

# URGENT

\*TB 1-1520-240-20-119

## DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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### CH-47D/MH-47D AIRCRAFT, INITIAL AND RECURRING INSPECTION OF FUEL PODS FOR CORROSION AND ELECTRICAL BONDING.

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Headquarters, Department of the Army, Washington, D.C.  
12 May 2000

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

#### NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

#### 1. Priority Classification - Urgent

#### NOTE

IAW AR 95-1, para 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. Upon receipt of this TB the condition status symbol of the cited aircraft will be changed to a red horizontal dash // - // . The red horizontal dash // - // entry shall state "Inspect fuel pods IAW CH-47-00-ASAM-01 (TB 1-1520-240-20-119) within the next 10 flight hours, but NLT 14 May 2000. The red horizontal dash // - // may be cleared when the inspection of para 8 is completed. The affected aircraft shall be inspected as soon as practical but no later than 14 May 2000. Failure to comply with the requirements of this TB within the time frame will cause the status symbol to be upgraded to a red //X//.

b. Aircraft in Depot Maintenance – Aircraft will not be issued until compliance with paragraphs 8 and 9 of this TB have been completed. This includes aircraft undergoing refurbishment at Corpus Christi Army Depot (CCAD).

c. Aircraft Undergoing Maintenance - Same as para 1a.

d. Aircraft In Transit -

(1) Surface/Air Shipment - Same as para 1a.

(2) Ferry Status -

(a) Same as para 1a.

\*This TB supersedes USAAMCOM Message 272016Z APR 00, CH-47-00-ASAM-01.

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(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 with paragraph 9 within 90 days of receipt of this TB.

f. Component/parts in stock at all levels (Depot and others) including War Reserves - On receipt of this TB 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-01 (TB 1-1520-240-20-119), inspection of fuel pods, not complied with".

(1) Wholesale Stock - N/A.

(2) Retail Stock - Upon receipt of this TB commanders and others maintaining retail stock at installation level and below shall contact the supported Aviation Unit to perform the inspection required by paragraph 8 and the correction procedures of paragraph 9 on discrepant materiel. Disposition of discrepant materiel will be IAW paragraph 10.

g. Components/parts in work (Depot Level and others) - Items listed in paragraphs 6 and 7 in work will not be issued until compliance with this TB.

**2. Task/Inspection Suspense Date** - Within the next 10 flight hours but NLT 14 May 2000, and report IAW para 14b.

**3. Reporting Compliance Suspense Date** - Report compliance IAW para 14a NLT 19 May 2000.

**4. Summary Of Problem -**

a. A unit reported finding corrosion where the fuel pod skin attaches to the T-Cap. Further investigation revealed this to be galvanic corrosion. The manufacturer of the pods misinterpreted the drawings and painted bare aluminum with a carbon filled paint. The dissimilar materials set up the environment for the galvanic corrosion. Corrosion products can reduce conductivity and make electrical bonding ineffective.

b. For Manpower/Downtime and Funding Impacts See para 12.

c. The purpose of this TB is to -

(1) Direct an initial and recurring inspection for corrosion and proper electrical bonding.

(2) Require replacement, rework, or use of an additional bonding strap, as an interim measure where electrical bonding is insufficient.

(3) At the next phase inspection, rework or replace the fuel pod T-Caps which have corrosion.

**5. End Items To Be Inspected** - All CH-47D And MH-47D Aircraft.

**6. Assembly Components To Be Inspected -**

NOMENCLATURE	P/N	NSN
Main Fuel Pod Assy	145S5021-1	1560-01-192-2458
Auxiliary Fuel Pod Assy	145S5022-1	1560-01-192-2459
Auxiliary Fuel Pod Assy	145S5022-2	1560-01-189-2062
Auxiliary Fuel Pod Assy	145S5022-3	1560-01-192-2457
Auxiliary Fuel Pod Assy	145S5022-4	1560-01-192-2456

**7. Parts To Be Inspected -**

NOMENCLATURE	P/N	NSN
Angle Assembly	114S5520-31	1560-00-909-2557
Angle Assembly	114S5521-44	N/A
Angle Assembly	114S5521-45	N/A
Angle Assembly	114S5521-46	N/A
Angle Assembly	114S5521-47	N/A

**8. Inspection Procedures -**

- a. Prepare the aircraft for safe ground maintenance.
- b. On pods that are constructed with a fiberglass upper skin perform the following -

(1) Measure the electrical resistance in the riveted joint between the bonding strap and the pod attachment T-Cap. The resistance should not exceed 0.0025 (Twenty five ten thousandths) ohms. If the resistance exceeds 0.0025 ohm, perform the correction procedures IAW para 9a.

(2) Visually inspect for corrosion on the fuel pod T-Caps. If corrosion is present on the T-Caps, repair or replace IAW paragraph 9b NLT the next phase inspection.

c. If all areas inspected IAW para 8b are acceptable, the red horizontal dash // -// will be cleared and compliance with this TB 1-1520-240-20-119 will be noted.

**9. Correction Procedures**

- a. If the electrical resistance does not meet the inspection criteria IAW paragraph 8b(1) -

(1) Repair the bonding strap as follows -

(a) Remove corrosion from the attaching bolts and the strap inside diameter.

(b) Add another grounding strap from supply, or fabricate one similar to the existing strap from aluminum sheet.

(c) Attach the new strap to a bolt on the filler cap in the same manner as the existing strap. Attach the other end to the nearest pod T-Cap fuselage mounting bolt. Re-test electrical resistance IAW 8b(1) above.

(2) If unable to perform the correction procedures IAW para 9a(1) -

(a) Change the status symbol of the aircraft to a circle red //X//. The circled red //X// entry shall state "The aircraft is restricted from gravity refueling IAW CH-47-00-ASAM-01 (TB 1-1520-240-20-119)."

(b) Repair to the bonding strap will be completed IAW para 9a(1) NLT the next phase inspection.

(3) A recurring inspection of the bonding strap will be completed during each scheduled phase inspection. The requirement for this inspection will be added to the appropriate technical manuals IAW paragraph 12e of this TB.

- b. If corrosion is found following the inspection IAW para 8b(2), repair or replace the T-Caps at the next phase inspection as follows -

(1) Remove the pod IAW TM 55-1520-240-23, Task 10-7 (MAIN), Task 10-23 (FORWARD), or Task 10-28 (AFT).

(2) Remove the upper T-Cap, P/N 114S5521-44/-45/-46/-47 (auxiliary pods), or P/N 114S5520-31 (main pods).

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(3) Where Corrosion is Found - Using 60 grit or finer aluminum oxide paper or cloth, or with A-A-58054, Type 1, Grade A or finer abrasive material, remove corrosion from the T-Cap. The maximum allowable amount of material that can be removed from the T-Cap is 0.003 (minimum allowable thickness of the T-Cap is 0.054).

(4) If the T-Cap cannot be salvaged IAW the guidelines in para 9b(3), replace with a new section of T-Cap IAW TM 55-1520-240-23, task 2-186.

(5) Re-install the pod IAW TM 55-1520-240-23, task 10-21 (MAIN), task 10-26 (FORWARD), or task 10-31 (AFT).

c. After completion of the correction procedures IAW para 9a and 9b (as applicable), the red horizontal dash // - // will be cleared and compliance with this TB 1-1520-240-20-119 will be noted.

**10. Supply/Parts and Disposition -**

- a. Parts required - items cited in paragraphs 6 and 7 may be used to replace defective items.
- b. Some replacement parts can be locally fabricated as follows -

(1) T-Cap material can be fabricated from - stringer, aircraft, P/N 114A5520-31, NSN 1560-00-909-2557.

(2) The bonding (grounding) strap can be fabricated from - 6061-O, aluminum alloy per QQ-A-250/13, 0.016 inch thick by 1.2 inch wide. Cut to length as required.

- c. Requisitioning instructions - requisition replacement parts using normal supply procedures.
- d. Bulk and Consumable Materials - N/A.

e. Disposition - Demilitarize/mutilate IAW TM 1-1500-328-23 any part/component which does not meet inspection criteria.

f. Disposition of hazardous material - IAW environmental protection agency directives as implemented by your servicing environmental coordinator (AR 200-1).

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

**12. Application -**

- a. Category of maintenance AVUM. Aircraft downtime will be charged to AVUM.
- b. Estimated Time Required -
  - (1) To conduct the one time inspection of the fuel pod - total of 2 man-hours using 1 person.
  - (2) To remove, repair, and reinstall the fuel pods -
    - (a) Total of 30 man-hours using 3 persons.
    - (b) Total of 10 hours downtime for one end item.
- c. Estimated cost impact to the field -

NOMENCLATURE	PN/NSN	QTY	COST EA	TOTAL
Stringer, ACFT (T-Cap)	114S5520-31/ 1560-01-909-2557	1	\$715.99	\$715.99
TOTAL COST PER AIRCRAFT = \$715.99				

- 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 TM 55-1520-240-23 and TM 55-1520-240-PM shall be changed to reflect this TB. A copy of this TB shall be inserted in the appropriate TM as authority to implement the changes until the printed change is received.

**13. References -**

- a. TM 55-1520-240-23P.
- b. TM 55-1520-240-23.
- c. TM 55-1520-240-PM.
- d. TM 1-1500-328-23.
- e. DA PAM 738-751.

**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 MDS aircraft, forward a priority message, datafax or e-mail to CDR, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000, IAW AR 95-1. datafax number is DSN 897-2111 or (256) 313-2111. e-mail address is "safeadm@redstone.army.mil". the report will cite CH-47-00-ASAM-01 (TB 1-1520-240-20-119), 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) - N/A.
- 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 IAW 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 2408-14-1, Uncorrected Fault Record.
- (4) DA Form 2408-15, Historical Record For Aircraft.
- (5) DD Form 1574/DD Form 1574-1, serviceable tag/label - materiel (color yellow). Annotate remarks block with "CH-47-00-ASAM-01 (TB 1-1520-240-20-119) not completed with."
- (6) DD Form 1577-2/DD form 1577-3, unserviceable (reparable) tag/label - materiel TM 55-1520-240-PM (color green). Annotate remarks block with unserviceable IAW CH-47-00-ASAM-01 (TB 1-1520-240-20-119)."

**15. Weight and Balance - N/A.**

**16. Points of Contact -**

- a. Technical point of contact is Mr. Dennis Ganey, AMSAM-RD-AE-I-P-C, DSN 897-3361 or (256) 313-3361, datafax is DSN 897-4348 or (256) 313-4348. E-mail is dennis.ganey@redstone.army.mil".
- b. Logistical point of contact is Mr. Bill Olson, SFAE-AV-CH-L, DSN 897-3379 or (256) 313-3379, datafax is DSN 897-4348 or (256) 313-4348. E-mail is "olsonw@peoavn.redstone.amry.mil".
- c. Forms and records point of contact is Ms. Ann Waldeck, AMSAM-MMC-RE-FF DSN 746-5564 or (256) 876-5564, datafax is DSN 746-4904 or (256) 876-4904. E-mail is "ann.waldeck@redstone.army.mil".
- d. Safety Points Of Contact Are -
  - (1) Primary - Mr. Harry Trumbull (SAICC), AMSAM-SF-A, DSN 897-2095 or (256) 313-2095, datafax is DSN 895-2111 or (256) 313-2111. E-mail is "harry.trumbull@redstone.army.mil".
  - (2) Alternate - Mr. Howard Chilton, AMSAM-SF-A, DSN 897-2068 or (256) 313-2068, datafax is DSN 897-2111 or (256) 313-2111. E-mail is "howard.chilton@redstone.army.mil".

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e. Foreign military sales recipients requiring clarification of action advised by this TB should contact: CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0681 or (256) 313-0681. E-mail is "wittstromjl@redstone.army.mil" or Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0869 or (256) 313-0869. Datafax is DSN 897-0411 or (256) 313-0411. E-mail is "sammonsrw@restone.army.mil". Huntsville, AL is gmt minus 5 hrs.

f. After hours contact the AMCOM Command Operations Center (COC) DSN 897-2066/7 or (256) 313-2066/7.

**17. Reporting of Errors and Recommending Improvements.** You can improve this Technical Bulletin. 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) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5230. You may also submit your recommended changes by E-Mail directly to "ls-lp-@redstone.army.mil". A reply will be furnished directly to you.

By Order of the Secretary of the Army:

Official:

  
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***These are the instructions for sending an electronic 2028***

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:** 1-1520-240-20-119
9. **Pub Title:** TB
10. **Publication Date:** 05--MAY-00
11. **Change Number:**
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.

