

EMERGENCY

*TB 1-1520-240-20-91

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ONE TIME VISUAL INSPECTION OF FORWARD
TRANSMISSION MOUNTING (BARREL) NUTS,
P/N NAS 577B20A
FOR
ALL CH-47D, MH-47D, AND MH-47E AIRCRAFT

Headquarters, Department of the Army, Washington, D.C.
02 December 1996

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NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. Priority Classification - Emergency

a. Aircraft in Use - Upon receipt of this Technical Bulletin (TB) the condition status symbol of the cited aircraft shall be immediately changed to a **Circled Red "X"**. The **Circled Red "X"** may be cleared when the inspection and correction procedures of paragraph 8 and 9 below are complete. Aircraft on a **Circled Red "X"** status symbol shall be maintained in flyable storage condition.

b. Aircraft in Depot Maintenance - Inspect and correct prior to issue. Aircraft shall not be issued until compliance with this TB has been completed.

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

d. Aircraft in Transit -

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

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

e. Maintenance Trainers (Category A,B) - Same as paragraph 1a.

*This TB supersedes USAATCOM Message 141510Z November 1996 (CH-47-97-01)

f. Component/Parts in Stock at All Levels (Depot and Others) Including War Reserves - Upon receipt of this TB, the materiel condition tags of all items listed in paragraph 7 below in all condition codes shall be annotated to read 'TB 1-1520-240-20-91, One Time Visual Inspection of Forward Transmission Mounting (Barrel) Nuts, P/N NAS 577B20A', must be complied with prior to issue.

1) Wholesale Stock - Upon receipt of this TB, depot commanders shall ensure inspection of all items listed in paragraph 7 below located in all wholesale depots including all satellite wholesale depots and war reserve depots. Upon receipt of this TB depot commanders and other maintaining wholesale stock shall ensure that serviceable materiel (condition codes "A", "B", and "C") is placed in condition code "J" and tagged with a suspended tag/label - DD Form 1576/1576-1. The authority block must reference inspection required per TB 1-1520-240-20-91. Report compliance with this TB in accordance with paragraph 14d(1) below.

(2) Retail Stock - Upon receipt of this TB commanders and other maintaining retail stock of items listed in paragraph 7 below shall contact their support aviation organization to perform the inspection required by paragraph 8 below and to perform the correction procedures of paragraph 9 below on discrepant materiel. All items listed in paragraph 7 below shall be immediately placed in condition code 'D' and re-tagged with a test/modification tag/label - DD Form 1576/1576-1 (blue color). The authority block must reference inspection required per TB 1-1 520-240-20-91. Items identified as serviceable IAW paragraph 8 below shall be re-tagged with a serviceable tag/label - DD Form 1574/1574-1 (yellow color). Indicate compliance with TB 1-1520-240-20-91 in the remarks block. Item identified as discrepant IAW paragraph 8 below shall be re-tagged with unserviceable (reparable) tag/label - 1577/1577-3 (green color). Annotate remarks block to indicate that the item is unserviceable IAW TB 1-1520-240-20-91. Any items found discrepant per the inspection procedures cited in paragraph 8 below shall be disposed of by mutilation/demilitarized to prevent resale. Report compliance with this TB in accordance with paragraph 14d(2) below.

g. Components/Parts in Work - All items listed in paragraph 6 below shall not be issued until compliance with this TB has been completed.

2. Task/Inspection Suspense Date - Within 10 hours/14 days.

3. Reporting Compliance Suspense Date - No later than 06 December 1996 per paragraph 14a of this TB.

4. Summary of the Problem.

a. Safety-of-flight messages (see paragraphs 13a and 13b below) issued in April 1990 required the inspection/replacement of NAS577B20A barrel nuts to purge the supply system of nuts manufactured by Hartford Aircraft Products (HAP) Inc., CAGE 66861. These nuts mount the forward transmission to the airframe, and four (4) nuts are required per aircraft. Analysis of several failed barrel nuts manufactured by this vendor indicated impurities in steel and alloy segregation. All other manufacturers NAS577B20A barrel nuts are acceptable.

b. A report was just received that another subject barrel nut manufactured by this vendor was found in the field assets. It is logical to assume that additional discrepant nuts manufactured by Hartford Aircraft Products, Inc. maybe installed on CH-47 Chinook Aircraft.

c. For Manpower/Downtime and Funding Impacts - See paragraph 12 below.

d. The purpose of this TB is to require another one time visual inspection of forward transmission NAS577B20A mounting (barrel) nuts prior to next flight and removal of nuts manufactured by Hartford Aircraft Products Inc. which can be identified by an impression stamp marking of HAP, or CAGE code 66861, on the exposed barrel nut carrier.

5. End Items to be Inspected - All CH-47D, MH-47D, and MH-47E aircraft.

6. Assembly Components to be Inspected -

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Forward Transmission Assembly	145D1300-9	1615-01-317-6446

7. Parts to be Inspected -

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Nut, Self-locking Barrel	NAS577B20A	5310-01-210-3874

8. Inspection Procedures -

- a. Prepare the aircraft for safe ground maintenance.
- b. Visually inspect the four (4) NAS577B20A barrel nuts (see paragraph 13 below, reference c., Task 6-51, Item 13.1, or reference d., Task 6-60, item 15) that attach the forward transmission to the airframe. The nuts fasten to the bottom of the mounting bolts (item 14 or item 17).
- c. Inspect each barrel nut to determine the manufacturer. Use a flashlight and mirror to improve readability.
- d. If the exposed barrel nut carrier is impression stamped with HAP or the CAGE code 66861, the nut was manufactured by Hartford Aircraft Products, Inc., is suspect, and must be removed from service. Proceed to paragraph 9 below for corrective action.
- e. If the exposed barrel nut carrier is marked in any other way, or has no markings, the nut is acceptable and no further action is required. Record and report compliance with this TB in accordance with paragraph 14 below.

9. Correction Procedures -

- a. Replace NAS577B20A barrel nuts exhibiting an impression stamp of HAP or CAGE code 66861 with any other manufacturer's nut prior to further flight.
- b. Whenever a barrel nut is installed, the bolt must be torqued in accordance with paragraph 13 below, reference c., Task 6-51, paragraph 9 or reference d., Task 6-60, paragraph 12. Also, a one-time retorquing after 25 flight hours is required.
- c. Any suspect barrel nut removed from an aircraft or found in supply shall be disposed of by mutilation/demilitarized to prevent resale, reissue, or use by any other MDS aircraft systems (i.e., UH-60, AH-64, etc.).

10. Supply/Parts and Disposition -

- a. Parts Required - Items cited in paragraph 7 above may be required to replace defective items.
- b. Requisitioning Instructions - Requisition replacement parts through normal supply channels using normal supply procedures. All requisitions shall use project code 'XCS' per this TB.

NOTE

Project code 'XCS' is required to track and establish a data base of stock fund expenditures incurred by the field as a result of this TB.

- c. Bulk and Consumable Materials - N/A.
- d. Disposition - After mutilation or demilitarization IAW published procedures, dispose of removed components/parts IAW normal supply procedures. A QDR is not required.
- e. Disposition of Hazardous Materiel - N/A.

11. Special Tools, Jigs and Fixtures Required - N/A.

12. Application -

- a. Category of Maintenance - AVUM. Aircraft downtime will be charged to AVUM.
- b. Estimated Time Required -
 - (1) Total of one (1) man-hour using one (1) person.

(2) Total of one (1) hour downtime for one (1) end item.

c. Estimated cost impact of stock fund items to the field -

NOMENCLATURE	PART NO.	NSN	QTY	UNIT COST	TOTAL COST
Nut, Self-Locking Barrel	145SS131-20	5340-01-334-1248	4	\$123.00	\$492.00

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. Message, AVSCOM, AMSAV-XSOF, 192100Z APR 90, subject: Safety-of-Flight Message, Technical, RCS CSGLD-1860(R1), All Ch-47D Aircraft, One Time Inspection of CH-47D Forward Transmission Barrel Nuts, P/N NAS 577B20A, (CH-47-90-07) (TB 55-1520-240-2048).

b. Message, AVSCOM, AMSAV-XSOF, 201700Z APR 90, subject: Safety-of-Flight Message, Technical, RCS CSGLD-1860(R1), All Ch-47D Aircraft, Clarification to One Time Inspection of CH-47D Forward Transmission Mounting Nuts, P/N NAS 577B20A, (CH-47-90-08) (TB 55-1520-240-20-48).

c. TM 55-1520-240-23-5.

d. TM 1-1520-252-23-6

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, data fax or E-Mail to Commander, ATCOM, ATTN: AMSAT-R-X (SOF Compliance Officer), per AR 95-3. Data fax number is DSN 693-2064 or commercial (314) 263-2064. E-Mail address is "amsatrxs@emh4.stl.army.mil". The report will cite this TB 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) - Within two (2) working days of receipt of this TB, units will forward a priority message to: Commander, ATCOM, ATTN: AMCPM-CH-L. The report will cite this TB number, date of inspection, aircraft serial number, and component hours, and results of the inspection. Inspection and reports will be completed no later than 7 days after task/inspection suspense date.

c. Reporting Compliance Suspense Date (Spares) -

(1) Materiel in retail Storage - Report receipt of this TB to the Logistical point of contact listed in paragraph 16b within two (2) working' days from the date of this TB.

(2) Materiel in Wholesale Depot Storage - Report receipt of this TB to the Wholesale Materiel (SPARES) point of contact listed in paragraph 16c within two (2) working days from the date of this TB.

d. Task/Inspection Reporting Suspense Date (Spares) -

(1) Materiel in Wholesale Depot Storage - Report compliance with this TB to the wholesale materiel point of contact (SPARES) listed in paragraph 16c within two (2) working days from the date of this TB. Provide an estimate of the cost reimbursable funding required to move the items listed in paragraph 7 above to a work area, unpack the materiel, repack the materiel after inspection b ATCOM inspectors, and to return the materiel to storage. Report the serial numbers, by original serviceable condition code, of all materiel placed in condition code "J".

(2) Materiel in retail Storage - Report compliance with this TB to the logistical point of contact in paragraph 16b within two (2) working days from the date of this TB. Report the quantity inspected by condition code , and the resulting condition code. Report the serial numbers of all materiel requiring correction. Place these items in condition code "D" and provide copies of shipping documents to wholesale materiel point of contact listed in paragraph 16c.

e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 June 1992 -

- (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.

15. Weight and Balance - N/A.

16. Points of Contact -

a. Technical point of contact for this TB are Mr. Robert A. Lawyer, AMSAT-R-ECC, DSN 693-3820 or commercial (314)263-3820, respectively.

b. Logistical point of contact for this TB is Mr. Norm Huston, AMCPM-CH-L, DSN 693-1415 or commercial (314)263-1415 and data fax is DSN 693-1485 or commercial (314)263-1485.

c. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAT-I-MDM, DSN 490-2318 or commercial (314)260-2318.

d. Safety point of contact for this TB is Mr. Jim Wilkins, AMSAT-R-X, DSN 693-2258 or commercial (314)263-2258.

e. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact CW5 Jay Nance or Mr. Ron Van Rees, AMSAT-D-S, DSN 693-7844/3216 or commercial (314)263-7844/3216.

f. After hours contact ATCOM Command Operations Center (COC) DSN 693-2066/2067 or commercial (314)263-2066/2067.

17. Reporting of Errors and Recommending Improvements. You can help improve this TB. 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 Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you. You may also submit your recommended changes by E-mail directly to <mpmt%/avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you.

By Order of the Secretary of the Army:

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