

URGENT

TB 1-2835-205-20-3

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ONE TIME INSPECTION FOR ALL CH-47D AND MH-47E AIRCRAFT, MANDATORY TORQUE CHECK AND REPLACEMENT OF AUXILIARY POWER UNIT BOLTS

Headquarters, Department of the Army, Washington, D. C.
1 June 1998

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

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL SUBJECT AIRCRAFT HAS BEEN INSPECTED UNLESS SOONER RESCINDED OR SUPERSEDED.

1. Priority Classification. Urgent

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB) the condition status symbol of the cited aircraft will be changed to a red horizontal dash //-. The red horizontal dash //-- may be cleared when the inspection of paragraph 8 below is completed. The affected aircraft shall be inspected as soon as practical but no later than the task/inspection suspense date. Failure to comply with the requirements of this message within the timeframe will cause the status symbol to be upgrade to a red // X //.

b. Aircraft in Depot Maintenance. Aircraft will not be issued until compliance with this TB has been completed.

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

d. Aircraft in Transit. Same as paragraph 1 .a.

(1) Surface/Air Shipment. Prior to first flight.

(2) Ferry Status. Inspect at final destination.

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

f. Component/Parts in Stock at All Levels (Depot and Others) Including War Reserves. Inspect prior to issue.

g. Component /Parts in Work (Depot Level and Others). Items listed in paragraphs 8 and 7 in work will not be issued until compliance with this TB.

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

This TB supersedes USAAMCOM CH-47-98-ASAM-03 Message.

- 3. **Reporting Compliance Suspense Date.** No later than 27 May 1998 per paragraph 14.a of this TB.
- 4. **Summary of the Problem.**

NOTE

Cherry Point has never used these bolts.

a. In two separate incidents since October 1997, one bolt of six which secures the APU Turbine Assembly to the reduction drive assembly has backed out and been ingested into the APU compressor causing FOD damage but no uncontained failures. The original Depot Maintenance Work Request (DMWR) and Technical Manuals specified a self-locking bolt (P/N M4DS428-22C, NSN 5306-00-986-7200). However, the current DMWR and TM specify a new bolt (P/N AN101118, NSN 5306-00-638-5332) which is also listed as self-locking but, in reality, is not. Any T-62T-2B APU which has been subject to a Special Repair Activity (SRA) since 1 Jan 92 is suspect for having these non-self-locking bolts. To prevent further incidents, the DMWR and TM will be corrected to specify a bolt which is truly self-locking. Also, Because it is difficult to identify the suspect bolts based only on head markings, all six of these bolts in each suspect T-62T-2B APU need to be replaced, one at a time. The new bolt (P/N NK4-13, NSN 5306-00-117-9897) is currently used by the Navy and is provisioned for Army use. Also, a limited number of the original self-locking bolts will be available from the Defense Logistics Agency (DLA). Until replacement bolts arrive, each bolt will be torque checked, torque-stripped, and reinspected every 50 flight hours to ensure proper torque (50 to 70 pound-inches torque).

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

c. The purpose of this TB is to require torque checks, torque-stripes, and 50-hour inspections of the bolts which secure the T-62T-2B APU turbine assembly to the reduction drive assembly to ensure proper torque until replacement of all six bolts has been accomplished.

5. **End Items to be Inspected.** All CH-47D and MH-47E aircraft with a T-62T-2B APU that has been subject to an SRA since 1 Jan 92. Units should examine maintenance records (DA Form 2408-5-1 and 2408-16) to determine if an aircraft has been subject of an SRA. If this can not be determined, the bolts are suspect and require replacement.

NOTE

APUs received from depot accounts direct from Cherry Point will Not require inspection. APUs in ASL/PLLS will require compliance with this technical bulletin.

6. **Assembly Components to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Auxiliary Power Unit	T-62T-2B	2835-01-092-2037

7. **Parts to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Bolt, Self-Locking	AN101118	5306-00-638-5332

8. **Inspection Procedures.**

- a. Determine if bolts are suspect. See paragraph 5. If not suspect, inspection is complete.
- b. If bolts are suspect:

- (1) Prepare the aircraft for safe ground maintenance.
- (2) Gain access to APU air screen assembly located between the turbine **assembly** and the reduction drive assembly.
- (3) Cut **lockwire** lacing from air screen assembly, spread screen ends, and separate air screen assembly from turbine.
- (4) Locate six bolts previously concealed by air screen assembly (refer to figure 1, **Item 8** of TM 55-2835-205-23P; bolt heads will be toward turbine assembly).
- (5) Perform torque check to verify 50 to 70 pound-inches torque above drag torque for each bolt. Torque bolts as necessary.
- (6) Apply torque-stripe across each bolt head.
- (7) Reposition and secure air screen assembly.
- (8) **Visually** inspect torque-stripe on each bolt every **50** flight hours and retorque bolts if **necessary** until replacement self-locking bolts are available.

9. Correction Procedures.

- a. Requisition six replacement self-locking bolts (P/N NK4-13, NSN 5306-00-1 17-9897) per APU through normal supply channels.
- b. Remove **the** air screen assembly to gain access to the bolts.

CAUTION

In the following step, remove and replace only one bolt at a time. The replacement, self-locking bolts are one-time **use** only.

- c. Replace the existing bolts one at a time with the new, self-locking **NK4-13** bolts and torque properly (50 to 70 pound-inches torque).
- d. Reposition and secure air screen assembly.
- e. Remove from stock all bolts with P/N AN1 01118, NSN 5306-00-638-5332.
- f. Add pen and ink change to TM 55-2835-205-23P, Figure I, Item 8, changing P/N AN1 01118, NSN 5306-00-1 17-9897 to P/N **NK4-13**, NSN 5306-06-1 17-9697.

10. Supply/Parts and Disposition.

- a. Parts Required. Six replacement bolts (P/N NK4-13, NSN 5306-00-117-9897) per APU.
- b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) "XDX" (X-ray, Delta, X-ray).

NOTE

Project code "XDX" is required to track and establish a database of stock fund expenditures incurred by the field as a result of SOF actions.

- c. Sulk and Consumable Materials. N/A.
- d. Disposition. Dispose of removed parts/components using normal supply procedures.
- e. Disposition of Hazardous Material. In accordance with Environmental Protection Agency Directives as implemented by your servicing environmental coordinator (AR 200-1).

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

12. Apptcatton.

- a. Category of Maintenance. **AVUM**. Aircraft downtime will be charged to AVUM.
- b. Estimated Time Required.
 - (1) Total of 1 man-hour using 1 person.
 - (2) Total of 1 hour downtime for one end item.
- c. Estimated Cost Impact of Stock Fund Items to the Field.

NOMENCLATURE	PART NUMBER/ NATIONAL STOCK NUMBER	QUANTITY	COST EACH	TOTAL \$
Bolt	NK4-13 / 5306-00-1 17-9897	6	\$0.85	\$5.10
			\$	\$
Maximum total cost per aircraft = \$5.10				

- 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. TM TM 55-2835-205-23P and DMWR 55-2835-205 shall be changed to reflect this TB. A copy of this TB shall be inserted in the appropriate TM as authority to implement the change until the printed change is received.**

13. References.

- a. TM TM 55-2835-205-23P
- b. DMWR 55-2835-205

14. Recording and Reporting Requirements.

- a. **Reporting Compliance Suspense Date (Aircraft).** Upon entering requirements of thii TB on DA Form 240813-I on all subject MDS aircraft, forward a priority message, **datafax** or E-Mail to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5222 per AR 95-I. **Datafax** number is DSN 897-2111 or commercial (256) 313-2111. E-Mail address is "SAFE-ADM@Redstone.Army.Mil". The report will cite this TB number, date of entry in DA Form 2468-I 3-1, 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). N/A**
- e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 June 1992:

NOTE

For ULLS-A Units, use applicable "E" Forms.

- (1) DA Form 2408-5-1, Equipment Modiiicatiin Record (APU).
- (2) DA Form 2408-I 3, Aircraft Status Information Record.
- (3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record.
- (4) DA Form 2408-I 5, Historical Record for Aircraft.
- (5) DA Form 2408-18, Equipment Inspection List.

NOTE

ULLS-A users use inspection number 135 for the 50-hour torque check

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this TB is Mr. Joseph Ingram, AMSAM-AR-EP, DSN 897-4994 or commercial (256) 313-4994, datafax is DSN 897-4961. E-mail is INGRAMJ@AVRDECR.Redstone.Army.Mil.

b. Logistical point of contact for this TB is Mr. Norman Huston, SFAE-AV-CH-L, DSN 897-4289 or commercial (256) 313-4289. Datafax is DSN 897-4348. E-mail is HUSTONN@PEOAVN.Redstone.Army.Mil.

c. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-RE-FD, DSN 746-5564 or (256) 876-5564. Datafax is DSN 746-4904. E-mail is WALDECK-AB@Redstone.Army.Mil.

d. Safety point of contact for this TB is Mr. Howard Chilton, AMSAM-SF-A, DSN 897-2068 or commercial (256) 313-2068. Datafax is DSN 897-2111. E-mail is CHILTON-HL@Redstone.Army.Mil. Alternate point of contact is Teng Ooi, AMSAM-SF-A, DSN 897-2094 or commercial (256) 313-2094. Datafax is DSN 897-2111. E-mail is OOI-TK@Redstone.Army.Mil.

e. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0681 or commercial (256) 313-0681. E-mail is WITTSTROM-JL@Redstone.Army.Mil. Mr. Ronnie W. Sammons AMSAM-SA-CS-NF, DSN 897-0869 or Commercial (256) 313-0869. Datafax is DSN 897-0411 or commercial (256) 313-0411. E-Mail is SAMMONS-RW@Restone.Army.Mil.

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

17. Reporting of Errors and Recommending Improvements. You can 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 Missile Command. ATTN: ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AL 35898-5230. You may also send in your comments electronically to our e-mail address: ls-lp@redstone.army.mil or by fax, 205-842-6542/DSN 788-6546. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

By Order of the Secretary of the Army:

Official:


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04642

DENNIS J. REIMER
General, United States Army
Chief of Staff

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To be distributed in accordance with Initial Distribution No. (IDN) 313759, requirements for TB 1-2835-205-20-3.

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.mit>

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. **P u b 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:** 123-1 23-1234
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.