URGENT

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

OPERATIONAL RESTRICTION ON ALL UH-1 SERIES AIRCRAFT FOR T53-L-13B ENGINES

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

1. Priority Classification. Urgent.

a. Aircraft in Use. As directed in TB 1-2840-229-20-9, the condition status symbol of the cited aircraft remains a **circled red X.** Paragraph 8 outlines the procedures necessary to clear the circled red X Failure to comply with the requirements of this TB will cause the status symbol to be upgraded to a red X.

b. Aircraft in Depot Maintenance. Same as para 1.a.

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

d. Aircraft in Transit.

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

(2) Ferry Status. Same as para 1.a.

e. Maintenance Trainers (Category A and B). N/A.

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

(1) Retail Stock. No Change from TB 1-2840-229-20-9.

(2) Wholesale Stock. No Change from TB 1-2840-229-20-9.

2. Task/inspection Suspense Date. Prior to next flight.

3. Reporting Compliance Suspense Date. No later than 20 December 1996 per para 14.a.

4. Summary of the Problem.

This TB supersedes USAATCOM (PROV) Message UH-1-97-01.

a. This is a follow up TB to TB 1-2840-229-20-9 which required certain operational restrictions on the UH-1 aircraft due to numerous failures of the engine N2 accessory drive carrier assembly. This TB provides the information necessary to allow the **circled red X** imposed by TB 1-2840-229-20-9 to be cleared. This entails the replacement of the lock cup, annotation of aircraft and engine maintenance records, accomplishment of a maintenance test flight, and annotation of changes to the T53 parts manual. The N2 assembly part number changes when the new lock cup is installed. Depot authorized teams will not etch the new part number on the N2 assembly. This will be accomplished during future returns to depot repairs.

NOTE

The definition of depot authorized teams is any individual or group trained by CCAD Engine Service Center to perform the N2 lock cup replacement. No written authorization is being provided for training individuals and the MACOM is required to monitor the training. Train the trainer concept is being used to accomplish the safety of Ifight repair. MACOMs may have depot authorized teams train additional technicians.

b. Depot authorized teams have been trained to accomplish the removal of the suspect retainer nut lock cup in the N2 accessory drive carrier assembly and the installation of an improved, more reliable, lock cup. These teams are being dispatched to accomplish this procedure on all Army UH-1 aircraft worldwide and are authorized to train additional technicicns as necessary. These teams are equipped with all of the tools (not parts) required to perform this task. These teams are not, however, responsible for removal and reinstallation of the engine itself. This is the responsibility of the unit.

c. Unit/aircraft scheduling and prioritizing of the lock cup replacement has been determined by the MACOMs. All other agencies are responsible for contacting the Corpus Christi Army Depot Engine Service Center (ESC) for training and/or contracting to replace the lock cups. The costs involved in training and/or contracting will be paid by the requesting agency.

d. For manpower/downtime and funding impacts see para 12.

e. The purpose of this TB is to provide the necessary instructions to clear the circled red X imposed by TB 1-2840-229-20-9.

5. End Items to be inspected. All UH-1 aircraft.

6. Assembly Components to be Inspected:

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
T53-L-13B	1-000-060-22	2840-00-134-4803

7. Parts to be Inspected. N/A.

8. Inspection Procedures.

a. Verify that TB 1-2840-229-20-9 has been complied with and that restrictions have been annotated.

b. Inspect the aircraft and engine records to determine if lock cup has been replaced.

(1) If the maintenance records clearly indicate that the lock cup has been replaced, proceed to para 14.e.

(2) If the maintenance records do not, repeat do not, clearly indicate that the lock cup has been replaced, proceed with corrective action in accordance with para 9.

9. Correction Procedures.

a. Units will be contacted by MACOM trained teams for scheduling aircraft for the replacement of the lock cup. If you have not been contacted and your aircraft are not scheduled for repair, contact the MACOM point of contact in para 16. This applies to all Army UH-1 users.

b. Units are responsible for removal of the T53-L-13B engine from the aircraft to allow the depot authorized teams access to the engine to perform the lock cup replacement.

NOTE

Depot authorized teams are only authorized to disassemble engines one time, any secondary failure of the N2 carrier assembly requires the team to call the CCAD Engine Service Center for instructions. Authorization to perform the lock cup replacement does not permit any other repairs to the N2 carrier assembly. Units are also responsible for reinstalling the engine in the aircraft once the repair is complete. When reinstalling the repaired engine units shall comply with all requirements of TM 55-2840-229-23 and TM 1520-210-23 applicable to installation of a new engine. These requirements include, butr are not limited to, the main driveshaft alignment check of TM 1520-210-23, para 6-24, and the engine vibration check of TM 55-2840-229-23, para 1-92.

c. Units shall order all parts listed in para 10 through normal supply channels and have these parts on hand when the depot authorized team arrives to accomplish the repair.

d. Units are required to perform a maintenance test flight in accordance with TM 55-1520-210-MTF after reinstalling the repaired engine. When the repaired engine is reinstalled in the same tail number aircraft from which it was removed a normal TEAC check is required (reference TM 55-2840-229-23, para 1-117). When reinstalling the repaired engine in any other aircraft than that from which it was removed a baseline TEAC check is required.

e. Annotate aircraft and enigne records per para 14.e, to reflect accomplishment of this TB. The **circled red X** aircraft status can only be cleared when the depot authorized team has accomplished the lock cup replacement. the engine has been reinstalled and the aircraft has completed the maintenance test flight, and the appropriate aircraft/engine records have been properly annotated.

f. The depot authorized team will provide the unit with a copy of the lock cup replacement documentation. Units shall forward a copy to: U.S. Army Aviation and Troop Command, ATTN: AMSAT-D-WAU (Charles Elkins), 4300 Goodfellow Blvd., St. Louis, Missouri 63120-1798. Fax number is DSN 693-1508 or Commercial (314) 263-1508.

10. Supply/Parts and Disposition.

a. Parts Required.

NOMENCLATURE	PART NUMBER	NSN	QUANTITY
Gasket	1-000-026-01	5330-00-388-3065	1
Gasket	1-080-025-02	5330-01-330-9629	1
Gasket	1-160-454-01	5330-00-775-6523	1
Retainer	1-070-066-03	5340-01-430-0385	1
Packing	1-020-017-01	5330-00-766-8653	1
Packing	M83248/1-008	5330-00-166-0967	2
Packing	M83248/1-012	5330-00-166-0980	2
Packing	M83248/1-013	5330-00-166-0988	6
Packing	M83248/1-014	5330-00-166-0990	7
Packing	M83248/1-015	5330-00-166-0991	5
Packing	M83248/1-113	5330-00-166-1062	2
Packing	M83248/1-114	5330-00-166-1063	1
Packing	M83248/1-122	5330-00-167-5111	2
Packing	M83248/1-128	5330-00-167-5116	1
Packing	M83248/1-131	5330-00-167-5119	1
Packing	M83248/1-138	5330-00-537-3929	1
Packing	M83248/1-144	5330-00-167-5126	1
Retainer Bolt	1-030-141-03	2840-00-084-7761	1
Seal Tubing	1-300-368-01	5330-00-570-9811	1
Washer Convex	1-030-138-04	5310-00-613-7435	1
Washer	STD3023K2	5310-00-658-5299	3

b. Requisitioning Instructions. Requisition replacement parts through normal supply channels using normal supply procedures.

NOTE

Requisition replacement parts through normal supply channels using normal supply procedures. All requisitions shall use project code XCW per this TB.

c. Bulk and Consumable Materials. N/A.

d. Disposition. Mutilate all lock cups removed from engines as a result of this TB.

e. Disposition of Hazardous Material. N/A.

11. Special Tools, Jigs and Fixtures Required.

NOMENCLATURE

Engine Maintenance Stand

12. Application.

a. Category of Maintenance AVIM. Aircraft downtime will be charged to AVUM maintenance.

b. Estimated Time Required to Remove, Repair, and Replace Engine.

(1) Total of 20 manhours using 3 persons.
(2) Total of 14 hours downtime for one end item.

c. Estimated Cost Impact of Stock Fund Items to the Field. $50.83.

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 1-2840-260-23P shall be changed to delete the existing lock cup, P/N 1-070-066-01, NSN 5340-00-916-2592, and replace it with lock cup, P/N 1-070-066-03, NSN 5340-01-430-0385. 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. TM 1-2840-260-23P.

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 Commander, ATCOM, ATTN: AMSAT-R-X (SOF Compliance Officer), per AR 95-3. Datafax 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). N/A.

c. Reporting Compliance Suspense Date (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:

(1) DA Form 2408-13, Aircraft Status Information Record.

(2) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record. Document completion of this TB and sign off the restriction imposed by TB 1-2840-229-20-9 if the lock cup has been replaced.

(3) DA Form 2408-5-1, Equipment Modification Record (Component). Document compliance with this TB on the engine DA Form 2408-5-1.

(4) DA Form 2408-16, Aircraft Component Historical Record. Determine when the lock cup was replaced by researching the aircraft six month file. Make an entry in the significant historical data block of the engine DA Form 2408-16 stating that replacement of the lock cup has been completed, date completed, engine TSN at the time of completion, name and location of the individual making the entry.

(5) DA Form 2410, Component Removal and Repair/Overhaul Record. A DA Form 2410 should have been completed when the lock cup replacement was accomplished. If a DA Form 2410 was not submitted prepare a copy 1 DA Form 2410 documenting removal of the engine and copy 2 DA Form 2410 documenting repair of the engine. The lock cup should be entered on the reverse side of copy 2. A copy 3 DA Form 2410 documenting installation of the engine on the aircraft should have been submitted for installed engines.

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contactfor this TB is Mr. Dan Flesher, AMSAT-R-EPE, DSN 693-0306 or Commercial (314) 263-0306.

b. Logistical point of contact for this TB is Mr. Charlie Elkins, AMSAT-D-WAU, DSN 693-2004 or Commercial (314) 263-2004.

c. MACOM points of contact are as follows:

AMC	John Savelli	DSN 767-9891
USAR	Monte McDonald	1-800-359-8483 EXT 8687
USMA	CW3 Hood	DSN 220-3298
FORSCOM	Gene Villiva	DSN 367-5369
MDW	Capt. Katie Boehm	DSN 656-7647
NGB	Ken Winters	DSN 327-7754
TRADOC	Judy Dyer	DSN 680-5683
USAREUR	Dave Spinks	011-49-631-413-8900
USARPAC		DSN 438-9892
INSCOM	Msgt. Fields	DSN 235-1648
ALASKA	Ron McIntosh	907-353-6029
KOREA	Bob Spencer	DSN 723-4394

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

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

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

g. 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 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. 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:

Official

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
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DENNIS J. REIMER
General, United States Army
Chief of Staff

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THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. 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

'VEIGHTS

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

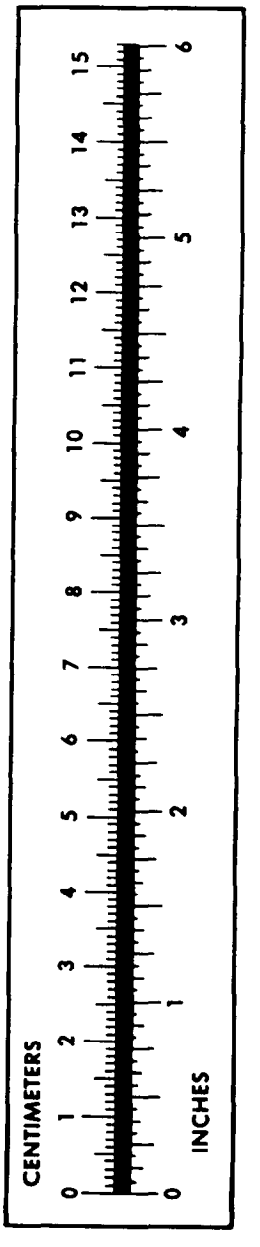
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°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
ıts	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
lometers per Liter	Miles per Gallon	2.354
meters per Hour	Miles per Hour	0.621



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