

URGENT

TB 1-1520-238-20-114

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MANDATORY INSPECTION AND MAINTENANCE PROCEDURES FOR MAIN TRANSMISSION INPUT CLUTCH, RCS CSGLD-1860 (R1), ALL AH-64 SERIES AIRCRAFT

Headquarters, Department of the Army, Washington, D.C.

5 January 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THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 TB 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 (TB), make the following entry on the DA Form 2408-13-1. Enter a red horizontal dash //--// status symbol with the following statement: "Inspect main transmission input clutch in accordance with TB 1-1520-238-20-114 prior to the next flight." Clear the red horizontal dash //--// entry when the procedures in accordance with paragraph 8 and paragraph 9 are completed. The affected aircraft shall be inspected prior to the next flight. Commanders who are unable to comply with the requirements of this TB within the time frame specified will upgrade the affected aircraft status symbol to a red //X//.

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- b. Aircraft in Depot Maintenance. Depot commanders will not issue aircraft until they are in compliance with this TB.
- c. Aircraft Undergoing Maintenance. Commanders and facility managers will not issue aircraft until they are in compliance with this TB.
- d. Aircraft in Transit.
 - (1) Surface/Air Shipment. Same as paragraph 1.a.
 - (2) Ferry Status.
 - (a) Same as paragraph 1.a.
 - (b) Boeing will inspect DD 250 aircraft prior to the departure of those aircraft for ferry to final destination.
- e. Maintenance Trainers (Categories A and B). Same as paragraph 1.a.
- f. Components/Parts in Stock at All Levels (Depot Level and Others), Including War Reserves. Upon receipt of this TB, depot and materiel activity commanders will ensure that the materiel condition tags of all items in all condition codes listed in paragraphs 6 and 7 are annotated to read as follows: "TB 1-1520-238-20-114, Inspection of the Main Transmission Input Clutch, not complied with."
 - (1) Wholesale Stock. Upon receipt of this TB, depot and materiel activity commanders will ensure that all serviceable items (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. Report compliance with this message in accordance with paragraph 14.d.(1).
 - (2) Retail Stock. Upon receipt of this TB, 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 paragraph 8 and paragraph 9 on suspect materiel. Dispose of discrepant materiel in accordance with paragraph 10. Report compliance with this message in accordance with paragraph 14.d.(2).
- g. Components/Parts in Work (Depot Level and Others). Depot and other maintenance activity commanders will ensure that items listed in paragraphs 6 and 7 are not issued until they are in compliance with this message.

2. Task/Inspection Suspense Date. Complete the inspection in accordance with paragraph 8 prior to the next flight and report in accordance with paragraph 14.b.

3. Reporting Compliance Suspense Date. Report compliance in accordance with paragraph 14.a.

4. Summary of the Problem.

- a. A recent AH-64 tail rotor drive shaft failure was caused by failure of a main transmission input clutch P/N 7-311310003-7. The input clutch had 583 flight hours at the time of failure.
- b. For manpower/downtime and funding impacts, see paragraph 12.
- c. The purpose of this TB is to inspect aircraft to accomplish the following:
 - (1) Determine the part number of the input clutch.
 - (2) Direct a reduction in Time Between Overhaul (TBO) for the P/N 7-311310003-7 and earlier configuration clutch assemblies from 1000 hours to 500 hours.
 - (3) Direct that all P/N 7-31131000-7 and earlier configuration clutch assemblies with more than 500 hours be upgraded to the P/N 7-311310003-9 clutch assembly when returned to depot.

5. **End Items To Be Inspected.** All AH-64 aircraft.

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

NOMENCLATURE	PART NUMBER	NSN
Main Transmission	7-311310001-All	All

7. **Parts To Be Inspected.**

NOMENCLATURE	PART NUMBER	NSN
Clutch Assembly	7-311310003-9	3010-01-364-2470
Clutch Assembly	7-311310003-7	3010-01-224-6952

8. **Inspection Procedures.** Inspect the main transmission input clutch to determine the part number of the input clutch assembly installed.

- a. If clutch assembly P/N 7-311310003-9 is installed, inspection is complete.
- b. If clutch assembly P/N 7-311310003-7 or an earlier configuration is installed, proceed to paragraph 9.

9. **Correction Procedures.**

a. Determine the time since last overhaul. If the clutch assembly has never been overhauled, determine the Time Since New (TSN).

(1) If it is determined that the time since overhaul or TSN is in excess of 500 hours, the clutch is unserviceable. Replace the P/N 7-31130003-7 or earlier configuration clutch assembly with a P/N 7-311310003-9 assembly.

NOTE

The input clutch assembly P/N 7-311310003-9 will retain the original TBO of 2500 hours.

(2) If the time since overhaul or TSN is less than 500 hours, change the main transmission assembly DA Form 2408-16 entry for TBO on P/N 7-311310003-7 and earlier clutch assemblies to reflect the new 500 hour TBO. Recalculate the replacement due time.

(3) ULSS-A units will use this TB as authority to change the legitimate code file to reflect the new TBO. Contact the ULSS-A Point of Contact in paragraph 16.e. if you have questions regarding ULSS-A changes.

b. If the time since overhaul or TSN is more than 500 hours, return the P/N 7-311310003-7 and earlier clutch assemblies to depot for upgrade to a P/N 7-311310003-9 configuration.

10. Supply/Parts and Disposition.

NOTE

HQDA-ODCSOPS will prioritize units and repair parts distribution in a separate follow-on TB.

- a. Parts Required. P/N 7-311310003-9 may be required for replacement of defective items.
- b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use Project Code (CC 57-59) "X0E" (XRAY-zero -ECHO).

NOTE

Project Code "X0E" is required for the tracking and establishment of a database of stock fund expenditures incurred by the field as a result of Safety of Flight (SOF) actions.

- c. Bulk and Consumable Materials. N/A.
- d. Disposition. Dispose of removed parts/components using normal supply procedures. All turn-in documents must include Project Code (CC 57-59) "X0E".
- e. Disposition of Hazardous Material. N/A.

11. Special Tools and Fixtures Required. As required.

12. Application.

- a. Category of Maintenance. AVUM. Aircraft downtime will be charged to 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 person.
 - (2) Total of 2 hours downtime for 1 end item.
- c. Estimated Cost Impact To the Field. Total cost per aircraft is \$7790.46.

NOMENCLATURE	PART NUMBER/NSN	QTY	COST EA.	TOTAL \$
Clutch Assembly	7-311310003-9	2	\$3895.23	\$7790.46
-	3010-01-364-2470	-	-	-

- d. TB/MWOs To Be Applied Prior To Or Concurrently With This Inspection. N/A.

e. Publications Which Require a Change As a Result of This Inspection. The following publications shall be changed to reflect this TB. A copy of this TB shall be inserted in the appropriate publications as authority to implement the change until the printed change is received.

(1) TM 1-1520-238-23, Aviation Unit and Intermediate Manual, dated 16 May 1994, with changes.

(2) Interactive Electronic Technical Manual (IETM): TM 1-1520-Longbow/Apache IETM, CD No. 1, Version 3.1.2, Data 19 November 1998, CD Date 1 December 1998 or subsequent.

(3) DMWR 1-1615-299, Main Transmission, 30 June 1992.

13. References.

a. DA PAM 738-751, 15 March 1999.

b. TM 1-1520-238-23, Aviation Unit and Intermediate Manual, dated 16 May 1994, with changes.

c. Interactive Electronic Technical Manual (IETM): TM 1-1520-Longbow/Apache IETM, CD No. 1, Version 3.1.2, Data 19 November 1998, CD Date 1 December 1998 or subsequent.

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, commanders will forward a priority message, Datafax, or e-mail to CDR, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000, in accordance with AR 95-1. Datafax number is DSN 897-2111 or (256) 313-2111. E-mail address is "safeadm@redstone.army.mil". This 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). Upon completion of inspection, commanders will forward a priority message to the Logistics Point of Contact listed in paragraph 16.b. This report will cite this TB number, date of inspection, the aircraft serial number, aircraft and component hours, and the results of the inspection.

c. Reporting TB Receipt (SPARES).

(1) Materiel in Wholesale Depot Storage. Depot and materiel activity commanders will report receipt of this TB by e-mail or Datafax to the Wholesale materiel (SPARES) Point of Contact listed in paragraph 16.c. Provide local Point of Contact.

(2) Materiel in Retail Storage. Commanders and facility managers will report receipt of this message by e-mail or Datafax to the Logistics Point of Contact listed in paragraph 16.b. Provide local Point of Contact.

d. Task/Inspection Reporting Suspense Date (SPARES).

(1) Materiel in Wholesale Depot Storage. Depot and materiel activity commanders will report compliance with this TB to the Wholesale Materiel Point of Contact (SPARES) listed in paragraph 16.c. on DD Form 1225. Provide the cost of compliance with this TB, including an estimate of the cost reimbursable funding required to move serviceable items on hand listed in paragraphs 6 and 7 to a work area, to unpack the materiel, to repack the materiel after inspection by AMCOM inspectors, and to return the materiel to storage, as appropriate. Report, by original serviceable condition code, the quantity of materiel placed in condition code //J//. Report by e-mail or Datafax and provide local Point of Contact.

(2) Materiel in Retail Storage. Commanders and facility managers will report compliance with this message to the logistical Point of Contact in paragraph 16.b. Report the quantity inspected by condition code and the resulting condition code. Report by e-mail or Datafax and provide local Point of Contact.

e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 March 1999.

NOTE

ULLS-A users will use applicable "E" Forms.

- (1) DA Form 2408-5-1, Equipment Modification Record (Input Clutch and Main Transmission Assembly).
- (2) DA Form 2408-13, Aircraft Status Information Record.
- (3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record.
- (4) DA Form 2408-15, Historical Record for Aircraft.
- (5) DA Form 2408-16, Aircraft Component Historical Record.
- (6) DA Form 2410, Component Removal and Repair/Overhaul Record (only if clutch is removed/replaced).
- (7) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label--Materiel (Color Yellow). Annotate remarks block with "Inspected serviceable in accordance with TB 1-1520-238-20-114."
- (8) DD Form 1575/DD Form 1575-1, Suspended Tag/Label--Materiel (Color Brown). Annotate remarks block with "Suspended in accordance with TB 1-1520-238-20-114."
- (9) DD Form 1577-2/DD Form 1577-3, Unserviceable (Reparable) Tag/Label--Materiel (Color Green). Annotate remarks block with "Unserviceable in accordance with TB 1-1520-238-114."

15. Weight and Balance. N/A.

16. Points of Contact.

- a. Technical Point of Contact is Ken Muzzo, AMSAM-AR-EI-P-A, DSN 897-4812 or commercial (256) 313-4812. Datafax is DSN 897-4923 or commercial (256) 313-4923; e-mail is "kenneth.muzzo@redstone.army.mil".
- b. Logistical points of contact are as follows:
 - (1) Primary. Jim Mason, SFAE-AV-AAH-LF, DSN 897-4242 or (256) 313-4242. Datafax is DSN 987-4343 or commercial (256) 313-4343; e-mail is "Jim.Mason@redstone.army.mil".
 - (2) Alternate. Mike Sharp, SFAE-AV-AAH-LF, DSN 897-4236 or commercial (256) 313-4236; e-mail is "Mike.Sharp@redstone.army.mil".
- c. Wholesale materiel Point of Contact (SPARES) is Debbie Barton, AMSAM-MMC-VS-AB, DSN 897-1355 or commercial (256) 897-1355. Datafax is DSN 897-1556 or commercial (256) 313-1556; e-mail is "Debra.Barton@redstone.army.mil".
- d. Forms and records Point of Contact is Ann Waldeck, AMSAM-MMC-RE-FF, DSN 746-5564 or commercial (256) 876-5564. Datafax is DSN 746-4904 or commercial (256) 876-4904; e-mail is "Ann.Waldeck@redstone.army.mil".
- e. ULLS-A Point of Contact is Alan Burleson, AMSAM-MMC-RE-FF, DSN 746-4468 or commercial (256) 876-4468. Datafax is DSN 746-4904 or commercial (256) 876-4094; e-mail is "Alan.Burleson@redstone.army.mil".
- f. Safety points of contact are as follows:
 - (1) Primary. Harry E. Trumbull (SAIC), AMSAM-SF-A, DSN 897-2095 or commercial (256) 313-2095. Datafax is DSN 897-2111 or commercial (256) 313-2111; e-mail is "Harry.Trumbull@redstone.army.mil".

(2) Alternate. Howard Chilton, AMSAM-SF-A, DSN 897-2068 or commercial (256) 313-2068. Datafax is DSN 897-2111 or commercial (256) 313-2111; e-mail is "Howard.Chilton@redstone.army.mil".

g. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact one of the following (Huntsville, AL, time is GMT minus 6 hours):

(1) CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or commercial (256) 313-0410, e-mail "WittstromJL@redstone.army.mil".

(2) Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or commercial (256) 313-0408. Datafax is DSN 897-0411 or commercial (256) 313-0411; e-mail is "SammonsRW@redstone.army.mil".

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

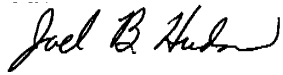
17. Reporting of Errors and Recommending Improvements. You can improve this TB. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the following address: Commander, 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. Instructions for sending an electronic 2028 may be found at the back of this manual.

TB 1-1520-238-20-114

By Order of the Secretary of the Army:

Official:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0036201

DISTRIBUTION:

To be distributed in accordance with Initial Distribution Number (IDN) 313955 requirements for TB 1-1520-238-20-114.

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: <mpmt%avma28@st-louis-emh7.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: 078757-000