URGENT

TB 1-1520-238-20-113

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INITIAL AND RECURRING INSPECTION FOR MAIN ROTOR BLADE CRACKING, ALL AH-64 SERIES AIRCRAFT

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

30 March 2001

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THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 for the cited aircraft. Enter a red horizontal dash ***//–//*** status symbol with the following statement: “Inspect aircraft in accordance with TB 1-1520-238-20-113 prior to the next flight, but no later than 6 October 2000. Clear the red horizontal dash ***//–//*** entry when the procedures in

This TB supersedes USAAMCOM Safety of Flight 22 2300Z Sep 00 AH-64-00-09.

paragraphs 8 and 9 have been completed. The affected aircraft shall be inspected as soon as practical but no later than 6 October 2000. Commanders who are unable to comply with the requirements of this TB within the timeframe specified will upgrade the affected aircraft's status symbol to a red ***//X//***.

b. Aircraft in Depot Maintenance. N/A.

c. Aircraft Undergoing Maintenance. Aircraft will not be released until they are in compliance with this TB.

d. Aircraft in Transit.

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

(2) Ferry Status.

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

f. Components/Parts in Stock at All Levels (Depot 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 paragraph 7 are annotated to read as follows: "AH-64-00-09 (TB 1-1520-238-20-113), Inspection for Main Rotor Blade Cracking, not complied with."

(1) Wholesale Stock. N/A.

(2) Retail Stock. N/A.

g. Components/Parts in Work (Depot Level and Others). N/A.

2. **Task/Inspection Suspense Date.** Complete the inspection in paragraph 8 prior to the next flight but not later than 6 October 2000; report in accordance with paragraph 14.b.

3. **Reporting Compliance Suspense Date.** Report Compliance in accordance with paragraph 14.a. no later than 16 October 2000.

4. **Summary of Problem.**

a. AH-64 main rotor blades have been found exhibiting chordwise cracks, which have appeared on both the upper and lower surfaces. Cracks have also appeared on the trailing edge. Recently, a 5-ft. section of a blade afterbody separated from the blade, resulting in an emergency landing.

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

c. The purpose of this message is to direct and initial and recurring inspection for evidence of cracks in the main rotor blade.

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

6. **Assembly Components to Be Inspected.** N/A.

7. **Parts to Be Inspected.**

Nomenclature	Part Number	NSN
Blade, Rotary Wing	7-311412000-3	1615-01-310-4978
Blade, Rotary Wing	7-311412000-3A	1615-01-330-5098
Blade, Rotary Wing	7-311412000-5	1615-01-332-0702
Blade, Rotary Wing	7-311412000-5A	1615-01-415-6397
Blade, Rotary Wing	7-311412000	1615-01-147-4873
Blade, Rotary Wing	7-311412000-A	1615-01-331-2483

8. **Inspection Procedures.**

a. Perform an initial inspection of each main rotor blade as follows:

(1) Check main rotor blade for cracks and voids in accordance with the following procedures:

(a) Check the entire surfaces of the main rotor blade upper/lower and trailing edge for chordwise and spanwise cracks visually and by wiping upper and lower surfaces of the blade and the top and bottom of trailing edge with cloth. Snagging of cloth indicates a crack. No cracks allowed. Use cloth (cheesecloth) listed in paragraph 10.c. to conduct this inspection.

(b) If cracks are suspected, examine with a 10X magnifying glass for evidence of crack(s).

(2) Pay particular attention to main rotor blades trailing edges for cracking.

(3) If cracks are found, correct in accordance with paragraph 9.

b. Perform the recurring inspections of each main rotor blade as follows:

(1) The inspection procedures in accordance in accordance with paragraph 8.a. of this message will be completed every 10 flight hours/14 days. ULLS-A units will use an 800 inspection number for this special inspection.

(2) Prior to each flight, including through flights, visually check the entire length of each main rotor blade upper and lower surface trailing edge for chordwise and spanwise cracks.

9. **Correction Procedures.**

a. If cracks are found, repair in accordance with TM 1-1520-238-23.

b. If cracks are beyond repairable limits in the TM, dispose of in accordance with paragraph 10.d. and contact the technical POC in paragraph 16.a.

c. If there is any evidence of chordwise cracking on the main rotor blade, submit CAT I QDR and notify the technical POC listed in paragraph 16.a.

d. Commanders shall ensure that flight crews and maintenance personnel are briefed on correct methods of inspecting for blade damage and the importance of completing thorough blade inspections.

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

a. Parts Required. Items cited in paragraph 7 may be required for the replacement of defective items.

b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) “XD4” (x-ray–delta–four).

NOTE

Project code “XD4” is required to track and establish a database of stock fund expenditures incurred by the field as a result of SOF actions.

c. Bulk and Consumable Materials.

Nomenclature	NSN
Cloth (50 lb.)	8305-00-205-3558

d. Disposition. Dispose of removed parts/components using normal supply procedures. All turn-in documents must include project code (CC 57-59) “XD4”.

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.

b. Estimated Time Required.

(1) To conduct the inspection in accordance with paragraph 8. Total of 1 man-hour using 1 person.

(2) To correct in accordance with paragraph 9.

(a) Total of 6 man-hours using 2 persons.

(b) Total of 3 hours downtime for one end item.

c. Estimated Cost Impact to the Field.

Nomenclature	Part Number/NSN	QTY	Cost Each	Total $
Blade, Rotary Wing	7-311412000-5/ 1615-01-332-0702	4	$102,174.00	$408,696.00
			TOTAL COST PER AIRCRAFT =	**$408,696.00**

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. N/A.

13. **References.**

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

b. 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.

c. TM 1-1520-238-23, Aviation Unit and Intermediate Maintenance Manual for AH-64A Apache Attack Helicopter, 16 May 1994.

14. **Recording and Reporting Requirements**.

a. Reporting compliance suspense date (Aircraft). Upon entering requirements of this message 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, in accordance with 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 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 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 March 1999:

NOTE

ULLS-A users will use applicable “E” forms.

(1) DA Form 2408-5-1, Equipment Modification Record (Main Rotor Blade).

(2) DA Form 2408-13, Aircraft Inspection and Maintenance 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 2408-18, Equipment Inspection List.

(7) DA Form 2410, Component Removal and Repair/Overhaul Record. Use only if the blade is removed/replaced.

(8) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label – Materiel (Color Yellow). Annotate remarks block with “AH-64-00-09 (TB 1-1520-238-20-113), Inspection for Main Rotor Blade Cracking not complied with.”

(9) DD Form 1577-2/DD Form 1577-3, Unserviceable (Reparable) Tag/Label – Materiel (Color Green). Annotate Tag/Label with condition code “E” and the remarks block with “Unserviceable in accordance with AH-64-00-09 (TB 1-1520-238-20-113).”

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

16. **Points of Contact.**

a. Technical point of contact is Larry Powitzky, AMSAM-RD-AE-I-P-A, DSN 897-4801 or commercial (256) 313-4801. Datafax is 897-4823 or commercial (256) 313-4823; e-mail is lawrence.powitzky@redstone.army.mil.

b. Logistical points of contact are as follows:

(1) Primary logistical point of contact for this TB is Jim Mason, SFAE-AV-AAH-LF, DSN 897-4242 or commercial (256) 313-4242. Datafax is DSN 897-4343 or commercial (256) 313-4343; e-mail is “jim.mason@peoavn.redstone.army.mil”.

(2) Alternate logistical point of contact for this TB is Mike Sharp, SFAE-AV-AAH-LF, DSN 897-4236 or commercial (256) 313-4236; e-mail is “mike.sharp@peoavn.redstone.army.mil”.

c. Forms and records point of contact for this TB 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”.

d. Safety points of contact are as follows:

(1) Primary safety point of contact for this TB is 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 safety point of contact for this TB is Howard Chilton, AMSAM-SF-A, DSN 897-2068 or commercial (256) 313-2068. Datafax is DSN 897-2111 or (256) 313-2111; e-mail is “howard.chilton@redstone.army.mil”.

e. Foreign Military Sales (FMS) recipients requiring clarification of actions 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 is “joseph.wittstrom@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 “ronnie.sammons@redstone.army.mil”.

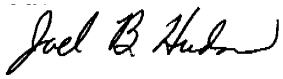
f. After hours, contact the AMCOM Command Operations Center (COC) DSN 897-2066/7 or commercial (256) 313-2066/7.

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 the following address: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, 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.

By Order of the Secretary of the Army:

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

OFFICIAL:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0108104

DISTRIBUTION:
To be distributed in accordance with Special Distribution requirements for TM 1-1520-252-23-2.

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).

PIN: 078943-000

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.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

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

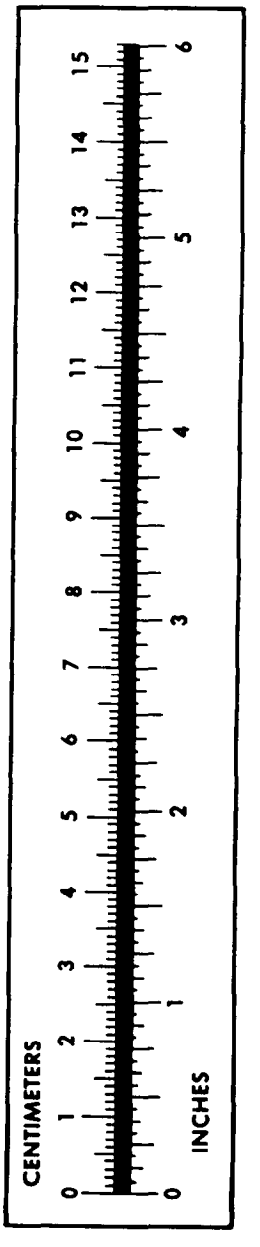
TEMPERATURE

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



PIN: 078943-000