

URGENT

TB 1-1520-238-20-127

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INITIAL AND RECURRING INSPECTION OF TAIL ROTOR BLADES FOR ALL AH-64 SERIES AIRCRAFT

Headquarters, Department of the Army, Washington, D. C.
28 June 2002

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

1. Priority Classification. Urgent

NOTE

This publication is effective until rescinded or superseded.

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB) make the following entry on DA Form 2408-13-1. Enter a **red horizontal dash** “-” with the following statement: “Inspect tail rotor blades IAW TB 1-1520-238-20-127 prior to next flight, but NLT 10 June 2002.” Clear the **red horizontal dash** “-” when the procedures IAW paragraph 8 and 9 are completed. 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”**.

b. Aircraft in Maintenance Facility.

(1) Aircraft in AVUM, AVIM, and Depot. Same as paragraph 1a.

(2) Aircraft at Contractor Facility. Boeing will inspect DD 250 aircraft prior to those aircraft departing for ferry to final destination

c. Aircraft in Transit.

NOTE

For aircraft away from home station, this TB authorizes a one time flight, with intermediate stops, to return to the nearest secured maintenance facility/home station. If a 10X magnifier is not available, a closeup-visual inspection of the tail rotor blades will be completed every 2 flight hours. The aircraft will be inspected IAW this TB upon arrival at the nearest secured maintenance facility/home station.

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

This TB supersedes USAATCOM Safety of Flight 032300ZJun02 (AH-64-02-07).

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

d. Maintenance Trainers (Category A and B). Same as paragraph 1a.

e. Component/Parts in Stock at All Levels (Depot and Others) including War Reserves - upon receipt of this TB, Depot and Materiel Activity Commanders will ensure the material condition tags of all items in all condition codes listed in paragraphs 6 and 7 are annotated to read: "AH-64-02-07 (TB 1-1520-238-20-127), tail rotor blade cracking, not complied with."

(1) Wholesale Stock -Report receipt of this TB IAW paragraph 14b(1) NLT 10 June 2002.

(2) Retail Stock - Report receipt of this TB IAW paragraph 14c(1) NLT 10 June 2002. Upon receipt of this message Commanders and Facility Managers maintaining retail stock at installation level and below shall contact the supported aviation unit to perform the procedures required IAW paragraphs 8 and 9 on suspect materiel. Disposition of discrepant materiel will be IAW paragraph 10. Report compliance with this TB IAW paragraph 14c(2) NLT 17 June 2002.

f. Component/Parts in Work (Depot level and others) - Depot and other maintenance activity Commanders will ensure items listed in paragraphs 6 and 7 are not issued until they are in compliance with this TB.

2. Task/Inspection Suspense Date. Complete the inspection IAW paragraph 8 prior to the next flight and report IAW paragraph 14a(2) NLT10 June 2002.

3. Reporting Compliance Suspense Date. Report compliance IAW paragraph 14a(1) NLT10 June 2002.

4. Summary of the Problem.

a. History- Safety of Flight AH-64-02-04 was issued to require an initial and recurring inspection of the tail rotor blades. Since that time, a Category 1 Quality Deficiency Report (CAT 1 QDR) has been received from the field reporting an extensive chordwise crack on the inboard side of a tail rotor blade, outboard of the finger doublers at station 30.1. This is a high stress area. Preliminary analysis indicates that the crack resulted from fatigue initiated at a surface impression approximately .005 inches in depth.

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

c. The purpose of this TB is to:

(1) Heighten awareness to the possibility of tail rotor cracking and increase the inspection area identified IAW AH-64-02-04 (TB 1-1520-238-20-118).

(2) Prior to the next flight, inspect all tail rotor blades IAW AH-64-02-04 (TB 1-1520-238-20-118) for chordwise cracks and/or any indication of surface damage between blade stations 25.0 and 35.0.

(3) Add the requirement to inspect between blade stations 25.0 and 35.0 to the recurring inspections required IAW AH-64-02-04 (TB 1-1520-238-20-118).

(4) Provide upgraded tail rotor blade damage/repair limits to AH-64A technical manuals (TM 1-1520-238-23).

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

6. Assembly Components to be Inspected. - Same as AH-64-02-04 (TB 1-1520-238-20-118).

7. Parts to be Inspected. - Same as AH-64-02-04 (TB 1-1520-238-20-118).

8. Inspection Procedures.

a. Prior to the next flight - Utilizing a 10X magnifier, use the procedures IAW AH-64-02-04 (TB 1-1520-238-20-118) to inspect the inboard and outboard tail rotor blade surfaces for chordwise cracking and/or any indication of surface damage between blade stations 25.0 (measured 30 inches inboard of the blade tip) and 35.0 (measured 20 inches inboard of the blade tip).

(1) If a crack is found - proceed to paragraph 9a.

(2) If damage other than cracking is found - proceed to paragraph 9b.

b. Include the criteria IAW paragraph 8a to inspect for chordwise cracking and/or surface damage at each subsequent 10 hr/14 day recurring inspection required IAW AH-64-02-04 (TB 1-1520-238-20-118).

9. Correction Procedures.

NOTE

Do not use TM 1-1520-238-23 damage repair limits. For AH-64A damage/repair limits, use AMCOM approved Figure 1 for scratches, nicks, gouges, and corrosion; and Figure 2 for dents and depressions. The damage/repair limits as listed in the current AH-64D IETM are the same and can also be used.

- a. If a crack is found, remove blade IAW AH-64-02-04 (TB 1-1520-238-20-118).
- b. If damage other than cracking is found, correct IAW AH-64-02-04 (TB 1-1520-238-20-118) and Figure 1 and/or Figure 2 as indicated in the note above.

10. Supply/Parts and Disposition.

- a. Parts Required. Items cited in paragraph 7 may be required to replace defective items.
- b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) "X1G" (X-Ray One Golf).

NOTE

Project code "X1G" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of message actions.

- c. Bulk and Consumable Materials. Same as AH-64-02-04 (TB 1-1520-238-20-118).
- d. Disposition. Submit a CAT 1 QDR for blade failing the inspection per this TB. Hold any discrepant part/component pending disposition instructions from technical POC in paragraph 16a.
- e. Disposition of Hazardous Material - Same as AH-64-02-04 (TB 1-1520-238-20-118).

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

12. Application.

- a. Category of Maintenance - Same as AH-64-02-04 (TB 1-1520-238-20-118).
- b. Estimated Time Required - Same as AH-64-02-04 (TB 1-1520-238-20-118).
- c. Estimated Cost Impact to the Field - Same as AH-64-02-04 (TB 1-1520-238-20-118).
- 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 1-1520-238-23, (Aviation Unit and Intermediate Maintenance Manual for the AH-64A), dated 16 May 1994, and TM 1-1520-238-PMS (AH-64A Helicopter 10 Hour/14 Day Inspection Checklist), dated 30 June 1994 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. - Same as AH-64-02-04 (TB 1-1520-238-20-118).

14. Recording and Reporting Requirements.

a. Aircraft-

(1) Reporting compliance suspense - Upon entering requirements of this TB on DA Form 2408-13-1 for all affected aircraft, commanders will forward a priority message, Fax or E-Mail to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000 IAW AR 95-1 NLT the date specified in paragraph 3. Fax 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.

(2) Task/Inspection reporting suspense - Upon completion of inspection, commanders will forward a priority message to the Logistical Point of Contact listed in paragraph 16b. The report will cite this TB number, Date of Inspection, Aircraft and Component Serial Number, Aircraft and Component Hours, and Results of the inspection. Inspection and reports will be completed NLT date specified in paragraph 2.

b. Wholesale Spare Parts/Assemblies

(1) Reporting TB receipt - Depot and materiel activity commanders will report receipt of this TB by E-Mail or fax to wholesale materiel (spares) POC listed in paragraph 16c NLT date specified in paragraph 1e(1). Provide local POC.

(2) Task/Inspection reporting suspense - N/A

c. Retail Spare Parts/Assemblies-

(1) Reporting TB Receipt - Commanders and Facility Managers will report receipt of this TB by E-mail or Fax to the Logistical Point of Contact (POC) listed in paragraph 16b NLT date specified in paragraph 1e(2). Provide local POC.

(2) Task/Inspection reporting suspense - Commanders and facility managers will report inspection results to the Logistical Point of Contact in paragraph 16b NLT date specified in paragraph 1e(2). Report the quantity inspected by condition code and the resulting condition code. Report by E-Mail or Fax and provide local POC.

d. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 Mar 99:

NOTE

ULLS-A users will use applicable "E" forms

(1) DA Form 2408-5-1, Equipment Modification Record (Blade, Rotary Rudder).

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

(3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record.

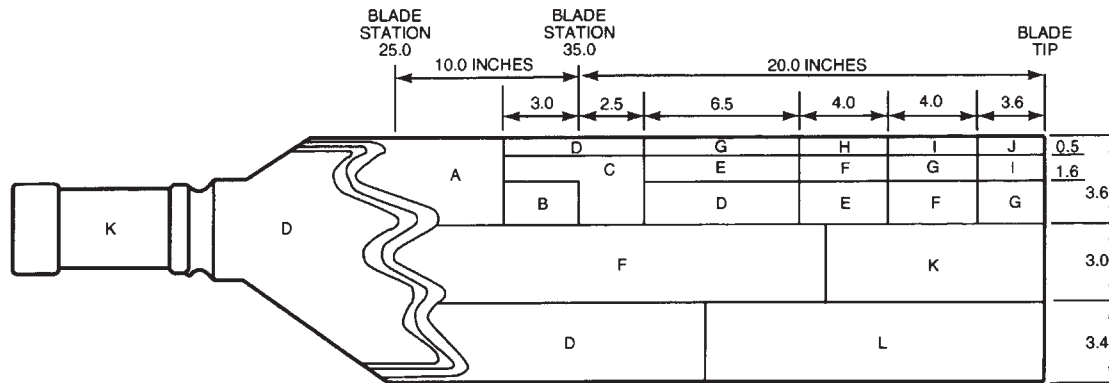
(4) DA Form 2408-16, Aircraft Component Historical Record (If blade is removed or replaced).

(5) DA Form 2410, Component Removal and Repair/Overhaul Record (If blade is removed or replaced).

(6) DD Form 1577/DD Form 1577-1, Unserviceable (Condemned) Tag/Label- Material (Color Red). Annotate remarks block with "Condemned IAW AH-64-02-07 (TB 1-1520-238-20-127) and mutilated IAW TM 1-1500-328-23.

15. Weight and Balance. N/A

TAIL ROTOR BLADE REPAIR CRITERIA



REPAIR LIMITS FOR SCRATCHES, GOUGES, AND CORROSION

AREA	MAXIMUM DEPTH WITHOUT REPAIR	MAXIMUM DEPTH WITH REPAIR (Note 5)	TM REPAIR PARAGRAPHS
A	NONE	NONE	-
B	NONE	0.002	5.55
C	NONE	0.004	5.55
D	NONE	0.005	5.55
E	NONE	0.008	5.55
F	NONE	0.010	5.55
G	NONE	0.015	5.55
H	NONE	0.018	5.55
I	0.005	0.020	5.55
J	0.005	0.025	5.55
K	0.002	0.015	5.55
L	0.002	0.005	5.55

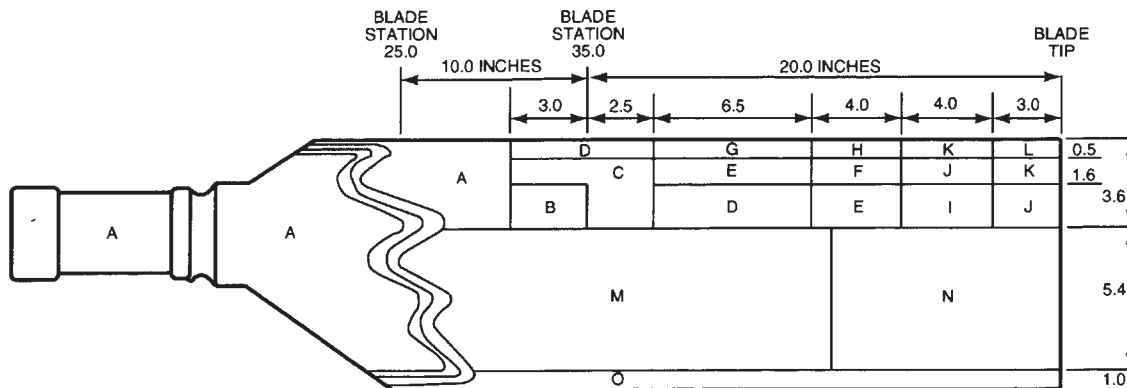
NOTES

1. ALL DIMENSIONS ARE IN INCHES.
2. LIMITS APPLY TO BOTH INBOARD AND OUTBOARD SURFACES
3. INSPECTION WITH MAGNIFIER REQUIRED.
4. CORROSION MUST BE TREATED PER TM PARAGRAPH 5.55.
5. DAMAGE UP TO THE MAXIMUM DEPTH MUST BE REPAIRED PER TM PARAGRAPH 5.5

FIGURE 1.

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TAIL ROTOR BLADE REPAIR CRITERIA



NOTES

1. ALL DIMENSIONS ARE IN INCHES.
2. USE STRAIGHT EDGE AND DEPTH GAGE. NO VISIBLE DENT SHALL EXIST DURING STRAIGHT EDGE TEST.
3. INSPECT FOR BOND DEPLAMINATION IN AREA DENT AND DE-ICING BLANKET ELECTRICAL CONTINUITY.
4. NO SHARP CREASES ALLOWED.
5. SMOOTHLY ROUNDED DENTS ARE ACCEPTABLE TO THE MAXIMUM DIMENSION SHOWN.
6. DAMAGE UP TO THE MAXIMUM DEPTH MUST BE REPAIRED PER TM PARAGRAPH 5.56.

REPAIR LIMITS FOR DENTS AND DEPRESSIONS

AREA	MAX DEPTH W/O REPAIR	MAX DEPTH WITH REPAIR (Note 6)	MAX AREA ALLOWED	MAX NUMBER OF DEFECTS	MINIMUM DISTANCE BTWN DEFECT CENTERS	TM REPAIR PARAGRAPHS
A	NONE	NONE	N/A	N/A	N/A	N/A
B	NOTE 2	0.002	1.0 X 1.5	3	1.5	5.56
C	NOTE 2	0.004	1.0 X 1.5	3	1.5	5.56
D	NOTE 2	0.005	1.0 X 1.5	3	1.5	5.56
E	NOTE 2	0.008	1.0 X 1.5	3	1.5	5.56
F	NOTE 2	0.010	1.0 X 1.5	3	1.5	5.56
G	NOTE 2	0.015	1.0 X 1.5	3	1.5	5.56
H	NOTE 2	0.018	1.0 X 1.5	3	1.5	5.56
I	0.010 NOTE 5	0.020	1.0 X 1.5	3	1.0	5.56
J	0.010 NOTE 5	0.030	1.0 X 1.5	3	1.0	5.56
K	0.010 NOTE 5	0.040	1.0 X 1.5	3	1.0	5.56
L	0.010 NOTE 5	0.050	1.0 X 1.5	3	1.0	5.56
M	0.010 NOTE 5	0.010	1.0 X 1.5	3	2.5	5.56
N	0.025 NOTE 5	0.025	1.0 X 1.5	3	2.5	5.56
O	0.020	N/A	1.0 X 1.5	3	4.0	N/A

FIGURE 2.

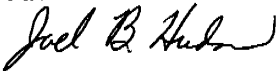
16. Points of Contact.

- a. Technical POC is Tim Powell, AMSAM-RD-AE-I-P-A, DSN 897-2350 Extension 9849 or (256) 705-9849, Fax is (256) 705-9918. E-Mail is "timothy.powell@rdec.redstone.army.mil".
- b. Logistical points of contact are:
 - (1) Mr. Steve Hayes, SFAE-AV-AAH-LF, DSN 897-4245 or (256) 313-4245. Fax is DSN 897-4343 or (256) 313-4343 E-Mail is "steve.hayes@peoavn.redstone.army.mil".
 - (2) Mr. Mike Sharp, SFAE-AV-AAH-LF, DSN 897-4236 or (256) 313-4236. Fax is DSN 897-4343 or (256) 313-4343 E-Mail is "mike.sharp@peoavn.redstone.army.mil".
- c. Wholesale material POC (spares) is Ms. Kathy Elfrink, AMSAM-MMC-AV-AA, DSN 897-1350 or (256) 313-1350, Fax is DSN 897-1556. E-Mail is "kathy.elfrink@redstone.army.mil".
- d. Forms and records POC is Ms. Ann Waldeck, AMSAM-MMC-MA-NM, DSN 746-5564 or (256) 876-5564, Fax is DSN 746-4904. , E-Mail is "ann.waldeck@redstone.army .mil".
- e. Safety points of contact are:
 - (1) Primary- Mr. Harry Trumball (SAIC), AMSAM-SF-A, DSN 897-2095 or (256) 313-2095, Fax is DSN 897-2111 or (256) 313-2111. E-Mail is "harry.trumball@redstone.army.mil".
 - (2) Alternate- Mr. Joseph Creekmore. AMSAM-SF-A, DSN 897-2090 or (256) 313-2090, Fax is DSN 897-2111 or (256) 313-2111. E-Mail is "joseph.creekmore@redstone.army.mil".
- f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact - Mr. Ronnie W. Sammons, AMSAM-SA-AS-UT, DSN 897-0407 or (256) 313-0407, Fax is DSN 897-0411 or (256) 313-0411. E-Mail is "ronnie.sammons@redstone.army.mil".
- g. After hours contact AMCOM Command Operations Center (COC) DSN 897-2066/7 or (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.: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5230. You may also submit your recommended changes by E-mail directly to 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. 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*
0217101

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

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TB1-1520-238-20-127

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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.