URGENT

*** TB 1-1520-238-20-86**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INSPECTION OF NUMBER 2L STRINGER FOR AH-64 AIRCRAFT HAVING ACCUMULATED 1750 OR MORE FLIGHT HOURS

Headquarters, Department of the Army, Washington, D.C.
28 February 1997

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 TB will cause the status symbol to be upgraded to a ***red*** "//x//".

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

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

d. Aircraft in Transit.

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

(2) Ferry Status.

(a) Same as paragraph 1 a.

(b) Those aircraft that have a DD Form 250 and are at McDonnell Douglas Helicopter Systems (MDHS) will be inspected prior to ferry to final destination.

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

f. Component/Parts in Stock Including War Reserves at all Levels (Depot and Others) - N/A.

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

3. Reporting Compliance Suspense Date. No later than 5 March 1997 per paragraph 14a of this TB.

4. Summary of the Problem.

*This TB supersedes USAATCOM Message 110905Z Feb 97 (AH-64-97-ASAM-04).

a. AH-64 aircraft having flown 1750 or more flight hours are susceptible to cracking of the 2L stringer. Previous fatigue tests conducted on the AH-64 tailboom in a laboratory revealed cracking of the 2L stringer at the equivalent of 1750 flight hours. Unless a doubler reinforcement is applied or the slot area has been closed, the aircraft must be inspected for cracks before each flight. (See figure 1.)

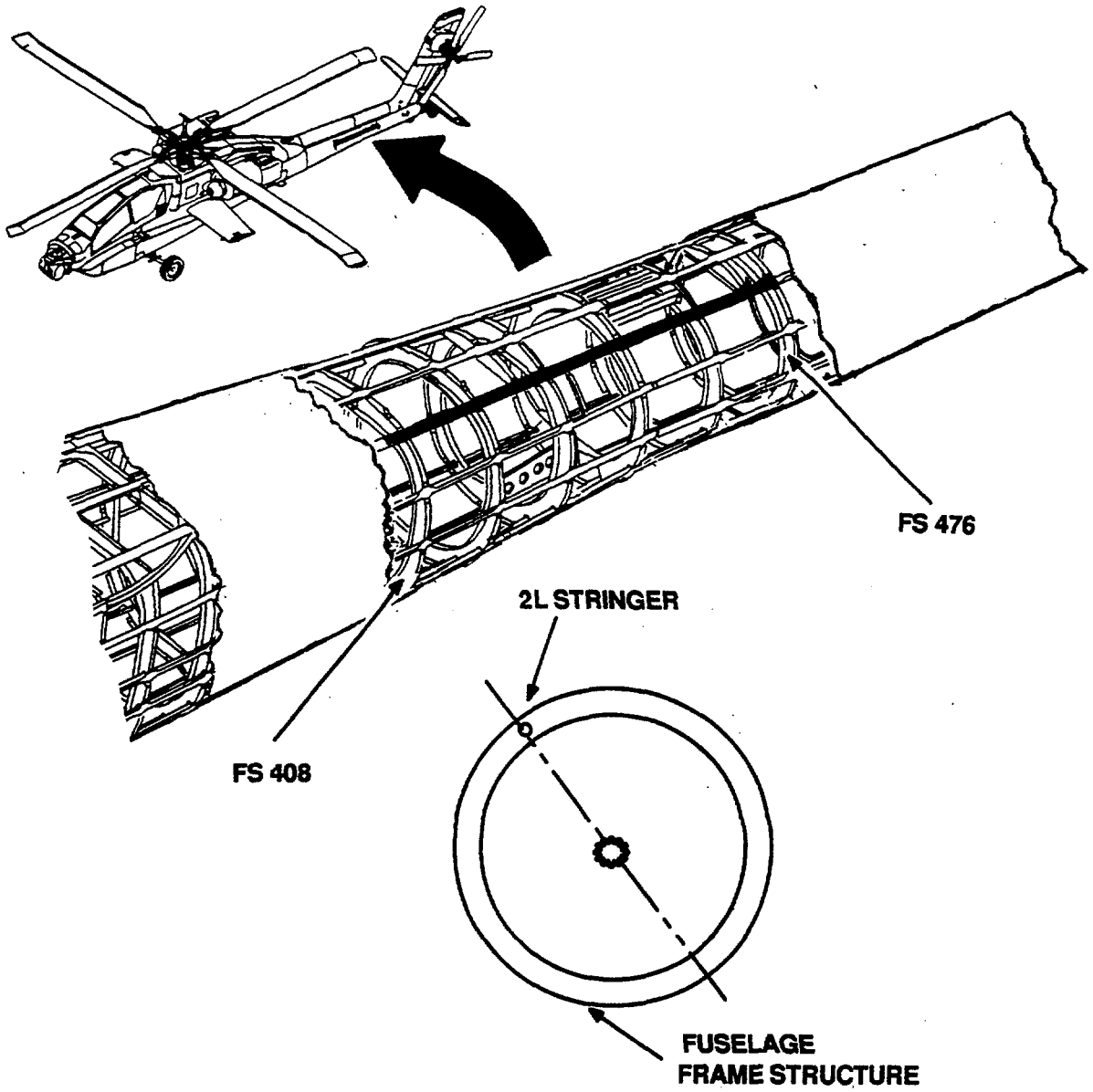

Figure 1. Inspecting 2L Stringer for Cracks, AH-64 Aircraft

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

c. The purpose of this TB is to direct a recurring preflight inspection of all AH-64 aircraft which have accumulated 1 750 or more flight hours and have not been modified either by application of a 2L stringer doubler (per MWO 1-1520-238-50-32) or by closure of the slot area between Fuselage Stations (FS) 370 and 450. The inspection area bounds the No. 2 left hand stringer between FS 409 and FS 476.

5. End Items to be inspected. Inspect all AH-64 aircraft that have accumulated 1750 or more flight hours, Serial Nos. 82-23355 and subsequent, (except those aircraft modified per MWO 1-1520-238-50-32 or by slot closure between FS 370 and FS 450).

6. Assembly Components to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Skin and Stringer	7-311113512	N/A

7. Parts to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Stringer, No. 2L	7-311113803-1	N/A
Skin, Aft, Top	7-311113512-87	N/A

8. Inspection Procedures.

a. Inspect the skin surface over the No. 2L stringer area of the slot on the upper left side of the tailboom from FS 409 through FS 476 before each flight.

b. Concentrate on the skin surface over the No. 2L stringer, and inspect for working rivets or skin cracking.

c. If working rivets or skin cracking are found, refer to paragraph 9.

d. If no defects are found, the aircraft is operational. Continue to perform the recurring inspection before each flight. The accumulated flight hours shall not exceed three (3) flight hours between inspections.

e. This recurring inspection shall be performed until a doubler strap is installed or the slot area is dosed per USMTCOM approved procedure/personnel.

f. Mark the skin inspection area using paint stripes to facilitate the inspection. Place a paint stripe at FS 408 and another at FS 477 on the area around the No. 2 left hand stringer.

9. Correction Procedures.

a. If skin cracks are found during the inspection (refer to paragraph 8), inspect the No. 2L stringer inside the fuselage.

(1) Inspect the area of the stringer directly in line with the skin crack and the area three rivet rows forward and aft of the crack.

(2) Perform a fluorescent penetrant inspection and use a 10X magnifier.

(a) If the stringer is cracked, the aircraft is non-operational until the stringer is replaced. Contact the technical POC.

(b) If no crack is found, proceed to step 3.

(3) Perform USMTCOM approved eddy current inspection. Contact technical POC.

b. If working rivets are found, inspect the corresponding hole area in the No. 2L stringer inside the tailboom, and check the three (3) adjacent fastener holes forward and aft.

(1) Determine if the fastener can be moved by hand.

(2) Use the 10X magnifier to inspect for No. 2L stringer cracks.
(a) If a crack is found, the aircraft is non-operational until the stringer is replaced. Contact the technical POC.
(b) If no crack is found, continue the inspection.
(c) Contact the technical POC before removing loose fastener(s) and inspecting for cracks using an eddy current probe. Contact the technical POC to schedule an inspection.

10. Supply/Parts and Disposition.

a. Parts Required. The items referenced in paragraphs 6 and 7 may be required to replace defective items. This is a depot level task to be performed only by USAATCOM approved personnel..
b. Requisition Instructions. N/A.
c. Bulk and Consumable Materials.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Polyurethane Coating, Black, Type II	MIL-C-46168	8010-01-146-2646

d. Disposition. A Category 1 QDR is required. Hold any unserviceable part/component pending disposition instructions from the technical POC per paragraph 16.
e. Disposition of Hazardous Material. Dispose in accordance with Environmental Protection Agency (EPA) directives as implemented by your servicing environmental coordinator (AR-200-1).

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

12. Application.

a. Category of Maintenance - Aviation Unit Maintenance (AVUM) for the inspection. A contractor team may be required for eddy the current inspection.
b. Time Required - Total of 0.5 man-hour using one (1) person.
c. Estimated Cost Impact of Stock Fund Items to the Field. N/A.
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 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 1-1520-238-23,16 May 94.

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 MDHS aircraft, forward a priority message, datafax or E-Mail to: Commander, USMTCOM, ATTN: AMSAT-C-XS (SOF Compliance Officer), per AR 95-3. Datafax number is DSN 693-2064 or commercial (314) 262-2064. E-Mail address is "<amsatcxs-st-louis-emh4.army.mil>". The report will cite this TB number, date of entry in DA Form 2408-13, 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.

(3) DA Form 2408-15, Historical Record for Aircraft.

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical Point of Contact for this TB is Mr. Lee Bumbicka, AMSAT-R-EIA, DSN 693-9867/1679 or commercial (314) 263-9867/1679.

b. Logistical Point of Contact for this TB is Mr. Jim Mason, SFAE-AV-MH, DSN 693-1947 or commercial (314) 263-1947.

c. Forms and Records Point of Contact for this TB is Ms. Ann Waldeck, AMSAT-1-MDM, DSN 490-2318 or commercial (314) 260-2318.

d. Safety Point of Contact for this TB is Mr. Howard Chilton, AMSAT-R-X, DSN 693-1587 or commercial (314) 263-1587.

e. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact Mr. Ron Van Rees, AMSAT-D-SAF, DSN 693-7844 or commercial (314) 263-7844. St Louis is GMT-6.

f. After hours contact ATCOM Command Operations Center (COC) DSN 693-2066/7 or commercial (314) 263-2066/7.

17. Reporting of Errors and Recommending Improvements. You can help 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-1-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you. You may also submit your recommended changes by E-mail directly to <daf2028@dmhl1.stl.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this TB.

By Order of the Secretary of the Army:

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

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
03221

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31-E, block no. 3657, requirements for TB 1-1520-238-20-86.

These are the instructions for sending an electronic 2028

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@daf2028.army.mil>
To: daf2028@dmhl.stl.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
1 2. 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.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

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

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 075386-000