# URGENT

TB 1-1520-238-20-87

# DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

# AH-64, INSPECTION OF THE NO. 1 STRINGER AT FUSELAGE STATION (FS) 383

**Headquarters, Department of the Army, Washington, D. C.**
**2 July 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THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 1a.

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

d. Aircraft in Transit.

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

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

e. Maintenance Trainers (Category A and B). Comply within 60 days of receipt of this message.

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

2. **Task/Inspection Suspense Date.** Suspense date is 30 days from receipt of superceded message, as stated in subject message, or receipt of the TB, whichever is received first.

3. **Reporting Compliance Suspense Date.** No later than 7 July 1997 per paragraph 14a of this TB.

4. **Summary of the Problem.**

a. Cracks have been discovered in fastener holes of the No. 1 stringer, P/N 7-311113512-43/123, in the area of Fuselage Station (FS) 385. This is the area where the anti flail bearing mount, P/N 7-311113528, connects to the stringer. Additionally, gaps have been found between the stringer and mount.

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

This TB supersedes USAATCOM Message 161907Z Jun 97 (AH-64-97-ASAM-06).

c. The purpose of this TB is to direct a one time inspection of the No. 1 stringer for cracks in the fastener holes and gaps in the interface of the stringer and the forward anti flail bearing mount between fuselage stations (FS) 383-386. .

5. **End Items to be Inspected.** Inspect all AH-64 Aircraft Serial Numbers 87-0504 through 90-0512.

6. **Assembly Components to be Inspected.**

| NOMENCLATURE | PART NUMBER | NATIONAL STOCK NUMBER |
|---|---|---|
| Stringer and Skin, Instl/ Assy AFT Fuselage (FS 280-450) | 7-311113512 | N/A |
| Bracket, Instl/Assy | 7-311113528 | N/A |

7. **Parts to be Inspected.**

| NOMENCLATURE | PART NUMBER | NATIONAL STOCK NUMBER |
|---|---|---|
| Stringer, No. 1 | 7-311113512-43 | N/A |
| | 7-311113512-123 | N/A |
| Bracket, Shaft Supt | 7-311113345 -3 | N/A |
| | 7-311113528 | N/A |

8. **Inspection Procedures.**

**NOTE**

Reference TM 1-1520-238-23P, Fig. 104, Area A&G, (FS 383) upper LH corner & RH corner of the page. The inspection area is the 4 mounting holes on the No. 1 Stringer which mate with those holes shown on the protruding forward section of the bracket assembly (Item 27). Pin rivets (Item 37) which go through three of the attachment holes and the fourth hole located in the left AFT position has Nut Plate (Item 44) with an NAS 1403-6 screw.

a. Access Fairing R410.

**NOTE**

Do not remove mount fasteners for this inspection.

b. Inspect the area of the stringer around the 4 forward fastener holes at fuselage station 383. These fasteners secure the forward side of the anti flail bearing support bracket assembly P/N 7-311113528 to the No. 1 stringer P/N 7-311113512-43/7-311113512-123.

c. Inspect the underside area of the stringer for cracks.

(1) If no crack is found, perform inspection in paragraph 8d.

(2) If a crack is observed and propagates inboard of the fastener hole:

(a) Submit a Category 1 Quality Deficiency Report (QDR) and call technical POC.

(b) The stringer must be replaced prior to the next flight. Contact logistical POC to schedule McDonnell Douglas helicopter service team for replacement.

(3) If the crack does not propagate inboard of the fastener hole:

(a) Contact logistical POC to schedule replacement.

(b) Perform a daily inspection of the crack before the first flight of the day. There are no flight restrictions. Crack is allowed only to the outboard side of the hole (refer to paragraph 9).

d. Inspect the interface area between the aft end of the No. 1 stringer and the forward end of the anti flail bearing support bracket for a gap using a feeler gauge.

(1) If gap is no greater than .002 inch, inspection is complete.

(2) If gap is greater than .002 inch, refer to paragraph 9c for correction procedure and inspect stringer for cracks every 50 flight hours until paragraph 9c has been complied with.

**9. Correction Procedures.**

a. If stringer crack propagates inboard from the fastener hole replace the No. 1 stringer before the next flight. Contact logistical POC to schedule replacement.

b. If the stringer crack propagates outboard from the fastener hole continue to inspect the No. 1 stringer before the first flight of the day. Contact the logistical POC to schedule replacement.

c. If gap is greater than .002 inch, contact the technical POC for installation of shim per ATCOM approved procedures.

d. Continue to inspect the No. 1 stringer for cracks at every 50 flight hours until gap is shimmed to .002 inch or less.

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

a. Parts Required. MDHS will provide parts for stringer replacement.

b. Requisitioning Instructions. N/A.

c. Bulk and Consumable Materials. List provided by technical POC.

d. Disposition. Dispose of removed parts/components in accordance with normal supply procedures. A Category 1 QDR is required.

e. Disposition of Hazardous Material. N/A.

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

**12. Application.**

a. Category of Maintenance. Aircraft Downtime will be Charged to: AVUM for the Inspection: AVIM for Shim Installation, and Depot for Stringer Replacement.

b. Estimated Time Required.

(1) Total of 1 man-hour using 1 person to inspect.

(2) Total of 1 hour downtime for one end item.

(3) Total of 24 man-hours using 2 persons to install shim.

(4) Total of 3 days downtime to install shim.

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. N/A

**13. References.**

a. TM 1-1520-238-23, 16 May 94

b. TM 1-1520-238-23P, 28 May 1996

**14. Recording and Reporting Requirements.**

a. Reporting Compliance Suspense Date (Aircraft). Upon entering the 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, USAATCOM, 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@st-louis-emh4.army.mil>". The report will cite this TB number, date of entry in DA Form 2408-13-1, the aircraft mission design and series serial numbers of aircraft in numerical order.

b. Task/Inspection Reporting Suspense Date (Aircraft). Upon completion of inspection, units will forward a priority message to: AAH-PM, ATTN: SFAE-AV-AAH-LF (Jim Mason), 4300 Goodfellow Blvd., St. Louis, MO or E-mail to "<mason@peo4.stl.army.mil>". The report will cite this TB number, date of inspection, aircraft serial number, aircraft and component hours, and results of the inspection. Inspection reports will be completed no later than 10 days after task/inspection suspense date.

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.

(4) DA Form 2408-18, Equipment Inspection List. (Used for the 50 hour stringer inspection. ULLS-A units will use an 800 number).

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

**16. Points of Contact.**

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

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

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

d. Material Management (Spares) Point of Contact for this message is Mr. Sam Samples. AMSAT-I-SAA, DSN 693-5969 or commercial (314)263-5969.

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

f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this message should contact CW5 Jay Nance, AMSAT-D-S, DSN 693-7844/3216 or commercial (314)263-7844/3216. Datafax number is 2917.

g. 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 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 <daf2028@dmh1.stl.army.mil>. A reply will be furnished directly to you.

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*
03868

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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

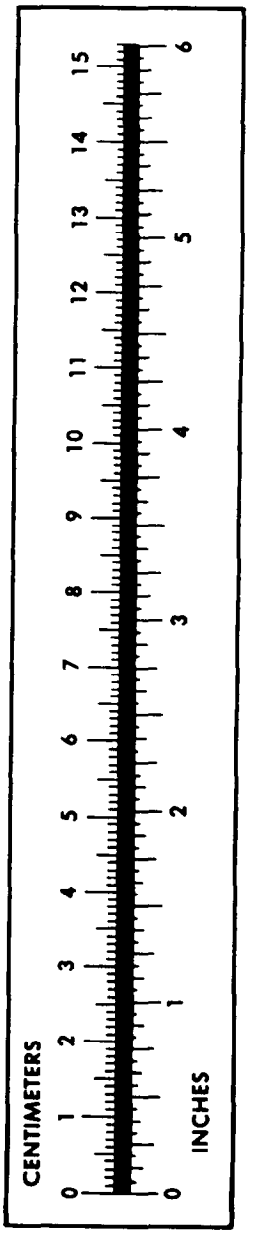
## TEMPERATURE

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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