

# URGENT

TB 1-1520-238-20-124

## DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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### INITIAL AND RECURRING INSPECTION OF TAIL ROTOR BELLCRANK AND SUPPORT BRACKET FOR ALL AH-64 SERIES AIRCRAFT.

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Headquarters, Department of the Army, Washington, D. C.  
4 April 2002

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

#### NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

#### 1. Priority Classification.Urgent

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 bellcrank assembly IAW TB 1-1520-238-20-124 within the next 10 flight hours, but NLT 11 April 2002." The red horizontal dash "-" may be cleared when the inspection of paragraph 8 and 9 are completed. The affected aircraft shall be inspected as soon as practical but no later than (NLT) 11 April 2002. Failure to comply with the requirements of this message within the time frame will cause the status symbol to be upgraded to a red "x".

b. Aircraft in maintenance facility. Aircraft will not be issued until compliance with this TB has been completed.

(1) Aircraft in AVUM/AVIM, and Depot. Same as para 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. For aircraft away from home station, this message authorizes a one time flight, with intermediate stops, to return to the nearest secured maintenance facility/home station.

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

(2) Ferry Status. Inspect within 10 hours/ 14 days from arrival at final destination.

d. Maintenance Trainers (Category A and B). Inspect NLT 16 July 2002

e. Component/Parts in Stock Including War Reserves at All Levels (Depot and Others). Upon receipt of this TB, the materiel condition tags of all items in all condition codes listed in paragraphs 6 and 7 shall be annotated to read "(TB 1-1520-238--20--124), Inspection of the tail rotor support bracket not complied with".

(1) Wholesale Stock --Upon receipt of this message, depot and materiel activity commanders will ensure all items in condition codes "A", "B", "C", "D", "E", and "L" listed in paragraph 7, are placed in condition

This TB supersedes USAAMCOM Safety of Flight Message 281930Z Mar 02

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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 TB IAW paragraph 14b(2) NLT 11 April 2002.

(2) Retail Stock – Report receipt of this TB IAW para 14c(1) NLT 4 April 2002. Upon Receipt of this message commanders and others maintaining retail stock at installation level and below shall contact the supported aviation unit to perform the inspection required by para 8 and the correction procedures of para 9 on discrepant materiel. Disposition of discrepant materiel will be IAW para 10. Report compliance with this TB IAW para 14d(2) NLT 11 April 2002.

f. Component/Parts in Stock Including War Reserves at All Levels (Depot and Others). Items listed in para 7 in work will not be issued until compliance with this TB.

**2. Task/Inspection Suspense Date.** Complete the inspection IAW paragraph 8 within 10 flight hours but NLT 11 April 2002 and report IAW paragraph 14a(2) NLT 15 April 2002.

**3. TAMMS Reporting Compliance Suspense Date.** Report compliance IAW 14a(1) NLT 4 April 2002.

**4. Summary of the Problem.**

a. History-- Some recently delivered AH--64D aircraft have been received with improperly manufactured bellcrank support brackets, which allow contact between the tail rotor bellcrank and the support bracket. This issue affects both A and D model aircraft.

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

c. The purpose of this TB is to:

(1) Conduct an initial inspection and temporary repair of bellcranks and bellcrank support brackets with signs of contact.

(2) Perform a recurring inspection for bellcranks and brackets with signs of contact.

(3) Perform a permanent repair of brackets without a cutout at the next Phase inspection.

**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	NATIONAL STOCK NUMBER
Bracket, Control	7-311523003-5	1615-01-251-9391
Bracket, Control	7-311523003-BSC	1615-01-251-9391
Bellcrank	7-311523014-5	1680-01-224-6688
Bellcrank	7-311523014-BSC	1680-01-224-6688

**8. Inspection Procedures.**

**NOTE**

Prior to beginning the procedures IAW Paragraph 8 and 9, contact the LAR for all required diagrams and repair instructions.

a. Remove access panel L200 IAW TM 1-1520-238-23 or IETM.

b. Determine the configuration of the bellcrank support bracket.

(1) A correctly manufactured bellcrank support bracket, P/N 7-311523003-5, has a reduced section (cutout) on one side of the bathtub area of the fwd inboard (inbd) mounting bolt. The reduced section allows clearance for the bellcrank at maximum right pedal.

(2) The incorrectly manufactured bellcrank support bracket does not have the reduced area (cutout) on the bathtub area of the fwd inbd mounting bolt. The inbd leg of the counterweight bellcrank arm may contact the bellcrank support bracket at full right pedal.

- c. If a bellcrank support bracket without a cutout is installed, perform a clearance check as follows
  - (1) Using AGPU or APU hydraulic power, apply full right pedal input until the tail rotor bellcrank counterweight arm has reached its lowest position.
  - (2) If any evidence of contact between the bellcrank counterweight arm and the bellcrank support bracket is observed, or there is any evidence of previous contact, correct IAW paragraph 9a.
  - (3) If no contact, or evidence of previous contact, between the bellcrank counterweight arm and bellcrank support bracket is observed. Enter a red diagonal "/" status symbol with the following statement: "Repair tail rotor bellcrank bracket assembly IAW TB 1-1520-238-20-124 at next phase."
- d. Inspect the bellcrank, P/N 7-311523014--5, as follows -
  - (1) Inspect outboard surface of the bellcrank for missing paint and scratches, dents or damage. If any damage is found, blend out and apply touch up paint. Continue to inspect IAW paragraph 8d(2).
  - (2) Inspect bottom area of the bellcrank inboard counterweight arm in section closest to bellcrank mounting bracket upper surface for nicks, paint removal, or damage from bracket contact.
  - (3) If damage is found, enter a red diagonal "-" status symbol with the following statement: "Repair tail rotor bellcrank IAW TB 1--1520-238-20-124 at next phase."
  - (4) Correct IAW paragraph 9c.
- e. If a bellcrank support bracket with a cutout is installed, and if no damage is observed on both the bellcrank and bellcrank support bracket- clear the red horizontal dash "-/" entry required IAW paragraph 1a.

**9. Correction Procedures.**

**NOTE**

During the temporary and permanent repair, precautions to prevent FOD must be adhered to. A vacuum device must be used during the repair to collect metallic dust and shavings.

- a. Perform the following AVUM level correction procedures for the bellcrank support bracket-

**NOTE**

This repair is considered a temporary repair. Units must schedule permanent repair of the bellcrank support bracket and bellcrank IAW paragraph 9b at the next 250 hour phase inspection. Perform a recurring visual inspection at each 10 hr/14 day inspection until the permanent repair is completed.

- (1) Install rig pins at tail rotor control bellcranks P/N 7-311517052 (FS 164.33) and P/N 7--311524010 (FS 347.96).
- (2) Disconnect push rod assemblies P/N 7-211524001--7 and P/N 7--211524001-9 from the tail rotor control bellcrank (FS 216.25).
- (3) Repair the bellcrank support bracket using a half-round hand file. Remove approximately 0.060 inch to assure clearance.
- (4) Touch-up reworked area using MIL-C-5541 class a (corrosion resistant coating) and MIL-PRF-85582 Type 1/Class 2 (epoxy primer).
- (5) Reassemble control rod assemblies, remove rig pins and inspect IAW TM 1-1520-238-23 or the IETM.
- (6) Enter a red diagonal "/" status symbol with the following statement: "Repair tail rotor bellcrank bracket assembly IAW TB 1-1520-238-20--124 at next phase." Schedule an AVIM level repair of the bracket at the next scheduled 250 hour phase inspection IAW paragraph 9b.
- (7) Clear the red dash "-/" entry required IAW paragraph 1a and enter a new red horizontal dash "--" status symbol with the following statement: "Inspect tail rotor bellcrank bracket assembly at each PMS--1

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IAW TB 1-1520-238-20-124." Inspect the bellcrank support bracket IAW paragraph 8c of this TB at each 10 hour/14 day MPG-1 until the AVIM level permanent repair is completed IAW paragraph 9b. ULLS-A units will use an "800" inspection number for the recurring 10 hour/14 day PMS-1 inspection.

- b. At the next 250 hour phase,

### NOTE

AH-64A only- schedule an AVIM level repair of the bellcrank support bracket.

### NOTE

AH-64D only- Contact the LOG POC IAW paragraph 16b for a replacement bellcrank support bracket. A new or reworked bracket will be provided at no cost to the unit.

(1) Install rig pins at tail rotor control bellcranks P/N 7-311517052 (FS 164.33) and P/N 7-311524010 (FS 347.96).

(2) Disconnect push rod assemblies P/N 7-211524001-7 and P/N 7-211524001-9 from the tail rotor control bellcrank (FS 216.25). Retain hardware for reinstallation.

(3) Remove the bellcrank by removing two cotter pins (P/N MS24665-153), two nuts (P/N 21224-4) and two bolts (P/N MS27576-4-17) from top of bellcrank. Remove cotter pin (P/N MS24665-153), nut (P/N MS1224-4), and bolt (P/N MS27576-4-45) from bottom of bellcrank.

(4) Remove the bellcrank support bracket from aircraft by removing four bolts (2 each P/N NAS6604H9 and 2 each P/N NAS6604H10) from bellcrank support bracket.

### NOTE

AH-64A only- completion of steps 9b(5) and 9b(6) will be performed by AVIM level repair of the bellcrank support bracket.

### NOTE

AH-64D only- completion of steps 9b(5) and 9b(6) are note required if a new or repaired bellcrank support bracket has been provided by the log PM for installation.

(5) Clamp the bellcrank support bracket securely to a wood 2x4 and install the 2x4 in bench vise. Referencing the procedures received from the LAR or safety website, use a pin router or half-round hand file to remove metal as required.

(6) Touch-up repaired area using MIL-C-5541 Class A (corrosion resistant coating) and MIL-PRF-85582 Type 1/Class 2 (epoxy primer).

(7) Reinstall bellcrank support bracket in aircraft IAW TM 1-1520-238-23 or the IETM.

- c. At the next 250 hour phase, perform the following AVIM/OLR level repair of the bellcrank.

(1) Install rig pins at tail rotor control bellcranks P/N 7-311517052 (FS 164.33) and P/N 7-311524010 (FS 347.96).

(2) Disconnect push rod assemblies P/N 7-211524001-7 and P/N 7-211524001-9 from the tail rotor control bellcrank (FS 216.25). Remove bellcrank from the bellcrank support bracket. Retain hardware for reinstallation.

(3) Referencing the rework procedures provided by the LAR, the bellcrank may be repaired to a maximum depth of 0.060 inch and blended out approximately 12 to 1 in each direction. Bellcranks damaged beyond these limits must be replaced.

(4) Conduct a dye penetrant inspection of the area and touch up the finish.

(5) Reinstall bellcrank IAW TM 1-1520-238-23 or the IETM.

(6) Reinstall the push rods P/N 7-211524001-7 and P/N 7-211524001-9 onto the tail rotor bellcrank.

(7) Remove rig pins.

d. Perform flight control MOC. No MTF is required.

**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 through normal supply channels using normal supply procedures. All requisitions shall use project code "X1O" (X-Ray ONE Oscar) per this TB.

**NOTE**

Project code "X1O" is required to track SOF costs in an attempt to establish a future fund to reimburse units for stock fund expenditures created by SOF messages.

c. Bulk and Consumable Materials. N/A.

d. Disposition. Dispose of removed parts/components IAW normal supply procedures. All turn-in documents must include project code "X1O".

e. Disposition of Hazardous Material. IAW Environmental Protection Agency Directives as implemented by your servicing environmental coordinator (AR 200-1).

**11. Special Tools, Jigs and Fixtures Required.** File, Half-Round, NSN 5110-00-241-9149.

**12. Application.**

a. Category of Maintenance. AVUM for initial inspection and 10 hour/ 14 day interim correction. AVIM/ Depot for machining the mounting bracket and bellcrank repair. Aircraft downtime will be charged to AVIM.

b. Estimated time required.

(1) Time to complete the initial inspection and perform temporary repair-

(a) Total of 1 man-hours using 2 persons.

(b) Total of .5 hours downtime for one end item.

(2) Time for permanent repair-

(a) Total of 4 man-hours using 1 person.

(b) Total of 4 hours downtime for one end item.

c. Estimated Cost Impact of Stock Fund Items to the Field.

NOMENCLATURE	PART NUMBER/ NATIONAL STOCK NUMBER	QUANTITY	COST EACH	TOTAL \$
Bracket, Control	7-311523003-5 1615-01-251-9391	1	\$252.92	\$252.92
Bellcrank	7-311523014-5 1680-01-224-6688	1	\$545.45	\$545.45
Maximum total cost per aircraft = \$798.37				

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. Interactive Electronic Technical Manual (IETM): TM 1-1520-Longbow/Apache IETM, CD No. 1, Version 3.1.2, Dated 19 Nov. 98, CD Date 1 Dec 98 or subsequent.

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- b. TM 1-1520-238-23, Aviation Unit and Intermediate Maintenance Manual for AH-64A Apache Attack Helicopter, 16 May 94.
- c. TM 1-1520-238-23P-3, Aviation Unit and Intermediate Maintenance Repair Parts and Special Tools List for AH-64A Apache Attack Helicopter, 28 May 96.
- d. TM 1-1500-204-23-10, Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) Manual for General Aircraft Maintenance, Volume 10 (Sheet Metal Shop Practices) 31 July 1992.
- e. DA PAM 738-751, 15 Mar 99, Functional users manual for The Army Maintenance Management System- Aviation (TAMMS-A).

### 14. Recording and Reporting Requirements.

#### a. Aircraft-

(1) TAMMS reporting compliance suspense -- Upon entering requirements of this TB 1-1520-238-20-121 on DA Form 2408-13-1 on all subject MDS aircraft, forward a priority message, Datafax or E-Mail to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000 IAW AR 95-1 NLT date specified in paragraph 3. Datafax number is DSN 897-2111 or commercial (256) 313-2111. E-Mail address is "SAFEADMS@REDSTONE.ARMY.MIL". The report will cite this TB 1-1520-238-20-121 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 date (aircraft) -- Upon completion of initial inspection, commanders will forward a priority message to the logistical point of contact in paragraph 16b. The report will cite this TB number, Date of Inspection, Aircraft Serial Number, Aircraft 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 (spares) -- Depot and materiel activity commanders will report receipt of this TB by email 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 date (spares) -- Depot and materiel activity commanders will provide a DD form 1225 to the wholesale materiel (spares) POC listed in paragraph 16c NLT date specified in paragraph 1e(1). Provide an estimate of the cost reimbursable funding required to move serviceable items on hand listed in paragraph 7 to a work area, unpack materiel, 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 fax and provide local POC.

#### c. Materiel in Retail Storage-

(1) Report receipt of this TB -- Commanders and Facility Managers will report receipt of this TB 1-1520-238-20-121 by E-mail or Datafax to the Logistical Point of Contact (POC) listed in paragraph 16b NLT date specified in paragraph 1.e.(2). Provide local POC.

(2) Task/Inspection reporting suspense date -- Commanders and Facility managers will report inspection results to the Logistical Point of Contact in paragraph 16.b NLT date specified in paragraph 1.e.(2). Report the quantity inspected by condition code and the resulting condition code. Report by E-Mail or Datafax 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 2408-13, 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. The 250 Phase Inspection will be carried on this form until incorporated into the TM. ULLS--A users will use one of their 800 inspection numbers.

(5) DD Form 1575/DD Form 1575-1, Suspended Tag/Label - Materiel (Color Brown). Annotate Remarks Block with "Suspended IAW SOF AH-64-02-ASAM-- 03 (TB 1-1520-238-20-124)."

(6) DD Form 1577/DD Form 1577-1, Unserviceable (Condemned) Tag/Label- Materiel (Color Red). Annotate remarks block with " Unserviceable IAW SOF AH-64-02-ASAM- 03 (TB 1-1520-238-20-124)."

(7) DD Form 1577-2/DD Form 1575-3, Unserviceable (Reparable) Tag/Label - Materiel (Color Green). Annotate remarks block with " Unserviceable IAW SOF AH-64-02-ASAM- 03 (TB 1-1520-238-20-124)."

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

**16. Points of Contact.**

a. Technical point of contact for this TB is Mr. Daniel Rice, AMSAM-AR-AE-I-P-A, DSN 897-2350 ext. 7853 or commercial (256) 705-9853. Datafax is (256) 705-9918. E-mail is daniel.rice@redstone.army.mil.

b. Logistical point of contact for this TB is:

(1) Primary - Mr. Steve Hayes, SFAE-AV-AAH-LF, DSN 897-4245 or commercial (256) 313-4245. Datafax is DSN 897-4343 or (256) 313-4343. E-mail is Steve.Hayes@peoavn.redstone.army.mil.

(2) Alternate -- Mr. Mike Sharp, SFAE-AV-AAH-LF, DSN 897-4236 or commercial (256) 313-4236. Datafax is DSN 897-4343 or (256) 313-4343. E-mail is Mike.Sharp@peoavn.redstone.army.mil.

c. Wholesale material point of contact (spares) is

(1) Bracket Control - Mr. Paul Hughes, DSXR-XBD, DSN 695-6328 or commercial (804) 279-6328, datafax is DSN 695-5695, E-Mail is phughes@dscr.dla.mil

(2) Bellcrank -- Mr. Guillermo (Gill) Calvo, AMSAM-MMC-AV-AA, DSN 897-1352 or commercial (256) 313-1352. Datafax is DSN 897-1556. E-Mail is guillermo.calvo@redstone.army.mil.

d. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-MA--NM, 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. Safety point of contact for this TB is:

(1) Primary - Mr. Harry Trumball, AMSAM-SF--A, DSN 897-2068 or commercial (256) 313-2068. Datafax is DSN 897-2111 or commercial (256) 313-2111. E-mail is Harry.Trumball@redstone.army.mil.

(2) Alternate - Mr. Joseph Creekmore AMSAM-SF-A, DSN 897-2090 or commercial (256) 313-2090. Datafax is DSN 897-2111 or commercial (256) 313-2111. E-mail is Howard.Chilton@redstone.army.mil.

f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact - (Huntsville, AL is GMT minus 6 hours.) Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-6856 or commercial (256) 313-6856. Datafax is DSN 897-6630 or commercial (256) 313-6630. E-mail is Ronnie.Sammons@redstone.army.mil.

g. After hours contact AMCOM Operations Center (AOC) 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: Commander, US Army Aviation

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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**  
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0209802

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General, United States Army  
Chief of Staff

**DISTRIBUTION:**

To be distributed in accordance with Initial Distribution Number (IDN) 314044, requirements for TB 1-1520--238-20-124.



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.