URGENT

TB 1-1520-238-20-119

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INITIAL AND RECURRING INSPECTION OF THE FIRE EXTINGUISHER CHECK VALVES FOR CORROSION FOR ALL AH–64 AIRCRAFT

Headquarters, Department of the Army, Washington, D.C.
14 March 2002

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THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.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 the DA Form 2408–13–1. Enter a red horizontal dash //–// status symbol with the following statement: "Inspect the fire extinguisher check valves for corrosion IAW AH–64–01–ASAM–06 (TB 1–1520--238–20–119) within the next 50 flight hours, but NLT 1 October 2001." Clear the red horizontal dash //–// entry when the procedures IAW para 8 and 9 are completed. The affected aircraft shall be inspected as soon as practical but no later than 1 October 2001. Commanders who are unable to comply with the requirements of this message 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, or Depot – Commanders and facility managers will not issue aircraft until they are in compliance with this message.

(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.

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

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

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

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

This TB supersedes USAAMCOM Message 021922Z Aug 01 (AH-64–01–ASAM–06)

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

2. **Task/Inspection Suspense Date.** Complete the inspection IAW paragraph 8 within the next 50 flight hours but NLT 1 October 2001 and report IAW para 14a(2) NLT 5 October 2001.

3. **Reporting Compliance Suspense Date**. Report compliance IAW para 14a(1) NLT 23 August 2001.

4. **Summary of the Problem.**

a. AH--64--00–ASAM–08 (TB 1–1520–238–20–100) was issued on 27 Jan 00 to require an initial and recurring inspection of the fire extingusher tubes for corrosion. Subsequent reports from the field indicate that, during normal maintenance inspections, extensive corrosion was found inside the engine fire extinguisher system check valves. The internal check valve ball had corroded to a point that it seized and was blocking the secondary bottle entry port into the valve.

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

c. The purpose of this TB is to –

(1) Require an initial inspection of the engine number 1 and 2 and the auxiliary power unit (APU) fire extinguishing check valves, and the fire bottle vertical outlet ports.

(2) Require a recurring inspection at phase numbers 2 and 4 for all three fire extinguisher system check valves and the fire bottle outlet ports.

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

6. **Assembly Components To Be Inspected.**

Nomenclature	Part Number	NSN
Fire Extinguisher System Assy	7–311620010	N/A

7. **Parts To Be Inspected**.

Nomenclature	Part Number	NSN
Valve, Stop–Check	7–117210003	4820–01–170--1280
Extinguisher, Fire	30205000--3	4210–01–359--4769

8. **Inspection Procedures**.

a. Initial Inspections –

(1) Initial Check Valve Inspection –

(a) Remove the three fire extinguisher system check valves IAW para 12.42, TM 1--1520–238–23 for the AH–64A, and the IETM for the AH–64D.

(b) Remove tube assemblies part number 7--311620503 and part number 7–311620504 IAW paragraph 12.38, TM 1–1520–238–23 for the AH–64A, and the IETM for the AH–64D. Refer to figure 668, items 26 and 27, TM 1--1520–238–23P, for the AH64A for the location of these tubes or the IETM for the AH–64D.

(c) Rapidly move the check valve side to side to ensure unrestricted movement of the check valve ball.

(d) If ball moves unrestricted in check valve and there is no pitting observed, clean valve IAW paragraph 9A.

(e) If ball is pitted and/or seized to the valve, replace the valve IAW paragraph 9c.

(f) Inspect the three threaded portions on each valve using a 10X magnifier. Replace all cracked valves.

(2) Initial Fire Bottle Outlet Port Inspection –

(a) Inspect inside the fire bottle cartridge housing vertical outlet ports for evidence of pitting corrosion or evaporation residue.

(b) If pitting or evaporation residue is found – clean inside the port IAW paragraph 9b.

(3) If no pitting or residual is noted reinstall the tube assemblies part number 7–311620503 and part number 7–311620504 IAW paragraph 12.39, TM 1--1520–238–23 for the AH–64A, and the IETM for the AH–64D and reinstall the check valves IAW TM–1--1520–238–23, para 12.42 for the AH--64A and the IETM for the AH–64D.

b. Recurring Inspections – These inspections will be carried on the DA Form 2408--18 until the phase maintenance inspection checklists have been updated. ULLS--A units will use this message as authority to use their 800 inspection numbers for the corrosion inspections of all three fire extinguisher check valves at phases 2 and 4.

(1) Check Valve – The inspection for corrosion required IAW para 8a(1) will be completed at phase inspection numbers 2 and 4 for all three fire extinguisher check valves.

(2) Fire Bottle Outlet Ports – The inspection of the fire bottle outlet ports required IAW para 8a(2) will be required at phase inspection numbers 2 and 4.

9. Correction Procedures.

a. Check Valve Cleaning Procedures –

(1) Submerge two way check valve in Turco corrosion resistant fluid, NSN 6850--00–551–9577, for a minimum of 3 minutes. After 3 minutes agitate valve in fluid to remove excess corrosion and evaporation residue.

(2) If required, use a soft brush to help remove corrosion and evaporation residue.

NOTE

After corrosion has been removed, inspect inside of the valve for corrosion or pitting, paying special attention to the ball seats and check ball. If pitting exists in either area, replace IAW para 9c.

(3) After the two way check valve has been cleaned in the Turco corrosion resistant fluid, flush entire valve with clean water and allow to air dry.

(4) Use of compressed air to expedite dry time is permitted.

(5) Apply corrosion prevention compound (CPC), fluid film, NSN 8030–01–387–1131, to inside of two way check valve.

(a) Cap one end of valve and fill inside of valve with CPC, fluid film.

(b) Cap the two other ports and rotate valve to ensure a complete coating of the entire internal section of the valve.

(c) When the entire internal section of the valve has been coated, drain excess fluid from the valve and allow to air dry for 20 minutes.

(6) Reinstall the check valve IAW TM 1--1520–238–23, para 12.42 for the AH--64A and the IETM for the AH–64D.

b. Fire Bottle Outlet Ports Cleaning Procedures –

(1) Clean with cotton swab dipped in Turco corrosion resistant fluid.

(2) Swab vertical outlet ports with cotton swabs soaked in water. Allow to air dry.

(3) Apply CPC, fluid film, to inside of vertical outlet ports with cotton swab, and allow to air dry.

(4) Reinstall tube assemblies part number 7--311620503 and part number 7–311620504 IAW para 12.39, TM 1–1520–238--23 for the AH–64A, and the IETM for the AH--64D.

c. Following the procedures required IAW para 8a(1) and 9a(1), if the ball is pitted and/or seized to the valve, replace the valve IAW TM 1--1520–238–23, para 12.42 for the AH--64A and the IETM for the AH–64D.

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

a. Parts Required – Items cited in para 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) “X0T” (X--ray Zero Tango).

NOTE

Project code “X0T” is required to track and establish a data base of stock fund expenditures incurred by the field as a result of SOF actions.

c. Bulk and Consumable Materials –

Nomenclature	Part Number	NSN
Turco corrosion resistant fluid	WO–1	6850–00–551--9577
Corrosion prevention compound	fluid film	8030–01–387--1131

d. Disposition – Demilitarize/Mutilate IAW TM 1–1500–328--23 any part/component which does not meet inspection criteria.

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

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

12. **Application.**

a. Category of Maintenance – AVUM. Aircraft downtime will be charged to AVUM.

b. Estimated Time Required –

(1) To inspect the check valves and vertical outlet ports – total of 1.5 man–hours using 1 person.

(2) To clean and install the check valves – total of 1.5 man–hours using 1 person.

(3) To clean the vertical outlet ports – total of 0.5 man–hour using 1 person.

(4) Total of 3.5 hours downtime for one end item.

c. Estimated Cost Impact to the Field – Parts common to all AH–64 series aircraft:

Nomenclature	Part No/NSN	QTY	Cost Ea.
Valve, Stop–Check	7--117210003/ 4820–01--170–1280	3	$215.40

Total approximate cost per aircraft = $646.20

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 – A copy of this TB shall be inserted in the appropriate publication, or filed with appropriate IETM, as authority to implement the change until the printed change or updated ITEM is received.

(1) Interactive Electronic Technical Manual (IETM): TM 1--1520–Longbow/Apache IETM, CD No. 1, version 3.1.2, data 19 Nov 98, CD date 1 Dec 98 or subsequent.

(2) TM 1–1520–238–PM – Phased Maintenace Inspection Checklist for Army AH–64A Helicopter, 30 Jun 94.

13. **References.**

a. DA Pam 738–751, 15 Mar 1999, Functional Users Manual for the Army Maintenance Management System – Aviation (TAMMS–A).

b. Interactive Electronic Technical Manual (IETM): TM 1–1520– Longbow/Apache IETM, CD No. 1, version 3.1.2, data 19 Nov 1998, CD date 1 Dec 1998 or subsequent.

c. TM 1–1520--238–PM, Phased Maintenance Inspection Checklist for Army AH–64A Helicopter, 30 Jun 94.

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

e. TM 1–1520--238–23P, Aviation Unit and Intermediate Maintenance Repair Parts and Special Tools List for AH–64A Apache Attack Helicopter, 27 March 1995.

f. TM 1–1500--328–23 – Aeronautical Equipment Maintenance Management Policies and Procedures, 30 July 1999.

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 effected aircraft, commanders will forward a priority message, datafax or email to: CDR, AMCOM, ATTN: AMSAM–SF–A (SOF Compliance Officer), Redstone Arsenal, AL 35898–5000, IAW AR 95–1, NLT date specified in para 3. Datafax number is DSN 897–2111 or (256) 313–2111. E–mail address is "SAFEADM@redstone.army.mil." The report will cite this message and 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 – N/A.

b. Wholesale Spare Parts/Assemblies -- N/A

c. Retail Spare Parts/Assemblies – N/A.

d. The following forms are applicable and are to be completed IAW DA PAM 738–751, 15 Mar 1999 --

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.

(5) DD Form 1577/DD Form 1577--1, Unserviceable (Condemned) Tag/Label -- Materiel (Color Red). Annotate remarks block with "Condemned IAW AH–64–01--ASAM–06 (TB 1--1520–238–20–119) and mutilated IAW TM 1–1500–328–23."

(6) DD Form 1577–2/DD Form 1577–3, Unserviceable (Reparable) Tag/Label – Materiel (Color Green). Annotate remarks block with "Unserviceable IAW AH–64–01–ASAM--06 (TB 1--1520–238–20–119)."

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

16. **Points of Contact**.

a. Technical point of contact is Mr. Andy Fabery, AMSAM-RD--AE–I–P–A, DSN 897-4802 or (256) 313-4802, datafax is DSN 897-4923 or commercial (256) 313-4923. E-mail is "Andrew.Fabery@redstone.army.mil".

b. Logistical point of contact is Mr. Steve Hayes, SFAE-AV-AAH-LF, DSN 897-4245 or (256) 313-4245, datafax is DSN 897-4343 or commercial (256) 313-4343. E–mail is "Steve.Hayes@peoavn.redstone.army.mil".

c. Wholesale point of contact is Mr. Paul Hughes, DSCR–XBD, DSN 695–6328 or commercial (804) 279–6328. Datafax is DSN 695–5695 or commercial (804) 279–5695. E--mail is "PHughes@dcsr.dla.mil".

d. Forms and Records point of contact is Ms. 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" .

e. Safety points of contact are –

(1) Primary – Mr. Harry 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 – Mr. Howard Chilton, AMSAM-SF-A, DSN 897-2068 or commercial (256) 313-2068. 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 one of the following (Huntsville, AL, time is GMT minus 5 hours):

(1) Primary – Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-6656 or commercial (256) 313-6656. Datafax is DSN 897–6603 or commercial (256) 313–6603. E-mail is "Ronnie.Sammons@redstone.army.mil".

(2) Alternate – Mr. Paul W. Tarr, AMSAM–SA--CS–NF, DSN 897–6861 or (256) 313–6861. Datafax is DSN 897--6630 or (256) 313–6630. Email is "Tarrpw@redstone.army.mil".

g. 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 "2028@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
0207213

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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: <2028@redstone.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).