ROUTINE

TB 1–1520–238–20–123

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

AIRCRAFT INSPECTION CRITERIA FOR SEARCHLIGHT ASSEMBLY AH–64 AIRCRAFT P/N 7–211B12031 NSN 6220–01–160–3527

Headquarters, Department of the Army, Washington, D. C.
15 July 2002

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. **Priority Classification** ROUTINE.

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB) the condition status symbol of the cited aircraft will be changed to a **dash.** The **red horizontal dash** // **–** // entry shall state "**Inspect searchlight assembly, P/N 7–211B12031 in accordance with this TB 1-1520-238120-123".** These procedures must be accomplished at next 10 hour/14 day inspection or 10 days after receipt of this TB (whichever comes first).

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

c. Aircraft Undergoing Maintenance. Aircraft will not be issued until compliance with this TB has been completed.

d. Aircraft in Transit. Aircraft will not be issued until compliance with this TB has been completed.

e. Maintenance Trainers (Category A, B, and Others). Aircraft will not be issued until compliance with this TB has been completed.

f. Component/Parts in Stock Including War Reserves at All Levels (Depot and Others). Not Applicable.

2. **Task/Inspection Suspense Date.** This inspection should be within 10 days from receipt of this TB or the next scheduled 10 hour/14 day inspection, whichever occurs first.

3. **Reporting Compliance Suspense Date**. Not Applicable.

4. **Summary of the Problem**.

a. Searchlights on the AH–64D aircraft have been failing because of increased vibration brought on by a design relocation during production. This harsh environment causes some internal/external fasteners to loosen.

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

c. The purpose of this TB is to ensure that all AH–64D aircraft searchlights are inspected for this vibration problem and that locking compound is applied to fasteners as presented in paragraph 9.

5. **End Items to be inspected**. All Army AH–64 aircraft.

6. **Assemblies to be Inspected**.

Nomenclature	Part Number	National Stock Number
Assembly, Searchlight	7–211B12031	6620-01-160-3527
Motor Assy	46-0956-3	6105-01-038-9984
Rotating Motor (B1) 25140	3A1536	6105-00-635-5879
Base Plate Assy	46–0851–1	6220-01-022-1780

7. **Parts to be Inspected**.

Nomenclature	Part Number	National Stock Number	Quantity
Screw, machine	MS51958–62	5305-00-889-2997	14
	AN960PD8L	5310-00-184-9002	2
Washer, flat	AN960JD10L	5310-01-105-7241	16
Cover, terminal	A6881	5940-00-672-1607	1
Screw, machine	MS35206–230	5305-00-889-3000	1
	MS35206-232	5305-00-984-4992	2
Block, terminal	A-6906–1	5940-00-983-6049	1
Screw, machine	MS5206–226	5305-00-984-4983	1
Washer, lock	MS35338–41	5310-00-045-4007	5
Plate, mounting	46–0851–1	6620-01-022-1780	1
Screw, machine	MS24693S28	5305-00-837-3343	4
Washer	MS35338–41		4
Nut, hex	NAS671–6	5310-00-631-1294	4
Gearbox assy	46–0965–5		1
Cover,	B-6908–1	6620-00-930-8338	1
Plate, identification	46–0880–1		1
	46–1113–1		1
Screw	MS3520-209	5305-00-959-1713	2

Nomenclature	Part Number	National Stock Model	Quantity
Washer, lock	MS35333–35	5310-00-579-5554	2
Motor	A-6532	6105-00-635-5878	1
Plate, motor	46–0955–1	6625--00-017-2641	1
Screw, machine	MS24693S10	5305-00-713-8892	2
Filter, noise	A-6907-1	5915-00-503-3873	1
Screw, machine	MS35206–213	5305-00-809-3316	2
Nut, hex	MS21042–04	5310-00-811-6419	2
Gear, worm	A-6594	220-00-326-5590	1
Setscrew	AN565D4H2	5305-00-336-2152	2

8. **Inspection Procedures**.

NOTE

• All AH–64D aircraft searchlight assemblies must be checked for proper operation and hardware security. Locking compound shall be applied according to the procedures in paragraph 9.

• AH–64A aircraft exhibiting the problem are authorized to use these procedures, but initial inspection is not required.

a. Check removed and attaching parts for damage.

b. Check wires and terminals for wear, cracks, and cuts.

c. Check removed and attaching parts for corrosion.

9. **Correction Procedures.**

NOTE

Observe all safety precautions when entering the pilot station.

a. **Searchlight Unit Removal.** (See Figure 1.)

(1) Safe aircraft per procedures in TM 1–1520–238–23 and IETM 1–1520–251–Longbow publications.

(2) Loosen searchlight (1) on helicopter fuselage (2) by removing 12 machine screws (3) and washers (4) from searchlight mounting plate (5).

(3) Lower searchlight (1) from helicopter fuselage (2).

(4) Remove terminal cover (6) from terminal block assembly (7) by removing two screws (8) and lockwashers (9).

(5) Detach wires (10) from terminal block assembly (7).

(6) Identify and tag wires (10)

(7) Remove six screws (11), lockwashers (12), and detach terminal lug(s) (13) from terminal block (14).

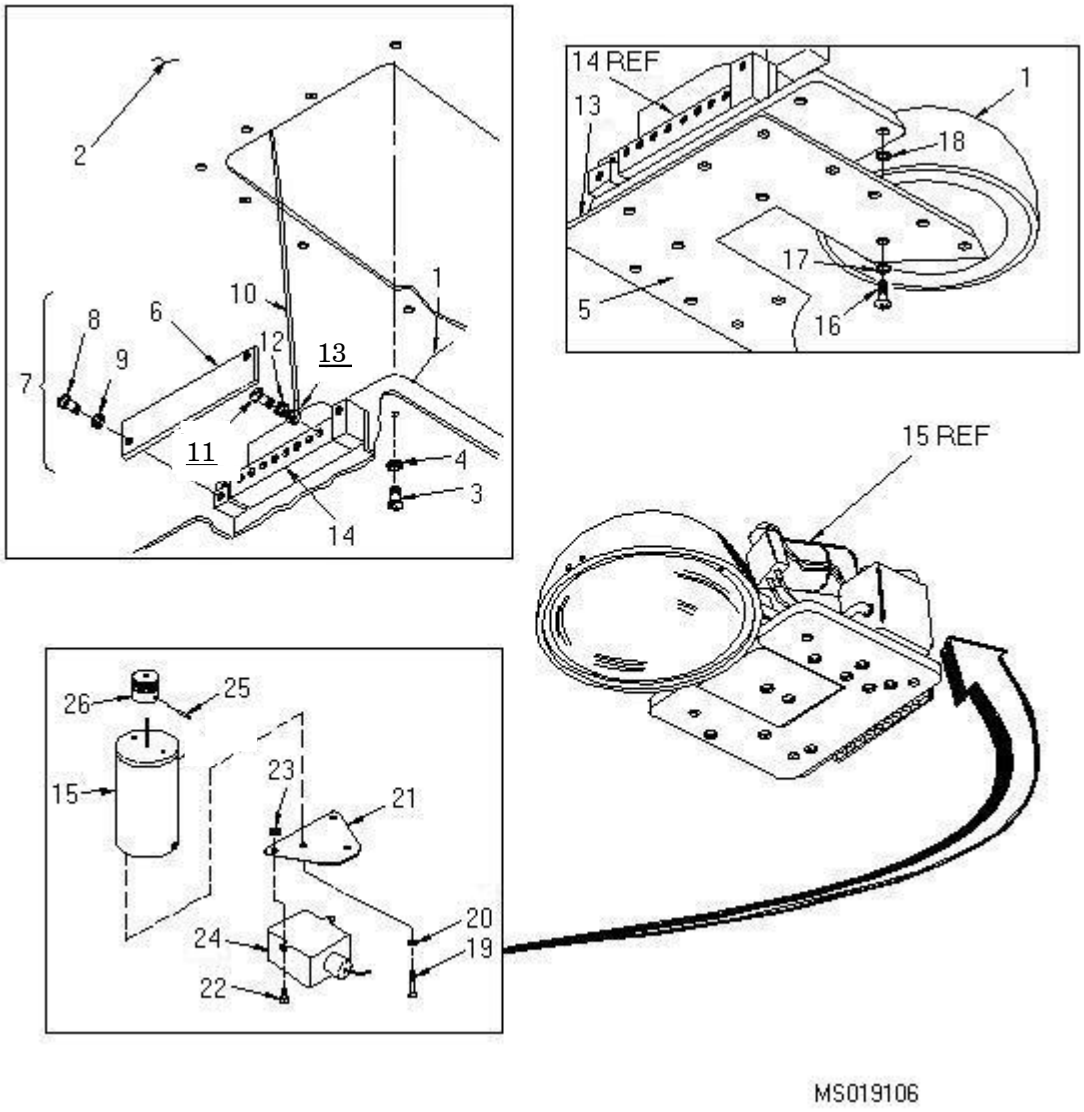

Figure 1. Searchlight Unit and Motor Removal and Installation

(8) Remove terminal block (14) .

(9) Remove searchlight (1) from helicopter fuselage (2).

(10) Locate motor (15) on searchlight (1) and searchlight mounting plate (5).

NOTE

When the searchlight faces down (with the searchlight mounting plate closest to an individual) the motor is located off center and to the right.

(11) Remove four screws (16), washers (17), hex nut (18) and searchlight mounting plate (5), from searchlight (1).

b. **Motor Components Removal.** (See Figure 1.)

(1) Remove right mounting screw (19) and washer (20) from gear housing plate (21).

(2) Apply locking compound (MIL–S–22473 Grade B) to threads of mounting screw (19).

(3) Remove left mounting screw (22), hex nut (23), noise filter (24), and gear housing plate (21) from motor (15).

NOTE

It is sometimes more efficient to apply locking compound and immediately reinstall parts and components.

(4) Apply locking compound to threads of screw (22) and reinstall screw and hex nut (23) in noise filter (24), gear housing plate (21), and motor (15).

c. **Motor Components Installation (MOC).** (See Figure 1).

CAUTION

Care must be taken to ensure that the helical gear mates correctly with the motor wormgear.

(1) Remove two helical gear setscrews (25) and apply locking compound to threads.

(2) Install setscrews (25) on shaft of motor (15).

(3) Ensure that helical gear set screws (25) are tight and that helical gear (26) is flush on bearing, when moving searchlight (1).

(4) Attach terminal wires (10) to terminal block assembly (7).

(5) Apply locking compound to threads of two screws (8) and install screws and terminal cover (6), on terminal block (14).

(6) Apply locking compound to threads of six screws (11) and install screws and lockwashers (12) on terminal lug (13) and into terminal block (14)..

(7) Apply locking compound to threads of 14 machine screws (3); position searchlight (1) on helicopter fuselage (2); and install screws and washers (4) to secure searchlight (1).

(8) Perform electrical bond checks and MOC in accordance with publications listed in paragraph 13.

d. **Cleaning.** Excess locking compound and graphite should be removed from all parts using a cleaning cloth and isopropyl alcohol.

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

a. **Parts Required.** Items cited in paragraph 7 may be required to replace unserviceable items.

b. **Requisitioning Instructions.** Requisition replacement parts through normal supply channels using normal supply procedures. All requisitions shall use project code "CST" per this TB.

NOTE

Project code "CST" 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**.

WARNING

Isopropyl alcohol is flammable and toxic to eyes, skin, and respiratory tract.

- Skin and eye protection is required.
- Avoid repeated or prolonged contact.
- Provide acceptable general ventilation.
- If injury occurs, seek medical aid.

Materials	Part No.	CAGE	Quantity
Cloth, cleaning	MIL–C–85043	81349	As required
Compound, locking	MIL–S–22473, Grade B	81349	As required
Alcohol, isopropyl	2200200	89264	As required

d. Disposition. Dispose of removed parts/components in accordance with normal supply procedures. A QDR is not required.

e. Disposition of Hazardous Material. Not Applicable.

11. **Special Tools, Jigs and Fixtures Required**. Not Applicable.

12. **Application**.

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

b. Time Required.

(1) Total of approximately 1.5 man-hours using 1 person.

c. Estimated Cost Impact of Stock Fund Items to the Field. Not Applicable

d. Disposition. Dispose of removed parts/components in accordance with normal supply procedures.

e. TB/MWOs to be Applied Prior to or Concurrently with this Inspection. Not Applicable.

f. Publications Which Require Change as a Result of This Inspection. Not Applicable

13. **References**.

a. TM 1–1520–251–Longbow (Interactive Electronic Aviation Unit and Intermediate Maintenance Manual for the AH–64D).

b. TM 1–1520–238–23 (Aviation Unit and Intermediate Maintenance Manual for the AH–64A).

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

14. **Recording and Reporting Requirements**. The following forms are applicable and are to be completed in accordance with DA Pam 738–751, 15 March 1999.

NOTE

ULLS–A users shall use applicable E forms.

a. DA Form 2408–13, Aircraft Status Information Record.

b. DA Form 2408–13–1, Aircraft Inspection and maintenance Record.

c. DA Form 2408–13–2, Related Maintenance Actions Record.

d. DA Form 2408–15, Historical Record for Aircraft.

15. **Weight and Balance**. Not Applicable.

16. **Points of Contact**.

a. Maintenance point of contact for this TB is Mr. Malcolm Fuller, AMSAM–MMC–AV–AB, DSN 897–1337 or commercial (256) 313–1337, Datafax is DSN 987–1556, e–mail is malcolm.fuller@ redstone.army.mil

b. Technical point of contact for this TB is Mr. Lee Bumbicka, AMSAM–RD–AE–I–PA, DSN 897–4925 or commercial (256) 313–4925, Datafax, DSN 897–4923 or commercial (256) 313–4923, e–mail is lee.bumbicka@redstone.army.mil.

c. Forms and records point of contact is Ms. Ann Waldeck, AMSAM–MMC–MA–NM, DSN 746–5564, or commercial (256) 876–5564, Datafax is (256) DSN 747–4904, e–mail is ann.waldeck@redstone.army.mil.

17. **Reporting of Errors and Recommending Improvements.** You can improve this TB. If you find any mistakes or know 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–LS–LP, Redstone Arsenal, AL 35898–5230. You may also submit your recommended changes by sending 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:

Official:

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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.