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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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AVIATION NIGHT VISION GOGGLE MAINTENANCE  
DOCUMENTATION, ALL U.S. ARMY AIRCRAFT

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Headquarters, Department of the Army, Washington, D. C.  
29 December 1995

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**NOTE**

**THIS PUBLICATION IS EFFECTIVE UNTIL SUBJECT AVIATION NIGHT VISION GOGGLE MAINTENANCE DOCUMENTATION REQUIREMENTS ARE COMPLETED, UNLESS SOONER RESCINDED OR SUPERSEDED.**

1. **Priority Classification.** Routine
2. **Task/Inspection Suspense Date.** N/A.
3. **Reporting Compliance Suspense Date.** N/A.
4. **Summary of the Problem.** The purpose of this TB is to update present aviation night vision goggle maintenance documentation requirements. This TB becomes effective immediately upon receipt and supersedes TB 1-1500-348-30, 18 November 1994 and the April 1993 Flightfax. It will be used to supplement DA PAM 738-751, dated 15 June 1992.
5. **End Items to be Inspected.** Aviation night vision goggles, AN/AVS-6 and GM-6.
6. **Assembly Components to be Inspected** N/A.
7. **Parts to be Inspected.** N/A.
8. **Inspection Procedures.** N/A.
9. **Correction Procedures**

a. The Following information is a consolidated listing of current NVGs forms and maintenance documentation requirements.

\*This TB supersedes TB 1-1500-348-30, dated 18 November 1994

(1) Equipment Record Folder (Logbook). Each set of NVG will have a logbook This logbook is illustrated in DA PAM 738-750, Page 9, Figure 2-1 ,(NSN 7510-01-065-0166) and is available at self-service centers.

(2) Forms. DA Forms 2407, 2408-5, 2408-15, 2408-22, 2408-30, 5504, and DD Forms 1574, 1576, and 1577-2 will be used to document NVG maintenance Requirements. (Until the receipt of the new DA Pam 738-751, refer to this TB).

**NOTE**

**Damaged or obliterated forms will be processed IAW DA PAM 738-751.**

**NOTE**

**Red "X" status symbols must be cleared by an individual designated in writing by the unit Commander per DA PAM 738-751**

(a) DA Forms 2407 or 5504 (Maintenance Request). This form will be used when AVIM level maintenance is performed or when NVGs are forwarded to a higher maintenance level for scheduled or unscheduled maintenance. Do not combine two or more NVGs on a single DA Form 2407/5504. It is recommended that each individual service of the 180 day service be listed separately. After completion of maintenance and receipt of NVGs, place the "organizational" copy in the pocket located inside the back cover of the logbook. Maintain this form until next 180 day service is completed.

(b) DA Form 2408-5 (Equipment Modification Record). This form will be placed In the first vinyl page of the logbook and will be used to document authorized DA modifications to NVGs. Dispose of this form IAW DA PAM 738-751.

(c) DA Form 2408-15 (Historical Record of Aircraft). This form will be placed in the second vinyl page of the logbook and will be disposed of IAW DA PAM 738-751 It will be used to document the following:

- 1 On-time inspection (i.e. successful distortion evaluations, service upon receipt inspection).
- 2 Compliance with Safety of Flight (SOF), Aviation Safety Action Message (ASAM), Safety of Use (SOU), and Technical Bulletins (TB).
- 3 Replacement of image intensifier tubes (s). Record new serial numbers.
- 4 Light Interference (LIF) Kit Installation

(d) DA Form 2408-22 (Helmet and Oxygen Mask/Connector Inspection Record). This form provides a record of helmet and NVG visor/mount inspections and maintenance performed. It will be used to document the 120 day visor continuity check Record the type of NVG visor or mount installed on the helmet in block 7. This form will be maintained separately from the NVG records and disposed of IAW DA PAM 738-751.

(e) DA Form 2408-30 (NVG Inspection and Maintenance Record). A current DA Form 2408-30 is the only form required to be maintained in the NVG carrying case.

1 The DA Form 2408-30 will be used to record all faults and document all corrective actions taken for the following:

- (a) Deficiencies discovered while performing operator's checks.
- (b) 90 day Preventive Maintenance Checks and Services (PMCS)
- (c) 180 day services.
- (d) Special inspections (i.e. distortion evaluations).

2 The current DA Form 2408-30 will be managed by the owning unit. After NVGs are returned from a maintenance facility, the owning unit will complete the DA Form 2408-30 by signing off

the completed work under "Part II-Correcting Information" block. Examples are "180 day service completed," or "Intensifier tube replaced, serial number XXXXXX." When a work request is initiated, enter the work order number in the W.O. Block Number Part I. See DA Form 2407 or 5504 work order number XXXXXX. Variation of wording is acceptable. Under "Part 1-Fault Information", record the next scheduled inspection. Calculate the next scheduled 90 day PMCS and 180 day service due dates from block 26 of DA Form 2407 or Block 37c of DA Form 5504. Enter these calculated dates in Block 6 of DA Form 2408-30. The dates in Block 6 of DA Form 2408-30 should not be changed until completion of the next 180 day service.

3 The current DA Form will not be maintained in the logbook. It will be maintained in the NVG carrying case until completely filled. When completely filled, the DA Form 2408-30 will be dosed out and placed in the third vinyl page of the logbook. Destroy these forms one year from-the date of the last entry. It will remain there for one year from the date of the last entry. To complete a close-out, initiate a new DA Form 2408-30 and indicate the next inspections due (90 day PMCS and 180 day service) in block 6. Under "Part 1 -Fault Information", record the next scheduled inspection and any uncorrected faults. This DA Form 2408-30 will then become the current form.

4 NVG hours will not be entered on DA Form 2408-30 unless the unit is directed by MACOM.

(f) DD Form 1574 (Serviceable Tag-Material). This form is used to identify serviceable NVGs being returned from maintenance. Destroy this form after DA Form 2408-30 has been updated.

(g) DD Form 1576 (Test/Modification Tag-Material). This form is used by AVIM to identify NVGs requiring a distortion evaluation. After replacement of either one or both image intensifiers, AVIM will mark the form "Distortion evaluation is required prior to use". Variation of wording is acceptable. Destroy this form upon completion of a successful distortion evaluation.

(h) DD Form 1577-2 (Unserviceable-Repairable-Tag Material). This form is used to identify an unserviceable night vision goggle (i.e. cracked monocular housing, failed distortion evaluation). Destroy this form when no longer required.

b. Summary of form Locations.

(1) Logbook. The following forms will be maintained in the NVG logbook:

- (a) DA Form 2408-5-First vinyl page (b) DA Form 2408-15-Second vinyl page.
- (c) DA Form 2408-30 (Current Close Out) Third vinyl page.
- (d) DA Form 2408-30 (Other Close Outs) Fourth vinyl page.
- (e) DA Form 2407/5504 (Organizational) Inside back cover

(2) NVG Carrying Case. The current DA Form 2408-30 is the only form required to be maintained in the NVG carrying case. Fold the form to fit inside the NVG case.

(3) The DA Form 2408-22 will be maintained separately from the NVG logbook.

c. Recurring Tests, Inspections, and documentation Requirements for GM-6 and ANVIS.

(1) Operator's Checks. Operator's checks will be accomplished by the operator IAW appropriate operators manual In addition to these checks, an optional low/high light resolution test may be performed by the operator using the TS4348/UV test set IAW with TM 11-5855-263-10. Record deficiencies found during operator's checks on DA Form 2408-30.

(2) 90 Day PMCS. Document the accomplishment of the 90 day PMCS on DA Form 2408-30. This Inspection is performed by AVUM IAW appropriate maintenance publications and consist of:

- (a) Inspection, checks, and servicing of the NVG and power pack.
- (b) Low/high light resolution test. (Image intensifier tests).

**NOTE**

**The 90 day PMCS may be accomplished within, but not to exceed, a ten percent plus or minus tolerance from the scheduled calendar date.**

(c) Infinity focus check (ANVIS only).

(3) 180 Day Service. Document the accomplishment of the 180 day service on DA Form 2408-30. This inspection is performed by AVIM IAW appropriate maintenance publications and consists of:

- (a) The 90 day PMCS on the NVG and power pack.
- (b) System current drain test (ANVIS only).
- (c) Infinity focus check
- (d) Collimation check
- (e) Nitrogen purge.

**NOTE**

**The 180 day service may be accomplished within, but not to exceed, a ten percent plus or minus tolerance from the scheduled calendar date.**

(4) Maintenance Operational Check (MOC).

(a) When maintenance has been performed by AVIM, the owning/maintaining unit will accomplish a Maintenance Operational Check (MOC) utilizing Table 2-1 of the appropriate unit/intermediate maintenance manual.

(b) Document the completion of the MOC on DA Form 2408-30.

(c) The low/high light resolution test is not required as part of the MOC.

d. Dual Battery Pack (Power Pack).

(1) All power packs require a 90 day PMCS and a 180 day service IAW the appropriate technical manual.

(2) All Power packs will have a gum label attached which will indicate the 90 day PMCS and 180 day service due dates.

**NOTE**

**The 90 day PMCS may be accomplished within, but not to exceed, a ten percent plus or minus tolerance from the scheduled calendar date.**

**NOTE**

**The 180 day service may be accomplished within, but not to exceed, a ten percent plus or minus tolerance from the scheduled calendar date.**

e. 120 Day Visor/Mount Check Documentation Requirements.

(1) All visors/mounts which are placed into service are required to have a 120 day continuity check.

(2) Record inspections for assigned visors/mounts on the DA Form 2408-22 for the helmet to which it is assigned.

(3) "Float visor/mount will be recorded on a DA Form 2408-22 for each float on hand.

**NOTE**

**A float visor/mount is a serviceable device not permanently assigned to an individual helmet.**

f. Distortion Testing.

(1) Reference 13d and 13g describe specific procedures for accomplishing the distortion test.

(2) A distortion test is required for the following conditions:

- (a) Service upon receipt of material (newly fielded NVGs or newly assigned NVGs without successful distortion evaluation documentation).
- (b) Replacement of image intensifier tube(s).
- (c) Receipt of NVGs with a DD Form 1576 attached.

(3) Document all distortion tests and results on DA Form 2408-30 to include both NVG pilot's signatures who performed evaluation. The completion of a successful distortion test will also be documented on the DA Form 2408-15.

**NOTE**

**This TB contains updated guidance on aviation NVG maintenance documentation. When there is a conflict between this TB and any other reference listed in paragraph 13, this TB takes precedence.**

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

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

**12. Application.** N/A.

**13. References.**

a. TM 11-5855-238-10, Operator's Manual, Night Vision Goggles, Ground Use AN/PVS-5, 5A,5B, and 5C, Aviation use GM-6(V)1 and GM-6(V)2, dated 15 May 1993.

b. TM 11-5855-238-23&P, Unit and Direct Support Maintenance and Aviation Unit and Aviation Intermediate Maintenance Manual (Including Repair Parts and Special Tools List), Aviation use GM-6(V)1 NVG, GM-6(V)2 NVG, dated 15 November 1993.

c. TM 11-5855-263-10, Operator's Manual, Aviator's Night Vision Imaging System (ANVIS) AN/ AVS-6(V)1 NSN (5855-01-108-4749) and AN/AVS-6(V)2 (NSN 5855-01-108-4748), dated 1 March 1994.

d. TM 11-5855-263-23&P, Aviation Unit and Intermediate Maintenance Manual, Aviator's Night Vision Imaging System AN/AVS-6(V)1 and AN/AVS-6(V)2, dated 15 January 1992.

e. TM 10-8415-206-12&P, Operator's and Organizational Maintenance Manual, Including Repair Parts and Special Tools List, dated 5 May 1986 (SPH-4 Helmet Manual)

f. DA PAM 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A), dated 15 June 1992 (under revision).

g. Flightfax April 93, subject: Aviation NVG maintainers receive new guidance

h. TB 1-1500-346-20, dated 20 January 1995, subject: Updated Information on Night Vision Goggles.

i. CDRATCOM message 061300Z Jan 93, subject: Aviation Safety Action Message, Informational, status of the new DA PAM 738-751, dated 15 June 1992, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A) (GEN-93-ASAM-03). NVG guidance contained in this message is rescinded effective immediately.

j. TB 1-1500-347-30, dated 9 March 1993, subject: Use of dual Visor or SPH-4B Aviator's Helmet and Related Information (GEN-93-ASAM-04) (TB 1-1500-347-30 expires on 31 December 1995).

**14. Recording and Reporting Requirements.** N/A.

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

**16. Points of Contact.**

a. Point of contact for Aviation Night Vision Goggles at USAAVNC is CW5 Rowe, CW3 Griner, SSG Mintze or SSG Walker, ATZQ-ATB-NS, DSN 558-9545/9515 or commercial (205) 255-9545/9515.

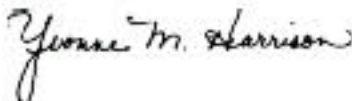
- b. Point of contact at PM-NVEO is Glen Nowak, SFAE-IEW-NV/RSTA-L, DSN 656-3453 or commercial (703) 704-3453.
- c. Point of contact for DA PAM 738-751 at ATCOM is Ms. Ann Waldeck AMSAT-I-MDM, DSN 693-1821/22 or commercial (314) 263-1821/22.
- d. ATCOM safety point of contact is Mr. Brad Meyer, AMSAT-R-X, DSN 693-2085 or commercial (314) 263-2085.
- e. CECOM maintenance point of contact is Mr. Mike Ayers, AMSEL-LC-LM-EN, DSN 992-2407 or commercial (908) 532-2407.
- f. US Army TMDE Calibration point of contact is Mr. Ed Copeland, AMXPM-LM-AMR, DSN 788-2698. Datafax is DSN 746-3070.
- g. After hours contact ATCOM Command Operations Center (COC) DSN 693-2066/67 or commercial (314) 263-2066/67.

**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) direct to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., ST. Louis, MO 63120-1798. A reply will be furnished to you.

By order Of the Secretary Of the Army:

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

Official:



*Administrative Assistant to the  
Secretary of the Army*

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PARA-GRAPH

FIGURE NO.

TABLE NO.

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

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## 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 decigrams = .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 milliliters = .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

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
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
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