URGENT

***TB 1-1520-210-20-36**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

NIGHT VISION GOGGLE (NVG) FLIGHT RESTRICTIONS FOR ALL UH-1 H/V AIRCRAFT

Headquarters, Department of the Army, Washington, D.C.

22 July 1997

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERCEDED

1. Priority Classification. URGENT.

a. Aircraft in Use. Upon receipt of the message or this TB (whichever occurs first), the condition status symbol of the cited aircraft will be changed to a **circled red X: aircraft restricted from NVG flight.** The circled red X may be cleared when the inspection requirements of paragraph 8. below are 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 within the time frame will cause the status symbol to remain a **circled red X.**

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

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

d. Aircraft in Transit.

(1) Surface/Air Shipment. Within 30 hours or 60 days of arrival.

(2) Ferry Status. Inspect at final destination.

e. Maintenance Trainers (Category A and B). N/A.

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

***This TB supersedes USAATCOM Aviation Safety Action Message 011330Z, JUL 97, UH-1-97-ASAM-05.**

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

2. Task/Inspection Suspense Date. Within the next 30 flight hours or 60 days from receipt of original message or this TB, whichever is received first.

3. Reporting Compliance Suspense Date. No later than 23 July 97 per paragraph 14.a. of this TB.

4. Summary of Problem.

a. TB 1-1520-210-20-34 (UH-1-97-ASAM-02) directed all units to remove obscuring materials from the red and green navigation position lights. The original intent of masking these lights was to prevent disruptive glare during night vision goggle (NVG) operations. However, these masking practices were in violation of FAA regulations when aircraft were operated in national airspace at night. Once the masking was removed, an unacceptable level of glare persisted for aircraft operators using NVG. The aeromedical research laboratory developed a masking scheme in compliance with FAA regulations and NVG user requirements.

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

c. The purpose of this TB is to:

(1) Require a one-time masking of the red and green position lights to exact dimensions specified.

(2) Ensure that flight operations are conducted in accordance with FAA regulations when flying in civil airspace at night.

(3) Provide controls to minimize risk during NVG flight operations.

5. End Items to be Inspected. All UH-1H/V aircraft.

6. Assembly Components to be Inspected. Both upper and lower sets of red and green exterior navigation lights.

7. Parts to be Inspected. N/A.

8. Inspection Procedures. Ensure actions per paragraph 9. of TB 1-1520-210-20-34 (UH-1-97-ASAM-02) were performed, which required the removal of all tape and or paint from both upper and lower sets of red and green lenses. If actions per paragraph 9. of TB 1-1520-210-20-34 (UH-1-97-ASAM-02) were not performed, complete the procedures of paragraph 9. of TB 1-1520-210-20-34 (UH-1-97-ASAM-02) prior to implementing paragraph 9. of this TB.

9. Correction Procedures.

a. Lens Modification (Reference Figure 1).

(1) Both upper and lower red and green lenses must be modified. Leave position light dome lens in assembly.

(2) Determine the horizontal center line of the position lights by drawing or marking from the center of the Phillips screw and cone point of the light cover and extending across dome lens through the raised letter or dimple located in the center of the lens.

(3) For the upper right and left position lights, mark a line 1/8 inch below and parallel to the center line drawn in step 2. The line should extend from the light cover to the base of the lens. Place masking tape on the upper part of the light assembly along the line drawn 1/8 inch below the center line. Note that the masking tape will just cover the head of the Phillips screw on the light assembly covers.

(4) For the lower right and left position lights, measure and mark 1/8 inch above and parallel to the center line mark on the lens. The line should extend from the light cover to the base of the lens. Place masking tape on the lower part of the light assembly along the 1/8 inch line above the center line. Note that the masking tape will just cover the head of the Phillips screw on the light assembly covers.

(5) Verify that slightly more than 1/2 of the top portions of the exposed upper position lights are completely masked, and slightly more than 1/2 of the bottom parts of the lower position lights are completely masked.

(8) To prevent overspray of the airframe CARC paint, cut a piece of stencil board, oil (NSN 9310-00-160-7858) approximately 16 inches long by 11 inches wide and locate center point. Place the position light template over the center point of the cut stencil board lengthwise and draw around the template. Remove the template and, with a sharp instrument, cut out template area. The position light assembly will be exposed to minimal overspray.

NOTE

Roughing the exposed lens surfaces with either steel wool or sandpaper prior to painting may make application easier and the paint adhere better.

(7) Paint the exposed area of the lenses using lacquer, olive drab, 16 oz. aerosol can (NSN 8010-00-584-3149). Proceed until sufficient coats are applied to prevent any bleeding of light through the painted area. Test the opacity of the painted area by turning on the position lights.

(8) A schematic of the above instructions may be found at figure 1.

b. Flight Procedures.

(1) All aircraft operations will be conducted in accordance with AR 95-1, AR 95-2 and AR 95-3; applicable supplements to AR 95-1, AR 95-2 and AR 95-3; and Federal Aviation Administration (FAA) Exemption 3946E.

NOTE

The new masking scheme lights will alleviate NVG interference from the aircraft's own position lights, but will not provide shielding from other aircraft. Therefore, commanders must urge extreme caution when flying multi-aircraft NVG operations, particularly when position lights are required to be illuminated to meet regulations.

(2) No aircraft shall fly above 500 feet AGL with LIGHTS OUT/DIM, unless in a designated military training area which meets the requirements of AR 95-2, paragraph 9-2. When in civil airspace, compliance with FAA Exemption 3946E is required.

10. Supply/Parts and Disposition.

a. Parts Required. Items cited in paragraph 6. may be required to replace defective or damaged items.

b. Requisitioning Instructions. Requisition replacement parts through normal supply procedures.

c. Bulk and Consumable Materials.

NOMENCLATURE	NSN
Stencil Board. Oil	9310-00-160-7858
Lacquer, Olive Drab, 16 oz. Aerosol Can	8010-00-584-3149

d. Disposition. Dispose of removed parts/components using normal supply procedures.

e. Disposition of Hazardous Material. Dispose of hazardous materials in accordance with environmental protection agency directives as implemented by your servicing environmental coordinator (AR 200-1).

11. Special Tools, Jigs and Fixtures Required. As required per this TB.

12. Application.

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

b. Estimated Time Required.

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

(2) Total of 2 hours downtime for one end item.

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. TB 1-1520-210-20-34.

e. Publications which Require Change as a Result of this Inspection. TM 55-1520-210-23-2.

13. References. TB 1-1520-210-20-34 (UH-1-97-ASAM-02).

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of this message on DA Form 2408-13-1 for all subject MDS 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@emh4.stl.army.mil>. The report will cite this message number, data of entry in DA Form 2408-13-1, the aircraft mission design series (MDS) and serial numbers of aircraft in numerical order.

b. Task/Inspection Reporting Suspense Date (Aircraft). No special report of the results of this inspection is requited.

c. Reporting Compliance Suspense Date (Spares). WA.

d. Task/Inspection Reporting Suspense Date (Spares). N/A.

e. The following forms are applicable and are to be completed In accordance with DA Pamphlet 738-751, dated 15 Jun 92.

(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.

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this message is Mr. Walt Demkowski, AMSAT-R-ECH, DSN 693-1685 or commercial (314) 263-1685. Datafax is (314) 263-1622; E-mail is <demkowski@stl.army.mil>.

b. Logistical point of contact for this message is Mr. Charles Elkins, AMSAT-D-WAU, DSN 693-2004 or commercial (314) 263-2004. Datafax is (314) 263-1508; E-mail is <celkins@emh4.wsmd.stl.army.mil>.

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. Datafax number is (314) 263-1836; E-mail address is <awaldeck@dmh1.stl.army.mil>.

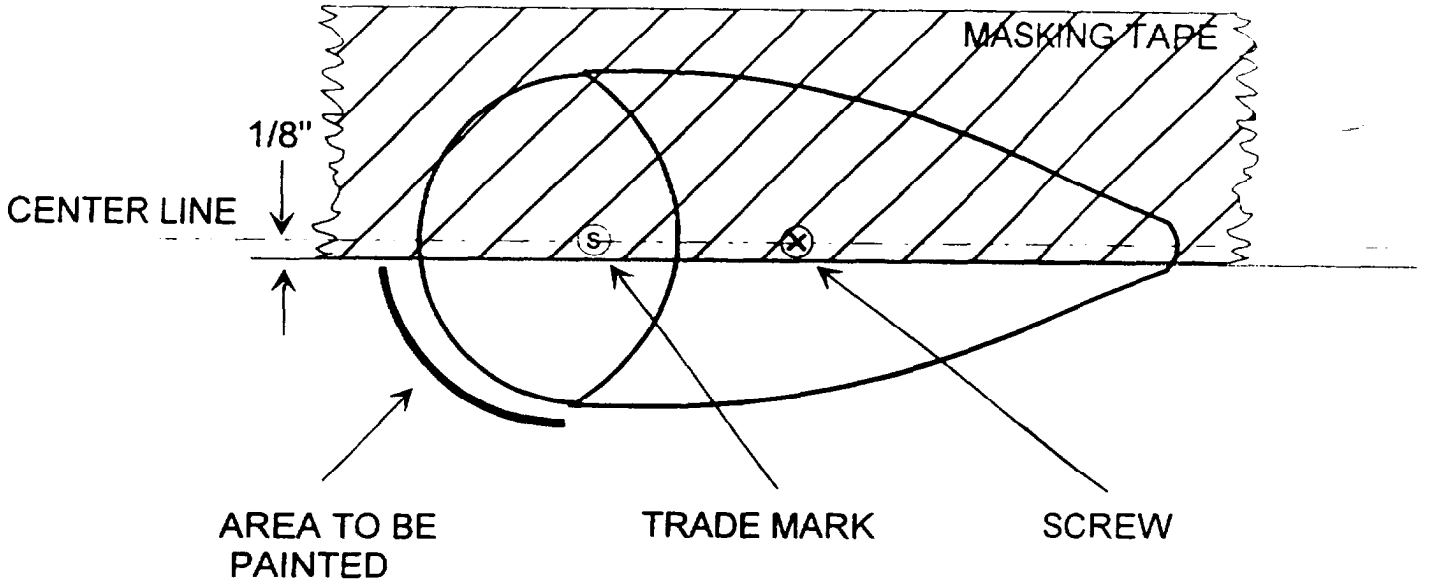
d. Safety point of contact for this message is Mr. Bob Brock, AMSAT-R-X, DSN 693-2718 or commercial (314) 263-2718. Datafax is (314) 263-2064; E-mail is <brockb@stl.army.mil>.

e. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this message should contact CW5 Jay Nance or Mr. Ron Van Rees, AMSAT-D-S, DSN 693-7844/3216 or commercial (314) 263-7844/3216. Datafax is DSN 693-2917. Note: St. Louis is GMT minus 6 hours.

f. After hours contact ATCOM Command Operations Center (COC) DSN 693-2066/2067 or commercial (314) 263-2066/2967.

17. Reporting of Errors and Recommending Improvements. You can help improve this TB. If you find any mistakes or 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, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Boulevard, St. Louis, Missouri 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. Instructions for sending an electronic 2028 may be found at the back of most TMs.

TOP POSITION LIGHT



BOTTOM POSITION LIGHT

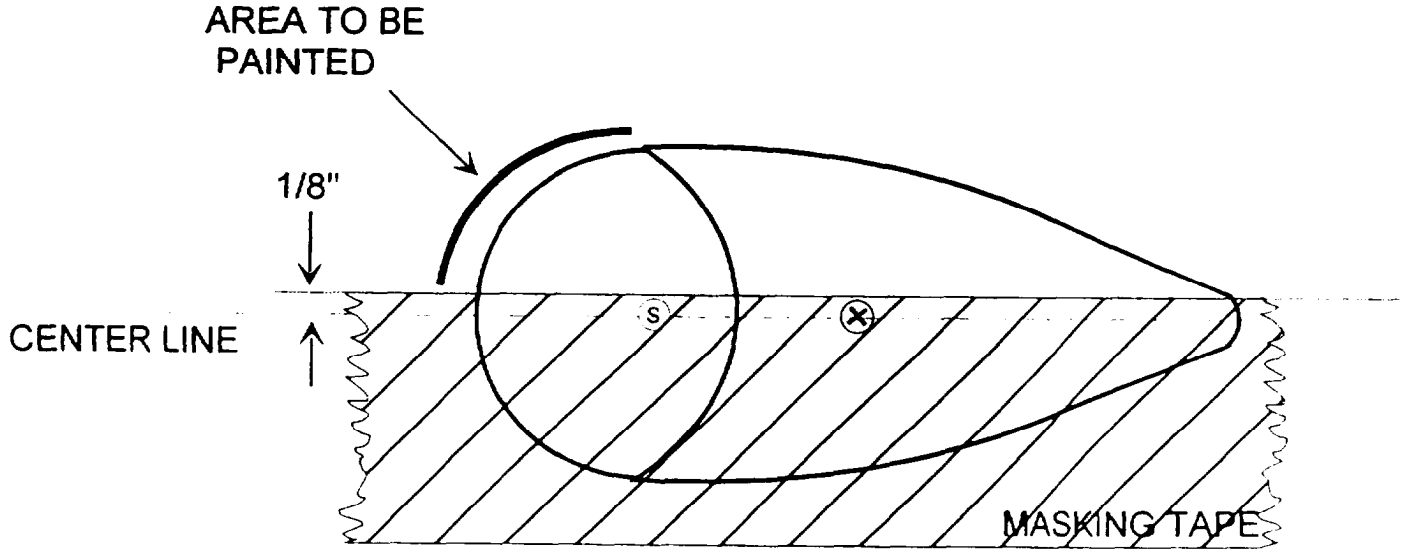


Figure 1. Lens Modification Schematic

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 Army
03673

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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

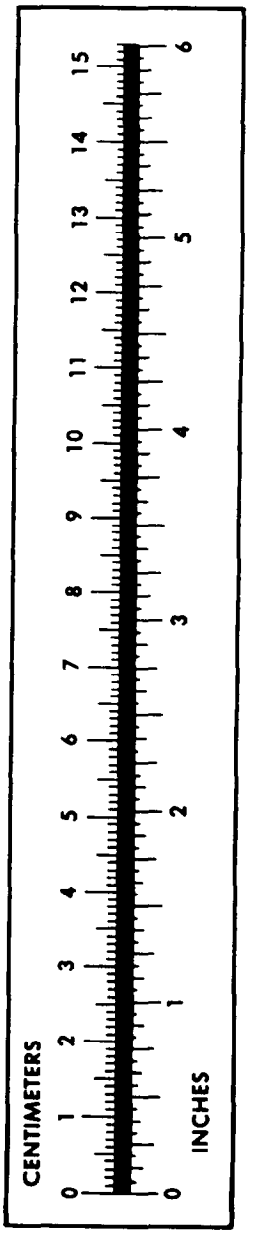
TEMPERATURE

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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