

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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OPTIONAL DEACTIVATION OF MAIN ROTOR AND TAIL  
ROTOR BLADE DE-ICE CAPABILITY

AH-64A HELICOPTER

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Headquarters, Department of the Army, Washington, D. C.  
30 June 1995

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**NOTE**

THIS PUBLICATION IS EFFECTIVE UNTIL SUBJECT AH-64A AIRCRAFT HAVE BEEN INSPECTED, UNLESS SOONER RESCINDED OR SUPERSEDED.

**1. Priority Classification.** Routine

a. All aircraft shall comply with this Technical Bulletin (TB) at the Commander's discretion. No suspense date shall be enforced..

b. Aircraft in stock including war reserves at all levels (Depot/others) - N/A.

**2. Task/Inspection Suspense Date.** N/A.

**3. Reporting Compliance Suspense Date.** N/A.

**4. Summary of the Problem.**

a. As a result of new Operator's Manual requirements limiting flights into light icing conditions only, it is no longer necessary to maintain the Rotor De-ice System.

b. For manpower/down time and funding impact, refer to paragraph 12.

c. The purpose of this TB is to provide instructions for deactivating the Rotor De-ice System, if so chosen, and to provide requisitioning information for Main Rotor Blades with operable and inoperable heater blankets.

**5. End Items to be Inspected.** All AH -64A aircraft.

**6. Assembly Components to be Inspected.** N/A.

**7. Parts to be Inspected.** N/A.

**8. Inspection.** Perform the deactivation procedure identified in paragraph 9. If deactivation is not elected, no further action is required. However, proceed to paragraph 9., 6 for Main Rotor Blade procurement information.

**9. Correction Procedures.**

a. Deactivation. Perform deactivation procedure as follows:

- (1) **Part I** - Locate, pull and tie wrap the Blade De-ice (1 amp) and the Blade De-ice Controller (5 amp) circuit breakers in the Pilot's Overhead Aft CB Panel.
- (2) **Part II** - Access the Blade De-ice Relay XK-6 by first removing the Electrical Power Distribution Box Cover per paragraph 9.9 of TM 1 -1520-238-23. Next, gain access to the XK-1 terminal block per paragraph 9.10 (Electrical Power Distribution Box Relay Cover) of TM 1-1520-238-23. Locate and remove the relay located at position 6 on the XK-1 terminal block (Refer to TM 55-1520-238 23P, figure 394 for location, and refer to TM 1 -1520-238-23, paragraph 9.139 for removal). Install Relay Cover and Electrical Power Distribution Box Cover after a technical inspector has confirmed that the correct relay was removed. Note that per DA Form 2408-13 the Blade De-ice System is non-functional. A functional check of the windshield and pitot tube heating systems shall be performed in order to ensure proper operation.

b. Main Rotor Blade Requisitioning Information. Due to failures of some Main Rotor Blade Heater Blanket(s), unique part numbers and NSNs have been assigned as determined by operable and inoperable heater blankets. The following tables are provided as an aid in acquisition of appropriate blades.

**NOTE**

- For units that need only blades with de-ice capability, requisition using NSN 1615-01-332-0702, and use advice code 2B. You will be issued only the blades listed in table 1.
- For units that need only blades with inoperable heater blankets, use NSN 1615-01-330-5098, and use advice code 2B. You will be issued only the blades listed in table 2.
- Regardless of the NSN used for requisitioning, if advice code 2B is not used, units will be issued blades from either table 1 or 2 as supply availability allows.

**Table 1. Blades with Operable Heater Blankets**

NSN	PART NUMBER
1615-01-147-4873	7-311412000
1615-01-310-4978	7-311412000-3
1615-01-332-0702	7-311412000-5

**Table 2. Blades with Inoperable Heater Blankets**

NSN	PART NUMBER
1615-01-331-2483	7-311412000 A
1615-01-330-5098	7-311412000 3A

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

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

**12. Application.**

- a. Category of Maintenance. AVIM. Aircraft downtime will be charged to AVIM.
- b. Time Required for Deactivating the De-ice System.
  - (1) Total of 2 man-hours 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. N/A.
- e. Publications Which Require Change as a Result of this Inspection. A copy of this TB shall be inserted in the appropriate TM as authority to implement the change.

**13. References**

- a TM 1-1520-238 23P, Repair Parts and Special Tools Manual, 16 May 1994.
- b TM 1-1520-238-23, AVUM and AVIM Maintenance Manual, 16 May 1994.

**14. Recording and Reporting Requirements.**

- a. Reporting Compliance Suspense Date (Aircraft). N/A.
- b. Task/Inspection Reporting Suspense Date (Aircraft). N/A.
- c. Reporting Compliance Suspense Date (Spares). N/A.
- d. Tasks Inspection Reporting Suspense Date (Spares). N/A
- e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 June 1992.
  - (1) DA Form 2408-5, Equipment Modification Record.
  - (2) DA Form 2408-5-1, Equipment Modification Record (Component).
  - (3) DA Form 2408-13, Aircraft Status Information Record.
  - (4) DA Form 2408-13-1, Airport Inspection and Maintenance Record.

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

**16. Points of Contact.**

- a. Technical Point of Contact for this TB is Mr. Matt Benzek, AMSAT-R-EIA, DSN 693-1680 or Commercial (314) 263-1680.
- b. Logistical Point of Contact for this TB is Mr. Jim Mason, SFAE-AV-AAH-LS, DSN 693-1947 or Commercial (314) 263-1947.
- c. Forms and Records Point of contact for this TB is Mrs. Ann Waldek, AMSAT-I-MDM, DSN693-1153 or Commercial (314) 263-11758.
- d. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact Mr. Ron Van Rees or CW5 Jay Nance, Amsat-I-A, DSN 693-3659 or Commercial (314) 263-3659/3826.

By Order the Secretary of the Army:

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*Acting Administrative Assistant to the  
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To be distributed in accordance with DA Form 12-31-E, block no. 3517, requirements for TB 1-1520-238-20-62.

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**SOMETHING WRONG WITH PUBLICATION**

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.

PARA-GRAPH

FIGURE NO.

TABLE NO.

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

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

# THE METRIC SYSTEM AND EQUIVALENTS

## WEIGHT MEASURE

1 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

## WEIGHTS

1 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

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$   
 212° Fahrenheit is equivalent to 100° Celsius  
 90° Fahrenheit is equivalent to 32.2° Celsius  
 32° Fahrenheit is equivalent to 0° Celsius  
 $9/5^{\circ}\text{C} + 32 = ^{\circ}\text{F}$

## 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
arts	Liters	0.473
gallons	Liters	0.946
Ounces	Liters	3.785
Pounds	Grams	28.349
Short Tons	Kilograms	0.454
Pound-Feet	Metric Tons	0.907
Pounds per Square Inch	Newton-Meters	1.356
Miles per Gallon	Kilopascals	6.895
Miles per Hour	Kilometers per Liter	0.425
	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
gallons	Gallons	0.264
ounces	Ounces	0.035
pounds	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



**PIN: 074002-000**