

TB 55-1500-206-30-2
DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INSPECTION OF TAIL ROTOR HUB ASSEMBLY
FOR SEALANT BETWEEN GRIP AND GRIP ADAPTER NUT
(UH-1B/C/M/D/H, AH-1G AND TH-1G AIRCRAFT)

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

20 March 1973

1. Purpose.

To provide protection against ingestion of moisture into grips of the (204-011-801) Tail Rotor Hub Assemblies, thereby retarding corrosion. This action is in response to data generated via TB 55-1500-206 -30-3 dated 20 Jun 72. An analysis of this data indicated that the Army did not have fatigue cracking and/or corrosion fatigue cracking problems. It was felt however, that a corrosion retarder was in order as corrosion was discovered.

2. Priority Classification Normal.

a. Equipment in use. Equipment in use will be inspected the next time the tail rotor hub assembly is removed for its 100 hour re-balance.

b. Equipment in depot supply or maintenance. Equipment in depot supply or maintenance will be assembled using the new techniques prior to issue but not later than three months after time compliance date of this TB.

c. Positioned stock. Equipment which is propositioned against a war reserve requirement will be inspected during cyclic maintenance but not later than four months from the time compliance date.

3. End Items to be Inspected.

MODEL	SERIAL NUMBER
UH-1B	55-4461
	58-2078
	60-3546 through 60-3619
	61-686 through 61-803
	62-4606 through 62-4613
	62-1872 through 62-2105
	62-4566 through 62-4605

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

26 February 1974

TB 55-1500-206-30-2, 20 March 1973, is changed as follows:

Page 6. Paragraph 11 is superseded as follows:

11. Recording and Reporting the Inspection.

Record and report accomplishment of the inspection in accordance with the procedures prescribed in TM 38-750. The following forms are applicable: DA Form 2408-13 (Aircraft Inspection and Maintenance Record); DA Form 2407 (Maintenance Request) and DA form 2408-5 (Equipment Modification Record, Tail Rotor Hub).

By Order of the Secretary of the Army:

Official:

VERNE L. BOWERS

*Major General, United States Army
The Adjutant General*

CREIGHTON W. ABRAMS

*General, United States Army
Chief Staff*

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31 (qty rqr blocks no. 342, 34, 352, and 38 cumulative for all blocks) Organizational Maintenance Requirements for UH-1B, UH-1C, UH-1D and 1H, and AH-1G aircrafts.

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MODEL

SERIAL NUMBER

UH-1B (Cont.)

62-12515 through 62-12555
63-8500 through 63-8683
63-8685 through 63-8738
63-12903 through 63-12952
63-13086 through 63-13089
63-13586 through 63-13593
64-13902 through 64-14100

UH-1C/M

63-8684
64-14101 through 64-14191
65-9416 through 65-9564
65-12738 through 65-12744
65-12772
66-0491 through 66-0745
66-15000 through 66-15245

UH-1D/H

60-6028 through 60-6034
62-2106 through 62-2113
62-12351 through 62-12372
63-8739 through 63-8859
63-12956 through 63-13002
64-13492 through 64-13901

65-9566 through 65-10135
65-12773 through 65-12776
65-12847 through 65-12852
66-12857 through 65-12895
66-746 through 66-1210
66-16000 through 66-17144
66-8574 through 66-8677

67-17145 through 67-17859
67-18411 through 67-18413
67-18558 through 67-18577
67-19475 through 67-19537
68-15214 through 68-15778

68-16050 through 68-16628
69-15000 through 69-15959
69-16606
69-16650 through 69-16679
69-16692 through 69-16732
70-15700 through 70-15874
70-15913 through 70-15932
70-16200 through 70-16496
70-16515 through 70-16518
71-20000 through 71-20339
72-21465

MODEL	SERIAL NUMBER
AH-1G/TH-1G	66-15246 through 66-15357 66-15493 66-15500 67-15453 67-15450 through 67-15869 68-15000 through 68-15218 68-17020 through 68-17118 69-16410 through 69-16447 70-15936 through 70-16105 71-20983 through 71-21039

4. Assemblies to be Inspected.

The following items whether, installed or in stock will be inspected:

<u>Nomenclature</u>	<u>Federal Stock Number</u>	<u>Part Number</u>
Tail Rotor Hub	1615-178-8531	204-011-801-3
	1615-176-1797	204-011-801-11
	1615-135-0294	204-011-801-5
	1615-133-6872	204-011-801-9

5. Parts to be Inspected.

Not applicable.

6. Application.

- a. *Time Compliance Date.* Time compliance period begins 4 May 1973.
- b. *Category of Maintenance.* Direct Support Maintenance Activities.
- c. *Applied By.* Rotor and Propeller Repairman MOS 68E.
- d. *Time Required.*

(1) Total of two additional manhours over and above the normal manhours. Hub must air dry for 48 hours before use.

(2) Normally hub and blade assemblies are removed and replaced on a rotational basis; therefore, total downtime should not change from the present downtime experienced during the one-hundred hour tail rotor rebalance. If a unit must take a particular hub off, seal the unit, balance and reinstall the same tail rotor hub and blade assembly, then the total downtime would be 54 hours, including the 48 hour air dry requirement.

- e. *Publications which require change as result of this TB:*

TM 55-1520-221-20

TB 55-1500-206-30-2

TM 55-1520-221-34

TM 55-1520-210-20

TM 55-1520-210-34

TM 55-1520-219-20

TM 55-1520-219-34

TM 55-1520-220-20

TM 55-1520-220-34

7. Supply Parts.

The following parts will be requisitioned when required:

<u>Quantity</u>	<u>Nomenclature</u>	<u>Federal Stock Number</u>	<u>Part Number</u>	<u>Source</u>
1	Sealing Compound	8030-723-2746	EC1675 TYPE B	GSA
		OR		
2	Sealing Compound	8030-753-5006	25003-1B2	GSA
1	Nozzle Caulking Gun	5120-801-0949	220542	GSA

8. Special Tools, Jigs and Fixtures Required.

Not applicable.

9. Inspection Procedure.

Visually inspect the hub assembly for a head of sealant between the grip and grip adapter nut. If no sealant is apparent, the following must be accomplished:

a. Hub and blade removal and disassembly:

(1) Remove tail rotor hub and blade assembly in accordance with the organizational maintenance manual.

(2) Remove blades from grips and disassemble hubs in accordance with instructions in DS and GS Maintenance Manuals.

(3) Clean all parts using P-D-680, Type 1 and a bristle brush.

b. Hub reassembly procedures:

{1} Seal corks on inboard side of yoke spindles, using sealing compound.

(2) Apply a generous bead of sealing compound to the inside diameter of the radius ring (between radius ring and yoke and spindle OD). Position radius ring onto yoke spindle.

(3) Install thrust bearings (with thrust sides inboard) apex identification facing outboard, onto the yoke spindle. Use a third thrust bearing as a tool to set the radius ring properly. Put the third bearing on the spindle and then torque the spindle nut to 200 inch pounds. Back nut off.

CAUTION

Be careful to keep shim bearings and radius rings on same spindle as determined below.

(4) Reference the DS and GS Maintenance Manual for correct procedure on figure shims required to obtain .002 to .004 pinch fit on thrust bearings and accomplish same.

CAUTION

Avoid getting sealing compound on seal.

(5) Coat the threads of the grip adapter nuts with sealing compound and position on each spindle of yoke.

(6) Complete hub build up per DS and GS Maintenance Manual except for installation of grips.

CAUTION

Do not over do this filling of the thread relief notch. Just barely filling the notch is adequate. Too little is better than too much. Sealing compound must not be allowed to squeeze out into bearing area.

(7) Run a bead of sealing compound into the thread relief notch which is just below the last thread of the grip. A very sparing amount of sealing compound on the last thread or two of the grip is beneficial.

(8) Install grips per installation instructions in DS and GS Maintenance Manuals. When filling grip cavity with lubricant prior to assembly, be sure to keep grease out of the sealing compound and grip thread area.

(9) Wipe off excessive sealing compound leaving only enough to provide an external fillet or bead around the adapter nut grip interface.

(10) Allow 48 hours for sealant to air dry before using hub and blade assembly.

(11) Install proper tail rotor blades on hub. Purge lubricate the grips and balance per DS and GS Maintenance Manual.

10. Weight and Balance Data.

Not applicable.

11. Recording and Reporting the Inspection.

Record and report accomplishment of the inspection in accordance with the procedures prescribed in TM 38-750. The following forms are applicable: DA Form 2408-18 (Aircraft Inspection and Maintenance Record); DA Form 2407 (Maintenance Request) and DA Form 2408-15 (Historical Record for Aircraft).

12. Reporting of Improvements.

Report of errors, omissions and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to the Commander, US. Army Aviation Systems Command, ATTN: AMSAV-M, PO Box 209, St. Louis, Missouri 63166.

By order of the Secretary of the Army:

Official:

VERNE L. BOWERS

*Major General, United of States Army
The Adjutant General*

CREIGHTON W. ABRAMS

*General, United States Army
Chief of Staff*

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

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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.

TEAR ALONG PERFORATED LINE

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
its	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
ometers per Liter	Miles per Gallon	2.354
ometers per Hour	Miles per Hour	0.621



PIN: 009232-001