

# URGENT

\*TB 1-2840-241-20-18

## DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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### MANDATORY ONE TIME AND RECURRING INSPECTION OF THE PC FILTER TUBE ASSEMBLY, FOR ALL OH-58A/C SERIES AIRCRAFT

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Headquarters, Department of the Army, Washington, D. C.  
7 April 1999

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**DISTRIBUTION STATEMENT A:** Approved for public release; distribution is unlimited.

#### NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

#### NOTE

Safety of Flight (SOF) Message 171230Z, gives the wrong TB number of TB 55-1520-220-18. The correct number is the number of this TB.

1. **Priority Classification.** URGENT.

#### NOTE

See AR 95-1, paragraph 6-6.a., for noncompliance authority of major commanders.

a. **Aircraft in Use.** Upon receipt of this TB, the condition status symbol of the cited aircraft will be changed to a **Red Horizontal Dash -**. The **Red Horizontal Dash -** may be cleared when the requirements of paragraph 8. and the correction procedures described in paragraph 9. 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 be upgraded to a **Red X**.

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

c. **Aircraft Undergoing Maintenance.** Same as paragraph 1 .a.

\*This TB supersedes USAAMCOM Safety of Flight (SOF) Message, 171230Z, MAR 99 OH-58-99-ASAM-03.

**d. Aircraft in Transit.**

**(1) Surface/Air Shipment.** Prior to First Flight

**(2) Ferry Status.**

(a) Same as paragraph 1 .a.

(b) Those aircraft that have a DD 250 and are at a contractor facility will be inspected prior to ferry to final destination.

**e. Maintenance Trainers (Category A and B).** Same as paragraph 1 .a.

**f. Component/Parts in Stock at All Levels (Depot and Others) Including War Reserves.** Upon receipt of this TB, the material condition tags of all items in all condition codes listed in paragraph 6. shall be annotated to read "TB 1-2840-229-20-21 (OH-58-99-ASAM-03), Inspection of the PC Tube Assembly, Not Complied With."

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

**2. Task/Inspection Suspense Date.** Within next 10 flight hours/14 days.

**3. Reporting Compliance Suspense Date.** No later than 07 April 1999 in accordance with paragraph 14.a. of this TB.

**4. Summary of the Problem.**

a. The U. S. Army has OH-58A/C helicopters equipped with the multi-application scroll to PC filter tube assembly, part number 6848471. When used IAW TM 55-2840-241-23P, item 1, figure 12, the scroll to PC filter tube ducts air from the diffuser scroll to the PC filter. PC refers to compressor discharge pressure. This PC filter tube has been identified as the suspected source of several cases of loss of engine power due to the tube cracking. The tube cracking is occurring as a result of handling and over torquing of the tube during required maintenance procedures. For use in this critical application, a replacement tube with a thicker wall and improved routing configuration has been identified in the DOD supply system. The replacement tube is being incorporated into the OH-58A/C engine parts manual.

**b. For Manpower/Downtime and Funding Impacts** see paragraph 12.

**c. The purpose of this TB is to:**

**(1)** Alert OH-58A/C users to a cracking problem associated with the scroll to PC filter tube assembly.

**(2)** To initiate recurring inspections with part replacement NLT 31 Jan 2000.

**5. End Items to be inspected.** All OH-58A/C series aircraft powered by T63-A-720 engines.

**6. Assembly Components to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
T63-A-720 Engine	(73342) 6887191	2840-01-013-1339

**7. Parts to be Inspected.** Item 1, figure 12 TM 55-2840-241-23P.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
PC Filter Tube	6848471	4710-00-922-9549
PC Filter Tube	23054628	4710-01-332-9875

**8. Inspection Procedures.**

a. Initiate a recurring inspection of the scroll to PC filter tube assembly once every 50 hours of flight that will coincide with the special inspection (50 +/- 5 hour compressor inspection) conducted IAW TM 55-1520-228-23, page 1-59.

b. Remove the PC scroll to PC filter tube and inspect for cracks using a 10 power magnifying glass. Pay particular attention to the flared ends of the tube for cracks, and to the areas beneath the floating ferrules for excessive fretting damage. Install serviceable tube assembly IAW instructions in paragraph 5-5 and leak check IAW paragraph 5-8, TM 55-2840-241-23.

**9. Correction Procedures.**

**NOTE**

The tube cracking is occurring as a result of handling and over torquing of the tube during required maintenance procedures.

a. Tubes found to contain cracks and/or fretting damage are to be replaced with P/N 23054628. After installation of PC tube NSN 47110-01-332-9875, P/N 23054628, the inspection requirements of paragraph 8 will then no longer be required.

b. If tube is not damaged, the helicopter can continue to be flown utilizing the inspection procedures of paragraph 8 until the new tube can be installed.

c. If P/N 23054628 is not available and requirements are such that the helicopter must be flown. P/N 6848471 can be used to replace a cracked tube. The inspection procedures of paragraph 8 must be followed until P/N 23054628 is available.

d. P/N 23054628 will be installed on all OH-58A/C aircraft NLT 31 Jan 2000

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

**a. Parts Required.**

NOMENCLATURE	P/N	NSN
PC Control Tube	23054628	4710-01-332-9875

b. **Requisitioning Instructions.** Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) "XFG".

**NOTE**

Project code "XFG" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of ASAM actions.

c. **Bulk and Consumable Materials.** N/A.

d. **Disposition.** Locally demilitarize/mutilate IAW TM I-I 500-328-23 any part/component which does not meet inspection criteria.

**e. Disposition of Hazardous Material.** In accordance with Environmental Protection Agency directives as implemented by your servicing environmental coordinator (AR 200-1).

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

**12. Application.**

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

**b. Estimated Time Required.**

- (1) Total of 2.0 man-hours using 1 person.
- (2) Total of 2.0 hours downtime for one end item.

**c. Estimated Cost impact to the Field.**

NOMENCLATURE	P/N	NSN	QTY.	COST EA.	TOTAL \$
PC Filter Tube Assy.	23054628	4710-01-332-9875	1	\$81.13	\$81.13

**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.** TM 55-2840-241-23P, shall be changed to reflect this TB. A copy of this TB shall be inserted in the appropriate TM as authority to implement the change until the printed change is received.

**13. References.**

- a. TM 55-2840-241-23.
- b. TM 55-2840-241 -23P.
- c. TM 55-2840-248-23.

**14. Recording and Reporting Requirements.**

**a. Reporting Compliance Suspense Date (Aircraft).** Upon entering requirements of this TB on DA Form 2408-13-1 for all subject mission design series (MDS) aircraft. forward a priority message, datafax or E-mail to CDR, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL. 35898-5000, IAW AR 95-1. Datafax number is DSN 897-2111 or (256) 313-2111. E-mail address is <safeadm@redstone.army.mils. The report will cite this TB number, date of entry on DA Form 2408-13-1, aircraft MDS, and serial numbers of aircraft in numerical order.

**b. Task/inspection Reporting Suspense Date (Aircraft).** N/A.

**c. Reporting TB Receipt (Spares).** N/A.

**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 June 1992:**

**NOTE**

Unit Level Logistics System-Aviation (ULLS-A) users will use applicable electronic "E" forms.

- (1) DA Form 2408-5-1, Equipment Modification Record (Engine).

(2) DA Form 2408-13, Aircraft Status Information Record.

(3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record

(4) DA Form 2408-15, Historical Record for Aircraft.

(5) DA Form 2408-18, Equipment Inspection List. ULLS-A units will use one of their 800 inspection numbers until the new part is installed.

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

**16. Points of Contact.**

a. Technical point of contact for this TB is Mr. Darrell Hutson, AMSAM-DSA-CO, DSN 788-0973 or (256) 842-0973; Datafax is (256) 955-9536. E-mail is <hutson-de@redstone.army.mil>.

b. Logistical point of contact for this TB is Ms. Sue Lewis, AMSAM-DSA-ASH, DSN 645-8249 or (256) 955-8249; Datafax is (256) 955-9536; E-mail is <LEWIS-SL@redstone.army.mil>.

c. Wholesale materiel point of contact (Spares) for this TB is Mr. Steve Wood, DSCC-ADBA, DSN 850-7077 or (614) 692-7077; E-mail is <steven-wood@dsc.dla.mil>. The DLA expediter is Larry Curtis DSCC-AGC, DSN 850-7031 or (614) 692-7031; E-mail is <larry-curtis@dsc.dla.mil>.

d. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-RE-FD, DSN 746-5564 or commercial (256) 876-5564; Datafax is DSN 746-4904 or (256) 876-4904; E-mail is <waldeck-ab@redstone.army.mil>.

e. Safety point of contact for this TB is Mr. Ron Price, AMSAM-SF-A, DSN 788-2068 or commercial (256) 842-8636; Datafax is (256) 842-8643; E-mail is <price-sf@redstone.army.mil>.

f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact either CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0681 or commercial (256) 313-0681; E-mail is ewittstrom-jl@redstone.army.mil>. Alternate POC is Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0869 or (256) 313-0869; Datafax is DSN 897-0411 or (256) 313-0411; E-mail is <sammons-rw@redstone.army.mil>. Huntsville, Alabama is GMT minus 6 hrs.

g. After hours contact AMCOM Command Operations Center (COC) DSN 897-2066/2067 or commercial (256) 313-2066/2067.

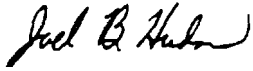
**17. Reporting of Errors and Recommending improvements.** You can improve this TB. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, Alabama 35898-5230. A reply will be furnished to you. You may also send in your comments electronically to our E-mail address at <ls-lp@redstone.army.mil>, or by datafax at DSN 788-6546 or commercial (256) 842-6546. Instructions for sending a DA Form 2028 by E-mail may be found at the back of most Technical Manuals,

**TB 1-2840-241-20-18**

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 the Army**  
05722

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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 dekagram = 10 grams = .35 ounce  
 1 hectogram = 10 dekagrams = 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

To change	To	Multiply by	To change	To	Multiply by
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



**PIN: 077352**