

URGENT

TB 1-2840-248-20-21

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ONE TIME INSPECTION OF ALL AH-64 SERIES AIRCRAFT T700-GE-701 ENGINES PART NUMBER 6044T06G01, NSN 2840-01-114-2211

Headquarters, Department of the Army, Washington, D. C.
15 November 1998

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

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. Priority Classification. Urgent

NOTE

SEE AR 95-1, PARA 6-6A, FOR EXCEPTION AUTHORITY OF MAJOR COMMANDERS.

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB) the condition status symbol of the cited aircraft will be changed to a circled red //X//. The circled red //X// entry shall state, "Aircraft restricted to flight operations and inspection procedures in accordance with Safety of Flight (SOF) message AH-64-99-01, Inspection of T700-GE-701 engine." The circled red //X// may be cleared when the inspection of paragraph 8 below is 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 IIX//. While the aircraft is on a circled red //X//, it may be reported as fully mission capable (FMC).

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

c. Aircraft Undergoing Maintenance. Aircraft will not be released until compliance with this TB has been completed.

d. Aircraft in Transit.

(1) Surface/Air Shipment. Same as paragraph 1.a.

(2) Ferry Status.

(a) Inspect at final destination.

This TB supersedes USAAMCOM 191944Z Oct 98 Message.

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

e. Maintenance Trainers (Category A, and B). N/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 paragraphs 6 and 7 shall be annotated to read "TB 1-2840-248-20-21 Inspection of T700-GE-701 Engine Not Complied With." (1) Wholesale Stock. Upon receipt of this TB, all serviceable items (condition codes //A//, //B//, //C//, //D//, and //E//) listed in paragraphs 6 and 7 located in wholesale depot storage shall be placed in condition code //J// and tagged with a suspended tag/label Material, DD Form 1576/DD Form 1576-1. Do not remove original condition tags. Report compliance with this TB in accordance with paragraph 14.d.(1).

(2) Retail Stock. Upon receipt of this TB, commanders and others maintaining retail stock at installation level and below shall contact the supported aviation unit to perform the inspection required by paragraph 8 and the correction procedures of paragraph 9 on discrepant materiel. Disposition of discrepant materiel will be in accordance with paragraph 10. Report compliance with this TB in accordance with paragraph 14.d.(2).

g. Components/Parts in Work (Depot Level and Others). Items listed in paragraphs 6 and 7 in work will not be issued until compliance with this TB.

2. Task/Inspection Suspense Date. Prior to next flight.

3. Reporting Compliance Suspense Date. No later than 30 November 1998 per paragraph 14.a. of this TB.

4. Summary of the Problem.

a. Utilizing input provided by General Electric Aircraft Engines (GEAE), under AMCOM-managed T700 series engine components improvement program (CIP) contract, the service life limit of some rotating components in the T700-GE-701 engine has been reduced by the engine manufacturer. Continued operation beyond the newly established life limits of the components could result in failure of the engine.

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

c. The purpose of this TB is to:

(1) Identify gas generator rotor modules having stage 2 aft cooling plates with over 4,000 operating hours and remove them from service. The life limit of stage 2 aft cooling plate, P/N 6055T24P01, is 4,000 hours.

(2) Collect operating time data on other affected components. The data shall be used to establish revised life limits to be published in a projected 2d quarter fiscal year (FY) 99 follow-on message.

5. End Items to be Inspected. All AH-64 series aircraft with T700-GE-701 engines installed (P/N 6044T06G01, NSN 2840-01-114-2211).

6. Assembly Components to be Inspected. The engine records for the following components are to be inspected:

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Engine, Turbine, T700-GE-701	6044T06G01	2840-01-114-2211
Turbine, Rotor, Turbine (also known as Gas Generator Rotor Assembly)		
Turbine, Rotor, Turbine	6055T26G08	2840-01-298-0693
Turbine, Rotor, Turbine	6055T26G09	2840-01-298-0693

7. **Parts to be Inspected.** The engine records are to be inspected for the following components:

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Stage 1 Forward Cooling Plate	6044T88P02	2840-01-140-6735
Stage 1 Forward Cooling Plate	6044T88P03	2840-01-236-4599
Stage 1 Aft Cooling Plate	6044T92P02	2840-01-140-6736
	6044T92P03	2840-01-187-1558
Stage 2 Forward Cooling Plate	6055T25P01	2840-01-180-7667
	6044T93P02	2840-01-140-6733
Stage 2 Aft Cooling Plate	6055T24P01	2840-01-180-7668
		2840-01-299-2225
	6044T94P02	2840-01-140-6734

8. Inspection Procedures.

a. Prior to next flight, review DA Form 2408-16-1 (GG Rotor) to obtain the following cumulative component counts and data to date on all components listed in paragraph 7.

- (1) Engine serial number
- (2) Component serial number
- (3) Component operating hours
- (4) LCF1 counts
- (5) Unit Identification Code (UIC)
- (6) Unit
- (7) Station
- (8) Point of contact/phone number/e-mail

9. Correction Procedures.

a. Remove all gas generator assemblies having stage 2 aft cooling plates (P/N 6055T24P01, NSN 2840-01-180-7668) with more than 4,000 operating hours. Forward a Category I Deficiency Report (SF Form 368) per DA PAM 738-751 to the technical point of contact listed at paragraph 16.a.

b. Provide data collected from paragraph 8 on all components to logistics point of contact listed at paragraph 16.b.

c. Change the life limit of stage 2 aft cooling plates, P/N 6055T24P01, to 4,000 hours on DA Form 2408-16-1 in accordance with TB 1-2840-248-20-21.

10. Supply/Parts and Disposition.

a. Parts Required. Turbine, Rotor, Turbine (also known as Gas Generator Rotor Assembly) Turbine, Rotor, Turbine, P/N 6055T26G08, NSN 2840-01-298-0693; or Turbine, Rotor, Turbine, P/N 6055T26G09, NSN 2840-01-298-0693.

b. Requisitioning Instructions. Requisition replacement parts using normal supply procedures. All requisitions shall use project code (CC 57-59) "XEG", "X-RAY-ECHO-GOLF".

NOTE

Project code "XEG", "X-RAY-ECHO-GOLF" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of Safety of Flight (SOF) actions.

c. Bulk and Consumable Materials.

d. Disposition. Hold any discrepant gas generator assemblies having stage 2 aft cooling plates (P/N 6055T24P01, NSN 2840-01-180-7668 with more than 4,000 operating hours pending disposition instructions from technical point of contact in paragraph 16.a.

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.

- (1) For Inspection - AVUM. Aircraft downtime will be charged to AVUM.
- (2) For Replacement - AVIM. Aircraft downtime for replacement will be charged to AVIM.

b. Estimated Time Required.

- (1) For records check:
 - (a) Total of 1.5 man-hours using 1 person.
 - (b) Total of 1.5 hours downtime for one end item.
- (2) For replacement:
 - (a) Total of 12 man-hours using 2 persons.
 - (b) Total of 6 hours downtime for one end item.

c. Estimated Cost Impact to the Field: \$112,015.00.

d. TB/Maintenance Work Orders (MWOs) to be Applied Prior to or Concurrently With This Inspection. N/A.

e. Publications Which Require Change as a Result of This Inspection. N/A.

13. References. 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 on all subject MDS aircraft, forward a priority message, datafax or E-Mail to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), per AR 95-1. Datafax number is DSN 897-2111 or commercial (256) 313-2111. E-Mail address is "SAFEADM@REDSTONE.ARMY.MIL". The report will cite this TB number, date of entry in DA Form 2408-13-1, the aircraft mission design series and serial numbers of aircraft in numerical order.

b. Task/Inspection Reporting Suspense Date (Aircraft).

(1) Upon completion of inspection, units will forward a priority message, datafax or E-Mail to the Logistical point of contact listed in paragraph 16.b. The report will cite this TB number, date of inspection, aircraft serial number, aircraft and component hours, and results of the inspection. Inspection and reports will be completed no later than 15 days after task/inspection suspense date. Negative reports are required.

(2) Units with gas generator assemblies having stage 2 aft cooling plates (P/N 6055T24P01, NSN 2840-01-180-7668) with more than 4,000 operating hours shall forward a Category I Deficiency Report (SF Form 368) per DA Pam 738-751 to the technical point of contact listed in paragraph 16.a.

c. Reporting TB Receipt (Spares).

(1) Materiel in Wholesale Depot Storage. Report receipt of this TB by E-Mail or datafax to the wholesale materiel (spares) point of contact listed in paragraph 16.c. within three working days from the date of receipt of this TB. Provide local point of contact.

(2) Materiel in Retail Storage. Report receipt of this TB by E-Mail or datafax to the logistical point of contact listed in paragraph 16.b. within seven days from the date of receipt of this TB. Provide local point of contact.

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

(1) Materiel in Wholesale Depot Storage. Report compliance with this TB to the wholesale materiel point of contact (spares) listed in paragraph 16.c. within seven days of receipt of this TB on DD Form 1225. Provide the cost of compliance with this TB to include an estimate of the cost reimbursable funding required to move serviceable items on hand listed in paragraphs 6 and 7 to a work area, unpack the materiel, repack the materiel after inspection by AMCOM inspectors, and to return the materiel to storage, as appropriate. Report, by original serviceable condition code, the quantity of materiel placed in condition code H/J//. Report by e-mail or datafax and provide local point of contact.

(2) Materiel in Retail Storage. Report compliance with this TB to the logistical point of contact in paragraph 16.b. within 14 days of receipt of this TB. Report the quantity inspected by condition code and the resulting condition code. Report by e-mail or datafax and provide local points of contact.

e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 June 1992:

NOTE

ULLS-A users will use applicable "E" forms.

- (1) DA Form 2408-5-1, Equipment Modification Record (GG Rotor Assy (MRS)).
- (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 2408-16-1, Aircraft Component Historical Record (GG Rotor Assy (MRS)).
- (6) DA Form 2410, Component Removal and Repair/Overhaul Record (only is GG Rotor Assy/MRS is removed/replaced).
- (7) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label - Materiel (Color Yellow). (Annotate Remarks Block with "Inspected Serviceable in accordance with TB 1-2840-248-20-21".)
- (8) DD Form 1575/DD Form 1575-1, Suspended Tag/Label - Materiel (Color Brown). (Annotate Remarks Block with "Suspended in accordance with TB 1-2840-248-20-21".)
- (9) DD Form 1577/DD Form 1577-1, Unserviceable (Condemned) Tag/Label - Materiel (Color Red). (Annotate Remarks Block with "Condemned in accordance with TB 1-2840-248-20-21".)
- (10) Form 1577-2/DD Form 1577-3, Unserviceable (Reparable) Tag/Label - Materiel (Color Green). (Annotate Remarks Block with "Unserviceable in accordance with TB 1-2840-248-20-21".)

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this TB is Mr. John Caraway, AMSAM-AR-EP, DSN 897-4974 or commercial (256)313-4974. Datafax is DSN 897-4923 or commercial (256) 313-4923. E-mail is "carawayj@redstone.army.mil". The alternate point of contact is Mr. Ken Muzzo, AMSAM-AR-E-I-P-A, DSN 897-4812 or commercial (256) 313-4812. E-mail is "muzzo-kw@redstone.army.mil".

b. Logistical point of contact for this TB is Mr. John Patton, SFAE-AV-AAH-LF, DSN 897-4244 or commercial (256)313-4244. Datafax is DSN 897-4343 or commercial (256)313-4343. E-Mail is "pattonj@peoavn .redstone.army.mil".

c. Wholesale material point of contact (spares) is Mr. Terry Hortter, AMSAM-MMC-VS-UT, DSN 897-1170 or commercial (256)313-1170. Datafax is DSN 897-1572 or commercial (256)313-1572. E-mail is "hortter-tl@exchange 1.redstone.army. mil".

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

e. Safety point of contact for this TB is Mr. Howard Chilton, AMSAM-SF-A, DSN 897-2068 or commercial (256)313-2068. Datafax is DSN 897-2111 or commercial (256)313-2111. E-mail is "chilton-hl@redstone.army.mil".

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

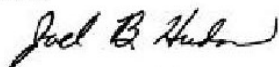
g. After hours, contact the AMCOM Command Operations Center (COC) at DSN 897-2066/7 or commercial (256)313-2066/7.

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, AL 35898-5000. You may also submit your recommended changes by e-mail directly to <ls-lp@redstone.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual.

By Order of the Secretary of the Army:

Official:

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



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
04866

DISTRIBUTION:

To be distributed in accordance with Initial Distribution Number (IDN) 313798, requirements for TB 1-2840-248-20-21.

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1,3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whoever" <whoever@avma27.army.mil>
To: <ls-lp@redstone.army. mil>

Subject: DA Form 2028

1. **From:** Joe Smith
2. **Unit:** home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 19-DEC-98
8. **Pub no:** 1-2840-248-20-21
9. **Pub Title:** TB
10. **Publication Date:** 15-NOV-98
11. **Change Number:** N/A
12. **Submitter Rank:** MSG
13. **Submitter FName:** Joe
14. **Submitter MName:** T
15. **Submitter LName:** Smith
16. **Submitter Phone:** 123-123-1234
17. **Problem:** 1
18. **Page:** 2
19. **Paragraph:** 3
20. **Line:** 4
21. **NSN:** 5
22. **Reference:** 6
23. **Figure:** 7
24. **Table:** 8
25. **Item:** 9
26. **Total:** 123
27. **Text:**

This is the text for the problem below line 27.

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

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.

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

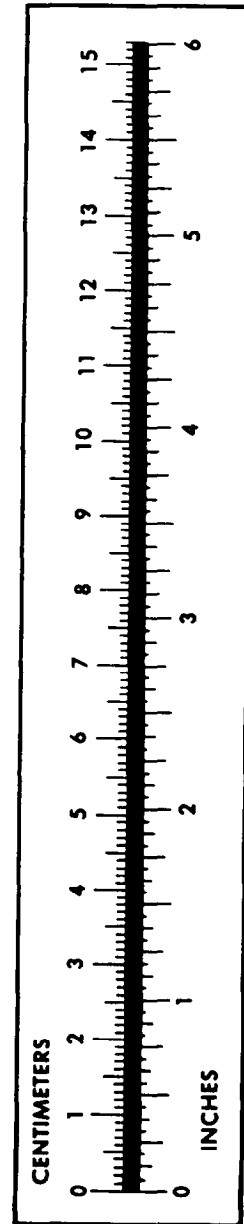
TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 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: 076935-000