

# URGENT

\*TB 1-2840-256-20-04

## DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

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### ONE TIME INSPECTION OF SCROLL ASSEMBLY ON T703-AD-700 AND T703-AD-700A ENGINES FOR OH-58D AIRCRAFT

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Headquarters, Department of the Army, Washington, D. C.  
13 February 2001

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#### NOTE

THIS PUBLICATION IS EFFECTIVE  
UNTIL RESCINDED OR SUPERSEDED.

#### 1. Priority Classification. URGENT.

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB), make the following entry on DA Form 2408-13-1. Enter a Red Horizontal Dash status symbol with the following statement: Inspect OH-58D engine Scroll Assembly in accordance with this TB paragraph 8., prior to next flight, but not later than 1 February 2001. Clear the Red Horizontal Dash entry when procedures in paragraphs 8. and 9. are completed. The affected aircraft shall be inspected as soon as practical but no later than 1 February 2001. Commanders unable to comply with requirements of this TB within the time frame specified will upgrade affected aircraft status to a Red X.

b. Aircraft in Depot Maintenance. Depot Commanders will not issue aircraft until they are in compliance with this TB.

c. Aircraft Undergoing Maintenance. Commanders and Facility Managers will not issue aircraft until they are in compliance with this TB.

d. Aircraft in Transit.

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

(2) Ferry Status. Inspect at final destination.

(3) Aircraft at Contractor Facility. Bell Helicopter TEXTRON, Inc. (BHTI) will inspect DD 250 aircraft prior to those aircraft departing for ferry final destination.

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

f. Component/Parts in Stock Including War Reserves at All Levels (Depot and Others). Upon receipt of this TB, Depot and Materiel Activity Commanders will ensure the materiel condition tags of all items in all condition codes listed in paragraphs 6. and 7. are annotated to read (TB 1-2840-256-20-04), Replacement of Compressor Scroll, not complied with.

(1) Wholesale Stock. Report receipt of this TB in accordance with paragraph 14. c. (1). Upon receipt of this TB, Depot and Materiel Activity Commanders, will ensure all serviceable items (condition codes A, B, C, D, and E.) listed in paragraphs 6. and 7. are placed in condition code J. and tagged with a suspended tag/label materiel, DD Form 1575/DD Form 1575-1. Do not remove original condition tags. Report compliance with this TB in accordance with paragraph 14. d. (1).

(2) Retail Stock. Report receipt of this TB in accordance with paragraph 14. c. (2). Upon receipt of this TB, Commanders and Facility Managers maintaining retail stock at instillation level and below shall contact support aviation unit to perform procedures required in accordance with paragraphs 8. and 9. on suspect materiel. Dispose of discrepant materiel in accordance with paragraph 14. d. (2).

(3) PM Owned Assets. Facility Managers for PM owned assets will survey all engines and compressors on hand upon receipt of this TB to determine if any defective scrolls are in stock. Report compliance with this TB in accordance with paragraph 14. d. (3).

g. Component/Parts in Work (Depot Level and Others). Depot and other Maintenance Activity Commanders will ensure items listed in paragraphs 6. and 7. are not issued until they are in compliance with this TB.

**2. Task/Inspection Suspense Date.** Complete inspection in accordance with paragraph 8. prior to next flight but not later than 1 February 2001 and report in accordance with paragraph 14. b.

**3. Reporting Compliance Suspense Date.** Report compliance in accordance with paragraph 14. a. no later than 7 February 2001.

**4. Summary of Problem.**

a. Rolls Royce has reported that a few compressor scrolls have been found with crack in the turning vanes. Inspection of one engine revealed that crack(s) propagated to the point that a piece of turning vane separated from the scroll assembly resulting in turbine wheel damage and loss of power. Investigation into the cause of the crack determined the crack was initiated during manufacturing; subsequent engine operation propagated the crack to metal separation. Further inspection of compressor scrolls revealed the existence of additional cracks. The manufacturing problem has been isolated to two compressor scroll configurations, P/N 23066737 and P/N 23072848.

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

c. The purpose of this TB is to require a visual inspection of the compressor scroll to determine the part number. Engines with compressor scroll part numbers 23066737 or 23072848 installed will require compressor scroll replacement prior to next flight.

**5. End Items to be Inspected.** All T703-AD-700 and T703-AD-700A engines on OH-58D aircraft.

**6. Assemblies Components to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Engine, Aircraft	23005714	2840-01-131-3350
Engine, Aircraft	23055439	2840-01-333-2064
Compressor Assembly	23033193	2840-01-288-5616
Compressor Assembly	23051643	2840-01-332-9903

**7. Parts to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Compressor Scroll	23066737	
Compressor Scroll	23072848	

**8. Inspection Procedures.**

- a. Open engine access panels and remove cowling as necessary to inspect engine scroll assembly.
- b. Locate scroll part number on engine right side forward portion of scroll near turning section.
- c. Note scroll part number.
- d. If scroll part number is other than 23066737 or 23072848, no further action is required and inspection is complete. Clear Red Horizontal Dash entry.

e. If scroll part number is 23066737 or 23072848, proceed to paragraph 9.

**9. Correction Procedures.**

a. If scroll part number is either 23066737 or 23072848, compressor assembly or engine assembly must be changed prior to next flight. Make the following entry on DD Form 2408-13-1. Enter a Red X status symbol with the following statement: Engine compressor scroll requires replacement in accordance with TB 1-2840-256-20-04.

b. Commanders may authorize a One Time Flight to home station or nearest secure maintenance facility for replacement.

**10. Supply Parts and Disposition.**

a. Parts Required.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Compressor Scroll	23072862	
Compressor Scroll	23074076	

b. Requisitioning Instructions. A rotatable pool will be established and repairs made under Rolls Royce warranty program. Contact the Logistics Point of Contact in paragraph 16. b. for further instructions.

c. Bulk and Consumable Materials. Not applicable.

d. Disposition. Dispose of removed parts/components using normal supply procedures. All turn-in documents must include Project Code (CC 57-59) X0N (X-Ray-Zero-November).

e. Disposition of Hazardous Material. Not applicable.

**11. Special Tools, Jigs, and Fixtures.** As required.

**12. Application.**

a. Category of Maintenance. AVUM for inspection and engine replacement. Downtime will be charged to AVUM maintenance. Report aircraft Non-Mission Capable Maintenance (NMCM) while undergoing inspection and correction in accordance with this TB.

b. Estimated Time Required.

(1) To complete inspection. Total of 1.0 man-hours using one person.

(2) Compressor assembly replacement (including removal and replacement of engine):

(a) Total of 9 man-hours using one person.

(b) Total of 9 hours downtime for one end item.

c. Estimated Cost Impact to the Field. Not applicable. (Warranty Item).

d. TB/MWOs to be Applied Prior to or Concurrently with this Inspection. Not applicable.

e. Publications Which Require Change as a Result of This Inspection. TM 1-2840-256-23P 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. DA PAM 738-751, 15 March 1999

b. TM1-1520-248-23, 28 February 2000

c. TM 55-2840-256-23, 2 June 1986

d. TM 1-2840-256-23P, 30 April 1996

#### 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 aircraft, Commanders will forward a priority message, datafax, or e-mail to Commander, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL. 35898-5000, in accordance with AR 95-1. Datafax DSN 897-2111 or 256-313-2111. E-Mail address safead@redstone.army.mil. Report will cite this TB number, date, of entry on DA Form 2408-13-1, aircraft Mission Design and Series (MDS) and serial number of aircraft in numerical order.

b. Task/Inspection Reporting Suspense Date (Aircraft). Upon completion of inspection, Commanders will forward a priority message to Logistics Point of Contact listed in paragraph 16. b. Report will cite this TB number, date of inspection, aircraft and component hours, and results of inspection. Inspection and reports will be completed no later than 6 February 2001.

c. Reporting TB Receipt (Spares):

(1) Materiel in Wholesale Depot Storage. Depot and Materiel Activity Commanders will report receipt of this TB by e-mail or datafax to Wholesale Materiel (Spares) Point of Contact listed in paragraph 16. c. no later than 23 January 2001. Provide local point of contact.

(2) Materiel in Retail Storage. Commanders and Facility Managers will report receipt of this TB by e-mail or datafax to Logistics Point of Contact listed in paragraph 16. b. no later than 24 January 2001. Provide local point of contact.

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

(1) Materiel in Wholesale Depot Storage. Depot and Materiel Activity Commanders will report compliance with this TB to Wholesale Point of Contact in paragraph 16. c. no later than 23 January 2001 on DD Form 1225. Provide cost of compliance with this TB to include an estimate of cost reimbursable funding required to move serviceable items on hand listed in paragraph 6. to a work area, unpack materiel, repack materiel after inspection by AMCOM inspectors, and return materiel to storage as appropriate. Report by original serviceable condition code, quantity of materiel placed in condition code J. Report by e-mail or datafax and provide local point of contact.

(2) Materiel in Retail Storage. Commanders and Facility Managers will report compliance with this TB. to Logistics Point of Contact in paragraph 16. b. no later than 1 February 2001. Report quantity inspected by condition code and resulting condition code. Report by e-mail or datafax and provide local point of contact.

(3) PM owned assets. A report will be generated and provided to Logistics Point of Contact no later than 23 January 2001. Report quantity inspected by condition code and resulting condition code. Report by e-mail or datafax and provide local point of contact. Disposition instructions from PM will follow receipt of report.

e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 March 1999

#### NOTE

ULLS-A users will use applicable 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 2408-16, Aircraft Component Historical Record.

(6) DA Form 2410, Component Removal and Replacement/Overhaul Record, (If engine 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 1-2840-256-20-04".

(8) DD Form 1575/DD Form 1575-1, Suspended Tag/Label Materiel (color brown). Annotate Remarks Block with "Suspended in accordance with TB 1-2840-256-20-04".

(9) DD Form 1577-2/DD Form 1577-3, Unserviceable (Reparable) Tag/Label Materiel (color green). Annotate Remarks Block with "Unserviceable in accordance with TB 1-2840-256-20-04".

15. Weight and Balance. Not applicable.

**16. Points of Contact.**

a. Technical Point of Contact for this TB is Mr. Gary Kellogg, AMSAM-RD-AE-P-E, DSN 897-3882 or 256-313-3882, datafax 897-4961. E-Mail gary.kellogg@redstone.army.mil.

b. Logistical Point of Contact for this TB is Mr. Ray Hensley, AMSAM-DSA-AS-ASH-L, DSN 645-7441 or 256-955-7441, datafax 645-7125. E-mail raymond.hensley@redstone.army.mil.

c. Wholesale Materiel Point of Contact for this TB is Mr. Claude McClendon, AMSAM-MMC-AV-SOT, DSN 897-1379 or 256-313-1379, datafax DSN 788-6758. E-Mail claudemcclendon@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 256-876-5564, datafax DSN 746-4904. E-Mail ann.waldeck@redstone.army.mil.

e. Safety Points of Contact for this TB are:

(1) Primary. Mr. Randall Rushing (SAIC), AMSAM-SF-A, DSN 897-2092 or 256-313-2092, datafax DSN 897-2111 or 256-313-2111. E-Mail is randall.rushing@redstone.army.mil.

(2) Alternate. Mr. Ron Price, AMSAM-SF-A, DSN 788-8636 or 256-842-8636, datafax DSN 897-2111 or 256-313-2111. E-Mail ron.price@redstone.army.mil.

f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact:

(1) CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or 256-313-0410. E-Mail wittstromjl@redstone.army.mil.

(2) Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or 256-313-0408. Datafax DSN 897-0411 or 256-313-0411. E-Mail sammonsrw@redstone.army.mil

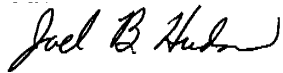
g. After hours contact ATCOM Command Operations Center (COC) DSN 897-2066/7 or 256-313-2066/7. Huntsville, AL. is Greenwich Mean Time (GMT) minus six hours.

TB 1-2840-256-20-04

By Order of the Secretary of the Army:

Official:

ERIC K. SHINSEKI  
*General, United States Army*  
*Chief of Staff*



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