URGENT

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ONE TIME INSPECTION AND REPAIR OF SUPPORT INSTALLATION, OIL COOLER, P/N 406-030-117-125/129, ON OH-58D HELICOPTER

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

31 December 1999

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. Priority Classification. Urgent

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB) the condition status symbol of the cited aircraft will be changed to a red dash. The red dash may be cleared when the inspection/repair of paragraphs 8 and 9 below are completed. The affected aircraft shall be inspected as soon as practical but no later than the task/inspection suspense date.

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 issued until compliance with this TB has been completed.

d. Aircraft in Transit.

(1) Surface/Air Shipment Inspect at final destination.

(2) Ferry Status. Inspect at final destination.

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

f. Component/Parts in Stock Including War Reserves a All Levels (Depot and Others). N/A.

2. Task/inspection Suspense Date.

a. inspection Suspense Date: Next 40 hour Progressive Phase Maintenance (PPM) interval following receipt of this technical bulletin.

b. Repair: Shall be accomplished prior to next flight.

3. Reporting Compliance Suspense Date. Not applicable.

*This Technical Bulletin is published in conjunction with OH-58-00-ASAM-01.

4. Summary of the Problem.

a. Aircraft in the field are experiencing a high incidence of deck skin and core cracking of subject support installation. The area where damage is noted is where oil cooler blower shaft forward hanger bearing support attaches to oil cooler support deck.

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

c. The purpose of this TB is fourfold:

(1) Part I addresses steps for inspection of edge distance for aft two inserts that support forward oil cooler blower hanger bearing support.

(2) Part III addresses inspection criteria for cut out area, where oil cooler blower fan housing resides, for cracks in the core fill.

(3) Part II addresses inspection criteria for under side of the oil cooler panel for concave indentations of inserts.

(4) Part IV addresses repair criteria for discrepancies discovered during inspections.

5. End items to be Inspected/Repaired. All OH-58D aircraft.

6. Assembly Components to be Inspected/Repaired.

NOMENCLATURE	PART NUMBER	NSN
Support Installation, Oil Cooler	406-030-117-125	1560-01-356-6007
Support Installation, Oil Cooler	406-030-117-129	1560-01-445-3364

7. Parts to be Inspected. Not applicable.

8. Inspection Procedures.

a. Inspection for Proper Inset Edge Distance.

(1) Remove oil cooler blower cowling, P/N 406-060-804-189. (Task 2-1-28.1)

CAUTION
Care must be taken not to damage driveshaft assembly, While working in this area

(2) Carefully remove aft firewall closeouts, LH, P/N 406-060-903-101, and RH, P/N 406-060-903-102 taking care not to bend closeouts during removal. (Task 4-9-3) (3) Gain access to forward oil cooler driveshaft hangar bearing support.

(4) Carefully measure distance from center of two aft bolts of forward oil cooler driveshaft hangar bearing support to forward edge of oil cooler blower cut out Dimension should be between 0.405 to 0.515 inches.

(5) If measurement is within limits above, proceed to paragraph 8. b. If measurement falls outside limits above, proceed to paragraph 9.

b. Inspection of Oil Cooler Cut Out

(1) Using a flashlight and inspection mirror, inspect oil cooler cut out for cracks in core fill material. Pay particular attention to forward and aft cut out edge areas.

(2) If no cracks are found, proceed to paragraph 8. c. If cracks am found, proceed to Paragraph 9 b.

c. Inspection of Forward Hanger Bearing Support Inserts

(1) Gain access to under side of oil cooler panel by removing access panel, P/N 406-961-037-120, and tail boom access panel, P/N 406-032-328-105.

(2) For support installation P/N 406-030-117-125, Using a flashlight, inspect two forward, forward hanger bearing inserts for concave indentations. If concave indentation is found, the wrong insert has been installed. Using a flashlight, inspect two aft, forward hanger bearing inserts for concave indentations. If concave indentation is not found, the wrong insert is installed.

(3) For support installation P/N 406-030-117-129, Using a flashlight, inspect four forward hanger bearing inserts for concave indentations. If concave indentation is found, the wrong insert is installed.

(4) If any discrepancies are discovered, precede to paragraph 9 for corrective procedures. If no discrepancies are noted, install close outs, access panels, and cowing.

9. Correction Procedures.

a. If edge distance measured in paragraph 8. a. is not within dimensions, proceed as follows:

(1) Remove oil cooler blower assembly and hanger bearing supports per instructions contained in TM 55-1520-248-23-3, Chapter 6.

(2) Prior to performing any further maintenance, and with oil cooler blower assembly removed, re-measure forward oil cooler hanger bearing support aft insert edge distance. Refer to Part a of Paragraph 8 for dimensions.

(3) If dimensions are within limits, no further action is required for correction procedures. If dimensions are not within limits, proceed to step 4.

CAUTION

Care must be taken not to damage upper or lower skins or inserts.

(4) Remove corefill material at edge pane of oil cooler panel cut out approximately 0.40 inch on each side of insert centerline, for aft forward insert holes.

(5) Remove adhesive back to existing edge of insert holes.

(6) Inspect area r skin and insert damage. If damage is found, repair in accordance with instructions contained in TM 55-1520-248-23-1, Chapter 2.

WARNING

- **Naphth/Naphthalene is combustible: do not use it near welding area, near flames, or on hot surface. Avoid prolonged or repeated contact with liquid. Contact of skin with liquid can cause irritation. Inhalation of vapors can cause irritation, giddiness, and drowsiness. If liquid contacts eyes, flush eyes thoroughly with water. If there is any prolonged skin contact, wash contacted area with soap and water. If vapors cause drowsiness, go to fresh air. Remove saturated clothing. If any liquid is swallowed, do not try to vomit. In all cases get immediate medical attention. When handling liquid in an air-exhausted, partially covered tank, wear approved gloves. When handling liquid in open exhausted container, wear approved gloves and goggles. If contact with vapor is likely, ware an approved respirator. Dispose of liquid-soaked rags in approved metal container. Metal containers of liquid must be grounded to maintain electric continuity.**

- **Isopropyl alcohol is flammable: do not use near open flame, near welding area, or on hot surface. Do not use while smoking or while others are smoking. Inhalation of vapors can cause drowsiness, dizziness, and headache. If liquid touches skin or eyes, flush thoroughly with water. Remove contaminated clothing. If vapors cause drowsiness, go to fresh air. When handling large quantities (greater than 1 gallon) work at air-exhausted workbench or covered tank. Store solvent and liquid-soaked clothes in an approved grounded metal container.**

· **Denatured ethyl alcohol and its vapor is flammable and explosive do not use where others are smoking. POISON-do not ingest. Ingestion will cause vomiting, stupor, and collapse. Inhalation of vapor may cause headache and drowsiness. If vapors cause drowsiness, go to fresh air. Immediately remove wet clothing. When working with denatured ethyl alcohol, wear approved respirator, gloves, and goggles. If splash could occur, wear a approved face shield over goggles. In case of contact with eyes, flush with water for at least 20 minutes and obtain medical attention. Dispose of liquid soaked rags In approved metal container. Metal container must be grounded to maintain electrical continuity.**

(7) Prepare area for bonding by cleaning with alphatic naphtha, isopropyl, or denatured alcohol.

WARNING

Adhesive can cause allergic reaction, skin sensitization, or gastrointestinal irritation. Contact with eyes can cause severe burns. Wash skin immediately with soap and water. Flush eyes with water for at least 15 minutes. Get immediate medical attention in event of eye contact with adhesive. Wash contaminated clothing before reuse. Wear approved respirator in closed area. Work in well-ventilated area using approved rubber gloves and safety glasses or goggles.

(8) Pack fill area using adhesive EA934NA.

(9) Allow to cure smooth to adjacent surfaces.

(10) Inspect area and refinish per instructions contained in TM 55-1520-248-23-1, Chapter 2.

(11) Install oil cooler blower assembly per instructions contained in TM 55-1520-248-23-3, Chapter 6.

b. Repair of Oil Cooler Blower Cut Out Area.

(1) Remove oil cooler blower assembly per instructions contained in TM 55-1520-248-23-3, Chapter 6.

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(2) Clean area around oil cooler blower cut out using naphtha, isopropyl, or denatured alcohol and re-inspect area for cracking of corefill material. If cracking of corefill material is still evident, proceed to Step 3.

CAUTION
Do not damage upper or lower skins or inserts.

(3) Using medium grade sandpaper, carefully sand away corefill material around area of crack. Clean sanded area with naphtha, isopropyl, or denatured alcohol.

WARNING

Adhesive can cause allergic reaction, skin sensitization, or gastrointestinal irritation. Contact with eyes can cause severe burns. Wash skin immediately with soap and water. Flush eyes with water for at least 15 minutes. Get immediate medical attention in event of eye contact with adhesive. Wash contaminated clothing before reuse. Wear approved respirator in closed area. Work in well-ventilated area using approved rubber gloves and safety glasses or goggles.

(4) Pack fill area using EA934NA.

(5) Allow to cure smooth to adjacent surfaces.

(6) Inspect area and refinish per instructions contained in TM 55-1520-248-23-1, Chapter 2.

(7) Install oil cooler blower assembly per instructions contained in TM 55-1520-248-23-3, Chapter 6.

c. Replacement of Oil Cooler Hanger Bearing Support Inserts

(1) Remove oil cooler blower assembly per instructions contained in TM 55-1520-248-23-3, Chapter 6.

(2) Remove oil cooler blower assembly forward hanger bearing support shims and retain.

(3) Determine part number of deck, remove existing inserts (sleeves and plugs) per instructions in TM 55-1520-248-23-1, Chapter 2. If deck is a -125, then forward sleeves are P/N 80-013-S4F12-9 and AFT sleeves are P/N 80-013-S4D12-9. The same plug P/N 80-013-P4D2-9 is used on all sleeves. If deck is a -129, sleeves are P/N 80-013-S4F10-9.

WARNING

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- **Isopropyl alcohol is flammable: do not use near open flame, near welding area, or on hot surface. Do not use while smoking or while others are smoking. Inhalation of vapors can cause drowsiness, dizziness, and headache. If liquid touches skin or eyes, flush thoroughly with water. Remove contaminated clothing. If vapors cause drowsiness, go to fresh air. When handling large quantities (greater than 1 gallon) work at air-exhausted workbench or covered tank. Store solvent and liquid-soaked clothes in an approved grounded metal container.**

· **Denatured ethyl alcohol and its vapor is flammable and explosive do not use where others are smoking. POISON –do not ingest. Ingestion will cause vomiting, stupor, and collapse. Inhalation of vapor may cause headache and drowsiness. If vapors cause drowsiness, go to fresh air. Immediately remove wet clothing. When working with denatured ethyl alcohol, wear approved respirator, gloves, and goggles. If splash could occur, wear an approved face shield over goggles. In case of contact with eyes, flush with water for at least 20 minutes and obtain medical attention. Dispose of liquid soaked rags in approved metal container. Metal container must be grounded to maintain electrical continuity.**

(4) Clean repair surface with naphtha, denatured, or isopropyl alcohol.

(5) Inspect corefill area for crushed core. Inspect upper and lower skin area for damage. Repair as necessary.

WARNING

Adhesive vapors may cause irritation of eyes, nose, and respiratory system. Eye and skin contact with material may cause irritation. If ingested, may cause gastric distress. Flush eyes with water for 15 minutes. Wash skin with soap and water. If inhaled, move to fresh air. In all cases get immediate medical attention. work in well-ventilated area. Wear approved gloves and safety glasses.

(6) Determine part number of deck and install proper inserts (sleeves and plugs) using Hysol EA 9320NA adhesive. per instructions in TM 55-1520-248-23-1, Chapter 2. If deck is a -125, forward sleeves are P/N 80-013-S4F12-9 and aft sleeves are P/N 80-013-S4D12-9. The same plug P/N 80-013-P4D2-9 is used for all sleeves. If deck is a -129, sleeves are P/N 80-013-S4F10-9. Allow adhesive to cure.

(7) Inspect and refinish repaired area per instructions contained in TM 55-1520-248-23-1, Chapter 2.

(8) Install oil cooler blower assembly per instructions contained in TM 55-1520-248-23-3, Chapter 6.

10. Supply/Parts and Disposition.

a. Parts Required.

PART NUMBER	NSN	NOMENCLATURE	QTY.
80-013-S4F12-9	5325-01-025-0585	Sleeve	AIR
80-013-S4D12-9	5325-01-025-0583	Sleeve	A/R
80-013-S4F10-9		Sleeve	A/R
80-013-P4D2-9		Plug	AIR

b. Requisitioning Instructions. Requisition replacement pas through normal supply channels using normal supply procedures.

c. Bulk and Consumable Materials.

PART NUMBER	NSN	NOMENCLATURE	QTY.
P-P-101	5350-00-721-8117	Sandpaper 180 grit	AR
P-P-101	5350-00-224-7203	Sandpaper 320 grit	AR
TT-N-95	6810-00-238-8119	Naphtha, Alphatic	AR
P-D-680	6850-00-274-5421	Solvent, Drycleaning	AR
O-E-760	6810-00-205-6786	Alcohol, Denatured	AR
TT-I-735	6810-00-855-6160	Alcohol, Isopropyl	AR
EA934NA	8040-00-016-8662	Adhesive, Heat Res	AR
EA9320NA	8040-00-104-4354	Adhesive	AR

d. Disposition. Dispose of removed parts/components in accordance with normal supply procedures. A QDR is not required.

e. Disposition of Hazardous Material. Not applicable.

11. Special Tools, Jigs and Fixtures Required. Not applicable.

12. Application.

a. Category of Maintenance. AVUM.

b. Time Required.

(1) Total of 1 man-hours using 1 person.

(a) Inspection for Proper Insert Edge Distance - 2 man-hours

(b) Inspection of Oil Cooler Cut Out - 1 man-hour

(c) Inspection of Forward Hangar Bearing Support Inserts - 2 man-hours

(d) Correction Procedures - 32 man-hours

(2) Total of hours downtime for one end item. Times will vary as applications are completed as required per paragraph 12. b. (1) .(a) thru (d).

c. Estimated Cost Impact of Stock Fund Items to the Field. N/A

d. Disposition. Dispose of removed parts/components in accordance with normal supply procedures. A QDR is not required.

e. TB/MWOs to be Applied Prior to or Concurrently with this Inspection. N/A.

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

13. References.

a. TM 55-1520-248-23-1

b. TM 1-1520-248-23P

c. TM 1-1500-204-23 Series

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date (Aircraft). Not applicable.

b. Task/Inspection Reporting Suspense Date (Aircraft). Not applicable.

c. Reporting Compliance Suspense Date (Spares). Not applicable.

d. Task/Inspection Reporting Suspense Date (Spares). Not applicable.

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

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

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

(3) DA Form 2408-13-2, Related Maintenance Action Record.

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

15. Weight and Balance. Not applicable.

16. Points of Contact.

a. Maintenance Engineering point of contact is Mr. Thad Baranowski, AMSAM-MMC-VS-AO, DSN 897-1381 or commercial (256) 313-1381, E-Mail baranowski-ts@redstone.army.mil.

b. System Engineering point of contact for this TB is Mr. Kevin Cahill, AMSAM-AR-E-I-B-O, DSN 645-9544 or commercial (256) 955-9544, E-mail cahill-kt@redstone.army.mil.

c. Logistical point of contact for this TB is Mr. Chris Price, AMSAM-DSA-ASH-L, DSN 645-7449 or commercial (256) 955-7449, E-mail price-cp@redstone.army.mil or Mr. Randy Lyle, AMSAM-DSA-ASH-L, DSN 645-7971 or commercial (256) 955-7971, E-mail lyle-rd@redstone.army.mil.

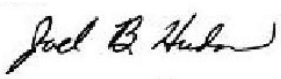
d. Forms and records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-RE-FF, DSN 746-5564 or commercial (256) 876-5564, E-mil waldeck-ab@exchange1.redstone.army.mil.

e. Publications point of contact for this TB is Ms. Juanetta Brent, AMSAM-MMC-VS-AO, DSN 897-1385 or commercial (256) 313-1385, E-mail brent-ju@exchange1.redstone.army.mil.

f. Foreign Military Sales (FMS) /Security Assistance recipients requiring clarification or additional information, contact CW5 Joseph I. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0681 or (256) 313-0681, E-mail wistromjl@redstone.army.mil or Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0869 or (256) 313-0869, E-mail sammons-rw@redstone.army.mil. Datafax is DSN 897-0411 or (256) 313-0411. Huntsville, AL is GMT minus 6 hours.

By Order of the Secretary of the Army:

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



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