URGENT

***TB 1–1520–248–20–53**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MAINTENANCE MANDATORY HYDRAULIC FLUID SAMPLING FOR ALL OH–58D HELICOPTERS

Headquarters, Department of the Army, Washington, D. C.
15 June 2000

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UNTIL RESCINDED OR SUPERSEDED.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 the aircraft DA Form 2408–13–1: Enter a red horizontal – status symbol with the following statement; "Inspect OH–58D aircraft in accordance with this TB within the next 10 flight hours, but no later than 20 June 2000. Subsequent samples required at 40 hour intervals." Clear the red horizontal dash – entry when procedures in paragraphs 8 and 9 are completed. Affected aircraft shall be inspected as soon as practical but no later than 20 June 2000. Commanders who are unable to comply requirements of this TB within the time frame specified will upgrade affected aircraft status symbol 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. Same as paragraph 1.a.

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). Not applicable.

g. Components/Parts in work (Depot level and others). Not applicable.

2. Task/Inspection Suspense Date. Complete inspection in accordance with paragraph 8. within the next 10 flight hours but no later than 20 June 2000 and report in accordance with paragraph 14. b.

3. Reporting Compliance Suspense Date. No later than 28 June 2000 per paragraph 14.a of this TB.

This TB supersedes OH–58–00 ASAM–05 061419Z Jun 00.

4. Summary of Problem.

a. The U. S. Army has experienced flight control anomalies over the past few years. Investigations of these incidents have indicated that some may have involved hydraulic fluid contamination affecting flight control servos and actuators. Recent engineering review of army aircraft maintenance and operational procedures clearly indicate that filters in aircraft hydraulic systems are not effective in controlling contaminates and water. To detect and control this potential condition, all OH–58D aircraft will immediately be added to the Army Oil Analysis Program (AOAP) program for hydraulic fluid. This TB implements that guidance.

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

c. The purpose of this TB is to institute requirements for hydraulic fluid sampling under AOAP on all OH–58D aircraft.

5. End Items to be Inspected. All Army OH–58D aircraft.

6. Assemblies Components to be Inspected. Not applicable.

7. Parts to be Inspected. Not applicable.

8. Inspection Procedures.

NOTE

As noted in TB 43–0106, hydraulic fluid should be warm and recently circulated prior to sampling.

a. A hydraulic fluid sample will be taken within the next 10 flight hours/14 days and every forty flight hours thereafter.

b. This sample will be processed in accordance with TB 43–0106.

c. Clean exterior of reservoir to remove any fluid or dirt prior to opening reservoir, to prevent contamination.

d. Open reservoir and remove screen for sampling.

e. Sample will be taken at filler neck using 15 inch by 3/8 inch tubing from sampling kit.

f. Use three ounce sample bottle.

g. Service hydraulic system after sampling as required.

h. Red horizontal – may be cleared after inspection is completed.

i. Corrective actions shall be as required in paragraph 9.

j. Special samples will be taken whenever a major hydraulic component (i.e. pump, check valve, etc.) has failed or whenever hydraulic system is suspect.

9. Correction Procedures.

a. Aircraft using MIL–H–83282 maximum limit for water is 350 parts per million. If AOAP analysis indicates hydraulic fluid contains more then 350 parts per million, hydraulic system shall be flushed in accordance with TM 1–1520–246–23, Task 7–8–3. When hydraulic fluid has been verified by AOAP as exceeding 350 parts per million of water; change aircraft status to a red X. The red X may be cleared upon successful hydraulic flushing, re–sampling, and favorable verification by AOAP laboratory.

b. Aircraft using MIL–H–5606 maximum limit for water is 250 parts per million. If AOAP analysis indicates hydraulic fluid contains more than 250 parts per million, hydraulic system shall be flushed in accordance with TM 1–1520–248–23, Task 7–8–3. When hydraulic fluid has been verified by AOAP as exceeding 250 parts per million of water; change aircraft status to a red X. The red X may be cleared upon successful hydraulic flushing, re–sampling, and favorable verification by AOAP laboratory.

c. All data generated from AOAP analysis will be kept for statistical purposes in order to determine trends which would lead to component replacement. AOAP laboratories are also currently able to test for levels of particulate contamination (in parts per million) of specific elements which include iron, aluminum, chromium, copper, silicon, sodium, nickel, and zinc. In case of abnormal levels of particulate contamination which has been verified by AOAP, AOAP laboratory will notify the unit immediately. Aircraft status will be changed to a red X. The red X may be cleared upon successful hydraulic flushing, re–sampling and favorable verification by AOAP laboratory. If system is still contaminated, contact technical point of contact listed in paragraph 16. a. for corrective action.

d. Organizational owned hydraulic test stands, depot test stands, hydraulic carts, and auxiliary ground power units (AGPUs) using MIL–H–83282 hydraulic fluid will be maintained to a maximum of 200 parts per million of water. Test stands using MIL–H–5606 hydraulic fluid will be maintained to a maximum of 175 parts per million of water.

(1) A hydraulic fluid sample will be taken every seven days for all test stands and recorded on equipment DA Form 2408–20. This sample will be processed in accordance with TB 43–0106.

NOTE

As noted in TB 43–0106, hydraulic fluid should
be warm and recently circulated prior to sampling.

(2) AGPU sample will be taken at gauge calibration port.

(3) Use a three ounce sample bottle.

(4) A DA Form 2408–20 will be established by the unit to record and track AGPU hydraulic fluid samples.

e. The 40 hour hydraulic fluid sample will be entered on the aircraft DA Form 2408–18. ULLS–A units will use this TB as authority to change Inspection Master File using inspection A–110. Whenever AGPU and purifier are used, record the following on aircraft DA Form 2408–15:

(1) Date of purification.

(2) Serial Number/ADMIN Number of AGPU.

(3) Serial Numbere/ADMIN Number of Purifier.

(4) Aircraft Hours.

(5) Hour meter start and completion times of AGPU and purifier.

10. **Supply Parts and Disposition.**

a. Parts Required. Not applicable

b. Requisitioning Instructions. Requisition three ounce plastic sampling bottles using normal supply procedures.

c. Bulk and Consumable Materials.

NOMENCLATURE	NATIONAL STOCK NUMBER
Bottle, Oil Sample, 3 oz.	8125–01–082–9697
Sampling Mailer Kit	8125–01–193–3440

d. Disposition. Not applicable.

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.** Not applicable.

12. Application.

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

b. Time Required.

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

(2) Total of one hours downtime for one end item.

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

NOMENCLATURE	NATIONAL STOCK NUMBER	QTY	COST EACH	TOTAL $
Bottle, Oil Sample, 3 oz. U/I Box (120 ea.)	8125–01–082–9697	1	$52.67	$52.67
Sampling Mailer Kit, (24 btls, plastic shpng sacks and Mailing Cartons.)	8125–01–193–3440	1	$17.84	$17.84

Maximum total cost per aircraft = $70.51

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 1–1520–248–23 and TB 43–0106 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 1–1520–248–23.

b. TB 43–0106.

c. DA PAM 738–751.

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date. 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), Redstone Arsenal, AL. 35898–5000, in accordance with 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/Inspenction Reporting Suspense Date (Aircraft). No special report of results of this inspection is required.

c. Reporting TB receipt (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 March 1999:

NOTE

ULLS–A users use applicable E forms.

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

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

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

(4) DA Form 2408-18, Equipment Inspection List. ULLS–A units will use A–110 inspection number for 40 hour hydraulic fluid sample.

(5) DA Form 2408–20, Oil Analysis Log (Aircraft).

NOTE

AGPU/Hydraulic cart DA Form 2408–20 will be completed in accordance with DA PAM 788–751, 1 August 1995.

15. **Weight and Balance.** Not applicable.

16. **Points of Contact.**

a. Technical point of contact for this TB is Mr. Gerald Johnson, AMSAM–RD–AE–I–D–O, DSN 645–9545 or commercial 256–955–9545, datafax DSN 645–9536. E–Mail gerald.johnson@redstone.army.mil. Alternate point of contact is Mr. Matthew Boenker, AMSAM–RD–AE–P–T, DSN 897–4959 or 256–313–4959, datafax DSN 897–4961. E–Mail matthew.boenker@redstone.army.mil.

b. Logistical point of contact for this TB is Ssg. Timothy Hardin, AMSAM–DSA–AS–ASH–L, DSN 645–7943 or commercial 256–955–7934, datafax DSN 645–7125 or commercial (256) 955–7125. E–Mail timothy.hardin@redstone.army.mil.

c. 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 DSN 746–4904. E–Mail waldeck–ab@redstone.army.mil.

d. Safety Points of contact for this TB are:

(1) Primary, Mr. James Hanson (SAIC), AMSAM–SF–A, DSN 897–2113 or 256–313–2113, datafax 256–313–2111, E–Mail jim.hanson@redstone.army.mil.

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

e. 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 897–0410 or 256–313–0410. E–Mail wittstromjl@redstone.army.mil or 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 sammondrw@redstone.army.mil. Huntsville is Greenwich Mean Time minus six hours.

f. AOAP director is Mr. Daniel McElroy, AMXLS–LA, DSN 645–6915 or 256–955–6915, datafax DSN 746–9344 or 256–876–9344. E–Mail aoap@logsa.army.mil.

g. After hours contact ATCOM Command Operations Center (COC) DSN 897–2066/7 or commercial 256–313-2066/7.

By Order of the Secretary of the Army:

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