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NO

CDRAMCOM REDSTONE ARSENAL AL//AMSAM-SF-A//

AIG 8881

AIG 9004

AIG 9042

AIG 8708

AIG 7515

AIG 7471

AIG 12124

DCM AFMO OZARK AL//DCMDE-AAA//

ASF42 81ST ARCOM DOBBINS AFB GA

CDRCDCOM ABERDEEN PROVING GROUND MD//AMSCB-OP/OPA//

CDRUSAGAPG ABERDEEN PROVING GROUND MD//STEAP-PF-V//

RAYTHEON RANGE SYSTEMS ENGINEERING KWAJALEIN ME//PAT2//

CDR WHITE SANDS MISSILE RANGE NM//STEWG-NRS-AA-MQA//

CDRDPG DUGWAY UT//STEDP-AVN//

USDOCO LANDSOUTHEAST IZMIR TU//AV//

DCMC BELL HELICOPTER FORT WORTH TX//DCMDW-RKD//

WALLOPS FLIGHT FACILITY NASA WALLOPS ISLAND VA

//CODE 831.2 AIRCRAFT QA//

INFO HQAFSPC PETERSON AFB CO//LGM/SEF//

ROBERT BROCK, SAFETY ENGINEER      MINIMIZE CONSIDERED  
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*UH-1-97-ASAM-06  
ODDS sept*

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NO

USDAO COLOMBO CE

USDAO SUVA FJ

DGA NEW DELHI IN

AMEMBASSY ANTANANARIVO MA

AMEMBASSY PORT LOUIS

SAO KUALA LUMPUR MY

UNCLAS

SUBJECT - AVIATION SAFETY ACTION MESSAGE, MAINTENANCE MANDATORY,  
RCS CSGLD-1860(R1), ALL UH-1 SERIES AIRCRAFT, ONE TIME AND RECURRING  
INSPECTION OF OIL DEBRIS DETECTION SYSTEM (OODS) SELF-SEALING  
QUICK-DISCONNECT OIL FITTING UH-1-97-ASAM-06 (TB 1-1520-210-20-35).

NOTE - THIS IS AN AVIATION SAFETY ACTION MESSAGE ISSUED PER AR 95-  
3, CHAPTER 5 REVISION VIA MESSAGE HQ AVSCOM, AMSAV-XSOF, 181900Z  
SEP 90, SUBJECT: CHANGE TO AR 95-3, CHAPTER 5, SAFETY OF FLIGHT  
MESSAGES. THIS MESSAGE HAS NOT BEEN TRANSMITTED TO UNITS  
SUBORDINATE TO ADDRESSEES. ADDRESSEES SHOULD IMMEDIATELY  
RETRANSMIT THIS MESSAGE TO ALL SUBORDINATE UNITS, ACTIVITIES OR  
ELEMENTS AFFECTED OR CONCERNED. THE RETRANSMITTAL SHALL  
REFERENCE THE MESSAGE. ACTION ADDRESSES WILL IMMEDIATELY VERIFY  
THIS TRANSMISSION TO CDR, AMCOM, ATTN: AMSAM-SF-A (SOF COMPLIANCE

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NO

2. TASK/INSPECTION SUSPENSE DATE - WITHIN 20 HOURS/30 DAYS.
3. REPORTING COMPLIANCE SUSPENSE DATE - NO LATER THAN 20 OCT 97 IAW PARA 14A OF THIS MESSAGE.
4. SUMMARY OF PROBLEM -

A. ATCOM HAS RECEIVED FIELD REPORTS CITING FAILURE OF THE SELF-SEALING BREAK-AWAY COUPLING CONNECTING THE OIL LINE FROM THE ENGINE SCAVENGE PUMP TO THE ODS LUBRICLONE FILTER. THE PINS IN THE CONNECTOR ARE DESIGNED TO SHEAR IN A CRASH SEQUENCE, BUT ARE WEARING AWAY PREMATURELY. THE PINS FAIL WHEN THE WEAR BECOMES EXCESSIVE. THE INTERNAL VALVE CLOSES AND SHUTS OFF THE OIL FLOW. PRESSURE IN THE OIL LINE INCREASES AND THE HOSE HAS FAILED UNDER CERTAIN CIRCUMSTANCES. MOST OF THE WEAR ON THE PINS CAN BE ATTRIBUTED TO NORMAL AIRCRAFT VIBRATION AND SIDE LOADING CAUSED BY THE SLIGHT MISALIGNMENT OF THE 90 DEGREE COUPLING HALF AT THE LUBRICLONE FILTER. PERIODIC INSPECTION OF THESE COUPLINGS IS NEEDED TO PREVENT A FAILURE DURING FLIGHT.

B. THERE IS CURRENTLY A SHORTAGE OF 90 DEGREE COUPLING HALVES IN SUPPLY. FOR THE PURPOSE OF COMPLYING WITH THIS MESSAGE ONLY, THE USE OF A SOLID 90 DEGREE TUBE ELBOW IS AUTHORIZED TO TEMPORARILY REPLACE 90 DEGREE COUPLING HALVES THAT FAIL THE

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NO

INSPECTION. THE SOLID 90 DEGREE TUBE ELBOW SHALL IMMEDIATELY BE REPLACED WHEN A SERVICEABLE 90 DEGREE COUPLING HALF IS OBTAINED AND INSTALLED.

C. FOR MANPOWER/DOWNTIME AND FUNDING IMPACTS SEE PARA 12.

D. THE PURPOSE OF THIS MESSAGE IS TO REQUIRE AN INSPECTION OF THE COUPLINGS, ESTABLISH A RECURRING INSPECTION TO PREVENT FUTURE FAILURES, AND PROVIDE A TEMPORARY SOLUTION TO THE SUPPLY SHORTAGE.

5. END ITEMS TO BE INSPECTED - ALL UH-1 AIRCRAFT EQUIPPED WITH THE ODS.

6. ASSEMBLY COMPONENTS TO BE INSPECTED - N/A.

7. PARTS TO BE INSPECTED -

NOMENCLATURE	PART NO.	NSN
COUPLING HALF, 90 DEGREE	222645	4730-01-322-4962
COUPLING HALF, STRAIGHT	222646	4730-01-322-9863

8. INSPECTION PROCEDURES -

A. GAIN ACCESS TO LEFT SIDE ENGINE COMPARTMENT. LOCATE THE OIL LINE (FIGURE 98, ITEM 172A) RUNNING FROM THE ENGINE TO THE ODS LUBRICLONE FILTER (LEFT SIDE OF ENGINE ON THE FIREWALL). LOCATE THE BREAK-AWAY OIL COUPLING (90 DEGREE AND STRAIGHT

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HALVES) AT THE OODS LUBRICLONE FILTER.

B. LOOSEN THE B-NUT ON THE OIL LINE (FIGURE 98, ITEM 172A) AND DISCONNECT THE OIL LINE AT THE STRAIGHT COUPLING HALF. TEMPORARILY CAP OIL LINE TO PREVENT CONTAMINATION.

C. MEASURE THE WEAR ON THE BREAK-AWAY PINS USING A FEELER GAGE AS FOLLOWS:

NOTE

WHEN ATTEMPTING TO MEASURE THE GAP DO NOT ROCK COUPLING HALVES BACK AND FORTH. APPLY AN EVEN PRESSURE SO THAT A CONSISTENT READING IS OBTAINED.

(1) APPLY PRESSURE TO COUPLING HALVES (AS IF TO PUSH THEM TOGETHER). MEASURE AND RECORD THE BREAK-AWAY JOINT GAP AT EACH PIN POSITION WITH THE COUPLINGS FULLY COMPRESSED.

(2) APPLY OPPOSITE PRESSURE TO THE COUPLING HALVES (AS IF TO PULL THEM APART). AGAIN MEASURE AND RECORD THE BREAK-AWAY JOINT GAP AT EACH PIN POSITION WITH THE COUPLING FULLY EXTENDED.

(3) CALCULATE THE DIFFERENCE IN THESE MEASUREMENTS AT EACH PIN POSITION.

D. IF THE DIFFERENCE IS 0.085 INCHES OR LESS, AT ALL

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NO

LOCATIONS, THE COUPLING IS SERVICEABLE. REINSTALL THE OIL LINE. PAY CLOSE ATTENTION TO THE ALIGNMENT OF THE 90 DEGREE COUPLING HALF. IF NECESSARY, LOOSEN THE 90 DEGREE COUPLING HALF FROM THE LUBRICLONE FILTER AND REPOSITION IT SO THAT THE LEAST AMOUNT OF SIDE LOADING IS PLACED ON THE BREAK-AWAY COUPLING. ENSURE THAT THE CLAMP USED TO SECURE THE OIL LINE TO THE LOWER FUEL FILTER LINE IS POSITIONED AS CLOSE TO THE BREAK-AWAY COUPLING END OF THE OIL LINE AS PRACTICAL TO REDUCE VIBRATION.

E. IF THE DIFFERENCE IS GREATER THAN 0.085 INCHES AT ANY OF THE THREE LOCATIONS, PROCEED WITH THE CORRECTION PROCEDURES OF PARAGRAPH 9.

9. CORRECTION PROCEDURES -

A. REPLACE THE 90 DEGREE COUPLING HALF WITH A SERVICEABLE COUPLING IF THE DIFFERENCE CALCULATED IN PARAGRAPH 8 IS GREATER THAN 0.085 INCHES.

B. REINSTALL THE OIL LINE. PAY CLOSE ATTENTION TO THE ALIGNMENT OF THE 90 DEGREE COUPLING HALF. POSITION THE 90 DEGREE COUPLING HALF SO THAT THE LEAST AMOUNT OF SIDE LOADING IS PLACED ON THE BREAK-AWAY COUPLING. ENSURE THAT THE CLAMP USED TO SECURE THE OIL LINE TO THE LOWER FUEL FILTER LINE IS POSITIONED AS CLOSE

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NO

TO THE BREAK-AWAY COUPLING END OF THE OIL LINE AS PRACTICAL TO  
REDUCE VIBRATION.

C. REPEAT THIS INSPECTION AT EACH PHASE INSPECTION. THE  
INSPECTION PROCEDURE WILL BE ADDED TO REFERENCE 13A. REFERENCE  
13B WILL BE CHANGED TO REFLECT THIS NEW REQUIREMENT.

D. IF A REPLACEMENT 90 DEGREE COUPLING HALF IS NOT AVAILABLE  
AND CANNOT BE OBTAINED IN A TIMELY MANNER THROUGH THE SUPPLY  
SYSTEM, A SOLID FITTING MAY BE USED TEMPORARILY UNTIL A  
REPLACEMENT IS RECEIVED. THE STATUS SYMBOL OF THE AFFECTED  
AIRCRAFT SHALL BE A HORIZONTAL RED DASH UNTIL THE SOLID FITTING  
IS REMOVED AND A REPLACEMENT 90 DEGREE COUPLING HALF IS  
INSTALLED. INSTALL A SOLID FITTING AS FOLLOWS:

(1) THE FOLLOWING PARTS ARE REQUIRED:

PART NAME	PART NUMBER	QTY	NSN
TUBE ELBOW	AN833-12D OR MS24394D12	1	4730-00-197-2919
HEX NUT	AN924-12D	1	5310-00-199-1028
PREFORMED PACKING	MS29561-119	1	5330-00-835-8974

(2) DISCONNECT THE HOSE FROM THE STRAIGHT COUPLING HALF,  
AND RETAIN THE COUPLING HALF FOR LATER INSTALLATION.

(3) INSTALL TUBE ELBOW INTO LUBRICLONE ASSEMBLY USING

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NO

PERFORMED PACKING AND NUT. DO NOT TIGHTEN NUT.

NOTE

THE TUBE ELBOW IS SHORTER THAN THE  
BREAK-AWAY FITTINGS, THEREFORE, IT MAY  
BE NECESSARY TO REPOSITION THE OIL LINE  
BY LOOSENING AND RELOCATING THE STAND OFF  
CLAMPS BETWEEN THE OIL LINE AND THE LOWER  
FUEL FILTER HOSE.

(4) ATTACH HOSE TO TUBE ELBOW.

(5) ALLOW HOSE AND TUBE ELBOW TO ALIGN IN A NEUTRAL  
POSITION. TIGHTEN NUTS.

10. SUPPLY/PARTS AND DISPOSITION -

A. PARTS REQUIRED - COUPLING HALF, 90 DEGREE, P/N 2E2645,  
NSN 4730-01-312-4962, MAY BE REQUIRED TO REPLACE DEFECTIVE ITEMS.  
IF COUPLING HALF, 90 DEGREE, P/N 2E2645, IS REQUIRED AND IS NOT  
AVAILABLE, USE THE PARTS CITED IN PARA 9D(1) UNTIL THE COUPLING  
HALF, 90 DEGREE, IS INSTALLED.

B. REQUISITIONING INSTRUCTIONS - REQUISITION REPLACEMENT  
PARTS USING NORMAL SUPPLY PROCEDURES. IF REQUISITIONING THE  
TEMPORARY REPLACEMENT TUBE ELBOW LISTED IN PARA 9D(1), ONLY PART

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## B. ESTIMATED TIME REQUIRED -

- (1) TOTAL OF 1 MAN-HOUR USING 2 PERSONS.
- (2) TOTAL OF 1 HOURS DOWNTIME FOR ONE END ITEM.

## C. ESTIMATED COST IMPACT OF STOCK FUND ITEMS TO THE FIELD -

NOMENCLATURE	PART NO./NSN	QTY/AC	COST EA.	TOTAL \$
COUPLING HALF,	282645	1	\$488.62	\$488.62
90 DEGREE	4730-01-322-4962			

TOTAL COST PER AIRCRAFT = \$488.62

D. TB/MMOS TO BE APPLIED PRIOR TO OR CONCURRENTLY WITH THIS INSPECTION - N/A.

E. PUBLICATIONS WHICH REQUIRE CHANGE AS A RESULT OF THIS INSPECTION - TM 55-1520-210-23-1 AND TM 55-1520-210-PM SHALL BE CHANGED TO REFLECT THIS MESSAGE. A COPY OF THIS MESSAGE SHALL BE INSERTED IN THE APPROPRIATE TM AS AUTHORITY TO IMPLEMENT THE CHANGE UNTIL THE PRINTED CHANGE IS RECEIVED.

## 13. REFERENCES -

- A. TM 55-1520-210-23-1.
- B. TM 55-1520-210-PM.

## 14. RECORDING AND REPORTING REQUIREMENTS -

- A. REPORTING COMPLIANCE SUSPENSE DATE (AIRCRAFT) - UPON

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