RETRANSMISSION TO COMMANDER, AVSOM, ATTH - AMSAY-MPSD.

OBJECT - SAFETY OF FLIGHT MAINTENANCE MANDATORY DAILY INSPECTION ON UH SERIES UH-1 HELICOPTERS (EXCEPT C/N MODELS) (UH-1-84-09) CONCERNING CLEVIS OF PITCH CHANGE LINK.

1. PURPOSE - TO INITIATE ADDITIONAL DAILY INSPECTION OF THE PITCH LINK CLEVIS, P/N 204-011-135-1, NSN 5340-00-839-3984.

2. SUMMARY - THE ORIGINAL CLEVIS FAILURE WAS CAUSED BY A CRACK IN THE BOTTOM OF THE DRILLED HOLE WHERE THE SECTIONAL AREA CHANGES (AREA OF TOP TWO THREADS). A SUBSEQUENT REPORT HAS BEEN RECEIVED STATING THAT CRACKS HAVE ALSO BEEN FOUND BETWEEN CLEVIS BOTTOM SURFACE AND THE SIDE FORK. METALURGICAL EXAMINATION OF THESE CRACKS DETERMINED THAT IT ORIGINATED BECAUSE OF THE ROUGH MACHINE SURFACE FINISH. THERE WAS NO EVIDENCE OF ANY GROWTH BY FATIGUE. FINAL SOLUTION TO THIS PROBLEM IS 100 PERCENT REPLACEMENT OF THIS CLEVIS WITH A REDESIGNED CLEVIS P/N 151L-UH-1-100-1. EXPEDITED PROCUREMENTS HAVE BEEN MADE WITH INITIAL PARTS AVAILABILITY IN MID SEPTEMBER WITH SUFFICIENT QUANTITIES TO REPLACE ALL INSTALLED CLEVIS BY APPROXIMATELY 1 FEB 85.

3. PRIORITY CLASSIFICATION - UPON RECEIPT OF THIS MESSAGE, AFFECTED HELICOPTERS WILL BE INSPECTED AT THE NEXT DAILY INSPECTION AND THEREAFTER UNTIL NEW TYPE REPLACEMENT CLEVIS ARE INSTALLED.

CONDITION STATUS OF AIRCRAFT WILL BE UNCHANGED.

INSPECTION PROCEDURE -
A. USING A 10 OR GREATER POWER MAGNIFYING GLASS, INSPECT CLEVIS SIDE FORKS FOR CRACKS. PARTICULAR INTEREST AREA IS INSIDE, FLAT AND OUTSIDE OF FORK LEG RADIUS BOTH LEGS. (NOTE - ROUGH MACHINE MARKS ON INSIDE FORK LEG RADIUS ARE NOT CAUSE FOR REJECTION.)
B. IF ANY SUSPECT CRACKS ARE NOTED ON CLEVIS, AIRCRAFT WILL BE PUT ON RED //X// AND THE FOLLOWING MAGNETIC PARTICLE INSPECTION WILL BE PERFORMED.
C. MAGNETIC PARTICLE INSPECTION -
   (1) EQUIPMENT -
   (A) LENS, MAGNIFIER 1 INCH FOCUS 10X, NSN 6450-00-878-8999, ONE EACH.
   (B) INDICATOR, FIELD, NSN 6450-00-391-0050.
   (C) MAGNETIC INSPECTION UNIT, STATIONARY - WET METHOD AC CURRENT. P/N HL20, NSN 6435-00-150-2431 OR EQUAL.
   (D) BLACK LIGHT, COMPONENT OF MAGNETIC PARTICLE UNIT

LISTED ABOVE.

DT
#0223
PAGE 03 RUCIFRDL142 UNCLASS

BASE OR SEMITRAILER MOUNTED - C-3 FLAW DETECTION, GENERAL SUPPORT SHOP SETS.
HSN 4920-00-321-9411 LIN T1084 AND HSN 4920-00-621-2041 LIN T2346A RESPECTIVELY.

TYPE OF MEDIA - WET FLUORESCENT

(1) MAGNAFLUX/MAGNAFLUOR CARRIER, P/N 1-2120-40 FSCM 37476
ON EQUAL.
(2) MAGNAFLUX/MAGNAFLUOR CONCENTRATE INSPECTION POWDER,
FLUORESCENT, P/N 104 FSCM 37476 OR EQUAL.
(3) MAGNAFLUX/MAGNAFLUOR PREPARED FLUORESCENT BATH,
PRESSURIZED SPRAY CAN, P/N 144M FSCM 37476 OR EQUAL, MAY BE USED IN
LIEU OF CARRIER AND CONCENTRATE LISTED ABOVE.
(4) TYPE OF CURRENT - AS PREFERRED.
(5) OPERATING TECHNIQUE/TYP - WET CONTINUOUS, FLUORESCENT.
(6) THE FOLLOWING THREE INSPECTION PROCEDURES ARE REQUIRED
ON EACH AFFECTED CLEVIS

A. PART PREPARATION

(1) DISASSEMBLY - REMOVE CLEVIS IAW APPLICABLE MAINTENANCE
MANUAL.

PAGE 04 RUCIFRDL142 UNCLASS

CLEANING - REMOVE PAINT, PRIMER AND SOIL PARTICLES IAW
TM 43-0103 AND APPLICABLE AIRCRAFT MAINTENANCE MANUALS.

B. PART INSPECTION

(1) PLACE CLEVIS ON CENTRAL CONDUCTOR (COPPER OR ALUMINUM
ROD THROUGH BOLT HOLES) AS SHOWN IN TM 43-0103, DATED 15 MARCH 1984
WITH CHANGES THROUGH 4, DATED 30 SEP 81. CHAPTER 2, PAGE 2-131,
FIGURE 9-21.
(2) PLACE ENDS OF CENTRAL CONDUCTOR BETWEEN HEAD AND TAIL
STOCKS AS SHOWN IN FIGURE 9-21 AND LOCK IN PLACE.
(3) MAGNETIZE CLEVIS USING 1000-1500 AMPS AC CURRENT, WET
CONTINUOUS METHOD.
(4) REMOVE CENTRAL CONDUCTOR FROM CLEVIS AND INSPECT BOLT
HOLE AREA WITH BLACK LIGHT AND 5X OR GREATER MAGNIFIER IN SUBDUE
WHITE LIGHT PER CHAPTER 2 OF TM 43-0103.
(5) NO CRACKS ALLOWED.
(6) DEMAGNETIZE CLEVIS IAW TM 43-0103, CHAPTER 2, SECTION
VI.

INSTRUCTION PROCEDURE NO. 2

A. PART PREPARATION - SAME AS IN INSPECTION PROCEDURE NO. 1
ABOVE.

PAGE 05 RUCIFRDL142 UNCLASS

B. PART INSPECTION

(1) INSTALL SMALL PARTS ADAPTERS ON HEAD STOCK AND TAIL
STOCK OF MAGNETIC PARTICLE INSPECTION UNIT.
(2) PLACE CLEVIS BETWEEN HEAD STOCK AND TAIL STOCK ADAPTERS
IN SIDES OF CLEVIS CONTACTING ADAPTER FACE PLATES. BOLT HOLES IN
"LEGS" OF THE CLEVIS WILL BE 90 DEGREES TO CENTER LINE BETWEEN HEAD
AND TAIL STOCKS.
(3) MAGNETIZE CLEVIS, USING 1000-1500 AMPS AC CURRENT, WET
CONTINUOUS METHOD.
(4) INSPECT FOR CRACKS ALONG BASE "INSIDE RADIUS" OF
CLEVIS "LEGS" USING BLACK LIGHT AND 5X MAGNIFIER OR GREATER.
(5) NO CRACKS ALLOWED.

INSPECTION PROCEDURE NO. 3 -
A. PART PREPARATION - SAME AS PROCEDURE NO. 1 ABOVE.
B. PART INSPECTION -
(1) PLACE CLEVIS NEAR (APPROXIMATELY ONE INCH), INSIDE WALL OF COIL WITH SHANK OF CLEVIS PARALLEL WITH COIL AXIS (CENTER LINE).
REFERENCE TM 43-0103, CHAPTER 2, PAGE 2-126, FIGURE 9-16.
(2) MAGNETIZE CLEVIS, USING 1000-1500 AMPS (METER READING) AC CURRENT, WET CONTINUOUS METHOD.

PAGE 06 RUCIFRD6162 UNCLASS
(3) INSPECT SHANK AND THREADED AREA OF CLEVIS FOR CRACKS USING BLACK LIGHT AND 5X MAGNIFIER OR GREATER.
(4) NO CRACKS ALLOWED.
(5) DEMAGNETIZE CLEVIS IAW TM 43-0103, CHAPTER 2, SECTION VI.
5. IF ANY EVIDENCE OF CRACKS ARE CONFIRMED, CLEVIS SHALL IMMEDIATELY BE REMOVED FROM SERVICE.

NOTE

BT
#0224
7. **MARKING INSTRUCTIONS** - CLEVISES THAT PASS THE INSPECTION SHALL BE
YIBRO ETCHED WITH A //21// ON THE FLAT VERTICAL SURFACE OF THE YOKE,
JUST ABOVE THE SHAFT, TO INDICATE ACCEPTANCE. (DO NOT MARK ON THE
VERTICAL FORK OR FLAT HORIZONTAL-surfaces of the clevis.)

8. **SUPPLY STATUS** - REQUISITIONING OF REPLACEMENT CLEVIS WILL BE
ACCOMPLISHED THROUGH NORMAL SUPPLY CHANNELS. A LIMITED NUMBER OF
SPARE CLEVIS ARE CURRENTLY AVAILABLE AND ACTION IS BEING TAKEN TO
ACCELERATE DELIVERIES FROM CURRENT CONTRACTORS. A NEW CLEVIS, P/H
1615UH1-100-1, HSN 5340-01-184-1317, WILL BE OBTAINED TO REPLACE
PRESENT CLEVIS TO ELIMINATE THE CURRENT CLEVIS SHORTCOMING.

9. **PARTS** (P/H 204-011-136-1) IN STOCK WILL BE INSPECTED PRIOR TO
INSTALLATION.

10. **RECORDING AND REPORTING OF INSPECTION** - NONE

11. **FOREIGN MILITARY SALES/FMS RECIPIENTS** REQUIRING CLARIFICATION OF
THIS MESSAGE SHOULD CONTACT AVSCOM, AMSAY-1, C44 KYLLE STEPHENSON,
AUTOYOH 693-2813, COMMERCIAL 314-263-2813.

12. **AVSCOM TECHNICAL POINT OF CONTACT** IS MR. KEN LUBER, AMSAY-EI,
AUTOYOH 693-1683, COMMERCIAL 314-263-1683.

---

**PAGE 04 RUCIFRD6164 UNCLAS**

13. **AVSCOM SUPPLY POINT OF CONTACT** IS MS. RENA WINDLE, AMSAY-SAJPA,
AUTOYOH 693-3528, COMMERCIAL 314-263-3528.