USDA FOREST SVC AVIATION FIRE MGMT
3905 VISTA AVE
BOISE ID 83705

I RUCIFRD5526  2390248 DA-BDCVBA
R 2619002 AUG 91 2EX
FM DRAVSCOM ST LOUIS MO  //AMSAB-XSOF//
TO RUCLRAF/USDA FOREST SERVICE AVIATION FIRE MGMT
//3905 VISTA AVE BOISE ID 83705//
DA-BDCVBA
UNGLAS
SECTION 01 OF 03
AIG 8708 TAKE FOR INFO ONLY
AIG 9042 TAKE FOR INFO ONLY

SUBJECT - AVIATION SAFETY ACTION MESSAGE, MAINTENANCE MANDATORY, RCS CSGD-1660(R1), ALL AH-1 AND UH-1 SERIES AIRCRAFT, CHANGE IN INSPECTION METHODS/PROCEDURES FOR THE TAIL ROTOR FLEXIBLE COUPLINGS.
(AH-1-91-ASAM-15) (UH-1-91-ASAM-16) (TB 955-1520-243-20-17)
NOTE - THIS IS AN AVIATION SAFETY ACTION MESSAGE AND 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.

1. PRIORITY CLASSIFICATION -
   A. AIRCRAFT IN USE - N/A.
   B. AIRCRAFT IN DEPOT MAINTENANCE - N/A.
   C. AIRCRAFT UNDERGOING MAINTENANCE - N/A.
   D. AIRCRAFT IN TRANSIT -
      (1) SURFACE/AIR SHIPMENT - N/A.
      (2) FERRY STATUS - N/A.
   E. MAINTENANCE TRAINERS (CATEGORY A, B AND OTHER) - N/A.
   F. COMPONENT/PARTS IN STOCK INCLUDING WAR RESERVES AT ALL LEVELS (DEPOT AND OTHERS) - N/A.

2. TASK/INSPECTION SUSPENSE DATE - N/A.

3. REPORTING COMPLIANCE SUSPENSE DATE - N/A.

4. SUMMARY OF PROBLEM -
   A. INVESTIGATION INTO A UH-1H CLASS A MISHAP IN CENTRAL AMERICA HAS SHOWN THAT THE MALE SPHERICAL T/R DRIVESHAFT COUPLING WAS SEVERELY WORN TO THE EXTENT THAT DRIVE WAS LOST TO THE T/R.
   B. A REVIEW OF THE CURRENT INSPECTIONS FOR BOTH THE MALE AND FEMALE PARTS OF THE FLEXIBLE COUPLING INDICATES THAT IMPROVEMENT TO THE INSPECTION PROCEDURES IS REQUIRED TO INCREASE CONFIDENCE IN IDENTIFYING COUPLINGS THAT ARE WORN BEYOND ALLOWABLE LIMITS.

To reply by Mailgram Message, see reverse side for Western Union's toll-free numbers.
FREQUENCY OF INSPECTION WILL NOT BE CHANGED.

C. INSPECTION METHODS AT THE DEPOT LEVEL HAVE ALSO BEEN

REVIEWED AND STANDARDIZED FOR MORE RELIABLE SCREENING OF COUPLINGS
THAT ENTER DEPOT OVERHAUL WHETHER INSTALLED ON A TRANSMISSION, THE
42 OR 90 DEGREE GEARBOXES, OR T/R DRIVESHAFT HANGER ASSEMBLIES.

D. THE PURPOSE OF THIS MESSAGE IS TO INFORM AH-1 AND UH-1 USERS
THAT A CHANGE TO THE MAINTENANCE MANUALS IS FORTHCOMING AND PROVIDES
THE NEW INSPECTION PROCEDURES FOR THE FLEXIBLE COUPLINGS.

5. END ITEMS TO BE INSPECTED - N/A.

6. ASSEMBLY COMPONENTS AFFECTED -

<table>
<thead>
<tr>
<th>NOMENCLATURE</th>
<th>PART NO.</th>
<th>NSN</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSMISSION ASSY</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>QUILL ASSY, T/R</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>42 DEGREE GEAR BOX ASY</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>90 DEGREE GEAR BOX ASSY</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>DRIVE SHAFT HANGER ASSY</td>
<td>ALL</td>
<td>ALL</td>
</tr>
</tbody>
</table>

7. PARTS AFFECTED -

UH-1

<table>
<thead>
<tr>
<th>NOMENCLATURE</th>
<th>PART NO.</th>
<th>NSN</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUPLING, MALE</td>
<td>204-040-603-7</td>
<td>1615-00-791-6073</td>
</tr>
<tr>
<td>SPHERICAL</td>
<td>204-040-603-9</td>
<td>1615-00-523-9770</td>
</tr>
<tr>
<td>SPUR GEAR</td>
<td>204-040-603-11</td>
<td>3020-00-439-5590</td>
</tr>
<tr>
<td>DRIVESHAFT COUPLING</td>
<td>204-040-604-5</td>
<td>1615-00-701-4142</td>
</tr>
</tbody>
</table>

8. INSPECTION PROCEDURES -

A. THE FOLLOWING SPECIAL INSPECTIONS SHALL REPLACE THE CURRENT SPECIAL INSPECTIONS OF THE TAIL ROTOR FLEXIBLE COUPLINGS IN EACH MANUAL SPECIFIED

(1) TM 55-1520-210-23-1, PAGE 1-106
"EVERY 600 HOURS OR ANNUALLY, WHENEVER OCCURS FIRST,
ACCOMPLISH THE FOLLOWING

A. LUBRICATE ALL TAIL ROTOR DRIVESHAFT FLEXIBLE COUPLINGS ON THE HANGER ASSEMBLIES, THE TAIL ROTOR OUTPUT QUILL OF THE TRANSMISSION, AND THE 42 DEGREE AND 90 DEGREE GEAR BOXES.

PAGE 06 RUCIFR05520 UNCLAS

B. INSPECT COUPLING SPLINES FOR WEAR AND DAMAGE.
C. VISUALLY CHECK FLEXIBLE COUPLING SEAL FOR PROPER

23:03 EST

MSGCOMP

To reply by Mailgram Message, see reverse side for Western Union's toll-free numbers.
**SECTION 02 OF 03**

Installation, cuts, and tears.

D. Deleted.

E. Hanger bearing support fittings for nicks, scratches, corrosion, hole elongation or wear.

(2) TM 55-1520-220-23-1, PAGE 1-69

SAME AS PARAGRAPH 8.A.(1) ABOVE.

(3) TM 55-1520-234-23-1, PAGE 1-69

"Every 600 HOURS OR ANNUALLY, WHICHEVER OCCURS FIRST"

ACCOMPLISH THE FOLLOWING

A. REMOVE, DISASSEMBLE, CLEAN, INSPECT, LUBRICATE, ASSEMBLE, AND REINSTALL MAIN DRIVE SHAFT ASSY.

P/N 205-040-004-19.

INSPECT MAIN DRIVESHAFT FOR INTERNAL CORROSION.

PAGE 03 RUCIFRD5527 UNCLAS

B. LUBRICATE ALL TAIL ROTOR DRIVESHAFT FLEXIBLE COUPLINGS ON THE HANGER ASSEMBLY, THE TAIL ROTOR OUTPUT QUILL OF THE TRANSMISSION, AND THE 42 DEGREE AND 90 DEGREE GEARBOXES.

C. INSPECT COUPLING SPLINES FOR WEAR AND NICKS.

D. VISUALLY CHECK FLEXIBLE COUPLING SEAL FOR PROPER INSTALLATION, CUTS, AND TEARS.

E. INSPECT TAIL ROTOR DRIVESHAFT HANGER BEARINGS FOR EVIDENCE OF GREASE LEAKAGE, CORROSION, OVERHEATING (BROWN DISCOLORATION OF GREEN ZINC CHROMATE)

PAINT ON HANGER, AND NOTCHINESS.

(4) TM 55-1520-236-23-1, PAGE 1-66.2

SAME AS PARAGRAPH 8.A.(3) ABOVE.

B. THE MANUALS SHALL BE CHANGED TO REFLECT A NEW INSPECTION METHOD. VISUAL INSPECTION IS NOT ACCEPTABLE. SINCE THIS NEW INSPECTION METHOD INVOLVES SEVERAL FIGURES FOR ILLUSTRATION PURPOSES, IT COULD NOT BE INCLUDED IN THIS MESSAGE. A COPY OF THE NEW METHOD IS AVAILABLE FROM YOUR LOCAL LOGISTICS ASSISTANCE REPRESENTATIVE.

To reply by Mailgram Message, see reverse side for Western Union's toll-free numbers.
(LAR).

(1) TM 55-1520-210-23-1

A. PARAGRAPH 6-129.D., PAGE 6-97.
B. PARAGRAPH 6-129.F., PAGE 6-129.
C. PARAGRAPH 6-129.B.(2), PAGE 6-133.
E. PARAGRAPH 6-129.B., PAGE 6-141.
G. PARAGRAPH 6-129.F., PAGE 6-161.

(2) TM 55-1520-220-23-1

A. PARAGRAPH 6-157.D., PAGE 6-114.
D. PARAGRAPH 6-229.C., PAGE 6-156.
E. PARAGRAPH 6-232.H., PAGE 6-158.
F. PARAGRAPH 6-239.B.(7), PAGE 6-167.
G. PARAGRAPH 6-243.1., PAGE 6-172.

(3) TM 55-1520-234-23-1

C. PARAGRAPH 6-24.C.(6), PAGE 6-79.

PAGE 05 RUCIFRDS527 UNCLAS

E. PARAGRAPH 6-26.B.(7)

(4) TM 55-1520-236-23-1

A. PARAGRAPH 6-27.G., PAGE 6-49.
D. PARAGRAPH 6-128.1., PAGE 6-114.

9. CORRECTION PROCEDURES

A. IMPLEMENT REVIS/ED INSPECTION PROCEDURES/METHODS FOR THE
DRIVESHAFT FLEXIBLE COUPLINGS, AS STATED IN PARAGRAPH 8 ABOVE, AT THE
NEXT SCHEDULED "600 HOUR OR ANNUAL" INSPECTION.
B. CONTACT YOUR LOCAL LAR FOR A COPY OF THE REVIS/ED INSPECTION
METHOD. IF UNABLE TO CONTACT LOCAL LAR CONTACT AVSCOM LAR LISTED IN
PARA 16. IMPLEMENTATION OF THE NEW METHOD REQUIRES THE USE OF A GAP
SETTING GAGE, PART NO. TYCLESI. NSN 5210-00-278-1246. THIS GAGE IS
NOT INCLUDED IN STANDARD TOOL SETS AND MUST BE REQUISITIONED PRIOR TO
IMPLEMENTING THE NEW METHOD. A SUFFICIENT QUANTITY ARE AVAILABLE
FROM THE GENERAL SERVICES ADMINISTRATION. HOWEVER, UNITS ARE ADVISED
NOT TO REQUISITION MORE THAN NECESSARY TO ENSURE ALL REQUISITIONS CAN
PAGE 06 RUCIFRDS527 UNCLAS
BE FILLED. COST OF THE GAGE IS APPROXIMATELY $1.50.
C. COUPLINGS WHICH DO NOT MEET THE INSPECTION CRITERIA OF THE
NEW METHOD, DURING THE NEXT SPECIAL INSPECTION ONLY, SHALL HAVE A
CATEGORY II DEFICIENCY REPORT (DR) SUBMITTED IAW DA PAM 738-751. NO

23:06 EST

MGMCOMP

To reply by Mailgram Message, see reverse side for Western Union's toll-free numbers.
USDA FOREST SVC AVIATION FIRE MGMT
3905 VISTA AVE
BOISE ID 83705

1 RUCIFRD5528 2390248 DA-BDCVBA
R 2619902 AUG 91 ZEX
FM CDRAVS COM ST LOUIS MO /AMS A-VSOF/
TO RUCIFRA/USDA FOREST SERVICE AVIATION FIRE MGMT
//3905 VISTA AVE BOISE ID 83705//
DA-BDCVBA
UNCLASS
F I N A L  S E C T I O N  O F  0 3
10. S U P P L Y / P A R T S  A N D  D I S P O S I T I O N  -  N / A
12. A P P L I C A T I O N -
B. T I M E  R E Q U I R E D  -  N / A .
C. E S T I M A T E D  C O S T  I M P A C T  O F  S T O C K  F U N D  I T E M S  T O  T H E  F I E L D -

<table>
<thead>
<tr>
<th>Nomenclature</th>
<th>Part No./NSN</th>
<th>Quantity</th>
<th>Cost EA.</th>
<th>Total $</th>
</tr>
</thead>
<tbody>
<tr>
<td>AH-1 COUPLING</td>
<td>204-040-603-9</td>
<td>4</td>
<td>479.70</td>
<td>1918.80</td>
</tr>
<tr>
<td>AH-1 GEAR</td>
<td>204-040-603-11</td>
<td>3</td>
<td>526.37</td>
<td>1579.11</td>
</tr>
<tr>
<td>AH-1 DRIVE</td>
<td>204-040-604-5</td>
<td>7</td>
<td>256.00</td>
<td>1792.00</td>
</tr>
<tr>
<td>UH-1 COUPLING</td>
<td>204-040-603-7</td>
<td>8</td>
<td>415.00</td>
<td>3320.00</td>
</tr>
<tr>
<td>UH-1 DRIVE</td>
<td>204-040-604-5</td>
<td>8</td>
<td>256.00</td>
<td>2048.00</td>
</tr>
<tr>
<td>TOTAL MAX COST PER AH-1 AIRCRAFT</td>
<td>5351.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL MAX COST PER UH-1 AIRCRAFT</td>
<td>5268.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. R E F E R E N C E S -

To reply by Mailgram Message, see reverse side for Western Union's toll-free numbers.