Note: This is a maintenance advisory message and must be repeated immediately.

1. Maintenance Advisory Message Authorizing New Lubrication/Inspection Requirements of Tail Rotor Flexible Couplings on AH-1U/121 Helicopters (AH-1-77-1 and UH-1-77-1).

2. Purpose of this message is to alert all users of modification in the lubrication interval for the tail rotor flexible coupling scheduled to be implemented with the new phased:

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Maintenance Checklists: TM 55-1322-216-PMS DATED 31 DEC 76

- All AH-1/UH-1 Aircraft Models are subject to the lubrication/inspection requirements described herein. Corresponding checklists for all models are in development and will be forthcoming.

- Reports of flexible coupling failures are still being received. These reports show that although significant calendar time had elapsed since the last packing, the operating time of the aircraft involved had not reached the 600-hour lubrication interval specified by the affected technical manual. Loss of tail rotor thrust was the result of coupling/hanger bearing failures.

- The flexible coupling shall now be re-packed every 600 hours from the last packing, as before; but to exceed 12 months from the last packing date. Date of next lubrication is now required on DA Form 2458-1A. This coupling is common to the transmission, tail rotor drive shaft, the hanger assemblies, the 42 degree gearbox input/output quills, and the 92 degree gearbox input quill.

- If date of last packing cannot be determined, or was last packed more than 12 months ago, schedule coupling lubrication at the next periodic/phase inspection, re-pack all couplings on the.
SAME HELICOPTER AT THIS TIME:
6. WHenever any of the freeHILE COUPLINGS COME DUE FOR REPACKING:
   Perform the following BEFORE DISASSEMBLY:
   a. REMOVE DRIVE SHAFT COMPLETELY TO AVOID SIDELOADING THE
      ADJOINING DRIVE TRAIN COMPONENT; MANUALLY FLEX THE COUPLING AXIALLY
      WITH A SLIGHT TORQUE APPLIED (CLOCKWISE AND COUNTERCLOCKWISE) TO CHECK
      FOR WEAR, ROUGHNESS, OR BINDING OF SPLINES;
   B. VISUALLY INSPECT FOR WEAR METAL PARTICLES ADJACENT TO THE
      COUPLING (OR THE BEARING);
   c. WIPE THE SHAFT OF THE HOE COUPLING CLEAN OF GREASE RESIDUE
      WITH A LINT-FREE CLOTH TO CHECK FOR EVIDENCE OF AN OVERHEATING
      COUPLING (OR BEARING AS INDICATED BY DISCOLORATION (DUE TO BLUES/BLACK
      IN COLOR);
   d. INSPECT COUPLING SEAL FOR LEAKS, CUTS, TEARS, AND DETERIORA-
      TION;
   e. ON HANGER ASSEMBLIES, MANUALLY ROTATE THE COUPLING SLOWLY
      WITH ENOUGH AXIAL LOAD TO CHECK FOR BEARING ROUGHNESS AND BINDING;
   f. ON HANGERS, INSPECT HANGER BEARING SUPPORT RING AND ATTACH-
      MENT LUGS FOR CRACKS, ELONGATED BOLT HOLES, OR OTHER VISIBLE DAMAGE;
   g. IF ANY OF THE ABOVE CONDITIONS ARE ENCOUNTERED, REMOVE AND

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   REPLACE THE AFFECTED COMPONENT; SUBMIT THE DEFECTIVE UNIT TO DIRECT
   SUPPORT FOR REPLACEMENT OF COUPLING AND/OR BEARING, REFER TO
   APPLICABLE 0-20 MANUAL FOR PROPER INSTALLATION PROCEDURES;
   b. COUPLINGS MAY BE REPACKED WHILE INSTALLED ON THE AIRCRAFT;
   c. REMOVE SPIRAL RETAINING RING FROM COUPLING WHILE HOLDING SEAL PLATE
      AGAINST SPRING PRESSURE, REMOVE PLATE AND SPRING; HOLD COUPLING
      AT FULL EXTENDED POSITION, REMOVE OLD GREASE AND CLEAN INTERNAL
      SPLINES VISUALLY INSPECT SPLINES FOR GROOVES, UNUSUAL WEAR PATTERNS,
      AND DAMAGE; IF ANY SUCH CONDITION EXISTS, REMOVE AFFECTED COMPONENT
      AND SUBMIT TO DIRECT SUPPORT FACILITY;
   d. CAUTION: DO NOT WASH, CLEAN, OR SPRAY THE BEARING OR HANGER
      ASSEMBLY WITH ANY TYPE OF SOLVENT, USE CLEAN LINT-FREE CLOTH TO
      CLEAN ASSEMBLY;
   e. IF NO SUCH CONDITION EXISTS, HAND PACK THE OUTER COUPLING WITH
      GREASE (ANDEROL L-766, NSN 9152-00-926-1949, FOR ALL UH-1 AND AH-16
      AND 3 MODELS, SYNTECH 5913-01, NSN 9152-00-866-4497, FOR AH-1S
      MODELS) TO 1/8 INCH OVER TOP OF INTERNAL SPLINES OVER THE FULL
      EXPOSED LENGTH; KEEP COUPLING AT CUPWARD POSITION, REINSTALL
      SPRING, SEAL PLATE, AND RETAINING RING, PUSH AND PULL COUPLING
      GENTLY TO LIMIT OF TRAVEL SEVERAL TIMES TO DISTRIBUTE GREASE IN

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12. COUPLING:
   WHENEVER A HANGER ASSEMBLY HAS BEEN REPLACED, MONITOR ITS
   PERFORMANCE CLOSELY, IMMEDIATELY AFTER AIRCRAFT HAS SHUT DOWN;
   CAUTIOUSLY FEEL THE BEARING HANGER; IF IT IS TOO HOT TO TOUCH OR
   IF IT IS UNUSUALLY HOTTER THAN ADJOINING HANGERS, REMOVE AND REPLACE
   THE HANGER ASSEMBLY.
12. On hanger bearings just installed, a small bead of grease expelled from around the lip of the bearing seal indicates slight overfilling of the ball bearing at time of manufacture and is not cause for its rejection. Wipe lube from seal with clean, lint-free cloth and keep under surveillance for next 10 flight hours.

13. If further information is required, point of contact at this command is Thomas Hecei, ATTN DRSAV-FEU, AUTOVON 698-6516.