HUGHES SERVICE INFORMATION LETTER

TO—All owners and operators of Hughes Helicopters

SUBJECT: INTERIM REVISION - HANDBOOK OF MAINTENANCE INSTRUCTIONS (HMI) RE: INSPECTION - SUDDEN STOPPAGE DRIVE SYSTEM

MODELS AFFECTED: All 269A, TH55A, 269A-1 and 269B Helicopters.

Reference

269A/A-1 Handbook of Maintenance Instructions
TH55A HMI Addendum
269B Handbook of Maintenance Instructions

The information given in this Service Information Letter lists inspection procedures to be used following sudden stoppage of the drive system. This data is to be considered a part of the HMI until formal incorporation is accomplished at the next revision cycle.

ADD: New paragraph as follows, preceding paragraph 4-5 in referenced HMI's.

SUDDEN DRIVE SYSTEM STOPPAGE. The following data outlines inspection procedures to be performed in case of sudden stoppage. The extent of inspection required is progressive, depending on the severity of damage inflicted to the various components and/or assemblies of the helicopter. However, a thorough preflight inspection of the helicopter prior to the next flight is necessary whenever sudden stoppage occurs.

WARNING

Replace all damaged parts and assemblies not meeting minimum inspection criteria defined in the HMI.

a. Perform initial inspection as follows:

1. Inspect main rotor blades visually and dimensionally for damaged skin, trailing edge fittings and root fittings.

2. Visually inspect droop stop for deformation and cracks.

3. Visually and dimensionally inspect pitch bearing shaft for deformation or damage of droop stop arm. (See Figure 1)

4. Inspect tail rotor drive shaft for misalignment.

b. Perform following inspection if damage to inboard portion of main rotor blade (near damper attachment fittings, root fittings, etc.) is noted in step a-1.

1. Visually and dye penetrant inspect damper housing in area of lead-lag stop and for cracks in body. Check sight glass for leakage.

2. Visually, dimensionally and dye penetrant inspect pitch bearing case pitch control arm for deformation; inspect bearing case for damage, paying particular attention to lead-lag bearing yoke. (See Figure 1)

c. Perform following inspection if damage defined in step a-2 is noted:

1. Visually inspect swashplate slide area of main rotor thrust bearing retaining nut P/N 269A1306 for deformation.

2. Remove blade root fittings and inspect area under fittings for deformation or cracks (if blade was not replaced under step a-1).

d. Perform following inspection if damage is found to pitch bearing case in step b-2, or to thrust bearing retaining nut in step c-1.

1. Visually inspect pitch links for deformation and check rod end bearings for roughness and binding.

2. Visually inspect the scissors and links for damage.

3. Visually and dye penetrant inspect for damage to body and bearings, yokes of upper and lower swashplates.

4. Visually inspect cyclic and collective push-pull rods for damaged bearings and deformed rods.

5. Remove and magnetically inspect main rotor hub, per HMI. Check flapping hinge bearings for damage and bolt holes for deformation.

6. Magnetically inspect (or replace) hub attaching bolts and flapping hinge bolts.

7. Remove main rotor drive shaft and replace existing thrust bearing, per HMI.

8. Magnetically inspect main rotor drive shaft for cracks. Check for shaft runout at the thrust bearing journal. Shaft dimension 1.9693/1.9689 in. dia. concentric to within 0.004 in T.I.R.

9. Visually and audibly inspect swashplate bearing for damage and roughness.

10. Visually inspect mast, mast supports and attachments, transmission lugs and transmission torque struts for deformation or cracks. If mast damage is found, proceed to step e.

11. Install main rotor drive shaft and thrust bearing, swashplate assembly, rotor hub, pitch bearing and blade damper assemblies, and main rotor blades, per HMI.

e. Perform following inspection, if mast damage is found:

1. Visually inspect main rotor shaft splined coupling teeth for damage. If no damage is found, proceed to step 5.

2. Remove and disassemble main rotor gear drive assembly per HMI Overhaul Addendum.

3. Visually inspect gear teeth bearing cups and cones; magnetically inspect coupling.

NOTE

Spline teeth may be dressed to smooth damage.

4. Assemble, adjust and install main rotor gear drive assembly per HMI, Overhaul Addendum.

5. Install main rotor drive shaft and thrust bearing, swashplate assembly, rotor hub, pitch bearing and blade damper assemblies, and main rotor blades per HMI.

ADDITIONAL INSPECTION

a. Perform following inspection if hard landing was involved:

1. Dimensionally inspect the input pinion shaft for maximum runout at the 269A5430 attaching spline (0.003 T.I.R. max.). If out of limits, replace gears in accordance with HMI, Overhaul Addendum.

2. Visually inspect landing gear and fuselage frame for deformation or cracks.

3. Visually inspect remainder of drive system, noting particularly the condition of engine coupling shaft and pulley frame.

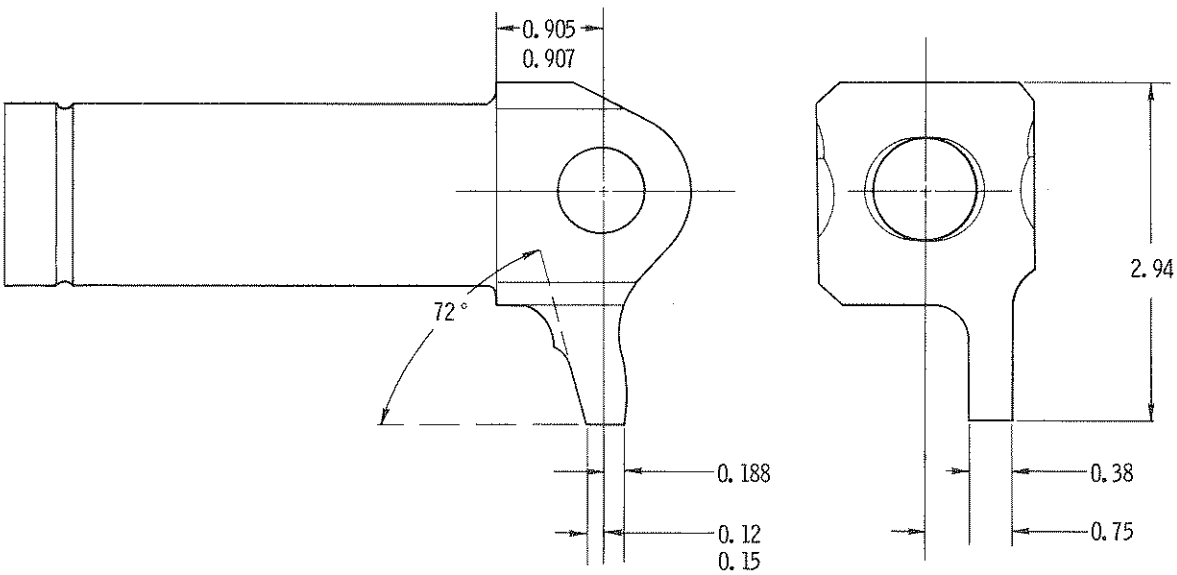

Figure 1. Pitch Bearing Shaft

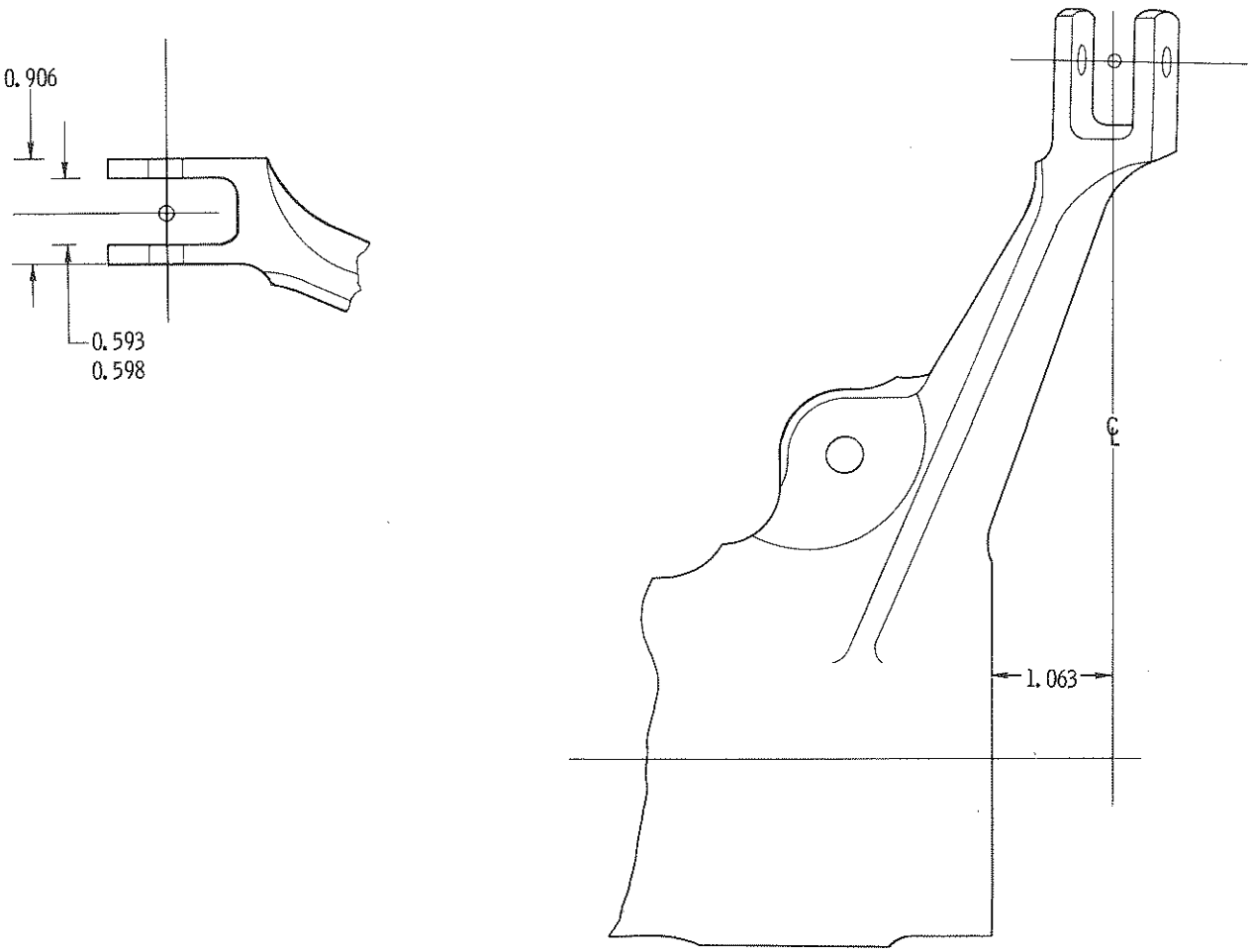

Figure 2. Pitch Control Arm