



HUGHES SERVICE INFORMATION NOTICE

NOTICE NO. N-23

DATE February 20, 1967

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SUBJECT: FIELD REPLACEMENT - MAIN ROTOR DRIVE SHAFT

MODELS AFFECTED: All 269A (TH55A) Helicopter Serial No's. 0315 and subsequent.

TIME OF COMPLIANCE: At owners and operators discretion.

PURPOSE: To provide proper fit between the parts when mating a new main rotor drive shaft (P/N 269A5305-3) with a main rotor hub (P/N 269A5305-5) and fitting, (P/N 269A5305-7) presently incorporated in aircraft.

Reference

269A/A-1 Handbook of Maintenance Instructions (with TH55A Addendum)

Tools and Equipment

Micrometer - 2 inch
Micrometer - inside
Lathe

Commercial
Commercial
Commercial

Tools and Equipment (Cont.)

Cylinder Hone - portable type	Commercial
Honing Set (for bolt holes):	Sunnen Products Co., St. Louis, Mo.
P-180 Head or Drive	
PK-12-A Adapter	
K-12-370AS Mandrel	
Use Honing Oil MAN 841-1 (1 gal.)	
S-370 Trueing Sleeve	
Use Honing Oil MAN 841-6 (6 gal.)	
K12-A69 Stones (box of 12)	
Honing Set, P28 3-Stone (for hub I. D. to shaft)	Sunnen Products Co., St. Louis, Mo.
3H-P28-1875 WE Mandrel	
ST-1875 Trueing Sleeve	
P28A45 Stones (box of 12)	

a. Remove main rotor blades, pitch bearing assemblies, rotor hub, swashplate assembly, main rotor drive shaft and thrust bearing, per Handbook of Maintenance Instructions.

b. Measure diameter of six bolt holes in hub. Diameter should be 0.3745/0.3755 inches.

NOTE

Diameter oversize to 0.3760 inch maximum is permissible for one or two bolt holes in same vertical center line. Oversize of two bolt holes not on the same vertical center line will necessitate hub replacement.

c. Insert hub bolts into holes of new drive shaft to check for free push fit of bolts with 0.3745/0.3755 in. dia. holes in shaft.

NOTE

Hone (do not ream) holes in shaft to obtain free push fit, using Sunnen Product Co. Honing Set. Maintain 0.3745/0.3755 hole dia.; use honing oil when sizing holes.

d. Insert fitting into new drive shaft and thread bolts fully into fitting by hand.

NOTE

Collar of fitting may be machined to 0.010 inch maximum, per Figure 1, to obtain free alignment of bolt holes in hub and fitting.

e. Record outside diameter of new drive shaft, as shown in Figure 2. Nominal shaft diameter is 1.878/1.877 inches.

f. Measure inside diameter of hub and compare:

1. If inside diameter of hub is 0.0005/0.0012 inches greater than outside diameter of new shaft, proceed to step g.

NOTE

0.0005 clearance is slip fit. To facilitate fitting of hub on shaft, lubricate shaft with hydraulic oil, MIL-H-5606.

2. If fit between hub and shaft is less than 0.0005 inch, hone inside diameter of hub for clearance of 0.001 inch, using cylinder hone and honing set; use honing oil when sizing bore. PARCO LUBRIZE hub MIL-P-16232 Type M, Class 2 and proceed to step g.

CAUTION

Hub should never be pressed onto shaft.

3. If fit between hub and shaft exceeds 0.0012 inch, replace hub and return to step b.

NOTE

Hubs are fitted to shafts in original assemblies. Some variance will occur between hub bore and outside diameter of new shaft.

g. Install main rotor drive shaft and thrust bearing, swashplate assembly, rotor hub, pitch bearing assemblies and main rotor blades, per Handbook of Maintenance Instructions.

Weight & Balance Data

Weight and balance data not affected.

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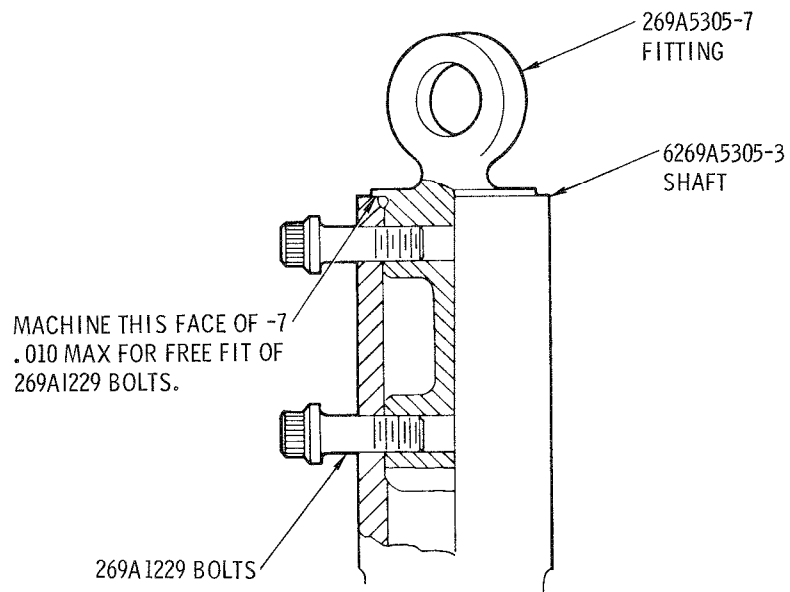


Figure 1.

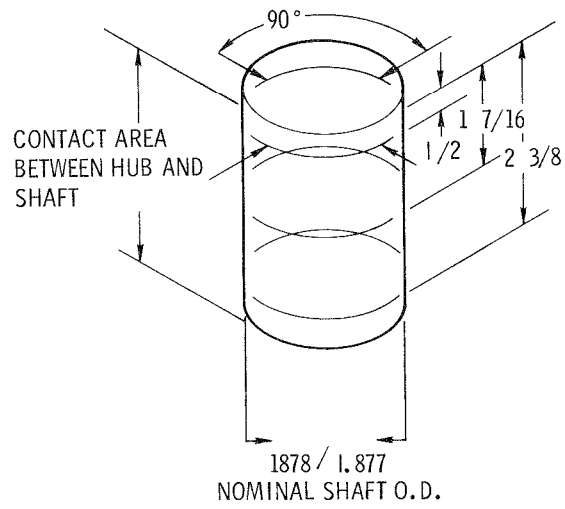


Figure 2.

