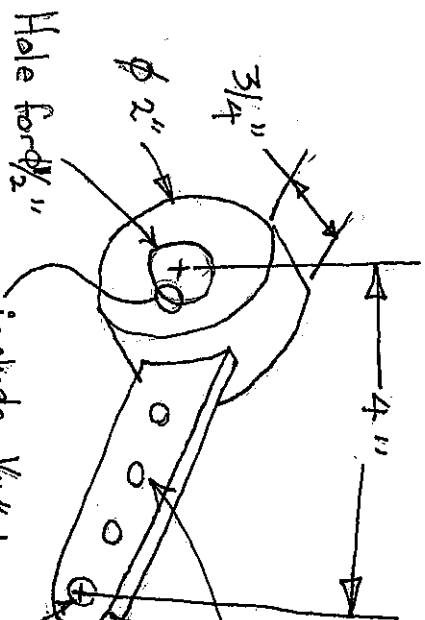


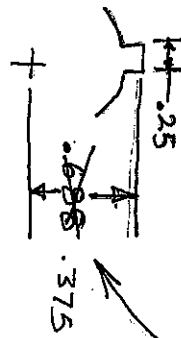
# Connecting Rod

Problem 1. Make a

detailed engineering drawing. (50 points)

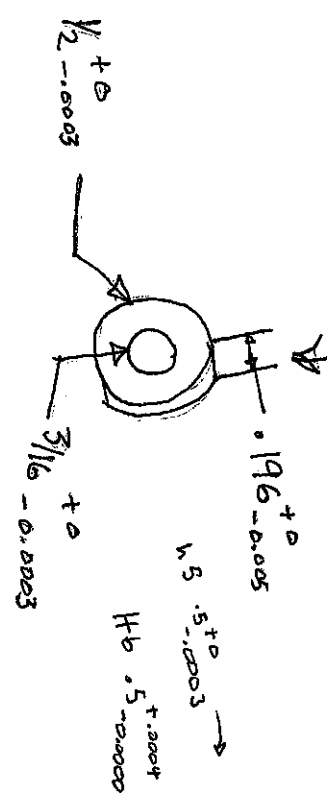


3 clearance holes for 1/4-20 screws, spaced at 1/2", the center hole is 1 1/2" from the end hole. tongue width is 1", thickness is .2", centered in hub. tight fit for ABEC R3 bearing



Nominal Size Range (inches)	LC1		LC5		LC9	
	Hole H6	Shaft h5	Hole H9	Shaft f8	Hole H11	Shaft c10
0.40-0.71	+0.04	+0.03	+0.07	-0.25	+0.0	-0.35
	-0	-0.03	-0	-0.05	-0	-0.3
0.40-0.71	RC1		RC5		RC9	
	Hole H6	Shaft h5	Hole H9	Shaft f8	Hole H11	Shaft c10
	+0.03	-0.25	+0.0	-1.2	+0.0	-6.0
	-0	-0.45	-0	-1.9	-0	-8.8

Entries in thousandths of inches



use fit table to determine tolerances on holes.



## Problem 2 Instructions

Subassembly 1. Assemble the drive shaft, key, connecting rod.

- b. Add two swash plates, one on either side of the connecting rod. Insert 3  $\frac{1}{4}$ -20 x  $\frac{7}{8}$ " screws and 3  $\frac{1}{4}$ -20 nuts through the  $\frac{1}{4}$ -20 clearance holes in the swash plates. Align the swash plates so that the  $\phi\frac{1}{4}$ " hole covers the ABEC R3 bearing hole in the connecting rod.
  - c. Place a washer between the connecting rod and the snap ring groove on the drive shaft. Insert a snap ring in the snap ring groove.
- Subassembly 2. a. Insert one shoulder bolt through the  $\phi\frac{5}{16}$ " hole in the clevis.
- b. Place a bearing washer on either side of the R3 bearing and insert them into the clevis slot.

Assemble s.a. 1 and s.a. 2 by placing the bearing between the swash plates, in the connecting rod's R3 bearing hole.

Make an assembly drawing with exploded views detailing how the system assembles. Include a bill of materials and number the parts on the drawing.