

## HEADSTOCK BEARING ADJUSTMENT

### “READ CAREFULLY”

BEFORE ADJUSTING THE SPINDLE BEARINGS WE SUGGEST A LIFT TEST BE APPLIED TO BOTH BEARINGS. ADJUST ONLY THE BEARINGS REQUIRING SUCH ADJUSTMENT.

LIFT TEST: - LARGE BEARING – With the indicator clamp fastened to the compound rest, set the dial indicator on the spindle as near to the shoulder as possible. Place a piece of bar stock in the spindle, force spindle down, and then exert about a 75# lift. If the reading indicates a movement of over .0015” on any lathe with cast iron bearings or over .001” on any lathe with bronze sleeve bearings, adjustment can be made as instructed below. Apply same test on small bearing by clamping onto the quill guard and setting the dial indicator on the spindle gear.

### BEARING ADJUSTMENT FOR 9” LATHES WITH CAST IRON BEARINGS:

1. Remove bearing cap screws.
2. Remove laminated shim and peel off a .002” lamination.
3. Carefully replace shim with an added shim of .001” thick (supplied by customer) so the thickness removed is only .001”.
4. Replace and tighten cap screw.
5. Check with lift test. If necessary to remove more shim stock, be sure spindle turns freely.

### BEARING ADJUSTMENT FOR 9” AND 10K LATHES WITH BRONZE SLEEVE BEARINGS:

1. Loosen the two bearing lock screws in bearing cap.
2. Remove bearing cap screw.
3. Remove laminated shim and peel off a .002” lamination.
4. Carefully replace shim with an added shim of .001” (supplied by customer) so the thickness removed is only .001”.
5. Replace and tighten cap screw.
6. Adjust the two bearing lock screws moderately tight.
7. Check with lift test. If necessary to remove more shim stock, be sure spindle turns freely.

# Instructions for Adjusting Spindle Bearings on 9" Spindle Housing (W/O Sleeve Bearings)

INDICATOR  
MOUNTED  
ON REVERSE  
BRACKET

MIN .001" LIFT  
MAX .0015" LIFT \*

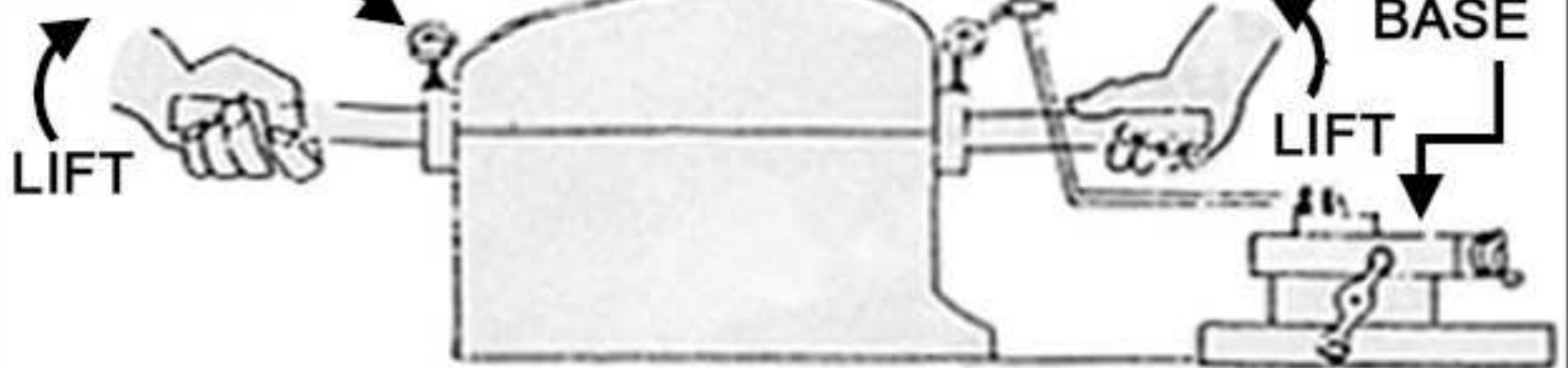
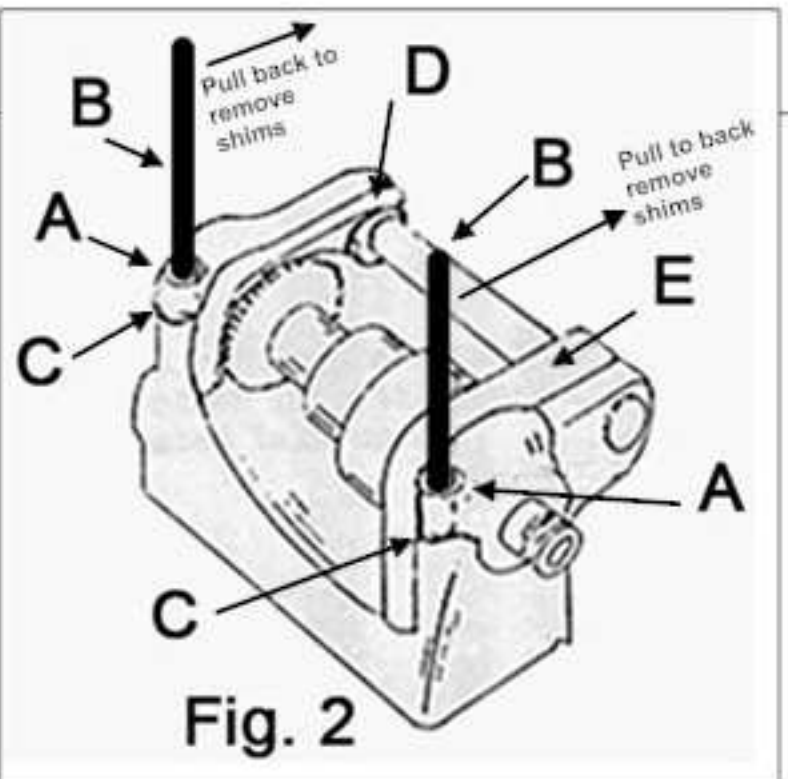


FIG. 1



1. Remove quill guard "D"
2. Remove bull gear guard "E"
3. Use bar stock in spindle and check spindle lift. See fig. 1
4. If lift exceeds above limit, remove cap screws at "A". See fig. 2
5. Insert a piece of 3/8" rod stock shown at "B" and pull bar slightly backward to loosen shims at "C". One shim at each bearing is aluminum, the other is laminated brass.
6. Remove all shims on bearing or bearings that need alignment.
7. Peel one layer (.002") off the laminated shim of each bearing being adjusted.
8. Replace shims, cap screws, and repeat lift test.
9. If lift test exceeds limit, repeat step 7.

\* NOTE: Bronze Bearing Clearances are:

Min - .0007"  
Max - .0010"