

## **MILL SPINDLE SERVICE 17-20XM THROUGH BRIDGEMILL**

- 1. Remove mill drive pulley by prying upwards from below with equal pressure from 2 sides using large screwdrivers or pry bars. Be careful to pry against the pulley, not the roller bearing.**
- 2. Remove the roller bearing and its mounting plate by removing the 4 small bolts holding it to the casting. Inspect the roller bearing and clean and re-pack it if it is a non-sealed type.**
- 3. After the roller bearing is removed you will see the spanner nuts holding the top spindle bearing. Loosen the lock tab and remove the spanner nuts- use a hammer and punch to loosen them- be careful not to damage the threads on the spindle.**
- 4. At the bottom of the spindle, remove the bracket used for the DRO , Ball screw and depth stop functions. Then remove the chrome seal ring.**
- 5. Put the mill mechanism into the drill press mode.**
- 6. Lock the quill lock as tight as possible.**
- 7. Use a piece of wood to protect the splines and drive the spindle down from above with a hammer. Put some rags on the mill table to protect it when the spindle drops out. Be sure you drive the spindle out with straight vertical blows- if you hit at an angle or a glancing blow, you could bend the spindle.**
- 8. Once the spindle drops out, the upper bearing can be lifted out by hand. The lower bearing must be pressed off. Clean and inspect the bearings first- if there is no damage or wear, you can re-pack them and replace them. Use a good brand of light wheel bearing grease.**
- 9. Once you have re-packed or replaced the bearings, put the spindle back in place and support it from below with a piece of 2X4 standing on the mill table.**
- 10. Tap the new upper bearing into place using a piece of pipe that fits over the spindle and rests against the bearing inner race. When the bearing seats into the outer race you will hear the change in sound.**
- 11. Test the spindle for ease of turning and any play. Once satisfied, replace the spanner nuts and the other components.**
- 12. After the machine is assembled, test run the spindle for a few minutes- the casting should become warm to the touch, but not too hot to touch. After a good run-in period test the spindle for any runout.**

