Fitting Slotter Spindle, Collar and Head

As always I try to write a tech tip based on inquires in the recent past. Fitting the collar to the spindle, and the head to the collar, seems to be a point of confusion for a lot of people out there. So here is a little trick that was shown to me and it works very well. This procedure works so well it is now standard procedure at Davenport when we build a slotting attachment.

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To fit the collar to the slotter spindle and the collar you will need to secure the outer spindle in a vise (use caution not to distort or damage the spindle). You will then need to mix a very watery solution of fine lapping compound and lube oil (a compound that WILL BRAKE DOWN in a very short time after it is mixed in oil).

- Put a small amount of the mix on the spindle external threads and taper.
- Spin the nut on by hand all the way
- Work the nut until it is tight
- Back off the nut and work it on again until it is tight
- Repeat this procedure about 8-10 times.

After the spindle and the collar are COMPLETELY CLEANED of all lapping compound, install the collar on the spindle and tighten the collar using a spanner wrench.

Spot and drill the cone point set screw hole. Break the corner and install the set screw. The break in the corner is very important.

Install the spindle & collar into a good lathe and steady rest. Indicate the spindle in 2 spots (close to the lathe jaws and close to the collar) to .001 or less. At this point you should check the face of the collar that the head seats against, if there is more than .001 run out take a skin cut off of the collar face.

WITHOUT REMOVING FROM THE LATHE continue to install the head onto the collar and follow the lapping procedure above as well as the drilling procedure. With the slotter head installed and tightened down; check the indication on the support end. If it is off by more than .001 this also should be faced off.

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