

Lightning Hollower

Tool rest placement:

I found out the hard way that the position of the tool rest holder can be very important. Normally when we work the banjo is positioned at 90 degrees to the bed ways and the tool rest is generally parallel to them. With a torque system like this is important that the banjo be set just the opposite. The banjo needs to be as close to parallel with the bed ways as possible and of course the torque gate will be perpendicular (see photo below). This is because there is so much more force that can be exerted on the banjo that it needs to have as wide a footprint on the ways as possible. Also the sliding cam clamp, when set, should be as close to the tool post as possible. Once again it just brings the maximum amount of mechanical advantage to counteract the extra force that can be applied to it.

Laser and holder:

You'll slide the laser up into the laser holder all the way until the pocket clip stops it. Hold the button down while you slide it into the tube so the edge of the tube does not shear the button off. Rotate the laser back and forth in the holder until you find the "off" and the "on" positions. The pocket clip is an integral part of the design. The laser is on when you rotate it counterclockwise all the way until it hits the square tube. By rotating it back approximately 90 degrees you should find a spot where the laser will turn off. You've probably found out that these presentation laser's don't have a truly round or centered laser spot. This is no big deal as long as the pocket clip is against the square tube while it is on. By making sure the clip is against the square tube the laser dot will always be oriented the same. Remember to put the batteries for the laser in backwards to the way that you would load batteries in a flashlight.

Torque Gate:

The torque arresting tool gate is adjusted by using the 1/2" spacer as a fulcrum. It does not matter which side the spacer is on. Slightly tighten down the bolt on the side you have the spacer on. If the opposite side is left loose the top bar will slant up away from the fulcrum, about an eighth of an inch, like a lopsided teeter totter. By tightening down the opposite side you will have very precise control of the clearance. A narrow clearance is very helpful but is not particularly critical until the tool is used near its maximum depth. You may need to adjust the clearance as you move the bar from one side of the trap to the other as you work different areas of a hollow form. You can even move the spacer to the other side of the trap if need be.

In my experience, you will only use about 1/3 of the width of the gate at any one time. This is because I work down the wall of the form in two inch increments. When the shape of the form demands that I move to a different part of the gate where the tool begins to bind, I simply readjust the clearance for that section of the torque gate. I may make many minor adjustments to the gate during the course of a hollowing project. The clearance can be as small as 1/1000th" when you are getting a lot of vibration and are very deep in the vessel. My rule of thumb is to leave the clearance as wide as I can get away with especially when the bar is only a short distance off the trap. I then reduce the clearance as vibration becomes an issue as I go deeper with the bar hanging farther over the gate.

Tool Bit:

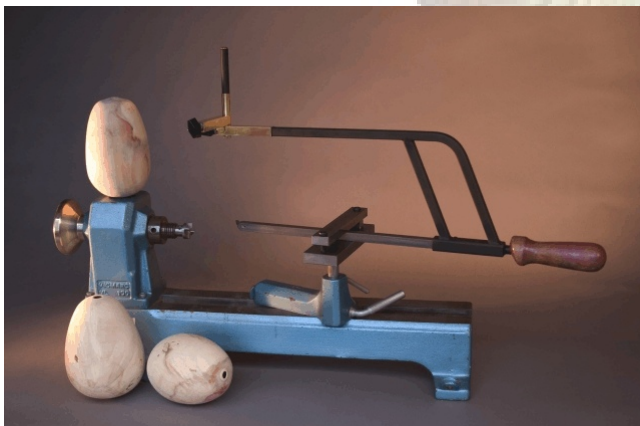
The tool bit is glued in using super glue. Simply place the bit in the square hole. Apply enough glue so that it wicks in like a plumbers solder joint. Set it aside and let the glue cure. It is best not to use accelerator so that the bond will be as strong as possible. Thin glue may need two applications.

To remove the bit, heat up the end of the tool with a propane torch until the glue is soft and pull out the bit with a pair of plyers, let it cool and glue in another one.

Handle:

Insert the half inch stub shaft of the handle into the at the back of the rig and secure it with the set screw.

If you have any questions don't hesitate to call me at 509-925-3538. Thanks for your interest in Derry Tools



Donald Derry
7020 Manastash Rd
Ellensburg WA 98926
509-925-3538

