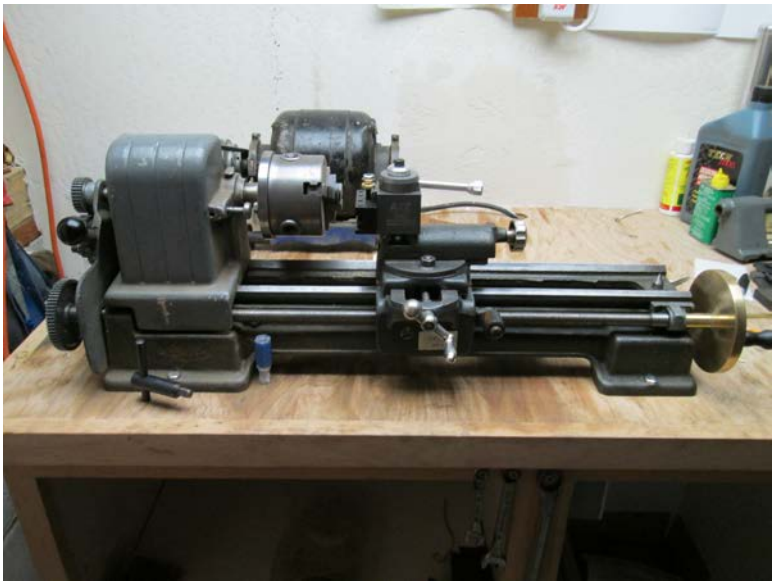
Craftsman 109 (Vintage lathe)

Product review and photos from Terry Haight, 2013



Review of Craftsman 109 Benchtop Metal Lathe. Please note I'm new to the world of metal lathes. I needed some special adapters for my Hornady reloader so I thought to find myself a small Lathe and make them myself as these could not be purchased.

So I found mine on Craigslist, not knowing anything about Metal Lathes, I purchased this one. Now in hindsight, I wish I had done a little research first. I believe I over paid plus I didn't know what to look for in a Lathe. Now the learning begins.

I've read several articles on this little guy. Some suggest that it makes a good boat anchor, while another gentleman commented that you just need to listen to it and tune it up so as to make it a better machine. So I went to work on it, following recommendations gleaned from a forum I found here http://groups.yahoo.com/group/craftsman109/ where I learned a lot.

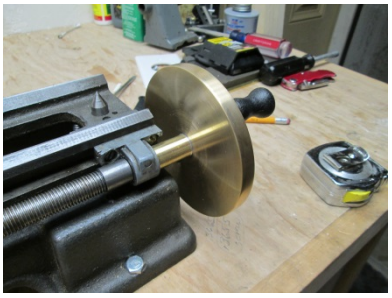
I took the whole spindle assembly and back gear apart, cleaned it up and greased the planetary gears. I wanted to see how this little guy worked so I could understand what it does, and how it does it.

First thing was to make a new rear gib for the compound because mine was broken and it wasn't really a good design. New one made out of brass instead of the cast iron one that is stock. Also drilled and tapped it for 2 new screws to secure the Gib on both ends instead of the stock one in the center position.

Next was to replace the two front gibs which were steel with brass ones that i made. The new ones I made to extend back to ride against the underside/front surface

of the machined way, keeping things tighter so that when cutting, the compound doesn't walk back and forth. Now I've been able to see less than .001" travel in the compound when I cut from left to right.

I put a dead center into the chuck and turned it on and it was wobbling pretty bad. So took the chuck off and did a skim cut on the spindle register which was out a pinch. Then reinstalled the chuck with dead center installed, fired it up and still had the wobble on the dead center. Huh? Then I came across an ad for a new chuck which stated at the bottom of the ad," As with all new chucks you need to take off the back plate and turn it on your lathe to true it up to your spindle. And then he said if you don't have the ability to do this then you have no business owning a metal lathe". I thought maybe I was that guy? So I decided to see if I could do this. I removed the back plate off the chuck, installed it onto my spindle in reverse of how it installs while attached to the chuck and it was out maybe .002 to .004", so I machined it to .000" run out and reattached it to the chuck and still had the wobble problem. So I took off back plate and looking at the other side which marries to the chuck I noticed it looked like someone tried to turn it to true it up. So I'm thinking this is a factory part so it didn't need to be turned, right? I think a previous owner thought this would true it up so they turned the wrong side of the back plate. So I decided to check it with a dial indicator and to my surprise it was out .008". So I cleaned it up near .000" run out, reinstalled every thing and bingo, no more wobble.



Now were off to making things, like a new handle for the lead screw. 4" diameter solid brass sure makes it easier to turn by hand. Along with purchasing a new tool post, some cutting tools, new brass gibbs for the tool post slide and compound swivel base.