

Making a Cross Style Bullet Pen Nib

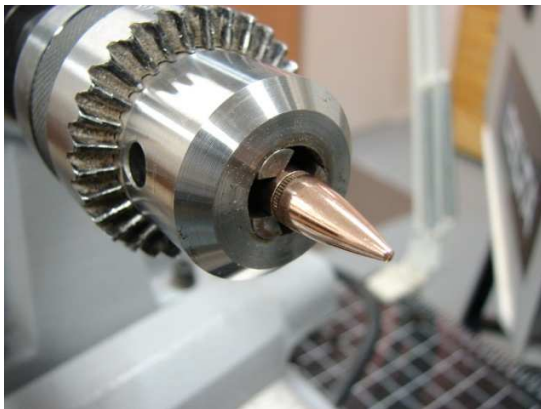
Les R. Elm © 2008

This tutorial is for a Cross style refill using a 30 Caliber Copper Full Metal Jacket Bullet which has a lead core.

Due to environmental and health issues associated with lead, a lot of bullet manufactures are now making Solid Copper Bullets.

Set lathe at 250 – 300 RPM to do the drilling. When drilling either a bullet containing lead or a solid copper bullet, go slow and drill shallow using Rapid Tap Cutting Fluid, cleaning the drill bits frequently to avoid plugging the hole. Drilling too fast will cause the lead will get hot, melt and cause problems.

1. Install a 1/2" drill chuck in the headstock and install the bullet with the point facing out. File 3/32nds of an inch from the point to get a square flat surface. *Do not over tighten and always ensure the bullet is tightened on the surface that will not be seen when the bullet is seated into the cartridge neck.*

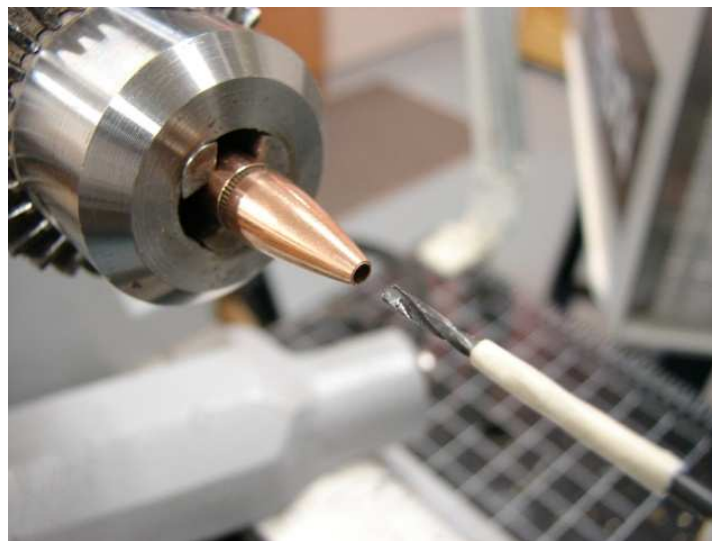


Bullet Installed In Drill Chuck



Bullet Tip Filed Square and Flat

2. Install a 1/2" drill chuck in the tailstock c/w a #46 bit and place a piece of tape at 1/2" on the #46 bit to act as a depth gauge. Using Rapid Tap Drilling Fluid drill to a depth of 1/2" an inch. With the lathe running use a fine flat file to de-burr and lightly round over the tip. Use a piece of extra fine steel wool pressed onto the hole to de-burr the inside of the nib hole.



Drilling #46 Nib Hole

3. Reverse the bullet in the head stock drill chuck with the boat tail end facing out. Install a 9/64th bit into the tail stock drill chuck and place a piece of tape on the bit at 15/16" to use as a depth gauge. Using Rapid Tap Drilling Fluid drill stopping frequently to clean the hole and bit. Drill to a depth of 15/16ths of an inch to avoid drilling through the sides of pointed end. This depth will vary depending on the caliber of bullet being used.

Don't over tighten and always ensure the bullet is tightened on the surface that will not be seen when the bullet is seated into the cartridge neck.



Drilling 9/64ths Bullet Nib Hole

4. Remove the bullet from the drill chuck and check the #46 nib hole to ensure the refill slides in freely and that there is enough 9/64th hole depth to get the proper amount of refill tip reveal through the bullet nib hole.



Checking Nib Refill Hole For Reveal

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