

Leementing Kit Documentation

Products:

6-32NC Taper ground Hand Tap
6-32NC Bottoming Hand Tap
8-32NC Taper Ground Hand Tap
8-32NC Bottoming Hand Tap
T-Handle Tap Wrench
#29 Jobber Drill Cobalt Finish
#36 Jobber Drill Cobalt Finish
Single Flute CounterSink
Hex Wrench Set 1/16 - 7/32
Beagling Tape

10 each:

1/8 6-32NC Socket Set Screws
3/16 6-32NC Socket Set Screws
1/4 6-32NC Socket Set Screws
5/16 6-32NC Socket Set Screws
7/16 6-32NC Socket Set Screws
1/8 8-32NC Socket Set Screws
3/16 8-32NC Socket Set Screws
1/4 8-32NC Socket Set Screws
5/16 8-32NC Socket Set Screws
7/16 8-32NC Socket Set Screws

20 each:

3/8 8-32NC Flat Head Cup Screws

3 1/2 Hex Nuts for Lapping

1 small bottle 800grit clover compound

To fix a mold with a stripped Sprue plate Screw.

- 1.) Remove the sprue plate from the mold and mount in Drill press or vise as shown.



2.) Using the small of the two drill bit provided, drill a hole through the mold body into the sprue plate screw hole.



3.) Clean the metal out of the hole.

4.) Using the tapered 6-32 tap, slowly tap the hole. A drop or two of light weight oil will help. Remember to cut a little at a time and then back your tap out to clean the threads. Do Not rush, when you feel pressure, back the tap out, re-oil.



After tapping, Select a 6-32 screw to fill the hole, reattach the plate and use the set screw to hold the main screw to the appropriate tension.



To add a sprue plate pressure point screw to a 6 cav Lee:

- 1.) Measure and mark the mold to find where the sprue lever makes contact with the side of the mold. Be sure to determine the position of the screw as the top of the screw must not extend past the surface of the mold.



2.) Drill a hole approximately half the depth of the mold block using the larger of the 2 bits provided.



3.) Use the countersink in a drill to open the surface of the metal to hold the screw.



4.) Tap the hole using the 8-32 Bottoming Tap (since the hole is not open at the bottom. Again use small amounts of light oil and tap in stages emptying metal out of the tap as needed.



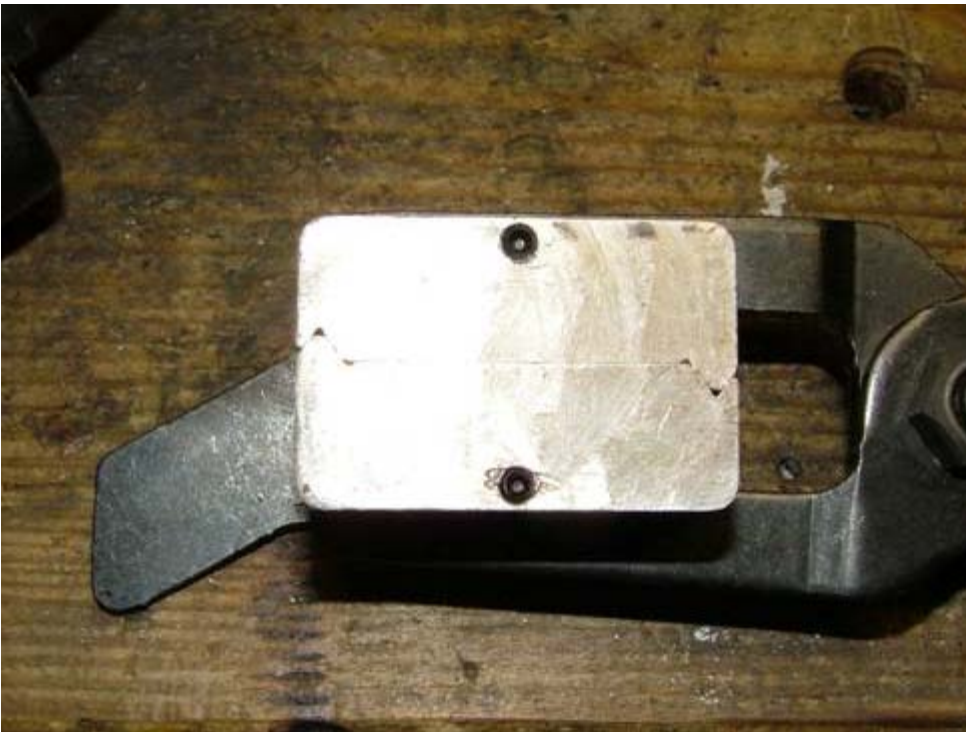
Thread the screw into the hole and reassemble the mold.





Fixing Handle Pins that fall out of the 2 Cavity molds

You usually don't even need a tap for this one. Just use the shortest of the 8-32 size screws and screw them directly into the pin holes as shown.



Lapping a mold:

Remove the sprue plate from the mold and line up a Nut centered over 1 cavity of the mold.



Fill the cavity with WW alloy including the Nut and water drop.



Coat the bullet with the provided clover compound and use a 1/2 inch box end wrench to twist the bullet in the cavities. You will need to recoat the bullet between cavities for best effect.



Clean the mold in Hot water then with Degreaser and re-assemble.

"Beagling" a Mould

I suppose that at least once in our lives, every caster is plagued but an undersize mould. This fault as I call it occurs primarily with Lyman or Ideal moulds. Many times, I have searched carefully for a mould only to find it casts small bullets when I finally obtain it. Many designs suffer from this problem but it seems that certain moulds or designs are worse than others. Among these are the 457191, the 357446, the 429360, the 41032, the 427098 and the 429434. Then there are the true old classics you obtain that were just an "ah shit!" when cut. I have a 358429 that drops bullets at .358 X .355 and that was just a manufacturer's problem.

All of these moulds set in my mould cabinet for years and occasionally I'd learn something and then try them again to no avail. Still too small.

After retirement, I had time to mess some with these moulds and try to improve them.

First was lapping with valve grinding compound. A very messy and often unsuccessful project.

The second attempt was to drill and tap the open side of the pin alignment hole and put set screws in so that the mould blocks could be held partially open. This works but the proper adjustment is hard to establish and maintain. About .003" clearance can be obtained before flashing occurs.

The third attempt was to take a 5/32" spring pin and cut 3/16" lengths off one end and drive them into these openings to hold the mould open enough to cause enlargement of the bullet. This method also works but the correct adjustment is very difficult to obtain.

About this time, I acquired a H & G #73 double cavity mould off E-Bay. Since I had 2 cav H & G moulds, I didn't worry about handles. When it came, my handles were too thick to fit the block cuts. I finally found that a set of Lyman 4 cavity handles would hold the blocks so that I could try the mould. I fully expected a .358" diameter bullet but instead obtained a .361" bullet. Close examination of the gap between the mould halves showed that there was a minute gap between the blocks. Removing the blocks, there was no gap so the handles were held apart exactly the correct amount to produce a nice large bullet.

I communicated this information to Orygun Mark and he drilled and tapped a set of handles to incorporate a single .002" shim between a set of SC blocks and it worked for him. We're getting somewhere now.

I finally located a set of shim stock at ACE Hardware of .001, .002, .003 and .005" thicknesses. I cut and prepared a piece of .002" shim stock and prepared to shim a DC mould by securing it behind the mould handle screw. Won't work as the alignment pins get in the way. Back to the drawing board.

I had a roll of .003" aluminum tape with adhesive backing. I tried that on a SC mould but the adhesive closed the vent lines on a .22 mould I was attempting to enlarge. Finally, I placed a large square of this tape below the cavity and small strips on either side. Success.

Now, back to the DCs. The same method of a large patch below the cavities and a small strip along the outside of each cavity works well and stays in place because of the adhesive. Now, the 427098 which previously ran .428" runs between .432 and .433.

I leaned several things during this experiment.

- 1) Don't completely block the vent lines or incomplete bullets will result.
- 2) The shim must be directly between the mould handles. If below or above, the blocks will tilt and close. The shim must be directly between the alignment pins for the same reason.
- 3) For some reason unclear to me, bullets don't enlarge excessively sideways even though there is a gap there.
- 4) Even if bullets are slightly elliptical, sizing rounds them if done with a new style tapered entrance sizer and accuracy is just as good as with round bullets.
- 5) Very little flashing between the mould halves occurs using this method. If being dipper poured, they will flash. If using the bottom pour and dropping the melt ¾" to 1" into the sprue hole, no flashing occurs due to reduced melt temperature and the reduction in the pressure of the melt going into the cavity.

Update.....

After several months of experimenting with enhancing moulds, I have learned a little more about it. More uniform results can be obtained by applying tape to both halves of the mould.

Venting is not a problem as I first anticipated. Sufficient venting is provided by the gaps between the tape strips.

The best method of taping can be obtained by using strips approximately 1/8" wide. If you want a bigger body, apply strips alongside the cavity and between the cavities in the case of a double cavity mould alongside the area you wish to enlarge. These strips should be positioned so that the two strips bear on each other. This separates the mould halves a uniform amount.

This method can also be used on the larger 45 moulds designed for black powder to enlarge the nose to full diameter for use in smokeless rifles and give a better bore fit.

Under the current method of taping, I am obtaining about .003" in diameter without undue design distortion. This has been very useful in the .38, .44, .375 for the 38/55 and in the BP 45 designs in the 45/70.

Originally posted by Beagle