

# THERMOFORMER PUNCH & DIE QUICK START GUIDE

*Version 1.0*

10/17/2019

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## CHANGING PUNCH AND DIES

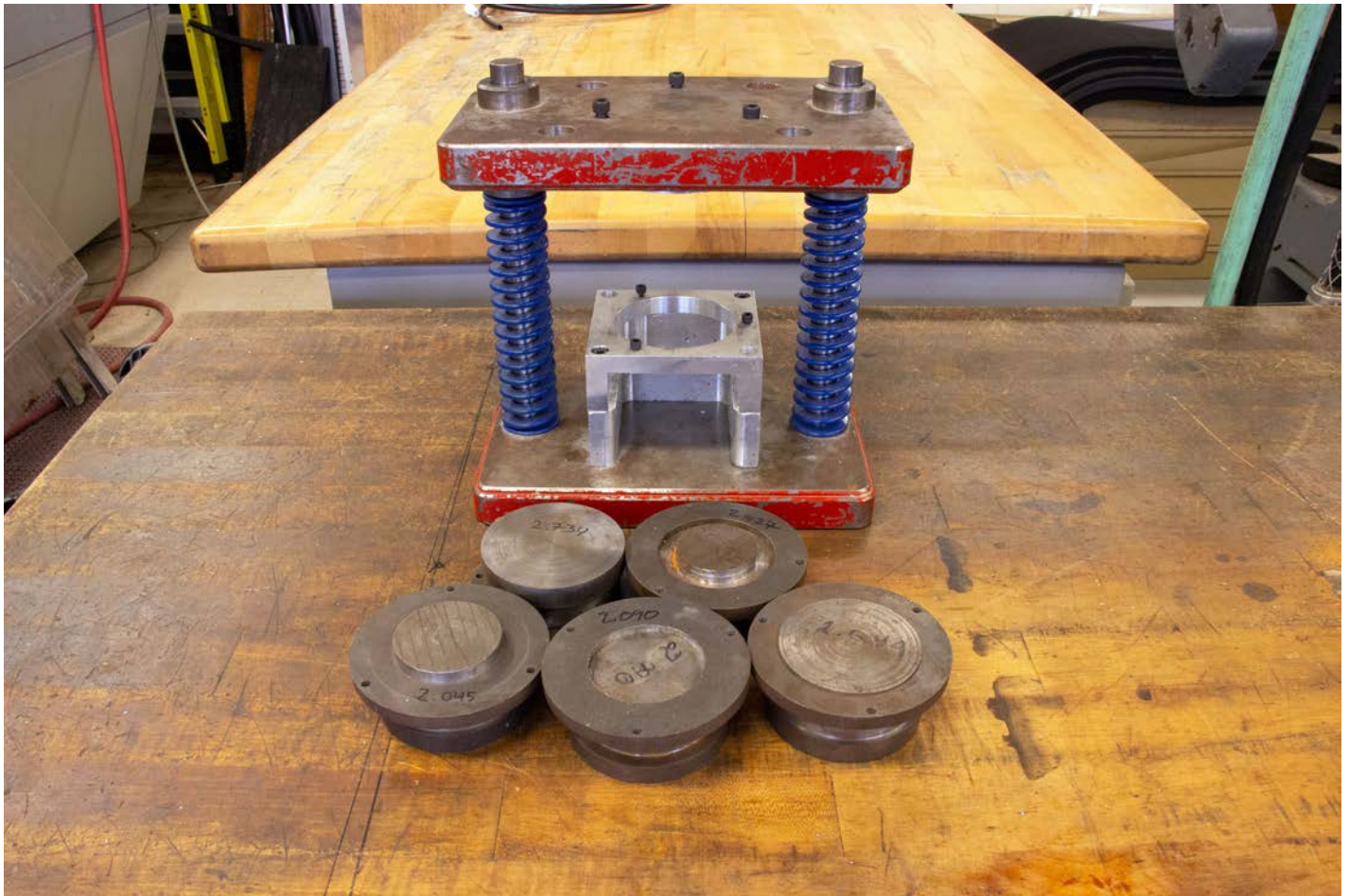
*PUNCH DIAMETERS: 2.090", 2.045", 2.427",  
2.644", and 2.734"*

*PUNCH DIAMETERS: 0.307", 0.499", 0.562",  
0.749", 0.971", 0.985", 1.074", 1.192", 1.290",  
1.378", 1.500", 1.598", 1.652", 1.710", 1.754",  
1.804", 1.875", 1.880", 1.970", 2.002", 2.075",  
2.170", 2.219", 2.240", and 2.229"*

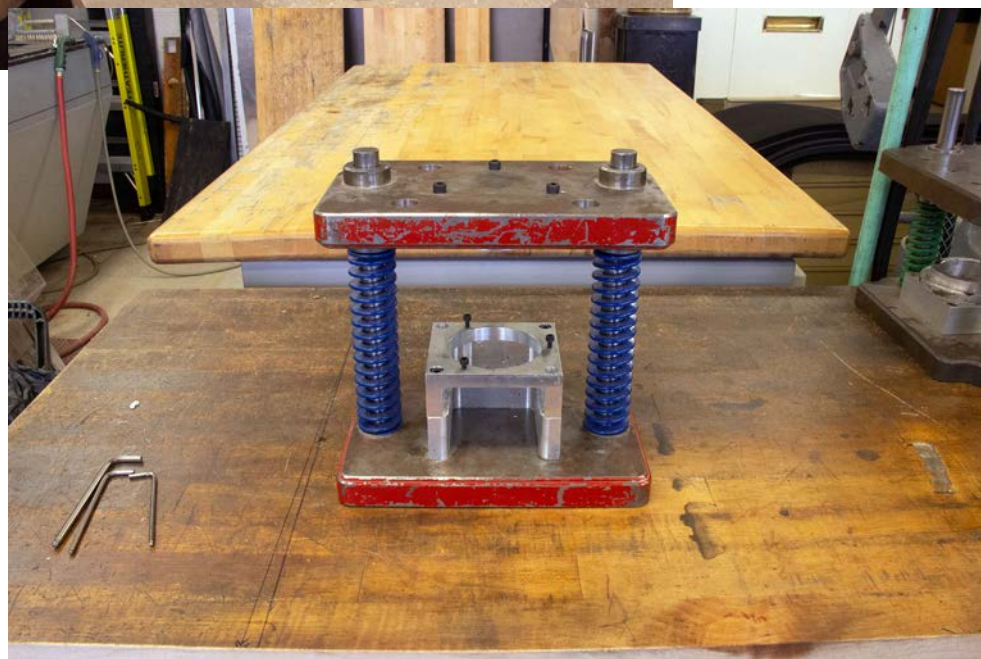
## OPERATION

# CHANGING PUNCH AND DIES

PUNCH DIAMETERS: 2.090", 2.045", 2.427", 2.644", and 2.734"

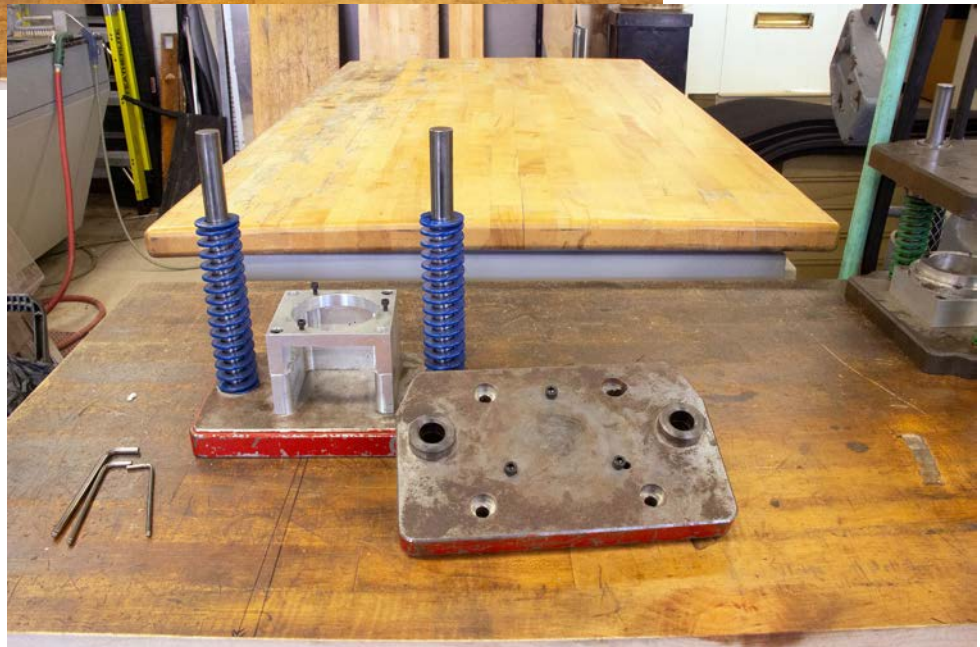
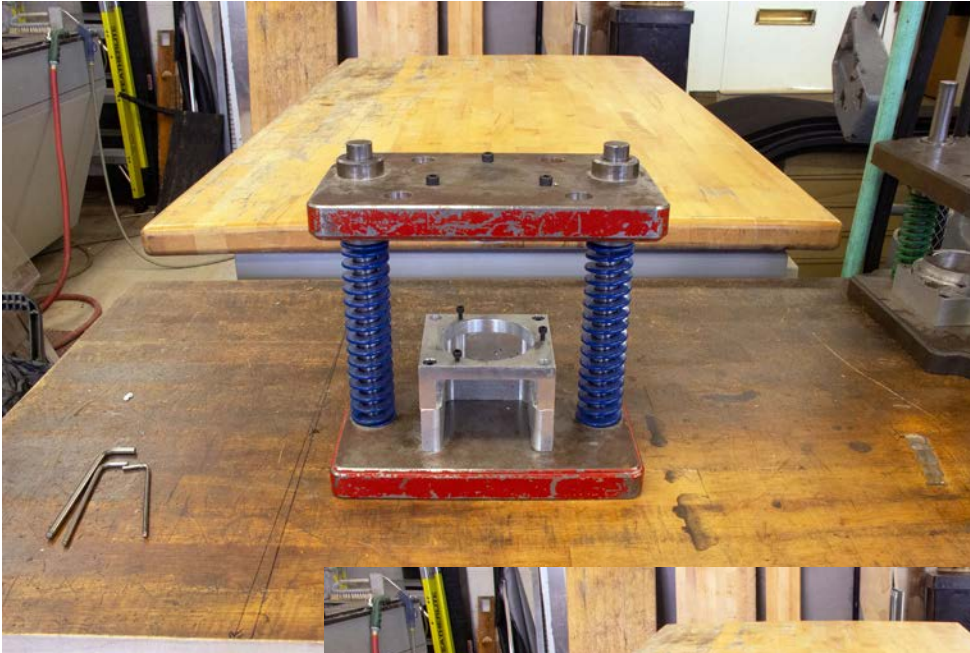


1. If you are using one of the following punch & die sets: (2.090", 2.045", 2.427", 2.644", and 2.734"), you will need to use punch & die fixture that has the BLUE springs





2. Slide the top of the fixture off



3. Using a 3/16" hex wrench, remove the 1/4-20 1 1/4" Socket Head cap screws that hold the punch and the ring fixture together to the top plate. Put the screws to the side



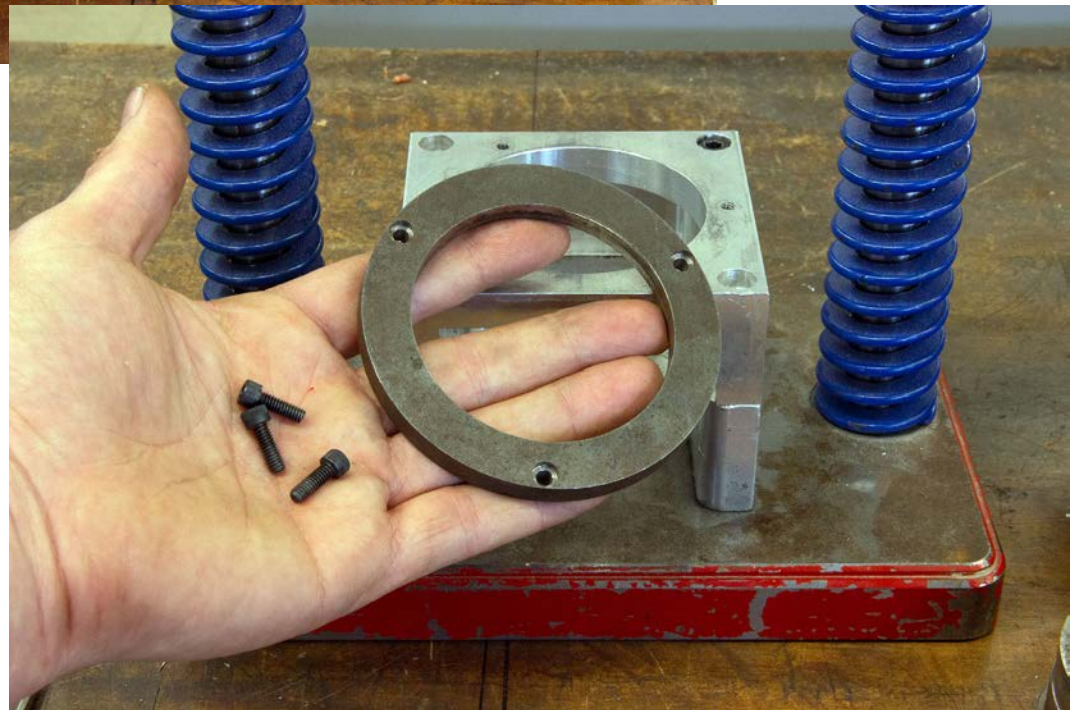
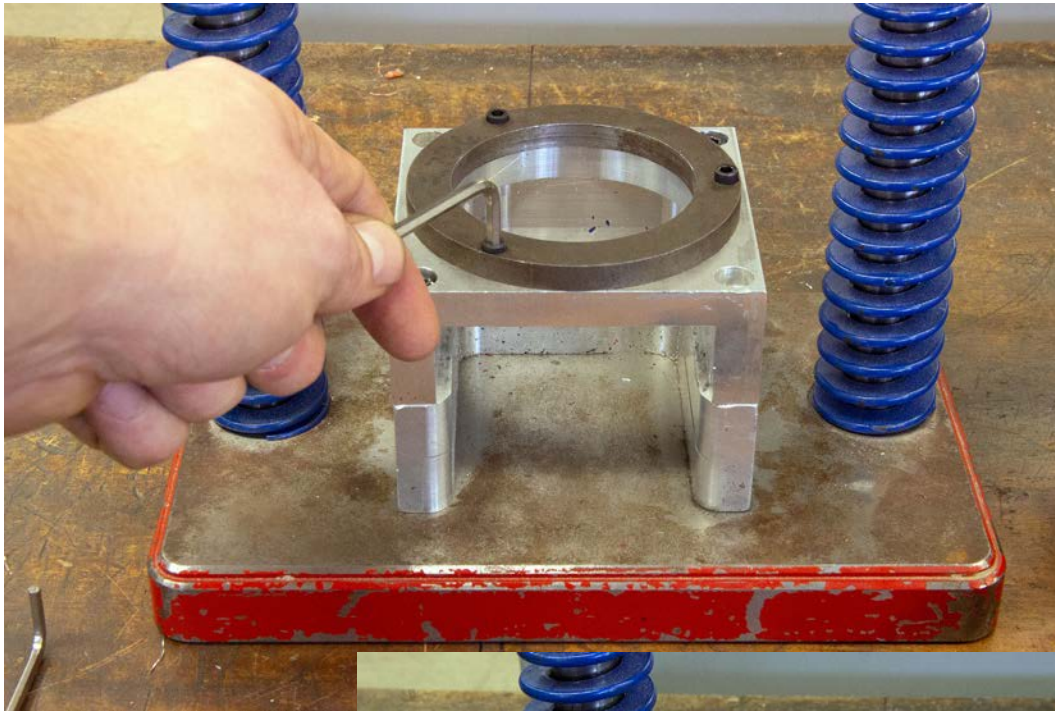


4. Remove the punch from its fixture ring

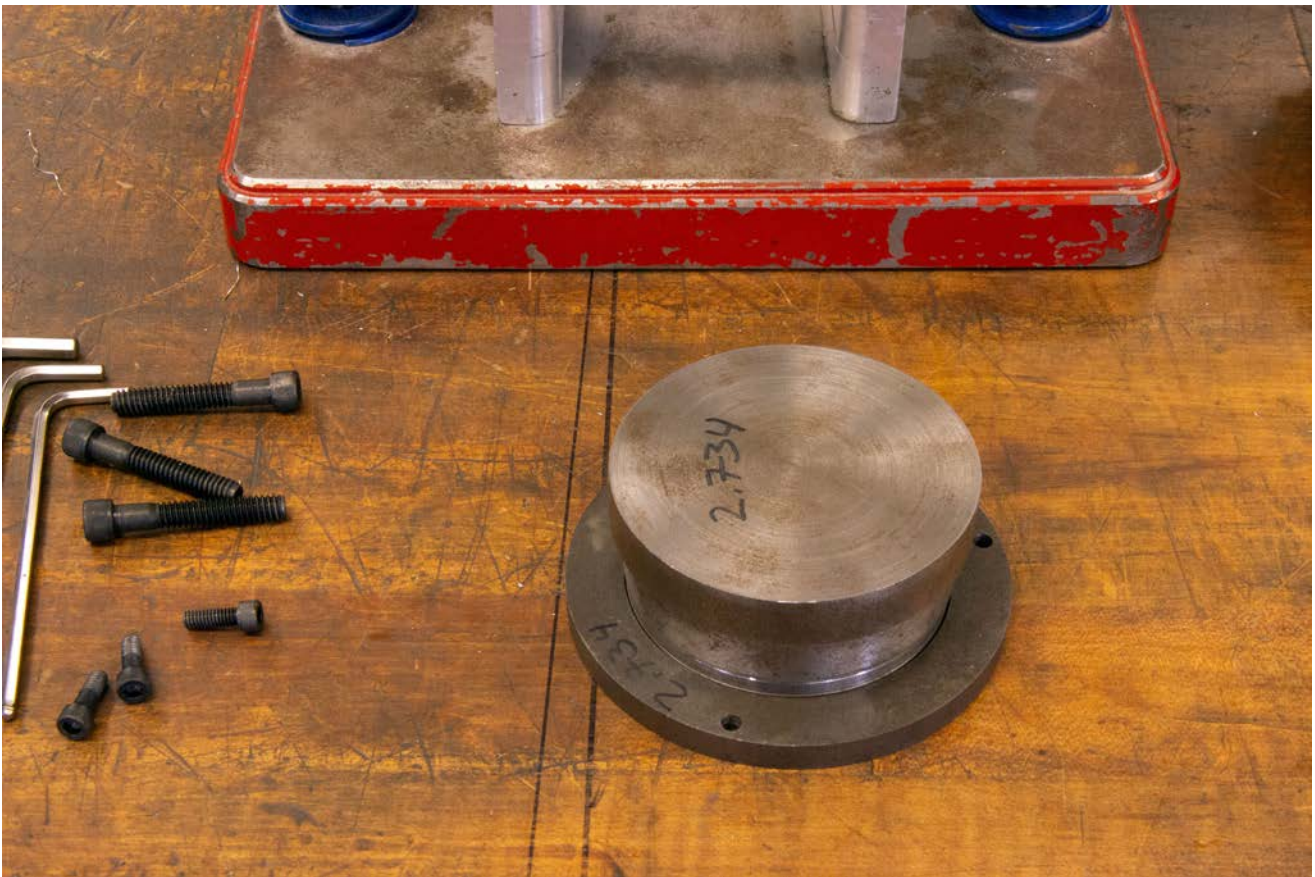




5. Remove the die from the bottom fixture by using a 9/64" hex wrench. Put the screws to the side

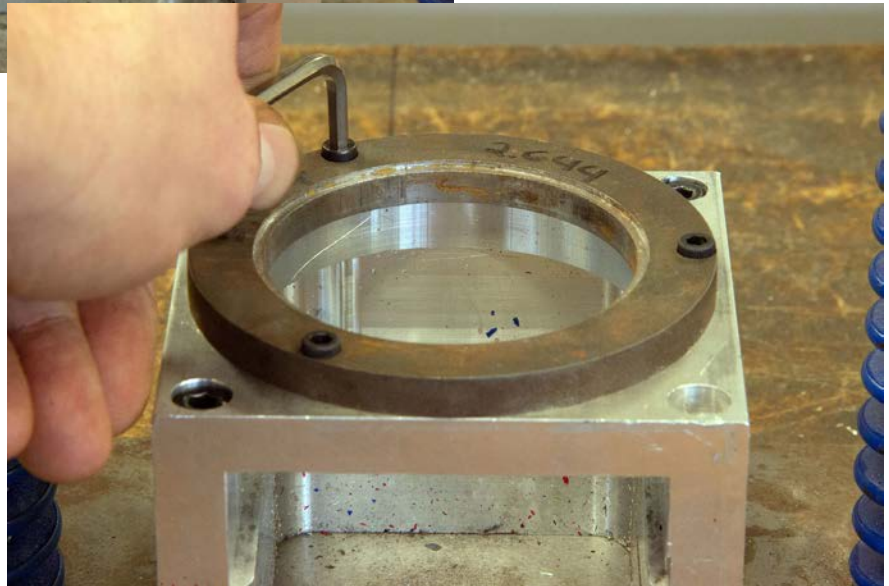
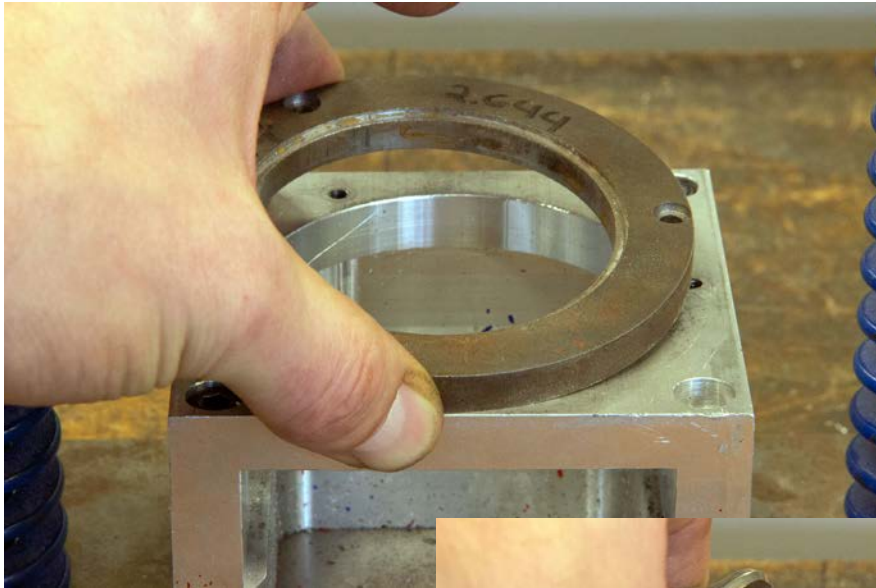


6. Put the punch and corresponding die together so they do not get separated



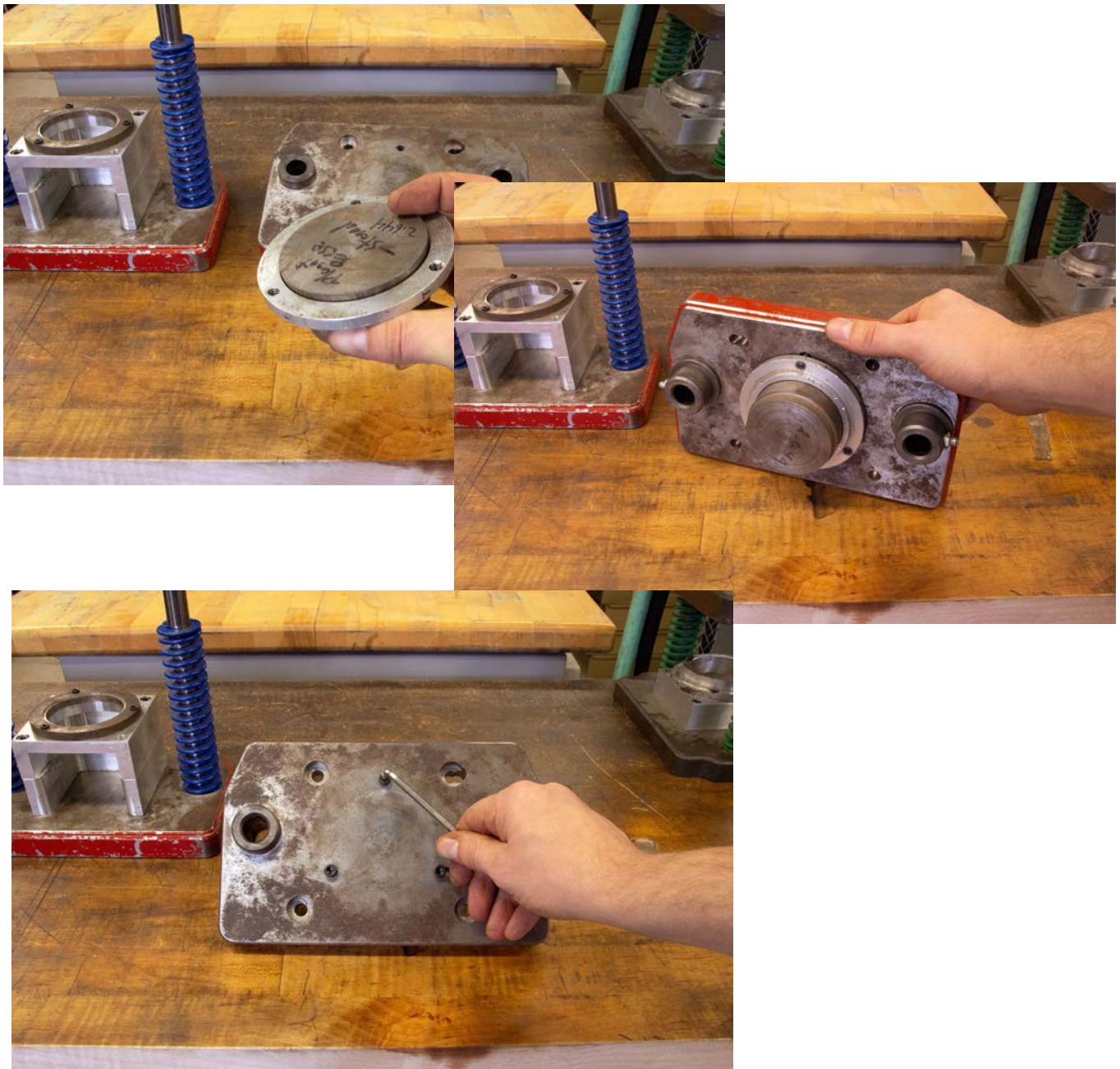


7. Place the die on the bottom part of the fixture and fasten it using the 8-32 1/2" Socket Head cap screws and a 9/64" hex wrench

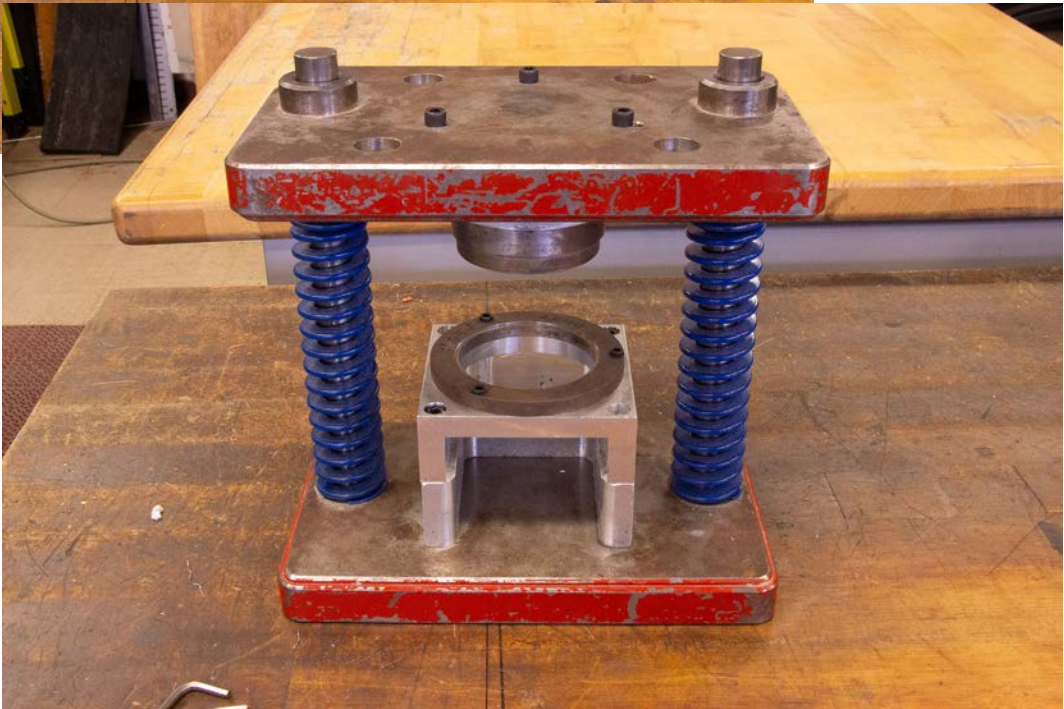




8. Place the punch into the top fixture ring and attach to the top plate using  $\frac{1}{4}$ -20  $1\frac{1}{2}$ " Socket Head cap screws and the  $\frac{3}{16}$ " hex wrench. Important!!! Leave the punch a bit loose!!! You will tighten the cap-screws fully at a later step

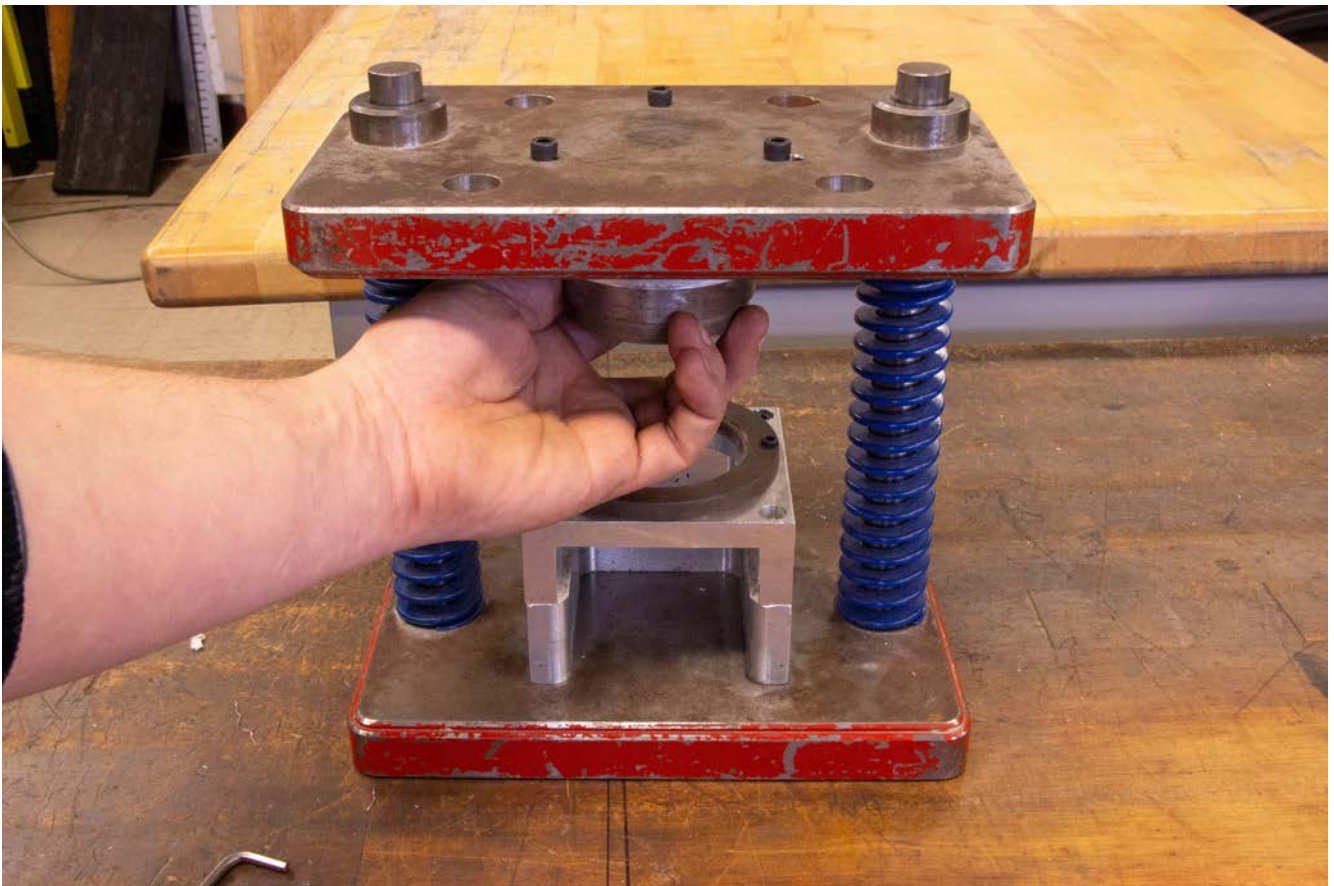


10. Slide the top plate back onto the fixture assembly.



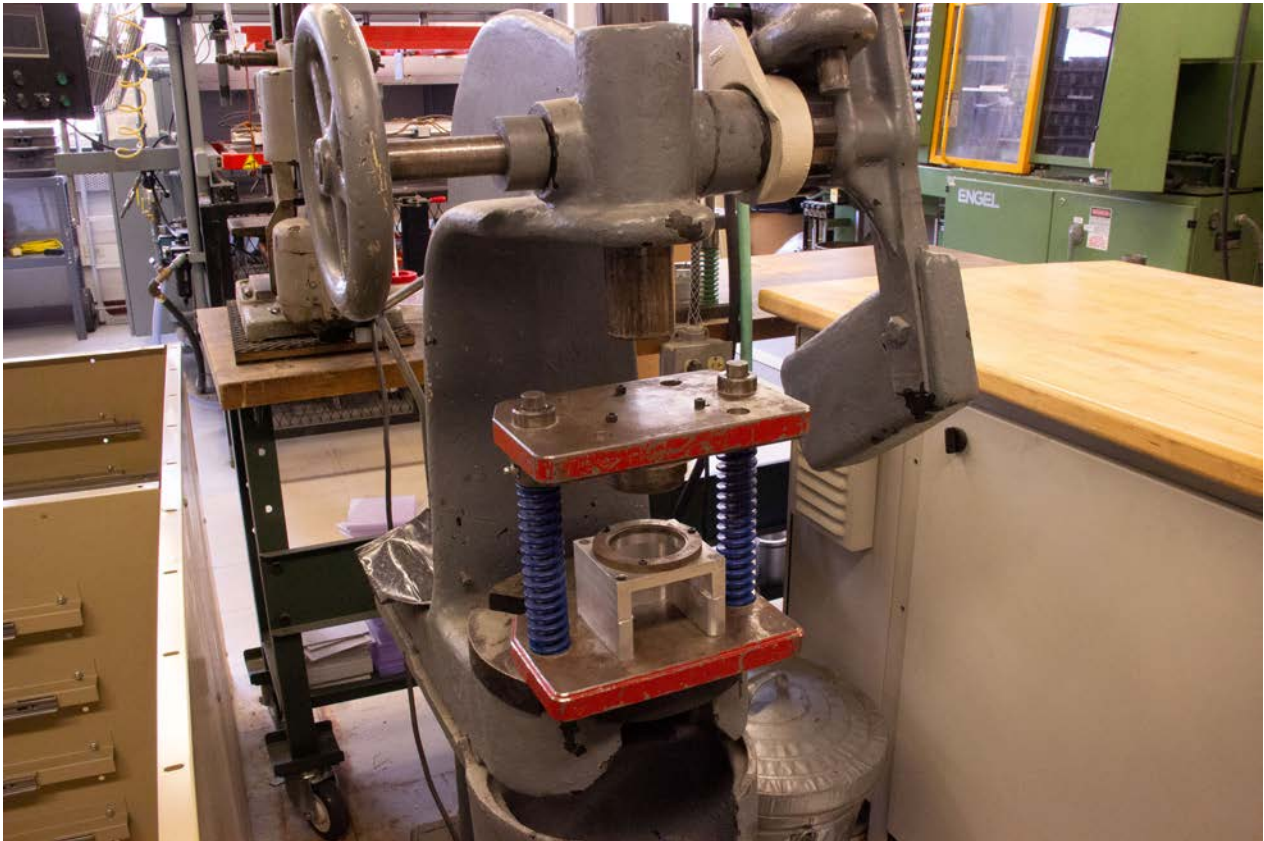


11. Double-check to make sure the punch is loose and has some movement

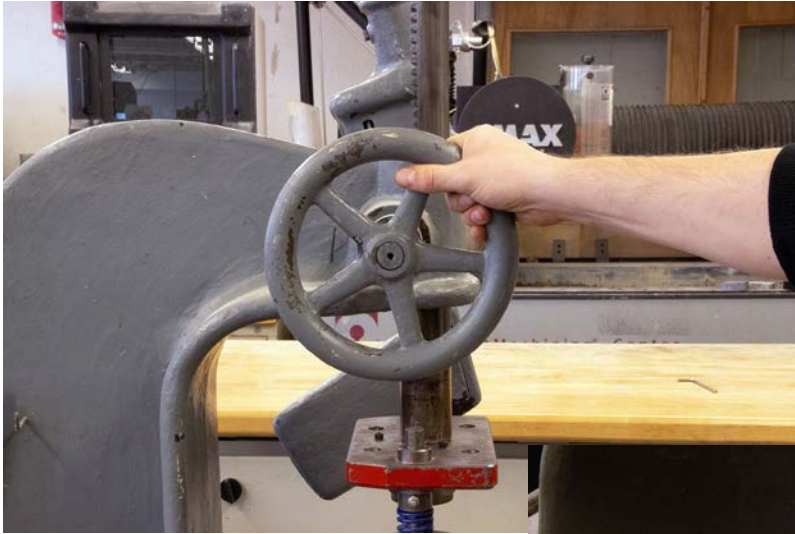




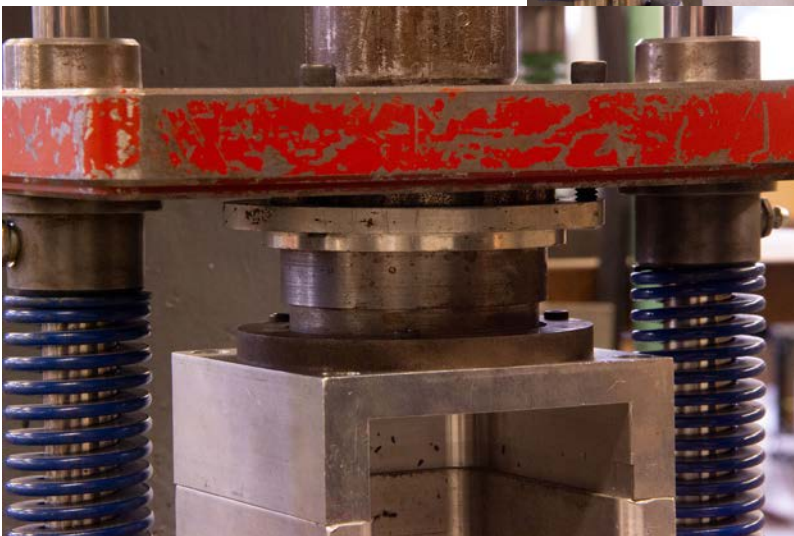
12. Place the punch fixture onto the Arbor Press and keep the 3/16" hex wrench close by



13. Turn the handwheel clockwise until the ram is touching the top of the fixture. You may need to create a little compression via the ram to ensure that your punch and die will properly mate.

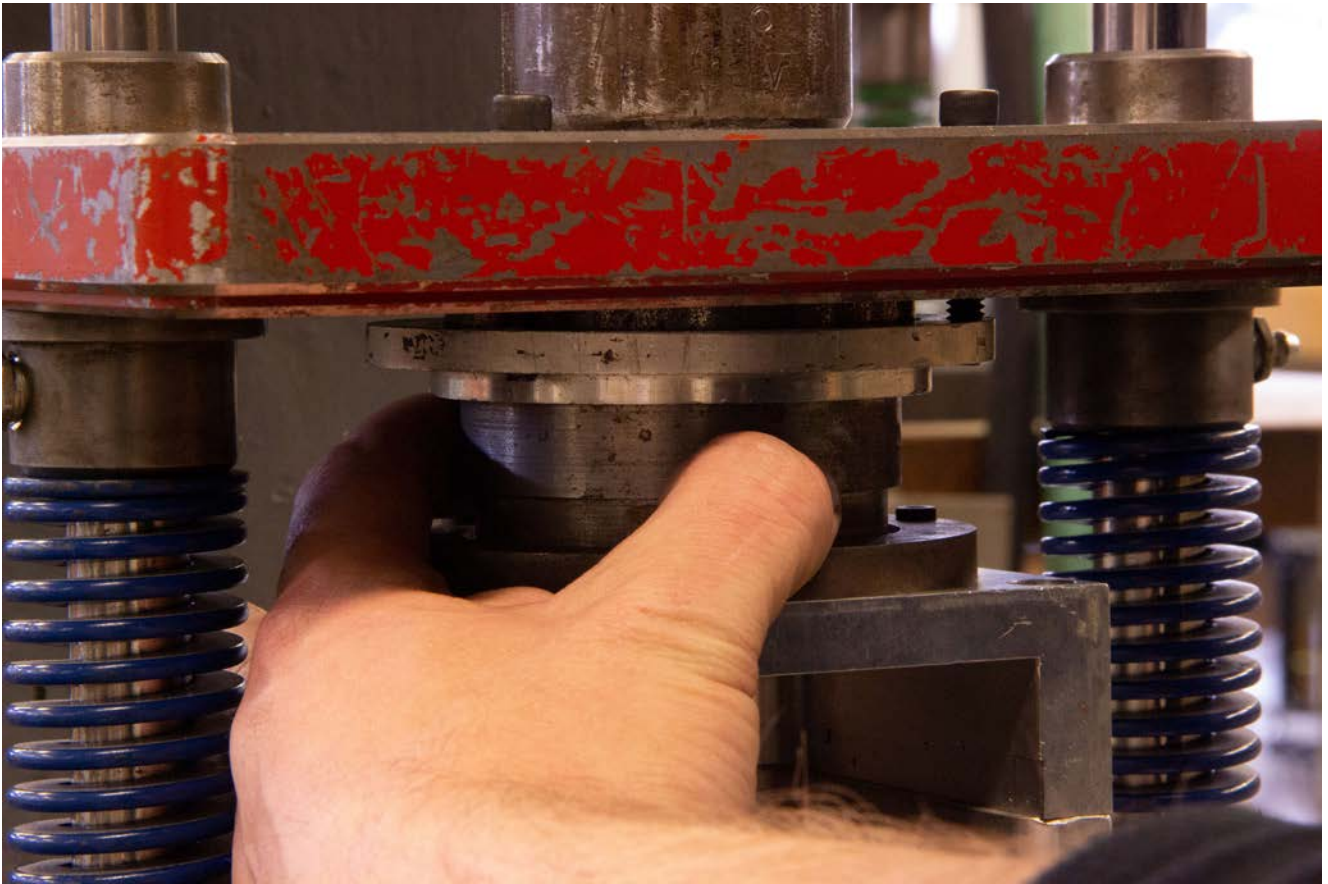


14. Pull the Arbor Press handle down until the punch is beginning to touch the die.





15. While pulling the handle, adjust the punch so that it engages and smoothly mates with the die



16. While the punch is fully mated with the die, continue holding the Arbor Press handle down and use the 3/16" hex wrench to tighten the cap-screws. This will lock the punch in place and ensure a smooth and proper mating for your parts.



PUNCH DIAMETERS: 0.307", 0.499", 0.562", 0.749", 0.971", 0.985", 1.074", 1.192", 1.290", 1.378", 1.500", 1.598", 1.652", 1.710", 1.754", 1.804", 1.875", 1.880", 1.970", 2.002", 2.075", 2.170", 2.219", 2.240", and 2.229"





1. If you are using one of the following punch & die sets: (0.307", 0.499", 0.562", 0.749", 0.971", 0.985", 1.074", 1.192", 1.290", 1.378", 1.500", 1.598", 1.652", 1.710", 1.754", 1.804", 1.875", 1.880", 1.970", 2.002", 2.075", 2.170", 2.219", 2.240", 2.229"), you will need to use punch & die fixture that has the GREEN springs

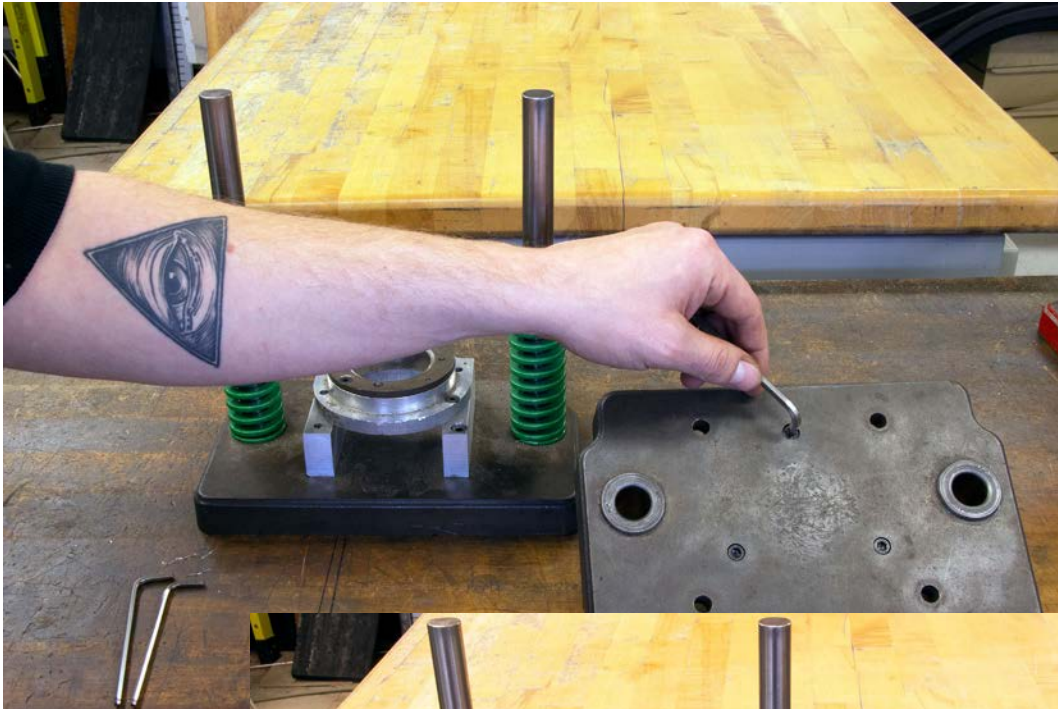


2. Slide the top of the fixture off





3. Using a 3/16" hex wrench, remove the 1/4-20 1 1/4" Socket Head cap screws that hold the punch and the ring fixture together to the top plate. Put the screws to the side





4. Remove the punch from its fixture ring



5. Remove the die from the bottom fixture by using a 1/8" hex wrench. Put the screws to the side



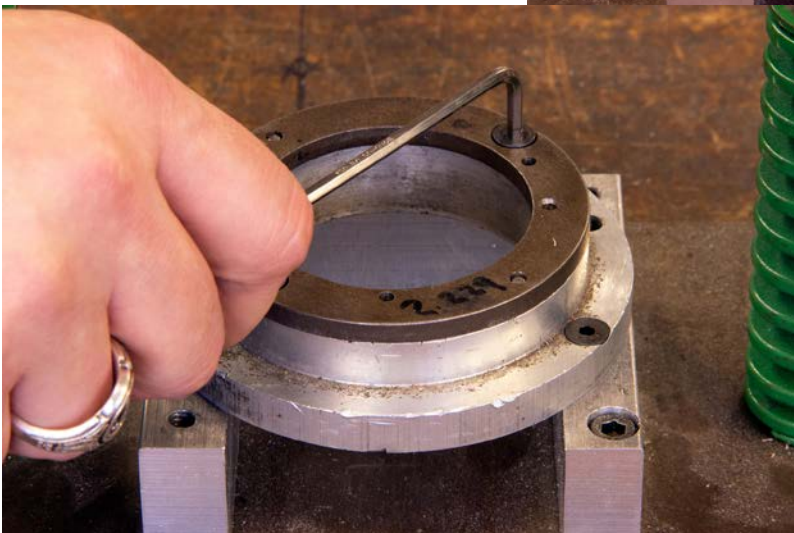
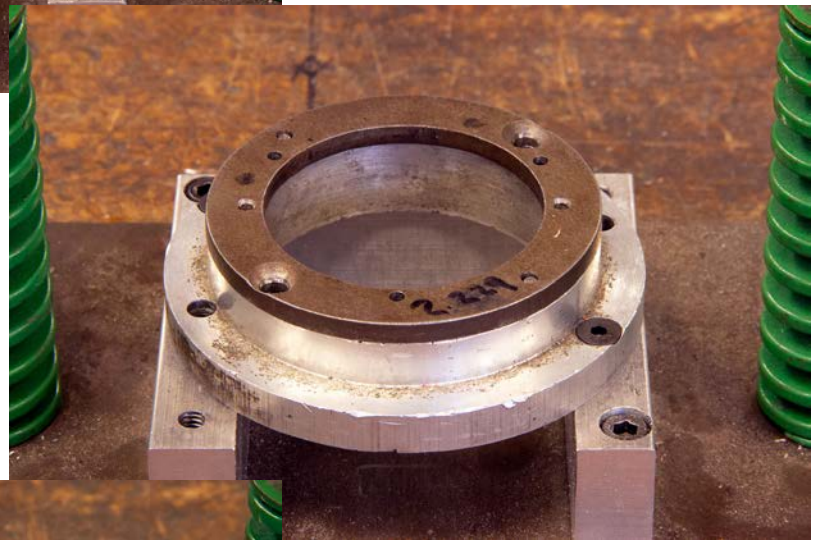


6. Put the punch and corresponding die together so they do not get separated





7. Place the die on the bottom part of the fixture and fasten it using the 10-32 1/2" machine screws and a 1/8" hex wrench. With this fixture, you will see that there are pins to assist with registration of the die

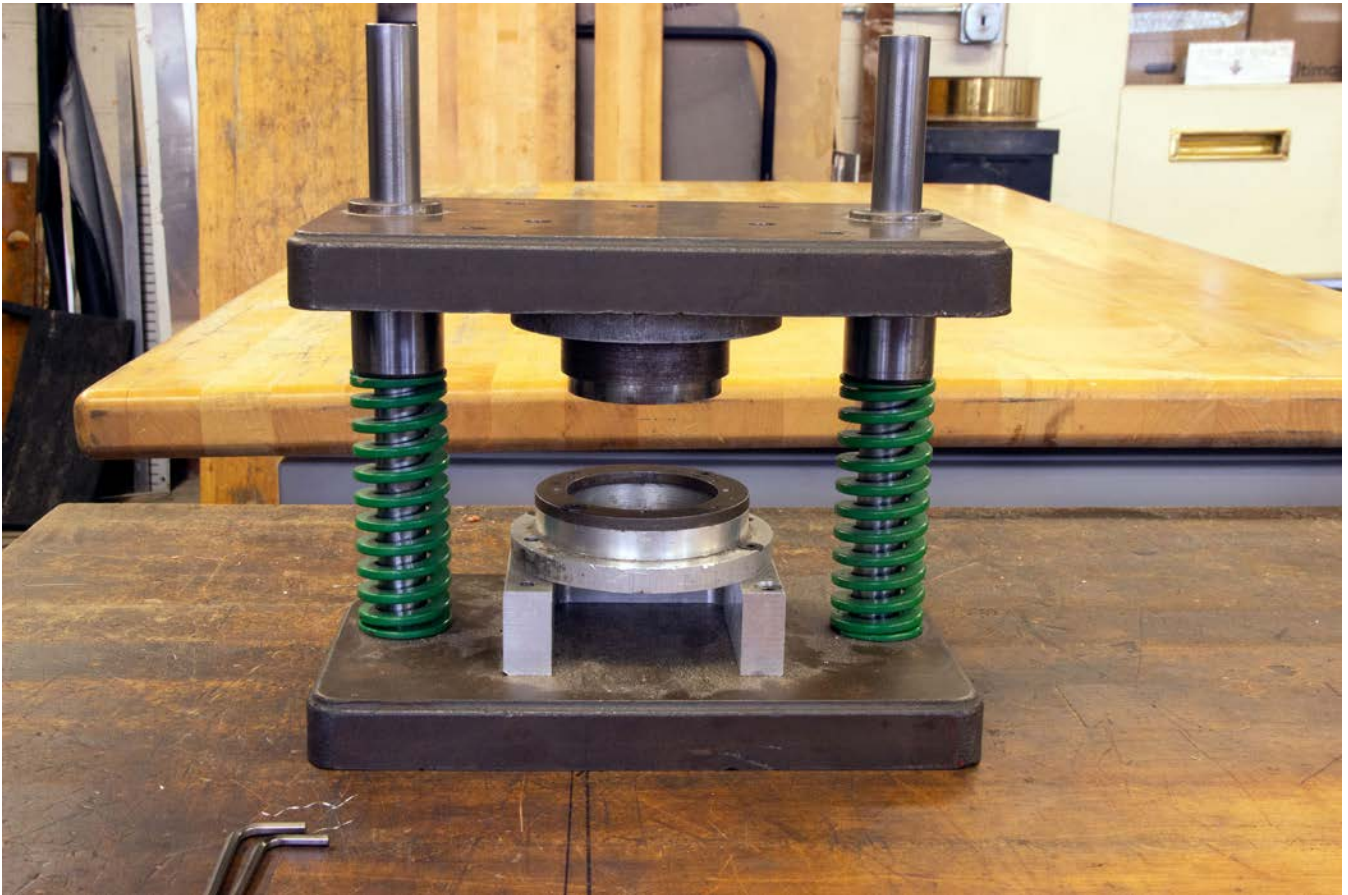


8. Place the punch into the top fixture ring and attach to the top plate using  $\frac{1}{4}$ -20  $1\frac{1}{4}$ " Socket Head cap screws and the  $\frac{3}{16}$ " hex wrench. Important!!! Leave the punch a bit loose!!! You will tighten the cap-screws fully at a later step



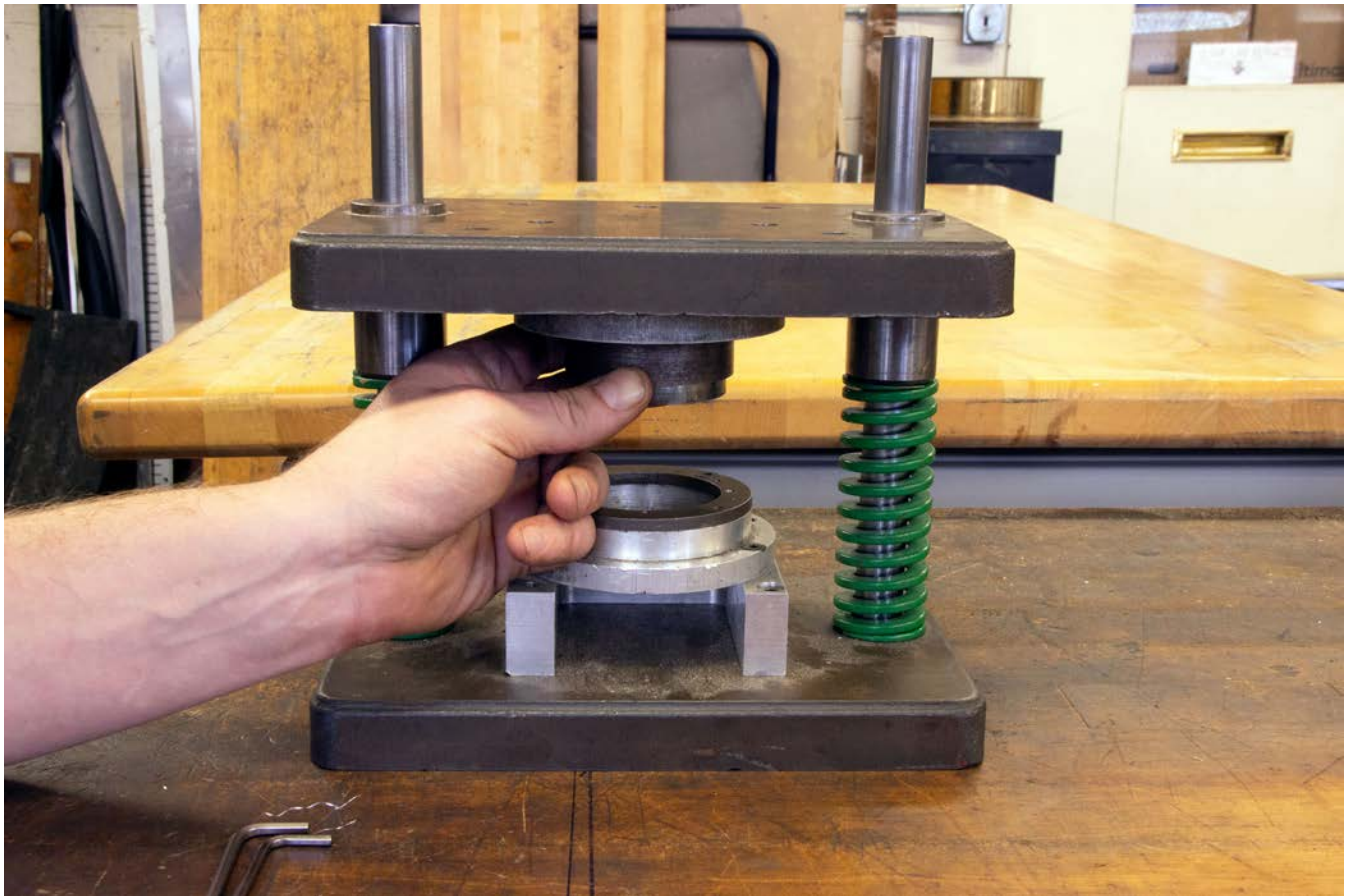


10. Slide the top plate back onto the fixture assembly.





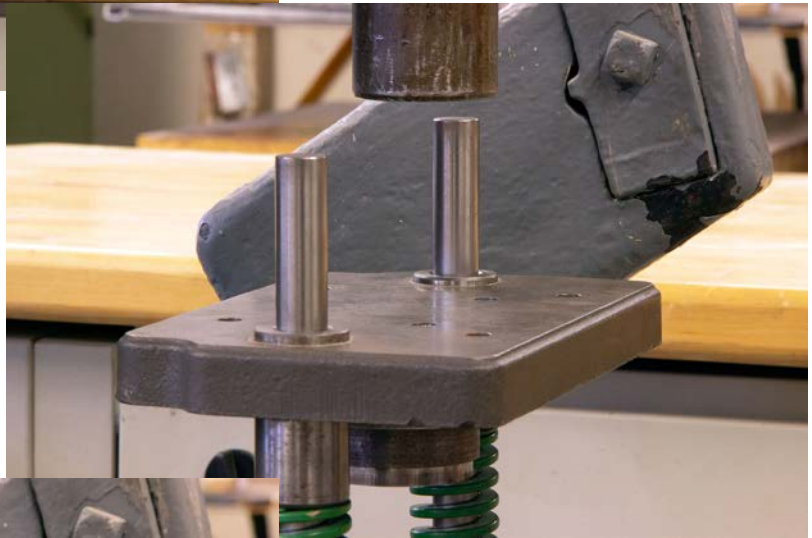
11. Double-check to make sure the punch is loose and has some movement



12. Place the punch fixture onto the Arbor Press and keep the 3/16" hex wrench close by

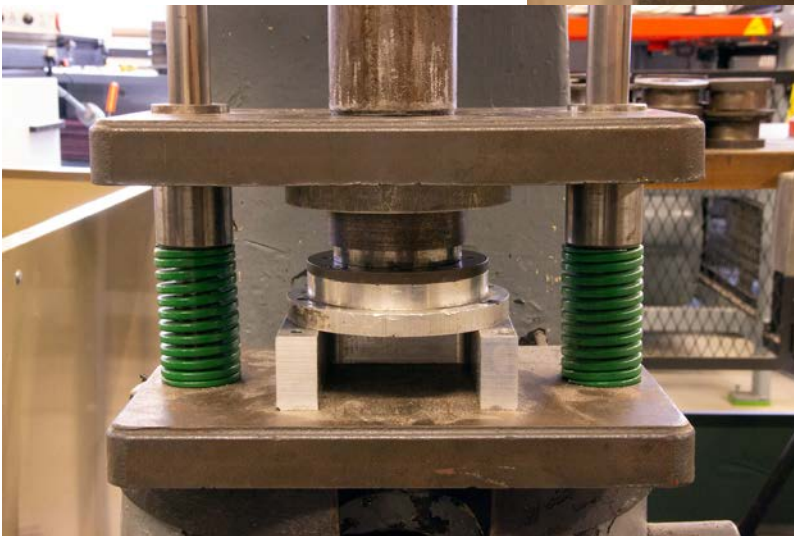
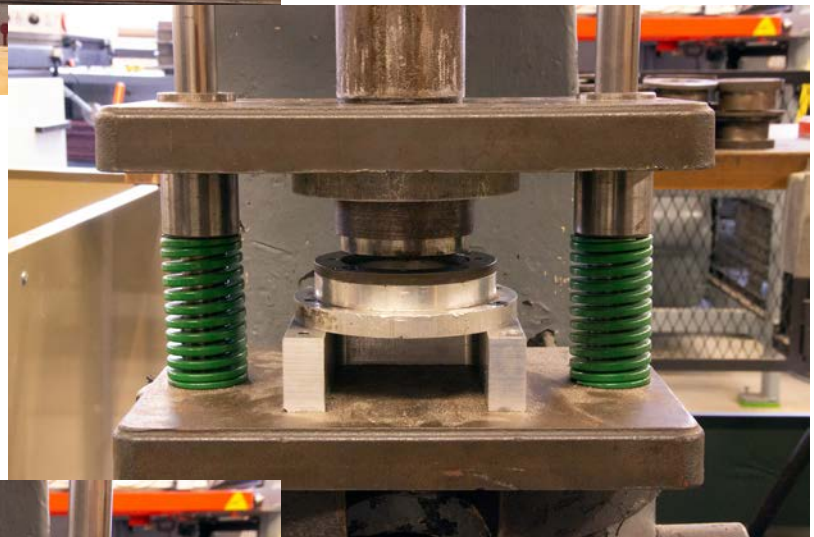
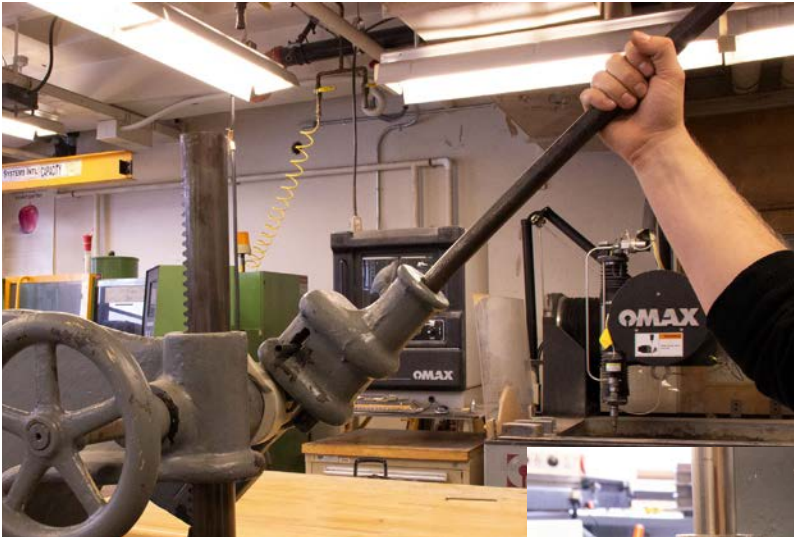


13. Turn the handwheel clockwise until the ram is touching the top of the fixture

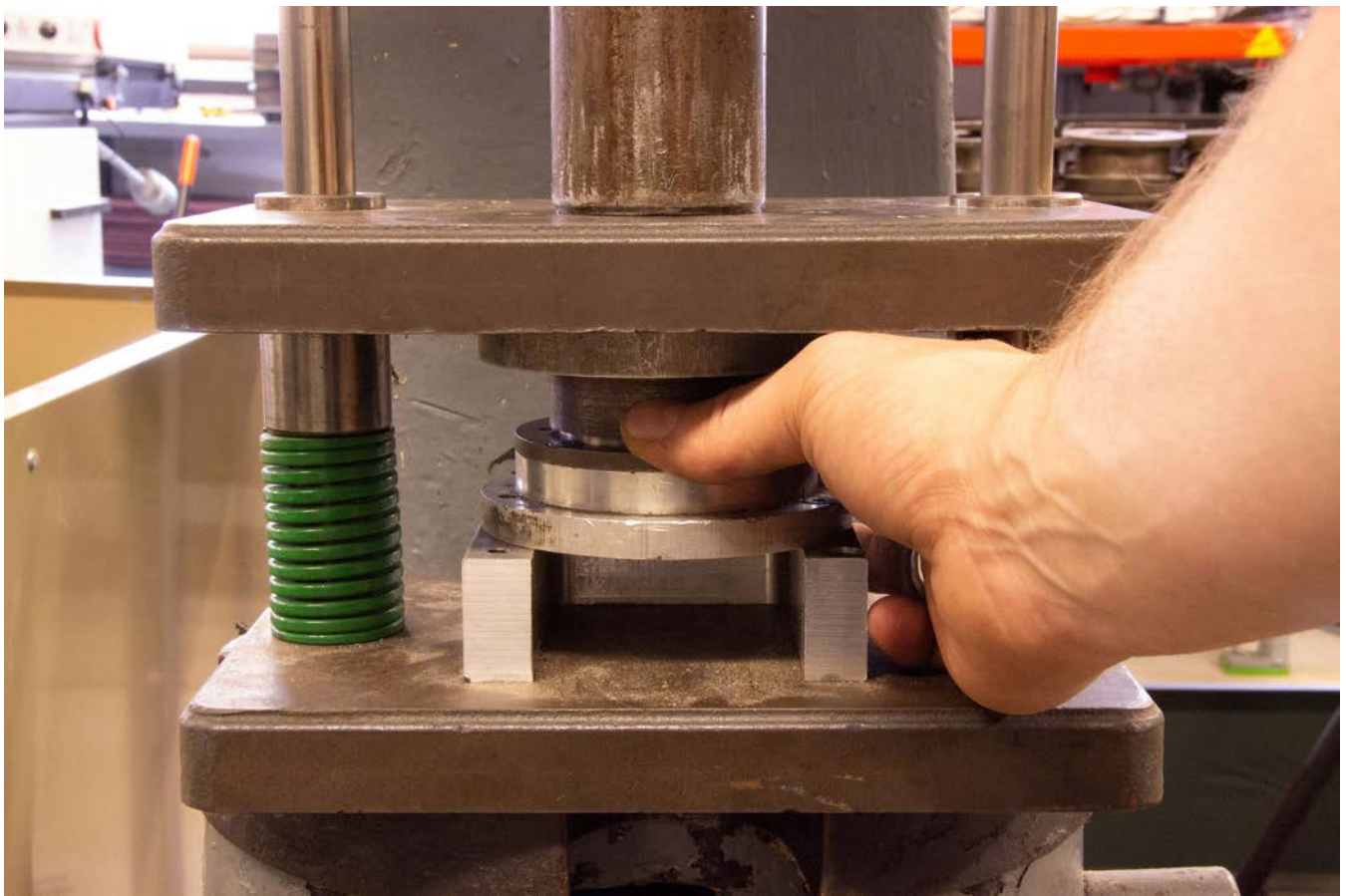




14. Pull the Arbor Press handle down until the punch is beginning to touch the die.



15. While pulling the handle, adjust the punch so that it engages and smoothly mates with the die

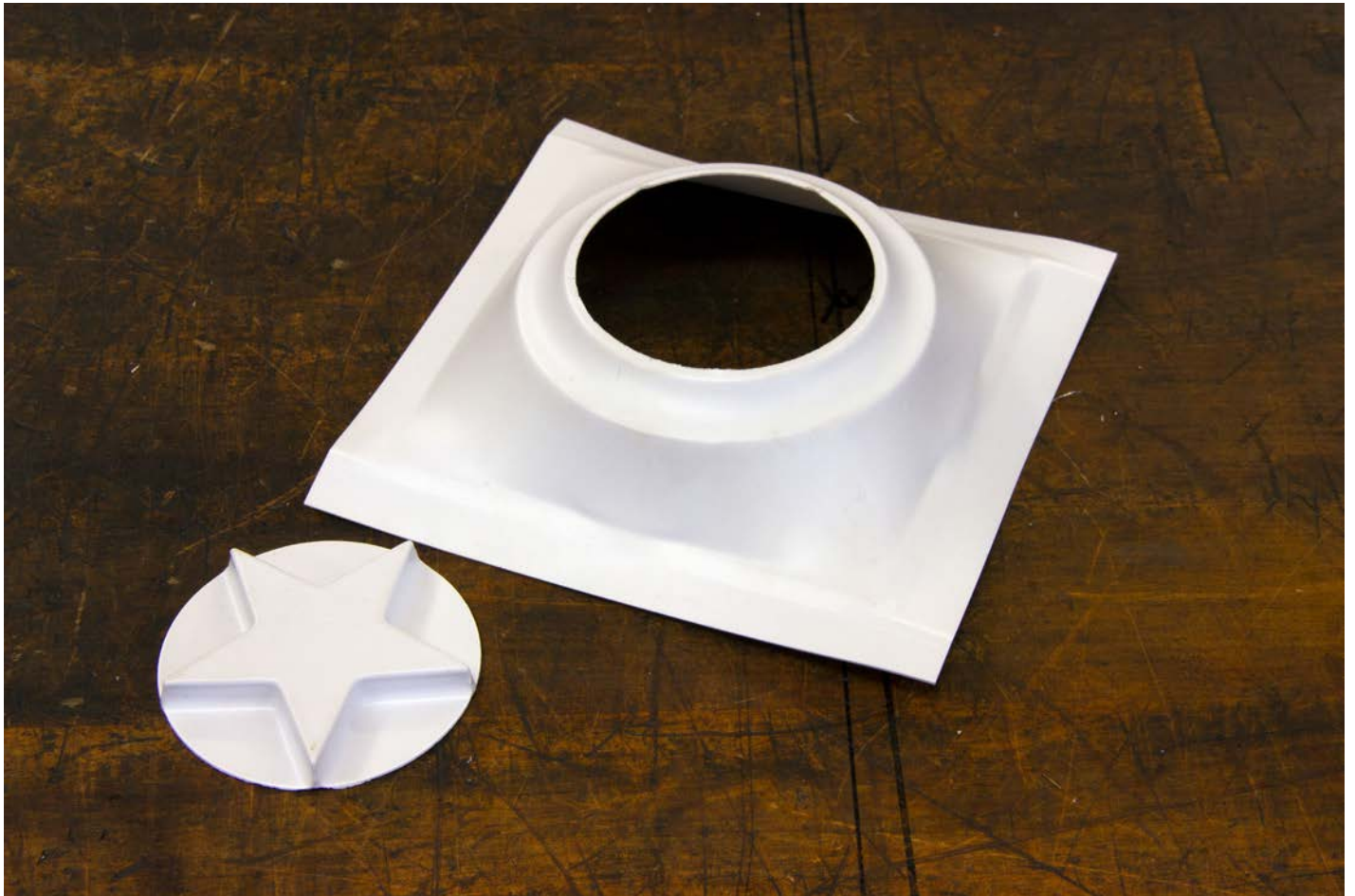




16. While the punch is fully mated with the die, continue holding the Arbor Press handle down and use the 3/16" hex wrench to tighten the cap-screws. This will lock the punch in place and ensure a smooth and proper mating for your parts.



# OPERATION

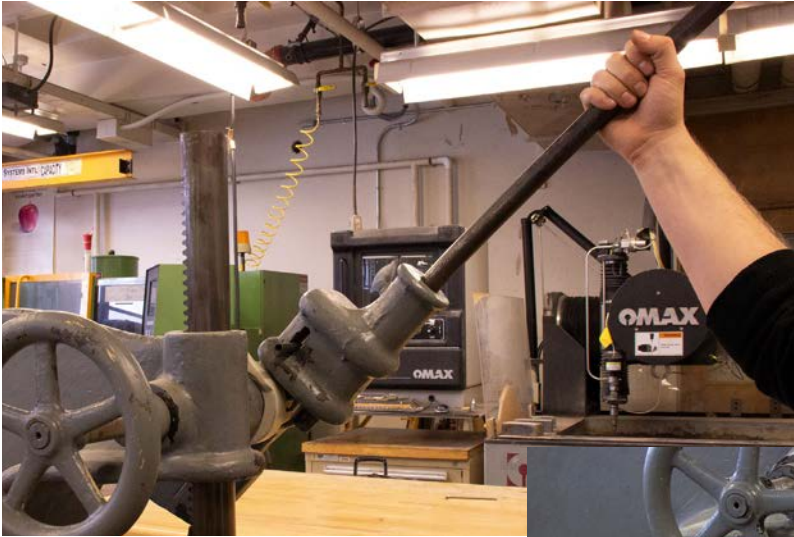




1. Place thermoformed part on the punch so that it lays face down on the die

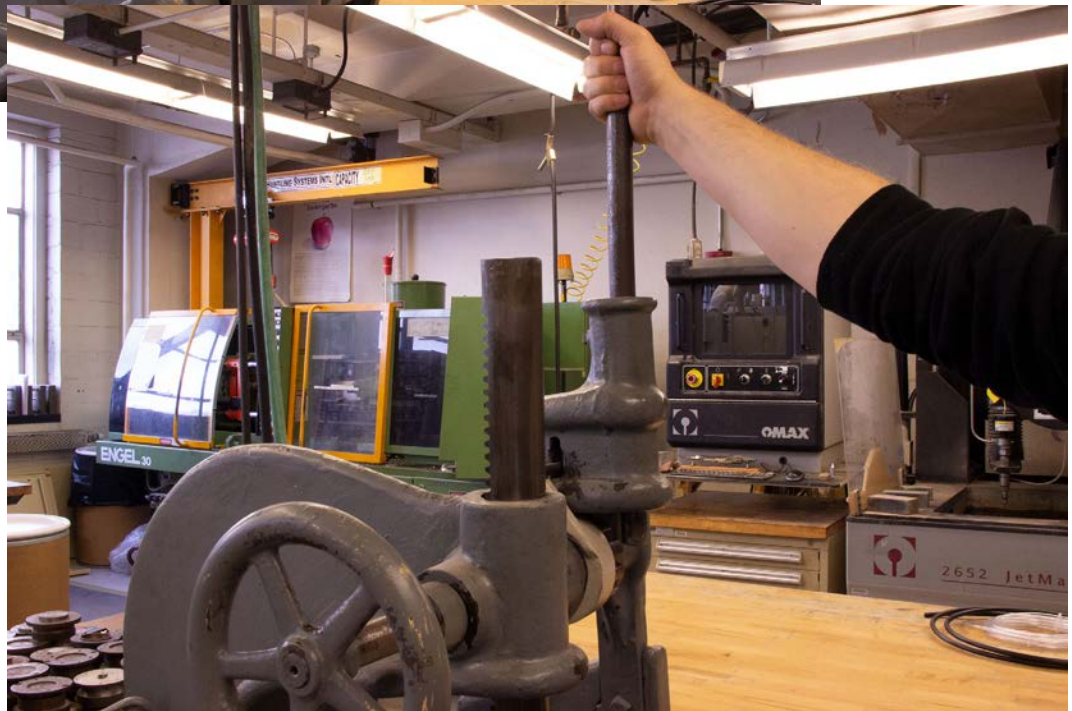


2. Grab the handle and pull down. It may be difficult to fully punch through the material

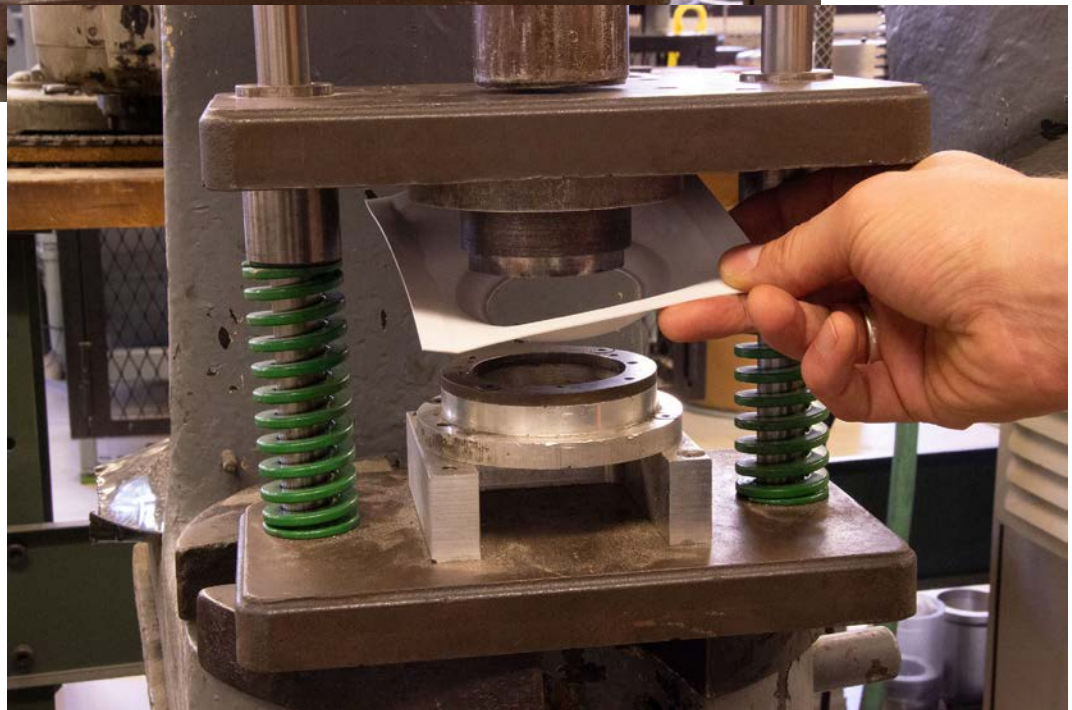
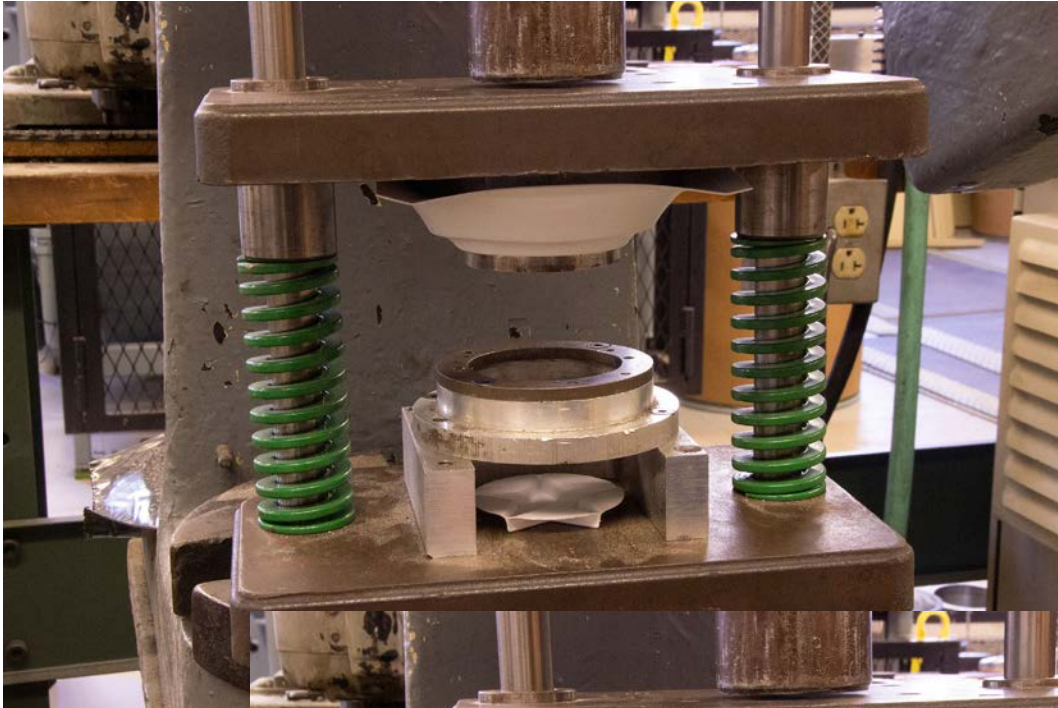




3. After the part has been cut, do NOT let the lever handle fly back! This is dangerous and could hurt you! Keep control of the handle until it is back in its resting position



4. Remove your finished part. (Sometimes the excess plastic gets stuck to the punch. Just pull it off and recycle it)





5. When you are finished cutting all your thermoformer pieces, push the handle of the Arbor Press all the way up until it rests in the notch. This will disengage it from the ram.

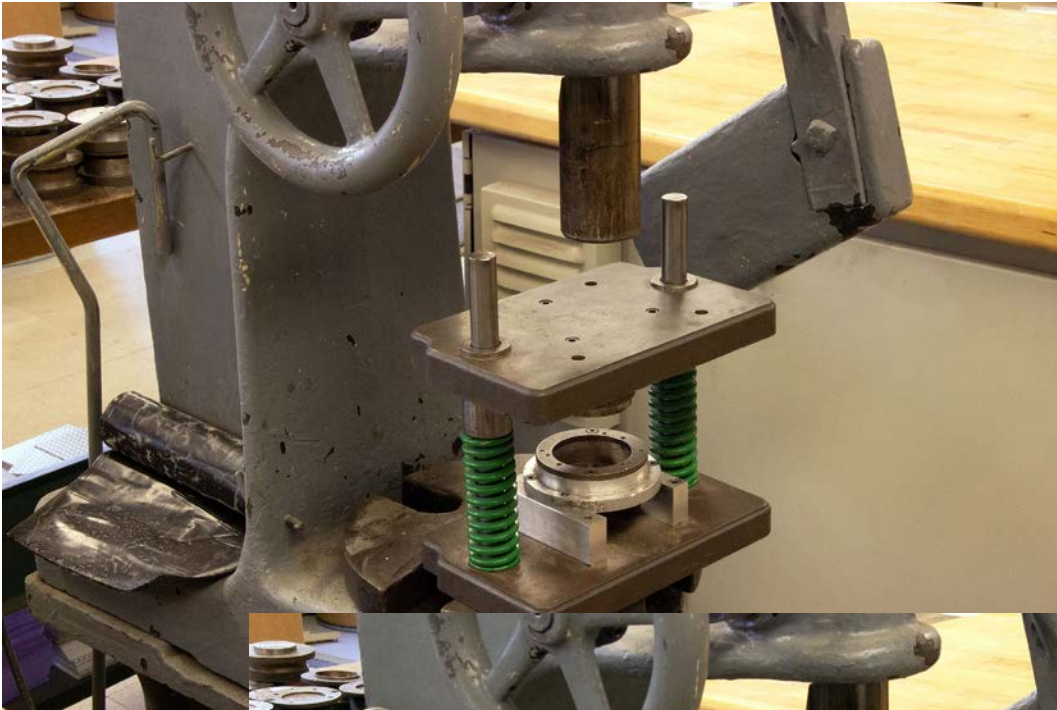


6. If needed, turn the hand-wheel counter clockwise to manually raise the ram and allow removal of the punch and die fixture.





7. Remove the fixture from the Arbor Press by holding it from the bottom and place it on the table with the other punch & die sets. The fixture is a bit heavy, so ask for help if you need



8. Clean up the area for the next user and recycle all plastic waste.

