

ENGEL EC88 INJECTION MOLDING QUICK START GUIDE

Basic Operation

VERSION 2.0

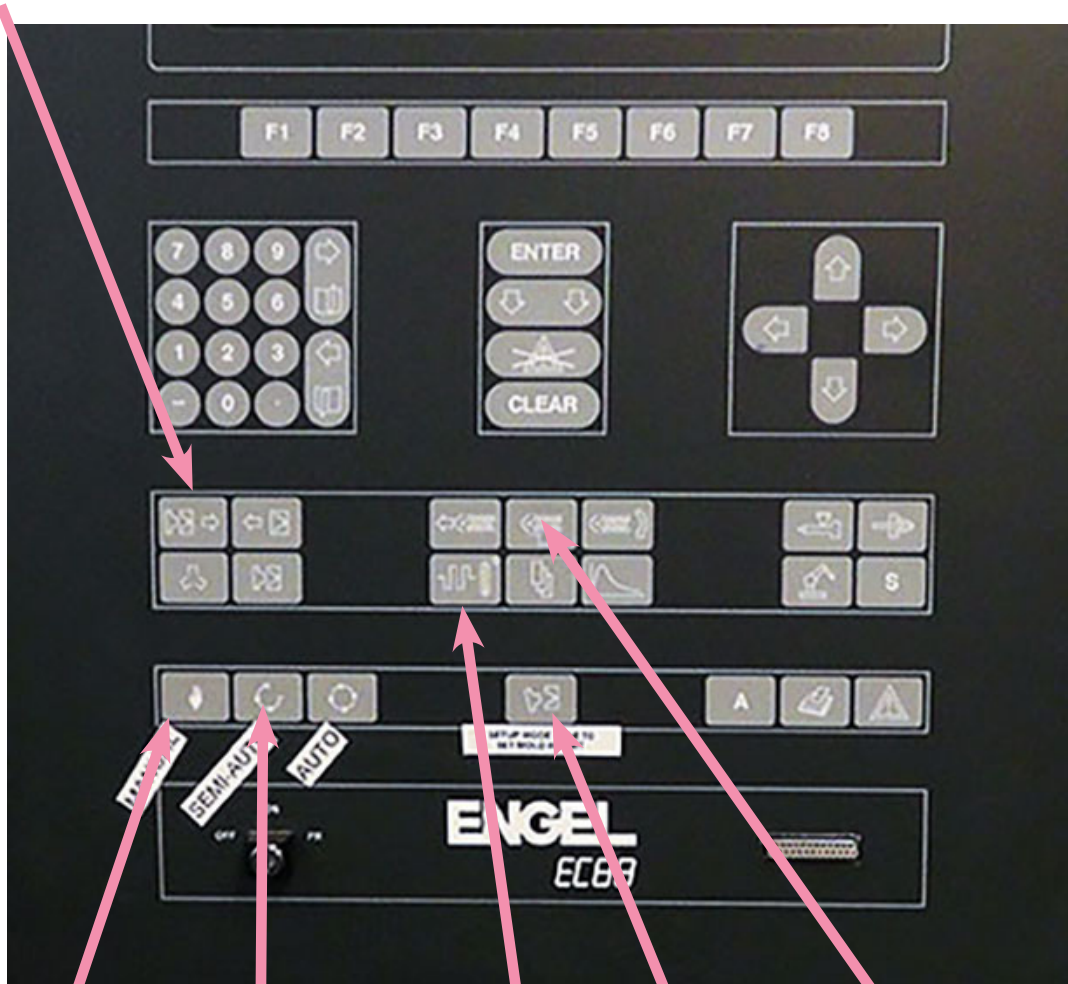
5/1/2019

MAIN GUIDE



Pendant Controller Buttons

MOLD
CLOSING
SCREEN



MANUAL
MODE

SEMI- AUTO
MODE

BARREL HEAT
& OIL TEMP
SCREEN

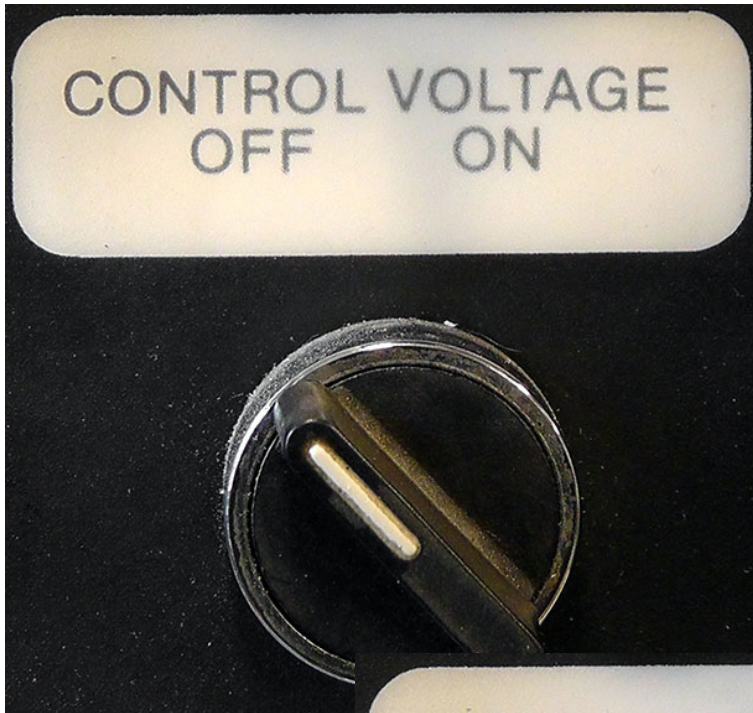
SETUP
MODE

INJECTION
HOLD
(PARAMETERS)
SCREEN

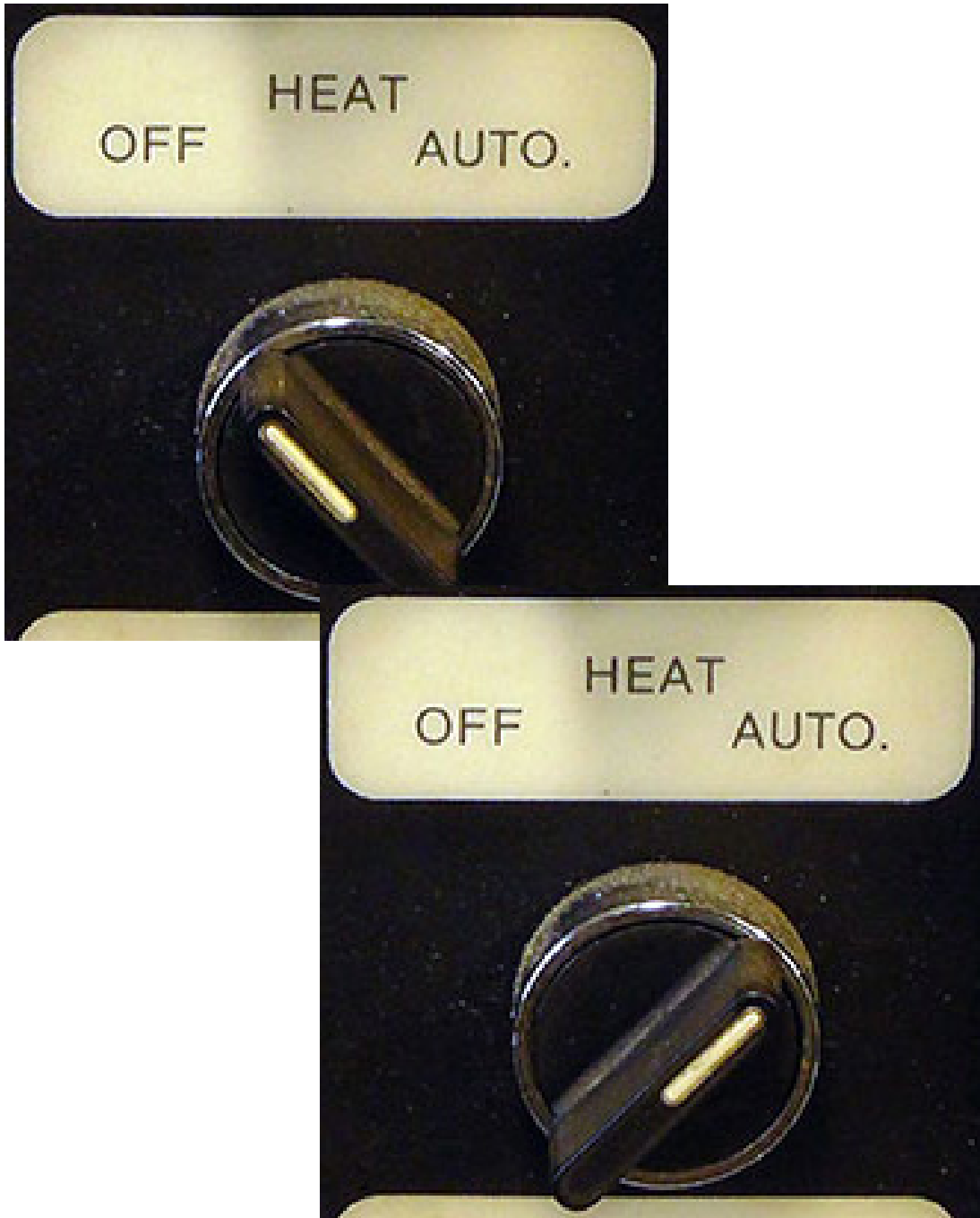
1. Main power ON



2. Control Voltage ON



3. Turn HEAT Switch to AUTO



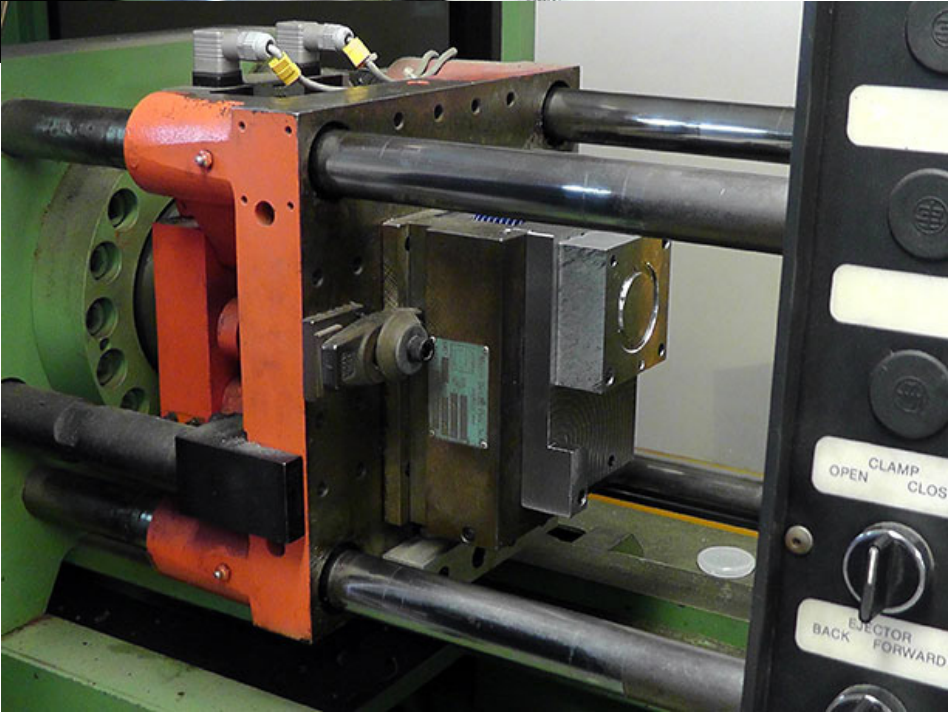
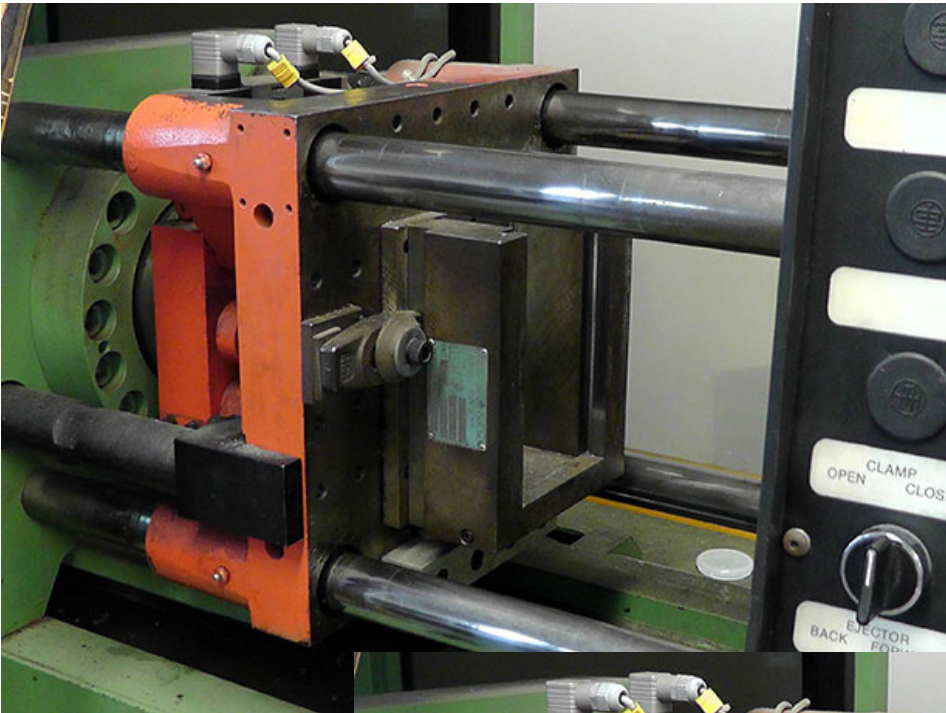
4. Turn MODE SELECT Switch to MANUAL. You may need to switch from MANUAL to AUTOMATIC and back to MANUAL. Also, be sure to close the RIGHT door.



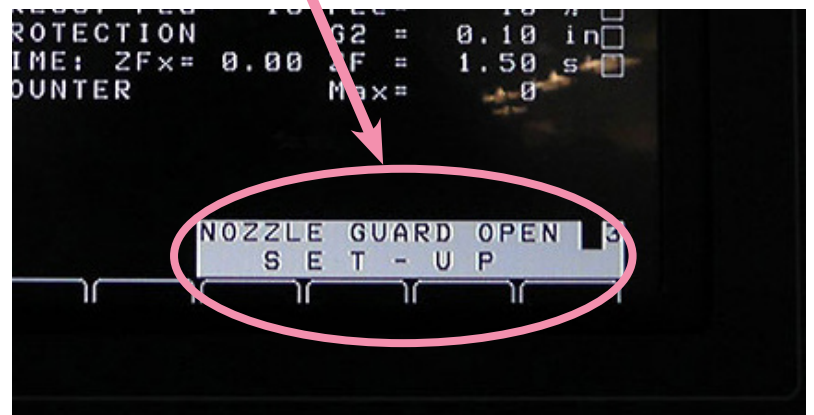
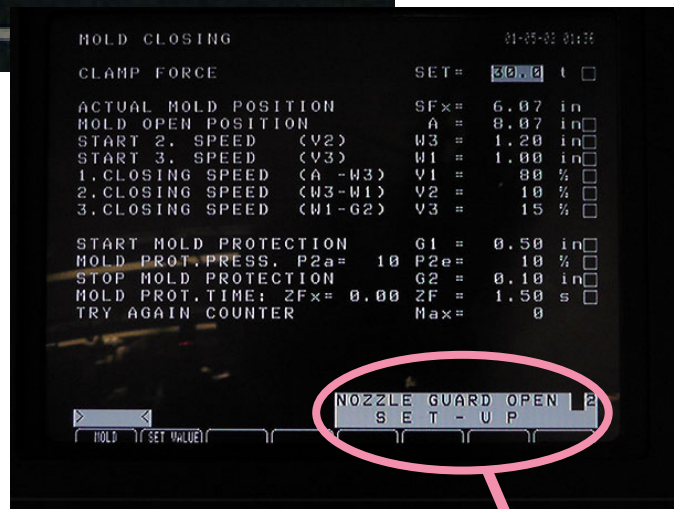
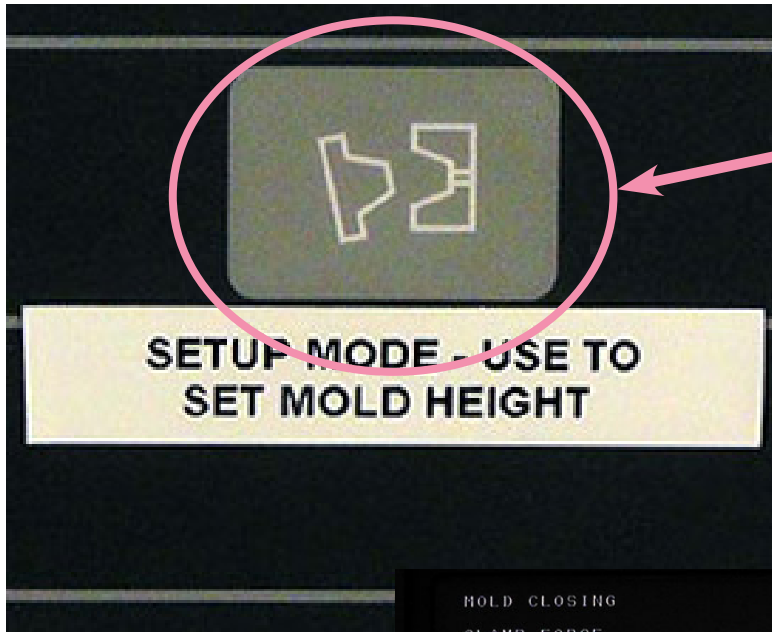
5. Close the safety gates and press MOTOR START button



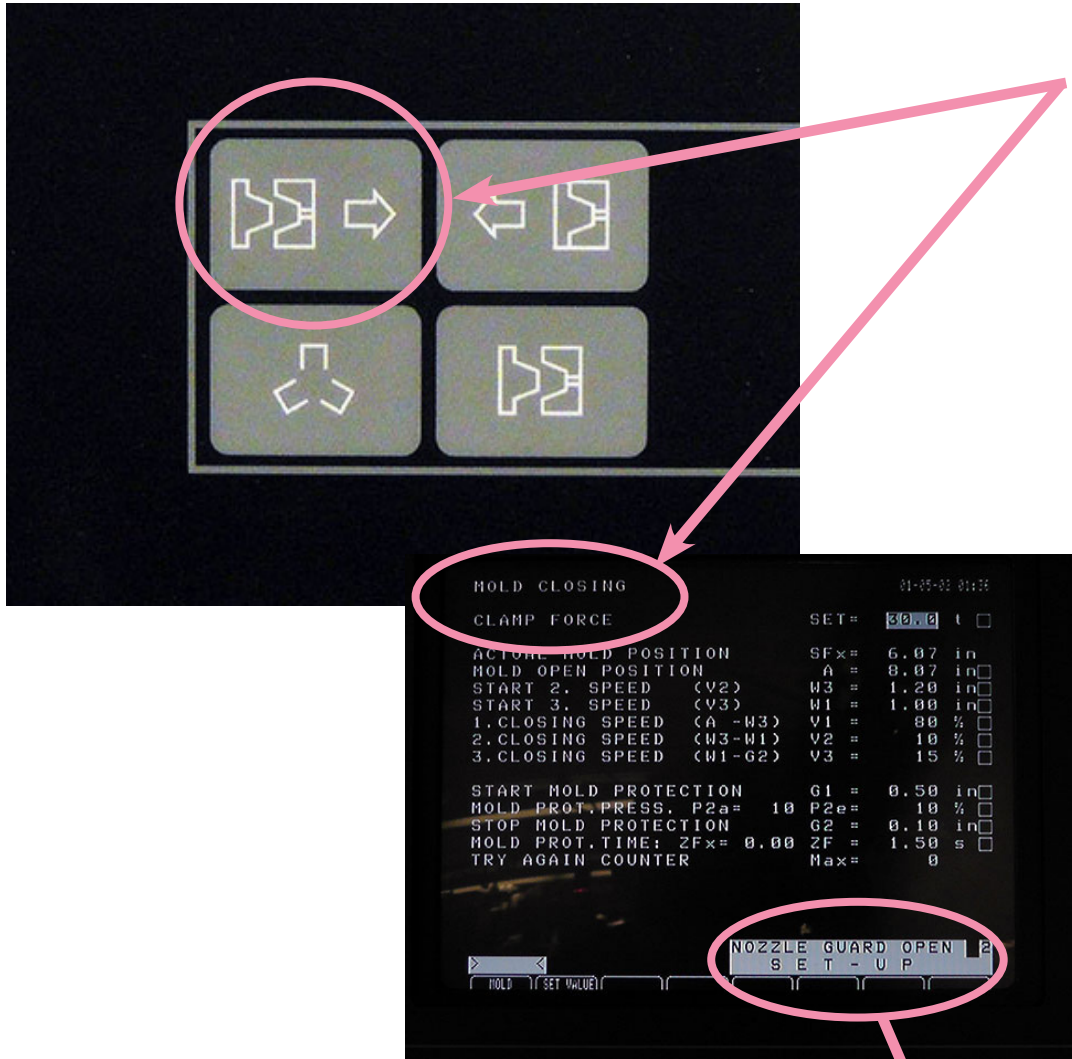
6. Load Molds into MUD Frames



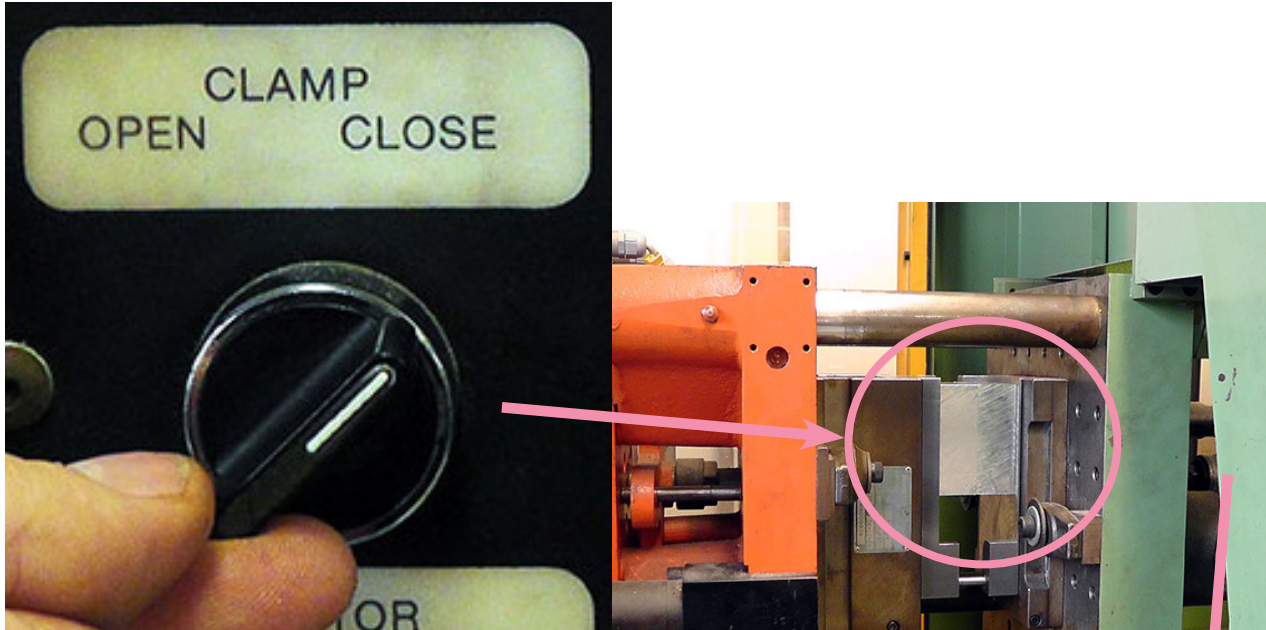
7. Press SETUP MODE Button on Controller Pendant. Make sure it says it says "setup mode" on the screen!



8. Press MOLD CLOSE Button on Controller Pendant. Again, make sure the screen says SETUP MODE!!! If it isnt in SETUP MODE, the mold will close very quickly and could crash.



9. Turn CLOSE CLAMP Switch to CLOSE until the mold fully closes and hold for 10 seconds. This will zero the mold position and properly set the mold height

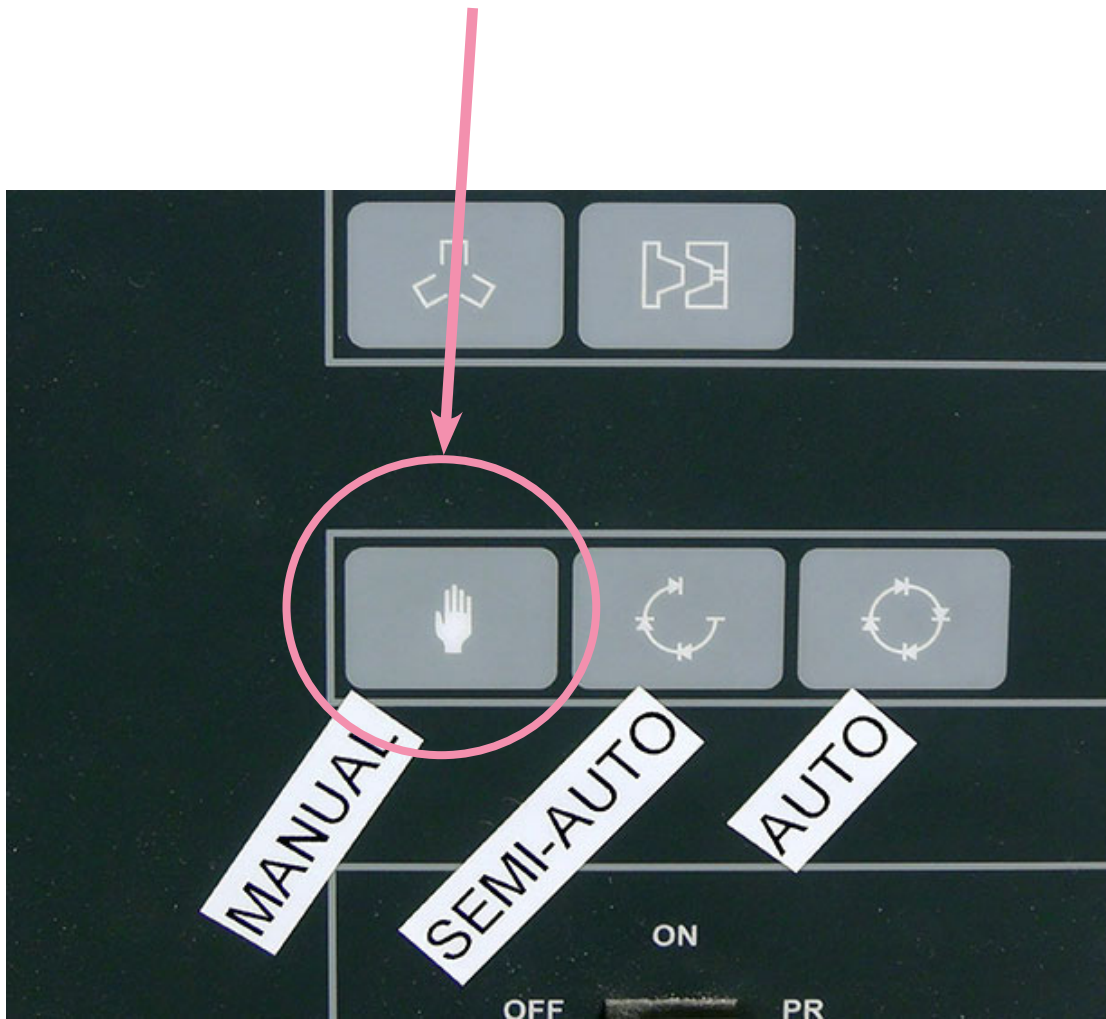


```
MOLD CLOSING 01-05-02 01:37
CLAMP FORCE SET= 30.0 t 
ACTUAL MOLD POSITION SFx= 6.87 in
MOLD OPEN POSITION A = 8.87 in 
START 2. SPEED (V2) W3 = 1.28 in 
START 3. SPEED (V3) W1 = 1.88 in 
```

```
MOLD CLOSING 01-05-02 01:37
CLAMP FORCE SET= 30.0 t 
ACTUAL MOLD POSITION SFx= 8.89 in
MOLD OPEN POSITION A = 8.87 in 
START 2. SPEED (V2) W3 = 1.28 in 
START 3. SPEED (V3) W1 = 1.88 in 
```

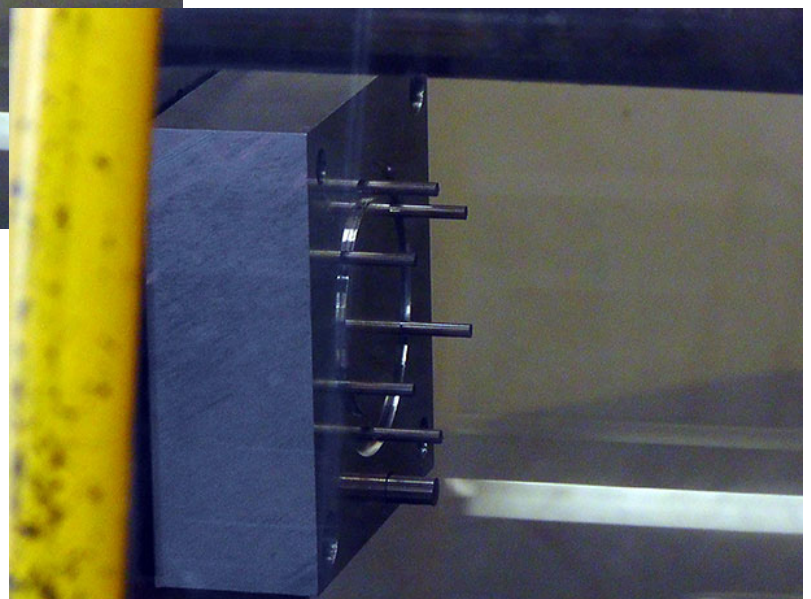
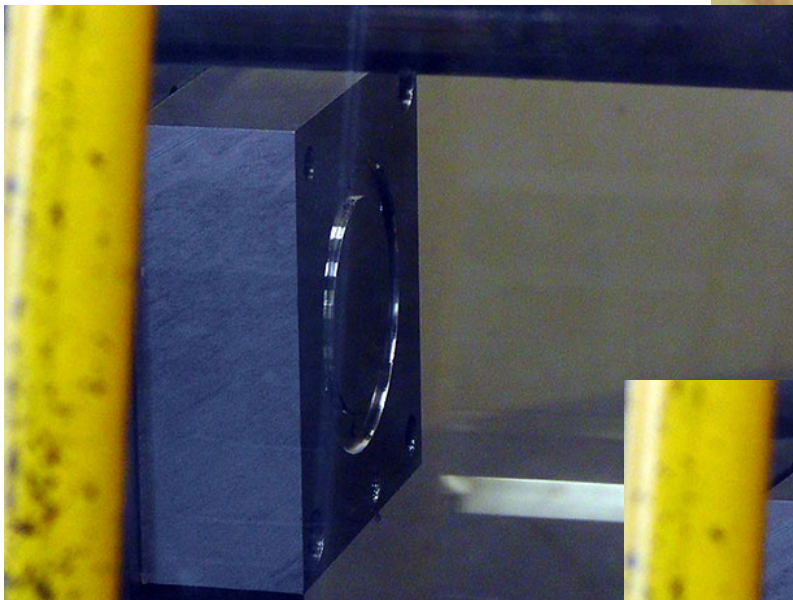
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MOLD CLOSING 01-05-02 01:37
CLAMP FORCE SET= 30.0 t 
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START 2. SPEED (V2) W3 = 1.28 in 
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```

10. Press the MANUAL button on the Controller Pendant



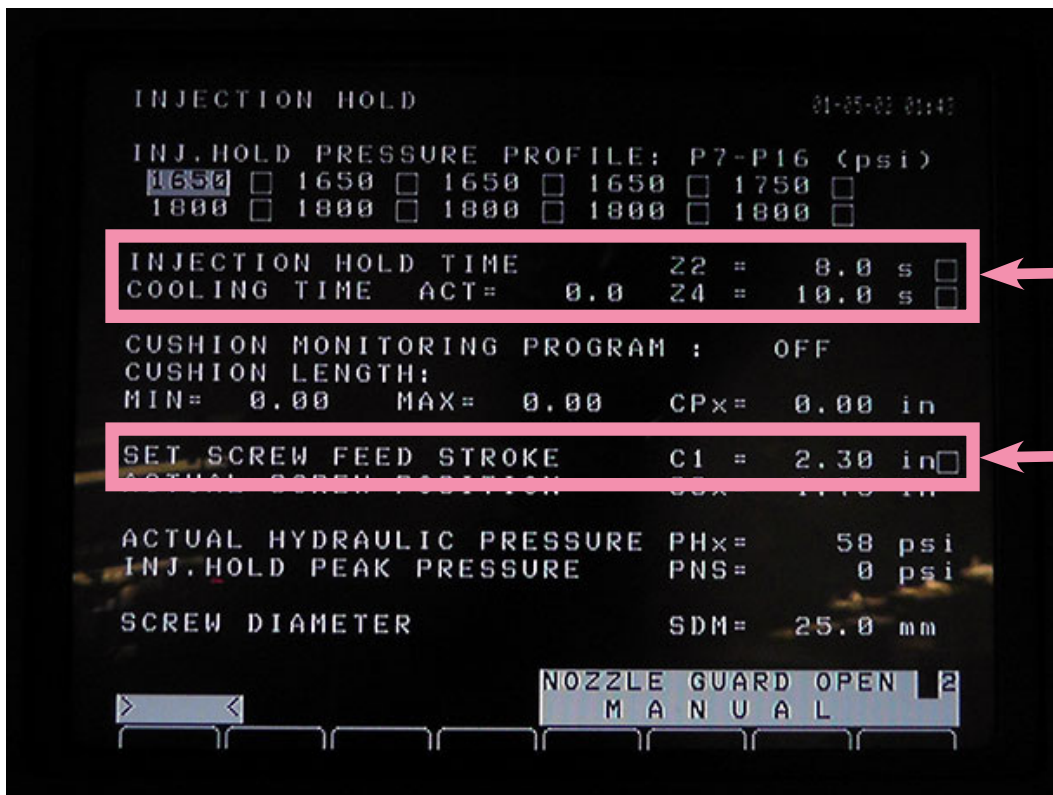
11. Check your ejector pins by turning the EJECTOR Switch to the FORWARD position. Don't forget your sprue ejector pin!!!

NOTE: You cannot do this if the mold is not fully open!

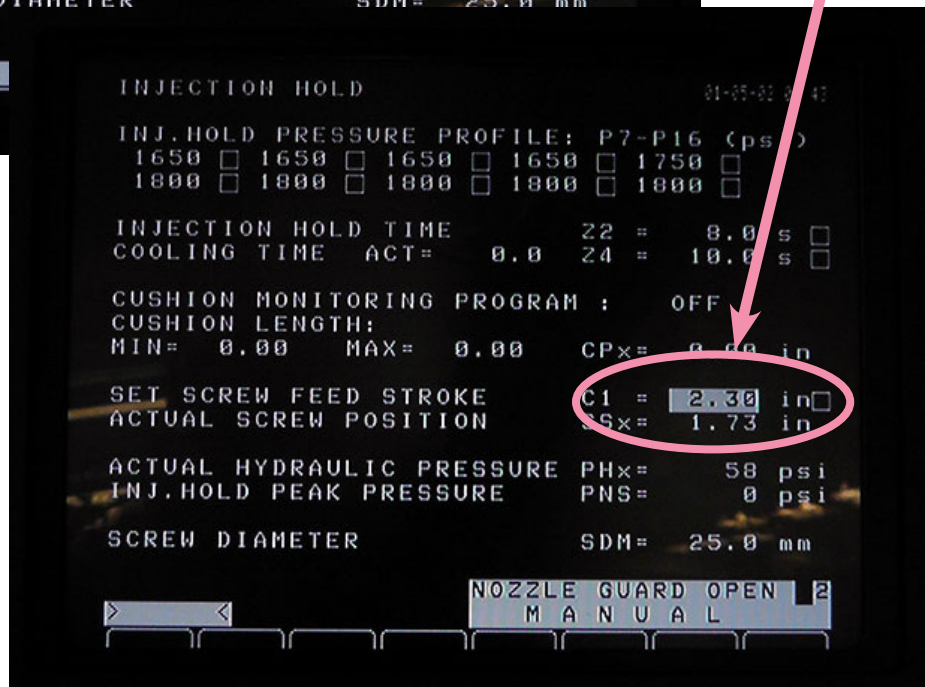
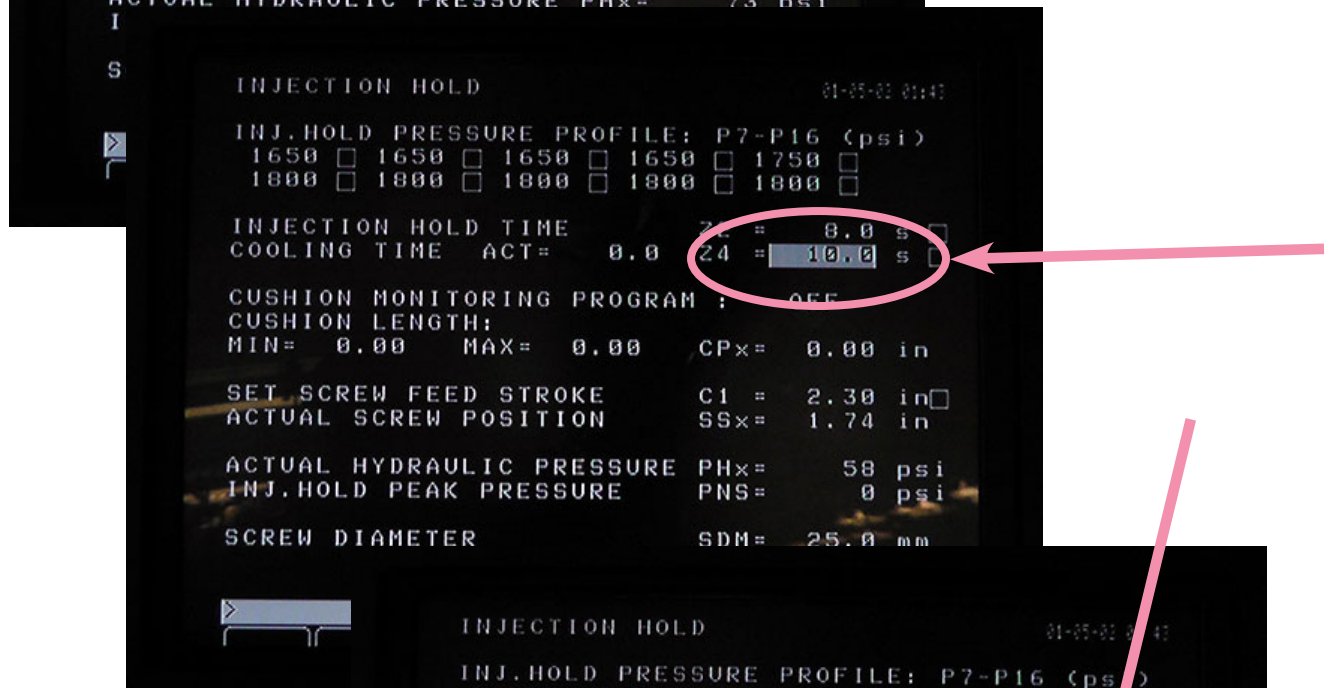
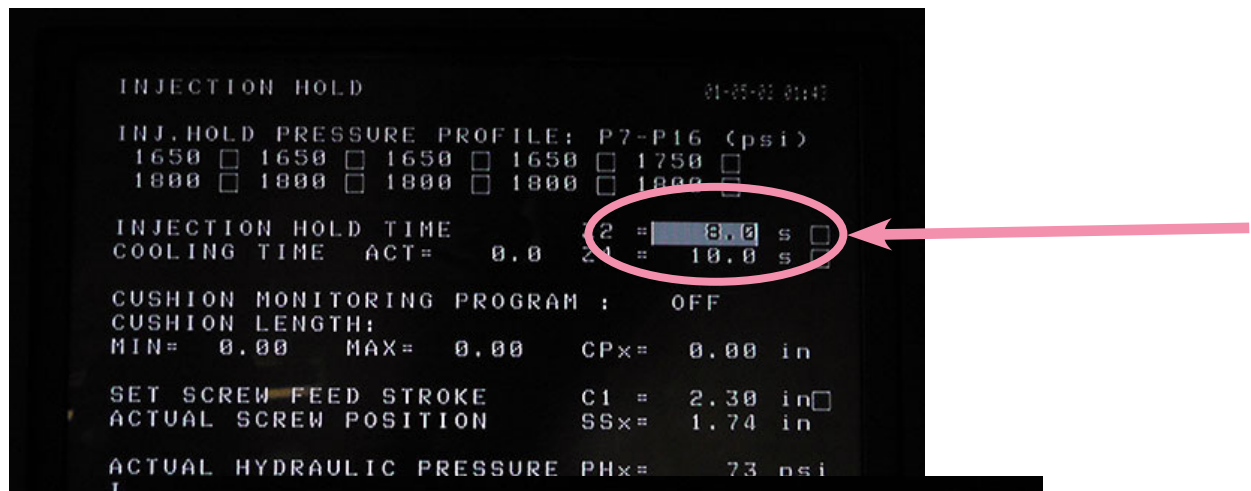


12. Press the INJECTION HOLD SCREEN Button on the Controller Pendant to adjust:

- a. Injection Hold Time (pack time)
- b. Cooling Time
- c. Set Screw Feed Stroke (shot size)

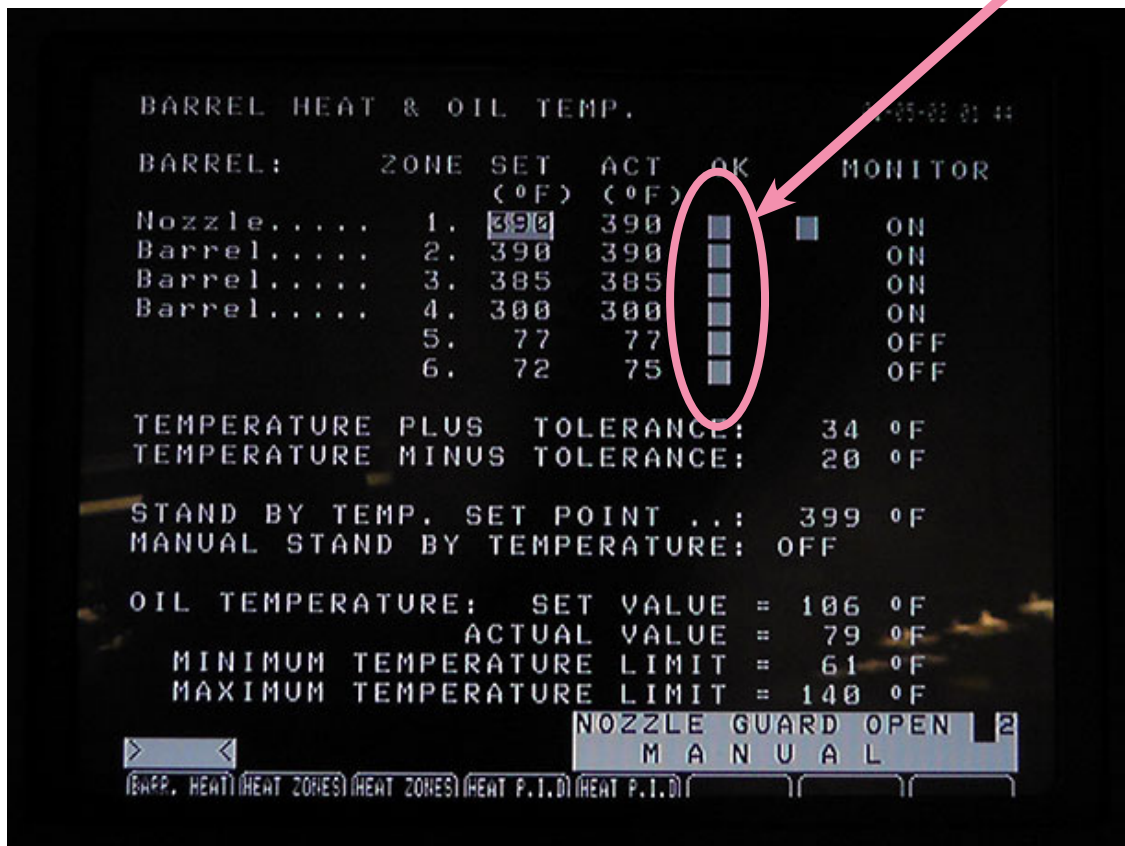


13. While still in INJECTION HOLD SCREEN, Set your parameters. This may take a few tries to get the right settings



14. Allow the machine to reach operating temperature. You can monitor the temperature by pressing the Barrel Heat & Oil Temp button on the controller pendant.

If the zones are at operating temperature, the square next to them will be filled. If not, the square will be empty



15. When the machine reaches operating temperature, retract the nozzle using the NOZZLE switch.



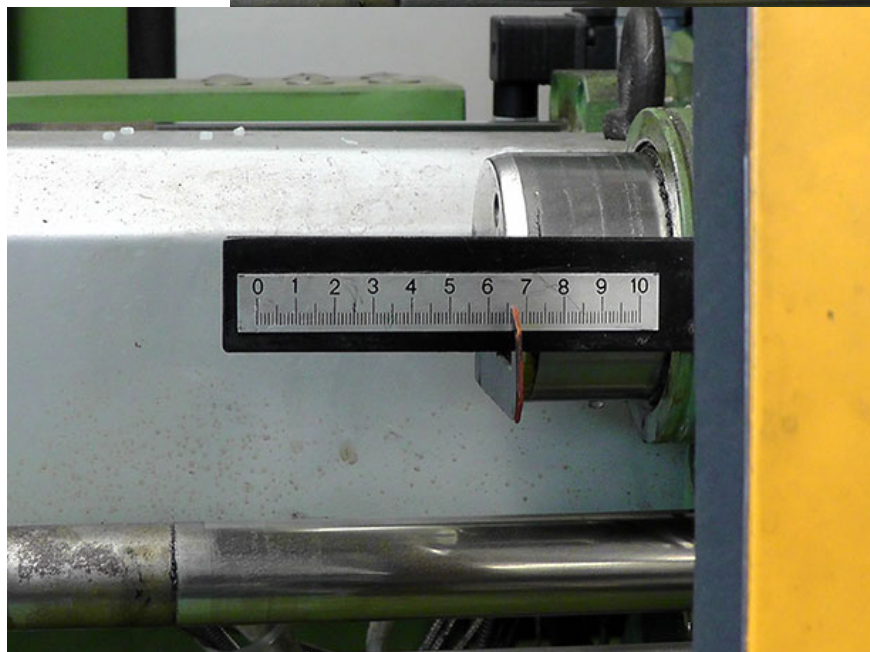
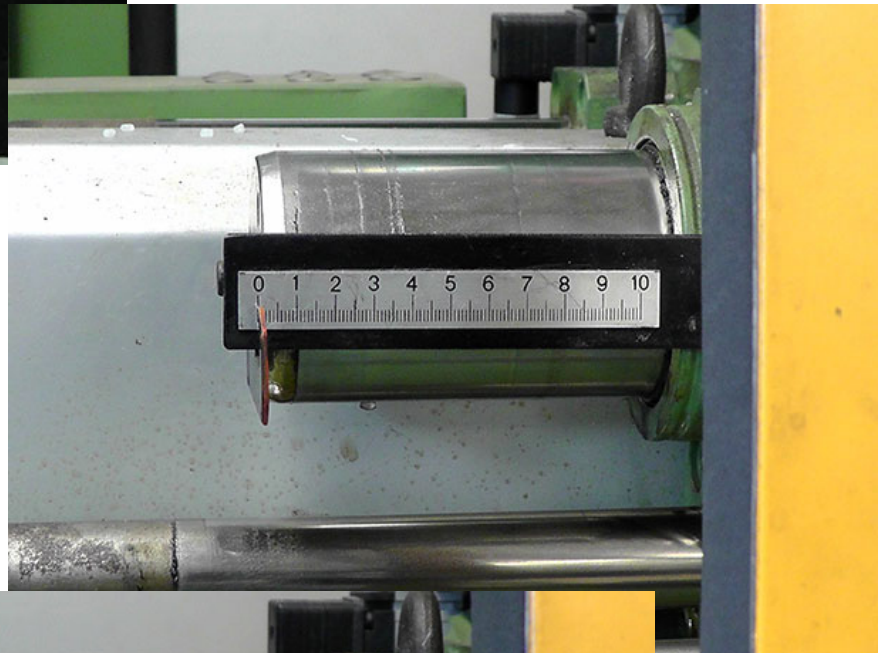
16. Place the block on the bushing



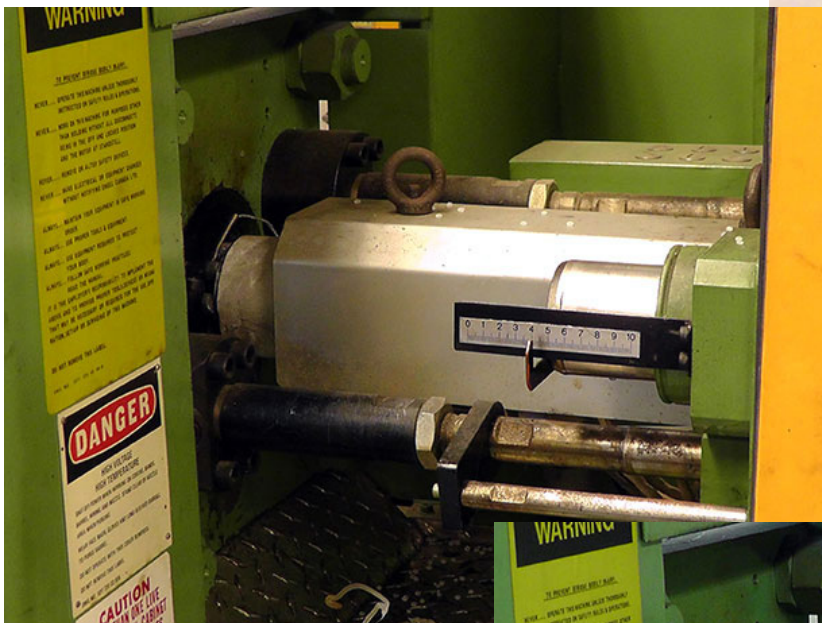
17. Shut the right safety gate and move the NOZZLE Forward by turning the NOZZLE Switch to the FORWARD position until it presses against the block



18. Turn the INJECTION FEED Switch to the FEED position until you have a full Set Screw Feed Stroke (shot size)



19. Shut the right safety gate and move the NOZZLE back by turning the NOZZLE Switch to the BACK position until it presses against the block



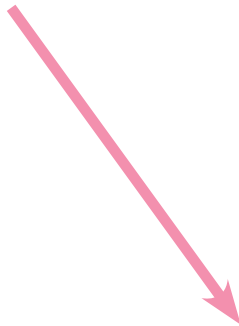
20. Remove the Block



21. Shut the right safety gate and turn the NOZZLE Switch to the FORWARD position until the NOZZLE is back in the operating position



22. Turn the MODE SELECT Switch to AUTO



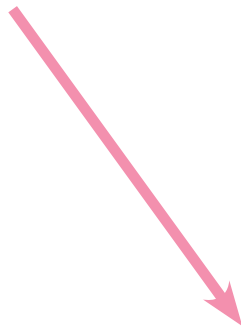
23. Press the SEMI-AUTO button on the Controller Pendant



24. To begin Run, close (or, open and then re-close), the left door



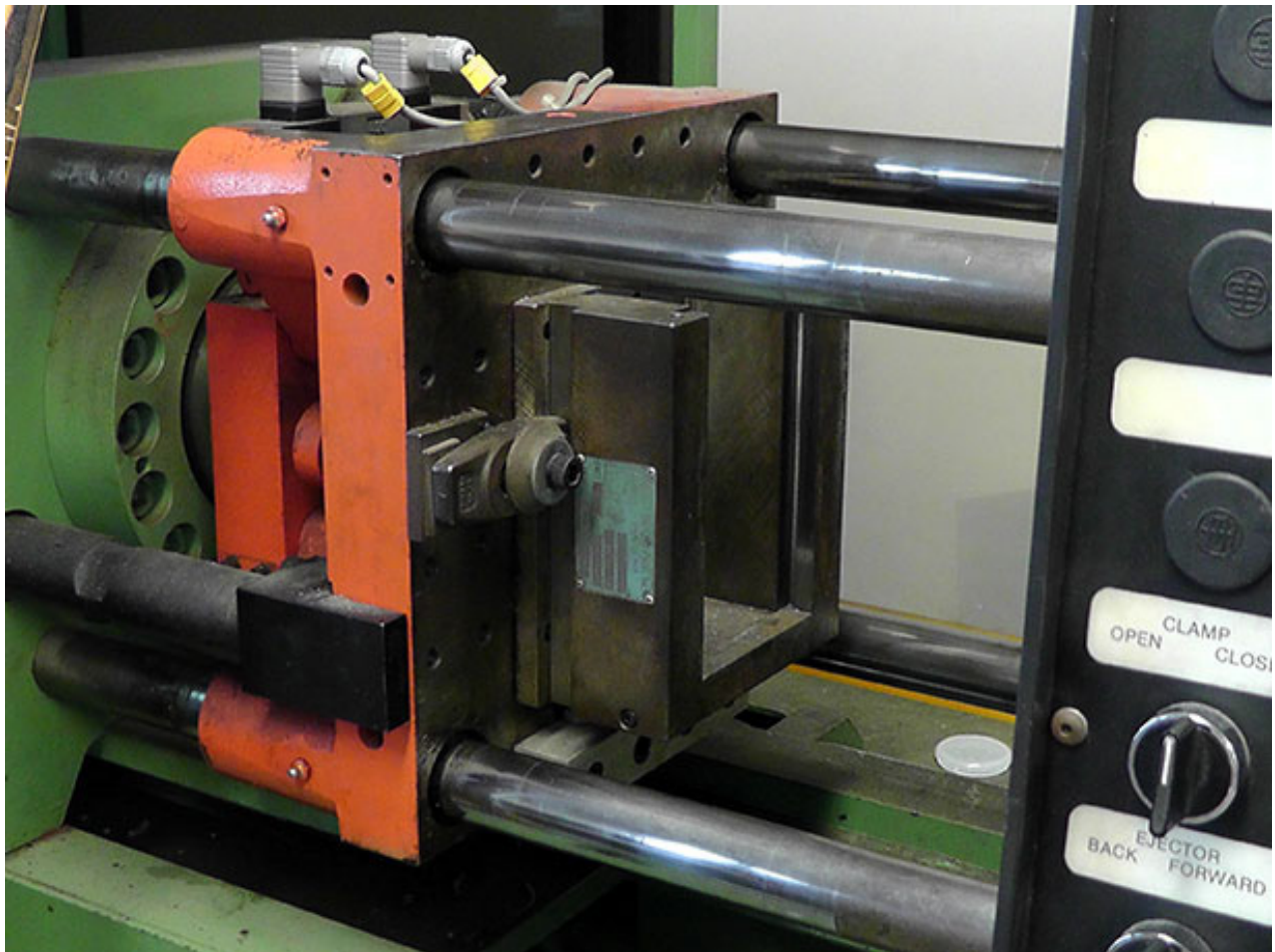
25. After run is finished, turn MODE SELECT Switch to MANUAL



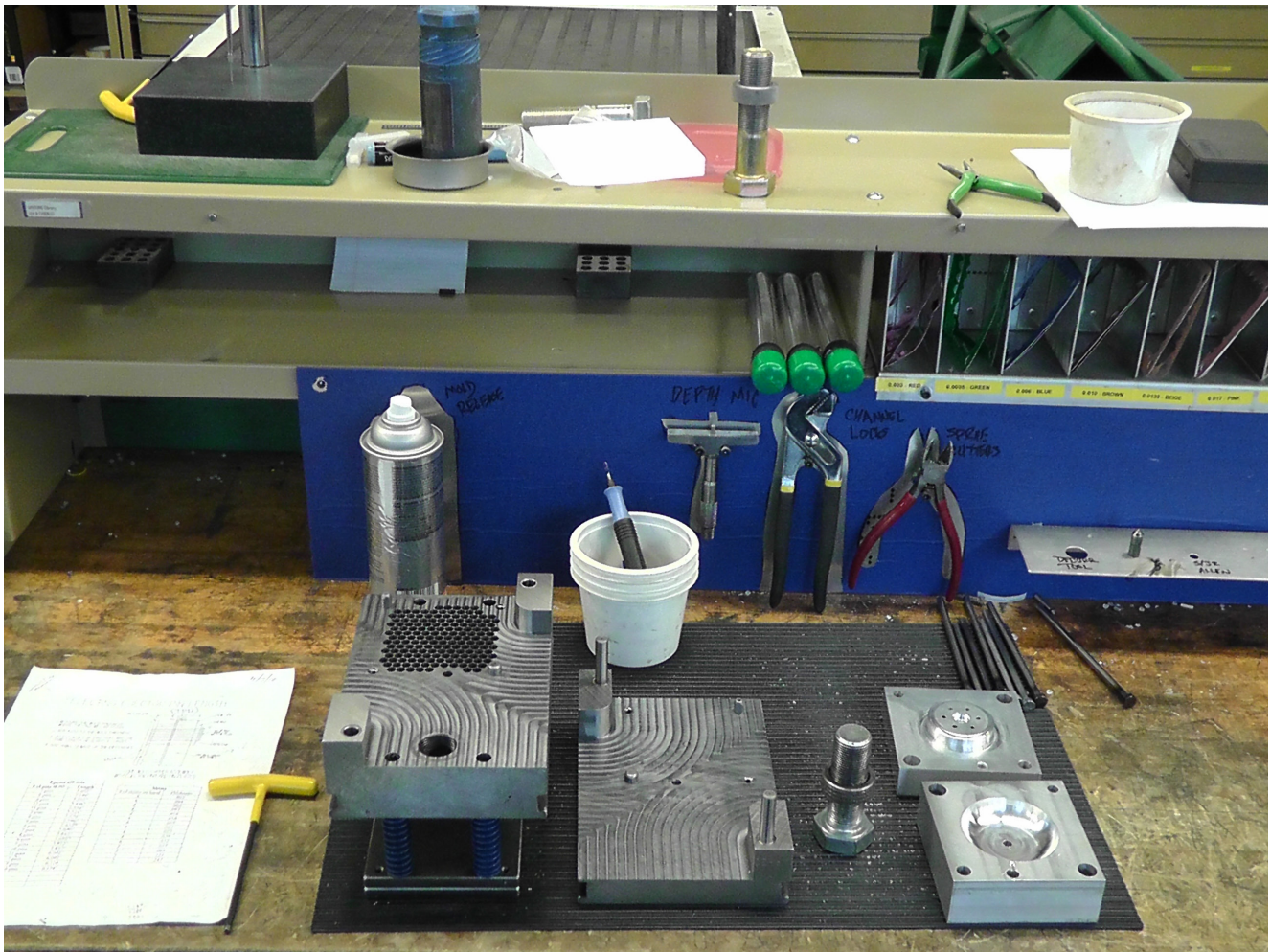
26. Retract NOZZLE by turning switch to BACK position



27. Remove your mold from the MUD Frames



28. Put everything away and clean up area



COLOR CHANGING GUIDE



1. Close shut-off gate on the hopper and remove the hopper



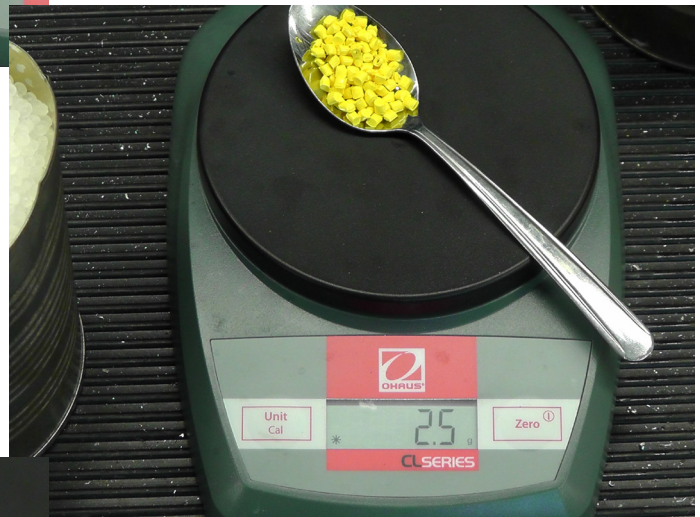
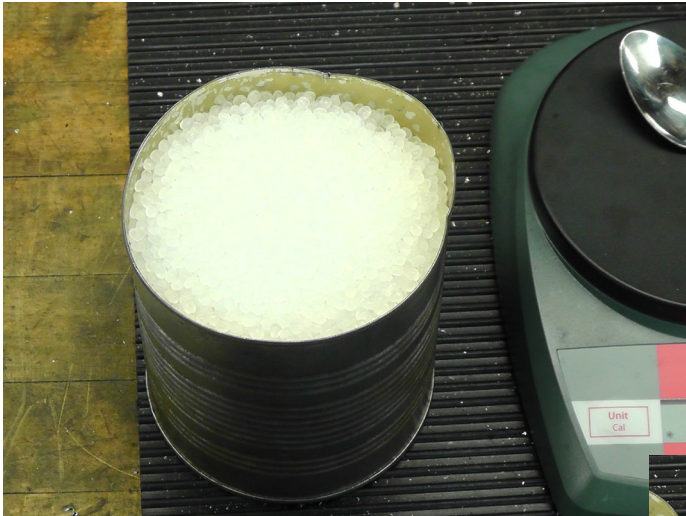
2. Dump all resin into the bucket labeled "Tye Dye"



3. Replace hopper onto machine and open the hopper gate



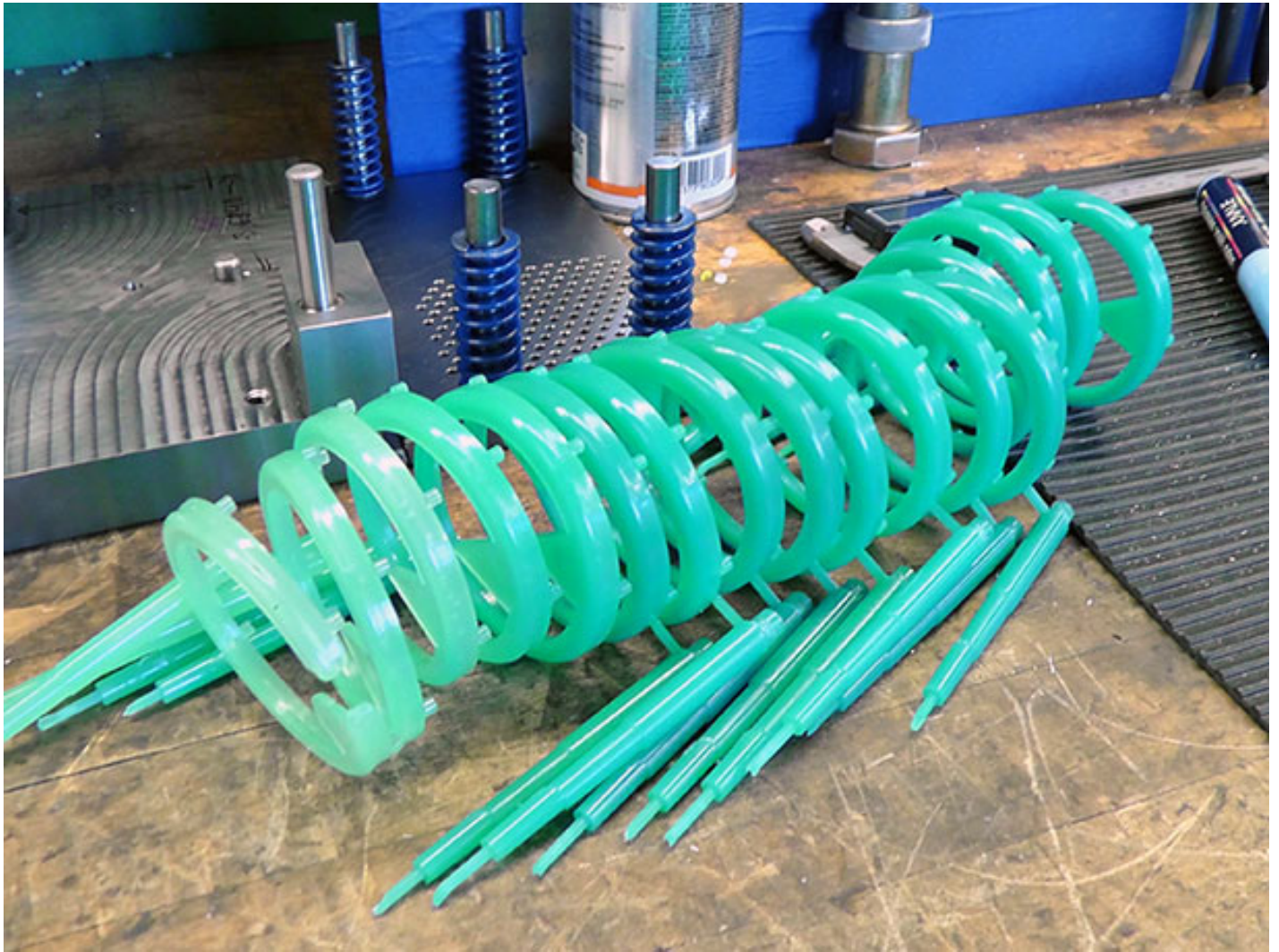
4. Mix your color resin with clear resin:
 - a. 1 coffee can of clear resin (Approximately 500g)
 - b. 1 teaspoon of colored resin (Approximately 2.5g)
 - c. MIX THOUROUGHLY



5. Dump the mixture into the hopper and begin your parts run
 - a. NOTE: It may take several parts to begin noticing color change. This is normal



AFTER YOUR RUN



1. Close the hopper shut-off gate



2. Remove the hopper and dump all contents into the bucket labeled "TYE DYE"



3. Replace the hopper and re-open the hopper gate



4. Dump about $\frac{1}{2}$ coffee can of Dyna-purge into the hopper



5. Retract the Nozzle by turning the NOZZLE Switch to the BACK position and place the wooden block onto the bushing



6. Turn the NOZZLE Switch to the FORWARD position until the Nozzle is pushing firmly against the wooden block and then turn the INJECTION Switch to the FEED position to fill the Nozzle with the Dyna-Purge



7. Retract the Nozzle and turn the INJECTION Switch to the INJECT position and extrude the Dyna-Purge from the nozzle



8. Repeat steps 5-8 until all the Dyna-Purge in the hopper has been extruded
 - a. Be sure to clean the extruded Dyna-Purge!



9. After the Dyna-Purge is finished, add about a ½ coffee can of clear resin to the hopper



10. Extrude the clear resin until it no longer has any color



11. Move Nozzle back to operating position

