RETRACTION PIN and EJECTION BAR Installation:

Swaging dies for the CHP-1 Hydro-Press and CSP-2H Hydraulic Mega-Mite presses screw directly into the press RAM (not the press head, as with reloading dies). The long punch which fits inside the die is called the "INTERNAL" punch. It comes to rest on a shoulder inside the ram on the upward stroke. (The "EXTERNAL" punch fits into the "Floating Punch Holder", which in turn screws into the press head.)

Some internal punches have a hole through their heads, and others do not. The hole allows you to inser

Punch with no hole in the head.

a quarter-inch diameter steel pin beneath the large coiled spring that surrounds the press ram. The spring then pushes DOWN on the retraction

pin, which in turn pushes the internal punch down until it either rests on the shoulder within the ram, or contacts the knock-out bar on the down stroke.

Some punches do not need to be pushed down by the spring, because they are used in an operation that automatically pushes the punch down when you insert the component. An example of this might be the typical core seating die. Point forming dies ALWAYS have an internal punch with a hole through the head, because they must be pulled down before the bullet is formed.

The knock-out bar must be installed through a slot in the side of the press ram, below the head of the internal punch. The retraction pin goes directly on top of the knock-out bar, with the spring pushing down upon it.

Spring

Retraction

pin /

Knock-out bar

Slot in ram

To install the knock-out bar and the retraction pin, first put the internal punch into the ram. Then turn on the press and move the ram upward (Energize and UP buttons held down) until the spring is loose. When you can move the spring up and down by hand, put the knock-out bar through the slot in the ram below the spring. Then, align the hole in the internal punch head with the slot in the side of the ram, and push the retraction pin through the slot and the hole, below the lowest coil of the spring. Do NOT insert the pin through any adjacent spring coils!

The knock-out bar, or ejection bar, is what stops the internal punch from continuing down with the die and ram once the bar comes to rest on top of the lower press mounting plate. It stops, forcing the internal punch upward against spring pressure on the retraction pin. The lower ram position sensor must be set so that the press stops (red light on the sensor comes on) just as the punch end comes to the top of the die and pushes out the component: make sure the spring is not completely compressed or it will be ruined. There should be some space between coils even at the lowest useful position.