

# UNI**P**UNCH

## HOLES IN PARTS. **FAST.**

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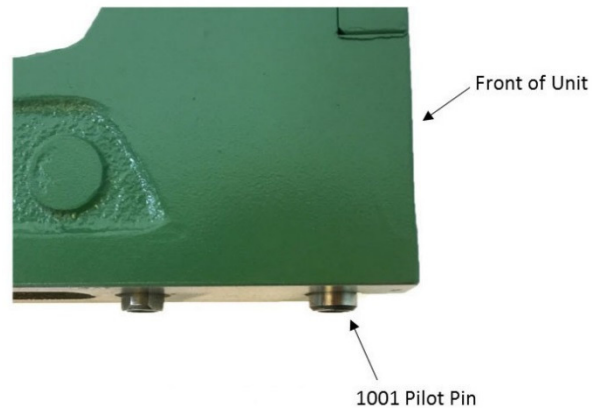
### A-3 ½ Unit (For Round Holes)

#### Assembly and Punch and Die Replacement

##### Lower Arm Assembly

**Pilot Pin Removal:** To remove the pilot pin, thread the ¼-20 x ½ set screw into the holder to back the pilot pin out of its hole.

**Pilot Pin Installation:** Use a brass or aluminum hammer to install the pilot pin assembly (P/N 1001) into the hole on the bottom of the holder under the die. Ensure the pilot pin is perpendicular to the bottom and extends 3/32" from the bottom surface. Thread the 1/4-20 x 1/2 set screw (P/N 91332, supplied with pilot pin), until it touches the bottom of the hole, being careful not to push the pilot pin back out.



**Die Removal:** To remove the die, use a hex key wrench to remove the stripper bolt (P/N 91420) in the upper arm and lift the guide to allow clearance for die removal. Then loosen the die set screw (P/N 91353 5/16-18 x 1/2) in the front corner of the holder and, if necessary, push the die up out of the holder from the slug chute.

**Die Installation:** First make sure the die and die seat are free of debris. Then insert the die (P/N 2520) with the cutting edge on the top, being sure the die is fully seated in the lower arm of the holder and tighten the die set screw to secure the die in place. Useful tip: push down on the guide to help tap the die down into the die seat so make sure it is fully seated.

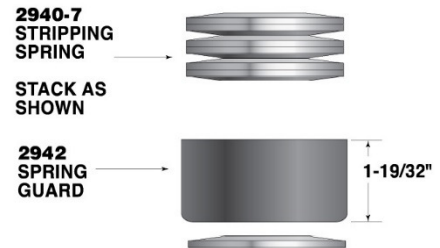
##### Upper Arm Assembly

**Punch, Guide and Spring Assembly:** First check punch and die alignment. Externally lubricate punch body (P/N 2511) with a thin even coat of lubricant (e.g. P/N 8007 Molykote® type G-N metal assembly paste). Insert punch (threads facing up) into the bottom punch driver (P/N 2984). Externally lubricate the bottom punch driver and insert the punch driver into the shaped guide (P/N 2935).

Loosely thread the S.H.C.S (P/N 91072) only a few threads, by hand, into the punch. Now using the punch screw as a handle, drop this punch and guide assembly through the guide bore of the holder, gradually lowering the punch into the die. Visually look to see that the die clearance is even all the way around. If the die clearance is uneven, contact UniPunch.

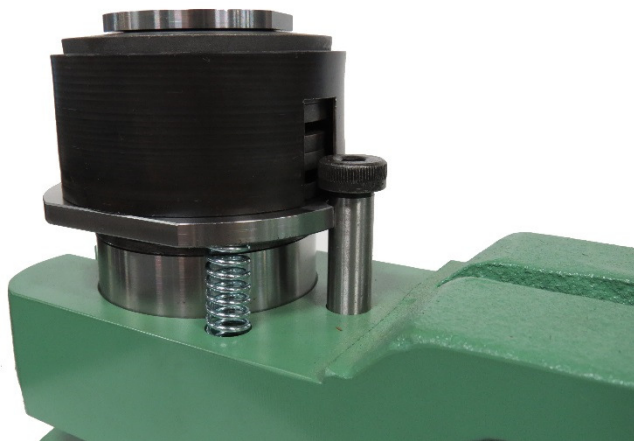
Pull this assembly back out once die clearance is visually verified and remove the punch screw leaving the punch in the guide.

Stack 6 of the 7 disc style stripping springs (P/N 2940) with the disc spring curvature opposing each other as shown in the picture on the right. Place the stack of springs into the spring guard (P/N 2942). Take the remaining disc spring and assemble under the spring guard in the pocket so the disc spring will be cupping the top of the guide. Insert the springs. Insert the top punch head driver down thru the springs and screw into the bottom punch driver until tight. Insert punch screw thru top punch driver.



Insert this top assembly into the top of the guide and screw into punch. Make sure to align the pin hole on punch with key slot on guide. To prevent the punch from spinning while tightening, insert a drift pin or similar tool, through the key slot of the guide and into the punch pin hole.

Insert (2) lifter springs (P/N 2846) into the pockets on top of upper arm. Externally lubricate outside diameter of guide body. Molykote® type GN metal assembly paste or die grease is recommended.



Assemble guide assembly into holder. Insert stripper bolt (P/N 91420) into upper arm of holder. Align the cut-out pocket on the spring guard with the stripper bolt and tighten bolt.

### Converting a Round Unit to a Shaped Unit

Purchase a key kit (P/N 9301) and the appropriate shaped punch and die.