

UNIPUNCH

HOLES IN PARTS. *FAST.*

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A-2 ½ Unit (For Shaped Holes)

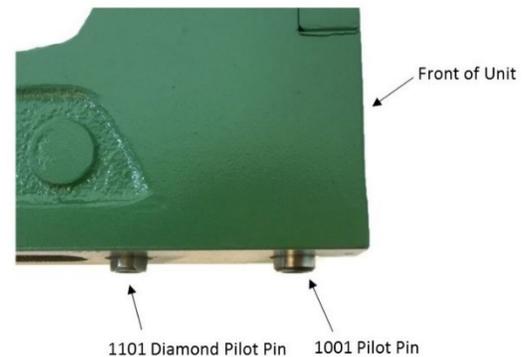
Assembly and Punch and Die Replacement

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 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.

Using the same process as above, install the diamond pilot pin (P/N 1101) into the second hole making sure a point of the diamond shape faces the front of the unit.



Die Removal: To remove the die, first use a hex key wrench to remove the ¼-20 x 1 ½" socket head cap screws (P/N 91013) from the die block (P/N 2475) and pull the die block off the front of the lower arm. Remove the die.

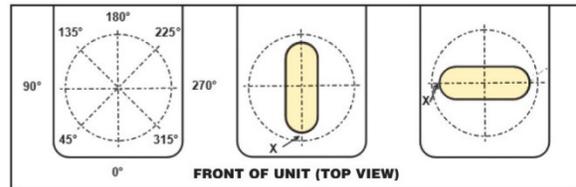
Die Installation: First, to install dowel pin (P/N 1088-3) in the back of the die seat, back out the 10-32 x 3/16 set screw (P/N 91310) located on the side of the bottom arm. Then insert the dowel pin into the hole in the back of the die seat being sure it extends into the die seat at least 0.050" and no more than 0.075"; finally retighten the set screw.

Make sure to align the shape in die (P/N 2425) in the intended orientation; align the keyway in the die with the dowel pin and insert the die into the die seat, being sure the die is fully seated in the lower arm of the holder and the die block is, itself, fully seated in the lower arm of the holder and securely held in place with the socket head cap screws. (The die block creates half the die seat and it is important the die block be fully seated in the holder for the die to be flat.) A useful tip is to put a guide in the upper arm and push it down against the die to fully seat it.

Upper Arm Assembly

Punch, Guide and Spring Assembly: First install the ¼ x 1 dowel pin (P/N 1088-3). Start by backing out the 10-32 x 3/16 set screw (P/N 91310) located on the side of the upper arm. Then insert the dowel pin through the clearance hole at the front of the upper arm and into the hole in the back of the guide bore being sure it extends into the guide bore at least 0.125" and no more than 0.150"; finally retighten the set screw.

Next, check punch and die alignment. Externally lubricate punch body (P/N 2416) 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 (the end away from the snap ring) of the guide (P/N 2435) being sure the



pin on the side of the punch engages the keyway in the internal bore of the guide.

Loosely thread the punch screw (P/N 2485) 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 making sure the punch shape will fit in the die by orienting it in the same intended orientation as 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.

Stack the set of 10 disc style stripping springs (P/N 2440-10) 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 2442). Insert the punch driver (P/N 2484) down through the center of the springs. Insert this assembly into the

**2440-10
STRIPPING
SPRING
SET OF 10
STACK AS
SHOWN**



top of the guide. Insert the punch screw thru the punch driver and by hand engage a few threads into the punch. Put the punch and guide assembly into a soft jaw vice and tighten the vice just enough to prevent the guide from spinning while you tighten the screw. Use a hex key wrench to tighten the punch screw.

Important: tighten the punch screw until the punch driver is tight against the punch so that during punching operation the punch driver is what engages the punch and

not the threads of the screw. When properly assembled the disc springs will not spin and there is no loose play that would allow the punch to move up and down or spin in the guide.

Assemble the conical lifter spring (P/N 2470) onto the guide body, putting the narrow end of the spring on first. Lubricate the guide bore of the holder with a thin even coat of lubricant (*e.g.* P/N 8007 Molykote® type G-N metal assembly paste).

Insert guide assembly into holder. While pushing down on the guide, align the flat on the guide retainer (P/N 1018) with the flat on the guide. Insert the guide retainer in the guide retainer bore in the upper arm with the small diameter up and use the button head screw (P/N 91330) to secure the guide retainer under the lifter spring. For additional feed clearance, assemble the guide retainer with the small diameter down.