

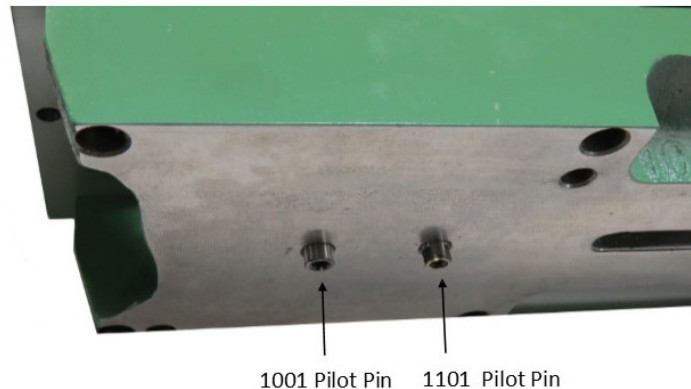
### OA-6 Unit (For Shaped Holes)

#### Assembly and Punch and Die Replacement

##### Lower Arm Assembly

**Pilot Pin Removal:** To remove the pilot pin, thread the 1/4-20 x 1/2 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 concentric with 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.



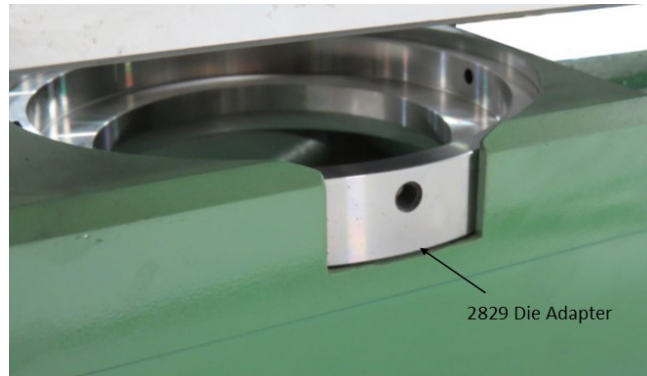
Using the same process as above, install the diamond pilot pin (P/N 1101) into the second hole making sure a point of the diamond shape faces the front of the unit.

**Die Removal for the 2825 Die:** To remove the die, loosen the die set screw (P/N 91350 5/16-18 x 3/8) in the front of the holder and, if necessary, push the die up out of the holder from the slug chute.

**Die Installation for the 2825 Die:** First, to install dowel pin (P/N 1088-2) in the front of the die seat, back out the 1/4-20 x 3/8 set screw (P/N 91331) located on the bottom side of the slug chute. Then insert the dowel pin into the hole in the front 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. Then, being sure the die seat is free of debris, insert the shaped die (P/N 2825) with the cutting edge on the top, making sure to align the shape in the die 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.

**Die and Die Adapter Removal for the 3825 Die:** To remove the shaped die (P/N 3825) from the die adapter, loosen the die set screw (P/N 91330 ¼-20 x 1/4) from the right side of the die adapter and lift the die up and out of the adapter.

To remove the die adapter (P/N 2829), loosen the die set screw (P/N 91350 5/16-18 x 3/8) in the front of the holder and, if necessary, push the adapter up out of the holder from the slug chute.



**Die and Die Adapter Installation for the 3825 Die:** First, to install dowel pin (P/N 1088-2) in the front of the die seat, back out the 1/4-20 x 3/8 set screw (P/N 91331) located on the bottom side of the slug chute. Then insert the dowel pin into the hole in the front 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.

Next, install the 2841 dowel key into the die adapter by inserting the smaller end of the die key into the key hole from the inside of the die adapter, making sure the larger diameter of the die key is snug against the wall of the die adapter. Then, being sure the die seat is free of debris, assemble the die adapter (P/N 2829) and align the key slot on the die adapter with the dowel key on the front of the die seat.

Insert the shaped die (P/N 3825) into the die adapter with the cutting edge on the top, making sure to align the shape in the die in the intended orientation. Align the keyway in the die with the dowel key in the adapter and insert the die into the die seat, being sure the die is fully seated at the bottom of the die seat. Tighten the die set screw on the right side of the adapter (P/N 91330 ¼-20 x 1/4) to secure the die in place.

## Upper Arm Assembly

First check punch and die alignment. Externally lubricate punch body (P/N 2815) with a thin even coat of lubricant (e.g. P/N 8007 Molykote® type G-N metal assembly paste). Assemble the punch body up thru the bottom of the punch driver (P/N 2879), making sure the dowel key on the punch is engaged in the proper keyway on the bottom of the punch driver making sure the shape on the punch is in the correct orientation. Loosely thread the punch bolt (P/N 91072) only a few threads, by hand, into the punch. Drop the punch and punch driver down through the guide bushing in 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.

Assemble the (2) lifter springs (P/N 2673) into the two small pockets on the upper arm of the holder. Then assemble the stripper plate (P/N 2870) on the underside of the upper arm by inserting the two stripper bolts (P/N 2685) down thru the center of the lifter springs and tighten into the stripper plate.

Assemble the (4) stripping springs (P/N 2540) into the four larger pockets on the top of the upper arm. Then put the punch plate (P/N 2871) on top of the springs and drop the (4) spring retainers (P/N 2681) down thru the center of the holes on the punch plate and down thru the center of the stripping springs. Then insert the (4) stripper bolts (P/N 2684) down thru the spring retainers and tighten into the stripper plate.

Securely tighten the punch bolt (P/N 91072) into the shaped punch and punch driver and drop the assembly down thru the center hole of the punch plate and the guide bushing. Assemble the punch driver key (P/N 2778) on the top of the guide bushing on the upper arm using the B.H.S.C.S. (P/N 91130). Make sure the key engages in the keyway on the punch driver. Then assemble the two punch retainers on the punch plate. While holding the punch retainer (P/N 2680) on the bottom side of the punch plate in the groove, screw the F.H.S.C.S. (P/N 91202) and lock washer (P/N 91604) into the punch retainer from the top of the punch plate. Please note that the guide retainers must engage in the groove ring on the top of the punch driver.