

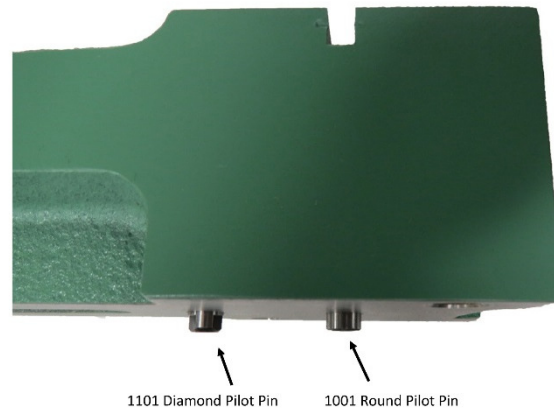
### AH-3 Unit (For Shaped Holes)

#### 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 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:** To remove the shaped die (P/N 2529), turn the unit on its side and unscrew the two S.H.C.S (P/N 91041) from the lower arm. Then lift the block die up and out of the unit.

**Die Installation:** First install the die key (P/N 3777) in one of the four key slots on the lower arm of the unit in the die bore area depending on which orientation the shape in the die needs to be. Then make sure the die and die seat are free of debris and insert the shaped die (P/N 2529) in the proper orientation with the cutting edge on the top. Ensure the die is fully seated in the lower arm of the holder and insert the two S.H.C.S (P/N 91041) up thru the lower arm of the holder and into the bottom of the die and tighten.

##### Upper Arm Assembly

First check punch and die alignment. Externally lubricate punch body (P/N 2519) 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 3779), 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 screw (P/N 91260) only a few threads, by hand, into the punch. Drop the punch through the guide bore of the holder, gradually lowering the punch into the die. Assemble the punch driver key (P/N 3778) on the top of the guide bore on the upper arm using the B.H.S.C.S. (P/N 91120). Make sure the key engages in the keyway on the punch driver. Visually look to see that the die clearance is even all the way around. If the die clearance is uneven, contact UniPunch.

Remove the punch driver key and pull the punch and punch driver back out of the unit. Assemble the (4) lifter springs (P/N 3774) into the four small pockets on the upper arm of the holder. Then assemble the stripper plate (P/N 3773) on the underside of the upper arm by inserting the four stripper bolts (P/N 3784) down thru the center of the lifter springs and tighten into the stripper plate.

Assemble the (2) spring spacers (P/N 3742) with pilot facing up into the two larger pockets on the upper arm. Assemble the two smaller stripping springs (P/N 3741) into the center of the two larger stripping springs (P/N 3740). Then drop these stripping spring assemblies into the two larger pockets on the upper arm on top of the spring spacers.

Next, assemble the punch and punch driver assembly into the punch plate (P/N 3772) with the F.H.S.C.S. (P/N 91260), making sure the keyway on the punch driver is 90 degrees to the right of the front of the punch plate. Lubricate the punch driver with a thin even coat of lubricant (e.g. P/N 8007 Molykote® type G-N metal assembly paste). Drop the punch and punch plate assembly down into the guide bore of the unit and make sure the stripping springs are captured in the pockets on the bottom side of the punch plate.

Insert the half dog point S.S.S. (P/N 91360) into the side of the upper arm. Align the keyway on the punch driver with the half dog point S.S.S until it touches the punch driver. Back it out half a turn to allow the punch driver to move up and down freely.

Assemble the punch driver key (P/N 3778) on the top of the guide bore on the upper arm using the B.H.S.C.S. (P/N 91120). Make sure the key engages in the keyway on the punch driver.

