

### AH-3 1/2 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.

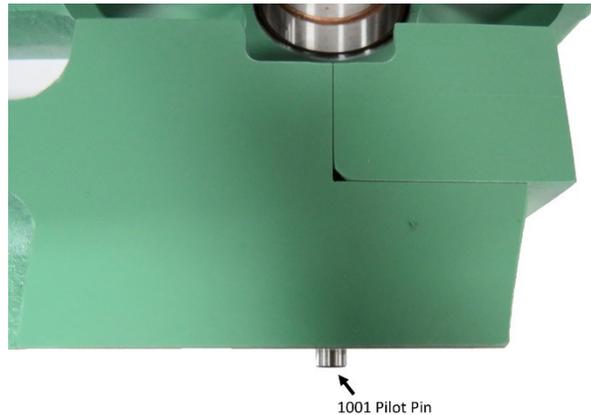
Thread the ¼-20 x ½ set screw (P/N 91332), supplied with pilot pin, until it touches the bottom of the hole, being careful not to push the pilot pin back out.

**Die Removal:** To remove the die, first use a hex key wrench to remove the 3/8-16 x 3" socket head cap screws (P/N 91030) from the die block (P/N 2580) and pull the die block off the front of the lower arm. Remove the die.

**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 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.

##### Upper Arm 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). Assemble the punch body up thru the bottom of the punch driver (P/N 2583) and tighten the punch screw (P/N 91072) into the punch. Drop the punch 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.

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 2573) on the underside of the upper arm by inserting the two stripper bolts (P/N 2683) down thru the center of the lifter springs and tighten into the stripper plate.



Assemble the (2) stripping springs (P/N 2540) into the two larger pockets on the top of the upper arm. Then put the punch plate (P/N 2572) on top of the springs and drop the (2) 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 (2) stripper bolts (P/N 2682) down thru the spring retainers and tighten into the stripper plate.

Drop the round punch and punch driver assembly down thru the center hole of the punch plate and the guide bore. Then assemble the punch retainer 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 91201) and lock washer (P/N 91604) into the punch retainer from the top of the punch plate. Please note that the guide retainer must engage in the groove ring on the top of the punch driver.

### **Converting a Round Unit to a Shaped Unit**

Purchase a shaped hole conversion kit (P/N 7131) and the appropriate shaped punch and die.