

SWAGE TOOL USER MANUAL

Introduction:

Use this instruction manual with your Mill-Max Swage Tooling Kit to achieve a secure and professional swage. For a complete cross reference list of available punch and anvil kits visit www.mill-max.com/swagetooling.

Alignment:

1. Place punch into chuck or ram of press and secure.
2. Place anvil into tool holder with desired hole facing up. Do not secure.
3. Align punch and anvil by lowering punch, such that the tip is lightly resting inside the anvil, see Figure 1. This will allow the anvil to center itself with the punch.
4. Once the anvil and punch are perfectly aligned and straight, secure anvil.

Be sure the anvil does not shift out of alignment when securing. Alignment is critical to a strong and secure swage.

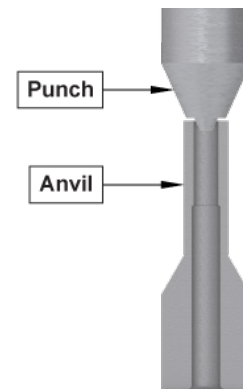


Figure 1: Tool Alignment

Swage Procedure:

1. Place pin into anvil with hollow shank of pin facing up. The pin shoulder should be resting on the top surface of anvil and will act as support during the swaging process.
2. Place pre-drilled PCB over the hollow shank of the pin.
3. Use press to bring the punch down, applying pressure on the hollow shank of the pin, flaring it, and securing it to the PCB.

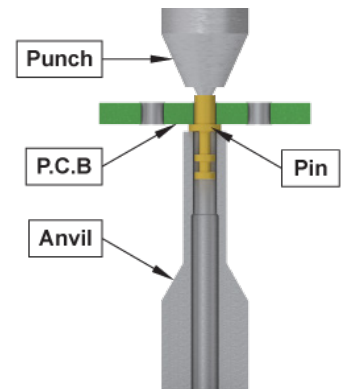


Figure 2: Swage Layout

Inspecting the Swage:

Shown below are examples of a well-formed and a poorly-formed swage. Pressing with too much force will cause the swaged area to fracture and create an unreliable swage. Conversely, pressing with too little force will not flare the hollow shank enough and the pin will not be secure in the PCB. For additional guidance for inspecting a swage refer to Mil-T-55155.

Note: Proper punch and anvil must be used based on part size to achieve secure and professional swage.

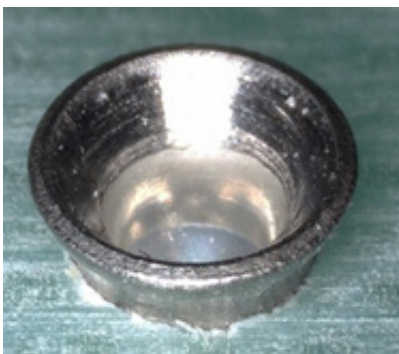


Figure 3: Example of a well-formed swage



Figure 4: Example of a poorly-formed swage

