

#0 Morse Blank

P/N 3051

Using the #0 Morse Blank

The Morse #0 Blank was first mentioned by Ross Heitt in our "Sherline Machinist Tips section" (Tip #8A). We started manufacturing this accessory at the request of several of our customers who had read this tip and wanted one ready-made.

The #0 Morse Blank is made from $\frac{3}{4}$ " round free-machining steel. This offers a way to make inexpensive custom tailstock tool holders. These holders come in handy for holding tool bits that you will be using frequently, such as center drills, drills, and counter-bores.

The biggest difference between the Morse #1 Blank P/N 3055 and the Morse #0 Blank is its holding capability. The #1 Morse Blank has the #1 Morse taper and a drawbolt to pull it tightly into the taper. The #0 Morse Blank has a #0 Morse taper without a drawbolt. This means that you can't exert as much twisting force on the #0 Morse holder as you can on the #1 Morse holder. For this reason, we suggest that this holder be used for cutting tools $\frac{3}{8}$ " in diameter and smaller. The $\frac{3}{8}$ " limit will also allow you to have a minimum of 5 threads in your 10-32 set screw hole. If you attempt to use tools that are larger than $\frac{3}{8}$ " you risk the chance of exerting too much force on the taper fit. This may result in breaking the taper fit loose and spinning the holder in the tailstock.

Drilling the hole into the holder

In order to ensure that the tool is located concentric to the headstock. Place the holder in the tailstock, then use the headstock with a chuck to drill and ream the hole in the holder. Before removing the holder, scribe a witness mark on the center of the top of the body. Each time you use it, make sure the scribed line is at the top, assuring it is in the same position as when it was drilled on center.

Inserting the holder into the tailstock

NOTE: All good taper fits require that you keep the male and female taper surfaces clean and free of chips. To secure your #0 Morse holder into the tailstock spindle:

- 1) Clean the male and female tapers.
- 2) Lock the tailstock spindle with the tailstock locking screw.
- 3) Insert the taper end of the holder into the tailstock spindle.
- 4) Push and twist the holder as if you were trying to thread the holder into the tailstock spindle.
- 5) As the taper surfaces match with each other, the fit will get tighter and tighter until it is almost impossible to turn the holder any more. Now you are ready to go.

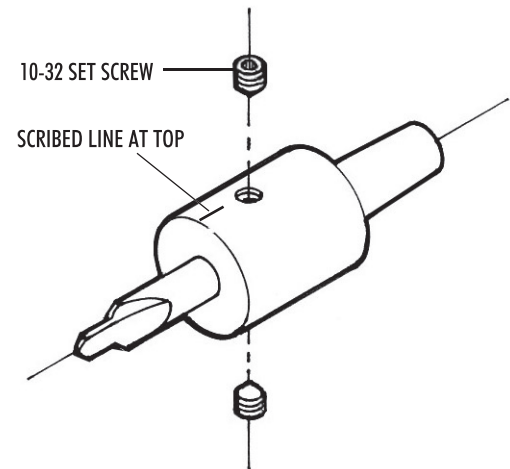


Figure 1—No. 0 Morse Blank with center drill held by two set screws.

Figure 1 above shows a typical use of the holder. It is shown set up to hold a #1 Center drill. The advantage of having several of these holders pre-loaded with your most often used tools is that you can change from tool to tool quickly.