

NOTE: Allowable chuck runout is specified as .003" or less.

**CAUTION! DO NOT OVERTIGHTEN CHUCK.** Use only moderate pressure with the Tommy Bars Supplied.

**IMPORTANT! DO NOT TURN THE LATHE SPINDLE ON UNLESS THE CHUCK IS TIGHTENED.** Acceleration of the spindle can cause the scroll to open the chuck jaws if they are not tightened!

**SHERLINE PRODUCTS**  
INCORPORATED 1974

# 4-JAW SELF-CENTERING CHUCKS

P/N 1075 and 1076

Self centering chucks are designed to have all the jaws move in unison. The jaws are driven by a spiral scroll when the knurled ring is turned. Self centering chucks will never duplicate the accuracy that can be attained with jaws that are moved independently, but they will usually "get the job done", saving a machinist much time and effort.

The main purpose of a 4-jaw self centering chuck is to hold square stock. It can also be useful in holding thin wall round tubing that will collapse easily. Round stock that is held in this chuck must be perfectly round and can not be at all elliptical or one of the jaws will not grip. The same is true for square stock; it must be very square and not at all rectangular to achieve a proper grip with all four jaws.

This chuck is designed so that the jaws can be removed and reversed to hold larger stock. The hole through the center of the chuck is .687" (17.46mm). In the normal position, the 1075 chuck can hold stock from 3/32" (2.0mm) to 1-3/16" (30.16mm). With the jaws reversed, material up to 2-1/4" (56.0mm) can be held. The 1076 chuck can hold stock up to 1-1/2" in normal position and 2-3/4" with the jaws reversed.

### REMOVING THE JAWS

When seen from the front, turning the scroll clockwise backs the jaws out. Turn clockwise until all jaws can be removed. The jaws can be identified by the location of the teeth as noted in Figures 1 and 2.

### REVERSING THE JAWS

When reversing the jaws, jaws 4 and 2 will go back into the same slots from which they were removed. Jaws 3 and 1 will exchange positions. The order of installation to reverse the jaws is 4-3-2-1 in slots D-A-B-C. (See Fig. 1.)

To install the jaws in the reversed position, turn the scroll counterclockwise (viewed from the top) until the outside tip of the spiral scroll thread is just ready to pass the slot for the first jaw to be inserted (jaw #4). Slide jaw 4 as far as possible into the slot. Turn the scroll until the jaw is engaged.

Due to close tolerances between the slot and jaw, the most difficult part of replacing the jaws is engaging the scroll thread and first tooth of each jaw without binding. Never use force when replacing the jaws, and if binding occurs, simply back up the scroll slightly and wiggle the jaw until it is free to move in the slot. Advance the scroll counterclockwise and engage jaw #3 next in the slot that previously held jaw #1 (the slot marked "A"). Continue to engage jaws 2 and finally jaw 1.

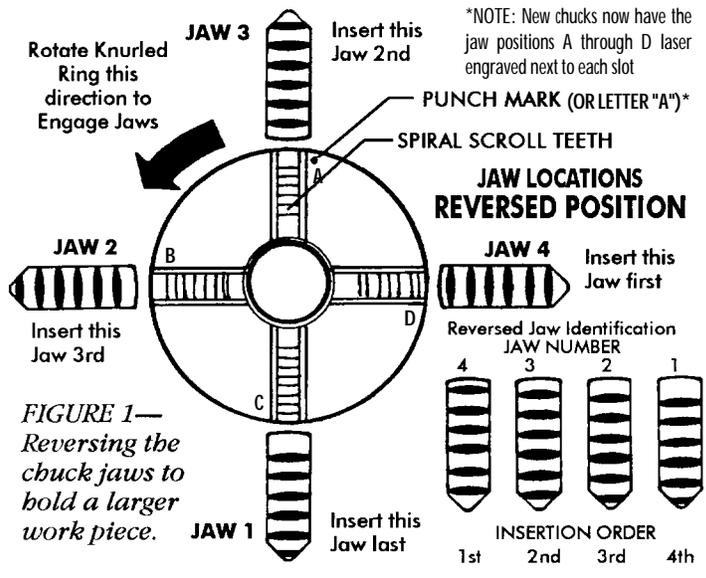


FIGURE 1— Reversing the chuck jaws to hold a larger work piece.

\*NOTE: New chucks now have the jaw positions A through D laser engraved next to each slot

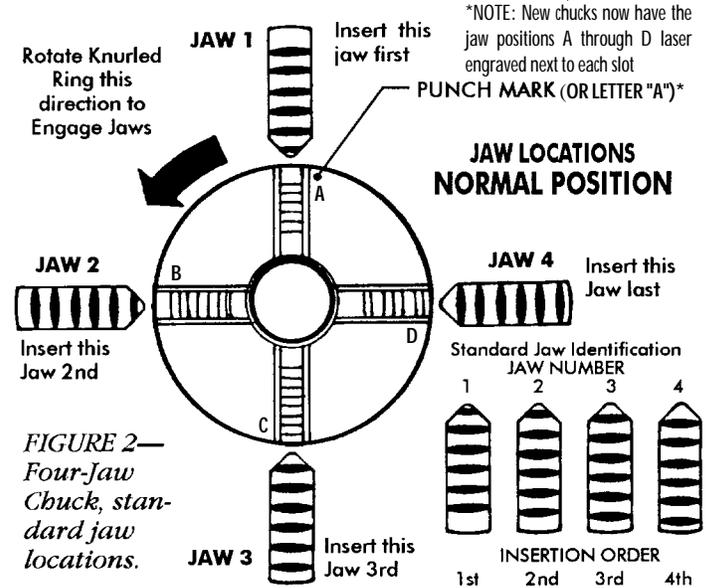


FIGURE 2— Four-Jaw Chuck, standard jaw locations.

\*NOTE: New chucks now have the jaw positions A through D laser engraved next to each slot

When reinstalling jaws in normal position, the order of insertion reverts to 1-2-3-4 in slots A-B-C-D. (See Fig. 2.) A set of replacement jaws is available as P/N 1177. Should repair become necessary, please return your chuck to the factory so that we may replace the jaws and check the alignment of the chuck before returning it to you. In the case of a damaged chuck body, replacement of the entire chuck is usually more economical than attempting repairs.

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### **Lubrication and maintenance**

Clean chips from the jaw slots with a brush and add lubrication to keep the chuck operating smoothly. To prevent rust, keep the surfaces of the chuck lightly oiled. If possible, store wrapped in the waxed paper it came in.