

**NOTE: Always use plenty of cutting fluid when using the Cutoff Tool.**

**SHERLINE PRODUCTS**  
INCORPORATED 1974

## Cutoff Tool Post Riser

P/N 1296

### Introduction

This is an accessory that we were somewhat reluctant to make; however, we proceeded because it has been requested by several customers. The problem with Sherline making it is that it could cause customers to believe we are suggesting that you can part off large diameter (over 1.0" or 25 mm) stock with our lathe. This is not the case. You should use the riser with the following items in mind:

1. The only cutoff blade we recommend is one with a width of .040" or less, and thin blades such as these tend to wander on larger diameters.
2. It is difficult to get enough coolant to the cutting edge with a narrow, deep slot.
3. The Sherline 3" lathe simply doesn't have enough power for wider cutoff tools.

### Mounting the Cutoff Riser Block to the Crossslide

The riser block is designed to be mounted on one T-slot as shown below (see Figure 1). This orientation offers more structural rigidity to the riser block and the clamping points that are in a direct line with the forces, which are exerted on the cutoff tool when it is in use.

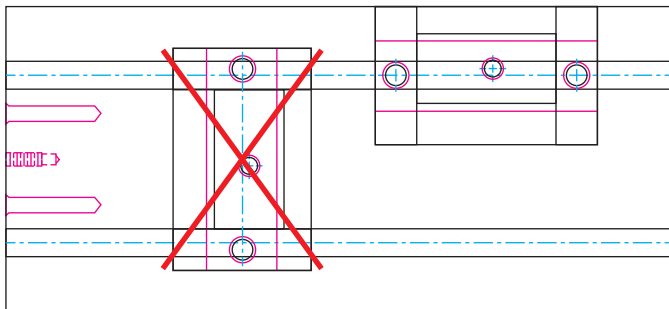


FIGURE 1—Proper mounting orientation on the crossslide.

### Use of the Cutoff Tool Riser

The farther the cutting tool is raised above the machine bed, the greater the chance of "chatter," so we increased the rigidity of the tool by enlarging the base area along with height. This is a simple riser block with two hold-down screws that mounts on the back side of the crossslide. The standard cutoff holder (P/N 3002) mounts on top with the blade upside down and reversed with the tip of the blade pointed down, because cutoff tools have a tendency to lift rather than to dig in (see Figure 2).

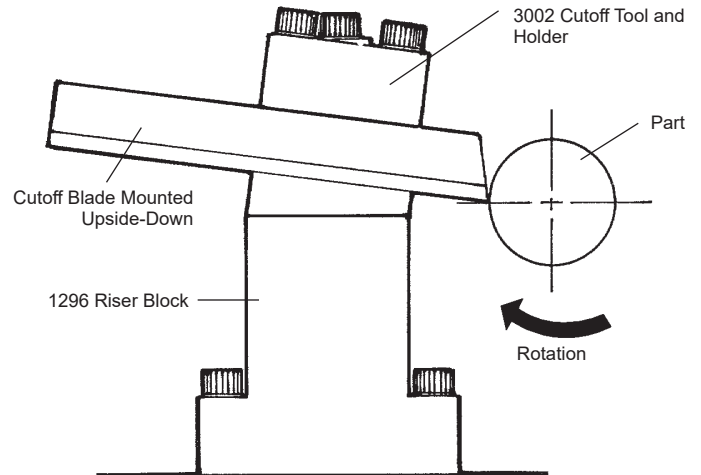


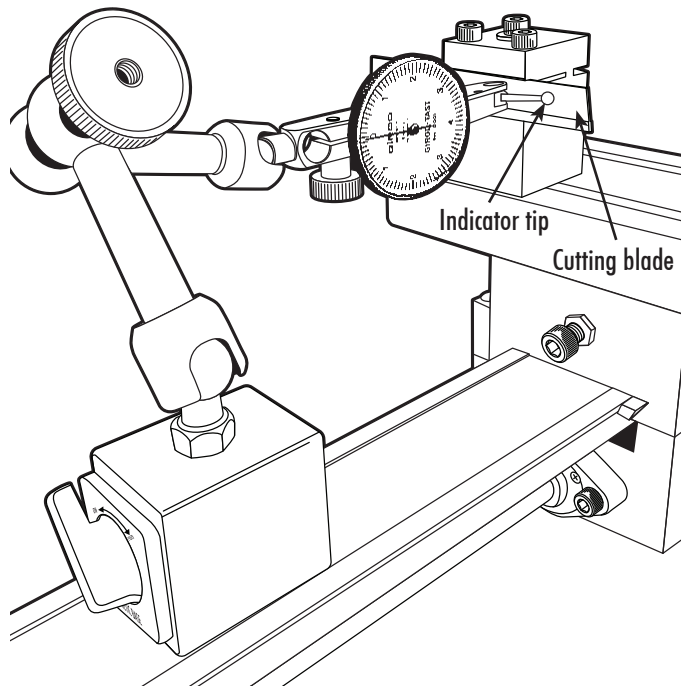
FIGURE 2—Proper blade orientation. (As seen from the headstock spindle.)

The blade must be moved in or out to bring the tip to center in the same fashion as when it is used in a standard configuration, and a shim may be required to get the tip on center for really large diameters.

### Parting off Large Diameters

If you want to attempt to go beyond the maximum of 1" diameter stock mentioned earlier, here are some suggestions. These are especially important on hard-to-machine materials.

1. Use plenty of cutting fluid.
2. Grind the cutting tip of the blade square rather than angled so it tracks straight and doesn't cause the blade to bend or wander.
3. Align the blade accurately with the crossslide to assure a square cut. The most accurate way to make sure that your blade is perfectly square to the part, is to use a test indicator and indicate the side of the blade from the cutting tip to the holder body. Rotate the tool holder until the blade is square, and then tighten the holder mounting screws. The larger the diameter of the part, the more critical it is that the blade is square to the part (see Figure 3).



**Parts List**

NO. REQ.	PART NO.	DESCRIPTION
1	12960	Riser Body
1	40700	10-32 x 1-3/4" SHCS
2	40690	10-32 x 3/4" SHCS
2	30561	T-Nut

FIGURE 3—The standard rear-mounted cutoff tool holder (P/N 3018) is shown for reference.

4. Listen to your machine. It will tell you when you are working it too hard before it “strikes back.”
5. Last, but not least, don’t blame us if you break a blade!

Thank you,  
 Sherline Products