

**SHERLINE
PRODUCTS**
INCORPORATED 1974

Steady Rest

P/N 1074

All materials have a tendency to deflect away from the cutting tools when you are turning them in a lathe. This tendency is especially noticeable on long, slender parts and long pieces of bar stock. It makes it quite difficult to hold close tolerances. The best way to hold a long part is with a center mounted in the tailstock. However, for one reason or another this is not always possible. As an example, it may be a piece of stock that you want to center drill so that you can mount it between centers, or it may be a part where a center drill hole would ruin the looks of the part. Whatever the reason, the steady rest provides a means of supporting the part.

The Sherline steady rest has three adjustable brass blades mounted in a holder that mounts on the bed of the lathe. These blades can be set to the diameter of the part to provide necessary support while it turns.

Another advantage of the steady rest that is often overlooked is the fact that work that is held in position by the steady rest

turns concentrically with its outside diameter. This means that concentricity is assured when working near the steady rest because at that point it must be running perfectly true despite imperfections in the way it is chucked or centered at either end.

Use of the Steady Rest

The easiest way to set up a steady rest is to first mount the part to be machined in a collet or 3-jaw chuck. Then mount the steady rest onto the bed of the lathe and slide it over the free end of the part and up as close to the chuck as it will go. The three blades of the steady rest can then be adjusted in until they just contact the part, supporting it but not binding it. For small diameter parts it may be necessary to cut or file off the corners of the blades so they contact the part without touching each other. While the blades are close to the chuck, mark where the center of the small diameter stock contacts the blade. Because the casting is not extremely precise, the blades may not contact the part at their center. This does not affect their function. File or grind off the corners as needed so the blades contact the part but not each other (See Figure 2).

Once the blades are set and locked in place, the steady rest

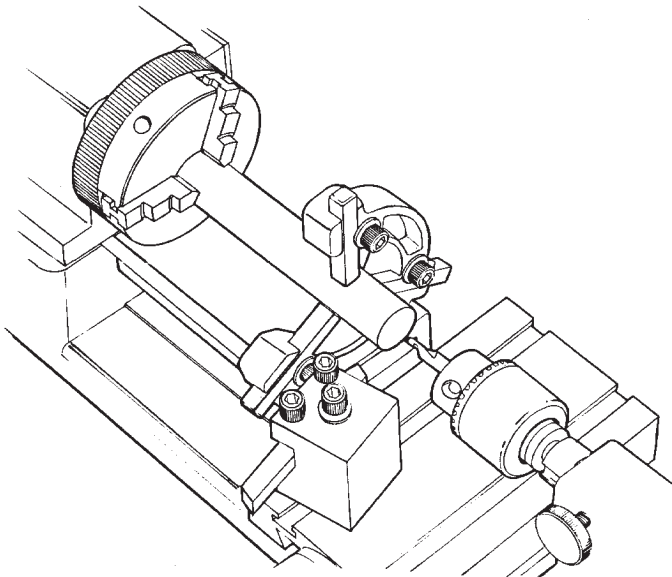


FIGURE 1—To drill a hole in the end of a long shaft, the lathe is set up with a center drill in the drill chuck which is mounted in the tailstock. The steady rest keeps the shaft from wobbling and also assures that the hole will be concentric with the outside diameter of the part.

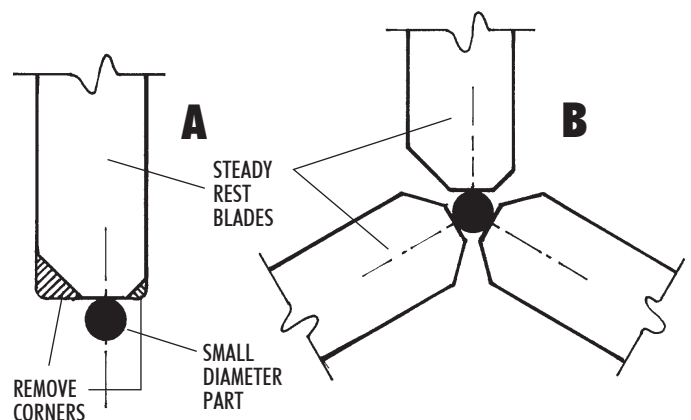


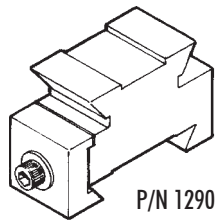
FIGURE 2—A) Mark each blade where it contacts the part and grind off corners for clearance. Note that the contact point may or may not be at the center of the blade. B) All three blades can now contact the part without their corners interfering with each other.

can be slid back out to support the free end of the part. Tighten the steady rest bed clamp (P/N 11760) to snug using the 10-32 x 3/4" socket head cap screw (P/N 40690). Average clamping pressure should be enough to lock the steady rest to the lathe bed.

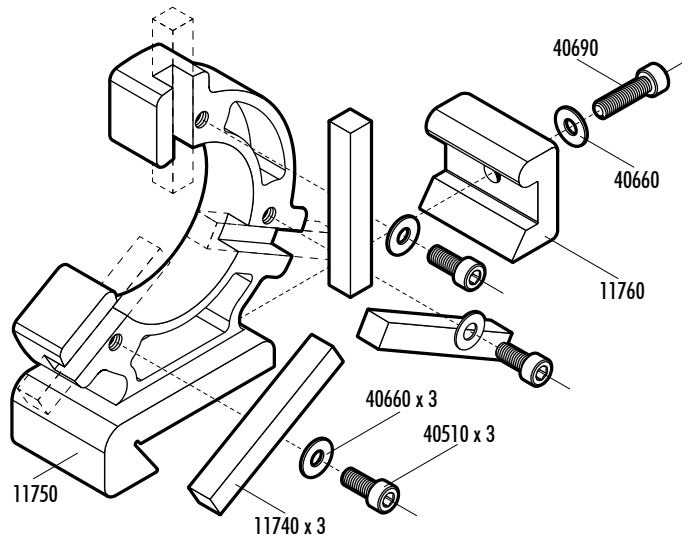
If you want to check the accuracy of your set-up, you can use a dial indicator mounted on the crossslide. Once you are satisfied with the set-up, apply a drop or two of oil where the blades come in contact with the part, and you are ready to start machining. The Sherline steady rest will accommodate work up to 1.75" diameter.

Thank you,
Sherline Products Inc.

NOTE: A steady-rest riser block (P/N 1290) is available, which makes it possible to use the steady rest on the lathe with the headstock and tailstock riser blocks in place.



P/N 1074 Steady Rest Exploded View



Parts List

NO. REQ.	PART NO.	DESCRIPTION
1	11740	Set of 3 brass pads
1	11750	Steady rest casting
1	11760	Steady rest bed clamp
3	40510	10-32 x 3/8" SHC screws
4	40660	#10 washer
1	40690	10-32 x 3/4" SHC screw