



A Simple RPM Gauge

Knowing the exact speed your machine is running is not all that critical. It is how the cut is progressing that will determine final adjustments to the speed and feed. Those of you who own the optional digital readout will already have a speed readout. For others, starting at 1/4, 1/3, 1/2 speed, etc., on the speed control knob will usually get you close enough for a good cut. However, some people find it helpful to know what speed their machine is actually running, and this simple gauge can help you determine that if you don't have a DRO with an electronic speed readout.

How the Gauge Works

The gauge was posted on one of the Internet newsgroups and has been passed around long enough that it is unclear as to who actually came up with it first. It is similar to gauges that were used to adjust the speed of record players to exactly 45 or 33-1/3 RPM. Under light from a fluorescent bulb that runs on 60 Hz. current, the gauge will give you an accurate reading when you are running at one of the speeds on the gauge. The "flashing" of the fluorescent bulb at 60 cycles per second will cause one of the bands to appear to stop moving at the RPM indicated by that band. The gauge will not work as well with an incandescent light bulb because the filament glows and doesn't dim as much during the cycling of the current. The speeds indicated on the gauge from the outer ring in are: 100, 300, 400, 480, 600, 720, 800, 900, 1200, 1800 and 2400 RPM.

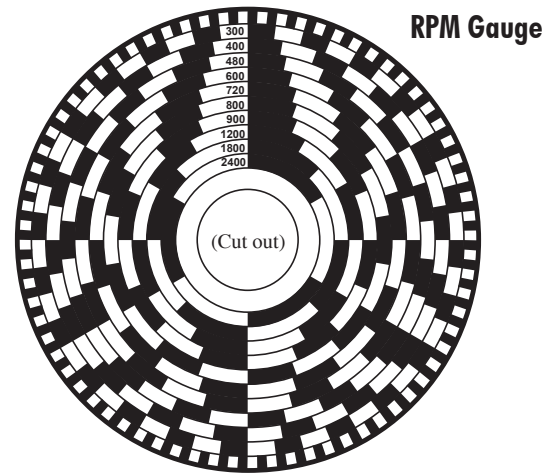
The circular gauge can be copied on a copy machine and the copy cut out. It is then glued to the pulley of your machine. Rubber cement or spray adhesive are the best for this purpose. Laminating plastic or clear packing tape can be applied over the surface to make it easier to clean.

A Way to Make the Gauge Easier to Read

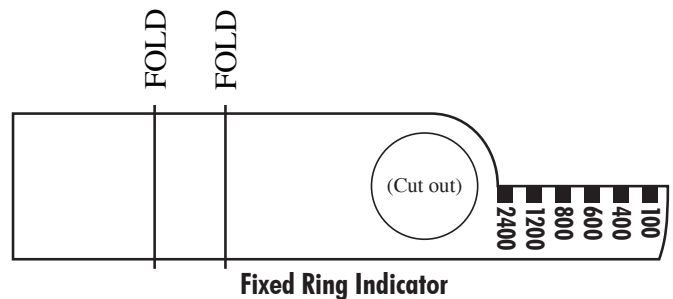
Because the gauge spins, the numbers can't be read once the machine is turned on. If you wish, the indicator at the right can also be copied, cut out, pasted to thin shirt back cardboard, trimmed to size and mounted to the speed control housing as a reference. Fold an offset into the indicator at the lines shown so that it runs just above the surface of the pulley. The center fits over the spindle shaft and the numbers line up with the rings of the gauge to help you tell which ring is which when the motor is turning. The easiest way to mount it to the speed control housing is with double sided Scotch® tape. A layer of clear packing tape over each will make them easier to keep clean.

For more information on determining what the proper speed

for your particular cut should be, see the section on speeds and feeds in the Sherline Assembly and Instruction Guide that came with your machine.



Make a photocopy of the above gauge, cut it out and glue it to the Sherline spindle pulley. Use under 60 Hz fluorescent light for best results.



The above indicator can be used if desired to help you tell which ring is which when the gauge is moving. The hole slips over the spindle and the end is taped to the speed control housing. It's a bit crude, but some might find it helpful.

Using the RPM Gauge with 50 Hz Current

The spacing on the black and white bands is calculated for light flashing at 60 cycles per second. To use it with light operating on 50 Hz current, multiply each value by 6/5 or a factor of 1.2. In other words, the outer ring would now represent 120 RPM instead of 100 ($100 \times 1.2 = 120$), the 300 RPM ring would represent 360 RPM and so on up to the smallest ring that would now actually appear to stop moving at 2880 RPM instead of 2400 RPM.