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Maintaining a Rotary Tumbler and Silver Polishing Precautions

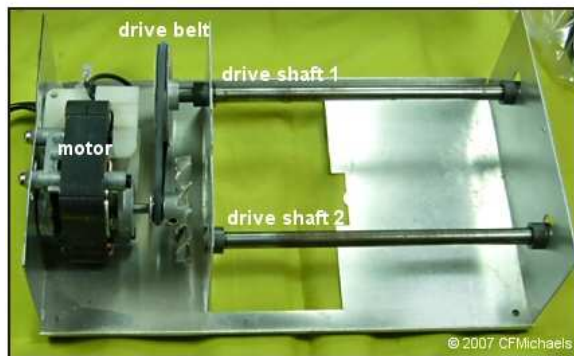
In the previous article in this series, we looked at [my technique for polishing sterling silver components using a rotary rock tumbler](#). Now let's explore basic rotary-tumbler care and maintenance, and identify some precautions you should take when using a tumbler for silver polishing.

Rotary Tumbler Care & Maintenance

As I mentioned earlier, the tumbler I use for polishing is the Lortone Model 3A. According to the manufacturer, it is "capable of operating 24 hours [per] day for years *with proper care*." [My emphasis.] When I started to have trouble with my tumbler recently, I realized that I had overlooked that crucial "proper care" requirement. Fortunately, it's a pretty easy requirement to meet.

Rotary rock tumblers are relatively simple machines. The Lortone 3A consists mainly of a 220v motor with a *drive belt* that causes a *drive shaft* (a metal rod) to turn. As the drive shaft turns, it causes the rubberized barrel to turn, and the contents inside the barrel become tumble-polished.

(Note: In the photo below, the shaft labeled "Drive Shaft 2" is actually an *idle shaft*; it spins as the barrel turns, but it is not powered by the motor.)



Lortone tumbler with the cover removed to show what's inside

Here's what to do to keep those basic parts functioning smoothly.

~ Cleaning

Lortone recommends wiping down the outside of the rubberized barrel occasionally with a wet, soapy cloth, and allowing it to dry completely. I also like to keep the flat, outside surfaces of the tumbler base as clean as possible by wiping them with a damp cloth, or a cloth I've sprayed with a bit of orange-oil degreaser soap. (Be careful not to get degreaser on the bearings, which need to remain oiled to work properly - see below.)

~ Oiling

According to Lortone, its tumbler motors are "designed for continuous use" and never need oiling; however, the *shaft bearings* do.

The shaft bearings are short, tubular metal housings that hold the drive shafts. On my tumbler, they are the darker-colored parts at either end of both shafts. Lortone tumbler bearings need to be oiled once every 30-days of use (so, less often than monthly if you don't use your tumbler every day). Lortone recommends adding one drop (and never more than a drop) of motor/bearing oil (available at hardware stores) to each bearing. The photo at right shows me adding a drop of oil to the place where a bearing and shaft come together.



~ Maintaining and Replacing the Drive Belt

The tumbler's drive belt is a soft, rubberized ring. When the tumbler is in operation, the belt must have sufficient tension to cause the drive shaft (and barrel) to turn. Over time, the drive belt slowly becomes stretched out, which reduces its tension, and therefore its ability to turn the barrel. If you notice that your barrel is not turning even though the drive shaft is, or if it's only turning intermittently, then your belt may be becoming stretched.

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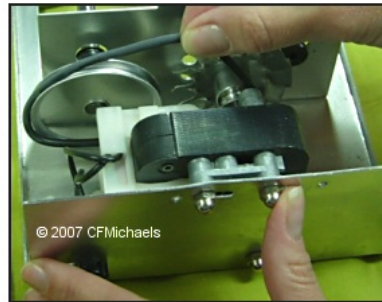
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You can try to solve this problem by slightly increasing the tension on the belt manually by adjusting the bolts that hold the motor in place. Use a small wrench to loosen - but not remove - the nuts on the bolts at the end of the machine, and gently slide them (and the motor) to the right. Retighten them, and then try tumbling again.

Eventually, the belt will become so stretched that it will need to be replaced. (You can find Lortone replacement belts online, and they are very reasonably priced.) To replace the belt, first remove all four screws (but not the motor bolts) that hold the tumbler's cover in place. There are two on one end, one on the other end, and one inside the barrel chamber.

Remove the metal cover to expose the motor and drive belt. In order to remove the belt, you need to *reduce* its tension by loosening the motor bolts and sliding the motor gently to the *left*. In the photo at right, I am pulling up on the belt to show how loose it has now become on the pulleys.



Slip the drive belt off of the pulleys and remove it from the machine. Install the new belt by placing it over the appropriate grooves in the pulleys.

Re-assemble the tumbler by placing the cover back on, making sure that the sides of the cover are inside of the metal holders that run along both sides of the bottom of the machine.



Replace the four screws by twisting each one gently into its hole, then going back and tightening each individually with a screwdriver so that it is snug, but not overly tight.

Now that your tumbler is reassembled, you need to adjust the tension on the new belt so that it works properly. Begin by loosening the motor bolt nuts and sliding the motor slightly the right.

Refasten the bolts, then try using the tumbler with

a normally-loaded barrel in place. If the barrel skips or fails to turn, go back and move the motor bolts a little more to the right, then try again. Repeat this procedure until the drive belt has just enough tension to properly turn the barrel.



### Jewelry Tumbling Precautions

You should now have a good idea how to use and care for a rotary tumbler, but you may be wondering what kinds of jewelry you can polish with it. I've found that the most appropriate items for tumble-polishing are solid pieces made entirely of sterling silver. Most sterling chains can also be tumbled, although I recommend tumbling them one at a time to reduce tangling.

Be especially cautious with any jewelry that contains gemstone beads or settings. Most gemstones (especially quality stones), do just fine in the tumbler, but others can be ruined. For example, softer stones, or stones made of "composite" crushed-gemstone (like much of the more-affordable turquoise on the market), can lose their shine and become dull and worn from tumbling. When in doubt, do a test run with an extra bead of the same material to see whether it's affected by tumbling - *before* tumbling your finished piece of jewelry.

~ Deals on [Lortone Tumblers](#) are often available [on eBay](#).

~ For jewelry that can't be tumble polished, try using [a jewelry polishing cloth](#). It takes much more time and effort, but it's worth saving your jewelry from damage.

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