Wizard Polishing Lap
From Dick Walker

Your new WGS Wizard Lap is the result of several years of experimentation with numerous thermoplastic formulations in an effort to perfect a polishing medium for as broad a range of gemstones as possible. This lap is a very hard thermoplastic that has no abrasive fillers to cause problems during polishing or create unwanted surface textures when polishing any of the diverse gemstones that can be polished on it.

In order to get the most out of your new lap you will have to read the following instructions.

Your new lap works best when used with oxide powder base polishes, such as cerium oxide and tin oxide. When using oxide polishes, it is best to use the very purist chemicals that you can find. In the case of both tin and cerium oxides, we are fortunate to have optical grade polishing powders available at very moderate prices. DO NOT use polishing powders intended for tumbling or cabochon polishing. Some of these powders have relatively high percentages of impurities, many of which can cause scratching and could possibly contaminate your lap.

Generally I mix my polishing powders in a wide mouth resealable container.

A good general purpose recipe is:

1. 1 rounded tablespoon of oxide powder
2. 3 ounces of water. (If you live in an exceptionally hard water area, it might be prudent to use distilled or demineralized water.)
3. Approximately 15 drops of white vinegar (5% acetic acid) per ounce of water.
4. 10 to 12 drops of a 20/10 concentrate, automotive windshield washer fluid™ . Grocery store detergents (dish washing detergent), are not a satisfactory substitute for this product.

I have found that the best method of applying my polishing slurry to a rotating lap is to use a Chinese or Japanese calligraphy brush, about 3/8" in diameter. These can be purchased from most art supply stores; this type of brush provides the best control of the amount of polish that ends up on the lap. When not in use, I store my brushes in separate plastic bags plainly marked to minimize cross contamination.

As for lap speed, I use the rule of thumb. If the slurry is flying off of your lap into the splash pan, the lap is going too fast. On an 8" lap the "too fast" speed is about 300 revolutions per minute. Most gemstones require a lower speed to obtain an optimum polish.

Also I recommend, with any oxide slurry, use only a minimum amount of polish on the lap at any one time. Too much polishing powder on the lap tends to round facet edges and can, at times, cause an apparent wash or corrugation at the leading edge of the

facet. In order to extend the effectiveness of the polish and keep the quantity to a minimum, I use a spritzer or atomizer to spray a mixture of water, and a few drops of detergent, onto the rotating lap. One of the best spritzers around at this time is the one in the yellow bottle of "I can't believe it's not butter"- it is truly a mister, and if you like the product it is free.

Your new lap will polish a number of gemstones very well. A partial listing follows:

1. Quartz family minerals - Cerium oxide
2. Beryl family minerals - Cerium oxide, take note here however, Emerald should be polished with tin oxide, because tin oxide is soluble in hot nitric acid should some of the polish be forced into an open fissure or tube in the gemstone, cerium oxide is not acid soluble.
3. The feldspar gemstones - Cerium oxide
4. The glasses both natural and man made - Cerium oxide, Tin oxide.
5. Opal - cerium oxide.
6. A number of lapidaries have had considerable success using alpha alumina (Linde A) in various suspensions and slurries, with a number of other gem species.

Over the years a number of other gem materials have been successfully polished on this lap. On occasion you will come upon a stone that will yield to no other lap, yet will succumb to your Wizard Lap. One of the things that makes lapidary so enjoyable is the fact that we are allowed to experiment to our hearts content and make our own discoveries, as I am sure you will once you become familiar with your Wizard Lap.

In order to obtain the maximum lifespan and enjoyment out of using your Wizard lap, you should clean your lap after use and store it in a contamination free container. Whether the container is a lap cabinet or a plastic bag, the important thing is to use it.

Like all plastic laps, your new Wizard Lap will have to be resurfaced to minimize the tendency to glaze. When a plastic lap glazes, it tends to run dry, allowing the lap surface to come into direct contact with the facet being polished resulting in mysterious little scratches appearing out of nowhere. In order to resurface or micro score your lap, you will have to rough up the surface of your lap with a sheet of 60 or 80 grit opencoat abrasive paper. The best way to do this and keep your polishing surface as flat as possible is to lay your sheet of abrasive paper or cloth, face up, on a flat hard surface such as a piece of plate glass. Place your lap, polishing surface down, onto the abrasive surface. Push your lap across the abrasive, then draw it back and rotate your lap about 1/8th turn and repeat the above step. Keep doing this until you have made a couple of revolutions of the lap. Look at your lap and you will notice a maze of new scratches in the surface of your lap. Now is the time for cleanliness. Take your lap to the sink and scrub it vigorously with soap and water and a stiff bristle brush. This step will remove any bit of grit from the abrasive paper that may have become lodged in the lap surface.

Rinse your lap thoroughly with running water and you are ready to polish more gemstones. NOTE: USE THE RADIALLY SCORED SIDE OF YOUR NEW LAP

Good luck with your new Wizard Lap, with care it will polish many, many diverse gemstones successfully. If you have questions or comments please feel free to contact me:

Dick Walker
Walker Gem Services
Lake Oswego, Or. 97035
(503) 699-1807
E-mail: rcw@hevanet.com

To reorder, contact:

Facet Shoppe
Box 499
Port Townsend, WA 98368
(360) 385-4520

facet@gemcutter.com
www.gemcutter.com