

“Slow or Scratchy Laps: For All Lightning Laps, Diamond or Oxide”

All laps slow perceptibly with use, especially resin-bonded laps, as they tend to become shiny after use. And yes, they get less aggressive, or slower than when you first started using them. But proper use, maintenance care, cleaning, and technique is paramount to successful polishing with any lap.

There are many things to consider, such as types of gem material being polished, size of facets, and so on which can cause scratching. It's also not impossible for a lap to acquire a foreign particle, which can stick in the matrix. This is why a clean shop/workspace is imperative!

If you're using a diamond powder or spray of any kind in your Lapidary polishing, make sure your workspace and hands have been properly cleansed in between polishes! Metal laps have the same issue!

But the more common problems come from stone oxides; a byproduct of the polishing process. These oxides bind to any kind of lap surfaces in the form of a whitish shield, or haze which is more visible when the lap is dry. This can prevent proper contact with the abrasives. And potentially can cause scratching.

To correct this problem, scrub the lap at the kitchen sink, using a 3M scrubber, and a slurry of water, “Bon Ami” kitchen cleanser, “Bar Tender's Friend”, “Comet”, etc. with plenty of water to flush afterwards. Pesky contaminants can be removed in this manner.

Sanding with 400-grit sandpaper is a last resort method. And if you sand, you MUST use a waterproof variety! Otherwise, particles of abrasives can be loosed and make their way into the polishing surface, further compounding the problem. When sanding diamond D'Lites, throw away this sandpaper when finished. Do not use on another lap!

Additionally, 91% Isopropyl may be used to clean off some obvious surface contaminants such as dop wax, and marker ink. Using this method, there will be a bit of color on your throw away shop towel.

Dopping wax, or dop glue subsequently abraded during contact to the lap is easily pressed or rubbed onto the lap surface during polishing. Natural gem rough often contains impurities from fractures, etc. which can transfer to the lap surface; and getting in the way of a clean polish. Foreign substances finding their way on any type of lap will interfere with the dynamics of polishing! So, if your laps have picked up crud, they need to be cleaned!

Scratching can be caused by swarf! This is usually due to the "technique" used when polishing stones. NEVER sweep the lap from side to side, (distal edge to distal edge!) Your safe work area is the midway zone between the arbor nut and the distal edge of your lap. And it's a space about 45-50mm in the center of the lap.

Lap rotation is also critical for scratch-free polishing. The direction of the spin needs to be either CW or CCW, depending on whether it's a Right-Hand or Left-Hand machine. But the lap should make contact with the stone facets closest to the dop. On the pavilion, this is usually the part with the most exposed meat of material. When polishing the pavilion, the culet tip would then be pointing away from you; and the lap would be spinning CCW, for most people using R-H machines. NEVER cross the meridian line between 6 o'clock and arbor nut! Doing so reverses rotation, and tears facet edge material, which then produces swarf, that will scratch the facets.

The distal edge (19 mm) is a "Swarf Mine Zone!" Do not go there! Swarf collects like trash from our cars in road side gravel. When you sweep the lap, swarf is dragged back into play! Swarf can be pesky once it is freed to roll. It can then be pressured into the lap becoming stuck until it's pulled out via wet-burnishing!

A method to remove embedded swarf is wet/dry sanding, just like you did with initial burnishing. Takes just seconds. Use plenty of water drip. Spin afterward with water flowing to flush away loose particles, or take to sink and scrub with dish soap and 3M-Scrunge Pad; rinse and resume polishing

Be sure to use "JET DRY" (blue liquid for final rinse in your dishwasher). 4-5 drops per tank full of "filtered", or distilled water will do. Jet Dry is a "surfactant"; makes water wetter. Stops hydroplaning. Makes better contact between stone and polishing surface.

Also, please take careful note: Gemstones like to be "finessed, not bullied!" Polishing isn't a race to the finish line!

Thanks, and happy faceting!