

Polished Porcelain Scratch Removal System Operating Instructions

Step 1: Assessing the Damaged Area

The first step in removing damage from the surface is to determine how deep the damage is and what the best method to remove the damage will be. To determine if the depth of the damage is within repairable limits use the following criteria:

- If you are trying to remove hard water, or etching staining from the ceramic/porcelain surface, use the polish felt first (START ON STEP 4)
- If you can see the scratch but can't feel it with your fingernail, use a pre-polish (Grey) Disk to start. (START ON STEP 3)
- If you can see the scratch and can feel it with your fingernail, use a Black Disk to start. (START ON STEP 2)
- If you can see the base material color in the ceramic scratch, the scratch is too deep to repair.

Once you have determined your starting point, it is important to determine what size disk to start with.

Step 2: Beginning Grinding (FOR SCRATCHES REQUIRING THE BLACK DISK)

Place the Disk onto the backing pad and thread the backing pad onto a variable speed 7" Sander Polisher. (WE RECOMMEND THE MAKITA 9227C OR ANY COMPARABLE 7" SANDER POLISHER)

NOTE: BEFORE ATTEMPTING A REPAIR, MAKE SURE YOU ARE USING ALL APPROPRIATE SAFETY EQUIPMENT INCLUDING EYE PROTECTION AS WELL AS DUST PROTECTION WITH A MINIMUM N95 RATING.

Place the surface of the disk flat against the surface you are repairing, on top of the damaged area before turning the grinder on. Set the variable speed to 1800 RPM and turn the grinder on. Methodically move the disk in both horizontal and vertical motions throughout the damage, not doing so can cause wavy ridges in the finished repair surface. Methodical grinding movements will allow for no distortion results.

While grinding porcelain, the surface will heat up. It is important that you monitor the heat during the repair process. We recommend the use of a non-contact thermometer that can be bought at most hardware stores. The goal is to keep the hottest part of the repair to within 120 degrees Fahrenheit of the coldest part of the porcelain material.

IF YOU OVERHEAT THE PORCELAIN, IT CAN CRACK AND OR BREAK. TAKE NECESSARY PRECAUTIONS TO PREVENT THIS BY MONITORING THE TEMPERATURE DURING THE REPAIR PROCESS.

During the repair process, the surface of the disk will clog up with surface dust. It is important to remove this dust by gently tapping the surface of the disk when it is not rotating with the flat non-aggressive side of the rasp file. Keeping the disk free from dust will reduce the time spent grinding. Continue grinding until you are able to see the damage has been removed.

Step 3: Pre-Polishing (Using the Grey Disk)

Remove the used Black Disk from the backing pad and place a new Grey Disk on the surface of the backing pad. A new or clean Grey Disk should be used on every repair. With the speed of the grinder still set at 1800 RPM, place the disk flat against the surface and begin grinding. The Grey Disk is used to smooth out the surface of the area you had previously ground and prepare it for polishing. Unlike the Black Disk, the Grey Disk performs its full function when the porcelain dust builds up on the surface of the disk. Once the surface of the Grey Disk is clogged up with dust, you will feel the disk slip on the surface. As soon as you feel the disk begin to slip, increase the speed of the grinder to between 2800 and 3000 RPM. This is the final stage of pre-polishing and is when you will want to start feathering out the repair area 2 inches into the surrounding surface. When the ground surface area of the porcelain is covered with a uniform haze, and the transition between the ground area and the unground area looks wispy, or feathery, it is then time to move to the polishing process.

Step 4: Polishing

After the pre-polish step is complete, remove the Grey Disk and replace it with the Polishing Felt. Turn the grinder's variable speed down to 600 RPM. Take the rasp file and begin to rough up the polishing felt to help allow the polish to soak in and insure a good polish. Fill the light or dark bottle with 16 oz of clean water, shake the bottle of Polishing Compound and give several squirts of compound onto the surface of the felt. The goal is that the felt should be damp to the touch but not soaked, and not dripping. Use the light polish (white cap) on most colored surfaces and the dark polish (black cap) on dark colored to black surfaces. **DO NOT USE THE DARK POLISH ON LIGHT COLORED SURFACES, IT WILL PERMANENTLY STAIN THE SURFACE!** Place the felt FLAT on the repair area of the porcelain and begin the polishing process. Spread the polish over the ground area to something that resembles "non-fat milk," once this is done, the grinder speed can be sped up to between 1200 and 1500 RPM. Polishing the porcelain can heat the surface up as well, so it is important to continue monitoring the temperature of the repair area. As the polishing felt dries up, you will need to reapply polish to the felt surface. Polish until the gloss of the ceramic surface looks the same from all angles and the haze is completely removed. Once the polishing has been completed, you can clean the surface with any normal cleaning solution.

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