

Step 1 Equip the operator with the appropriate PPE when working with this application including safety glasses, dusk mask (NIOSH/ N95), gloves and ear protection based on the work environment and OSHA guidelines.

Step 2 Identify the type of glass being repaired. Glass surfaces that can be repaired are tempered, laminated, insulated, heat treated annealed. Unrepairable surfaces include tinted or low-e coated surfaces.

Step 3 Clean the glass surface thoroughly including the frame and moldings that may surround the glass. **The surface must be free of ANY foreign contaminates. Further damage may occur result if this step is not completed.**

Step 4 Isolate the damaged area by masking the area with a tape dam or cutting a hole in a plastic drop sheet and taping it against the glass. Circle the damaged area on the opposite side of the glass to maintain accuracy in the repair area.

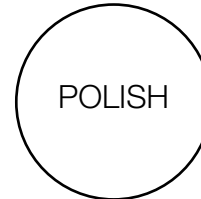
Step 5 Identify the type of damage being repaired so as to choose the appropriate sanding or polishing materials based the guide below (Disc are color coded w/ part#):

Heavy Damage Damage that is considered to reach a depth of .014 of an inch or more. Damage could be a result of pitting, scratching or etching that has resulted in heavy fluctuations in the glass surface. Can be felt with a razor blade or finger nail (nail or razor blade will stop in the defect). This type of damage will require coarse or medium coarse speed grit materials when starting the repair

Medium Damage Damage that is considered to reach a depth of .005 -.013 of an inch. Damage could be a result of pitting, scratching or etching that has resulted in irregularities in the glass surface. Can be felt with a razor blade or finger nail (nail or razor blade will catch but not stop in the defect). This type of damage will require medium coarse or medium speed grit materials when starting the repair.

Lite Damage Damage that is considered to reach a depth of .001 -.004 of an inch. Damage could be a result of incidental scratching. Can be seen but rarely felt (noticeable with the refraction of light). This type of damage will require fine or extra fine speed grit materials when starting the repair

Staining Damage Damage that is considered to be surface damage with minor etching. Damage could be a result of high TDS levels (hard water), acid rain and or weathering over long periods of time. This type of damage will require extra fine speed grit materials or polishing materials when starting the repair.



>>START WITH LEAST AGGRESSIVE DISC THAT WILL REMOVE THE SCRATCH. THEN CONTINUE THE PROGRESSION>>

Step 6 Attach the appropriate sanding disc based on the damage to the correct sized hook and loop backing plate. Screw plate onto polisher hand tight.

Abrasive Steps The progression of abrasives must be followed from whatever abrasive is chosen to start with. Example: if the Medium disc is chosen to remove the scratch, the fine disc followed by the ultra-fine disc will need to be used in that progression before fishing with the polishing step.

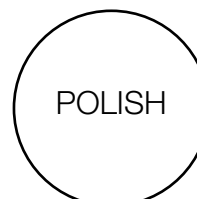
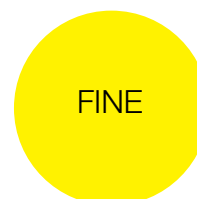
Step 7 Set the polisher to 1000-1500 rpm during the sanding steps. Start the polisher and begin sanding in the designated area that has been circled from the opposite side of the glass. Sand effected are with the first abrasive chosen until the damage has been removed. Keeping the disc as flat as possible.

Glass Temperature Ideal temperature range for repair is 65-100 Degrees F. It is recommended to stop and check the temperature during the repair to maintain an operable temperature.

Step 8 With the damage removed, progress to the next level of abrasive in the step down process. Circle the haze created with the first abrasive used. Now begin running the next level of abrasive in the newly circled area while overlapping 1 inch. Continue to use this abrasive until the haze inside the newly circled area has been lightened to match the 1 inch overlapped haze outside the circle. Follow these procedures to progress down to the ultra-fine disc (circling the new haze left from the previous step and overlapping with the next progression down. **Cleaning the glass between each disc progression.**

Step 9 Once the sanding progression has been followed down to the ultra-fine disc the polishing step will finish the restoration process. Fill the pressurized tank with water (distilled water works best) and connect it to the polisher. Set the polisher speed to 2500 rpm. Attach one of three options for polishing to the polisher itself and begin polishing while using the on-demand spray trigger to distribute water on the surface of the glass to keep the surface lubricated. Continue to polish until the glass is restored to its original finish.

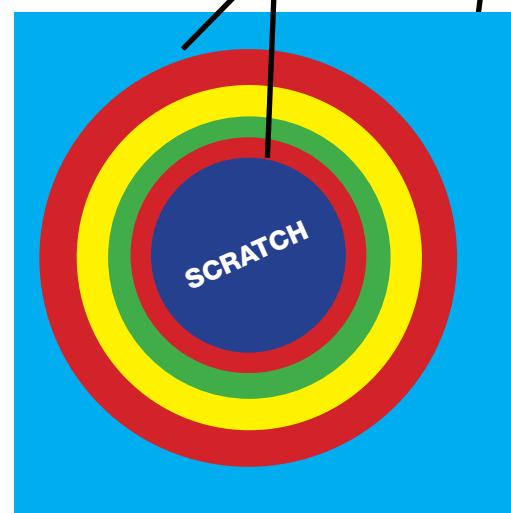
Polishing Steps The three polishing steps that can be used are as follows: White PSA disc (3" and 5") that can be attached to the smooth PSA backing pad. 5" felt polishing pad can be attached to the 5" hook and loop backing pad and used with the Diamond Fast Powder (Diamond fast powder can be mixed with water to form a paste that can then be applied to the felt pad to polish the glass surface. 5" foam polishing pad can be attached to the 5" hook and loop backing pad and used with the Liquid Diamond Polish to polish the glass surface.



>>DISC PROGRESSION>>

Overlap progression using all steps.

Glass



Troubleshooting

The Glass will not polish to a clear finish at the final polishing step.

This typically occurs when the operator has not spent enough time with one of the sanding steps leading to the final polishing step. Remember to circle with a marker the new haze from one abrasive to the next. The overlapped haze outside of the marked area is the true haze that must be achieved inside the marked area. Think of the overlapped sanded area as a template for what is required to lighten the haze inside the marked area before moving to the next step down in the abrasive process.

Dirt contamination can also cause a reduction in polishing. Make sure to thoroughly clean the area in and around the repair before and between each step.

The polisher will not turn on. Typically resolved by the reset button on the GFI safety switch on the polisher. If this does not resolve the issue check the circuit breaker on the outlet being used.

Scratching or Swirling Effects on the Glass. Is normally created from a contaminant that has affected a sanding or polishing step. Discard any abrasives being used as well as all polishing applicators being used.