C 5.3.0.0 - Hard Water Deposits [CAT-1]

APPROXIMATE TIME PER SQUARE FOOT: 4 - 7 minutes

Light hard water deposits are characterized by the accumulation of salt residues lightly adhered to glass surfaces. These deposits predominantly consist of alkaline minerals and are the direct result of the glass's exposure to water with a high Total Dissolved Solids (TDS) content. Typically, water with a TDS exceeding 20 parts per million is prone to leaving behind these mineral traces as it evaporates. In the initial stages, these deposits rest on the glass surface, beginning the process of forming ionic bonds with the trace elements found in the glass's outermost layers. This early stage of deposit formation is crucial for restoration efforts, as the bonds have not yet fully solidified, making the deposits easier to remove.

Fig. 5300A

Fig. 5300B

IMPORTANT NOTE: During the glass restoration process, it's crucial to closely monitor the temperature of the glass pane. The heat generated from grinding or polishing can increase the risk of thermal stress, potentially leading to cracks or breakage. To effectively manage this risk, it is recommended to use a non-contact thermometer, a tool available at most hardware stores. This allows for accurate and safe temperature measurements without interrupting the workflow.

Regular monitoring of the temperature differential between the repair area and the rest of the pane is key to preventing thermal damage. Should the temperature in the work area rise significantly, pause the restoration and allow the glass to cool. Immediate cessation of work and allowing the pane to return to a normal temperature range is necessary if overheating occurs. For specific temperature guidelines and detailed procedures on managing thermal expansion, please refer to section C 3.1.1.0 - Thermal Expansion.

TEMPERATURE ADVISORY	Delta	Maximum Temperature
Annealed	+80℉ Δ	N/A
Tempered	+120℉ Δ	N/A
Laminate- Annealed	+80℉ Δ	145℉
Laminate- Tempered	+120℉ Δ	145℉
Mirrored	+80℉ Δ	N/A

Fig. 5300C

Tool Checklist

- ☐ Corded, Variable Speed, Rotary Polisher (600-3000 RPM MINIMUM, ⅝-11 threaded spindle)
- ☐ Backing Pad
- ☐ Foam Finishing Disk(s)
- ☐ Cutting Compound
- ☐ Polishing Felt
- ☐ Polishing Compound
- ☐ Rasp
- ☐ IR Thermometer

Workspace Checklist

- ☐ Power Access
- ☐ Workbenches, ladders, scaffolding, lifts, etc. (If Applicable)
- ☐ Masking Tools
- ☐ Drop Clothes/ Tarps/ Waste Receptacles
- ☐ Temperature Control Tools (If Applicable)

Damage Assessment Checklist

- ☐ Confirm Glass Type
- ☐ Confirm Damage Type
- ☐ Inspect Glass System Integrity (Framing, Glazing, Etc.)
- ☐ Inspect Glass Pane Integrity (Cracks, Chips, etc.)
- ☐ Identify Damage Location(s)

Notes:

Hard Water Deposits (Light)
C 5.3.1.0 - Step One: Cutting

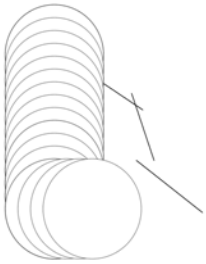

Fig. 5310A

Fig. 5310B

Fig. 5310C

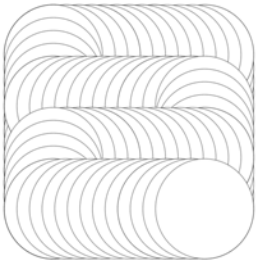

Fig. 5310D

C 5.3.1.0 - Step One: Cutting utilizes a Foam Finishing Disk to quickly remove target damage.

1. Secure a Foam Finishing Disk to the designated backing pad.
2. apply 1/4 - 1/2 oz. of Cutting Compound to the surface of the Foam Finishing Disk.
3. Adjust the polisher to operate at a rotational speed of 600 RPM.
4. Align the Foam Finishing Disk surface directly above the glass's damaged area, ensuring that the disk remains parallel to the glass pane.
5. Engage the polisher's power trigger, and trigger lock.
6. Employ a systematic cutting approach by guiding the RenuDisk in alternating horizontal and vertical paths across the damaged area. This action should form a precise cross-hatch pattern. Maintaining uniform pressure, continue cutting until all damage has been removed.
7. Disengage the Foam Finishing Disk from the glass pane.
8. Disengage the polisher's power trigger. Ensure the disk is stationary.Detach the Foam Finishing Disk.
9. Continue to [Step Two: Polish].

NOTE: Over the course of cutting, it may be necessary to reapply Cutting Compound to the Foam Finishing Disk. If the Cutting Compound has been fully worked into the glass, or if the Cutting Compound becomes dry on the pane:

- **Disengage the polisher, ensuring the disk is stationary.**
- **Apply 1/4 - 1/2 oz. of Cutting Compound to the surface of the Foam Finishing Disk.**

Fig. 5310E

Fig. 5310F

Fig. 5310G

Notes:

Hard Water Deposits (Light)
C 5.3.2.0 - Step Two: Polish

C 5.3.2.0 - Step Two: Polish utilizes the Polishing Felt and Polishing Compound to restore glass to full luster.

1. Secure the polishing felt to the designated backing pad.
2. Using the rasp file, abrade the polishing felt surface gently. This helps elevate the natural fibers of the felt for enhanced polishing ease and efficiency.
3. Vigorously agitate the bottle prior to each application to ensure homogeneous distribution of the polishing compound. Apply Polish Compound directly to the felt's surface.
4. Adjust the polisher to operate at a rotational speed of 600 RPM.
5. Align the polishing felt surface to overlap the top left corner of the established work area by approximately ½ the diameter of the polishing felt, ensuring that the disk remains parallel to the glass pane.
6. Engage the polisher's power trigger, and trigger lock.
7. Disperse the polish uniformly across the entirety of the work area.
8. Employ a systematic polishing approach by guiding the polishing felt in alternating horizontal and vertical paths, expanding the established work area created in Step Two by approximately ½ the diameter of the RenuDisk. This action should form a precise cross-hatch pattern. Maintain uniform pressure. Continue the polishing process until all of the Polishing Compound has been worked into the glass.
9. Inspect the entire work area, checking for any remnants of haze from multiple angles. Pay particular attention to the edges and corners of the work area. If any remnants remain, begin Step Three again.
10. When the pane has been adequately restored, clean the glass using any standard glass cleaning technique to remove excess Polishing Compound.

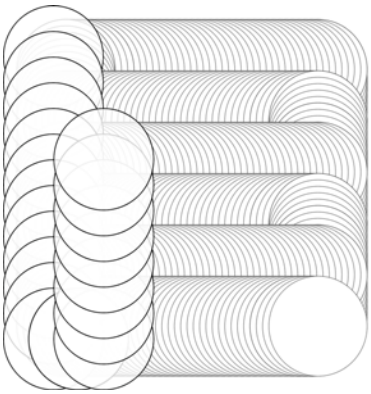

Fig. 5320A

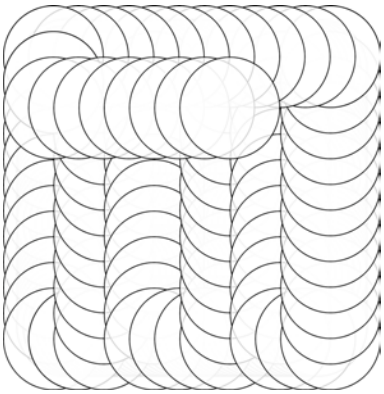

Fig. 5320B

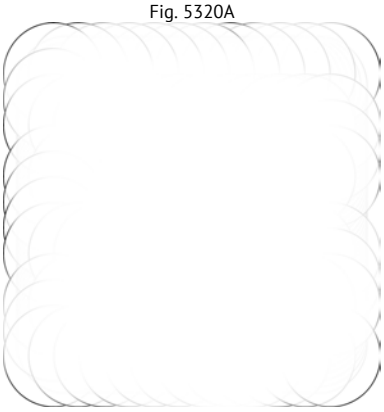

Fig. 5320C

Fig. 5320D

Fig. 5320E

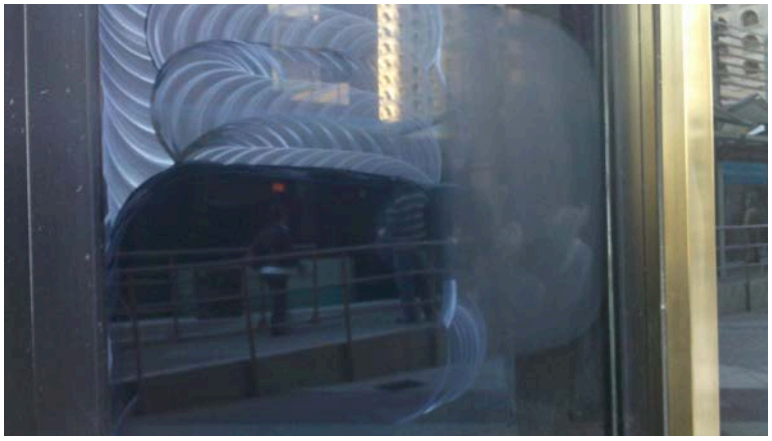

Fig. 5320F

Notes: