

# **Scratch Away Glass Polishing**

## **Contents**

<b>1. Introduction</b>	<b>Page 2</b>
<b>2. Equipment Specification</b>	<b>Page 3</b>
<b>3. Technical Data</b>	<b>Page 4</b>
<b>4. Preparation</b>	<b>Page 5</b>
<b>5. Polishing Fine Scratches</b>	<b>Page 9</b>
<b>6. Technical Tips</b>	<b>Page 11</b>
<b>7. Polishing Heavy Scratches</b>	<b>Page 12</b>
<b>8. Parts List</b>	<b>Page 16</b>

## **Introduction**

**Scratch Away is a complete system for the removal of both light and deep scratches from glass. It is suitable for use on Laminated, Toughened and Plate Glass. It is a portable system, allowing on site operation, which means that there is no need to remove the glass for polishing. There are many possible applications for the system, including automotive, ships, double-glazing and architectural glass.**

**Those who have previous experience of glass polishing will find Scratch Away is both faster and cleaner in use when compared to earlier glass polishing systems.**

**In order to achieve the best possible results from your Scratch Away system, please read the instructions carefully before use. As with all new equipment, a period of familiarisation and practise is recommended before serious use.**

**It is very important to learn the difference between fine (light) and heavy (Deep) scratches.**

**Fine Scratches can be polished out by both the Compact Kit and the Professional kit. They are comparatively, fast and easy to remove and will not create any distortion effects due to removal of excess material. Examples of fine scratches include surface abrasion of windscreens caused by the wiper blade, glass on glass rub marks, caused in handling and light clean scratches caused by a piece of sand or grit being rubbed across the glass.**

**Deep Scratches can only be removed by the Professional System. This is a three-step process and will take a longer time to carry out than the light polishing process. With very deep scratches, removal of the scratch may create a small degree of distortion due to the amount of material removed. Examples of deep scratches are diamond ring scratches and windscreen wiper marks where the damaged wiper has not been replaced for a long time. Deep scratches can be easily felt by running a fingernail across them, and when viewed closely, the edges of the scratch look rough and chipped.**

## **Scratch Away Kit specification:**

### **1. Professional Kit**

**The Professional kit contains materials for the removal of both fine and heavy scratches as previously described.**

### **2. The Compact Kit**

**The compact kit is only suitable for the removal of fine or light scratches as previously described. The compact kit shares the same polishing tool as the professional kit. The consumables can be upgraded at a future date to give deep scratch removal capability.**

## **Technical Data: Electric Tool**

**Speed 5000 - 9500 RPM**  
**Weight 1.5 Kg**  
**Power Consumption 150 Watts**  
**Voltage 220 / 230 volts (110v available)**

**EC Declaration of conformity. We declare at our sole responsibility that this product is in conformity with the following standards of the standardised documents: pr EN 50144, EN55014, HD 400, IEC 1029-2-6/1029-2-7 in accordance with the regulations 73/23/EWG, 89/392/EWG, 89/336/EWG.**

### **Preparation**

**When connecting the SAW XEB polishing tool to the electricity supply, it is recommended that a circuit breaker plug be used.**

## **Technical Data: Air Tool.**

**Speed 10,500 RPM**  
**Weight 750 grams.**  
**Air consumption 280l/min**  
**Air Pressure 6 bar (Minimum)**

**Lubrication. The Air Tool should be lubricated each time it is used. Place 2 or 3 drops of Air Tool Oil into the machine via the air inlet behind the air control knob.**

## **Preparation:**

### **Air Tool**

Connect the air tool to the compressor using a suitable airline connector and airline. The control knob at the end of the handle is used to control the airflow to the machine. This is normally set to the fully open position, but can be partially closed if required. This will reduce the speed of the tool, which may be necessary if the compressor is unable to maintain a steady flow of air.

## **Preparation:**

### **Electric Tool**

When connecting the Scratch Away XEB tool to the electricity supply, it is recommended that a circuit breaker plug is used.

The speed control knob at the back of the machine should be set to 6. (Maximum speed) The black rubber support foot at the end of the handle should be adjusted so that the polishing head is flat to the glass. This adjustment is done most easily when the tool has the black rubber polishing head and polishing disc in place.

## **Prepare the Yellow Velcro applicator heads.**

**(All Systems)**

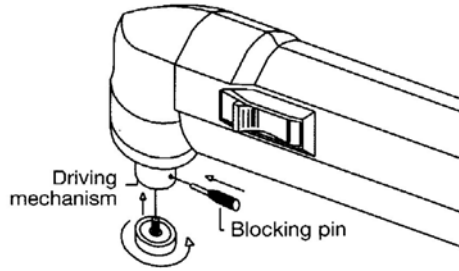
For polishing fine scratches use a beige polishing disc and press the disc firmly onto the yellow Velcro polishing head. (Ensure that the head is clean & dry, to provide a good bond). See diagram 1.



Diagram 1

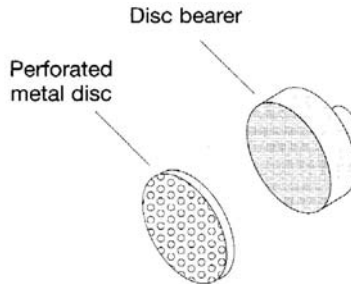
To mount the yellow applicator head onto the machine it will be necessary to use the silver Locking Pin to prevent the shaft from rotating while the applicator head is screwed in. The Locking Pin is placed into the small hole in the drive mechanism, and gently pushed forwards; at the same time as the applicator head is rotated. Continue, until the locking pin locates. Keeping light pressure on the Locking Pin, the applicator head can be screwed fully into the machine. See diagram 2.

**ATTENTION! Always remove the tool from the power supply before using the locking pin. Also ensure that the locking pin is removed from the tool before reconnecting to the power supply.**



**Diagram 2**

**The yellow applicator head can also be prepared for the polishing of medium and heavy scratches by fixing a Velcro backed perforated metal disc to it. See Diagram 3.**



**Diagram 3**

**Clean the glass thoroughly in the area to be polished. Any dust or sand not removed prior to the start of polishing may result in extra scratching of the glass.**

**Using the marker pen supplied, outline the area to be polished on the inside of the glass. This outline provides the user with a reference point whilst polishing, so the more accurate the guideline, the more accurate the polishing will be**

**For the polishing of fine scratches, one bucket of clean water will be required**

**Select the correct Ring Sponge and soak it in the water for 2 minutes. There are 3 different ring sponges you can use. They are identified by having small holes cut into the corner of the sponge: -**

**2 small holes... Use ONLY with the metal disc and heavy (RED) cutting paste.**

**1 small hole.... Use only with the metal disc and medium (Pink) cutting paste.**

**No holes in the corner of the sponge... Use only with the beige polishing disc.**

## **Polishing Fine Scratches.**

### **Compact or Professional Scratch Away**

**(Reminder: Fine scratches or light scratches are those which are visible, but can not be felt when running a finger nail across them. Fine scratches are up to 0.09 mm wide.)**

**1) Having cleaned the glass and outlined the area to be polished place the wet ring sponge (using clean water) over the work area. The water in the sponge provides the lubrication for the polishing process.**

**(The correct sponge for fine polishing is the one without any**

**small holes in the corner). To help to locate the sponge in position on the glass you can use the small sucker provided. Press the sucker onto the glass above the work area and position the sponge so that the sucker is at the top centre of the ring.**

**2) Press the sponge above the work area to send water across the area to be polished.**

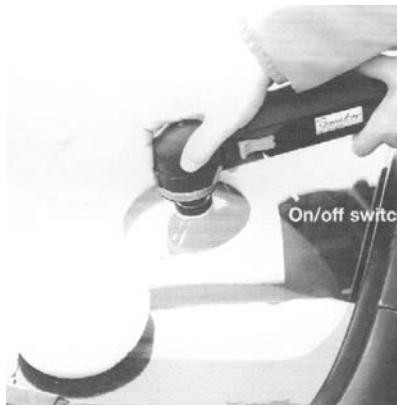
**3) Add a small portion of the white “Final Polishing Powder” to the area to be polished.**

**4) Ensure that you have the applicator head with the beige polishing disc fitted to the tool, switch the tool and press the tool firmly onto the glass.**

**To switch on the air tool you must hold in the button mounted underneath the handle while the tool is in use**

To switch on the electric tool, push the green slider switch mounted on the side of the tool, forwards. It will click into position and the tool will start to run. To stop the tool, push down on the back of the switch and it will click off.

**Note:** It is important to hold the tool so that the polishing disc is held squarely onto the glass to obtain the most efficient polishing action. To do this hold the tool with your hand over the top of the tool; pushing down directly onto the polishing head. Holding the tool by the handle will result in the polish head NOT being held squarely onto the glass, which will reduce its efficiency. See Diagram 4 (Electric Tool)



**Diagram 4**

5) Move the tool in a slow circular action, moving along the scratch as you do so. Repeat this process several times, but not exceeding 30 seconds per session. Polishing in short sessions will prevent overheating, and running dry.

6) Remove the sponge, clean the work area with the squeegee and inspect the scratch.

7) Repeat steps 1 to 5 until the scratches are seen to disappear.

### **Technical Tips: (Light polishing.)**

A) The correct amount of water from the sponge is important. You must press the sponge as often as necessary, in order to keep the glass wet. The water is the lubricant. Too much water will wash the polishing compound away from the work area. Too little water will allow the work area to dry out, causing overheating, which may result in softening of the adhesive holding the discs onto the black rubber head. This may result in the discs coming away from the rubber head.

B) A polishing compound is impregnated into the beige polishing head. (This is supplemented by adding the white polishing powder as required.) The polish will mix with the water for maximum polishing efficiency and the water over the polishing area will appear milky.

C) Polishing for too long without a rest will lead to overheating. This will soften the adhesive holding the polishing head onto the applicator, which may result in it becoming detached.

D) Pressing the tool firmly and squarely onto the glass is important. Two to three Kg. of pressure is sufficient.

Do not tilt the tool to one side; this may seriously impair the polishing efficiency

**ATTENTION:** Always check that the polishing head is rotating

If it stops turning, then you are either pressing down too hard, or the polishing head is not being held flat to the glass.

**E) If the scratch is longer than the diameter of the ring sponge, then the scratch is treated in steps. Put the sponge at the beginning of the scratch and treat this part first. The sponge is then moved along the scratch to the next area to be polished, without lifting it off the glass surface.**

## **Removal of Heavy or Deep Scratches.**

**(Reminder:) A heavy or deep scratch is one that exceeds 0.13 mm in width or depth. This type of scratch can be easily felt when running a fingernail across it. The edges of the scratch will look rough.**

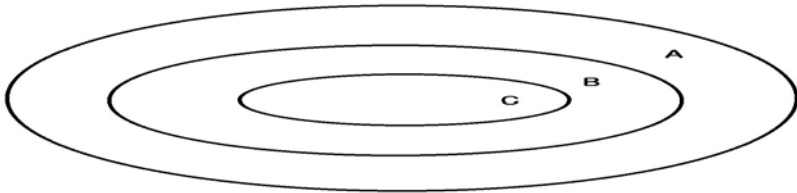
**The process for removing deep scratches is a three-step process: - see *diagram 5***

**Step 1. Area C: Metal disc + Heavy (Red) paste to cut away the glass surface to the depth of the scratch.**

**Step 2. Area B: Metal disc + Medium (Pink) paste to start to restore the surface finish.**

**Step 3. Area A: beige polishing disc (As for fine scratches) to fully restore the glass surface.**

**ATTENTION: Always change the water between steps to prevent contamination by any residue of the previous compound. Also clean the perforated metal disc and the glass thoroughly between steps 1 and 2 to prevent cross contamination between the grades of material.**



**Diagram 5**

### **Step 1 Details:- Area C**

**Clean the glass and mark out the work area on the reverse side of the glass, using the special marker pen supplied.**

**Wet the correct ring sponge (2 holes in corners) and place onto the glass using the support sucker if required. Fit the applicator head with the perforated metal disc onto the tool.**

**Apply a small quantity of the Red (Heavy) cutting paste to the scratch and apply water by pressing the sponge above the paste.**

**Switch on the tool and press onto the glass (4 to 5 Kg force is required for the best results).**

**Polish along the scratch in short bursts. Keep to the line of the scratch to avoid removing excess glass.**

**Clean and inspect. This process will leave a Matt surface to the glass.**

**Repeat this process until the scratches are no longer visible.**

**When this has been achieved, clean all traces of the heavy cutting compound off the glass. Also clean the sponge and perforated metal disc.**

## **Step 2 Details:- Area B**

Using clean water, wet the correct ring sponge (1 Hole in the corner) and position over the matt area of glass.

Put some of the Pink (Medium) paste onto the glass and apply water from the sponge.

Switch on the tool and polish as before.

**NOTE:** The area polished with the medium compound should be greater than the matt area. This will “feather out” the work area and thus reduce distortion.

This process will reduce the matt area down to a semi-transparency, ready for the final polish. The more time taken at this stage, then the easier the final polish will be. When finished, clean the glass, sponge, and perforated metal disc as before.

## ***Step 3 Details: - Area A***

The final polishing procedure is the same as already described in the section on polishing light scratches.

**Warning.** Polishing out very deep scratches will leave some distortion in the glass surface. “Feathering out” the work area, see diagram, will reduce this effect. See diagram 5 above for further details.

When polishing the glass back to a full shine after

Steps 1 and 2, the centre of the matt area will always polish faster than the edge. It is normal to spend longer polishing the boundary area.

## ***OPERATION 3 Medium Scratches.***

Medium scratches are those between 0.1 mm and 0.12 mm. These are scratches that can **JUST** be felt when running a fingernail across them.

To polish out medium scratches, follow steps 2 and 3 of the heavy scratch procedure.

### ***Spare Parts List***

<b><i>Part No</i></b>	<b><i>Description</i></b>
<b><i>966000</i></b>	<b><i>Electric Scratch Away Tool</i></b>
<b><i>93.066</i></b>	<b><i>Beige (Velcro) Polishing Disc</i></b>
<b><i>93.061</i></b>	<b><i>Perforated Metal Disc (Velcro)</i></b>
<b><i>93.110</i></b>	<b><i>Red (Heavy) Cutting Paste</i></b>
<b><i>93.100</i></b>	<b><i>Pink (Medium) Cutting Paste</i></b>
<b><i>93.075</i></b>	<b><i>Yellow Velcro Applicator Head</i></b>
<b><i>93.130</i></b>	<b><i>Set of Ring Sponges</i></b>
<b><i>ESPCER70</i></b>	<b><i>Final Polishing Powder</i></b>
<b><i>93.180</i></b>	<b><i>Locking Pin</i></b>
<b><i>93.200</i></b>	<b><i>Scraper / Squeegee</i></b>
<b><i>93.164</i></b>	<b><i>Marker Pen</i></b>

***For any other item not listed above, please telephone our sales line on 01782 565811.***

