Instructions for Use

TALON Laminated glass repair system

1. Introduction

In order to achieve the best possible repair results it is essential to first practice the individual steps of the repair process. To do this, take a practice pane of laminated glass and use the steel ball provided to create typical stone damage areas, by hitting it against the glass.

2. Preparations for repair

2.1 Cleaning

Use a dry cloth to clean around the damaged area, without actually wiping the point of impact. Use the hard metal rod to remove loose splinters of glass from the damaged area, being careful not to enlarge it.

- **Important:** The more glass missing from the surface of the damaged area, the more visible residues there will be after repair.

2.2 Fixing the mirror

Fix the mirror onto the inside of the windscreen so that the repair process can be observed from the outside.

2.3 Drilling

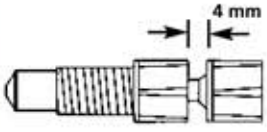
Fit the hard metal drill bit and drill a hole about 1mm deep at right angles to the windscreen in the center of the damaged area.

- **Important:** Make sure you hold the drill with both hands! This is the only way to ensure exact positioning of the drill. It is possible to avoid the drill overheating by briefly interrupting the drilling about every two seconds.

2.4 Filling the injector

Open the repair pack and take out the injector and the resin pipette. Check the use by date of the resin on the packaging.

Unscrew the piston 4 – 5mm out of the cylinder. Cut off the tip of the resin pipette diagonally and completely fill the chamber of the injector with repair resin.



- **Important:** After filling close the resin pipette and immediately replace it in the protective packaging to minimize exposure to ultraviolet light.

2.5 Fixing the tool holder

Apply vacuum gel to the suction pads on the tool holder. This will enable you to reposition the tool holder. Fix the tool holder to the windscreen by pushing back the suction lever. The tool holder should be positioned so that the injector is directly above the damaged area.

Screw down the injector until the injector seal is completely in contact with the windscreen.

- **Important:** Only turn the cylinder – see diagram No. 1.

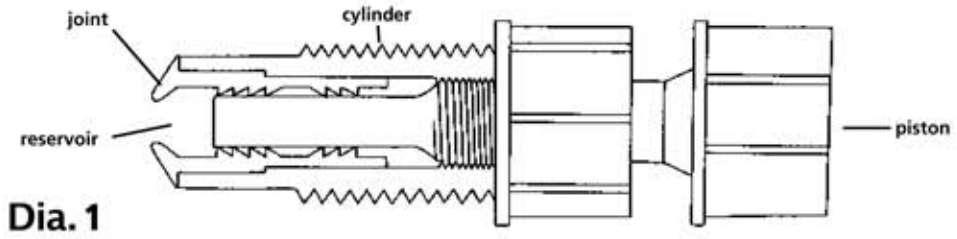
3. Repair process

Never carry out repairs in direct sunlight. The repair resin can harden too soon if exposed to ultraviolet light.

3.1 Pressure phase

Screw the piston into the cylinder until the hole in the seal becomes slightly enlarged (by about 1mm).

- **Important:** Always hold the cylinder while turning the piston.



Dia. 1

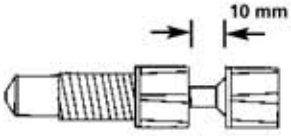
Due to the pressure created in the chamber the resin is pushed into the damaged area.
In the mirror you can see how the damaged area is filled with resin and becomes clear and transparent.

3.2 Suction phase

Unscrew the piston by about 10mm until the thread is visible.

- **Important:** Always hold the cylinder when turning the piston.

Leave in this position for 5 minutes.



A vacuum is created in the chamber (Diagram 1)
In the mirror you can see how air in the form of little black dots escapes from the hole in the windscreen in the direction of the injector.
The pressure and suction phases need to be repeated until no air (little black dots) is visible during the suction phase.

3.3 Heating

By gently heating the damaged area it is possible to accelerate the filling of small cracks and the removal of air bubbles. To do this hold the cigarette lighter just under the point of impact on the inside of the windscreen for about 3 – 5 seconds.

- **Important:** Only heat during the suction phase. Otherwise the expanding air creates an unwanted vacuum in the damaged area.

4. Hardening the repair

Once the damaged area is clear and free of air bubbles, you can begin the hardening process.

First remove the tool holder by pulling back the suction lever and slightly tilting the tool holder away from the windscreen.

4.1 Foil

Take a piece of foil (about 4 – 5 cm) from the roll and place it gently over the repair without applying any pressure.

4.2 Finishing resin

Gently lift the foil to expose the point of impact. Put a drop of the finish resin directly onto the point of impact and let the foil drop back onto the windscreen.

4.3 Ultraviolet lamp

The Ultraviolet lamp accelerates the hardening process. After rubbing vacuum gel onto the suction pads, fix the Ultraviolet lamp to the outside of the windscreen and turn it on.

The hardening of the damaged area takes about 5-6 minutes. If you have an Ultraviolet lamp with a timer, it will turn itself off automatically.

5. Completing the repair process

5.1 Scraping

Remove the foil from the damaged area and use the blade to scrape any residual material from the windscreen. Be careful not to scrape at or plane away the resin as this could lead to it being pulled out of the damaged area.

Should you find that after this process there is an indentation in the repair, you will need to reapply the finish resin, replace the foil, harden the resin again and scrape the windscreen free of residues. Only then can you be sure of achieving a perfectly level surface.

Only use blades with no defects, otherwise you risk damaging the windscreen.

5.2 Polishing

Finally, fit the polishing bit to the drill and using some of the polish and a little pressure, polish the repaired area.

- **Important:** Polishing for too long can remove repair resin as a result of which the surface may no longer be level.

Once the repair has been completed, clean the suction pads on the tool holder, lamp and mirror with a lint free cloth. To clean the injector, remove all residues of resin from the chamber by turning the injector so that it is completely closed.

Conditions for the repair of laminated glass windscreens.

Repairs are only permitted under the following conditions:

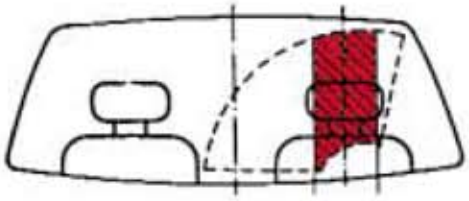
1. Only damaged areas on the exterior surface of the windscreen can be repaired. There must be no evidence of damage to the interior of the windscreen or to the plastic film.
2. Repairs must be carried out as soon as possible after the damage has occurred. There must be no visible signs of damp or dirt in the damaged area.
3. The hole at the point of impact must not have a diameter larger then 5mm.
4. Any cracks radiating out from the point of impact may not be longer then 50mm. Cracks must not end in the sealing rubber.

Addition to the conditions for repairs to laminated glass windscreens

Fields of vision in which a repair is **not permitted**. (Long distance field of vision)

1. Cars and other vehicles with a maximum permitted weight of up to 3.5 tons:

The zone in which a repair is not permitted is made up of a 29cm wide strip (about the width of a piece of A4 paper in landscape format) with its centre on a line which dissects the center of the steering wheel and with its upper and lower limits formed by the arc of the windscreen wipers.



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Call your Equipment Solutions workshop equipment representative for additional repair information: 1-800-892-9650