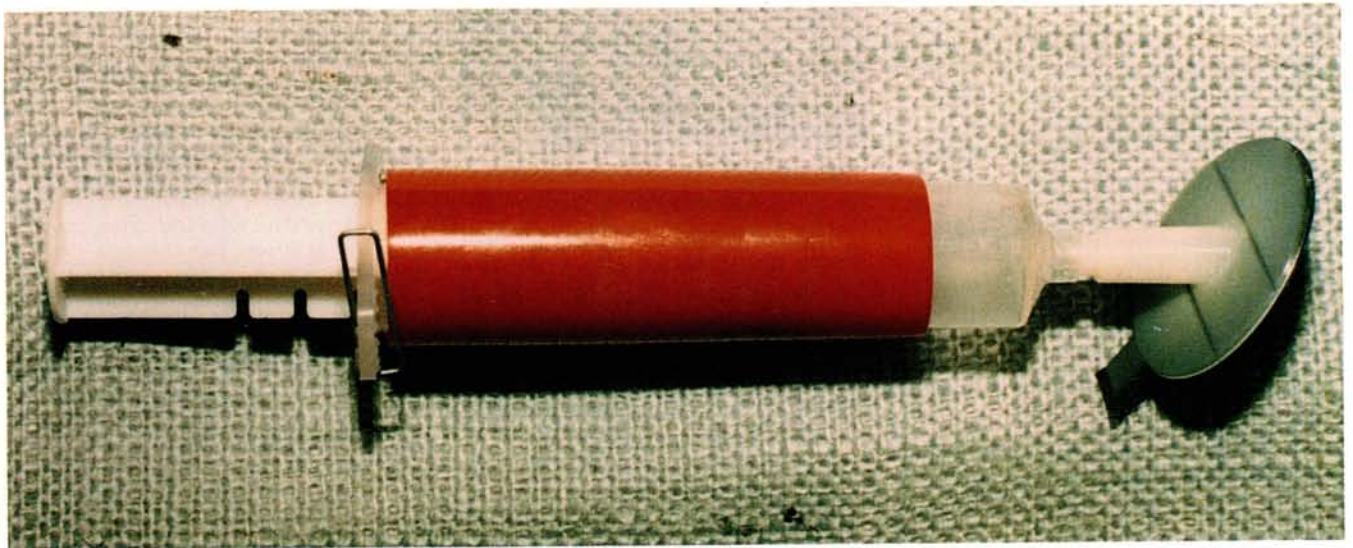


Windshield Repair Kits



A long time ago, we did an article on repair kits for cracked taillight lenses. These lenses had gotten bigger and a lot more expensive over the years, and repairing them became a logical alternative to replacement. Many of you found a whole new source of income, and made some friends to boot, by repairing these lenses at a profit, and saving your customers a bundle of cash.

The price of windshields has also gone up, and they take even more abuse from rocks and flying debris than taillights do. Glass men have names for the small damaged spots in windshield glass. They're affectionately known as bullseyes, stars, or daisies, depending on the appearance of the flaw.

Many of these small imperfections can be repaired with a windshield repair kit at a fraction of the cost of a new windshield. And like taillight lens repair, windshield repair can be one of those services that makes everyone involved richer and happier.

Here are some of the pluses to consider:

- **It's easy to do.**
- **Even shops that don't want to replace windshields can do these repairs.**
- **Many shops charge 50 dollars or more to repair a windshield.** The customer may balk at this, but pricing a new windshield usually cures these objections in a hurry, especially when you suggest that there's probably another stone flying around out there just waiting for that fresh windshield glass.
- **This repair can be done while you do a scheduled maintenance and repair.** In many cases, you can set up the repair, and go on with the rest of the job. This also saves the customer the time and hassle of a separate trip to the glass shop.
- **There are a lot of damaged windshields out there.** We surveyed our own parking lot and found that better than half of all the cars parked outside our windows have some kind of windshield damage.
- **Repairing the damaged area prevents further cracking at that spot.**

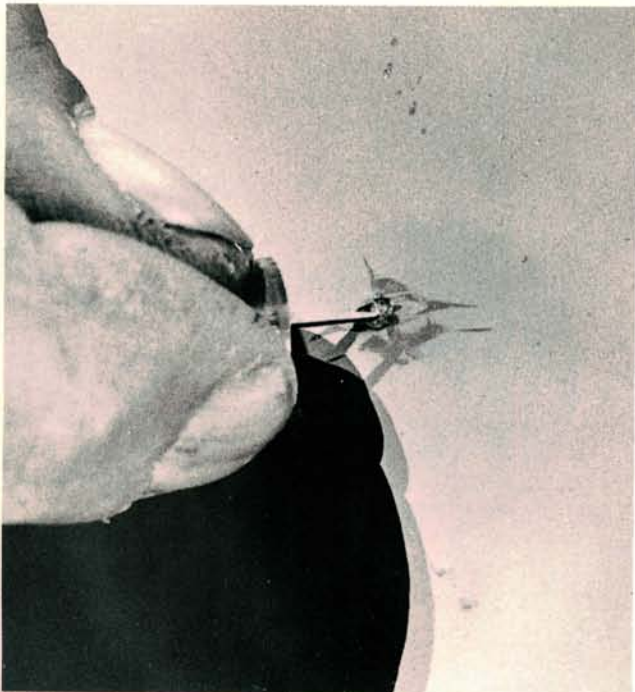
You Can't Save Them All

There are also a few cautions to note:

- **Not all windshield damage is repairable.** Tiny cracks that don't go all the way down to the lamination between the inner and outer glass layers won't repair well.
- **The repair reduces the amount of light diffusion that makes the damage so visible.** But not all repairs will restore the glass to a like-new state. There may be some very small imperfections remaining, depending on the type and size of the original damage. As a result, you may want to shy away from damage areas right in the driver's line of vision. A less than perfect repair here will still be annoying.
- **Practice makes perfect.** While the repair procedure itself is pretty foolproof, you will need to use some discretion when deciding if the damage is repairable in the first place. Most kits include instructions, but you'll want to try repairs on several different kinds of damage. That way you'll know what kind of results to expect.

General Information

Windshield repair kits come in all shapes and sizes. Kits available from Loctite and Roberk are consumer kits for retail sale. They are inexpensive and are designed for one-time use only. The nice part about these kits is that they're inexpensive, and let you prac-



Clean the area right around the damage. If necessary, remove any loose chips of glass with a diamond pick. Peel the adhesive backing off the seal. Press the seal to the windshield with the hole over the damage and the tab pointing to 12 o'clock.

tice with your mother-in-law's aging Datsun before deciding whether or not you want to invest in a larger, professional kit.

Larger, professional kits like the one we used from Clear Star Products let you do a number of repairs. Then you can restock the consumable items like seals and resin. The resin in the Clear Star kit cures when it's exposed to ultraviolet rays. The sun will provide you with these rays free of charge, or you can speed the curing process indoors by buying a kit that includes an ultraviolet light.

We found another kit from Repair It Industries that uses a slightly different two-stage resin. You mix the resin with a catalyzing agent that cures the resin without ultraviolet rays.

Shop around and find the kit that suits your needs.

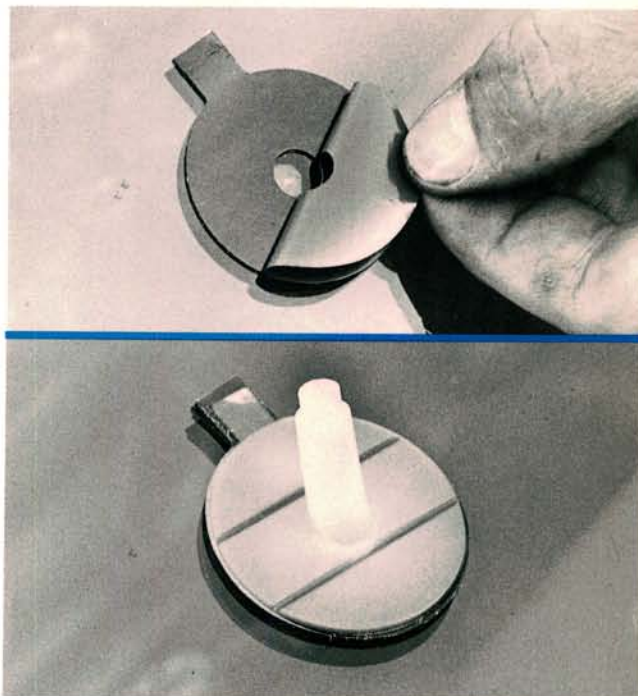
Available from:

Clear Star Products, Inc.
Circle No. 207

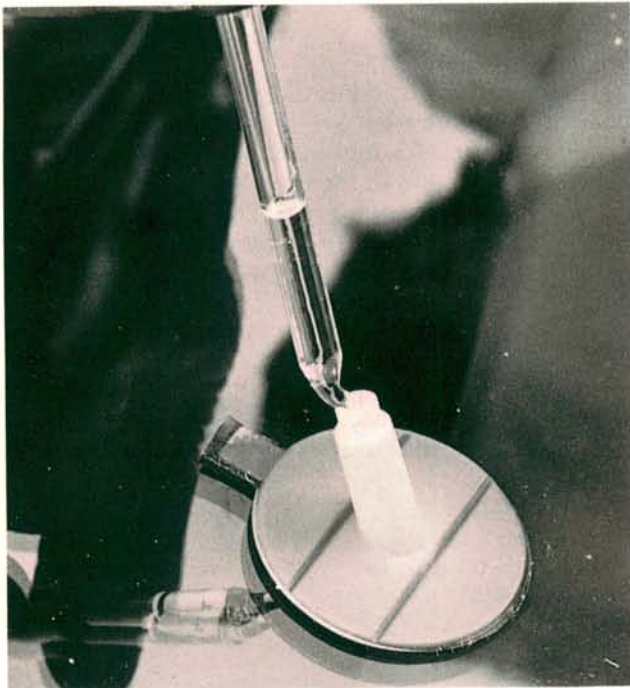
Repair It Industries, Inc.
Circle No. 208

Loctite
Circle No. 209

Roberk
Circle No. 210



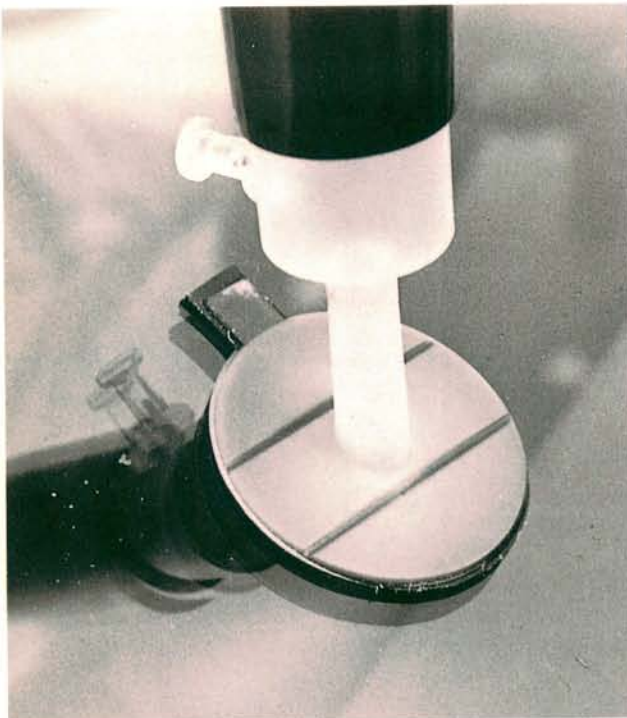
The adhesive sealing ring applied in the first step is the base for the pedestal. Remove the adhesive backing from the pedestal and press it against the sealing ring. Align the tab on the pedestal with the tab on the ring. Press them tightly together.



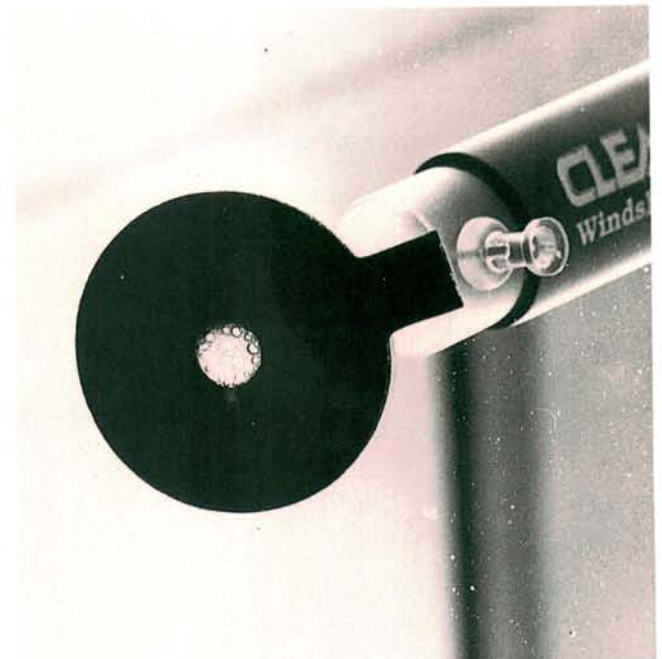
Fill the eyedropper halfway with resin and inject it into the neck of the pedestal. If the resin is ultraviolet ray activated, recap the resin bottle as soon as possible and avoid direct sunlight while the bottle is open.



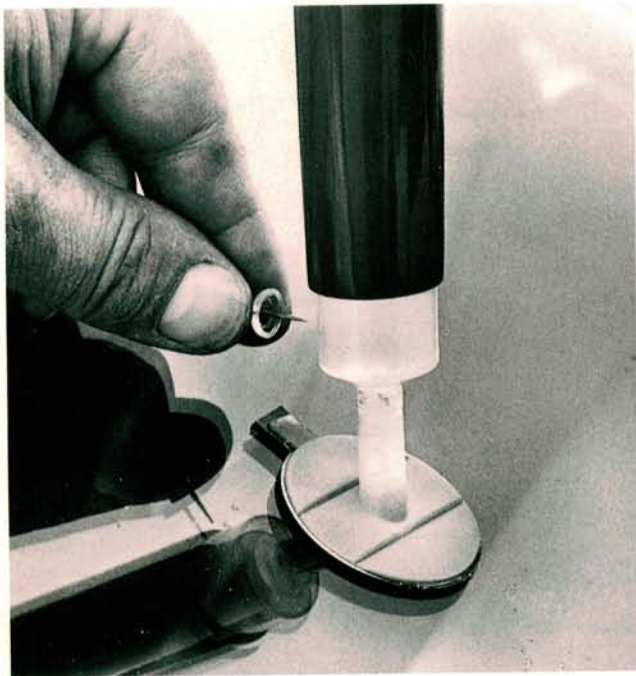
Pull back the plunger in the vacuum/pressure pump about one-half inch. Press the neck of the pump into the pedestal. We need a good, tight fit here. Make sure the pin valve is tight. Pull up on the plunger and lock it in place against the wire stop. It will take a strong pull if you have a good seal.



Now that we have vacuum in the pump, tiny air bubbles will begin to flow to the top of the resin column in the pedestal. The vacuum is removing the air from the cavity in the windshield formed by the damage. It will take about five minutes to remove all of the air.



View the damaged area from the inside of the car. Make sure you "evacuate" the cavity until the bubbles stop. If you don't get it right the first time, you can repeat the vacuum process until all air is removed.



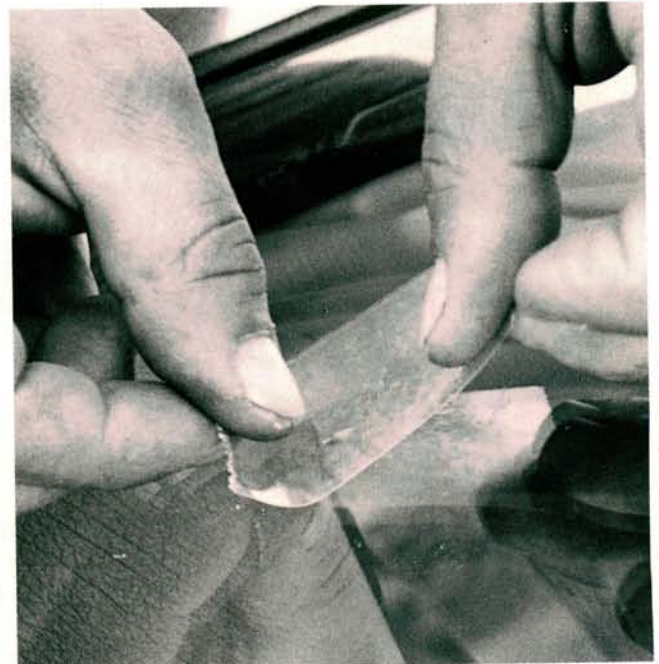
When the bubbles stop, remove the pin valve and vent the vacuum. Reinstall the pin valve. Then rotate the plunger to clear the lock pin and press downward until the lock wire catches the upper notch in the plunger. This pressurizes the resin. Leave the pump in place for about 10 minutes.



Inspect the repair area again to be sure that all air bubbles have been removed, and that resin has been forced into the entire damage area. If there are still bubbles in the damaged area, or if the resin hasn't filled the damaged area completely, repeat the vacuum and pressure steps again.



We did this repair on a bright, sunny day. If you're working in the shade or indoors, you may want to purchase an ultraviolet lamp to speed the curing process. Once the resin is set, remove the pedestal with a razor blade as shown.



To complete the job, inject a drop of resin into the repair area, and place a piece of clear tape over the repair. Smooth the tape with the razor blade and leave it in place until the resin cures. Then remove the tape and any excess resin with the razor blade, and you're done.