



SOLID PLATE GLASS REPAIR INSTRUCTIONS

Repairable *SOLID* plate glass damage is generally limited to the "bullseye" type break, which is characterized by a small hole, about 1/8" in diameter on one side of the glass (commonly caused by a BB or Pellet gun), and a cone shaped hole about 3/4" to 1 1/2" in diameter on the opposite side of the glass. The smaller hole is on the side of the glass that was hit by the object causing the damage. If the cone shaped plug *is* recovered and fits into the void without any protrusions, it may be bonded back into the glass.

A correctly performed plate glass repair will result in a smooth surface that is flush with the glass. The repair will not be optically correct, but it will improve the cosmetics considerably, will keep dirt and moisture out of the damaged area, will minimize the temptation for people to place fingers or other objects into the damaged area, and most importantly, will strengthen the glass to minimize the chance of further breakage.

The following is a list of the products necessary for about 5 plate glass repairs:

30277 Plate Glass Repair Kit

2" Clear Box Sealing Tape

Denatured Alcohol (Available from your local hardware store)

Nitrile Gloves

Toll free technical support is available from Delta Kits Monday – Friday 8am-5pm Pacific Time

IMPORTANT NOTE: The resins used to repair solid plate glass contain acrylic acids that etch glass to improve bonding strength. It is important to use personal protective equipment to prevent chemical contact with your skin and eyes. A barrier cream or nitrile (not latex) glove should be used together or independently to protect your skin.

STEP BY STEP INSTRUCTIONS TO RE-BOND THE CONE SHAPED PLUG

If the cone shaped plug of glass that came from the large side of the break *cannot* be located or does not fit perfectly into the void left by the impact, skip to the next section.

1. Clean the plug (cone), the mating surface of the hole, and an area about 4" in diameter around the hole on both sides of the glass with denatured alcohol. Wipe the area dry with a lint free cloth or paper towel. ***NOW IS A GOOD TIME TO BE SURE THE PLUG DOES NOT PROTRUDE ABOVE THE SURFACE OF THE SURROUNDING GLASS.***
2. With the acid brush, cover all mating surfaces with a light coat of 30003 MagniBond resin to make sure it penetrates all surface scratches, followed immediately by a generous coat of 30271 Plate Glass Resin.
3. Push plug firmly into proper position and place 2" wide clear sealing tape over the entire plug to hold it in place during curing process. ***DOUBLE CHECK TO BE SURE THE PLUG DOES NOT PROTRUDE ABOVE THE SURFACE OF THE SURROUNDING GLASS.***
4. Apply a drop of 30271 Premium Plate Glass Resin to the void on the outside of the glass and cover with a 1" section of 22245 Curing Tape.
5. Attach the 15230 UV curing light to the inside of the glass, within a quarter inch of the glass, and cure for 15 minutes. If using a less powerful light curing time may be increased up to 30 minutes. Be sure *not* to apply more pressure than necessary when attaching the light.
6. Test to be sure the resin has cured properly by removing the curing tape from the outside of the repair and scraping off a small amount of resin from the cured edge. If the resin is still wet or rubbery, reapply the curing tape and continue curing until a full cure is achieved.
7. When the resin has completely cured, remove the curing tape and box sealing tape from both sides of the glass and scrape off the excess resin on each side by holding a razor blade at a 90° angle to the glass. You will not scratch the glass with a new blade, and anything other than a 90° angle is less than desirable. Rub the edge of the blade over the repair (make sure both ends of the blade are supported by the surrounding glass so that gouging does not occur when scraping the filled void. You may want to pick up a wider scraper blade from your local hardware store if you are repairing a break larger than 1.5" in diameter).

8. After scraping stops producing residue from hardened excess resin, check for low or uneven spots. These spots may be brought level with a drop or two of 30271 plate glass resin, quickly covered with a section of 22245 curing tape, followed by application of UV light for 2-5 more minutes depending on your UV light source. **Repeat step 7.** You may have to repeat steps 7 & 8 several times to get a perfectly smooth final surface. Be sure to use a new razor blade each time you have to scrape.
9. Apply 30400 pit polish to the filled repair with a soft cloth and rub vigorously for one minute or until the repaired surface is quite clear and shiny. This step is important for best appearance so take your time.

STEP BY STEP INSTRUCTIONS WITHOUT THE CONE SHAPED PLUG

1. Clean both sides of the glass around the damaged area with denatured alcohol and wipe dry with a lint free cloth or paper towel.
2. Place a piece of clear sealing tape over the void on the outside of the glass.
3. Lightly coat the inside surfaces of void on the inside of the glass with 30003 MagniBond resin using the acid brush to make sure it penetrates all surface scratches. *Remove any resin from the glass around the outside of the hole as it is necessary to maintain a clean dry surface for the next step.*
4. Place a 4" long section of clear 2" wide box sealing tape directly over the inside of the glass, with the top edge of the tape just below the top edge of the void. Tape should be pulled tightly across the void and pressed firmly against the glass around edges of the void. **Important: Leave enough of an opening at the top of the damaged area to insert the tip of a bulb dropper. About 1/8" will be enough.**
5. Using the bulb dropper, draw resin from the bottle of 30271 plate glass resin, making sure there are no bubbles in the resin. Insert dropper tip under the top edge of the 2" sealing tape. Dispense the resin into the void under the tape until the void is full and resin starts to overflow the top edge of the tape. If you slowly add the resin and allow it to run down the inside of the tape, you will avoid introducing air bubbles and achieve better results.
6. Quickly withdraw the tip of the bulb dropper and place 22245 curing tape over the top edge of the filled repair to completely seal off the damaged area.
7. Attach the 15230 ultraviolet light to the inside of the glass and cure for 15 minutes. If using a less powerful light curing time may be increased up to 30 minutes. If one side of the glass is exposed to direct sunlight, you will not need to use the UV lamp on that side and the entire curing process will be shortened due to the powerful UV rays from the sun. When it is not possible to reach one side of the glass with UV light, the cure can still be accomplished by doubling the cure time on the other side of the glass.
8. When the resin has completely cured, remove the curing tape and box sealing tape from both sides of the glass and scrape off the excess resin on each side by holding a razor blade at a 90° angle to the glass. You will not scratch the glass with a new blade, and anything other than a 90° angle is less than desirable. Rub the edge of the blade over the repair (make sure both ends of the blade are supported by the surrounding glass so that gouging does not occur when scraping the filled void. You may want to pick up a wider scraper blade from your local hardware store if you are repairing a break larger than 1.5" in diameter).
9. After scraping stops producing residue from hardened excess resin, check for low or uneven spots. These spots may be brought level with a drop or two of 30271 plate glass resin, quickly covered with a section of 22245 curing tape, followed by application of UV light for 2-5 more minutes depending on your UV light source. **Repeat step 8.** You may have to repeat steps 8 & 9 several times to get a perfectly smooth final surface. Be sure to use a new razor blade each time you have to scrape.
10. Apply 30400 pit polish to the filled repair with a soft cloth and rub vigorously for one minute or until the repaired surface is quite clear and shiny. This step is important for best appearance so take your time.