



Starting a Windshield Repair Business

Technical Manual Business Startup Guide

© 2015 by American Windshield Repair Systems

All Rights Reserved. No part of this document may be reproduced in any form without the permission of American Windshield Repair Systems.



Table of Contents

Introduction to Windshield Repair	3
Product Care & Precautions	4
Type of Chips	5
Bulls Eye Repair	5-8
Star break or small crack repair	9-12
Combination Repair	12
Crack Repair	13
Technical FAQ's	13-18
Business Guide Introduction	19-29
Product Disclaimer	29
Example Glass Breakage Form for Invoicing	30

An Introduction to Windshield Repair

Welcome to the windshield and rock chip repair industry. This manual is designed to give you basic information to begin a windshield repair business and technical training by answering basic questions about windshield repair and running a windshield repair business.

We recommend that you inform each customer before beginning a repair that it will not disappear. The main purpose of the repair is to keep the damaged area from becoming a long crack. The repair will look much better than before but no matter what kit or resin you use, you will never make any rock chip completely disappear. This especially applies to the pit where the rock hit the windshield.

In the early 1970's windshield repair was introduced to the auto glass industry. As the industry grew, newer equipment and resins began making it economical and profitable to repair windshields. Windshield repair, when done properly offers the following:

- Improvement of the windshield's strength and integrity.
- Keeps the windshield from further damage, cracking, or splitting.
- It will in most cases look much better after the repair.
- Saves the original seal by avoiding replacement.



What is Windshield Repair?

Windshield repair is the simple process of injecting a liquid resin into the damaged area of laminated glass and allowing it to cure, thereby restoring the integrity of the windshield and preventing further damage from occurring. Most people are unaware that a windshield is made of two separate pieces of glass with a layer of lamination in the middle. This is a soft clear, rubbery type material. Lamination is a required safety feature in the manufacturing process, designed to prevent the glass from shattering in the event of a crack or break, as well as preventing flying road debris from impacting the windshield and reaching the driver. When a windshield is “chipped or dinged” in general only the outer layer of glass is damaged and this is the layer of glass the repair technician will be working with. Some impacts that hit near the edge of a windshield, will crack the inside layer of glass. That is not repairable.

Windshield Repair System

The following are the key basic components you will need in order to do quality repairs for your customers.

- **Windshield Repair Bridge** - This device is used to inject the resin into the damaged area of the windshield.
- **High Speed Drill with dental bur**- This is used to create an avenue for the resin to flow more freely into star breaks or small cracks.
- **Repair Resin** – Repair resin is the first step of liquid injection and is a thinner resin than pit filler.
- **Pit filler Resin**- Pit filler is designed for the final touch. It seals off the repair with a hard finish.
- **Curing Film** – Curing film is used to hold the pit filler in place, flatten it, and accelerate the curing process.
- **Ultra Violet Light** - Windshield repair and pit filler resin, are **UV sensitive**. When exposed to UV rays, whether from sunlight or a UV light, the resin will harden and bond the damaged glass together.
- **Nitrile Gloves** - Used to protect hands from repair resins that can cause irritation to the skin.
- **Probe** – Used to place pressure on the cracks to allow the resin to flow.
- **Heating Element** – (lighter) Used to heat the glass during the repair process.
- **Razor blade** - Used to scrape off the excess resin from around the pit.
- **Pit Polish** – This step is optional. By polishing the pit you can remove some of the dull appearance of the finished repair. Many companies do not do this because from the driver's perspective it will look no different. From outside the vehicle there is a small benefit in terms of appearance. Every technician or business owner will have his/her own preference in regards to polishing the pit.
- **Curing Film**- This comes in strips. Cut the film into squares. You can re-use it several times.

Note: In directions for all the types of repairs you are taught to place the chip under pressure. You are also taught to pivot the bridge away from the injector to check your progress. **NEVER PIVOT THE BRIDGE AWAY FROM THE PIT UNLESS YOU HAVE FIRST REMOVED THE PRESSURE ON THE RESIN, BY REVERSING THE PISTON. IGNORING THIS STEP CAN CAUSE RESIN TO SQUIRT DIRECTLY IN YOUR EYES. WEAR SAFETY GLASSES. IF YOUR KIT DOES NOT HAVE SAFETY GLASSES, GET A PAIR BEFORE YOU BEGIN. IF YOU GET RESIN IN YOUR EYES FLUSH WITH WATER AND SEEK MEDICAL ATTENTION. KEEP ALL RESINS OUT OF THE REACH OF CHILDREN.**

Product Care and Precaution Information

Repair Bridge: For nightly storage wipe all parts with a clean soft cloth. Once a week, during times of heavy use, you can soak the injector and piston in a small amount of acetone overnight. Remove all seals before soaking. End seals and inner O-rings should be replaced as needed.

High Speed Drill Motor: We recommend a four hour charge time. Remove the bur (dental drill bit) from the collet at the end of the day and store.

Repair and Pit Filler: Repair resins are **UV** sensitive. ***Always replace the cap after use.*** Be sure to tighten the cap, and store in the carrying case when not in use. Keep resin bottles out of direct sunlight. **If you are working in the sun keep the repair covered with your hand while working. If you walk away place a rag over the bridge to block UV rays. You do not want your resin to cure until you are done with the repair.**

When using repair resin it is important that you wear nitrile or chemical resistant gloves to protect your skin from harmful chemicals. We recommend nitrile dipped gloves. They allow you to grip the cylinder and piston better than thin disposable gloves. Safety glasses must be worn to protect the eyes from possible resin splashes. **If resin gets on your skin wash immediately with soap and water or glass cleaner. If resin enters the eyes flush with water and immediately seek medical attention. Keep out of reach of children.**

Razor Blades: Razor blades should always be stored in a safe place.

Single Point Probe: The probe should be handled and stored with care. The pointed end can cause injury or damage if handled carelessly.



Figure 1.1
Different types of
chips



Figure 1.3



Figure 1.4

Figure 1.2



Star Break

Bull's Eye

Combo

Small Crack

Bull's Eye Repair

Important note before you begin!

A Bull's Eye is actually a small cone shaped break inside the first layer of glass. **(Figure 2.1)** As you can see in **Figure 2.1**, the top of the cone is where the pit (impact point) is located. The bottom of the cone lays on the lamination of the windshield. When you repair a Bull's Eye, you are forcing resin from the top to the bottom or border area of the cone. Because the bottom of the cone lays on the lamination, this circular area is a place where damage can occur to the windshield. The lamination can become soft from too much heat or age. (older vehicles) When repairing a bull or combo bull star break, watch closely and if you see the border expanding or changing in anyway, immediately reverse the

piston to avoid damage to the lamination. A slight expansion beyond the border is not a problem. A small amount of air will dissipate to the outer edges of the bull. This will not be very visible.

Figure 2.1



Step 1: Mount the bridge and Heating the Glass

Before you place the repair bridge on the windshield, make sure the injector and rear set screw are backed out high enough so that they are above the bottom of the suction cup. **(Figure 2.2)**, otherwise the cup will not adhere to the windshield properly.

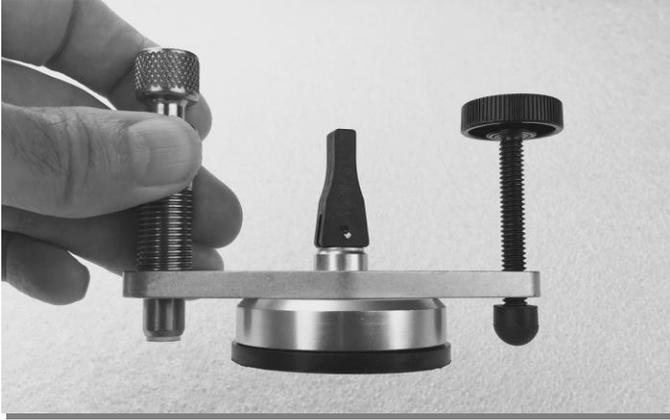


Figure 2.2



Figure 2.3

Next, with the piston removed from the cylinder, mount the repair bridge so that you can see the center of the pit through the cylinder. **(Figure 2.3)** If you are unable to get up high enough to look through the cylinder, you can estimate the cylinder being over the pit. You will become better at this as you get more hands on experience.

Unless the windshield is already hot from the sun, before you begin the repair, go inside the vehicle and heat the Bull's Eye with a lighter or match, until it is nearly too hot to touch with the back of your finger. Take care to not over heat the glass as you could over soften the lamination. Now exit the vehicle, bring the cylinder down until it makes contact with the pit. Then turn it in a bit farther to firm it up on the glass. Next bring the rear set screw down and do the same. This will create a tight seal between the windshield and the repair bridge. You may need to tighten or adjust the cylinder and rear set screw slightly as you proceed with the repair.

(Never over tighten these parts of the bridge. You can crack the windshield by doing so.)

Step 2: Drop resin into the cylinder

Most Bull's Eyes take between 6 to 8 drops of repair resin in the cylinder **(Figure 2.4)**. When you perform your first repair of the day the cylinder is dry, therefore some of the resin is absorbed into the threads, you may need to use a bit more resin for the first repair of the day. (8-10 drops)

A larger Bull may take a bit more resin. **IF YOU DO NOT USE ENOUGH RESIN ON ANY TYPE OF REPAIR, YOU WILL NOT GET A PROPER SEAL.** Too much resin and you will not be able to get into the vacuum cycle.

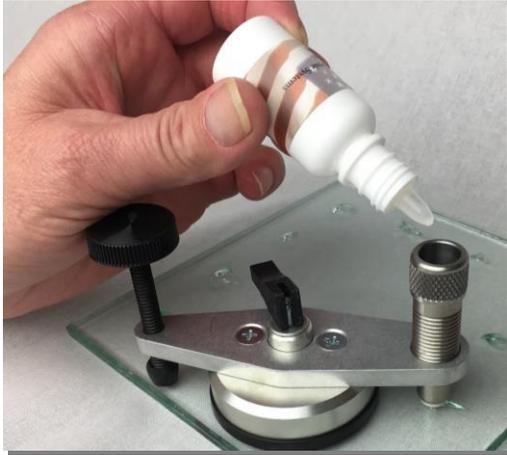


Figure 2.4



Figure 2.5

Step 3: Forcing the Resin into the Pit and Vacuuming Air Out:

First, make sure you have secured the top external portion of the cylinder with your thumb and index finger as above in **Figure 2.5**. With your other hand, place the piston in the cylinder and begin to ***slowly*** screw it in clockwise. This will force resin down into the Bull's Eye. It is important to use small slow turns. Small turns will allow you to have better control over the resin flow. Watch closely as the resin flows to the outward edges of the bull.

Once the resin reaches the border of the Bull's Eye, reverse the direction of the piston with 3 or 4 turns. This action will produce suction, creating a vacuum cycle. You may or may not be able to see air leaving the Bull's Eye and flowing into the injector. Allow 10-15 seconds before moving to the next step. *(Any air in the chip will look like small black lines or bubbles moving in the direction of the injector. Areas within the rock chip that contain air are generally dark or black.)*

Step 4: Bring the pressure down a second time:

Again slowly screw the piston clockwise to force the resin into the bull. As soon as the resin reaches the border of the Bull's Eye, reverse the piston again just as before. Leave the injector in the vacuum cycle for another 10-15 seconds.

Bring the pressure down on the bull for a third time. ***Watch the border of the bull closely. If you see resin moving beyond the border, reverse the direction of the piston immediately. A small amount of air will dissipate into the edges and slightly increase the size of the border. That is fine. You are making the air go away. That is what you want. Provided you do not see a problem such as the border changing too much in appearance, leave it in the pressure cycle for about 10 or 15 seconds. Relieve the pressure and it should be done. If you still see air you will need to cure it under pressure. See below...***

Step 5: Viewing the Repair: CAUTION: NEVER TURN THE BRIDGE WHILE UNDER PRESSURE

Reverse the piston slowly to relieve the pressure. Now, slightly unscrew the cylinder and rear set screw by turning them counter-clockwise until they are both loosely touching the glass. You can now pivot the bridge away from the Bull's Eye and view the repair. If all the air has been removed from the Bull's Eye, it should look much less visible. (Not the pit. It will never disappear) and you may then skip the next step and go directly to ***Step 7 - Curing the Pit***. If you do still see air in the Bull's Eye you will need to follow the instructions in Step 6.

Step 6: Curing the Bull's Eye While Under Pressure:

If you still see dark areas (*air pockets*) in the Bull's Eye, you will notice that when you put pressure down with the piston, the air or black areas disappear. Curing under pressure is simply 'freezing' resin in that condition by using UV rays.

To cure under pressure, pivot the bridge back over the pit so that you have the pit in the center of the end seal. When you begin to pressurize the repair again as discussed in Step 3, you should see the air in the Bull's Eye disappear. If not, or if the end seal leaks excessively when you bring the pressure down, you may not be directly over the pit. You may wish to go back to Step 1 and remount the bridge. At this point, the Bull's Eye should only need 2-4 drops more of resin. Bring the pressure down gently by turning it in clockwise. The Bull's Eye should now be clear, and the air dark areas should be completely gone.

Leaving the Bull's Eye under pressure, place the UV light over the repair. **(figure 2.6)** You will want to allow 5-10 minutes to cure, remove the light. If the sun is shining you won't need to use the UV light. Simply leave the Bull's Eye under pressure for about 5 minutes in the sunlight. Next, begin taking the pressure off of the Bull's Eye by slowly reversing the piston.



Figure 2.6



Figure 2.7

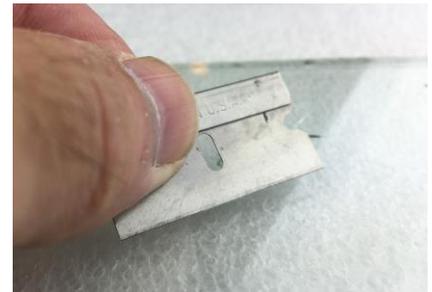


Figure 2.8

Step 7: Cure the Pit and Scrape the Resin:

Once you are satisfied release the pressure by reversing the piston. You can then release the lever and remove the bridge from the windshield. Do not wipe away the repair resin but place pit filler directly over the repair resin. (1 or 2 drops) Then place a piece of curing film over the pit. You can then secure the UV Light over the repair site and cure the pit filler resin **(Figure 2.7)**. It will take between 5.10 minutes to cure the pit filler. Once the pit filler is hard to the touch you can remove the U.V. Light. If it is still soft, let it cure a bit longer.

You can now remove the curing film and with a razor blade, shave the excess resin away from the pit in a circular motion **(Figure 2.8)**. This helps not to pull the pit resin out of pit.

Step 8: Buffing the Pit:

This step is optional. If you chose you can buff the pit with buffing polish. It will look a bit better from outside the vehicle.

Star Break or Small Crack



Important note before you begin!

If you have never repaired a windshield, it is important that you understand how to identify a small crack with resin, versus one without. You

need to be able to determine whether the chip or crack has previously been filled by another technician. It is common for a technician to be asked to repair a chip that someone else has already filled! **Follow this simple rule: If the crack is visible from any angle, it does not have resin in it. If a crack is only visible from certain angles, it has resin in it.** This rule is extremely important for those just starting in windshield repair. You don't want to find yourself trying to fill a break someone else has already filled! Or filling your own crack again and again! Try to view any cracks from every angle while you are injecting it with resin. This practice will help you become familiar with seeing resin as it flows into the small cracks. **The legs or cracks will not disappear. Your eye will become trained to see legs or small cracks that are filled with resin vs not filled.**

Step: 1 Drilling the pit area:

The purpose of drilling is to create an avenue for the resin to flow out to the ends of the cracks or "legs" While repairing Star Breaks or Small Cracks, you will notice that some are formed at an angle. When you drill into a pit with a crack that is angled, it is important to do your best to drill at that same angle so as to provide the correct avenue for resin to flow. This only applies to small cracks (one crack with a pit in the middle) Not star breaks.

Before you begin drilling make sure you have a tight grip on the drill and that your palm is on the glass while holding the drill. This will prevent it from skipping on the glass. Start by drilling a hole in the center of the pit (**Figure 3.1**). You do not need to drill all the way to the lamination but if you are a beginner it is fine to do so at first. That is how you will learn how deep the lam is. We recommend you drill all the way into the lam on your first few repairs. You will learn to judge the correct depth with experience. Some technicians prefer to drill all the way to the lamination. This is optional. The repair Will look slightly better if you do not drill into the lam. (learn to stop just before reaching the lam)



Figure 3.1

Step 2: Mount the bridge:

Again, before you place the Bridge on the windshield, make sure the injector and rear set screw are unscrewed until they are higher than the cup on the bridge assembly (**Figure 3.3**). Otherwise the cup will not adhere to the windshield.



Figure 3.2

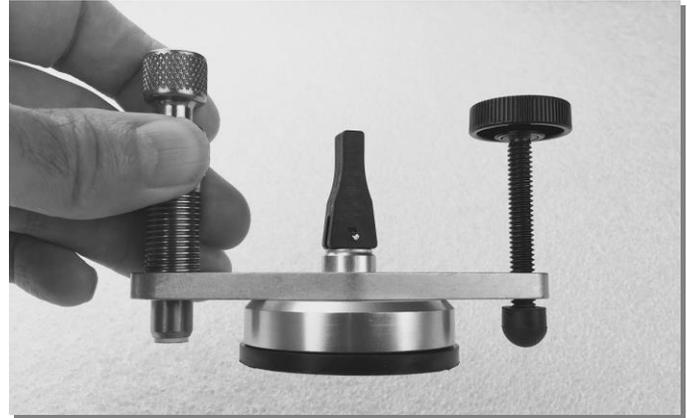


Figure 3.3

Next mount the bridge in the exact same way you mounted it for the bull's eye.

Step 3: Drop resin into the cylinder

Most all chips will require between 6 to 8 drops of resin in the injector (**Figure 3.3**). Again use extra resin if it is the first repair of the day. If you do not use enough resin you will not get a proper seal. If you use too much you will not be able to get the piston into the vacuum cycle. You will learn how much resin to use as you go. These are just starting points to get you going. Some like to use as little resin as possible so as to avoid waste. This is a good practice to do as you gain more experience.



Figure 3.4

Step 4: Forcing the Resin into the Pit:

Place the piston into the cylinder and begin driving resin into the break, by turning the piston slowly clockwise. Use small fractions of a turn. As the resin begins to enter the damaged area of the windshield you will start to feel resistance. Watch closely and you should see the resin begin to flow into the legs of the Star Break. (*The "Legs" are the small cracks*) At this time turn the insert approximately one eighth of a turn more, or until it feels fairly firm. It may even leak a bit. That is okay. Let the injector stay in that position, and begin to probe the legs.

Step 5: Probing the Cracks or "Legs"

With the Star Break or small crack under pressure, you need to help the resin flow to the outer end of each crack. With your probe at an angle, put pressure directly on the leg that you are trying to fill (**Figure 3.4**). Hold the pressure down on the leg for 3 or 4 seconds. This pressure opens the crack, and you will see the resin flowing outward. Lift the probe and apply gentle pressure again 2 or 3 times for each leg. You need to find every leg within a star break and probe each one of them. Be careful not to apply too much pressure so you do not cause a longer leg or crack. (If this happens just let the resin flow into the longer leg and move onto the next leg of the star break) It's very important that you watch closely and

find the angle needed to view each leg as the resin flows. Remember, small cracks look different when they have resin in them and you will learn to find the angle at which to view the flow of resin. You must also learn to know when the leg is full. You do not want to be trying to fill a leg that is full! It will still be visible from certain angles even when full.



Figure 3.5

Step 6: Vacuum

Reverse the pressure from the injector by turning the piston counter-clockwise. This will create suction, placing the injector in the vacuum cycle. Leave it this way for 10-20 seconds. It takes a certain amount of turns to get into this cycle. A good start is about 3-5 (what we call flick or half turns) You may or may not see air slowly moving out of the legs. You cannot always see the air moving. (The video may say something different about turns of the piston. These are just starting points. You will learn the techniques by hands on experience.)

Step 7: Bring the Pressure Down and Probe the Legs a Second Time:

Slowly turn the piston in again and until you feel reasonable pressure. Then probe each of the legs a second time. As before, probe each leg two or three times. By probing the legs each time you will help resin to flow outward to the end of each crack within the star break.

Step 8: Vacuum a Second Time:

Reverse the pressure from the injector by turning the piston counter clockwise until you again reach the vacuum cycle. Leave the injector in the vacuum cycle for about 10-15 seconds.

Step 9: Heating the Windshield:

Increase the pressure again by turning piston clockwise one last time. Firm it up as before so that there is pressure on the resin. While the break is under pressure, go inside the vehicle and heat the outer edges of the legs. This will draw the resin outward. (Do not be deceived. Heat can make legs disappear when they have not. Step out of the vehicle and remove the pressure by reversing the piston. Now wait a few minutes for the star break to cool. If you still see air in the legs bring the pressure down again and probe whatever cracks may need probing. ***If you still have air at the end of a leg, you can take your drill, while you have the break under pressure, and drill at the end of the leg. Do this at an angle toward the center of the break. Releasing the air will allow the leg to fill. You do not need to drill deep. Just until you get results. We do not recommend drilling each leg. This is only for stubborn legs that may come up from time to time.***

Step 10: Inspect the Repair:

Inspect the repair by taking the pressure off and pivoting the bridge as described above. All of the legs should be filled with resin. Certain facts may keep you from filling every star break perfectly. How long it has been there, how much oil, road debris, grease, dirt, rainex, etc. may have penetrated the break. Just do your best. Do not go around drilling holes everywhere or you will make it look much worse than before. A finished star break will still be visible from inside the vehicle. The pit will always be visible from inside and out.

Remember what you tell your customer before each repair. ***(It will not disappear. The main purpose of the repair is to keep it from spreading to a long crack and you guarantee your work)***

Step 11: Cure the Pit:

With a curing tab in hand, take the pressure off the resin, unscrew the cylinder, and remove the bridge. Now place a drop or two of pit filler directly over the repair resin. Place the curing film over the pit. Cure the pit filler resin and scrape it off as described above (Bull's Eye Repair)

Combination Bull's Eye-Star Break

Step 1: Mount the Injector

Just as before make sure the cylinder and rear set screw are screwed up higher than the cup. **(Figure 4.1)**

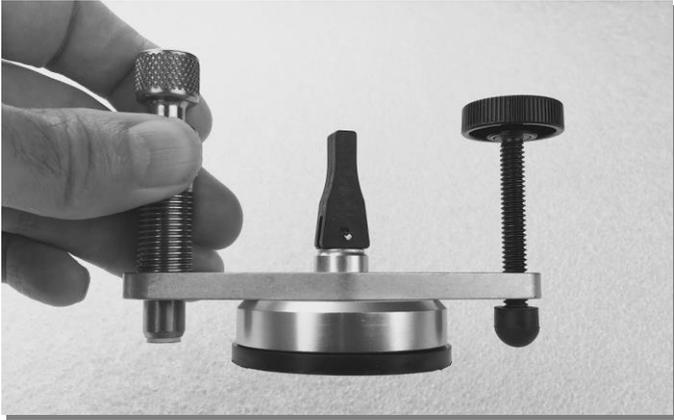


Figure 4.1



Figure 4.2

Next mount the bridge so that you can see the pit through the center of the cylinder. **(Figure 4.2)** Drop in your resin as with any other chip and bring the pressure down with the piston. Fill the bull area of the combo and watch the resin flow beyond the bull and into the legs. Probe the legs just as you would a star break. Take the pressure off and get into the vacuum cycle as you did with the bull and star break (10-15 seconds). Bring the pressure down a second time and probe the cracks again the same as you did the star break. Get in the vacuum cycle one last time and wait 10-15 seconds. Now bring the pressure down for the third time and probe the cracks or (legs) again. This time go inside and carefully heat the outer edges of the legs of the combo break. Be careful not to heat the bull portion of the combo while under pressure as it could cause a daisy. The repair should be done. Go outside the vehicle, take off the pressure, pivot the bridge and view the repair. If it looks good, place your pit filler on the pit, cure it, and scrap it as with the other chip repairs. If you see areas that still need attention pivot the bridge back over the pit and bring the pressure down again repeating steps to fill the cracks. You may need to cure the bull portion of the combo under pressure. Simply follow the steps for curing a bull under pressure.

Crack Stop Repair

Occasionally, you may have a customer who has a 2-6 inch crack that they would prefer to have repaired instead of replacing the whole windshield. In these cases the customer usually will have a high deductible, liability coverage only, or no insurance and prefer to have you stop the crack from getting any worse.

You will begin by drilling a small hole at one or both ends of the crack, depending on the location of the crack. Do your best to drill a hole directly over the end of the crack. Drill all the way to the lamination. To prevent the crack from going around the hole, hone the hole out to about 1/8th of an inch in diameter. Do this by gently pushing outward in a circular motion (at this point you are using your drill as a router and may need to use a higher speed). **Do not use any downward pressure or you may drill all the way through the windshield!**

Next, blow the dust out and inject the hole you created just as you would a star break. Watch the resin flow. If it stops, simply relieve the pressure from the resin by turning the piston outward until you are out of the pressure cycle, then move your bridge over and inject directly over the crack. Keep doing this until you reach the other end of the crack. It may also be necessary to repair the area where the crack began.

Any chip close to the edge of the windshield is considered a high stress area and can crack out if a repair is attempted. You must be careful and use very little pressure in mounting and injecting. All repairs done near the edge of the windshield must be done carefully. It is also necessary to let the customer know that you will do your best not to crack the windshield, but that you cannot be responsible if it does crack. If the customer does not agree, do not attempt to do the repair. You should even go so far as to have the customer sign a written agreement that you have made for these cases.

Frequently Asked Questions

These pages contain important information that will be useful for you when you are in the field. We suggest you read the Frequently Asked Questions before you begin performing rock chip repairs.

1. What is “the pit”?

The pit is the center of the damage on the windshield, where the rock hit. This is the area where resin is injected into the chip.

2. Will I encounter different types of chips besides those discussed in this training manual?

Yes. However, nearly every chip you will ever find will have some characteristics of the chips found in your manual and you can always simply follow the same steps to repair them.

3. What is the “lamination” in a windshield?

Lamination is *the thin layer of clear soft plastic between the two layers of glass*. Lamination is a required safety feature that keeps the glass in a windshield from shattering. It is what keeps a rock from flying through the windshield when you are driving down the road. Most people do not know that a windshield is really made up of two pieces of glass. When a windshield is chipped, it is usually the outside layer of glass that is damaged.

4. Is it okay to drill all the way through the first layer of glass?

Yes. However, repairs will look slightly better if you learn to stop drilling just before you reach the lam. Some technicians find it easier to fill small cracks and Star Breaks by drilling through the first layer of glass. If you choose to drill all the way through the first layer, remember to remove the laminate from the bur with a small piece of steel wool or your fingernail.

5. Is it possible to damage the lamination during a windshield repair?

Yes, the laminate can be damaged by pressure. All repairs require heat either from your lighter or the sun. When you pressurize the resin to the lamination by turning the piston inward, you have to be careful. Heat softens the lamination in a windshield. Always watch closely when putting down pressure on any chip that is heated, or hot from the sun.

6. What is a “Daisy?”

A daisy is damage to the lamination usually caused by a combination of too much heat and pressure on the chip. It looks a lot like a real daisy, but is transparent. The size of a daisy will usually depend on the length of time the chip is left under pressure. A daisy cannot be repaired or reversed. It is unlikely you will cause a daisy in chips other than a Bull or Combination Bull-Star Break. This is because of the large opening to the lamination in these types of chips.

7. How do you avoid causing a “Daisy?”

Use tiny fractions of a turn while driving the resin down, and pay close attention to the border of the Bull or Combo. If you see the resin going beyond the border, quickly reverse the piston to relieve the pressure.

8. Why does my drill sometimes stop cutting?

Most importantly, you should be drilling at the slowest speed possible. Overheating your bur can keep it from cutting. Drilling too slow will obviously not cut as well so find the sweet spot for drilling the glass.

Whenever you are drilling, you may need to stop and let the bur cool. If that doesn't work, the bur may be too dull and you may need to change it. Keep in mind that you should be seeing a 'powder' accumulating around the pit while you are drilling. If not, you probably are not cutting through the glass. Changing speed, pressure, and angles can also help.

9. When do you drill a hole at an angle?

Many small cracks or partial Bulls are formed at an angle. When you drill into the center or pit of a small crack, you need to follow the angle of the crack. You may need to lean the drill at an angle to match the angle of the crack. This opens an avenue that is congruent, or in line, with the crack you are trying to fill.

10. I keep breaking drill bits. Why is that?

Most likely you are drilling a hole, backing off and drilling again at a different angle. Drilling at a different angle the second time can not only break the bit, but also it can fracture the glass. It's very important to keep the drill at the same angle when are drilling.

11. Why won't my bridge cup adhere to the windshield?

First, make sure the windshield isn't dirty. Use a small amount of cleaner to ready the area. (Never spray glass cleaner into the pit) Next, hold up the bridge assembly and make sure the cup is positioned lower than the cylinder and rear set screw. If not, adjust the bridge accordingly. Finally, before you press the lever down to secure the cup to the glass make sure you are also applying a downward pressure on the whole bridge assembly. This will make sure the cup is pressed flat before you press the lever down.

12. Why not heat a combination Bull Star Break before injecting?

Heating cracks can actually cause them to temporarily disappear or close. We do not recommend heating a Combo first because of the cracks. We do recommend heating cracks under pressure, but only after the cracks have been probed.

13. If it's a hot sunny day should I take any extra precautions in repairing windshields?

Yes! If the windshield is extra hot, we recommend cooling it before you begin. If you reside in a hot environment it is a good idea to either have an awning that you can set up to shade the windshield or keep a golf umbrella in your vehicle. The other option is to let the customer know ahead of time to have the vehicle parked under a tree or somewhere in the shade. This is only a recommendation, not a requirement. Anytime you are working on a warm windshield it is very important to pay special close attention to the effect the pressure will have on the cracks and lamination. A warm windshield is also a good thing. You will find it easy to fill Bulls, Combinations, and small cracks, so don't be discouraged if it is a hot day, just remember to careful in all you do. Use less

pressure in every way. This includes how tight you mount the bridge and how much pressure you place on the resin. **(NEVER TRY TO COOL A CHIP WITH ICE OR ANYTHING SIMILAR. YOU WILL CRACK THE GLASS)**

14. Is it possible to drive air into the lamination?

Yes, it most often occurs on older windshields or extra hot windshields. The lamination in an older car can actually become liquefied on a hot day! If it's really hot outside or you are working on an older car, be extra careful and shade the glass before you begin working! Older cars are generally considered those that are 15-20 years old. Cars kept in extreme weather conditions – such as very hot areas, may have windshield laminates

that liquefy more easily than the average vehicle. Either do not attempt a repair on an old vehicle or warn the customer ahead of time absolving you of any responsibility.

15. How can I stop my end seal from leaking resin?

It isn't anything to worry about if your end seal leaks a small amount of resin. If the end seal is new, the problem will subside after a few repairs. If the problem persists, simply remove the end seal and turn it around. If you still have a problem you may not be tightening the injector and rear set screw hard enough. Don't be afraid to tighten these knobs more during the repair process. These guidelines are a starting point. You will learn what works best as you gain experience. (Never ream the cylinder or rear set screw down hard. It is not necessary. Firm it up as you go and that is all you should need)

16. How do you decide if a windshield is too old to repair?

If the vehicle is older you may still be able to repair the windshield. You do need to take extra care if the windshield looks to be aged. Older cars are generally considered those that are 15-20 years old.

17. What is the high stress area of the windshield and how do you do repairs in this area?

About 3-4 inches from the edge of the windshield is considered a high stress location. This area is close where the windshield is glued to the vehicle. Be extra careful when repairing chips in this area. It's a good idea to let the customer know of the risk before you do a repair in this area of the windshield. This is a policy you will need to set for yourself. Never use heat when repairing a chip near the edge of the glass. The customer will understand why the repair may not look as good as it could when you explain to him/her the extra caution you are taking.

(Before you do any repairs in this area, let your customer know that if the windshield cracks while doing the repair, you will not be held liable for a replacement. Also inform the customer that you will be extra careful while injecting the resin into the chip. Of course if the chip is not repaired, the chances of it spreading are even greater. After explaining this to the customer, let him/her decide. The customer will usually allow you to do the repair.)

18. How will I know when to change the o-ring or end seal on my injector set?

The end seal will begin to expand and/or leak excessively. You can then flip it and keep using it for a while longer. As for the O-ring, it will become loose on the piston or start to shred. Remember to wipe off any resin from your O-ring and end seal after every appointment. This will extend the life of these parts. **Do not store the piston inside the cylinder. You do not want the O-rings soaking in resin.**

19. How can you do a motor home or a bus windshield when the glass is nearly vertical?

The difficulty here is getting resin into the injector. Use an extra amount of resin and quickly insert the piston.

20. What is a ½ or ¼ Bull?

A ½ Bull is when the cone of the Bull is only half formed. The same goes for a ¼ bull. It's only ¼ formed or maybe ⅓ formed. Treat these types of partial Bulls as you would a full Bull. You can make these types of damage nearly disappear, especially if you heat them first. We highly recommend the heat method for any Bull, unless of course it's a hot day. It is actually better to get a partial Bull a bit hotter than a full Bull before injecting.

21. I have a Bull's Eye that won't take resin. What should I do?

This is rare, but sometimes a Bull won't accept resin. Take your probe and put direct pressure on the center of the Bull. This is the top of the cone of the Bull. As you put pressure down on the cone you will see the Bull flexing. After doing this a few times, use your drill to clean around the top of the cone and inject it. It should now take resin. Another consideration is the Bull may have already been repaired. The resin that was injected and cured will keep you from doing it again.

22. A small area of the Bull will not take resin. What can I do to complete the repair?

This is also rare, but sometimes a small area of the Bull is stubborn and won't allow you to pressurize it with resin. A good remedy is as follows. While the Bull is under pressure, drill a hole into the part of the Bull that you are seeing the air. This will almost always solve the problem.

23. I did a Bull repair and when I was finished, I could see small cracks in the cone. Why?

Sometimes the cone of a Bull will contain fractures inside it. These small cracks in the cone pose no threat and there is nothing you can do to make them disappear. You may wish to explain this to your customer before you begin.

24. I am doing a star break and one or more of the legs won't fill with resin. What now?

First, be sure that you have probed the cracks by putting direct pressure on the legs, while the star break is under pressure with resin. If necessary repeat this for at least 3 or 4 cycles. If there are still one or more cracks that are not taking any resin, simply go inside the vehicle and heat the cracks while under pressure with resin. A last resort is, while in the pressure cycle, drill the stubborn leg, at an angle, pointed to the center of the star break. This will release the air that is trapped in the leg.

25. How much pressure can I put on a crack when probing?

There is no exact way to determine how much pressure to put on a crack with your probe. It is possible to enlarge a crack when probing. If you see the crack enlarge remove the pressure immediately. This does not happen very often and when it does, the crack will usually not go far. The resin will usually fill out to the end of the now longer crack, making it nearly invisible. You will learn by experience how to determine how much pressure is needed for probing cracks.

26. My injector does not seem to be vacuuming out any air. Why is that?

If you are not seeing air being removed from a chip it is most likely because you are using too much resin. Too much resin in the injector will fill the injector and not allow for the vacuum cycle. Try using a few less drops of resin when doing a repair. Also, just because you do not see air coming out does not mean that it is not coming out. Follow the steps and you should be fine.

27. Heating cracks under pressure makes the resin flow so why not do that from the start?

You could do that. The problem is you wouldn't be getting any air out of the cracks. This is a very important part of the process. Air in a chip is always visible. Where there is air, there is no resin! With Star Breaks and small cracks, it's always best for heat to be the very last part of the process.

28. Should I repair a windshield in the rain?

We do not recommend repairing windshields in the rain. If a windshield is wet, it needs to be dry before repairing. Just as a chip will absorb resin, it will also absorb water. Water does not mix with repair resin. You must dry the

chip out before repairing it. A good way to do this is to have the customer run his or her vehicle with defrost on full hot for about 15 minutes before doing the repair. Check to make sure the chip is dry. A Bull is dry when it has a dark “marble-like” look to it. With your probe, put pressure on the bull and flex the cone inside. If the appearance changes as you do this, it has water in it. With a small crack or Star Break, remember the rule? If a crack is visible from any angle, it does not have resin in it. If a crack is only visible from certain angles, it has resin in it. The same holds true with water. Water in a small crack will make the crack visible from certain angles only. If a small crack is completely dry, it will be visible from any angle. Just be sure to give small cracks and Star Breaks plenty time to dry before repairing. **Please note: We do not recommend leaving a vehicle running unattended while drying out a chip in a windshield.**

29. What happens if I crack the customer’s windshield?

This is a policy that you will need to set for yourself when you start your business. There is always a small possibility this may happen whenever you do a windshield repair. If you do a lot of windshield repairs, and that is obviously your goal, it is likely that at some point in time you will accidentally crack a windshield and it may not even be your fault. You might be following the instructions of your manual exactly and still crack out a windshield. It is important to know that it is a rare occasion and most customers are very understanding about it when it happens. They realize that the windshield was damaged before you began the repair anyway. Some technicians and business owners will pay for a replacement or refer customers to someone they know to replace the windshield for them at a special rate. While others technicians will let the customer know ahead of time that there is a slight possibility of the windshield cracking during the repair and because of the fact that the windshield is already damaged; they will not be held responsible. But do remember if you follow the directions of your manual closely, cracking a windshield will be extremely rare. ***It is a good idea to have the customer sign an agreement that you create, that does not hold you responsible for further damage to the windshield.***

30. How do I know if a windshield has a rock chip that has already been repaired?

Anyone who enters the windshield repair business will soon learn how to spot a chip that’s already been repaired. The problem is customers will sometimes insist a chip needs to be fixed and has never been repaired. One way of determining if a repair has been done is looking at the pit. If there is some yellowing in the center, you know its aged resin. You can also take your probe to the pit and if it feels soft, it probably has resin in it. In most cases, you cannot repair a chip a second time.

31. My customer has a surface chip. Is that something that would need to be repaired?

We do not recommend repairing surface chips. There is little or no benefit to the customer and we would certainly not recommend billing an insurance company for it.

32. I have followed all the steps and I am not satisfied with the appearance. What now?

Leave it alone! Remember what you told the customer before you began? The chip won’t disappear. It will look better but the main reason for the repair is to keep the chip from spreading to a long crack. We do not recommend going over a chip repair a second time after the resin has been cured. If a chip has just happened it will fill easily. If it has been there a while it may not. They absorb dirt, grease, wax, etc. Just do your best and when it is done it is done.

33. What kind of guarantee should I give to my customers?

This will be up to you. A good guarantee is this; “Mrs. Johnson, if the repair ever fails, the money is refunded back to your insurance company.” Of course if Mrs. Johnson paid for the chip she would get her money back. This is a good guarantee and may insurance companies expect it.

34. If I get resin on the paint of a vehicle, will it remove the paint?

If you do spill resin on a painted area you must clean it right away. You don't want the resin to cure on the paint, so it is best to spray the area with glass cleaner and wipe it as soon as possible

35. I am new at windshield repair and wearing gloves makes it difficult to do repairs ?

If your kit did not come with nitrile dipped gloves, you should purchase a pair. You can get them at Home depot or other hardware stores. Buy extra gloves so you can change them as they wear down. We do not recommend ever doing repairs with no gloves. Nitrile dipped is best. Thin nitrile gloves are slippery.

36. My potential customer has a huge chip. Can I help this person?

Yes, you can inject at least some resin into almost any damage on a windshield. Just let the customer know that it certainly will not disappear. It should keep the windshield from becoming worse. Heating a big chip before injecting will actually cause the chip to absorb resin without much pressure. In the case of a huge chip, you might heat it first, even if it is a Combination. Mount your bridge and inject it. Even if it leaks because it is so big it should take some resin. You don't have much to lose. Most likely your customer will be amazed at your work!

AMERICAN WINDSHIELD REPAIR SYSTEMS



Business Guide

Part One: Getting Started

The first step in starting a business is to determine the legal structure of the business, and to give it a name. This is a critical step when starting a business, since your future financial organization of your business is determined by which structure you select. The business name is important in order to help identify and market your business successfully. It should be given thought and consideration. It also should be determined whether or not it is in any legal conflict with any other business. You should be able to do a search in your state to see if the name you wish to use is available.

A professional tax consultant, accountant, and/or attorney should be consulted to determine which business structure will provide you with the best legal advantages. While it is possible to form a partnership or incorporate a business on your own, it is highly recommended that you seek the professional advice of an attorney or other qualified business person before entering into any legally binding agreement with another potential business party.

Legal Business Structure

(This information may vary from state to state. Contact your state for further information on the type of business structures recognized in your state.)



1. Sole Proprietorship

The easiest and least expensive way to start your business is as a sole proprietorship. A sole proprietorship means you are in business on your own, with no business partnerships and are not incorporated. To register as a sole proprietorship, you need to list your business name, type of business (what you will be doing, selling, or what types of service (s) you will be providing), and business address with your state's business licensing agency. In most states you can register your business in just a few minutes on line or by mail.

If you are registering in person, you will need to take a small amount of cash (usually less than \$50), and proof of ID (such as your driver's license). You can register your own name as the name of your business and use your social security number as your Tax ID number, or you can register a "trade name". A trade name is simply a business name you operate under. Some examples might be: "John's Rock Chip Service", "Al's Chips and More", etc. Registering a trade name is easy to do, and you can actually operate under several trade names by listing them separately on your business license. A trade name is referred to as your DBA or "Doing Business As" name.

Owning your own business has many advantages. You have more control over the direction you wish to pursue; you make your own decisions and have more control over your future. Business ownership has many excellent tax advantages as well. A business license also allows you to purchase products for resale at wholesale prices, and gives you certain advantages with club memberships and product offerings. It is important to take your business ownership responsibilities seriously! You are accountable for the decisions you make, and the tax reporting you do.

2. A Partnership (General or Limited)

A partnership is a legal agreement between two or more people wishing to start a business, or even several people and a business entity. Family partnerships are very common. In a partnership all members who have a voice in the decision making also have the financial and legal responsibility for those decisions. A partnership should only be formed with people or businesses you trust, since you will also be held accountable for any decisions they make as well as your own.

When a partnership is registered with the Department of Revenue, all partners are listed on the business license. While the terms of the partnership can be based on an oral agreement, it is strongly recommend that a written agreement be made to protect all parties. Legal fees will vary as well as licensing fees. When two or more people

are involved in a business together it's important to have ideas and plans in writing for solving business disputes that may arise over business related issues. Many businesses have closed their doors due to unresolved business disputes. If you are going to have a partner make sure it is someone you trust very much. It is like being married.

3. Corporations

A corporation is another type of business structure. The main reason for incorporating is for the legal protection of personal and/or business assets. The second reason is for the tax advantages. A corporation may be made up of one or more people, or even several businesses. Decisions and actions of the corporation are considered to be the activities of a single unit. In many ways, a corporation as a whole is treated as if it were an individual.

Note: While owners of the corporation can have certain legal protections, such as in the event of a lawsuit, considerable financial and legal responsibilities still fall on the owners and officers. Officers are liable for the decisions and actions of the company. Incorporating alone, does not provide complete protection of personal assets. Care should always be taken to follow sound business principles and accounting, whether your corporation is made up of one person, or many.

Corporate structures can be quite simple, or very complex. Some even involve multiple businesses, or even several layers of other corporations. Corporations may be created in the state you live in, or even other states depending on the advantages you are seeking. Other than corporations created in the state a person resides in, Delaware Corporations and Nevada Corporations are two of the next most common.

A corporation divides its ownership into shares, or stock. The stock is held by members of the company, and can be sold to outside individuals (investors) or businesses. Stock can also be given to employees as part of a raise, a bonus, or as an incentive to reach a specific goal.

Contact a local accountant for more information about corporations.

Business Guide

Part Two: Bookkeeping, Accounting & Insurance Billing

Accurate bookkeeping is important and actually quite easy!

- Income: Money you take in: insurance payments, cash from customers, etc.
- Expenses: Money you spend: supplies, tools, mileage on your car, etc.

Although it is not a requirement, we recommend you let your accountant know that you are starting a windshield repair business. Most accountants will offer a no cost initial consultation. He or she will give you the basic information about saving for taxes and keeping good records. After the consultation you should only need to see your accountant once a year to help you with your tax return. In addition, during the course of regular business, most accountants are willing to answer basic questions over the phone at little or no cost. We highly recommend you find a good accountant for assistance. Some people think having an accountant is expensive. To the contrary, having an accountant is not only affordable; they can help you avoid costly mistakes.

1. Getting Organized

Why is it important to be organized and keep good records?

Whenever you perform a service, or sell a product, and you are generating income, you have to pay taxes on the money paid to you. It does not matter if you are making \$2.00 or \$200.00; it is all taxed on a percent set forth by

the city, state and federal government. This tax money must be paid to the appropriate agency. The best reason for being organized and keeping accurate records is obvious: *You need to know how much money you can keep for yourself!* As mentioned above, an accountant will help you in determining an approximate amount of money to save for your taxes.

You should have a filing cabinet as well as a small petty cash box for keeping paper work and money in while you are at your job sites. The generic Glass Damage Report Form (GDR) contains vital information you will need in order to get paid by insurance companies and the information that you need to have on file for future reference. We recommend you file your copy of this form in alphabetical order so you can pull a customer out of your file by name. There are many computer programs that useful in business. You can do invoicing from your computer and at the same time it could keep track of vital information, such as when an outstanding bill is 30 days past due.

2. Banking & Money

It is best to have a business bank account that is separate from your personal account. We recommend you have a savings account. With a checking and savings account, you can store your income and tax money in different places. This is an excellent way to save money separately for any taxes or fees that federal, state, and local agencies may require of your business. Do not use your business money for personal expenses. If you do make sure to keep a detailed log of what you did and reimburse the business ASAP. It is best to pay yourself a paycheck just as you would receive if you worked for another company. Treat your business as a separate entity.

Another suggestion is to have your checks with carbon copies in case you forget to log in information. Personal size checks are easiest to carry.

Make sure you balance your checking account monthly. You must take your accounting seriously. If you ever are audited you need to have a detailed record of income and expenses. Never cheat on your taxes. It is not worth the risk. Always pay your taxes and on time.

3. Collecting Money & Taxes

What types of payments will you accept?

Once you have decided your fees for repairs, you need to decide if you are going to accept just cash and checks, or credit cards as well. Processing credit cards is simple! Check with your bank and they should be able to get you set up with a merchant account to process nearly every type of credit card imaginable. There is usually a small monthly processing and per sale fee. This will be shown on your monthly statement for easy record keeping. You do not have to have a credit card machine! You can call the information in to your bank, use authorize.net, Paypal or another processing company. Accepting credit cards can make your business much easier.

▪ Insurance Billing

This section will be covered in Part 3

▪ Cash Only Businesses

There is plenty of money to be made if you decide to have a “cash only” business. A “cash only” business means you intend to have your customers pay you directly, and leave it to them to be reimbursed from their insurance company. We do not recommend this policy for the following reason, one of the best benefits to your customers when a windshield repair is done: *They will not have to pay you anything!* Even knowing this, some business owners would rather not deal with billing insurance companies. If you choose to do a “cash only” business, decide up front how you are going to price your services. Compare prices by calling around to other auto glass companies and asking what they charge for windshield repairs. This will help you to get a fairly good idea of the going rate for chip repairs in your area. A good place to start for cash customers is \$39.99 for the first chip and \$9.99 each additional chip. This price is lower than what you would charge an insurance company. Keep in mind you are getting paid now, not in several weeks, and you will not have to do any billing, which will save on administrative costs for your business.

▪ Bounced Checks?

At some point, you may have to handle a bounced check. Simply contact the customer and inform them of what has happened. Be polite, and let them know they will have to make good on the check, as well as pay the bounced check fee that you have set forth to cover your time and bank charges (usually about \$25). It may be better not to accept checks.

Collections?

In the rare event a customer will not pay their bill, you will be faced with a decision. Either write it off as a loss, or send them to a collection agency. There are many different collection agencies to pick from. Each has a different technique of obtaining payment. There are many local and national companies to choose from.

▪ Collecting taxes

Taxation varies from state to state. In many cases, companies are obligated to collect taxes from their customers based on where the work is done. Very simply, if you do the work in Jamestown, the amount of tax you collect from the insurance company or customer if paying cash, will be based on Jamestown's tax rate. If you do the work in Fairville, you will collect taxes at Fairville's tax rate. This is important if you intend to do mobile work as many technicians do. If you have questions about this, check with your local state licensing agency or Department of Revenue. Of course an accountant should be able to help you as well.

Taxes and Insurance Companies

Insurance companies will pay the taxes for repairs you do and bill through them. As you begin receiving checks in the mail from insurance companies, make sure to set aside the tax that you charged until it is time to send it to your state Department of Revenue.

When you collect money from a customer who does not have insurance ("cash only" customers), you need to collect tax from them as well.

Local Taxes

Local taxes are the taxes on your product or service. They are known as the "Retail Sales" and Business and Operating (B&O) taxes. Depending on what state you are in when you purchase an item, you pay retail sales tax. The retail tax amount may be as low as 5%, or as high as 9% depending on your area. Be sure you know how much to charge. If you charge too low on the tax, you will be required to make up the difference. If you are charging too much, you can get in trouble with the state. Charging too much tax and not reporting it, is considered fraud, and is a serious offense. Also, collecting taxes and not reporting them, or not paying them, is also a serious offense. Play it safe, and follow the rules. The consequences if you don't are not worth any small gains you might have in the short term.

Some businesses are also required to pay a B&O tax, (depending on what state you are in) which is a tax assessed on the amount of money your business generates in a given quarter or year. Most states do not have B&O Taxes. When you apply for your business license, they will tell you how often you need to pay your local and state taxes. Mid-sized businesses generally file quarterly tax returns (every 3 months). Many small businesses file only once a year. Large businesses may be required to file monthly. *Remember, the local and state taxes are paid by money you collected directly from the insurance companies or customers. This is not money that comes out of your own pocket*

Federal Taxes

Federal taxes are taxes you pay on the money you earn PERSONALLY. Federal taxes are different for a business owner versus an employee of a business. Most likely you will register as a “sole proprietor”. When you are employed by a company, the employer pays for part of your taxes, and deducts the rest from your paycheck. When you work for yourself, you are responsible to pay the full amount. The easiest way is to deduct a percentage from each paycheck, just like would happen if your employer took those deductions out every two weeks. Put the money you deduct into a savings account. By taking a small amount out each week, or every two weeks, it will make it much easier when you need to pay your taxes. Although it is tempting to use that money, try not to touch it. Get in the habit of setting those funds aside and forgetting about them. When tax time comes, it will be simple to send the money in, and you might even get a refund! Much better than suddenly realizing you have to come up with hundreds, or even thousands of dollars that you were not planning for! Check with your accountant as to how much you should hold back. Consider 20% as a starting point. This means, for every \$100 you are paid, hold back \$20 in savings for taxes.

If you incorporate your business, you can choose to be an “employee” of your own company. Your taxes will be a little different than for a sole proprietor. You will still need to set aside the money you deduct for taxes. But, instead of holding these funds in a savings account, you will send them to the various agencies, such as Labor and Industries, IRS and Employment Security. Your bank can help you organize this. Understanding how much to withhold, and where to send the payments, is especially important if you hire additional people to work for you. Taxes are a very serious business, and so keep accurate records and always estimate the amount of money you need to save from any money collected.

Business Guide

Part Three: Insurance Billing

1. How Do I bill The Insurance Companies?

This is not as hard as most people think. It does, however, require some planning. There is a very simple way to handle your billing and one that really works great for those who are new to the windshield repair business. Always make sure you verify coverage before doing any insurance work. In most cases that is quite simple to do. Ask your customer if he or she has comprehensive insurance on their vehicle. Make sure they had coverage on the date the damage occurred.

If you find out the customer has liability only, or no insurance, give them a cash quote before you do any work.

What information do I need to collect from an insured? (See the sample Glass Breakage Report Form at the end of this section.)

Most insurance companies require the information listed below. There is a place for all of this information on your GBR (Glass Breakage Report):

- Date you are doing the work
- Insured's full name
- Insured's mailing address
- Insured's phone number/alternate phone number
- Vehicle information: year/make/model/VIN (*Vehicle ID #*)
- Date of damage, cause, and location. (*Example: 04/20/2002 / flying rock / Hwy 101*)
- Insurance company/policy number/agent name/phone number
- Claim number or referral number (most insurance companies, not all)
- Mark location of chips and how many
- Total amount due from insurance company, including tax.

2. What if the Insurance Company Will Not Pay?

We recommend you verify that the customer has comprehensive coverage BEFORE repairing a chip. Accurate records and information gathering will help you get to the bottom of any insurance problems right away. Check all your paperwork to make sure you have correctly billed the invoice. This will help you to answer the following questions: Do you have the correct company, billing address, or billing rate? Do you have a claim number, referral number, or dispatch number if necessary for processing? At this point if you still have not found a reason contact the insurance company and ask them if there is a problem? Occasionally they may not have input information correctly; simply not received an invoice or quite possibly the insured is not covered. Many insurance companies will allow you to fax them any unpaid invoices. They will usually give your unpaid invoice special attention if you make it clear that you require immediate payment. Accurate information gathering and invoicing procedures will help to eliminate most problems from the start before they even become an issue. So make sure you are accurate in your paperwork. If you do not wish to deal with the details you can contact IBS Software of (Elmo) You can use your search engine to find them. They will assist you in electronic billing for a reasonable fee.

3. Do I Need a Claim Number?

Most insurance companies do require a claim to be set up before they will pay you. This does not mean you won't get paid if you do the work before getting a claim number! As mentioned above, we recommend getting the claim number before you do the work. If you have to get a claim number after the work is done, we recommend you do so by following these instructions: Call the claims department and let them know you repaired a windshield and you need to know if you need a claim number, or if you can simply send them the bill. If they require a claim number they will most likely ask you several questions such as: policy number, date of loss etc. Finally, they may ask to speak with the insured before giving you the claim number. You can connect the claims representative with the insured by a three-way call or you can tell the claims representative that you will have the insured call him or her, and then call you back with a claim number. The claims representative should have no problem with either. If you need to have the insured call and get the claim number, make sure you call them promptly and let him/her know that it is urgent for them to make the call, get the claim number, and call you back with it, so you can get paid for the work you did! Make sure you give the insured the date of damage, and any other important information that they wrote on the GBR! They need to be ready to give the same information to the claims rep when they call. If you have the ability to three-way call when you reach the customer, why not use it and connect the customer to the claims representative? That way you will get your claim number now and get paid sooner!

4. What if I Get "Short Paid"

Usually this happens because an insurance company has a set pricing guideline you may not be aware of.

5. What is a Network/Claims Referral Center?

A "network" is actually a claims and referral center designed to help with glass claims processing. These centers have contract agreements with insurance companies. They handle the details for the insurance company for both repairs and replacements. Many insurance companies have contractual agreements with this large glass company. It is important for you to know that, because this network has their own windshield repair and replacement facilities, they may try to gently refer your customer to one of their shops, rather than having you do the work! If you decide to have your customer call this glass network that also does repairs and replacements, make sure to let the customer know that though you go by the insurance companies pricing guidelines. It is best to do a three way call with this company so that you do not take the chance of being steered. That means your customer can be steered away from you and toward the networks own glass company.

6. Should I Join a Network and what are the Benefits?

This is up to you. We recommend you contact the networks and do your homework before you sign an agreement with any of them. They will inform you if you need to have a pricing agreement with them. A pricing agreement is simply an agreement to bill at a certain rate, usually based on market research in your area.

7. What is Market Research?

Market research is what the insurance companies base their pricing guidelines on to determine what is considered a fair and reasonable payment for services rendered to customers.

8. Can I Still Bill a Network Without Being Part of One?

Yes you can. There is no law requiring you to be a part of any auto glass network.

9. What if I Have to Bill a Customer?

If this situation arises, (and at some point it will), we encourage you to call them first. Explain why you will need to bill them and work out the amount you are going to bill them for. This allows you the opportunity to explain to them what the problem is and together work out an arrangement to have your services paid for. This is simply good customer relations. Make it clear you need to be paid for the work you did while at the same time, assuring them you are willing to work with them.

Business Guide

Part Four: Marketing

Successful marketing is the following:

- *Attracting customers!*
- *Selling your service!*
- *Making sure customers want to use you again!* ▪ *Getting customer referrals.*
- *Sales and marketing is the "KEY" to a successful business!*

With a little imagination you can have a great marketing campaign in no time. A good marketing campaign does not have to be complicated or expensive. The following material is a brief overview.

- *Who you are and what you do.*
- *How you do it and where you do it.*
- *When you are available and how much it costs.*

Keep these key points in mind as we go along through the following list of marketing/advertising techniques. Simply start checking off the ideas you believe will work for you. It may be surprising to you how many ways you can promote your business without a lot of work or money.

First, begin by defining two things:

- *Who you will sell to?*
- *What you have to offer?*

1. Where can chip repair technicians do work?

Do not be afraid to go into any territory. You own it. Take it. Show the businesses you are the best person for the job. You are more dependable than the person they have been using. You are better qualified. Go with confidence!

10 Minute Rock Chip Tents

QUICK and EASY \$\$\$\$!!! Set up in a grocery parking lot (get permission first), near a quick oil change station, truck stop, or espresso stand.... Lots of places! Be sure to have lots of fliers and business cards to pass out.

Fleet Vehicles

Quick and easy repairs that reduce the number of windshields to be replaced, saving the company money and reducing vehicle downtime! Companies with a large fleet of vehicles, such as, telephone, cable and electrical contractors, heating and air conditioning, carpet cleaners etc.

New Cars/Used Cars

A big market here! Make a point of stopping by and getting to know the shop managers. Set up a regular schedule to stop by for repairs. Be sure to leave your business card so they can call you.

Auto Collision and Repair Facilities, Detail Shops, Auto Leasing companies. Truck Stops/Convenience Stores/Gas Stations etc.

Fast repairs for the trucker or a family on the go! 10 minutes can save them lost road time and tickets for cracked glass!

Towing Companies

A great customer service! And a substantial profit for you! 10 minutes = up to \$60 or more!

2. Building Your Business: Marketing & Advertising Strategies

Who do you know?

Family, friends, and neighbors are a great source for business! You probably know somebody that needs a windshield repair, and who will be glad to let you do it. Simply ask them! You are a professional at what you do, and you have a repair kit that is second to none. Let your friends and family know about your new business! Whenever you do a repair for anybody, always ask if they know someone who may be interested in your services. Ask them to tell other people about your services. Networking is a great tool to grow your business!

Door to Door Inquires

It is not hard to spot a rock chip. Why not take the opportunity to let people know about your new business when you spot one? This is not high-pressure sales! In most cases, your customer won't have to pay you anything, and people appreciate the "at home" service. Providing mobile service at a person's home or work makes your services convenient and easy to agree to!

Other Businesses

Visit local businesses. Introduce your company and what you do. Remember you are the President and CEO of your company. Don't be shy! Many times, business owners prefer networking with fellow business owners. You can often get multiple car dealerships this way. Set yourself up as their main referral for windshield repair work. Let them know you stand by your repairs, and they will be happy to let people know about you.

Maximize Exposure

To maximize exposure of your new business, try to make contact with 10 new customers every day. That is a pretty small number, but from those 10 contacts you can obtain a lot of business. (Everybody knows at least 5 people. Make sure your customers tell other business owners) Using this game plan you will never run out of potential business. Be sure to leave your business card with all your customers. Ask if it is okay for them to program your phone into their cell.

3. Business Boosters

Promoting with Postcards

Once you have started building your customer base, keep in touch with them. Build a mailing list and use it. Contact the people and businesses on your list. Be sure to thank them for the work they have given you. A simple post card can be a great way to convey a message.

Surveys

A survey is a great way to obtain abundant marketing material. How? It's all in the asking. Example: Ask customers what matters most to them when it comes to windshield repair. Find out what motivates them to do business with a certain company and why. What age group are they in? Retired folks are usually very loyal to businesses they like. Ask them questions that will help you determine how to service customers better in the future and win them over as a repeat customer.

Promotional Materials

Business cards, brochures, and flyers, are a great way to get your name out there! Be sure to put your logo, name, and PHONE NUMBER on everything that comes in contact with the public and could result in business. They can't use you if they don't know about you, or can't find you!

- Promotional materials do not have to be expensive. Try using different colors of ink, screen printing, or different colors of paper stock, to give you the look and feel of a large company. Check with your local printer for prices. Also, making self-serve copies (B&W) on brightly colored paper can look great, and costs pennies.

Promote Yourself

Personalize your printed materials with photos of your self and your staff. You will be promoting friendliness, building confidence, and personalizing your business by letting people put a face to the name. This can be put on anything, business cards, letterhead, brochures, mailers, you name it!

Try Vista Print. They have tons of promotional materials and do not require minimum orders.

Spy on the Competition

Where do they advertise? Do they have lots of customers? Why are they being successful? Learn from them and duplicate what they do.

Use Other Companies as Models

Collect ads, brochures, flyers, or anything that catches your attention. By using larger companies as a model for marketing, you save yourself time and money. They already know what works and doesn't. Spend some time analyzing their strategies and look at the ways that they promote their businesses and what may benefit you. Keep in mind, these companies do not necessarily have to do auto glass repair. It can be any type of business that is doing a great job at getting the customers in, and servicing the public.

Consistency

If you intend to do any type of newspaper or phone book advertising, remember that not everyone will see you the first time they go looking. You may need to repeat the same ads several times before you are noticed. Don't be discouraged. Once people know where to find you, they will remember where to look for you again. Be consistent. Keep your logo the same or similar, in all your ads, and the layout recognizable. Maximize your money by buying ads that run for extended periods of time.

Don't Forget Your Vehicle

Everywhere you travel, hundreds of drivers will see you. Promote your services with magnetic door signs and window-cling decals. Also, consider bumper stickers. Be sure to include your phone number on these! A reputable sign company will be able to help you.

Customer Window Cling Decals

Use a yellow stick to write a note stating that you need to speak with them regarding their vehicle. They may think you caused a scratch and be calling you for sure! But you have good news! No scratch! You would like to repair their windshield at no cost to them! **(This works very well. You may need to find out how to word it right but there are people who make a lot of money with this bit of wisdom)**

Personal Image

Many companies have uniforms. A good example would be your local home improvement store. In most cases, employees wear brightly colored smocks or aprons. This sets the employees apart from the customers, and makes them more visible. Company uniforms can be seen everywhere, from hospitals to restaurants, and can be as simple as a logo shirt and cap, to a fully color coordinated shirt and pants.

- Strive to always look clean, neat, and professional. Hair should be clean and trimmed. Avoid long hair, which can also be a hazard when working with the equipment. Shoes should be clean and comfortable for standing in. Boots usually work best. No open toed shoes or bare feet. Pants should be full length. Shirts should be clean, and have a collar. If you wear a watch, a belt with a metal buckle, or shirts or pants with metal buttons or snaps, make sure that you do not accidentally scratch your customer's vehicle. Avoid "tee-shirt and shorts". Look professional if you want people to take you seriously. Safety glasses or glasses with shock/scratch resistant lenses should be worn while working, especially when drilling.

Reevaluate Yourself

It is a good idea to get outside opinions about your business. You can do this by building a board of advisors. This is a group of people you trust, who can help to critique your business in an objective, non-threatening way. This gives new perspective, and is a good way to brainstorm ideas for building and promoting your business.

Encourage Feedback

Ask your customers how you are doing, and if they are satisfied. The sooner you are aware of a problem, the sooner it can be corrected. Use feedback as a valuable tool for building a relationship with a potential customer.

The 110% Rule

Always give 110% percent in customer care. When you put the customer first, you get a happy customer. A happy customer will give you referrals and repeat business for many years to come.

Build a Website

This is a great way to give your customers more information about who you are, and what you do.

Direct Mailing

Direct mail means mailing information directly to potential customers. This is a very popular way to market. The most common, and usually the most cost effective, is to print ads as coupon. Mail them as a group to local homeowners.

If you utilize the suggestions above, you would most assuredly have ample customers to begin and grow your new business.

Product & Business Disclaimer

American Windshield Repair Systems and its employees are in no way responsible for injuries to any person or damage to any vehicle in which a person performing repairs with any product that he/she purchased. Instructions in our kits are meant as a training guide and in no way guarantees against damage to persons, glass, or vehicles during a repair process. Thus, any damage resulting from actions or decisions of the purchaser of any American Windshield Repair System's products are the responsibility of the purchaser.

Glass breakage report form

Below is a sample of basic information for your customer to fill in. You will need to create your own glass breakage report form for your customer. You might have three part forms made, one for the customer, one for the insurance company and one for yourself.

Your company name, address, email, website etc here

Name _____ Address _____

City _____ State _____ Zip Code _____ Phone _____

Year _____ Make _____ Model _____ Number of doors Hatch back Ext cab etc _____

Vehicle information

Vin # / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ / ____ (17 digits must be legible)

Date of Damage ____ / ____ / ____ (one date no matter how many chips)

Cause: Example (rock on the freeway) _____

Number of chips to be repaired _____

Location on windshield Driver side _____ Passenger side _____

Insurance Information

Insurance company _____ Agent if applicable _____

Policy number _____ Claim # _____

Phone _____

LIFETIME LIMITED GUARANTEE

If your chip repair spreads to a longer crack (your company here) will refund the money to the person or company who paid for it. .

STATEMENT OF AUTHORIZATION AND SATISFACTION

I hereby authorize my insurance company to make direct payment to (your company here) I agree to pay for my glass repair if billed on account due to lack of payment from my insurance company. I agree with the guarantee on this document by (your company here)

Insured's Signature: X _____ Date: ____/____/____

Total Due \$ _____ Sales Tax _____ Total with Tax _____

Only fill in below if paying by credit card

Card number _____ exp date ____/____ code on back _____