

Auto Glass Replacement — General Information

Personal and Vehicle Protection

Personal Protection

Wear safety equipment, such as work gloves, nitrile chemical resistant gloves, safety glasses, work apron or other protection required by your company



Vehicle Protection

Inspect vehicle for any dents, scratches, missing parts or other pre-existing conditions that could prevent safe installation.

Cover the hood, roof, trunk area, instrument panel, defroster vents, floor area, seats, sills or whatever is necessary with appropriate padded cover material or paint-safe protective tape.



Caution: primers, cleaning solvents and urethane adhesives may permanently adhere to and stain an interior or exterior surface if spilled or dripped on the customer's vehicle. It may be difficult to remove these materials without damaging a surface.

Surface Preparation Guide

Part	Pre-Treatment Process	Product
Ceramic Coat Frit/Inner Frit	Wet-Scrub/BETACLEAN GC-800	BETAPRIME 5504G
Clear Laminated Glass No Frit	Wet-Scrub/BETACLEAN GC-800	BETAPRIME 5504G - 2 coats
Encapsulated Parts	Wet-Scrub/BETACLEAN GC-800	BETAPRIME 5504G
PAAS	Lightly Wet-Scrub/BETACLEAN GC-800	BETAPRIME 5504G
Metal Frame PVC Slider	Wet-Scrub/BETACLEAN GC-800	BETAPRIME 5504G
Gasket Set Parts	Wet-Scrub/BETACLEAN GC-800	BETAPRIME 5504G
OEM Pre-Primed Parts (Black)	BETACLEAN GC-800	BETAPRIME 5504G
Any Bare Metal (Nicks and Scratches)	BETACLEAN GC-800	BETAPRIME 5504G - 2 coats
Corroded Bare Metal	Remove Surface Corrosion Clean Bare Metal with 100% Acetone or Heptane.	BETAPRIME 5504G - 2 coats
Body Side Paint	BETACLEAN GC-800	BETAPRIME 5504G



Glass Preparation

Glass Cleaning

CLEANING PREPARATION FOR MOST REPLACEMENT GLASS:

1. Many contaminants are difficult to detect and remove.
2. Spray glass with BETACLEAN™ GC-800 glass cleaner.
3. Use Scotch-Brite™ pad or melamine foam sponge to abrade the surface:
 - This is a mechanical abrasion step, make sure to use some pressure.
 - Ensure the entire bonding surface is treated.
4. While the surface is still wet, wipe surface with a clean paper towel.
5. Spray glass again with BETACLEAN™ GC-800:
 - If the glass cleaner de-wets, repeat steps 1-4.
 - If the glass cleaner does not de-wet, proceed to glass priming step.

PAAS & Encapsulation Cleaning

CLEANING PAAS, RIM OR PVC ENCAPSULATED BONDING SURFACES:

1. Spray encapsulation with BETACLEAN™ GC-800.
2. Scrub area vigorously with abrasive pad (light scrubbing on PAAS), then wipe clean with a lint-free paper towel.

Glass, PAAS & Encapsulation Bonding

ONCE GLASS IS CLEAN, FOLLOW THESE PRIMING STEPS:

1. Check the expiration date on the container*.
2. If using BETAPRIME™ 5504G All-in-One Primer in bottle, open cap and use the loose cap to pry up the inner seal in a circular motion containing the inner seal in the cap or by pulling gently on the grab ring in the inner seal.

If using BETAPRIME™ 5504G SA stick, open by pinching or bending (on corner of bench) the tube near the foam head to break the internal glass ampule releasing the black primer. **While breaking, be careful to orientate the stick so that the foam applicator is up to prevent possible primer from dripping.** Point the foam head down toward surface to be primed. Allow the primer to saturate the foam head. Gently squeezing the tube will allow the foam head to saturate faster. Apply light pressure to the foam head (too much will damage the foam during application).

For any fritted glass (internal or external):

3. Apply BETAPRIME™ 5504G All-in-One Primer with a clean wool dauber or primer stick in one, even, wet coat, moving in the same direction.
4. Allow primer to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 6 minutes.

For non-fritted glass (internal or external):

5. Apply BETAPRIME™ 5504G All-in-One Primer with a clean wool dauber or primer stick in one, even, wet coat, moving in the same direction.
6. Allow primer to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 6 minutes.

7. Apply a second coat of BETAPRIME™ 5504G and allow to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 6 minutes. When using BETAPRIME™ 5504G SA primer stick on clear glass, two sticks may be required for proper application.

NOTE: In cold temperatures, BETAPRIME™ 5504G may have a wet appearance – this is normal as long as proper dry times are followed.

*Advanced formulation BETAPRIME™ 5504G All-in-One Primer no longer requires shaking. However, shaking won't have a negative effect on the performance.

Body Preparation

Body Cleaning

Body Preparation

Cleaning the vehicle body:

1. Remove all trim and moldings.
2. Remove glass using the preferred method.
3. Clean any dirty areas on the bonding surface with BETACLEAN™ GC-800 or water and a lint-free paper towel to remove all dust, dirt and debris.
4. Trim existing urethane bead down to 1-2 mm.

Bare Metal Body Priming

Once clean and dry, the pinchweld can be primed:

1. Check the expiration date on the container*.

CAUTION: Do not reinsert (double dip) the dauber into the primer bottle if it has touched the body of the vehicle. This could contaminate the remaining primer in the bottle.

For priming any areas of bare metal (large or small, including scratches):

2. Apply one coat of BETAPRIME™ 5504G with a clean wool dauber to any scratches or large areas of bare metal.
3. Allow primer to fully dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 6 minutes.
4. Apply a second coat of BETAPRIME™ 5504G and allow primer to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 6 minutes.
5. When priming large areas of bare metal, only apply a maximum of 8 to 12 linear inches per dauber. This ensures the dauber has enough primer to apply a thick enough coat to protect the bare metal.

NOTE: Scratches well outside of the bonding area do not have to be completely dry at the time of installation

*Advanced formulation BETAPRIME™ 5504G All-in-One Primer no longer requires shaking. However, shaking won't have a negative effect on the performance.

Painted Metal Body Priming

Once clean and dry, the pinchweld can be primed:

1. Check the expiration date on the container*.

CAUTION: Do not reinsert (double dip) the dauber into the primer bottle if it has touched the body of the vehicle. This could contaminate the remaining primer in the bottle.

For priming painted bonding surfaces (no bare metal):

2. Apply one coat of BETAPRIME™ 5504G with a clean wool dauber to the painted area where original adhesive may have peeled off or to extend the bonding area when applying adhesive to the glass part.
3. Allow primer to dry for 2 minutes at 20°F (-7°C) and above. From 20°F (-7°C) down to 0°F (-18°C), allow primer to dry for 6 minutes.

NOTE: In cold temperatures, BETAPRIME™ 5504G may have a wet appearance – this is normal as long as proper dry times are followed.

*Advanced formulation BETAPRIME™ 5504G All-in-One Primer no longer requires shaking. However, shaking won't have a negative effect on the performance.

Corrosion Protection

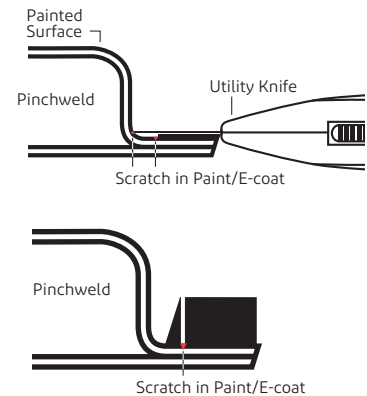
Preventing Corrosion

Pinchweld Scratches in Paint/E-coat

When trimming the existing bead of adhesive, be aware of where the end of the knife is – adjust the blade as necessary.

Warning: deep scratches made in the paint during relief or plunge cuts may be inaccessible to primers used in touch up. The scratched area will corrode over time. Not scratching the area is the only sure way to avoid corrosion.

1. Inspect bottom and sides of pinchweld to ensure paint/e-coat is not scratched.
2. Treat any scratches with BETAPRIME™ 5504G.



Identifying Corrosion Levels

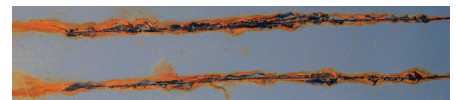
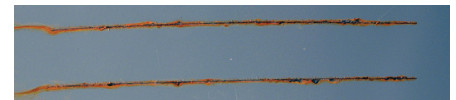
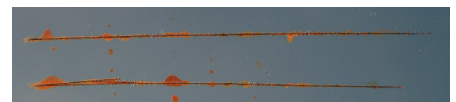
There are four levels of corrosion:

Light oxidation – light metal discoloration, orange in color – remove with abrasive wheel or grinding stone

Moderate oxidation – some red spots – remove with an abrasive wheel, grinding stone or by media blasting

Severe oxidation – deep pitting with dark red spots with raised edges – remove with an abrasive wheel, grinding stone or media blasting

Perforation – varies from holes in metal to loss of metal thickness – replace panel



Corrosion Treatment

- Remove corrosion using your preferred method: e.g., wire brush, abrasive wheel, grinding stone or media blasting

NOTE: wire brushes should not be used on any corrosion over level 1.

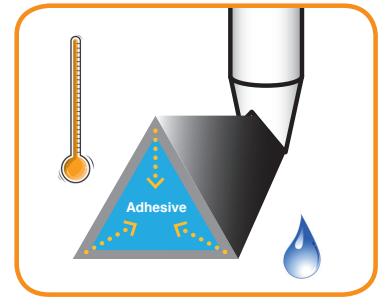
- Take care to avoid damaging paint
- Only repair areas with good adhesion
- Photograph any corrosion damage and final treated area after applying the primer to document it
- Clean the bare metal area with 100% acetone
- Prime bare metal using 2 coats of BETAPRIME™ 5504G All-in-One Primer
- Record all lot numbers for BETAPRIME™ 5504G All-in-One Primer

Adhesive Application

Applicator Position

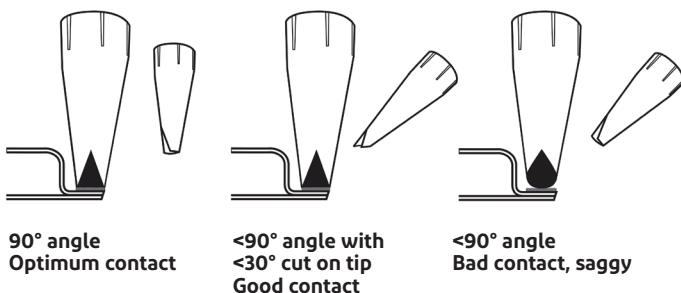
For glass application:

1. For best application results, hold the applicator in a vertical position (at 90° to the surface) and dispense the adhesive with a continuous motion in a uniform V-shaped bead.
2. Apply adhesive to the glass on top of the bondline.
3. Make sure the bead is uniform and has no gaps; add material or tool joints if necessary.

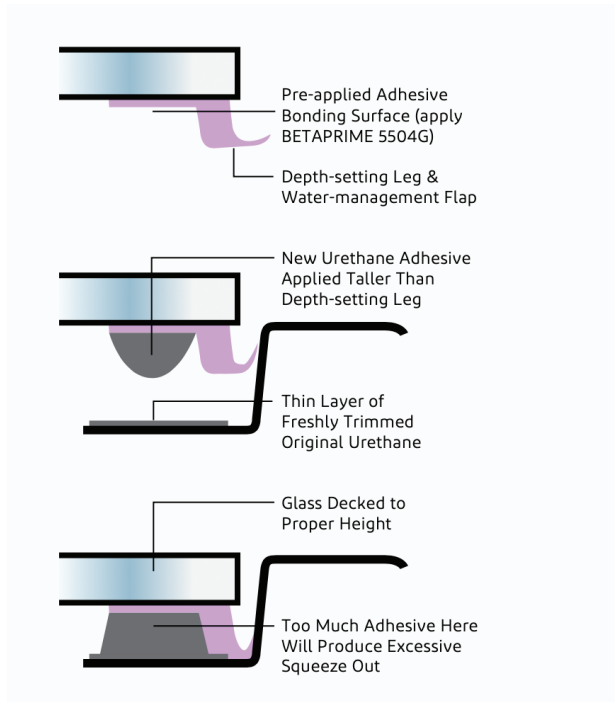


For pinchweld application:

1. For best application results, hold the applicator in a vertical position (at 90° to the surface) and dispense the adhesive with a continuous motion in a uniform V-shaped bead. This is to ensure that the nozzle tip sits flush to the cut urethane so the V-shaped bead dispensed makes good contact. For applications on the body where maintaining the applicator 90° to the surface is difficult due to the need for an extended reach, it might be useful to cut a bit of an angle to the tip (not more than 30°). This will allow the tip to remain flush with the cut urethane and the V-shaped bead will make good contact.
2. Apply adhesive to the pinchweld perimeter directly on top of the freshly cut original equipment urethane.
3. Make sure the bead is uniform and has no gaps; add material or tool joints if necessary.



Pre-Applied Adhesive System (PAAS)



Bead Shape

ROUND BEAD

A round bead lays on top of the trimmed adhesive (Figure 1). This exposes the bead of new adhesive to curing of the surface, preventing penetration and wet out to the bonding surfaces. A round bead after application of glass has minimal penetration into rough surface, as well as having a high potential for trapping air pockets between the glass and new adhesive (Figure 2).

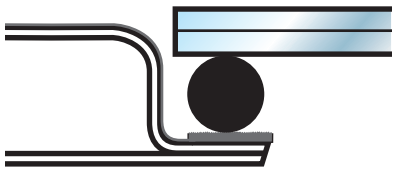


Figure 1

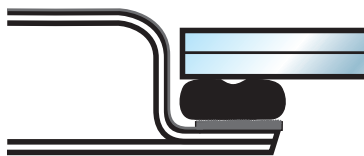


Figure 2

TRIANGLE OR V-SHAPED BEAD

A triangle or V-shaped bead applied to trimmed adhesive has superior penetration into the rough surface (Figure 3).

A triangle or V-shaped bead wets out as glass is pressed or decked into the new adhesive, while avoiding creation of air pockets (Figure 4). This bead most closely duplicates the original OEM adhesive application.

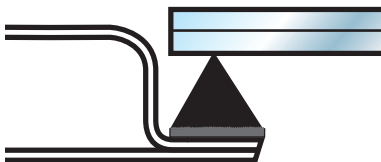


Figure 3

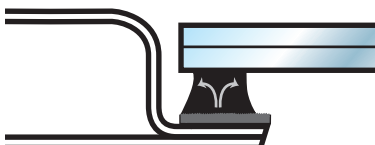


Figure 4

A TRIANGLE OR V-SHAPED BEAD ON GLASS

A triangle or V-shaped bead applied to glass will penetrate and wet out into the trimmed adhesive when decked (Figure 5).

A triangle or V-shaped bead applied to glass will penetrate and wet out into the trimmed adhesive when decked and squeeze out potential air pockets (Figure 6).

A triangle or V-shaped bead applied to glass will wet out into the trimmed adhesive but may not line up exactly with the full width of the trimmed adhesive bead, reducing surface contact.

A triangle or V-shaped bead applied to glass may require application of appropriate primer to area outside of trimmed adhesive area to promote full adhesion of new adhesive (Figure 7).

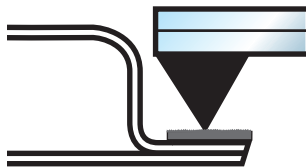


Figure 5

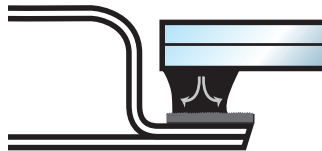


Figure 6

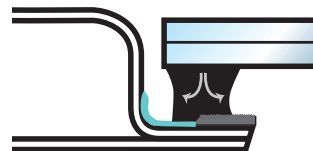


Figure 7

Recordkeeping

- Record lot numbers for all adhesives and primers used
- Record D.O.T. Number for glass parts installed
- Refer to minimum drive-away time published for adhesive system used and record recommended time and date vehicle may be driven
- Record ambient temperature and relative humidity at time and location of installation
- If ALL adhesives and primers were from the same BETASEAL™ G-EZKit, the master lot code sticker contains all necessary lot numbers of adhesives and primers in the kit