

## This procedure is the Full Cutout Method With Dam Materials Using 3M™ Auto Glass Urethane Windshield Adhesive

These instructions describe the proper use of 3M™ Auto Glass Urethanes and related 3M glass shop products and are intended for use as a supplement to detailed service manuals and instructions provided by automotive manufacturers. Automobile manufacturer instructions should be followed when removing automotive trim and moldings as well as other special requirements pertaining to specific car models.

*Note: The products and procedures presented here may be applicable to quarter glass and backlite replacements. However, for detailed instructions by car model, you should refer to information available from the automobile manufacturer.*

The following instructions cover replacement procedure for urethane bonded automotive windshields using the full cut out procedure with dam material. The dam material provides the proper setting height and may or may not be required, depending on the adhesive chosen and OEM recommendations.

*Please Note: Powder free gloves are required for glass replacement, as powdered gloves can contaminate the bonding surface.*

### Step 1

Organize all tools, product and equipment needed. Wear appropriate safety equipment, such as Nitrile rubber, Butyl rubber, chemical resistant gloves, safety glasses, apron or other protective equipment required by safety or company regulations.

### Step 2

If necessary, remove windshield wiper arms and trim as necessary to expose the entire perimeter of glass.

### Step 3

Clean dirt and debris from around the pinchweld area before cutting out the glass, and again after the glass is cut out to minimize contamination.

### Step 4

Cut into existing urethane around entire perimeter of glass with a utility knife, cutting as close to edge of the glass as possible.

### Step 5

Cut out glass with appropriate removal tools, keeping as close to the glass as possible. Remove windshield and repeat Step 3.

### Step 6

Dry set the glass. Align for uniform fit and adjust setting blocks as needed for best fit. To allow for sufficient bonding of urethane, make sure there is a MINIMUM of 1/4-inch of glass, in addition to the space that will be taken up by any dam material, around the entire perimeter of the glass. Mark location by applying masking tape to windshield and car body. Slit tape at edge of glass. Remove windshield.

### Step 7

Remove major portion of old urethane adhesive from the pinchweld. Use a razor blade knife or utility knife to prevent scraping paint off the pinchweld and exposing bare metal. *NOTE: On urethane installations, it is recommended that a thin film (1-2 mm) of the old urethane be left on the pinchweld and fresh urethane is bonded to remaining film. When removing butyl tape or unknown material, remove all old material from pinchweld.*

### Step 8

Prime any bare metal scratches with 3M™ Single Step Primer (PN 08681, 08682). *NOTE: When excessive abrasive cleaning is required, prime pinchweld metal with a 2 part epoxy automotive paint primer and allow to cure properly. Apply (PN 08681, 08682) to repaired area and allow to dry for at least 5 minutes.*

### Step 9

Clean inside surface of glass with 3M™ Glass Cleaner, (PN 08888), and use a lint-free paper towel to clean the surface where the urethane bond will be made.

### Step 10

Verify the primer and urethane are within "use by" dates. Record the lot numbers for future reference if needed.

### Step 11

Shake 3M™ Single Step Primer (PN 08681, 08682) for at least 30 seconds before application.

### Step 12

Apply 3M™ Single Step Primer (PN 08681, 08682) to the outer edge of the glass where the urethane bond will be made and allow to dry for at least 10 minutes.

### Step 13

If a foam dam was used in the OEM application it is suggested that foam dam material should be replaced. If no dam was used it is suggested that foam spacer blocks be applied to the inside edge of the pinchweld to assist in setting the glass when using 3M™ Auto Glass Urethane PN 08690.