

Windshield pinchweld corrosion repair

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There may be occasions when the pinchweld beneath the windshield has corroded either due to an improperly installed windshield or simply age. This can be detected either by water leaking into the passenger compartment or by excessive wind noise. In some instances, the corrosion isn't noticed until the glass is being replaced and the windshield has been removed. Regardless of the extent of damage, this corrosion must be removed before the installation of a new windshield. Failure to do so can result in leaks, wind noise, or the windshield not remaining securely in place during a collision.



Figure 1 - Corrosion along the windshield pinchweld can cause leaks into the vehicle interior.

CORROSION occurs from a breakdown of the coatings, allowing moisture and air to come into contact with the exposed metal (see Figure 1). The repair must ensure that the metal is completely sealed from the elements to prevent corrosion from reoccurring after the windshield is reinstalled. It also requires that all corrosion be removed before reapplying primers and adhesive to the pinchweld area.

Corrosion Repair

To repair a corrosion-damaged windshield pinchweld, begin by removing the windshield from the vehicle, making sure not to create any more additional corrosion hot spots during the removal process. Keep the blade close to the glass, so the majority of the adhesive is left intact. Always note the position of the cutting blade to make sure

Figure 4 - Common methods of corrosion removal include using a plastic-coated abrasive wheel, wire wheel, and a media blaster.



Figure 5 - Anti-corrosion primer must be applied to the pinchweld to reinstall corrosion protection over the bare steel.





Figure 2 - This vehicle has extensive corrosion damage beneath the urethane that may have inhibited the safety features of the windshield.



Figure 3 - The vehicle interior must be protected from the repair process.

any adjacent surfaces are not being marred.

With the glass removed, examine the pinchweld, looking for all areas that are contaminated by corrosion or scratched during the removal process (see Figure 2). These areas must be properly repaired before applying a new bead of urethane. Typically, pinchweld primer will work well for repairing minor scratches on a pinchweld. However, damage to a panel beyond the pinchweld may require a spot repair of the finish.

Before beginning the corrosion repair process, mask off the windshield opening area (see Figure 3). This helps ensure that dust and particles from the repair process don't end up in the defroster vents, or anywhere else in the vehicle interior. Also protect adjacent areas.

Corrosion can be removed from the pinchweld using either a plastic-coated abrasive wheel, wire wheel, or media blaster (see Figure 4). Regardless of which method is used, it's important to minimize thinning the metal during the corrosion removal process. If body repair was completed on the pinchweld, it's important that filler not be used. Windshields should not be installed over body filler. This would be a weak link. The body of the urethane adhesive fills in minor irregularities on the pinchweld.

Primer Application

Once all the corrosion is removed from the surface of the pinchweld, corrosion-resistant primer must be applied (see Figure 5). If areas adjacent to the pinchweld are also being refinished, use a primer that is recommended by the refinish system.

If topcoats are being applied, masking is applied over the primer to prevent topcoats from being sprayed onto the surface of the pinchweld. After the basecoat and clearcoat have been applied, the masking is removed. The pinchweld should be cleaned after tape removal to ensure any residual adhesive from the tape has been removed.

Pinchweld primer, that is specific to the urethane adhesive, is now applied over the corrosion-resistant primer, making sure to not get the pinchweld primer on any of the existing urethane (see Figure 6). After the pinchweld primer is applied, the windshield is test fit and prepped, the existing urethane is trimmed, the new urethane bead is applied, and the glass is reinstalled.

Conclusion

Proper repair of a corrosion-damaged windshield pinchweld not only helps stop the further spread of corrosion, it maintains the safety features of the windshield which include maintaining the structural integrity of the upperbody structure, containing passengers within the vehicle, and possibly assisting in proper deployment of the passenger airbag.

More information on stationary glass installation can be found in the I-CAR Course, *Stationary Glass (GLA02)*. [I](#)

I-CAR

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Figure 6 - Pinchweld primer, specific to the urethane being applied, must be applied over the corrosion-resistant primer before applying the urethane.