



Adhesives Coatings & Sealants

Application Guide

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Plastic Tab Repair

Step 1

Clean the workpiece with soap and water, followed by 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987).*

Step 2

Grind the remaining part of the tab with a 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder set at a lower speed.



Step 3

Grind the remaining tab to a beveled edge, so that the area can be built back up to the original thickness with adhesive.

Step 4

Drill 1/8 inch holes through the beveled area, about 1/4" to 1/2" apart, as space permits.



Step 5

Use clean, unoled, compressed air to remove any dust from the tab surface.

Step 6

Apply a light coat of 3M™ Automix™ Polyolefin Adhesion Promoter (PN 05907) to the tab. Allow to dry for 5 minutes.

Step 7

Cut a piece of Duramix™ Plastic Contour Sheet (PN 04903) that is about 3 times as long as the tab that will be repaired.

Step 8

Following the product directions, carefully dispense an appropriate amount of either Duramix™ Super Fast Plastic Repair Adhesive (PN 04247) or Duramix™ Semi-Rigid Plastic Repair Adhesive (PN 04240) onto the center of the contouring sheet. *NOTE: 04247 is faster-setting and the preferred choice, but may not be appropriate for larger applications or in a hot environment.*



Step 9

Immediately press the adhesive and sheet into the repair area, folding over the sheet and forming the general shape of the tab to be rebuilt. Force the repair material through the holes that were drilled in step 4.



Step 10

Allow to cure before sanding for 5 minutes (PN 04247) or 15 minutes (PN 04240).



Step 11

Carefully remove the contouring sheet from the area.

Step 12

Grind and shape the tab to the desired dimensions with a 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder.



Step 13

Use a die grinder or appropriate drill bit to re-create the mounting hole of the original tab.



Step 14

If desired, use appropriate grades of 3M Abrasives and paint company recommended practices to prepare and paint the finished tab.

- Do not apply polyester based body fillers or putties directly to Duramix™ products. Use 3M™ Automix™ EZ Sand Flexible Parts Repair (PN 05887) instead, if a cosmetic finish is necessary.

** Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

PLASTIC REPAIR GUNS

- MixPac® Manual Applicator Gun PN 08117
- MixPac® Pneumatic Applicator Gun PN 09930
- 3M™ Manual 200mL Cartridge Applicator Gun PN 08571
- 3M™ Automix™ Mixing Nozzle 3/8" PN 08193

CATALOG PAGE REFERENCE GUIDE PLASTIC TAB REPAIR PRODUCTS

	
05907 - 3M™ Automix™ Polyolefin Adhesion Promoter	Pg.18
	
04240 - Duramix™ Semi-Rigid Plastic Repair Adhesive	Pg.17
	
04247 - Duramix™ Super Fast Plastic Repair Adhesive	Pg.17
	
04903 - Duramix™ Plastic Contour Sheet	Pg.17
	
08987 - 3M™ General Purpose Adhesive Cleaner	Pg.7
	
08193 - 3M™ Automix™ Mixing Nozzle - 3/8"	Pg.32

Flexible Plastic Repair - Cosmetic

Step 1

Clean the workpiece with soap and water, followed by 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987).*



Step 2



Begin dishing out the repair area with a 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder set at a lower speed. It is important to create a gradual transition into the undamaged area and not to have any sharp edges.

Step 3



Continue dishing out the repair area with a 3M™ Abrasive DA Disc (Grade 80), being careful to keep grade 80 scratches confined to the sunken area that has been dished out.

Step 4



Finish the dish-out process with a 3M™ Abrasive DA Disc (Grade 180) and feather into the surrounding area, removing paint where adhesive will be applied.

Step 5

Use clean, unooled, compressed air to remove any dust from the work surface.

Step 6



Apply a light coat of 3M™ Automix™ Polyolefin Adhesion Promoter (PN 05907) to the sanded area. Allow to dry for 5 minutes.

Step 7



Following product instructions, apply 3M™ Automix™ EZ Sand Flexible Parts Repair (PN 05887) to the work surface.

Step 8

Using a 3M Spreader (PN 05842) with firm pressure, apply a tight coat of adhesive to insure good contact with the plastic. Continue to build thin, wet coats until the repair adhesive is slightly higher than the surrounding plastic.

Step 9

Allow the material to cure for 15 minutes before proceeding to the next step.

Step 10

Test the area's readiness for sanding by nicking the surface of the repair material. When a white mark is obtained, the material is ready to sand.

Step 11

Use a 3M™ Abrasive DA Disc (Grade 80) to bring the material close to level with the bumper surface, but be careful not to sand the surrounding plastic with this step.

Step 12



Use a 3M™ Abrasive DA Disc (Grade 180) to finish leveling the area and feather into the surrounding plastic and paint.

Step 13



Finish with a 3M™ Abrasive DA Disc (Grade 320), sanding well into the surrounding surface.

Step 14



Reapply a light coat of 3M™ Automix™ Polyolefin Adhesion Promoter (PN 05907) to the sanded area.

Step 15

Prime and paint per paint manufacturer's recommendations.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

FLEXIBLE PLASTIC REPAIR GUNS

- MixPac® Manual Applicator Gun PN 08117
- MixPac® Pneumatic Applicator Gun PN 09930
- 3M™ Manual 200mL Cartridge Applicator Gun PN 08571
- 3M™ Automix™ Mixing Nozzle 3/8" PN 08193

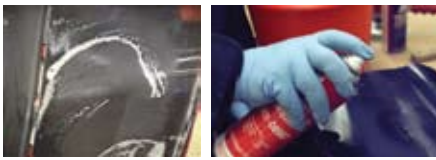
CATALOG PAGE REFERENCE GUIDE FLEXIBLE PLASTIC REPAIR (COSMETIC) PRODUCTS

	
05887 - 3M™ Automix™ EZ Sand Flexible Parts Repair	Pg.18
	
05907 - 3M™ Automix™ Polyolefin Adhesion Promoter	Pg.18
	
08987 - 3M™ General Purpose Adhesive Cleaner	Pg.7
	
08193 - 3M™ Automix™ Mixing Nozzle - 3/8"	Pg.32

Flexible Plastic Repair - Structural (2-sided repair)

Step 1

Clean the workpiece with soap and water, followed by 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987).*



Step 2



If necessary, realign the plastic piece by heating (a 700-1000 Watt heat gun is recommended) to relax the plastic to its original shape. Quench the heated bumper with cold water.

Step 3

Begin dishing out the repair area on the front side with a 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder set at a low speed. It is important to create a gradual transition into the undamaged area and not to have any sharp edges. Use clean, unoled, compressed air to remove any dust from the work surface.

** From here, you have two choices with how to proceed to reinforce the plastic component. In most cases, follow steps 4-8. For difficult contours, larger repairs, or very high stress areas follow steps 9-18.*

Repair with 3M™ Automix™ EZ Fix Flexible Patch (PN 05888)

Step 4

If necessary: If there is any paint overspray in the area surrounding the damage on the back of the plastic piece, remove with 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987) and a clean, dry shop towel. For stubborn overspray, a maroon Scotch-Brite™ Pad (PN 07447) and 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987) work best. For very stubborn overspray, sand with a DA Disc (Grade 320).

Step 5

If necessary: If the damage reaches the edge of the plastic piece, grind out a "v-notch" at the edge of the plastic to help dissipate any stress there.

Step 6



Wipe the back side of the bumper where the patch will be placed with 3M™ Automotive Adhesion Promoter (PN 06396). Allow this to dry for 5 minutes.

Step 7

Cut to size, allowing at least 1.5" of overlap around damage, remove the release liner, and apply the 3M™ Automix™ EZ Fix Flexible Patch (PN 05888) to the backside of the bumper. Press in place firmly, as pressure will increase the bond strength. If the full-size patch is too small for the damage you are repairing, this is not an appropriate repair to make with the patch (see Duramix™ traditional repair method).



Step 8

Proceed to step 3 of **Flexible Plastic Repair – Cosmetic** on the front side of the plastic piece.

Traditional Repair with Duramix™ Semi-Rigid Plastic Adhesive (PN 04240)

Step 9



Dish into the damaged area of the back side (non-cosmetic side) of the plastic piece with the 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder set at a low speed.

Step 10



Continue to sand the back side with a 3M™ Abrasive DA Disc (Grade 80) where the repair materials will be applied.

Step 11

Use clean, unoled, compressed air to remove any dust from the work surface.

Step 12



Apply a light coat of 3M™ Automix™ Polyolefin Adhesion Promoter (PN 05907) to the sanded area (front and back). Allow to dry for 5 minutes.

Step 13



Use Scotch® Auto Body Repair Tape (PN 06930) on the front side of the repair piece, tenting in the middle, to keep the repair material from the back side from flowing through to the front.

Step 14



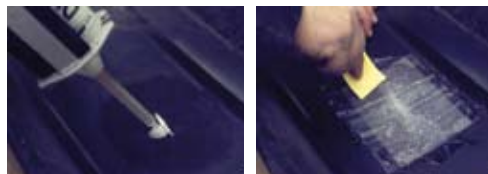
Cut a piece of Duramix™ Reinforcement Patch (PN 04904) 1.5" larger than the damage, remove the liner from the mesh and place the mesh aside (to be used in the next steps).

Step 15

Following product instructions, prepare Duramix™ Semi-Rigid Plastic Repair Adhesive (PN 04240) to be applied to the work surface.

Step 16

Apply a small amount of adhesive. Using a 3M Spreader (PN 05842) with firm pressure, spread a tight coat of adhesive to insure good contact with the plastic. Position the reinforcement mesh on the damage and continue to build thin, wet coats until the repair adhesive is slightly higher than the surrounding plastic. Multiple layers of Duramix™ Reinforcement Patch (PN 04904) may be used to increase strength.



Step 17

Allow the adhesive to cure for 15 minutes.

Step 18

Remove the Scotch® Auto Body Repair Tape (PN 06930) and proceed to step 3 of **Flexible Plastic Repair – Cosmetic** on the front side of the plastic piece.

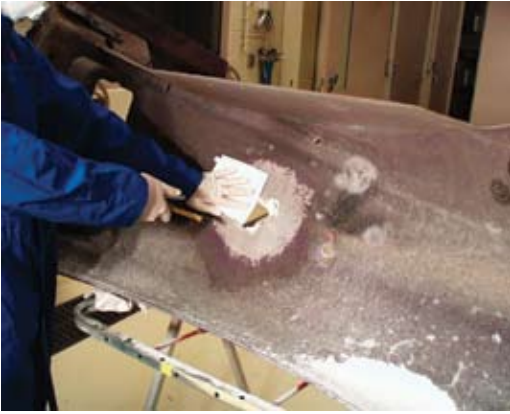
**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

CATALOG PAGE REFERENCE GUIDE FLEXIBLE PLASTIC TAB REPAIR PRODUCTS

	
05907 - 3M™ Automix™ Polyolefin Adhesion Promoter	Pg.18
	
04240 - Duramix™ Semi-Rigid Plastic Repair Adhesive	Pg.17
	
04247 - Duramix™ Super Fast Plastic Repair Adhesive	Pg. 17
	
04904 - Duramix™ Reinforcement Patch	Pg.17
	
08987 - 3M™ General Purpose Adhesive Cleaner	Pg.7
	
05888 - 3M™ Automix™ EZ Fix Flexible Patch	Pg.18
06396 - 3M™ Automotive Adhesion Promoter	Pg.18

Step 1

Clean the workpiece with soap and water, followed by 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987).*



Step 2

Begin dishing out the repair area with a 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder. It is important to create a gradual transition into the undamaged area and not to have any sharp edges.



Step 3

Continue dishing out the repair area with a 3M™ Abrasive DA Disc (Grade 80).

Step 4

Finish the dish-out process with a 3M™ Abrasive DA Disc (Grade 180) and feather into the surrounding area, removing paint where adhesive will be applied.

Step 5

Use clean, unoled, compressed air to remove any dust from the work surface.

Step 6

Following product instructions, apply 3M™ Automix™ EZ Sand Rigid Parts Repair (PN 05885) to the work surface.



Step 7

Using a 3M Spreader (PN 05842) with firm pressure, apply a tight coat of adhesive to insure good contact with the plastic. Continue to build thin, wet coats until the repair adhesive is slightly higher than the surrounding plastic.

Step 8

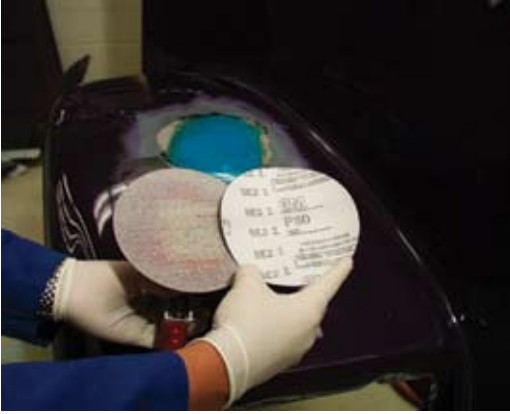
Allow the material to cure for 30 minutes before proceeding to the next step.

Step 9

Test the area's readiness for sanding by nicking the surface of the repair material. When a white mark is obtained, the material is ready to sand.

Step 10

Use a 3M™ Abrasive DA Disc (Grade 80) to bring the material close to level with the composite surface.



Step 11

Use a 3M™ Abrasive DA Disc (Grade 180) to finish leveling the area and feather into the surrounding composite and paint.



Step 12

Finish with a 3M™ Abrasive DA Disc (Grade 320), sanding well into the surrounding surface.

Step 13

Prime and paint per manufacturer's recommendations.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

CATALOG PAGE REFERENCE GUIDE FIBERGLASS, SMC, AND COMPOSITE REPAIR (COSMETIC) PRODUCTS



05885 - 3M™ Automix™ EZ Sand Rigid Parts Repair

Pg.17



08275 - 3M™ Automix™ Truckline EZ Sand Rigid Parts Repair

Pg.5



08987 - 3M™ General Purpose Adhesive Cleaner

Pg.7

Fiberglass, SMC, and Composite Repair Structural (2-sided)

Step 1

Clean the workpiece with soap and water, followed by 3M™ General Purpose Adhesive Cleaner (PN 08984, 08987)*. It is important to prevent solvent from “wicking” in to exposed glass fibers. You can cover the fibers with masking tape to prevent this from occurring during the cleaning process.



Step 2

Begin dishing out the repair area on both sides with a 3M™ Roloc™ Abrasive (Grade 50) on a pistol grip grinder set at a lower speed. It is important to create a gradual transition into the undamaged area and not to have any sharp edges. Use clean, unoled, compressed air to remove any dust from the work surface.



Step 3

Continue to sand the back side (non-cosmetic side) repair area of the plastic piece with the 3M™ Roloc™ Abrasive (Grade 36) on a pistol grip grinder set at a lower speed.



Step 4

Use clean, unoled, compressed air to remove any dust from the work surface.

Step 5

Use Scotch® Auto Body Repair Tape (PN 06930) on the front side of the repair piece, tenting in the middle, to keep the repair material from the back side from flowing through to the front.



Step 6

Cut a reinforcement patch using 3M™ Fiberglass Matting (PN 05837) or Fiberglass Cloth (PN 05838) 1.5” larger than the damaged area. It is recommended to include an additional layer of reinforcement material cut slightly larger than the first layer.



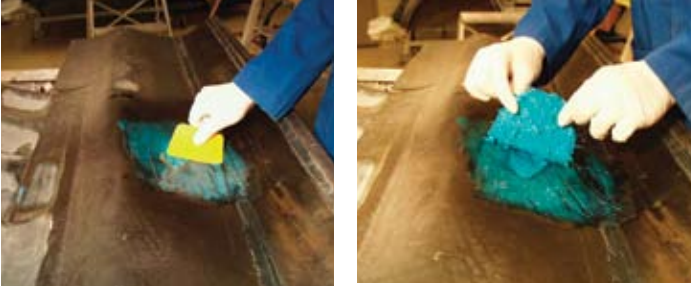
Step 7

Place the pre cut reinforcement material on a clean, dry work surface and apply 3M™ Automix™ EZ Sand Rigid Parts Repair (PN 05885) to the fiberglass cloth or matting. Using a 3M™ Spreader (PN 05842) spread a “tight coat” of the repair material, forcing it through the glass cloth or matting on both sides and being sure to saturate the cloth or matting completely.



Step 8

Following product instructions, apply a “tight coat” of 3M™ Automix™ EZ Sand Rigid Parts Repair (PN 05885) to the prepared work surface. Place the saturated reinforcement material on the damaged area and continue to build thin, wet coats of 3M™ Automix™ EZ Sand Rigid Parts Repair (PN 05885) until the repair adhesive is slightly higher than the surrounding plastic.



Step 9

Allow the adhesive to cure for 30 minutes.



Step 10

Remove the tape and proceed to step 3 of **Fiberglass, SMC and Composite Repair – Cosmetic** on the front side of the plastic piece.



**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

CATALOG PAGE REFERENCE GUIDE FIBERGLASS, SMC, AND COMPOSITE REPAIR (STRUCTURAL) PRODUCTS



05885 - 3M™ Automix™ EZ Sand Rigid Parts Repair

Pg.17



08275 - 3M™ Automix™ EZ Sand Rigid Parts Repair

Pg.5



08987 - 3M™ General Purpose Adhesive Cleaner

Pg.7

Panel Bonding

Step 1

Remove the damaged panel. If the panel was previously bonded, cut away the inside area of the damaged panel, but leave a 2 to 3 inch strip of the panel bonded to the vehicle. Apply heat to the panel's exterior and pry or peel the panel off the vehicle as the adhesive softens.

Step 2



To avoid grinding any contaminants into metal surfaces, use 3M™ General Purpose Adhesive Cleaner PN 08984/08987 to clean all areas of the replacement panel and the portions of the vehicle that will be bonded.

Step 3



In the parts of the replacement panel that will be bonded, remove the E-coat using a 3M™ Scotch-Brite™ Clean & Strip™ Disc PN 07460 or a grade 50 3M™ Green Corps™ Roloc™ Disc PN 01406. These products can also be used to remove primer, paint and corrosion from the inner structure of the vehicle. If bonding a door skin, the E-coat does not have to be removed but the area that will be bonded must be scuffed with a Scotch-Brite™ General Purpose Hand Pad PN 07447. Since the flange will be hemmed later, any potential E-coat failure will be overcome.

Step 4



Grind off all exposed welds or raised metal on the vehicle that could prevent the replacement panel from fitting well. Use a grade 36 or grade 50 3M™ Green Corps™ Roloc™ Disc.

Step 5

Straighten all metal surfaces that will be bonded.

Step 6

Obtain enough clamps of the correct type to hold the replacement panel in place during curing. Appendix A of this manual recommends clamp types for various repairs. Sheet metal screws also may be used in areas that are non-cosmetic or where there is not enough space to place clamps.

Step 7



Dry fit the replacement panel and clamp it in place. It is very important to obtain good fit and alignment. Remove the panel from the vehicle.

Step 8

If the panel must be cut or reshaped in order to fit, make those adjustments then confirm the panel fits well.

Step 9



Use 3M™ General Purpose Adhesive Cleaner PN 08984/08987 to re-clean all areas of the replacement panel and vehicle inner structure that will be bonded.

Step 10



If any areas need to be MIG welded, they should be sprayed with 3M™ Weld-Thru Coating PN 05917 at this time. Resistance spot welding can be done through 3M™ Automix™ Panel Bonding Adhesive PN 08115 so 3M™ Weld-Thru Coating is not needed in those areas.

Step 11



Place the 3M™ Automix™ Panel Bonding Adhesive PN 08115/08116 dual cartridge in the MixPac® Manual Applicator Gun PN 08117.

Step 12



Remove the cartridge end cap and equalize the cartridge by dispensing a small amount of adhesive onto the empty cartridge packaging or a shop towel. Dispense enough material to ensure both components of the adhesive are being extruded from the cartridge.

Step 13



Place the mixing nozzle on the cartridge and lock it in place with the retaining collar. Extrude a small amount of adhesive to ensure thorough mixing.

Step 14

Following the diagrams in Step 1, apply beads of 3M™ Automix™ Panel Bonding Adhesive PN 08116 to the appropriate areas of the replacement panel and vehicle. Do not apply adhesive to areas that have been sprayed with 3M™ Weld-Thru Coating.



Step 15



Spread the adhesive with a 3M™ Spreader PN 05842 or an acid brush to cover all bare metal surfaces.

Step 16



Place a second bead of adhesive in the central flange area of either the replacement panel or the vehicle's inner structure.

Step 17

Apply 3M™ Ultrapro™ Urethane Seam Sealer PN 08360 or 3M™ Ultrapro™ MSP Seam Sealer PN 08369 or Duramix™ NVH Dampening Material PN 04274 to intrusion beams or roof bows for flutter prevention. This will prevent road noise or vibrations from occurring in the interior of the vehicle.



Step 18

Place the replacement panel on the vehicle and slide it into the correct position. Do not lift the panel because air pockets could form in the adhesive between the replacement panel and the vehicle.

Step 19



Clamp the panel into position. Clamps should be spaced closely enough to achieve proper fit and adhesive squeeze out.

Step 20



Place sheet metal screws in non-cosmetic areas or spaces where there is not enough room to use clamps.

Step 21



Remove excess adhesive from the outside edges of the seams.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

CATALOG PAGE REFERENCE GUIDE PANEL BONDING PRODUCTS



08115 - 3M™ Automix™ Panel Bonding Adhesive

Pg.3



08116 - 3M™ Automix™ Panel Bonding Adhesive

Pg.3



05917 - 3M™ Weld-Thru II

Pg.9,21



04274 - Duramix™ NVH Dampening Material

Pg.14



08987 - 3M™ General Purpose Adhesive Cleaner

Pg.7

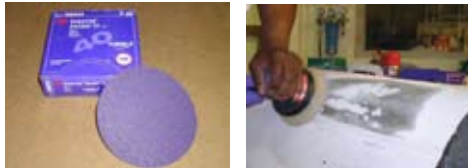
Dent Repair

Step 1

Clean the repair area with soap and water, followed with 3M™ General Purpose Adhesive Cleaner PN 08984 or PN 08987.*

Step 2

Sand damaged area with grade 40E 3M™ Imperial™ Hookit™ II 6" PN 00834 or 8" Discs (using PN 05276 standard 6" 3M™ Hookit™ II D/A pad, or PN 05279 8" 3M™ Hookit™ II Pad).



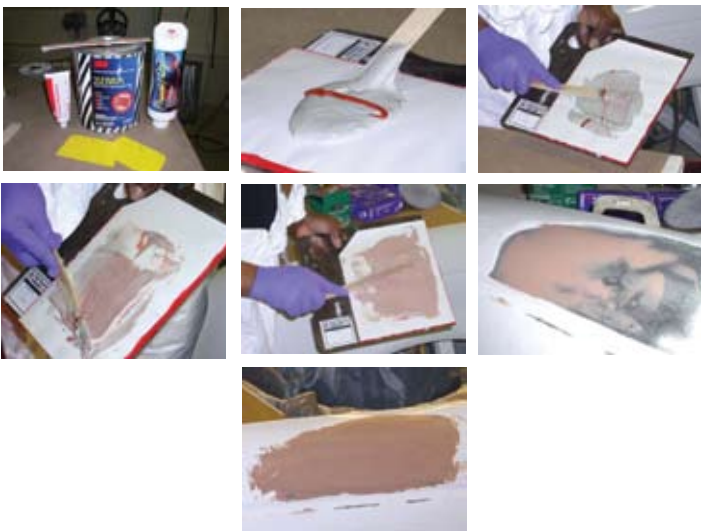
Step 3

Sand low spots and hard to reach areas with grade 50 3M™ Roloc™ Discs, PN 01406.



Step 4

Mix and apply 3M™ Zebra™ Advanced Lightweight Filler PN 05868 using proper mixing and application techniques.



Step 5

Sand plastic filler with grade 40E 3M™ Imperial™ Hookit™ II for an air file, 8" "Mud Hog" or hand block.



Step 6

Apply 3M™ Dry Guide Coat to sanded body filler.



Step 7

Finish sand plastic filler with grade 80E 3M™ Imperial™ Hookit™ II until 3M™ Dry Guide Coat is gone.

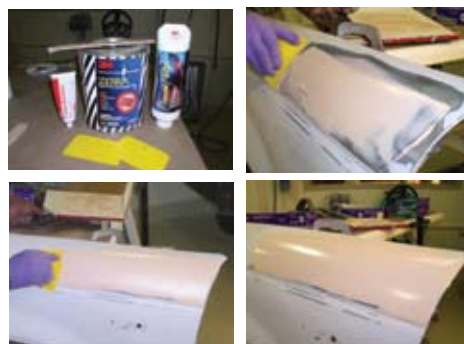


Step 8

Rough featheredge the surrounding area with grade P180 3M™ Imperial™ Hookit™ II 6" Disc on a 3M™ Hookit™ II Soft D/A Pad, PN 05251.



Step 9



Mix and apply 3M™ Piranha™ Finishing Putty PN 05821 over the filler and ENTIRE REPAIR AREA.

Step 10

Hand sand the finishing putty with grade P150 3M™ Imperial™ Hookit™ II File Sheet or 6" DA on a hand block/pad.



Step 11

Reapply 3M™ Dry Guide Coat over the sanded putty.



Step 12

Hand block the putty with grade P180 3M™ Imperial™ Hookit™ II 6" Disc on a hand block/pad until 3M™ Dry Guide Coat is gone.



Step 13

Fine sand the featheredge area with grade P320 3M™ Imperial™ Hookit™ II 6" Disc on a D/A sander.



**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

CATALOG PAGE REFERENCE GUIDE DENT REPAIR PRODUCTS

	
<p>05868 - 3M™ Zebra™ Advanced Lightweight Filler</p>	<p>Pg.23</p>
	
<p>05821 - 3M™ Piranha™ Advanced Finishing Putty</p>	<p>Pg.24</p>
	
<p>05861 - 3M™ Dry Guide Coat</p>	<p>Pg. 26</p>
	
<p>08987 - 3M™ General Purpose Adhesive Cleaner</p>	<p>Pg.7</p>

General Bonding

Step 1

Clean the repair area with soap and water, followed with 3M™ General Purpose Adhesive Cleaner (PN 08984 or 08987).*

Step 2

Abrade the surface as appropriate with a 3M Abrasive.

Step 3

Check adhesive directions for use to see if a primer is required prior to adhesive application.

Step 4

Follow adhesive directions for application to one or both surfaces.

Step 5

Mate the bond and insure proper fit.

Step 6

Fixture pieces with tape or in some other manner until the unclamp time for the specific adhesive is reached.

Step 7

Check to see that adhesive has cured adequately, and remove tape or other fixture.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

PLASTIC REPAIR GUNS

- Duramix™ Manual Dispenser PN 04991
- MixPac® Pneumatic Applicator Gun PN 09930
- 3M™ Manual 200mL Cartridge Applicator Gun PN 08571
- Duramix™ Mixer Tips for 20cc and 50cc products PN 04909





CATALOG PAGE REFERENCE GUIDE PLASTIC TAB REPAIR PRODUCTS



08214 - Duramix™ Universal Adhesive

Pg.3



08217 - 3M™ Automix™ Universal Adhesive

Pg.3



08223 - 3M™ Automix™ Universal Adhesive

Pg.3



04747 - Duramix™ Super Fast Adhesive

Pg.7,17

Step 1

Clean the repair area with soap and water, followed with 3M™ General Purpose Adhesive Cleaner (PN 08984 or 08987).*

Step 2

Abrade the surface as appropriate with a 3M Abrasive as you would to prepare for primer application.

Step 3

Check directions for use to see if a primer is required prior to coating application.

- All 3M rocker panel coatings (PN 05910, 05911, 08874 and 08949) require the surface to be primed with a 2-part automotive primer first. PN 08949 performs best over a 2-part epoxy primer.
- All 3M undercoatings (PN 08881, 08882, 08883, 08804, 08864, 08964) can be applied over a 2-part primer or on bare metal. For the best corrosion protection, prime the surface with direct to metal primer before application.
- 3M™ RustFighter I (PN 08891 and 08892) is designed for application over bare metal, e-coat, primer, or other interior panel surfaces.

Step 4

DO NOT apply 3M coatings directly over a self-etching primer, or do not apply a self-etching primer directly over any 3M coatings.

Step 5

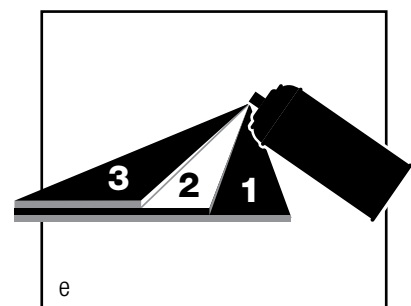
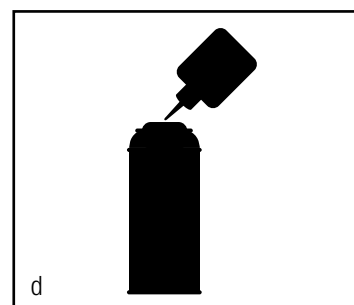
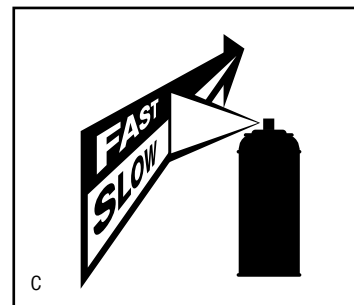
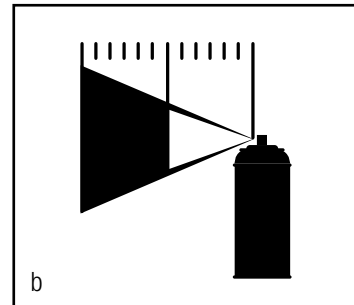
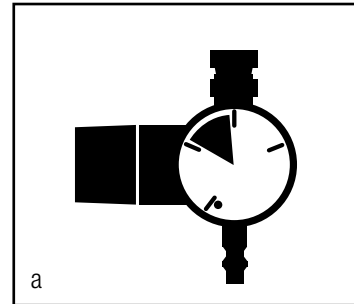
Apply the coating per the directions for use on the can. To achieve different coating textures with the same product, the user can vary:

- Air delivery pressure (for non-aerosol products).
- Application distance from the surface to be treated.
- Speed and steadiness of application.
- Thinning the product with paint reducer or other suitable solvent (for non-aerosol products).
- Application thickness/ number of coats applied.

Step 6

For rocker panel coatings, prime and paint per paint manufacturer recommendations. For undercoatings, prime and paint if desired (if product is paintable), or simply leave undercoating as the top coat.






**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*



COATINGS GUNS

- 3M™ Body Schutz™ Applicator Gun PN08997
- 3M™ Rust Fighter-1 Application Wand PN 08998
- 3M™ No Cleanup Applicator Gun PN 08801
- 3M™ No Cleanup Replacement Nozzles PN 08966

CATALOG PAGE REFERENCE GUIDE COATING PRODUCTS

	
08891 - 3M™ Rust Fighter-1	Pg.10
	
08804 - 3M™ No Cleanup Water-Based Undercoating	Pg.9
	
08964 - 3M™ No Cleanup High Coverage Body Schutz™	Pg. 10
	
08949 - 3M™ No Cleanup Rocker Gard	Pg.10
	
08987 - 3M™ General Purpose Adhesive Cleaner	Pg.7

Seam Sealers

Step 1

Clean the repair area with soap and water, followed with 3M™ General Purpose Adhesive Cleaner (PN 08984 or 08987).*

Step 2

Abrade the surface as appropriate with a 3M Abrasive as you would to prepare for primer application.

Step 3

3M seam sealers must be applied over a 2-part automotive primer. Prime per paint manufacturer directions and allow to cure adequately.

Step 4

DO NOT apply 3M seam sealers directly over a self-etching primer, or do not apply a self-etching primer directly over any 3M seam sealers.

Step 5

If primer has been applied more than 24 hours before seam sealer application, scuff with Scotch-Brite™ General Purpose Hand Pad (PN 07447).

Step 6

Apply seam sealer as directed for the specific product you are using.

Step 7

Seam sealer appearance can be adjusted to match OEM appearance by a number of different methods:

- Speed and steadiness of application.
- Direction of nozzle during application.
- Dispensing nozzle diameter.
- Use of PN 08200 OEM Seam Sealer Tip Kit with appropriate products.
- A variety of adjustments during application of PN 08374 MSP Sprayable Seam Sealer.

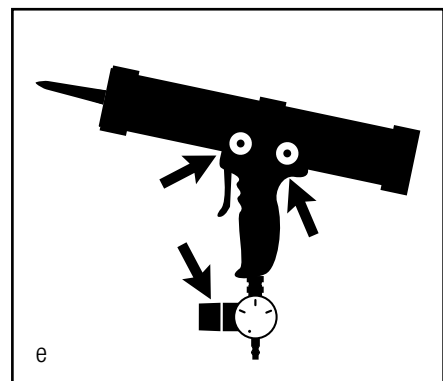
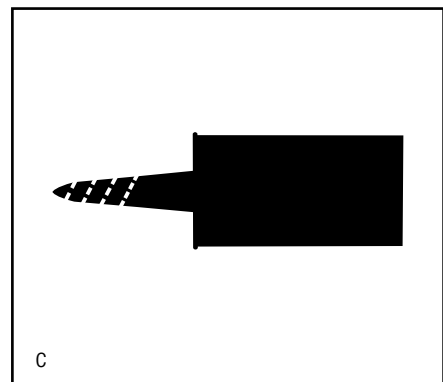
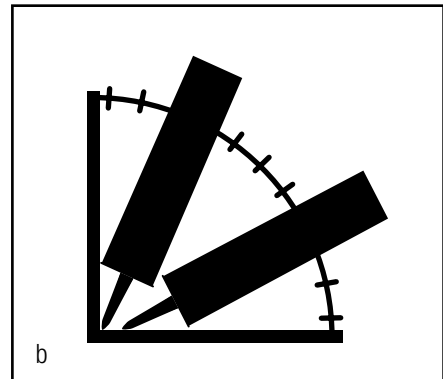
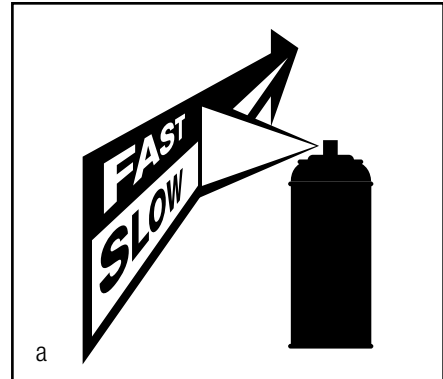
Step 8

Prime and paint per paint manufacturer directions.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

PLASTIC REPAIR GUNS

- MixPac® Manual Applicator Gun PN 08117
- MixPac® Pneumatic Applicator Gun PN 09930
- 3M™ Manual 200mL Cartridge Applicator Gun PN 08571
- 3M™ Automix™ Mixing Nozzle 3/8" PN 08193



CATALOG PAGE REFERENCE GUIDE PLASTIC TAB REPAIR PRODUCTS



08308 - 3M™ Automix™ Heavy-Bodied Seam Sealer

Pg.12



08307 - 3M™ Automix™ Self-Leveling Seam Sealer

Pg.15



08323 - Duramix™ Factory Match Seam Sealer

Pg.12



08374 - 3M™ Ultrapro™ MSP Sprayable Seam Sealer

Pg.13



08200 - 3M™ Automix™ OEM Seam Sealer Tip Kit

Pg.12,33



08987 - 3M™ General Purpose Adhesive Cleaner

Pg.7

Noise, Vibration & Harshness (NVH) Applications

Step 1

When possible, clean the repair area with soap and water, followed with 3M™ General Purpose Adhesive Cleaner (PN 08984 or 08987).*

Step 2

Inspect the NVH material that was present from the factory. Choose an appropriate 3M™ product to replace it:

- a. For rubbery, solid NVH material, choose:
 - i. 3M™ Ultrapro™ Urethane Seam Sealer (PN 08360/08361)
 - ii. 3M™ Ultrapro™ MSP Seam Sealer (PN 08369/08370)
 - iii. 3M™ Duramix™ NVH Damping Material (PN 04274)
- b. For rubbery, sprayed on coatings, choose 3M™ Ultrapro™ MSP Sprayable Seam Sealer (PN 08374).
- c. For flexible acoustical foams, choose 3M™ Automix™ Flexible Foam (PN 08463).
- d. For rigid acoustical foams, choose 3M™ Automix™ Pillar Foam (PN 08458).
- e. If the foam is a “structural foam,” consult the OEM for an appropriate replacement product. 3M™ does not provide a structural foam.

Step 3

If foams are used and any “trimming” was done afterwards, seal the cut area with more foam or a seam sealer to restore the water resistance of the closed cell foam.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

NVH GUNS

- MixPac® Manual Applicator Gun PN 08117
- MixPac® Pneumatic Applicator Gun PN 09930
- 3M™ Manual 200mL Cartridge Applicator Gun PN 08571
- 3M™ Automix™ Mixing Nozzle 3/8" PN 08193

CATALOG PAGE REFERENCE GUIDE NOISE, VIBRATION & HARSHNESS (NVH) PRODUCTS



04274 - Duramix™ NVH Dampening Material

Pg.14



08463 - 3M™ Automix™ Flexible Foam

Pg.15



08458 - 3M™ Automix™ Pillar Foam

Pg.15



08374 - 3M™ Ultrapro™ MSP Sprayable Seam Sealer

Pg.13

Welding

Step 1

Prepare the surface for welding with appropriate 3M™ Abrasives and by cleaning with 3M™ General Purpose Adhesive Cleaner (PN 08984 or 08987).*

Step 2

Protect the adjacent areas with 3M™ High Performance Welding Drape (PN 05919). Be sure to cover all areas completely, and consider doubling the drape over on horizontal surfaces that will see high amounts of welding slag.

Step 3

Protect any vertical surfaces or nearby glass with 3M™ Welding and Spark Deflection Paper (PN 05916).

Step 4

Apply 3M™ Weld Thru II (PN 05917) to any weld mating surfaces to provide additional corrosion protection.

Step 5

Protect yourself with appropriate 3M™ Protective Eyewear, 3M™ Respirators, 3M™ Speedglas™ Helmets and any other additional safety equipment required.

Step 6

After the welding is complete, finish the welds with appropriate 3M Abrasives.

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*



CATALOG PAGE REFERENCE GUIDE PLASTIC TAB REPAIR PRODUCTS

	
<p>05916 - 3M™ Welding and Spark Deflection Paper</p>	<p>Pg.21</p>
	
<p>05919 - 3M™ High Performance Welding Drape</p>	<p>Pg.21</p>
	
<p>05917 - 3M™ Weld Thru II</p>	<p>Pg.9,21</p>
	
<p>08987 - 3M™ General Purpose Adhesive Cleaner</p>	<p>Pg.7</p>

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.

Step 14

Cut tip to desired shape and size to provide a bead height sufficient to give good contact with the windshield around the entire perimeter. A triangular shaped notch will provide the desired bead shape and height. A height of 9/16-inch and a 5/16-inch base is suggested. *NOTE: Where installing encapsulated glass, apply a bead high enough to assure glass contact before encapsulation contacts the car body and prevents further setting. Back padding material after setting will not be possible.*

Step 15

Apply 3M™ Auto Glass Urethane PN 08690 directly onto the OEM urethane film on the pinchweld or directly to the glass.

Step 16

Position the glass by aligning the masking tape on glass and car body. Press glass in place to assure complete contact with the urethane adhesive.

Step 17

Paddle squeeze out around edge of glass if possible. If necessary, paddle additional adhesive between glass and car body to fill voids.

Step 18

Remove masking tape alignment strips.

Step 19

Replace moldings, windshield wipers and other trim removed in step 2.

Step 20

Remove any excess urethane with 3M™ General Purpose Adhesive Cleaner (PN 08984 or 08987).*

**Consult your local, state and federal regulations before using 3M™ General Purpose Adhesive Cleaner to prepare the surface.*

GLASS REPLACEMENT GUNS

- 3M™ Flex Pack Heavy Duty Applicator Gun PN 08991
- 3M™ Flexible Package Applicator Gun PN 08398
- 3M™ Air-Operated Flexible Package Applicator Gun PN 08399
- 3M™ Professional Caulking Gun PN 08993

CATALOG PAGE REFERENCE GUIDE GLASS REPLACEMENT PRODUCTS

	
08681 - 3M™ Single Step Primer	Pg.28
	
08690 - 3M™ Fast Cure Auto Glass Urethane	Pg.28
	
08688 - 3M™ Urethane Primer Daubers	Pg.28
	
08888 - 3M™ Glass Cleaner	Pg.
	
08987 - 3M™ General Purpose Adhesive Cleaner	Pg.7