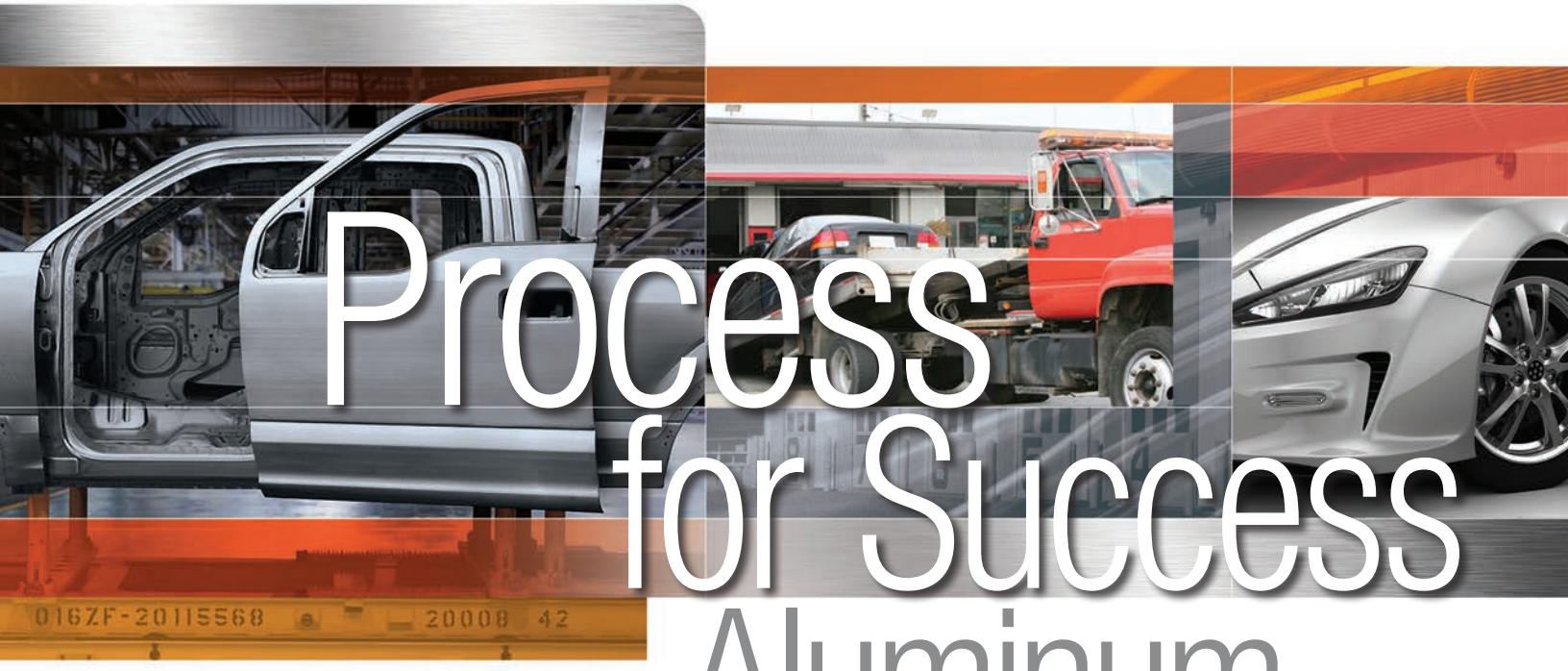
3M Automotive Aftermarket Division
Standard Operating Procedures for Aluminum



Process for Success Aluminum

Process for Success

Standard Operating Procedures

From aluminum and plastic repair, to sanding, paint finishing and car clean-up, 3M has the products and repair processes for you. Feel confident your repair is done professionally and efficiently using our **Standard Operating Procedures**. These procedures will help you consistently produce quality, time-proven solutions for any of your collision repair needs. For more Standard Operating Procedures, visit our website at **3MCollision.com**.

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Important Note on VOCs: Volatile Organic Compound (VOC) regulations may exist that prohibit the use of certain alcohol solutions or solvents. You should check with your state environmental authorities to determine whether use of a solution or solvent is restricted or prohibited in your area.

Aluminum Repair Procedures

Aluminum Frequently Asked Questions

Questions and Answers

1	**Do I need special sandpaper?** No. You don't need special sandpaper, but you do need dedicated sandpaper to avoid cross-contamination between steel and aluminum surfaces. Commonly accepted repair practices for steel repairs will translate to aluminum specific repairs. Traditional 3M Abrasives are well suited for aluminum repairs, but abrasives and tools previously used on steel must be kept away from aluminum repair areas and vice versa.
2	**What adhesives do we use?** Commonly accepted repair practices and products for steel repairs will translate to aluminum specific repairs. 3M Adhesives will work on aluminum, but it's always a good idea to follow OEM repair recommendations for preferred products and processes.
3	**What seam sealers are best?** Commonly accepted repair practices and products for steel repairs will translate to aluminum specific repairs.
4	**Are the 3M body fillers and glazes going to stick?** Yes. 3M premium body fillers and glazes are applicable to aluminum repairs.
5	**Do I need to take special care to help maintain proper air quality within the work area?** Yes. Follow all OSHA guidelines and use approved vacuum system for your specific requirements when repairing aluminum.
6	**How long can bare aluminum be exposed before corrosion begins?** Oxidation will begin once aluminum is exposed to atmosphere. Oxidation should be removed throughout the repair by re-abrading and cleaning the surface after each hour of exposure.
7	**Do 3M panel bonding adhesives still retain lifetime warranties with aluminum?** Yes, provided all proper procedures are followed.
8	**Do I need special air tools?** It is highly recommended to use separate air tools dedicated to aluminum repairs OR tools that have been thoroughly cleaned with compressed air to remove any steel particles. Use caution not to cross contaminate work surfaces.
9	**Do I need special tools or clamps?** Yes. Use separate hand tools designed for aluminum repairs (e.g., hammers, dolleys, clamps, files, drill bits, saw blades, etc.). These tools are usually either non-metallic, or have a highly polished surface to ensure that steel particles will not transfer while being used.
10	**What aluminum welder do you recommend?** Welder technology has improved greatly in the last few years for aluminum. There are many great models, but it's best that you explore models that meet OEM recommendations for the types of vehicles that you work on.
11	**Can 3M coatings be applied direct to aluminum (e.g., 3M™ No Cleanup Rocker Gard™ Coating, undercoating, etc.)?** Commonly accepted repair practices and products for steel repairs will translate to aluminum specific repairs. Direct to metal coatings may be applied as such.
12	**Can I use the same piece of abrasive on steel and aluminum substrates?** No. It is very important to use a new piece of abrasive and thoroughly clean tools or use separate tools when going between work surfaces to avoid cross contamination of work surfaces. Contamination of one substrate from another causes galvanic corrosion and will eventually lead to paint failure.

Visit www.3MCollision.com for more SOPs and videos.

Aluminum Repair Matrix

	Corrosion Prevention and Protection	Surface Preparation	Metal Working
Personal Protective Equipment	Wear latex, nitrile or fabric gloves dedicated to aluminum repair to prevent surface contamination from skin contact. See #1 below. Please note that you need to read and understand each product label and SDS for important health and safety information regarding PPE. This section relates only to not cross-contaminating surfaces, not to the full PPE gear required for each type of repair.		
Shop Environment	Use segregated repair areas for aluminum repairs according to OEM recommendation and follow all OSHA guidelines.		
Hand Tools	Use separate hand tools designed for aluminum repairs (e.g., hammers, dolleys, clamps, files, drill bits, saw blades, etc.).		
	HEAT USAGE: Heat is recommended when straightening aluminum to avoid over stretching and cracking of the panel. Aluminum has a much lower melting point than steel and care must be taken to avoid permanent damage. Generally, a propane torch is sufficient to reach the 400°F area. It's best to follow OEM recommendations for specific temperatures.		
Pneumatic Tools	Use air tools dedicated to aluminum repairs OR tools that have been thoroughly cleaned with compressed air to remove any steel particles. See #2 below.		
Abrasives	Use separate piece of abrasive on dissimilar substrates. See #2 below.	Do not use grinding or sanding abrasives coarser than grade 80.	
Adhesives	Apply and spread adhesives to cover all prepared metal surfaces. Use wipes dedicated to aluminum substrates. Ensure proper squeeze out and tooling of squeeze out to cover all metal surfaces.	Prepare bonding surfaces using grade 80 abrasive or equivalent Scotch-Brite™ abrasive grade. See #4 below.	Use caution when heating the panel near bonded joints. See #5 below.
	HEAT USAGE: Replace: Use heat to de-bond observing OEM temperature limits. **Repair:** Use caution when applying heat near bonded joints to avoid bond failures. See #3 below.		
Sealers	Follow standard surface preparation procedures. Use wipes dedicated to aluminum substrates. Apply tight coat into seam. Tool to match OEM appearance.	Follow product use recommendations for DTM or non-DTM seam sealers.	—
Coatings	Follow standard surface preparation procedures. Use wipes dedicated to aluminum substrates. Apply 3M™ Rust Fighter-I to panel interior prior to final assembly.	Remove loose debris, abrade and properly clean prior to coating application.	Apply 3M™ Rust Fighter-I to panel interior prior to final assembly.
Filler & Glaze	Follow standard surface preparation procedures. Use wipes dedicated to aluminum substrates. Apply filler or glaze within 1 hour. See #4 below.	Prepare surface using grade 80 abrasive or equivalent Scotch-Brite graded abrasives. See #4 below.	
Visit www.3MCollision.com for more SOPs and videos.			

Note: Statements and recommendations within this matrix should be considered general practices. Follow specific OEM recommendations, when they exist.

1. Skin contact with open substrates can leave contamination that leads to corrosion.
2. Cleaning tools thoroughly and using separate abrasive will help prevent the possibility of galvanic corrosion caused by incidental contact of dissimilar metals.
3. To de-bond 3M™ Panel Bonding adhesive, panel must be heated to above 400°F.
4. Oxidation forms immediately on exposed aluminum. Accumulated oxidation is detrimental to bond strength. After 1 hour of exposure, re-abrade aluminum surface to maximize bond strength.
5. Panel bond adhesive degradation begins at 300°F or higher. Use caution and heat indicators to monitor panel temperature when applying heat near bonded joints.

Aluminum Repair Procedures

Glass

Note: The products and process for this repair are the same as standard procedure.

Windshield Removal and Installation

1

Glass Removal

Apply interior surface protection. Remove wiper blades and cowl panel. Remove windshield molding. Cut urethane with the appropriate tool. Remove glass.

2

Dry Set Glass

Clean the pinchweld area of all loose pieces of urethane. Dry fit the glass. Use masking tape to mark proper alignment by applying two pieces of tape along the top edge of the glass, perpendicular to the pinchweld. Cut the masking tape and remove the glass.

3

Pinchweld Inspection & Preparation

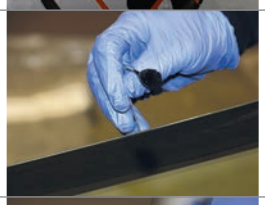
Close-cut the old urethane down to a thickness of 1mm–2mm. Clean with water and a clean cloth. Apply primer to any bare metal scratches if necessary and allow to dry for 5–10 minutes.

4

Clean and Prepare the Glass

Clean glass with glass cleaner and a clean cloth.

5



Apply Primer to the New Windshield

Check the expiration date on the primer. Shake the primer can well. Apply a continuous layer of primer to the new windshield and allow to dry for 5–10 minutes.

6

Apply Urethane & Install Windshield

Check expiration date on urethane. Cut nozzle to desired width and shape. Apply a bead of new urethane to the old urethane on the pinchweld at an application angle of 90-degrees. Paddle all joints/gaps in one direction.

7

Tape Removal

Remove all tape before delivering the vehicle. For best results remove it in a slow, uniform motion. Remove it in the direction of the painted surface to the windshield, and remove the tape at an angle of approximately 135° to the surface. Tape removal works best if the temperature is above 60°F.

8

Reinstall Moldings and Panels

Reinstall moldings and interior panels as needed. Reconnect electronics. Remove excess urethane. Keep vehicle out of service until the urethane builds strength per manufacturer recommendations.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Precision Masking Tape, 2 in. width, PN 06528

3M™ Single Step Primer, 30mL can, PN 08682

3M™ Urethane Primer Daubers, PN 08688

3M™ Glass Cleaner, 19 oz. aerosol, PN 08888

3M™ Fast Cure Auto Glass Urethane, 450mL Flex Pack, PN 08689; 10.5 fl. oz. cartridge, PN 08690

3M™ Flex Pack Heavy Duty 450mL Applicator Gun, PN 08991

3M™ Specialty Adhesive Remover, 1 qt. can, PN 38984; 15 oz. aerosol, PN 38987

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Aluminum Repair Procedures

Glass

Note: The products and process for this repair are the same as standard procedure.

Stationary Auto Glass Removal and Installation

1

Glass Removal

Apply interior surface protection. Remove interior trim pieces and disconnect electronics. Remove molding. Cut urethane with the appropriate tool. Remove glass.

2

Preparing Damaged Pinchweld

Remove all of the old urethane from the damaged area only. For the undamaged pinchweld, leave the urethane intact at this time.

3

Additional Surface Protection

Take time to add additional surface protection if needed. This will save time and money in the end.

4

Preparation of New Pinchweld

Scuff pinchweld area with general purpose scuffing pad and apply two-part epoxy primer. Then, mask off the pinchweld prior to top coating. Check with paint manufacturer for two-part epoxy primer.

5

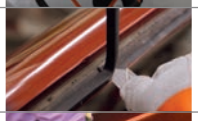
Dry Set Glass

Clean the pinchweld area of all loose pieces of urethane. Dry fit the glass. Use masking tape to mark proper alignment by applying two pieces of tape along the top edge of the glass, perpendicular to the pinchweld. Cut the masking tape and remove the glass.

6

Clean and Prepare Glass

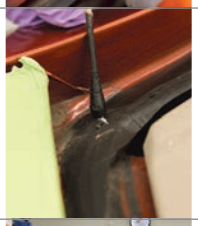
Clean the existing glass. Close cut the urethane if it is in good condition to a thickness of 1mm–2mm. Clean with water and a clean cloth. For new glass, clean glass with glass cleaner and a clean cloth.



7

Preparation of Undamaged Pinchweld

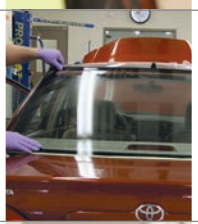
Close-cut the old urethane down to a thickness of 1mm–2mm. Clean the pinchweld area with water and a clean cloth.



8

Apply Primer to Pinchweld if Necessary

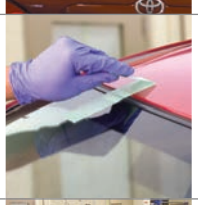
Check the expiration date on the primer, and shake the primer well. For the undamaged pinchweld area, apply the primer to any bare metal scratches. For the damaged pinchweld area that has been repaired, apply a continuous layer of primer to the newly abraded and cleaned epoxy primer. Allow 5–10 minutes of dry time for the primer.



9

Apply Urethane and Install Glass

Check the expiration date on the urethane. Cut the application nozzle to the desired width and shape and install the flex pack into the applicator gun. Apply urethane to either the close-cut urethane on the undamaged pinchweld area and/or the prepped epoxy primed area of the new pinchweld. Paddle all gaps in the urethane in one direction and install the glass.



10

Tape Removal

Remove all tape before delivering the vehicle. For best results remove it in a slow, uniform motion. Remove it in the direction of the painted surface to the windshield, and remove the tape at an angle of approximately 135° to the surface. Tape removal works best if the temperature is above 60°F.

11

Reinstall Moldings and Panels

Reinstall moldings and interior panels as needed. Reconnect electronics. Remove excess urethane. Keep vehicle out of service until the urethane builds strength per manufacturer recommendations.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ White Masking Paper, 12 in. x 750 ft., PN 06538

3M™ High Performance Welding Drape, PN 05919

Scotch-Brite™ General Purpose Hand Pad, PN 07447

3M™ Precision Masking Tape, 2 in. width, PN 06528

3M™ Glass Cleaner, 19 oz. aerosol, PN 08888

3M™ Single Step Primer, 30mL can, PN 08682

3M™ Urethane Primer Daubers, PN 08688

3M™ Fast Cure Auto Glass Urethane, 450mL Flex Pack, PN 08689; 10.5 fl. oz. cartridge, PN 08690

3M™ Flex Pack Heavy Duty 450mL Applicator Gun, PN 08991

3M™ Specialty Adhesive Remover, 1 qt. can, PN 38984; 15 oz. aerosol, PN 38987

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Welding and Spark Protection

1

Clean
Clean part with soap and water, followed by a VOC compliant surface cleaner.

2

Vertical Surface
Apply welding and spark deflection paper to vertical surfaces.

3

Horizontal Surface
Protect horizontal surfaces using cloth welding drape.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Welding and Spark Deflection Paper, PN 05916

3M™ Welding and Spark Deflection Dispenser, PN 05912

3M™ High Performance Welding Drape, PN 05919

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Note: Use and wear proper personal protection equipment when conducting weld applications.

Aluminum Repair Procedures

Body Repair

Aluminum Metal Working

1

Pre-Cleaning

Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2

Surface Prep

Use a Scotch-Brite™ Roloc™+ Clean N Strip Disc or a Scotch-Brite™ Belt to remove paint/coating in low points of damage in preparation for dent pulling.

3

Dent Pulling

Pull low spots of dent using preferred dent pulling method and equipment. Pulling equipment that allows continued pulling pressure while heating may be necessary to avoid stretching or cracking the aluminum. First in, last out and hammer-off-dolly technique is suggested.

4

Final Prep

Use a grade 80 3M™ Roloc™ Disc to remove remaining studs from dent pulling operation.
Caution: Avoid thinning the aluminum.

5

Clean and Inspect

Clean with 3M™ All Purpose Cleaner and Degreaser Concentrate. Blow off with clean, dry air. Inspect damage area to determine if additional metal straightening is required before applying body fillers.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 07470

Scotch-Brite™ Roloc™+ Clean N Strip TR Disc, PN 07466

3M™ File Belt Sander, PN 28366

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

3M™ Cubitron™ II Fibre Roloc™ Disc, grade 80+, 3 in., PN 33392

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Note: It will be necessary to apply cavity wax to back side of panel at heat affected areas to restore corrosion protection.

Aluminum Part Replacement

1

Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2

Sealer/Coating Removal
Use Scotch-Brite™ Clean N Strip Disc to remove seam sealer and coatings from large easy to access areas. Use CRS Scotch-Brite™ Belt to remove coatings and seam sealers in hard to reach areas and along pinch weld flanges to expose spot weld locations.

3

Rivet/Spot Weld Removal
Use grade 80 abrasive belt to remove spot welds or rivet head from top panel. Note top panel thickness. Use belt thickness as a gauge — stop grinding when back of belt is flush with exterior panel. **Follow OEM recommended procedures for removal of rivets and/or other fasteners, when they apply.**

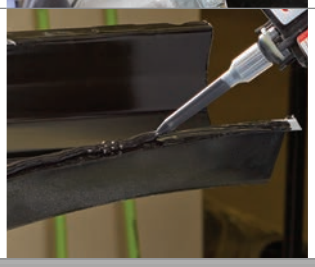
4

Panel Separation
Separate exterior panel from the host panel. **DO NOT force separation in areas where the weld isn't completely removed, go back to step 3 and finish weld removal before continuing.**

5

Surface Preparation
Prepare surfaces of host and replacement panel for bonding adhesive by using a Scotch-Brite™ Belt or Clean N Strip Disc.

6



Panel Installation
Follow OEM recommendations where applicable. Attachment methods may include panel bonding adhesive, self piercing rivets, huck rivets, etc.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

Scotch-Brite™ Roloc™+ Clean N Strip, XT Disc, PN 07470

Scotch-Brite™ Roloc™+ Clean N Strip TR Disc, PN 07466

3M™ File Belt Sander, PN 28366

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

3M™ Cubitron™ II File Belt, grade 80+, PN 33446

3M™ Panel Bonding Adhesive, 50mL, PN 38315; 200mL, PN 08115; 200mL, PN 08116; 450mL DMS, PN 58115

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

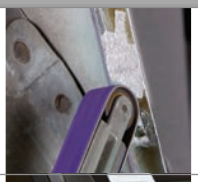
3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Note: Use caution when working on aluminum parts. Use tools that have been cleaned properly or designated for use on aluminum to reduce potential cross contamination. Do not re-use abrasives that were previously used on steel repairs.

Panel Bonding (Excluding Door Skin)

1



Host Panel Preparation
Using a grade 80 abrasive belt, remove remaining weld nugget material from host panel. Prep remaining mating flanges on host panel with a coarse Scotch-Brite™ Belt.

2

Replacement Panel Preparation
Remove Ecoat from replacement panel mating flange areas using Scotch-Brite™ Belt or Clean N Strip Disc.

3

Clean
Clean host panel and replacement panel mating flange areas with a VOC compliant surface cleaner.

4

Dry Fit Panel
Dry fit replacement panel and complete any necessary metal straightening at flanges areas. Remove panel in preparation for adhesive application.

5

Pre Assembly NVH Replacement
If vehicle construction necessitates, apply NVH material or foams at original locations as required.

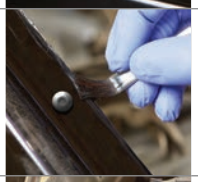
6

Apply Bonding Adhesive
Apply adhesive to mating flange areas on host panel and replacement panel covering all bare metal areas. Apply an additional bead of adhesive at mating flange areas to ensure proper bond line thickness.

7

Install Replacement Panel
Install replacement panel to host panel. Clamp in place and make required welds on rear vertical seams, cosmetic joints, or where otherwise recommended by the directions for use, or the OE manufacturer. Follow recommended adhesive clamp times.

8



Adhesive Clean Up
Tool excess adhesive squeeze out from repair area prior to curing to seal the repair. **Note: Grinding to remove excess adhesive can expose bare metal, causing corrosion.**

9

Post Assembly Foam Replacement
Apply foams at original locations as required.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ File Belt Sander, PN 28366

3M™ Cubitron™ II File Belt, grade 80+, PN 33446

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 07470

Scotch-Brite™ Roloc™+ Clean N Strip TR Disc, PN 07466

3M™ NVH Dampening Material, PN 04274

3M™ Flexible Foam, 200mL, PN 08463

3M™ Panel Bonding Adhesive, 50mL, PN 38315; 200mL, PN 08115; 200mL, PN 08116; 450mL DMS, PN 58115

3M™ SMC/FRP Panel Adhesive, 200mL, PN 08219

3M™ Rigid Pillar Foam, 200mL, PN 08458

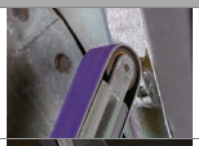
Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Aluminum Rivet Bonding



1 Host Panel Preparation
Using a grade 80 abrasive belt, remove remaining rivet material from host panel. Prep remaining mating flanges on host panel with a coarse Scotch-Brite™ Durable Flex Belt.

2 Mating Flange Panel Preparation
Remove Ecoat from replacement panel mating flange areas using a Scotch-Brite™ Belt or Clean N Strip Disc.

3 Dry Fit Panel
Dry fit replacement panel and complete any necessary metal straightening at flanges areas.

4 Clean
Clean host panel and replacement panel mating flange areas with a VOC compliant surface cleaner.

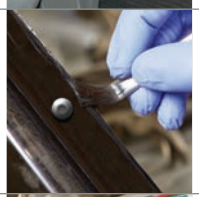
5 Rivet Preparation
Identify replacement rivet sites and prepare the surface for the type of rivet recommended by the manufacturer. (For blind or solid rivets, drill all necessary holes.) Remove panel once complete.

6 Pre Assembly NVH Replacement
If vehicle construction necessitates, apply 3M™ NVH Dampening Material or 3M™ Flexible Foam at original locations as required.

7 Apply Bonding Adhesive
Apply adhesive to mating flange areas on host panel and replacement panel covering all bare metal areas. Apply additional bead of adhesive at mating flange area to ensure proper bond line thickness.

8 Install Replacement Panel
Install replacement panel to host panel taking care to avoid scraping off any adhesive during installation. Clamp in place.

9 Install Rivets and Welds
Install replacement rivets to all areas as recommended by the OE manufacturer. **Note: Rivets must be installed while adhesive is uncured.** Weld cosmetic joints/splices as necessary or recommended by the OE Manufacturer.



10 Adhesive Clean Up
Remove clamps and tool excess adhesive squeeze out from repair area prior to curing to seal the repair. An acid brush works well to remove adhesive from between clamps. **Note: Grinding to remove excess cured adhesive can expose bare metal, causing corrosion.**

11 Post Assembly Foam Replacement
Apply foams at original locations as required.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ File Belt Sander, PN 28366

3M™ Cubitron™ II File Belt, grade 80+, PN 33446

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 07470

Scotch-Brite™ Roloc™+ Clean N Strip TR Disc, PN 07466

3M™ NVH Dampening Material, PN 04274

3M™ Flexible Foam, 200mL, PN 08463

3M™ Panel Bonding Adhesive, 50mL, PN 38315; 200mL, PN 08115; 200mL, PN 08116; 450mL DMS, PN 58115

3M™ SMC/FRP Panel Adhesive, 200mL, PN 08219

3M™ Rigid Pillar Foam, 200mL, PN 08458

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Note: Follow recommended internal corrosion protection processes prior to vehicle final assembly.

Door Skin Removal

1

Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2

Parts Removal
Remove associated trim and parts. Use molding removal tool to remove and save side moldings and emblems.

3

Hem Flange Grinding
Use grade 60 fiber backed abrasive disc to grind outer edge and separate door skin from door frame.

4

Hem Flange Spot Weld Removal
Use grade 36 file belt to remove any spot welds attaching hem flange to door frame. **Use caution when grinding to only grind top panel and avoid cutting into host/interior panel.** Separate hem flange material from backside of door.

5

Door Skin Spot Weld Removal
Use grade 36 file belt to remove any spot welds attaching door skin to door frame. **Use caution when grinding to only grind top panel and avoid cutting into host/interior panel.**

6

Door Skin Removal
Separate door skin from door frame. Use a putty knife to help separate skin from adhesive and NVH material on intrusion beam. Heat may be used when required for softening. (Maintain original NVH material whenever possible.)

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Side Molding and Emblem Removal Tool, PN 08978

3M™ Disc Sander, PN 28408

3M™ Cubitron™ II Abrasive Fibre Disc, grade 60+, 5 in., PN 33415

3M™ File Belt Sander, PN 28366

3M™ Cubitron™ II File Belt, grade 36+, PN 33443

Think About Your Health

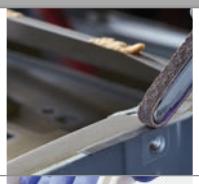
3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Door Skin Full Replacement

1



Door Frame Preparation
Using a grade 80 abrasive belt, remove remaining weld nugget material from door frame. Clean and prep remaining mating flanges on door frame with a coarse Scotch-Brite™ Belt.

2

Clean
Clean door frame and replacement panel mating flange areas with a VOC compliant surface cleaner.

3

Replacement Skin Prep
Scuff replacement skin mating flange areas using Scotch-Brite™ Hand Pad.

4

Dry Fit Panel
Dry fit replacement panel and complete any necessary metal straightening at flanges areas. Remove door skin in preparation for adhesive application.

5

NVH Replacement
Apply NVH material at original locations on intrusion beam.

6

Apply Bonding Adhesive
Re-clean bonding surfaces with a VOC compliant surface cleaner. Apply adhesive to door frame covering all bare metal areas. Apply an additional bead of adhesive at mating flange areas to ensure proper bond line thickness.

7

Install Door Skin
Install replacement door skin onto door frame. Crimp hem flange using hammer and dolly. Clamp as necessary. (For aluminum panels, follow OEM recommended flanging procedures.)

8

Clamp and Cure
Follow recommended adhesive clamp and cure times. Clean any adhesive squeeze out from hem flange area with a VOC compliant cleaner.

9

Seam Sealing
Re-apply seam sealer to hem flange as required following general seam sealing guidelines.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ File Belt Sander, PN 28366

3M™ Cubitron™ II File Belt, grade 80+, PN 33440

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

Scotch-Brite™ Durable Flex Hand Pad, MX-HP, 4-1/2 in. x 9 in., Very Fine, PN 64659

Scotch-Brite™ 7447 PRO Hand Pads, Very Fine, 6 in. x 9 in., PN 64926

3M™ NVH Dampening Material, PN 04274

3M™ Panel Bonding Adhesive, 50mL, PN 38315; 200mL, PN 08115; 200mL, PN 08116; 450mL DMS, PN 58115

3M™ SMC/FRP Panel Adhesive, 200mL, PN 08219

3M™ Urethane Seam Sealer, PN 08361

3M™ MSP Seam Sealer, PN 08370

3M™ Bare-Metal Seam Sealer 200mL, PN 08310; 600mL DMS, PN 58310

3M™ EZ Sand Multi-Purpose Adhesive, 200mL, PN 05887; 600mL DMS, PN 55887

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

For ordering information, contact your 3M Sales Representative

Aluminum Repair Procedures

Body Repair

Express Damage Repairs

1

Clean the Damaged Area

Clean the repair area with soap and water, followed by a recommended VOC compliant surface cleaner.

2

Initial Prep Sand

DA sand the repair using 3 in. P180 DA disc, being careful to not sand through the clear coat. Blow off with clean dry air and reclean with a surface cleaner.

3

Mix and Apply Glaze

Mix and apply polyester glaze per manufacturer's recommendation or use the 3M™ Dynamic Mixing System. Cure 15–20 minutes at 75°F.

4

Apply Dry Guide Coat

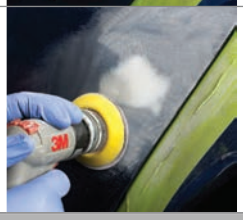
Apply 3M™ Dry Guide Coat over cured glaze. Re-apply as often as necessary during sanding process.

5

Sand Glaze

Hand block or DA sand glaze completely removing 3M™ Dry Guide Coat using a P320 abrasive disc/sheet.

6



Final Sand and Inspect

Blow off repair area and re-apply 3M™ Dry Guide Coat. Finish sanding the repair area and the surrounding area using a 3 in. P320 abrasive disc. Inspect the repair for quality.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Cubitron™ II Clean Sanding Hookit™ Disc, 3 in., 180+ grade , PN 31364

3M™ Purple Clean Sanding Hookit™ Disc, 3 in., P320, PN 30275

3M™ Platinum™ Plus Finishing Glaze, 30 oz. container, PN 31180

3M™ Platinum™ Glaze for DMS, 10.3 oz. cartridge, PN 05862

3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861

3M™ Hookit™ Purple Clean Sanding Sheet Roll, 320 grade, 70mm x 12m, PN 30705

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Note: Use caution when working on aluminum parts. Use tools that have been cleaned properly or designated for use on aluminum to reduce potential cross contamination. Do not re-use abrasives that were previously used on steel repairs.

Aluminum Repair Procedures

Body Repair

Small Damage Repair

1

Pre-Cleaning

Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2

Initial Prep Sand

DA sand the repair area using grade 80 abrasive, removing paint beyond damage by 2–4 in. Blow off with clean, dry air and re-clean with surface cleaner.

3

Mix and Apply Filler

Mix and apply filler per manufacturer's recommendation or use the 3M™ Dynamic Mixing System. Keep the body filler within the primer featheredge area. Cure the body filler 15–20 minutes at 75°F.

4

Sand Filler

Using a hand block, shape sand the body filler with P80 abrasive. Apply dry guide coat and finish block sanding with P150 abrasive. DA featheredge the repair area with P180 abrasive disc. Inspect the repair for quality, if glaze is not required, continue to Step 7.

5

Mix and Apply Glaze

Blow off the repair area completely removing sanding dust from the surface. Mix and apply glaze if required per manufacturer's recommendation or using 3M™ Dynamic Mixing System. Keep the glaze within the primer featheredge area. Cure glaze for 15–20 minutes at 75°F.

6

Sand Glaze

Sand polyester glaze with P180. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections.

7

Final Sand and Inspect

Blow off repair area. Featheredge the surrounding area using P180 abrasive. Inspect the repair for quality.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Cubitron™ II Clean Sanding Hookit™ Abrasive Disc, 3 in., 80+ grade, PN 31361; 6 in., 80+ grade, PN 31371

3M™ Platinum™ Plus Body Filler, 1 gallon, PN 01131; for DMS, PN 05863

3M™ Hookit™ Purple Clean Sanding Sheet Roll, 70mm x 12m, 80 grade, PN 30713 150 grade, PN 30710; 180 grade, PN 30709

3M™ Platinum™ Plus Finishing Glaze, 30 oz., PN 31180

3M™ Platinum Glaze for DMS, PN 05862

3M™ Cubitron™ II Clean Sanding Hookit™ Disc, 6 in., 180+ grade , PN 31374

3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Note: Use caution when working on aluminum parts. Use tools that have been cleaned properly or designated for use on aluminum to reduce potential cross contamination. Do not re-use abrasives that were previously used on steel repairs.

Aluminum Repair Procedures

Body Repair

Large Damage Repair

1		**Pre-Cleaning** Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).
2		**Initial Prep Sand** DA sand the repair area using grade 80 abrasive, removing paint beyond damage by 2 in.–4 in. Blow off with clean, dry air and re-clean with surface cleaner.
3		**Final Metal Prep** Remove remaining paint/coatings in "low spots" using a Scotch-Brite™ Clean N Strip Disc. Use a 3 in. grinding disc to remove weld nuggets or other surface imperfections. Blow off with clean, dry air and re-clean with surface cleaner.
4		**Mix and Apply Filler** Mix and apply filler per manufacturer's recommendation or use the 3M™ Dynamic Mixing System. Keep the body filler within the primer featheredge area. Cure the body filler 15–20 minutes at 75°F.
5		**Initial Sand Filler** Block shape sand filler with P80 abrasive. DA rough featheredge area with P80 abrasive. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections. Re-apply 3M™ Dry Guide Coat as necessary.
6		**Final Sand Filler** Final block sand filler with P150 abrasive. DA fine featheredge sand the repair area with P180 abrasive and blow off the area with clean, dry air. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections.
7		**Mix and Apply Glaze** Blow off the repair area completely removing sanding dust from the surface. Mix and apply glaze if required per manufacturer's recommendation or using 3M™ Dynamic Mixing System. Keep the glaze within the primer featheredge area. Cure glaze for 15–20 minutes at 75°F.
8		**Sand Glaze** Block sand polyester glaze with P180 abrasive. Use 3M™ Dry Guide Coat to highlight imperfections. Re-apply glaze as necessary to fill minor imperfections.
9		**Final Sand and Inspect** Blow off repair area. Featheredge the surrounding area using P180 abrasive. Inspect the repair for quality.

Visit www.3MCollision.com for more SOPs and videos

Product List

- 3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377 
- 3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350 
- 3M™ Cubitron™ II Clean Sanding Hookit™ Abrasive Disc, 3 in., 80+ grade, PN 31361; 6 in., 80+ grade, PN 31371 
- 3M™ Cubitron™ II Fibre Roloc™ Disc, grade 80+, 3 in., PN 33392 
- 3M™ Scotch-Brite™ Roloc™+ Clean N Strip, 4" x 1/2", extra coarse, XT Disc, PN 07470; TR Disc, PN 07466 
- 3M™ Roloc™+ Holder, PN 07500 
- 3M™ Platinum™ Plus Body Filler, 1 gallon, PN 01131; for DMS, PN 05863 
- 3M™ Hookit™ Purple Clean Sanding Sheet Roll, 70mm x 12m, 80 grade, PN 30713 150 grade, PN 30710; 180 grade, PN 30709 
- 3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861 
- 3M™ Cubitron™ II Clean Sanding Hookit™ Disc, 6 in., 180+ grade , PN 31374 
- 3M™ Platinum™ Plus Finishing Glaze, 30 oz., PN 31180 
- 3M™ Platinum Glaze for DMS, PN 05862 

Think About Your Health

- 3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300 
- 3M™ Half Facepiece Respirator, PN 07182 
- 3M™ Lexa™ Protective Eyewear, PN 15200 

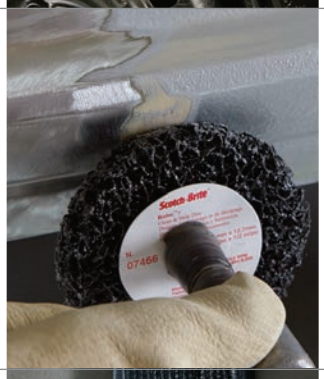
Note: Use caution when working on aluminum parts. Use tools that have been cleaned properly or designated for use on aluminum to reduce potential cross contamination. Do not re-use abrasives that were previously used on steel repairs.

Seam Sealer and Coating Removal

1

Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2



Method A
Use Scotch-Brite™ Clean N Strip Disc to remove seam sealer and coatings where accessible.

3

Method B
Use CRS Scotch-Brite™ Belt to remove coatings and seam sealers in hard to reach areas.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 07470

Scotch-Brite™ Roloc™+ Clean N Strip TR Disc, PN 07466

3M™ File Belt Sander, PN 28366

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

For ordering information, contact your 3M Sales Representative

Aluminum Repair Procedures

Sealing and Coating

Properly dress and finish welding areas prior to applying direct to metal seam sealer.

General Seam Sealer Application: Direct to Metal

1

Surface Prep

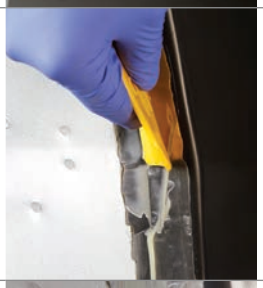
Scuff sealer application areas using a maroon Scotch-Brite™ Hand Pad. Blow off with clean, dry air.

2

Clean

Use a clean cloth or paper towel to clean repair area with all purpose cleaner and degreaser followed by a VOC compliant wax and grease remover.
DO NOT spray or saturate seams with cleaner.

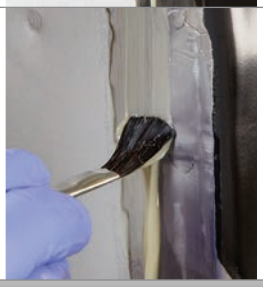
3



Apply Tight Coat

Apply thin bead of sealer to desired joint. Tool sealer into seam ensuring proper sealing of the joint prior to creating the desired appearance.

4



Apply Seam Sealer

Apply seam sealer over the prepared seam. Tool to re-create OEM appearance.

Visit www.3MCollision.com for more SOPs and videos

Product List

Scotch-Brite™ Durable Flex Hand Pad, MX-HP, 4-1/2 in. x 9 in., Very Fine, PN 64659

Scotch-Brite™ 7447 PRO Hand Pads, Very Fine grade, 6 in. x 9 in., PN 64926

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Urethane Seam Sealer, PN 08361; PN 08362

3M™ MSP Seam Sealer, PN 08370

3M™ Bare-Metal Seam Sealer 200mL, PN 08310; 600mL DMS, PN 58310

Think About Your Health

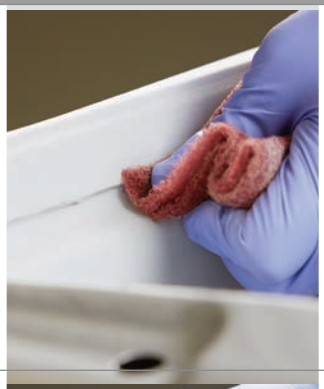
3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

3M™ Lexa™ Protective Eyewear, PN 15200

General Seam Sealer Application: Non-Direct to Metal

1



Surface Prep

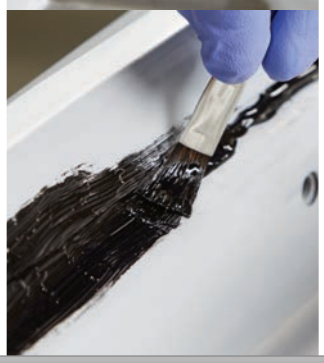
Cover all bare metal areas with a quality Urethane or Epoxy two part primer. After allowing to cure as per manufacturers recommendations, scuff primer in sealer application areas using a maroon Scotch-Brite™ Hand Pad. Blow off with clean, dry air.

2

Clean

Use a clean cloth or paper towel to clean repair area with all purpose cleaner and degreaser followed by a VOC compliant wax and grease remover. **DO NOT spray or saturate seams with cleaner.**

3



Apply Seam Sealer

Apply seam sealer over the prepared seam. Tool to re-create OEM appearance.

Visit www.3MCollision.com for more SOPs and videos

Product List

Scotch-Brite™ Durable Flex Hand Pad, MX-HP, 4-1/2 in. x 9 in., Very Fine, PN 64659

Scotch-Brite™ 7447 PRO Hand Pads, Very Fine grade, 6 in. x 9 in., PN 64926

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Urethane Seam Sealer, PN 08361

3M™ MSP Seam Sealer, PN 08370

3M™ MSP Sprayable Seam Sealer, PN 08374

3M™ Heavy-Bodied Seam Sealer, 200mL, PN 08308; 600mL DMS, PN 58308

3M™ EZ Sand Multi-Purpose Adhesive, 200mL, PN 05887; 600mL DMS, PN 55887

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

3M™ Lexa™ Protective Eyewear, PN 15200

For ordering information, contact your 3M Sales Representative

Aluminum Repair Procedures

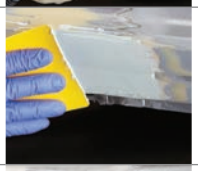
Sealing and Coating

Anti Chip Coating

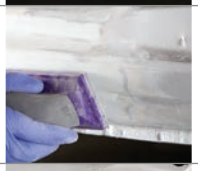
1 Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2 Removal of Heavy Surface Contaminates
Clean to remove heavy contaminants from repair area.

3 OEM Coating Removal
Remove OEM coating as needed using Clean N Strip disc. Featheredge using grade 80 abrasive on DA sander. Blow off surface with clean, dry air. Clean surface with all purpose cleaner and degreaser.

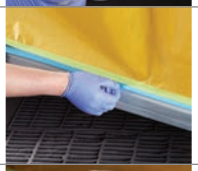


4 Filling/Leveling Surface
Use polyester glaze to fill the repair area, bringing it the same level as the surrounding coating.



5 Sanding and Primer
Sand glaze using P150 on a hand block. Final featheredge area using P320 abrasive on a DA sander. Blow off with clean, dry air. Final clean with VOC compliant wax and grease remover. Apply primer following paint company recommendations.

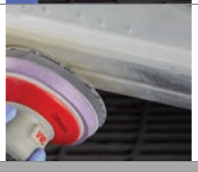
6 Sanding Primer
Apply 3M guide coat to primed surface. Sand primer using P320 on a DA sander with an interface pad. Blow off with clean, dry air. Final clean with VOC compliant wax and grease remover.



7 Masking
Apply soft edge foam masking tape following existing coating edge. Final mask the area using tape and paper to protect from overspray.

8 Coating Test Panel
Apply the coating to a test panel. Always apply a light coat first, allow it to flash, and adjust the spray equipment to deliver the texture required to match the OEM appearance.

9 Apply Coating
Apply anti chip coating to the repair area using settings from test panel, blending the material into surrounding area as needed.



10 Blend Sanding
Use P1000 3M™ Trizact™ Disc on a DA sander to smooth the blend edges. This operation produces a smooth transition without removing chip coating profile.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ General Purpose Adhesive Cleaner, aerosol, PN 08987; Adhesive Remover, PN 38983

Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 07470; TR Disc, PN 07466

3M™ Cubitron™ II Clean Sanding Hookit™ Abrasive Disc, 6 in., 80+ grade, PN 31371

3M™ Platinum™ Plus Finishing Glaze, 30 oz., PN 31180; Glaze for DMS, PN 05862

3M™ Hookit™ Purple Clean Sanding Sheet Roll, 150 grade, 70mm x 12m, PN 30710; Disc 334U, 6 in., P320 grit, PN 01812

3M™ Hookit™ Sanding Block Dust Free, 70mm x 127mm, PN 05207

3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861

3M™ Hookit™ Soft Interface Pad, 6 in. x 1/2 in. x 3/4 in., PN 05777

3M™ Soft Edge Foam Masking Tape PLUS, 21mm (.8 in.), PN 06293

3M™ Smooth Transition Tape, 1/4 in. (6.4mm), PN 06800

3M™ Scotchblok™ Masking Paper, 18 in. x 180 ft., PN 06738

Scotch® Performance Green Masking Tape 233+, 12mm width (.47 in.), PN 26332

3M™ Rocker Protector Pouch, 3 fl. oz. (US), PN 08733; 5.5 fl. oz. (US), PN 08734

3M™ Paintable Undercoating, — Waterbased — Pouch, 5.5 fl. oz. (US), PN 08744

3M™ Trizact™ Hookit™ Blending Disc, 6 in., P1000 grit, PN 02090

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

3M™ Lexa™ Protective Eyewear, PN 15200

Corrosion Protection (Cavity Wax)

1

Pre-Cleaning

Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2

Application

After painting is complete and prior to final assembly apply cavity wax to restore internal corrosion protection.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Rust Fighter-I, 18 oz. aerosol, PN 08892

3M™ Body Schutz™ Applicator Gun, PN 08997

3M™ Rust Fighter-I, 1 qt., PN 08891

3M™ Rust Fighter-I Application Wand, PN 08998

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

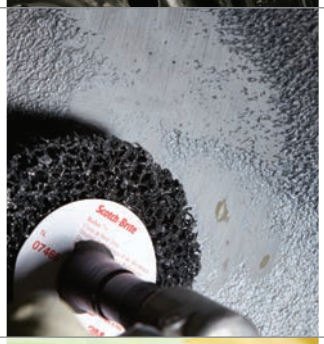
3M™ Lexa™ Protective Eyewear, PN 15200

Corrosion Protection (Undercoating)

1

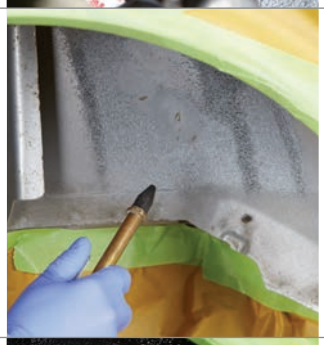
Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2



Surface Preparation
Use Scotch-Brite™ Clean N Strip Disc to remove loose coatings from the repair area. Use CRS Scotch-Brite™ Belt in hard to reach areas.

3



Clean and Inspect
Blow off area with clean dry compressed air to remove dust and loose surface contaminates. Use a VOC compliant surface cleaner to remove any remaining contaminants. **Note: Coatings must be applied over thoroughly cleaned substrates to maximize corrosion protection.**

4

Coating Application
Apply appropriate undercoating following local VOC regulations to the area. For maximum corrosion protection apply four medium coats of undercoating allowing flash time between coats.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 07470

Scotch-Brite™ Roloc™+ Clean N Strip TR Disc, PN 07466

3M™ File Belt Sander, PN 28366

Scotch-Brite™ Durable Flex Belt, CRS, PN 64475

3M™ Paintable Undercoating – Waterbased – Pouch, 5.5 fl. oz. (US), PN 08744

3M™ Paintable Undercoating Pouch, 5.5 fl. oz., PN 08747

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

3M™ Lexa™Protective Eyewear, PN 15200

Pre-Made LASD Replacement (Off Body) (Liquid Applied Sound Deadening)

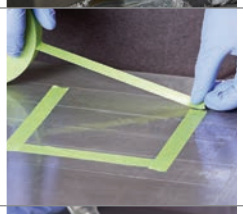
1

Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2

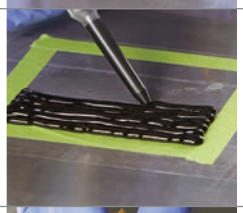
LASD Removal
Remove sound deadener material from affected repair area using a scraper or chisel. Blow off area with compressed air and clean with APCD.

3A



Pre-make Patch
Apply packaging tape to smooth bench top surface as a release liner. Mask out desired patch size and shape over the top of packaging tape.

3B

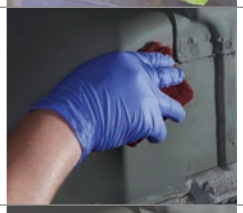


Pre-make Patch
Dispense seam sealer material onto prepared surface.

3C

Pre-make Patch
Re-create desired appearance and texture of NVH material using tools of the trade (e.g., brushes, scuff pads, compressed air, etc.). Remove perimeter masking following the tooling process and prior to final cure.

4



Surface Prep
Scuff surface with a maroon Scotch-Brite™ Hand Pad. Blow off area with compressed air and clean with APCD.

5

Install Replica (on body)
After material cures, remove the LASD replica from the release liner, scuff with maroon Scotch-Brite™ Hand Pad, apply NVH material to the bottom of the replica. Bond in place at the correct location.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

Scotch® Performance Green Masking Tape 233+, 18mm width (.71 in.), PN 26334

3M™ Heavy-Bodied Seam Sealer, 200mL, PN 08308

3M™ Heavy-Bodied Seam Sealer, 600mL DMS, PN 58308

3M™ NVH Dampening Material, PN 04274

Scotch-Brite™ Durable Flex Hand Pad, MX-HP, 4-1/2 in. x 9 in., Very Fine, PN 64659

Scotch-Brite™ 7447 PRO Hand Pads, Very Fine grade, 6 in. x 9 in., PN 64926

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

3M™ Lexa™Protective Eyewear, PN 15200

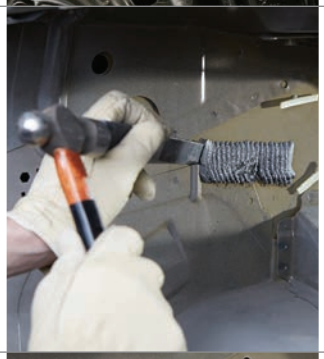
Note: Pre-made LASD replacement patches are typically created off body for panels with complex surfaces.

LASD Replacement (On Body) (Liquid Applied Sound Deadening)

1

Pre-Cleaning
Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).

2



LASD Removal
Remove sound deadener material from affected repair area using a scraper or chisel.

3

Surface Prep
Scuff surface with a maroon Scotch-Brite™ Hand Pad. Blow off area with compressed air and clean with APCD.

4

Application
Mask area and apply seam sealer. Re-create desired appearance and texture of NVH material using tools of the trade (e.g., notched spreaders, brushes, scuff pads, compressed air, etc.). Remove perimeter masking following the tooling process and prior to final cure.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

Scotch-Brite™ Durable Flex Hand Pad, MX-HP, 4-1/2 in. x 9 in., Very Fine, PN 64659

Scotch-Brite™ 7447 PRO Hand Pads, Very Fine grade, 6 in. x 9 in., PN 64926

3M™ Heavy-Bodied Seam Sealer, 200mL, PN 08308; 600mL DMS, PN 58308

3M™ Urethane Seam Sealer, PN 08361

3M™ MSP Seam Sealer, PN 08370

3M™ NVH Dampening Material, PN 04274

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Respirator Assembly/Organic Vapor N95 Dual Cartridge, PN 07192

3M™ Lexa™Protective Eyewear, PN 15200

E-Coat Panel Prep

1

Cleaning
Clean part with soap and water, followed by a recommended VOC compliant surface cleaner.

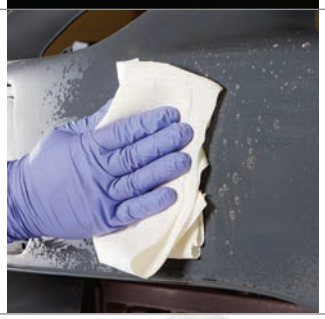
2A

Surface Prep Hand
Sand edges and other hard to reach areas using P400 flexible abrasive sheet or Scotch-Brite™ Hand Pad until the surface is matte and all sheen has been removed.

2B

Surface Prep Machine
Sand remaining surfaces using P400 abrasive on a DA sander until the surface is matte and all sheen has been removed. **Note: Use 3M™ Hookit™ Hard E-coat Disc on hard to sand aftermarket parts.**

3



Re-Clean
Blow off with clean, dry air. Clean bumper surface with soap and water, followed by a VOC compliant surface cleaner.

4

Apply Top Coats
Seal and paint following paint company recommendations.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Car Wash Soap Concentrate, 1 gallon, PN 38377

3M™ All Purpose Cleaner and Degreaser Concentrate, 1 gallon, PN 38350

3M™ Flexible Abrasive Hookit™ Sheet, 5.5 in. x 6.8 in., P400, PN 34337

3M™ Flexible Abrasive Hookit™ Foam Pad, PN 34349

Scotch-Brite™ Durable Flex Hand Pad, MX-HP, 4-1/2 in. x 9 in., Very Fine, PN 64659

Scotch-Brite™ 7447 PRO Hand Pads, Very Fine grade, 6 in. x 9 in., PN 64926

3M™ Purple Clean Sanding Hookit™ Disc 334U, 6 in., P400 grit, PN 01811

3M™ Hookit™ Hard E-Coat Disc, 320 Grit, PN 30695

3M™ Accuspray™ Spray Gun Model HG14 Kit, 1.4mm, PN 16577

Think About Your Health

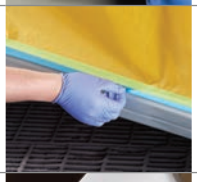
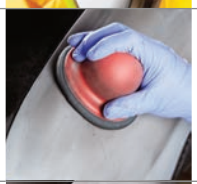
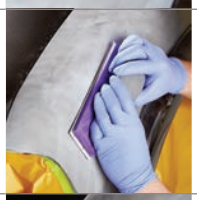
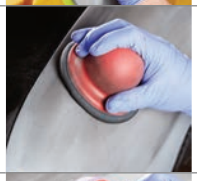
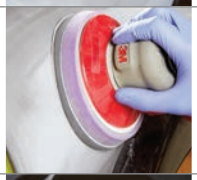
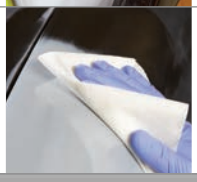
3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

For ordering information, contact your 3M Sales Representative

Feather-Prime-Block

1		**Featheredge** Blow off repair area. Featheredge the surrounding repair area using P180 abrasive.
2		**Final Sand and Inspect** Final sand surrounding area using P320 abrasive disc on a DA sander. Blow off, with clean, dry air. Clean with wax and grease remover. Inspect the repair for quality.
3		**Mask for Primer** Mask repair area as necessary. Refer to primer masking standard operating procedures for 3M specific recommendations.
4		**Apply Primer** Apply primer to repair area following manufacturers recommendations. Allow to cure.
5		**Apply Dry Guide Coat** Apply 3M™ Dry Guide Coat over cured primer.
6		**Hand Block Repair** Hand sand or "check block" sand the repair area using a P320 abrasive sheet on an appropriately sized hand block. Look for imperfections in the repair area highlighted by the dry guide coat. If necessary, re-apply dry guide coat and continue block sanding to repair any defects as required.
7		**Re-Apply Dry Guide Coat** Re-apply 3M™ Dry Guide Coat over entire repair area.
8		**DA Sand Primer** DA sand repair area using a P400 disc and a soft interface pad until all 3M™ Dry Guide Coat is removed.
9		**Clean the Damaged Area** Clean the repair area with a recommended VOC compliant surface cleaner.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Cubitron™ II Clean Sanding Hookit™ Disc, 6 in., 180+ grade , PN 31374

3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861

3M™ Purple Clean Sanding Hookit™ Disc 334U, 6 in., P320 grit, PN 01812

3M™ Accuspray™ Spray Gun Model HG09, PN 16570

3M™ Accuspray™ Atomizing Head, PN 16611

3M™ Hookit™ Purple Clean Sanding Roll, 70mm x 12m, P320, PN 30705

3M™ Purple Clean Sanding Hookit™ Disc, 6 in., P400 grit, PN 01811

3M™ Hookit™ Soft Interface Pad, PN 05777

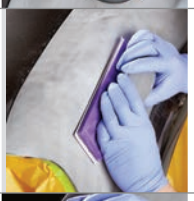
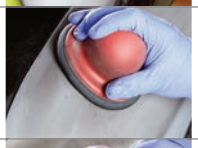
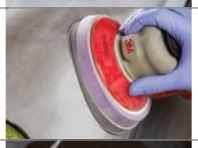
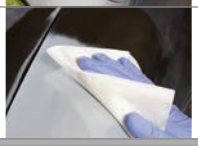
Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Feather-Prime-Block Waterborne

1		**Featheredge** Blow off repair area. Featheredge the surrounding repair area using P180 abrasive.
2		**Final Sand and Inspect** Final sand surrounding area using P320 abrasive disc on a DA sander. Blow off, with clean, dry air. Clean with wax and grease remover. Inspect the repair for quality.
3		**Mask for Primer** Mask repair area as necessary. Refer to primer masking standard operating procedures for 3M specific recommendations.
4		**Apply Primer** Apply primer to repair area following manufacturers recommendations. Allow to cure.
5		**Apply Dry Guide Coat** Apply 3M™ Dry Guide Coat over cured primer.
6		**Hand Block Repair** Hand sand or "check block" sand the repair area using a P320 abrasive sheet on an appropriately sized hand block. Look for imperfections in the repair area highlighted by the dry guide coat. If necessary, re-apply dry guide coat and continue block sanding to repair any defects as required.
7		**Re-Apply Dry Guide Coat** Re-apply 3M™ Dry Guide Coat over entire repair area.
8		**DA Sand Primer** DA sand repair area using a P400 disc and a soft interface pad until all 3M™ Dry Guide Coat is removed.
9		**Re-Apply Dry Guide Coat** Re-apply 3M™ Dry Guide Coat over hand blocked repair area.
10		**DA Sand Primer** DA Sand repair area using a P600–P800 disc and a soft interface pad until all the 3M™ Dry Guide Coat is removed.
11		**Clean the Damaged Area** Clean the repair area with a recommended VOC compliant surface cleaner.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Purple Clean Sanding Hookit™ Disc, 6 in., P180 grit, PN 01816; P400 grit, PN 01811

3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861

3M™ Purple Clean Sanding Hookit™ Disc 334U, 6 in., P320 grit, PN 01812

3M™ Accuspray™ Spray Gun Model HG09, PN 16570

3M™ Accuspray™ Atomizing Head, PN 16611

3M™ Hookit™ Purple Clean Sanding Roll, 70mm x 12m, P320, PN 30705

3M™ Purple Clean Sanding Hookit™ Disc 334U, 6 in., P600 grit, PN 30761; 6 in., P800 grit, PN 30760

3M™ Hookit™ Soft Interface Pad, PN 05777

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

3M™ Lexa™ Protective Eyewear, PN 15200

Blend Panel Sanding Process

1

Clean the Repair Area
Clean the repair area with soap and water, followed by a recommended VOC compliant surface cleaner.

2

Hand Sand Edges
Scuff hard to reach areas and panel edges by hand with P800–P1000 abrasive disc or flexible abrasive sheet.

3

DA Sand Color Blend Area
DA sand the color blend area using a grade P800 abrasive disc and a soft interface pad. For best results, sand back into primer surfacer.

4

DA Sand Adjacent Panels
DA sand the remainder of the blend panel(s) using a P1000 abrasive disc.

5

Clean and Inspect
Clean the repair area with a VOC compliant or paint manufacturer recommended surface cleaner. Blow dry the repair area with clean, dry air. Inspect the repair area and re-sand any shiny spots as necessary.

Visit www.3MCollision.com for more SOPs and videos

Product List

3M™ Trizact™ Hookit™ Blending Disc, 6 in., P1000, PN 02090

3M™ Flexible Abrasive Hookit™ Sheet, 5.5 in. x 6.8 in., P800, PN 34340

3M™ Purple Finishing Film Hookit™ Disc, 6 in., P800, PN 30670

3M™ Hookit™ Soft Interface Pad, 6 in. x 1/2 in. x 3/4 in., PN 05777

Think About Your Health

3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300

3M™ Half Facepiece Respirator, PN 07182

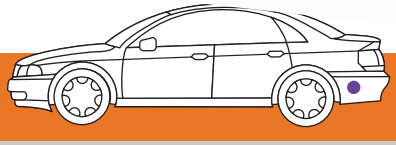
3M™ Lexa™ Protective Eyewear, PN 15200

3M™ PPS™ Paint Preparation System

An innovative, all-in-one disposable system that enables painters to eliminate expensive liquid coating waste left on mixing cups and filters by mixing directly in the PPS cup. Mix, measure, filter, spray and temporarily store your coating materials.

	Part No.	Description
3M™ Accuspray™ Spray Gun Kits		
	16570	Model HG18, 1.8mm
	16577	Model HG14, 1.4mm
	16587	Model HGP (Pressurized)
3M™ Accuspray™ Atomizing Heads		
	16612	1.4mm
	16611	1.8mm
	16609	2.0mm

Spot Repair

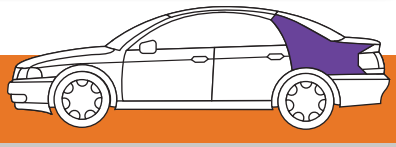


Ideal for spot repairs that require 3 fluid ounces of material or less.

3M™ PPS™ Kit 3 fl. oz. Lids and Liners, PN 16028
3 fl oz (90mL) full diameter, 200 micron filters

3M™ PPS™ Kit 3 fl. oz. Lids and Liners, PN 16328
3 fl oz (90mL) full diameter, 125 micron filters

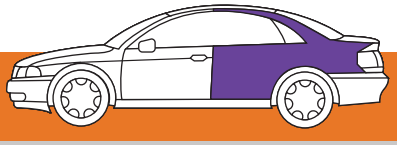
1 Panel Repair



Ideal for small areas that require 6 fluid ounces of material or less.

3M™ PPS™ Kit Mini Size, PN 16114
6 fl. oz. (180mL) full diameter, 200 micron filters

3M™ PPS™ Kit Mini Size, PN 16314
6 fl. oz. (180mL) full diameter, 125 micron filters

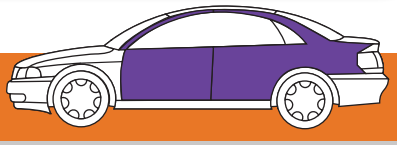


2 Panel Repair

Ideal for areas that require 13.5 fluid ounces of material or less.

3M™ PPS™ Kit Midi Size, PN 16112, 13.5 fl. oz. (400mL) full diameter, 200 micron filters

3M™ PPS™ Kit Midi Size, PN 16312, 13.5 fl. oz. (400mL) full diameter, 125 micron filters

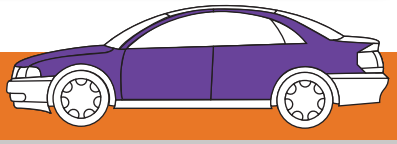


3 Panel Repair

Ideal for large areas that require 22 fluid ounces of material or less.

3M™ PPS™ Kit Standard Size, PN 16000
22 fl. oz. (650mL) 200 micron filters

3M™ PPS™ Kit Standard Size, PN 16301
22 fl. oz. (650mL) full diameter, 125 micron filters



4 Panel Repair

Ideal for large jobs that require 28 fluid ounces of material or less.

3M™ PPS™ Kit Large Size, PN 16024
28 fl. oz. (850mL) 200 micron filters

3M™ PPS™ Kit Large Size, PN 16325
28 fl. oz. (850mL) full diameter, 125 micron filters

PPS™
PAINT PREPARATION SYSTEM

3M

Individual Product Instruction and Safety Information

For individual product instructions and applicable precautions see product labels and associated literature for the individual product at **www.3MCollision.com**

For product material safety data sheets see **www.3MCollision.com**

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IMPORTANT NOTE: There are of course many factors and variables that can affect an individual repair, so the technician and repair facility need to evaluate each specific application and repair process, including relevant vehicle, part and OEM guidelines, and determine what is appropriate for that repair.

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