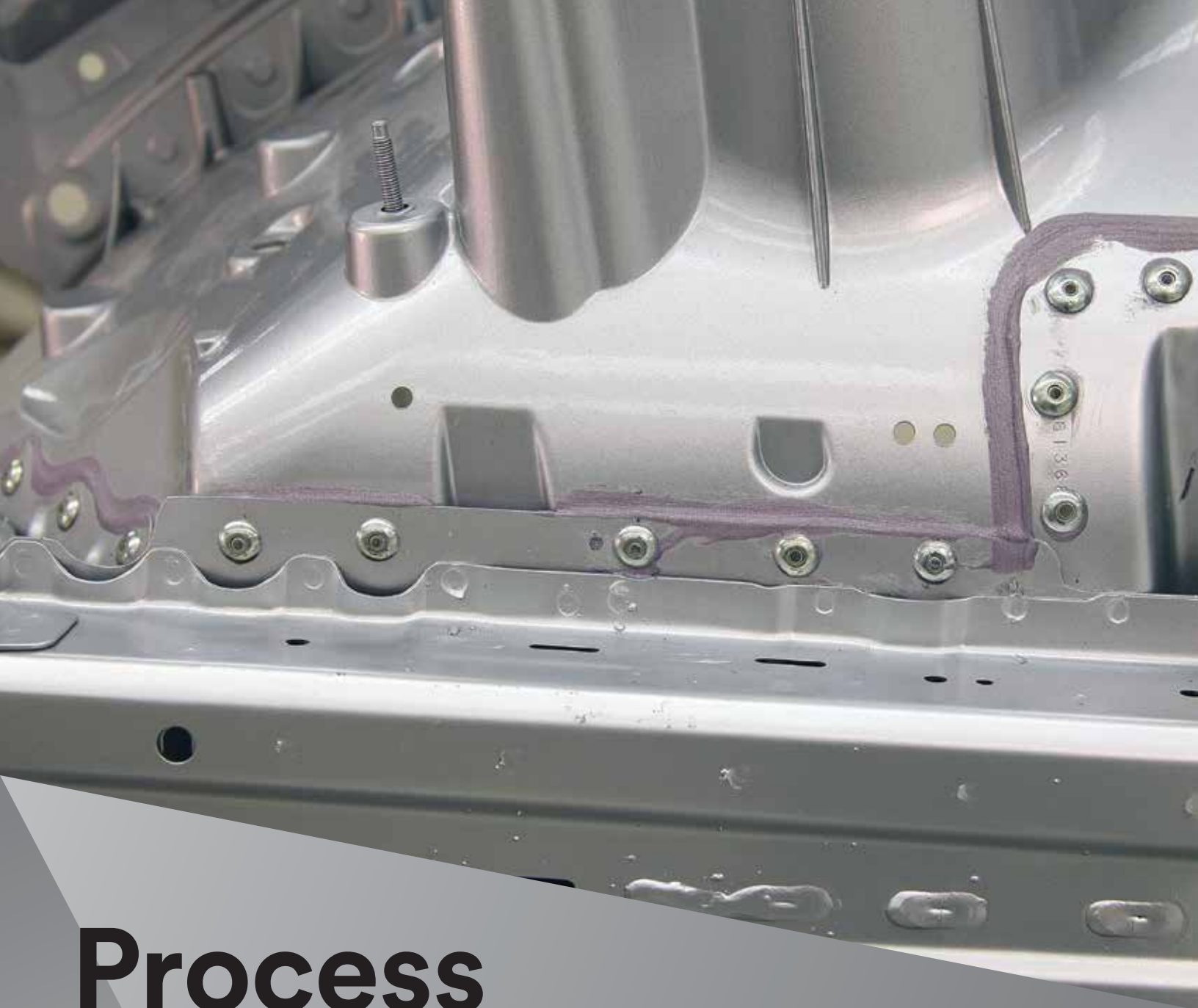




Standard Operating Procedures

for 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 **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.

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, dollies, 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 3MCollision.com for more SOPs and videos	

	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 3M™ Cavity Wax Plus to panel interior prior to final assembly.		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™ Cavity Wax Plus to panel interior prior to final assembly.		Remove loose debris, abrade and properly clean prior to coating application.	Apply 3M™ Cavity Wax Plus 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 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	2	3	4	5
Skin contact with open substrates can leave contamination that leads to corrosion.	Cleaning tools thoroughly and using separate abrasive will help prevent the possibility of galvanic corrosion caused by incidental contact of dissimilar metals.	To de-bond 3M™ Panel Bonding Adhesive, panel must be heated to above 400°F.	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.	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.

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.

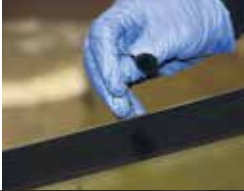
4



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°. 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.

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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™ Virtua™ Protective Eyewear, PN 11326



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 3MCollision.com for more SOPs and videos

Product List

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



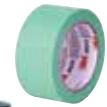
3M™ High Performance Welding Drape, PN 05919



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



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™ Virtua™ Protective Eyewear, PN 11326



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

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.

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Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



3M™ Welding and Spark
Deflection Paper,
PN 05916



3M™ Welding and Spark
Deflection Dispenser,
PN 05912



3M™ High Performance
Welding Drape, PN 05919



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



3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



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

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 and 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.

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Product List

Meguiar's® Shampoo Plus, 1 gallon, PN D11101



Meguiar's® Citrus Power Cleaner Plus, 1 gallon, PN D10701



Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Disc, PN 21552



Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Extra Cut Disc, PN 21555



3M™ File Belt Sander, 18 in., PN 33575



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



3M™ Pistol Grip Disc Sander, PN 33577



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



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



3M™ Half Facepiece Respirator, PN 07182



3M™ Virtua™ Protective Eyewear, PN 11326



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 and 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 and Strip Disc.

6



Panel Installation

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

Visit 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701

Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Disc, PN 21552



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Extra Cut Disc,
PN 21555



3M™ File Belt Sander,
18 in., PN 33575



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



3M™ Impact Resistant
Structural Adhesive
200mL, PN 07333;
450mL DMS, PN 57333



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



3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



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 E-coat from replacement panel mating flange areas using Scotch-Brite™ Belt or Clean and 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 flange 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.
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Product List	
3M™ File Belt Sander, 18 in., PN 33575	
3M™ Cubitron™ II File Belt, grade 80+, PN 33446	
Scotch-Brite™ Durable Flex Belt, CRS, PN 64475	
Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Disc, PN 21552	
Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Extra Cut Disc, PN 21555	
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™ Impact Resistant Structural Adhesive 200mL, PN 07333; 450mL DMS, PN 57333	
3M™ Composite and Metal Bonding Adhesive, 200mL, PN 08219	
3M™ Rigid Pillar Foam, 200mL, PN 08458	

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3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300	
3M™ Half Facepiece Respirator, PN 07182	
3M™ Virtua™ Protective Eyewear, PN 11326	

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 E-coat from replacement panel mating flange areas using a Scotch-Brite™ Belt or Clean and 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.
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Product List

3M™ File Belt Sander,
18 in., PN 33575



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



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



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Disc, PN 21552



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Extra Cut Disc,
PN 21555



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™ Composite and
Metal Bonding Adhesive,
200mL, PN 08219



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

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



3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



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

Door Skin Removal			Product List	
1		Pre-Cleaning Prewash/clean vehicle prior to disassembly (power wash undercarriage area at repair).	Meguiar's® Shampoo Plus, 1 gallon, PN D11101	
2		Parts Removal Remove associated trim and parts. Use molding removal tool to remove and save side moldings and emblems.	Meguiar's® Citrus Power Cleaner Plus, 1 gallon, PN D10701	
3		Hem Flange Grinding Use grade 60 fiber backed abrasive disc to grind outer edge and separate door skin from door frame.	3M™ Side Molding and Emblem Removal Tool, PN 08978	
4		Hem Flange Spot Weld Removal Use grade 60 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.	3M™ Disc Sander, PN 28408	
5		Door Skin Spot Weld Removal Use grade 60 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.	3M™ Cubitron™ II Abrasive Fibre Disc, grade 60+, 5 in., PN 33415	
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.)	3M™ File Belt Sander, 18 in., PN 33575	
Visit 3MCollision.com for more SOPs and videos			3M™ Cubitron™ II File Belt, grade 60+, PN 33445	
			Think About Your Health	
			3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300	
			3M™ Half Facepiece Respirator, PN 07182	
			3M™ Virtua™ Protective Eyewear, PN 11326	

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. For best results, re-attach existing foam with NVH material. In the absence of original foam, NVH material can be used in place of original foam.
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.

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Product List

3M™ File Belt Sander, 18 in., PN 33575



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



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™ Urethane Seam Sealer, PN 08361

3M™ MSP Seam Sealer, PN 08370

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



3M™ Composite and Metal Bonding Adhesive, 200mL, PN 08219



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



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



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



3M™ Half Facepiece Respirator, PN 07182



3M™ Virtua™ Protective Eyewear, PN 11326



Express Damage Repair			Product List	
1		Clean the Damaged Area Clean the repair area with soap and water, followed by a recommended VOC compliant surface cleaner.	3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 3 in., grade 180+, PN 31364; 3 in., grade 320+, PN 31463	
2		Initial Prep Sand DA sand the repair using 3 in. grade 180 DA disc, being careful to not sand through the clear coat. Blow off with clean dry air and reclean with a surface cleaner.	3M™ Platinum™ Plus Finishing Glaze, 30 oz. container, PN 31180	
3		Mix and Apply Glaze Mix and apply polyester glaze per manufacturers recommendation or use the 3M™ Dynamic Mixing System. Cure 15–20 minutes at 75°F.	3M™ Platinum™ Glaze for DMS, 10.3 oz. cartridge, PN 05862	
4		Apply Dry Guide Coat Apply 3M™ Dry Guide Coat over cured glaze. Re-apply as often as necessary during sanding process.	3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861	
5		Sand Glaze Hand block or DA sand glaze completely removing 3M™ Dry Guide Coat using a grade 320 abrasive disc/sheet.	3M™ Cubitron™ II Hookit™ Clean Sanding Sheet Roll, 70mm x 12m, grade 320+, PN 34449	
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. grade 320 abrasive disc. Inspect the repair for quality.	3M™ Dynamic Mixing Applicator — Pneumatic, PN 05846	
Visit 3MCollision.com for more SOPs and videos			Think About Your Health	
			3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300	
			3M™ Half Facepiece Respirator, PN 07182	
			3M™ Virtua™ Protective Eyewear, PN 11326	

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.

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 grade 80 abrasive. Apply dry guide coat and finish block sanding with grade 150 abrasive. DA featheredge the repair area with grade 180 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 grade 180. 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 grade 180 abrasive. Inspect the repair for quality.

Visit 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701

3M™ Cubitron™ II Hookit™
Clean Sanding Abrasive Disc,
3 in., grade 80+, PN 31361;
3 in., grade 180+, PN 31364;
6 in., grade 80+, PN 31371;
6 in., grade 180+, PN 31374



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



3M™ Platinum™ Select Body
Filler, 1 gallon, PN 31131;
for DMS, PN 35863



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



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



3M™ Cubitron™ II Hookit™
Clean Sanding Sheet
Roll, 70mm x 12m,
grade 80+, PN 34442;
grade 150+, PN 34445;
grade 180+, PN 34446



3M™ Dynamic Mixing
Applicator — Pneumatic,
PN 05846



Think About Your Health

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



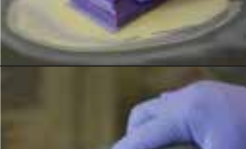
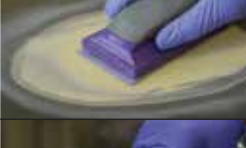
3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



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.

Large Dent Repair		
1		Pre-Cleaning Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).
2		Initial Prep Sand DA sand the repair area using grade 80, removing paint beyond damage by 2–4 in. Clean the surface with an approved low VOC surface cleaner.
3		Final Metal Prep Remove remaining paint/coatings in “low spots” using a Scotch-Brite™ Clean and Strip disc. Use a 3 in. grinding disc to remove weld nuggets or other surface imperfections. Clean the surface with an approved low VOC 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 grade 80. DA rough featheredge area with grade 80 abrasive. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections. Reapply 3M™ Dry Guide Coat as necessary.
6		Final Sand Filler Final block sand filler with grade 150 abrasive. DA fine featheredge sand the repair area with grade 180 abrasive and clean the surface with an approved low VOC surface cleaner applied to a clean towel. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections.
7		Mix and Apply Glaze Mix and apply glaze if required per manufacturer’s recommendation or if using the 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 grade 180 abrasive. Use 3M™ Dry Guide Coat to highlight imperfections. Reapply glaze as necessary to fill minor imperfections.
9		Final Sand and Inspect Featheredge the surrounding area using grade 180 abrasive. Inspect the repair for quality.
Visit 3MCollision.com for more SOPs and videos		

Product List	
Meguiar’s® Shampoo Plus, 1 gallon, PN D11101	
Meguiar’s® Citrus Power Cleaner Plus, 1 gallon, PN D10701	
3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 3 in., grade 80+, PN 31361; 3 in., grade 180+, PN 31364; 6 in., grade 80+, PN 31371; 6 in., grade 180+, PN 31374	
3M™ Platinum™ Plus Body Filler, 1 gallon, PN 01131; for DMS, PN 05863	
3M™ Platinum™ Select Body Filler, 1 gallon, PN 31131; for DMS, PN 35863	
3M™ Cubitron™ II Roloc™ Fibre Disc, 3 in., grade 80+, PN 33392	
3M™ Roloc™+ Holder, PN 07500	
Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Disc, PN 21552	
Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Extra Cut Disc, PN 21555	
3M™ Platinum™ Plus Finishing Glaze, 30 oz., PN 31180; for DMS, PN 05862	
3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861	
3M™ Cubitron™ II Hookit™ Clean Sanding Sheet Roll, 70mm x 12m, grade 80+, PN 34442; grade 150+, PN 34445; grade 180+, PN 34446	

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3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300	
3M™ Half Facepiece Respirator, PN 07182	
3M™ Virtua™ Protective Eyewear, PN 11326	

The Festool mobile dust extractor is not approved for use with aluminum dust.
Adapt sander to a non-vacuum airline. PN 29917.

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 and 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 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Disc, PN 21552



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Extra Cut Disc,
PN 21555



3M™ File Belt Sander,
18 in., PN 33575



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™ Virtua™ Protective
Eyewear, PN 11326



**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.**

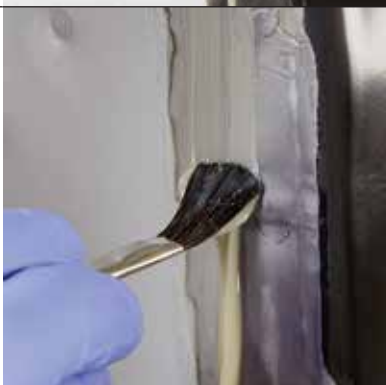
3



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 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, 6 in. x 9 in., PN 64926



Meguiar's® Citrus Power Cleaner Plus, 1 gallon, PN D10701



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



3M™ MSP Seam Sealer, PN 08370



3M™ Performance Manual Applicator, 200mL, PN 08117



3M™ Dynamic Mixing Applicator — Pneumatic, PN 05846



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™ Virtua™ Protective Eyewear, PN 11326



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

**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 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, 6 in. x 9 in., PN 64926



Meguiar's® Citrus Power Cleaner Plus, 1 gallon, PN D10701



3M™ Urethane Seam Sealer, PN 08361



3M™ MSP Seam Sealer, PN 08370; Sprayable, PN 08374



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



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



3M™ Performance Manual Applicator, 200mL, PN 08117



3M™ Dynamic Mixing Applicator — Pneumatic, PN 05846



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

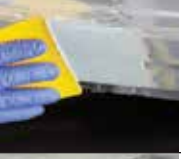


3M™ Half Facepiece Respirator, PN 07182



3M™ Virtua™ Protective Eyewear, PN 11326



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 and 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 grade 150 on a hand block. Final featheredge area using grade 320 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 grade 320 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 grade 1000 3M™ Trizact™ Disc on a DA sander to smooth the blend edges. This operation produces a smooth transition without removing chip coating profile.
Visit 3MCollision.com for more SOPs and videos		

Product List	
Meguiar's® Shampoo Plus, 1 gallon, PN D11101	
Meguiar's® Citrus Power Cleaner Plus, 1 gallon, PN D10701	
3M™ General Purpose Adhesive Cleaner, aerosol, PN 08987; Adhesive Remover, PN 38983	
Scotch-Brite™ Roloc™+ Clean and Strip XT Pro Extra Cut Disc, PN 21555	
3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 6 in., grade 80+, PN 31371; 6 in., grade 320+, PN 31483	
3M™ Platinum™ Plus Finishing Glaze, 30 oz., PN 31180; Glaze for DMS, PN 05862	
3M™ Hookit™ Sanding Block Dust Free, 70mm x 127mm, PN 05207	
3M™ Cubitron™ II Hookit™ Clean Sanding Sheet Roll, 70mm x 12m, grade 150+, PN 34445	
3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861	
3M™ Hookit™ Soft Interface Pad, 6 in., PN 05777	
3M™ Soft Edge Foam Masking Tape PLUS, 21mm (.8 in.), PN 06293	
3M™ Scotchblok™ Masking Paper, 18 in. x 750 ft., PN 06718	
Scotch® Performance Green Masking Tape 233+, width 12.7mm (.5 in.), PN 26332	
3M™ Waterbased Paintable Undercoating Pouch, 5.5 fl. oz. (US), PN 08744	
3M™ Rocker Protector Pouch, 3 fl. oz. (US), PN 08733; 5.5 fl. oz. (US), PN 08734	
3M™ Accuspray™ HGP Pressure Spray Gun, PN 16587	
3M™ PPS™ Type H/O Pressure Cup, 28 oz., PN 16124; 6 oz., PN 16121	
3M™ Trizact™ Hookit™ Blending Disc, 6 in., grade P1000, PN 02090	

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3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300	
3M™ Respirator Assembly/ Organic Vapor N95 Dual Cartridge, PN 07192	
3M™ Virtua™ Protective Eyewear, PN 11326	

Corrosion Protection (Cavity Wax)

1		Pre-Cleaning Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).
2		Take Photos of Repair Area Photograph repair areas that will receive 3M™ Cavity Wax Plus prior to reassembly. Use a lighted borescope to photograph inaccessible areas or enclosed cavities. Use a stand to hold and steady panels which will receive cavity wax before they are attached to the vehicle.
3		Shake Aerosol Agitate the aerosol can thoroughly — one minute of shaking is required to mix the components prior to use. Attach the desired accessory extension and actuator if needed to access the areas inside the panel enclosure.
4		Application with Standard Actuator If applying to new panels prior to installation use the standard actuator. Spray up to three (3) coats to ensure full coverage and maximize protection.
5		Mark Extension Wand If using the 360° accessory wand, mark the extension about one inch from the end as a reference to reduce overspray.
6		Insert Wand Into Panel Opening Insert the wand to the farthest point. Begin spraying as you remove the wand until the reference mark comes into view. Repeat up to three (3) times to ensure complete coverage and maximize corrosion protection.
7		Clean Accessory Nozzle After application, invert the can and clear material from the accessory wand and nozzle by depressing the actuator.
8		Remove Excess Cavity Wax Re-assemble the associated parts and wipe off any excess using a VOC compliant surface cleaner.
9		Retake Photos of Repair Area Retake photos after Cavity Wax Plus is applied. To provide the best comparison, photograph enclosed cavities through the same access hole. If Cavity Wax Plus was applied to a part to prepare it for installation, photograph it before installing in on the vehicle. Attach pre- and post-cavity wax photos to the repair order file.

Visit 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



3M™ Cavity Wax Plus
18 oz. aerosol, PN 08852



3M™ Cavity Wax Plus -
Amber, 18 oz. aerosol,
PN 38854



3M™ Cavity Wax Plus
Applicator Wand Kit,
PN 08851



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



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



3M™ Virtua™ Protective
Eyewear, PN 11326



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 and 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 contaminants. 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 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Disc, PN 21552



Scotch-Brite™ Roloc™+
Clean and Strip XT
Pro Extra Cut Disc,
PN 21555



3M™ File Belt Sander,
18 in., PN 33575



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



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



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



3M™ Accuspray™ HGP
Pressure Spray Gun, PN 16587



3M™ PPS™ Type H/O Pressure
Cup, Large 28 oz., PN 16124;
Mini 6 oz., PN 16121



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



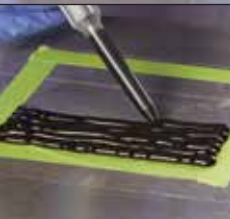
3M™ Respirator Assembly/
Organic Vapor N95 Dual
Cartridge, PN 07192



3M™ Virtua™ Protective
Eyewear, PN 11326



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.
3_A		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.
3_B		Pre-make Patch Dispense seam sealer material onto prepared surface.
3_C		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 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



Scotch® Performance
Green Masking Tape 233+,
18mm x 55m (.75 in.),
PN 26334



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



3M™ NVH Dampening
Material, PN 04274



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



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



3M™ Performance
Manual Applicator,
200mL, PN 08117



3M™ Dynamic Mixing
Applicator — Pneumatic,
PN 05846



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



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



3M™ Virtua™ Protective
Eyewear, PN 11326



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 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D11101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



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™ 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



3M™ Performance
Manual Applicator,
200mL, PN 08117



3M™ Dynamic Mixing
Applicator — Pneumatic,
PN 05846



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



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



3M™ Virtua™ Protective
Eyewear, PN 11326



E-Coat Panel Prep

1



Cleaning

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

2_A



Surface Prep Hand

Sand edges and other hard to reach areas using grade 400 flexible abrasive sheet or Scotch-Brite™ hand pad until the surface is matte and all sheen has been removed.

2_B



Surface Prep Machine

Sand remaining surfaces using grade 400 abrasive on a DA sander until the surface is matte and all sheen has been removed.

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 3MCollision.com for more SOPs and videos

Product List

Meguiar's® Shampoo Plus,
1 gallon, PN D1101



Meguiar's® Citrus Power
Cleaner Plus, 1 gallon,
PN D10701



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



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



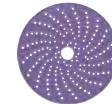
Scotch-Brite™ 7447 PRO
Hand Pads, Very Fine,
6 in. x 9 in., PN 64926



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



3M™ Cubitron™ II Hookit™
Clean Sanding Abrasive
Disc, 6 in., grade 400+,
PN 31484



3M™ Accuspray™ ONE
Pro Spray Gun Kit for
3M™ PPS™ 2.0, PN 26578



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



3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



Feather-Prime-Block		
1		Featheredge Blow off repair area. Featheredge the surrounding repair area using grade 180 abrasive.
2		Final Sand and Inspect Final sand surrounding area using grade 320 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 manufacturer's 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 grade 320 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 grade 400 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 OC compliant surface cleaner.
Visit 3MCollision.com for more SOPs and videos		

Product List	
3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 6 in., grade 180+, PN 31374; 6 in., grade 320+, PN 31483 6 in., grade 400+, PN 31484	
3M™ Accuspray™ ONE Pro Spray Gun Kit for 3M™ PPS™ 2.0, PN 26578	
3M™ Dry Guide Coat, 50 gram applicator kit, PN 05861	
3M™ Cubitron™ II Hookit™ Clean Sanding Sheet Roll, 70mm x 12m, grade 320+, PN 34449	

Think About Your Health	
3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300	
3M™ Half Facepiece Respirator, PN 07182	
3M™ Virtua™ Protective Eyewear, PN 11326	

Feather-Prime-Block Waterborne		
1		Featheredge Blow off repair area. Featheredge the surrounding repair area using grade 180 abrasive.
2		Final Sand and Inspect Final sand surrounding area using grade 320 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 grade 320 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 grade 400 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 grade 600–800 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 3MCollision.com for more SOPs and videos		

Product List

3M™ Cubitron™ II Hookit™
Clean Sanding Abrasive Disc,
6 in., grade 180+, PN 31374;
6 in., grade 320+, PN 31483;
6 in., grade 400+, PN 31484



3M™ Accuspray™ ONE
Pro Spray Gun Kit for
3M™ PPS™ 2.0, PN 26578



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



3M™ Cubitron™ II Hookit™
Clean Sanding Sheet Roll,
70mm x 12m, grade 320+,
PN 34449



3M™ Hookit™ Soft Interface
Pad, 6 in., PN 05777



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



Think About Your Health

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



3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



Blend Panel Sanding Process

1



Hand Sand Edges

Scuff hard to reach areas and panel edges by hand with grade 800–1000 abrasive disc or flexible abrasive sheet.

2



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.

3



DA Sand Color Blend Area

DA sand the color blend area using a grade 800 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 grade 1000 abrasive disc.

5



Clean the Repair Area

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

Visit 3MCollision.com for more SOPs and videos

Product List

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



3M™ Hookit™ Soft Interface
Pad, 6 in., PN 05777



3M™ Hookit™ Purple
Clean Sanding Disc 334U,
6 in., grade P800, PN 30760



3M™ Hookit™ Flexible
Abrasive Disc, 17 hole,
6 in., grade P800, PN 34802;
6 in., grade P1000, PN 34803



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



Think About Your Health

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



3M™ Half Facepiece
Respirator, PN 07182



3M™ Virtua™ Protective
Eyewear, PN 11326



3M™ PPS™ Series 2.0 Spray Cup 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 3M™ PPS™ cup. Mix, measure, filter and spray your coating materials.

Most Common Part Numbers and Ordering Information

Part No.	Description	Items/ Kit	Kits/ Case	Predecessor Part No.
200 Micron Liner Cup System Kits				
26024	Large (28 oz, 850mL) Lids and Liners – 200 micron filter	50	1	16024
26000	Standard (22 oz, 650mL) Lids and Liners – 200 micron filter	50	1	16000
26112	Midi (13.5 oz, 400mL) Lids and Liners – 200 micron filter	50	1	16112
26114	Mini (6.8 oz, 200mL) Lids and Liners – 200 micron filter	50	1	16114
26028	Micro (3 oz, 90mL) Lids and Liners – 200 micron filter	50	1	16028
Note: Each kit contains 32 sealing plugs and 1 cup; each lid includes a quarter-turn lid locking system				
125 Micron Liner Cup System Kits				
26325	Large (28 oz, 850mL) Lids and Liners – 125 micron filter	50	1	16324/16325
26301	Standard (22 oz, 650mL) Lids and Liners – 125 micron filter	50	1	16301/16300
26312	Midi (13.5 oz, 400mL) Lids and Liners – 125 micron filter	50	1	16312
26314	Mini (6.8 oz, 200mL) Lids and Liners – 125 micron filter	50	1	16314
26328	Micro (3 oz, 90mL) Lids and Liners – 125 micron filter	50	1	16328
Note: Each kit contains 32 sealing plugs and 1 cup; each lid includes a quarter-turn lid locking system				
Lids Only (with Quarter-Turn Lid Locking System)				
26200	Large / Standard Lids – 200 micron filter	25	1	16200
26199	Large / Standard Lids – 125 micron filter	25	1	16199
26204	Midi / Mini / Micro Lids – 200 micron filter	25	1	16204
26205	Midi / Mini / Micro Lids – 125 micron filter	25	1	16205
Hard Cups – Ratios Now Printed on Cups!				
26023	Large Cups (28 oz, 850mL)	2	4	16023
26001	Standard Cups (22 oz, 650mL)	2	4	16001
26122	Midi Cups (13.5 oz, 400mL)	2	4	16122
26115	Mini Cups (6.8 oz, 200mL & 3 oz, 90mL)	2	4	16115
Most Popular Adapters for 3M™ PPS™ Series 2.0*				
26003	PPS™ Series 2.0 Adapter, #S2	4	1	16003
26016	PPS™ Series 2.0 Adapter, #S9	4	1	16016
26046	PPS™ Series 2.0 Adapter, #S15	4	1	16046
26135	PPS™ Series 2.0 Adapter, #S40	4	1	16135
26139	PPS™ Series 2.0 Adapter, #S43	4	1	16139
3M™ Accuspray™ ONE Pro Spray Gun for 3M™ PPS™ Series 2.0*				
26578	Accuspray™ ONE Pro Spray Gun	1	2	16578
26580	Accuspray™ ONE Spray Gun System with PPS™ Series 2.0	1	2	16580
26612	Atomizing Head Refill Pack, 1.2mm, Blue	4	6	16615
26613	Atomizing Head Refill Pack, 1.3mm, Green	4	6	16614
26614	Atomizing Head Refill Pack, 1.4mm, Orange	4	6	16612
26618	Atomizing Head Refill Pack, 1.8mm, Clear	4	6	16611
26620	Atomizing Head Refill Pack, 2.0mm, Red	4	6	16609



***Need a new 3M™ PPS™ Series 2.0 Adapter for your spray gun?**
Find a complete list of adapters at
3MCollision.com/PPSadapters

Cut your costs by picking the cup that fits the job.

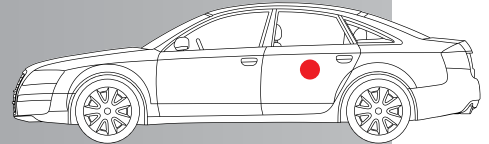
Save money both on cups (smaller cups cost less) and paint (less chance of over-mixing) by always having a ready supply of a variety of 3M™ PPS™ Series 2.0 Kits. Five sizes are available to fit the most common repairs in your shop. Stock them all to maximize your savings!



Spot Repair

Micro Cups

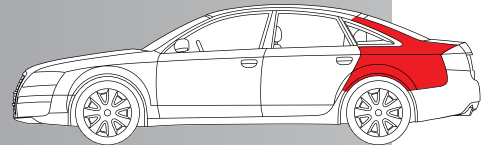
Ideal for areas requiring 3 fluid ounces (90mL) or less of material. EPA 6H compliant.



1-Panel Repair

Mini Cups

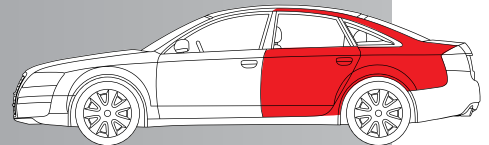
Ideal for areas requiring 6.8 fluid ounces (200mL) or less of material.



2-Panel Repair

Midi Cups

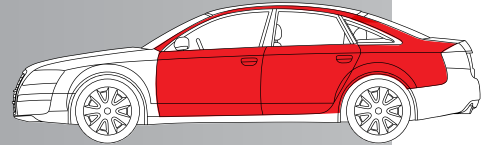
Ideal for areas requiring 13.5 fluid ounces (400mL) or less of material, such as bumpers.



3-Panel Repair

Standard Cups

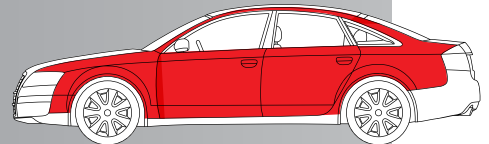
Ideal for areas requiring 22 fluid ounces (650mL) or less of material.



4-Panel Repair

Large Cups

Ideal for areas requiring 28 fluid ounces (850mL) or less of material, including large, clear coat batches.



Pro Tips and Tricks

- Use the 3M™ PPS™ Series 2.0 Shaker Core to remove the lid more easily.
- When removing the lid and liner from the hard cup, twist lid to unlock, place fingers through hole in bottom of cup and push liner upwards, releasing lid and liner together.
- Use the wide base on your 3M™ PPS™ Series 2.0 Cup Sealing Plugs to stand your cups upside down when not in use, helping to keep the filter mesh wet.
- Eliminate traditional mixing cups and filters by mixing materials right inside your 3M™ PPS™ Series 2.0 Cups. Each lid contains a clean, welded-in filter.
- Stock all 5 Kit sizes to always have the right size cup for the job, reducing your cost per use.
- Maintain Compliance with EPA 6H Rule by using the 3 oz/90mL size 3M™ PPS™ Series 2.0 Cups.
- Keep your red 3M™ PPS™ Dispensers. They still work with all 3M™ PPS™ Series 2.0 Lids and Liners.

Individual Product Instruction and Safety Information

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

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

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