

Aluminum Repair Procedures

Paint Prep

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.

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



Door Skin Replacement		
1		<p>Door Frame Preparation</p> <p>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.</p>
2		<p>Clean</p> <p>Clean door frame and replacement panel mating flange areas with a VOC compliant surface cleaner.</p>
3		<p>Replacement Skin Prep</p> <p>Scuff replacement skin mating flange areas using Scotch-Brite™ hand pad.</p>
4		<p>Dry Fit Panel</p> <p>Dry fit replacement panel and complete any necessary metal straightening at flanges areas. Remove door skin in preparation for adhesive application.</p>
5		<p>NVH Replacement</p> <p>Apply NVH material at original locations on intrusion beam.</p>
6		<p>Apply Bonding Adhesive</p> <p>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.</p>
7		<p>Install Door Skin</p> <p>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.)</p>
8		<p>Clamp and Cure</p> <p>Follow recommended adhesive clamp and cure times. Clean any adhesive squeeze-out from hem flange area with a VOC compliant cleaner.</p>
9		<p>Seam Sealing</p> <p>Re-apply seam sealer to hem flange as required following general seam sealing guidelines.</p>

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™ 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™ SMC/FRP Panel Adhesive, 200mL, PN 08219	
3M™ Bare-Metal Seam Sealer 200mL, PN 08310; 600mL DMS, PN 58310	
3M™ EZ Sand Multi-Purpose Flexible 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	

Protect Your Repairs

Corrosion protection is recommended for this type of repair.

Protect repairs with a self-healing, non-hardening formula

- 3M Cavity Wax Plus, PN 08852
- 3M™ Cavity Wax Plus Applicator Wand Kit, PN 08851



All OEMs recommend the application of internal anti-corrosion material during body repair, which includes cavity wax.

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Product Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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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.

Feather-Prime-Block		
1		<p>Featheredge Blow off repair area. Featheredge the surrounding repair area using P180 abrasive.</p>
2		<p>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.</p>
3		<p>Mask for Primer Mask repair area as necessary. Refer to Primer Masking SOP for 3M specific recommendations.</p>
4		<p>Apply Primer Apply primer to repair area following manufacturers recommendations. Allow to cure.</p>
5		<p>Apply Dry Guide Coat Apply 3M™ Dry Guide Coat over cured primer.</p>
6		<p>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.</p>
7		<p>Re-Apply Dry Guide Coat Re-apply 3M™ Dry Guide Coat over entire repair area.</p>
8		<p>DA Sand Primer DA sand repair area using a P400 disc and a soft interface pad until all 3M™ Dry Guide Coat is removed. Note: Use 3M™ Flexible Abrasive Disc to reduce burning through the primer surface.</p>
9		<p>Clean the Damaged Area Clean the repair area with a VOC compliant surface cleaner.</p>

Product List	
3M™ Cubitron™ II Clean Sanding Hookit™ Disc, 6 in., 180+ grade, PN 31374	
3M™ Purple Clean Sanding Hookit™ Disc, 6 in., P400 grit, PN 01811	
3M™ Flexible Abrasive Hookit™ Disc, 17 hole, 6 in., P400, PN 34800	
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 HG18, PN 16570; 1.8mm Atomizing Head, PN 16611	
3M™ Hookit™ Purple Clean Sanding Roll, 70mm x 12m, P320, PN 30705	
Festool D150 Thin Interface Pad, PN 29939	

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	

Seam Sealer Removal

1



Clean

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

2



Protect

Protect surrounding areas with masking tape.

3



Method A

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

4



Method B

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

5



Clean

Blow off the surface with clean dry air and then use a VOC compliant surface cleaner to remove any remaining residue.

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



Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, 4 in. x 1/2 in., Extra Coarse, PN 07470



Scotch-Brite™ Roloc™+ Clean N Strip Disc, 4 in. x 1/2 in., Extra Coarse, PN 07466



3M™ File Belt Sander, 18 in., PN 33575; 13 in., PN 33573



Scotch-Brite™ Durable Flex Belt, 1/2 in. x 18 in., Coarse, PN 64475



3M™ Specialty Adhesive Remover, 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™ CCS Protective Eyewear with Foam Gasket, PN 11872



Not a complete list. Select protective eyewear, appropriate gloves, hearing protection, respirator and protective clothing based on your job and exposure assessment.

Seam Sealer Installation: Over Primer

<p>1</p>		<p>Surface Prep Scuff primer in sealer application areas using a maroon Scotch-Brite™ Hand Pad. Blow off with clean, dry air. Note: Apply 3M seam sealers only over two-part epoxy or two-part urethane primers.</p>
<p>2</p>		<p>Clean Use a clean cloth or paper towel to clean repair area with 3M™ All Purpose Cleaner and Degreaser followed by a VOC compliant wax and grease remover. Note: DO NOT spray or saturate seams with cleaner.</p>
<p>3</p>		<p>Apply Tight Coat Apply thin bead of sealer to desired joint. Tool sealer into seam ensuring proper sealing and adhesive qualities.</p>
<p>4</p>		<p>Apply Seam Sealer Apply seam sealer over the prepared seam. Tool to recreate OEM appearance.</p>

Product List

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



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



Marson® Yellow Spreaders, PN 20395



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 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™ CCS Protective Eyewear with Foam Gasket, PN 11872



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