



# Process for Success

## Standard Operating Procedures

From metal 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](http://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.



### 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.

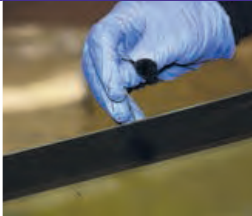
4



#### 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



#### Reinstall Moldings and Panels

Remove all tape before delivering the vehicle. 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](http://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



# Steel Repair Procedures

## Windshield Repair

### Stationary Auto Glass Removal and Installation

<b>1</b>		<b>Glass Removal</b> Apply interior surface protection. Remove interior trim pieces and disconnect electronics. Remove molding. Cut urethane with the appropriate tool. Remove glass.
<b>2</b>		<b>Preparing Damaged Pinchweld</b> Remove all of the old urethane from the damaged area only. For the undamaged pinchweld, leave the urethane intact at this time.
<b>3</b>		<b>Additional Surface Protection</b> Take time to add additional surface protection if needed. This will save time and money in the end.
<b>4</b>		<b>Preparation of New Pinchweld</b> 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.
<b>5</b>		<b>Dry Set Glass</b> 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.
<b>6</b>		<b>Clean and Prepare Glass</b> 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.
<b>7</b>		<b>Preparation of Undamaged Pinchweld</b> Close-cut the old urethane down to a thickness of 1mm–2mm. Clean the pinchweld area with water and a clean cloth.
<b>8</b>		<b>Apply Primer to Pinchweld if Necessary</b> 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.
<b>9</b>		<b>Apply Urethane and Install Glass</b> 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.
<b>10</b>		<b>Reinstall Moldings and Panels</b> Remove all tape before delivering the vehicle. 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](http://www.3MCollision.com) for more SOPs and videos

### Product List

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



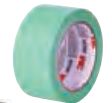
3M™ High Performance Welding Drape, PN 05919



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](http://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



### Metal Working

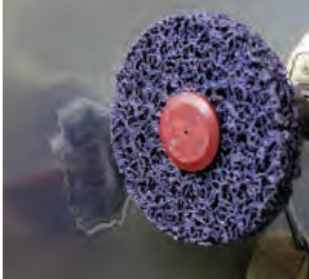
1



#### Pre-Cleaning

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

2



#### Surface Prep

Use a Scotch-Brite™ 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.

4



#### Final Prep

Use a grade 80 Roloc™ grinding disc to remove weld nuggets from dent pulling operation.

5



#### Clean and Inspect

Clean with all purpose cleaner and degreaser. Blow off with clean, dry air. Inspect damage area to determine if additional metal straightening is required.

Visit [www.3MCollision.com](http://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 effected areas to restore corrosion protection.**

### Steel Part Replacement

1		<b>Pre-Cleaning</b> Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).
2		<b>Panel Cutting</b> Identify OEM recommended sectioning location, scribe or mark with tape on the vehicle. Trim repair area using preferred cut-off wheel. Use grade 36 file belt in hard to reach areas to cut top panel and avoid damage to host panel.
3		<b>Sealer/Coating Removal</b> 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.
4		<b>Spot Weld Removal</b> Using grade 36 abrasive belt, grind spot weld to remove weld from top panel. Note top panel thickness. <b>Use caution when grinding to only grind top panel and limit cutting into host/interior panel.</b> Use belt thickness as a gauge — stop grinding when back of belt is flush with exterior panel. Grade 80 belt can be used to remove welds from thinner steels.
5		<b>Panel Separation</b> Separate exterior panel from the host panel. <b>DO NOT force separation in areas where the weld isn't completely removed; go back to step 4 and finish weld removal before continuing.</b>
6A		<b>Surface Preparation</b> Using a grade 80 abrasive belt, remove remaining weld nugget material from host panel.
6B		<b>Surface Preparation</b> Clean and prep remaining mating flanges on host and replacement panel with a coarse Scotch-Brite™ Belt where necessary.
7A		<b>MIG Plug Weld Dressing</b> Use a grade 80 abrasive belt to dress replacement MIG welds. Grind weld. <b>Use caution to avoid damage to adjacent areas.</b>
7B		<b>Continuous Weld Dressing</b> Use a 3 in. grade 50 grinding disc to dress continuous MIG welds at sectioning joint. Grind weld. <b>Use caution to limit amount of grinding done to adjacent areas.</b>
8		<b>Weld Cleaning</b> Use a CRS Scotch-Brite™ Belt to clean weld site in preparation for subsequent operations.

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### Product List

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



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

3M™ Green Corps™ Cut-Off Wheel, 3 in. x 1/32 in., PN 01989; 3 in. x 1/16 in., PN 01990



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™ Green Corps™ Abrasive File Belt, grade 36, PN 31801; grade 80, PN 31804



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



3M™ Pistol Grip Disc Sander, PN 28547



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





# Steel Repair Procedures

## Body Repair

### Panel Bonding (Excluding Door Skin)

1		<b>Host Panel Preparation</b> 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		<b>Replacement Panel Preparation</b> Remove Ecoat from replacement panel mating flange areas using Scotch-Brite™ Belt or Clean N Strip disc.
3		<b>Clean</b> Clean host panel and replacement panel mating flange areas with a VOC compliant surface cleaner.
4		<b>Dry Fit Panel</b> Dry fit replacement panel and complete any necessary metal straightening at flanges areas. Remove panel in preparation for adhesive application.
5		<b>Weld-Thru Primer</b> Use Scotch-Brite™ Belt to prepare metal surfaces. Clean and apply weld-thru primer to all areas requiring MIG welding.
6		<b>Pre-Assembly NVH Replacement</b> If vehicle construction necessitates, apply NVH material or foams at original locations as required.
7		<b>Apply Bonding Adhesive</b> 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.
8		<b>Install Replacement Panel</b> 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.
9		<b>Adhesive Clean Up</b> Tool excess adhesive squeeze-out from repair area prior to curing to seal the repair. <b>Note: Grinding to remove excess adhesive can expose bare metal, causing corrosion.</b>
10		<b>Post-Assembly Foam Replacement</b> Apply foams at original locations as required.

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### 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™ Roloc™ + Clean N Strip XT Disc, PN 07470



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



3M™ Weld-Thru Coating II, PN 05917



3M™ NVH Dampening Material, PN 04274



3M™ Flexible Foam, 200mL, PN 08463



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



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



### Weld Bonding (Excluding Door Skin)

1		<b>Host Panel Preparation</b> 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		<b>Mating Flange Panel Preparation</b> Remove Ecoat from replacement panel mating flange areas using Scotch-Brite™ Belt or Clean N Strip disc.
3		<b>Clean</b> Clean host panel and replacement panel mating flange areas with a VOC compliant surface cleaner.
4		<b>Dry Fit Panel</b> Dry fit replacement panel and complete any necessary metal straightening at flange areas.
5		<b>Weld-Thru Primer</b> Use Scotch-Brite™ Belt to prepare metal surfaces. Clean and apply weld-thru primer to all areas requiring MIG welding.
6		<b>Spot Weld Surface Preparation</b> Identify replacement spot weld sites and remove Ecoat using Scotch-Brite™ belt where spot weld tips will contact host and replacement panel. Remove panel once complete.
7		<b>Pre-Assembly NVH Replacement</b> If vehicle construction necessitates, apply NVH material or foams at original locations as required.
8		<b>Apply Bonding Adhesive</b> 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 areas.
9		<b>Install Replacement Panel</b> Install replacement panel to host panel. Clamp in place.
10		<b>Spot Weld</b> Spot weld while adhesive is uncured at prepared weld sites. Follow welder settings determined from test panel.
11		<b>Adhesive Clean Up</b> Remove clamps and tool excess adhesive squeeze-out from repair area prior to curing to seal the repair. <b>Note: Grinding to remove excess adhesive can expose bare metal, causing corrosion.</b>
12		<b>Post-Assembly Foam Replacement</b> Apply foams at original locations as required.

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#### WARNING

Follow OEM and/or welder manufacturers' recommended procedure for making and testing welds. Before welding on a vehicle, test welds must be made to ensure proper weld quality and welding machine settings.

### 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™ Roloc™ + Clean N Strip XT Disc, PN 07470



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



3M™ Weld-Thru Coating II, PN 05917



3M™ NVH Dampening Material, PN 04274



3M™ Flexible Foam, 200mL, PN 08463



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



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



# Steel Repair Procedures

## Body Repair

### Weld Sealing

<b>1</b>		<b>Host Panel Preparation</b> 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.
<b>2</b>		<b>Mating Flange Panel Preparation</b> Remove Ecoat from replacement panel mating flange areas using Scotch-Brite™ Belt or Clean N Strip disc.
<b>3</b>		<b>Clean</b> Clean host panel and replacement panel mating flange areas with a VOC compliant surface cleaner.
<b>4</b>		<b>Dry Fit Panel</b> Dry fit replacement panel and complete any necessary metal straightening at flanges areas.
<b>5</b>		<b>Weld-Thru Primer</b> Use Scotch-Brite™ belt to prepare metal surfaces. Clean and apply weld-thru primer to all areas requiring MIG welding.
<b>6</b>		<b>Spot Weld Surface Preparation</b> Identify replacement spot weld sites and remove Ecoat using Scotch-Brite™ Belt where spot weld tips will contact host and replacement panel. Remove panel once complete.
<b>7</b>		<b>Pre-Assembly NVH Replacement</b> If vehicle construction necessitates, apply NVH material or foams at original locations as required.
<b>8</b>		<b>Apply Seam Sealer</b> Apply urethane or MSP seam sealer to mating flange areas on host panel and replacement panel covering all bare metal areas. Apply additional bead of sealer at mating flange areas.
<b>9</b>		<b>Install Replacement Panel</b> Install replacement panel to host panel. Clamp in place.
<b>10</b>		<b>Spot Weld</b> Spot weld while sealer is uncured at prepared weld sites. Follow welder settings determined from test panel.
<b>11</b>		<b>Sealer Clean Up</b> Remove clamps and tool excess adhesive squeeze-out from repair area prior to curing to seal the repair. <b>Note: Grinding to remove excess sealer can expose bare metal, causing corrosion.</b>
<b>12</b>		<b>Post-Assembly Foam Replacement</b> Apply foams at original locations as required.

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### WARNING

Follow OEM and/or welder manufacturers' recommended procedure for making and testing welds. Before welding on a vehicle, test welds must be made to ensure proper weld quality and welding machine settings.

### 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™ Roloc™ + Clean N Strip XT Disc, PN 07470



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



3M™ Weld-Thru Coating II, PN 05917



3M™ NVH Dampening Material, PN 04274



3M™ Flexible Foam, 200mL, PN 08463



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



3M™ MSP Seam Sealer, PN 08370



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

Pre-wash/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](http://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 Replacement

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

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### 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™ 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 Adhesive 15, 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



### Express Damage Repairs

1



#### Clean the Damaged Area

Clean the repair area with soap and water, followed by a VOC compliant surface cleaner. Use 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 necessary during sanding process.

5



#### Sand Glaze

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

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](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Purple Clean Sanding Hookit™ Disc, 3 in., P180, PN 30279; 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



### Small Damage Repairs

1		<p><b>Pre-Cleaning</b> Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).</p>
2		<p><b>Initial Prep Sand</b> DA sand the repair area using grade 80, removing paint beyond damage by 2–4 in. Blow off with clean, dry air and re-clean with surface cleaner.</p>
3		<p><b>Mix and Apply Filler</b> 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.</p>
4		<p><b>Sand Filler</b> 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 seven.</p>
5		<p><b>Mix and Apply Glaze</b> Blow off the repair area completely removing sanding dust from the surface. 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.</p>
6		<p><b>Sand Glaze</b> Sand polyester glaze with P180. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections.</p>
7		<p><b>Final Sand and Inspect</b> Blow off repair area. Featheredge the surrounding area using P180 abrasive. Inspect the repair for quality.</p>

Visit [www.3MCollision.com](http://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™ Dry Guide Coat, 50 gram applicator kit, PN 05861

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

3M™ Platinum Glaze for DMS, 05862

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

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



### 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



### Large Damage Repair

<b>1</b>		<p><b>Pre-Cleaning</b> Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).</p>
<b>2</b>		<p><b>Initial Prep Sand</b> DA sand the repair area using grade 80, removing paint beyond damage by 2–4 in. Blow off with clean, dry air and re-clean with surface cleaner.</p>
<b>3</b>		<p><b>Final Metal Prep</b> 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.</p>
<b>4</b>		<p><b>Mix and Apply Filler</b> 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.</p>
<b>5</b>		<p><b>Initial Sand Filler</b> Block shape sand filler with P80. 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.</p>
<b>6</b>		<p><b>Final Sand Filler</b> 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.</p>
<b>7</b>		<p><b>Mix and Apply Glaze</b> Blow off the repair area completely removing sanding dust from the surface. 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.</p>
<b>8</b>		<p><b>Sand Glaze</b> Block sand polyester glaze with P180 abrasive. Use 3M™ Dry Guide Coat to highlight imperfections. Re-apply glaze as necessary to fill minor imperfections.</p>
<b>9</b>		<p><b>Final Sand and Inspect</b> Blow off repair area. Featheredge the surrounding area using P180 abrasive. Inspect the repair for quality.</p>

Visit [www.3MCollision.com](http://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™ Roloc™ Disc, 80 grade, 3 in., PN 01346

3M™ Roloc™ + Holder, PN 07500

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

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

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

3M™ Platinum Glaze for DMS, 05862

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

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

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

### 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





### Sealer Coating Removal

1



#### Pre-Cleaning

Pre-wash/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](http://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



# Steel Repair Procedures

## Sealing and Coating

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

### General Seam Sealer Application: Direct to Metal

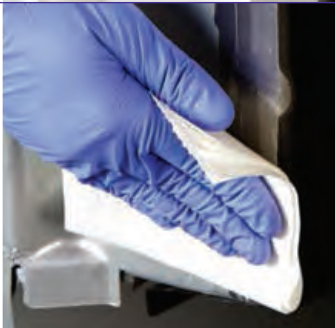
1



#### Surface Prep

Scuff the 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](http://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 3M™ 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](http://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; Sprayable, PN 08374



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



3M™ EZ Sand Multi-Purpose Adhesive 15, 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



### Corrosion Protection (Cavity Wax)

1



#### Pre-Cleaning

Pre-wash/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](http://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, 1 qt., PN 08891; 18 oz. aerosol, PN 08892

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



3M™ Body Schutz™ Applicator Gun, PN 08997



### 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

Pre-wash/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 of 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 [www.3MCollision.com](http://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)

1		<p><b>Pre-Cleaning</b> Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).</p>
2		<p><b>LASD Removal</b> Remove sound deadening material from affected repair area using a scraper or chisel. Blow off area with compressed air and clean with APCD.</p>
3A		<p><b>Pre-Make Patch</b> 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.</p>
3B		<p><b>Pre-Make Patch</b> Dispense seam sealer material onto prepared surface.</p>
3C		<p><b>Pre-Make Patch</b> 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.</p>
4		<p><b>Surface Prep</b> Scuff surface with a maroon Scotch-Brite™ hand pad. Blow off area with compressed air and clean with APCD.</p>
5		<p><b>Install Replica (on body)</b> 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.</p>

Visit [www.3MCollision.com](http://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; 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)

1



#### Pre-Cleaning

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

2



#### LASD Removal

Remove sound deadening 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](http://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

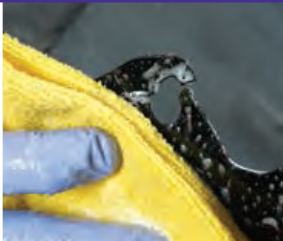


3M™ Lexa™ Protective Eyewear, PN 15200



### Plastic Tab Repair

1



#### Clean the Damaged Area

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

2



#### Initial Prep Sand

Grind the broken tab using a 3 in. 60 grit 3M™ Roloc™ disc, creating a tapered edge. Using a DA sander, sand the repair area with a 3 in. P80 abrasive disc to remove any melted plastic.

3



#### Prepare the Tab

Drill 1/8 in. pinning holes in the damaged area 1/4 in. from tapered edge and 1/4 in. apart. Apply aerosol adhesion promoter, allowing to dry 5–10 minutes.

4



#### Mix and Apply Super-Fast Repair Material

Cut contour film 3 times the length of tab. Mix and apply adhesive to contour sheet and apply to damaged tab, shaping as you work. Allow to cure 5–10 minutes. Remove contour film.

5



#### Rough Shape Damaged Tab

Rough shape the repaired tab area with a 3 in. 60 grit 3M™ Roloc™ disc. Using a DA sander, sand the repair area with a 3 in. P80 abrasive disc to restore original tab dimensions. Re-drill mounting holes as necessary.

6



#### Final Sand and Inspect

Using a DA sander, finish sand the repair area and the surrounding area using a 3 in. P180 abrasive disc. Blow off the repair area and inspect for quality.

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Cubitron™ II  
Fibre Roloc™ Disc,  
grade 60+, PN 33391



3M™ Purple Clean Sanding  
Hookit™ Disc, 3 in., P80,  
PN 30283; 3 in., P180,  
PN 30279



3M™ Super Fast Repair  
Adhesive, 200mL, PN 04247



3M™ Super Fast Repair  
Adhesive — Black,  
200mL, PN 04248



3M™ Plastic Contour Sheet,  
5 in. x 12 ft., PN 04903



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



3M™ Polyolefin Adhesion  
Promoter, 12 oz. aerosol,  
PN 05907



### Think About Your Health

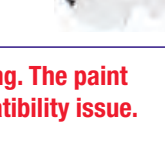
3M™ E-A-R™ Skull Screws™  
Ear Plug, PN P1300



3M™ Half Facepiece  
Respirator, PN 07182



3M™ Lexa™ Protective  
Eyewear, PN 15200



**Note: We do not recommend a final coat of 3M™ Polyolefin Adhesion Promoter (PN 05907) after the final sanding. The paint companies all recommend their own paint adhesion promoters and applying the PN 05907 may cause a compatibility issue.**



# Steel Repair Procedures

## Bumper Repair

### Cosmetic Flexible Bumper Repair

#### Scrapes, Gouges and Deformations

1		<p><b>Clean the Damaged Area</b> Clean the repair area with soap and water, followed by a VOC compliant surface cleaner.</p>
2		<p><b>Initial Prep Sand</b> "Dish Out" the damaged area using a P80 abrasive disc on a DA sander. Keep the P80 abrasive scratches within the "Dish Out" area. Use a DA sander with P180 abrasive to "feather" the repair area 2–3 in. from the "Dish Out" area.</p>
3		<p><b>Apply Adhesion Promoter</b> Blow off the repair area with clean, dry air. Apply aerosol adhesion promoter, allowing to dry 5–10 minutes. Always apply adhesion promoter before any filler material.</p>
4		<p><b>Mix and Apply Flexible Filler</b> Mix and apply flexible filler with a "tight coat," followed by additional coats to fill in all low areas. Allow to cure for 15 minutes at 75°F.</p>
5		<p><b>Sand Flexible Filler</b> Hand block or DA sand flexible repair material with a P150 disc or sheet, followed by a P180 disc or sheet.</p>
6		<p><b>Final Sand and Inspect</b> Finish sand the repair and the surrounding area using a P320 abrasive disc. Blow off and inspect the repair for quality. Repeat steps 3, 4 and 5 as necessary.</p>

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Purple Clean Sanding Hookit™ Disc, 3 in., P80, PN 30283; 3 in., P180, PN 30279; 6 in., P80, PN 01820; 6 in., P150, PN 01817; 6 in., P180, PN 01816; 6 in., P320, PN 01812



3M™ Hookit™ Purple Clean Sanding Sheet Roll, 70mm x 12m, P150, PN 30710



3M™ Purple Hookit™ Sheet, 2-3/4 in. x 16-1/2 in., P180, PN 30709

3M™ Polyolefin Adhesion Promoter, 12 oz. aerosol, PN 05907



3M™ EZ Sand Flexible Parts Repair Material, 200mL cartridge, PN 05887



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



### 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: We do not recommend a final coat of 3M™ Polyolefin Adhesion Promoter (PN 05907) after the final sanding. The paint companies all recommend their own paint adhesion promoters and applying the PN 05907 may cause a compatibility issue.**

### Flexible Patch Non-Structural Bumper Repair

1



#### Clean the Damaged Area

Clean the front and back of the repair area with soap and water, followed by a VOC compliant surface cleaner. Be sure to remove any overspray from the back side of the repair area. A Scotch-Brite™ scuffing pad may be used to assist with stubborn overspray.

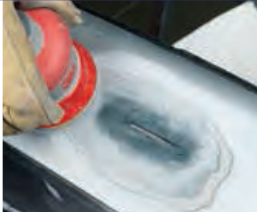
2



#### Initial Grinding

Grind the front of the repair using a 3 in. grade 60 disc. Grind at a low speed creating a "Dish Out" area 3 in. wide that tapers to the bottom of the damage.

3



#### Initial Prep Sand

Sand the "Dish Out" area using a P80 abrasive disc on a DA sander, removing any melted plastic. Keep the P80 abrasive scratches within the "Dish Out" area. Using P180 abrasive, feather edge 2–4 in. from the "Dish Out" area.

4



#### Apply Reinforcement Patch

On the back side of the repair area apply the flexible patch adhesive promoter. Firmly apply the flexible reinforcement patch overlapping the damaged area by 1-1/2 in. on all sides of the repair.

5



#### Mix and Apply Flexible Filler

Apply 3M™ Polyolefin Adhesion Promoter (PN 05907) to the front side of the repair and allow to dry for 5 minutes. Mix and apply flexible filler with a "tight coat" followed by additional coats to fill in all low areas. Allow 15 minutes to cure at 75°F.

6



#### Sand Flexible Filler

DA sand the flexible filler material with a P150 abrasive disc. Block sand the repair area with a P180 abrasive sheet.

7



#### Final Sand and Inspect

Using a DA sander, finish sand the repair and the surrounding area using a P320 abrasive disc. Blow off and inspect the repair for quality. Repeat steps 5 and 6 as necessary.

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Purple Clean Sanding Hookit™ Disc, 3 in., P80, PN 30283; 3 in., P150, PN 30280; 3 in., P180, PN 30279; 3 in., P320, PN 30275; 6 in., P80, PN 01820; 6 in., P150, PN 01817; 6 in., P180, PN 01816; 6 in., P320, PN 01812



3M™ Hookit™ Purple Clean Sanding Sheet Roll, 70mm x 12m, P180, PN 30709



3M™ Cubitron™ II Fibre Roloc™ Disc, grade 60+, PN 33391



3M™ Polyolefin Adhesion Promoter, 12 oz. aerosol, PN 05907



3M™ EZ Fix Flexible Patch Kit (with adhesion promoter wipes), 4 in. x 8 in., PN 05888



3M™ Automotive Adhesion Promoter, Sponge Applicator Packets, 2.5mL per packet, PN 06396



3M™ EZ Sand Flexible Parts Repair Material, 200mL cartridge, PN 05887



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



### 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



# Steel Repair Procedures

## Bumper Repair

### Two-Sided Bumper Repair

#### Cracks, Holes & Punctures

1		<p><b>Clean the Damaged Area</b> Clean the front and back of the repair area with soap and water, followed by a VOC compliant surface cleaner.</p>
2		<p><b>Prepare for Reinforcement Material</b> Apply aluminum autobody repair tape to the front side of the repair to align and secure the damage while the back side reinforcement is being completed. On the back side, use a DA with grade 80 abrasive disc to sand the repair area where the reinforcement patch will be applied. Blow off with clean, dry air and apply adhesion promoter, allowing 5 minutes to dry.</p>
3		<p><b>Apply Reinforcement Material</b> Apply alternating applications of thin, wet coats of semi-rigid plastic repair material and reinforcement cloth on the damaged area. Allow dry time of 15 minutes at 75°F.</p>
4		<p><b>Tapering the Front Side</b> Remove the aluminum tape. Grind the front damage using a 3 in. grade 60 disc or grade 36 file belt at a low speed to create a gradual "Dish Out" area 3 in. wide and deep enough to expose a 1/4-inch wide strip of the back side reinforcement material through the center of the damage.</p>
5		<p><b>Preparing the Repair Area</b> Use a DA with grade 80 abrasive disc to create a smooth transition into the dished area, remove any melted plastic and create a fuzzy surface for the adhesive. No shiny plastic areas should remain. Abrade with grade 180 around the dished out area where the adhesive will eventually be featheredged.</p>
6		<p><b>Mix and Apply Flexible Filler</b> Blow off the front side repair area with clean dry air, apply aerosol adhesion promoter and allow to dry for 5 minutes. Mix and apply flexible filler material with an initial "tight coat" immediately followed by additional coats to fill in all low areas. Allow 15 minutes to cure at 75°F.</p>
7		<p><b>Sand Flexible Filler</b> Use a DA to sand the flexible filler material with a grade 150 abrasive disc, followed by a block with grade 180.</p>
8		<p><b>Final Sand and Inspect</b> Use a DA sander to finish sand the repair area using P320 abrasive disc. Blow off and inspect the repair quality. Repeat steps 6 and 7 as necessary.</p>

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

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

3M™ Polyolefin Adhesion Promoter, 12 oz. aerosol, PN 05907

3M™ Plastic Repair Material Semi-Rigid, 200mL cartridge, PN 04240

3M™ Reinforcement Patch, 5 in. x 12 ft., roll, PN 04904

3M™ Cubitron™ II Fibre Roloc™ Disc, grade 60+, PN 33391

3M™ File Belt Sander, 0.6 HP, PN 28366

3M™ Cubitron™ II File Belt, 3/8 in. x 13 in. (10 x 330mm), grade 36+, PN 33437

3M™ EZ Sand Flexible Parts Repair Material, 200mL cartridge, PN 05887

3M™ EZ Sand Flexible Parts Repair Adhesive, 600mL, DMS, PN 55887

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

3M™ Dynamic Mixing Applicator — Pneumatic, PN 05846

3M™ Purple Clean Sanding Hookit™ Disc, 3 in., P150, PN 30280; 3 in., P180, PN 30279; 3 in., P320, PN 30275; 6 in., P150, PN 01817; 6 in., P180, PN 01816; 6 in., P320, PN 01812

### 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: We do not recommend a final coat of 3M™ Polyolefin Adhesion Promoter (PN 05907) after the final sanding. The paint companies all recommend their own paint adhesion promoters and applying the PN 05907 may cause a compatibility issue.**



### General Masking

1



#### Clean Area

Clean the area with water based cleaner. Wipe area with a VOC compliant solvent prep cleaner. Dry the area. The preferable surface temperature for masking is 60°–80°F.

2



#### Critical Edge Masking

Mask the areas that require fineline tape first. Mask the rest of the repair and backup the fineline with creped tape. Protect any nearby moldings with trim masking tape.

3



#### Overspray Protection

Ensure that the car is completely dry prior to applying plastic sheeting. Mask entire vehicle with plastic sheeting. Cut out the repair area with a razor blade. Tape the plastic sheeting directly to critical masking edge.

4



#### Masking Removal

After painting, remove the masking tape at a 90-degree angle to the vehicle's surface.

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

Scotch® Performance Green Masking Tape 233+, 18mm x 55m (3/4 in. applications), PN 26334; 36mm x 55m (1-1/2 in. applications), PN 26338; 48mm x 55m (2 in. applications), PN 26340



3M™ Vinyl Tape 471+, 1/4 in. width (6.4mm), PN 06405



3M™ Trim Masking Tape, Introductory kit containing 5mm, 7mm, 10mm and 15mm, PN 06342



3M™ Overspray Protective Sheeting, 12 in. x 400 in. roll, PN 06727; 16 in. x 350 in. roll, PN 06728; 20 in. x 250 in. roll, PN 06742



### 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



# Steel Repair Procedures

## Masking

### Jamb Masking

1		<p><b>Clean Area</b> Clean the area with water based cleaner. Wipe area with a VOC compliant solvent prep cleaner. Dry the area. The preferable surface temperature for masking is 60°–80°F.</p>
2		<p><b>STT Application</b> Apply outermost strip of 3M™ Smooth Transition Tape. Leave a tab available for easy removal after sealer application and basecoat coverage coats.</p>
3		<p><b>STT Application</b> Apply inner strip of 3M™ Smooth Transition Tape if the jamb size allows. Overlap the leading wing of the tape with the back wing of the first strip of 3M™ Smooth Transition Tape.</p>
4		<p><b>Seal Jamb</b> Apply 3M™ Soft Edge Foam Masking Tape PLUS to the moving part of the repair area. Position foam tape overlap as necessary to completely seal the jamb against the 3M™ Smooth Transition Tape. Close the moving part.</p>
5		<p><b>Positioning the Foam Tape</b> Press foam into the jamb with fingers to set appropriate depth. In order to avoid sealer creep the foam can be pressed further into the jamb with a spreader after the initial coats are applied.</p>
6		<p><b>STT First Strip Removal</b> After applying sealer and initial basecoat, pull the tab created in Step 2 and remove the outermost strip of 3M™ Smooth Transition Tape. Careful attention should be used to avoid making contact with either of the adjacent panels. Apply final coats of basecoat.</p>
7		<p><b>Masking Removal</b> Remove the remaining strip of 3M™ Smooth Transition Tape at a 90-degree angle after painting is complete.</p>
8		<p><b>Masking Removal</b> Remove 3M™ Soft Edge Foam Masking Tape PLUS by stretching the foam parallel to its direction.</p>

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Smooth Transition Tape, 1/4 in. x 30 ft. roll, PN 06800



3M™ Soft Edge Foam Masking Tape PLUS, 21mm x 49m (.8 in.), box, PN 06293



### 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



### Mask Openings

1



#### Clean

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

2



#### Back Masking

Back mask outer edge of opening using wide width tape, ensuring that half of tape width is exposed to the opening.

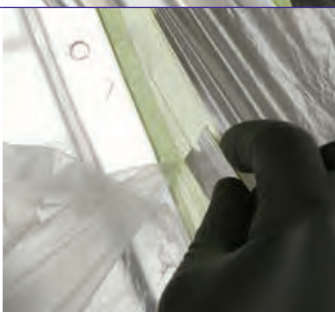
3



#### Overspray Protection

Cover opening with overspray masking film. Pull tight and adhere film to exposed edge of back masking.

4



#### Trim Opening

Trim film around inner panel opening.

5



#### Seal Edge

Seal edge of masking film using wide width masking tape.

### 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+, 36mm width (1.41 in.), PN 26338; 48mm width (1.9 in.), PN 26340



3M™ Overspray Protective Sheet, 12 in. x 400 in. roll, PN 06727; 16 in. x 350 in. roll, PN 06728; 20 in. x 250 in. roll, PN 06742



### 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



Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

**Note: All critical edge, jamb masking and general masking should be completed prior to masking openings.**



### Primer Masking

1



#### Clean

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

2



#### Back Masking

Back mask primer application area using tape and paper.

3



#### Overspray Protection

Apply plastic film to remaining exposed areas, cut out repair area.

4



#### Seal Edge

Seal edge of masking film using wide width masking tape.

Visit [www.3MCollision.com](http://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™ Scotchblok™ Masking Paper, 18 in. x 180 ft., PN 06738



3M™ Overspray Protective Sheeting, 12 in. x 400 in. roll, PN 06727; 16 in. x 350 in. roll, PN 06728; 20 in. x 250 in. roll, PN 06742



Scotch® Performance Green Masking Tape 233+, 18mm width (.71 in.), PN 26334; 36mm width (1.41 in.), PN 26338; 48mm width (1.9 in.), PN 26340



### 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 paint company recommended procedures for new raw plastic bumpers.**

### Refinish Bumper Prep

**1**



#### Cleaning

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

**2<sub>A</sub>**



#### Surface Prep Hand

Sand edges and other hard to reach areas using P800–P1000 flexible abrasive sheet until the surface is matte and all sheen has been removed.

**2<sub>B</sub>**



#### Surface Prep Machine

Sand remaining surfaces using P800–P1000 flexible abrasives on an orbital sander until the surface is matte and all sheen has been removed.

**3**



#### Re-Clean

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

**4**



#### Apply Top Coats

Seal and paint bumper following paint company recommendations.

Visit [www.3MCollision.com](http://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, P800, PN 34340; P1000, PN 34341



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



3M™ Orbital Sander, 3 in. x 4 in. Non-Vacuum, 10,000 RPM, PN 20331



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





**Note: Follow paint company recommended procedures for new raw plastic bumpers.**

### New Primed Bumper Prep

**1**



#### Cleaning

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

**2<sub>A</sub>**



#### Surface Prep Hand

Sand edges and other hard to reach areas using P400 flexible abrasive sheet until the surface is matte and all sheen has been removed.

**2<sub>B</sub>**



#### Surface Prep Machine

Sand remaining surfaces using P400 flexible abrasives on an orbital sander until the surface is matte and all sheen has been removed.

**3**



#### Re-clean

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

**4**



#### Apply Top Coats

Seal and paint bumper following paint company recommendations.

Visit [www.3MCollision.com](http://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



3M™ Orbital Sander, 3 in. x 4 in. Non-Vacuum, 10,000 RPM, PN 20331



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



### E-Coat Panel Prep

1



#### Cleaning

Clean part with soap and water, followed by a 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](http://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



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™ Flexible Abrasive Hookit™ Foam Pad, PN 34349



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



### Feather-Prime-Block

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

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Purple Clean Sanding Hookit™ Disc, 6 in., P180 grit, PN 01816; 6 in., 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 HG18, PN 16570; Atomizing Head, PN 16611



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



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		<b>Featheredge</b> Blow off repair area. Featheredge the surrounding repair area using P180 abrasive.
2		<b>Final Sand and Inspect</b> 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		<b>Mask for Primer</b> Mask repair area as necessary. Refer to Primer Masking SOP for 3M specific recommendations.
4		<b>Apply Primer</b> Apply primer to repair area following manufacturers recommendations. Allow to cure.
5		<b>Apply Dry Guide Coat</b> Apply 3M™ Dry Guide Coat over cured primer.
6		<b>Hand Block Repair</b> 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		<b>Re-Apply Dry Guide Coat</b> Re-apply 3M™ Dry Guide Coat over entire repair area.
8		<b>DA Sand Primer</b> DA sand repair area using a P400 disc and a soft interface pad until all 3M™ Dry Guide Coat is removed.
9		<b>Re-Apply Dry Guide Coat</b> Re-apply 3M™ Dry Guide Coat over hand blocked repair area.
10		<b>DA Sand Primer</b> DA Sand repair area using a P600–P800 disc and a soft interface pad until all the 3M™ Dry Guide Coat is removed.
11		<b>Clean the Damaged Area</b> Clean the repair area with a VOC compliant surface cleaner.

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

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



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



3M™ Accuspray™ Spray Gun Model HG18, PN 16570; Atomizing Head, PN 16611



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



3M™ Hookit™ Soft Interface Pad, PN 05777



3M™ Purple Clean Sanding Hookit™ Disc 334U, 6 in., P320 grit, PN 01812; 6 in., P600 grit, PN 30761; 6 in., P800 grit, PN 30760



### 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 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](http://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



### Anti-Chip Coating

1		<p><b>Pre-Cleaning</b> Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair).</p>
2		<p><b>Removal of Heavy Surface Contaminates</b> Clean to remove heavy contaminants from repair area.</p>
3		<p><b>OEM Coating Removal</b> Remove OEM coating as needed using Scotch-Brite™ Clean N Strip disc. Featheredge using grade 80 abrasive on DA sander. Blow off surface with clean, dry air. Clean surface with 3M™ All Purpose Cleaner and Degreaser.</p>
4		<p><b>Filling/Leveling Surface</b> Use polyester glaze to fill the repair area, bringing it the same level as the surrounding coating.</p>
5		<p><b>Sanding and Primer</b> 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.</p>
6		<p><b>Sanding Primer</b> Apply 3M™ Dry 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.</p>
7		<p><b>Masking</b> Apply soft edge foam masking tape following existing coating edge. Final mask the area using tape and paper to protect from overspray.</p>
8		<p><b>Coating Test Panel</b> 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.</p>
9		<p><b>Apply Coating</b> Apply anti chip coating to the repair area using settings from test panel, blending the material into surrounding area as needed.</p>
10		<p><b>Blend Sanding</b> 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.</p>

Visit [www.3MCollision.com](http://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 Disc, 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™ Sanding Block Dust Free, 70mm x 127mm, PN 05207

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

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+, 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



### Base-Coat Denibbing

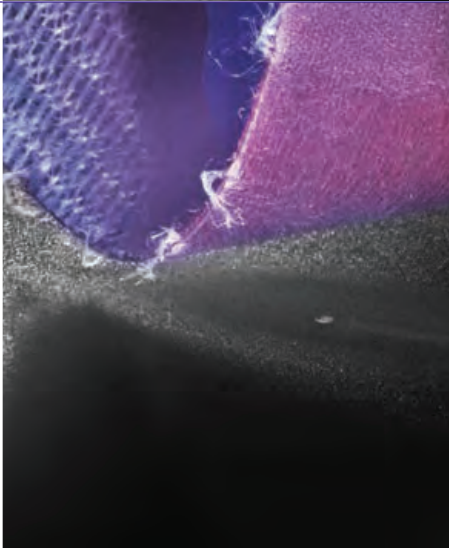
1



#### Identify Defects

Identify surface defects and dirt nibs between applications of base coat.

2



#### Remove Defects

Sand to remove defect using P1000 flexible abrasive sheet on foam pad. **Note: Sand in one direction when removing defect to prevent trapping defect.**

3



#### Clean

Blow off surface with clean, dry air.

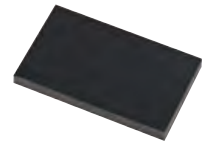
Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Flexible Abrasive Hookit™ Sheet, P1000, PN 34341



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



### 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

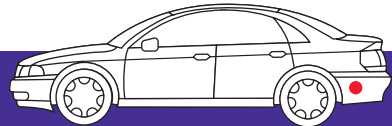
An innovative system from 3M that enables painters to mix less paint and drastically reduces the amount of solvent and technician time required for gun cleaning, improving operator efficiency by as much as 15%.

**Innovation. Efficiency. Profitability. These are the values you've come to expect from 3M.**

3M delivers with the PPS™ Paint Preparation System. Make your job easier and save money with this innovative system that increases efficiency by eliminating the need for traditional mixing cups and paint strainers. Now, paint is mixed and sprayed out of the same PPS™ liner with a lid and built-in filter. Specifically designed adapters allow painters to use the PPS™ system with virtually any spray gun. A key advantage of this closed system is that it enables a painter's spray gun to function at any angle, even upside down! Safe from outside contamination, the PPS™ system offers a cleaner, more efficient solution for all repairs from small spots to large surfaces. Enhance your quality, reduce solvents, minimize waste, maximize productivity and make your job easier with the revolutionary 3M™ PPS™ Paint Preparation System—now in a comprehensive range of size options allowing precise, accurate coverage.



### Spot Repair



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

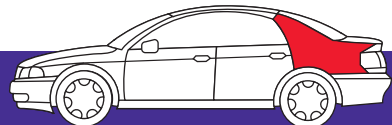


3M™ PPS™ Kit 3 fl. oz. Lids and Liners, PN 16028  
3 fl oz (90mL) full diameter, 200 micron filters

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.

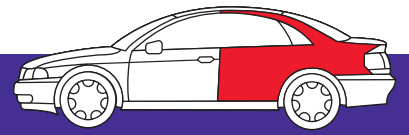


3M™ PPS™ Kit Mini Size, PN 16114  
6 fl. oz. (180mL) full diameter, 200 micron filters

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







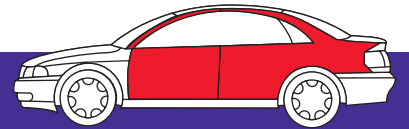
## 2 Panel Repair

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



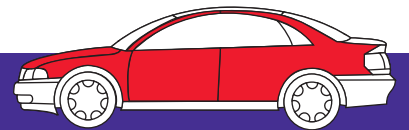
## 3 Panel Repair

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



### Paint Finish Denibbing Process

1		<p><b>Initial Defect Removal</b> Apply 1500 or 2000 to the sanding block. Sand the defect until it is completely removed. Wipe panel clean. Small Defects: 2000; Large Defects: 1500</p>
2		<p><b>Scratch Refinement</b> Refine the 1500/2000 sand scratches with a 3 in. 3M™ Trizact™ Hookit™ Foam Disc 3000 on a sander or by hand with 3000 3M™ Paint Defect Removal Abrasive. Sand until all the scratches are refined. Wipe panel clean.</p>
3		<p><b>Compound</b> Compound the repair area with a 6 in. white foam compounding pad and the appropriate rubbing compound. Wipe panel clean.</p>
4		<p><b>Machine Polish</b> Polish the repair area with a 6 in. black foam polishing pad and the appropriate machine polish. Wipe panel clean with a microfiber cloth.</p>
5		<p><b>Ultrafine Machine Polish</b> Ultrafine polish the repair area with a 6 in. blue foam polishing pad and ultrafine machine polish. Leave a light film of polish on the surface and wipe the panel clean with a microfiber cloth.</p>
6		<p><b>Final Detail</b> Clean sling from adjacent panels and door jamb areas. Doing this immediately after the repair will greatly improve ease of this step.</p>

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Paint Defect Removal Abrasive, 1500 grit, PN 33892, PN 33893, PN 33894; 2000 grit, PN 33895, PN 33896, PN 33897



3M™ Paint Defect Removal Accessory, PN 33909 (circle), PN 33910 (rectangle), PN 33912 (card)



3M™ Trizact™ Hookit™ Foam Disc, 3000, PN 02087



3M™ Hookit™ Soft Interface Pad, PN 05771



3M™ Perfect-It™ EX Rubbing Compound, 1 qt., PN 36060



3M™ Perfect-It™ Foam Compounding Pad, Double Sided, Quick Connect, 6 in., PN 33284



3M™ Quick Connect Adaptor, 5/8 in. Thread, PN 05752



3M™ Perfect-It™ Machine Polish, 1 qt., PN 06064



3M™ Perfect™ Foam Polishing Pad, Double Sided, Quick Connect, 6 in., PN 33285



3M™ Perfect-It™ Ultrafine Machine Polish, 1 qt., PN 06068



3M™ Perfect™ Ultrafine Foam Polishing Pad, Double Sided, Quick Connect, 6 in., PN 33286



3M™ Perfect-It™ Detail Cloth, PN 06016



### Think About Your Health

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









3M™ Particulate Respirator N95, PN 07185



3M™ Lexa™ Protective Eyewear, PN 15200



### Paint Finish Small Area Process

1		<p><b>Initial Defect Removal</b> DA sand the repair area with a 3 in. P1500 3M™ Trizact™ Hookit™ Clearcoat Sanding Disc used damp, or P1500 3M™ Hookit™ Purple Finishing Film Disc. Wipe panel clean. When using Trizact™ abrasives, use a light mist of water while sanding to avoid clogging of the disc.</p>
2		<p><b>Scratch Refinement P3000</b> Refine the P1500 scratches with a DA and a 3 in. P3000 Trizact™ foam disc used damp with a soft interface pad. Wipe panel clean.</p>
3		<p><b>Scratch Refinement 5000</b> Refine the P3000 scratches with a DA and a 3 in. 5000 Trizact™ foam disc used damp with a soft interface pad. To thoroughly remove previous scratches go over each area 5 times. The use of P3000 is required prior to 5000 for best results.</p>
4		<p><b>Machine Polish</b> Polish the repair area with a 3 in. polisher. Use a 3 in. black foam polishing pad and the appropriate machine polish. Wipe panel clean with a yellow microfiber cloth.</p>
5		<p><b>Ultrafine Machine Polish</b> Ultrafine polish the repair area with a 3 in. polisher. Use a 3 in. blue foam polishing pad and 3M™ Ultrafine Machine Polish. Leave a light film of polish on the surface and wipe the panel clean with a blue microfiber cloth.</p>
6		<p><b>Final Detail</b> Clean sling from adjacent panels and door jamb areas. Doing this immediately after the repair will greatly improve the ease of this step. Inspect the surface using the 3M™ PPS™ SUN GUN™ II.</p>

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### Product List

3M™ Trizact™ Hookit™ Clear Coat Sanding Disc, 3 in., P1500, PN 02094



3M™ Hookit™ Finishing Film, 3 in., P1500, PN 00907



3M™ Trizact™ Hookit™ Foam Disc, 3 in., P3000, PN 02087; 3 in., 5000, PN 30362



3M™ Hookit™ Soft Interface Pad, 3 in., PN 05771



3M™ Perfect-It™ Machine Polish, 1 qt. (946mL), PN 06064



3M™ Perfect-It™ Foam Polishing Pad, 3 in., PN 05726



3M™ Perfect-It™ Ultrafine Machine Polish, 1 qt. (946mL), PN 06068



3M™ Perfect-It™ Ultrafine Foam Polishing Pad, 3 in., Single Sided, PN 05760



3M™ Perfect-It™ Detail Cloth, PN 06016



3M™ PPS™ SUN GUN™ II Light Kit, PN 16550



### Think About Your Health

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



3M™ Particulate Respirator N95, PN 07185



3M™ Lexa™ Protective Eyewear, PN 15200



### No Compound Paint Finish Small Area Process

1



#### Initial Defect Removal

DA sand the repair area with a 3 in. P1500/P2000 3M™ Purple Finishing Film Hookit™ Disc or P1500 3M™ Trizact™ Clearcoat Sanding Disc used damp. Wipe panel clean. When using Trizact™ Abrasives, use a light mist of water while sanding to avoid clogging of the disc.

2



#### Scratch Refinement 3000

Refine the P1500/P2000 scratches with a DA and a 3 in. 3000 3M™ Trizact™ Hookit™ Foam Disc used damp with a soft interface pad. Wipe panel clean.

3



#### DA Polishing 5000

Eliminate compounding by refining the 3000 scratches with a DA and a 5000 grit 3M™ Trizact™ Hookit™ Foam Disc used damp with a soft interface pad. To thoroughly remove previous scratches go over each area five times. Wipe panel clean.

4



#### Finishing Material

Finish the entire repair area with a high speed polisher set at 1200–2000 RPM. For fastest results use a 6 in. foam finishing pad and 3M™ Perfect-It™ 1 Finishing Material to remove the 5000 scratch and bring up the gloss. To ensure all sand scratches have been removed, inspect the repair area by spraying it with 3M™ Inspection Spray and wipe clean with a yellow microfiber cloth.

5



#### Ultrafine Machine Polish (Optional)

Ultrafine polish the repair area using a high speed rotary polisher. Use a 6 in. blue foam polishing pad and ultrafine machine polish. Leave a light film of polish on the surface and wipe the panel clean with a blue microfiber cloth.

6



#### Final Detail

Clean sling from adjacent panels and door jamb areas. Doing this immediately after the repair will greatly improve the ease of this step. Inspect the surface using the 3M™ PPS™ SUN GUN™ II.

Visit [www.3MCollision.com](http://www.3MCollision.com) for more SOPs and videos

### Product List

3M™ Purple Finishing Film Hookit™ Disc, 3 in., P1500, PN 30367; P2000, PN 30366



3M™ Trizact™ Hookit™ Clear Coat Sanding Disc, 3 in., P1500, PN 02094



3M™ Trizact™ Hookit™ Foam Disc, 3 in., 3000, PN 02087; 5000, PN 30362



3M™ Hookit™ Soft Interface Pad, 3 in., PN 05771



3M™ Perfect-It™ 1 Finishing Material, 1 qt. (946mL), PN 36064



3M™ Perfect-It™ 1 Finishing Pad, Double Sided, Quick Connect, 6 in., PN 33292



3M™ Inspection Spray, 1 gallon, PN 06082



3M™ Perfect-It™ Ultrafine Machine Polish, 1 qt. (946mL), PN 06068



3M™ Perfect-It™ Ultrafine Foam Polishing Pad, 6 in., Double Sided, Quick Connect, PN 33286



3M™ Quick Connect Adaptor, 5/8 in. Thread, PN 05752



3M™ Perfect-It™ Detail Cloth, PN 06016



3M™ PPS™ SUN GUN™ II Light Kit, PN 16550

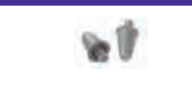


3M™ Perfect-It™ Clean and Shine, 16 fl. oz. bottle, PN 06084



### Think About Your Health

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



3M™ Particulate Respirator N95, PN 07185



3M™ Lexa™ Protective Eyewear, PN 15200



# Steel Repair Procedures

## Paint Finishing and Detailing

### Paint Finish Full Panel Process

1		<p><b>Initial Defect Removal Texture Match</b>          DA sand the repair area with a P1500/P2000 3M™ Purple Finishing Film Hookit™ Disc or P1500 3M™ Trizact™ Clearcoat Sanding Disc used damp. Remove all paint defects and match texture to adjacent OEM panels. Wipe panel clean.</p>
2		<p><b>Scratch Refinement 3000</b>          Refine the P1500/P2000 scratches with a DA and a 3000 3M™ Trizact™ Hookit™ Foam Disc used damp with a 3M™ Hookit™ Soft Interface Pad. Wipe panel clean.</p>
3		<p><b>Scratch Refinement 5000 (Optional)</b>          To reduce your buffing time refine the 3000 scratches with a DA and a 5000 grit 3M™ Trizact™ Hookit™ Foam Disc used damp with a 3M™ Hookit™ Soft Interface Pad. Wipe panel clean. The use of 3000 is required prior to 5000 for best results.</p>
4		<p><b>Compound</b>          Compound the repair area with a high speed polisher set between 1200–2000 RPM. For faster results, use a foam compounding pad and the appropriate rubbing compound. To insure all sand scratches have been removed, inspect the surface by spraying with an Inspection Spray and wipe clean with a yellow microfiber cloth.</p>
5		<p><b>Machine Polish</b>          Polish the repair area with a high speed polisher set between 1200–2000 RPM. Use a black foam polishing pad and the appropriate machine polish. Wipe the panel clean with a yellow microfiber cloth.</p>
6		<p><b>Ultrafine Machine Polish</b>          Polish the repair area with a high speed polisher with the speed set between 1200–2000 RPM. Use a blue foam polishing pad and the appropriate ultrafine machine polish. Leave a light film of the polish on the panel and wipe clean with a blue microfiber cloth.</p>
7		<p><b>Final Detail</b>          Remove any masking material from the repair area and clean any residual sling from adjacent panels and door jamb areas. Cleaning the panel immediately after compounding and polishing will greatly improve the ease of cleaning. Inspect the surface using the 3M™ PPS™ SUN GUN™ II Light Kit.</p>

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### Product List

<p>3M™ Purple Finishing Film Hookit™ Disc, 6 in., P1500, PN 30667; P2000, PN30666</p>	
<p>3M™ Trizact™ Hookit™ Clearcoat Sanding Disc, 6 in., P1500, PN 02088</p>	
<p>3M™ Hookit™ Soft Interface Pad, 6 in., PN 05777</p>	
<p>3M™ Trizact™ Hookit™ Foam Disc, 6 in., 3000, PN 02085; 6 in., 5000 grit, PN 30662</p>	
<p>3M™ Perfect-It™ EX Rubbing Compound, 1 qt. (946mL), PN 36060</p>	
<p>3M™ Perfect-It™ Foam Compounding Pad, Double Sided, Quick Connect, 9 in., PN 05706</p>	
<p>3M™ Perfect-It™ Low Linting 100% Wool Compound Pad, Double Sided, Quick Connect, PN 33279</p>	
<p>3M™ Quick Connect Adaptor, 5/8 in. Thread, PN 05752</p>	
<p>3M™ Perfect-It™ Machine Polish, 1 qt. (946mL), PN 06064</p>	
<p>3M™ Perfect-It™ Foam Polishing Pad, Double Sided, Quick Connect, 9 in., PN 05707</p>	
<p>3M™ Electric Variable Speed Polisher, PN 28391</p>	
<p>3M™ Inspection Spray, 1 gallon, PN 06082</p>	
<p>3M™ Perfect-It™ Ultrafine Machine Polish, 1 qt. (946mL), PN 06068</p>	
<p>3M™ Perfect-It™ Ultrafine Foam Polishing Pad, Double Sided, Quick Connect, 9 in., PN 05708</p>	
<p>3M™ Perfect-It™ Detail Cloth, PN 06016; PN 06020</p>	
<p>3M™ PPS™ SUN GUN™ II Light Kit, PN 16550</p>	
<p>3M™ Perfect-It™ Clean and Shine, 16 fl. oz. bottle, PN 06084</p>	

### Think About Your Health

<p>3M™ E-A-R™ Skull Screws™ Ear Plug, PN P1300</p>	
<p>3M™ Particulate Respirator N95, PN 07185</p>	
<p>3M™ Lexa™ Protective Eyewear, PN 15200</p>	



### No Compound Paint Finish Full Panel Process

1



#### Initial Defect Removal Texture Match

DA sand the repair area with a P1500 3M™ Trizact™ Hookit™ Clearcoat Sanding Disc used damp or P1500 3M™ Purple Finishing Film Hookit™ Disc. Remove all paint defects and match texture to adjacent OEM panels. Wipe panel clean.

2



#### Scratch Refinement P3000

Refine the P1500 scratches with a DA and a P3000 3M™ Trizact™ Hookit™ Foam Disc used damp with a 3M™ Hookit™ Soft Interface Pad. Wipe panel clean.

3



#### Scratch Refinement 5000

Eliminate compounding by refining the P3000 scratches with a DA and a 5000 grit 3M™ Trizact™ Foam Disc used damp with a 3M™ Hookit™ Soft Interface Pad. To thoroughly remove previous scratches go over each area five times. Wipe panel clean.

4



#### Finishing Material

Finish the repair area with a high speed polisher set at 1200–2000 RPM. For fastest results, use a 9 in. foam finishing pad and the appropriate finishing material to remove the 5000 scratch and bring up gloss. To ensure all sand scratches have been removed, inspect the repair area by spraying it with 3M™ Inspection Spray and wipe clean with a yellow microfiber cloth.

5



#### Ultrafine Machine Polish

Polish the repair area with a high speed polisher with the speed set at 1200–2000 RPM. Use a blue foam polishing pad and 3M™ Ultrafine Machine Polish. Leave a light film of the polish on the panel and wipe clean with a blue microfiber cloth.

6



#### Final Detail

Remove any masking material from the repair area and clean any residual sling from adjacent panels and door jamb areas. Cleaning the panel immediately after compounding and polishing will greatly improve the ease of cleaning. Inspect the surface using the 3M™ PPS™ SUN GUN™ II.

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### Product List

3M™ Trizact™ Hookit™ Clearcoat Sanding Disc, P1500, 6 in., PN 02088



3M™ Purple Finishing Film Hookit™ Disc, P1500, 6 in., PN 30667



3M™ Trizact™ Hookit™ Foam Disc, P3000, 6 in., PN 02085; 6 in., 5000 grit, PN 30662



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



3M™ Perfect-It™ 1 Finishing Material, 1 qt. (946mL), PN 36064



3M™ Perfect-It™ Finishing Pad, 9 in., PN 33291



3M™ Quick Connect Adaptor, 5/8 in. Thread, PN 05752



3M™ Inspection Spray, 1 gallon, PN 06082



3M™ Perfect-It™ Ultrafine Machine Polish, 1 qt. (946mL), PN 06068



3M™ Perfect-It™ Ultrafine Foam Polishing Pad, 9 in., PN 05708



3M™ Perfect-It™ Detail Cloth, PN 06020



3M™ PPS™ SUN GUN™ II Light Kit, PN 16550



3M™ Perfect-It™ Clean and Shine, 16 fl. oz. bottle, PN 06084



### Think About Your Health

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










3M™ Particulate Respirator N95, PN 07185



3M™ Lexa™ Protective Eyewear, PN 15200



### Headlight Lens Restoration Process

1		<p><b>Clean and Mask</b> Clean the damaged lens with soap and water. Perimeter mask the lens with two layers of masking tape.</p>
2		<p><b>Sand to Remove Yellowing and Defects</b> Dry DA sand the damaged headlight lens with a 3 in. P500 abrasive disc using a soft interface pad. Completely remove any yellowing and/or surface defects.</p>
3		<p><b>First Step Scratch Refinement</b> Refine the P500 sand scratches by dry DA sanding with a 3 in. P800 abrasive disc on a soft interface pad. Wipe the headlight lens clean.</p>
4		<p><b>Second Step Scratch Refinement</b> Refine the P800 sand scratches by DA sanding with a 3 in. P1000 foam disc on a soft interface pad. Use water to lubricate the P1000 foam abrasive disc. Spend extra time on this step to ensure removal of all P800 sand scratches. Wipe the headlight lens clean.</p>
5		<p><b>Third Step Scratch Refinement</b> Refine the P1000 sand scratches by DA sanding with a 3 in. P3000 foam abrasive disc on a soft interface pad. Use water to lubricate the P3000 foam abrasive disc. Spend extra time on this step to ensure removal of all P1000 sand scratches. Wipe the headlight lens clean.</p>
6		<p><b>Compound Lens</b> Completely remove the P3000 sand scratches using a 3 in. polishing tool with a foam compounding pad and rubbing compound. Wipe the headlight lens with a clean microfiber cloth.</p>
7		<p><b>Polish Lens</b> Polish the headlight lens using a 3 in. foam polishing pad and machine polish. Wipe the headlight lens with a clean microfiber cloth. Remove the masking tape and inspect for quality.</p>

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### Product List

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



Scotch® Performance Masking Tape 233+, 18mm x 55m, PN 26334



3M™ Hookit™ Soft Interface Pad, 3 in., PN 05771



3M™ Purple Clean Sanding Hookit™ Disc, 3 in., P500, PN 30272; 3 in., P800, PN 30260



3M™ Trizact™ Hookit™ Blending Disc, 3 in., P1000, PN 02091



3M™ Trizact™ Hookit™ Foam Disc, 3 in., P3000, PN 02087



3M™ Perfect-It™ Rubbing Compound, 1 qt. (946mL), PN 06085; 16 oz., PN 39060



3M™ Foam Buffing Pad, 3 in., PN 05759



3M™ Perfect-It™ Machine Polish, 1 qt. (946mL), PN 06064; 16 oz., PN 39061



3M™ Foam Polishing Pad, 3 in., PN 05726



3M™ Perfect-It™ Detail Cloth, PN 06016



### Think About Your Health

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



3M™ Particulate Respirator N95, PN 07185



3M™ Lexa™ Protective Eyewear, PN 15200



# Steel Repair Procedures

## Paint Finishing and Detailing

### Vehicle Clean-Up Process

1		<b>Inspect Interior</b> Remove any trash from the vehicle and blow out the air vents. Vacuum the interior of the vehicle including the ashtray, seat folds and trunk. Inspect the carpet and upholstery for any heavily-soiled stains that may require a pre-spot treatment.
2		<b>Pre-Spot Carpet and Fabric</b> Use 3M™ All Purpose Cleaner and Degreaser to pre-treat any stains or heavily soiled areas on carpet or upholstery. Dilute the 3M™ All Purpose Cleaner and Degreaser at a 1:15 dilution ratio. Lightly brush the soiled/stained area.
3		<b>Pre-Clean Exterior</b> Apply 3M™ Heavy Duty Wheel Cleaner at a 1:4 dilution ratio to clean brake dust from wheels. Apply 3M™ All Purpose Cleaner and Degreaser at a 1:15 dilution ratio to clean the engine, engine compartment, door jambs, wheels, tires and other hard to clean areas.
4		<b>Rinse Vehicle Exterior</b> Scrub, pressure wash, and rinse any areas where pre-cleaner was applied. Rinse the entire vehicle to remove loose dirt and debris.
5		<b>Wash Vehicle Exterior</b> Pre-soak any remaining bugs, soiled areas or compound residue using 3M™ All Purpose Cleaner and Degreaser at a 1:15 ratio. Wash the entire vehicle, then rinse. Dry, using a water blade or chamois as needed.
6		<b>Apply Tire Dressing</b> Dress the tires with a silicone-free tire dressing, being sure to remove the excess with an absorbent cloth.
7		<b>Clean Interior and Glass</b> Clean interior vinyl and leather using 3M™ All Purpose Cleaner and Degreaser at a 1:30 dilution ratio. Clean the interior and the exterior of the windows with glass cleaner. Use an extractor on carpet or fabric as needed.
8		<b>Final Detail</b> Apply a body shop safe spray detailer to the vehicle's exterior surfaces by misting on and wiping off. Spray detailer will remove any compound residue, dust or fingerprints and will also improve gloss.

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### Product List

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



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



3M™ Detailing Spray Bottle, 32 fl. oz., PN 37716



3M™ Spray Trigger Nozzle Head, PN 37717; PN 37718



3M™ Heavy Duty Wheel Cleaner, 1 gallon, PN 38374



3M™ Silicone Free Tire Dressing, 1 gallon, PN 38327



3M™ Glass Cleaner, 1 gallon, PN 38399



3M™ Perfect-It™ Clean and Shine, 16 fl. oz. bottle, PN 06084



3M™ Perfect-It™ Detail Cloth, PN 06020

### Think About Your Health

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



3M™ Lexa™ Protective Eyewear, PN 15200











## 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](http://www.3MCollision.com)

For product material safety data sheets see [www.3MCollision.com](http://www.3MCollision.com)

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