



# Standard Operating Procedures

Heavy Duty Truck Repair Europe

**3M Automotive Aftermarket Division** 



# Process for Success

# **Standard Operating Procedures**

From metal and plastic repair, to sanding, paint finishing and truck 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 results for any of your collision repair needs.

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# Aluminium Panel Removal





#### Clean

Clean the panel prior to disassembly with soap and water followed by a surface cleaner.



# Sealer/Coating Removal

If necessary, use a Scotch-Brite™ Clean N Strip Disc to remove seam sealer and coatings from large easy to access areas.



## Rivet/Spot Weld Removal — **Belt Grinder**

Use 80+ grade abrasive belt to remove spot welds or rivet head from top panel. Note top panel thickness. Use belt thickness as a gauge (e.g., stop grinding when the back of belt is flush with exterior panel). Note: During application, follow OEM recommended procedures for removal of rivets and/or other fasteners.



## **Panel Separation**

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

# **Product List**

3M™ General Purpose Adhesive Cleaner, 946mL, PN 08984



Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc, 100mm x 30mm, Extra Coarse, PN 07470



3M™ File Belt Sander, 457mm, PN 33575; 330mm, PN 33573



Scotch-Brite<sup>™</sup> Roloc<sup>™</sup> Surface Conditioning Disc, 50mm, PN 07480; PN 07481



3M™ Cubitron™ II Roloc™ Fibre Disc, 80+ grade, 50mm, PN 33380; 75mm, PN 33392



3M™ Pistol Grip Disc Sander, PN 33577



3M™ Cubitron™ II File Belt, 13mm x 457mm, 80+ grade, PN 33446



# Think About Your Health

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

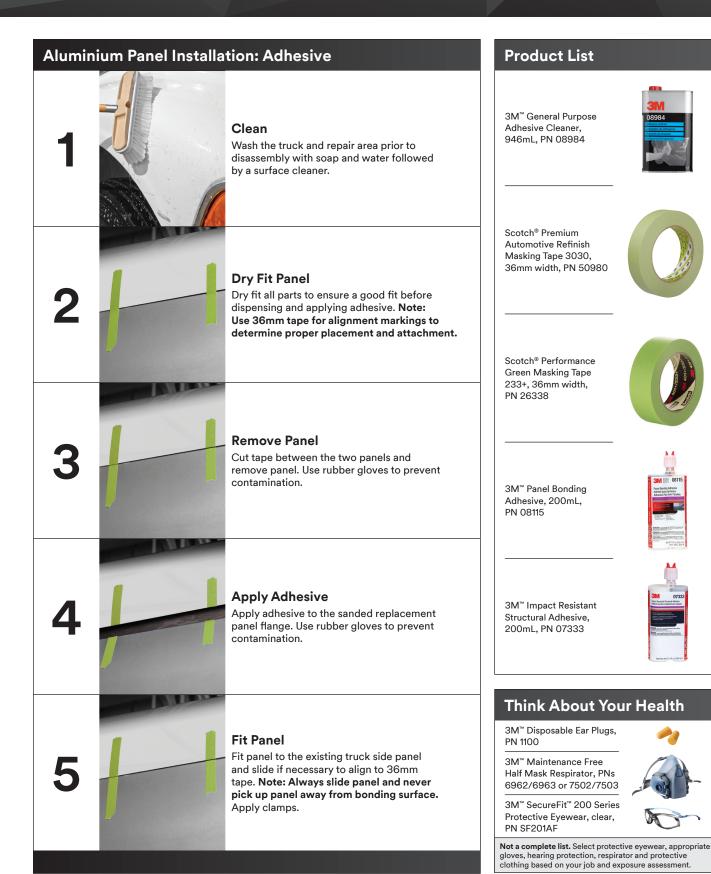
3M™ SecureFit™ 200 Series Protective Eyewear, clear,



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

Use only tools that have been cleaned properly or are designated for use on aluminium to reduce potential cross contamination. DO NOT re-use abrasives that were previously used on steel repairs.

PN SF201AF



# **Aluminium Dent Repair**

1

## **Pre-Cleaning**

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

2

# **Initial Prep Sand**

DA sand the repair area using 80+ grade, removing paint beyond damage by 5–10cm. Clean the surface with an approved surface cleaner.



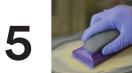
# Final Metal Prep

Remove remaining paint/coatings in "low spots" using a Scotch-Brite™ Clean N Strip disc. Use a 75mm grinding disc to remove weld nuggets or other surface imperfections. Clean the surface with an approved surface cleaner.



## Mix and Apply Filler

Mix and apply filler per manufacturer's recommendation or use the 3M™ Dynamic Mixing System. Keep the body filler within the primer featheredge area. Cure the body filler 15–20 minutes at 23°C.



## **Initial Sand Filler**

Block shape sand filler with 80+ grade abrasive. DA rough featheredge area with 80+ grade abrasive. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections. Re-apply 3M™ Dry Guide Coat as necessary.



# Final Sand Filler

Final block sand filler with 150+ grade abrasive. DA fine featheredge sand the repair area with 180+ grade abrasive and clean the surface with an approved surface cleaner applied to a clean towel. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections.



## Mix and Apply Glaze

Mix and apply glaze if required per manufacturer's recommendation or if using the 3M™ Dynamic Mixing System. Keep the glaze within the primer featheredge area. Cure glaze for 15–20 minutes at 23°C.



# Sand Glaze

Block sand polyester glaze with 180+ grade abrasive. Use 3M™ Dry Guide Coat to highlight imperfections. Re-apply glaze as necessary to fill minor imperfections.



#### **Final Sand and Inspect**

Featheredge the surrounding area using 180+ grade abrasive. Inspect the repair for quality.

It is recommended to use the Festool mobile dust extractor for aluminium, PN 575106.

# **Product List**

3M<sup>™</sup> Cubitron<sup>™</sup> II Hookit<sup>™</sup> Clean Sanding Abrasive Disc, 150mm, 80+ grade, PN 51369



3M<sup>™</sup> DMS Heavy General Purpose Body Filler, PN 51003



3M™ Cubitron™ II Roloc™ Fibre Disc, 75mm, 80+ grade, PN 33392



3M™ Roloc™+ Holder, PN 07500



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



Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc, PN 05814



3M<sup>™</sup> Platinum<sup>™</sup> Plus Finishing Glaze, 887mL, PN 31180



3M<sup>™</sup> DMS Lightweight Filler — Extra Life, PN 51005



3M™ Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator



3M™ Cubitron™ II Hookit™ Sheet, 80+ grade, PN 51411; 150+ grade, PN 51413; 180+ grade, PN 51414



3M™ Cubitron™ II Hookit™ Clean Sanding Disc, 150mm, 180+ grade, PN 51422

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# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# **Composite Panel Removal and Installation**

1



## Clean the Panels

Clean panels with soap and water followed by a surface cleaner. Thoroughly dry the parts. **DO NOT** apply any other cleaners throughout the remainder of the removal and installation procedure.

2



#### **Panel Removal**

Heat the bond line to 120–150°C and gently pry the panels apart with a rigid putty knife or equivalent. Remove all adhesive from the undamaged part using the same process as below. Let the surface cool.

3



#### **Surface Prep**

Sand the surfaces to be bonded using 60+ grade 3M™ Roloc™ Abrasive Disc on a pistol grip sander set at a low speed to rough up the area, or 80+ grade abrasive disc on a DA. Blow off the repair area with clean, dry air and a clean cloth. Note: If flame heat was used to help separate panels it's a must that the after burn be removed with a 80+ grade abrasive disc. For metal parts, nothing coarser then 80+ grade is necessary.

4



## **Dry Fit Parts**

Dry fit all parts to ensure a good fit before dispensing and applying adhesive.

5



## **Apply Adhesive**

Follow the Directions for Use to prepare, mix and apply 3M™ Panel Bonding Adhesive. Apply a continuous bead to one part. Note: If you need to adjust the part, slide the part to prevent air pockets in the adhesive bead.

6



#### Pone

Mate the parts. Apply clamps to the bonded panel surface and clamp within the desired area. Note: Apply as many clamps as needed to bring the panels together. Make sure NOT to over clamp, which can result in squeezing the bondline dry of adhesive. Remove any excess adhesive squeeze out.

# **Product List**

3M<sup>™</sup> General Purpose Adhesive Cleaner, 946mL, PN 08984



3M<sup>™</sup> Cubitron<sup>™</sup> II Roloc<sup>™</sup> Fibre Disc, 60+ grade, 75mm, PN 33391



3M™ Pistol Grip Disc Sander, PN 33577



3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 150mm, 80+ grade, PN 51369



Scotch® Premium Automotive Refinish Masking Tape 3030, 18mm width, PN 50977



Scotch® Performance Green Masking Tape 233+, 18mm width, PN 26334



3M™ Flexible Parts Repair Material, 50mL, PN 05901



3M<sup>™</sup> Panel Bonding Adhesive, 200mL, PN 08115



3M<sup>™</sup> Performance Manual Applicator, 50mL, PN 08190



3M<sup>™</sup> Performance Manual Applicator, 200mL, PN 08117



# **Think About Your Health**

gloves, hearing protection, respirator and protective clothing based on your job and exposure assessment.

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

PN SF201AF

Not a complete list. Select protective eyewear, appropriate

# **Metal Working**

1



# **Pre-Cleaning**

Surface Prep

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

# **Product List**

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



Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 05814



3M<sup>™</sup> File Belt Sander, 457mm, PN 33575; 330mm, PN 33573



**^** 



# **Dent Pulling**

Pull low spots of dent using preferred dent pulling method and equipment.

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

Scotch-Brite™ Roloc™ Surface Conditioning Disc, 50mm, PN 07480; PN 07481



4



# Final Prep

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

3M<sup>™</sup> Cubitron<sup>™</sup> II Roloc<sup>™</sup> Fibre Disc, 80+ grade, 75mm, PN 33392



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.

# **Think About Your Health**

3M<sup>™</sup> Disposable Ear Plugs, PN 1100 3M<sup>™</sup> Maintenance Free

Half Mask Respirator, PNs



6962/6963 or 7502/7503
3M™ SecureFit™ 200 Series
Protective Eyewear, clear,



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

Note: It will be necessary to apply Cavity Wax Plus to back side of panel at heat effected areas to restore corrosion protection.

PN SF201AF

3M™ Maintenance Free

Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M™ SecureFit™ 200 Series

Protective Eyewear, clear,

Not a complete list. Select protective eyewear, appropriate gloves, hearing protection, respirator and protective

PN SF201AF

#### **Product List** Steel Part Replacement **Pre-Cleaning** 3M™ Cubitron™ II Cut-Off Wheel. Pre-wash/clean vehicle prior to disassembly (power wash 75mm x 1mm, PN 33456; undercarriage area at repair). 75mm x 1.6mm, PN 33455 Panel Cutting Identify OEM recommended sectioning location, scribe Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ or mark with tape on the vehicle. Trim repair area using Clean N Strip XT Disc, preferred cut-off wheel. Use 36+ grade file belt in hard to PN 07470 reach areas to cut top panel and avoid damage to host panel. Sealer/Coating Removal Use Scotch-Brite™ Clean N Strip disc to remove seam Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ sealer and coatings from large easy to access areas. Use Clean N Strip XT Disc, CRS Scotch-Brite™ Belt to remove coatings and seam PN 05814 sealers in hard to reach areas and along pinch weld flanges to expose spot weld locations. Spot Weld Removal 3M™ File Belt Sander, Using 36+ grade or 60+ grade abrasive belt, grind spot 457mm, PN 33575; weld to remove weld from top panel. Note top panel 330mm, PN 33573 thickness. Use caution when grinding to only grind top panel and limit cutting into host/interior panel. Use belt thickness as a gauge — stop grinding when back of belt is flush with exterior panel. 80+ grade belt can be used to Scotch-Brite™ Roloc™ remove welds from thinner steels. Surface Conditioning Disc. 50mm. **Panel Separation** PN 07480; PN 07481 Separate exterior panel from the host panel. DO NOT force separation in areas where the weld isn't completely removed; go back to step 4 and finish weld removal 3M™ Cubitron™ II File Belt, before continuing. 36+ grade, PN 33443; 60+ grade, PN 33445; **Surface Preparation** 80+ grade, PN 33446 Using 80+ grade abrasive belt, remove remaining weld nugget material from host panel. 3M™ Pistol Grip Disc Sander, PN 33577 **Surface Preparation** Clean and prep remaining mating flanges on host and replacement panel with a coarse Scotch-Brite™ Belt where necessary. 3M™ Cubitron™ II Roloc™ Fibre Disc, 60+ grade, 75mm, PN 33391 MIG Plug Weld Dressing Use 80+ grade abrasive belt to dress replacement MIG welds. Grind weld. Use caution to avoid damage to adjacent areas. Think About Your Health **Continuous Weld Dressing** 3M™ Disposable Ear Plugs, Use a 75mm 60+ grade grinding disc to dress continuous PN 1100 MIG welds at sectioning joint. Grind weld. Use caution

clothing based on your job and exposure assessment

to limit amount of grinding done to adjacent areas.

Use a CRS Scotch-Brite™ Belt to clean weld site in

preparation for subsequent operations.

Note: Follow High Strength steel heat control recommendations and techniques when necessary.

Weld Cleaning

# Cosmetic Repair (SMC, FRP, Composites)

1



# Clean the Damaged Area

Clean the repair area with soap and water followed by a surface cleaner making sure to minimize the exposure of damaged or exposed fibers to the cleaners. Thoroughly dry the part. **DO NOT** apply any other cleaners throughout the remainder of the repair procedure.

2



# **Rough Grind**

Dish out the repair area with a 60+ grade 3M™ Roloc™ Abrasive Disc on a pistol grip sander set at a lower speed. Finish dishing out the repair area using a 80+ grade abrasive disc on a DA.

3



# Feather-edge

Finish the dish-out process using a 180+ grade abrasive disc and feather well into the surrounding area. Blow off the repair area with clean, dry air and a clean cloth.

4



## **Adhesion Promoter**

SMC and Fiberglass do not require an adhesion promoter. If repairing Metton® Liquid Molding Resin, apply a light, consistent coat of 3M™ Polyolefin Adhesion Promoter, to the repair area. Allow adhesion promoter to dry for 5 minutes before applying the adhesive/filler.

5



#### Apply

Following product instructions, apply a tight coat of adhesive/filler to the repair area to insure good contact with the composite. Continue to build until the repair area is slightly higher than the surrounding area. For best results heat set at 66°C for 15 minutes.

6



## Rough Sand and Shape Filler

Rough shape the filler once it has cooled using a DA or a hand block with an 80+ grade abrasive. Apply 3M™ Dry Guide Coat between sanding steps to highlight imperfections.

7



#### **Final Sand and Inspect**

Final DA or block sand the filler with 180+ grade abrasive and feather into the surrounding composite and paint. Apply 3M™ Dry Guide Coat between sanding steps to highlight imperfections. Finish sanding with a 220+ grade abrasive sanding well into the surrounding surface. Note: Contact your paint manufacture for final sand preparation.

# **Product List**

3M<sup>™</sup> General Purpose Adhesive Cleaner, 946mL, PN 08984



3M<sup>™</sup> Cubitron<sup>™</sup> II Roloc<sup>™</sup> Fibre Disc, 60+ grade, 75mm, PN 33391



3M™ Cubitron™ II Hookit™ Clean Sanding Disc, 150mm, 180+ grade, PN 51422; 220+ grade, PN 51423



3M<sup>™</sup> Polyolefin Adhesion Promoter, PN 05917



3M<sup>™</sup> Semi-Rigid Plastic Repair, 50mL, PN 34240



3M<sup>™</sup> Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

## **A WARNING** Weld Bonding (Excluding Door Skin) **Host Panel Preparation** Using a 80+ grade abrasive belt, remove remaining weld nugget material from host panel. Prep remaining mating flanges on host panel with a coarse Scotch-Brite™ Belt to remove all adhesive, corrosion and coatings. **Product List Mating Flange Panel Preparation** 3M™ File Belt Sander, Remove Ecoat from replacement panel mating flange 457mm, PN 33575: areas using Scotch-Brite™ Belt or Clean N Strip disc. 330mm, PN 33573 3M™ Cubitron™ II File Belt, Clean host panel and replacement panel mating flange areas with a surface cleaner. **Dry Fit Panel** Dry fit replacement panel and complete any necessary metal straightening at flanges areas. Weld-Thru Primer PN 07470 Use Scotch-Brite™ Belt to prepare metal surfaces. Clean and apply weld-thru primer to all areas requiring Scotch-Brite™ Roloc™+ MIG welding. **Spot Weld Surface Preparation** PN 05814 Identify replacement spot weld sites and remove Ecoat using Scotch-Brite™ belt where spot weld tips will contact host and replacement panel. Remove PN 50410 panel once complete. **Pre-Assembly Sound Deadening Replacement** Pad, PN 08840 If vehicle construction necessitates, apply sound deadening pad or foams at original locations as required. 3M™ Flexible Foam, Apply Bonding Adhesive 200mL, PN 08463 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. 3M™ Panel Bonding Adhesive, 200mL, PN 08115 **Install Replacement Panel** Install replacement panel to host panel. Clamp in place. 3M™ Flexible Parts Repair Material, 50mL, PN 05901 **Spot Weld** Spot weld while adhesive is uncured at prepared weld sites. Follow welder settings determined from test panel. Adhesive Clean Up

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.



80+ grade, PN 33446



Scotch-Brite<sup>™</sup> Durable Flex Belt, CRS, PN 64475



Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc,



Clean N Strip XT Disc,



3M™ Weld-Thru II Coating,



3M™ Sound Deadening









# Think About Your Health

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF

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

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

metal, causing corrosion.

Remove clamps and tool excess adhesive squeeze-out

from repair area prior to curing to seal the repair. Note:

Grinding to remove excess adhesive can expose bare

Post-Assembly Foam Replacement

Apply foams at original locations as required.

# Weld Sealing **Host Panel Preparation** Using a 80+ grade abrasive belt, remove remaining weld nugget material from host panel. Prep remaining mating flanges on host panel with a coarse Scotch-Brite™ Belt. Mating Flange Panel Preparation Remove Ecoat from replacement panel mating flange areas using Scotch-Brite™ Belt or Clean N Strip disc. Clean Clean host panel and replacement panel mating flange areas with a surface cleaner. Straighten Flanges and Dry Fit Part Dry fit replacement panel and complete any necessary metal straightening at flanges areas. Weld-Thru Primer Use Scotch-Brite™ belt to prepare metal surfaces. PN 07470 Clean and apply weld-thru primer to all areas requiring **Spot Weld Surface Preparation** PN 05814 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. PN 50410 **Pre-Assembly Sound Deadening Replacement** If vehicle construction necessitates, apply sound 3M™ Sound Deadening deadening pad or foams at original locations as required. **Apply Seam Sealer** 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. **Install Replacement Panel** Install replacement panel to host panel. Clamp in place. **Spot Weld** Spot weld while sealer is uncured at prepared weld sites. Follow welder settings determined from test panel. Sealer Clean Up Remove clamps and tool excess adhesive squeeze-out PN 1100 from repair area prior to curing to seal the repair. Note: 3M™ Maintenance Free Grinding to remove excess sealer can expose bare metal, causing corrosion. **Post-Assembly Foam Replacement**

#### 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, 457mm, PN 33575; 330mm, PN 33573



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



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



Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc,



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



3M™ Weld-Thru II Coating,



Pad, PN 08840

3M™ Flexible Foam, 200mL, PN 08463

3M™ Polyurethane Seam Sealer, cartridge, PN 08684; sachet, PN 08782



3M™ Multi-Purpose Seam Sealer, beige, PN 50740

# Think About Your Health

3M™ Disposable Ear Plugs,



Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF

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

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

Apply foams at original locations as required.

# **Small Damage Repair Pre-Cleaning** Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair). Initial Prep Sand DA sand the repair area using 80+ grade, removing paint beyond damage by 5-10cm. Blow off with clean, dry air and re-clean with surface cleaner. Mix and Apply Filler Mix and apply filler per manufacturer's recommendation or use the 3M™ Dynamic Mixing System. Keep the body filler within the primer featheredge area. Cure the body filler 15-20 minutes at 23°C. Sand Filler Using a hand block, shape sand the body filler with 80+ grade abrasive. Apply dry guide coat and finish block sanding with 150+ grade abrasive. DA featheredge the repair area with 180+ grade abrasive disc. Inspect the repair for quality, if glaze is not required, continue to step seven. Mix and Apply Glaze Blow off the repair area completely removing sanding dust from the surface. Mix and apply glaze if required per manufacturer's recommendation or if using the 3M™ Dynamic Mixing System. Keep the glaze within the primer featheredge area. Cure glaze for 15-20 minutes at 23°C. Sand Glaze Sand polyester glaze with 180+ grade. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections. Final Sand and Inspect Blow off repair area. Featheredge the surrounding area using 180+ grade abrasive.

# **Product List**

3M<sup>™</sup> Cubitron<sup>™</sup> II Hookit<sup>™</sup> Clean Sanding Abrasive Disc, 150mm, 80+ grade, PN 51369



3M<sup>™</sup> DMS Heavy General Purpose Body Filler, PN 51003



3M™ Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator



3M<sup>™</sup> Platinum<sup>™</sup> Plus Finishing Glaze, 887mL, PN 31180



3M<sup>™</sup> DMS Lightweight Filler — Extra Life, PN 51005



3M™ Cubitron™ II Hookit™ Sheet, 80+ grade, PN 51411; 150+ grade, PN 51413; 180+ grade, PN 51414



3M<sup>™</sup> Cubitron<sup>™</sup> II Hookit<sup>™</sup> Clean Sanding Disc, 150mm, 180+ grade, PN 51422



# **Think About Your Health**

3M<sup>™</sup> Disposable Ear Plugs, PN 1100



3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF

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

Inspect the repair for quality.

# Large Damage Repair

# Pre-Cleaning

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

# **Initial Prep Sand**

DA sand the repair area using 80+ grade, removing paint beyond damage by 5-10cm Blow off with clean, dry air and re-clean with surface cleaner.

# **Final Metal Prep**

Remove remaining paint/coatings in "low spots" using a Scotch-Brite™ Clean N Strip disc. Use a 75mm grinding disc to remove weld nuggets or other surface imperfections. Blow off with clean, dry air and re-clean with surface cleaner.

# Mix and Apply Filler

Mix and apply filler per manufacturer's recommendation or use the 3M<sup>™</sup> Dynamic Mixing System. Keep the body filler within the primer featheredge area. Cure the body filler 15-20 minutes at 23°C.

#### **Initial Sand Filler**

Block shape sand filler with 80+ grade. DA rough featheredge area with 80+ grade abrasive. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections. Re-apply 3M™ Dry Guide Coat as necessary.

# **Final Sand Filler**

Final block sand filler with 150+ grade abrasive. DA fine featheredge sand the repair area with 180+ grade abrasive and blow off the area with clean, dry air. Use 3M™ Dry Guide Coat between sanding steps to highlight imperfections.

## Mix and Apply Glaze

Blow off the repair area completely removing sanding dust from the surface. Mix and apply glaze if required per manufacturer's recommendation or if using the 3M<sup>™</sup> Dynamic Mixing System. Keep the glaze within the primer featheredge area. Cure glaze for 15-20 minutes at 23°C.

## Sand Glaze

Block sand polyester glaze with 180+ grade abrasive. Use 3M™ Dry Guide Coat to highlight imperfections. Re-apply glaze as necessary to fill minor imperfections.

## Final Sand and Inspect

Blow off repair area. Featheredge the surrounding area using 180+ grade abrasive. Inspect the repair for quality.

# **Product List**

3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 150mm, 80+ grade, PN 51369

3M™ DMS Heavy General Purpose Body Filler, PN 51003

3M™ Cubitron™ II Roloc™ Fibre Disc, 75mm, 80+ grade, PN 33392

3M™ Roloc™+ Holder, PN 07500

Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc, PN 07470

Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc, PN 05814

3M™ Platinum™ Plus Finishing Glaze, 887mL, PN 31180

3M™ DMS Lightweight Filler — Extra Life, PN 51005

3M™ Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator

3M™ Cubitron™ II Hookit™ Sheet, 80+ grade, PN 51411; 150+ grade, PN 51413; 180+ grade, PN 51414

3M™ Cubitron™ II Hookit™ Clean Sanding Disc, 150mm, 180+ grade, PN 51422





















# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100

3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF



# Seam Sealer Removal

1



## Clean

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

2



#### **Protect**

Protect surrounding areas with masking tape.

3



## Method A

4



#### Method B

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

5



#### Clear

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

# **Product List**

Scotch® Premium Automotive Refinish Masking Tape 3030, 18mm width, PN 50977



Scotch® Performance Green Masking Tape 233+, 18mm width, PN 26334



Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, 100mm x 30mm, Extra Coarse, PN 07470



Scotch-Brite™ Roloc™+ Clean N Strip XT Disc, PN 05814



3M<sup>™</sup> File Belt Sander, 457mm, PN 33575; 330mm, PN 33573



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



3M<sup>™</sup> General Purpose Adhesive Cleaner, 946mL, PN 08984



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# **Seam Sealer Installation: Over Primer**





# **Surface Prep**

Scuff primer in sealer application areas using a maroon Scotch-Brite™ Hand Pad. Blow off with clean, dry air. Note: Apply 3M seam sealers only over two-part epoxy or two-part urethane primers.

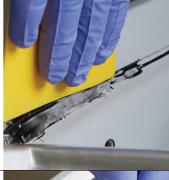
2



## Clean

Use a clean cloth or paper towel to clean repair area with all purpose cleaner and degreaser followed by a wax and grease remover. Note: 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 and adhesive qualities.

4



## **Apply Seam Sealer**

Apply seam sealer over the prepared seam. Tool to recreate OEM appearance.

# **Product List**

Scotch-Brite<sup>™</sup> Hand Pads 7447 PRO, Very Fine grade, 150mm x 229mm, PN 64659



3M™ Polyurethane Seam Sealer, 310mL cartridge, PN 08689; 310mL sachet, PN 08787; 600mL sachet white, PN 08788



3M<sup>™</sup> Pneumatic Applicator, 310mL cartridge, PN 08012; 310mL sachet, PN 08006; 600mL sachet, PN 08007



3M™ Multi-Purpose Seam Sealer, beige, PN 50740



3M™ Flexible Plastic Filler, 200mL, PN 05887; Nozzles, PN 08193



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF

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

# Seam Sealer Installation: Direct to Metal

1



# **Surface Prep**

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

2



#### Clean

Use a clean cloth or paper towel to clean repair area with all purpose cleaner and degreaser followed by a wax and grease remover. Note: 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 and adhesive qualities.

4



## **Apply Seam Sealer**

Apply seam sealer over the prepared seam. Tool to recreate OEM appearance.

# **Product List**

Scotch-Brite<sup>™</sup> Hand Pads 7447 PRO, Very Fine grade, 150mm x 229mm, PN 64659



3M™ Polyurethane Seam Sealer, 310mL cartridge, PN 08689; 310mL sachet, PN 08787; 600mL sachet white, PN 08788



3M<sup>™</sup> Pneumatic Applicator, 310mL cartridge, PN 08012; 310mL sachet, PN 08006; 600mL sachet, PN 08007



3M™ Multi-Purpose Seam Sealer, beige, PN 50740



# Think About Your Health

3M<sup>™</sup> Disposable Ear Plugs, PN 1100



3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# **Corrosion Protection (Cavity Wax Plus) Pre-Cleaning** Pre-wash/clean vehicle prior to disassembly (power wash undercarriage area at repair). Shake Aerosol Agitate the aerosol can thoroughly — one minute of shaking is required to mix the components prior to use. Attach the desired accessory extension and actuator if needed to access the areas inside the panel enclosure. **Application with Standard Actuator** If applying to new panels prior to installation use the standard actuator. Spray up to three (3) coats to ensure full coverage and maximize protection. Mark Extension Wand If using the 360° accessory wand, mark the extension about one inch from the end as a reference to reduce overspray. **Insert Wand Into Panel Opening** Insert the wand to the farthest point, Begin spraying as you remove the wand until the reference mark comes into view. Repeat up to three (3) times to ensure complete coverage and maximize corrosion protection. Clean Accessory Nozzle After application, invert the can and clear material from the accessory wand and nozzle by depressing the actuator. **Remove Excess Cavity Wax** Re-assemble the associated parts and wipe off any excess using a surface cleaner.



# **Think About Your Health**

3M<sup>™</sup> Disposable Ear Plugs, PN 1100

3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF



# **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<sup>™</sup> Clean N Strip disc to remove loose coatings from the repair area. Use CRS Scotch-Brite<sup>™</sup> belt in hard to reach areas.

# 3



# **Clean and Inspect**

Blow of area with clean dry compressed air to remove dust and loose surface contaminates. Use a surface cleaner to remove any remaining contaminants.

Note: Coatings must be applied over thoroughly cleaned substrates to maximize corrosion protection.

# Δ



## **Coating Application**

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

# **Product List**

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



Scotch-Brite<sup>™</sup> Roloc<sup>™</sup>+ Clean N Strip XT Disc, PN 05814



3M™ File Belt Sander, 457mm, PN 33575; 330mm, PN 33573



Scotch-Brite<sup>™</sup> Durable Flex Belt, CRS, PN 64475



3M™ Body Gard™ Textured Coating, PN 08868, black



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# **Standard Operating Procedures Bumper Repair**

# Cosmetic Flexible Bumper Repair Scrapes, Gouges and Deformations Clean the Damaged Area Clean the repair area with soap and water, followed by a surface cleaner. Disc, 150mm, **Initial Prep Sand** "Dish Out" the damaged area using a 80+ grade abrasive disc on a DA sander. Keep the 80+ grade abrasive scratches within the "Dish Out" area. Use a DA sander with 180+ grade abrasive to "feather" the repair area 50-75mm from the "Dish Out" area. **Apply Adhesion Promoter** 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. Mix and Apply Flexible Filler 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 23°C. Sand Flexible Filler Hand block or DA sand flexible repair material with a 150+ grade disc or sheet, followed by a 180+ grade disc or sheet. PN 1100 **Final Sand and Inspect** 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. PN SF201AF

# **Product List**

3M™ Hookit™ Purple Clean Sanding Disc, 75mm, P320, PN 51023; 150mm, P320, PN 50531



3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive 80+ grade, PN 51369; 150+ grade, PN 51421; 220+ grade, PN 51423



3M™ Cubitron™ II Hookit<sup>™</sup> Abrasive Sheet, 150+ grade, PN 51388; 180+ grade, PN 51389



3M™ Polyolefin Adhesion Promoter, PN 05917



3M™ Flexible Plastic Filler, 200mL, PN 05887; Nozzles, PN 08193



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



# **Think About Your Health**

3M™ Disposable Ear Plugs,



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M™ SecureFit™ 200 Series Protective Eyewear, clear,

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

Note: We do not recommend a final coat of 3M™ Polyolefin Adhesion Promoter (PN 05917) after the final sanding. The paint companies all recommend their own paint adhesion promoters and applying the PN 05917 may cause a compatibility issue.

# Standard Operating Procedures Bumper Repair

# Flexible Patch Non-Structural Bumper Repair Clean the Damaged Area Clean the front and back of the repair area with soap and water, followed by a surface cleaner. Be sure to remove any overspray from the back side of the repair area. A Scotch-Brite<sup>™</sup> scuffing pad may be used to assist with stubborn overspray. **Initial Grinding** Grind the front of the repair using a 75mm 60+ grade disc. Grind at a low speed creating a "Dish Out" area 75mm wide that tapers to the bottom of the damage. **Initial Prep Sand** Sand the "Dish Out" area using a 80+ grade abrasive disc on a DA sander, removing any melted plastic. Keep the 80+ grade abrasive scratches within the "Dish Out" area. Using 180+ grade abrasive, feather edge 5-10cm from the "Dish Out" area. **Apply Reinforcement Patch** On the back side of the repair area apply the flexible patch adhesion promoter. Firmly apply the flexible reinforcement patch overlapping the damaged area by 36mm on all sides of Mix and Apply Flexible Filler Apply 3M™ Polyolefin Adhesion Promoter (PN 05917) 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 23°C. Sand Flexible Filler DA sand the flexible filler material with a 150+ grade abrasive disc. Block sand the repair area with a 180+ grade abrasive sheet. 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.

# **Product List**

3M<sup>™</sup> Hookit<sup>™</sup> Purple Clean Sanding Disc, 75mm, P320, PN 51023; 150mm, P320, PN 50531



3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 150mm, 80+ grade, PN 51369; 150+ grade, PN 51421



3M<sup>™</sup> Cubitron<sup>™</sup> II Hookit<sup>™</sup> Abrasive Sheet, 180+ grade, PN 51389



3M™ Cubitron™ II Roloc™ Fibre Disc, 50mm, 80+ grade, PN 33380



3M<sup>™</sup> Polyolefin Adhesion Promoter, PN 05917



3M<sup>™</sup> Instant Plastic Repair Patch (with additional adhesion promoter sachets), 102mm x 203mm, PN 05888



3M<sup>™</sup> Automotive Adhesion Promoter Sachets, 2.5mL, PN 06396



3M™ Flexible Plastic Filler, 200mL, PN 05887; Nozzles, PN 08193



3M<sup>™</sup> Performance Manual Applicator, 200mL, PN 08117



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

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

Note: We do not recommend a final coat of 3M™ Polyolefin Adhesion Promoter (PN 05917) after the final sanding. The paint companies all

recommend their own paint adhesion promoters and applying the PN 05917 may cause a compatibility issue.

# **Standard Operating Procedures Bumper Repair**

# Two-Sided Bumper Repair Cracks, Holes & Punctures



# Clean the Damaged Area

Clean the front and back of the repair area with soap and water, followed by a surface cleaner.



## **Prepare for Reinforcement Material**

Apply aluminium 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 80+ grade abrasive disc to sand the repair area where the reinforcement patch will be applied. Apply adhesion promoter, allowing 5 minutes to dry.



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 23°C.



# **Tapering the Front Side**

Remove the aluminium tape. Grind the front damage using a 75mm 60+ grade disc or 36+ grade file belt at a low speed to create a gradual "Dish Out" area 75mm wide and deep enough to expose a 5mm wide strip of the back side reinforcement material through the center of the damage.





# **Preparing the Repair Area**

Use a DA with 80+ grade 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 180+ grade around the dished out area where the adhesive will eventually be featheredged.





# Mix and Apply Flexible Filler

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 23°C.



#### Sand Flexible Filler

Use a DA to sand the flexible filler material with a 150+ grade abrasive disc, followed by a block with 180+ grade.



# **Final Sand and Inspect**

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.

# **Product List**

3M™ Polyolefin Adhesion Promoter, PN 05917

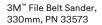
3M™ Flexible Parts Repair Material, 50mL cartridge, PN 05901



3M™ Crack Seal Tape, 50mm x 25m, PN 03020



3M™ Cubitron™ II Roloc™ Fibre Disc, 60+ grade, PN 33379



3M™ Cubitron™ II File Belt, 10mm x 330mm, 80+ grade, PN 33440



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

3M™ Hookit™ Purple Clean Sanding Disc, 75mm, P320, PN 51023; 150mm, P320, PN 50531

3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 150mm, 80+ grade, PN 51369; 150+ grade, PN 51421; 220+ grade, PN 51423

























# Think About Your Health

3M™ Disposable Ear Plugs, PN 1100

3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF



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

Note: We do not recommend a final coat of 3M™ Polyolefin Adhesion Promoter (PN 05917) after the final sanding. The paint companies all recommend their own paint adhesion promoters and applying the PN 05917 may cause a compatibility issue.

# Standard Operating Procedures Masking

# **General Masking**



## Clean Area

Clean the area with water based cleaner. Wipe area with a solvent prep cleaner. Dry the area. The preferable surface temperature for masking is 15–25°C.

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.

# **Product List**

Scotch® Premium Automotive Refinish Masking Tape 3030, 18mm width, PN 50977; 36mm width, PN 50980; 48mm width, PN 50981



Scotch® Performance Green Masking Tape 233+, 18mm width, PN 26334; 36mm width, PN 26338; 48mm width, PN 26340



3M<sup>™</sup> Vinyl Tape 471+, 6.4mm, PN 06405



3M™ Perforated Trim Masking Tape, 5mm, PN 06345; 7mm, PN 06347; 10mm, PN 06349; 15mm, PN 06348



3M<sup>™</sup> Clear Masking Film, 5m x 120m roll, PN 07838; 6m x 100m roll, PN 51061



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100

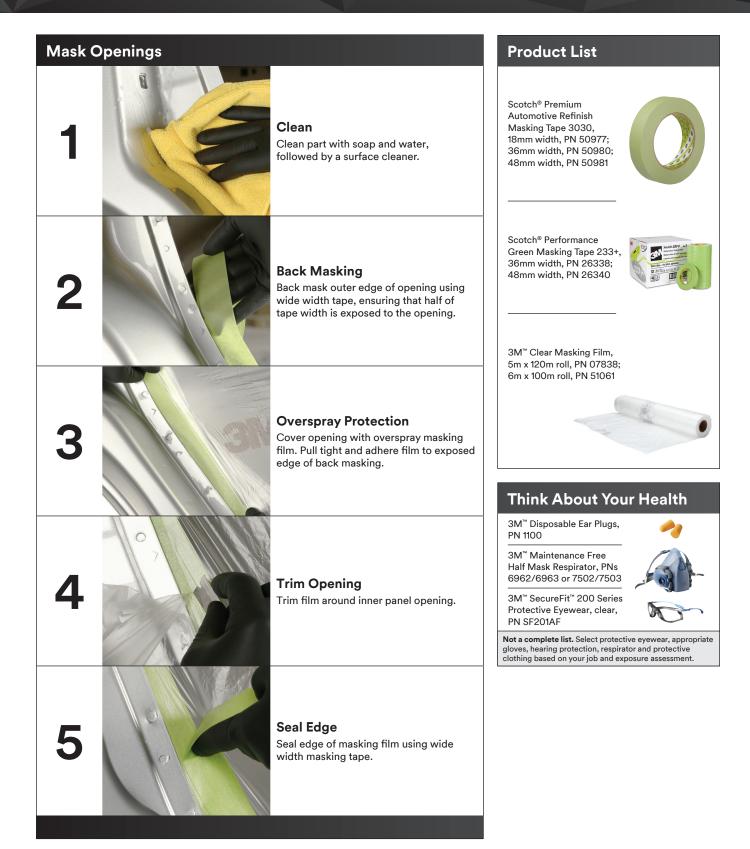


3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

6

3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# **Standard Operating Procedures Masking**



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

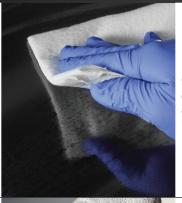
# **Standard Operating Procedures Masking**



# **Standard Operating Procedures Parts Preparation**

# **Prep New Parts**

1



#### Clean

Clean parts to be painted with a wax and grease remover to remove any remaining surface contamination.

2



#### Scuff

Use a P320 abrasive on a DA equipped with a soft interface pad or a red Scotch-Brite™ Hand Pad to sand the part.

3



#### Clean

Blow off the repair area with clean, dry air and a clean cloth. Clean parts to be painted with a wax and grease remover to remove any remaining surface contamination.

4



# **Apply Top Coats**

Seal and paint new part following paint company recommendations.

# **Product List**

3M<sup>™</sup> General Purpose Adhesive Cleaner, 946mL, PN 08984



3M<sup>™</sup> Hookit<sup>™</sup> Purple Clean Sanding Disc, 75mm, P320, PN 51023; 150mm, P320, PN 50531



3M<sup>™</sup> Hookit<sup>™</sup> E-Coat Disc 150mm, P320, PN 50535



Festool D150 Thin Interface Pad, PN 202662



Scotch-Brite™ Cleaning and Finishing Pads, Very Fine grade, pre-cut roll, 115mm x 150mm, PN 07903



3M<sup>™</sup> Accuspray<sup>™</sup> Spray Gun HG14, PN 16577



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# Standard Operating Procedures Parts Preparation

**Product List** 

220+ grade, PN 51423

# Prime Parts (Aluminium, SMC, FRP, Composite)

# 1

#### **Assess and Sand**

Assess damaged area for flatness/ straightness. Use 220+ grade abrasive, if necessary, on a DA over the entire repaired area to guarantee the surface is ready to prime. Blow off the repair area with clean, dry air and a clean cloth. Then clean with a wax and grease remover to remove any remaining surface contamination.

# 3M™ Cubitron™ II Hookit™ Clean Sanding Abrasive Disc, 150mm,

3M<sup>™</sup> General Purpose Adhesive Cleaner, 946mL, PN 08984



3M™ Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator



3M™ Cubitron™ II Hookit™ Abrasive Sheet, 220+ grade, PN 51390



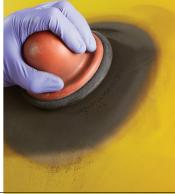
3M<sup>™</sup> Hookit<sup>™</sup> Sanding Block Dust Free, 70mm x 127mm, PN 05170



3M<sup>™</sup> Accuspray<sup>™</sup> Spray Gun HG14, PN 16577



2



# **Apply Primer and Finish Sand**

Apply primer to repair area following manufacturers recommendations. Apply 3M™ Dry Guide Coat over the entire repaired area. Sand with 220+ grade abrasive to ensure flatness.

4



## **Block Sand**

Double check flatness of the repair by block sanding it with 220+ grade abrasive.



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100

3M™ Maintenance Free



Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

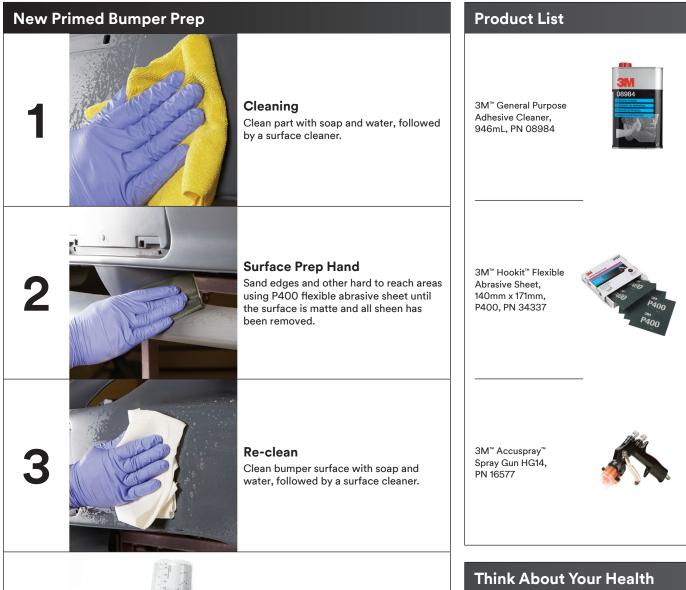
**Not a complete list.** Select protective eyewear, appropriate gloves, hearing protection, respirator and protective clothing based on your job and exposure assessment.

Note: For aluminium, it is mandatory to use Festool Mobile Dust Extractor CTM 48 E LE EC/B22, PN 575105.

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



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





# **Apply Top Coats**

Seal and paint bumper following paint company recommendations.

3M<sup>™</sup> Disposable Ear Plugs, PN 1100

3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# **E-Coat Panel Prep**

1



## Cleaning

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

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



# **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.

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



# **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™ Flexible Abrasive Disc to reduce burning through the e-coat surface.

3



#### Re-clean

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

4



# **Apply Top Coats**

Seal and paint following paint company recommendations.

# **Product List**

3M<sup>™</sup> Hookit<sup>™</sup> Flexible Abrasive Sheet, 140mm x 171mm, P400, PN 34337



Scotch-Brite™ Cleaning and Finishing Pads, Very Fine grade, pre-cut roll, 115mm x 150mm, PN 07903



Scotch-Brite<sup>™</sup> Hand Pads 7447 PRO, Very Fine grade, 150mm x 229mm, PN 64659



3M<sup>™</sup> Hookit<sup>™</sup> Purple Clean Sanding Disc, 150mm, P400, PN 50533



3M<sup>™</sup> Hookit<sup>™</sup> Flexible Abrasive Disc, 17 hole, 150mm, P400, PN 34800



3M<sup>™</sup> Accuspray<sup>™</sup> Spray Gun HG14, PN 16577



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF

# Feather-Prime-Block **Featheredge** Blow off repair area. Featheredge the surrounding repair area using 180+ grade abrasive. Final Sand and Inspect Final sand surrounding area using P320 abrasive disc on a DA sander. Blow off with clean, dry air. Clean with wax and grease remover. Inspect the repair for quality. Mask for Primer Mask repair area as necessary. Refer to Primer Masking SOP for 3M specific recommendations. **Apply Primer** Apply primer to repair area following manufacturers recommendations. Allow to cure. **Apply Dry Guide Coat** Apply 3M™ Dry Guide Coat over cured primer. **Hand Block Repair** Hand sand or "check block" sand the repair area using a 320+ abrasive sheet on an appropriately sized hand block. Look for imperfections in the repair area highlighted by the dry guide coat. If necessary, re-apply dry guide coat and continue block sanding to repair any defects as required. Re-Apply Dry Guide Coat Re-apply 3M™ Dry Guide Coat over entire repair area. **DA Sand Primer** DA sand repair area using a P400 disc and a soft interface pad until all 3M™ Dry Guide Coat is removed. Note: Use 3M™ Flexible Abrasive Disc to reduce burning through the primer surface. Clean the Damaged Area Clean the repair area with a surface cleaner.

# **Product List**

3M<sup>™</sup> Cubitron<sup>™</sup> II Hookit<sup>™</sup> Clean Sanding Disc, 150mm, 180+ grade, PN 51422



3M<sup>™</sup> Hookit<sup>™</sup> Purple Clean Sanding Disc, 150mm, P320, PN 50531; P400, PN 50533



3M™ Hookit™ Flexible Abrasive Disc, 17 hole, 150mm, P400, PN 34800



3M<sup>™</sup> Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator



3M<sup>™</sup> Accuspray<sup>™</sup> Spray Gun HG14, PN 16577



3M™ Cubitron™ II Hookit™ Abrasive Sheet, 320+ grade, PN 30641



Festool D150 Thin Interface Pad, PN 202662



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100



3M<sup>™</sup> Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF

# Feather-Prime-Block Waterborne

# **Featheredge**

Blow off repair area. Featheredge the surrounding repair area using 180+ grade abrasive.

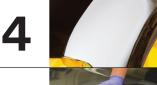


Final sand surrounding area using P320 abrasive disc on a DA sander. Blow off, with clean, dry air. Clean with wax and grease remover. Inspect the repair for quality.



# **Mask for Primer**

Mask repair area as necessary. Refer to Primer Masking SOP for 3M specific recommendations.



# Apply Primer

Apply primer to repair area following manufacturers recommendations. Allow to cure.



# **Apply Dry Guide Coat**

Apply 3M<sup>™</sup> Dry Guide Coat over cured primer.



# Hand Block Repair

Hand sand the repair area using a 320+ abrasive sheet on an appropriately sized hand block. Look for imperfections in the repair area highlighted by the dry guide coat. If necessary, re-apply dry guide coat and continue block sanding to repair any defects as required.



# Re-Apply Dry Guide Coat

Re-apply 3M™ Dry Guide Coat over entire repair area.



#### **DA Sand Primer**

DA sand repair area using a P400 disc and a soft interface pad until all 3M™ Dry Guide Coat is removed. Note: Use 3M™ Flexible Abrasive Disc to reduce burning through the primer surface.



#### Re-Apply Dry Guide Coat

Re-apply 3M™ Dry Guide Coat over hand blocked repair area.



## **DA Sand Primer**

DA Sand repair area using a P600-P800 disc and a soft interface pad until all the 3M™ Dry Guide Coat is removed. Note: Use 3M™ Flexible Abrasive Disc to reduce burning through the primer surface.



# Clean the repair area with a surface cleaner.

# **Product List**

3M™ Cubitron™ II Hookit™ Clean Sanding Disc. 150mm, 180+ grade, PN 51422



3M™ Dry Guide Coat, PN 09560, black cartridge; PN 09561, applicator



3M<sup>™</sup> Accuspray<sup>™</sup> Spray Gun HG14, PN 16577



3M™ Cubitron™ II Hookit™ Abrasive Sheet, 320+ grade, PN 30641



Festool D150 Thin Interface Pad. PN 202662



3M™ Hookit™ Purple Clean Sanding Disc, 150mm, P320, PN 50531; P400, PN 50533; P500, PN 50534; P600, PN 50913



3M™ Hookit™ Flexible Abrasive Disc, 17 hole, 150mm, P400, PN 34800; P600, PN 34801; P800, PN 34802



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100 3M™ Maintenance Free



Half Mask Respirator, PNs 6962/6963 or 7502/7503 3M™ SecureFit™ 200 Series

Protective Eyewear, clear,



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

PN SF201AF

# **Blend Panel Sanding Process Product List** 3M™ Hookit™ Flexible Foam Abrasive Disc, P1000 75mm, PN 33551; Clean the Repair Area 150mm, PN 33541 Clean the repair area with soap and water, followed by a surface cleaner. 3M™ Hookit™ Flexible Abrasive Sheet, 140mm x 171mm. P800, PN 34340 **Hand Sand Edges** Scuff hard to reach areas and panel edges by hand with P800-P1000 abrasive disc or flexible abrasive sheet. 3M™ Hookit™ Flexible Abrasive Disc, 17 hole, 150mm, P800, PN 34802: P1000, PN 34803 **DA Sand Colour Blend Area** DA sand the colour blend area using a grade P800 abrasive disc and a soft Festool D150 Thin Interface interface pad. For best results, sand Pad, PN 202662 back into primer surfacer. Note: Use **3M<sup>™</sup> Flexible Abrasive Disc to reduce** burning through the top coat surface. **Think About Your Health** 3M™ Disposable Ear Plugs, PN 1100 3M™ Maintenance Free Half Mask Respirator, PNs **DA Sand Adjacent Panels** 6962/6963 or 7502/7503 DA sand the remainder of the blend 3M™ SecureFit™ 200 Series panel(s) using a P1000 abrasive disc. Protective Eyewear, clear, PN SF201AF Not a complete list. Select protective eyewear, appropriate gloves, hearing protection, respirator and protective clothing based on your job and exposure assessment. **Clean and Inspect** Clean the repair area with a 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.



# **Standard Operating Procedures Paint Shop**

# 3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Spray Cup System

Reinvented from top to bottom, it's designed to help make your life easier. To make your painting process cleaner and faster. And to make you a better, more productive painter — more confident in the quality of your work and better able to exceed the expectations of your customers and your shop.

# Improved six ways.

- 1 Wide Spout Adapter with Four-Point Connection.

  Maximizes stability while spraying. Makes cleaning easier.
- 2 Domed Lid with Full-Diameter Filter. More paint below the filter improves flow and consistency, while reducing spitting from start to finish.
- 3 Quarter-Turn Lid Locking System. Comes with every lid. Stays cleaner. Locks faster. Fewer parts to keep track of.
- 4 New Cup in Every Lid and Liner Kit. Start with a clean cup more often, reducing paint build-up. On-cup ratios and fill markings eliminate traditional mixing cups.
- 5 Access Window.
  Allows painter to hold the liner for cleaner, easier lid removal when refilling. Also easier to check paint levels.
- 6 Larger Cup Sealing Plug.
  Allows painter to seal and protect coatings upside down with greater stability when not in use. Use fewer lids by keeping filters wet.



Visit 3Mbodyshop.co.uk to learn more

# **Product List**

3M™ PPS™ Series 2.0 Lid and Liner Kit, 200 micron liner cup system, 850mL, PN 26024; 650mL, PN 26112; 400mL, PN 26114



3M™ PPS™ Series 2.0 Lid and Liner Kit, 125 micron liner cup system, 850mL, PN 26740; 650mL, PN 26026; 400mL, PN 26312; 200mL, PN 26752



3M™ PPS™ Series 2.0 Hard Cups, 850mL, PN 26023; 650mL, PN 26001; 400mL, PN 26122; 200mL, PN 26115



3M<sup>™</sup> Accuspray<sup>™</sup> Spray Gun HG14, PN 16577



3M™ Accuspray™ Atomizing Heads, 1.4mm orange, PN 22614; 1.8mm clear, PN 22618; 2.0mm red, PN 22620;



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100





3M<sup>™</sup> SecureFit<sup>™</sup> 200 Series Protective Eyewear, clear, PN SF201AF





# **Standard Operating Procedures Paint Shop**



# Mini 200mL

Ideal for small areas that require 200mL of material or less.



3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Mini Size, PN 26114, 200mL, 200 micron filters

3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Mini Size, PN 26752, 200mL, 125 micron filters



# Midi 400mL

Ideal for areas that require 400mL of material or less.



3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Midi Size, PN 26112, 400mL, 200 micron filters

3M™ PPS™ Series 2.0 Kit Midi Size, PN 26312, 400mL, 125 micron filters



# Standard 650mL

Ideal for large areas that require 650mL of material or less.



3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Standard Size, PN 26000, 650mL, 200 micron filters

3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Standard Size, PN 26026, 650mL, 125 micron filters



# Large 850mL

Ideal for large jobs that require 850mL of material or less.



3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Large Size, PN 26024, 850mL, 200 micron filters

3M<sup>™</sup> PPS<sup>™</sup> Series 2.0 Kit Large Size, PN 26740, 850mL, 125 micron filters

# Standard Operating Procedures Truck Detailing

#### Paint Finishing: Small Areas **Product List** 3M™ Trizact™ Hookit™ Clear **Initial Defect Removal** Coat Sanding Disc, 75mm, P1500, PN 05601 DA sand the repair area with a 75mm P1500 finishing film disc, removing all paint defects. Wipe panel clean. When using 3M™ Trizact™ 3M™ Hookit™ Finishing Abrasives, use a light mist of water while Film Disc, 75mm, sanding to avoid clogging of the disc. P1500, PN 51267 3M<sup>™</sup> Hookit<sup>™</sup> Soft Interface Pad, 75mm, PN 05771 Scratch Refinement P3000 Refine the P1500 scratches with a DA and a 75mm 3M™ Pistol Grip Disc P3000 3M<sup>™</sup> Trizact<sup>™</sup> Foam Disc used damp with Sander, PN 33577 a soft interface pad. Wipe panel clean. 3M™ Trizact™ Hookit™ Foam Disc, 75mm, Scratch Refinement 6000 (Optional) 3000, PN 50415: 6000, PN 51131 Refine the P3000 scratches with a DA and a 75mm 6000 3M™ Trizact™ Foam Disc used damp with a soft interface pad. To thoroughly remove 3M™ Perfect-It™ III Fast Cut previous scratches go over each area five times. Plus Extreme Compound, The use of P3000 is required prior to 5000 for 865mL, PN 51815: best results. 432mL, PN 51816 3M™ Perfect-It™ III Compounding Pad, 75mm, PN 50499 Compound the repair area with a 75mm polisher. Use a 75mm foam compound pad and the appropriate rubbing compound. 3M™ Perfect-It™ III Wipe panel clean. Extra Fine Plus Compound, PN 80349 3M™ Perfect-It™ III Polishing Pad, **Polish** 75mm, PN 50536 Polish the repair area with a 75mm polisher. Use a 75mm black foam polishing pad and the appropriate machine polish. Wipe panel clean 3M™ Perfect-It™ III with a yellow microfiber cloth. Ultrafina SE Polish. PN 50383 3M™ Perfect-It™ III **Swirl Elimination** Polishing Pad. Ultrafine polish the repair area with a 75mm 75mm, PN 50457 polisher. Use a 75mm blue foam polishing pad and ultrafine machine polish. Leave a light film of polish on the surface and wipe the panel **Think About Your Health** clean with a blue microfiber cloth. 3M™ Disposable Ear Plugs, PN 1100 3M™ Maintenance Free Final Detail Half Mask Respirator, PNs

Clean sling from adjacent panels and door apertures areas. Doing this immediately after the

repair will greatly improve the ease of this step.

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

6962/6963 or 7502/7503

3M™ SecureFit™ 200 Series

Protective Eyewear, clear,

PN SF201AF

# Standard Operating Procedures Truck Detailing

# **Paint Finishing: Large Areas** Initial Defect Removal Texture Match 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. Scratch Refinement 3000 Refine the P1500/P2000 scratches with a DA and a 3000 3M™ Trizact™ Hookit™ Foam Disc used damp with a 3M<sup>™</sup> Hookit<sup>™</sup> Soft Interface Pad. Wipe panel clean. Scratch Refinement 6000 (Optional) To reduce your buffing time refine the 3000 scratches with a DA and a 6000 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 6000 for best results. Compound 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. **Machine Polish** 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.

**Ultrafine Machine Polish** 

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.

#### **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™ Colour Check Light II Kit.



# **Think About Your Health**

3M™ Disposable Ear Plugs, PN 1100

3M™ PPS™ Colour Check

Light II Kit, PN 16550

3M<sup>™</sup> Perfect-It<sup>™</sup> III Double Sided Polishing Pad, 150mm, PN 50880; 216mm, PN 50708

3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503

3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF



# **Standard Operating Procedures Truck Detailing**

# **Headlight Restoration**



# Clean and Mask

Clean the damaged lens with soap and water. Perimeter mask the lens with two layers of masking tape.



# Sand to Remove Yellowing and Defects

Dry DA sand the damaged headlight lens with a 75mm P600 abrasive disc using a soft interface pad. Completely remove any yellowing and/or surface defects.



Refine the P600 sand scratches by dry DA sanding with a 75mm P800 abrasive disc on a soft interface pad. Wipe the headlight lens clean.



## 2nd Step Scratch Refinement

Refine the P800 sand scratches by DA sanding with a 75mm 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.



#### 3rd Step Scratch Refinement

Refine the P1000 sand scratches by DA sanding with a 75mm 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.



#### Compound Lens

Completely remove the P3000 sand scratches using a 75mm polishing tool with a foam compounding pad and rubbing compound. Wipe the headlight lens with a clean microfiber cloth.



# Polish Lens

Polish the headlight lens using a 75mm foam polishing pad and machine polish. Wipe the headlight lens with a clean microfiber cloth. Remove the masking tape and inspect for quality.

# **Product List**

Scotch® Premium **Automotive Refinish** Masking Tape 3030, 18mm width, PN 50977; 36mm width, PN 50980; 48mm width, PN 50981



Scotch® Performance Masking Tape 233+, 18mm width, PN 26334



3M™ Hookit™ Soft Interface Pad, 75mm, PN 05771



3M™ Hookit™ Purple Clean Sanding Disc, 75mm, P600, PN 51263; 75mm, P800, PN 51264



3M™ Trizact™ Hookit™ Blending Disc, 75mm, P1000, PN 50413



3M™ Trizact™ Hookit™ Foam Disc, 75mm, 3000, PN 50415



3M™ Perfect-It™ III Fast Cut Plus Extreme Compound. 865mL, PN 51815; 432mL, PN 51816



3M<sup>™</sup> Perfect-It<sup>™</sup> III Compounding Pad, 75mm, PN 50499





3M™ Perfect-It™ III Polishing Pad, 75mm, PN 50536



# **Think About Your Health**

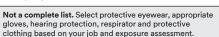
3M™ Disposable Ear Plugs, PN 1100



3M™ Maintenance Free Half Mask Respirator, PNs 6962/6963 or 7502/7503



3M™ SecureFit™ 200 Series Protective Eyewear, clear, PN SF201AF



# **Individual Product Instruction and Safety Information**

For individual product instructions and applicable precautions see product labels and associated literature for the individual product at **3Mbodyshop.co.uk** 

For product material safety data sheets see 3Mbodyshop.co.uk

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