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NON-STRUCTURAL SHEET METAL REPAIR MANUAL



SAFETY NOTICE

CAUTION

ALL SERVICE AND REBUILDING INSTRUCTIONS CONTAINED HEREIN ARE APPLICABLE TO, AND FOR THE CONVENIENCE OF, THE AUTOMOTIVE TRADE ONLY.

All test and repair procedures on components or assemblies in non-automotive applications should be repaired in accordance with instructions supplied by the manufacturer of the total product.

Proper service and repair is important to the safe, reliable operation of all motor vehicles. The service produces recommended and described in this publication were developed for professional service personnel, and are effective methods for performing vehicle repair. Following these procedures will help ensure efficient economical vehicle performance and service reliability. Some service procedures require the use of special tools designed for specific procedures. These special tools should be used as recommended throughout this publication.

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It is important to note that this publication contains various **Cautions** and **Warnings**. These should be read carefully in order to minimize risk of personal injury or the possibility that improper service methods may damage the vehicle or render it unsafe. It is important to note that these Cautions and Warnings cover only the situations and procedures DaimlerChrysler Corporation has encountered and recommended. DaimlerChrysler Corporation cannot possibly know, evaluate, and advise the service trade of all conceivable ways in which service may be performed, or of the possible hazards of each. Consequently, DaimlerChrysler has not undertaken any such broad service review. Accordingly, anyone uses a service procedure or tool that is not recommended in this publication must be certain that neither personal safety, nor vehicle safety, will be jeopardized by the service methods they select.

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Safety Precautions

Adhesives:

- Adhesives must comply with all federal, state, and local regulations.
- Material Safety Data Sheets (MSDS) must be available and understood before adhesives are handled.
- All personnel should be instructed in the proper procedures to prevent skin contact with solvents, curing agents, and uncured base adhesives, which could cause allergic reactions or sensitization.

Introduction

With the new structural adhesives available today, sheet metal repairs are much easier. The corrosion repairs that previously required welding no longer require welding. The day of the warped or oil canned door or quarter panel is over.

Structural adhesive can also be used to bridge new and old quarter panel sections using a backer panel at the joint. In addition, this sectioning would be supported with STRSW weld bonding at the pinch weld flange.

Fatigued sheet metal can be repaired using structural adhesive as a sandwiching type reinforcement material between the old fatigued panel and a new panel used as reinforcement.

Clamps, weights or similar fixtures provide the best method for securing adhesive bonded metal panels. However, screws may be necessary in hard to clamp locations. The use of screws should be limited to these difficult areas only, as cosmetic filling of these holes may present some challenges.

▪ Types of Structural Adhesive

Overview:

There are three basic chemistries used in aftermarket structural bonding and repair: Epoxy, Urethane, and Acrylic. To achieve optimum results, it is best to use the chemistry that bonds best to the substrate to be repaired, is easiest to use, and offers the most permanent, non-detectable repair at the lowest overall repair cost. All three chemistries have their strengths and weaknesses.

▪ Epoxy adhesives bond well to rigid and semi rigid plastics and are generally easy to sand and feather edge. Some may be too rigid for flexible substrates and they often require primers on most bare metal applications. Epoxies can be heat cured to increase strength and accelerate the curing process and have a very stable long shelf life. The mix ratio can vary by + / - 50% and still cure, however, the performance properties will vary when the mix ratio is off. Epoxies are more forgiving than urethanes with regards to mix ratio accuracy.

▪ Acrylic adhesives bond all types of bare metals and are excellent for cross bonding aluminum to steel. They have good NVH properties and some offer anti-corrosion

properties so primer on bare metal are not necessary. Most acrylics have a fast room temperature cure, and are stable with regards to temperature and moisture during cure. However, both of these can effect shelf life. Mix ratio is modestly important although the performance properties can vary some with a change in mix ratio. Acrylics are the most forgiving of the three chemistries with regards to mix ratio accuracy

- Urethane adhesives are typically flexible and bond well to plastics. However they usually require primers on metal surfaces to protect against corrosion. Urethanes have good seam sealing and NVH qualities and are frequently the optimal choice for seam sealers. They are sensitive to moisture during cure, packaging and storage. One component urethanes usually have a much shorter shelf life than two component urethanes. Mix ratio is critical for urethanes. In most cases it cannot vary more than +/- 5%. Therefore, hand mixing is not recommended. Urethanes are the most unforgiving of the three chemistries with regards to mix ratio accuracy.

Joins and Sections

Overlap Joint

Overview:

This procedure can be used when panel sectioning is being performed on a door skin at the window belt line section. It is also a great procedure for a patch panel being used for corrosion perforation. If using during an OEM panel replacement such as a quarter panel, side aperture on a mini van, or rocker panel you must also use weld bonding at the pinch weld flange area.

Illustration A:

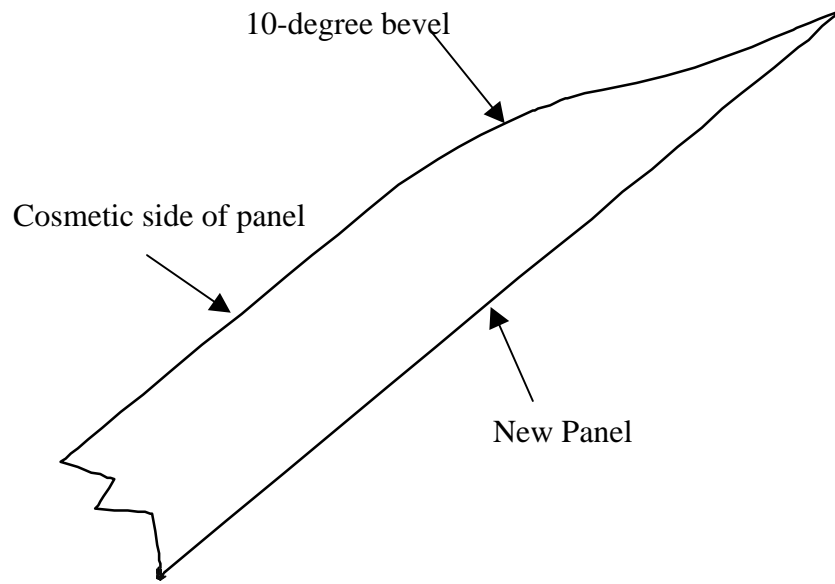
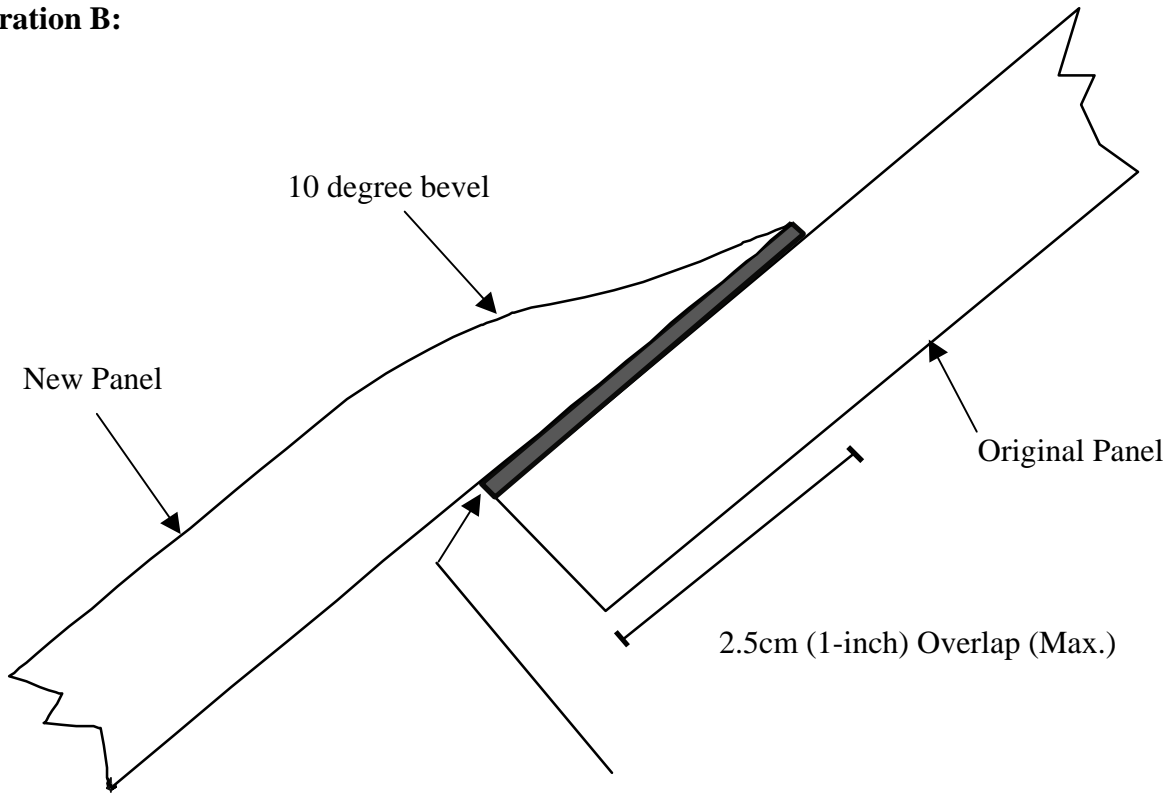


Illustration B:



Note: Illustrations not drawn to scale

Mopar (part # 05083855AA)/
Fusor #112B Structural Adhesive

Preparation:

1. All paint, primer, adhesive, and any other corrosion protection coatings must be removed from the two mating surfaces prior to application. Grind a 2.5cm (1 inch) contact area on both panels where you will do your overlap bond. The metal should be bare and shiny in appearance.

Note: Apply the structural adhesive to all bare metal at the bond locations. The adhesive has corrosion resistant properties built-in to protect the metal from corrosion.

2. Pre-bevel to 10 degrees the outer side of the section joint edge of the new panel (**See Illustration A**).

3. Pre-fit the new panel to ensure proper alignment. If screws will be required to hold the panel in place during curing apply them now to ensure proper fit later.

4. Dispense a small amount of Mopar (part # 05083855AA)/ Fusor #112B structural adhesive from the cartridge to ensure an even flow of both components. Attach a mixing tip and dispense a mixer's length of the adhesive from the cartridge.

Note: You will have approximately 70 minutes @ 21°C (70°F) to apply the adhesive and assemble the components.

Application:

1. Apply a 3/8 to 1/2 inch bead of Mopar (part # 05083855AA)/ Fusor #112B structural adhesive to the mating surfaces. Evenly apply the adhesive over the complete bonding surface making sure not to leave any bare metal.

2. Position the new panel making sure not to lift up on it as lifting will create air bubbles and weaken the bond. Adjustments to the panel fit must be made by sliding, not lifting.

3. Clamp tightly and evenly. There are glass beads in the adhesive that will prevent complete squeeze out. Apply screws in hard-to-clamp areas. Remove excess adhesive from all joints prior to adhesive cure.

4. Allow the adhesive to cure. The Mopar / Fusor #112B structural adhesive takes approximately two to two and a half hours to reach handling strength. The Mopar / Fusor #112B fully cures in approximately eight hours. Expect the adhesive to be a little "tacky" on the surface. This is a normal property of the adhesive.

5. Remove clamps and screws. All excess adhesive must be removed from the cosmetic repair area prior to doing any finish work. This will prevent more work later.

6. Bevel the center of the screw-holes and apply fiber-filled waterproof body filler to the screw holes and section seam, complete the repair using conventional body filler. Block sand, prime and paint per paint manufacturer's recommendations.



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Joint Using a Backer Panel

Overview:

Backer panel procedures can be used to achieve a smooth joint between panel sections. The backer panel section is good for locations when you don't have the room to smooth an overlap joint. An example would be a corrosion perforation hole in a roof panel. The backer panel joint is a common repair for rocker panel or lower quarter panel sections. When using backer panels on rocker or lower quarter panels all pinch weld locations must be weld/bonded, Refer to The Chrysler Group's Weld Bond publication, part number 81-170-03005 for additional information.

Preparation:

1. The original panel joint edge must be pre-beveled to 10 degrees (**See Illustration C**).
2. All paint, primer, adhesive, and any other corrosion protective coatings must be removed from all mating surfaces prior to application of the adhesive. Grind a 2.5cm (1 inch) contact area on all panels where you will do your backer panel bonding. The metal should be bare and shiny in appearance. The backer panels must also be free of all coatings. Bevel the backer panel edges to prevent moisture or condensation from collecting between the backer and outer panel. (**See Illustration C**).

Note: Apply the structural adhesive to all bare metal at the bond locations. The adhesive has corrosion resistant properties built-in to protect the metal from corrosion.

3. Pre-fit the backer panels to both panels being joined to ensure a proper fit. If screws will be used to hold the panel in place during curing, dry fit them now to ensure proper fit latter.

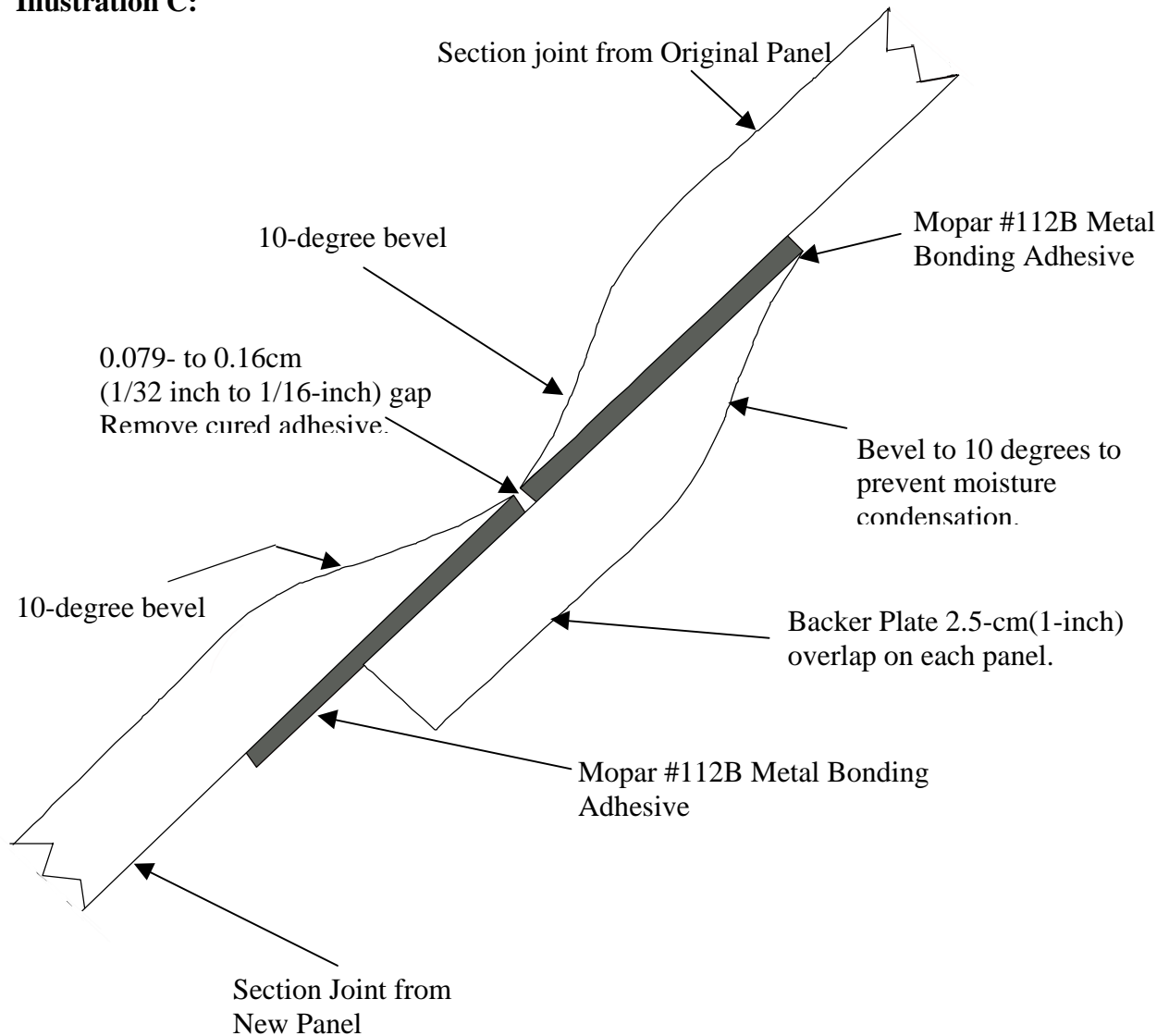
Note: 2.5cm (1 inch) overlap of bonded area is recommended.

4. Dispense a small amount of Mopar (part # 05083855AA)/ Fusor #112B Structural Adhesive from the cartridge to ensure an even flow of both components. Attach a mixing tip and dispense a mixer's length of the adhesive.

Application:

1. Apply a 3/8 to 1/2 inch bead of Mopar / Fusor #112B structural adhesive to the bare metal mating surfaces (Backer Panels).
2. Position the backer panel against the underside of the original panel. Remember do not separate the panels once positioned together, slide the panel for proper alignment.

Illustration C:



3. If working on a rocker panel, lower quarter panel, or other location with limited access for clamping, use screws to hold the panels together during the curing process. Remove all adhesive squeeze out before it cures.

4. Allow the adhesive to cure approximately two to two and a half hours to reach handling strength. The Mopar / Fusor #112B fully cures in approximately eight hours. Expect the adhesive to be a little “tacky” on the surface once cured. This is a normal property of this adhesive.

5. Remove the clamps and/or screws. If screws must be used in a cosmetic area, all excess adhesive must be removed.

6. Bevel the screw-holes and prepare the joint and screw holes for the application of waterproof fiber-filled body filler. Complete the repair using conventional body filler.
7. Refinish following paint manufacturer's recommendation.

Corrosion

Overview:

There are certain rule of thumb conditions when repairing any type of corrosion:

All rust / corrosion must be removed or it will return.

Sand blasting / grinding will remove surface rust but it won't remove rust from deep in the pitting.

Any bare metal around the repair must have a corrosion resistant material applied to protect against future corrosion

Note: Most corrosion removing / neutralizing chemicals have safety / health concerns. Always follow manufacturer's recommendations when using corrosion removal equipment and chemicals.

Corrosion Perforation

Overview:

Corrosion perforation is any hole that has formed because of a corrosion condition.

When repairing corrosion perforation you must remove **all** corrosion prior to beginning the repair.

A cosmetic body panel does not require replacement in all cases of perforation. A new partial panel can be hand crafted or cut from an OE panel to accomplish a good lasting repair.

Corrosion perforation can be repaired using a repair panel and the overlap process or the backer panel process. The type of section to be used is usually determined by the location of the condition. A lower quarter panel can usually be repaired using the overlap procedure. On the other hand, using a backer panel to repair corrosion on the roof would be a better choice. Areas like a roof, which require a smoother transition of the new replacement panel and the existing panel, the backer process usually works better.

Roof Panel Repair

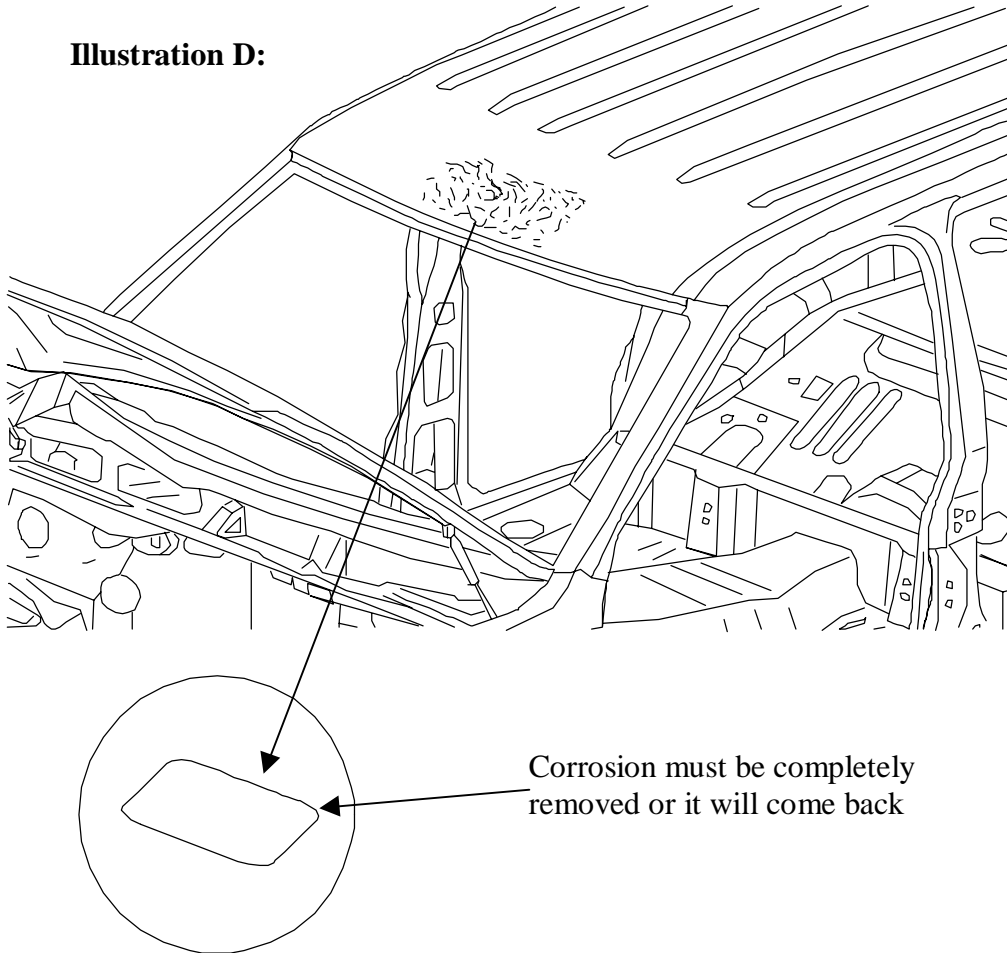
Overview:

When evaluating a corrosion condition on a roof panel you need to take into consideration things like extent of the condition. Will you need to remove the windshield to do the repair? Can a repair be made without removing the headliner? What type of joint would be best suited for this particular repair?

Roof Panel Repair using a Backer Panel:

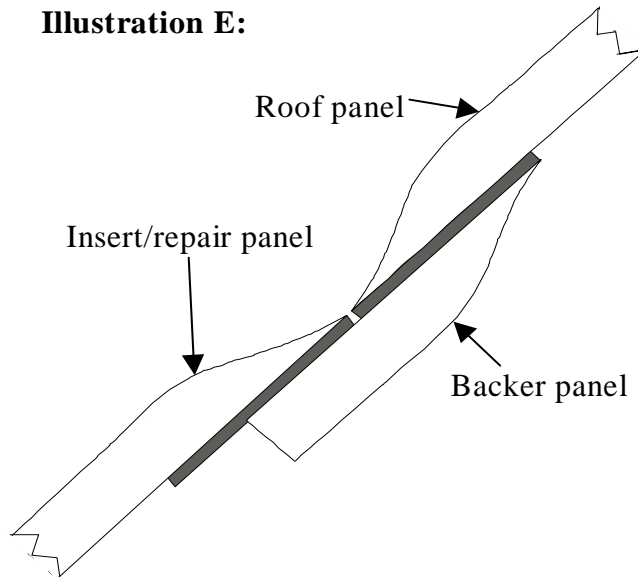
1. Remove all parts necessary to access the damaged area.
2. Remove all the corrosion from the panel being repaired. If there is any corrosion left behind, even if it's deep in the pitted areas the corrosion will return.

Illustration D:



3. All paint, primer, adhesive, and any other protective coatings must be removed from all mating surfaces prior to application of any adhesive for the backer panels. Grind a 2.5cm (1 inch) contact area on all panels where you will do your backer panel bond. The metal should be bare and shiny in appearance. The panels to be used as the backer panels must also be free of all coatings. Bevel the backer panel to prevent moisture or condensation from collecting between the panels.

Illustration E:



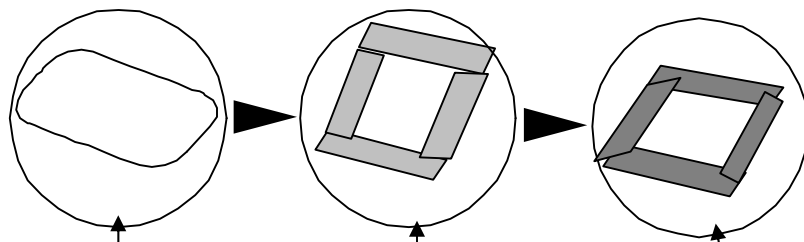
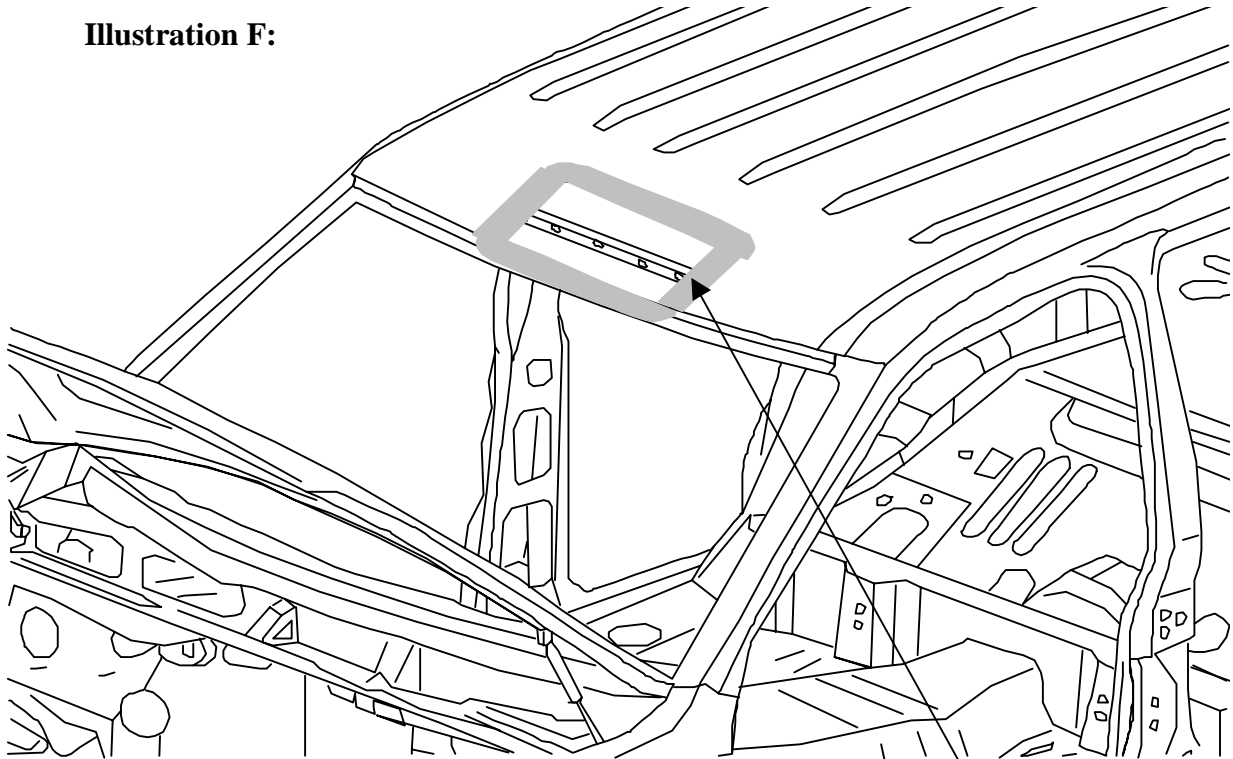
4. Pre-fit the backer panels to the roof and the insert patch to ensure a proper fit. If screws will be required to hold the backer panels and the insert in place during application they should be used during the dry fit.

5. Using Mopar (part # 05083855AA)/ Fusor #112B dispense a small amount of adhesive without the tip to assure there is an even flow of adhesive from both sides of the cartridge. Once you are sure there is even flow, install the mixing tip and pump the adhesive through the mixing tip.

Note: Apply the structural adhesive to all bare metal at the bond area. The adhesive has corrosion resistant properties built-in to protect the metal from corrosion.

6. Apply 3/8 to 1/2 inch of Mopar / Fusor #112B to the mounting area of the insert panels. From this point you will have approximately 70 minutes @ 21°C (70°F) to apply the adhesive and assemble the components.

Illustration F:



Backer panels in place
under the roof skin

Repair Panel

Backer Panels

Backer Panels with
Mopar / Fusor
#112B Structural
Adhesive applied

7. Use a body filler applicator to smooth the adhesive and to cover all bare metal to prevent corrosion.

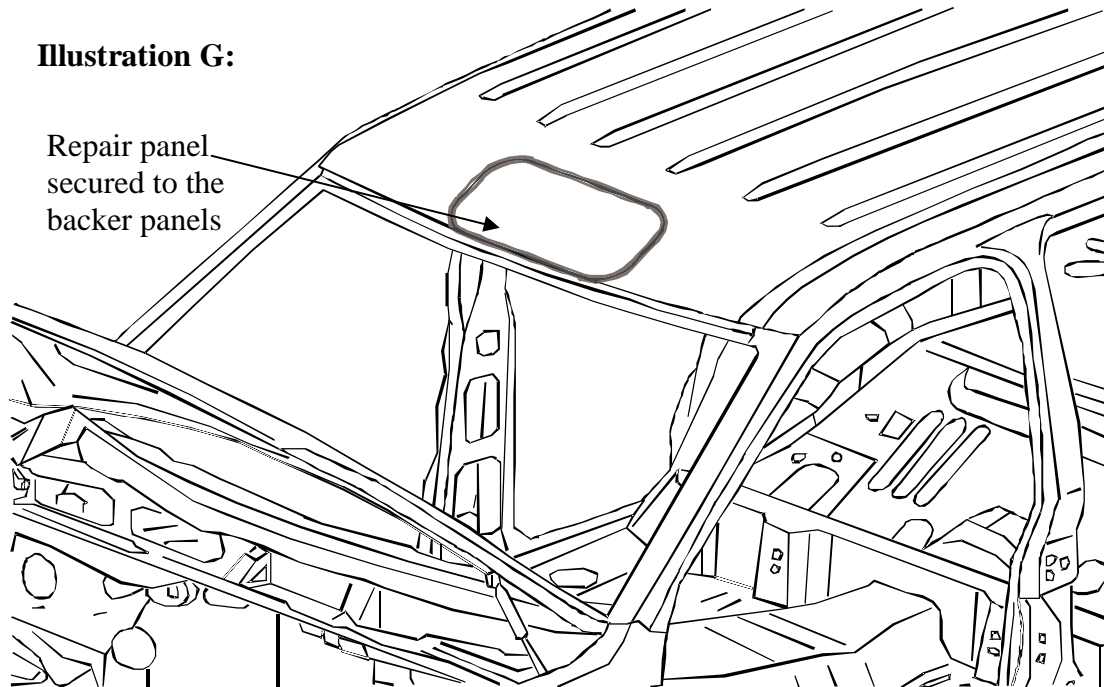
8. Position the backer panels into place using the clamps and/or screws from the prior dry fit process.

9. You may need to smooth or finesse the adhesive at the bond surface prior to installing the insert/repair panel.

10. Apply a small amount of adhesive to the underside of the insert/repair panel at the bare metal spots to ensure there will be corrosion protection

11. Secure the insert/repair panel in place using clamps and/or screws from the dry fit process.

Illustration G:



12. Remove all excess adhesive material from the work area.

13. Once the adhesive has achieved handling strength in approximately 2 ½ hours, remove the clamps and/or screws.

14. When the adhesive has reached full cure, if screws were used bevel the screw-holes and prepare the joint and screw holes for the application of waterproof fiber-filled body filler. Complete the repair using conventional body filler.

15. Refinish following paint manufacturer's recommendations.

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Hem Flange Corrosion

Overview:

Hem flange corrosion generally starts at the bottom of a down standing hem flange where water can collect. The condition can occur on hoods, liftgates, and door skins. The condition usually begins where the outer panel makes the turn upward to form the hem flange on the inside of the panel. The condition can vary from minor surface corrosion to perforation. The repair process will vary based on the severity of the condition.

Hem Flange Repair:

Overview:

When the condition is surface rust at the edge of the hem you would remove the corrosion, and apply a corrosion resistant primer. Seal the hem edge using seam sealer and topcoat following paint suppliers recommendations.

A slightly more aggressive corrosion condition may require opening of the hem to remove all the corrosion. Once the hem is opened you must remove all the corrosion and apply a corrosion resistant material to protect the sheet metal.

A couple of the most common corrosion resistant primers are acid etch primers and epoxy primers.

The adhesive The Chrysler Group recommends for hem repairs contains corrosion resistant properties (built in) so no primer is required.

Once the corrosion is removed from the hem area apply the Mopar / Fusor #112B adhesive, follow the directions that are supplied with the adhesive.

Move the hem back into place remove any excessive adhesive squeeze-out. After the adhesive has cured finish sand, prime, seam seal and paint.

Hem Flange Removal Repair:

Overview:

In cases where there are parts of the hem missing or the hem is very thin it may be easier to remove the hem completely to achieve an acceptable repair.

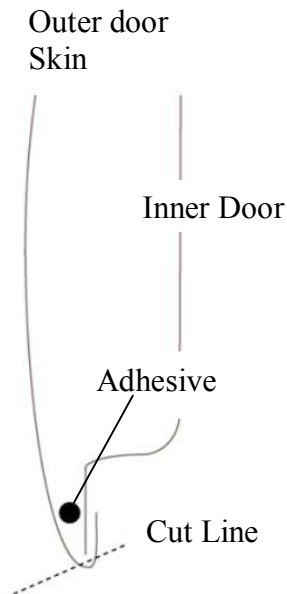
The outer door skin is bonded to the inner door structure around the perimeter of the door assembly. The hem is applied during the assembly process to hold the inner and outer door panels together until the adhesive is cured using heat from the paint process. Once the adhesive is cured there is no need for a full hem flange.

1. Use a grinder equipped with a 36 grit-grinding disc to remove the hem flange by grinding through the lower edge of the door skin. To do this you must use the grinder so the rotation of the grinding disc moves inward toward the inside of the vehicle at the cutting surface. If the grinding disc moves outward away from the door skin on the cutting edge you will peel the outer door skin away from the inner door causing damage to the skin.

2. Once you have cut through the skin, peel the remaining hem from the inner door.

3. Check the bond between the inner and outer door panels, at the bottom of the door if there are locations that require adhesive bonding use Mopar (part # 05083855AA)/ Fusor #112B structural adhesive. Follow the information on the instruction sheet for curing and work time.

Illustration H:



Note: There must be drain holes in the bottom of the door. If you apply adhesive to the bottom of the door make sure to you have a drain hole at the front and rear of the door.

4. Finish sand, prime, and topcoat per paint supplier's recommendation.

Panel Replacement

Door Skin

Overview:

This repair can be used for a full door skin/panel replacement like you would do for collision repair or a partial replacement such as a lower hem flange repair. In most cases a new door skin will require an overlap joint at the belt line. A partial door skin can also be applied at the lower section of the door using an overlap joint, either way the repair involves removing at least part of the original door skin. The new skin/panel will be installed using Mopar (part # 05083855AA)/ Fusor #112B, structural adhesive with no welding required.

Door Skin Removal:

1. To remove the damaged door skin/panel, first, grind the outer edge of the hem with an angle grinder until you have cut through the outer skin/panel.
2. Cut around weld nuggets using a hole saw.

3. Use an air chisel to remove the remaining door skin/panel.
4. If repairing hem corrosion that has perforation on the outer skin you can do a short door skin cut-in. An ideal place to do a short section would be under or behind an existing molding.

Surface Preparation:

1. Grind-weld nuggets flush with the door frame. Remove any adhesive, paint, E-coating, or other corrosion protection coating from the area where the Mopar (part # 05083855AA)/ Fusor #112B will be applied.
2. Straighten and align the door flange using a hammer and dolly.
3. On the new door skin/panel, wherever bonding is to occur, scuff with an abrasive pad to remove the gloss of the E-coat. Clean all bond surfaces to ensure they are free of dust and debris. Pre-fit the part for proper alignment.
4. Dry fit the new panel, you will need to determine where the best place is to apply clamps and in some cases (partial panels) where to place screws if necessary to hold the new panel in place.

Application:

1. Dispense a small amount of adhesive from the cartridge to level the plungers and to ensure an even flow of both components. Then, attach a mixing tip and dispense a mixer's length of the adhesive. From this point you will have approximately 70 minutes @ 21°C (70°F) to apply the adhesive and assemble the components.
2. Apply 3/8 to 1/2 inch bead of the Mopar (part # 05083855AA) / Fusor #112B structural adhesive to the bare metal mating surfaces. Use a body filler applicator to level the adhesive, making sure to cover all bare metal to protect against corrosion. Then apply a second bead of adhesive to ensure proper adhesive thickness.
3. Properly position the new skin/panel. If repositioning is necessary, slide the skin/panel, do not lift or separate the panels. Clamp/screw the frame and door skin/panel together to hold alignment while rolling the hem flanges. Remove excess adhesive before it cures to aid in clean up later.

Note: Do not pull the panels apart once they have been set in place. Pulling on the panel will introduce air pockets into the adhesive and weaken the bond. Any adjustments made to the panel should be done by sliding the panel.

4. Allow the adhesive to cure, it takes approximately two to two and a half hours to reach handling strength. The Mopar (part # 05083855AA) / Fusor #112B fully cures in approximately eight hours. It is normal for the adhesive to be a little tacky on the surface after full cure.
5. Remove clamps and screws. If any screws were used, bevel the screw holes and fill them using any remaining adhesive or the water proof body filler to be used at the overlap area.

6. Sand smooth, apply corrosion resistant primer and refinish according to paint manufacturer's recommendations.

Side Aperture Panel Repair:

Overview:

The Chrysler Group's recommended repair system for side apertures includes butt joints using backer panels with structural adhesive. Resistance spot welding with structural adhesive should be used at all pinch weld locations. A quarter panel repair would require weld bonding at the drain trough, and tail panel areas as well. MIG welds can be used in place of the STRSW without adhesive in the weld location by following I-CAR recommended procedures.

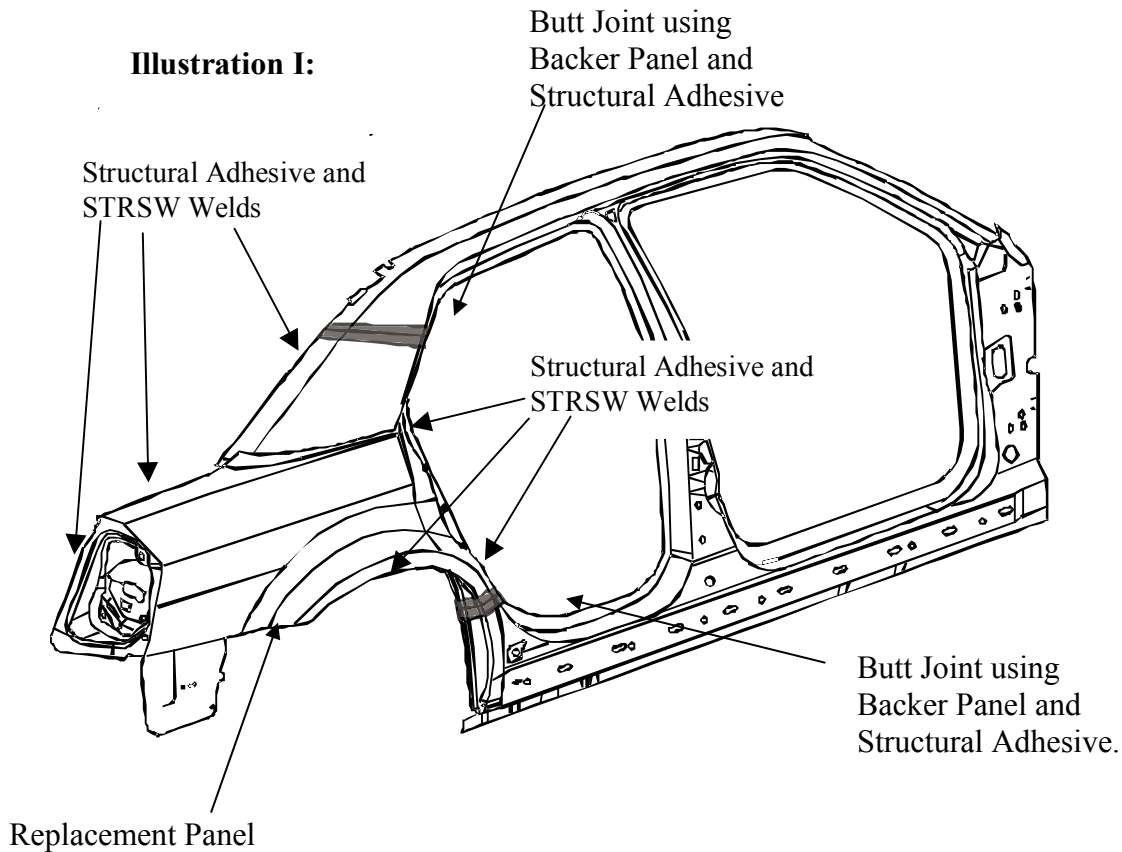
Quarter Panel Replacement:

Overview:

The location of the butt joints may be determined by the new replacement panel or the location or severity of the damage. During the panel removal process keep in mind that you may be using parts of the old quarter panel to make your backer panels.

1. Once you have determined where and how the new panel will be installed remove the old sheet metal.
2. Use a hammer and dolly to repair any damage to adjacent mating surfaces.
3. Grind all surfaces where the new panel will be mounted. Final surface preparation should be done using a 36 grit-grinding disk.
4. Dry fit the panel to the vehicle, it is recommended you have someone assist you.

Keep in mind where the butt joints will be and make the backer panels to be used at the butt joints. Determine how you will mount and hold the panel in place during installation. Make notes as to where you use clamps and screws so you can place them in the same location during installation.



Note: Using the Weld Bond Publication #81-170-03005 make test samples with scrap metal and adhesive to ensure your STRSW welder is ready to apply welds as required.

5. Using Mopar (part # 05083855AA)/ Fusor #112B dispense a small amount of adhesive with out the tip to assure an even flow of adhesive. Place the mixing tip on Mopar / Fusor #112B and purge the adhesive.
6. Apply 3/8 to 1/2 inch of Mopar / Fusor #112B adhesive at the mating surface where the two panels will join.
7. Use a body filler applicator to smooth the adhesive over all prepared mating surfaces making sure to cover all bare metal. Then apply a second bead of adhesive to ensure proper adhesive thickness.
8. Mount the panel to the vehicle, it is recommended you have someone assist you. If the panel needs to be adjusted, slide the panel to achieve proper fit. Do not lift to adjust the panel, lifting will induce air bubbles into the adhesive and weaken the bond.

9. Install the clamps and screws in the same locations developed during the dry fit process.
10. Remove all excess adhesive squeeze out prior to curing.
11. Apply the spot welds using the squeeze type resistant spot welding (STRSW) immediately or after the adhesive has cured for approximately 2 ½ hours. Once spot welding is completed clamps and/or screws can be removed.
12. If screws were necessary, bevel the screw-holes and prepare the joint and screw holes for the application of waterproof fiber-filled body filler. Complete the repair using conventional body filler.
13. Refinish using your paint supplier's recommendations

Panel Reinforcements

Overview:

On extreme use vehicles there may be a need to add reinforcement panels to sheet metal body panels for stiffening or for reinforcement.

One way to reinforce sheet metal panels is to use a structural adhesive as a bonding material between an existing panel and a new panel.

In most cases you will be required to cut and fit the new panel to fit the area requiring the reinforcing. Cracks in the original panel must first be stop drilled prior to installing a new part. All mating surfaces must be cleaned in preparation for the adhesive. Always follow the adhesive manufacturer's recommendations for application.

Floor Pan Repair:

Overview:

A typical panel reinforcement repair would be great for a floor pan that has stress cracks from extreme use. The repair consists of stop drilling all stress cracks to stop the cracks from spreading. Fit the new Mopar sheet metal part to the original sheet metal part. Tailor fitting of the new panel will usually be required so the new panel fits perfectly against the old panel. A complete skin coating of structural adhesive will be required between the two panels. Use screws to pull the two panels together, you want them to be as close together as possible. The structural adhesive has a glass bead that determines optimum thickness and restricts complete squeeze out.

Preparation:

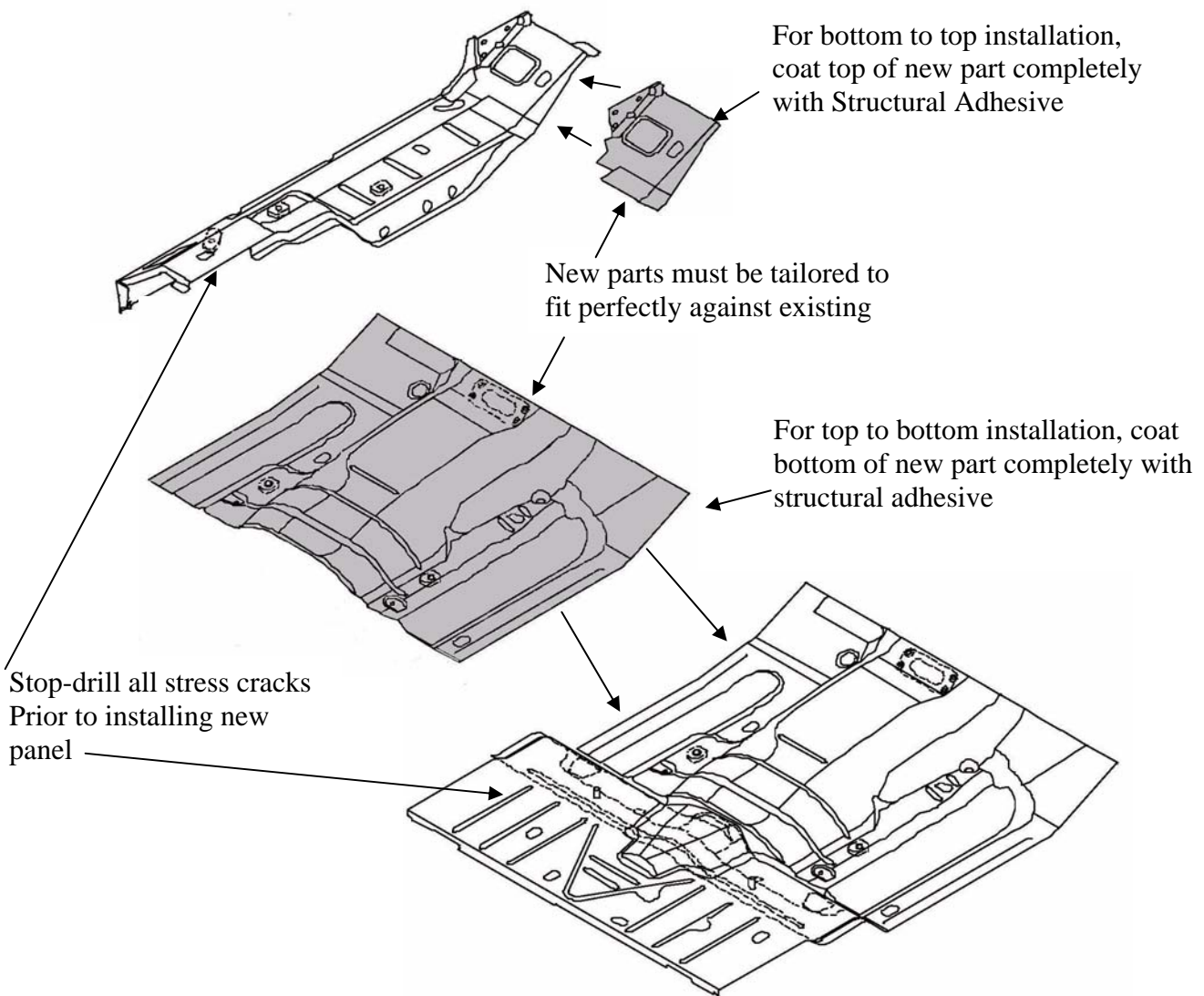
1. Clean the surface area to be repaired.
2. Stop-drill all cracks in the panel to be repaired.

3. Remove any rust, adhesive, grease, oils, or loose dirt from the surface you are going to bond to. Use a red scruff pad to abrade the surface of both panels. Clean all loose materials from the mating surfaces prior to installation.

4. Fit/tailor the new panel to fit flat under or over the original panel. The way you place the panel will be determined by the access you have. An example would be a floor pan. If you need to reinforce the center of the floor pan where you have a drive train restricting access. You may want to install it through the interior to the topside of the floor pan.

5. Dry fit the new panel using screws and clamps, the tighter the two panels fit the stronger the bond will be. The panels must fit perfectly against each other to achieve optimum reinforcement strength.

Illustration J:



Application:

1. Dispense a small amount of adhesive from the cartridge to ensure an even flow of both components. Attach a mixing tip and dispense a mixer's length of the adhesive. From this point you will have approximately 70 minutes @ 21°C (70°F) to apply the adhesive and assemble the components.

2. Apply a thin coat of the Mopar (part # 05083855AA)/ Fusor #112B to the entire surface of the new panel.

3. Position the new reinforcement panel to the old panel. Remember slide the panel to make any adjustments.

4. Install the screws and clamps evenly and tightly. The glass beads in the adhesive will prevent over-clamping and excessive squeeze-out of the adhesive.

5. Use the adhesive squeeze out to finish the edge of the panel at the overlap. Remove the excess adhesive before it cures this will save time later.

6. Allow the adhesive to cure. The Mopar / Fusor #112B takes approximately two to two and a half hours to reach handling strength. The Mopar / Fusor #112B fully cures in approximately eight hours. It is normal for the adhesive to be a little tacky on the surface after full cure.

7. Remove clamps and screws, bevel the screw holes and fill them using the remaining adhesive.

8. Depending on the location of the repair and overlap seams, surface finishing may vary from sanding, priming and painting to the simple application of a Mopar rubberized undercoating.

Training:

DaimlerChrysler Motors Corporation LLC offers certified body and paint technician training through the DaimlerChrysler Training Academy in conjunction with I-CAR and I-CAR Training Alliance Courses.

Fusor Aftermarket Adhesives is a member of the I-CAR Training Alliance. For technical information on Mopar 05083855AA/Fusor® #112B, call 1-800-234-FUSOR or visit www.fusor.com For additional copies of this publication #81-316-0610, call 1-800-890-4038.



DaimlerChrysler Academy (DCA) is pleased to introduce the 2005 Technician Certification Plan.

Here are the highlights:

2005 Certified and Certified Specialist requirements remain the same as they were in 2004.

Certified must complete:

- All of the courses within Levels 1,2, and 3 in a specific skill category
- 8 of 12 Master Tech releases and achieve 80 percent or better on the quizzes

To maintain Certified status, technicians must complete two additional courses plus all applicable New Technology and Course Updates within the skill categories.

Certified Specialist must complete:

- The courses within Levels 1,2,3, and 4 in a specific skill category
- 8 of 12 Master Tech releases and achieve 80 percent or better on the quizzes
- ASE Certified in skill area

To maintain Certified Specialist status, technicians must complete one additional course plus all applicable New Technology and Course Updates within the skill categories.

New for 2005, Master takes on one new element: The dealership must achieve the minimum Five Star FFV requirement

Master level can be achieved in the following areas:

Powertrain Master — Must meet Certified Specialist requirements for skill areas 2,6, and 8:
Automatic Transmissions, Electrical and Engine Performance

Electrical Master — Must meet Certified Specialist requirements for skill areas 6 and 7:
Electrical and A/C and Heating

Chassis Master — Must meet Certified Specialist requirements for skill areas 3,4, and 5:
Manual Transmission, Steering and Suspension and Brakes

Body and Paint Master — Must meet Certified Specialist requirements for skill areas 11,12, and 14:
Body Mechanical, Body Repair and Refinishing

To maintain Master level status, technicians must complete all applicable New Technology and Course Updates within the skill categories.

The core curriculum continues to be refined in order to minimize the time a technician spends attending training. Since 2000, the amount of live training days has been reduced 38 percent from 62 to 45 days. Training is offered at 166 locations across the United States. Over 27 percent of our courses delivered in 2004 were held at mobile sites.





HEMI.com, the official DaimlerChrysler HEMI® Web site.

Learn about the history of the early HEMI®, built by Chrysler, DeSoto, and Dodge. Get all the details on the 426 HEMI on the street and in race cars, from NASCAR stock cars at Daytona and Darlington, to NHRA Super Stock, Funny Cars, and Top Fuel dragsters. Meet the engineers who designed the original HEMI, the 426 HEMI and the new 5.7 HEMI. Learn how Don Garlits and other legendary racers adopted the 331, 354, 392, and finally the 426 Hemi as they set records year after year.

**WE SUPPORT
VOLUNTARY TECHNICIAN
CERTIFICATION
THROUGH**



DaimlerChrysler Corporation

DEALER TECHNICAL OPERATIONS

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