Procedure for Sectioning Joints with Backer Plate using LORD Fusor® Adhesives

Materials Needed:

- LORD Fusor 110B/111B Metal Bonding Adhesive (Fast)
- LORD Fusor 108B/109B Metal Bonding Adhesive (Medium) or LORD Fusor 112B/113B Metal Bonding Adhesive (Slow)
- LORD Fusor 123/126 Non-Sag Seam Sealer (Fast), or LORD Fusor 123EZ/126EZ Non-Sag Seam Sealer (Medium), or LORD Fusor 800EZ/801EZ/803EZ Factory Match Urethane Sealer/Adhesive
- LORD Fusor 300 or 301 Manual Dispensing Gun, or LORD Fusor 304 or 304X Pneumatic Dispensing Gun

This repair procedure describes the proper steps for assembling a section joint with a backer plate. This is not the preferred joint, but at times, certain applications may lend themselves to this technique. We continue to recommend an overlapped section joint wherever possible.

Both LORD Fusor® 108B/109B and 112B/113B metal bonding adhesives are recommended for this procedure, depending on temperature and work time needed. For this repair procedure, LORD Fusor 108B/109B metal bonding adhesive will be used.

Original Panel and Backer Plate

Panel Sectioning

1. Follow all the steps in this repair procedure for installing panels.
2. Pre-bevel to <10 degrees the original panel section joint edge **(see Illustration A)**.
3. Grind a 1 inch (25.4 mm) area of the underside of the section joint on the original panel to remove any primer, e-coating, corrosion protection or galvanized coating. If the metal has a pewter appearance, then all of the galvanized coating has not been removed. The metal should be shiny in appearance. Be careful not to damage the corners or thin the metal. Because this is on the underside of the panel, it may be difficult to easily abrade. However, this is an important step.
4. Prepare a 2 inch (50.8 mm) backer plate that will overlap the underside of both the new panel and the original panel seam by 1 inch (25.4 mm) and cover the complete seam. Grind the front side of the backer plate to remove any primer, e-coating, corrosion protection or galvanized coating that may be present. Bevel the backer plate to prevent moisture condensation from collecting **(see Illustration B)**.
5. Pre-fit the backer plate to both joint panels to ensure a good fit.

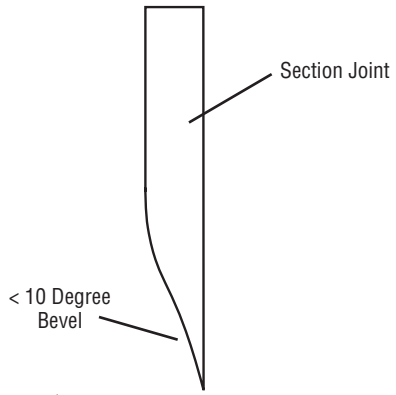
Note: Only a 1 inch (25.4 mm) overlap of bonded area is recommended.

Adhesive Preparation

1. Insert the LORD Fusor metal bonding adhesive cartridge (Stock #110B/111B) into the dispensing gun. Squeeze a small amount of product from each side of the cartridge to level the plungers.
2. Attach a mixing tip and dispense a small amount of adhesive, which is about the length and width of the mixer. Dispense until the product is evenly mixed and the color is consistent.

Note: From this point you will have about 5-8 minutes at 70°F (21°C) to apply the adhesive and assemble the components.

Illustration A



Note: Not drawn to scale.

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Backer Plate Installation

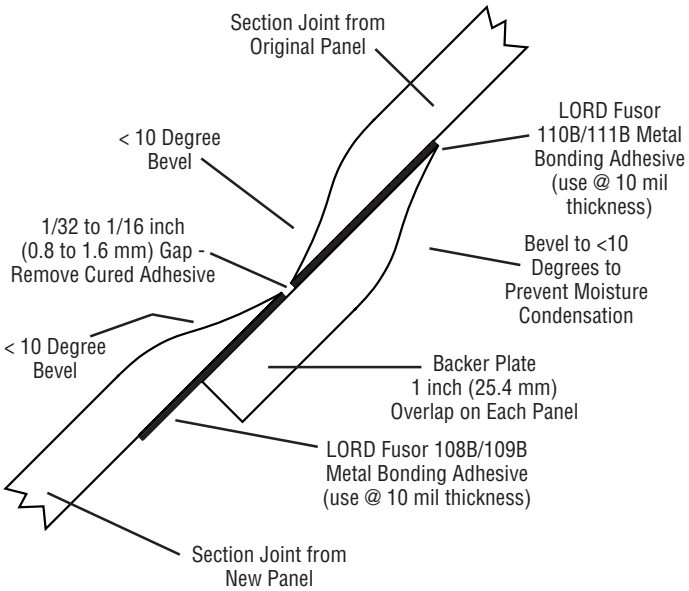
1. Apply a 3/8 to 1/2 inch (9.5 to 12.7 mm) bead of LORD Fusor metal bonding adhesive (Stock #110B/111B) to the bare metal mating surfaces.
2. Properly position the backer plate against the prepared underside of the original panel. Once it has been positioned, do not pull it away from the vehicle. If repositioning is necessary, slide the panel. This maintains proper contact between the two panels.
3. Clamp tightly and evenly. The glass beads in the adhesive will prevent you from over clamping. Where possible, wipe excess adhesive from panel before it cures. This will save you time later.
4. Allow the adhesive to cure for 20-30 minutes. Expect the adhesive to be a little “tacky” on the surface as this is a normal property of the adhesive.
5. Remove clamps. All excess adhesive must be removed from the cosmetic repair area with an abrasive wheel.

New Panel

Panel Sectioning

1. At the section joint edge of the new panel, grind a 1 inch (25.4 mm) area of the back of the new panel to remove any primer, e-coating, corrosion protection or galvanized coating that may be present. Be careful not to damage the corners or thin the metal.

Illustration B



Note: Not drawn to scale.

2. Pre-bevel to <10 degrees the section joint edge of the new panel **(see Illustration A)**.
3. Ensure that the vehicle is evenly supported at normal suspension points.
4. Pre-fit all parts to ensure proper alignment. Make sure that there is a 1/32 to 1/16 inch (0.8 to 1.6 mm) gap between the two outer panels **(see Illustration B)**.

Adhesive Preparation

1. Insert the LORD Fusor metal bonding adhesive cartridge (Stock #108B/109B) into the dispensing gun. Squeeze a small amount of product from each side of the cartridge to level the plungers.
2. Attach a mixing tip and dispense a small amount of adhesive, which is about the length and width of the mixer. Dispense until the product is evenly mixed and the color is consistent.

Note: From this point you will have about 40-50 minutes at 70°F (21°C) to apply the adhesive and assemble the components.

Panel Installation

1. Apply a 1/8 to 1/4 inch (3 to 6 mm) bead of LORD Fusor metal bonding adhesive (Stock #108B/109B) to the bare metal mating surfaces. Using an acid brush, spread a coat of the adhesive to cover all of the bare metal surfaces to ensure corrosion protection. Next, apply a 1/8 to 1/4 inch (3 to 6 mm) bead of LORD Fusor metal bonding adhesive (Stock #108B/109B) to all mating surfaces.
2. Properly position the new panel. Once the panel has been positioned, do not pull it away from the vehicle. If repositioning is necessary, slide the panel. This maintains proper contact between the two panels.
3. Clamp tightly and evenly. The glass beads in the adhesive will prevent you from over clamping the bondline. Apply screws in hard-to-clamp areas. Where possible, wipe excess adhesive from panel before it cures. This will save you time later.
4. Allow the adhesive to cure for 1-1/2 to 2 hours. Expect the adhesive to be a little “tacky” on the surface as this is a normal property of the adhesive.
5. Remove clamps and screws. All excess adhesive must be removed from the cosmetic repair area.
6. Ensure that the edges have been beveled to <10 degrees with 36- or 40-grit grinding disks. Taper the beveled edges so that there is a smooth transition **(see Illustration B)**.

7. Recess screw holes with a punch and hammer. Finish with fiber-filled body filler on the section seam, then complete the repair with conventional body filler. Cure and rough-sand the filler after the adhesive has fully cured. Block-sand, prime and paint per manufacturer's recommendations.
8. Use LORD Fusor non-sag seam sealer (Stock #123/126 or #123EZ/126EZ) or LORD Fusor factory match urethane sealer/adhesive (Stock #800EZ/801EZ/803EZ) wherever a cosmetic seam sealer is required.

Note: Do not hurry the job. Make sure that all cure time requirements are met or exceeded to provide even better quality.

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