

Semi-Truck Trailer Roof Replacement Procedure using LORD Fusor[®] Adhesives

Materials Needed:

- LORD Fusor 112B/113B Metal Bonding Adhesive (Slow) (approx. 12 to 14 adhesive cartridges are required for a 53-foot trailer)
- LORD Fusor 304 Pneumatic Dispensing Gun

Removal of Roof Panel

1. Using an air chisel and pliers, turn up the hemflange.
2. Punch or drill out rivets.
3. Roll aluminum skin using vise grips to stop roll-back.

Note: Wear heavy gloves to protect hands from sharp edges on aluminum skin.

4. Contain aluminum roll with bailing wire.
5. Lower the roll with a forklift.

Surface Preparation

1. Straighten damaged rail and replace sections where required.
2. Remove all rivet shanks that may be present.
3. Weld and flat finish any torn areas.
4. Scuff all mating surfaces using an angle grinder with a 36-grit Roloc[™] wheel or equivalent.
5. Blown away debris with an air gun. Be sure that the air does not have any oil or water in it.

Note: Do not use any cleaners after the mating surfaces have been scuffed.

Adhesive Preparation

1. Make sure one small push pad and one large push pad are installed on the dispensing gun.
2. Insert the LORD Fusor metal bonding adhesive cartridge (Stock #112B/113B) into the dispensing gun. Squeeze a small amount of product from each side of the cartridge to level the plungers.
3. 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.

Roof Panel Installation

1. Raise the new roof material into position with a forklift.
2. Unroll roof material the length of the trailer, working from the rear of the trailer forward.
3. Align the new roof panel so that one side is flush to the edge along the entire length of the trailer.
4. Clamp the flush side. Trim the opposite side using an air nibbler so that it is flush to the edge along entire length of the trailer.
5. Unclamp and raise roof material. Grind both sides of roof material along all mating surfaces using an angle grinder with 36-grit wheel.
6. Grind the mating surface of the J-molding, equal to the length of the trailer on both sides.
7. Blow mating surfaces clean of all debris. Lower roof material and secure with vise grips.

Rear Header

1. Cut roof material flush with back of trailer.
2. Along rear header, drill holes for buck rivets every 4-6 inches (10.2-15.2 cm).
3. Apply masking tape on underside of rear header panel to prevent adhesive from squeezing out.
4. Lift roof material from rear header to approximately three feet back along each side.
5. Apply a 3/8 inch (9.5 mm) bead of LORD Fusor 112B/113B metal bonding adhesive along the 3-foot area on each side roof rail and a 1/2 inch (12.7 mm) bead of adhesive along rear header.
6. Install rivets along rear header and clamp the 3-foot area on both sides.
7. Apply approximately 3/8 inch (9.5 mm) bead of adhesive to J-molding and install J-molding along rear header.

Note: Some style trailers will not allow installation of J-molding. Reinforce rear header by rivet-bonding a piece of 1-1/2 to 2 inch (38.1-50.8 mm) aluminum flat stock (16 gauge or greater) to the rear header, sandwiching the roof material.

Roloc is a trademark of 3M.

Side Roof Rails

1. Lift remaining length of roof material. If masking tape has not been applied to the underside of side roof rails, do that now to prevent adhesive from squeezing out.

Note: To reduce installation time, fabricate a stretching mechanism that attaches to the fork-lift. Once roof material is rolled out, measured and trimmed, use the forklift to stretch and raise the roof material.

2. Apply approximately 3/8 inch (9.5 mm) bead of LORD Fusor 112B/113B metal bonding adhesive along remaining length of both side roof rails.

Important: Do not apply adhesive to front header at this time.

3. Lower roof material and stretch.
4. Apply approximately 3/8 inch (9.5 mm) bead of LORD Fusor 112B/113B metal bonding adhesive to previously scuffed mating surface of J-molding.
5. Install one rivet at both end of all sections of J-molding. This will secure the roof so that the stretching mechanism can be released before front header installation.

Front Header

1. Release stretching mechanism.
2. Trim roof material flush with front edge of trailer.
3. Apply approximately 3/8 inch (9.5 mm) bead of LORD Fusor 112B/113B metal bonding adhesive along front header.
4. Install J-molding along front header. If necessary, cut "V's" in J-molding to allow for curve.
5. From inside the trailer, apply a single-component urethane to all the roof bows.
6. For cosmetic purposes, use a dry rag to wipe excess adhesive from the entire roof assembly.

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