

Detroit Autobody Equipment Company
100 Park Street
Troy, Michigan 48064

Model 750-HDA electric heat gun, heavy duty industrial grade 750°F

Special formula heat curable vinyl patching compound.

Applicator Trowel tools

Scalper knife

Grain-die compound

Silicone mold release

Practice vinyl samples

General Information

Applying patching compound is a multiple layer procedure at alternate filling and curing.

On flat or horizontal roof areas, use a moist sponge (not wet) to cool the repair area between heat cycles to prevent the patching compound from setting up too fast. Cooling is also accomplished by operating the heat gun on the COLD position.

On sloped or vertical roof areas, keep the work area warm so the patch compound will partially set up as it is applied to the joint to prevent running and tear-drop effects.

Sand down high spots with 200 grit open coat paper, then regrain and re-spray, or cut out undesirable area and repeat repair procedure.

If repair is too low, refill, recure, regrain and spray color.

Keep patching compound away from the heat gun air stream to prevent hardening in the jar. Store compound in a cool place.

Practice Procedure

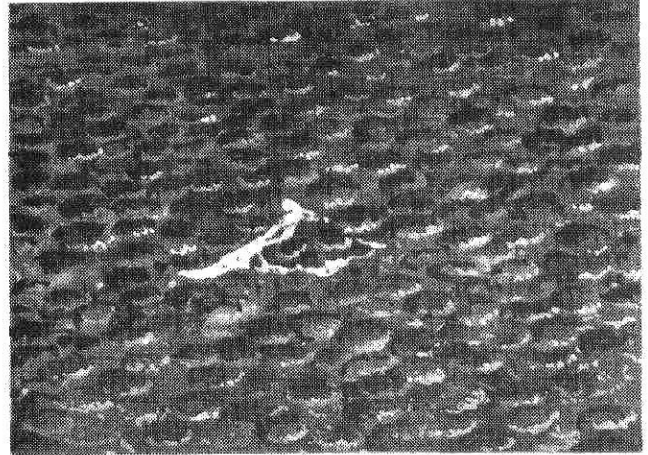
Use sample vinyl swatches in kit for practice. Cut a hole or slit in the sample and glue it to a piece of sheet metal with trim cement. After trim cement dries, make practice repairs in the flat position. Follow by making practice repairs in the vertical position.

Instructions On Use Of Heat Gun

1. Gun is hottest when using shortest possible heavy duty extension cord. Beware of drop light cords and long extension cords with small wires where the line of voltage drop can seriously reduce heat output of the gun.
2. Gun is hottest when adjustable air intake louvers are closed. Regraining procedures require maximum temperature - use closed louvers with nozzle distance 1 inch from work.
3. Curing each layer of Vinyl Patching Compound is normally done at 1 inch nozzle distance. Adapt louver opening to suit rate of cure desired.
4. Move gun nozzle in circular motion over repair area (whether curing or regraining) to get best temperature distribution at the vinyl surface.
5. Before turning gun OFF, flip switch from hot to cold for a few seconds to cool the heater element.
6. Do not drop gun - the ceramic heater element may fracture.

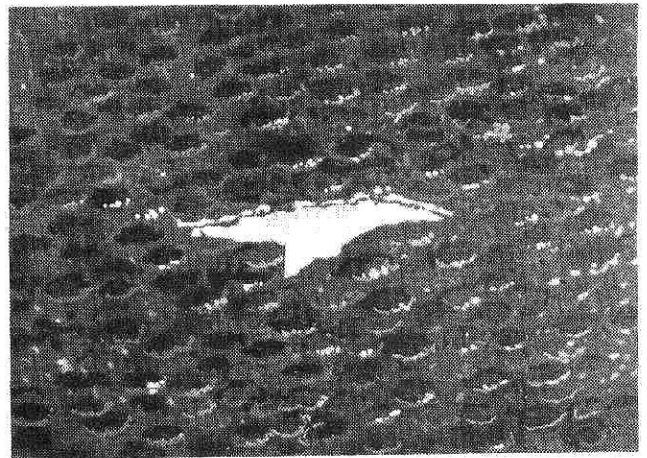
Vinyl Roof Repair Procedure

1. Make a grain die by following the Vinyl Grain Pattern Die procedure which is given in this Part. This die will be used later to regrain the repaired area.
2. If damaged area is small (Fig. 8), use scalpel knife to cut out loose vinyl material back to where vinyl material is securely bonded to roof. Cut out all fibrous strands. Cut to obtain a clean edge condition as shown in Fig. 8.



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FIG. 7 Typical Vinyl Roof Damage

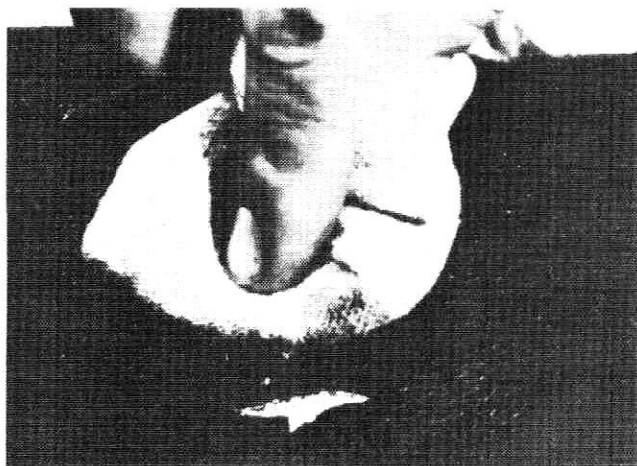


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FIG. 8 Vinyl Roof Damage After Trimming

If damaged area is larger, cement loose material back into place with trim cement and allow to dry. Cut out at least 1/16 inch of material on both sides of the tear line in which to place the vinyl patching compound.

3. Clean the area to be repaired with vinyl prep conditioner by spraying the conditioner **onto a clean cloth** and wiping the area (Fig. 9). **Do not spray the prep conditioner directly onto the repair area.**



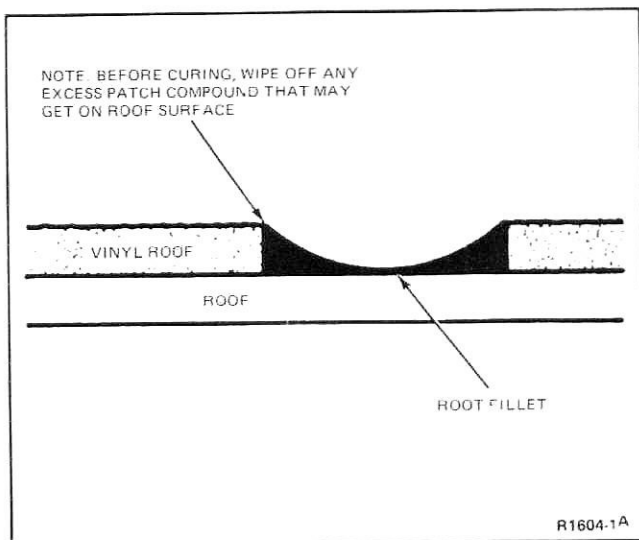
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FIG. 9 Cleaning Damaged Area

4. Apply patching compound with applicator trowel tool as follows (Refer to Figs. 10 and 11):



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FIG. 10 Applying Patching Compound

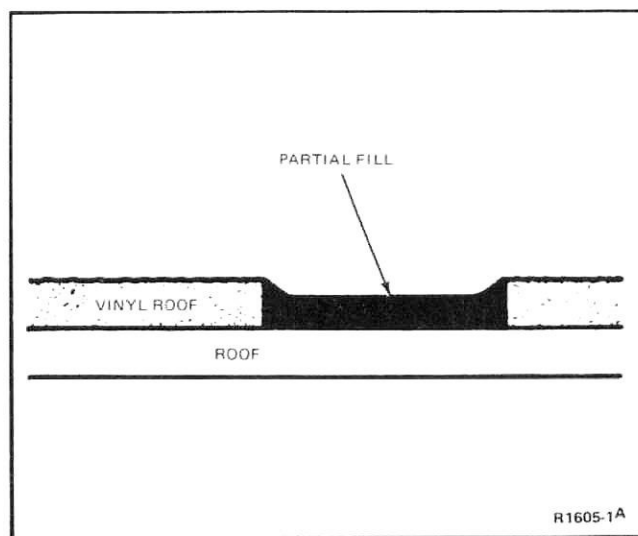
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FIG. 11 Patching Compound—First Layer

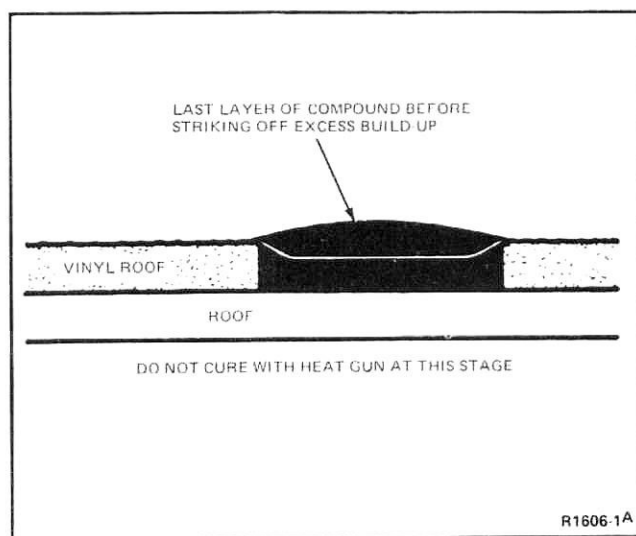
Apply the first layer in small quantities to the metal-vinyl edge joint to make a root fillet as shown in Fig. 11. Before curing, wipe off any excess patch compound above the joint with a clean dry cloth.

Hold the heat gun approximately 1 inch away from the repair and move the gun in a circular motion. Curing takes about 20 seconds and is complete when the compound turns from white to translucent. Press down on the roof material around the joint with fingers during heat-cure cycles to keep area flat.

Repeat the procedure of applying patching compound and heat curing - always in thin layers. (Refer to Figs. 12 and 13.) Usually three layers are adequate to complete the job but larger holes may require four to five layers.



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FIG. 12 Patching Compound—Intermediate Layer(s)

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FIG. 13 Patching Compound—Last Layer

After heat curing the next-to-last layer, the joint cross-section will appear as shown in Fig. 12 and be warm. Apply patching compound to obtain a slight build-up above the vinyl surface as shown in

Fig. 13. Wait until this last application turns to a gel-like consistency (about 10 seconds). **DO NOT CURE WITH HEAT GUN AT THIS STAGE.** Then, draw the side edge of the trowel tool over the face of the patch area to strike off the excess build-up to get a level surface (Fig. 14). Also, remove any excess compound that may smear on the vinyl roof material adjacent to the patch area otherwise it will cure to the roof material and cause unwanted build-up on the surrounding area. Joint is now ready for the final heat cure and regaining procedure.

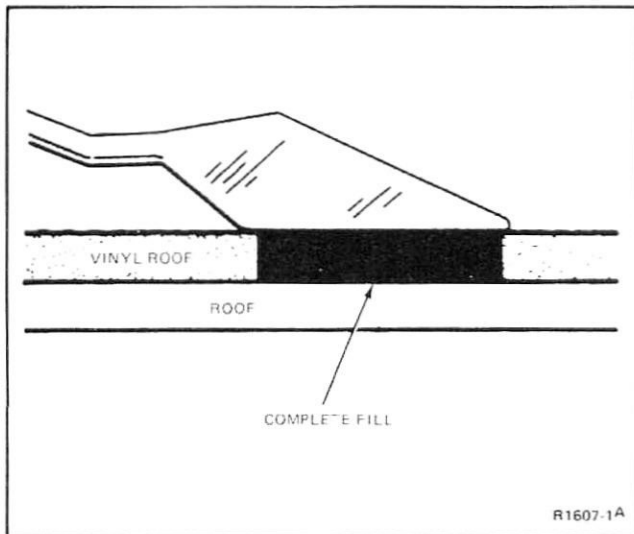


FIG. 14 Leveling Surface

5. Cure this last leveled layer by heating the patched area for about 30 seconds at 1 inch nozzle distance (always moving the gun nozzle in a circular motion) until the immediate surrounding vinyl develops a shiny glazed appearance. Have grain pattern die ready in the other hand.

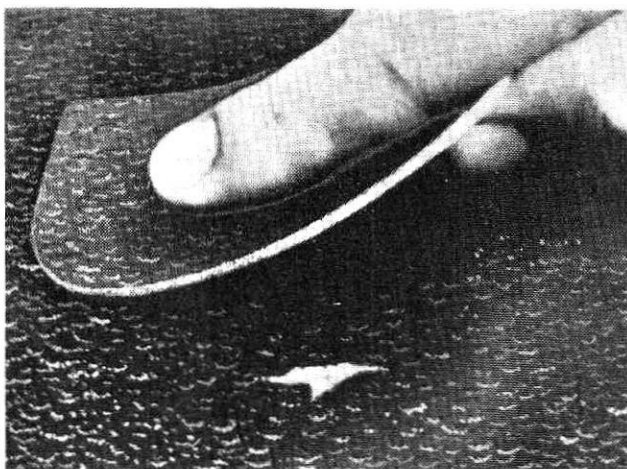


FIG. 15 Applying Grain Pattern Die

6. Remove heat and immediately press grain pattern die with force (Fig. 15). Hold die on repair for at least 10 seconds to obtain a good impression.
7. Cool the repaired area with a moist sponge or cold air blast from the gun.
8. Spray vinyl prep conditioner on a clean cloth and lightly dab the area. **Do not rub.**
9. After the repair area has cooled, color spray with a back and forth sweep to fog in the vinyl roof color.

Vinyl Grain Pattern Die

A graining die can be made to duplicate any print desired. It is made by taking an impression from the vinyl material in an area adjacent to the repair or from a piece of scrap having the same grain.

1. Clean the vinyl material from which the print will be made with any suitable mild vinyl cleaner.
2. Dry the material.
3. Spray a 6 x 8 inch area with Silicone Mold Release or equivalent.
4. On a glass surface, place about two tablespoons of Grain Die Compound and add seven drops of Fast Set Liquid Hardener or equivalent to the compound (Fig. 16). Mix thoroughly with a stick or spatula.



FIG. 16 Mixing Grain Die Compound

5. Scrape the mixture onto the vinyl material that has been sprayed with mold release and level out on a 4 x 6 inch area.
6. Cut an 6 x 8 inch piece of vinyl material of the same grain pattern, and place it over the compound. Place the grain side up, fabric side down. Refer to Fig. 17.