FIBERGLASS BODY CARE AND REPAIR

TYPES OF FINISHES

There are two types of fiberglass material finishes:

1. *Gel Coat finish:* This finish is made of a special pigment and blended polyester resin several thousandths of an inch thick.

2. *Painted finish:* This finish is painted on a "paintable" grey colored Gel Coat using standard painting procedure.

Identifying Finish

It is difficult to identify which finish has been used on a sidecar body. Generally, standard colors; e.g., black or white, are Gel Coat finishes. Most other colors are painted finishes.

If the finish had been damaged and a grey undercoat is visible, a painted finish is indicated. (The grey undercoat is a paintable Gel Coat.)

CARE OF FINISHES

The Gel Coat finish requires minimum care and can be kept new looking by following these easy maintenance rules:

Clean, buff and wax the exterior periodically to renew finish.

An automotive wax type cleaner containing fine rubbing compound is suitable for removing minor scratches and scuffs. Scratches which are not removed by the rubbing compound can be removed by wet sanding with 400 grit sandpaper. Then wet sand with 600 grit sandpaper, rebuff and apply wax polish.

Care should be taken not to cut through the gel coat surface when buffing. A power buffer may be used with care or the surface may be buffed by hand, using a rubbing compound.

REPAIRS

Patch and fill in deep scratches, scars and small breaks.

Repair any major breaks as soon as possible, to avoid any additional damage.

For damage to the gel coat finish, a can of **Gel Coat** of the same color and a small amount of catalyst is needed. For deeper holes, breaks, or gouges, some fiberglass mat and pre-accelerated polyester resin will also be required. Gel Coat, catalyst and the other materials including fiberglass mat, and pre-accelerated polyester resin are available at most marine or automotive supply stores.

NOTE

If Gel Coat of matching color cannot be obtained, the entire body must be painted.

Damage to the painted type finish can be repaired by sanding, priming and painting using regular painting procedure.

SURFACE FINISHING

Gel Coat Touch-Up and Surface Repairs

This type of damage may be classified as damage to the gel coat only, or a hole or gouge that is deep enough to slightly penetrate fiberglass material. Repair as follows:

1. To be sure that the area to be patched is dry, clean and free of any wax or oil, wash with lacquer thinner.

2. Roughen the bottom and sides of the damaged area, using a power drill with a burr attachment. Feather the edge surrounding the scratch or gouge, being careful not to undercut this edge. See Figure 4-1.

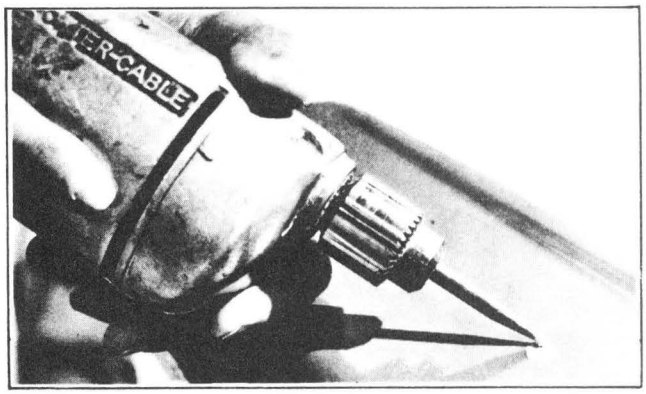

Figure 4-1. Roughing Damaged Area

3. A small amount of gel coat, the same color as the finish should be placed in a small can lid or on a piece of cardboard. Use just enough to fill the damaged area. If damage has penetrated through to fiberglass material, an equal amount of fibers, which can be taken from glass mat and shredded into small fibers, should be mixed with the gel coat — using a putty knife or flat stick. Add three drops of catalyst per teaspoon of gel coat using an eye

dropper. Be sure to mix the catalyst thoroughly for maximum working time. Maximum working time (pot life) will be about 15 to 20 minutes at which time it begins to "gel". See Figure 4-2.

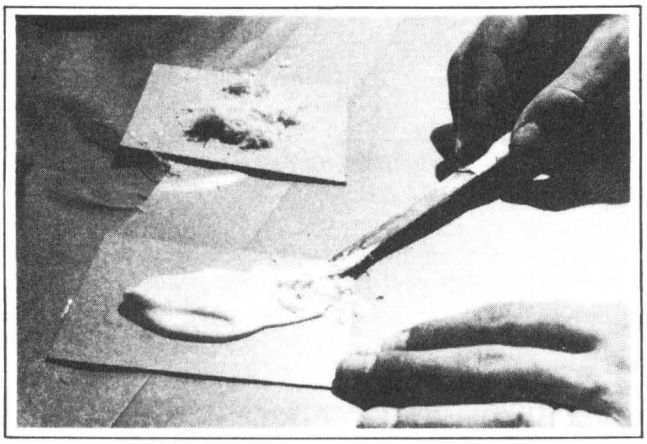

Figure 4-2. Mixing Gel Coat Glass Fibers

4. Fill the scratch or hole above the surrounding undamaged area about 1/16", working the material into the damaged area with the sharp point of a knife. Be careful to puncture and eliminate any air bubbles which may occur. See Figure 4-3.

NOTE

If fiberglass fibers have not been used in mixture, skip Steps 5 thru 7 and proceed with Step 8.

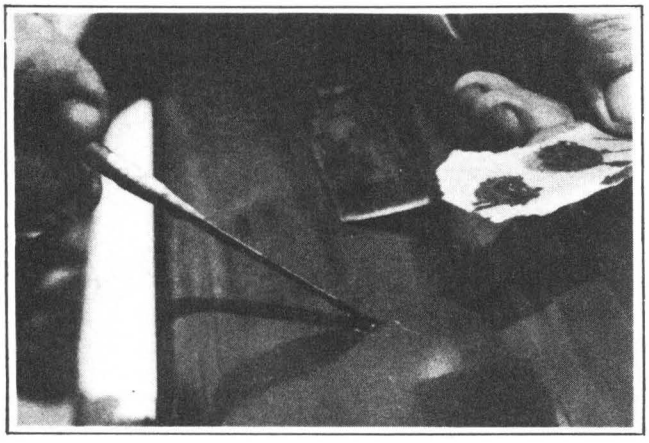

Figure 4-3. Filling Hole or Scratch

5. When the patch feels rubbery to touch, (10 - 15 minutes), trim the patch flush with the surface, and then allow to cure completely (30 - 60 minutes). Patch will shrink slightly as it cures, making a depression. See Figure 4-4.

6. Carefully roughen up the bottom and edges of the depression, using the electric drill with burr attachment, as in Step 2. Feather into surrounding gel coat; do not undercut.

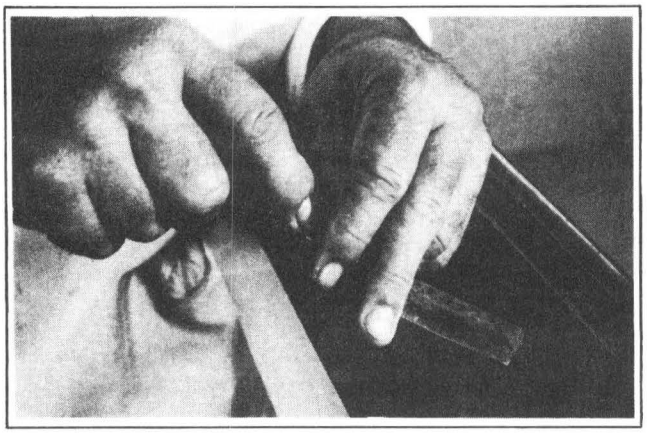

Figure 4-4. Trimming Patch

7. Again mix a small amount of gel coat with catalyst — do not use glass fibers. Using your finger or putty knife, fill the depression with gel coat 1/16 in. above the surrounding surface.

8. Spread the gel coat level with the surrounding area and allow to cure (30 - 60 minutes). See Figure 4-5. Gel coat can be covered with cellophane, if desired, to aid in spreading evenly. Remove cellophane after gel coat has cured.

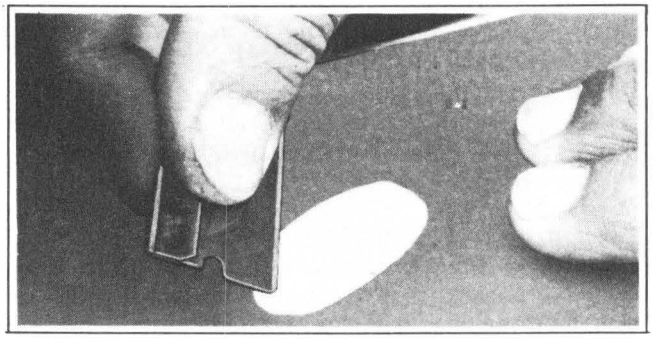

Figure 4-5. Spreading Gel Coat Evenly.

9. Sand the patched area, using a sanding block with 600 grit wet sandpaper. Finish by buffing with fine rubbing compound such as DuPont #606 and waxing. Weathering will aid to blend touch-up if a slight color difference can be observed. See Figure 4-6.

NOTE

Where surface color of part has changed due to weathering, color match of patch may not be satisfactory. In this case, entire panel must be sprayed.

Thin Gel Coat with acetone (1 to 1 ratio) and spray panel, blending sprayed area into a radius or corner on the part. Use a touch-up spray gun such as the Binks Model 15. After Gel Coat is hard, buff and polish sprayed area.

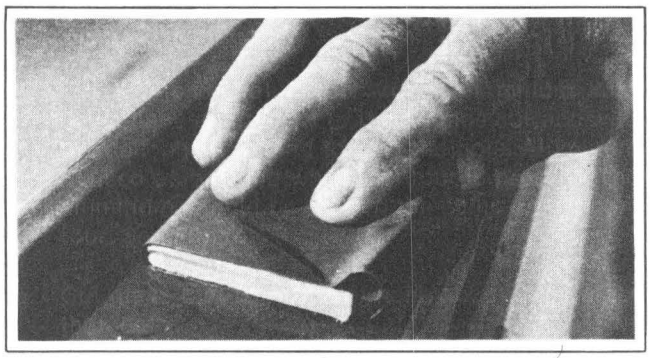

Figure 4-6. Sanding Patch

Patching of Holes, Punctures and Breaks

If possible, work in shaded spot or in a building where the temperature is between 70° and 80° F.

1. Be sure surface is clean and dry where repair is to be made. Remove all wax and dirt from the damaged area.

2. Prepare injured area by cutting back fractured material to the sound part of the material. A keyhole or electric saber saw can be used to cut out the ragged edges. See Figure 4-7.

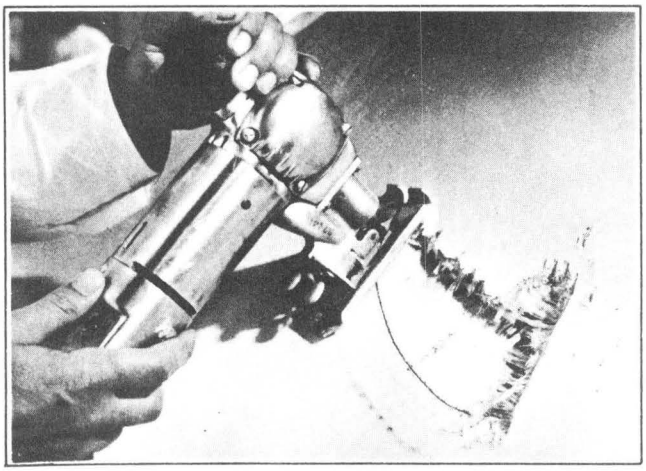

Figure 4-7. Sawing Out Damaged Area

3. Rough sand the inside surface, using 80 grit dry sandpaper, feathering back about two inches all around the hole in the area the patch will touch. See Figure 4-8.

4. Cover a piece of cardboard or aluminum with cellophane and tape it to the outside surface with the cellophane facing toward the hole. Aluminum is used as backing where contour is present. The aluminum should be shaped the same as the contour. See Figure 4-9.

5. Cut glass mat to shape of hole, about 2 in. larger than hole.

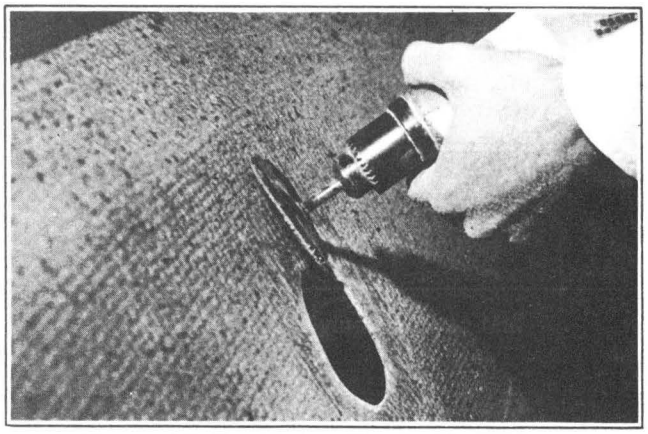

Figure 4-8. Rough Sanding Inside Surface

Figure 4-9. Taping on Backing

6. Mix a small amount of pre-accelerated resin and catalyst and daub resin on mat to thoroughly wet the mat. This may be done on a piece of cellophane or wax paper. See Figure 4-10.

NOTE

Mix resin 100 parts to 1 part catalyst for an approximate 30 minutes working time. Only mix enough resin for a given patch.

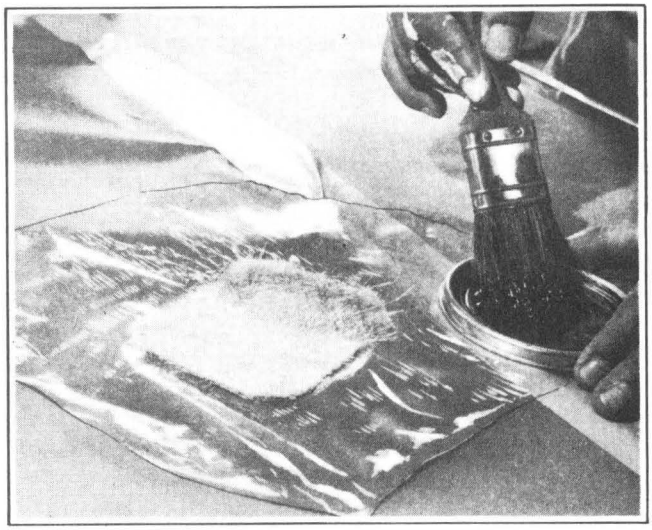

Figure 4-10. Applying Resin to Mat

7. Lay patch over hole, cover with cellophane and squeegee out air bubbles. Allow one to two hours to cure, then remove cellophane. See Figure 4-11.

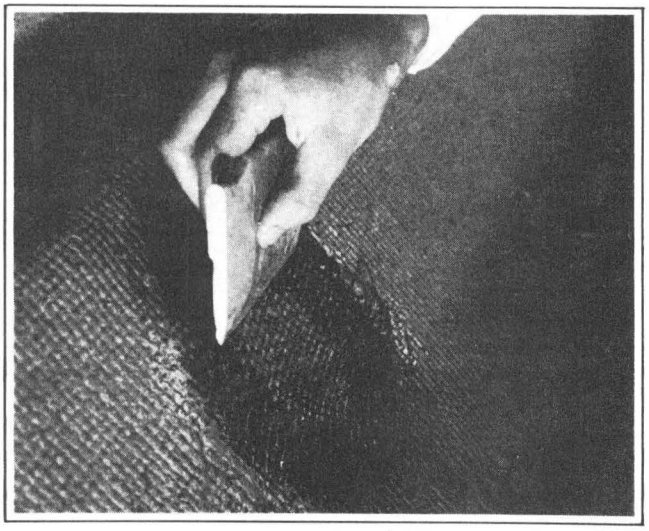

Figure 4-11. Squeegeeing Patch

8. After the patch is cured, remove the cardboard from the outside of the hole and rough sand outside surface, feathering the edge of the hole. See Figure 4-12.

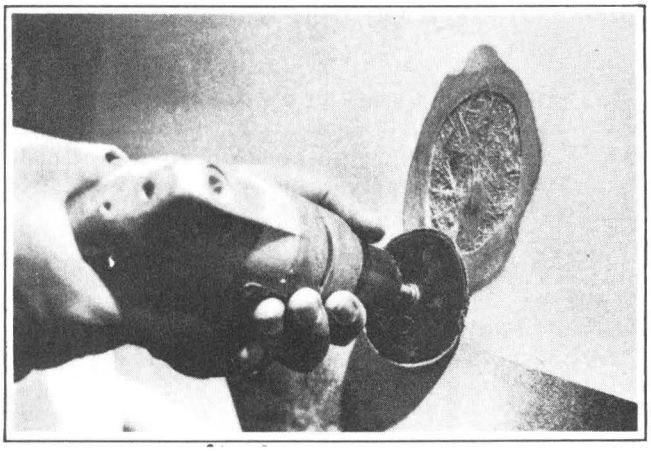

Figure 4-12. Rough Sanding Outside Surface

9. Mask area with tape and paper to protect the surrounding surface; then repeat Steps 5, 6, 7, and 8, applying patches to outside surface until enough material has been laminated to re-establish the original thickness of the section.

10. Allow the patch to cure overnight; then sand with dry 80-grit paper on power sander. Smooth the patch and blend it with surrounding surface. If air pockets are present, puncture and fill with catalyzed resin. Let cure and re-sand. See Figure 4-13.

11. Mix gel coat with catalyst. Work Gel Coat into patch with fingers. See Figure 4-14.

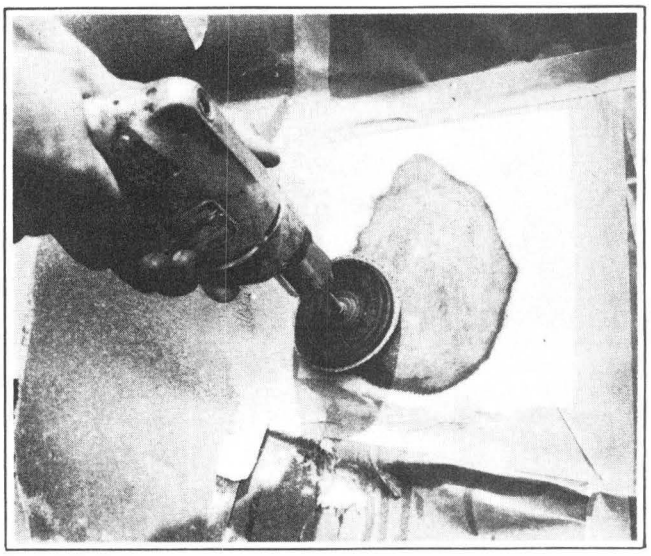

Figure 4-13. Blending Patch with Sander

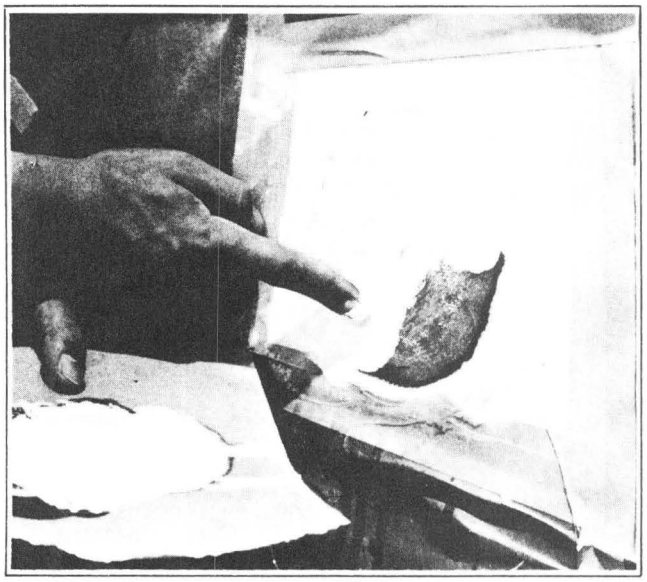

Figure 4-14. Working Gel Coat into Patch

12. Cover with cellophane and squeegee smooth. Allow to cure completely before removing cellophane.

13. Sand the patch with 220 grit wet sandpaper; then use 600 grit for finish sanding. On painted type surface, paint can be applied at this time. Buff with polishing compound and wax.

NOTE

On Gel Coat finish, it may be necessary to repeat Steps 12 and 13 to insure a smooth even gel coat surface. See Figure 4-15.

For large areas the gel coat can also be sprayed.

Where surface color of part has changed due to weathering, color match of patch may not be satisfactory. In this case, entire panel must be sprayed.