

## GEL COAT PATCHING PROCEDURE GENERAL - MARINE

### I. IDENTIFICATION

- A. Minor gel coat scratches and/or dull areas may require only a buffing or polishing to restore their original appearance.
- B. Deeper scratches and imperfections in the gel coat can be sanded out and patched with a gel coat patching material followed by sanding or polishing to restore their appearance.
- C. Very deep gouges that extend through the gel coat may require a patch of the laminate followed by a gel coat patch prior to sanding and polishing.

### II. TOOLS & EQUIPMENT

- 1. Cup or beaker calibrated in CC's
- 2. Standard Eye dropper
- 3. Spatula (stainless or plastic)
- 4. Lighter Fluid or Mineral Spirits
- 5. Acetone.
- 6. Sand paper & buffing materials

### III. PREPARATION

Proper preparation of the area to be patched is a vital part of the restoration process. Sand the area to be repaired with a 180-220 grit paper and sanding block. Break any air bubbles or remove any foreign matter with a knife and continue to sand the area. Feather the edges surrounding the blemish to help the patch blend with the surrounding area. A DREMEL tool or a small right angle grinder can be used to accomplish this task.

Clean the sanded area with a clean cloth and a hydrocarbon solvent such as naphtha or mineral spirits to remove all dust and traces of wax. Acetone does not cut wax well and can damage the gel coat surface.

## IV. APPLICATION

In order to obtain the best results, we recommend that all patches be made with the same gel coat used in the original manufacturing of the part. If this can be done, it will help assure a good color match to the original gel coat surface and aid in achieving a nearly "invisible" patch.

### A. Small Scratches and Surface Blemishes - Preferred Patching Method

Carefully catalyze (one drop/CC) a small amount of the patching gel coat and mix thoroughly. Apply this catalyzed gel coat to the pre-prepared area to be patched using a small spatula or mixing stick taking care to work the patching gel coat into all cracks and crevices. Slightly overfill the area to be patched.

Using a toothpick work air bubbles to the surface. It is not necessary to break these air bubbles, just work them up to the surface area where they will be sanded out later. Allow this patched area to cure overnight (16-24 hours) before proceeding with taping and sanding as described in Section V of this bulletin.

## V. SANDING

The cured patched area is now ready for taping and sanding. We recommend covering the patch and the surrounding area with masking tape extending at least 2 inches on either side of the patch.

Initial sanding should be accomplished with a 50-80-grit paper and a hard block, sanding directly over the tape in the raised patch area. The tape will gum up the paper, so you will probably have to change paper frequently, but this procedure will prevent the surrounding surface from being scratched as you sand down the overfill area. Sand this area until the patch is even with the tape. Remove the tape.

The next step is to sand the patch and immediate surrounding area with 100 grit paper and a hard block until you completely remove the glossy "halo" surrounding the patch. Sand this area until an even color and sheen is attained over the patch and surrounding area.

We are now ready to start wet sanding with a 400-grit paper using a soft sanding block. We suggest cross sanding in a direction across the grain of the previous 100 grit sanding. Using this procedure you can readily tell when you have completely sanded out the marks going in the direction opposite that in which you are sanding. Stop occasionally, dry the surface, and check to determine if the 100-grit sanding marks are all gone.

The next step is to proceed to wet sanding with a 600-grit paper and a soft sanding block again alternating your sanding direction to sand across the grain of the previous 400 grit sanding. Again, stop occasionally, dry the surface and check to determine if the 400 grit sanding marks are all gone. If so, you are now ready to proceed with buffing and polishing.

## VI. BUFFING & POLISHING

Final buffing should be accomplished with a buffing pad and an automotive buffing/polishing compound. Final application of a good "high content Carnuba wax" will bring the repaired part back to its original appearance.

### SMALL PATCHES

#### Equipment:

- Naphtha (Lighter Fluid) or Mineral Spirits
- Tooth Picks
- Measuring Container
- Gel Coat
- Masking Tape
- 100 grit Sandpaper
- 220 grit Sandpaper
- 600 grit Sandpaper
- Buffing Compound
- Spatula
- Eye Dropper
- Catalyst
- Paper Towels or Rags
- 80 grit Sandpaper
- 400 grit Sandpaper
- Buffer
- High Carnuba Wax

1. Inspect the defect and determine "course of action".
2. Clean area with appropriate solvent.
3. Sand defect and surrounding area with 220 grit Sandpaper (keeping area sanded as small as possible).
4. Catalyze Gel Coat with OEM's catalyst @ a rate of 1 drop / CC of Gel Coat or 1 CC / 1 1/2 Ounce of Gel Coat.
5. Apply Gel Coat so as to fill patched area slightly above the surrounding area.
6. Allow to cure for 16 hours for best results.
7. Apply masking tape to area to be sanded as well as surrounding area.
8. Sand patch through the masking tape with 50-80-grit sandpaper & hard sanding block. Once the Masking tape starts to show signs of "breaking through" outside of the immediate patch area - **Stop sanding !**
9. Remove masking tape and clean with appropriate solvent.
10. Using a hard sanding block and 100-120 grit sandpaper. Sand in perpendicular direction. Remove all 50 grit sand marks. Sand until "halo" is removed. Use lots of water!
11. Using soft sanding block and 220-grit sandpaper, sand in perpendicular direction. Remove all 100 grit sand marks. Use lots of water!
12. Using soft sanding block and 400-grit sandpaper, sand in perpendicular direction. Remove all 220 grit sand marks. Use lots of water!
13. Using soft sanding block and 600-grit sandpaper, sand in perpendicular direction. Remove all 400 grit sand marks. Use lots of water!
14. Inspect patched area for scratches and defects and take appropriate action.
15. Buff to high gloss with very fine grit buffing compound.
16. Apply wax to seal surface.