Repainting a kayak or shell by Ted Van Dusen

In brief:

1. Thoroughly clean the surface to remove any wax and oil that may have penetrated into the paint.
2. The old gel coat should be mostly sanded off to avoid weight gain.
3. Make any repairs to the surface at this point. For example, use epoxy to fill scratches.
4. Apply a light epoxy primer to improve adhesion and provide a uniform surface for the top coat.
5. Sand the surface smooth with fine grit sandpaper.
6. Spray the top coat.

Modern marine and automotive paints

There have been many improvements in paint since our earlier boats were built, both for durability and personal safety. Early on, we formulated an epoxy gelcoat, but some of the components are no longer readily available. The two-part automotive and marine paints that are available today will go on smoother and last longer than the original. The market is competitive and the top brands offer similar performance. Because they all handle a little differently, it is probably more important to use a paint that the painter is used to. Also, when you buy a two-part paint, the manufacturer wants you to buy their thinner, and likely a catalyst to help the paint to cure before it sags or collects dust. If you can't buy the small quantities that you need, you might be left with a bunch of toxic chemicals you have to pay to dispose of.

Avoiding pinholes

It is likely that when the solvent evaporated out of the gelcoat that we put on originally, there were some tiny pores that are too small to see that are now likely to be partly filled with oil or wax. When you put the finish paint over them, the paint won't want to fill them and you will see lots of tiny pinholes. Putting on more paint will likely just make them deeper; by the time the paint is thick enough that it covers them, it is ready to sag. Modern paints that cure to a high gloss are quite mobile and won't cover a surface that has wax, grease, scratches, etc.

If you are going to do more than just touch up some scratches, you are going to have to follow the paint manufacturer's recommendations and (1) clean the surface thoroughly before sanding to roughen up the surface, (2) apply a sandable epoxy primer, (3) sand with a dual action power sander with less than 320 grit or wet sanding with 320 grit, (4) wash again with a solvent, (5) when dry, wash with water. If you don't see an even sheet of water drying without dry spots, then you have wax or some other contamination. (Hopefully not silicone, which is really hard to get rid of.) (6) Finally, you are ready for the topcoat.

Avoiding weight gain

Painting has become a fussy process and an art. It is easy to add 2 or 3 pounds of paint onto a boat this size if you apply it the way automotive or large boat painters do. We like to sand off most of the original paint until we just start to see a different shade, indicating that the paint is getting thin before priming, then sanding off much of the primer until it is getting thin, but taking care not to sand into the gelcoat and uncover new pinholes. Finally, we apply the topcoat at the minimum recommended thickness.

Repairing dings and scratches

There is really nothing wrong with filling any chips or scratches with epoxy. If there are any bumps of epoxy, they can be trimmed off with a sharp chisel before the epoxy is hard, and then using a sharp scraper to remove the excess until you are almost at the level of the surrounding

gelcoat, before wet sanding with a block. When you sand a bump, you can't avoid sanding down the surrounding gelcoat. Also, everyone wants to start with fine sandpaper, but that tends to sand the surrounding gelcoat faster than if you had carefully taken off the top of the bump with a scraper or used coarse sandpaper initially.

If you find a good match in a spray can, use that to restore the color, wet sand with 600 grit paper and buff with an automotive polishing compound. The fix may need repainting after a few years, but by then you may have added some scratches to fix and saved a lot of time over a full restoration. Clear coats can help blend in a repaired area. However, they may not be as durable as the pigmented paint if the boat is stored outside in the sun.