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Restore that faded gelcoat

Under its dull, chalky finish lies a shiny boat

by Peter Robson

The gelcoat on Peter's Catalina 27 was dull with age, at left, so he tested several products formulated to restore its luster, below.

Believe it or not, it *is* possible to bring the shine back to a good old boat. Most of the thousands of aging fiberglass boats out there are still doing great service. However, after a few decades, the rain, sun, heat, and cold will have inevitably taken their toll on the fiberglass gelcoat. Unless meticulously maintained, once-gleaming decks and cockpits (and to a lesser extent the topsides) will have turned dull and chalky. Dirt and grime become embedded in the pores and removing footprints, stains, and scuffmarks becomes an almost impossible chore. While not much can be done about deep scratches and cracks, in most cases a good dose of elbow grease and some polishing can transform the gelcoat to the point where it gleams like new.

Assessing the gelcoat's condition

Before getting started, evaluate the existing finish. A dull surface on which water doesn't bead is clear evidence that the gelcoat has lost its protection from the elements and has oxidized. That oxidized layer, however thick, will have to be removed before the "good" gelcoat can be polished and waxed. In extreme cases, old gelcoat can wear down to the point where it is transparent and patchy or the fiberglass substrate is visible. Once that point is reached, painting is the only option.

Washing

The first step in restoring the gelcoat's luster is to thoroughly wash the boat with soap. If necessary, use a stain and/or mildew remover on spots that can't be cleaned with soap. Normally, you would not use household dish-washing liquids on gelcoat because they are formulated to dissolve oils and grease and will strip off the vital layer of protective wax. If the hull is heavily oxidized, however, the wax coating will be long gone and need not be protected. Rinse well and use a chamois or cloth to dry the surface and remove any lingering residue.

Rubbing compound vs. polish

Many abrasive products are available for removing oxidation prior to waxing. The terminology used by different manufacturers makes comparison a little confusing. Essentially, the higher the

Resources

For more information on the many products available, visit your local marine store, check out the selection, and ask their experts. The major manufacturers of wax products have their own websites and many have detailed product guides and application suggestions specific to their products.

3M
http://solutions.3m.com/wps/portal/3M/en_US/Marine/Home

Meguiars (owned by 3M)
www.meguiars.com

A wool pad, at left, is best for applying and working with rubbing compounds and polishes, and using a variable-speed rotary polishing machine almost goes without saying. After the compounding and polishing stage, wiping the surface with a cloth dampened with detailing spray, above center, removes residue. Wax should be applied sparingly, and a waffle-finish foam pad works well for applying it, above right. Peter's toil begins to show results, below.

content of abrasive material, the deeper it will penetrate into the gelcoat finish.

Rubbing compounds (also called *cut polishes*), such as 3M's Super Duty Rubbing Compound, contain the most abrasives. These products are best for removing the most heavily oxidized finishes.

Something called a *polish* contains the least abrasives. One of these is 3M's Finishing Compound. In contrast to rubbing compounds, polishes contain a higher percentage of "feeder" oils, so called because they "feed" the gelcoat. After the application of rubbing compounds, polishes are used to remove hazing, return oils to the gelcoat, and put the gloss on the finish. Polishes are also used as a first step where a finish isn't damaged enough to require the use of rubbing compounds. Polishes are especially good at removing swirl marks and fine defects from a good finish.

Some one-part products, such as 3M's Compound and Finishing Material, fall between the cut polishes and polishes. They are designed to remove loose material and minor defects and to enhance a dull finish.

The important thing is to use the least-abrasive product that will still do the job. If the product is too aggressive, it will remove more of the finish than is necessary and result in extra, unnecessary labor. If there is any doubt, experiment first with a less-aggressive product on an inconspicuous section of the hull.

Rubbing compounds and polishes, however, do not protect the finish. It's essential to wax the surface as the last step in the process.

Tools

While it is possible to cut, polish, and wax by hand, it's almost impossible to do so effectively because elbow grease simply can't match the torque and speed required to remove deep oxidization and polish effectively.

A good-quality electric, variable-speed rotary polisher can be used for cutting, polishing, and waxing and will definitely give the best results. Orbital buffers *can* be used for polishing and waxing, but they don't have variable speeds or the action required to remove heavily oxidized material. One option is to rent a polisher, but you'll likely need it for several days. If you want to get really serious, a good Makita unit costs about $250 and can be used again and again.

Backup pads are used to mount the pads to the polisher. I prefer the ones that attach with Velcro as they make changing pads faster. Other pads have a screw-on fitting.

Pads

There are many types of pads on the market. Use wool pads to apply rubbing compounds and polishes as these have a rougher surface and provide for the deepest cutting. Wool pads come in different grades for cutting and polishing.

Before using a wool pad, remove the loose or excess wool. Mount the pad on the polisher, mist it with water, turn the polisher on at low speed, and run your fingers or a tool known as a spur through the pad until it has shed all the loose bits of wool (and it will shed quite a lot).

Use foam pads for waxing. These can also be used for polishing, but aren't aggressive enough for cutting. Foam pads are designed to bring up the luster in paint and are good for removing minor swirl marks with polish. Foam pads with

waffled finishes work best because they run cooler than flat-surface pads.

Cloths

Microfiber cloths are much more effective than old cotton cloths and T-shirts. Cotton rags have flat surfaces that quickly become clogged. As a result, they tend to wipe residue instead of removing it. Microfiber cloths have much rougher surfaces and do a much better job of picking up residue.

Application

Cutting compounds, polishes, and wax should not be applied in direct sunlight. This is easier said than done. The products tend to dry before they can soak into the surface. It is similar to cleaning a ceramic stovetop. If you try to scrub it when it is warm or hot, the cleaning material will dry before it can do its job. The surface should be cool. Mornings or evenings are best, and work under a tarp or on the shady side of the boat as the day progresses. Whether applying rubbing compound, polish, or wax, apply it sparingly — about 2 tablespoons at a time — to the center of the pad. Most people use far too much. More isn't better.

Press the polisher against the surface before turning it on so the product doesn't fly off the pad. Start off slowly. If using rubbing compound, increase the speed to between 1,400 and 1,800 rpm, whatever feels and works the best. For polishing, keep the speed between 1,000 and 1,200 rpm. The faster the speed, the more the surface will heat up and the faster the product will dry out. Keep the pad flat to the surface, or angled by a few degrees at most. Apply a fair amount of pressure to the polisher and move it very slowly across the surface in an up-and-down or side-to-side motion.

Polishers have plenty of torque, enough to rip the polisher out of your hands or cause it to fly along the surface in all directions. To counteract this, try locking your arms against your body and moving your body up, down, and side-to-side.

Work an area of only a few square feet at a time. Ideally, there should always be a thin film between the pad and the surface to prevent hazing and overheating. Continue to polish until you can see the shine coming up to the surface. The idea is to polish the polish, not to polish the product until dry.

When using cutting compounds or polish, keep the pads away from corners, sharp edges, and deep grooves (such as cove stripes) — the pads can burn through the gelcoat. Tape these areas off and do them later by hand, working lengthwise, not across the sharp edges. Without a tool, you'll have to use lots of elbow grease and even then those areas will never look as good as areas hit by the polisher.

If the pad becomes caked with material, let it dry and then run your fingers

Products and processes evaluated

I had pretty well given up on the idea of ever bringing the shine back to my Catalina 27. It was built in 1978 and its white gelcoat was dull and stained. The cockpit and parts of the deck without non-skid were the worst and so chalky that they absorbed dirt like magnets. Water didn't bead on the surface and it took a whole lot of elbow grease to clean off dirty footprints. Something had to be done to protect the surface, but I wasn't convinced there was anything I could do short of painting. Over the years I'd played around with different waxing products, applying them by hand, but nothing seemed to work for long. It wasn't until I met Gary Wedemeyer, a product-training specialist with 3M, that I realized there was hope.

It was winter and wet in the Pacific Northwest, so doing my boat outside was out of the question. Gary suggested we take on a smaller project we could do indoors. I owned an equally vintage Frontiersman canoe salvaged from the scrap heap. It had sat out in the weather year-round for at least five years. Its dull red-orange finish was almost black and covered in leaves and dirt with deep scratches right through the gelcoat. I figured if Gary could show me how to bring it back to life, I could then use that knowledge on my own boat.

With his guidance — and to my amazement — within a few hours the canoe was transformed. The portions we worked on glistened like new with a rich, deep finish. Gary had shown it really was possible, using a little labor and the right tools and products, to bring gelcoat back from the dead. The following summer, I applied what I learned to my Catalina 27, trying each of the 3M systems noted in the article on different sections of the cockpit and decks.

On the starboard side of the cockpit, I used 3M Super Duty Rubbing Compound followed by 3M Finishing Material, then wax. This three-step process did a beautiful job of bringing back the finish and luster, though obviously it took the longest to do. I was amazed at how the chalky finish became mirror smooth (except where there were deep gouges and spiderweb cracks in the gelcoat).

On the port side of the cockpit, I used 3M's single-part Compound and Finishing Material followed by wax. Earlier in the year, when Gary and I worked on my canoe project, we found this system worked just as well as the three-step process. There was no need to go to the extra effort.

The freshly waxed cockpit gleams, at left, and still has much of its shine after six months, at right.

or a spur through the slowly spinning pad to clean off the excess. A good pad should last for years.

After cutting or polishing a section, wipe the surface with a cloth dampened with a boat (or car) detailing spray to remove excess material. (I'm not sure what's in the stuff, but it works a lot better than water.) Doing this prevents excess material from being ground into the finish during the next step.

Waxing

A good-quality boat wax protects the gelcoat from the elements. There are many brands and formulations and you really do get what you pay for. That said, any wax is better than no wax protection at all. Better products will likely have better ingredients, the wax will last longer, and you won't have to wax quite so often. Automotive waxes are similar to boat waxes but are formulated slightly differently, as the finish on most cars is acrylic urethane, not gelcoat.

As noted, carefully wipe down the surface with detailing spray and cloths before waxing. Waxing is an important step and the detailing spray really makes it easy.

For waxing, use the softest foam pad available. Apply the wax to the pad sparingly, about a tablespoon at a time. The idea is to apply only a very thin layer of wax. Too much and it will end up being wiped off and wasted.

Polish out the wax as you did with the cutting compounds and polishes but use a lighter touch and keep the speed of the polisher down to about 1,000 rpm. Don't over-polish to the point where the wax gets dry and white. Stop buffing while the wax is still wet and then finish-wipe each section with a microfiber cloth to remove dried wax before moving on.

Upkeep

To help maintain that wax coat, wash the boat with a boat wash containing wax (remember, don't use household soaps on waxed surfaces).

Wax a boat that is stored outdoors at least twice a year, especially the horizontal surfaces, as they will wear more than the topsides. When water stops beading nicely on the finish, it's time to bring out the wax.

There's nothing more rewarding than seeing your dull gelcoat transformed into a gleaming finish that beads water and repels dirt. Not only will the finish be easier to clean, it will give you a whole new sense of pride in your good old boat — like getting a new boat without the cost.

Peter A. Robson is an award-winning author, journalist, and former editor of Pacific Yachting *magazine. Over the years, he's owned a number of good old boats, both power and sail. He hails from Garden Bay on British Columbia's Sunshine Coast and is currently the editor of* Cottage *magazine.*

by Peter Robson

On the port side of the companionway hatch, I used 3M Restorer and Wax. This is a single-step cleaning/waxing process and came highly recommended by the owner of my local marine store. The product consists of a small amount of abrasive material and a finishing wax. It is designed for finishes with only minimal oxidation. I was sceptical about a product containing both rubbing compound and wax, but tried it anyhow.

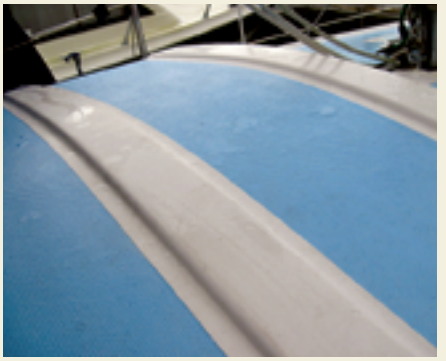
On the other half of the companionway, I used 3M Super Duty Rubbing Compound followed by 3M Finishing Material, then wax.

What impressed me the most was that a side-by-side comparison of the initial shine, regardless of the process, was identical as far as I could tell, and rain appeared to bead off the surfaces equally. It wasn't until the boat sat out in the West Coast weather for six months that the differences became apparent, though minor.

Surprisingly, in the cockpit, the port side, where I used one-part compound/polish followed by wax, was shinier and beaded water better than the three-step compound-polish-wax process. It should have been worse. It also came as a surprise that, on the companionway, the one-part restorer-wax used on the port side beaded water and was shinier than the three-part process used on the starboard side. Again, the port side should have been worse. I initially wondered if the wear had something to do with which side of the boat got the most sun, but the port side, with the best shine, was the side exposed most to the sun.

While it is a bit tricky to know what products will work best ahead of time — and no one wants to buy a boatload of different products, if I were starting from scratch again, I'd go with either 3M's single-part Compound and Finishing Material followed by wax or 3M's single-step Restorer and Wax. Of course, it all comes down to how badly the finish is oxidized. It was apparent that my chalky gelcoat wasn't in bad enough condition, even after 32 years, to require the extra work of the three separate steps (rubbing compound, polish, and wax).

While I started out being sceptical about ever bringing back the shine, my hope was renewed after seeing the stunning difference in the finish, regardless of the products used. The reward of seeing the dull, oxidized finish of my 32-year-old Catalina come up gleaming was definitely worth the effort and increased my pride in her.



The port side of the hatch slide seems to have better withstood six months of weathering, at right.