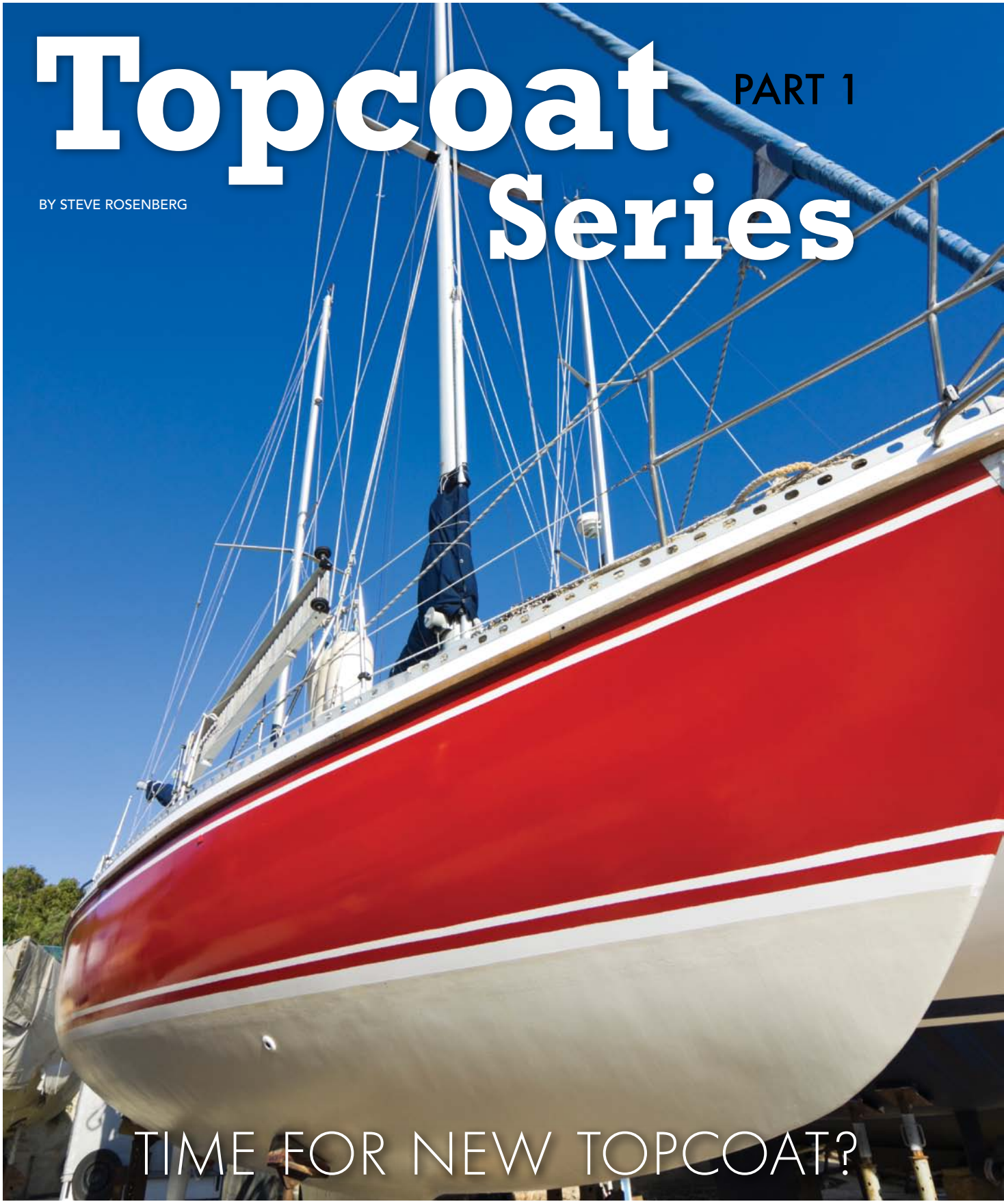
Topcoat Series PART 1

BY STEVE ROSENBERG



TIME FOR NEW TOPCOAT?

The Deck – Advances in paint technology, along with some good com-mon sense, can bring a good-looking layer of solid protection to your topside.

There may be no tougher paint job out there than the one on the deck of your boat. While you may get some good life out of the molded gelcoat that was installed at the factory, sooner or later, you'll notice that straight-from-the-boatyard brilliance start to fade. That's the time to nip the problem in the bud and put on hard coat that's up to the challenge of full-time sun, salt and sand.

With all the choices out there, choosing the right paint and process be a daunting task. That's why we've put together a series of articles on what to consider before deciding on a new topcoat application. With advice from experts at major paint manufacturers, we'll help you get to the key things you need to consider. We'll start this month with an explanation of the difference between topcoat and gelcoat, and how to know what product would work best for your boat surface in the tough-but-beautiful Caribbean environment.

Jim Seidel. Interlux Yacht Finishes:

"There are three main factors to consider when choosing a paint system – substrate, preparation and upkeep. On bare substrates such as fiberglass, aluminum, steel and epoxy you can use any of the Interlux paint systems. For bare wood you may want to stay with a single-part paint system. The wood in these flexible constructions, such as lapstrake (clinker-built) or carvel-planked will move as the moisture content varies, leading to cracking. For more stable wood systems, especially plywood where epoxy has been used, you can use one or two-part systems.

"If the boat has been previously painted and is in good shape, you may try to use the same type of paint that was used previously. If it is not possible to determine what type of paint was used, single-part paints can be applied over other one-part paints and two-part paints. Unfortunately, two-part paints cannot be applied over one-part paints, so it might be best to stay with one-part paint. If the boat has been previously painted and is in poor shape it will be best to remove the paint back to bare and proceed with a system for bare substrate.

"To get a good finish, all the paint systems will require about the same preparation. Two-part paints are more durable, keep their color and gloss longer, and are more abrasion resistant than one-part paints but they are more temperature and humidity sensitive as well as more expensive than one-part paints. These factors must be taken into consideration when choosing what to use.

"Areas where there is considerable foot traffic or harsh abrasion such as gunwale rails and coaming sides, will need

PHOTO COURTESY OF CHARLESTON CITY BOATYARD

frequent repair to keep them in pristine condition. Two-part paints such as Perfection offers excellent resistance to abrasion, but can still wear through in excessive circumstances. One-part systems are easier to touch up than high-performance, two-part systems, and may be more suitable for these areas."

Tripp Nelson. Alexseal Yacht Coatings:
"Gelcoats are typically used only when you're building a boat, where paints are used as a refinishing material. When you're purchasing a fiberglass boat that was made on a production line, they'll use gelcoat and they do that by applying the material in a mold. After it cures, you pop it out of the mold and you see the shiny gelcoat. If you're dealing with custom built fiberglass, steel, wood or aluminum, they will typically be painted from the manufacturer. With these boats, as you're trying to refinish them after they've aged for a while or if you just want to change the color, then the most cost-efficient way is to use a paint, primarily a two-part paint because it's more durable than a single-part paint.

"If you're looking at two-part paints, there are two types on the market. One is an acrylic polyurethane, and the other is a polyester-based polyurethane. The acrylic comes from the automotive industry. The polyester, which is what Alexseal is formulated from, comes from the aviation industry. The aviation formulas tend to be a little bit stronger coating with more solvent resistance and more scratch resistance. If you think about the life of a car, it doesn't go through the extremes an airplane goes through – the temperature swings, the expansion and contractions due to pressure changes, the abrasion caused by going 600 miles an hour through a rainstorm. That's why the polyester-based polyurethanes are a harder coating.

"If you look at your boat and how different areas of the boat are used, you can actually choose your coating. In a non-skid area or an area that you would walk on, you would always want to use the hardest finish possible. Typically, if you have cockpit area either on a sportfish or on a sailboat, people are going to put the cooler down and drag it back and forth, or you're going to have a lot of foot traffic, you would want the hardest, most abrasion-resistant finish. That would be a good place for a polyester-based polyurethane."

Jack Hickey. Blue Water Marine Paint:
"There are many generic topcoats used in the marine paint industry, ranging from basic alkyd types to two-part polyurethanes. Alkyd finishes may be sold as just that, a single-pack product, which dries by metal oxidation. Sometimes those products are modified with silicone resin for maximum durability, with urethane alkyd resin for improved film hardness and durability, and acrylic resins for faster drying than other modifying resins.

PHOTO COURTESY OF CHARLESTON CITY BOATYARD

Two-part finishes are usually composed of a base component and a curing agent. Generically these include epoxies, polyurethane, and both polyester and vinyl ester. By far the most common are the two-part polyurethanes, as they provide the ultimate in film integrity and durability. Epoxy finishes tend to chalk on exposure to UV light, and the esters are really designed for gel coating or laminations.

"All topcoats are repairable but can require the use of special buffing compounds and techniques. Generally, repairing is simply a matter of sanding the area to be repaired, applying fresh paint to the repaired area and then buffing the repaired area and the surrounding area until a uniform finish is achieved. Several companies, such as 3M, sell special compounds for the repair of topcoat finishes.

"The choice of topcoat finish is usually made based on cost, experience of application, desired appearance and durability. Any topcoat finish can be applied to any generic substrate provided the topcoat is part of a system which would normally include select primers, filling and fairing compounds, sealers, etc. The choice should be made after consultation with the boatyard or marina that will do the finishing or with the facility where the topcoat finishes are purchased."

Coming next month: The basic steps involved in prepping and preparing for a topcoat paint job. Also, we'll have some information tips if you want to tackle the job yourself, and some advice on how to choose the right professional yard for the job.

Steve Rosenberg is the former editorial director of Boating World *magazine and now writes exclusively about boating and yachting.*