

GOOD OLD BOAT

Still sailing after all these years!



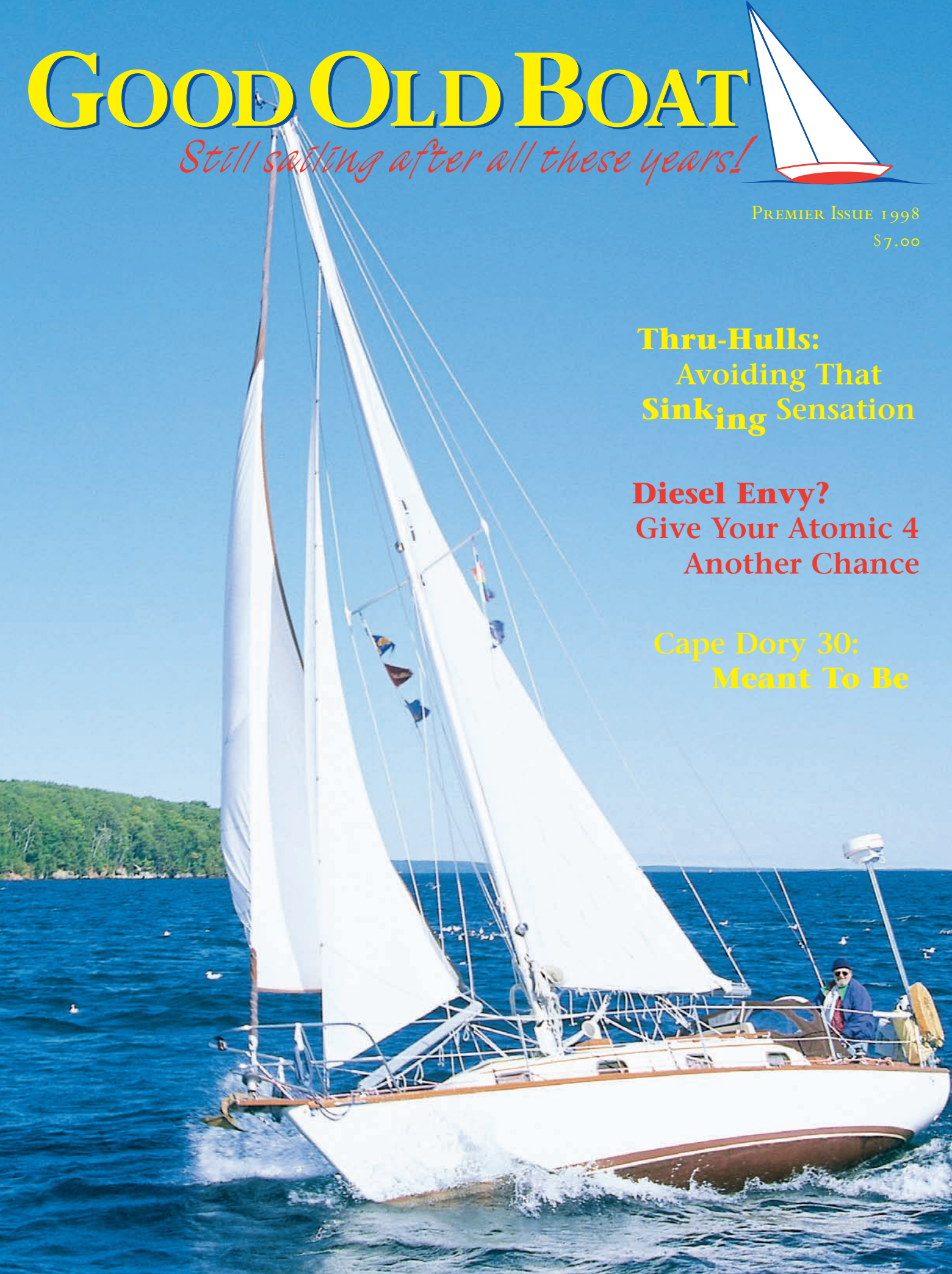
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Thru-Hulls:
Avoiding That
Sinking Sensation

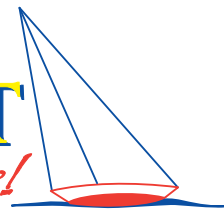
Diesel Envy?
Give Your Atomic 4
Another Chance

Cape Dory 30:
Meant To Be



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The sailing magazine for the rest of us

What?

Your sailboat is **not** the newest in the marina? Not the largest either? You must be our kind of sailor. *Good Old Boat* magazine was created for the "silent majority of sailors." You know who you are. Like us, you own, maintain, sail, and love a wonderful older boat.

Most of these boats are 10 to 30 and more years old. Many were built in the '60s and '70s before any of us understood the staying power of fiberglass. Those in "the orphan fleet," have outlived their manufacturers. Others in "the custom fleet" were created in limited numbers to begin with and are now as rare as a predictable sailing day in May. Some belong to "the Phoenix fleet," in which the manufacturer exists, but the company has changed hands often enough that support for the older boats formerly sold by previous owners is no longer a priority.

We all know who we are and which fleet we can call our own.

Creating a community

Good Old Boat magazine will bring the members of our "silent majority" together: we'll be pooling resources to compile lists of suppliers who offer parts for our boats, sharing solutions to specific and general problems we face in keeping our good old boats afloat, compiling contact information for sailboat owners' groups and associations, and profiling good old folks with good old boats. We enthusiastically welcome your input!

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- Fax: 612-420-8921
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Come aboard!

Karen Larson and Jerry Powlas

GOOD OLD BOAT

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Ode to Joy: In praise of good old boats

My advice is to buy yourself a boat you can afford, lavish her with the best in essential equipment, and cast off your lines

I love sailing for its simplicity. Wrap the breeze with canvas and you are away. No consumption. No pollution. No noise. Not even the faintest track to mark your passage. Add good food, affable mates, an interesting destination ... can there be a better way to spend a day? Or a year?

If the pleasures of cruising under sail were somehow diminished by the age of the boat, the joy would have gone out of it for me decades ago. In fact, it seems to me that older boats tend to enhance the experience.

First, there is cost. Today even modest new “cruising” boats can cost more than \$200,000, and prices in excess of \$500,000 are not uncommon. That’s half a million. Dollars. For a sailboat. If extended cruising is your goal, such a financial obligation almost certainly takes you farther from it, not closer. And if you sail only a few days a year, that’s a lot of money tied up in a depreciating asset. Old boats sail just as well, and the smaller investment means they sit idle much more comfortably.

Then there is style. Too many new boats are apartments with the corners rounded off. A sailboat should be defined by grace and charm, not volume. It should be half fish, half bird, and no part modern art. A new boat is only new for a short while; a beautiful boat is beautiful forever.

And let’s not overlook value. Many older boats were built to a standard that builders today call “cost


prohibitive,” yet they can be purchased for a fraction of a new boat’s cost. And the price almost always includes thousands of dollars’ worth of extra gear and equipment.

If you are new to sailing, maybe you think owning an old boat is like owning an old car. Here is an essential truth: the only similarity between a 1968 Chevy and a 1968 Hinckley

is the year of manufacture. The safe assumption is that a 30-year-old car isn’t trustworthy. In contrast, a well-maintained 30-year-old sailboat can be the equal of a

brand-new boat in every way.

Anyone who wants to own a sailboat can. You may locate it in a boatyard rather than at a boat show. And you may have to visit the library archives to find it featured in a full-color magazine ad. But if it was ever a good sailer, it still is. If it ever had sweet lines, it still does. And if it could ever fulfill dreams, it still can.

Sailing is a tactile connection to the cosmos. You are propelled by a force as invisible as faith, lifted over shallows by the pull of the moon, guided by the star-pricked sky, reassured by the rising sun. These are not things you will experience ashore. My advice is buy yourself a boat you can afford, lavish her with the best in essential equipment, and cast off your lines. 

by Don Casey

Editor’s note: Don has a new book out: *Dragged Aboard — A Cruising Guide for the Reluctant Mate*.



Do all sailormen
who write have beards?

Contributors

Page 3 – Don Casey (*on deck with a bucket of tools*) abandoned a career in banking in 1983 to devote more time to cruising and writing. His work combining these two passions has appeared in many popular sailing and boating magazines. He co-authored *Sensible Cruising: The Thoreau Approach* and became the authority on boat fix-it projects with his book, *This Old Boat*. He is the author of six books in the International Marine Sailboat Library series. Most recently he has returned to the subject of cruising with *Dragged Aboard — A Cruising Guide for the Reluctant Mate*. He and his wife, Olga, cruise aboard their 29-year-old Allied Seawind. They like to point out that they've done all the work themselves with no adult supervision.

Page 4 – Artist Dave Chase (*the artist in the lower right corner who gets the last word*) is a maker of drawings and paintings and foolishness like this caricature of the contributors. With his wife, Susan, he spends summers sailing the Great Lakes in good old Old Sam Peabody, a Cabot 36. Some folks think he looks a lot like his caricature; others think he flatters himself.

Page 9 – Nigel Calder (*with his finger in the thru-hull*) is the author of the best-selling *Boatowner's Mechanical and Electrical Manual*, which has become a "must-have" book for sailors around the world. He has also written *Marine Diesel Engines*, another best-seller, and several other books, including cruising guides to the northwest Caribbean and Cuba. He and his wife, Terrie, built their own 39-foot Ingrid cutter from a bare hull and have cruised extensively in the Caribbean with their two children. Nigel can be contacted through his website: <<http://lincoln.midcoast.com/~ncalder>>.

Page 16 – Dave Gerr (*carrying the prop, at left*) is a naval architect in New York City. Gerr Marine, Inc., founded in 1983, designs yachts and commercial vessels. Projects have ranged from 10-foot FRP canoes, that nested in three sections totalling just 48 inches long, to 60-foot Class 1 BOC racers. They also included work on a 90-foot brigantine and a 440-foot sail-assisted cruise ship. He is a contributing editor for *Offshore* and *Boatbuilding* magazines and is the author of *Propeller Handbook* and *The Nature of Boats*, both in multiple printings (International Marine). He's writing a new handbook on engineering boat structures, *Boat Strength*.

Page 26 – Mary Jane Hayes (*on deck with the camera*) and her husband, Warren, have been boating for more than 25 years in a variety of boats — both power and sail. They sailed Serena, a Sabre 28 for seven years and now cruise the East Coast in a Grand Banks 36, Sea Story II. A freelance writer and photographer, Mary Jane has been widely published in boating magazines.

Page 28 – Jerry Powlas (*effortlessly carrying the engine*) is technical editor of *Good Old Boat* magazine. In an earlier life he was director of engineering for a refrigeration manufacturing firm until sailing's siren song lured him into something less stable but more fun. He and his wife, Karen Larson, sail Mystic, their C&C 30 on Lake Superior.

Page 34 – John Vigor (*on deck with the paintbrush and also on Page 34 doing "the rubrail pirouette"*) is a freelance journalist based in Oak Harbor, Wash. He has raced, cruised, and written about boats for more than 30 years. He is a regular contributor to yachting magazines in the U.S., Europe, and South Africa. He's the author of *Danger, Dolphins and Ginger Beer* (Simon and Schuster), a sailing adventure novel for 8- to 12-year-olds; *The Practical Mariner's Book of Knowledge* (International Marine); *The Sailors' Assistant* (International Marine); and *The 1998 International Marine Daybook and Nautical Desk Reference*.

Page 35 – Artist Stan Terryll (*not shown, because he wasn't invited to the refitting party on time*) has a passion for art, boats, airplanes, and the blues. A schoolteacher from White Bear Lake, Minnesota, he designs, builds, and sells small boats as a hobby. Recently he entered the art market with limited prints of selected pieces primarily with nautical themes.

Page 51 – Karen Larson (*on ladder*) is editor of *Good Old Boat* magazine. Her idea of a good time is meeting and interviewing good old folks on good old boats all around the country. She has written about sailing for *Sail*, *Cruising World*, *Northern Breezes*, and *Lifeline*. Her publishing career began as a newspaper feature writer and page editor and later grew into a thriving newsletter production business.

Our thanks to friends Bob and Shery Ashley, who sail the good old boat Cat's Paw, for suggesting this column's name.

Mast pumping

I sail a 1981 C&C 36 on Lake Superior. I'm experiencing a problem with mast pumping. Under certain conditions, I can see the top two feet of the mast pump fore and aft several inches. I am unable to detect this problem while under sail, and barely notice it at anchor. It's a different story in my slip. The pumping mast vibrates the entire boat, easily waking me from a sound sleep.

Several riggers and a surveyor have investigated the problem. They indicated that it's a design flaw in older C&Cs. I only have one lower shroud, when two seem to be needed. I've been told that C&C eventually added two lower shrouds and solved the problem. The year my boat was built, C&C installed a baby stay, but it does not solve the problem.

Do you or any of your readers have any experience with this problem? If a solution cannot be found, will this mast pumping cause any unnatural

wear that could cause a more serious problem later on?

Tim Hanrahan,
Tim_Hanrahan@i-tech.com

Viewed from abeam, all your shrouds, both uppers and lowers, are in the same plane as the mast. This arrangement makes the mast stiff in that plane, but not so stiff in the plane that runs through the forestay, mast, and backstay. When the wind blows across the mast from abeam, vortices form to leeward of the mast. For reasons of their own, they form alternately on one side of the mast and then the other. This alternating vortex shedding tries to push the mast forward and then aft. If the vortex shedding frequency is close to the natural frequency of the mast, a resonance develops, and the mast starts to store energy as a pendulum does. As the oscillation continues, the excursion that the mast goes through becomes greater.

As a practical matter, the motion of the mast will be limited by the damping of the rig and hull. The limiting point may be at a level that is annoying to the crew, and possibly at a level that causes fatigue failures in the rig.

Because of the age of your boat and others with this characteristic, we would guess that fatigue failure is not a factor. That is just a guess. The pumping is certainly annoying however, and can be eliminated.

The fix we prefer is to insert one extra sail slide in your mast track above the headboard. When the main goes up and down, the headboard will push it up, and gravity will bring it down. There is room for it at the top. When the mast starts to pump, tie a small diameter line to the slide, and hoist it about halfway up the mast with the main halyard. Lead the other end of the line to the boom end or to a rigid point on the rail close to the stern. Tighten the line with the main halyard, mainsheet, or a small tackle at the stern, depending on how your rig it. Tighten the line just enough to stiffen the

mast and stop the pumping. We find that 5/32" kevlar from West Marine works for this because it is very stiff. Aracom T from BOAT/U.S. should also work, as would 1/16" 1x19 wire. You want something that is light and low stretch.

It may be necessary to tie a rag or short length of line along the main halyard near the shackle and up a few feet to stop the halyard from clanging on the mast.

We have room for seven heavy-duty slides above the headboard on our C&C 30 and use them to attach the storm trysail. We also rig a stiffening line as described above when we sail downwind without the mainsail because we have read that sailing without a mainsail can cause mast failure if the boat does not have opposing lowers.

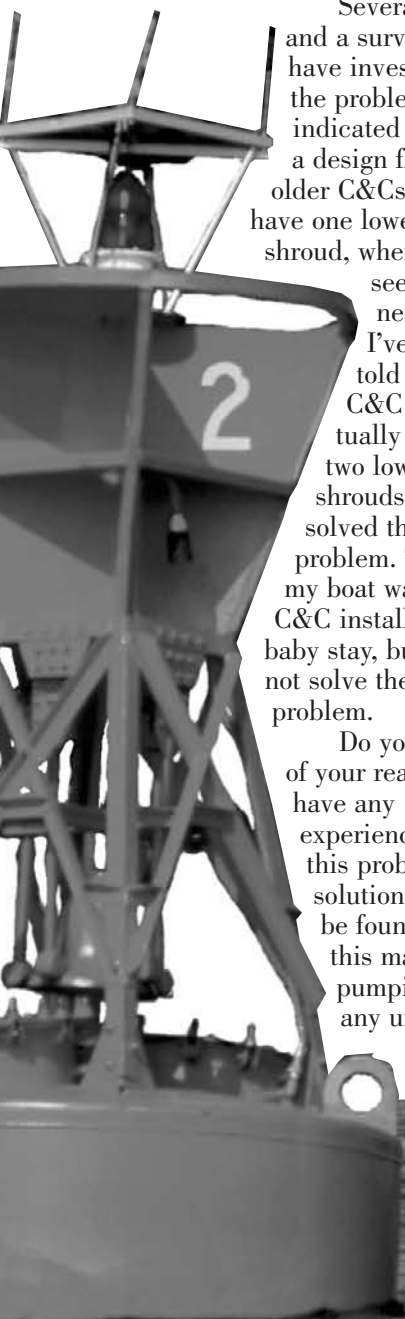
Water-lift muffler

What are the pros and cons of refitting a mid seventies IOR boat with a water-lift muffler? The engine is — what else but — the good old Atomic 4, and the present exhaust is dry, deteriorating, and probably wrapped with asbestos.

Ed Higgins
New Carlisle, Indiana

This question has proved to be so complex that we'll be devoting a lot of space to it in our next issue. The short answer would be that Atomic 4s are frequently converted to water-lift mufflers. We have learned that many Atomic 4s were originally equipped with water-jacketed exhausts. Alan Abrahamsson of Old Lyme Marine says these exhaust systems may be hard on the good old Atomic 4 when they rust out. Water may enter the exhaust manifold of the engine and eventually fill the lowest cylinder. After this, engine damage may result when the engine is cranked.

Dave Gerr points out that there is a slight risk from backfire. The main consideration is that water-lift exhaust systems may look simple, but are not.



Some thought must be given to making sure that water does not drain back into the engine from the muffler and that it does not siphon back into the boat through the exhaust pipe, either because it is submerged or forced in by following seas. We recommend Marine Diesel Engines by Nigel Calder as a reference.

After reading that reference, or any other good reference, you may be inclined to believe that it would be handy if the engine were mounted about halfway up the mast and the water-lift muffler were mounted a quarter of the way up the mast. The **greatly oversimplified rules** are that the muffler should be lower than the engine, and the final exit pipe loop up about 18 inches above the waterline before looping back down to exit about three inches above the waterline. In the real world, the designer of the boat wanted the engine as low as he could get it, and you may not find any place lower to put the muffler. This means water could run back into the engine from the muffler. There are ways around all these problems, and we'll look at them in more detail in the September issue of Good Old Boat. We recommend Nigel's book and that you proceed very carefully. We know of some experienced Lake Superior sailors who thought they had these considerations accounted for but flooded their engine twice while voyaging in the Atlantic.

Engine temperature gauge

I have a 1976 or 1977 Sabre 28 with a raw-water-cooled Volvo MD6A 10 HP 2-cylinder diesel engine. There is an engine temperature gauge in the cockpit which indicates temp (green to red, not actual degrees). The engine has always run very cool even at wide open under load. The last time I used the boat, the needle stayed in the green off load, but began to migrate toward red when I got under way. Anything above 1/4 throttle in forward began to push the needle toward the red zone.

I checked the intake system all the way to the thermostat including installing a new water pump impeller. Can a bad thermostat cause this problem? Water is being discharged with the exhaust, but I really can't

determine by eyeballing it if this is the same amount of water that was flowing through when it always ran cool. My question is: do I need a diesel mechanic or is putting on a new thermostat worth a try? Matt Grant at Sailrite referred me to you. I would appreciate any advice.

Jim Raffa,
JamesCapt@aol.com

We sent Jim's question to Peter Compton at <<http://www.BoatDiesel.com>>. His reply:

Just a few lines in response to that question — hope it helps.

I'm assuming the engine is raw-water cooled. The symptoms are typical of problems with the cooling system. If the thru-hull and inlet strainer are clear, and you've checked the raw water pump, then you've a little more work ahead of you.

Despite their simplicity, raw-water-cooled engines require a little more work solving overheating problems. Such cooling systems direct raw (sea) water through the engine block, cylinder head, and the exhaust manifold to remove surplus heat. The thermostat is a simple temperature-sensitive valve that controls the amount of raw water flowing through the engine to keep temperatures relatively constant (about 130-150 degrees F).

When the thermostat closes on a raw water system, the subsequent buildup in pressure would quickly damage the raw water impeller, so manufacturers build in a bypass valve to relieve excess pressure by sending surplus water straight to the exhaust injection elbow.

Sounds simple, but now consider the overheating problem and what could cause it:

1. The thermostat could be stuck closed or partially closed. (No flow through block.)
2. The bypass valve could be stuck open. (Little flow through block.)
3. There could be a restriction anywhere in the system — this is common with large flakes of rust from corroded components. (Little flow through block.)

4. The exhaust injection elbow could be blocked — very common. (Little flow through block.)
5. The engine block and/or cylinder head and/or exhaust manifold could have a heavy buildup of "insulating" corrosion or salts. (Good flow, but little heat transfer to cooling water.)


Although there are several faults on other systems that could cause overheating, I would check the cooling system first. However, before you strip down the engine, check that exhaust smoke — when you open the throttle do you get black smoke? If so, then the overheating is probably caused by overloading. Check for prop or bottom fouling first.

Regards,
Peter

Boat Diesel pc@boatdiesel.com

Editor's note: We would add that while cleaning or replacing the thermostat and removing obstructions from the system are fairly straightforward tasks, removing corrosion salts from the block may be something you would want to let an experienced repair person do.

We looked in Nigel Calder's Marine Diesel Engines and found advice that the chemical cleaners require care in their selection and use. Nigel points out, for instance, that cast-iron engines would use one type of chemical, while engines with an aluminum head would use another. Mistakes in using cleaning chemicals can result in damage to your engine or plugging it up worse.

Jim, please get back to Good Old Boat magazine and let us know what it took to repair your engine. We'll provide an update for readers in this column. 


Send your questions to Good Old Boat at 7340 Niagara Lane North, Maple Grove, MN 55311 or by email to jerry@goodoldboat.com. We'll get a response to you prior to the next scheduled publication and promise to respond whether or not your question is selected for publication.

Seacocks and marine metals:

What you can't see can hurt you

In researching this series, we contacted over a dozen manufacturers and other authorities on the maintenance, sale, and replacement of thru-hulls and seacocks. The topic originally got our attention when a reader of *Practical Sailor* reported on a seacock in his boat that had failed to close. We learned a few things from this investigation:

Pay attention to your seacocks.

- Open and close them several times a year to wipe marine growth off the moving parts and get a “feel” for their condition.
- Lubricate traditional tapered plug seacocks with waterproof grease. Lubricate Marelon® (glass filled nylon) seacocks with vegetable oil. Bronze ball-valve seacocks do not require lubrication. There may be some advantage to disassembling and inspecting traditional seacocks in some cases, but neither of the ball-valve types (bronze or glass-filled nylon) are intended for routine disassembly. Consult maintenance literature or the manufacturer before disassembling these valves.
- If your boat is bonded, protect your seacocks with zincs. (Bonding is controversial.)
- Even with all this, your seacocks may not last forever. If you replace them, get proper parts that are intended to mate together. Suitable replacements are purpose-designed and built to be seacocks. Water valves from hardware and builders’ supply stores are dangerous substitutes.
- Seacocks have special straight threads on their inlet side to mate with the thru-hull and tapered pipe threads on the inboard side. There are at least two types of straight threads in use: straight pipe thread and buttress thread. They look somewhat alike, but it is essential to use exactly the same type of thread for the seacock and the thru-hull. Straight pipe threads are symmetrical, while buttress threads are not. This can be seen by looking at the side of the male threaded part. Wrongly mated parts can seem to fit together reasonably well. This is a source of much error. Make sure the thru-hull and seacock are intended to be used together. If you are not absolutely certain on this point, consult the manufacturers of the parts.
- Marine chandleries sell valves that are similar to seacocks but are not. If you call up suppliers and ask for a seacock, you will get one. If you ask for a particular valve by name or item number, they are likely to sell it to you without asking if you really wanted a seacock. If you are not sure, ask. They don’t want to sell you the wrong parts, but they will not necessarily know or ask you about your intentions.
- The choice of bedding compound is important. Forespar recommends a good polyurethane sealant such as 3M 5200 or Sikaflex 240. Forespar does not recommend the use of polysulfide sealants with their fiber-reinforced nylon valves. West Marine’s Chuck Hawley suggests that Dolfinite bedding compound be used for sealing seacocks to thru-hulls but adds that the bedding blocks should be sealed to the hull with a polyurethane sealant or thickened epoxy. Conbraco, manufacturer of Apollo seacocks says to follow the sealant manufacturer’s guidelines.
- Seacocks should be made of glass fiber-reinforced nylon or bronze. They should not be made of brass or have brass parts in them. 

Thru-hull fittings

In galleys, engine compartments, and heads, seacocks and thru-hulls are everywhere

Every thru-hull fitting below the waterline is a potential boat sinker. That fact is enough to raise these lowly devices to equipment of prime importance to the mariner and to provoke discussion on such subjects as thru-hull design, construction, and installation.

During the course of my research for this article, I discovered that a vast number of thru-hulls as installed probably don't comply, in one way or another, with the limited

by Nigel Calder

voluntary standards of the American Boat and Yacht Council (ABYC) and Underwriters Laboratories Inc. (UL) voluntary standards. These standards, both what is in them and what is currently not in them, are a useful way to look at this subject. First, here are some definitions:

- A thru-hull fitting is “a device that penetrates a hull, and which is designed to accept a pipe, hose or valve on its inboard end.”
- “A seacock is a type of valve used to control intake or discharge of water through the hull. *It is operated by a lever-type handle usually operating through a 90-degree arc, giving a clear indication of whether it is open or shut.*”
(italics added by author)

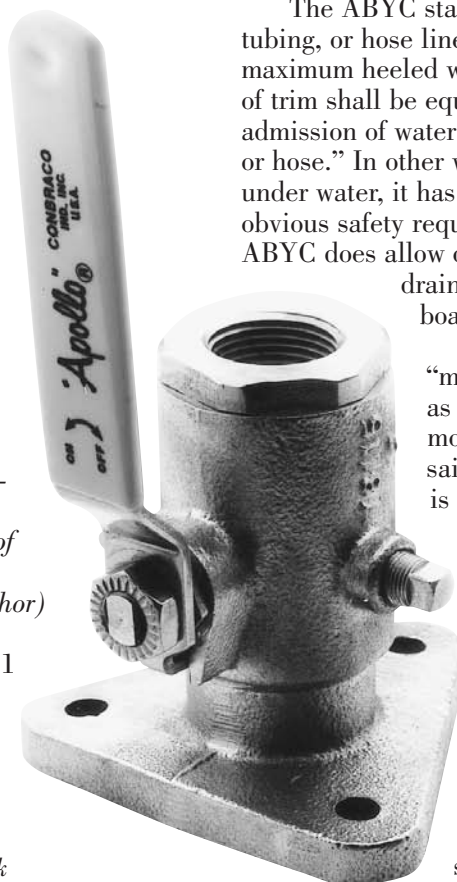
—ABYC H-27 and UL 1121

Flanged bronze ball-valve seacock

Note the distinction between the fitting that passes through the hull, the thru-hull — and the valve that may or may not be used to seal its inboard end — the seacock. Put another way, even if a seacock is supplied with an integral thru-hull fitting, there are still two distinct components here.

The ABYC standards go on to state that: “All piping, tubing, or hose lines penetrating the hull below the maximum heeled waterline and under all normal conditions of trim shall be equipped with a seacock to stop the admission of water in the event of a failure of pipes, tubing or hose.” In other words, if the thru-hull is ever likely to be under water, it has to have an attached seacock. This is an obvious safety requirement that is frequently violated. (The ABYC does allow one or two exceptions, including cockpit drains that are above the waterline when the boat is at rest.)

Both the ABYC and UL define the “maximum heeled waterline” on powerboats as a 14-degree angle of heel (there are moves to change this to 7 degrees). On sailboats the “maximum heeled waterline” is considered to be the waterline when the boat is heeled to the point at which the midships sheerline is down to the surface of the water. On most sailboats this puts much of the hull below the heeled waterline, meaning that almost all thru-hulls should have an attached seacock. A quick look at most boats will reveal thru-hulls that don't meet this standard. A glance at marine catalogs will show that the industry itself has not grasped the significance of this standard: I have several catalogs that



contain comments to the effect that thru-hulls without seacocks should not be installed below the waterline “as per ABYC H-27.” In my admittedly incomplete survey, I haven’t seen a single catalog that refers to the heeled waterline.

Turning now to the definition of a seacock, the wording that I have italicized, which was only added in recent years, is quite significant. A “lever-type handle” eliminates all gate and globe valves from consideration as seacocks (gate and globe valves are the type that are operated by handwheels requiring multiple turns to open and close). This makes sense. Despite their widespread use, gate and globe valves have four design flaws in seacock applications:

1. The valve operating stems have a narrow cross section and as such can be relatively easily sheared. Given the fact that seacocks are often obstructed by marine growth and calcium, and as a result are hard to operate, these valves are especially prone to failure.
2. Any marine growth or obstruction occurring on the seat of the valve is next to impossible to clean off without valve disassembly, and it is very difficult to get the valve to seat properly until it is cleaned off (as opposed to other types of valves which are wiped clean in operation).
3. The mechanism is indirect (the handle turns a gear which operates the valve) which makes it less reliable than the direct mechanism of a seacock (the handle turns the drum or ball).
4. It is not possible to tell by looking at the valve handle whether the valve is open or closed.

The last point relates to the other part of the italicized definition which calls for the operating handle to move through a 90-degree arc, “giving a clear indication of whether the valve is open or shut.” This requirement is



Gate valve stuck open by debris. Note that the handle does not indicate whether the valve is open or closed.

normally met by having the handle line up with the body of the valve when the valve is open and having it at right angles to the body of the valve when the valve is closed: a quick look is all that is needed to see if the valve is open or closed. Positive stops limit the movement in both directions.

Corrosion concerns

With metal thru-hulls, corrosion is a major concern. The ABYC H-27 standard states: “All materials shall be corrosion-resistant in the marine environment and shall be galvanically compatible.”

Widespread problems have occurred through the use of brass valves as opposed to bronze. Brass is an alloy of copper and zinc. If these two metals are electrically interconnected (which occurs automatically in an alloy) and are then immersed in an electrolyte (salt water and all but the purest fresh water), a

galvanic cell is established which results in the dissolution of the zinc, leaving a soft and porous casting (often identifiable by its reddish hue). Most gate and globe valves are brass, rather than bronze (another reason for not using them). And even those with bronze bodies may have brass internal components. (**Editor’s note:** For more on this subject, refer to Dave Gerr’s article on Page 16.)

Among the bronzes there are many different alloys, some of which also contain zinc and, as a result, are more susceptible to corrosion than nonzinc alloys. Clearly, most buyers are not going to be able to make metallurgical tests to determine whether the alloy in a valve or thru-hull is suitable for marine use. Our best guarantee of a quality fitting is to dig into our pockets and buy only recognized marine name brands. To try to cut costs by buying cheaper industrial products or those of unknown origin seems to be the height of foolishness.

The internal parts of a valve have to be galvanically compatible, or noninteractive, with its body. Traditional drum-type valves have a drum machined from the same stock as the body, i.e., ball-type valves mostly have chrome-plated bronze balls riding in Teflon seals, with the chrome providing excellent corrosion resistance and the plastic

seals electrically insulating the ball from the bronze body; and then there is the rubber-plug type of valve in which the rubber eliminates all galvanic interaction between the plug and its body. Other materials that have been used in seacocks are stainless steel and aluminum. However, most grades of stainless steel are not suitable in any permanently wet application. When stainless steel is submerged in stagnant water (precisely the conditions inside many seacocks) it will lose its stainless quality and corrode much like regular steel. Even when used for such items as handles, unless a high quality (and expensive) grade is used, stainless steel will corrode in time, especially if coated with plastic.

Aluminum is often used for welded thru-hulls on aluminum boats and sometimes for seacocks. The key consideration here is to use only a high-quality marine-grade aluminum, making sure that it is also galvanically compatible with the hull (i.e., of the same or a similar grade of material).

Bonding questions

The question then arises as to whether metal thru-hulls and seacocks should be given cathodic protection. Aluminum fittings, if welded to the hull, will automatically be included in the hull's protection system. The debate centers on whether or not to connect bronze fittings in wood or fiberglass hulls to the boat's bonding system and zincs. In general, the answer is "no," for a couple of reasons:

1. Bronze will almost certainly be the "most noble" metal on board. As such, it is not likely to suffer from galvanic corrosion. If wired into the bonding circuit and, therefore, electrically connected to other "less noble" metals on the boat, it will simply accelerate the consumption of the boat's zincs. If the zincs are neglected, the bronze will actually accelerate corrosion of the other metals.
2. The added galvanic activity caused by wiring the bronze into the bonding circuit will generate alkaline hydroxides in the vicinity of the bronze. This will blister paint and destroy wooden backing blocks in fiberglass boats and the hull planking on wooden boats.

This opposition to bonding bronze thru-hulls and seacocks is based on the assumption that without a bonding connection,

Glass fiber-reinforced nylon seacocks, tail pieces, three-way valve and vented loop.

the thru-hull or seacock will be electrically isolated, which is almost always the case, particularly if the inboard connection is made with a rubber hose. However, if there is any chance of the thru-hull or seacock being part of a path for stray currents (for example, installation below the normal accumulation of bilge water or a hard metal connection from a bilge pump to a thru-hull) the fitting should be bonded. This is done to forestall the possibility of devastating stray current corrosion. Note that it is not the bonding-circuit zinc that is now protecting the fitting from stray current corrosion, but the fact that the bonding circuit is connected to the battery negative.

Stray-current corrosion occurs when a metal fitting discharges a current into water. It cannot be stopped with zincs. However, it can be forestalled by providing a direct path for the stray current back to the battery negative, instead of allowing the current to be discharged into the water. The bonding circuit forms this path. If thru-hulls or seacocks in fiberglass or wooden hulls are bonded for any reason, the vessel is going to need a proper lightning protection system (it should have one anyway) containing a separate immersed ground plate of at least one square foot in surface area (an external ballast keel or metal rudder will suffice; otherwise a ground plate will have to be fastened to the hull). Without such a ground plate, the bonded thru-hulls may become the path to ground for a lightning strike. Lacking adequate surface area to safely dissipate a strike, they may heat up to the point at which they melt, burn, or explode out of the hull.

Plastic thru-hulls and seacocks

It is these kinds of corrosion and corrosion-prevention problems associated with metal thru-hulls and seacocks that make using plastic units such an attractive alternative. Plastic fittings are totally non-corrosive and require no



corrosion prevention strategies; in addition they are lighter, frequently easier (and therefore cheaper) to install, and often cheaper to buy in the first place. There can be drawbacks of course: reduced physical strength compared to metal, less abrasion resistance, susceptibility to damage from ultraviolet degradation and chemicals, a limited ability to tolerate temperature extremes, and embrittlement with age.

When looking at these drawbacks, it is possible to distinguish two somewhat different sets of issues: the suitability of different plastics for use in manufacturing thru-hulls and seacocks; and whether the fittings, as manufactured, will withstand the rigors of thru-hull and seacock service.

Finding suitable plastics

The best treatment I have found on this subject is a 1985 paper, titled "Selection Criteria for Plastics Used in Through-Hull Fittings," written by A.B.F. Fraser-Harris, M.D., and Jerry J. Leyden and presented to the Seventh Chesapeake Sailing Yacht Symposium of the Society of Naval Architects and Marine Engineers. The authors identify the necessary physical characteristics for any plastic to be used in thru-hull or seacock construction and then review the available plastics to see which ones have these properties. Their list of requirements includes:

- Impact resistance. From time to time boats have a violent motion. Externally, there will be impacts from crashing into waves; internally, there may be severe shocks from loosely stowed objects or falling bodies.
- Flexibility, tensile strength, and good memory. A boat's hull is constantly flexing while machinery and other sources impart vibration. Any fittings attached to the hull must be able to absorb this flexing and vibration without damage or permanent distortion in shape.
- Abrasion resistance. They must be able to handle normal situations, such as sand and other particles in cooling water and bilge water, as well as abnormal situations, such as groundings.
- Tolerance of temperature extremes. They may be subjected to everything from the high temperatures associated with engine manifolds and hot fluids down to sub-zero conditions.
- Resistance to a broad range of household chemicals, hydrocarbons, effluent, and the byproducts of various forms of marine growth.
- No ultraviolet degradation.
- "Continuous freedom of movement." If a seacock is left undisturbed in one position for a long period of time, the plastics in the various internal components must not bond together or otherwise cause the valve to seize up.

- The ability to be drilled, threaded, and otherwise machined without developing internal stresses that may result in later failure.

Given the fact that no authority had established any quantifiable standards for plastics used in thru-hulls and seacocks, Fraser-Harris and Leyden set their own threshold levels. Based on their assessment of available plastics, they concluded that the only ones suitable for thru-hull and seacock manufacture were nylons, acetals, and PBTs (polybutylene terephthalate), and that these are only suitable when reinforced with between 20 percent and 33 percent fiberglass and when UV inhibited. They specifically ruled out polyvinyl chloride (PVC), chlorinated polyvinyl chloride (CPVC), and acrylonitrile butadiene styrene (ABS), which are all, from time to time, found in thru-hull fittings (note that these materials may be suitable for less demanding situations, but not for thru-hulls and seacocks).

Bob Foresman of Forespar®, the manufacturer of the well-known Marelon® line of fiber-reinforced nylon thru-hulls and seacocks, concurs. Forespar® nylon thru-hulls have 13 percent fiber reinforcement, and their seacocks have 33 percent. The company has been selling these fittings for 14 years without experiencing problems with the material (although there have been some minor design glitches, see Page 14).

What's more, as Bob Foresman is happy to point out, fiber-reinforced nylon has been used in agricultural valves, for which the conditions are in some ways far more demanding, for more than 40 years, so there is a great deal of anecdotal evidence and experience to support its use.

There is also a great deal of anecdotal evidence to support the position that other nonfiber-reinforced and non-UV inhibited plastics are *not* suitable for thru-hulls and seacocks. This evidence includes numerous boat sinkings caused by fittings that failed from UV degradation, embrittlement with age, inability to withstand temperature extremes, and inadequate resistance to shock, fatigue, and abrasion.

Plastic fitting design

It is one thing to find a plastic that is acceptable for thru-hull and seacock use; however, it is quite another to design a fitting suitable for such use. Fraser-Harris and Leyden comment on this subject, which is also in part addressed by UL and ABYC standards.

The most conspicuous design and manufacturing weakness with plastic seacocks has been the operating handles. Failures have been relatively common among some early designs.

I have been told that handles only break when valves freeze up from a lack of use (all seacocks, both metal and plastic, should be tested at least once or twice a season) and a lack of lubrication. This is probably true. Given this lack of maintenance, the explanation continues, the handle, as the weak link, is protecting the valve from being overstressed. I personally find this attitude unacceptable. If I have a failed hose and water is flooding into my boat,

when the handle breaks off the seacock it's going to be small consolation to know that the broken handle is protecting the valve from damage! It is significant that most manufacturers have beefed up their handles over the years, but even so I still get nervous around a tight plastic seacock (as opposed to the old tapered bronze seacocks which you can give a good whack with a hammer to loosen up!).

Glass fiber-reinforced seacocks and thru-hulls. Note the straight threads.

Editor's note: *There are two hex "nuts" on some valve designs. One is intended to tighten the valve to the thru-hull, and one is intended for assembly and disassembly of the valve. Take care not to overtighten the hex intended for disassembly; it can make the ball too tight, which can (in some designs) lead to breakage of the operating handle. Use the hex closest to the hull for tightening the valve to the thru-hull.*

In addition, UL and the ABYC specify that any threaded components must have at least five full thread engagements, that the valve position once set (open or closed) must not be altered by shock or vibration, that the valve must still operate with marine growth inside it, and that it must have a drain (unless it can withstand the pressure of freezing water without damage).



Testing procedures

In order to establish quantifiable standards for these and other requirements, UL has devised a number of tests that any thru-hull or seacock (metal or plastic) must pass to receive the UL stamp of approval.

- Fittings are subjected to temperature extremes — seacocks with no drain plugs are filled with water and frozen hard.
- A special machine is used for shock and vibration testing.
- Fittings are driven through two feet of dry sand 10,000 times to test for abrasion.

- Seacock operation is tested in both dry and saturated conditions (some plastics swell up and seize when wet).
- Both thru-hulls and seacocks are submerged in hydrocarbons, bleach, ammonia, and salt water.
- Plastics are subjected to an accelerated UV test and then tested for retention of at least 70 percent of their original strength.

Lastly there's UL's static load test, otherwise known as the "500-lb. man test." The static load test consists of mounting a thru-hull or seacock in a simulated hull section and then applying a static load of 500 lbs. to its inboard end (this is done by hanging a 500-lb. weight from the fitting). The fitting must be able to support the weight for 30 seconds without suffering damage or deformation that impairs its performance (with seacocks, the test is followed by a leak test to see that the valve still seals properly).

The static load test is the ultimate test of plastic thru-hulls and seacocks, and of the smaller sizes of bronze fittings (some 1/2-inch and 3/4-inch bronze fittings fail). Bob Foresman reports that the smaller (1/2-inch and 3/4-inch) sizes of their Marelon® fittings as originally designed (the "old series") could not pass this test. The company had to redesign and retool, changing the original, straight pipe threads on the fittings to a buttress thread. The company now produces this "new series" of thru-hulls and valves which are UL-tested and are listed alongside the "old series" which are not UL-listed. The new series is sold primarily to boatbuilders; the old series to the after-market (marine chandlers and catalogs).

Editor's note: *The reason that Forespar continues to build the straight pipe thread valve for chandlers is that it will mate with a straight pipe thread thru-hull fitting which is likely to be encountered in an aftermarket situation. The boat builder can control these parts better, and ensure that only buttress threads are used on both the valve and thru-hull.*

As far as I know, there are no other plastic thru-hulls and seacocks intended for below-the-waterline use that are UL-listed, although there may be some that the manufacturer describes as "meeting the UL standard." The distinction is that the UL-listed classification means that not only has UL done the requisite testing, but has also established a factory inspection program to ensure that the manufacturing facility will reliably turn out products meeting the standard. In the second instance, the manufacturer has either itself, or through an outside laboratory, tested its own products to see if they will pass the UL tests — UL has in no way validated the results, and there is no factory inspection program.

Tough tests for seacocks and thru-hulls provide an extra margin of security.



Installation

Even if a product is UL-listed, this is still no guarantee that it will be installed correctly. Key issues here are protecting the hull in way of the fitting, maintaining watertight integrity at all times, providing adequate fastening, making sure that the fitting as installed will withstand the 500-lb. static load test (as opposed to only passing on the test bench), and placing seacocks in readily accessible locations. Particularly in fiberglass hulls, thru-hulls and seacocks need some kind of a backing block, faired to the shape of the hull and providing a level surface on its inboard side on which to seat the retaining nut or seacock.

This helps spread to a larger area of the hull the inevitable shocks, stresses, and vibrations experienced by the fitting. Clearly the thru-hull needs to be bedded or bonded in place in such a way that it will not develop leaks over time. This is most essential in cored hulls, where even a small leak can do extensive and expensive damage to the core (the core should be removed and the two skins bonded together in the area of the thru-hull). Threaded fittings should be wrapped with Teflon tape.

At one time the ABYC required seacocks to have flanges that could be securely (i.e., independently) fastened to the hull. This is no longer part of the standard, although many bronze seacocks are still installed in this manner. In this case the fasteners must be galvanically compatible with, and at least as noble as, the seacock itself (otherwise the fasteners will soon suffer from galvanic corrosion).

Plastic seacocks are invariably held in place by the thru-hull fitting, with maybe some additional bonding inside the hull. With the integrity of the installation riding solely on the thru-hull, it is essential to have a thru-hull that is properly qualified (preferably UL-listed but, at a minimum, fiber-reinforced); that is not vulnerable to external damage (for example, being broken off if the boat bangs against a dock); that has at least five full threads engaged with its seacock or retaining nut; and that is properly installed with the seacock or retaining nut bedded to a backing block.

To meet the ABYC standard, an installed seacock must pass the 500-lb. static load test (the UL standard is a test-bench standard; the ABYC standard is an “in-the-boat” standard). If a seacock is supplied with an integral thru-hull and the entire assembly is UL-listed, it will automatically pass the static load test if it is properly installed (according to the manufacturer’s instructions).

Mixing and matching problems

However, problems arise when thru-hulls and seacocks are mixed and matched. Even if the individual components are UL-listed, a specific combination of thru-hull and seacock may not pass the static load test (notably when an unsupported seacock, or a seacock and raw-water filter, is on the end of a thru-hull extending some way into a boat). Because it is next to impossible to rig up the static load test inside a boat, an installation generally cannot be tested for compliance with the ABYC standard. For this reason, it is best to ensure that the thru-hull and seacock are a matched


pair. If not, a certain amount of common sense is needed with thru-hull and seacock installations, viewing each one from the perspective of: “Will it hold if a heavy person, a loose battery, or a tool box is thrown violently against it?”

Finally, the last installation requirement in the standards, which would be too obvious to state if it were not for the fact that it is routinely ignored, is to make sure that all seacocks are readily accessible. A seacock is nothing more than an insurance policy designed to protect against the failure of the hose that is attached to the thru-hull. If the hose does fail and if the operator can’t get at the seacock to close it, then the seacock won’t do a bit of good and might just as well not have been there in the first place.

Accessibility is also necessary for maintenance and to drain the seacock when winterizing the boat (make sure the drain is on the lower side).

In days gone by, there was only one choice when it came to a “proper” thru-hull and seacock installation: bronze. Today, with plastic fittings having proven themselves after many years of service, there seems to be a bewildering array of choices. However, a closer inspection reveals that very few of these choices meet even the limited standards (UL and ABYC) that pertain to these products. These standards are, of course, voluntary, but I know that on my boat I wouldn’t want any below the-(heeled)-waterline thru-hull fittings that didn’t meet the standards.

With this point in mind, the choices are still fairly limited — basically either bronze or fiberglass-reinforced nylon. Given that there is not much of a cost difference between the two, the choice of which to use is largely a matter of the brute strength of bronze as opposed to the lighter weight and freedom from corrosion that comes with plastic.

Either approach is an excellent choice, just as long as the thru-hull and seacock are properly installed and maintained. 

This is a revised version of an article which was published in Ocean Navigator, Sept. 1996.

Choosing the right

It's not likely — I expect — that we'll soon forget the spectacle of a brand-new, fancy America's Cup racing machine splitting in two and sinking ... in less than two minutes ... like a stone. We will hope that was a learning experience. At any rate, the sinking/split-up was the result of going too light — way too light — with a new-fangled, high-tech material, in this case, carbon fiber. Though it's now forgotten, this isn't the first time America's Cup boats have run into difficulties with exotic materials. The earlier stuff? Metal, of course.

The designer was none other than the Wizard of Bristol, Captain Nat Herreshoff. The race was in '95 ... 1895, that is. Herreshoff's construction for the 123-foot Defender was truly remarkable:

The foundation was the heavy bulbed lead keel, on top of which was a cast brass keel plate in three sections joined by bronze bolts through flanges on the upper side; this keel plate was fastened by bronze lag screws to the lead keel. The stem and sternpost were of cast bronze, as was the frame of the rudder. The plating, down from a little above the water was of manganese bronze ... The topsides were of aluminum, with a 4 percent alloy of nickel, 5/16 and 3/8 inch thick, with a steel plate in the wake of the chainplates, and the rivets were of bronze. The frames were steel.

Well, you get the idea—an awful lot of different metals all mixed together in salt water. Not good! In fairness to

Captain Nat, using all-metal for hull construction was such a new

by Dave Gerr, N.A.

concept at the time, that the corrosion problems just weren't fully understood. More important, Defender not only held together through her entire racing campaign, but she won it all as well. Still, her problems were — to say the least —

severe. The U.S. Navy inspected Defender to see about using aluminum in shipbuilding:

... the topsides were in bad condition with the paint peeling and corrosion visible at the juncture of the aluminum and bronze. In spite of a special paint prepared by a local painter after the usual yacht paints had failed, it was difficult to maintain a satisfactory surface.

After a later inspection, the report continued:

In June she showed more serious corrosion and the heads of many bronze rivets had fallen off ... The cast fittings about the deck were so corroded that many might be broken by hand.

Fully 100 years have passed, and we have at last gained a firm understanding of how to build boats of metal and how to employ metal fittings. (There was a time when even metal fittings were nearly unheard of: most cleats, chocks, brackets, even rudder stocks, were of wood.) Indeed, aluminum and steel are regularly used for hull construction in everything from aluminum canoes and production runabouts, to megayachts and commercial craft. Even on fiberglass boats — like the one you probably own — metal fittings, props, shafts, rudders, and miscellaneous hardware are everywhere ... and each is vital.

When you're examining a new boat or considering adding or replacing hardware or fittings, you should have a basic understanding of what types of metals are available. What are their properties, advantages, and drawbacks?

Stainless steel

These days, when someone looks for a marine fitting made of metal, more often than not they'll think of stainless steel. This is a shame since stainless has some drawbacks which good old bronze doesn't, but more about that in a bit. The common stainless alloys for marine use are listed in the chart on Page 17.

All these stainless steels contain about 2 percent manganese and 1 percent silicon. They also all have 17-19 percent chromium. In fact, the steels in this group are often referred to as "18-8 stainless" because they're based

metal for the purpose

on adding 18 percent chromium and 8 percent nickel to steel to reduce corrosion and increase strength. Engineers — always fond of catchy terms — will frequently refer to this group as “austenitic” steels. This really just means that they have 8 percent (or so) nickel and are thus non-magnetic. Whatever they’re called, 302, 304, and 316 stainless all have a tensile strength of about 85,000 PSI, a high average.

Something like 70 or 80 percent of the stainless fittings and hardware you buy will be made of 302 or 304. These alloys work fine for deck and interior hardware. But they’re ... well, barely adequate (but no better) below the waterline ... as long as they’re used out in the open in flowing water. This flowing water business is stainless steel’s great weakness. I’m forever discovering badly pitted and

oxygen — for instance, pressed for a long time, immobile, against a cutlass bearing; smothered by barnacles; or enclosed in a stern tube — it loses its protective oxide film. In these conditions it becomes active and can suffer badly indeed from pitting corrosion.

Stainless welding concerns

Another problem with stainless occurs during welding. Most of the 300 series steels have a moderately high carbon content — from 0.08 percent to as high as 0.25 percent. The trouble with this, for marine use, is that when the steel is heated in welding, the carbon mixes with the chromium to form a chromium carbide. (Sounds like we’re getting deep into hard science here, but hang on for a moment.) The result is a welded metal fitting with two sub-alloys formed inside: chromium carbide and chromium-depleted stainless right next to it. These alloys are different enough to corrode each other (they form a galvanic couple). Indeed, it takes you right back to the problems built into Captain Nat’s Defender.

Low-carbon stainless

One solution is to reduce the amount of carbon in the alloy. This is what the “L” stands for in 304L and 316L stainless. You can see from the table that these alloys have 0.03 percent carbon content or less, thus higher resistance to corrosion after welding. Another more exotic approach is 321 stainless, which has titanium added. The titanium mixes with the carbon more readily than the chromium and prevents the formation of chromium carbide.

If you have to use stainless underwater, especially a welded fitting, be very sure to use only 316L. Though you’ll often hear otherwise, none of the other 300 series (18-8) stainless is up to the job. The best use for 321 is for welded fuel tanks. Technically, stainless isn’t approved for use in fuel tanks by the American Boat and Yacht Council (ABYC); 321 stainless is, however, up to the job — if done by a certified welder with the correct welding equipment, electrodes, flux, and wire.

Special stainless steels

There are marine stainless alloys that don’t fit in the standard 300 series. Probably the best known of these is known as Aquamet-22 or Nitronic 50 (same thing). This is a proprietary steel alloy of the Armco Steel Corporation. It’s

Marine stainless steels
(18-8 stainless — steel, chromium, and nickel)

alloy	carbon content	nickel	molybdenum
302	0.15% Max.	8-10%	none
304	0.08% Max.	8-12%	none
304L	0.03% Max.	8-12%	none
316	0.08% Max.	10-14%	2-3%
316L	0.03% Max.	10-14%	2-3%
321	0.08% Max.	9-12%	none*

*plus titanium at 6 times carbon percentage

corroded stainless fittings or fasteners used underwater where flowing water can’t get at them — like in rudder shafts or struts.

Stainless and oxygen

The reason for this is that stainless protects itself from corrosion by interaction with the oxygen dissolved in seawater. This forms a protective oxide film. Bronze, Monel, copper, and copper-nickel corrode slightly faster if they lose this film but will still remain highly corrosion-resistant.

Stainless steels, on the other hand, rely chiefly on this oxide film to protect them from corrosion. When stainless is in clean, flowing water containing plenty of oxygen, it has no difficulty generating and retaining the oxide film. In this condition it’s highly cathodic (noble) — a state that’s also called passive. (See *galvanic series chart on Page 21.*) However, if you deprive stainless of a regular supply of

steel alloyed with about 21 percent chromium, 12 percent nickel, and 2 percent molybdenum. Aquamet-22 has almost become the “standard” prop shaft material. It’s very corrosion-resistant and has a tensile strength of over 100,000 PSI. I have a slight preference for Monel, especially with a bronze propeller, but Aquamet is darned good stuff, and I’m happy to see it installed on any boat. Under the Nitronic 50 name, this same alloy is the standard material for most high-tech rod rigging employed on racing sailboats.

Other special stainless — usually used in high-strength rigging components — are alloy 17-4 and 17-7. These are steel with 17 percent chromium and 4-7 percent nickel. With tensile strengths over 170,000 pounds, these are strong alloys indeed. Nitronic 50 and the 17-4 or 17-7 steels in a fitting are a sign of the utmost in high-tech engineering and care by the manufacturer.

Aluminum

Aluminum has come a long way since the days of Herreshoff’s 19th-century Bristol boatyard. Chances are most of your boat’s metal fittings that aren’t stainless are aluminum. This is good for many applications. Since aluminum is lighter than steel, aluminum fittings are lightweight. Saving weight (and, not incidentally, cost) is usually a fine thing. Windscreen, window, and hatch frames, handrails, rubrails, flagstuffs, boathooks, stove tops, stanchions, and masts are all commonly fabricated of aluminum.

Aluminum castings are used for making cleats, end caps, plugs, small housings, traveler tracks, and the like. Common alloys are 356, which is principally an aluminum/silicon/copper alloy, and Almag 35 (or 535), which is similar but with chromium. The 356 version has a tensile strength of 23,000 PSI, while Almag 35 is considerably stronger, with a 35,000 PSI tensile strength and a yield strength of 18,000 PSI. Accordingly, 356 is better suited for lower-strength applications, like end caps and housings, while the Almag is excellent for cleats and traveler tracks. Almag is particularly good for applications with shock loading, because — unlike most castings — it will yield (deform or stretch) before breaking altogether, providing an additional safety margin.

Aluminum for welding

Welded aluminum for boat use should be either from the 5000 or 6000 series. The all-around strongest and most workable is 5086-H32 and H111 or H112. The 5052-H32 and -H34 varieties are also acceptable. It pays to ask around and find out what alloys were used on the hardware you’re planing to buy. Almost all masts and tubes used on boats are 6061-T6. It has been proved to have the best combination of extrudability (how it’s originally formed), corrosion resistance, light weight, and strength. I’d be suspicious of a mast made of some other aluminum alloy.

Zinc

The least expensive metal for small castings is a zinc alloy. These die-castings are almost all from alloy AG40A or AC41A. Frequently, they’re referred to as “pot metal” or by brand names like “Zamack.” Fairly close in composition and in strength, the 41A is a bit stronger, while the 40A is a bit more elastic. Manufacturers like die-cast zinc components because they’re inexpensive, melt at a low temperature, and have easy crisp line detailing right out of the mold. Zinc castings, however, are not as strong and are not nearly as corrosion-resistant as steel, aluminum, or bronze. If your boat has zinc cleats, chocks, or other high load fittings, it’s a good idea to plan an organized system of replacement with bronze or stainless. This doesn’t mean that all zinc fittings are bad. Why pay for more strength than you need? All sorts of low-strength hardware — caps, housings, decorative trim, light hinges, and so on — are just fine as chrome-plated zinc castings.

Space-age titanium

At the other end of the spectrum, most of the hot racing sailboats have some titanium hardware on them. Indeed, many of the Whitbread round-the-world boats, the America’s Cup racers, and other maxi racers employ titanium in most of their high-load fittings. Interestingly, pure titanium isn’t really all that strong, but add, oh, a dash of carbon, nitrogen, aluminum, and iron, and a pinch of, say, manganese, and you get a metal with a tensile strength over 120,000 PSI — twice the strength of ordinary mild steel. Titanium alloys — for reasons unknown and inscrutable — have extraordinarily complex numbering.

For example, one common general-purpose marine alloy is Ti-7Al-4Mo. (No, I haven’t the foggiest idea what it stands for.) Better still, titanium stretches or elongates under load before breaking, yet another margin of safety for an already strong material. As usual, you don’t get something for nothing. Titanium costs ... well, one big fat bundle. Most of us ordinary sailors really don’t need the stuff; but heck if you’ve got a few extra dollars, you could always install a titanium fitting or two just to say you have ’em. Then all your friends would have to run out and purchase titanium hardware, too.

Brass and bronze

It really is a shame that stainless has become the “standard” metal for most marine fittings. Unlike stainless, good-quality marine bronze doesn’t suffer from pitting corrosion. Many bronzes are as strong as the best stainless, and bronze can be more easily cast and worked into complex shapes than stainless. Even better, bronze is more ductile (it stretches and gives more) which — as we’ve seen previously — provides an additional margin of strength and safety.

Perhaps the most important question is: what’s the difference between bronze and brass? Once, this was relatively simple; brasses were copper alloyed with zinc, and bronzes were copper alloyed with tin, with very little or no zinc at all. Either brass or bronze could have a variety of



other elements stirred in to adjust strength, elongation, and machinability. Over the past couple hundred years or so, “new” varieties of bronzes have been developed. The old standard bronzes are usually called “tin bronzes.” Now these may also have some phosphorus added and so are sometimes called “phosphor bronzes.” The alternatives are “aluminum bronzes,” which have 5-8 percent aluminum, while “silicon bronze” has silicon added.

The best-known silicon bronze is probably Everdur, a trademarked bronze generally of 95 percent or higher copper, with about 3 percent silicon, and 1 percent manganese. Silicon bronze (Everdur) is just about my all-around favorite marine metal. The top pick for most marine screws and bolts, it has a tensile strength of 90,000 PSI in hard temper, and 55,000 PSI or more in soft temper. It'll never corrode (unless you're foolish enough to fasten it directly to steel or aluminum). It can be cast, welded, rolled, bent, and otherwise formed without harm. If I had my way, every fitting on a boat would be made from silicon bronze. If you don't like polishing bronze (and who does?), get it chrome-plated. Now that's Bristol fashion! Phosphor and aluminum bronzes are also exceptional for almost all marine applications.

Corrosion damage to underwater fittings can be significant.

Brasses and fake bronzes

Brasses, on the other hand, aren't so hot. The trouble with brass is that the zinc in it provides a built-in galvanic reaction. Indeed, in salt water, bronzes self-destruct or dezincify. This leaves them spongy and brittle — bad news. Brass gate valves — in place of proper bronze seacocks — have sunk many a boat. There's nothing at all wrong with lightweight brass interior trim, however. These are quite suitable. Just don't use brass anywhere on a boat where both strength and resistance to salt water are required.

This leads to a little understood problem. There are several bronzes around that regularly are called — quite wrongly — bronze! Beware! Many of these are used regularly, even underwater, with varying degrees of success. The two most common are Tobin bronze, which is only 60 percent copper and fully 39 percent zinc, and Manganese bronze, which is just 58 percent copper and 39 percent zinc. (Trace elements make up the balances.)

Manganese bronze is routinely used for castings like portlights and cleats. This is fine; it's not in the water. Manganese bronze is also used for propellers. I've never fully understood its popularity for this. The phosphor or

aluminum bronzes are both stronger and more corrosion-resistant. In fact, Nibral (commonly used for better-quality props) is a nickel-aluminum bronze. Nibral is *the* way to go. Tobin bronze was (and still is) the low-cost prop-shaft material. If you have props and shafts of Manganese and Tobin “bronze,” be sure to use good zincs for corrosion protection, and to check them regularly. If you have a choice, avoid these “fake” bronzes below the waterline.


Copper-nickel

Copper-nickel is an interesting alloy, though it is seldom used. Composed principally of 70 percent copper and 30 percent nickel, copper-nickel has about the same strength as ordinary mild steel — 60,000 PSI. Copper-nickel is about as hard, and it works and welds in just about the same way as mild steel. Copper-nickel’s great — and very unusual — advantage is that it’s not only as corrosion-resistant as bronze, but it’s totally non-fouling. Yep, if you build a boat from copper nickel, you don’t ever have to paint it (if you don’t want to), and it never needs bottom paint — not ever! Sadly, copper-nickel is costly — too costly for most of us ordinary folks, at least for whole boats. Still, it makes wonderful grounding shoes, centerboards, and the like.

Monel and nickel alloys

Monel is possibly the most famous of all marine metals. Almost everyone knows it for its quality, corrosion resistance, and long life. It’s also an alloy of nickel and

copper. Monel 400 — the “standard” — is 67 percent nickel, 29 percent copper, and 1.4 percent iron. Even in soft temper, its tensile strength is 70,000 PSI. Monel K-500 is similar, but the addition of small amounts of aluminum, silicon, and manganese push its soft-temper tensile strength to 90,000 PSI. Monel K-500 is my first choice for prop shafts, followed closely by standard Monel 400. Combined with an aluminum-bronze or a nickel-aluminum-bronze prop, you’d really be cooking with gas: high strength and very high corrosion resistance. Monel is pricey, however, and these days Aquamet-22 stainless shafts are easier to come by at most shops. Monel also makes the number one best fastener for wooden hulls, as well as the very best metal for custom fuel and water tanks. Again, this is pricey, but if you want the very best, Monel is it.

Two other marine nickel alloys are Inconell and Hastelloy. Inconell is a nickel-chromium-iron alloy, while Hastelloy is a nickel-chromium-iron-molybdenum alloy. Both are high strength, with over 90,000 PSI tensile strength; however, the real advantage of these alloys is their resistance to corrosion at high temperatures while in an acid bath. Where do you find such conditions on boats? Why, in the exhaust lines. Mix high heat, saltwater, and sulfur, and the resulting sulfuric acid and diesel exhausts are pure murder on most ordinary metals, even on the very best stainless. For exhaust risers, metal exhaust bellows, and the like, there’s nothing to beat Inconell, except, that is, for Hastelloy C — the absolute first-pick for any metal exhaust component, if you can afford it. 

About the galvanic series chart at right ...

When dissimilar metals are connected — either by simple contact or by wiring — and they are immersed in water, a current will flow which can cause galvanic corrosion. The galvanic series can be used to determine which combinations need special protection and which of the metals will corrode.

Any metals that are more than 200 millivolts apart in the table will cause the more anodic (higher in the table) metal to corrode. Such combinations should use a sacrificial zinc to protect them.

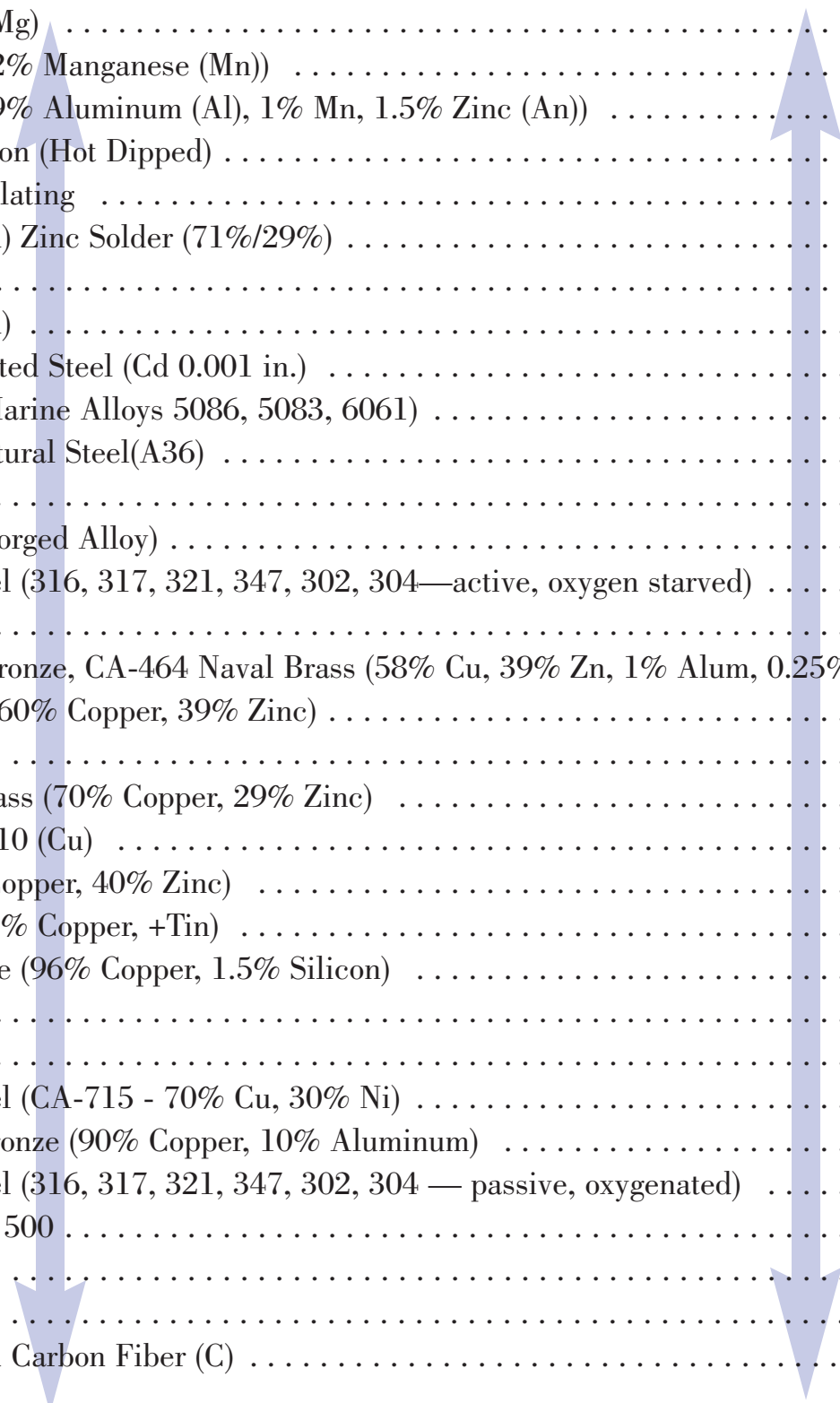
If the metals are not underwater, seal them where they contact each other, to keep out moisture. In no case should brass or other metals containing zinc be used underwater.

- All measurements taken relative to a silver:silver chloride (Ag/AgCl) electrode, at 77 degrees Fahrenheit.
- The sign of potential applies with the negative (black) probe of the voltmeter connected to the reference electrode and positive (red) terminal connected to the fitting being tested.
- If using a zinc reference electrode, add 100 mV to the potential. For instance, silicon bronze is: -260mV, then + 100 mV = -160 mV.
- Average variability of potential is ± 40 mV for alloys with iron and/or nickel ± 20 mV for copper-based alloys without nickel.

Galvanic series

Anodic or least noble end (Active)

Millivolts (mV)



Magnesium (Mg)	-1730
Magnesium (2% Manganese (Mn))	-1670
Magnesium (9% Aluminum (Al), 1% Mn, 1.5% Zinc (An))	-1580
Galvanized Iron (Hot Dipped)	-1140
Zinc Electroplating	-1130
Cadmium (Cd) Zinc Solder (71%/29%)	-1120
Zinc (Zn)	-1050
Cadmium (Cd)	-860
Cadmium Plated Steel (Cd 0.001 in.)	-860
Aluminum (Marine Alloys 5086, 5083, 6061)	-820
Mild or Structural Steel(A36)	-790
Alloy Steel	-740
Aluminum (Forged Alloy)	-730
Stainless Steel (316, 317, 321, 347, 302, 304—active, oxygen starved)	-550
Tin (Sn)	-500
Manganese Bronze, CA-464 Naval Brass (58% Cu, 39% Zn, 1% Alum, 0.25% Mg)-	450
Naval Brass (60% Copper, 39% Zinc)	-450
Yellow Brass	-450
Admiralty Brass (70% Copper, 29% Zinc)	-360
Copper CA-110 (Cu)	-340
Brass (60% Copper, 40% Zinc)	-330
Gunmetal (88% Copper, +Tin)	-310
Silicon Bronze (96% Copper, 1.5% Silicon)	-260
Tin Bronze	-260
Lead (Pb)	-240
Copper/Nickel (CA-715 - 70% Cu, 30% Ni)	-200
Aluminum Bronze (90% Copper, 10% Aluminum)	-150
Stainless Steel (316, 317, 321, 347, 302, 304 — passive, oxygenated)	-150
Monel 400 & 500	-110
Titanium (Ti)	-100
Silver (Ag)	-80
Graphite and Carbon Fiber (C)	(+250)
Platinum (Pt)	(+260)

Cathodic or most noble end (Active)

Millivolts (mV)

Some things are
MEANT
to be . . .



*. . . After doing their research, the Cape Dory 30
is exactly the boat these Lake Superior sailors
hoped it would be*

Once in a while you come across something that was meant to be. In some indefinable way all the parts go together, all the characteristics complement each other and the sense of cohesion and harmony is striking. All this is true of Jan and Larry DeMers and their 1983 Cape Dory 30, DeLaMer.

The boat is impressive. The brightwork gleams. The lines are spliced and lovingly done up. Inside and out DeLaMer is exceptionally shipshape. Jan and Larry complement the boat and each other, and the boat complements them. In speaking of how they selected this Cape Dory, Larry simply says, "It was meant to be." This is not the same as saying it was simple or easy.

The DeMers chartered boats for 15 years, sampling different designs. Larry says they collected a \$3,000 library for the study of the design characteristics of various yachts. They even chartered a Cape Dory 31 they didn't like. It was a modified hull, designed by Cape Dory instead of by Carl Alberg, and it did not have the easy motion of the Alberg designs. This did not stop them from choosing the Alberg design. In their selection, the DeMers were thoughtful and thorough, and they understood the difference.

Jan and Larry were thumping DeLaMer's hull and checking out bed size and headroom in a yard near Lake Ontario on a well-remembered day in January 1991: it was the day war was declared in the Persian Gulf. DeLaMer, although already eight years old, still had all the original equipment packing boxes and user manuals. The obvious love with which she had been

by Jerry Powlas

kept made the purchase decision easy for the DeMers.

"It was like when you find the one you're supposed to marry," Larry says. "It was as sure as that." He should know. He and Jan were teenage sweethearts, and the passion has lasted into middle age.

DeLaMer has a modified full keel and a cutter rig. The 140 percent genoa is roller furling, but the staysail is hanked on and has a club boom. Jan likes the rig. She says the three smaller sails are easier to handle than the two larger sails of a sloop. Larry says they didn't want roller furling but that is what DeLaMer came with, and once they'd tried the rig, they liked it. The 140 jib has a foam pad along the leading edge to help control the shape as the sail is rolled. In Larry's opinion they get good sail shape from 90 to 140 percent of the J-dimension.

The roller furler is a Hood line drive which works very well. Larry cautions that it must have the proper control line, however. When he hears of people who are having trouble with this type of roller furler he always asks if they are using the original line or a replacement. The problems come when the replacement is not the one specified by Hood. His advice is to use the Yale 7/16" line specified by Hood. It splices easier and fits the drum just right. Larry adds, "Just follow the instructions."



*At left and at right above, DeLaMer in her element: a brisk day on Lake Superior.
At right, Larry and Jan DeMers appreciating a summer day on a fine boat.*



Larry made the ice box serve a double purpose when he created a fold-down cover that makes use of a two-way piano hinge to create a chart table.

DeLaMer is powered by a Volvo MD7B 13-horsepower two-cylinder engine. It was recently rebuilt by Alfred and Walkie Holzer of Schooner Bay Marina near Bayfield, Wis. Larry is very satisfied with the outcome and feels that Alfred and Walkie take special pride in their work. The rebuild included replacement of valve guides and seals, piston rings, fuel injectors, and the thermostat, as well as rebuilding the fuel injection pump and resurfacing the cylinder head. They found six impeller blades in the block from past water pump failures. Larry thinks Alfred and Walkie are the best.

Because they sail Lake Superior's cold waters, Larry and Jan added a wood- and charcoal-burning fireplace. Larry added functionality to the space limitations inherent in a 30-foot boat by designing a navigation tabletop that folds down over the ice box when needed. The tabletop takes a full-sized chart. Jan says she likes the interior because it is not dark teak throughout. DeLaMer has a white overhead, bulkheads, and cushions which brighten the interior. With their "can-do" approach to boat upgrades, Jan took on the cushion recovering project herself.

Larry says he is impressed with the quality workmanship throughout the boat. The quality of the work and finish in the areas that were not meant to be seen is very high, showing that the builders cared about what they were doing.

Larry says, "As far as I'm concerned, we are liveaboards who commute to work." They have a house and jobs and run a restaurant on the side, but they try to spend 35


weekends a year at the boat including the pre- and post-season boatyard work. Jan says, "This boat has been our sanity."

Jan, Larry, and DeLaMer are an impressive combination. The trio goes so well together that when Sandy and Randy Palmer sailed with them, they changed their minds about what kind of boat they wanted. They bought a Cape Dory 30 and are fitting it out much like DeLaMer.

The Cape Dory is no longer in production, but there is a good support network of owners. Robinhood Marine Center has the hull mold for the Cape Dory 30 as well as complete tooling for some of the larger Cape Dorys. They will build custom boats from that tooling.

The Cape Dory 30 was designed by Carl Alberg, who has had a major influence on yacht design. His designs were built by Pearson, Cape Dory, Whitby, and others. The Cape Dory is definitely traditional. She has a small interior compared to a contemporary 30 footer. There is much to be said for her in terms of seakeeping ability and ease of motion, and more than one person has said that she looks like a boat *should* look.

Larry and Jan are happy with and very proud of their boat. When you listen to them talk about it and watch them sail, it is clear that some things, indeed, are meant to be.

If you know of other good old boat sailors we should feature on these pages, please contact karen@goodoldboat.com or call 612-420-8923. 

Other resources

Cape Dory ceased operation in 1990. Robinhood Marine Center has much of the tooling that was used to make Cape Dory sailboats and uses it to make custom yachts.

Robinhood Marine Center is a good first place to look for advice or parts for a Cape Dory. Joe McCarty, general manager, says they can usually help Cape Dory owners or can refer them to other sources. They have a subsidiary called Spartan Marine Hardware which machines bronze castings from the original Cape Dory dies and molds. When it comes to spars and rigging, they recommend Rig-Rite, which bought the original Cape Dory inventory of these parts and continues to support the Cape Dory and other makes.

Robinhood Marine Center, HC 33, Box 1460, Georgetown, ME 04548; phone: 800-443-3625; fax: 207-371-2024; email: rmc@clinic.net; web: <http://www.robinhoodyachts.com>.

What others have to say about the Cape Dory 30

Editor's note: *It seems that whenever lists are made of the truly seaworthy boats, the Cape Dory 30 appears somewhere on these lists. (The most recent example we've seen was compiled by retired mechanical engineer John Holtrop in the April 1998 issue of Cruising World. He collected data on 507 monohulls and compared the numbers to determine "critical variables" for a cruising sailboat. Sure enough, the Cape Dory 30 is on the list in the 28-33' range.) What makes this boat so special? All sailboats are a compromise of some sort. Does the CD30 have no faults? We couldn't get Jan and Larry DeMers to admit to any, so we searched a bit farther for other owners of CD30s.*

Ed and Pat Carlson sail Skywind, a ketch-rigged CD30, in the Florida waters in and around Satellite Beach, with trips to the Florida Keys and Cape Canaveral. This summer they plan to cross to the Bahamas. They offered these insights:

"As a ketch, our CD30 offers a variety of sail plans. Depending on sea and wind conditions, we run fully rigged with either a standard-rigged 120 jib or a club-footed jib. With the club-footed jib, pointing into the wind is not as efficient, but tacking is automatic (no jib sheets to tend) which makes 'cocktail cruising' most enjoyable.

"She sails easily and well-balanced in a strong wind running just a jib and the mizzen. This configuration not only offers easier handling in less-than-perfect conditions, but also equalizes

the strain on the main mast by balancing stress between the jib and mizzen as opposed to running just a jib. In the three years we have owned Skywind we have never had to reef a sail — we just drop the main!

"The main mast height is 38.5 feet as opposed to the cutter's 40.5 feet, which allows us more flexibility when we encounter those 'low' fixed bridges. Also, we often leave the mizzen sail up when on the hook, which minimizes our swing. A disadvantage to the ketch is that the mizzen mast, being stepped in the cockpit, takes up its share of space. On the other hand, it provides an excellent place to mount a cockpit light (and to hang our wooden parrot)! We've also attached canvas pockets to this mast which gives us a place to put our suntan lotion, cameras, etc. (you know — 'stuff'). Haulouts can be a challenge, as there are few marinas that can perform this task without stepping the mizzen mast."

Regarding the boat's auxiliary, Ed and Pat say, "We found the Volvo Penta diesel auxiliary in a sad state and with insufficient push with only 14 horsepower. The new Universal 23 HP solved that problem. We also added a dripless stuffing box which, so far, has been wonderful."

Another disadvantage, which can be attributed to having an older boat perhaps, was in the deterioration of the wiring. Ed and Pat report, "Over the years, the wiring that bonded the boat had deteriorated. We recently replaced all the bonding wiring and added an in-hull zinc. 'To bond or not to bond' is always an area of controversy. Case in point — a week after the bonding was completed, we were struck by lightning! Thanks to good insurance, we were able to modernize much of our old electronics and wiring, so this was not necessarily a bad thing! We shudder to think of the large hole that may have been blown through the hull if we had not been bonded."

for Cape Dory sailors ...

Rig-Rite purchased Spartan Spars from Cape Dory before the company broke up. Rig-Rite still manufactures spar and rigging items for Cape Dory boats, including the original Cape Dory stanchions, the Stearns & Hyde furling systems, and Nicro-Fico traveler systems used on many Cape Dory sailboats.

Rig-Rite, 63 Centerville Road, Warwick, RI 02886; phone: 401-739-1140; email: kim@rigrite.com.

Spartan Marine has continued to operate in Robinhood, Maine, making portlights, cleats, hinges, stuffing boxes, struts, thru-hulls, and such. Many of these items were original Cape Dory equipment. Replacement parts for their assemblies are also available. Phone: 800-325-3287.

Triad Trailers, a former supplier of trailers to Cape Dory and its dealers, is still located in New Milford, Conn. They have custom trailer specs for the Typhoons and most Cape Dory sailboats up to 30 feet. Phone: 860-354-1146; email: triadtrls@aol.com.

Cape Dory owners are some of the best sources of information about these sailboats. They maintain an active network of websites, publications, and owners' associations. Please refer to the information on Page 38 of *Good Old Boat* magazine for more information about owners' associations and publications. This information is also available on the Good Old Boat website at <<http://www.goodoldboat.com>>.

Good Old Boat Photo Album



Photos by Mary Jane Hayes





Atomic 4: smooth,

Diesel envy?

*Take another look at the gasoline engine
that came with your good old boat*

If you own a sailboat, there is a good chance that you recognize the Atomic 4 engine by name, even if you don't have one in your boat. If you have a gasoline auxiliary engine in your boat, chances are it's an Atomic 4. Many good old boats have them; there were about 40,000 Atomic 4s built, and about 20,000 of them are still pushing sailboats around. While common, these engines are also controversial.

Most respected authors who write about sailboat engines say if you don't have a diesel engine, you should get one. They caution that it will be expensive to convert, but counsel that it is necessary. This point of view is so widespread, we don't know of any production inboard auxiliary sailboats offered today with gasoline engines. Indeed, to our knowledge there is no gasoline engine in production that would be a good candidate for this application.

Marine architect Dave Gerr and *Practical Sailor* editor Dan Spurr are respected authors who take the other tack. They point out that it may be difficult to justify the cost of converting from gasoline to diesel.

If you have a reliable Atomic 4, the best advice is to keep up with the routine maintenance and enjoy it. If you're having problems, your options are to repair it, get another used or

rebuilt Atomic 4, or replace it with a diesel. Four interesting factors should be considered in making your choice:

- the safety of gasoline and diesel fuels
- the economics of ownership
- the problems of maintenance
- reliability

Safety first

We have been told that one quarter of a cup of gasoline evaporated into the correct amount of air will explode with the destructive force of six sticks of dynamite. It makes you think.

Before you become overwhelmed with fear and diesel envy, however, take a walk down your dock, and ask a few diesel sailboat owners if they have engines for their dinghies. The truth is that just about every cruising sailboat has at least a quarter of a cup of gasoline aboard regardless of what the main engine fuel is. All of us have to be very careful with gasoline.

Automobiles have a good, though not perfect, safety record with gasoline. An automobile engine compartment is like an upside-down bowl. Leaking fuel and vapors fall down — out of the engine compartment and away from the

worth another look

car. In addition, cooling air from the radiator helps ventilate the compartment. We have never seen a production automobile engine compartment that was enclosed at the bottom. Although it might be desirable to do so to reduce drag, it simply is not worth the risk.

Marine inboard engine compartments are also shaped like a bowl, but the container is right-side-up. The problem is caused by gasoline vapor being heavier than air, so it tends to fall to the bottom of the bowl, where it can be ignited by sparks or flames. This is a major concern for any vessel that carries gasoline.

From a safety standpoint, we must consider that most small power boats use gasoline, and most sailboats carry

by Jerry Powlas

gasoline for their dinghies. Your safety will be enhanced if you know how to handle this fuel and adhere to very strict and thorough safety measures to prevent fire and explosion aboard your boat. Taking out your Atomic 4 will not greatly enhance your safety though, unless you also remove your dinghy fuel and perhaps your stove fuel as well.

Economics next

How do you use your boat? It is best to buy a boat suited to doing what you do most often. It is probably a mistake to buy a globe-circling blue water cruiser if you sail weekends with an annual two-week vacation. A coastal cruiser is better for this kind of work. This reasoning applies to your choice of engines as well.

Don Moyer, of Don Moyer Marine, is a notable advocate of the Atomic 4. He points out that a lot of older boats

are being purchased by young buyers. Many of these starter boats are “project boats” built in the early days of fiberglass. Some are boatyard queens that are being brought back from near-terminal neglect. They don’t cost a lot of money to buy, but they will often require a great deal of owner labor to put them back in shape. Many of them are smaller coastal cruisers, and many have Atomic 4 engines. The engine is enjoying a resurgence of popularity.

It’s difficult and unreasonable to convince these buyers that they should pay for an engine swap that may double the dollar investment in their boat. The Atomic 4 burns about twice as much fuel as a diesel will burn to go the same distance. On the other hand, how much fuel will a sailboat use in a year? If you motor out of your marina and set sails, it is hard to go through a tank of gas in a year of weekend and vacation sailing. If you motor in calms and very light air, you will burn a little more.

Last year, we estimate that we motored Mystic, our C&C 30, 400 miles on summer weekends and a couple of two-week vacations. Without being too precise with the math, it would cost \$75 per year more to feed an Atomic 4 than to feed our diesel. If an engine swap costs \$3,000 to \$6,000, the payback in fuel savings might take 40 years. And those were used diesel prices. New diesel swaps go for roughly \$6,000 to \$9,000.

Like fuel efficiency, an argument about operating hours between major overhauls favors the diesel. The cost of a major overhaul probably would not favor the diesel but is more difficult to compare. More importantly, both engines will run so many hours between overhauls that it is difficult to be certain that either one will need an overhaul before a boat is sold. The

resale value of a boat may be greater if it has a diesel, but there are still buyers for both. If the Atomic 4 is in good health, the economics simply are not there for some owners of coastal cruisers to convert to diesel before the engine needs to be replaced.

Maintenance

Mark Bressler is restoring Horizon, a beautiful Tripp 30 designed by William Tripp Jr. When he bought the boat, the engine had no compression to speak of. He determined that the exhaust valves were stuck. Because the engine had been unused for a long time, he feared other corrosion problems and replaced the original Atomic 4 engine with a used one that he located at a boat show.

He upgraded the replacement engine with electronic ignition and a higher capacity alternator. He also installed a raw water filter “big enough to grow fish in” and replaced the jacketed exhaust with an injection elbow and a water-lift muffler. He also plans to add an oil filter system and fresh water cooling. (The boat is presently operated in Lake Superior where Mark does not think the raw water cooling will cause much corrosion, but he has plans to someday use the boat in the salt.)

We asked him about routine maintenance. He said you need to change the oil and make sure the engine gets good, clean fuel. This much will be required by any diesel. Mark also said it is necessary to change the plugs once in a while, but this task is not difficult, and the electronic ignition makes the engine less fussy about plugs. What Mark didn’t say was that among shade tree mechanics and do-it-yourselfers, gasoline engine repair skills are more common.

The routine maintenance on either type of engine is not particularly difficult. Bacteria can grow in diesel

Case study:


“Proper” care and “feeding” of your Atomic 4?

When John Vigor learned that we were going to write an article about the Atomic 4, he offered the following sea story:

He once raced on a 33-foot light displacement sloop named *Diana K* from Africa to South America. She had a gasoline engine — not an Atomic 4, but rather a British Ford. The engine was fueled by gravity from a tank under the cockpit seat. John thinks that an accessible fuel shut-off valve between the tank and the engine would have been valuable.

On the return trip in the Roaring Forties, the boat ran into rough weather that lasted for weeks. The vessel was shaken so severely that gasoline from the tank forced its way past the float and into the engine. By the time the crew realized there was a problem, half the fuel was in the oil.

The crew removed the diluted oil, but did not have enough oil to replace it. So as they entered port at Capetown, they made up the difference with salad oil and margarine. They used the engine cautiously, and did not damage it. (We are not recommending this brew, only reporting that it worked once for a short time.)

We are not sure what happens if you shake the Atomic 4 violently for weeks without starting it, but John's suggestion of a shut-off valve may be good insurance. Most boats have a fuel shut valve, but they are not always accessible. 

fuel and will cause trouble if it is not filtered out before reaching the injection system. On the other hand, gasoline engines require occasional spark plug replacement. In addition, the breaker points and condenser will have to be replaced occasionally, if the engine does not have electronic ignition. And while we are on that subject, it is worth mentioning that we have convinced more than one reluctant Atomic 4 to start by simply wiping a clean cloth between the points. It makes electronic ignition seem like a good upgrade.

The availability of parts is another matter. Both Alan Abrahamsson of Old Lyme Marina and Don Moyer of Don Moyer Marine were cautious when asked about availability of parts. Certainly, routine maintenance parts are abundant. Major repair parts, such as blocks and camshafts, are available now but may not be forever. Mark Bressler is keeping his old engine for spares.

The BOAT/U.S. catalog shows 20 common Atomic 4 repair items, including gaskets, ignition, and pump parts. West Marine does not list parts for the Atomic 4, but Chuck Hawley, vice president at West Marine, says they may include them in their catalog in the future. The Alberg 30 web site: <[http://ourworld.compuserve.com/homepages/Alberg 30](http://ourworld.compuserve.com/homepages/Alberg%2030)> shows an extensive listing of spare parts and where to obtain them. The parts in this list are cross-indexed to several sources.

Both Old Lyme Marina and Don Moyer Marine sell maintenance parts as well as major replacement parts — such as blocks, cams, and cranks — but these large components are salvaged from other engines. The future availability of major parts is influenced by the fact that the tooling to efficiently make these parts no longer exists. At present, good salvaged parts can supply the demand. Don points out, however, that as younger buyers put more older boats back in service, this picture could change.

There is no cause for panic at the moment. If the estimates are correct,

40,000 engines were built, and 20,000 are still in service. They can draw on the other 20,000 for spares.

Tom Stevens of Indigo Electronics offers a broad selection of upgrade parts for the Atomic 4. An electronic ignition, oil filter system, fresh water cooling system, electronic fuel pump, and high output alternator with a smart regulator are available. Indigo also offers a crankcase vent system that works on the Atomic 4 and the Palmer P-60 4-cylinder gasoline engine. The electronic ignition, in particular, enjoys an excellent reputation. Tom started his accessory business by designing an electronic ignition for the Atomic 4 — which did not always start as easily as he would have liked — in his own Tartan.

Old Lyme Marina and Don Moyer Marine both sell rebuilt engines. These are high-quality engines that have been completely torn down and gone through. All components in these engines are inspected, evaluated, and replaced as necessary. They can be expected to give many years of reliable service. They list in the same price range as a used diesel. For many sailors, they may be the best option, because they truly “drop in,” while any diesel conversion will probably be more complicated and involve additional expenses.

Reliability and other aspects

The Atomic 4 has been criticized for not having a center main bearing, and indeed no modern high-compression engine is built today without a center main. In fact, some modern 4-cylinder engines have five mains instead of two or three. The Atomic 4 is not a high-compression engine however, and evidence suggests that it was a well-designed engine. Very likely, the designers knew that the center main would add several inches to the overall length of the engine and chose not to make it longer if they could solve the problem another way.

Don has seen little evidence of broken cranks and recently sold off a “basement full” because they were outlasting the blocks. Alan says that cranks do break but the problem is really associated with the condition of

the exhaust systems of the boats. He says many early exhausts were jacketed systems with a cooling jacket around the exhaust pipe. If the exhaust pipe corroded enough to leak, water from the jacket would enter the engine and get into the cylinders. If you have this type of exhaust system on your boat, it would be advisable to check it frequently for corrosion and, at the first suspicion of trouble, replace it with a properly designed water-lift muffler.

Don points out that with any of the water-cooled exhaust systems, it is important to close the cooling water seacock if the engine is going to be cranked any period of time without starting. These situations include the first start after launching in the spring, compression testing, and any case of hard starting. The point is that the raw water pump keeps pumping water into the exhaust system, and there is no combustion exhaust to blow it back out again. In this situation, the exhaust system can fill up and drain into the engine.

Naturally, as soon as the engine starts, the seacock must be opened **immediately** to prevent the exhaust system for overheating.

At Old Lyme Marina, Alan says they sell all their remanufactured Atomic 4s with the Indigo electronic ignition upgrade, and he has never seen one fail. As noted earlier, you can always wipe the points once in a while, but if you like an engine that starts dependably, this upgrade might be very attractive.

Alan also suggests that in boats where the fuel tank is higher than the carburetor (the common arrangement), it is worthwhile to shut off the fuel valve from the tank when the engine is not in use so if the float gets stuck, the carburetor will not overflow.

Another potential problem mentioned on the Alberg 30 website was the possible failure of the mechanical fuel pump diaphragm. If this part fails, the engine will get fuel in the oil. An indication of this failure is a strong gasoline smell on the dipstick. An electronic fuel pump is

available to eliminate this failure point.

The short of it is that the Atomic 4 is not a particularly unreliable engine in its original form, and there are modern upgrades to make it better.

To put the issue of reliability in perspective, it should be understood that few, if any, marine engines are as reliable and maintenance-free as modern automobile engines. In the case of older marine engines this statement is particularly true. Sailors should become familiar with their engines and be prepared to spend time learning about and maintaining them.

Two other “aspects of use” are noise and availability of fuel. Although newer diesel engines are quieter than they used to be, the Atomic 4 is a very quiet and smooth engine. Depending on the replacement, there may well be more noise and vibration with the diesel. We have seen comments to this effect in some class newsletters. Also, because the majority of pleasure boats are gasoline-powered motor boats, gasoline is more readily available in some areas. Have you ever seen a public fuel dock that had only diesel?

Good reasons to convert

The Atomic 4 is a good engine, but in some cases owners may want to consider the diesel alternative.

If you convert to a diesel, the range of your boat for a given amount of tankage will be roughly double. If you sail offshore or in remote cruising areas where fuel is not readily available, this can be an important consideration.

If your boat is fairly large and/or valuable, you may find the diesel option more appealing. Larger boats can effectively use the power of a four-cylinder diesel and may have more room for one in the engine space. Trading from the Atomic 4 to a four-cylinder diesel will not be as much of a comedown in smoothness. If your boat is quite valuable, you may not find the cost of conversion to diesel to be such an unreasonable percentage of the total investment. In some cases the diesel may even be an expectation on the part of your boat's next buyer.

If you are going on an extended cruise where fuel costs may become a

significant part of your budget and where you may expect to do an unusually large amount of motoring, a more efficient engine has a better chance of paying for itself. The inland waterways of the East and Gulf coasts are examples of places where a sailboat engine will see many hours of use.

There are several manufacturers making diesel engines intended to replace the Atomic 4. Westerbeke, which bought the line from the original manufacturer, sells both three- and four-cylinder engines for this purpose, and Kubota offers at least one 25-horsepower model that has been known to fit. These engines may or may not be drop-in replacements. Dimensional details should be checked very carefully. Remember that it is not necessary to match the 30-horsepower output of the Atomic 4. It was installed in a lot of boats that could not use anything like the full power it can develop. Determine your actual horsepower requirement by calculation.

Most diesels have a reduction gear, while many Atomic 4s did not. That means that a larger propeller may be required, and it may need to spin in the opposite direction. That is not all bad, but the tip clearance between the prop and the hull needs to be kept in mind. It is beyond the scope of this article to give all the considerations of converting to diesel; suffice to say that it is not always simple and straightforward. There are several good books on the subject, and there are yards that do repowering which can be valuable sources of information.

The bottom line

Even though the Atomic 4 went out of production about 20 years ago, it is still being extensively used in good old boats. It is well supported by rebuilders and parts suppliers, and it is well known among repair people. In many cases it is logical to repair it or replace it with another one rather than converting your boat to diesel.

The Atomic 4 is a well-designed good old engine for our good old boats.



Refueling safety is key

Stringent safety measures should be taken by any boat carrying gasoline. If your dinghy runs on gasoline, as most do, you have a boat carrying gasoline. A few ounces of gasoline will make all the trouble you need. Whether the other 20 or 30 gallons on board are diesel or gasoline won't make too much difference.

Kristen Chambers, Senior Project Administrator at the BOAT/U.S. Boating Safety Foundation provided *Good Old Boat* with statistics on fire-related boating accidents reported to the United States Coast Guard. She also provided excerpts from *Seaworthy*, a loss prevention newsletter that goes to sailors insured by BOAT/U.S.

The information provided by the Coast Guard does not distinguish between gasoline and diesel accidents, but for 1995 and 1996, 79 incidents of fire were reported. Of these, 61 involved ignition of spilled fuel or vapor, 15 were categorized as failure to vent, and three were categorized as fuel system failure. It is likely that the cases classed as "ignition of spilled fuel or vapor" were cases involving gasoline, since it is very difficult to ignite diesel fuel in this way.

Chapman's *Piloting, Seamanship, and Small Boat Handling* offers a somewhat elaborate procedure for refueling a boat. It may seem overly complicated, but perhaps not when you consider that most accidents involving fire, in the statistics noted previously, were caused while fueling or in the first few minutes after fueling.

The basic idea behind refueling safety is to get all the liquid fuel into the tank and to dissipate all the fuel vapors before making any sparks or fire. Condensed somewhat, the Chapman version makes these points:

Before you fuel

1. Before you fuel, inspect the fuel system, particularly the fuel fill and piping. A lot of trouble is caused by broken deck fittings or associated piping and hose. Look also at the place where the fuel fill hose and vent hose connect to the fuel tank. These locations are often below the fuel level after refueling.
2. Shut down anything that can make a spark or flame, and close up your boat. Fuel vapors are heavy and will "spill into low spots." Remember that when you take on 20 gallons of fuel, you will displace and emit roughly 20 gallons of fuel vapor.

When you fuel

1. Make sure you put the fuel into the fuel fill. If you don't do the filling yourself, watch to see that this is done. People have been known to accidentally put fuel into fresh water and holding tanks. Other holes that you would never consider — such as fishing rod holders and fresh air vents — have also been the erroneous receptacles for gallons of fuel. Don't delegate this task.
2. To avoid static charge buildup, make sure the nozzle is in metal-to-metal contact with the fuel fill. Don't use plastic funnels. Take portable containers off the boat to fill them. Remember, too, that the fuel is probably coming out of a ground tank and is colder than it will be later; leave room for expansion in all tanks and containers.

After you fuel

1. Stow portable tanks so they cannot be upset, no matter how violent the motion of your boat gets.
2. Ventilate your boat using your bilge blower. Ventilate until all the fumes are out, generally at least four minutes. Since heavy vapors will "pour into" low spaces, use your nose to sniff for fumes in the lowest spaces on the boat.
3. Do not start up and leave the fuel dock until you are sure you have no problem vapors and all the fuel went into the tank(s).

If there is a spill


Open the battery switch. It's a good idea to open it anyway during fueling so fewer circuits are live and capable of causing sparks. Don't turn on the bilge blower in this case. It could make a spark or add enough air to fuel vapors to make them explosive. Get the crew off the boat, and don't make any sparks or flames while cleaning up.

Finally, consider the spaces where you store all your fuels. Spaces that store fuels should ideally be vented overboard at the bottom of the space, in much the same way that propane is stored.

to living with gasoline

This next part is controversial. It represents *Good Old Boat* magazine's opinion. We had no problem finding disagreement with our opinion; we offer it here anyway.

We suspect that the design of many boats did not anticipate the need to store portable gasoline tanks. This may be particularly true of some boats with diesel engines since we are told that diesel-powered boats are not required to have ignition-proof components in the engine space. In

our own observation, we see that the majority of boats have gasoline-powered dinghies, and we almost never see gasoline tanks lashed down on deck. One industry authority told us (when reviewing this article) that the improper stowage of portable gasoline tanks aboard sailboats is not a problem, but we know that many good old boats really have no safe place below decks to store portable tanks. We invite our readers to comment. 

Where to go for further Atomic 4 help

We found several strong suppliers for the the Atomic 4 engine, but are looking for more. If you know of other suppliers, please contact *Good Old Boat*.

BOAT/U.S.

884 South Pickett St.
Alexandria, VA 22304
phone: 800-937-2628
fax: 800-285-8692
website: <<http://www.boatus.com>>
Replacement parts for maintenance.

Featherman Enterprises

90 Walnut Drive
Wellsville, PA 17365
phone and fax: 717-432-0601
email: a4parts@epix.net
Associated with Moyer Marine.
Replacement parts for maintenance; major parts for rebuilding.

Indigo Electronics Inc.

Tom Stevens
10 Wayfin Circle
Newport News, VA 23606
phone: 800-428-8569
email: indigo@visi.net
website: <<http://www.atomic4.com>>
Aftermarket upgrades, electronic ignition, crankcase ventilation system, and other upgrades.

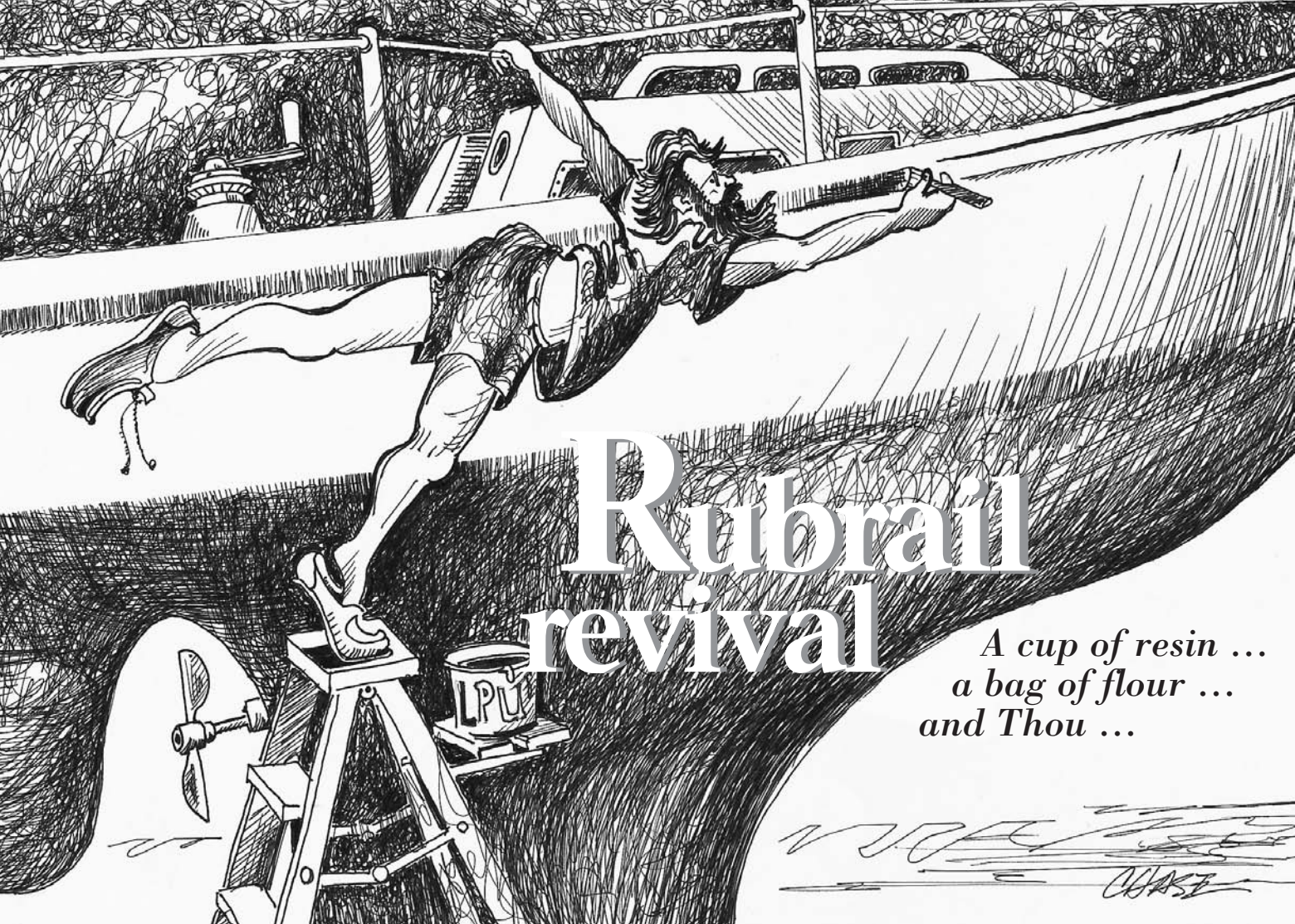
Don Moyer Marine

Don and Brenda Moyer
3000 Derry Street
Harrisburg, PA 17111
phone: 717-564-5748
fax: 717-564-5760
Replacement parts for maintenance, major parts for rebuilding, engine rebuilding, and rebuilt engines.
Don publishes a very good newsletter. We think of it as an essential part of proper care and feeding of your Atomic 4.

Old Lyme Marina Inc.

Alan Abrahamsson
34 Neck Road
Old Lyme, CT 06371
phone: 800-361-7595
fax: 860-434-3068
email: old.lyme.marina@snet.net
website: <<http://www.oldlyme.marina.com>>
Replacement parts for maintenance, major parts for rebuilding, engine rebuilding, and rebuilt engines. Replacement diesels for Atomic 4s.

See the the **Alberg 30 website** for a good parts list and advice:
<[http://ourworld.compuserve.com/homepages/Alberg 30](http://ourworld.compuserve.com/homepages/Alberg%2030)>.



Rubrail revival

*A cup of resin ...
a bag of flour ...
and Thou ...*

If you've ever attempted to replace your boat's plastic rubrail, you'll know it's one of those jobs that's a whole lot more difficult than it looks. Luckily, there is an alternative — a way to halt deterioration and make it look better than new. And you don't even have to remove the rubrail.

Thousands of old production fiberglass boats have vinyl plastic rubrails to protect their hulls from bumps and scratches and hide those ugly hull-deck joints. But over the years, the sun's ultraviolet rays destroy vinyl plastic. The surface crazes, becomes chalky, loses some of its flexibility, and begins to look very sorry for itself.

Many boat manufacturers used 3M's 5200 polyurethane sealant as a flexible bedding compound for the rubrail. Now 5200 is a very powerful glue, but just to be safe they also held the rubrail in place with self-tapping screws and cup washers, screwed into the projecting fiberglass flanges from beneath.

by John Vigor

It can be awkward and sometimes difficult to get to those screws when you want to remove the rubrail, especially if corrosion has set in. And even when you do manage to get them all out, there is often a worse problem: how to pull the glued plastic free of the hull-deck joint. If it tears, which is quite likely, you

are left with the time-consuming task of physically scraping the bits of strongly adhering vinyl and old polyurethane compound from between the bolt heads that fasten the hull-deck flanges together.

As if that weren't bad enough, a replacement rubrail can be expensive and difficult to find in the exact extrusion you need. Throw in the problem of fitting it around the sharp bends at the bow and stern quarters, where it refuses to lie flat at top and bottom, and you begin to realize that replacing a rubrail is not the simple job it appears to be.

Take heart. Thanks to modern technology, there is a better, easier, cheaper way: paint it.

Here's how:

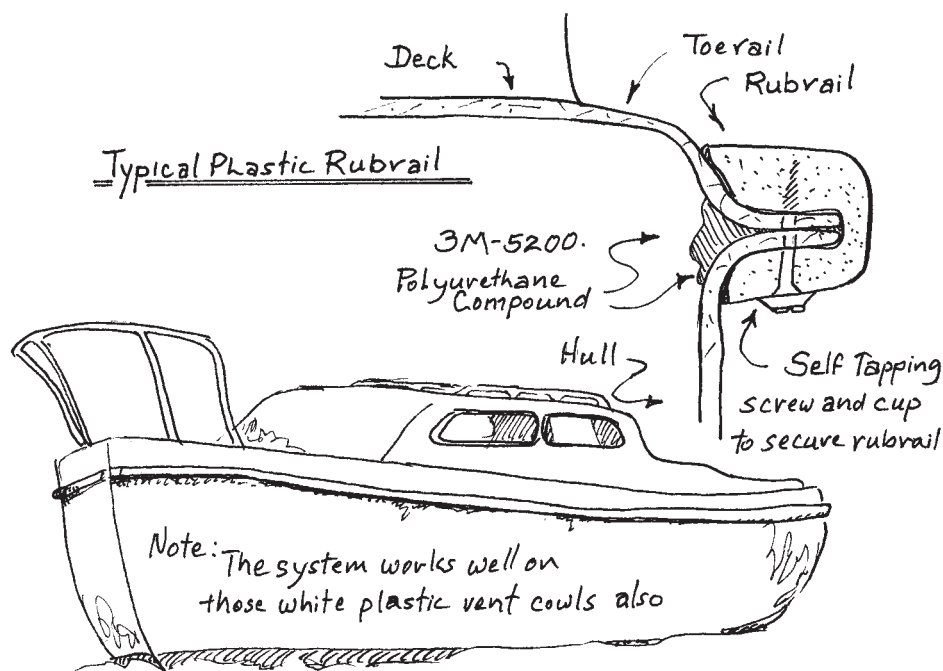
Wipe the rubrail with acetone on a lint-free cloth to remove all traces of dirt, grease, and wax before sanding. Don't sand first, or you'll force those contaminants deep into the plastic. Sand the rail with 100-grit waterproof paper, preferably used wet to keep down dust. Rinse with fresh water and allow to dry.

Mask the top and bottom edges of the rail with long-lasting masking tape.

Fill deep scratches and small gouges with epoxy resin thickened with enough household flour to give it the consistency of peanut butter. Let it cure. Sand fair with 100-grit paper. Carefully remove all sanding dust by brushing and wiping with a damp cloth. Allow to dry.

Materials list

Two-part polyurethane
brushing enamel
Two part polyurethane
primer
Compatible thinner, if
needed
Compatible brush cleaner
Waterproof silicon carbide
sandpaper: 100-, 220-,
and 600-grit
Longlife masking tape
1" or 1 1/2" bristle brush
Epoxy resin
Household flour
Acetone
Clean cloth
Clean 14- to 19-ounce
mixing containers
Plastic measuring spoon
or old tablespoon




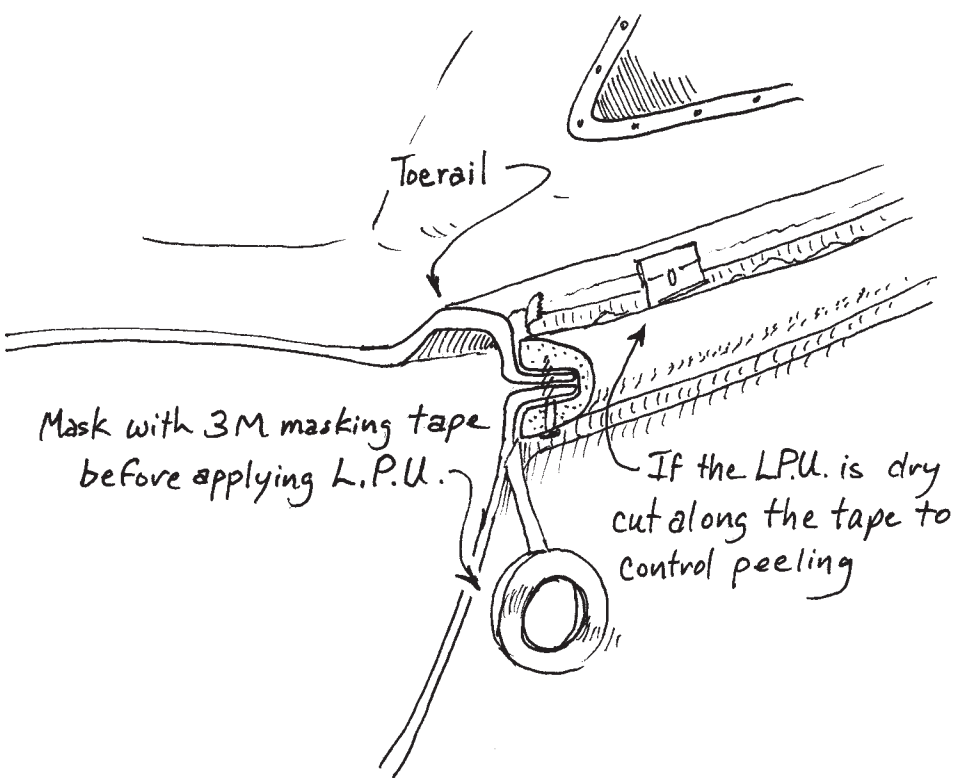
Now brush on a coat of two-part polyurethane primer paint. Let it cure, and sand it smooth with 220-grit waterproof paper used wet. Use two coats if necessary.

Wipe briefly with an acetone-soaked cloth once more, then brush on a finish coat of high-gloss, twin-pack, linear polyurethane (LPU).

White LPU is best because it shows the imperfections least, but if you want to use darker colors, you should apply a minimum of two coats of LPU, sanding in between with 600-grit wet paper.

The resulting finish is strong, flexible, attractive, and very resistant to abrasion and degradation by the sun. Maintenance is easy: simply paint over bad scrapes.

By the way, this system works equally well on those white plastic ventilator cowls that turn yellow and sticky after a couple of years on deck. It makes them look shinier and better than new, and they'll last indefinitely. Even old plastic-covered horseshoe and ring lifebuoys respond to this treatment. 



Don't mix and match

Not all the new high-tech paint systems are compatible with each other. Be sure to follow the paint manufacturer's recommendations about what primer, filler, and brush-cleaning materials to use.

On my boat, Tagati, I used Interlux's Interthane Plus 2300 two-part polyurethane enamel over Interlux's 2100/2101 Multithane primer, but there are many other good systems to choose from.

Mix adequately small portions of primer and LPU by counting spoonfuls, in the proportions given in the instructions, into clean tin cans.

Wear a mask while brushing LPU and primer, and work where the ventilation is good. Note, however, that toxicity while brushing LPU is low compared with spraying, which is not recommended to amateurs.

Others “in the same boat ...”

Editor's Note: *With the help of our readers, this list will expand to include all good old boats. It's the beginning of what can be a comprehensive list of contacts for specific boat types. Right now it includes:*

- *class associations and owners' groups: formal and informal; local, national, and regional*
- *names of individuals starting groups*
- *boat manufacturers still in existence (listed only for those boats for which we have no groups or contact names — we're looking for owners' groups or individuals who would like to start groups for these boats)*
- *boats for which we have no information at all: no groups, individuals, or manufacturers (This list is on the last page of this directory.)*

Please let us know about any boat or contact we've overlooked. We're seeking people who'd like to serve as contacts for those boats which have no organized groups. This means keeping a list of boat owners' names and helping them find each other.

We'll keep this list updated on our webpages at <<http://www.goodoldboat.com>>, and we'll publish updates in the newsletter we're sending to subscribers every other month. From time to time we'll republish the list in its entirety in Good Old Boat magazine.

A

Abbott 33 Class Association

Harold Hoffman
2124 Tanglewood Dr.
Toledo, OH 43614
419-473-0703
419-473-3765 (fax)
hhoffma@uoft02.utoledo.edu

Alajuela 33

Gerald Knight
3705 Artic Blvd., Box 612
Anchorage, AK 99503
907-278-7999

Wants to find other Alajuela 33 owners or to start an owners' association for Alajuela 33s.

Alberg Class Association

Ken Stephenson
KILTARLITY@headwaters.com
Members own and sail Alberg 29s, 30s, and 37s.

Alberg 30 Association (Great Lakes)

Rick Kent
170 Grenadier Road
Toronto, Ontario
Canada, M6R 1R4

Alberg 30 Class Association (Chesapeake Bay)

George Dinwiddie
226 Beachwood Road
Pasadena, MD 21122
76524.214@compuserve.com
<<http://ourworld.compuserve.com/homepages/Alberg30/>>
Prints a monthly newsletter, the *Mainsheet*. Holds annual winter seminars in February and sailing events from April to November on the Chesapeake Bay. Published a maintenance manual for the Alberg 30. Has members from California to British Columbia, Texas to Maine, both sides of the Great Lakes and a few in the interior of the U.S.

Alberg 35 Home Page

Tom Alley
alley@acm.org
<<http://www.pce.net/alley/Alberg35.html>>

Albin Vega (see Vega)

Alden Yachts

1909 Alden Landing
Portsmouth, RI 02871
401-683-4200
401-683-3668 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Alerion Express, Newport R&D

One Maritime Drive
Portsmouth, RI 02871
401-683-9450
401-683-5890 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Alerion (see Express)

Allied Sailboats Website

<<http://www.geocities.com/TimesSquare/Arcade/9282/>>
This is a great resource for owners and lovers of Allied boats: Greenwich (24); Seawind (30); Chance 30-30; Luders (33); Seabreeze (35); Seawind II (32); Princess (36); Contessa (36); Mistress (39); Allied 39; Wright 40; XL-2 (42); and Allied 52.

Allied Boats "Company Historian"

Daniel Smith
2212 B Foxden Drive
Salem, OH 44460

Allied Luders 33 Owners' Association

Allen Gamache
One Shanandoah Drive
Paxton, MA 01612-1015

Allied Princess 36

Todd Dunn
expet@unb.ca
<<http://www.geocities.com/TheTropics/8005/AP36PAGE.html>>

Allied Seabreeze Owners' Association

Gene Reardon
31 West Lane
Bay View, NY 11706

Allied Seawind II Owners' Association

Richard Manual
P.O. Box 422
Shelter Island Heights, NY 10021

Allied Seawind Owners' Association

Peter Edwards
6 Buttercup Lane
Dover, MA 02030
508-785-2968 (days)
508-785-1043 (evenings)
508-785-2871 (fax)
pedwa@world.std.com

Allmand 31 Owners' Group

Stephen Witt
134 Sunrise Ct.
Oconto Falls, WI 54154-1261
920-846-3843
wittspig@ez-net.com
Stephen wants to find other Allmand 31 owners or to start an owners' association for Allmand 31s.

B

B-Boats

505 Van Ness Ave.
Torrance, CA 90501
310-320-5671
310-320-5026 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Baba

Rick Emerson
940 Delaware Ave.
Lansdale, PA 19446
215-855-1607
rick@sbg.com
Publishes *Baba Salt* newsletter.

Baltic Yachts USA

3 Beacon St.
Marblehead, MA 01945
781-631-1356
781-631-2888 (fax)
info@balticyachts.com
<<http://www.balticyachts.com>>
This is the manufacturer; they have told us they don't know of any owners' associations in the US.

Baltimore Clipper (see Offshore Yachts Class Owners' Association)

Bavaria Yachts, Yacht Sales West

Ron Holbrook
2144 Westlake Ave. N., Ste. B
Seattle, WA 98109
206-378-0081
206-378-0084 (fax)
c&cyachts@pro.net
<<http://www.bavaria-yachts.com>>
This is a distributor; they may have information about any formal or informal owners' organizations.

Bayfield

Floyd Lancaster
3039 Dollsberry Ln.
Nashville, IN 47448
812-988-1460
flancast@indiana.edu

Beneteau (informal group of owners)

Michael Lehenbauer
mlehenba@kyrus.com
Michael can put people in touch with an informal group of Beneteau owners who chat by email.

Block Island, Migrator Yachts

72 Sandwich Road, Rte. 6
Wareham, MA 02571
508-295-8000
508-295-5735 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Bristol (Chesapeake Bristol Club)

Art Bretapelle
1940 Rockingham St.
McLean, VA 22101

Bristol Owners' Association

Douglas Axtell
Bristol32@aol.com
<<http://members.aol.com/bristolylht/>>
This website includes about 10 models of Bristols and their owners, also information on upgrades and maintenance.

C

C&C Corvette Association

Chuck Jones
59 O'Neil Crescent
Trenton, ON
Canada K8V 5Y5
cjones@connect.reach.net
<http://www.reach.net/~cjones/>

C&C Sailing Association

Edd Schillay
P.O. Box 444
Riverside, CT 06878
CnCYACHTS@aol.com
<<http://www.cnc-owners.com>>
Prints five issues of *Masthead* newsletter a year. Dues are \$35 annually. The group has seminars, socials, events, races, etc. They have established themselves as the C&C Sailing Association for the U.S.

Cabo Association of Boat Owners

2394 Mariner Square Drive
Alameda, CA 94501
510-521-4343

Cal 25 (Annapolis Organization)

Charlie Husar
702 Dreams Landing Way
Annapolis, MD 21401
410-684-6477 (days/preferred phone)
410-266-6216 (evenings)
husarc@bah.com
<<http://members.aol.com/MMayfield9/basepage.html>>

Cal 2-27 (Northern California Fleet)

Don Walder
219 Goldenind Passage
Corte Madera, CA 94925

Cal 29

Rich Kerbavaz
5523 Masonic Avenue
Oakland, CA 94618
510-654-2747
<<http://skilledlogic.com/cal29/index.html>>
Small one-design racing fleet in San Francisco Bay. The fleet has manuals and measurements available. They produce a monthly newsletter.

Cal 40 Class Association

Fin Beven
77 N. Oak Knoll, #106
Pasadena, CA 91101
626-795-3282, ext. 111
818-795-1331 (fax)
Publishes an occasional newsletter, race schedules and results, summer cruise events, and boats for sale.

Cal 46 Class Association

Marsha Ottestad
P.O. Box 527
Genoa, NV 89411
702-782-5047
702-782-3862 (fax)

Cal-Pearson Owners' Group

Morton Fortgang
30 Sands Lane
Port Jefferson, NY 11777
sailor3@I-2000.com
Morton is starting a group of Cal-Pearson owners to provide wider information interchange between owners. Membership is free. The *Cal-Pearson Log* newsletter will be distributed quarterly.

Cal (see O'Day, Cal, and Ranger listings)

Cal-Pearson (see Pearson)

Caliber Yachts

4551 107th Circle N.
Clearwater, FL 33762
813-573-0627
813-573-2413 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Cambria Yachts, Cabo Rico

2258 SE 17th St.
Ft. Lauderdale, FL 33316
954-462-6699
954-522-1317 (fax)

This is the manufacturer; they may have information about any formal or informal owners' organizations.

Camper Nicholson 35

John and Sandra Larson
16616 11th Street North
Lakeland, MN 55043
larsarch@worldnet.att.net

Cape Dory Owners' Association (California)

Walt Bilofsky
P.O. Box 111
Corte Madera, CA 94976
bilofsky@toolworks.com
<<http://www.toolworks.com/capedory/>>
Holds members' events twice a year, publishes an occasional newsletter, and hosts an active web discussion.

Cape Dory Owners' Association (Lake Michigan)

Kim Richards
P.O. Box 694
Gruneer, IL 60031
Williwaw28@aol.com
\$15 to join. Monthly newsletter is *SeaWorthy*.

Cape Dory Sailboat Owners' Association (National)

Jim Turner
273 Hopewell Road
Medford, NJ 08055
609-596-8618
jturner@net-gate.com
or
Al Lawton
308 Strathmore Road
Lexington, KY 40505
606-293-2793
Publishes a bi-monthly newsletter and promotes on-the-water activities.

Cape Dory: The Typhoon Newsletter

Noel Peattie
23311 County Road 88
Winters, CA 95694-9008
530-662-3364
Prints newsletter at no cost to readers (except for a contribution for postage), also prints a directory of Typhoon owners.

Capri 26 National Association

Brian Meredith
205 Brockway Ave.
South Haven, MI 49090
616-637-3897
brian-meredith@rocketmail.com

Capri (see Catalina and Capri)**Cascade**

Pete Kelley
1347 Dague Ave. SE
Buffalo, MN 55313
612-682-5130
pete.kelley@guidant.com
Pete has agreed to serve as a contact for other Cascade owners.

Catalina (All Fleet)

Walt Ahern
1011 Blackburn Dr.
Inverness, IL 60067
847-358-4295

Catalina Mainsheet magazine

Jim Holder
5210 Clipper Cove Rd.
Midlothian, VA 23112
804-739-9368 (phone and fax)
jholder@mainsheet.net
<<http://www.mainsheet.net>>

Catalina 22 National Association

Don Carsten
6230 Lewis #204
Temperance, MI 48182
313-847-4041
dpcarsten@juno.com

Catalina 25/250 National Association

Jim Bogner
P.O. Box 12377
5175 Chase St.
Denver, CO 80212
303-422-4437
303-420-5067 (association phone)
jbogner660@aol.com
<<http://www.best.com/~c25c250/index.html>>

Catalina 27/270 National Association

John Ebell
312 Severn Ave. E-311
Annapolis, MD 21403
410-295-9244
<<http://www.paw.com/sail/catalina27>>

Catalina 28 National Association

Bill McLees
28 S. Harrisburg Ave.
Atlantic City, NJ 08401
609-344-9121
75573.2363@compuserve.com

Catalina 30 International Association

Max Munger
13033 Mill Creek Dr.
Lusby, MD 20657
410-326-9024
mxmunger@crosslink.net
<<http://www.aztec.com/ic30a>>

Catalina 320 National Association

Roger Elliott
2167 Stillspring Place
Martinez, CA 94553
510-372-6945
relliott@pacbell.net
<<http://www.netwizards.net/jestes/c320.htm>>

Catalina 34 National Association

Bob Bierly
6817 Ontario St.
Springfield, VA 22152
703-451-2258
<<http://watt.seas.Virginia.EDU/~bp/c34>>

Catalina 36 National Association

Jean Flintzer
1400 Melville Ave.
Fairfield, CT 06432-2021
203-371-4796
donflin@aol.com

Catalina 37 One-Design Class Association

Paul Frazier
5782 East 2nd St., #596
Long Beach, CA 90803
310-493-5173
310-430-8471 (fax)

Catalina 38/380 National Association

Joe Degenhardt
1524 Santanella Terrace
Corona del Mar, CA 92625
714-721-1660

Catalina 400 National Association

Ron Marcuse
168 Coachman Dr. N
Freehold, NJ 07728
732-431-2305
CaptRon400@aol.com
<<http://www.catalina.net/c400/>>

Catalina 42 National Association

Bob Zoller
339 Sharon Rd.
Arcadia, CA 91007
626-446-5693
626-446-7003 (fax)
BobZoller@aol.com
<<http://www.catalina42.org/>>

Catalina & Capri National Association (New Hampshire)

Steve Raichelson
69 Main Street
Hooksett, NH 03106
603-485-8362
Raichelson@aol.com

Catalina & Capri National Association (Washington)

Bill Holcomb
W. 1617 Grace
Spokane, WA 99205
509-327-5337
wholcomb@on-ramp.ior.com

Catboat Association Inc.

Thomas Maddigan
P.O. Box 72
Middleboro, MA 02346
508-540-4655
508-947-7117 (fax)
<<http://www.catboats.org/>>
(Association includes Menger Cat, others.)

CFJ Class Association

Tim Hogan
720 W. Bay Ave.
Balboa, CA 92661
714-557-5511
714-641-9337 (fax)

Chance (see Allied Sailboats Website listing)**Cheoy Lee**

James and Cilla McGarvey
Box 42
South Plymouth, NY 13844
607-433-8310
607-433-8311 (fax)
mcgarvey@norwich.net
<<http://www.geocities.com/TheTropics/Cabana/8124/>>
James and Cilla have agreed to serve as contacts for owners of Cheoy Lee. They're collecting names, addresses, and email addresses. They've just put a new website up.

Chris Craft (Apache, Comanche, Cherokee, Capri, Caribbean) Owners' Association

Robert Pemberton
209 Haynesworth
Sumter, SC 29150
803-773-2160
pemberton@sumter.net
Robert has started an owners' association for all Chris Craft sailboats. The group has 85 members. Publishes a newsletter, the *Brass Bell*.

Chrysler Association

Rick Sneeuwjagt
47888 Waterview Dr.
St. Inigoes, MD 20684
301-872-9429
sneeuwjr@erols.com
<<http://www.geocities.com/thetropics/cabana/3135/>>

Chrysler Sailing Pages

Sanford Gentry
gentrysv@kiva.net
<<http://www.kiva.net/~gentrysv/sail.html>>

Columbia

Dan Croft
dancroft@mindspring.com
Interested in locating other Columbia owners or in starting an owners' association for Columbias.

Columbia Owners' Association

Eric White
<<http://www.monumental.com/ewhite/columbia.html>>
mailing list hosted by Sailnet: <<http://www.sailnet.com>>
newsletter by Mike Keers: emkay@sinosa.com

Columbia Challenger

1472 Portland Avenue
Albany, CA 94706

Com-Pac

Brad Brager
2001 Holcombe Blvd., #3406
Houston, TX 77030
Brad is interested in locating other Com-Pac 27 owners or in starting an owners' association for Com-Pac 27s.

Contessa (see Allied Sailboats Website listing)**Contest 27**

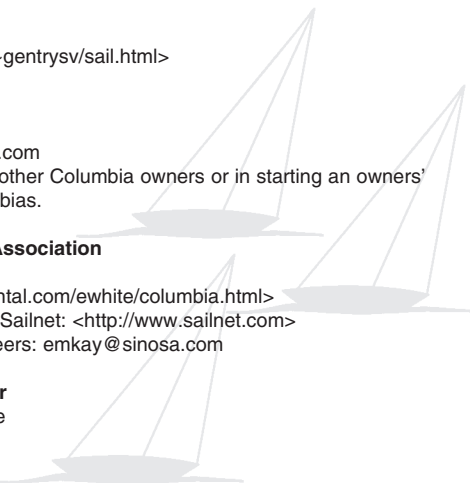
Spencer Baron
2040 Polk St., #274
San Francisco, CA 94109
spencerb@slip.net
Spencer agreed to serve as a contact for other Contest owners. He notes that the Contest 27 was built in Holland with a long fin keel and skeg behind the rudder. The rig is all-wood. Fittings are metric.

Corbin

Chris Stoyan
Dinkadolly Publishing
P.O. Box 275, Station D
Toronto, Ontario
Canada M1R 5B7
416-431-2732
bent@pathcom.com
Chris, aka the liveaboard cartoonist, has agreed to serve as a contact for Corbin sailboats.

Cornish Crabber, Britannia Boats, Ltd.

P.O. Box 5033
Annapolis, MD 21403
410-267-5922
410-267-6442 (fax)
info@britanniaboats.com
<<http://www.britanniaboats.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Cornish Shrimper, Britannia Boats, Ltd. (see Cornish Crabber)

Coronado

Garth Grimm
54 Jack London Square
Oakland, CA 94607
510-419-0570
gdgrimm@sf.znet.com
Garth would like to start a Coronado Boat Owners' Group.

Crealock, W.I.B. Crealock

1401 Forest Ave.
Carlsbad, CA 92008
760-434-3253
760-434-1953 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

CS Yacht Owners' Association

Anton and Shirley Imling
356 Bedell Street
Freeport, NY 11520
516-546-8636
cssloop@i-2000.com
<<http://www.closereach.com/csoa/cshome.htm>>
This organization has a list of more than 100 CS owners.

CS Yacht Owners West

Stephanie Dykstra
11070 Bond Blvd.
Delta, British Columbia
Canada V4E 1M7
604-596-6632
sdykstra@unix.ubc.ca
<<http://www.closereach.com/csoa/cshome.htm>>

D

Dehler

561 Boylston St.
Boston, MA 02116
617-536-1100
617-536-8829 (fax)
dehler@dehler-america.com
<<http://www.dehler-america.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Douglas and McLeod (D&M)

Bill Wright
wstuff@waterw.com

Downeaster

Scott Perkins
Rt. 1, Box 219
Houghton, MI 49931
sperkins@mail.portup.com
Scott has agreed to serve as a contact for Downeasters.

Dufour

1 Chelsea Court
Annapolis, MD 21403
410-268-6417
410-268-9739 (fax)
dwalsh@abs.net
<<http://www.DufourYachts.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

E

Endeavour Owners' Forum

Paul Uhl
6117 N. Winthrop Ave.
Chicago, IL 60660-2601
773-761-0013
endvr32@aol.com
<<http://members.aol.com/endvr32>>

Ericson 27 (California)

1220 Seville Drive
Pacifica, CA 94044
415-359-9178

Ericson 27 Class Association (Chesapeake Bay area)

John Stuhdreher
aetvjohn@erols.com
John is interested in locating other Ericson 27 owners in the Chesapeake Bay area or in starting an owners' association for Ericson 27s in the area.

Ericson 27 Fleet One

Amy Lee
amyklee@aol.com
\$15 a year to join. Group produces an owners' manual and a newsletter. It sponsors races, cruises, and events.

Ericson 29 Class Association

Greg Delozier
1675 Ridgewood
Wadsworth, OH 44281
330-668-2267 (days)
delozier@aristar.com
Interested in locating other Ericson 29 owners or in starting an owners' association for Ericson 29s.
also
Peter Stryker
stryker@bucknell.edu
Also interested in locating other Ericson 29 owners or in starting an owners' association for Ericson 29s.

Ericson 32

Cory Bolton
cbolton@halycon.com
Interested in locating other Ericson 32 owners or in starting an owners' association for Ericson 32s .

Ericson 33

sindabaldi@aol.com
Interested in locating other Ericson 33 owners or in starting an owners' association for Ericson 33s .

Ericson 35 Class Association

Tsternb100@aol.com
Interested in locating other Ericson 35 owners or in starting an owners' association for Ericson 35s.

Ericson Class Association (Northwest branch)

Max Heller
seamax@w-link.net
Max is interested in locating other Ericson owners in the northwest or in starting an owners' association for Ericsons in the northwest region.

Ericson Newsletter (Northeast Ericson News)

Jeff and Linda Lennox
18 White Birch Court
Shelton, CT 06484
203-452-3100 (days)
jlennox@compuserve.com
Jeff and Linda publish a quarterly newsletter for Ericson owners in the Northeast U.S. (Maine to Virginia). To be added, contact them with name, mailing address, boat model, year of manufacture, and name of boat.

Express 27 Class Association

Carl Schumacher
1815 Clement Ave.
Alameda, CA 94501
510-523-2580
510-865-1989 (fax)

Express 37 Class Association

Glenn Isaacson
21 Peninsula Rd.
Belvedere, CA 94920
415-435-4887
415-435-5130 (fax)
glenn.isaacson@CMAincsf.com

Express (see Alerion)**F****Freedom Yachts, Inc.**

305 Oliphant Lane
Middletown, RI 02842
800-999-2909
homeoffice@freedomyachts
<<http://www.freedomyachts.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Frers 33 Class Association

Paul Zabetakis
E. 77th St.
New York, NY 10021
212-861-3534

G**Gozzard Yachts**

P.O. Box 373
197 Huckins St.
Goderich, Ontario
Canada N7A 4C6
519-524-6393
519-524-9180 (fax)
gozzard@tcc.on.ca
<<http://www.gozzard-yachts.on.ca>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Grand Soleil

446 E. Ontario St., Ste. 1001
Chicago, IL 60611
312-944-1898
312-944-6989 (fax)
info@grandsoleil.com
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Greenwich (see Allied Sailboats Website listing)**Gulfstar Owners' Club**

Captain Dick Schroder
432 Third St. N.
St. Petersburg, FL 33705
813-825-0757
813-822-6415 (fax)
gulfstarij@aol.com

H**H-26, Cape Cod Shipbuilding Co.**

7 Narrows Rd.
Wareham, MA 02571
508-295-3550
508-295-3551 (fax)
ccsb@four.net
This is the manufacturer; they may have information about any formal or informal owners' organizations.

H-Class Association

William Harding
Box 1
Cataumet, MA 02534
508-748-0334

Halycon (see Offshore Yachts Class Owners' Association)**Hallberg-Rassi, Eastern Yachts**

33 Pratt St.
Essex, CT 06426
203-767-8224
203-767-9094 (fax)
This is a distributor; they may have information about any formal or informal owners' organizations.

Hallberg-Rassi, Emerald Yacht-Ship Mid-America

759 N. Milwaukee St., Ste. 522
Milwaukee, WI 53202
414-271-2595
414-271-4743 (fax)
This is a distributor; they may have information about any formal or informal owners' organizations.

Hans Christian Owners' Association

Gary Jensen
P.O. Box 14011
Fremont, CA 94539
<<http://www.hanschristian.com>>

Henderson 30 One-Design Class Association

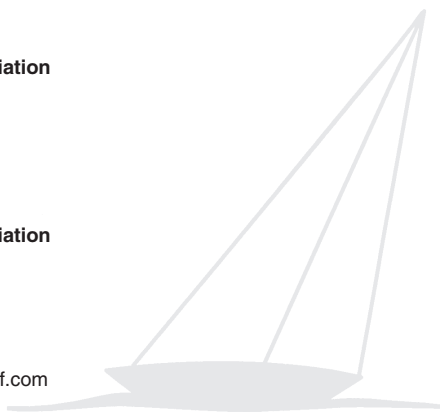
Glenn Henderson
c/o Hero Sports
2538 55th Ave. N.
St. Petersburg, FL 33714
813-525-7622
813-525-0179 (fax)
henwins@sprynet.com
<<http://www.hendersonyacht.com>>

Hinckley Company, The

P.O. Box 699
130 Shore Road
Southwest Harbor, ME 04679
207-244-5531
207-244-9833 (fax)
sales@thehinckleyco.com
<<http://www.thehinckleyco.com>>
This is a manufacturer; they may have information about any formal or informal owners' organizations.

Hobie 33 Class Association

3705 Darnall Pl.
Jacksonville, FL 32217
904-443-6331
904-737-8449 (fax)
<<http://www2.gdi.net/~sailrace/>>



Hughes 38

Gerry White
 2009 White Oak Dr.
 Paris, TN 38242
 901-642-5136
 gwhite@iswt.com
 Gerry agreed to be a contact for other Hughes owners.

Hunter Sailboats Owners' Web

3437-36th Avenue SW
 Seattle, WA 98126
 206-932-7245
 206-938-4727
 HOWinfo@herringn.com
 <<http://www.herringn.com/herringn/how>>

Hylas

P.O. Box 583
 Marblehead, MA 01945
 800-225-2520
 617-639-0216 (fax)
 This is the manufacturer; they may have information about any formal or informal owners' organizations.

**International Folkboat Association (San Francisco Bay)**

Tom Reed
 801 La Honda Road
 Woodside, CA 94062
 415-851-3800

Irwin Yachts

12900 Automobile Boulevard, Unit 1
 Clearwater, FL 34622
 813-573-4581
 813-573-5568 (fax)
 <<http://www.irwinyachts.com>>
 This is a manufacturer; they may have information about any formal or informal owners' organizations.

Island Packet 26/27 Owners' Association

Bill Dill
 25 Birch Lane
 Cumberland Foreside, ME 04110
 Discussion group at <<http://www.sailnet.com>>

Island Packet 31 Owners' Association

Jonathan Bickel
 P.O. Box 1216
 Ocean Springs, MS 39566
 601-392-2629
 Discussion group at <<http://www.sailnet.com>>

Island Packet 35/37 Owners' Association

Butler Smythe
 826 Orange Ave. #147
 Coronado, CA 92118
 619-223-4735
 Discussion group at <<http://www.sailnet.com>>

Islander 28 Association

4 Lotus Court
 Novato, CA 94945
 415-892-8944

Islander 36 Association (San Francisco Bay area)

Rick Van Mell
 1629 Begen Avenue
 Mt. View, CA 94040
 richard.vanmell@us.coopers.com
 <<http://www.paw.com/sail/islander36>>
 130 members in San Francisco Bay area and in rest of U.S. Sponsors race and cruise events, a newsletter, and meetings.

Islander 37 Association

450 Sutter #2116
 San Francisco, CA 94108
 415-681-7635

Islander Bahama

2004 Bush St.
 San Francisco, CA 94115
 415-567-9869

**J/24 Class Association (International)**

Steve Padlich
 514 Roxbury Way
 Belmont, CA 94002
 415-593-8959

J/27 Class Association

Chris Prining
 1669 Midland Rd.
 Saginaw, MI 48630
 517-792-7021
 517-793-6678 (fax)
 10245.2003@compuserve.com

J/29 Class Association

60 Starmorit Lane
 Danville, CA 94526
 510-837-0780

J/30 Class Association

Joe Ruzzi
 P.O. Box 7579
 Silver Spring, MD 20907
 301-565-2300
 301-589-0130 (fax)
 jmruzzi@tasc.com
 <<http://www.paw.com/sail/j30>>

J/35 Class Association (Southern California)

Kathy Patterson
 354 North Highland Avenue
 Los Angeles, CA 90036
 213-938-1227
 213-935-6984 (fax)
 paradigm2@msn.com

J/35 Class Association (Northern California)

Randy Paul
 1476 Hester Avenue
 San Jose, CA 95126
 408-556-0220
 408-556-0224 (fax)
 equnmity@msn.com

J/35 Class Association (Lake Michigan)

Michael Kennedy
 75 East Wacker Drive, Ste. 2200
 Chicago, IL 60601
 312-332-0564
 312-332-0565 (fax)
 michael@thekennedygroup.com
 <<http://www.sailingsource.com/j35>>

Web page contains current officers and regional fleet captains. A copy of the recent Class Journal and a revised Rules Book can be downloaded here.

J/35 (see national classes at: <<http://www.paw.com/sail/j35>> and <<http://www.majordamage.com>>)

J/44 Class Association

1114 Ave. of the Americas
 35th Fl.
 New York, NY 10036
 212-921-9099
 212-921-9239 (fax)

J/80 and J/90 Class Associations

c/o J/Boats Inc.
557 Thames St.
Newport, RI 02840
401-846-8410
401-846-4723 (fax)
ajboats@aol.com
<<http://www.paw.com/sail/jboats>>

J/92 Class Association

Topher Wurts
146 Paoli Pike
Malvern, PA 19355
610-296-2726
twurts@netreach.net
<<http://www.paw.com/sail/j92/owners.html#owners>>

J/105 Class Association

Rod Johnstone
148 Harrison Avenue
Sausalita, CA 94965
415-332-0213

Jeanneau

105 Eastern Ave., Ste. 202
Annapolis, MD 21403
410-280-9400
410-280-9401 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

K

Kadey Kroger Owners' Group

Sam and Marvol Barnard
P.O. Box 7082
Ketchikan, AK 99901
Marvol@juno.com

Kanter Yachts

9 Barrie Blvd.
St. Thomas, Ontario
Canada N5P 4B9
519-933-1058
519-633-8138 (fax)

Knarr Association of San Francisco Bay

Ray Palmer
P.O. Box 2125
San Francisco, CA 94126
415-956-0144

L

Laser 28 International Class Association

Judy Button
6909 Cordingley Crescent
Mississauga, Ontario
Canada L5N 4Y9
905-824-8119
905-824-0647 (fax)
laser@idirect.com or laser@globalserve.net
Publishes *Twinglines* newsletter four times a year.

Liberty

Gary Hughes
10020 Main St., # 234
Bellevue, WA 98004-6056
425-342-3055 (days)
206-784-7834 (nights)
425-451-2368 (fax)
gary.m.hughes@boeing.com
Gary corresponds with most of the Liberty owners. He says the Liberty 458, built by Shin Fa, was a remake of the Peterson 44 hull with a new top mold.

Little Harbor

One Little Harbor Landing
Portsmouth, RI 02871
401-683-7000
401-683-7029 (fax)
inquiries@thco.com
<<http://www.thco.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Nord Nelson

Bill and Shirley Martin
1022 Scogin Dr.
Monticello, AR 71655
870-367-6848 (days)
870-367-7781 (evenings)
870-367-9877 (fax)
smartin@seark.net

Luders (see Allied Luders)

M

MacGregor Owners' Association

69 Green River Rd.
Greenfield, MA 01301
413-773-7525

MacGregor (see Venture)

Maine Cat 30

P.O. Box 645
Waldoboro, ME 04572
207-832-6678 (phone and fax)
mecat@biddeford.com
<<http://www.mecat.com>>

Mercer 44

Floyd Hollister
1410 Forest Drive, #8, Ste 145
Annapolis, MD 21403-1442
Wants to find other Mercer 44 owners or to start an owners' association for Mercer 44s.

Merit 25

Paul Kamen
5 Northgate Ave.
Berkeley, CA 94708
510-540-7968
fishmeal@netcom.com
<<http://www.well.com/user/pk/M25.html>>

Mirage Owners' Association

searabbit@aol.com
<<http://www.freeyellow.com/members2/mirageyachts>>

Mistress (see Allied Sailboats Website listing)

Moody Boat Owners' Association of the Americas

Sally Reuther
Bay Yacht Agency
325 First St.
Annapolis, MD 21403
410-263-2311
410-263-2964 (fax)
sreuther@bayacht.com or SMRSail@aol.com
The group has 50-60 members from Canada and Maine to the U.S. West Coast and even Venezuela. The group has a newsletter and a couple of group events. Moodys were designed by Angus Primrose and more recently by Bill Dixon. They are built by Marine Projects in Plymouth, England.

Moore 24 Class Association

Sydnie Moore
220 Owen St.
Santa Cruz, CA 95062
408-429-8304
also
Fred Cox
flc@netscape.com
<<http://people.netscape.com/flc/Moore.html>>

Morgan 38 Owners' Group

Lenny Reich
RR2, Box 4440
Belgrade, ME 04917
207-872-3535 (daytime)
LSREICH@colby.edu
<<http://www.colby.edu/personal/lreich/morgan.html>>
Owners' group for the original "Charlie Morgan-38" (1969-71); the Ted Brewer-designed Morgan 382, 383, and 384 (1977-1985); and the Catalina/Morgan-38 currently in production. This group has approximately 130 member boats and publishes a newsletter three times a year.

Morgan Owners' Group

Ken Klein
kklein@mail.fsu.edu
<<http://mailer.fsu.edu/~kklein/>>
Loose collection of Morgan owners.

Morris

P.O. Box 588D
Southwest Harbor, ME 04679
207-244-5509
207-244-5866 (fax)
morrisyachts@acadia.net
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Mount Gay 30 Class Association (U.S.)

Geoff van Gorkom
Box 982
Newport, RI 02840
401-849-6090
401-849-6090 (fax)
74544.2267@compuserve.com
<<http://www.paw.com/sail/w30>>

N

Nantucket Clipper (see Offshore Yachts Class Owners' Association)

Nauticat, Sitala Yachts

P.O. Box 23
FIN-21870
Riihkoski, Finland
011-358-2-4861-500
011-358-2-4868-500
sitala.yachts@pp.kolumbus.fi
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Nelson Marek, Carroll Marine

91 Broad Common Road
Bristol, RI 02809
401-253-1264
401-253-5860 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Nicholson (see Camper Nicholson)

Newport 30

aronoff@aronoff.com or jonyo@aronoff.com
<<http://www.newport30.org/>>

New York 36 Class Association

68 Westover Lane
Stamford, CT 06902
203-324-4581

Nonsuch Association

Norm Sand
300 Spencer Ave. E.
Greenwich, RI 02818
401-884-1094
401-884-4268 (fax)
or
Jon Downey
jon.downey@ASG.unb.ca

Northeast, Eastland Yachts

33 Pratt St.
Essex, CT 06426
860-822-8224
860-767-9094 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Northcape and Northshore (see Offshore Yachts Class Owners' Association)

O

Ocean, Westerly

P.O. Box 1132
Madison, CT 06443
203-421-5608
203-421-5608 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations. Ocean Ranger, Ocean Lord, etc.

Oceanis, Beneteau

24 North Market St., Ste. 201
Charlestown, SC 29401
803-805-5000
803-805-5010 (fax)
<<http://www.beneteauusa.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

O'Day, Cal, and Ranger (Chesapeake Mid-Bay)

Roy and Louann Meisinger
8253 The Midway
Annadale, VA 22003
703-978-6035
rrmeisin@erols.com

O'Day, Cal, and Ranger Chesapeake Northern Bay)

Al and Jan Gunzelman
1708 Oakfield Ave.
Baltimore, MD 21221
410-391-5925
email to co-commadores: tfhfs@bellatlantic.net

O'Day, Cal, and Ranger (Southern Chesapeake/Potomac)

Tom and Cathy Heacock
4400 Rollingbrooke Ct.
Alexandria, VA 22306
703-765-1613
theacock@juno.com

Offshore Yachts Class Owners' Association

(Baltimore Clipper, Halycon, Nantucket Clipper, Northcape, Northshore, Offshore, Trintella)

Tim Robison
381 Hanover St.
Boston, MA 02113-1907
617-565-5305 (days)
617-723-7299 (nights)
tatoosh@geocities.com
<<http://www.geocities.com/~tatoosh/OYCOA.html>>

Offshore 40 (see Rhodes Reliant/Offshore 40)

Olson 25 Class Association

Jay Aiken
<<http://www.advancedsp.com/olson25/>>

Olson 30 Class Association

Jack Easterday
1150 Ballena Blvd., Ste. 210
Alameda, CA 94501
510-521-9223
510-521-4457 (fax)
vmi@richochet.net
<<http://www.winterlan.net/vmi/o30/>>

Olson 911S Class Association

Rich Canning
127 Hilltop Dr.
Cranston, RI 02920
401-781-9800
rcanning@dimeo.com

1 Class Association (U.S.)

George Murray
P.O. Box 1647
Lexington, SC 29071
803-356-0375
gsmurray20@aol.com

Oyster

5 Marina Plaza, Goat Island
Newport, RI 02840
401-846-7400
401-846-7483 (fax)

This is the manufacturer; they may have information about any formal or informal owners' organizations.

P

Pacific Seacraft 25

Jim Swindell
2951 Marina Bay Drive, #130
League City, TX 77573
jswindell@usa.net

Pearson Ariel Association

Bill Phelon
rphelon@juno.com
<<http://www.webmem.com/ariel.htm>>

Pearson Coaster-Wanderer Website

Pat Tilson
3529 Morningside Drive
Fairfax, VA 22031
shaboom@valise.com
<<http://www.smart.net/~moondog/pcwoa/>>

Pearson Electra

Bob Hinely
12403 Condor Dr.
Jacksonville, FL 32223
904-262-2640
rchinely@bellsouth.net

Pearson Renegade Website

Michael Lehmkuhl
mic@commlaw.com
<<http://www.mindspring.com/~ghz/>>

Pearson: *The Vanguardian* newsletter

Conrad (Connie) Hoover
2600 W. 17th St.
Wilmington, DE 19806-1109
302-888-2722
choover@tower-hill.pvt.k12.de.us
\$8 per year: semi-monthly newsletter. Also has registry of owners.

Pearson Triton Website

suter@ixnetcom.com
<<http://pw1.netcom.com/~suter/triton.html>>

Pearson Vanguard Websites

Geoff Parkins
836 Great Mountain Lane
Winchester, VA 22602
703-918-1588
gparkins@aol.com
<<http://members.aol.com/gparkins/index.htm>>
This website meant for Pearson Vanguards offers all kinds of advice and useful links for Pearson owners.
also (for the Great Lakes Area)
Fred Fuller
4798 Sterling Drive
Greendale, WI 53129
414-421-9053
fredfuller@aya.yale.edu
<<http://www.execpc.com/~feftrpt/>>

Pearson Wanderer (see Pearson Coaster-Wanderer)

Pearson Yacht Owners' Association (National)

Bill Lawrence
28 Vesey St., Ste. 2172
New York, NY 10007
718-789-7105
pearsoncurrent@pipeline.com
<<http://www.pearsoncurrent.com/>>
Annual dues are \$25. Publishes the *Pearson Current* newsletter.

Pearson (see Cal-Pearson)

Pelican Association

Howard Mackey
2249 Tamalpais
El Cerrito, CA 94530
510-233-4954
<<http://ns./~jheidgr/pub/pelican.htm>>
or
Muriel Short
203 Hawthorne Ave.
Larkspur, CA 94939
415-924-0685
PelicanSailboat@webtv.net
Muriel, whose husband Bill Short designed the Pelicans, writes that designs are still available through her, even though Bill died several years ago. Some of these boats are trailerable pocket cruisers: Great Pelican 16, Super Pelican 18; and the Yangtze Junk. There is also a one-design racer: the 12' San Francisco Pelican.

Precision Boat Works

1511 18th Ave. Dr. E.
Palmetto, FL 34221
941-722-6601
941-722-5595 (fax)
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Princess (see Allied Princess)

R

Ranger 23 Class Association

P.O. Box 741
Woodacre, CA 94973
415-488-4464

Ranger 23 Owners' & Class Association

1808 175th Place NE
Bellevue, WA 98008
425-641-6437
arvel_gentry@email.msn.com
60-70 members throughout the U.S. Publishes a newsletter 3-4 times a year for \$15. Back issues and other sailing materials are available.

Ranger 26 Association

Hugh Johnston
hugh@sympatico.ca
<<http://www3.sympatico.ca/hugh.johnston/RANGHOME.HTM>>

Ranger 26 Class Association (San Francisco Bay area)

Dave Adams
77 Crestmont Drive
San Francisco, CA 94131
415-664-6553
dadams@webtv.net

Ranger 26 Roundup Owners' Association

Teresa Kasner
9810 NE 15th St.
Vancouver, WA 98664
360-256-0805
stargazr@europa.com
<<http://www.europa.com/~stargazr>>
Keeps member records. Sends a newsletter once a year. Organizes a yearly Ranger 26 roundup/rendezvous.

Ranger 29/33 Class Association

2084 Clematis Court
Fremont, CA 94539
510-770-8420

Ranger (see O'Day, Cal, and Ranger listings)

Rhodes Reliant/Offshore 40 Network

Ben Stavis
114 Harvest Circle
Bala Cynwyd, PA 19004
610-660-9966
bstavis@vm.temple.edu
<<http://nimbus.temple.edu/~bstavis/reliant.htm>>

Robinhood

Joe McCarty
HC 33, Box 1460
Georgetown, ME 04548
800-255-5206
207-371-2899 (fax)
rmc@clinic.net
<<http://www.robinhoodyachts.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

S

S2 6.9 Owners' Page

Jeff Roy
61 Mohawk Drive
Portsmouth, RI 02871
j_roy@ids.net
<http://users.ids.net/~j_roy/sailing/S2page/>

S2 7.9 Class Association

Marie Snow
24800 Winona
Dearborn, MI 48124
313-562-4498
313-323-7902 (fax)
jandmsnow@compuserve.com
<<http://www.sailingsource.com/s279>>
Publishes dates of regattas, meetings, cruising events, race results, boat maintenance. Newsletter is published 3-4 times per year.

Sparkman & Stevens (S&S)

Jim Huxford
125 West Dee St.
Lebanon, IL 62254
618-537-2278
jhuxford@apci.net

Sabre (Long Island Sound Sabre Association)

<<http://www.geocities.com/Pipeline/9486/index.html>>
or Lucy Brown at Sabre Yachts Corp.
207-655-2396
207-655-5050 (fax)
<<http://www.sabreyachts.com>>

San Juan 24 National Class Association

Kenneth Johnson
P.O. Box 22172
Seattle, WA 98122
206-624-0900
206-386-7500
kenwjohn@aol.com
<http://www.reed.edu/~mdunn/sj/sj_home.html>

Santa Cruz 27 Owners' Association

Dave Emberson
300 Moore Creek Rd.
Santa Cruz, CA 95060
408-459-8202
<<http://playground.sun.COM/pub/dre/SC27/>>

Santana 35 Class Association

31 Kevin Court
Walnut Creek, CA 94596
510-947-1685

Santana 35 Fleet of San Francisco Bay

Jim Graham
20 Invincible Court
Alameda, CA 94501
510-865-1218
<<http://www.geocities.com/Pipeline/9547/>>

Schock 35 Class Association

Don Adams
7858 W. 79th St.
Playa Del Rey, CA 90293
310-306-4684
310-306-4685
fang96@aol.com
<<http://www.baywoodinn.com/schock35.html>>

Seabird 37

Byron Lee
9490 Middleton Place
Vernon, British Columbia
Canada V1B 2L1
250-545-6456
byronix@bcgrizzly.com
Byron has agreed to serve as a contact for Seabird owners.

Seabreeze (See Allied Seabreeze)

Sea Sprite Association

Bob Russell
141 Country Club Drive
Warwick, RI 02888
401-781-5015
seasprites@aol.com

Seawind (See Allied Seawind)

Seward, Hake Yachts, Inc.

4550 SE Hampton Ct.
Stuart, FL 34997
561-287-3200
561-287-7003 (fax)
<<http://www.seawardyachts.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Shannon Yachts

19 Broad Common Rd.
Bristol, RI 02809
401-253-2441
401-254-1202 (fax)
shannonyts@aol.com
<<http://www.shannonyachts.com>>

Skimmer 25, Creative Marine

P.O. Box 2120
Natchez, MS 39121-2120
800-824-0355
601-442-5182 (fax)
maxskimr@bkbank.com
<<http://creativemarine.com>>
This is the manufacturer; they may have information about any formal or informal owners' organizations.

South Coast 23

Jerry Ewing
11018 Del Mar Ct.
Fairfax, VA 22030
703-352-0140
ghewing@dcsail.com
<<http://www.dcsail.com/southcst/>>
also
<<http://www.geocities.com/Colosseum/Arena/9808/southcoast.html>>

Southern Cross

Bill Duggan
978-369-2129
info@southern-cross.org
<<http://www.southern-cross.org>>

Sou'wester, (See Hinckley)**Soverel 33 Association**

77 Elk Ave.
New Rochelle, NY 10804
201-379-7778
201-379-1151 (fax)
100072,266@compuserve.com

Spirit 23

Dave Hord
2104 Sterling Drive
Clayton, NC 27520
hord.dr@worldnet.att.net
Dave has agreed to serve as a contact for Spirit 23 owners.

Spirit 28

Richard Hudgins
6434 Johnson Ln.
Lumberton, TX 77657
409-755-2727
hudgins1@ih2000.net
Richard has agreed to serve as a contact for Spirit 28 owners.

SWY, Sweden Yachts

P.O. Box 80, S-444 21
Stenungsund
Sweden 011-46-303-770640
011-46-303-88610
sales@swedenyachts.se
This is the manufacturer; they may have information about any formal or informal owners' organizations.

T**T45, Turner Yachts**

580 Read Rd.
St. Catharines, Ontario
Canada L2R 7K6
905-934-8300
905-934-3100 (fax)
windship@niagara.net
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Tartan Owners of New England

Tone@ComputerManagement.com
<<http://www.computermanagement.com/tone/>>

Tartan 10 Fleet

6501 Liggett Drive
Oakland, CA 94611
510-339-9451

Tartan Blackwatch

Martin Burs
111 Jackson St.
Santa Cruz, CA 95060
408-426-5332 (days) 408-469-9920 (evenings)
408-426-1220 (fax)
sailr@rocketmail.com
Martin is collecting names of other owners of Tartan Blackwatches.

Tashiba, Taswell, Ta Shing

4 Shing Yih Road
An-Ping Industrial Dist.
Tainan, Taiwan
Republic of China
011-886-6-261-5176
011-886-6-264-4672 (fax)
tashing@ms8.hinet.net
This is the manufacturer; they may have information about any formal or informal owners' organizations.

Tayana Owners' Group

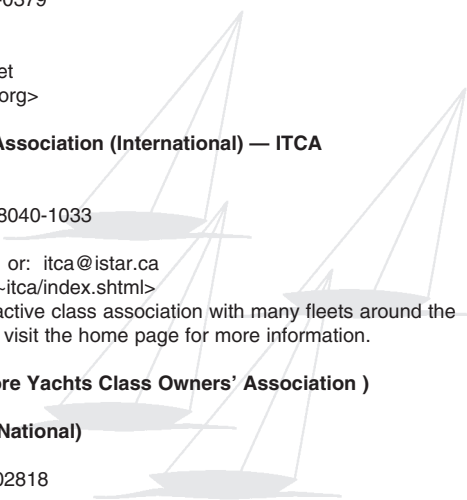
Bill and Rockie Truxall
P.O. Box 379
Reedville, VA 22539-0379
804-453-5700
804-453-4961 (fax)
tognews@crosslink.net
<<http://www.tognews.org>>

Thunderbird Class Association (International) — ITCA

Jeff Wallace
P.O. Box 1033
Mercer Island, WA 98040-1033
206-528-1135
jwallace@filenet.com or: itca@istar.ca
<<http://home.istar.ca/~itca/index.shtml>>
This is an extremely active class association with many fleets around the world. Contact Jeff or visit the home page for more information.

Trintella (see Offshore Yachts Class Owners' Association)**Triton Association (National)**

300 Spencer Ave.
East Greenwich, RI 02818
401-884-1094



U

ULDB 70 Association

Jane Watkins
1917 Anacapa St.
Santa Barbara, CA 93101
805-687-7501
jwatkins@silcom.com

V

Valiant Owners' Group

<<http://www.sailnet.com/vog>>

Valiant Yachts Owners' Association

Sylvia and Stanley Dabney
255 East 22nd Court
Riviera Beach, FL 33404
561-845-9303
561-845-9304 (fax)
offshoreYT@aol.com
Valiant Yacht Owners' Association is an incorporated entity for the owners and "wanna bees" of Valiants, founded by Stanley Dabney one of the original founders of Valiant Yachts Corp in 1975.

Vega

Sidney Rosen (publishes a newsletter)
SIDNOCK@aol.com
also
Vega Association of Great Britain
Steve Birch
user@firstnet.u-net.com
<<http://www.firstnet.u-net.com/>>

Venture/MacGregor Yacht Club

Steve Hanes
2004 Antwerp Avenue
Plano, TX 75025
972-517-5104
972-527-4414
VMYC@compuserve.com
<<http://ourworld.compuserve.com/homepages/vmyc>>
The V/MYC is a Dallas-area association for owners of Venture and MacGregor trailerable yachts. Our history goes back over 29 years to our beginning as the Venture Fleet of Dallas. The V/MYC has 76 member families organized into fleets for each size (17/21/22/23/24; 25 Fleet; 26 Fleet; and Associate Fleet).

W

Wellington 47

Ed Stoner
226 Outlook Drive
Pittsburgh, PA 15228-2145
412-561-5359
enstoner@rsm.com

American Westerly Association

Joseph Vislocky
43 Jayme Dr.
York, PA 17402

Westerly Owners' Association

Jackie and Tim Pullen
19 Willowdale Close
Petersfield, Haunts
England GU32 3PS
jaytim@dial.pipex.com

Westsail Owners' Association

5701 Forest Road
Cheverly, MD 20785
woax@erols.com
also

Westsail Newsletter (Windblown)

<<http://www.erols.com/woax>>

West Wight Potter (East Coast)

Lars Mulford
902 Dogwood Dr.
Seaford, DE 19973
302-628-3456
<<http://members.tripod.com/~SpeedSailor/index.html>>

West Wight Potter (Gulf Coast)

Wiley Johnson
12723 Regal Pine Lane
Houston, TX 77070
wileyj@pdq.net

West Wight Potter (Northern California)

<http://songbird.com/potter_yachter>
Membership dues: \$33 new, \$18 renewal.

West Wight Potter (Northwest)

<<http://www.tx3.com/~ej/nwp.html>>
also
<<http://www.lesbois.com/wwwpotter/>>

West Wight Potter (Southern California)

Roland Borpple
17972 Larcrest Circle
Huntington Beach, CA 92647
714-848-1239
Welcomes West Wight Potter sailors and others with ramp-launched sailing craft.

Whitby/Brewer Owners' Association

Bernard Boykin
1919 Ruxton Road
Baltimore, MD 21204

Whitby 42 Owners' Association

Jim Alexander
jalexand@indiana.net
<<http://www.indiana.net/~jalexand/yourpage.html>>
or
Ken Brown
P.O. Box 254
453 Head St.
Victoria, British Columbia
Canada V9A 5S1
250-360-1094

Wianno Senior Class Association

George Edmonds
48 Fayerweather St.
Cambridge, MA 02138
617-491-4789

Wright 40 (see Allied Sailboats Website listing)

Wylie Wabbit Class Association

Colin Moore
c/o North Coast Yachts
2100 Clement Ave.
Alameda, CA 94501
510-523-8330
510-523-8331 (fax)

X

XL-2 (see Allied Sailboats Website listing)

X-Yachts

P.O. Box 3316
Annapolis, MD 21403
800-926-2878
410-268-8008

xyachts@aol.com

This is the manufacturer; they may have information about any formal or informal owners' organizations.

Y

Yorktown, Olympian Owners' Page

Mark Brown
330 W. Ocean Blvd., Apt. 109
Long Beach, CA 90802
<<http://www.liveaboardmagazine.com/yorktown/yorktoc.html>>

We just had to share this

In order to keep up with the ongoing news from all the sailing fleets around the country, we've offered a free subscription to *Good Old Boat* magazine to all newsletter editors in return for a subscription to each fleet's newsletter. If your fleet has not signed up, please contact *Good Old Boat* for more information. This priceless tidbit is from Noel Peattie's newsletter, *the Typhoon*, for owners of Cape Dory Typhoons and other Cape Dory sailboats, cried out to be shared. For more information on *the Typhoon*, see Page 38.

“COPY! COPY!! The reason you haven't seen an issue of *the Typhoon* for ever so long, is that I haven't received any news from you! Heroic circlings of stormy capes — momentary glimpses of gigantic sea monsters — rescues of mariners clinging to overturned longboats — pirates foiled by escapes into shallow waters ringed by mangroves — maidens saved from villains in luggers — leaks stopped with knotted pillowcases — dismastings repaired with adhesive tape — ending round-the-world races won by split seconds, — all are lacking from my files! Remember, unlike a literary journal, *the Typhoon* is not flooded with outside contributions; its contributors are its readers, and vice versa ...”

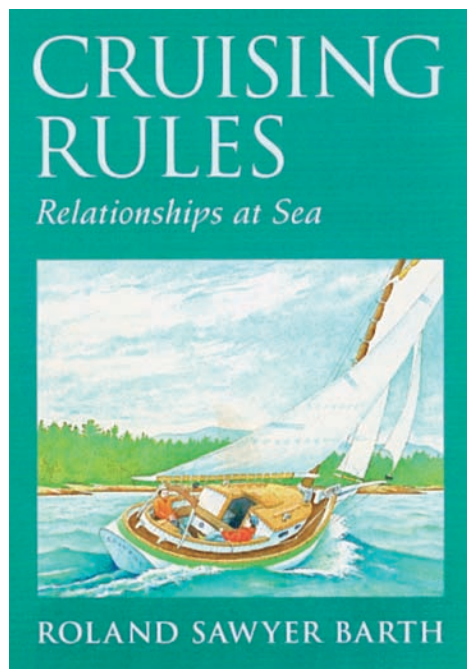
Help! Who's got contacts for these boats?

Acajutla
Allegra
Aragpsa
Balboa
Benford
Bounty
Brewer
Brewer Ahquabi
Cabot
Cape Cod H-26
Cape George
Carena
Carter
Clarion of Wight
Clearwater
Clipper
Crosby
CT-38
Dana
Deerfoot
Easterly
Eden
Eight Metre Class Association (International)
Elite
Endurance
Excalibur
Falmouth Cutter
Finnigulf
Fisher
Formosa
Freeport
Freya 39
Fryco
Glass Slipper
Glen-L
Grampian
Gulf

HC-41T
Hedoniste
Heritage
Hinterholer
HJB Cumulant
Holland
Horizon
Jonmeri
Jonque
K-43 and K-50
Kolal
Lancer
Legend
Lindenberg
LM
Malo
Maple Leaf
Margarita
Mariner Polaris
Mason
Mistral Class Association (International)
Montego
Moonfleet
Mystic
Mystique
Najad
Nautilus
Niagara
Nimble
Nor'Sea
Nordia
Nordic
O'Day Tempest
Orion
Passage
Passport
Pearson Commander

Perry
Pilot Cutter
Pratique
Quasar
Roberts
Royal Passport
Sea Farer
Seawolf
Sirocco
6 Metre One Design
Skye 51
Starlight
Swan
Ta Chiao
Tasar
Topper
Trapper
Tripp 30
Vagabond
Vancouver
Vega
Victoria
Viper 830
Vitrand
Voyager
Wally
Warrior
Wauquiz
Whitbread 30
Willard

Cruising Rules: Vital book may be missing from your library



Sailors' libraries are filled with every conceivable subject matter from dinghies to clipper ships — alcohol stoves to diesel engines, etc. but missing is a book to explain personal relationships at sea — or how to make a peaceful cruising passage with mate and/or crew members.

Roland S. Barth, a retired Harvard professor, has assembled a melange of mishaps on board and off, which actually occurred during his ownership of a vintage wooden Friendship sloop. These misadventures prompted Barth to discover solutions: "Rules for personal behavior at sea making it possible to stay on speaking, even friendly terms while confined in close quarters for an indefinite period."

Cruising Rules is presented in an entertaining, humorous manner with the academic skills of a lifelong educator. Beautifully illustrated, the book is prefaced by the author's reasons for writing about "relationships at sea." It also contains a glossary of terms, a map of the Maine coastline, and a consolidated list of the 25 rules to be followed for compatibility and happiness on board.

Examples from the glossary:

dismasting – cataclysmic act by which a sailboat is transformed into merely a boat

winch handle – essential metallic, elbowlike appliance usually found (or lost) in mud at ocean's bottom

I particularly enjoyed two of the cruising rules emerging from strained, onboard relationships:

Rule Number 6 – Non-discussibles may be discussed only within swimming distance of home port

Rule Number 10 – The gods protect beginning sailors and fools — sometimes both at once

Statements by William F. Buckley, Jr., author of *Atlantic High*, and Roger Duncan, co-author of *Cruising Guide to the New England Coast*, provide evidence this book is a must-read for every sailor.

Book price is \$12.95 plus \$2.05 shipping. Maine residents add 6 percent sales tax. Write to: Cyclops, The Mind's Eye, 307 Lunt Road, Brunswick, ME 04011. Phone/fax: 207-729-7403. Tollfree outside Maine: 888-729-4105. Email: cyclops@clinic.net.

Editor's note: We **by Dan Smith**

were also very

impressed with Barth's work, and will be presenting selected chapters in future issues of *Good Old Boat* magazine. Personal favorite rules, based on our experience, include:

Rule Number 2 – Any story worth telling is worth telling often.

Rule Number 7 – The hand that holds the paintbrush determines the color.

Free classifieds for subscribers coming next

Beginning in the September/October issue of *Good Old Boat* magazine, subscribers can have one free classified ad each year. Ads will run in the magazine, in the newsletter supplement (which goes via email or U.S. Post just to subscribers), and on the magazine's website. Ads on the web will be text only.

For non-subscribers and others wanting more frequent ads, the following rates apply:

- .50/word (\$10 minimum ad)
- \$20 for pictures or art (2" maximum size)
- \$50/column inch for display classifieds



Cover: Jan and Larry Demers think of themselves as "weekend liveaboards" on *DeLaMer*, their 30-foot Cape Dory. **Story on Page 22.**

Photo by Karen Larson

Reflections

by Karen Larson

Not long ago I rifled through a rack of anniversary cards looking for the perfect sentiment for my sailor. In doing so, I noticed a couple of cards which made the point that we don't have everything ... a mansion, the newest car, a fancy sailing yacht ... but honey we've got each other, so that's enough. Etcetera.

It wasn't the yacht concept tied in with mansions and expensive cars that sparked my interest, although good old boaters know you don't have to be rich to be out there on the water. Rather, it was the illustrations accompanying these "yachts." The sun was shining. The sky was blue. The water was lovely. The happy couple was dressed in the best nautical attire, whatever the artist decided that should be.

Then it struck me. They really don't know, (*do they?*) — the artists, our co-workers, and the other non-sailors — that even fancy yachts experience rain, gales, and fog ... possibly in equal proportions to the sunny days. They really don't know, (*do they?*), that these fancy yachts break down, need cleaning, and require maintenance ... perhaps also in proportion to the days spent in carefree bliss on the water.

They really don't know, most of the folks out there vicariously sailing with us, that you have to love the entire concept: you have to enjoy keeping the boat seaworthy and livable ... perhaps you do it for the memorable and beautiful days, but you must have foulweather gear at the ready and the ability to get the boat home in a storm.

They really don't know and perhaps envy us unfairly for what looks glorious, stately, and serene when the other side of the coin is not quite as picturesque. Maybe instead they should envy us for what we get in return for the bottom paint splatters on our seaboots and the lazarettes full of tools: we get the confidence that comes with competence. We know we can fix our boats and — because we have done it — we know we can sail in adverse situations when we have to. We have gained the companionship of others who really do know what it's like to own, care for, and sail a boat. We are part of a community of sailors, and there's nowhere we'd really rather be.

The artists and the others can represent our hobby as an idyllic way of life, but we much prefer the reality.

Reflections come to all of us when we're out there awhile. They represent the wisdom that comes of spending time with your innermost thoughts. If you'd like to offer yours, we'd like to hear from you. Call or write Good Old Boat Magazine, 7340 Niagara Lane North, Maple Grove, MN 55311-2655; 612-420-8923 (phone); 612-420-8921 (fax); or send email to karen@goodoldboat.com.



Here's what's coming in our Sept./Oct. issue:



- Exhaust systems
- Sailrite: Supplier for good old sailors who do it themselves
- Feature boat: 1965 Ericson and the family that loves her
- Ruminations of a nautical photographer
- Valiant: The birth of one great old boat
- Surveying and buying your good old boat
- Cut out the shouting: Lin Pardey looks at getting along in a small space
- Winter sailing: Cruising the 'Net when the water's too hard for sailing




Grab your seabag and come aboard Good Old Boat!

<<http://www.goodoldboat.com>>

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Maple Grove, MN 55311-2655

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