

GOOD OLD BOAT

The sailing magazine for the rest of us!



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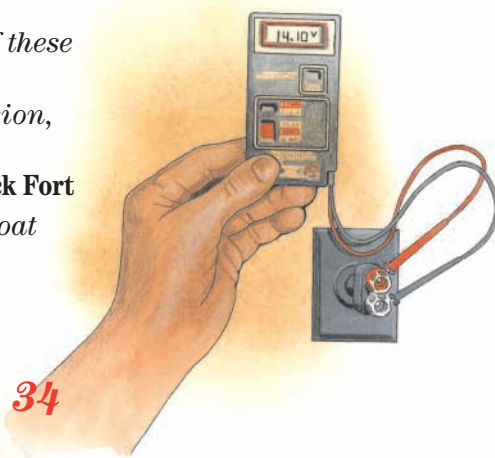


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Voices from everywhere

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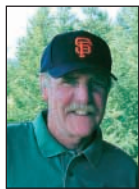
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Ed Lawrence (*Cape George* 38, Page 4) is a contributing editor with *Good Old Boat*. He writes about boats and off-beat subjects for national magazines from his home base in Montana. His wife, Judy, bought a San Juan 23. Ed is allowed to crew on it.



Dan Spurr (*Tartan Yachts*, Page 9) was editor of *Practical Sailor* for 11 years. He and his family moved to Montana where he continues to write books and articles for marine publications.



Ted Brewer (*On center cockpits and pilothouses*, Page 16; *Reliable 31s*, Page 39) is a contributing editor with *Good Old Boat* and one of North America's best-known yacht designers, having worked on the America's Cup boats *American Eagle* and *Weatherly*, as well as boats that won the Olympics, the Gold Cup, and dozens of celebrated ocean races.



Paul Esterle (*Paneling the overhead*, Page 20) has been building or repairing watercraft for longer than he cares to admit. Paul and his wife, Pat, are refitting *Bryn Auel*, a 35-foot Columbia 10.7. He specializes in boat improvement and repair projects utilizing wood, epoxy, and fiberglass. The Esterles produce boating videos and CDs and give seminars. Contact Paul at pesterle@preferred.com.



An escaped corporate executive, **Chuck Fort** (*Wind generators*, Page 23; *Cruising memories: Finding the right family cruiser*, Page 61) "sold out" to go cruising

with his family. The Forts settled in Florida for a couple of years while the kids were in braces. Now they're in Maryland while their daughter attends college.



Gregg Nestor (*Buying a used trailer*, Page 27; *Chrysler 22*, Page 50; *Quick and easy: Making fast real fast*, Page 76; *Use your noodle*, Page 78) is a contributing editor with *Good Old Boat*. More than 20 years and

four boats ago, he discovered sailing and has been an avid "trailer sailor" ever since. When not sailing or writing about sailing, Gregg runs the family farm. He and his wife, Joyce, sail an O'Day 222, *Splash*.



Don Launer (*Building a hard-top dodger*, Page 30; *Alternators 101*, Page 34) is a contributing editor with *Good Old Boat* and an inveterate do-it-yourselfer. He is shown here sitting on his new — very sturdy — hard-top dodger. He built his own home ("I bought 28,000 bricks, a cement-mixer, and a book on how to lay bricks") and has built about a half-dozen boats over the years.



Reese Palley (*The value of coasting*, Page 33) and his wife, Marilyn, have been sailing partners for 20 years. They live in Key West. *Unlikely*, their Ted Brewer-designed cutter, is their third leg, completing perfect "passages à trois." Reese has published three books: *There Be No Dragons*, *Unlikely Passages*, and *Unlikely People*, all with Sheridan House. This article is excerpted from his newest book, *Call of the Ancient Mariner*, published by International Marine.

Marci and **J Kolb** (*Reworking a classic*, Page 40) have been living and cruising aboard *Kotchka*, a 1969 Hinckley 38, since May 2000. Their travels have taken them to the Canadian Maritimes, the U.S. East Coast, and the Bahamas.

Marianne Scott (*Sharp as a laser beam — Bruce Kirby*, Page 44) started writing about marine subjects when she and her husband, David, sailed from Victoria, British Columbia, to Bora Bora on their good old boat, *Starkindred*, a Niagara 35. She is profiling a series of people who've been influential in the boating industry. She's also the author of *Naturally Salty — Coastal Characters of the Pacific Northwest*, published this spring.



Richard Coberly (*Center spread: Timeless tranquility*, Page 48) is an award-winning photographer and videographer. Although he can run a video camera while skiing downhill backward, the production credits that interest us include the sailing series *World Charter & Sail* for the Travel Channel, *Sailing Blind*, and *Trouvadore — The Last Voyage of an African Slaver*. Visit his website at <http://www.windwardmedia.net>.

Tor Pinney (*The truth about cruising*, Page 54) is a cruising sailor and writer. He holds a U.S. Coast Guard Merchant Marine Officer Master's License and has logged nearly 150,000 nautical miles under sail. His articles appear often in boating magazines around the world, and his authoritative new book, *Ready for Sea! — How to Outfit the Modern Cruising Sailboat*, is generally regarded as the best of its kind.



Glen Smith (*Cruising memories: What's your life worth?*, Page 58) grew up in the New Orleans area and resides in Connecticut. He is an avid racer who enjoys restoring good old boats. He holds a U.S. Coast Guard OUPV license. Glen and his wife, Georgette, cruise Long Island Sound aboard their 1977 Catalina 30.

Ed Verner (*Cruising memories: Calling the blue kittens*, Page 66) is a pilot, musician, writer, and sailor. He grew up on Sunfish and Hobie Cats on the waters of the Gulf of Mexico and these days cruises primarily in the Tampa Bay area. He provides occasional sunset cruises aboard *Wind Ketcher*, his Allied Seawind II ketch.



Bill Sandifer (*Simple solutions: Cordless winch power*, Page 70) is a marine surveyor and boatbuilder who has been living, eating, and sleeping boats since the early '50s when he assisted at Pete Layton's Boat Shop. Since then he's worked for Charlie Morgan (Heritage) and Don Arnow (Cigarette), and owned a commercial fiberglass boatbuilding company (Tugboats). Bill is a contributing editor with *Good Old Boat*.



Mark Parker (*Simple solutions: Update on Trex*, Page 72) has been sailing — Sunfishes, Lasers, Hobie Cats — since he attended college. He has begun work on a 16-foot trimaran, a "work in progress" temporarily sidelined when the Pearson Triton, *Always*, received a higher priority rating. Mark sails with his family in Narragansett Bay.



Brian Dodds (*Simple solutions: Exhaust blowout*, Page 74) is a New Zealander who has been crewing on other people's yachts for about 25 years. He now lives in Chicago where he bought *Forty Two*, a C&C-designed Newport 41, which he plans to take to the Caribbean soon. His partner, Fiona Weddell, plans to join him for the Caribbean trip. He has chartered in the Virgin Islands, Greece, and the Channel Islands, and participated in a BT Challenge Arctic Adventure in the Lofoten Fjord off the west coast of Norway.



Brooke Elgie (*Quick and easy: Fixing deck leaks*, Page 77; *Reflections: Navigation sans agitation*, Page 97) and his wife, Wendy Stern, cruise the "upper left corner." They sail primarily in Alaska while searching for a place to settle permanently.



Alan Lucas (*Quick and easy: Reeving a new halyard*, Page 79) has been a cruising writer for more than 40 years, during which time all his cruising boats were personally built from scratch, restored, or finished from a bare hull (eight in all). The latest is a built-from-scratch 50-foot ketch whose design was inspired by the Chesapeake Bay Skipjack. More on this subject in the next issue of *Good Old Boat*, January 2004.



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About the cover...

Sailor Ken Pfister sent
a couple of drop-dead
beautiful slides a while
back. He said they
“might be of interest”
(they were) and that all
including the sailboat on
this issue's cover were
shot at Ted Inlet Marine
Park near Victoria,
British Columbia.



The view from here

Elephants' graveyard

*This is something you don't see
on the Great Prairie*

WE WERE WORKING OUR WAY BACK home from a wonderful excursion down the middle of the country. We had traveled from near the Canadian border to the Gulf Coast looking at boats and places to sail them all along the way. One stop brought us to the yacht club of a friend and frequent correspondent of *Good Old Boat* magazine. After we'd seen the clubhouse and sailing waters, we asked to walk the docks. Our friend was proud of these docks. He'd helped to build, modify, and repair them. As we walked along, he gave us a running commentary on the collection of boats suited to the local sailing conditions.

Among them were some sad vessels

Our host said she'd sunk several times just from rainwater. She had lovely lines and had been a lovely craft but was now beyond any possible repair.

You don't see this on the Great Prairie. Winter is long. The water freezes. All boats are hauled. Only the fit are launched again in the spring. Those condemned to neglect die slowly in the backs of storage lots. Our friend was working hard to make dock space for the boats in his club, and it can be said in general that

space for a boat on the water is always at a premium. It would be better to get the neglected ones off the water.

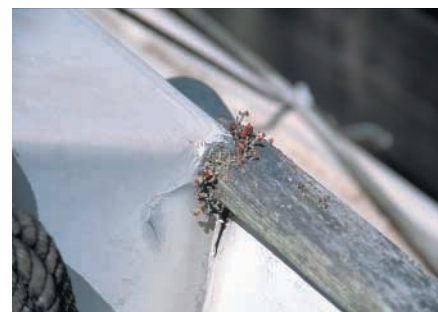
I offer this suggestion. Make it a marina or club rule that all craft occu-


“... it can be said in general that space for a boat on the water is always at a premium. It would be better to get the neglected ones off the water.”



that had been left there to die. We'd seen it before in other places where the sailing conditions are mild enough to allow boats to be kept in the water year-round... otherwise fine craft, obviously neglected, deteriorating with the seasons, some to the point of no return.

At one point, as we were moving from one dock to another, I said to Karen, “They're like elephants. It's better if they go somewhere else to die.” After that we saw a Marshall catboat, a Sanderling, with some lovely species of flora growing out of her teak handrails.



pying a slip or mooring should pass or be able to pass the Coast Guard courtesy inspection, have reasonable insurance, and be considered seaworthy if and when surveyed. The others should be on the hard, either neglected or making their return in the loving hands of owners who have the time and inclination. 

J. Powlas



Cape George 38

This bluewater cruiser inspires confidence

by Ed Lawrence

IMAGINE YOU'RE SITTING RINGSIDE AT A boxing arena. The announcer is decked out in a black tuxedo, his head covered by a mane of gray locks. His jacket sleeves taper to reveal French cuffs and diamond cuff links as he speaks into a microphone held in manicured fingertips. Pointing to his left, he begins.

"Ladies and Gentlemen, in this corner — wearing a fiberglass exterior and racing interior — we have the Cape Fear 38, a recently introduced hot rod, designed by Bruce Marek, one of the country's most prominent sailboat designers. Displacing only 11,000 pounds, she competes in the lightweight division.

"And in the opposite corner, from the heavyweight division, the Cape George 38, a queen of the seas displacing 36,000 pounds. A true bluewater cruiser, she was designed out of Ed Monk's office. She wears a fiberglass exterior accented by teak decks and pampers crews in a warm environment surrounded by mahogany and teak.

"Captains! Slip your docklines!"

Of course, we all know that act will never play in Madison Square Garden, but you get the point: except for the fact that they float, contemporary cruisers coming off the production lines of the major manufacturers bear little resemblance to traditional cruisers we grew up with in the 1960s and 1970s. Fiberglass hulls and teak decks have been replaced by lighter composites, a result of efforts to reduce the

cost of raw materials and labor costs. Interiors look more like those in RVs than boats. And the full keel has gone the way of the Model T.

So, in addition to stepping aboard a proper yacht, settling into the cockpit of Tim Whelan's *Patience*, Cape George 38 hull No. 1, was akin to taking a step onto a luxury liner. She didn't tremble at my additional weight. Shrouds provided a solid handhold, and cockpit backrests supported the shoulder blades. She's clearly the product of an era when sailing couples' tastes ran to overnight voyages and their vessels were not dockside entertainment centers.

How it began

Cape George yachts were constructed by a small firm that specialized in the production of small numbers of quality yachts — a stark contrast to Asian counterpart companies, which were flooding the market with look-alike sailboats pirated from the plans of many prominent designers.

The energy behind the design and introduction of the Cape George sailboats was provided by Cecil M. Lange,

an expatriate Kiwi who landed in the U.S. in the mid-1960s. He launched the boatbuilding operation in Everett, Washington, later moving it to its final address near Port Townsend in 1975. Cecil's sons, Brian and Bob, subsequently trekked to the States and joined their dad in the operation for stints of varying lengths.

Cecil was assisted by Larry Alexander and his wife, Margaret, in

constructing the molds for the Cape George 38. Larry took possession of hull No. 1 and completed the interior, which continues to be of museum quality. Cecil took hull No. 2.

Larry says, "Cecil had a reputation not only for building fine yachts, but also for loving the enterprise. The whole clan — Cecil's father and grand-

father, too — were boatbuilders in New Zealand. Cecil and his two sons are awesome: real boatbuilders as in grandpa's time.

"Cecil fell in love with Atkin's 34-foot Tally Ho Major," he recalls. "He had Ed Monk Sr. slightly modernize the lines and lengthen the plan to 36

"Except for the fact that they float, contemporary cruisers coming off the production lines of the major manufacturers bear little resemblance to traditional cruisers we grew up with in the 1960s and 1970s."

feet, producing the Cape George 36. That was the boat that really made the company."

Cecil eventually succumbed to multiple-foot-itis, and introduced 31-, 40-, 38-, and 34-footers, most having an Atkin look above the water but different underbodies, though all were constructed with full keels. Larry says, "I think John Anderson actually was the designer, and I'm not sure how much he was at Ed Monk's at the time. Although he worked for Ed Monk, later he was on his own. I can't say for sure when all those dates were.

"The bottom on the 36 is very wine-glass and forgiving," Larry adds. "It is fast with an easy motion but will roll more when running down the trades. The 38's underbody is flatter — more like a Herreshoff — and rolls less, but it has a bit more bumpy ride. The 34 was a cross between the two."

Interestingly, Cecil constructed 250 to 300 hulls of various sizes, but he completed only about 65 or 70, as Larry recalls. The balance were sold as bare hulls or partially completed boats for completion by owners, many of whom possessed only rudimentary carpentry skills.

"Some rented space and built them in the yard," Larry says. "One of the

"She's clearly the product of an era when sailing couples' tastes ran to overnight voyages and their vessels were not dockside entertainment centers."

finished versions is almost a Chinese junk," he adds. Another "was two stories high and tipped over when launched. It was named *Rock Bottom*, because it had rocks for ballast."

In appearance

The Lange-Atkin-Monk design produced shapes defined by high bulwarks, broad decks, squarish cabins, rounded ends and cockpits, and spacious living areas. Interiors were customized to reflect the tastes of individual owners.

The entry of the 38-footer is moderate, with slightly flared topsides that make for a fairly dry ride, unless she's beating to weather in stiff breezes and the skipper hasn't bothered to shorten sail. Then, like any boat, she's wet, and the wheel is a handful.

In profile she presents an attractive,

relatively flat sheer complementing an 11-foot 7-inch beam that is carried well aft, adding to volume belowdecks and the cruisability factor. Her waterline length is 32 feet 6 inches, which translates to a length-to-beam ratio of 2.8; most designers consider a factor of 3 to be a speedy shape.

Most of the Cape George models were designed with a shallow draft; the 38 draws only 5 feet 3 inches. On a lighter boat, that could translate to tip-piness and discomfort, but she's stable. Her full keel and deep rudder produce effective tracking, making life easier for a windvane when cruising offshore.

However, these boats provide plenty of excitement and dockside entertainment when backing out of a slip. A non-responsive rudder coupled with wind on the beam and a windvane hanging off the stern may produce a totally unpredictable situation. I've been there and know that a helmsman can only hope for a soft landing.

Patience, a Cape George 38, in her early years with Larry and Margaret Alexander, on facing page, and more recently, below. She now belongs to Tim and Amy Whelan, who sail with their children Emily, 3½, and Elizabeth, 1½.





Deck layout

Offshore cruisers tell stories of going days between tacks or jibes, making sailhandling in tropical breezes a minor consideration when selecting a boat. These days, however, with sailors finding less time even for overnighters, the ability to hoist, douse, and trim sails effortlessly during a daysail becomes more important. Though most of Cecil Lange's sailboats were originally rigged with hanked-on headsails and winches on the mast, many have been retrofitted with furlers and lines led aft to sheetstoppers.

The rig on *Patience* carries a single set of spreaders, with shrouds led to the rail, and genoa track running from amidships to the cockpit. Bulwarks are of 1½-inch-thick wood epoxied and bolted to the hull, producing a 2-inch-thick section. A long stainless-steel plate was bedded into the bulwarks to provide a home for shrouds, avoiding the pitfalls of leaks and rust stains when plates are bolted through the hull.

Like most, *Patience* was cutter-rigged with a bowsprit providing a home for a roller furler. The 'sprit adds a salty element to her appearance. More importantly, it moves the center of effort forward and increases her sail-carrying flexibility.

The double-led mainsheet runs through a double block on the boom end to turning blocks port and starboard aft of the helm station so the skipper and crew can easily trim the main in a cockpit devoid of clutter.

Her cockpit is spacious, large enough for 6 to 8 adults, while most likely being small enough that filling it with water won't result in a sinking. Of course, securing companionway hatchboards in heavy seas also is a good idea.

Curved seats are 20 inches wide with 10-inch-high backrests canted outward to provide lumbar support. These seats are long enough to stretch out on when sleeping under the stars in the tropics. Centerline length in the footwell is 68 inches, and the well is 15 inches deep with 37 inches of clearance, providing legroom for passengers sitting across from each other. Underway, visibility forward is excellent (see photo at left).

As you might expect, the cockpit has a storage area comparable to the back end of a soccer van in a cavity that spans the stern. Tim Whelan finds space for crab pots, a vast array of buckets, and a life raft there. The double-rail stainless-steel stern pulpit adds room for a BBQ, outboard motor, spare anchor, and other items these appurtenances tend to attract.

A real plus is a bridge deck on both sides of the companionway that is large enough to spread a full-sized chart while being protected by a dodger.

"As you might expect, the cockpit has a storage area comparable to the back end of a soccer van in a cavity that spans the stern."

Forward, space on the cabintop between handrails is 76 inches by 78 inches, plenty large enough for a life raft, hard dinghy, or inflatable. That's a far better arrangement than suspending a dinghy from davits.

Two hatches, prismatic windows bedded in the deck, and ports along the cabin sides provide ventilation while in the humid parts of the planet and light at night. Solar-powered vents are a worthwhile addition.

Belowdecks

Varying descriptions of Cape George 38 layouts are not the products of muddled minds (or poor reporting), but rather a reflection of the owners' tendency to design spaces to their

individual tastes. Cecil Lange, "being a product of the past," as Larry says, "tended to build traditional interiors with a settee on each side and a table in the middle." In comparison, *Patience* has a huge wrap-around table, a

settee to port, an enormous chart table complete with several storage drawers, a large berth in the bow, and a walk-in engine room.

Regardless of the final arrangement, these boats were designed for bluewater work, so odds are that the first owner placed sleeping and cooking



From on deck, above, or at a distance, at right, *Patience* is a work of art.

areas and storage spaces high on the list of priorities. Weather berths provide a comfortable ride on a long passage.

The saloon on *Patience* measures 110 inches on the centerline with more than 6 feet of headroom and 98 inches of clearance on the beam. The interior at the hull is covered with a light-colored cedar, the cabin sole is teak and holly, and galley counters are maple. The overhead is plywood painted white with athwartship beams as finely crafted as any on a million-dollar showpiece, a testament to Larry Alexander's craftsmanship.

There's room for two to work in the galley, depending upon the chef's temperament, of course. An 80-inch long counter that's 20 inches deep, including a cover on the stovetop, provides elbow room. An abundance of storage is subdivided into functionally-sized compartments.

A clotheslocker/vanity/hanging locker combination located amidships to port provides storage for wet and dry clothing that is close at hand.

The engine compartment on *Patience* is comparable to what you might expect on a trawler. Although for sailors there's a certain level of *savoir faire* implied in being able to change oil and filters while lying in a hot area with a beam cutting off the flow of

blood in the shoulders and sweat running in the eyes, it's no fun. And, on *Patience* at least, it's unnecessary.

Patience's well-lit engine compartment is filled with engine, inverter, two large batteries, and fuel for the generator. And it still has unused space large enough for a family reunion. One could argue that this excess of space comes at the expense of living or sleeping quarters; the corollary is that large social spaces may attract a surfeit of guests. In *Patience's* case the walk-in engine room is possible at the expense of one quarter berth.

Construction

Most of Cecil Lange's hulls were built at a spot in the forest near Cape George, thus the name. His methods

were typical of the era, with hulls constructed of solid fiberglass. Laminations consisted of layers of mat, fibercloth, and longitudinal roving, some in 3-foot widths which contribute to strength

throughout and reinforcement in the keel area. Bilge stringers were constructed of 2-inch by 8-inch Alaska cedar laminated to the hull with runs of roving.

"Some boats were insulated with ½-inch balsa not used as cores but attached to the inside of the hull and

"The engine compartment on Patience is comparable to what you might expect on a trawler."



covered with fiberglass," Larry notes. "Bulkheads were bonded to the hull with runs of mat and roving and laid and through-bolted between floor stringers." Though few in number, minor blistering problems were encountered; Larry recalls that Cecil eventually began "mixing 20-percent vinylester in the resin" to avoid osmosis.

Cabins and decks were constructed of Bruynzeel plywood decking, a marine product approved by Lloyd's, that was laid on the beams and secured with glue and copper nails. The cabin sides are solid 1¾-inch Port Orford cedar. Teak decks laid over the plywood were ¾ inches thick. All were built to Lloyd's specifications.

Performance

Now that we have a traditionally designed, well-built bluewater cruiser sitting at a dock, what's to do but go sailing? We sailed *Patience* in 4 to 6 knots of wind under the shadow of the Space Needle in Seattle, flying only a mainsail and 100-percent jib. It was unlikely anything short of a 180-percent drifter would have improved her performance, so the staysail remained under its canvas.

In these conditions, we managed to eke out 2 to 4 knots of boatspeed sailing on what could loosely be described as a beat... about the performance I'd expect from a heavyweight.

Tim said, "The boat is OK in these conditions until it gets choppy." At that



The spacious engine compartment, above, and the interior (still museum quality), at left.

point, he noted, she'll take one big step forward and one small step backward, ideal conditions for family sailing with the co-skipper and two young crew members. "I think she is at her best in 15 knots of wind," he said, "when she'll sail at 5 to 6 knots."

Later, given an opportunity to ponder her sailing characteristics, Tim added, "I think I probably miscommunicated her light-air capabilities. Unless we are going on a daysail, I generally only sail if there is more than 15 knots of wind. This is because that gives us 4.5 to 6.0 knots under sail. Despite the boat's name, I am usually not patient enough (or enough of a purist) to sail at 2 to 4 knots. So, while the boat does OK in lighter air, the skipper does not."

That's not America's Cup performance, but it is typical of pre-1990,

Continued on Page 63



***Patience* lives up to her name patiently waiting for the Whelan family to stir and go sailing. She was featured in another lovely setting on the May 2002 cover of *Good Old Boat*. Tim Whelan is a professional photographer. For more of his work, go to <<http://www.tgw.net>>.**



***Patience's* specifications**


Design: Cape George 38 (full keel, cutter rig)
LOA: 38 feet 0 inches (43 feet including 5-foot bowsprit)
Beam: 11 feet 9 inches
Draft: 6 feet 0 inches
Displacement: 36,000 pounds
Ballast: 10,500 pounds
Sail area: 1,100 square feet
Tankage: 175 fuel, 155 water, 40 holding tank
Year built: 1986-88

Larry Alexander writes

I ROWED MY FIRST BOAT IN THE MIDDLE 30s when I was 6 or 7 years old and it went from there. I joined the U.S. Navy in 1951. In 1955, Margaret and I were sent to a naval station in Yokohama. We had \$750 between us. We managed to have a Japanese boatyard build a 42-foot Monk Sr. canoe-stern ketch with my Navy pay and Margaret's pay from an Army civilian job she got over there. In 1957 I resigned my commission and we sailed the boat south through Japan and on to Honolulu, then on to San Pedro in southern California. We stayed three years while I earned money teaching and really getting the boat finished up. We moored where the liveaboards were printing the Seven Seas Cruising Association (SSCA) bulletin and have been members since 1957.

In 1960 we left on a five-year circumnavigation via the Red Sea route. In 1966, back in San Pedro, we sold *Sea Fever* and settled in Hilo, Hawaii, where I taught in the high school. We built a small hotel that our son runs today: The Dolphin Bay Hotel <<http://www.dolphinbayhotel.com>>. In 1974 we wanted to build a slightly changed version of *Sea Fever*. Ed Monk told us of Cecil Lange, who was trying to get started in Everett, 30 miles north of Seattle. We had previously tried

an Australian yard that went out of business. So we built the 45-foot *Sea Fever II* with Cecil. We were the last boat in Everett before Cecil moved to Port Townsend. In fact, we finished her in Port Townsend. We sailed her to Hawaii twice before deciding we wanted a smaller boat. So *Sea Fever II* was sold.

In 1983 or thereabouts, Cecil asked me if I wanted to help him build the plug for a 38. No pay, but I could have the first hull at cost. So Margaret and I and Cecil and his wife built it. We then rented a spot from Cecil and became do-it-yourselfers. We launched *Patience* in 1986 and finished her in the water. In 1988 we took *Patience* out to Hawaii and back in 1989. We then did three trips to southeast Alaska during the next three summers. In 1994 we sold *Patience* to Tim Whelan after foolishly thinking we wanted to try a powerboat in these inland waters. We did that until just last year. It was OK: very comfortable but absolutely no feeling... just like a camper on the water. We have since sold her and are currently fixing up a Cooper 37-foot Seabird cutter. She is quite a fixer-upper, so it will take time. 



Tartan Yachts

With a foundation in the 1940s, this company continues to produce fine yachts to this day

by Dan Spurr

THE COMPANY WE KNOW TODAY AS Tartan Yachts has undergone numerous changes over the years, transforming itself through mergers, bankruptcies, and new owners into a still-vibrant builder that remains surprisingly true to its origins. Where most builders of larger sailboats are situated on the East and West Coasts, Tartan is the offspring of two small builders of one-designs in northern Ohio. Through thick and thin, the company has stayed in the Midwest on the shore of the Grand River, though circumstances have pushed it around the county a few times.

Douglass & McLeod

Ray McLeod Sr. was born in 1908 in Wickliffe, Ohio, a small town east of Cleveland on the shores of Lake Erie. At the age of 33, while working as a painting contractor, he succumbed to what one must presume was the call of the sea and bought a small company named the Grand River Boat Works. It was located in nearby Richmond, though the town's name was later changed to Grand River because there were two Richmonds in Ohio. (For whatever reasons, this didn't seem to present the same problem for the two Wickliffes in the state.) Apparently it wasn't a full-time income because Ray continued to manage his painting business. Nevertheless, he found time to build several 35- to 40-foot wooden boats for commercial fishing — back when the Great Lakes had a commercial fishing business. But his bread and butter was the usual marina fare

of hauling and storing boats, maintenance, upgrades, and repair work.

At the same time, Gordon K. (Sandy) Douglass, formerly a portrait painter, was building small wooden boats at his shop in Vermilion, another small town on the lake, about 30 miles west of Cleveland. The boat models the Scotsman was building included the International 14, which he raced, and the 17-foot Thistle, introduced in 1946, which he had designed himself. But he wasn't having an easy time financially, in part because he lacked the space to increase production.

Ray McLeod and well-known Cleveland yachtsman C. Richard Newpher

both belonged to the Mentor Harbor Yacht Club. Richard knew Sandy Douglass as well and that he was struggling. One day he suggested to Ray that he and Sandy consider joining forces. Ultimately, they did, forming Douglass & McLeod, Inc. In addition to the Thistle and International 14, they began building the Great Lakes 21 (now called the International 21 after a group of local sailors modified the design). Douglass & McLeod contracted U.S. Molded Shapes of Grand Rapids, Michigan, to build the hulls out of molded plywood. These were shipped to Grand River for completion. Sandy continued to race, and in 1951



The Tartan 27, above left, was the first fiberglass boat designed by Sparkman & Stephens. More than 700 were sold. Above, Ray McLeod Sr. (left) and Ray McLeod Jr., in 1961.

he won the Thistle national championship.

Ray's son, Ray Jr., says, "There was a great deal of interest in the Thistle from the beginning. The first one was built from stripped planking to keep the weight to a minimum and later was destroyed once the plug was finished and the first molded mahogany plywood hulls were built. No. 1 Thistle of the molded plywood construction is still active, but it wasn't actually among the first batch of plywood boats. That is because the number was reserved until there were a few boats built and sold to get the company going." (This was in dramatic contrast to the more common practice in later years of giving the first boat a much higher number, like 201, to make buyers believe that 200 had already been sold.)

Sandy and Ray both took to the road to try selling the boats, particularly the Thistle, demonstrating how easily it could be trailered behind the family automobile. The mahogany parts were prefabricated in Douglass & McLeod's woodworking shop, as were the Sitka spruce masts, booms, and spinnaker poles. The boats were assembled in a Quonset hut set up to handle the increased production.

In 1951, Sandy designed a second boat, the 20-foot Highlander, which he saw as a logical sequel to the Thistle. She was larger and more comfortable and had a deck. She was also more expensive but, the partners hoped, still affordable when compared to larger cabin boats.

By 1959 the partners employed 15



Bill Seifert

Rod Stephens, on left, expert rigger and brother of designer Olin Stephens, and Charlie Britton, on right, head of Tartan Marine, discuss details of hull No. 1 of the Tartan 37, introduced in 1968.

workmen and were producing about 125 boats annually, delivering them throughout the U.S. and to Brazil, Mexico, the Bahamas, and the Philippines.

Ray Jr. began working for his father from the get-go. He says, "My service to the company started with sweeping floors in 1941 and continues to date. I came on full-time in 1953 after a couple of years of college and service. In 1957 we purchased the minor interest of Gordon Douglass and continued onward." Sandy Douglass went on to

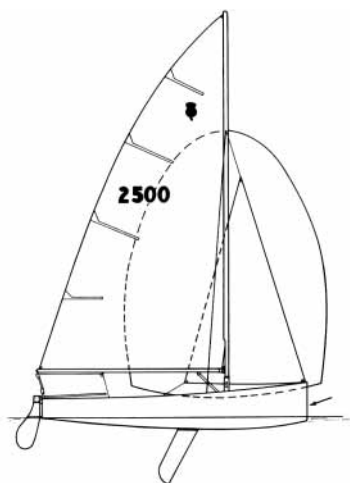
design and build the popular 19-foot Flying Scot one-design racer.

Enter Charlie Britton

While not at the leading edge of the movement from wood to fiberglass, Douglass & McLeod saw the change coming and readied itself. "In 1960 and 1961," Ray Jr. says, "we were experimenting with the use of fiberglass and started another company known as Douglass & McLeod Plastic Corporation in a partnership with Charles Britton, which led us to our first larger auxiliary, the Sparkman & Stephens-designed Tartan 27."

Charlie Britton was born in Bratenahl, Ohio, and attended Trinity College in Hartford, Connecticut, graduating in 1955. Between 1956 and 1958 he served as an operations officer and navigator aboard a destroyer in the U.S. Navy. He was stationed in Japan and wrote many letters home to his parents who, according to former Tartan employee Bill Seifert, published 150 of the letters in book form.

Bill says the family was wealthy. This probably explains why Charlie was able to commission the building of a 42-foot Phil Rhodes-designed yawl to sail home to the States from Japan upon discharge. His plans went awry when he was instead discharged in San Diego. Determined to get his boat, he flew back a year later, in 1959. Bill says the shipyard had since gone out of business, and Charlie was forced to "steal" his partially completed boat. In any case, he and some friends sailed across the Indian and Atlantic oceans to New York, traveling 22,000 miles in 204 days, with stops at Okinawa,



Thistle



Highlander



Tartan 27

Manila, Zamboanga, Borneo, Bali, Christmas Island, Cocos Island, Mauritius, Angola, Ascension Island, and the West Indies.

Charlie was a first-rate sailor, winning Class D of the SORC (Southern Ocean Racing Conference) in 1968, Class B of the Bermuda Race in 1976, and Class C of the Super Mac.

The shift to auxiliaries

Douglass & McLeod's first auxiliary, as noted, was the Tartan 27. It was designed in 1960 by the prestigious New York City firm of Sparkman & Stephens and was their first design for fiberglass. Bill Shaw, who later became chief designer and chief operating officer of Pearson Yachts in Portsmouth, Rhode Island, worked for Sparkman & Stephens at the time and was responsible for the Tartan 27 project. Bill Seifert says the boat was originally supposed to be 32 feet long, but that Charlie Britton "shortened the boat on the loft floor to eliminate the overhangs." (Bill Shaw says he has no recollection of this.)

In any case, the handsome centerboarder was an instant hit. Available as a sloop or yawl, she had teak cockpit coamings, hatch trim, and handrails. Built of fiberglass woven roving and mat, the hull was $\frac{3}{4}$ -inch thick at the keel, $\frac{5}{8}$ inch at the turn of the bilge, and $\frac{3}{16}$ inch at the sheer. Ray and Charlie thought they would build just a dozen, but by the time the production run ended, more than 700 had been built. Base price in 1975 was \$11,750.

The Tartan 27 was followed in 1966 by the Black Watch, a 37-footer also



Black Watch



Tartan 34



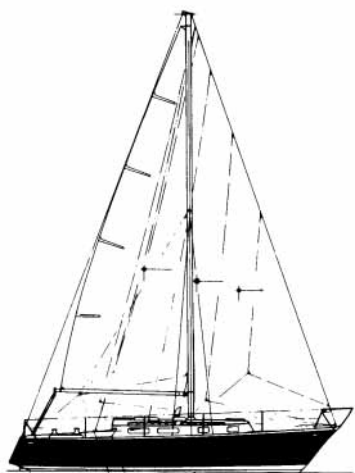
Tartan 4100

available as a sloop (618 square feet) or yawl (683 square feet). She has a 25-foot 6-inch waterline with a 10-foot 6-inch beam and draws just 3 feet 10 inches with the centerboard up. Displacement is 15,700 pounds. The hull is fiberglass, but the deck and cabin are teak. In the 1970s

Mimi and Ken Dyer circumnavigated in a Black Watch and wrote about their experiences in a series of articles for *Sail* magazine.

Long before the day of the in-house designer, Douglass & McLeod and others commissioned the best names in naval architecture they could afford. "There is always a certain risk to investing in an original boat design," Ray Jr. told his local newspaper in 1967. "We minimize this by hiring top-notch marine architects. Although we may have an idea of what we want, if they disagree, we always take their advice."

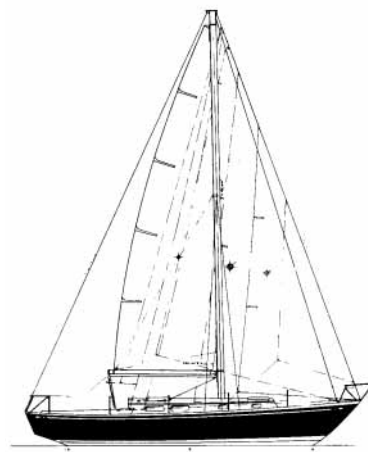
The Black Watch designed by Ted Hood would be the last time the company worked with a designer other than Sparkman & Stephens for many years. The Tartan 34 began a long string of Sparkman & Stephens designs. The waterline of the 34 is nearly as long as the Black Watch, at 25 feet 0 inches. She displaces 11,700 pounds, has a 10-foot 2-inch beam, and draws 8 feet 4 inches with the centerboard down. So all three auxiliaries from Douglass & McLeod were centerboarders, which besides being great for gunkholing, were popular during the era of the CCA (Cruising Club of America) rating rule. The yawl rig, which was offered on two of these three designs, was also popu-



Tartan 30



Tartan 31 Piper



Tartan 34

lar at the time. The Tartan 34 came along just as the IOR (International Offshore Rule) was gaining popularity.

Exit Douglass & McLeod

An unfortunate chain of events left the joint boatbuilding operation firmly in the hands of Charlie Britton.

"In January 1971," Ray McLeod Jr. says, "while displaying at the New York Boat Show (our 26th consecutive year), we had the misfortune of the Douglass & McLeod Plastic Corporation being totally destroyed by fire. The following year, Ray McLeod Sr. died of cancer."

At this juncture, Douglass & McLeod Plastic Corporation was sold to Charlie Britton, though Ray Jr. retained ownership of Douglass & McLeod, Inc., a separate company. Under this name he continued to build the Thistle (which at that time numbered more than 3,000), the Highlander, and a new Sparkman & Stephens design called the Douglass & McLeod 22, with a bubble or blister cabin, similar to those drawn by Bill Tripp in his 33-foot Medalist and many Columbia designs.

"With the start of the small boat decline," Ray Jr. says, "and after a 15-year battle with a local union, it was time for a major change. The repair business, winter storage, retail store, and my surveying business were enough to make a viable small operation. We also added a marina." The change was to cease building boats, though one detects a considerable degree of regret on Ray Jr.'s part. Indeed, during the decades following Douglass & McLeod's departure from



Bill Seifert

A worker installs an engine in a Tartan Ten, around 1979. The Tartan Ten helped to popularize one-design keelboats.

"In 1951, Sandy designed a second boat, the 20-foot Highlander, which he saw as a logical sequel to the Thistle."

boatbuilding, its letterhead still reads: "Originators of Thistle and Highlander Class Sail Boats and D&M Auxiliary."

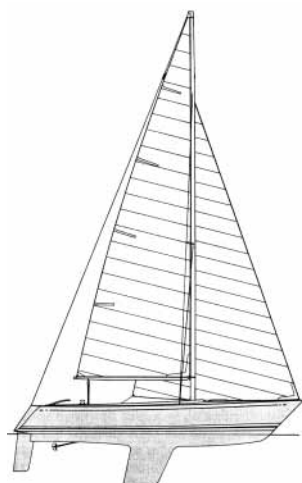
The next Tartan was the extremely successful 30, launched in July 1970. Second only to the Tartan 27 in terms of numbers built, it totaled 602 by the time production ended in 1979. By now,

Douglass & McLeod Plastic Corporation also had a plant in Hamlet, North Carolina. Combined with the Grand River, Ohio, facility, the company was finishing a Tartan 27 every 3.5 days, two Tartan 30s a week, and one Black Watch every month.

"To create boats of the same length and design in the old method, out of wood and using handwork," president Charlie Britton told an interviewer in 1970, "would make the cost prohibitive for many people. We'd be back to the old \$1,000-per-foot formula. Thus, a 30-footer like our new Tartan 30 would run about \$30,000 if made the old way, instead of the \$17,700 we get for our boat. Fiberglass enables more people to enjoy auxiliary sailing boats for racing or just cruising, people who would otherwise have to limit their choice to a smaller boat."

About the same time as the Tartan 30, Charlie introduced the Tartan 26 and the next year the Tartan 41, 46, and 48. Charlie stretched the 41 by 3 feet and sold approximately seven or eight Tartan 44s. One, called *Twain*, he raced himself in the SORC. One of his loyal customers, James Dawson of Cleveland, testifies to Charlie's seriousness as a racer. "Charlie never carried much to eat or drink aboard his boats," James says, adding, "When asked why, he indicated 'it made the crew want to get there sooner.'"

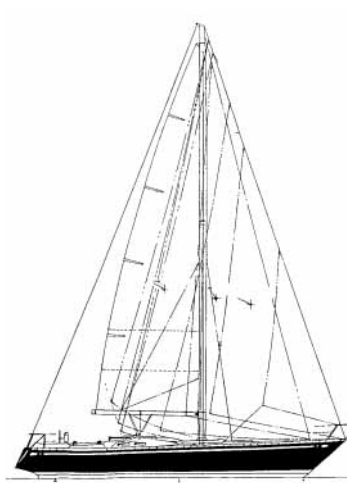
By 1978, when it introduced the Tartan Ten, the company had been renamed Tartan Marine. The 33-foot Tartan Ten established several trends — the idea of an offshore one-design class and a metric name — both of which spread to other companies in



Tartan Ten



Tartan 37



Tartan 41



Tartan 3500

the years that followed and continue to this day. Base price of the Tartan Ten in 1979 was \$21,500. By then 210 had been built. She was fast off the wind and capable of double-digit speeds. Compared to most other Tartans, she was lightly built, however, and a number of problems plagued owners, including the bending of the hollow rudderstock, hull flex, poor mast support, and the molded fiberglass interior pan coming adrift from the hull. Nevertheless, she was elected to the American Sailboat Hall of Fame.

Another very successful boat for the company, the Tartan 37, came along in 1976. Production lasted 12 years. She is a good all-around performer with the

*“By 1978,
when it introduced
the Tartan Ten,
the company
had been renamed
Tartan Marine.”*

classic good looks of a Sparkman & Stephens design. During the 1970s, the company produced 10 different classic models (see sidebar on Page 15).

The next generation

In 1983 Charlie sold Tartan Marine to John Richards and Jim Briggs. These two introduced the Tartan 28, 31,

34-2, 37-2, 40, and 41-2. They then sold the company to an outfit called the Baltic Holding Corp., which changed the name to NavStar Marine. Despite healthy sales figures, however, the company ran up a huge debt, and in 1990 Polk Industries of Winter Haven, Florida, a holding company owned by Mike Monastra, bought Tartan. Dealerships were opened in Holland, Great Britain, and Japan. In 1993, the company reported that 25 percent of its business was in exports. Today, with Polk principal Bill Roth actively involved, it is called Fairport Yachts, builders of Tartan Yachts and C&C Yachts.

Designer Tim Jackett, who had

Stories about Charlie

BILL SEIFERT, AUTHOR OF *OFFSHORE SAILING: 200 ESSENTIAL Passagemaking Tips*, worked for Tartan Marine for many years. He was a member of the informal “Tartan Racing Team,” headed, of course, by Charlie Britton. Here are several anecdotes, in Bill’s own words, that paint a picture of Charlie.

Spinnaker takedown

On *Tandem*, Charlie’s big boat I used to race on, the spinnaker afterguy led to a coffee grinder winch just aft of the main mast. This position gave the grinders and tailers a good view of the chute. This was the mid-1970s, and Kevlar rope had not been invented. Afterguys were 7 x 19 wire, the only material having low enough stretch for close reaching. Our spinnakers were 71 feet at the luff and 40 feet wide. On a St. Pete-Ft. Lauderdale race we were close reaching with a 2.2-ounce starcut to Rebecca Shoals one afternoon when a line squall closed with us. Our general battle plan for line squalls was to ride them for a few minutes to determine their duration before shortening canvas. (We did not have radar to check the intensity of squalls.)

This one turned out to be especially vicious, and *Tandem* took a major knockdown, putting the upper spreaders in the water. With the spinnaker sheet winch under water, we could not ease the sheet, and the strong spinnaker full of water was holding the boat down. I was close to the afterguy coffee grinder and happened to look at the mast, not up, but horizontally. The middle of the mast had what appeared to be a 4-foot bow. I waved to the crew in the cockpit to keep down and unwound the afterguy from the grinder. The 108-foot-long afterguy zinged through its blocks and spinnaker pole end. *Tandem* came upright rapidly. The flailing wire afterguy cut the chute into three pieces like a sword. After we took down the remains, Charlie questioned my actions. A sanitized version is: “Seif, why did you run the afterguy?”

My reply was: “Charlie, I was looking at the mast and thought it was about to bust. We have five spinnakers, but only one mast.” Charlie huffed and told the crew to put any

dry portions of the spinnaker in his bunk, as he wanted the world’s most expensive bed sheet.

Engine education

Charlie was a superb sailor. I once watched him sail his boat into a very congested harbor with a 12-Meter-sized spinnaker up, drop it, and coast the 30-ton boat into her dock without turning on the engine. Oh, yes, he was alone!

Sails were Charlie’s thing. One rainy Saturday, Charlie and I were onboard *Tandem*, which was brand new.

Charlie said, “OK, Seif, I suppose you ought to tell me what I need to know about the engine.”

“Sure, Charlie,” I answered, opening up the engine hatch so we could see the 4-108 Westerbeke diesel. “What do you want to know?”


“Let’s start with where the spark plugs are,” Charlie answered. I knew then this was going to be a long day.

Bagging it

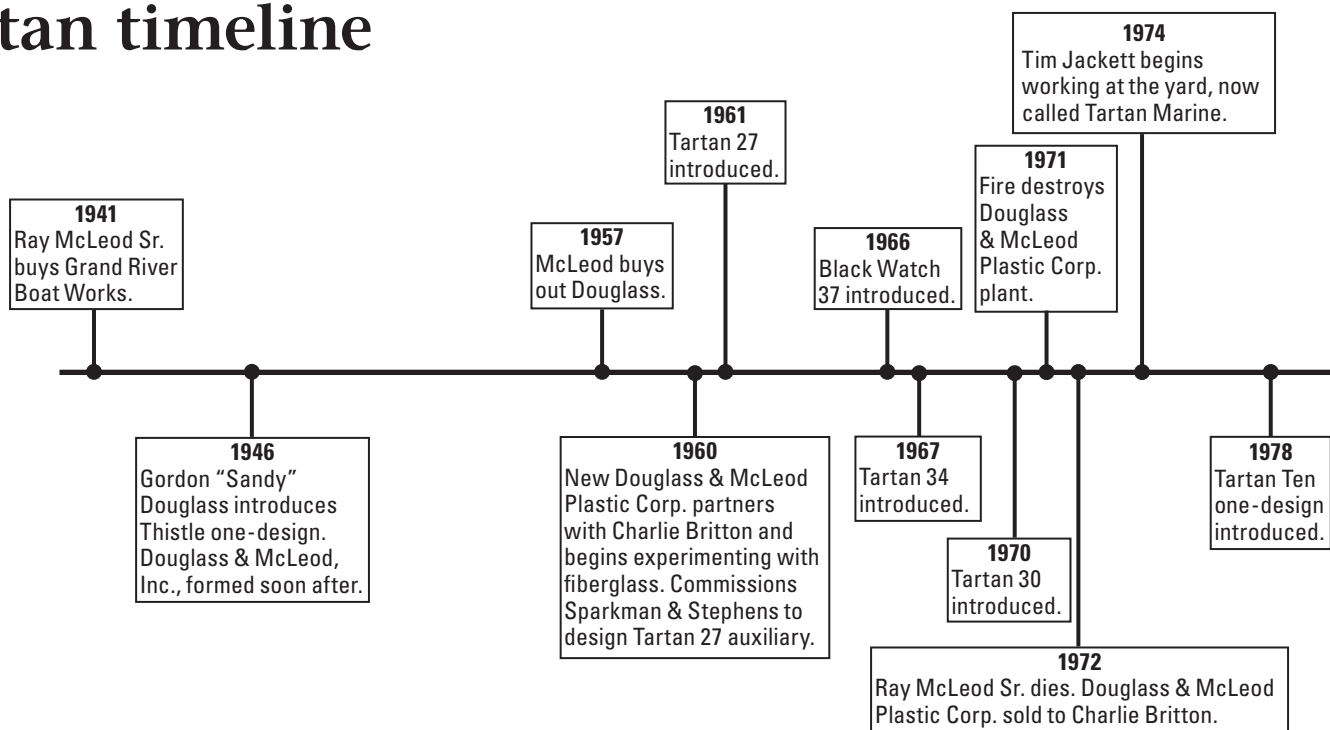
On the Tartan Racing Team’s Tartan 44, we were very weight conscious. Dazey came out with the Seal-a-Meal baggers, and I bought one to be able to pre-cook food, then toss it in a closed aluminum pressure cooker filled with sea water to warm. My first cooking experiment was to make an omelet at home. Since the eggs were cooked from the outside in, the omelet was very good, and I found that with careful timing I could make them still a little runny in the middle. I told Charlie about the bagger and he liked the idea of more time on the rail and less time below cooking for my hind end.

Charlie came into my office a few days later and said, “Seif, I’m not so sure about your bagger. I tried it the other night, and I just made a mess.”

“What did you do?” I asked.

“Well, I took a bread wrapper, dropped in a couple of eggs, then put it in boiling water. The bag melted and spoiled one of Linda’s pans, and now she’s mad at me, so I blamed it on you.” 

Tartan timeline



updated the 28 and 31 with the so-called Piper series, became vice-president and general manager in addition to his duties as chief designer. The Piper models were essentially sailaway versions of the earlier models, though other changes were made, too. In the case of the 31, the old Scheel keel was dropped in favor of Tim Jackett's Beaver Tail fin, and the interior layout was revised. The port pilot berth was eliminated in favor of cabinets and shelves. And the port quarter berth was expanded to a double with the nav station edged forward and angled to provide better berth access.

Tim is essentially a Tartan "lifer,"

having started out there in 1974 working summers while attending the Cleveland Institute of Art. "I thought I wanted to be a painter," he says, "but then I found myself drawing boats." He'd learned to sail on his parents' old wooden boat, which they kept at Mentor Lagoons on Lake Erie, and later a C&C Shark. Tim soon found himself racing with Charlie Britton and the rest of the so-called "Tartan Racing Team," but it was not to last. Tim says Charlie's interest "just sort of fizzled," owing in part to the demands of family.

In 1977 Tim set up his own small shop to build several small MORC (Midget Ocean Racing Club) boats but

then was offered full-time employment at Tartan. His first project was the Tartan Ten, helping in-house designer Art Rand draw the deck, interior, and component parts. At that time, Sparkman & Stephens designed the hulls, rigs, and appendages, and Art Rand did the rest. When Art retired, Tim assumed that role.

After Charlie sold out to John Richards and Jim Briggs, he formed Britton Yachts, building a Doug Peterson design. Tim worked on the project with him, but only three boats were built. Fortunately, Tim never left Tartan.

By 1985 John Richards saw that Tim was ready to draw an entire boat. So beginning with the Tartan 31, all design work moved fully in-house.

Between 1991 and 2003, Tim also designed the 3500, 37-2, 3700, 3800, 4100, 4400 LS, and 4600 LS. While the bigger boats are essentially cruising boats, the smaller models retain sprightly performance reminiscent of their Sparkman & Stephens forebears. The old 1970s Tartan 30 was popular with club racers, earning the reputation for Tartan as a builder of dual-purpose boats. It's doubtful anyone would race a Tartan 4100 or 4600 in anything but a cruising boat rendezvous such as one of the transoceanic rallies like the ARC (Atlantic Rally for Cruisers) or Caribbean 1500, but the 3500 and 3700, with the same Beaver Tail fin as the 31 Piper, generous sailplans, spade rud-

Resources for Tartan Sailors

Tartan Yachts/Fairport Marine Corp.

888-330-3484

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

Chesapeake Bay Tartan Sailing Club

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

Lake Erie Tartan Sailors (LETS)

<<http://lets.tartanowners.org>>

Tartan Owners of New England (TONE)

<<http://tone.tartanowners.org/home.htm>>

Tartan Ten Class Association

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

Tartan 27

<<http://www.tartan27owners.com>>

Tartan 3800 Owners Group

<<http://www.tartan3800.com>>

Tartan 30 Page

<<http://hometown.aol.com/T30SAILOR/indexold.html>>

Tartan 34 Owners Association

<<http://t34.tartanowners.org/>>

Tartan 37 Sailing Association

<http://www.mindspring.com/~sailing_fool/index.html>

Tartan 40

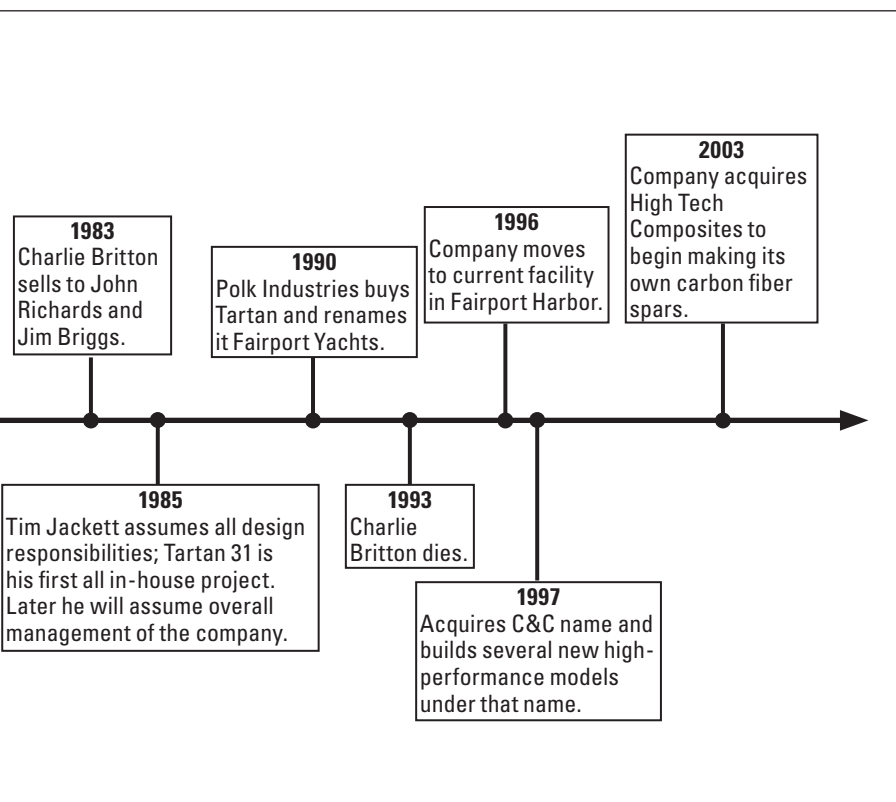
<<http://www.tartanowners.org/community.htm>>

Tartan Email Discussion Group

<<http://members.sailnet.com/resources/links/list/index-new.cfm?id=tartan>>

The Tartan Owners Web Site

<<http://www.tartanowners.org>>



der, and moderate displacement, are successfully club-raced.


Tartan is one of but a few production sailboat builders left (Sabre is the other notable one) building mostly wooden interiors with bulkheads and furniture tabbed to the hull and deck (the others, like Morris Yachts and Hinckley, build semi-custom boats). Fiberglass pans are used judiciously and, where employed, they are fully tabbed to the hull. In certain applications, structural adhesives are used. For a few years, Tartan used vinylester resins to help minimize the risk of osmotic blistering. Now it uses SP Systems epoxy exclusively, which is stronger than polyester, does not release dangerous and costly-to-capture VOCs (volatile organic compounds), and helps block moisture intrusion as well. Hull-deck joints are still through-bolted, with 3M 5200 as a sealant. Balsa coring is used in the decks, but most hulls are solid fiberglass. Fabrics include unidirectional E glass, Kevlar, and carbon fiber. Gel-coats are NPG/isophthalic. The hulls are vacuum bagged and post cured, which means the ambient temperature is elevated to more than 100°F for optimal curing of the resin.

In 1996 the company moved to its present facility in Fairport Harbor, Ohio, and in 1997 Tartan showed its health by acquiring the name and rights to C&C, the once famous Canadian line of racing sailboats. Tartan

did not get any molds, however. Tim Jackett drew the lines to three new C&C models: the 32-foot C&C 99, 36-foot C&C Express 110, and the 40-foot C&C 121 (see “The History of C&C Yachts,” *Good Old Boat*, September 2002). Hulls and decks are cored with Core-Cell foam. With fiberglass pan interiors, little wood, and a stronger emphasis on light weight — and hence performance — the C&C line is a nice counterpoint to the more cruiser-oriented Tartan designs.

Today Tartan Yachts employs about 100 persons, building something less than 100 boats a year. A dealer network covering both coasts was a critical component in the company’s rebound. In 2003 the company acquired High Tech Composites, an Ohio-based manufacturer of carbon fiber masts, now renamed Novis. Beginning in 2004, all Tartans will come standard with carbon rigs.

Ray McLeod Jr. continued for many years to run his Douglass & McLeod yard and marina business in Grand River. Charlie Britton died of cancer in May 1993. He spent the last years of his life on a dairy farm in Ohio. He was active in charitable organizations around Cleveland. A man who truly loved to sail, one of his last projects was building a wooden Snipe. And these days Tim Jackett is spending less time designing and more time

managing. He still draws the “big lines,” but he has several designer/engineers to work out the details. Tartan is a survivor thanks to these three. 

Some of the information in this article, as well as photos, first appeared in Dan Spurr’s book, *Heart of Glass: Fiberglass Boats and the Men Who Made Them*, published by International Marine in 2000. A soft cover edition will be released in spring 2004. —Ed.

Further reading

Heart of Glass: Fiberglass Boats and the Men Who Made Them, by Dan Spurr (2000, International Marine).

<<http://www.goodoldboat.com/bookshelf.html>>
or call 763-420-8923

Classic Tartan models

Model	Years	No. Built	Designer
26	1971-73	73	Tom Norton
27	1961-76	648	S&S
27-2	1976-79	64	S&S
28	1984-90	136	S&S
28 Piper	1990-94	1	S&S
30	1972-79	602	S&S
3000	1981-88	97	S&S
31	1987-91	146	Tim Jackett
3100	1991-96	2	Tim Jackett
Ten	1978-89	379	S&S
33	1979-84	215 ³	S&S
34C	1967-78	525	S&S
34-2	1984-89	110	S&S
Black Watch 37	1967-71	32 ⁴	Ted Hood
37C	1976-89	486	S&S
37-2	1988-93	60	Tim Jackett
38	1976-89	5	S&S
3800	1994-99	44	Tim Jackett
40	1984-89	72	S&S
TOCK ⁶	1976-77	30	S&S
41/43/44	1972-76	84	S&S
41-2	1989-90	8	S&S
42	1980-84	34	S&S
46/48	1972-74	8	S&S

¹ Combined Tartan 28/Piper production run noted.

² Combined Tartan 31/3100 production run noted.

³ Tartan 33R Masthead Racing Version — 14 produced.

⁴ Black Watch model category includes both Black Watch (hulls 1-15) with stepped mahogany coach and D&M Classic 37 (hulls 16-32) with straight fiberglass coach.

⁵ The 38 was simply a deep keel 37 racing by Charlie Britton.

⁶ TOCK is shorthand for the little-known 40-foot Tartan Offshore Cruising Ketch.

S&S = Sparkman & Stephens.

Table courtesy of www.tartanowners.org website

On center cockpits

Designer Ted Brewer ruminates about the development of these popular designs

THE FIRST CENTER COCKPIT YACHT that intrigued me was the British-built 26-foot Atlanta, a laminated wood Uffa Fox-design based on his famous World War II lifeboat by Fairey Marine. These lifeboats were dropped from airplanes (true!) to rescue downed flyers and torpedoed seamen. The yacht version — fitted with twin bilge boards, a sloop rig, and a rather streamlined cabin — was turned into a delightful small cruiser. I saw my first Atlanta almost 50 years ago. It struck me then, and still does, as a very sensible and seaworthy small yacht. However, with its reverse sheer and rounded cabinhouse it may have been far too advanced in design and aesthetics for the average sailor of that era and thus never received the attention it deserved. The same could be said of the *Bluebird of Thorne*, built in the 1950s. Her center-cockpit arrangement, however, is still worth studying as an example of a true seagoing yacht.

Many years later, in 1969, I did my first center-cockpit design, the *Amee*. She was a shoal-draft, light, 37-foot racer/cruiser, but her aft cabin, with good sitting headroom, was little more than a comfortable weekend dog kennel. In 1971 I was commissioned to do a custom 43-footer, the *Black Velvet II*, which permitted me to play with the center-cockpit arrangement in a larger, more comfortable cruiser than *Amee*. The *Black Velvet II*'s spacious aft cabin provided full headroom, a complete head, and decent stowage, but she still lacked a fore and aft passageway between the

saloon and owner's cabin. That can be a real disadvantage on a cold, wet, and stormy night at sea. In my defense, I must say that there are custom yachts of that era, of 50 to 60 feet LOA, with the same drawback: no passageway between the cabins.

About that time Pearson came out with its 390 and Charlie Morgan produced the Out Island 41, both with roomy aft cabins that could truly be called staterooms. I remember writing a review of these two yachts in 1972 for *Sail* magazine in which I expressed surprise that Charlie had not graced the 41's very shoal 4-foot 2-inch draft with a centerboard to improve windward performance. It did not occur to me to ask why neither of these yachts had a passage conveniently connecting the cabins.

Fore and aft passage

Perhaps the first center-cockpit production boat with a fore and aft passage was the Irwin 37 of the late 1960s. It made great sense to me, but

the appearance was, perhaps, less than aesthetic. That is quite possibly the reason the idea was slow to catch on despite its advantages. As one yachting writer once said, "The only person more conservative than the average yachtsman is an Anglican bishop!"

Fortunately, in 1972 I was given another opportunity to tackle a cen-

ter-cockpit design when Kurt Hansen asked for "a new design, exactly the same as the *Black Velvet II* except..." The "excepts" became the Whitby 42 in which I was able to better the *Black*

Velvet II's arrangement with the addition of the essential passageway along with other refinements, including a separate nav area and a small workbench. Headroom in the passageway was necessarily limited, but it beat the dickens out of going across the cockpit on a wild night at sea or a cold and rainy night in harbor for that matter!

Larger size always provides more amenities so following the success of the 42 came the Olympic 47 in which we fitted in a third cabin for a paid hand, albeit at the expense of engine room space. Next on the scene was the Constellation 44, which added a stall shower aft along with a larger and more convenient galley than the Whitby 42. Finally, in 1983 came the Whitby 55, which was large enough to include everything described in the foregoing plus an additional guest cabin. That was the swan song of Whitby Boats though. Kurt Hansen had one built for himself, closed the company, and sailed away into a well-deserved sunset, as many of us would like to do.

Center-cockpit advantages

The advantages of the center-cockpit arrangement are many. Let's first eliminate the idea that since you are seated so far forward the center cockpit is wet in a seaway. This is not exactly true. The cockpit of a Whitby 42 may, I say *may*, take more spray than that of a typical aft-cockpit 42-footer, but the difference is slight because you are up higher and in a wider part of the vessel. However, compared to the average 32- to 33-footer, the cockpit of a typical 40- to 43-foot center-cockpit yacht is no further from the bow and is certainly higher and drier in any kind of a chop.

One problem that can develop is that most owners want direct access from the cockpit to their aft cabin. In really heavy going when the spray is flying everywhere, that aft compan-

"Headroom in the passageway was necessarily limited, but it beat the dickens out of going across the cockpit on a wild night at sea or a cold and rainy night in harbor for that matter!"

and pilothouses ...

by Ted Brewer

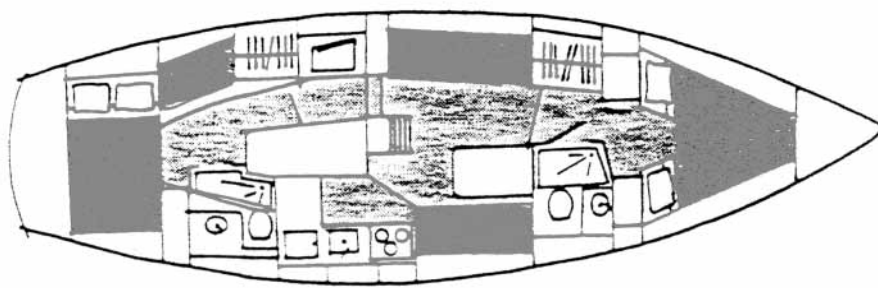
ionway facing forward can let a lot of water in. It's not dangerous, but it is annoying. There may be perfectly tight companionways, but I've never seen one that will stand up to a gale at sea.

The true advantage of the center cockpit is the privacy afforded by the separate aft cabin, which makes the yacht ideal for families, charter, and living aboard. The cockpit is usually

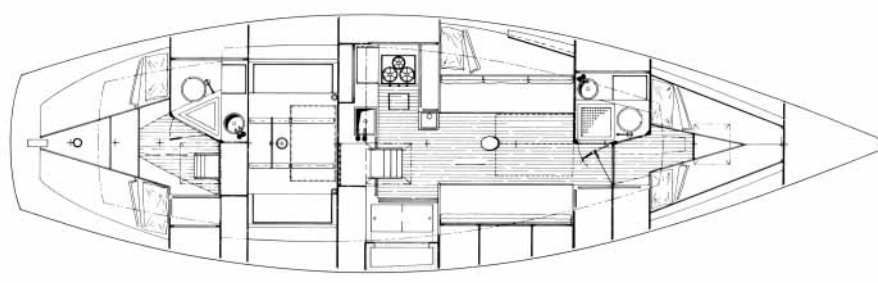
"She was a shoal-draft, light, 37-foot racer/cruiser, but her aft cabin, with good sitting headroom, was little more than a comfortable weekend dog kennel."

wider and roomier, of course, and the central helm location can assist in coming alongside, due to better visibility from the wheel and quicker access to the deck. Finally, and with the usual exceptions, a center-cockpit yacht often provides better interior accommodations than an aft-cockpit craft of the same length.

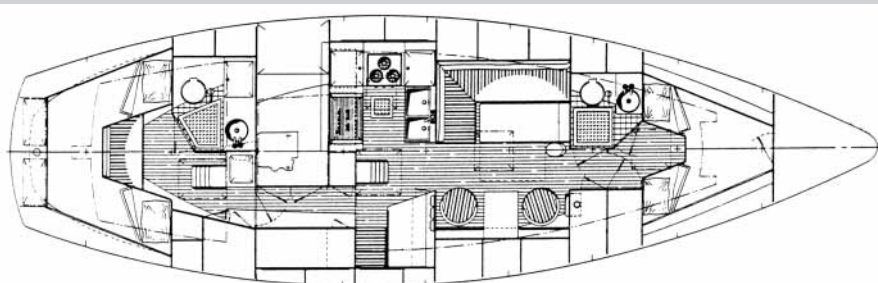
That can contribute to the one major disadvantage, as I see it: the tendency of the owner or builder to insist on filling the center-cockpit hull with people accommodations at the expense of equipment stowage. I am no less guilty than others — when a client has insisted — of eliminating a large lazarette in favor of a roomier owner's cabin or eliminating cockpit sail bins for a passageway or engine room space. It's too much like the old Madison Avenue approach: "More berths make better boats." Contrary to popular opinion, this was never true!



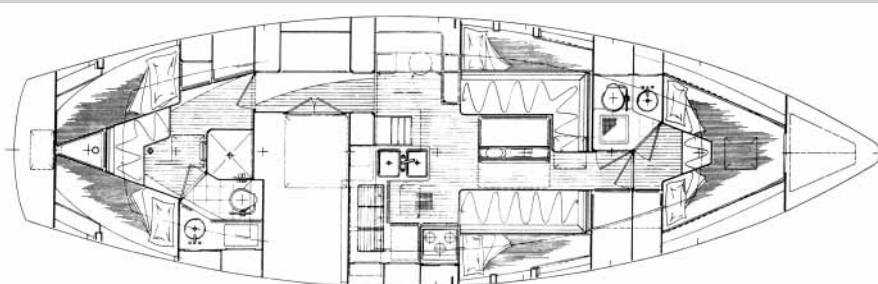
The Irwin 37 offered a passageway and a fairly roomy aft cabin in a small package.



In 1971 my first attempt at a larger center-cockpit yacht resulted in this custom 43, *Black Velvet II*. She had no passageway and the refrigerator doubled as the chart table. Both were corrected in a later production version.



Less than a year later the Whitby 42 featured a nav corner plus a passageway with workbench. Buyers had a choice between a settee or two chairs on the starboard side of the saloon.



Five years later this beamy Constellation 44 improved on the Whitby 42 by offering a stall shower aft, a larger and more convenient galley, and two pilot berths.

Pilothouses came later

The pilothouse arrangement was a late comer to the scene. I'm being honest when I say I can recall few great pilothouse auxiliaries of the 1950s and 1960s. I'm sure there were some, and some readers will remind me of them, but none sticks in my memory, with the exception of *Bluebird of Thorne*.

Philip L. Rhodes designed some lovely large pilothouse yachts but, by and large, they would be classed as motorsailers, not true auxiliaries.

My first auxiliary pilothouse design, in 1976, was the *Victory*,

"The modern flat-sheer, short-ended style of yacht lends itself well to the pilothouse arrangement."

a 44-foot FRP (fiberglass-reinforced plastic) double-ended cutter, beautifully built by her

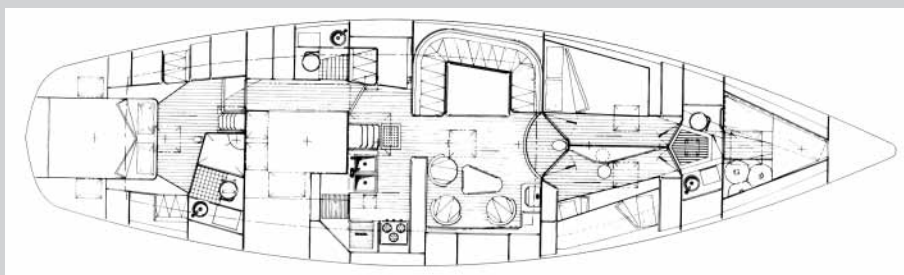
owner. However, he specified a very low pilothouse on a flush-deck hull with a perky sheer, and the result was that visibility forward was quite restricted. That is not altogether a bad thing for a bluewater cruiser, mind you, as the pilothouse is primarily a watch-keeping station when offshore. On the crest of a wave you can see forever, and in the trough you are blind even with a pilothouse 10 feet high! In coastal waters you need maximum visibility so, naturally, you'd be at the helm in the cockpit regardless of weather or time of day.

Victory was the first aft cockpit design on which I stuck a cabin below the cockpit. That seems to be common now, but at least it was a full headroom cabin and not a dog kennel. And you didn't have to go on deck to get to the galley.

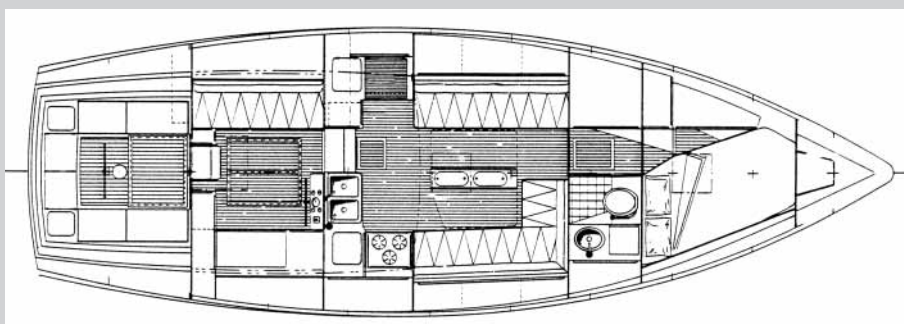
Forward visibility problems

Kingsland, a steel 45-foot custom yacht built by her owner, was based on *Victory*, but with a slightly higher pilothouse. This was followed by the Oceanic line of 46-, 43-, and 38-footers. The 46 was similar to *Kingsland*, but in the 43 I flattened the sheer to provide somewhat improved forward visibility. Reese Palley, the owner of Oceanic 46 No. 1 — one of my favorite writers, a good friend, and a wonderful old curmudgeon — circumnavigated in his 46 and has many fascinating stories to tell of *Unlikely's* adventures in foreign waters and strange ports. (See article by Reese on Page 33.)

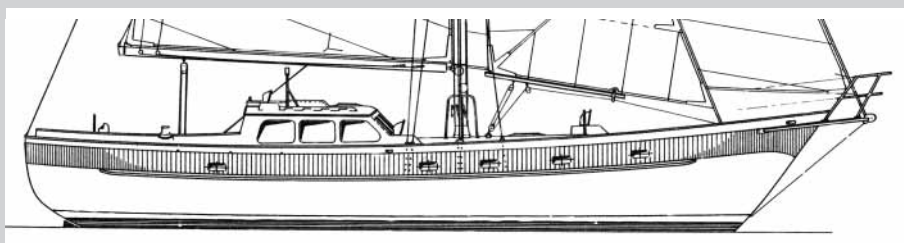
Oceanic skippers seem to have adapted well to the visibility problems of the type, and one 46 owner, a professional yacht delivery skipper, has put close to 200,000 miles under her keel and is very enthusiastic about her all-around comfort and heavy-weather ability. Still, the modern flat-sheer, short-ended style of yacht lends itself well to the pilothouse arrangement, as the designer can obtain reasonably good forward visibility without the need for an ungainly high pilothouse.



The Whitby 55 added a third stateroom, a third head, an even larger galley, and a large forepeak with room for a hand.



A 37-foot motorsailer features a double berth in the pilothouse plus a saloon below.



Note the difference in forward visibility between a low house on a perky sheer (top) and that on a contemporary flatter-sheer hull (bottom).

Categories of pilothouse plans

The usual pilothouse designs fall into several categories: a) smaller craft with a pilothouse and aft cockpit, b) slightly larger craft with a pilothouse, aft cockpit, and owner's cabin below the cockpit, and c) larger craft with a center cockpit, pilothouse forward, and owner's cabin aft. These can be broken down into two sub-types: the yacht where the pilothouse is a fairly small watch-keeping station and the main saloon is below, and the yacht where the pilothouse and the main saloon are combined.

To my way of thinking, the smaller pilothouse and separate saloon are to be preferred for any yacht that will spend nights at sea. For safety at night, the helmsman must be in a darkened area or he'll be blinded by any lights. If the saloon is up in the pilothouse, even the cockpit helm is


"To my way of thinking, the smaller pilothouse and separate saloon are to be preferred for any yacht that will spend nights at sea."

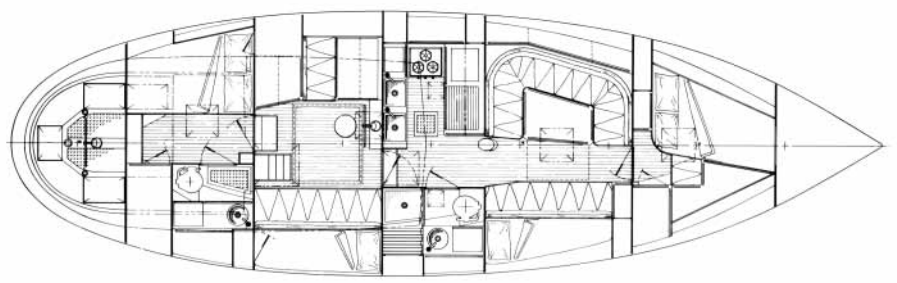
next to useless if there are any lights on in the saloon. With a small pilothouse up and the main saloon below, the off watch can read, the cook can cook, and the helmsman can keep sharp watch from either the cockpit or a darkened wheelhouse.

On the other hand, having the saloon seating in the pilothouse is pleasant for coastal cruising, as the saloon area is high, bright, and convivial whether under sail or lying snugly at anchor or in a slip. You can watch the passing parade, yet stay out of the hot sun and not feel as if you are down in a hole. Many couples prefer this setup. It's a personal choice depending on how the yacht is to be used, of course, and I've found it to be increasingly favored for tropical waters with owners who want to be out of the sun

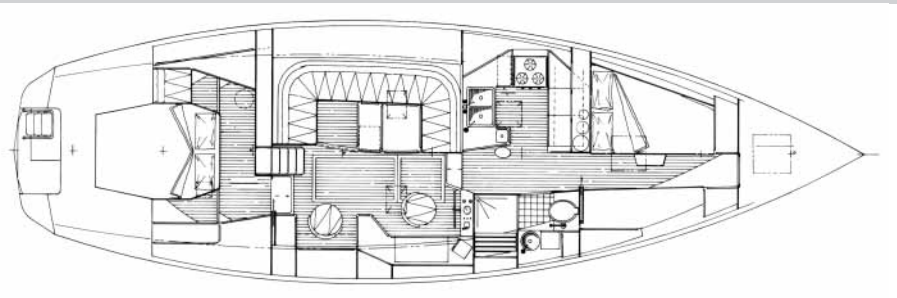
as much as possible for comfort or health reasons.

The choices are many: center cockpit, pilothouse, center cockpit with pilothouse, aft cockpit with pilot-

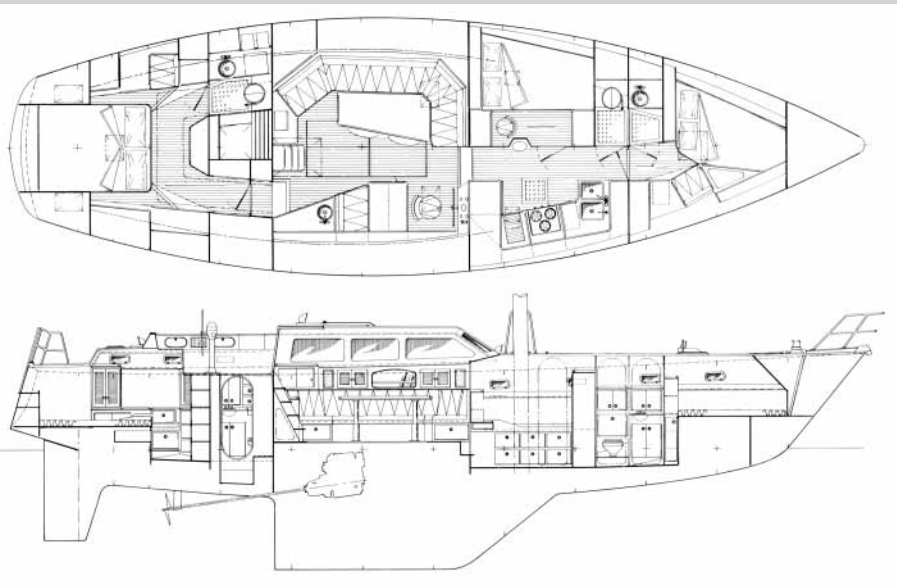
house, and so on. If you are considering buying one of these popular plans, give some thought to which will work best for you. Fair winds! 



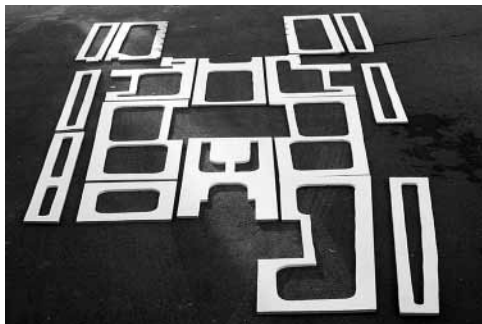
An aft cockpit 46 has the owner's cabin tucked under a wide bridge deck. The pilothouse is for watch keeping while the main saloon is below, a good arrangement for bluewater and night watches.



For coastal cruising and harbor hopping, many owners prefer to have the saloon up in the pilothouse, as shown on this 45 with her 10-foot long settee to port.



A 50-footer adds a third cabin and a stall shower in the aft head. I'd prefer to see V-berths in the forepeak or perhaps an upper/lower setup in the mid cabin, to add versatility to the layout.



Paneling the

A blow-by-blow description of a

by Paul Esterle

THE VINYL HEADLINER IN OUR 1978 Columbia 35-footer looked its age. It was dirty, off-white, and sagging in places. Metal rods, inserted in pockets sewn on the back side, supported the center headliner.

Even if it weren't old and sagging, the headliner posed two major problems. First, it prevented access to most of the fasteners holding the deck-mounted equipment. Second, the edges of the headliner were stapled to the upper edges of the cabin paneling, which was rotten and would have to be replaced.

We could have removed the headliner and sewn up a new one to match, but we'd still have the access problem. We had seen a paneled overhead on a sister ship and in several magazine articles, and we liked the look. It would be a little more work than a sewn liner replacement, but it seemed worth it.

The concept

The idea behind a paneled overhead is to divide the overhead area into manageable panels. Individual panels could be removed easily to reach any fittings or fasteners located on the overhead and to add new deck hardware.

I looked at several ways to create an overhead. The panels could be held in place with trim strips and screws, but this would require removing those screws every time I wanted to drop the panel. Another method involved bonding strips of wood to the overhead and applying trim strips with Velcro to the bonded strips. A third

approach was to bond a series of flat plywood panels to the overhead. The trim strips and Velcro would then be applied to the peripheries of these panels (Figures 1 and 2 on Page 22).

I already had a good supply of ½-inch medium-density overlay (MDO) plywood on hand and had developed some techniques to cut it to shape quickly and easily. This helped sway the decision to the plywood panel option.

MDO plywood has a phenolic paper layer bonded to one or both sides. Exterior glue is used, and the core has no noticeable voids. It is better than marine plywood in many respects and far cheaper. This material was developed for use in making outdoor signs, so its durability wasn't in question. The phenolic paper surface is extremely smooth and ready for paint or epoxy.

Demolition work

The first step in the process was to remove the existing headliner. The staples on the sides were easy to remove from the rotten paneling. It was a little more difficult to remove the staples around the storage lockers at the aft end of the cabin and the areas around the handrails. A little persistence and a pair of needle-nose pliers, and I had removed all remnants of the old headliner and the pesky staples.

Several other upgrades had to be completed before the overhead installation could begin. The first was to replace the side cabin paneling with new ash plywood. The second was to install an additional storage locker over the galley sink, the top of which

was against the overhead. The third involved installing additional posts from the side of the galley and the nav station to the overhead.

Designing the layout

With those projects out of the way, I could proceed with the layout of the new overhead. Figure 1 (Page 22) shows a cross-section of the proposed overhead installation. The ½-inch-thick MDO panels would be cut out, epoxied, and screwed to the overhead. Teak trim would outline sections of the overhead. These sections would then be filled with vinyl-covered plywood panels held in place with Velcro.

The first step was to make a scale drawing of the area to be paneled, including all existing hardware, openings, or other items that would affect the layout. I copied the drawing several times and experimented with different layouts until I had one that looked good, allowed access to all the pertinent features, and avoided all the encumbrances on the overhead.

The next step was transferring the design to the cabin overhead. I established a centerline, using the center of the companionway opening and the mast surround, a string, and a couple of screw eyes. Working from the centerline, I started cutting out individual sections using sheets of ¾-inch artist's foam board. I held sections in place with tape or spring-loaded shower rods. I then marked them with the locations of all the teak trim strips.

One complication occurred around the inside handrails located on the overhead. These handrails were



overhead

beautiful and practical conversion

through-bolted to their partners on the cabintop outside. I had used plywood shims to space the handrails down to accommodate the fabric headliner. To solve this design problem, I decided to install a 1-inch by 3-inch handrail trim strip to replace the plywood shims. The location of these strips was integrated into the overall panel design. Longer fasteners would be used to re-bolt the handrails in place (Figure 3 on Page 22).

Since these handrail trim strips were to be bolted in place and were substantial pieces of lumber, I added eyebolt anchors for future lee cloths. These eyebolts were mounted fore and aft of the interior handrails.

Rough-cut panels

With the patterns in hand, I proceeded to cut out the individual panels.

After tracing the pattern onto the paper surface, I rough-cut the panels using my saber saw. Trimming to the finished edge line was easy. I have a workbench with a piece of aluminum screwed to the edge. I lined up the cut line with the aluminum and clamped the plywood in place with a couple of quick-release clamps. A router bit with a ball bearing on the end rides on the aluminum edge, trimming the panel to shape quickly and accurately.

Next I marked the location of the teak trim strips on the face of the panels. The center of the panels was cut out, allowing a 2-inch rim, or frame, around the edge to remain. This was done to allow access to the overhead fasteners that would be located in the opening. The cutouts also light-

ened the panels considerably. I could use the opening later when installing insulation.

Once I had the centers of the panels cut out, I used a round-over bit in my router to ease the inside edges. To save time and overhead work, I painted the panels at this point. I gave the paper face of the panels a coat of Pettit White Undercoater primer and a couple of coats of Pettit Easypoxy Off-White. I left the back side of the panels uncoated for the application of the epoxy that would hold them in place. (Note: I usually give plywood a coat or two of epoxy for protection. I only did one panel this way and found that I couldn't drive the staple for the Velcro into it!)

Panel installation

With all the panels pre-finished, installation could begin. The entire overhead was washed down and wiped with acetone. The areas where the panels were to be bonded in place were lightly sanded with 80-grit sandpaper.

I installed the center panels first, lining them up with the centerline. The cabintop on my boat is cored, which allowed me to fasten the panels in place with stainless-steel self-tapping screws.

In the layout of the panels, I tried to minimize the need to curve or bend panels. Occasionally I needed to adjust things a bit to make adjacent panels flush. Driving a screw through the plywood panel and using it to adjust a panel out to match its neighbor accomplished this.

Once the panels were all in place

and adjusted to give a smooth, level surface, I removed them one at a time. As a panel was removed, I applied a coat of epoxy to the back side and allowed it to soak into the bare plywood. I then applied a generous amount of epoxy/filler, mixed to peanut-butter consistency, to the epoxy-coated plywood and screwed the panel back in place.

I filled any voids between the panels and the overhead with an epoxy-fairing compound. I filled empty caulking cartridges (you can purchase these) with the epoxy mixture and forced the mixture into the voids. I used a tongue depressor to clean up any excess and to make a smooth edge. (Note: Be sure to wipe up any drips or runs at this point, or you will be sanding the overhead to remove them after the epoxy cures.)

Once all the panels were bonded and screwed in place, I gave the entire overhead a light sanding with 80-grit sandpaper. The bare center areas were given two coats of primer. Then I applied a final coat of off-white paint to everything.

Clockwise from far left: Making foam board patterns for MDO plywood panels. MDO panels cut out, painted, and ready to install. Aligning panels with self-tapping screws. MDO panels epoxied and screwed in place. Installing teak trim strips. Stapling Velcro on vinyl-covered removable panels. Velcro stapled on MDO panel. Finished paneled overhead.



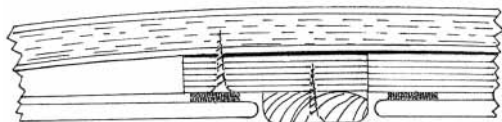
Trim installation

Once the paint had dried, I began installing the teak trim strips. Most of the teak strips were standard $1\frac{3}{16}$ -inch teak battens available at marine stores. The trim strips under the handrails were substantial pieces of 1-inch by 3-inch mahogany, with the lower edges rounded over. I stained the mahogany with Minwax Special Walnut to match the existing teak décor. A powered miter saw made quick work of cutting the various angles the trim strips required.

Starting from the center, I cut the teak trim to size and screwed it in place using #6 x $\frac{3}{4}$ -inch flathead self-tapping screws. You could countersink and bung them if you like, but I have an aversion to bungs. By screwing the strips in place, I could fit all the trim without having to worry about any finish. Once the strips were in place, I removed them and gave them six coats of Interlux #60 Rubbed-Effect varnish before reinstalling them.

This completed the foundation for the paneled overhead.

Figure 1
Cross-section
of paneled overhead



Removable panels

I moved on to the removable center panels. I again made patterns for these panels from artist's foam board. In fact, I recycled the foam patterns from the MDO panels. I cut the patterns to allow a $\frac{1}{16}$ -inch gap around all the edges. This allowed for the thickness of the vinyl material. I cut the panels from $\frac{1}{4}$ -inch exterior luan plywood and sanded the edges to a slightly rounded shape. (Note: Be sure and mark which side the vinyl covering goes on... don't ask why I know this is important.)

I covered the panels with a white marine upholstery purchased at a surplus fabric store. I put the fabric on a table with the good side down and placed the panel on top of the vinyl, making sure the proper side is down

*"I love the way it looks
and the easy access
it provides to the
underside of the cabin
overhead. It provides
sound and heat
insulation."*

against the vinyl. (I told you not to ask why I know this is important.) Cut the vinyl around the panel allowing 2 inches around each side. I used an Exacto knife for all my vinyl cutting and trimming.

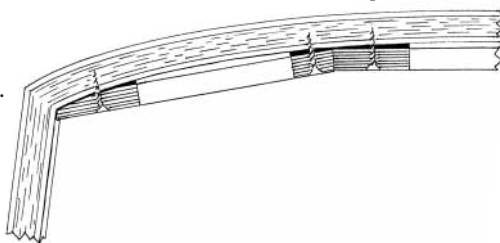
Starting from the center of one side, I folded the fabric over and stapled it on. I used $\frac{1}{4}$ -inch Monel staples. I then moved to the opposite side and stapled that center in place and did the same at each end. Working from the center out, I stapled the vinyl in place, stretching it as tightly as I could.

Next I trimmed the corners and stapled them in place. It is a good idea to make a couple of small sample panels on which to practice stapling and trimming before doing the real thing. The corners are particularly tricky.

Final assembly

With all the panels covered in vinyl, it was time for final assembly. The removable panels were to be held in

Figure 2
Section through
cabin side and top



place with adhesive-backed $\frac{3}{4}$ -inch wide Velcro. I discovered that Velcro purchased at a home improvement store is far cheaper than the same thing from a fabric store.

Velcro has a hook side and a loop side. To make installation easier, I decided that the hook tape would go on the MDO panels and the loops would go on the removable panels. I did one edge of the panel at a time,

cutting the strip to length and placing the loop tape on the removable panel. I placed the hook tape on the MDO panel in the same relative location as the strip on the removable panel.

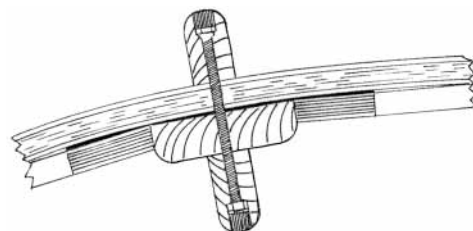
The Velcro's adhesive couldn't be depended upon to hold it indefinitely, so I also stapled it in place. I invested in an electric stapler to make this project easier.

With the Velcro firmly attached, I could then press the panels in place. It's amazing how tightly the Velcro holds the panels in place. I haven't had any panels come loose. In fact, I actually have to pry them off. The tool that paint stores sell to open paint cans is ideal for this job.

Recapping

All this may sound like a lot of work, but it actually went surprisingly fast. It took about a week to design the layout and make the patterns. Two days saw all the MDO panels cut out and ready to paint. I used slightly less than


Figure 3
Section through cabintop
and handrails



two sheets of MDO at \$38 a sheet.

The panels were bonded in place in three days, and I had all the removable panels cut in less than two days from luan, which runs \$8.95 for a 4-foot by 8-foot sheet. The trim was up and the Velcro and panels in place in about two weeks of part-time work.

After I was done, my wife, Pat, installed the insulation. She used several layers of Reflectrix plastic bubble/aluminum foil insulation, pressed into the center opening of the MDO panels.

Would I do it again? You bet! I love the way it looks and the easy access it provides to the underside of the cabin overhead. It provides sound and heat insulation. The air conditioner ran noticeably less after the insulation was completed. It's a winner as far as I'm concerned! 



Wind generators

*See how the wind
can fill your batteries
as well as your sails*

by Chuck Fort

An Ampair wind generator waits for a breeze in Bayfield, Wisconsin. Wind generators work best where steady trade winds blow.

SAILORS HAVE DEPENDED ON THE wind for propulsion ever since there have been sails. Now, however, not only can the wind take you from point A to point B, it can also keep your beer cold, run your radar, and light your night. Through the magic of wind generators, in areas with high winds you may be able to provide yourself with enough power to be self-sufficient in energy for days or possibly even indefinitely.

Selection

Careful selection and installation are important to assure a steady supply of juice. You'll want a generator that is powerful, quiet, and cheap. Pick any two. In general, you have to give up one for the others.

There are two types of wind generators: permanent-magnet generators and alternators. Unlike engine alternators, virtually all wind generators have permanent magnets in their rotors; designs differ according to how the alternating current is rectified. The generators rectify the alternating current produced by running it through a commutator with brushes. (Although changing brushes need not be a difficult task, it is a maintenance item.) The alternators rectify the alternating current using diodes, in the

same manner as the engine alternator. The general term wind generator as commonly used includes both the generator and alternator types.

Units with larger-diameter blades (typically 5 feet) tend to be of the generator type, while units with smaller blades (typically 3 to 3½ feet) tend to be of the alternator type. This is not a strict division, however. There are some large-diameter-blade alternators. Although the power output of a wind generator is a function of the square of the blade diameter, the smaller models have the advantage of being able to withstand very high winds unattended and with no provision for controlling the rotational speed. The larger units all need to be monitored and have the blades locked in high winds. Or they need some mechanism to control rotational speed in high winds. Because of their smaller size, alternator types can usually be left unattended in any wind, while their larger counterparts need

some type of braking or furling system to prevent them from flying apart.

Batteries

You must have the storage capacity for all that free power. Your battery(ies) should be able to hold three to four times your daily use and more in areas with unreliable winds. The more capacity you have, the longer your batteries are likely to last.

Power output

A wind generator is no more than expensive weight aloft without wind, so you must decide if where you are

or where you are going will provide enough of it to make this sort of purchase worthwhile. Nothing is better than steady trade winds for wind generator use, and most of the brochures gush toward that end. But, unless you're anchored somewhere in

"You'll want a generator that is powerful, quiet, and cheap. Pick any two. In general, you have to give up one for the others."

the trade-wind belt, the wind is more likely to be a mix of fairly reliable diurnal breezes, calms, and gusty

winds. If your area does not have regular winds, a wind generator is not for you.

Manufacturers' wind-generator output figures are not standardized so some reading between the lines is necessary. Since wind generator output is determined mainly by the diameter of the blades, the larger wind generator can be said to provide more power. However when comparing outputs, check how the manufacturers rate their machines: steady wind, weighted average, or laboratory tests? Watch out for blue-sky perfect-world figures. As most sailors can tell you, there ain't no such thing. It's rare to find a wind-generator output in the real world that compares to published ad slicks.

Specific applications will vary. How much energy do you use? How much wind is there where you are? You may not be able to supply your entire daily energy requirement with a wind generator even if you choose one with a large-diameter blade. If you have to augment your electrical power generation with solar panels or using your engine alternator occasionally, however, the wind generator could supply a large fraction of your energy requirement.

Models

Beside power output, there are several other considerations to make.

- **Quality and reputation.** What have you heard or read about individual models?
- **Ease of maintenance and parts availability.** Is the unit serviceable in the field (at sea)? Are parts available locally or do they come from overseas?
- **Regulation.** Can the unit be left unattended in any wind, or must it be stopped in strong winds? That's a challenge at times.
- **Aesthetics.** Does the style complement your boat (not very likely) or does it look like something cooked up in a garage?
- **Noise.** Though listed last, this may well become the

"You may not be able to supply your entire daily energy requirement with a wind generator even if you choose one with a large-diameter blade."

most important item. If you can't stand the noise (and they *all* make noise), power output is irrelevant.

Regulation

Regulation of a wind generator is necessary unless your demands and battery capacity are very high or if you are willing to constantly monitor battery voltage and can disconnect the generator.

All wind generators can produce loads of power in high winds — such as a squall or storm — and therefore should have a regulator capable of coping with as much as 15 to 25 amps. Only one of the well-known brands of wind generators has built-in regulation. The models from AirMarine have a regulator built into their housings, eliminating the need for an external

regulator — a savings of \$200 or more.

Most manufacturers sell regulators for their wind generators and most are of the shunt variety. This means that any excess power is completely wasted as heat at the regulator. These must be installed in a place with plenty of ventilation as they can get hot. In our boat, when the regulator is shunting power (an LED comes on), we know it's time to turn on more fans or lights. No sense in just making heat.

An adjustable-output regulator is more useful than one that is not, as it can be used to equalize sulphated batteries. And remember, there must be a fuse between the regulator and the positive side of the battery.

Noise

Regardless of slick brochures, all wind generators make noise. Since sailors generally like peaceful anchorages, this must be kept in mind when selecting a wind generator.

The small ones, such as the Rutland 913 on our boat, make about as much noise as wind in pine trees plus a low moaning sound from the alternator itself, which is noticeable but not objectionable. Some, like the AirMarine 403, are well known for the noise made by their blades. When the AirMarine exceeds the safe limits for wind, it cleverly stalls its blades to slow. But this damping is known to be noisy, too. Other manufacturers of larger models use centrifugal air brakes or tilt-back mechanisms, both of which can be quite noisy. Additionally, most wind generators can be electrically braked or slowed by shorting their leads (after disconnecting from the battery). Then if the noise is too great and the battery full, they can be effectively shut down, though this should not be done in high winds, as it can generate a lot of heat.

Mounting

Wind generators can be pole-mounted, hung in the rigging, or mounted on a mizzenmast. If you want your wind gen-

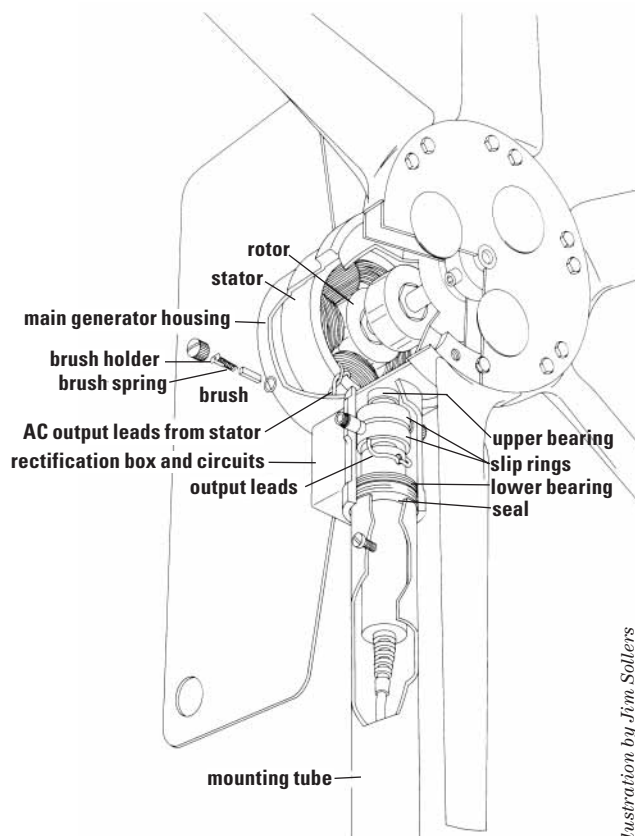


Illustration by Jim Sollers

erator mast-mounted or hung in the rigging, you'll probably want to use the manufacturers' mounts, though it is possible to fabricate them yourself. Most generators are mounted on the stern of the boat. This method has more options.

The wind generator, being akin to a giant food processor, must be located so its blades are higher than the tallest crewmember can reach. Usually a 9-foot above-deck height is sufficient. The easiest (and most expensive, naturally) method is to buy the pole kit from the manufacturer. These typically run from \$325 to \$450 including the pole. However, most wind generators are designed to mount on 1.5- or 2-inch Schedule 40 polished aluminum pipe. This can be purchased locally for about \$5.20 per foot, or less than

“Regardless of slick brochures, all wind generators make noise. Since sailors generally like peaceful anchorages, this must be kept in mind when selecting a wind generator.”

\$50 for 9 feet... about \$150 less than the manufacturer's price for the pole. The supports, support mounts, and deck mounts are the only other items needed. The supports, which are usually 1-inch stainless-steel tubing, can also be found locally for about \$3.60 per foot, again at a large savings. Two 6-foot lengths are usually adequate. Look for a metal shop or stainless-

steel welding shop in your area.

A fabricator can weld attachment points to the pole for the supports. Bimini or dodger eye ends found at marine stores can be purchased to slip on the ends of the supports. You will need four of these, two each for the pole attachment and two each for the deck attachment, which can be stainless-steel angle pieces. The good eye ends can be rather pricey. Their high cost may justify purchasing an attachment kit, as this will also give you the deck mounts, rubber isolators for the pole and supports, attachment points for the pole, and instructions. This kit also allows the whole wind generator and pole assembly to be pivoted downward for easy servicing. The kits sold by Southwest Windpower are well made and sell for less than \$200. All

Resources

AeroGen Wind Generators

c/o Unlimited Power Company, The Old Brewery
Oulton Broad Industrial Estate, Harbour Rd.
Oulton Broad, Suffolk, UK NR32 3LZ
011-44-870-745-11-19
<<http://www.unlimited-power.co.uk>>

AirMarine Wind Generators

c/o Southwest Windpower Inc.
2131 N. First St.
Flagstaff, AZ 86004
928-779-9463
<<http://www.windenergy.com>>

Ampair Wind Generators

c/o Oasis Montana, Inc.
436 Red Fox Ln.
Stevensville, MT 59870
877-627-4768
<<http://www.oasismontana.com/AMPAIR.html>>

Cruising Solutions, Inc.

550 N.E. 14th St.
Boca Raton, FL 33432
561-361-1165; and
165 Tennessee Ave.
Port Colborne, ON L3K 2R8 Canada
905-835-6898
<<http://www.cruisingsolutions.com>>

e-Marine, Inc.

2613 Key Largo Ln.
Ft. Lauderdale, FL 33312
877-432-2221
<<http://www.e-marine-inc.com>>

Fourwinds Wind Generators

c/o Everfair Enterprises Inc.
1205 Elizabeth St. A2
Punta Gorda, FL 33950
941-575-4404
<<http://www.fourwinds-ii.com>>

KISS Wind Generators

c/o KISS Energy Systems
Tropical Marine Complex
Chaguaramas, Trinidad
868-634-4929
<<http://www.kissenergy.com>>

Rutland Wind Generators

c/o Marlec Engineering Co. Ltd.
Rutland House, Trevithick Rd.
Corby, Northants, UK NN17 5XY
011-44-1536-201588
<<http://www.marlec.co.uk>>

Windbugger Wind Generators

c/o Windbugger Products, Inc.
1423 S.W. 1st Ave.
Fort Lauderdale, FL 33315
954-525-9999
<<http://www.windbugger.com>>

Mounting kits:

West Marine

P.O. Box 50070
Watsonville, CA 95077-0070
800-262-8464
<<http://www.westmarine.com>>

that is needed in addition to the kit is the pole, supports, and screws to attach the deck hardware.

An alternative to solid supports is to use two guy wires and turnbuckles mounted on the deck and a solid support to the backstay. This method allows the wind generator to move about a bit more and is more difficult to isolate but can be cheaper and has less weight and windage.

Whichever method you choose, when bedding the supports to the deck, be sure to overbore, fill with epoxy, and redrill any holes in the deck to prevent water from seeping in to the deck core. (See "Clay Saves the Day," *Good Old Boat*, January 2002.)

For solid supports, the angle between the pole and supports should be no less than 30 degrees and no more than 60 degrees. The angle between the supports should be as close to 90 degrees as possible. On smaller boats, like our Mercator 30, these dimensions were not possible, the support-to-pole measurement being about 27 degrees. However, with one of the lighter-weight wind generators, this is acceptable.

Also, the wind-generator blades need to be at right angles to the water in order to receive the wind's full power.

If you are attaching stainless-steel fittings to an aluminum pole with collars from a kit, it would be wise to insulate the two metals to prevent galvanic corrosion.

Wiring

All that wonderful free power will not make it to your batteries without

"The wind generator, being akin to a giant food processor, must be located so its blades are higher than the tallest crewmember can reach."

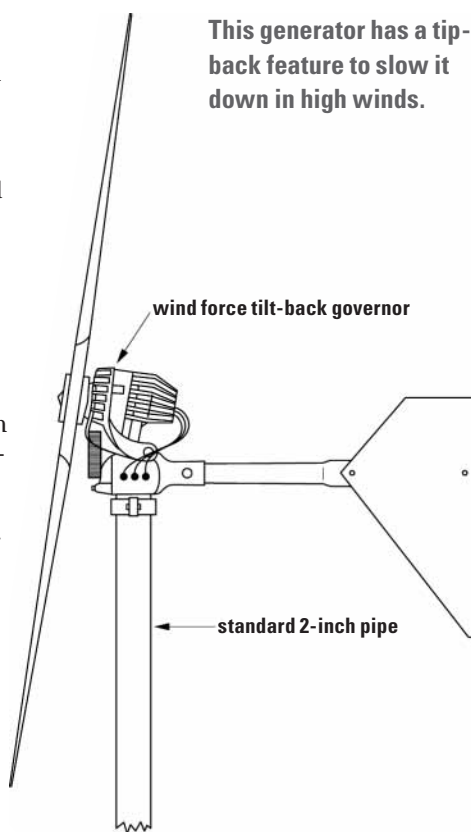



Illustration courtesy of International Marine

proper wire size and connections.

First, calculate the wire run from the wind generator to the batteries including the run to and from the regulator (if any) and double it to find the round-trip circuit length. Next, determine the highest amperage that your wind generator is likely to produce. Then, find the wire size needed in a conductor size chart (most marine catalogs have one). Runs of about 30 feet with a circuit amperage of 20 can use size 12-gauge wire, but be sure to use quality marine-grade wire and connectors. A hole drilled a few inches above the bottom of the pole can be used to let the wire out, provided a grommet is used to protect the wire. It is desirable to have no splices in the wire from the wind generator to the battery (excepting the regulator). Cable Grips, available at marine stores, allow the wire to pass through the deck using a water-proof entrance.

It is vital to install a properly rated fuse in the positive line between the wind generator and the battery. Also, using an ammeter to measure your wind power is useful; when calibrated, it can be used as a substitute anemometer.

The power

Once your wind generator is properly installed, you can begin to see the power available with the first gust. It is truly gratifying to see that the same free power that moves your boat can supply much of your electrical needs. Instead of dreading that coming squall, you'll be eagerly anticipating all the amp-hours that it holds. Grab a cold drink and thank the wind! 

Read these books first


by Jerry Powlas

IF YOU ARE SERIOUSLY CONSIDERING A wind generator, read the wind-generator sections of the following two books before you do anything else.

In his *Boatowner's Illustrated Handbook of Wiring*, Charlie Wing cites a survey of cruisers in Florida and the Bahamas that suggested that 40 percent of the energy requirement on boats equipped with the larger wind generators still needed to be supplied by their engine alternators. This same section provides calculations that predict the maximum theo-

retical performance based on blade diameter, wind speed, and mechanical efficiency. Charlie also offers charts showing the amount of wind energy available in various parts of the country and has good drawings of various types of mountings.

In his *Boatowner's Mechanical and Electrical Manual*, Nigel Calder gives specific wiring details for several types of installations. As it turns out, wiring a wind generator is not simple. Shunt-type regulators can interfere with the operation of engine

alternators unless the two systems are isolated from each other with diodes. Some wind generators need external diodes to prevent current from flowing in the wrong direction and discharging batteries. 

Further reading

Independent Energy Guide, by Kevin Jeffrey (1995, Avalon House).

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

or call 763-420-8923

Finding *the* right trailer

by Gregg Nestor



*Check these valuable tips before
buying a used sailboat trailer*

FOR THE MOST PART, SAILBOAT TRAILERS are semi-custom, owing to the fact that each must be designed and built to accommodate a specific sailboat model's hull and keel configuration. This factor alone makes them very expensive. For example, a new trailer capable of hauling, launching, and retrieving a typical 25-foot trailersailer with a shoal-draft keel and centerboard and weighing around 5,000 pounds can range in price from \$4,500 to \$8,000. A comparable used trailer, on the other hand, may cost from 10 to 90 percent less than a new one. This significant variation in price has to do with the trailer's age, model, and, most of all, condition.

To find the right used trailer for your trailersailer, become an educated consumer. The first step is contacting the sailboat's manufacturer and asking for recommendations. After all, who else would better know the sailboat's underwater configuration? If the manufacturer is no longer in business, check out the owners' association. One way to find sailboat owners' associations is on the *Good Old Boat* website <<http://www.goodoldboat.com>>.

Query several members and ask them what make and type trailers they use. Also talk with other sailors who have the same or similar boats. Boat-trailer manufacturers are another source of specifications. Armed with this newly acquired information, you're ready to search the used trailer market.

Where to look

Unfortunately, I know of no "Used Sailboat Trailer Store." You'll need to get creative in your search. The classified section of your local newspaper will probably be the best source of leads. Other places to look for used sailboat trailers include your local *Boat Trader* publication if there is one, marinas, boat dealers and brokers, local chandlery bulletin boards, and the Internet. Don't despair. While used powerboat trailers are more common and cheaper, sailboat trailers are not as rare as hen's teeth.

If powerboat trailers are common, you may consider obtaining a powerboat trailer and modifying it. While this may sound simple, it isn't. Most powerboat trailers have their axles located too far back to make for a good conversion. Furthermore, the rated capacity of the powerboat trailer will probably be too low since powerboats don't have a weighted keel like sailboats do. And finally, in order to make a safe conversion you'll need significant mechanical and engineering skills and possibly access to specialized tools and equipment. However, if you are not yet dissuaded, check out Chuck Fort's article

in the September 2000 issue of *Good Old Boat*, "Bringing Baby Home."

What to look for

When checking out a used sailboat trailer, the first item to note is its rated capacity. This information is listed on the manufacturer's identification plate, which is located on the trailer's tongue. Remember that the capacity is not just the base weight of your boat but also the combined weight of the boat, motor, fuel, water, provisions, and anchor

tackle, along with all accessories and personal gear you have or might have aboard. Adding all these together — plus a safety factor of perhaps 10 percent — yields a "trailer weight capacity." Make sure the trailer you're considering has that capacity or a bit more.

Don't skimp or go borderline. On the other side of the coin, it is not necessary to get way more capacity than you need. The stiff ride resulting from the heavier suspension could damage your sailboat's hull.

In addition to being able to bear the load of boat, motor, gear, and so on, the trailer should conform to the shape of your sailboat's hull. While most trailers have multiple adjust-

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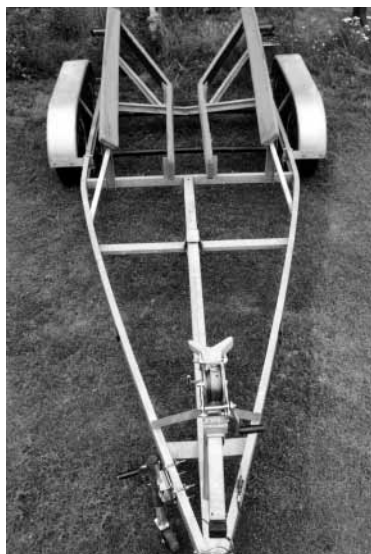
ment points, not even the most adjustable trailer can be properly fitted for every sailboat. In determining whether or not a trailer will fit your sailboat, the most important area is the support system. The supports should be located at reinforced or structural areas of your boat, such as the bulkheads and the keel.

There should be enough supports on both sides, beneath the hull, and at the bow to distribute the weight. The support arrangement should avoid excessive pressure at any one point and inhibit lateral and forward movement of the craft during transport. The supports also should be situated so the boat is carried as low as possible. This keeps the center of gravity close to the road and makes for easier ramp launching and retrieval. If the supports are properly arranged, during launch and retrieval the boat's hull will be constantly centered on the trailer and will not scrape along any unpadded parts of the trailer.

Personal preferences

As it is with sailboats, so is it with sailboat trailers... some things are givens, some are negotiable, and others fall into the category of personal preference. With trailer weight capacity and the matching of its supports to the sailboat's hull being givens and non-negotiable, such things as bunks vs. rollers, painted frame vs. galvanized, and single-axle vs. tandem fall into the latter categories.

Bunk-type trailers have carpeted rails, or "bunks," from which shallow-draft boats are floated on and off and deeper-draft boats are slid on and off. They are designed for relatively steep and deep launching ramps where the trailer is immersed over the top of its fenders. The principal advantage of bunk-type trailers is that, with proper adjustment, there is continuous fore-and-aft hull support, which equates to minimum risk of damage to the hull from jolts and bounces when being transported. Also, bunk-type trailers



This galvanized, tandem-axle, bunk-type trailer, above left, is pricey, whether used or new. Its welded A-frame construction can handle heavy loads. The painted, single-axle, roller-type trailer, at right, is 14 years old. With routine maintenance it continues to provide satisfactory service. Its pole-tongue construction is bolted together and affords multiple adjustment points.



than a single-axle trailer, simply because the load is dispersed over more tires, springs, and so on. Compared to single-axle trailers, tandem-axle trailers give a smoother ride. However, maneuverability is impaired because of a tandem-axle trailer's tendency to track in a straight line. Should you get a blowout with a tandem-axle trailer, you might be able to limp along on three or more tires. With a single-axle trailer, you'd best have a spare, a jack, and the tools to make the change.

"If you're sailing in salt water, a galvanized trailer is superior to one that is painted. It will also be more expensive."

can be as much as 25-percent cheaper than roller-type trailers.

Roller-type trailers employ low-friction rubber or synthetic rollers mounted on adjustable brackets to make launching and retrieval easier. Since bunk-type trailers do not allow boats to slide on and off without some difficulty, roller-type trailers can be used on launching ramps with a more gradual incline. On steep ramps, it is easier to winch a heavier boat onto a roller-type trailer than it is to skid it onto a bunk-type trailer. The extra hardware involved on a roller-type trailer justifies its higher cost.

If you're sailing in salt water, a galvanized trailer is superior to one that is painted. It will also be more expensive. Painted trailers will stand up to many years of saltwater service if they are judiciously rinsed with fresh water after each and every immersion in salt water and if care is taken to touch up any nicks with rust-preventive paint.

A tandem-axle trailer (two or three axles) generally can carry more load

Check the condition

With the trailer's capacity and support configuration properly matched to your sailboat, attention should be directed toward the trailer's condition. Condition easily equates to money saved or spent and/or negotiating room.

Tires: After years of occasional use, the tread of trailer tires may still be adequate. However, long-term exposure to the sun's UV rays may have resulted in the deterioration of the sidewalls, characterized by numerous small cracks. If this is the case, the tires will need to be replaced no matter what the tread looks like.

If the tires appear to be in good shape, confirm that they are of the proper capacity. The capacity is listed on the tire's sidewall and must be equal to or greater than the load being carried divided by the number of tires on the trailer. This includes the weight of the boat and the trailer. If the load being carried is 3,600 pounds, each tire on a single-axle trailer must be rated to be at least 1,800 pounds capacity.

Also, do not mix bias and radial tires; they must be of the same size and one type or the other. The construction and performance characteristics of radial and bias tires are significantly different; mixing them can result in severe trailering difficulties.

Wheel bearings: The most critical areas on a boat trailer are the wheel bearings. When the trailer is immersed in water, rapid cooling takes place, causing the grease and

any trapped air in the wheel hubs to shrink. The resulting vacuum draws water into the hubs and can cause corrosion and bearing failure. Check the condition of the bearings, even if they have bearing protectors installed. Make certain that the bearings are in good condition and that the hubs are filled with grease.

Suspension: Inspect the springs to make sure they have the same number of leaves and no broken leaves. Since the springs are usually unpainted, don't be too concerned about surface rust. However, if the rusting appears to be excessive, a closer look is warranted, especially if the trailer has seen saltwater service.

Leaf springs are generally attached to the trailer frame by means of shackles held in place by bolts. Over time and use, these bolts wear to the point that they need to be replaced. A visual inspection will generally reveal what, if anything, needs to be done.

Lights: Make sure the trailer lights work. Water and electricity do not mix well. When warm bulbs hit cold water at the launch ramp, the bulbs often break. Check them. Also, light sockets can corrode, making for a poor electrical connection. More often than not, a poor ground is the culprit when lights don't work. The ground wire is usually white. If the lights are still not functioning properly, suspect a short, an open circuit, or a poor connection. You now have a bit of negotiating room in your purchase.

Brakes: If the trailer is equipped with brakes, inspect them when you are checking out the condition of the wheel bearings. Excessive corrosion of the braking components may indicate that the brakes are seized. In addition to corrosion, note the thickness of the pads or shoes. If possible, activate the brakes slowly and determine if they work. With surge brakes,

"Since bunk-type trailers do not allow boats to slide on and off without some difficulty, roller-type trailers can be used on launching ramps with a more gradual incline."

this can be done by applying reverse pressure on the hitch, which in turn activates the master cylinder. If the brakes are electric, lightly press the lever on the actuator.

Rust: Technically speaking, rust results from the oxidation of iron. It occurs when steel comes in contact with water. If salt is present, the process is accelerated. On a boat trailer, unchecked corrosion can eat away exposed steel surfaces. This can result in a gradual thinning and eventually failure of a trailer's frame component. A good visual inspection, along with a bit of hammer tapping and screwdriver poking and scraping will tell you a lot.

Structural integrity: This is not difficult and can even be fun. Look at the frame components carefully. Make sure they are not bent. Wiggle everything and test each bolt and nut for tightness. Check welds or bends for cracks and crevice corrosion. When in doubt, give the questionable area a love tap with a handy 3-pound sledge hammer. If the noise produced is not a "clang" but rather a dull "thunk," some repair work may be needed.

More tests

If all has gone well so far, examine the winch and make sure it is not rusted to the point of being inoperable. Test the brake-and-locking mechanism. Confirm that it works in both directions. This small device prevents the crank from spinning out of control. Winch line is usually galvanized


or made of stainless steel, but it can be synthetic web strapping or even rope. Cable may rust or its strands may break over time, causing weakness and ultimately resulting in failure. Synthetics will deteriorate more rapidly due to UV degradation. Pay out the entire line and examine it closely.

Inspect the hitch and work the locking mechanism to determine that it is operable. This latch or screw-type mechanism will keep the coupled trailer and tow vehicle from coming apart. Safety chains should be present and permanently attached to the trailer's tongue.

With roller-type trailers, make sure that all of the rollers are present and that they turn freely. Broken or severely cracked rollers must be replaced. Rock all roller assemblies back and forth and side to side, confirming that their pivot points move easily.

Check the undersides of the carpeted rails on bunk-type trailers. Broken, badly cracked, or rotten wooden rails need to be replaced. Slide your hands over the carpeted areas. Make sure that none of the fasteners holding the carpeting down are protruding. These can gouge or even puncture the sailboat's hull.

Final thoughts

While searching for a suitable used sailboat trailer may appear to an overwhelming undertaking, keep in mind that trailersailing has never looked better. Slip rentals and winter storage fees continue to go up at an alarming rate, and mooring space is virtually nonexistent in many areas. These are inconveniences that do not plague the trailer sailor. Depending upon your home port, you could experience the thrill of a freshwater regatta today and enjoy saltwater cruising tomorrow. Unlike its waterbound cousins, the trailersailer is not limited by range. 

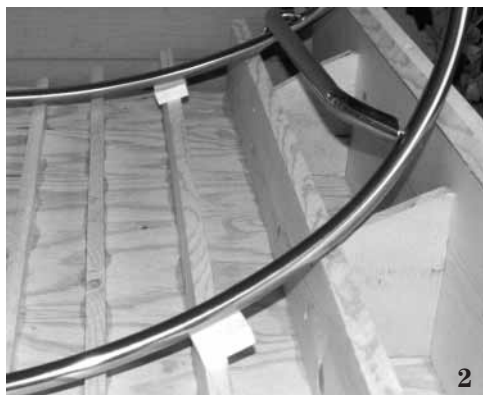


The bunks of the single-axle trailer, at left, provide for continuous fore-and-aft hull support. Tandem-axle trailers, at right, generally can carry more load than a single-axle trailer, simply because the weight is dispersed over more tires and springs.





1



2



3



4

Building a hard-top dodger

Here's how to get that professional finish

by Don Launer

MY SUNBRELLA DODGER IS A wonderful asset, and I can't imagine why I sailed so many years without one. I keep mine in place nine months of the year and, after 12 years of use, it was showing signs of age. A new fabric dodger would run in the realm of about \$700, but at the Annapolis Sailboat Show I saw an alternative that I found intriguing. It's a fiberglass hard-top that fits on the existing stainless-steel dodger frame and has removable Sunbrella side panels. This semi-permanent hard-top also allows you to mount equipment on its underside, such as a GPS chart plotter, light, and horn.

I decided this was the way to go. I've done fiberglass projects in the past — such as glassing in bulkheads, fuel tanks, and an engine bed when I built my boat from a bare hull — but nothing as large as the 4-foot by 8-foot fiberglass panel that would be my new hard-top dodger. Certainly nothing that required the final product to have a mirror-like gelcoat finish.

Our boatbuilder friend, Chris Bauer, visits us regularly when dis-

playing his Bauer dinghies at the New York and New Jersey boat shows, so one evening over a bottle of Merlot I asked him to suggest the proper procedure to be followed in creating my hard-top dodger. With his tutelage, I was able to lay up an almost professional hard-top, which is now in place on my schooner, *Delphinus*.

Building the mold

The project began with creating the mold — the form on which the fiberglass was to be laid up. Although building this mold is a big project, it's a necessity in creating a professional-looking final product. I began by screwing wood stringers to the bottom of a 4-foot by 8-foot piece of $\frac{3}{4}$ -inch plywood. The stringers prevent

"It's a fiberglass hard-top that fits on the existing stainless-steel dodger frame and has removable Sunbrella side panels."

it from twisting. Then I placed the dodger frame, upside down, on top of the plywood (see photo 1). Four-foot pieces of wood (the width of the plywood), with an angled cut that matched the curve of the stainless steel frame, were glued and screwed to the plywood base (see photos 1 and 2). These provided the base to which

a Formica sheet would be glued. The Formica gives a smooth and fair curve for the fiberglass layup.

In laying out this curve, wood blocks of the proposed thickness of the final hard-top are placed between the stainless-steel frame and the wood mold so the proper curve can be maintained on the inside of the final hard-top. The wood base was completed once the wood cross-pieces were all in place, every few inches down the length of the plywood.

I drew the outline of the perimeter of the proposed dodger on a 4-foot by 8-foot sheet of Formica, then I contact-cemented the Formica in place on the wood frame. Small wood blocks were glued on the outside edge of the hard-top perimeter-line. These blocks provided the backing for a strip of vertical Formica (about 2 inches high) that created the outside edge of the hard-top.

Since a fiberglass layup doesn't like sharp corners, a cove had to be established between the Formica base and the vertical Formica edge-strip. Although this cove can be created in several ways, on advice from Chris I decided on the technique used by professional moldmakers — that is, creating a cove using a wax “fillet” made just for that purpose (see photo 3). These inexpensive rolls of wax fillet are available from companies that supply commercial moldmakers and boatbuilders. They come in several radius curves. The fillet was unrolled from its spool (since it was winter-time and my garage was cool, I used a hair dryer to make the wax more supple) and pressed into the right angle of the two pieces of Formica. Then a heated radius tool melted the wax into a smooth corner cove molding (see photo 3), bonding it to the Formica. Instead of the commercially available radius tool, a heated steel ball, of appropriate diameter, can also be used for this fairing job.

Laying up the fiberglass

Once the mold was finished, the fiberglassing work could begin. Chris suggested the following layup procedure, and I bought the materials I needed, based on his schedule:

1. Coat the mold with two coats of mold-release liquid. Let dry between coats.
2. Pigment the gelcoat and apply to

the mold. If you plan to finish the hard-top with a two-part linear polyurethane paint (such as Awlgrip), then tinting the gelcoat is unnecessary. If a gelcoat spray-gun and high-pressure, high-volume air compressor are not available, the gelcoat can be rolled onto the mold.

3. Allow the gelcoat to cure about 10 to 12 hours.
4. Lay in a layer of chopped fiberglass mat and saturate with polyester resin. Roll out any air bubbles with a ribbed air-bubble roller, working from the center out toward the edges.
5. Lay in a layer of woven roving and saturate with polyester resin. Roll out the air bubbles in the same way.
6. Let cure for about 6 to 8 hours.
7. Coat the balsa core and previous layup with polyester resin and lay the balsa in place.
8. Taper the edges of the balsa with a paste made of polyester resin and glass micro-balloons. If there is a pronounced curve to the hard-top, Cabosil, a fumed silica powder, can be added to the mix to prevent sagging.
9. Saturate the balsa core with polyester resin.
10. Let cure for 6 to 8 hours.
11. Lay in a layer of chopped mat and saturate with polyester resin. Roll out air bubbles.
12. Lay in a layer of woven roving and saturate with polyester resin. Roll out air bubbles. Make sure this last layer has as smooth a surface as possible.
13. Wait at least two days before removing the hard-top from the mold.

Advance work

In preparation for this layup, the four layers of fiberglass can be cut to approximate size well before starting. The balsa core should also be cut to size before starting. Note the circular cutouts along the outside edge of the balsa panel (see photo 4). These are so the bolts that will mount the hard-top to the stainless-steel frame will pass through solid fiberglass rather than through the balsa core.

Although I've seen hard-tops made without the balsa core, this feature has several advantages. It not only provides great stiffening to the hardtop, but it also means that when electronics are mounted to the underside, they



1 and 2 – The stainless-steel dodger frame is turned upside down on the plywood, boards cut to the angle of the frame are fastened in place every few inches, and wood spacers of the proposed thickness of the final fiberglass top are used under the frame to keep the final curve true.

3 – A wax fillet with the appropriate cove radius is positioned at the right angle of the two pieces of Formica and melted into place with a heated radius tool.

4 – The balsa core is pre-cut to shape. Note the circular cutouts on the periphery of the core so the mounting bolts to the stainless-steel frame will pass through solid fiberglass rather than through part of the balsa core.

5 – After the mold has been sprayed with two coats of mold-release liquid and allowed to dry thoroughly, the tinted gelcoat is sprayed or rolled on.

6 – The fiberglass hard top is removed from the mold and the edges are trimmed. It can now be finished with a polyurethane coating, such as Awlgrip, if the gelcoat is not the desired color.

7 – Additional braces are added to the old frame.

don't have to be through-bolted.

Before starting the fiberglass work, two coats of a mold-release barrier must be put on the mold to prevent the fiberglass from sticking to the Formica (see photo 5). I used a commercially available water-soluble mold release containing ethyl alcohol and ethanol homopolymer. This mold-release liquid is of water consistency and can be sprayed on with any ordinary sprayer. Since it is water-soluble, it has the advantage of being easily removed from the finished fiberglass hard-top with just water. Easy removal of the mold release is especially important if repairs are to be made in the layup after removal from the mold or if you plan to finish the hard-top in a two-part polyurethane paint.

After the fiberglass layup has been completed according to the

"With the new dodger completed I now had a permanent and firm location for a horn, GPS chart plotter, and dome light."

lay-up schedule, the hard-top is removed from the mold. Then the edges are trimmed and any repairs that are necessary can be made to air-bubble voids

and so on (see photo 6). If the hard-top is to be painted, now is the time.

The layup described produces a hard-top with a glossy top and an underside that shows the pattern of the final woven roving. If this underside pattern is undesirable, it can be masked with a resurfacing coat, such as a paste of epoxy and filler.

Installing the hard-top

Finally it's time for the fun part: mounting the hard-top on the dodger frame. Most dodger frames made for a fabric dodger are held upright by the fabric, but I needed this frame to be self-supporting and also a bit stronger, so I added additional stainless steel supports fore and aft and port and starboard (see photo 7). Although our hard-top weighed only 48 pounds, having help to put it in place was a good idea, because its size made it awkward to handle.

With the hard-top on the stainless-steel frame and bolted in place, it was time for the fabric panels (see photo 8). Since I have a Sailrite sailmaker's sewing machine, I cut the top off the old fabric dodger, leaving just the sides. Although this fabric was old, it still had a couple of years of life before new side panels would have to be made. If you don't have a sailmaker's sewing machine, you might be able to do this job on a beefy home sewing machine (see "Sewing's Not for Sissies," *Good Old Boat*, January 2003). Or a local sail or canvasmaker can do the work for you.

The fabric sides are connected to the hard-top by sewing a preformed, Dacron "bolt-rope" to the top edge. This bolt-rope then slides into a matching bolt-rope channel that is screwed to the underside of the fiberglass hard-top. These channels come in either a semi-rigid anodized aluminum extrusion or in flexible vinyl and create a secure and spray-proof joint. These channels and bolt-ropes are available from Sailrite.

With the new dodger completed, I




8 – The completed dodger with fabric sides. The top of the old Sunbrella dodger is cut off and the side fabric is saved as side panels. Dacron or vinyl awning rope is sewn to the edge of the fabric. The awning rope slides into an aluminum or vinyl awning track that is fastened to the underside of the hard-top.

9 and 10 – The dodger attaches to a Bimini-style top or a winter canvas cover.

now had a permanent and firm location for a horn, GPS chart plotter, and dome light. The wiring for these devices is brought up through the cabintop using watertight deck fittings, and the wires are secured to the stainless-steel frame with nylon wire-ties.

I also fastened an aluminum bolt-rope channel under the aft edge of the hard-top. This gives me a firm spot to slide in a cockpit canopy (see photo 9) or a cockpit winter cover (see photo 10).

I think the idea of having fabric sides on my hard-top is the best of both worlds, since it allows me to roll up the front of the dodger for unfettered air flow during the dog days of summer. I am, however, toying with the idea of building fiberglass side panels (port and starboard) for my hard-top dodger — but that's another story. 

Where to find it all

Most marine-supply stores carry basic fiberglassing products.

Defender

800-628-8225

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

West Marine

800-262-8464

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

and at its retail stores.

BoatUS

800-937-2628

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

and at its retail stores.

Sources for complete fiberglassing supplies and special tools:

Fiberglass Supply, Inc.

509-493-3464

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

For an excellent selection of specialized fittings that will help when beefing up the dodger frame (and ones I couldn't find anywhere else) try:

Bo'sun Supplies, Inc.

888-433-3484

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

For Sunbrella, sewing materials, machines, and fasteners:

Sailrite

800-348-2769

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

The value of coasting

Rewards on the ocean deep are earned in shallows alongshore

by Reese Palley

DAYS OF NEPENTHE ON THE BLUE seas do not come easily. The spiritual gifts of the great oceans are made possible by the hard work and learning that can be accomplished only in the shallow and challenging waters just outside your own home port.

In excursions alongshore, close to home, we pass enchanting and rewarding days honing our sailorly skills. Roaring powerboats, shallows that reach for your keel, eddies and currents that move you in unwanted directions, winds that are twisted and magnified by the land off which they blow, lee shores, and big scary freighters traversing narrow waterways all conspire to etch the skills of sailing indelibly into your psyche.

Alongshore is where you delight in the knowledge of exactly where you are at every moment, compared to bluewater sailing where “approximately” is plenty good enough. An error of a foot or two can complicate life in shallow waters, while an oops! of a handful of miles in the deep results in little more than a moment of embarrassment.

After two decades of wandering the globe, *Unlikely* needed a refit. Since we had aged more quickly than she, we needed a vessel that was smaller, more nimble, and of shallower draft. We could hardly refit our own bodies

to new circumstances as well as we could refit our vessel. *Unlikely* would have to give way to the exigencies of age, and since we weren’t planning to cross too many more serious oceans, we prepared *Unlikely*, like a bride, for her new master.

For the 12 months it took us to rebuild and restore her for sale, we were without a sailboat. As we labored

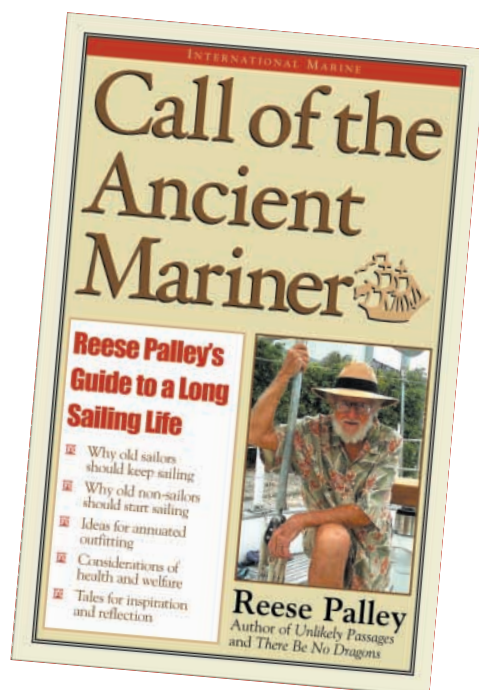
on *Unlikely*, we watched a nifty 38-foot sloop slip by us every day for some daysailing off the Keys. At the helm was a weathered old sea dog, and on the foredeck was his lively, octogenar-

ian wife, both hale and happy. They passed us with a wave, beaming with that special, anticipatory smile that wreathes the faces of sailors as they reach eagerly for a day at sea. Each evening they returned, anticipation fulfilled. It became a special sort of torture for us, as we yearned to be off for our own day at sea, freed from the tasks and confrontations and shackles of land.

Thing of the past

As I jealously watched the salty grande dame and grandsire take to the sea each day, I realized that the deep seas for me were a thing of the past, as are the deep seas for most old sailors. Times change, bodies and capabilities change, and now, in my ninth decade, I still wanted my life at sea. From my new perspective of great age, a week

“Times change, bodies and capabilities change, and now, in my ninth decade, I still wanted my life at sea.”



along a pleasant shore, or even a day, looked just as delicious as a 40-day passage to the French Marquesas once had.

On an ocean passage, the first navlight you are likely to see may be a month away, and navigational marks defining depths and dangers are encountered only after you raise your first lighthouse. Sailing a great ocean misses much of the high excitement of keeping your vessel safe from the hazards of shallows and lee shores. Close alongshore, the physical senses are galvanized, and sailing skills are honed for the pleasing reward of bringing your vessel safely and elegantly home.

While coastal sailing is demanding and difficult, there is, in even the shortest sail in familiar waters, the continuing exaltation of problems solved. Coasting is like a crossword puzzle in which every action, every decision, becomes part of the mosaic of the entire experience.

Coastal sailing is the quicksilver, instant, heart-pounding delight of contest. It grants those moments when puzzles and challenges flash clear, and you sense growth in yourself as a sailor. Ocean sailing is contemplative, slow, and introspective, requiring minimal skill and strength but deeply challenging the spirit and emotions. Passing across a great ocean is a precious reward, the goal of the sailorly life for many. Coastal sailing is process, and some would argue that process itself is reward aplenty.

Continued on Page 69

Generating electricity — how the alternator and regulator produce their magic

by Don Launer

ALTHOUGH SAILBOATS ARE USUALLY SMALL AND COMPACT, THEY have the infrastructure of a large city: the waterworks, the sewage disposal plant, and the electrical generating and distribution systems. And, just as happens on land, when one of these systems fails, it reminds us how dependent we are on that system's technology.

The loss of dependable electricity aboard your boat can jeopardize your enjoyment as well as your safety. It means the loss of the electric bilge pump; lights (navigational as well as cabin lights); the VHF-FM radio, Loran, and GPS (unless you have handheld ones); electronic chart systems; and the radar. Also, and perhaps more importantly, you will be unable to start your engine — unless you can hand-crank it.

Except for some megayachts that have motor generators constantly running, our electrical needs, when away from the dock, are completely supplied from a storage battery or batteries, which have the capacity to “store” electricity. These batteries, which usually supply 12 volts of direct-current (DC) power, have a finite capacity and must be kept charged, or supplied, from an outside source.

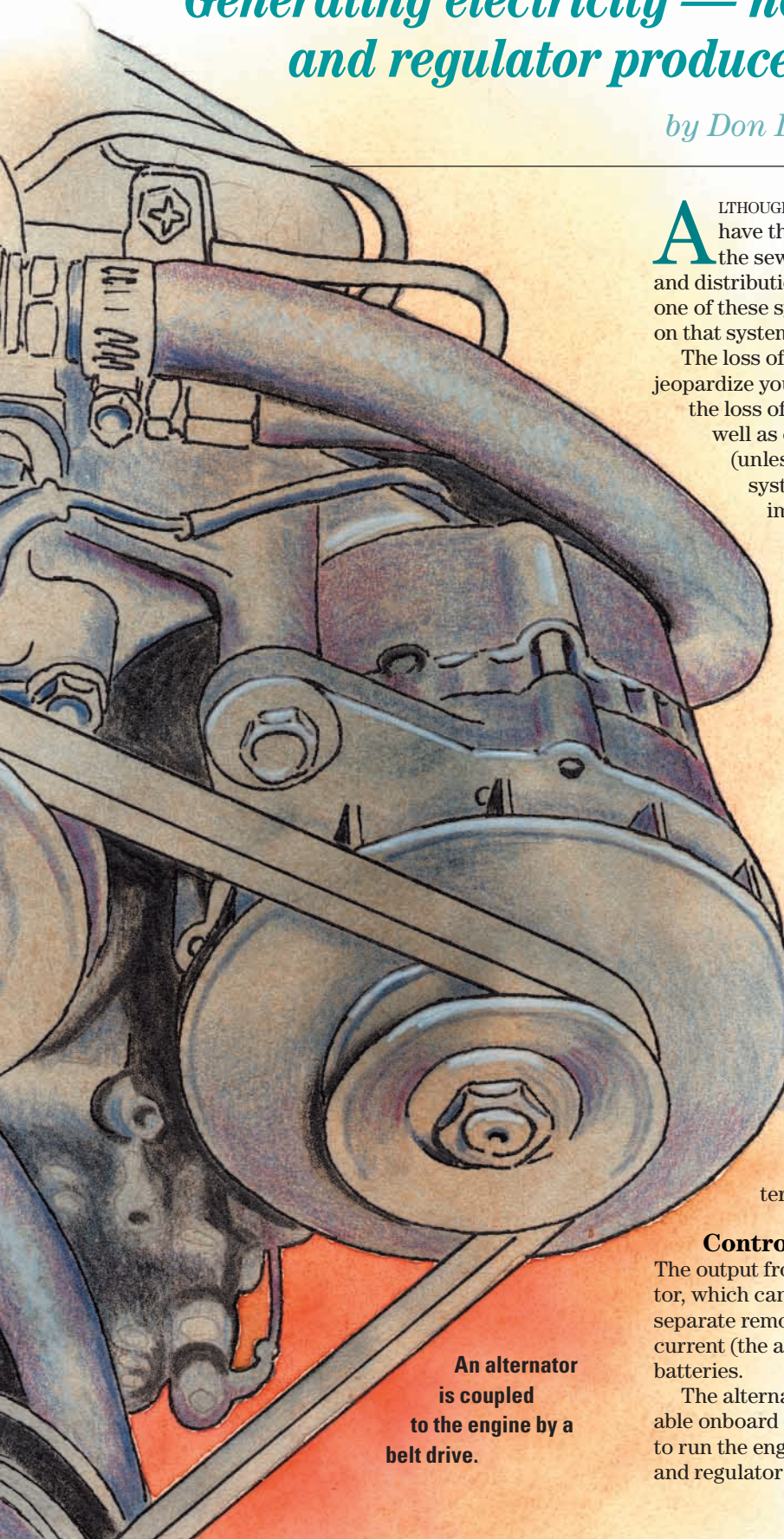
At a marina, that source can be from a shorepower connection to an onboard battery charger, which converts the shorepower's alternating current (AC) to the DC required to charge the batteries.

On the water, the source of this DC charging power comes from an alternator, which is driven by the engine. This alternator, as its name implies, creates alternating-current electricity (similar to shorepower) that is then converted, within the alternator, to DC electricity. A boat's battery, then, is like a city's reservoir, and unless that reservoir is periodically supplied with water, it will run dry. The alternator replenishes your boat's electrical reservoir — the battery — and keeps it from “running dry.”

Controlled output

The output from the alternator is controlled by a regulator, which can either be built into the alternator or exist as a separate remote device. This regulator controls the amount of current (the amperage) that the alternator is supplying to the batteries.

The alternator and regulator, then, are the keys to dependable onboard electricity, and that's contingent on being able to run the engine. This, of course, assumes that the alternator and regulator are functioning properly. But how do we know



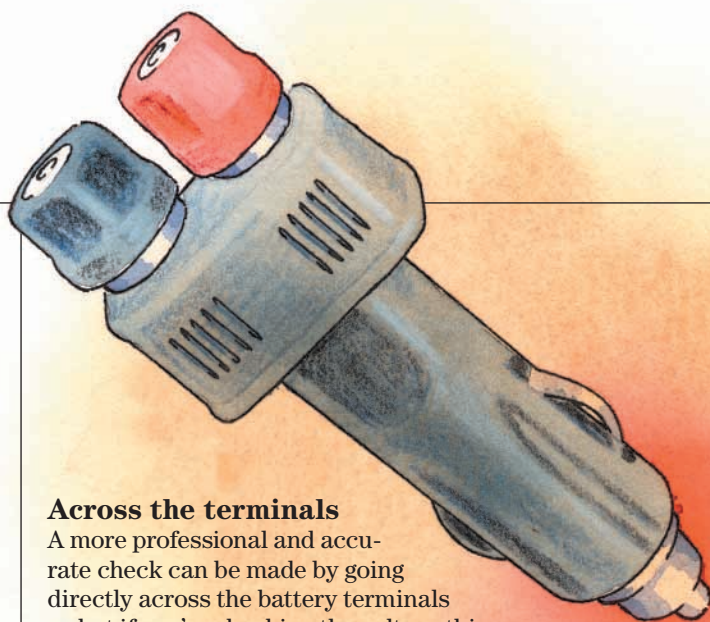
An alternator is coupled to the engine by a belt drive.

Measuring battery/alternator voltage is most safely done with a cigarette-lighter adapter.

if the alternator and regulator are working? We can check the voltage of the boat's electrical system, when the engine is running, with an inexpensive digital voltmeter; analog meters are just not accurate enough.

This check can be made most easily and safely at a cigarette-lighter outlet in the cabin — provided you're not using any lights or appliances at the time. The test is done by placing the voltmeter's probes on the socket's two contacts. For added safety and convenience, or if you're not sure where to check inside the socket, a Radio Shack cigarette-lighter adapter with test terminals can be used (Radio Shack part # 270-1521, \$6.99). This adapter reduces the possibility of accidentally causing a short circuit while testing and, for added safety, has a built-in, replaceable fuse. You can buy a simple, shirt-pocket-size digital voltmeter for this kind of test for less than \$20.

If your voltmeter shows a voltage of 1 or 2 volts above the battery's "normal" voltage, you can be reasonably certain that the alternator and regulator are functioning properly and the alternator is supplying electricity that is being stored in the battery. For wet-cell batteries, a "normal" voltage reading would be 12.6 volts for a fully charged battery and 12.2 volts for one that is 50 percent discharged. For gel-cell batteries, add 0.2 volts to these figures.

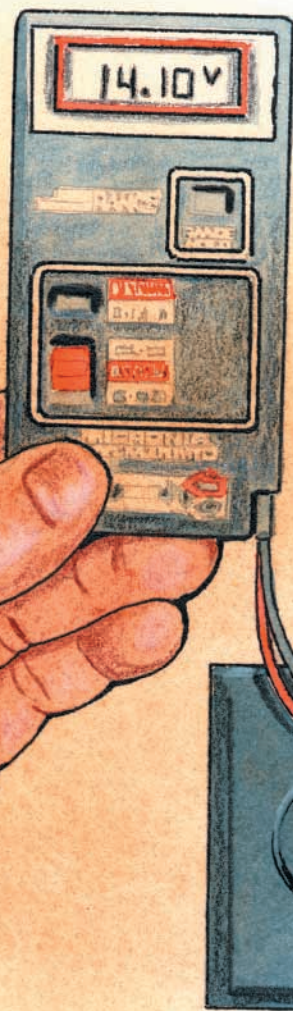


Across the terminals

A more professional and accurate check can be made by going directly across the battery terminals — but if you're checking the voltage this way, inside the engine compartment with the engine running, be sure to stay well away from the engine's spinning belts.

For the long-distance cruiser, the ultimate protection from an alternator or regulator failure is having a spare alternator/regulator on board. Since alternators on the engine are normally located at the forward end, they can be easily worked on from inside the cabin — and replacing an alternator is a relatively simple procedure from mechanical and electrical standpoints.

When on an extended cruise, we keep a spare alternator and regulator on board. Twice in the last 25 years — once from an alternator failure and once from a regulator failure — our onboard spares have allowed us to continue our cruise with only about a half-hour interruption. ⚓



With the engine running, a digital voltmeter reading can determine if an alternator/regulator is charging the battery.

Further reading

Boatowner's Mechanical and Electrical Manual, 2nd edition, by Nigel Calder (1995, International Marine).
<<http://www.goodoldboat.com/bookshelf.html>>
or call 763-420-8923



Eastward Ho 31

*She's just a sweet, 31-foot boat
that suits the Sandifers' plan*

by Karen Larson

BILL AND GENIE SANDIFER SAY IT'S the boats they've owned over the years that have kept their marriage strong. They value the time they spend together on the water. And they develop a strong commitment to each boat they own. How strong? They have an agreement: if either of them walks out on the relationship, the other one gets the boat. Children? That part is negotiable. But don't take the boat. After 40-some years, this marriage is going to last.

Genie can't remember when there wasn't a boat in her life. Her father had the boating bug, so her family grew up in and around boats. Vacations were usually spent on the water. Bill discovered boats at age 12. "Before that, I was into trains," he says. His mother figured his interest in boats was just the next in a series of fads. "I was given a choice of going to camp or getting a boat," he recalls. "I figured a boat would last longer."

It was an Old Town skiff. Bill had to row it for a year before a 7-hp motor was added. So he spent much of his time rowing and then putt-putting around in New York's Oyster Bay, an experience similar in many ways to that of Richard Bode, who wrote the classic,

*"'Most people go to
Singapore and buy
Oriental carpets,'
Genie recalls of
their time abroad.
'We bought a boat.'"*

First You Have to Row a Little Boat.

As teenagers, Bill and Genie didn't meet on the water but Bill, who was advised to meet her father before they could go out together, arrived for that momentous meeting by sea. By this time he was messing about in a 15-foot White, a lapstrake boat similar to a Lyman. Apparently he made a good impression on the older yachtsman.

Nothing fazed her

Bill's test of Genie involved her ability to keep smiling while aboard in the worst of weather. Nothing fazed the daughter of a boater. She knew boating occurred in all kinds of weather.

She passed the test. During this time Bill built a Sailfish that he and Genie sailed on Long Island Sound in some serious weather, including one day when her father, with his 38-foot powerboat, couldn't get out of the harbor.

The day after Bill was commissioned in the U.S. Navy as an ensign, he and Genie were married. He served on two LSTs (Landing Ship Tanks), which he says, grinning, stands for Large Slow Target. One quick sea story must be inserted here: While bringing LST #1177, the USS *Lorraine County*, home from the Cuban Missile Crisis, Bill's formation of ships ran into a frightful storm south of Cape Hatteras. While his ship was pounding into large head seas, a ramp fell on the vehicles in the hold, crushing some of the jeeps and their fuel tanks. A fire broke out. The commanding officer brought the ship about to prevent the headwinds from sweeping the fire into the ammunition-laden trucks behind the jeeps. But coming about put the ship momentarily broadside to 65-foot seas. While the designed point of no return for the *Lorraine County* was 65 degrees, she was heeled to 70 degrees during the turn. The superstructure developed a crack 2½ feet

wide. Running downwind with the seas, the crew of 250 plus 750 Marines made it safely to Charleston for repairs. Genie was lucky Bill made it home from that one.

Various progressions

A progression of children, boats, jobs, boats, locations, and boats followed his enlistment. “When Bill got out of the Navy,” Genie notes, “we had \$1,500. So being sensible people, we bought a boat.” They recognized that this would be seen as “nuts” and they already had their first daughter, Megan. So they named the boat *Nutmeg*. This was a Marconi-rigged catboat made of knotty pine. The knots popped out, causing geysers, near-sinkings, and no end of stress. As it turned out, they had been nuts for buying it.

They sold it soon afterward and bought a Crosby Striper bass boat for cruising Long Island and Block Island sounds. By this time Megan had been followed by Beth. Two more, Chip and Jenny, completed the family. In fact, Bill (ever the do-it-yourselfer) delivered Jenny himself when they couldn’t get to the hospital in time. His signature is on her birth certificate as the attending physician.

They invested in a home on the East Coast in the mid-1980s and bought a business building cruising tugs, called Tugboats. The marine industry declined, taking their fortunes with it, and the family started over. Bill became a project manager for oil rigs off the Texas coast near Brownsville. The family boat at that point was an Aquasport.

The time that followed was punctuated by the first boat they named the *Genie B*, a 16-foot O’Day Daysailer, and jobs first with Charlie Morgan, then with Don Arnow of Cigarette boat fame, and later with Ingalls Shipbuilding. Their job-related moves took them away from and brought them back to the Gulf Coast

Bill and Genie Sandifer, at right, sail their Eastward Ho 31, shown on facing page, in the Gulf of Mexico off Mississippi. The builder’s plate, above, is an especially nice example of such a plate.



“When Bill got out of the Navy we had \$1,500. So being sensible people, we bought a boat.”

of Mississippi, where they live today. The farthest move was to Singapore for several years where Bill’s expertise with oil rigs was in demand.

Children growing up

Before this move, they bought a Pearson Ensign, another *Genie B*, which they sailed out of Pass Christian, Mississippi. The children were growing up by now, and Genie stayed behind while Jenny completed her senior year of high school. It was during this time that Genie became a sailor in her own right.

Sailing skills are not necessarily innate in the daughter of a power-boater. She had been crew and moral support for Bill and helpmate during his many fix-it projects. But she had

not singlehanded their boats. With Bill in Singapore, she spent many a lunch hour with a bag lunch, enjoying the marina ambience from the cockpit of the Ensign. Her epiphany came when she took the *Genie B* out without him. Now Genie is as comfortable as Bill is behind the wheel or with a hand on the tiller.

The Ensign was sold with regret when Genie joined Bill in Singapore. Both Sandifers remember it fondly as a “sweet-sailing boat.” While in Singapore they sailed, of course. “Most people go to Singapore and buy Oriental carpets,” Genie recalls of their time abroad. “We bought a boat.” This *Genie B* was a Cheoy Lee Offshore 26 in need of work. They also sailed and repaired someone else’s Cape Carib ketch for a period of time. With these and other boats that went before, Bill was developing a knack for fixing boats — minor repairs and major structural modifications. “I’m always looking to save a boat,” Bill says. “I often rescue boats.”

They did not bring that Cheoy Lee Offshore home with them, but they did bring a boatless Farymann diesel engine back.

“We had no use for it,” Genie says.

“But it was a good deal,” Bill points out.

More progressions

Once home again, the couple bought an unloved O’Day Daysailer and reglased it. A Pearson Ariel was next, and finally their current boat, an Eastward Ho 31, designed by Walter McInnis of Eldredge-McInnis fame. (The firm of Eldredge-McInnis primarily built fast rumrunners and faster chase boats during Prohibition. Now in his 70s, Alan McInnis, son of co-founder Walter McInnis, is still running the company.)

Repairs on the Pearson Ariel, a 26-footer, became nearly legendary with *Good Old Boat* charter subscribers as Bill wrote about work he did, beginning with issue Number 2, September 1998. Projects on this boat included recoring the deck, bringing the Atomic 4 back to life, rebuilding the rudder, replacing the interior including the galley, replacing the ports, redoing the chainplates, and





The *Genie B* is sensibly maintained and modified inside and out. After four years with the Sandifers, she is still a work in progress. The galley, V-berth, and saloon, above, all reflect Bill and Genie's need for simplicity in a sweet-sailing boat.

fixing leaks. "The best part of the boat was the bottom," Bill says, grinning.

The Ariel had been raced, so it was well outfitted with sails. He sold many of the extra sails and wound up with a small profit on the purchase of the boat. He wrote of this and also of his philosophy that you must keep sailing and enjoying a boat you are bringing back. "From the day we bought it, we used it and fixed things as we went along," Bill says. "Genie wants her boats to run, and I've got to tiptoe around that on weekdays. On weekends it's *got* to run." How do you gut and rebuild the interior while maintaining the boat as a sailing boat? Bill took one section apart at a time.

It could be said that one boat led to another. The Pearson Ensign, for example, was a wonderful boat, but they soon realized the limitations of a boat they couldn't sleep aboard... they wanted a head... a self-bailing cockpit. The Ariel was the answer to these limitations. It was an improvement but, they both laugh, they thought it would be nice if that head were an enclosed head... if the bunk were a double bunk... if there were a table below... if it were powered by a diesel.

Sold quickly

Bill doesn't mind. He likes messing about in boats. Any boats. All boats. And the Ariel was generally finished. It was sold to the first person who came to look at it. Bill and Genie were boatless for a time until he found the Eastward Ho. When he found it, he was looking for a deal on an Allied Seawind and had located one on the East Coast.

Although Bill is a surveyor, his work schedule didn't offer time for a trip north. He hired a local surveyor who told him the Seawind was overpriced and in bad condition. But he pointed Bill toward the Eastward Ho.

Bill had never heard of an Eastward Ho but has since learned that there is also an Eastward Ho 24, which is quite popular. (See Mail Buoy, Page 90.) He has become the informal contact for other Eastward Ho owners on the *Good Old Boat* association webpage. Eastward Ho owners can contact him at devilsel@ametro.net.

"On the pier where she's docked, she's known to be the boat that gets the most use."

Of this boat Bill recalls, "Genie went below and said, 'This is the boat.' It had big windows, 6-foot 6-inch headroom, an open plan. It's a distinctive-looking boat. I don't want a No. 1 Clorox box, No. 2 Clorox box." The Sandifers are also pleased with the engine, a Westerbeke 491 (now called a Westerbeke 30). Its reliability has won high praise with Genie. A 25-hp, 4-cylinder diesel, its block is a marinized English Ford tractor engine.

"Jack Westerbeke marinized all kinds of engines," Bill says. "If I were to repower now, I'd use a Kubota engine. There's a Kubota dealer in every town, and parts are cheap and available." He notes that the Eastward Ho's access to her engine is nearly impossible. The Ariel, although smaller, has much better engine access.


A sensible boat

Bill's rendering of the latest *Genie B* is a work in progress. She's a sensible boat, sensibly maintained and modified, not one that would be referred to as Bristol fashion or a gold plater.

On the pier where she's docked, she's known to be the boat that gets the most use. Bill calls her "more of a motorsailer than a sailboat," although Ted Brewer would probably disagree (see "Dissecting the Motorsailer," *Good Old Boat*, January 2003). She carries a full sailing rig and a hull designed for good performance at displacement speeds. Bill says before he'd take this boat offshore he'd add a positive hold-down for the engine access cover in the cockpit floor and heavy-weather covers for the overlarge windows.

The Eastward Ho, as interpreted by the Sandifers, is not a boat of superlatives. It is a boat of compromises, as all the really good designs are: not the fastest or the slowest, not the biggest or the smallest, not designed to cheat the racing rules, just a sweet, well-maintained, 31-foot, full-keeled boat that suits the plan that Bill and Genie have for her.

The Sandifers have been sailing this *Genie B* for four years. But Genie says with a twinkle in her eyes, that it would sure be nice if this boat had a permanently made-up bunk... a bigger head... a shower... refrigeration. Clearly, they are not yet sailing their last boat.

They have a framed Hagar the Horrible cartoon hanging in a prominent location in their home. In this cartoon someone tells Hagar, "They say a man is lucky if he has just one serious, all-consuming love affair in his lifetime." There is a pause as Hagar becomes lost in thought counting each of his serious affairs... with boats he has owned. He's up to 12 in the last panel. Bill Sandifer's own list is similarly long and each boat has been all-consuming. Lucky for him there's been just one Genie through the years sharing his passion. In fact, it's the boats that have kept the marriage strong. 

Reliable 31s

Three modified full-keel 31-footers

THE ELDREDGE-McINNIS-designed perky little *by Ted Brewer* this is that Carl Alberg and I were trying to come up

Eastward Ho 24 has always been one of my very favorite designs in her size range, a superb little cruiser, so it was a pleasure to be asked to review her larger sister, the Eastward Ho 31. I had some difficulty getting information on other full-keel yachts in this size and of the same era for comparisons. After finding the Carl Alberg-designed Cape Dory 31, I finally settled on my own Douglas 31, which was also built as the Hullmaster 31 and the Cape Carib 31. After working up the figures, I was amazed to see how much alike these three yachts actually are.

The Douglas is the smallest and the lightest, the Eastward Ho the largest, and the Alberg design the heaviest. However, the differences are surprisingly minor. The probable reason for


with a coastal racer/cruiser that fit the CCA (Cruising Club of America) rule of the late 1960s. McInnis, on the other hand, seems to have worked at designing a coastal cruiser that compared favorably with the general dimensions of the other yachts of the times, but with the emphasis on comfort rather than racing. Indeed, the Eastward Ho seems to have the roomiest interior of the three.

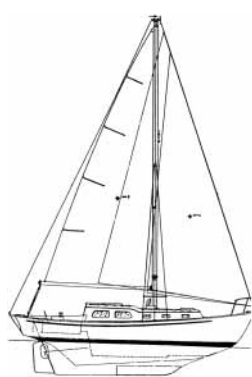
By today's standards, all three of these yachts are narrow, heavy, and short on the waterline. Their lateral plane is of the modified full-keel type, and their sloop rigs are of quite low aspect ratio, so very typical of CCA yachts of the late 1960s. The comparison figures are interesting and worthy of study.

As befits her shallower draft, the ends of the Eastward Ho's keel are less cut away than those of the other boats. I did not try to calculate the actual square footage, but visually it appears that the lateral plane areas of the three are reasonably close. That being the case, I'd expect the Douglas and Alberg to make somewhat less lee-way especially to weather, due to their deeper draft and the slightly higher aspect ratio of their lateral plane. The Eastward Ho might well have a steadier helm on a run due to her longer keel. Her more shallow draft will let her explore a few gunkholes forbidden to the two deeper yachts.

The displacement/length ratios of the three yachts are all on the heavy side, as one would expect from these older designs, but the Eastward Ho, with her 24-foot waterline, still has the lightest ratio by a substantial amount. Given that, and with the longest waterline of the three, she should give the others a challenge on a reach, especially in a good breeze where her smaller sail area would not be any great handicap.

There is little to choose from in motion comfort or capsize screening factor between the three yachts and, in my opinion, any one of these boats is quite capable of cruising blue water. One Douglas 31 survived an Atlantic hurricane at sea some years back and, more recently, a Cape Carib 31 was written up in a British yachting journal for getting through a serious tropical storm in a China Sea passage with no major problem. I would expect no less from the Eastward Ho or the Cape Dory. They will take you there, and they will bring you back in safety and with as much comfort as any yacht their size can offer.

The sailor looking for an able cruising yacht at a reasonable cost would do well to give serious thought to an Eastward Ho 31 or one of the other two yachts. Modern light and beamy cruisers will have more interior volume and perhaps a "private" aft cabin tucked under the cockpit. With their tall rigs, long waterlines, and fin keels, they will undoubtedly be faster as well. But, when the weather turns sour and the sea starts to growl, an older, narrower, and heavier full-keel yacht is not a bad place to be. And, besides, with their long ends and handsome, traditional sheerlines, you'll always get an appreciative glance in any harbor that you poke your nose into. 



Eastward Ho 31



Douglas 31



Cape Dory 31

	Eastward Ho 31	Douglas 31	Cape Dory 31
LOA	31 ft. 0 in.	30 ft. 10 in.	31 ft. 4 in.
LWL	24 ft. 0 in.	22 ft. 9 in.	23 ft. 3 in.
Beam	9 ft. 10 in.	9 ft. 3 in.	9 ft. 9 in.
Draft	4 ft. 2 in.	4 ft. 9 in.	4 ft. 9 in.
Displacement	11,000 lb.	10,000 lb.	11,500 lb.
Ballast	4,500 lb.	4,000 lb.	4,350 lb.
Sail area	430 sq. ft.	460 sq. ft.	504 sq. ft.
Beam/LWL ratio	.409	.407	.419
Displ./LWL ratio	355.2	379.1	408.5
Bal./Displ. ratio	.409	.400	.378
SA/Displ. ratio	13.9	15.9	15.8
Comfort ratio	30.8	31.5	33.1
Capsize screening factor	1.77	1.72	1.73



by J Kolb

unknown. Seeing the dream becoming possible later triggered further projects aimed at improved livability, safety, and handling.

One might ask, “Why not buy a boat that required less work?” Since traveling along the water at the pace of a brisk walk is hardly a logical activity, I can only respond that logic is not always the driving force with sailboats.

Rigging and sails first

Our first undertakings were rigging and sail changes. When we purchased *Kotchka*, she had a mixture of rod and wire standing rigging and an extensive quiver of hanked-on foresails. The old glass backstay insulators for the single-sideband radio were cracked and no longer functioning. We replaced the insulators with modern components and were able to keep the rod backstay. We also converted from hanked-on sails to a Furlex roller-furling unit. We replaced the fore and aft lower shrouds and cap shrouds. Our large quiver of foresails was reduced to one all-purpose 145-percent genoa, re-cut from one of the existing 150-percent jibs, and a smaller, heavy-weather backup sail, also re-cut from the inventory. The original sail inventory included a tri-radial spinnaker that we re-cut into an asymmetrical and set up with an ATN snuffer. This allows us to fly the chute simply and safely with a crew of two.

Next came the addition of a holding tank. *Kotchka* had a head that pumped overboard. We installed the plumbing, tank, and pump ourselves. We ended up with a stock 15-gallon holding tank mounted under the V-berth with a through-deck and through-hull with a manual pump-out option. Initially we had the head plumbed directly to the holding tank. We recently added another Y-valve between the head and the tank so we can pump the waste directly out when we’re offshore. This system has performed without inci-

Kotchka, above, shows her classic lines while sailing downwind. J and Marci Kolb were attracted by her reasonable price, when compared with the Hinckley Bermuda 40 and Pilot 35. The revised foredeck with a repositioned windlass layout, on facing page.

Reworking a classic

Their Hinckley 38 dreamboat came with a multi-year project list

NIXON WAS IN THE OVAL OFFICE, THE Vietnam War was dividing the country, and up in quiet Southwest Harbor, Maine, H.R. Hinckley and Co. (now The Hinckley Co.) was building beautiful sailboats that have since become classics. The company’s William Tripp-designed Bermuda 40 and Sparkman & Stephens-designed Pilot 35 have achieved something approaching cult status.

Many sailboats were racing under the Cruising Club of America (CCA) rules. Hinckley, looking to capture part of the CCA racer/cruiser market, started to build the S&S-designed Hinckley 38. Our H-38, *Kotchka*, is the second hull of the series. Like many boats of the era, she has beautiful overhangs, a narrow beam, functional but modest accommodations, and fine

craftsmanship. In the brokerage market a Bermuda 40 in similar condition will command nearly double the price of the H-38. The beautiful but much smaller Pilot 35 also commands a higher price. The H-38 with her affordable price, sweet-sailing characteristics, and traditional appearance suited us well.

When we bought *Kotchka*, we knew we were buying a multi-year project of changes, alterations, and upgrades. She required serious updating even for the comfortable, reliable weekend cruising that we could foresee. (Our cruising at that time consisted of weekend outings and a longer vacation cruise each summer.) Like many sailors, we dreamed of a more extensive cruising lifestyle, of moving aboard, and of setting off to parts

dent with only regular maintenance, consisting of a weekly dose of white vinegar followed by a splash of vegetable oil.

Before our first launching, we had the old bottom paint removed. After a good drying, we applied a barrier coat and anti-fouling paint.

Thinking things through

We thought things out carefully in each case, and the results have been very positive. But updating a 30-year old sailboat is not always straightforward. Each project was a mini-lesson, forcing us to learn more about the boat, her construction, and our capabilities. The bottom line, which we tried to apply every step of the way, was to take the time to consider everything before purchasing anything, cutting any holes, or taking anything apart. The old cliché reminding us to “measure twice, cut once” only gets at part of the issue. Our considered advice now is, “Before doing *anything*, carefully consider *all* the options.”

Case in point: after our first year of ownership we decided to replace the ancient (and frankly, scary) battery-charging system with a Heart inverter/charger and a Link battery monitor. This upgrade provided an opportunity to review all of *Kotchka's* wiring — a great side benefit to the installation process. Like many older boats with multiple past owners, *Kotchka* had a mixed bag of wiring, some well done, some terrible.

We wound up removing what seemed like miles of old, unused wiring, some of which was household lamp cord. Some wires were simply clipped on each end and left in place, presumably as they were either replaced or no longer needed. Tracking each wire individually, trying to determine what was in use and what was a dead end, was a mess. In hindsight, we should have just pulled out all the wiring and started from scratch. We were negligent and paid the price by not considering all the options before diving in.

Kotchka has had some equipment upgrades as well. A broken Loran was replaced by a Garmin GPS. A massive

“One might ask, ‘Why not buy a boat that required less work?’ Since traveling along the water at the pace of a brisk walk is hardly a logical activity, I can only respond that logic is not always the driving force with sailboats.”

12-inch-deep CRT radar unit that was fading rapidly was replaced by a slick new Raytheon flat-screen unit, and we added a cockpit repeater for the GPS. Although Marci and I are not fans of linked electronics, we did opt to interface the GPS with the radar. This enables us to place a waypoint on the radar screen, a nice feature when looking for a particular buoy on a busy and fog-bound Maine coast. The Signet wind indicator and depth sounder and the ICOM M700 SSB on the boat at purchase remain in working order.

One big surprise

Most of these changes were anticipated, planned, and budgeted, but there was one big surprise. The fall after our second annual hauling and winterizing, the yard mechanic noticed oil in the antifreeze. A professional examination of our Westerbeke

4-107 diesel engine was inconclusive. Compression was low but not outside specifications. Westerbeke indicated the problem was simply old age. Not very satisfying.

After a lot of research, we boiled our options down to two: repower with a new engine or rebuild our 4-107. In favor of the new engine: quieter, lighter, and more powerful, plus a nice new engine warranty. Downside: cost, a big difference. On the plus side for rebuilding: parts for the 4-107 are easily available, any good diesel mechanic can work on it, it is tried and true technology, and no changes to the boat would be required. The engine in *Kotchka* is located under the floor of the main saloon on top of the keel bolts. A new engine would require new mounts, new plumbing for the exhaust, and other reconfiguration expenses related to the tight and awkward space.

We decided to rebuild. While the engine was out of the boat, we seized the opportunity to make a few minor upgrades. We changed the stuffing box to a dripless system, added a dedicated electric pump for oil changes, painted the bilge, and changed the location of the oil filter for easier access. We can now change *Kotchka's* oil and filter in less than 10 minutes. This makes sticking to a regular oil change schedule a breeze.

This rebuild project, although costly and unanticipated, resulted in good operation and simplified maintenance for a bit more than 1,500 hours. The engine then sprang a tremendous oil leak. Examinations revealed a

great deal of blowby air and oil coming back up through the oil fill. The most likely culprits were rings or valves or both.

We knew we had to revisit the repower-or-rebuild issue. This time we opted to repower with a rebuilt Perkins 4-108, a slightly more powerful and a bit faster-turning engine with the same footprint.

Sailing often

During our first seven years of ownership, we sailed *Kotchka* as often as possible. We worked on keeping her varnish in good shape, improved her cosmetics with a new paint job, and plugged away at the 101 regular



jobs all boatowners face. Then our cruising plans took a dramatic turn. I lost my job, and Marci was able to take a leave of absence. We seized the day and spent 10 weeks cruising Downeast Maine and the eastern shore of Nova Scotia. This extended cruise gave us insight into the difference between weekend cruising and being full-time liveaboards. We returned from this trip armed with a “to do” list in anticipation of moving aboard and cruising full time.

At the top of the list were several creature comfort improvements. We replaced the cushions in the sleeping berth. While adequate for weekend cruising, they and our backs did not hold up with their everyday use. We wanted a multi-density foam, firm on the bottom and soft on the top, for the cushion. We were talked into five inches of semi-firm foam. We should have been more insistent, as we quickly realized we wanted more softness. First we tried egg-crate foam purchased at a discount store. While this was an improvement, we still didn't have the comfort we wanted.



“We replaced the cushions in the sleeping berth. While adequate for weekend cruising, they and our backs did not hold up.”

We've recently replaced the egg-crate foam with a thicker foam mattress pad cut to fit. This has made a dramatic improvement.

During our test cruise we also realized that getting out of the weather was important, so we installed a more robust dodger and a sun awning. New cockpit cushions were also part of this round of work. For this we opted to use Sunbrella fabric for everything: interior cushions, dodger, awning, the works. But cockpit cushions are exposed to the elements and are subject to lots of dirt, traffic, and stains. Sunbrella was not the right material. We have since recovered these cushions with a more cleanable, stain-resistant fabric called Phifertex. Once again a little more thought and research might have saved us some dollars, time, and aggravation.

Other quality-of-life improvements addressed storage and functionality

Additional storage spaces were created throughout the boat: in the nav station, above, and in the saloon, left and right, where the port pilot berth was transformed into additional cupboards, drawers, and cubbies and the starboard pilot berth was modified to create underberth stowage.

in the living spaces. Long overhangs, a narrow beam, and beautiful tumblehome make *Kotchka* a sweet sailer and a handsome vessel, but they don't do a thing for functional interior space. Her wide and deep cockpit lockers were great for carrying the sails necessary for a hanked-on racer in the CCA days. As functional storage space for a liveaboard, however, they leave a lot to be desired. Sliding saloon settees and pilot berths were great for an offshore racing crew but severely limited our storage space. We modified both pilot berths to improve storage. The starboard side was altered to create under-berth stowage. The port side was modified to create additional cupboards, drawers, and cubby storage. Cockpit locker storage is still a work in progress, but it is at the top of the list.

Ground tackle changes

Kotchka's ground tackle, windlass, and so on — while fine for a racer/cruiser — were not adequate for liveaboards who use this gear nearly every day. When we purchased *Kotchka*, her ground tackle consisted





of an adequately sized CQR linked to 6 feet of chain and 200 feet of 5/8-inch three-strand. She now has 175 feet of chain and 250 feet of rode linked to the CQR. We also carry a Danforth and a Fortress, both with chain and rode. Anchor sentinels were added to our ground-tackle inventory. The sentinels keep *Kotchka* from tripping the secondary rope rode with her keel when swinging in a current or wind shift. We also repositioned the windlass to allow for a better fall of the chain into the locker. This whole process of redesigning and changing the anchoring system was done in several steps. Had we known better what our cruising needs for an anchoring system would be, we could have saved a lot of time and money.

The transition from weekend cruising to liveaboard status caused us to make several changes. All of these were considered “must-haves” before moving aboard. We added a four-man life raft, an EPIRB, a Sailomat windvane, and solar panels to *Kotchka*’s inventory. Many cruisers opt for wind generators. We’ve never regretted our decision to go the solar route. The panels have delivered quiet, unobtrusive, maintenance-free operation. Even on cloudy days, they produce a bit of a charge. Every time we are anchored near a cruiser with a wind generator, the constant whir has

confirmed our choice. After about a year of use, we reconfigured the solar panel mounting brackets to allow us to tilt the panels to better catch the sun’s rays. The improvement has been significant.

The list goes on

When we moved aboard, our mid-1980s-vintage belowdecks autopilot was functioning, albeit a bit erratically. During our first six months of cruising, it finally gave out. We opted to replace it with an above-deck unit from Scanmar. We looked at several

“We added a four-man life raft, an EPIRB, a Sailomat windvane, and solar panels.”

below-deck and above-deck installations. Tipping the scales in favor of the Scanmar unit were easy installation, a competitive price, and generally good reviews. The unit has not performed well, however, although support from the company has been very good. It is awkward to engage and disengage the unit, and it has erratic steering. Plus or minus 20 degrees is about as good as it will do. In spite of less-than-stellar performance from the autopilot, single-

handed watches are now significantly easier, more enjoyable, and (in our view) safer.

Our first year aboard we sailed *Kotchka* to Prince Edward Island, Cape Breton, and Nova Scotia. Then we moved down the East Coast of the U.S. to Florida and on to the Bahamas. The second year saw us cruising Maine for the summer, followed by another trip south, then on to the Out Islands of the Bahamas.

During our two years aboard we’ve learned a lot, met many wonderful people, and have been aboard many great cruising boats. We’re often left yearning for their roomier interior, efficient anchoring system, cutter rig, and/or mizzenmast. But for all of her limitations, *Kotchka* is our home. It takes just one admiring comment from a fellow cruiser to remind us of what she has — great classic beauty, sweet sailing, and years of our own sweat equity — to help us to overlook any shortcomings. 



Rigged for cruising with a windvane (lower right) and solar panels (top right), *Kotchka* has spent two years traveling north from Maine to the Canadian Maritimes and south to the Bahamas. The engine is shown above.

Sharp ^{as}_a laser beam

A keen racer, this Canadian started out as a journalist before teaching himself yacht design

by Marianne Scott

“**C**HEAT THE NURSING HOME — DIE in your Laser.” That catchphrase appears on bumper stickers, Laser trailers, and websites as far away as Sweden. It’s only one indication of the loyalty Laser sailors worldwide feel toward their one-design, single-sail boats. To date, 178,000 Lasers have been built, making them the world’s most popular singlehanded racing boat. Each year, another 3,000 Lasers are cranked out in factories in the U.S., Chile, Great Britain, Japan, and Australia.

The Laser has been raced in 122 nations. It has spawned clubs, associations, books, and of course endless regattas wherever people can put a sailboat in the water. Many former racers — today’s cruisers — learned sail handling on a Laser. In 1991, it became an Olympic class boat, and when 58 Lasers from 58 nations entered the 1996 Atlanta Olympics, it marked the largest number of countries to participate in any Olympic event in any sport.

“It was the first competitive boat I sailed,” says British Columbia sailor Jeffrey Eckard, who competed in the 1988 and 1992 Olympics and won gold in the 1991 Pan American Games sailing 470s. “I was in sailing school, 11 years old, and 20 pounds too light, but to me, to be able to sail a Laser was ‘gold.’ Today, to get my Laser ready, it takes two minutes, and I’m comfortable. You just point the boat. It’s natural. Fits like a glove.”

The phenomenal success of this centerboard catboat was not something Bruce Kirby foresaw when, in 1969, he doodled a “cartopper” sailboat during a telephone conversation with Ian Bruce, a Montreal product developer and builder of dinghies. Ian represented a client who wanted to manufacture outdoor equipment and asked Bruce Kirby for a small-sailboat concept. Although Ian also warned



Phil Bayne

Runaway is a custom 40-footer Bruce Kirby designed in 1980 for himself and partner John Spain. They raced her in the SORC (Southern Ocean Racing Conference) and in the Admiral’s Cup and Fastnet race. She won her class in Block Island Race Week in 1980 and the New York Yacht Club June Regatta in 1980 and 1990.

that getting such a boat into production was a long shot, Bruce took his sketch home and developed in-depth drawings.

Surprisingly, he was not a boat designer by profession. Bruce Kirby, born and raised in Canada’s capital, Ottawa, was a professional journalist who had worked for both the *Ottawa Journal* and the *Montreal Star* before being lured to the U.S. to assume the editorship of *One-Design Yachtsman* (a magazine whose ever-changing name tracks the evolving

sailing scene — it was rebaptized *One Design and Offshore Yachtsman*, then *Yacht Racing*, then *Yacht Racing/Cruising*; today, it’s published as *Sailing World*). He considered himself more of a “hobby” boat designer, albeit one with a lot of sailing experience.

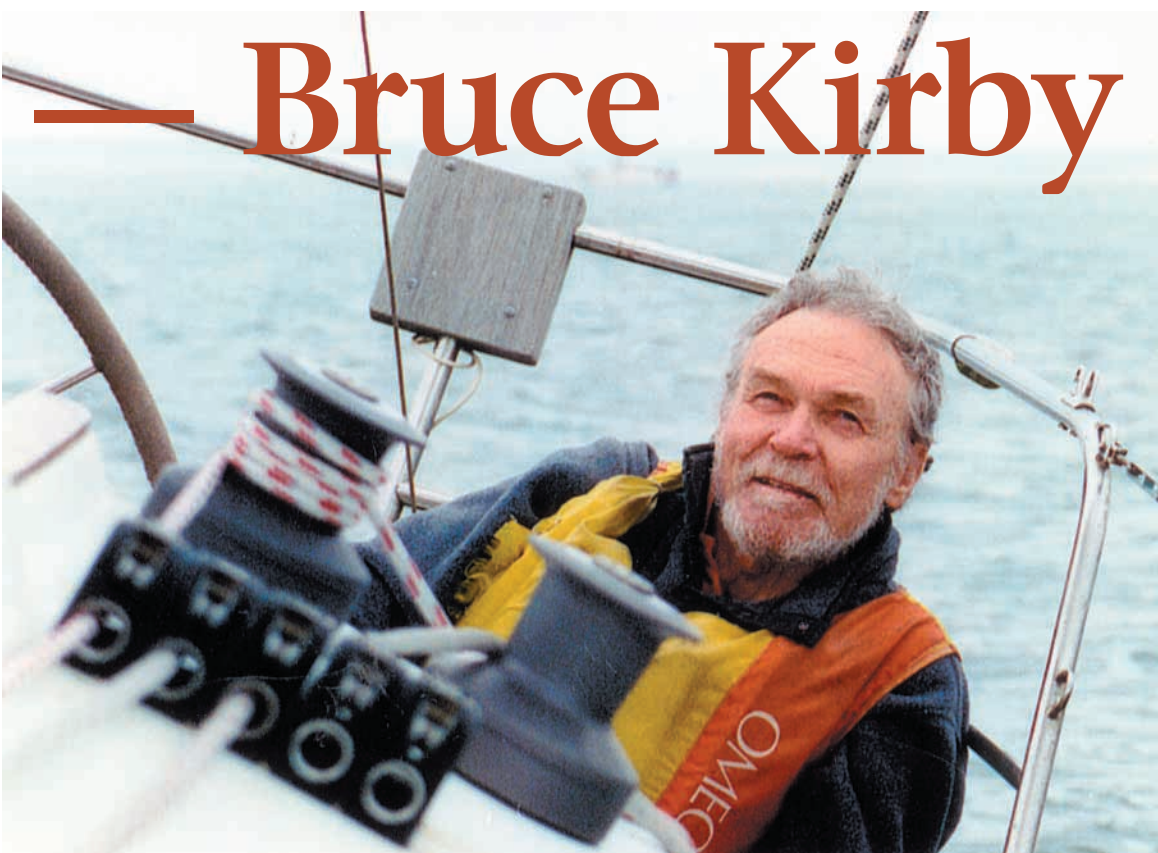
Born to sail

From his earliest memories, boats were part of Bruce Kirby’s life. His family were members of the Britannia Yacht Club on the Ottawa River, where his father and two uncles served as commodore. Although the Depression started shortly after Bruce’s birth — he was born the year of the great stock market crash of 1929 — he was able to sail with his father and older brother, David, on the family’s 24-foot sloop, *Velvet*, although they couldn’t afford a new mainsail. In high school, he excelled at history and English, rather than math and science, and often studied old copies of *Yachting* instead of doing his homework.

But he remembers one science teacher who inspired him. “He always told us to aim high,” recalls Bruce. “Aim at a star; you’ll shoot higher than if you aim at a tree.” Bruce also loved sailing dinghies and, having grown to 6 foot 2 inches as a teenager, he easily handled the International 14s in which he competed in Montreal and Toronto. After several wins, he left Canada for the first time and raced in Connecticut, not knowing that one day the state would become his permanent home. In 1948, he tried out for the first post-World War II Olympic Games, racing a Firefly. He lost in the final heats and returned home to finish high school.

By age 20, Bruce was an Ottawa newspaper reporter and worked there for three years until he was invited to join another reporter on a “sail around the world.” He accepted almost instantly. “Let’s do it,” he decided,

— Bruce Kirby



Bruce Kirby was a Canadian newspaperman before he began editing sailing magazines and designing boats.

a phrase that could be the leitmotif of his life. He and his friend, who'd inherited money, ended up on a 73-foot ketch in England and sailed in the Mediterranean for a year until family circumstances caused his friend to move back ashore. Bruce returned to Ottawa to say good-bye to his fatally ill father and rejoined the newspaper, to which he'd also contributed while sailing. He met, courted, and eventually married Margo Dancey and jokes that he had a verbal "pre-nup" allowing him to try out for the 1956 Olympics. The singlehanded boat in that contest was the Finn, with Bruce Kirby representing Canada and competing against such well-known names as Paul Elvstrom, who went on to win the gold in Melbourne, Australia, that year. Bruce was eighth out of 25.

His next venture was the prestigious International 14 team race in Cowes, England, and it was this event that determined his career as a yacht designer. Although his team won, he observed that the New Zealanders sailed much faster in heavy winds. He vowed to create a better boat for himself and "eyeballed" a design on shelf paper, dubbing it the "Kirby Mark I International 14." After having the boat built, he won several races in it. He also studied Norman Skene's *Elements of Yacht Design*, which

taught him to calculate prismatic coefficients, sail area, and wetted surface ratios. What he learned led to his bringing out the Kirby Mark II International 14. Over the years, he continued to improve the model through six reiterations, all of which became popular in the U.S., Britain, and Canada.

"To date, 178,000 Lasers have been built, making them the world's most popular singlehanded racing boat. Each year, another 3,000 Lasers are cranked out in factories."

Editing, sailing, designing

In 1956, he moved to take a job at the *Montreal Star*. Although responsible for the news desk, he managed to persuade his boss to let him cover the 1962 America's Cup in Newport, Rhode Island. Two years later, he entered the 1964 Olympics in Japan and competed in the Finn class,

again returning without a medal. But his name as a designer, racer, and writer had become so well-known he received an offer to take on the editorship of *One-Design Yachtsman*. After he held out for the unheard of salary of \$15,000 per year, Bruce and Margo, along with their two young daughters, Janice and Kelly, moved to Chicago in the winter of 1965. He got the magazine to sail properly, enjoyed the editing, and continued racing on Lake Michigan. He entered the world's longest annual freshwater race, the Chicago-Mackinac, an event that caused his magazine to start covering distance racing. He also sailed *Stars*, which led to his competing for Canada in the 1968 Olympics in Mexico. A year later, after Bruce Kirby, his family, and the magazine's operations had moved to Connecticut, he received the auspicious telephone call from Ian Bruce.

It took some doing to get the boat that eventually became known as the Laser into the marketplace. After Bruce drew the lines plan, sailplan, rudder, and centerboard, he sent the drawings off to Ian. As Ian predicted, his outdoor manufacturer didn't follow through, and the sailboat remained a blueprint only. A year later, *Yacht Racing's* marketing manager proposed a regatta — calling it "The America's Teacup" — for new,

small sailboats that could be launched from a beach and would cost no more than \$1,000 for a monohull or \$1,200 for a multihull. (Incidentally, Hobie Alter introduced his Hobie Cat at the same regatta.)

Bruce and Ian agreed to enter the regatta with a prototype of the “cartopper,” and Ian, who was already manufacturing the Mark III International 14s, produced a pink-and-purple dinghy from the plans. He drove from Montreal and picked up sailmaker Hans Fogh in Toronto on the way to the regatta venue — the Playboy Club at Wisconsin’s Lake Geneva. Hans had built the sails without ever having seen the actual boat. Although the “Weekender,” as it was originally called, came in first and second during the race’s opening day, the mast-sail combination lacked precision. Hans managed to get the use of a colleague’s sail loft and recut the sails overnight. Performance improved markedly, and the dinghy created quite a buzz at the regatta.

After finally having seen his boat in three dimensions and having tested it on the racecourse, Bruce literally returned to the drawing board. He worked with Ian to improve the hull’s stiffness and the helm balance while also adding a movable mast step. By late 1970, the boat’s parameters were laid out and have remained intact since then. (The single major adjustment is the “Laser formula,” which allows for alternate rigs for people of different weights, thus allowing women and youths to compete.)

The only thing the dinghy lacked was a sexy name. In an article, Bruce wrote that at a yacht club party, a McGill University science student said to Ian Bruce, “Why don’t you call it something modern and scientific, something that would suit the space age and that young people would iden-

“Bruce and Ian agreed to enter the regatta with a prototype of the ‘cartopper’ drawings and Ian, who was already manufacturing the Mark III International 14s, produced a pink-and-purple dinghy from the plans.”

tify with?” Ian blurted out, “Something like laser?” When I heard the term, I answered, “Let’s do it.” That’s how the new class got its name.”

With two new boats out of the mold — officially the first Lasers — Ian and Bruce went to the New York Boat Show in January 1971. The sailboat was priced at \$695. A record 144 were sold, which was more than any other boat in the show’s history. The Laser became a status boat for singlehanders, and Ian began mass producing them in Pointe Claire, Quebec. Success spurred Bruce to design more small boats.

Just two years after the Laser’s introduction — and although he knew little about measurement rules — he designed an IOR (International Offshore Rule) keelboat, the San Juan 24.

More than 1,200 were built, and the racer’s popularity was only eclipsed by the introduction of the J/24. San Juan 24 owners’ groups still swap information and regularly congregate for regattas.

For about four years, Bruce continued at the helm of *Yacht Racing*, but found that the combination of editing and designing was too time-consuming. Royalties from the Laser and San Juan were sufficient for the family to purchase the spacious home they still occupy today. Located in Rowayton, Connecticut, the house overlooks Long Island Sound and has its own dock. It’s a convenient location only 45 miles from New York City in a region where American competitive sailing was born. In 1975, he turned to full-time boat design and has drawn more than 60 different boats over the past quarter century.

The America’s Cup

In 1981, the phone rang again. This time the caller was Marvin McDill, the leader of a team of lawyers Bruce calls the “Calgary Group.” The lawyers had decided Canada needed an entry into the 1983 America’s Cup (the race in which Australia was to wrest away the trophy from the New York Yacht Club after 132 years) and Bruce Kirby should design it. With characteristic enthusiasm (“Let’s do it”), Bruce accepted the challenge, believing that his sailing experience, design

skills, and intuition derived from decades of looking at how boats sail gave him the confidence to create a competitive 12-Meter for the most prestigious yacht race in the world.

Canada I, as the 12-Meter was called, was built in Ontario. “We made it to the semi-finals,” Bruce says. “If you consider our dollar-to-success ratio, we did extremely well. We just didn’t have the bucks the others did. And the yacht served again four



A Laser 13, above left, carries a jib and can even carry a small spinnaker. Bruce Kirby designed the Norwalk Island Sharpie, above right, as a shallow-draft family boat. Plans are available to build the boat in lengths from 18 to 31 feet.

years later, when she was refurbished in Victoria as *Canada II*. We had even less money then. I even added a wing keel without tank testing!" Boat-builder and three-time world-champion Star racer Eric Jespersen served as crew on *Canada I*. He recalls this period with fondness and built a close friendship with Bruce.

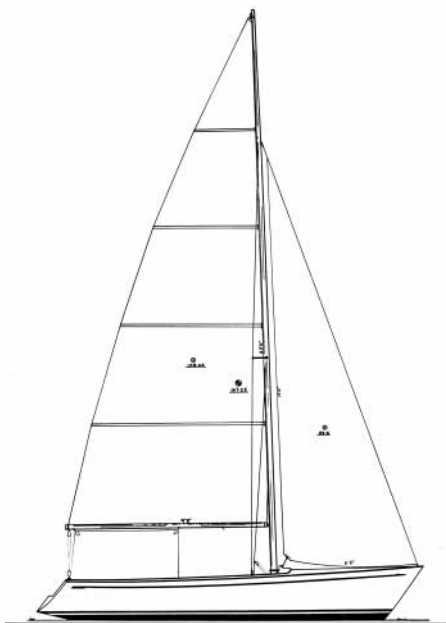
"My boatbuilding background came in handy when I went to the training camp in Florida," Eric remembers. "While working on the keel's trim tab, I noticed the fitting hung down one-quarter inch below the rest of the keel." He knew instantly the tiny protrusion would violate the boat's 12-Meter rule and that the extra draft would be paid for by reduced sail area. "Bruce was alarmed," Eric says, grinning. "The measurer was coming at 0700, so I worked all night to shorten the trim tab and recess the fitting. Fortunately, the boat measured to the millimeter for maximum draft. I saved Bruce's bacon."

His name on a boat

In the late 1970s, Bruce designed a 25-footer for Quebec boatbuilder Dick Steffen, who wanted a fast boat to beat the J/24 on the racecourse. The Kirby 25 did just that. When J/Boats launched its 30-footer, Bruce followed with his Kirby 30, which again passed the J on the racecourse. Both of these boats, of which several hundred were built by Mirage Yachts between 1978 and 1983, maintain good old boat status, have spawned user groups, and continue to compete in one-design races. Bruce also did some custom designs. "Jespersen Boatbuilders constructed my 8-Meter, *Octavia*, and then a 6-Meter for another client," he says.

And he's always liked a challenge. That's what led to his creating a 23-foot pedal-powered boat 15 years ago for an ex-Navy Seal who wanted to cross the Atlantic using his own muscle. The pedals activated the propeller, and the adventurer broke the previous self-propelled record by 12 days.

The Norwalk Island Sharpie, which Bruce says was basically a modernized, flat-bottomed Sharpie made of



In profile, the Ideal 18 keelboat has the lines of a much larger boat. The open transom saves weight. See photo on Page 89.

marine plywood, was another success. Several different companies built the cat-rigged, shallow-draft boat ranging in length from 18 to 31 feet, which is highly suitable for places like the Chesapeake Bay and other shallow waters. "I've also sold between 400 and 500 plans to [home-based] boatbuilders," adds Bruce. The Ideal 18, of which about 300 have been built by Ontario Yachts, is another of his popular yachts used in team racing on Long Island Sound.

No retirement

When you hear Bruce's voice over the telephone wires, you'd think he was about 38 instead of a wise 74 years of age, with a gray, "old salts" beard. And 38 is how he feels at heart. He continues to race, design, and write. "You know, Olin Stephens [of Sparkman & Stephens] is 95 and is still taking computer courses. That's something to emulate."

Bruce has attended every America's Cup race for the past 40 years and covered them for various publications. Naturally, he serves on the America's Cup Hall of Fame selection committee. At the dock in front of his house, his personal boat, a Nightwind 35 he designed in 1980 and which is actually called *Nightwind*, gets used at the Wednesday night races. "Ryder Yachts only built 13 of these center-boarders," he says. "But they draw only 2 feet 10 inches, and we cruise ours for a couple of weeks every year. We have two granddaughters, aged seven and five, and we're starting them daysailing on the boat."

For serious racing, he uses his Sonar 23 on Sundays. That's another one-design production boat he developed when his yacht club, the Noroton Yacht Club in Darien, Connecticut, lacked a proper boat for club racing.

Continued on Page 89



The 23-foot Sonar keelboat was a successful club racer as well as a good family boat. Bruce Kirby remains an avid racer, shown here at the helm.



timeless

photography by



tranquility

Richard Coberly

Chrysler 22

*Sounds like a car,
but this trailerable cruiser
sails like a pedigree Herreshoff*

by Gregg Nestor

IN 1965, THE CHRYSLER CORPORATION entered the marine marketplace by acquiring Lone Star Boats and West Bend Outboards. During that first year of production, all three of the names (Lone Star, Chrysler, and Chrysler/West Bend) were noted in its literature and on its products.

In the 1966 model year, Chrysler began marketing its own line of boats and outboard motors. Using the Lone Star Boats production facilities in Plano, Texas, Chrysler Marine built thousands of powerboats and sailboats. In the sailboat division alone, the company offered more than a dozen different classes. These comprised about eight daysailers and two catamarans with the balance being trailerable cruisers, including the Chrysler 22.

For their daysailers, Chrysler Marine benefited from the talents of design engineer Rod McAlpine-Downey. He was responsible for designing the C-13 Privateer, C-14

Dagger, C-15 Mutineer, and C-18 Buccaneer. Of these four classes, the popularity of the C-18 Buccaneer is as strong today as ever.

To insure the success of the cruising sailboat division, Chrysler enlisted Halsey Herreshoff as the design engineer. Halsey, the grandson of famous boat designer/builder, Nathanael Herreshoff, had a reputation for designing many interesting boats, including the Bristol 29.9, the Herreshoff 31, and the Freedom 40. Halsey also designed the Chrysler 22, which made its debut in 1975. The production run of the Chrysler 22 lasted approximately 4 years. The exact number of boats produced is not known.

Not so fortunate

Unfortunately, while Chrysler Marine was enjoying great success, the automobile division was not so fortunate. In 1979, Lee Iacocca, chairman of Chrysler Corporation, secured federal



loan guarantees to prop up his ailing company. One of the requirements for the government bailout was that Chrysler Corporation had to divest itself of any non-automobile-related businesses. Chrysler Marine disappeared in 1980. The outboard motor division followed in 1984.

Whether it's the Herreshoff design, the novelty of owning a boat built by a car company, or an interest in a vintage, proven trailerable cruiser, the Chrysler 22 is still a popular boat. It has an overall length of 22 feet, a waterline length of 19 feet, and a beam of 7 feet 9 inches. It displaces 3,000 pounds, 825 pounds of which is ballast.

The profile of the Chrysler 22 shows a little sheer, moderately low freeboard, a straight bow, and a slightly rounded, reverse transom. The rudder is inboard, and the cabin-top slopes all the way to the bow,



One of a few sailboats built by a car company is Frank and Judy Moser's 1978 Chrysler 22, above. The cockpit is 6 feet in length, but is swept by the long tiller, which tends to interfere with passengers and crew, at left. Yet Frank and Judy say, "There is nothing we *don't* like about this boat." When asked about the swing-keel cable hum, Frank replies, "It's music to my ears."

initially giving the boat a raised deck appearance. However there are narrow (8-inch) sidedecks. Overall the boat looks clean and uncluttered. The hull and deck are fiberglass. The hull is solid, hand-laminated fiberglass, and the decks, along with the cabin-top, are a sandwich of two fiberglass layers with a synthetic honeycomb core. Foam flotation is standard, and the boat is said to be self-righting. The foredeck is free from clutter except for a large hatch made of alternating ribs of opaque and translucent fiberglass.

The companionway hatch is also made of this alternating rib construction and was available in an optional pop-top version. All deck surfaces, including the cockpit seats, are skid-resistant. There is a full-length, anodized aluminum, combination genoa track and toerail. Even though the shrouds are inboard, and although there's a toerail, it would be more prudent to use the cabintop rather than the narrow sidedecks when going forward in rough weather.

Little brightwork

Brightwork has been kept to a minimum, with teak present only as companionway hatchboards and as trim on the companionway sliding hatch. All deck hardware is of satisfactory quality, some of it secured with backing plates and some relying on areas of solid fiberglass. The hull-to-deck joint is lapped, sealed, mechanically fastened, and covered with a vinyl gunwale.

The Chrysler 22 was available in two keel configurations: an optional 1,010-pound fixed keel model that draws 3 feet 9 inches, and the more popular 825-pound swing-keel version. By means of a winch located



"The Chrysler 22 is a satisfactory trailerable cruiser for beginners. It's no bluewater sailor, but it is comfortable in relatively protected waters."

inside the cabin beneath the bridge deck, the swing keel can be raised or lowered. With the swing keel in the up position, the boat draws only 1 foot 11 inches as compared to 4 feet 6 inches when down.

Located in the cockpit along the transom is a separate, ventilated, fuel-tank locker that avoids fuel spills and fumes inside the cabin. Just forward of the fuel-tank locker is the inboard, through-hull, rudder-and-tiller assembly. In shallow waters and for trailering, the rudder can be raised by

control lines at the base of the tiller. The cockpit is self-bailing and has a bona fide bridge deck to prevent water from cascading below, should a wave fill the cockpit. The boat has amply large port and starboard cockpit seat lockers. While the cockpit is 6 feet in length, the tiller extends to a position just short of the bridge deck and tends to interfere with everyone except maybe the helmsman. The cockpit coamings are high and smoothly lead into adequate backrests.

Down below

To enter the cabin, one uses the optional portable cooler as a step. Without this option, stepping from the cockpit into the cabin is awkward unless the port dinette seat is used as a step. Down below, the Chrysler 22 uses a molded fiberglass liner or pan for added structural support. Brightwork here is kept to a minimum, too, with teak solely used as fiddle boards or to trim the plastic/wood laminate forward bulkhead. The majority of the interior (headliner, sides, and sole) is the exposed smooth finish of the fiberglass pan. Forward is a surprisingly comfortable 6-foot 3-inch V-berth with a maximum width of 65 inches. Overhead is the large forward hatch for light and ventilation.

Centered under the aft end of the V-berth is space for a Porta Potti. (A toilet with a holding tank and deck pumpout was optional.) The bulkhead separating the V-berth from the main cabin has been opened up, giving a sense of spaciousness. It also allows for easier forward access. A privacy curtain separates the V-berth from the main cabin.

In addition to the forward hatch and the companionway hatch, there



The tiller assembly, above. In shallow waters and for trailering, the rudder can be raised. At left, ample storage is in the cockpit seat lockers. The foredeck and companionway hatches, at right, are constructed of alternating ribs of opaque and translucent fiberglass.



A double berth is created from the port dinette, at right.



The comfortable 6-foot 3-inch V-berth, below, has a maximum width of 65 inches.



If you use the optional slide-away galley, you gain the use of the starboard settee berth, at left. When the galley is stowed, the remaining settee berth is 4 feet 6 inches long.



are four fixed portlights illuminating the main cabin. To port is a dinette that converts to a 6-foot 3-inch double berth, and to starboard a settee/single berth of the same length. To achieve this length, both berths extend partway beneath the cockpit seats and merge with the cockpit lockers, which are open to the cabin. With the optional slide-away galley in use, the starboard settee is lost; and when the galley is stowed, the remaining berth shrinks to 4 feet 6 inches.

There is full sitting headroom of 34 inches, while the optional pop-top allows for standing headroom. Unlimited headroom is available, of course, if one stands at the foot of the companionway with the sliding hatch open. There are 18 bins, shelves, and places to stow gear in the forepeak, under all of the settees/berths, behind the settee backs, and along the sides of the V-berth.

The rig

The Chrysler 22 sports a 26-foot 6-inch mast, stepped on deck with a hinged tabernacle, supported belowdecks by an aluminum compression post. Both the mast and boom are made of anodized aluminum. It is a single-spreader rig with single upper and lower side shrouds and a split backstay. (A backstay adjuster was optional.) The standard sail area of this masthead-rigged sloop is 202 square feet, comprised of an 88-square-foot mainsail and a 110-percent genoa of 114 square feet. This arrangement makes for a headsail-driven boat.

“The cockpit is self-bailing and has a bona fide bridge deck to prevent water from cascading below, should a wave fill the cockpit.”

Halyards are external, wire with rope tails, and are cleated at the base of the mast. The full-length anodized aluminum toerails eliminate the need for genoa tracks. Blocks may be positioned anywhere and are easily moved. Two Barlow #15 winches are located on either side of the aft portion of the cabinhouse. Boom-end sheeting is attached to a traveler just aft of the tiller, between it and the dedicated fuel locker. This arrangement clears the cockpit of loose running rigging.

Under way

The Chrysler 22 is a satisfactory trailerable cruiser for beginners. It's no bluewater sailor, but it is comfortable in relatively protected waters. Like most trailerable sailboats, it suffers from initial tenderness. The Chrysler 22 quickly heels to about 20 degrees, at which point it stiffens. The boat's 3,000-pound displacement, combined with its conservative sail area, makes its light-air performance unexceptional. The boat comes into its own and performs best in moderate winds of 15 knots or more. When weather helm

develops, adjusting the angle of the swing keel helps minimize it. To realize the boat's potential, larger genoas, a boom vang, and topping lift are worth considering. However, the stock controls will balance the boat out fairly well. When balance is achieved, the Chrysler 22 will tell you. The swing-keel cable will begin to hum, setting up a vibration that is amplified by the hull. This song is loved and hated by owners of Chrysler 22s. Remember to keep the swing keel down when going to windward to help the boat point better and to lift it up on a run to reduce drag and pick up speed.

A checklist

Before you do anything, keep in mind that any Chrysler 22 will be approximately 25 years old. Some of the boats you see will be in great shape, while others may require extensive work, especially if they have been “owner customized.”

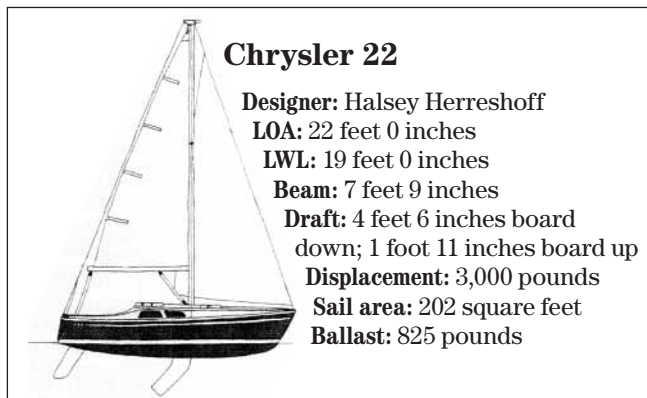
Two areas require careful inspection. The first is the kick-up rudder/tiller assembly. The original rudder stock was made of aluminum, as was much of its associated hardware. Perhaps because it was hollow, it was a source of many rudder failures. If it has not been upgraded or replaced with stainless steel, plan on spending some time with a custom fabricator. The swing-keel pivot pin is the other area that may require attention. The keel, at 825 pounds, is a significant amount of weight to carry, and half of it is borne by the pivot pin with the remainder carried by the control cable. Check for excessive play as well

as seepage at the pivot pin. Also check the condition of the control cable. Depending upon what you find, replacement or modifications may be warranted. Like any boat of this vintage, other areas to investigate are deck delamination, hull blistering, and leaks at the hull-to-deck joint and around ports, hatches, and fittings.

Summing it up

The overall appearance of the boat is clean and uncluttered, with smooth lines. At 3,000 pounds, it's a bit heavier than its contemporaries and does not lend itself well to more than occasional trailering. The inherent swing keel and rudder problems are disconcerting, but if these are properly addressed and upgraded, concerns quickly focus on the general condition of the boat. Since this is a somewhat heavy trailerable cruiser, the quality of the trailer and the strength of the intended tow vehicle should also be considered.

The overall construction of the boat is above average, and the standing rigging is stout. While the fittings are satisfactory, they are Spartan and should be candidates for upgrades.




Chrysler 22

Designer: Halsey Herreshoff
LOA: 22 feet 0 inches
LWL: 19 feet 0 inches
Beam: 7 feet 9 inches
Draft: 4 feet 6 inches board down; 1 foot 11 inches board up
Displacement: 3,000 pounds
Sail area: 202 square feet
Ballast: 825 pounds

boat manufacturers of that era, Chrysler Marine offered an extensive list of options, including safety equipment, performance hardware, and sails, as well as creature-comfort items. Most boats on the market today sport many of these options.

Depending upon condition and equipment, especially the trailer and outboard,

prices for a Chrysler 22 range between \$2,000 and \$5,000. If you're really lucky and a purist, you might even find a boat with an original Chrysler Sailor outboard.

For more information about Chrysler Marine and to hook up with other Chrysler owners, check out the Chrysler Sailing Association website at <http://www.geocities.com/thetropics/cabana/3135/>. 

"The bulkhead separating the V-berth from the main cabin has been opened up, giving a sense of spaciousness. It also allows for easier forward access."

The large V-berth is a real plus, but the remaining cabin area tries to pack too much into too little, with the sacrifices being made to the cockpit area. To complicate matters, add the long tiller.

Whether you like to heel or not, this boat loves it. In the blink of an eye it'll heel to over 20 degrees and then abruptly stiffen, daring you to put its rail in the water. The Chrysler 22 is not the fastest boat out of the box, so upgrading and possibly some rigging changes may be necessary to get it to full potential. Fortunately, like many of the

Further reading

Handbook of Trailer Sailing, 2nd edition, by Robert F. Burgess (1992, International Marine).
<http://www.goodoldboat.com/bookshelf.html>
 or call 763-420-8923



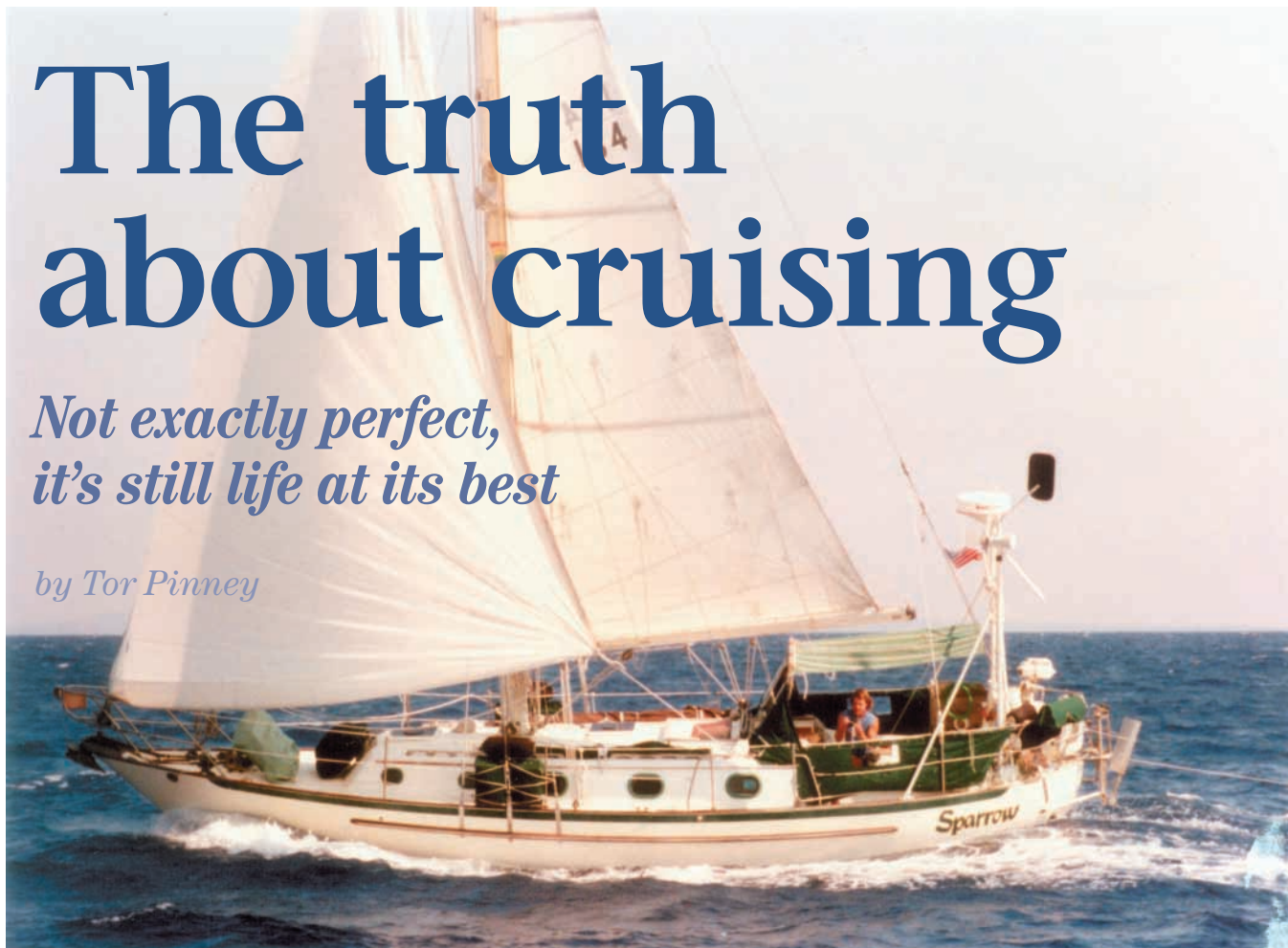
The 202 square feet of sail area on this masthead-rigged sloop, at left, is divided between an 88-square-foot mainsail and a 114-square-foot genoa. Like most trailerable sailboats, the Chrysler 22, at right, suffers from initial tenderness. It heels quickly to 20 degrees and then stiffens.



The truth about cruising

*Not exactly perfect,
it's still life at its best*

by Tor Pinney



THERE ARE FEW HUMAN ENDEAVORS more rewarding than cruising under sail. The thrill of a fast reach across the trades, the peace of an idyllic harbor, the novelty of living aboard your floating home in new places — it's a lifestyle rich and varied in experience.

But at the same time, the cruising life presents some unique challenges. Cruising, especially long-term, isn't all blue skies and cocktails at sunset. Unless you're mentally prepared for the "other" side of cruising, the downside, you may find yourself unnecessarily disappointed. Let's take a look at some of the most common pitfalls cruisers face and what can be done about them.

One of the most daunting aspects of cruising, particularly offshore, is bad weather. No matter how many forecasts you tune in, heavy weather and head winds are an inevitable fact of the cruising life once you venture far from land. Three days into a gale at sea, under gray skies and wet decks, cruising doesn't seem quite so glamorous anymore. (I often find myself dreaming of a cozy log cabin in the woods!) The truth is, being cooped up on a boat during long spells of bad

weather can be really depressing.

Then, just when things seem bad enough, the twin devils, fear and seasickness, clamber aboard to torture and dispirit even the most stalwart crew. Even if you're lucky enough to be in port when the weather deteriorates, cabin fever, concern for the boat and, sometimes, a roly mooring can take much of the romance out of living aboard.

"Unless you're mentally prepared for the 'other' side of cruising, the downside, you may find yourself unnecessarily disappointed."

However, there are ways to take some of the punch out of a bad day at sea. It's common sense to reduce sail at the first sign of deteriorating weather and to do everything you can to ensure that the boat rides safely. This alone alleviates some of

the initial anxiety. But if the motion is still harsh, tuck in an extra reef to slow the boat down further. So what if you get to your distant destination a few hours or a few days later? Increased safety, comfort, and crew morale are more important aboard a cruising boat than an extra knot of speed. This is especially true if you're bashing to windward offshore. Ease off a bit on the sheets and the heading to reduce the pounding. If the weather is really nasty, heave to and wait it out. Be kind to your boat, your crew, and yourself; don't push harder than absolutely necessary in bad weather. And don't yell.

Preparing meals early

Cooking in a gale isn't much fun, either. Before encountering bad weather, prepare some meals that can be heated up quickly. A good, hot meal can make the wet world outside more tolerable. Afterward, clean up the dishes even if you don't really feel like it. And straighten up the cabin. A depression is less depressing if your living space is in order.

Once the boat is riding safely, the best thing to do in heavy weather is to go below and relax. Make some

tea, play some music, read a book, make love, take a nap — and keep reminding yourself that all storms do eventually end.

Being afraid at sea, especially in rough weather, is perfectly normal and much more common than many will admit. Fear of the unknown (How much worse is the weather going to get?) and fear of death (How much can this boat really take?) can turn a squall into a nightmare, especially for the uninitiated.

Weather forecasts, received via VHF, shortwave radio, or weatherfax, are reassuring — even when they're bad! They take the mystery out of a storm, giving you an idea of whether or not it is likely to get worse and, best of all, when it'll end. Fear of foundering usually comes from lack of confidence in the vessel, the captain, or both. Only time and experience build confidence. The second storm isn't quite as scary as the first, and the tenth, while still no fun, is almost routine.

Seasickness, that universal mariners' curse, has spoiled many a cruise. For those afflicted, it turns passage-making into a dreaded burden and adversely affects judgment at sea. Today there are many remedies available. Find one that works for you and use it before you get ill.

Leisure time

One of the most surprising truths about cruising is that you can become bored. I didn't say cruising is boring.



But boredom can and does creep aboard when the voyaging spans months or years, rather than brief holidays. You can only trim so many sails, comb so many beaches, read so many paperbacks, and toast so many sunsets before it all starts to seem, well, commonplace.

One common reason for this isn't so surprising when you think about it. Most people who manage to cast off

“Being afraid at sea, especially in rough weather, is perfectly normal and much more common than many will admit.”

and go cruising today have worked long and hard to get there. Many are retired or taking a break from active, stimulating careers. Suddenly, they have an unaccustomed amount of leisure time on their hands. Oh, there's the sailing, the sightseeing, and the daily chores and boat maintenance — more than enough to fill the hours. But those of us who are products of a work-ethic society have a need to feel productive. I don't mean we have to “work” every day, but in order to feel good about ourselves, we need to feel like we're accomplishing something useful.

Too many people give up cruising, feeling depressed and dissatisfied, without realizing why they feel that way. This is particularly true of mates who have “gone along” with their spouse's cruising dream, but really aren't all that keen on it themselves. It's not the cruising that's boring. Cruising is, or can be, forever stimulating. It's the lack of feeling productive that gets some people down. Once you're aware of this potential threat, there's plenty you can do about it. But it takes a conscious effort on your part.

By being productive I don't necessarily mean earning money. Developing hobbies or interests such as writing, painting, or playing a musical instrument can give added meaning to life afloat. Continuing your studies, perhaps through university correspondence courses, may be especially rewarding. Consider jewelry design, woodcarving, or any of a score of other handicrafts.

Computer programming, shell collecting, canvas sewing — virtually anything that's portable enough to do aboard a boat is a positive, potential cure for boredom. Of course, working at a trade as you travel, even if it means stopping from time to time, has the added benefit of boosting the cruising kitty. Perhaps more importantly, the sheer contrast of “going to work” for periods of time will refresh your appreciation of the lazier life under sail.

Contrast is often the other key to successful, long-term cruising. For example, getting away from the boat every so often will keep your appreciation level high. Taking seasonal or annual sabbaticals from living aboard definitely cures cruising boredom. You'll soon discover that the best part of leaving your boat is coming back to her again.

A solitary life

The cruising life can be a very solitary existence. When living in remote and foreign places, cultural and language



differences may isolate you from the local population. Periodic feelings of isolation and loneliness are almost universal, especially among singlehanders, although cruising couples and even families are not immune. Everybody gets the cruising blues sometimes.

There are, however, some practical remedies. For some, a compromise cruising schedule is an ideal cure. Six (or four or eight) months spent sailing, alternated with similar periods of time staying put (either ashore or afloat) allows you to satisfy the gypsy itch, yet still provides plenty of time for nurturing valuable human relationships ashore. This can be especially important to the children of cruising families.

Alternatively, having friends and family come to visit you aboard is not only a way to share your unique lifestyle with them, but it breaks up the (dare I say it?) monotony of 24-hour-a-day, close-quarters living with your regular mate(s). So do brief vacation visits home with the boat stored safely in a marina or boatyard.

A pleasant way to combat cruising isolation is to sail in tandem with one or more other yachts. Whether you set off as a group or meet some compatible cruisers along the way and decide to continue on together, your social life will be multiplied tenfold by cruising in company. As a bonus, this arrangement provides an added safety margin for everyone.

Aboard as ashore, a pet is a great antidote for loneliness. So are regular phone calls home.

Lastly, there is a growing number of sailors' social clubs available on various radio nets. For local camaraderie, just ask other sailors you meet if there is a particular VHF frequency and time that area boaters get together. Licensed ham operators enjoy access to maritime mobile and land-based nets worldwide for communicating with kindred spirits. There are also many less formal, regional maritime nets on single-side-band frequencies that do not require a ham license to join in. Although the SSB nets may discuss weather forecasts and useful travel information, their



"Whether you set off as a group or meet some compatible cruisers along the way and decide to continue on together, your social life will be multiplied tenfold by cruising in company."

primary function is usually social. It's a chance for cruising sailors to chat, schedule rendezvous, and keep in touch with each other.

Ongoing maintenance

Another unpublicized truth about the cruising life is the huge amount of work and attention a boat requires. Every cruising sailor is, in a sense, a slave to his vessel. Even if you start out with a brand-new boat and equipment, the list of maintenance and

repair chores is never-ending. If the boat is old, the list is even longer. I don't know any cruiser who can honestly say, "I have absolutely nothing that I could be doing for the boat today."

Boat maintenance is necessary; it can even be gratifying. But be careful that it doesn't overwhelm you and spoil your trip. You'll do well to prioritize the

jobs, dealing with essential maintenance and repairs right away, while scheduling time for less urgent tasks at regular intervals. I find it easier to stop periodically, settle into a pleasant port, and work full-time on the boat for a few days or weeks to catch up. Then, with many jobs accomplished and a clear conscience, I can relax and enjoy the leisure time I've created for sailing, exploring, and writing.

When chores seem to pile up, I occasionally hire a local to help with the simpler tasks, like scrubbing and oiling the teak or waxing the hull. Of course, when I'm sailing with crew aboard, everybody pitches in and the jobs get done more quickly.

Once in a while it's a relief to get away from boat chores entirely. With your vessel securely moored or dry-docked, ideally with someone keeping an eye on her, you're free to leave for a while and devote your full attention to inland sightseeing and other interests. Remember: you own your boat; don't let her own you.

Clearing customs

Visiting foreign lands aboard our floating home is one of the prime reasons

most of us go cruising. On the plus side is the thrill of discovering remarkable places, meeting different people, learning their customs, trying new foods, and experiencing it all from the comfortable base of your own floating home.

But there are aspects of travel peculiar to boating that can try your patience. Clearing in with the various government authorities often is an onerous, time-consuming project. Customs, immigration, the port captain, the National Guard, the police, the Coast Guard, and all the king's men may require separate visits, each with forms to be com-





pleted. Rarely are they all in the same building, or even in the same part of town. Orderly ship's paperwork and a patient, friendly attitude are your best defenses against bureaucratic tedium.

Receiving mail is another snag in paradise. It's not uncommon to go for months between successful mail drops while cruising abroad. Often a mail packet containing your precious, accumulated correspondence will arrive in the country only to be stalled at a customs warehouse somewhere, waiting — sometimes for months — to be inspected for contraband. Or the packet may never arrive at all.

In many larger ports you can take advantage of international courier services such as DHL and Federal Express to get the mail packets through. They're expensive but they usually work.

Homeward-bound mail posted from many Third World countries stands, maybe, a 50/50 chance of ever arriving. If you have a supply of your home country's postage stamps aboard, you can often find a tourist willing to carry your flat mail back to that country with him or her, to be posted there. That gives it a much better chance of reaching its destination.


Replacement parts

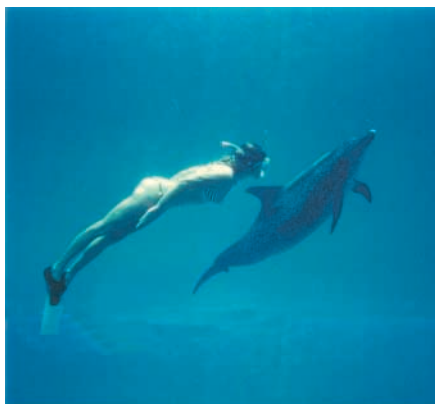
As a rule, when cruising abroad it's only in the largest cities that you'll find services for repairing things like electronics, sails, and machinery. Even then, locating replacement parts can be next to impossible, and if you have repair parts shipped to you from home they may be difficult to retrieve. It's true that a vessel in transit is almost universally exempt from pay-

ing import duty on equipment that is shipped in to be used on the boat. But it's often difficult, and sometimes impossible, to explain that to a customs official who doesn't speak your language or share your interpretation of international maritime law.

It's best to prepare for the inevitable breakdowns before leaving home waters. Stock up on complete spare parts, warranty cards, and service manuals (not just owner's manuals) for every essential device on the boat. Thus provisioned, you may then find even in some smaller towns a competent repairman who can help because you're able to provide the necessary manuals and materials.

The cruising life can be stimulating, peaceful, fun, and endlessly rewarding. It can be, and often is, everything you've dreamed and more. Still it is life, which by its very nature includes challenges and pitfalls. To set sail with the idea that

you're leaving all your troubles behind is to blow a bubble that is destined to burst. Be aware, be prepared, and be realistic. Add to that a positive mental attitude, and you'll discover the real truth about the cruising life: while it is not always perfect, it just may be life at its best! 



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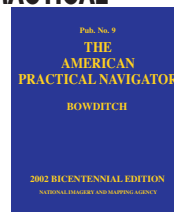
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What's *your* life worth?

Wearing a life jacket is sensible — but nobody said it was easy

by Glen Smith



“IS MY LIFE WORTH \$359?” I blurted out as I returned to the safety of the cockpit after putting an extra crank on the main halyard and tightening the outhaul.

“No,” my wife replied unexpectedly and without hesitation, “but you’re worth a couple of million dead.”

I took the helm and was unusually quiet as I contemplated her answer. The seas were building; they averaged around 3 feet now. Occasionally a voluptuous 5-footer rolled under us. I love the water and saw no cause for concern.

Finally my wife broke the silence. “What are you talking about?” she asked, still unaccustomed to my habit of starting in the middle of a thought.

“Well, hon, I think this self-inflating life jacket with harness cost me about \$189. I’d like to get one of those nifty tethers that retracts and has hooks that can be released under pressure. Bill sells them for \$170. So, do you think my life is worth \$359?”

Thinking back

The afternoon of May 24, 2002, was overcast. A southwest wind blew at about 15 knots. Seas were nominal at 1 foot. After six months on the hard, the boat was finally back in the water with numerous upgrades. Two bud-

dies, neither with more experience than a few daysails, agreed to join me for a shakedown cruise. It was Friday. The weather was still cool. There were not many boats out.

We were on an easy beam reach headed for Stratford Shoal when the straps holding the clew ring to the old genoa parted with a bang. I slid out onto the bowsprit, wrench in hand, to make the sail change. The clew of the torn foresail flogged noisily. I second-guessed my economic decision to buy a new mainsail rather than a foresail the previous winter. The seas were growing. The wind was gusting, taking the tops off the waves in fabulous bursts of white mist.

“You want to stop? Should I start the engine?” Danny called from the helm.

“No, no,” I answered, reasoning that I’d changed many a foresail while racing under far more adverse conditions than these. It crossed my mind that I should go below and get my life jacket. I thought about asking the friend sit-

ting behind me on the bow to go below and get life jackets, but I reasoned that leaving and returning to the deck posed more risk than staying put. If I went overboard, I had no expectations that my guests would be able to come about and retrieve me.

Spray was making the deck wet now. The fabric of my pants gave way, exposing my thighs and knees. The testosterone flowed. My system was fully charged. This is the stuff life is about.

Flying umbrellas

Unknown to me, back at the club, a comedy was unfolding as old salts,

already a drink or two into the evening, chased umbrellas that abruptly took flight in a sudden gust of wind. Just west of us several larger sailing vessels milled about. I admired their lines and dreamed. I kept steady at my task, sans safety equipment. Once

the damaged sail was down and a smaller one replaced it, we continued on, blissfully unaware that a deadly

“The next morning I read in the paper that a skilled skipper was missing, having been swept from the deck when a spinnaker pole failed.”

tragedy was playing itself out nearby.

The next morning I read in the paper that a skilled skipper was missing, having been swept from the deck when a spinnaker pole failed. The coordinates given were just west of those entered in my log following my sojourn onto the bowsprit. I was certain that it had been his vessel I'd admired the evening before. Though wearing his life jacket at the start of the race, the missing captain had removed it at some point prior to the mishap. A shipmate dove into the water and grabbed him but was unable to hold him. Despite a competent crew and the flawless execution of man overboard procedures, a great guy was gone, a cherished life was lost.

For the last few years I've sporadically worn a self-inflating life jacket with a built-in harness. On Saturday, May 25, 2002, I made the commitment to don a life vest every time I'm on the water. I must say it's a challenge. I'm the only member of my race crew who wears a life vest. To my dismay, I've noticed in the family pictures that the life vest accentuates my ample girth. Periodically the vest gets caught under the lifelines, rendering me something akin to a squealing pig wedged in a fence. Some days it's just plain hot, and going downwind I perspire like an exploding fire hydrant.

Then the crème de la crème: we were at the dock flaking the mainsail when the manual-inflate tab dropped out and got caught in a sail tie. There was a moment when the crew heard the pin penetrate the CO₂ cartridge. The entire marina stopped to watch my life vest inflate. Right side, left side, poof. My face flushed with embarrassment as the vest expanded around my neck. CO₂ is cold when it expands, and I should have enjoyed a brief respite from the heat. Instead, I gave in to peer pressure and lost my temper.

"Sh*#, that just cost me eight bucks," I said out of humiliation and tossed the vest into the cabin.

On further reflection

In the three days that passed before the next race, I thought about some of my less gallant nautical experiences. There was the time that, as 19-year-old college freshmen, we proudly showed off our Coast Guard seaman's cards when renting a canoe. It was spring in Oklahoma, and the Illinois River was swollen and cold. Barely two hours after our proud display of

credentials and boasts of many aquatic conquests, we found ourselves pinned between the shiny aluminum rental canoe and a fallen tree. The water was freezing. I tried to move, but my muscles only half-heartedly complied. The physical prowess I was accustomed

to failed me. All I could see of my best friend was a mass of brown hair floating on the water next to me. Strangely, my first thought was, "What will I tell his mother?" I reached for the back of his orange life preserver, and my buddy abruptly popped to the surface.

Lessons learned in Captain Dunn's East Jefferson High School nautical science class surely contributed to the saving of a life that day. We were wearing our life preservers. Until that moment, I believed myself to be invulnerable. I'd been warned about cold water but didn't believe it could happen to me; I had never experienced its paralyzing effects until that moment.

I started wearing seatbelts when a friend's vocal career went on hold due to a broken jaw received when she hit the steering wheel of her car in a 25-mile-per-hour crash. Only geeks wore seatbelts in the '70s, but — with firsthand knowledge of a senseless broken jaw — I reluctantly at first buckled up. Today it's a habit.

"The entire marina stopped to watch my life vest inflate. Right side, left side, poof. My face flushed with embarrassment as the vest expanded around my neck."

Hope of survival

There is a high probability that if I leave the deck of my boat unexpectedly, I will find myself not only in the inhospitable marine environment but will also be injured or incapacitated in some way. A life jacket is the best and cheapest hope of survival.

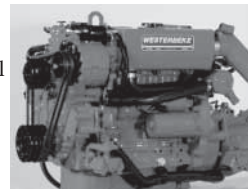
A captain acquaintance described an incident in which a ferry wake unexpectedly tossed him from the deck of a friend's twin-engine catamaran. Turbulence from the starboard prop tickled Dave's right ear as the screw passed within inches. The trolling wire passed smoothly along his arm. Visualizing the nasty hooks of the umbrella rig at the end of the wire, Captain Dave started swimming. On board the boat, blissfully ignorant, the owner motored toward home, some 60 miles to the west. A perplexed mate tapped him on the shoulder.

"Where's Dave?" 

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Finding the right family cruiser

Give in and go with it when you're chosen by a boat

by Chuck Fort

IT SEEMS LIKE EVERY IMPORTANT EVENT in my life starts with a phone call: jobs, births, deaths, want ads. This time it was long distance to Seattle.

Me: "Um, hi, I'm calling about your boat for sale."

Seattle: "OK."

Me: "What can you tell me about it?"

Seattle: (short pause) "Anything."

Me: "Well, is she in good shape?"

Seattle: "Yes."

Me: (*Hmmm, man of few words.*) "It says in the ad you've had her for 24 years. Where was she built?"

Seattle: "My house."

Me: "OK, uh, how does she sail?"

Seattle: "Good."

The conversation was fairly one-sided — something like a 20-to-1 word ratio, my favor — but gradually the boat took shape in my mind. Being pretty good at reading between the lines (even short ones), I discovered a man who had built his dream during his prime, only to see his wife lose interest. *He* never did though. I think that's why he was reluctant to speak about his lost dream to a stranger over the phone.

The boat was in good shape: well made and seaworthy (I learned later that this man, perhaps harking back to his no-nonsense Finnish heritage, grossly understated most things about his boat). I asked every question I could think of and received mostly short, but accurate, answers. ("4,200 pounds of poured lead. Because I poured it.")

After a series of quick terse answers, I began to feel — as a potential buyer — that I deserved a little more excitement on his part... perhaps even some multi-word sentences. I wanted him to extol the virtues of his boat to me. Maybe this one wasn't such a good idea after all. But somehow I liked talking to this man — he certainly didn't behave like a broker. And I felt sorry for him once I imagined him enduring phone calls from half-interested buyers, tire kickers, and dreamers.

Lindsay Christine, a Mercator Offshore 30, above, and the reasons Chuck left the corporate life at right: Alex and Amie, in more recent years.

I told him we'd like to see it (I think I de-emphasized the "we") and after he paused (judging for worthiness?), I set up a time to drive the 150 miles across
Continued on Page 62



the Cascade Mountains to see it. After I got off the phone, I told my wife, Theresa, that maybe we could take a drive to Seattle next Saturday and maybe take a ferry ride and ohyeahandseeaboat. To my surprise, she said — after looking over the notes I had made while I was talking to the seller — that *she* sounded nice.

She? Ever since we'd been looking at boats (just for fun, of course), Theresa had never called one a "she." I hope there are other men who have a wife like mine — not so set in her ways that she can't still surprise you. I sensed something in her that felt encouraging. Maybe my (dare I say our?) nebulous dream of seeing new places by sailboat could someday become a reality.

Corporate ladder

I had been climbing the corporate ladder and had reached a point at which there weren't many rungs left. To me at the time, it looked like a pretty long way down. Mid-life crisis? I don't think so. I was only 34, and everything was going great for me. But something was missing... my family. I was spending nine or 10 or 12 hours a day away from my 9-year-old daughter and 6-year-old son.

Maybe I was jealous that, as a homeschooler, my wife got to enjoy 24/7 with them (at the time she might not have been in total agreement). What would the cruising life be like, I wondered? Waking up in the morning and not having to leave home? Or leaving together in our home when the whim took us? I extended the dream to include being away from mortgage payments, advertising, peer pressure, *The Simpsons*. A small sailboat could do it. Just us, distilled down to a real family, traveling where we wanted, bringing our home with us, taking a bite out of life, with four mouths.

It was raining as we drove into Everett, just north of Seattle. Still early spring, this was not surprising. It was also cold and windy as we drove up to the yacht club parking lot to meet the owner. We found his truck, and introductions were made. He was short and trim, late 60s. He had eyes that seemed to have taken over emotion-central, since his mouth was



Contentedly aboard, Chuck cuddles with young Amie and Alex.

not allowed to express strong emotions. When he saw the kids, his eyes gleamed, even sparkled. His kids, he said, were grown now, but they used to like to sail in Puget Sound. On his boat. His eyes sighed.

We followed him to the marina and began walking down the wet dock into a spitting cold rain. At each slip, I wondered if he was going to stop and say, "This is the boat," or more likely for him, "Here." Most of the boats we passed were average, some rougher. I hoped he would keep walking. Suddenly he turned and walked down a finger pier. On one side was an ugly sky-scraper powerboat and on the other — her. Her clean ivory hull had classic lines. Her rig looked capable and reassuring. The freshly painted cockpit was comforting. I swear she tugged at her docklines as we approached.

We were selected

"So you're going to be the new owners, eh?" she seemed to say. "Where shall we go first?" She was partially covered by a tarp to keep the rain out of the cockpit, so it was difficult to see anything of her deck except that she was well taken care of. He stepped aboard and motioned us to follow. As I stepped aboard, she bowed to me. After he unlocked the companionway, I followed him in and waited for the rest of the family — I wanted to see their expressions when they first saw the inside. The kids were smiling and instantly picked out their own quarter berths and giggled inside their "caves."


When Theresa stepped in, she looked around and got a strange look

in her eye...like the one she gets after one of the kids gives her a flower. She later said that it felt as if she were home. This was surprising, given that the boat was decked out in 1970s burnt orange carpeting — something that normally would have caused an exit stampede.

I expected a cold wood-and-fiberglass vessel, but in contrast to the laconic nature of her builder, she seemed to speak to me. On opening a drawer or locker, I could hear

her whisper, "Yes, the silverware goes here. Tools here. I've a place for everything you need. If there is no place, you don't need it!"

Her whole inside seemed to be just waiting. The cushions were stacked neatly to avoid mildew, all of the locker doors were open, and a small dehumidifier purred on the floor. It was as though she had been put away in 1971 and was patiently waiting for the right circumstance to release her. I got the feeling that she thought we were it.

The negotiations were short (as I'm sure she knew they would be), and our dream became a reality perhaps as much because of *Lindsay Christine* as ourselves. She was the catalyst, the spark that ignited the fuse of the dream and propelled it to reality. 



Cape George 38,
continued from
Page 8

heavy displacement designs. It has been argued that fast is safe, because of the ability to outrun trouble on the horizon. The corollary is that a heavy, full-keeled boat will be more man-nerly in a blow than a lightweight. Both argu-ments have their merit.

If Tim's current plans come to pass, he and the family will be sailing in San Francisco next sum-mer, while the rest of us slave away at our daily tasks. The following sum-mer, they'll be somewhere in Mexico. After that?

"We're not sure," he says, but it doesn't take a crystal ball to read his thoughts. *Patience* has already traveled to Hawaii once and Alaska three times with Larry and Marga-ret Alexander. I'd guess that the Cape George 38 will deliver the Whelan family safely to whichever point of the compass they choose.

Except, of course, to Madison Square Garden. 



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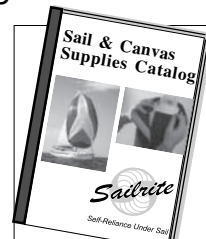
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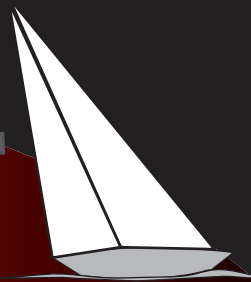
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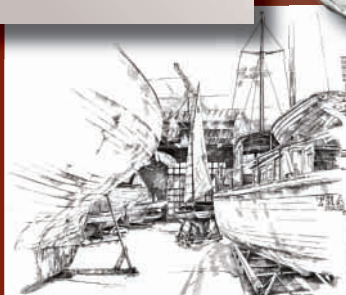
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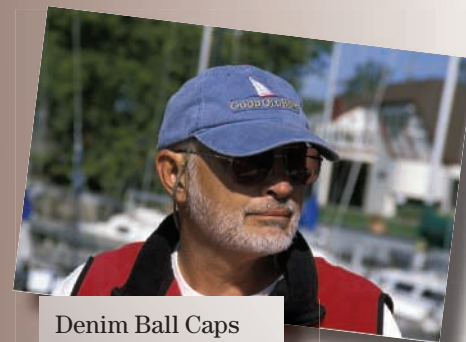
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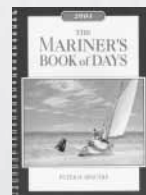
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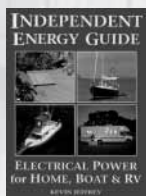
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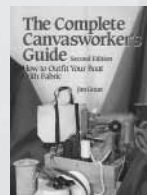
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Calling the blue

*Dolphins, a boat, and a pretty woman
make the heart beat faster*

“THEY ARE CURIOUS CREATURES,” I try to explain. “It’s not just the boat that will bring them. They need more than a bow wave to surf or a new face smiling down to really get them going.” She looks at me, unsure as to whether or not I’m serious. We haven’t said much to each other yet, and without more to go on, this lady isn’t sure just how to take me. She turns and looks out from the cockpit and sighs, shoulders relaxing a little. I enjoy the lovely profile and pretty aura of the sun spilling through her hair. She shines.

I begin rapping gently on the cockpit coaming boards. In the tapping, I purposefully avoid the steady rhythm coming from the stereo in the cabin below. Mischievous dark eyes look back toward me with a question, a shrug of her shoulders, and a gesture. I can imagine her thoughts: “What in the world are you doing?” I smile as I sense a joke giggling up from inside her: “Why can’t you keep the beat?”

I smile and say, “I’m not keeping time with music, I’m calling them. It needs to be just a bit off with a few stray notes.” The tapping continues out of beat with the strains of the angelic orchestrations wafting up from the main cabin stereo. No, I’m not ignoring the music, rather I’m annoyingly not quite in syncopation with it. “You see, they’re intelligent,” I continue, “and very curious. They can hear it for miles. Don’t worry. They will come.”

I reach over to move the wheel a nudge to windward. I’ve come to know my boat so well now. She is 32 feet of dark-blue hull with the pure white swollen sails above her, full of curves in this afternoon wind. She has seen 27 years of time across her deck. I have lovingly restored with oil some boards that had stood on their last legs during a few years of neglect.

Slowly and with great joy, I have come to appreciate this old boat. I am not alone; old sailors admire her from near and far, commenting on her character, good looks, and the fine line of traditional design. But I feel lucky, for I not only *see* her, but I’ve come to know the *feel* of her deep down.

Oversheated

I sheet in the jib a trifle too much to create a counterbalance against the wheel and the heel I’ve put her into. There’s but a moment before I can feel the slight whirling vibration from the rudder rising back through the post and wheel shaft to my hand. I can imagine the swirling sound in the water beneath me now that the strug-

*“You see, they’re
intelligent,” I continue,
“and very curious.
They can hear it for
miles. Don’t worry.
They will come.”*

gle is played out between the overly heady foresail and the vortex I’m forcing on the scene below. A shudder passes through the entire boat now, with the almost imperceptible complaints played out in the cattywompus balance of the feel in her. I look up to my standing rigging, and I can see a slight vibration in the main shrouds, like a gigantic double bass string being gently plucked. I am sure of a tone there so low that it is beneath my ability to hear. But *they* can hear it.

Miss Shiny Hair tells me she has never really seen dolphins up close in the wild before. Another moment passes in silence. Then she gets warm

with talk, describing her boating past with a small laugh and a sad story of how some idiot jibed a boom into her head and knocked her completely off the boat. It sounds like one of those Hollywood moments that you swear don’t really happen, but it certainly must have been that way. It was a small boat, and she didn’t even like him.

I shake my head incredulously, sympathetic, and I can imagine the scene she describes. We both chuckle a bit as she admits how she was gullible enough to go again later with the same lamebrain (nothing can explain to me why) and how she was knocked overboard yet again. As the young woman tells of her adventure, she is still looking about anxiously awaiting the arrival of the dolphins I’ve predicted. Of course, I didn’t go so far as to promise, for you can’t tell for sure what blue kittens are going to do. They are just independent enough to confound you on principle, if they can tell you are calling them.

Wonderful design

More tapping, but the vibration on the wheel is becoming more regular. What a wonderfully designed ketch — she just can’t stay off balance, even a little, without settling in somehow. My praise goes out to designer Tom Gillmer for a boat that requires effort to destabilize. I smile, then wonder if the blue kittens are ticklish today. Oh, how like cats they are. Just when you say you don’t care to pet them ever again, they jump in your lap or rub against your leg. Another distraction comes as my disbelieving passenger asks me what music this is. I tell her she might recall the theme from the movie, *City of Angels*. I smile, thinking how it is affecting her. She is curious — couldn’t help but ask. I like how the tapping and the tiniest of off-kilter shivers running through the

kittens

spine of the boat are forgotten now as the music has aroused her interest. It's a feline thing. Slowly, I'm less of a weirdo and more of a romantic anomaly.

I take the wheel abruptly to port then back to starboard, zigzagging the boat's course for a moment. The turns are heavy on my arms, as the huge barn-door rudder diverts giant swaths of water back and forth. I have a vision of a corkscrew of vortexes behind us as my beloved *Wind Ketcher* makes nearly 7 knots. I can feel the work of my forearms knotting my muscles as I swash about back and forth and back again. And I can visualize the horizontal water tornadoes being sprouted.

Just when the boat is getting into the swing of things and starting to rock on her own wave action, I stop. She slops across the top of a bow wave. I let go of the wheel and let the sails and the heel and the wash of the water beneath us underway find their harmony. Quickly the boat falls off a point to leeward, then the cockpit heels over a bit, and she heads back upwind a nudge. It is such a compliment to her how, in only a moment of being left to herself, this fine old ketch finds balance. All is in harmony now: an engraved invitation I feel certain they can no longer resist.

Here they are


The blowholes sound. The blue kittens have arrived to play with the silly man bouncing the ball of string, making all of this thumping, and swishing, and squishing, and the low hum. There are more than 10 of them, with several youngsters. A few roll high with a breath and even go so far as to slap the water with their tails. Some are spinning around in the vortex playground I created. More than just passing by, they are reaching out. I can

hear them squeaking. It almost sounds as if they are complaining and fussing about my annoying tapping and my vibrating rig set. I yell out to them, "Yeah, I know, everybody's a critic. So what if I can't keep a beat?"

My passenger leans over the railing to see them swimming alongside, stretching out her hand with a finger reaching. The reflection of her touching her own hand reminds me of a watercolor. The twist of her body is appealing as she enjoys our visitors. I take a deep breath, absorbing a vision of her being a little girl playing with frisky kittens. For their part, they are really putting on a show. These creatures that can swim for minutes and miles without a breath are blowing and snorting like madmen, making a racket that sounds like hundreds now.

Suddenly playtime ends, and the blowholes and squeaking are silent. I look at the beaming and flushed cheeks of the smiling lady. Her eyes are bright with wonder and joy. I'm glad the kittens came. Without her noticing, I put my foot gently on the wheel

and draw comfort from the feeling of balance and conversation with my boat there. Looking up at the rigging I see shroud telltales at their proper angle and stream, and the leech tapes are riding straight out in perfect contentment. And there is a slight roll of the boat as she gently outpaces the 3½-knot wave we are carving up. "That was so cool. Golly, they're beautiful," she blurts with a genuine sigh, sounding out of breath.

I take a long look down our wake and see in the distance a hump appear with a spray of exhalation, silent in its distance. A relaxation born of the balance, the sunshine, the kittens, the lady, and the wind spreads from the spine of the boat and eases through me. The blue kittens fall astern, and I catch another view of the shiny hair, the olive athletic legs, and the bare shoulders of the lady who enjoyed this with me. She smiles and lets go a husky victorious laugh at my appreciative glance, knowing as do I that we just shared something. 

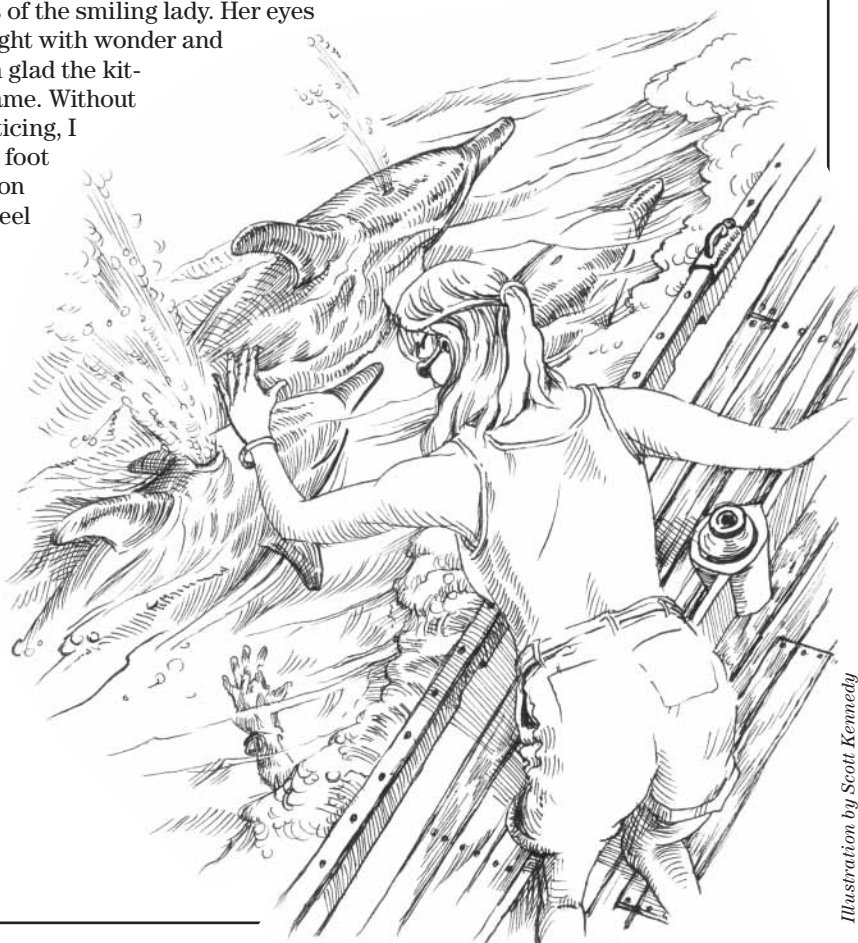
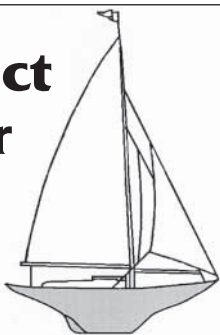


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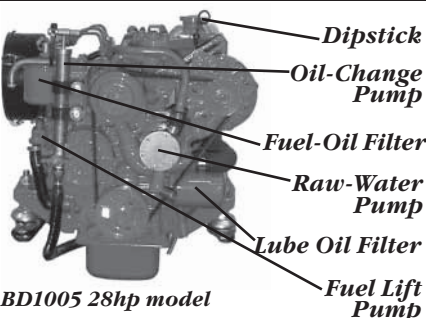
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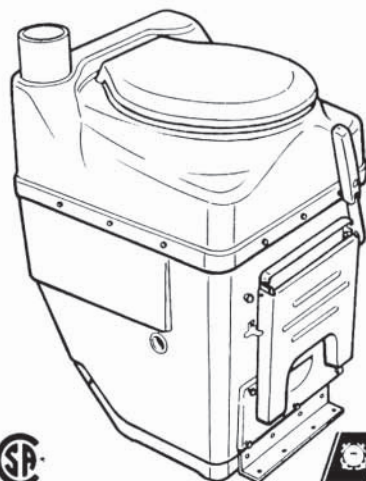
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Cordless winch power

Using an electric drill to drive sheet, halyard, and anchor winches

by Bill Sandifer

THE IDEA ORIGINATED WITH JIM SCHMITT, A FRIEND AND Freedom 33 owner, who said, "There is a lot of talk on the Freedom website about using a battery-powered electric cordless drill as power for a sailboat winch." It sounded possible...except for the "power" factor. All the cordless drills I was acquainted with were too small to power a winch under load.

However, Scandvik, Inc., makes an electric 12-volt winch handle that, it claims, draws 60 to 100 amps and generates 52 foot-pounds of torque. It is completely waterproof. It is also expensive, listing for close to \$5,000 and selling in discount catalogs for \$2,500.

The idea of using a powered winch handle is very interesting but a little expensive for my budget. I'd like the same capability or nearly so at a much lower price. I set out on a quest to find a cordless drill that would work on my boat.

The first step was to find the most powerful cordless drill I could. I wanted it to be a right-angle drive, as this would be the easiest to handle. My search turned up only one right-angle cordless drill. Fortunately, it turned out to be the most powerful as well. The drill, a Milwaukee model 3109-24, generates 50 foot-pounds of torque at 335 rpm. It has a ½-inch chuck and an 18-volt battery.

I researched the products of Makita, De Walt, Porter Cable, Bosch, Black and Decker, and Sears but was unable to find a comparable product. No one else offered a right-angle drill, and no one had close to the torque level of the Milwaukee product. As this was an experiment, I thought it best to start out with the most powerful drill and see if the idea was even worth pursuing. If it did not work, at least I had a very powerful right-angle drill for my boat. The cost of the drill through the Internet was \$319 plus shipping.

Designing a bit

The next step was to design a bit that would fit the drill's ½-inch chuck and the winch insert. For this I asked my friend Robin, a CAD expert, to create a design I could take to a machine shop. He

turned out a design in short order, and I took it to another

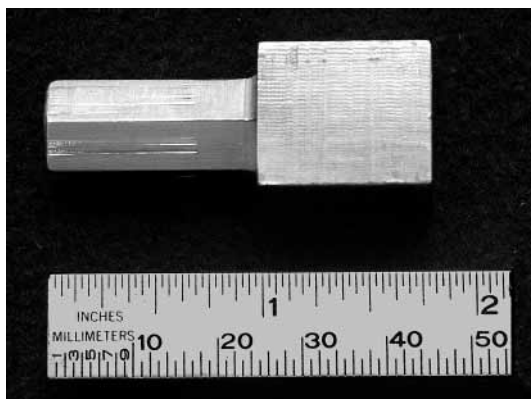
friend, Scott, at Coastal Precision Machine Works in Bay St. Louis, Mississippi, for implementation. Scott had a piece of 304 stainless steel that would work. Three hours and \$125 later, I had my bit. It's a little like a pocket charm: very pretty but plenty strong (see photo below).

I was ready to begin the operational test. As this was Jim's idea in the first place, I had no qualms about asking him for help in conducting the tests. Jim had been complaining about the amount of effort it takes to sweat his main halyard up the last few feet, so this test was first on the list.

To make a fair comparison, I first raised the mainsail manually with the normal winch system. I got the halyard as tight as I could. Then, using a Loos tension meter, I took a reading of 30 on the halyard. I lowered the sail and used the drill motor instead. One person can control the drill motor and tail the halyard if necessary. Jim's winches are self-tailing, so this was not necessary. If you don't have self-tailing winches, it still works easily. We raised the sail to its fully-raised position and measured the tension on the halyard with the Loos meter — a reading of 37 this time with no sweat on my part. Jim indicated that he had never had the halyard so tight. It was true: the halyard was like an iron bar.



**No problem winching
Bill up the mast with
the electric drill.**



Up the mast

The next test was to see if Gayla, Jim's wife, who weighs all of 100 pounds, could hoist all 217 pounds of me up the mast using the drill motor. We used my wife, Genie, as a safety person and tailer. I never go up a mast unless I have a safety person tailing the winch. Jim's winches are #23 Barient's and not overly large for the job. We led the halyard back to the same winch we had used for the mainsail test, and I got into the bosun's chair. I

did not have long to wait as Gayla easily hoisted me up to the masthead using the drill motor. She had no trouble controlling the drill motor, as it set down easily on top of the vertically oriented winch. Later we'd see if it was so easy to control with a horizontally oriented winch, such as the one on the mast of my boat. I actually was hoisted up the mast faster than Jim could have done it manually and without all of the labor.

By now the drill was slowing down a little bit, which indicated the battery was running out of juice. We had used it consistently for about 10 minutes of comparatively hard work.

The next test was to see if we could recharge the drill battery on board using Jim's small inverter. This product, called Power On Board, is available from Sam's Club for \$28. It is rated for 350 watts continuous. The inverter is important, as it's no good to have a drill on board that cannot be recharged at sea.

The drill came with a one-hour charger, so we gave it a try. The charger draws 3.4 amps, so it was not a problem for Jim's onboard battery bank. The battery was recharged as advertised, and we went back to testing.




The wives, Genie Sandifer and Gayla Schmitt, give it a go.

15 minutes of continuous effort, but you must be able to recharge the drill's battery on board.

What is the upside to this test? We proved the drill motor is up to the job with plenty of power. It never stalled except when the battery got really low. Milwaukee says you need to charge and discharge the battery four or more times before it will be truly fully charged,

so maybe a drill would operate longer than I think, but I would not want to count on it.

The drill was easy to control with the right-angle adapter. I do not know if a straight-drive drill would be as easy to control. The size of the drill may be overkill in most cases. There are several direct-drive 33-foot-pound drills that cost substantially less than the Milwaukee model. I did not try them, but I will in the future.

It's definitely a good concept. The marine version is more expensive, draws a lot of juice, and is limited to the length of the 12-volt cord attached to the winch motor. I can use the cordless powered drill motor anywhere on the boat for all kinds of jobs. I can even use it as a drill! 

Anchoring test

The next test was on my boat. We anchored out in about 15 feet of water with a mixed bottom of sand and mud with my usual 22-pound Danforth anchor. As I had work to do on the boat, cleaning the prop as usual, we stayed anchored for about two hours. The anchor was well dug in as I had set it under power to start with, and it had two hours to dig in. When we were ready to get underway, I led the anchor rode to my horizontally mounted main mast winch, a #6 Lewmar. The drill motor pulled all 11,000 pounds of my boat up to the anchor, broke the anchor out, and housed it. I know I should have used the boat's motor to power up to the anchor, but this was a test of the drill's strength.

Genie tailed the anchor rode, and I controlled the drill motor. We had no problems doing this, but it was definitely a two-person job. The wind was light that day, about 6 to 8 knots, so sea conditions were not a consideration. Once again it was a "no sweat" job. I usually haul in the rode manually while Genie motors up to the anchor, but I still have to house the anchor. This was a lot easier.

So far the drill motor has done everything we asked of it. When I first proposed this test, Genie was unhappy with the idea and cost involved. She is now a true believer and thinks this will really save my back from the weight of the anchor.

Where do we go from here and what are the negatives about using a drill motor as a powered winch handle? First of all, the drill motor is not waterproof and probably would not work in heavy rain or spray. Secondly, the drill has all of the power needed to get the job done, but the battery is only good for about 15 minutes at the maximum. On a sailboat there are not too many jobs that require more than



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Update on Trex

Faux teak deck is a winner after three years in service

by Mark Parker

IN THE JANUARY 2001 ISSUE OF *GOOD OLD BOAT*, I PUBLISHED an article about the new deck I made for my Pearson Triton, *All Ways*. At the time of publication, the deck was a year old. Since then we have enjoyed three seasons of sailing and three winters on the hard. The deck still looks as good as new and has required zero maintenance.

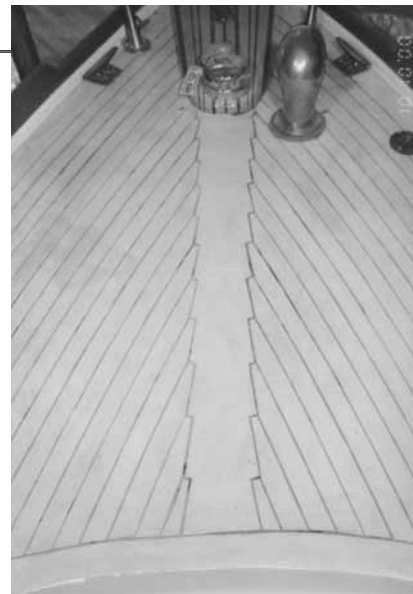
To recap briefly, I bought *All Ways* with delaminated decks. I used a combination of techniques to fix the delaminated core problem. When I was done with the structural repairs, I was faced with the issue of the cosmetic appearance and the issue of non-skid. For aesthetic reasons, I decided to create a laid deck with gracefully curved strips of teak sprung to match the shear, ribs at the cabin, and a kingboard in the center. For practical reasons, I decided to use Trex instead of teak.

Trex is a synthetic wood made of approximately equal parts sawdust and recycled milk jugs (polyethylene). It is produced by Mobil, is certified to meet non-skid requirements, and is guaranteed (in usual applications such as for a deck around swimming pools) for 25 years. It starts life as a beige color but quickly fades to a silvery grey very much the color of untreated teak. (Trex also comes in a brown version, but its fading characteristics are considerably less predictable.)

Since I did my deck, many similar products have come on the market — one I noticed uses only cedar for wood and might have some advantages, but I have not pursued

the issue since I don't anticipate repeating this project anytime soon!

Mark's Trex deck soon after installation. He has been receiving compliments for three years.



the issue since I don't anticipate repeating this project anytime soon!

The Trex comes in nominal 2 x 6 planks which, when sawn on edge, yield 1½-inch strips for laying a deck. See the original article for all the details. This is definitely a labor-intensive project, but the results have been worth it.

Daily compliments

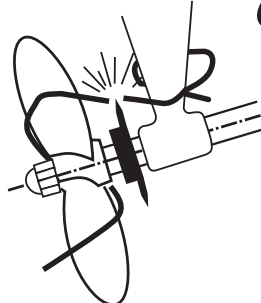
Since her restoration has been completed, *All Ways* receives compliments almost daily. Even in our slip (where we have been for four years), people often stop by to say how much they admire our boat. Nearly everyone comments on her deck. It is beautiful.

No one has ever recognized that it is not teak, and even when told they usually express disbelief. When I tell them the story and show them the deck up close, they are usually amazed. I have had two or three claim they are going to do the same on a boat they are restoring, but I have yet to see any results.

When sailing, the deck functions as well as it looks. Even when taking green water over the bow, it is never slippery. The light color keeps it relatively cool to walk and sit on, and it is much more comfortable than any traditional non-skid when it comes to sitting or lying. There are no splinters or slivers. Dropped winch handles and so forth don't faze it. I have yet to put a real ding in it, and it has seen some serious abuse. Even more amazing: sunscreen

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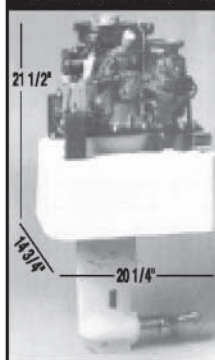
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doesn't stain it — nor does barbecue sauce.

Maintenance of the deck is virtually non-existent. After each sail, I hose it off with fresh water. I once washed it with a commercial deck soap. That was a mistake. The soap made the Trex incredibly slippery and took what seemed to be forever to rinse off. Since then, I just use a freshwater rinse. Even rings from coffee cups vanish with a quick spray.


Speaking of coffee, mornings on deck are great. As soon as the sun hits the deck, it is dry — a real plus for morning coffee in the cockpit.

Any downside?

There really have been very few problems. I had one spot which I sanded too vigorously when laying the deck and broke through. I patched it with a mixture of epoxy and Trex sawdust. Initially it looked great and was invisible from more than a few feet. Unfortunately, the epoxy reacted with the UV and has yellowed, leaving an obvious patch. It is still functional, just ugly. The solution will be to cut it out and replace it with a plug of actual Trex; I just haven't gotten to it yet.

The only other problem is that some of the screw holes have reappeared. In the initial laying of the deck, the strips are held in place by thousands of screws. These are removed and the holes (along with the entire gap between strips) are filled with epoxy and carbon. (The carbon does protect the epoxy from UV; no problem here.) My assumption is that the thickened epoxy did not actually fill some of the holes; it trapped an air bubble and just left a thin coating, which has now broken down.

Using a thinner epoxy mix would have avoided this, and filling the holes with thin epoxy/carbon mix from a syringe will fix those that have appeared. Since the screws did not penetrate the core, there is no cause for alarm anyway. It is just cosmetic.

No other problems to report. My wife and I are thoroughly pleased with the deck. Would I do it again? That's a harder question. The cost was reasonable (much less than teak!), but it did take an incredible amount of time (most of one summer after work). Faced with the same problems (delaminated deck, worn out non-skid, and cosmetic issues), I think I would do it again. The results really are worth the effort. 

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Exhaust blowout

How a can of fruit salad and some hose clamps saved the day

by Brian Dodds

DAY TWO OF OUR PLANNED TRIP UP LAKE MICHIGAN TO MICHIGAN's Upper Peninsula dawned like the previous day: hot, humid, and absolutely no wind. At least there was no sign of the fog that we had worked our way through the day before in the first two hours after leaving our homeport of Winthrop Harbor. Fiona and I had spent a pleasant night tied up at the marina in Port Washington, some 56 miles up the Wisconsin coast. But anxious to make as much northing as possible, we left at 0830 with a full tank of fuel for a second day of motoring. Later that morning the wind came through. So for a little more than two hours off Sheboygan, we sailed on a nice downwind run up the Wisconsin coast staying about two miles offshore. Then as abruptly as it arrived, the wind left us to face calm seas and slatting sails once more. Time to furl the jib, stow the main, and switch the engine on again.

The exertion of stowing sails left us both with a thirst, so Fiona went below for soft drinks. She came straight back up with a serious face and very calmly announced, "I think we have a fire." Behind her were wisps of white smoke coming out the companionway. After I shut down the engine, I made a quick trip into the cabin, which was full of smoke, with more coming from the engine compartment. There were no apparent flames. I grabbed the fire extinguisher and carefully lifted the engine cover. Again, no flames, but a lot more smoke.

Time to think

We obviously had some time to think the problem through, so we retreated to the cockpit while the cabin aired out. A quick confirmation of our position found us about midway between Sheboygan and Manitowoc with no other vessels around and in 40 feet of water. With no wind, tide, or current to worry about, we were not going anywhere, so we felt anchoring was unnecessary.

Once the cabin was clear of smoke, it was time to solve the problem. Restarting the engine quickly showed us the problem: a split in the exhaust pipe was allowing exhaust gases to pass into the engine compartment and diverting some of the cooling water to the bilges. Since it was still calm and we were two hours from Manitowoc, we were reluctant to call for help and a tow. This was, after all, a shakedown cruise in preparation for extensive cruising in the years ahead. We both felt that this was a test of our abilities and self-sufficiency.

After allowing the pipe to cool, I carefully felt the area of the leak. It seemed to be cracked, but the exhaust pipe

wrap did not permit a full inspection. My first thought was to wrap the pipe with underwater epoxy to make a seal. Unfortunately, I could get only one hand to the area, and the epoxy kept slipping, finally setting as a useless glob. The solution was obviously to wrap the pipe ... but with what?

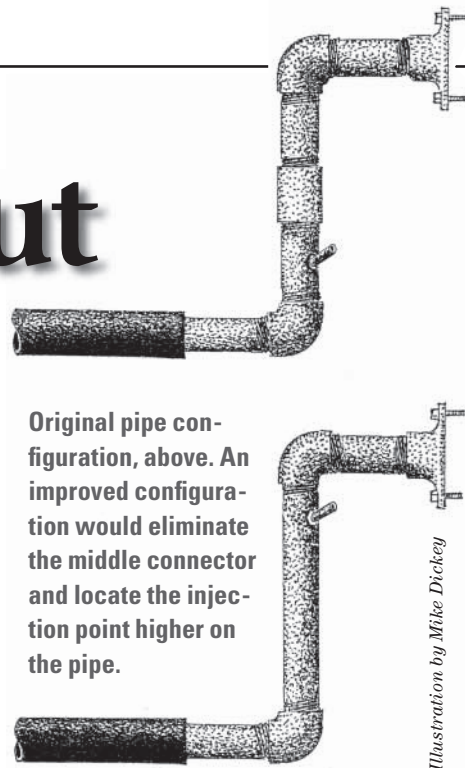
Somewhere from deep within our memory banks, we pulled out the idea of using a tin can and hose clamps. We had the materials, and it was worth a try. We found a can of fruit salad that was about the right diameter. We emptied out the fruit salad, cut the bottom out of the can, and split the side. We opened up four hose clamps and joined them to create two larger clamps. Then we began the job of fitting the can and clamping the repair together. Did we mention Lake Michigan's biting flies? They descended just about the time we started on the repair. While one of us was inside the engine compartment, the other's job was to keep the flies at bay.

In a half an hour the repair was in place, and it was time to start the engine. Our biggest surprise was that there were no exhaust fumes and no water leaking. It seemed that the tin can clamped around the exhaust pipe provided a reasonable gasket seal. But we continued to check the repair every 15 minutes until we were safely alongside in Manitowoc. By then, we were sufficiently happy with the repair that we decided to continue the next day to Sturgeon Bay, which has more extensive repair facilities.

Once we removed the exhaust pipe and stripped off the heat-wrap tape, we found that the original exhaust was made from threaded black-iron pipe and bends that had a threaded connector in the middle of the pipe. The vertical section was made from two short lengths of pipe and a coupling, making four joints instead of two. A possible contributing item was that the water-injection point was at the bottom of the pipe, not at the top, allowing the pipe to be heated to the exhaust temperature.


Lessons learned:

- A good selection of stainless-steel hose clamps should be in every spare-parts box.
- When an exhaust pipe is covered in exhaust wrap, you cannot tell what is happening underneath.



Original pipe configuration, above. An improved configuration would eliminate the middle connector and locate the injection point higher on the pipe.

Illustration by Mike Dickey

- Access is good from on top and the starboard side of my engine compartment, but the exhaust pipe runs at the back to the port side. It's worthwhile to improve access.
- Simple Green does a good job of cleaning the soot from the engine compartment and from the side lockers.
- Upholstery must be dry-cleaned after being exposed to a cloud of exhaust gases.
- Insect repellent doesn't work for Lake Michigan flies.
- Next time we'll keep the fruit salad, instead of dumping it in the trash. 



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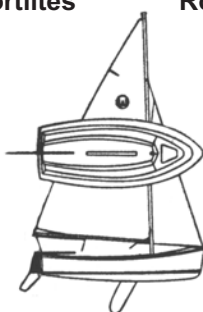
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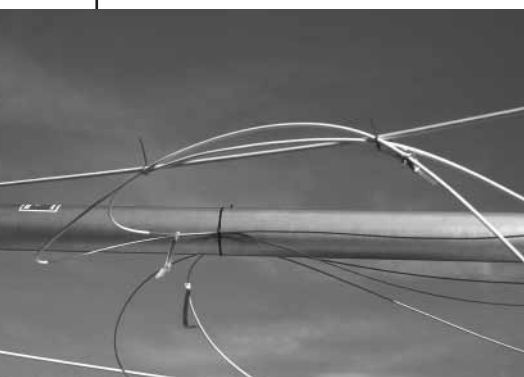
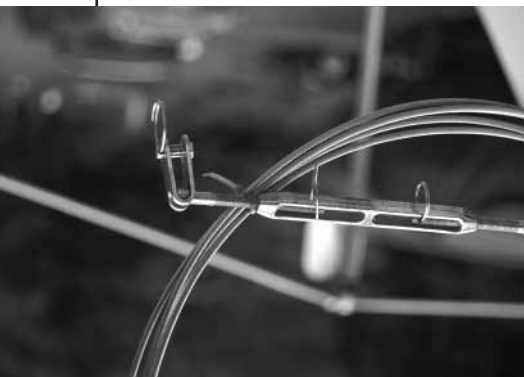
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by Gregg Nestor



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To achieve this enviable versatility, the mast must be unstepped, the gear properly secured, and the rigging made fast for the ensuing road trip. While a boat's rigging is designed to withstand the various stresses of sailing, her ability to cope with the stresses of highway speeds is definitely challenged.

Running rigging can be easily removed and stowed. However, it's the standing rigging, the stainless-steel wire shrouds and stays, that can be damaged or even cause damage to your craft, if they're not properly prepared for high-speed, highway travel.


Like running rigging, standing rigging can also be removed and stowed. Nevertheless, this process is more involved and basically amounts to: the more rigging removed = the more time spent rerigging, which = less time spent sailing. Not a happy little equation.

There are many methods for securing rigging for transit, and I've tried most of them with various degrees of success. Using short lengths of line, or "small stuff," is nautical, but often results in slippage and the unrestrained flapping of loose ends. Also, if you're not adept at knot-tying, the resultant jumble looks like the work of a Boy Scout gone berserk. The clip-, buckle-, or Velcro-type ties you can purchase are just an expensive alternative to rope and, in actual practice, don't work as well. Tape (riggers', electrical, duct, and so forth) works very well. It's quick and easy to apply and to remove. However, tape leaves a sticky adhesive residue. The method I've found to be foolproof is... cable ties.

These simple, adjustable, nylon, self-locking strips are easy to use, come in a variety of lengths, are inexpensive (I bought a 1,200-piece assortment for less than \$5), and are downright tenacious. I figure I use between eight and 10 ties per trip. Doing the math: 10 ties times two trips for each outing (there and back) times 16 trips a summer equals about 320 ties per season. That 1,200-piece package should last me more than three seasons for \$5. It comes to about \$1.34 per year.

If you've ever done any electrical work aboard, you know how handy these little gems are at keeping wiring shipshape. In addition to their intended electrical use, cable ties are excellent for securing all types of rigging for highway transport. The beauty is in their simplicity and versatility.

To prevent rigging from slapping, getting caught on something, or coming loose and being damaged or causing damage, use cable ties to secure it to the mast, lifelines, or even to itself. Then, once you've reached your destination, remove the cable ties quickly and easily with a snip of your wirecutters or a slice of a knife.

Once you've tried them, you'll agree that nothing beats cable ties for securing your rigging for a high-speed, interstate experience. 

Fixing deck leaks

The liquid that creeps along cracks and cures 'em


PERSISTENCE WAS A 40-YEAR-OLD CLASSIC WOODEN KETCH, designed by a master and built in Taiwan by folks who knew what they were doing. In the fashion of the time, she had teak decks laid over plywood. They had lasted well but the caulking was getting old, and I had an uncomfortable feeling that the few leaks I knew about were only the tip of the iceberg. I surely didn't want slow, insidious seepage to the plywood below. Neither did I want to take on the enormous job of reefing out and recaulking a whole deck for the sake of a few leakers. Here's what works.

The next time you wash the decks down, preferably on a nice warm day, stand by as they dry with a piece of school blackboard chalk in your hand. As the decks dry, you will notice that wetness lingers along some seams. Some of it will dry off in just a few minutes, but the wood alongside some seams or around some plugs will stay wet for quite a long time. These are the leakers. Mark them with a swipe of the chalk along the length of the wet edge.

Later, when all has dried out, come back with Captain Tolley's Creeping Crack Cure. No joke, there is such a product, and it's available at marine stores. It's a thin, milky material that comes in a small white plastic bottle, and it is the only thing for leaky windows, failing bedding around deck hardware, or failing caulking on laid decks.

It seems to work by virtue of having a peculiar quality of surface tension. As you squeeze out a line of it along a seam or around a fitting, you will see it will lie on top except where it encounters a crack or fissure, however small. Any place that it *can* penetrate, it *will*, and you will see it being dramatically sucked into the crack. Let the first applica-

tion dry for a few minutes, then repeat a time or two. It seldom takes more than two or three applications before the crack is filled; you will see any subsequent application lie on the surface.

Captain Tolly's dries to a hard, thin, glue-like state. Before it dries hard, it cleans up with water. After that you will need to scrape or sand off any that did not disappear into a crack. It isn't a caulk or bedding by itself — it looks more like a thin glue or epoxy — so don't expect it to fill large voids. For the small stuff, though, it's the best. Because it is so easy to use, it became a regular part of my boat washing. The old deck? Oh, it's just fine, thank you. 



by Brooke Elgie

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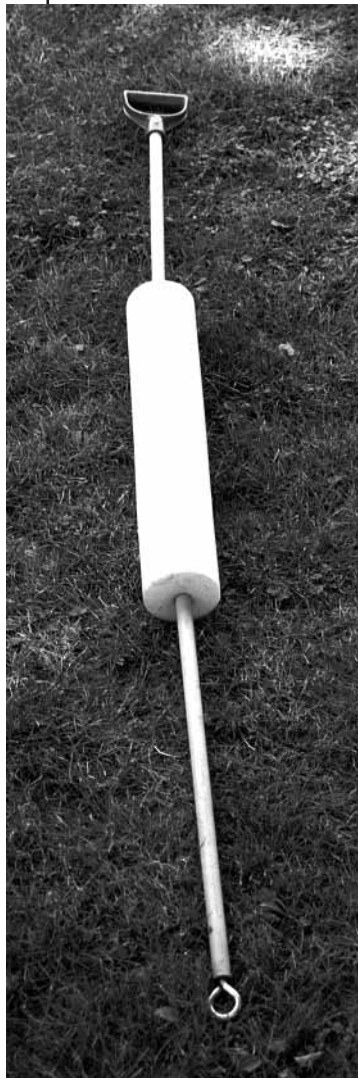
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Use your noodle

Say hello to the North Coast mooring pick-up buoy

by Gregg Nestor

NORTH COAST SAILORS (THOSE sailing on the Great Lakes) count on two major seasons: sailing and snowing. The two minor seasons are commissioning and decommissioning. As a North Coast trailersailor, I was experiencing the latter of the major seasons as I cleared snow off my O'Day 222, which was "moored" on her trailer in my backyard.

To take my mind off of the task at hand, I was reviewing my sailing "to do" list when I came to Item 10: Replace mooring pick-up buoy. I mumbled to myself, "Wouldn't it be nice to have a handle on the pick-up buoy like the one on this snow shovel?" As if on cue, a loud crack filled the air.

Not paying full attention, I had wedged the snow shovel between a roller and the trailer frame and inadvertently (or maybe subconsciously) twisted and broken it. I now had the bright red handle I would need for my new mooring pick-up buoy. Off to the workshop I went, hoping that the unshoveled snow would melt by commissioning season.

The construction of my North Coast pick-up buoy is relatively straightforward. The major components consist of a 6-foot length of ½-inch PVC pipe and a 2-foot piece of swim "noodle," a readily obtainable, plastic-foam cylinder with a hole through the center that will form the buoy. You'll also need a 6-inch section of ½-inch wooden dowel, a galvanized eyebolt with a wood-screw end, and, of course, the snow-shovel handle. Fastening requires a small amount of epoxy and a couple of 1½-inch or 2-inch stainless-steel machine screws with locking nuts.

Slide the swim noodle onto the 6-foot length of PVC pipe. The noodle's exact location will ultimately depend on the weight of your mooring chain. This can be determined at the dock when final adjustment and assembly are made. If you are using line instead of chain, it may be necessary to fill the lower third of the pipe with BBs or to add three to four links of heavy chain to the bottom eye. The goal is to have the pick-up buoy float straight out of the water.

Next, drill a hole into the end of a 3-inch piece of wooden dowel. After screwing the eyebolt into the hole,

- Shovel handle**
- + PVC pipe**
- + swim noodle**
- + wooden dowel**
- + eyebolt**
- + screws and locking nuts**
- + chain or BBs or both**
- = the North Coast mooring pick-up buoy**

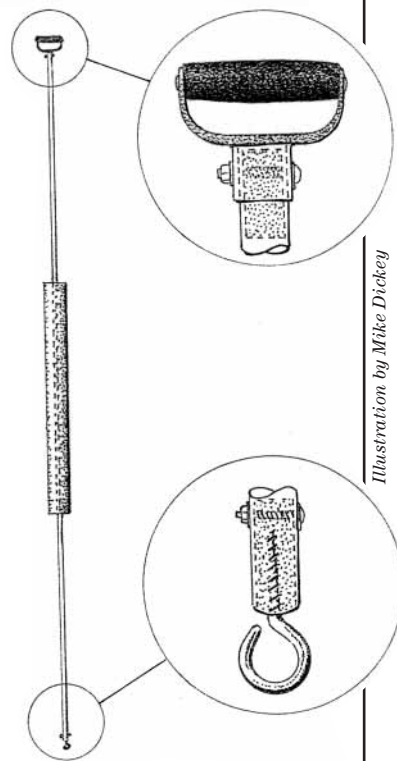


Illustration by Mike Dickey

insert the dowel into the lower end of the PVC pipe, approximately ½ inch past flush. Use a 1½-inch stainless-steel screw and nut to secure it in place. Fill the ½-inch space with epoxy, creating a watertight seal.

At this point in the assembly process you may want to test the buoy. If, after sliding the noodle up and down, the buoy does not float vertically when attached to the mooring line and chain, this is the time to add the links of chain or pour BBs down the pipe. If you use BBs, once the desired number have been added, pour some epoxy down the pipe to secure them in place. Finally, insert the other 3-inch piece of dowel into the top of the pipe, sealing it with epoxy. Use a stainless-steel screw and nut to fasten the snow-shovel handle through both the pipe and wooden plug.

Just as the Riviera has its Mediterranean mooring and the Caribbean its Bahamian anchoring, we Great Lakes sailors now have our North Coast pick-up buoy. 



Reeving a new halyard

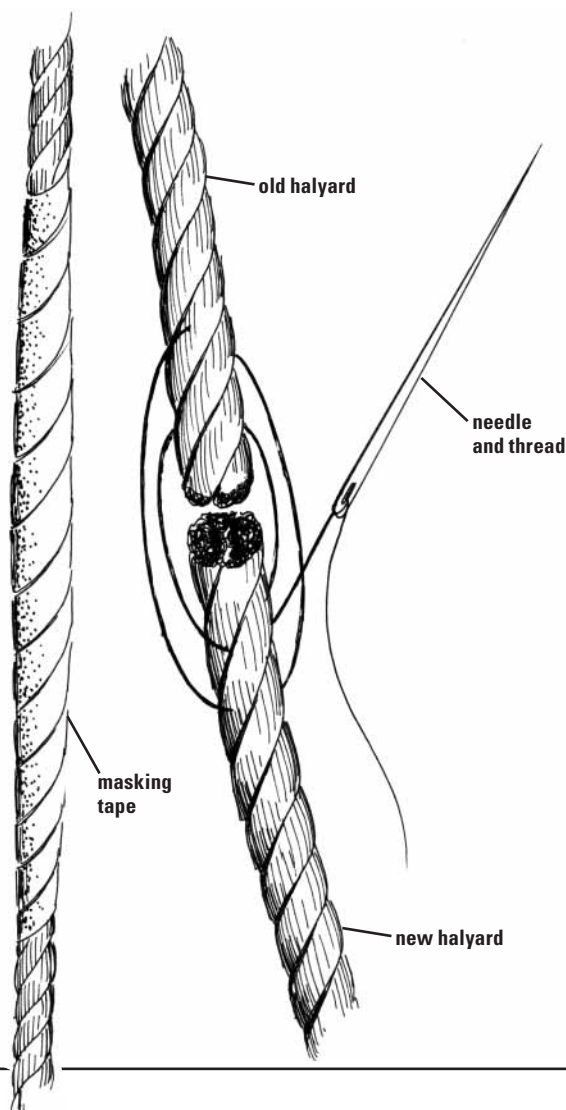
by Alan Lucas

WHETHER YOUR HALYARDS ARE OF braided or laid rope, as long as they are external, new ones can be reeved without sending a person aloft. Two things are needed: a nearly windless day and a gentle touch.

As illustrated, the ends of the old and new halyards are butted together and held there with needle and thread. Just a few turns are necessary after which they are brought up reasonably tight and tied off. The join

is then wrapped with masking tape that reaches well up and down beyond the join. Its purpose is to add strength to the union as well as to produce a fair, continuous run when it passes through the block aloft.

The old halyard is now hauled all the way through the block and is then separated once the join reaches the deck, leaving only the new halyard in place and ready to work. 



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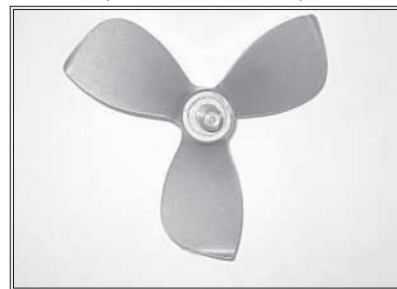


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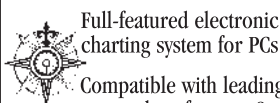
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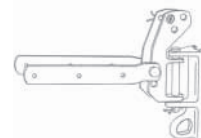
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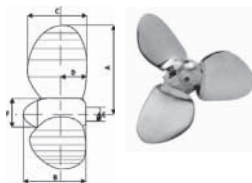
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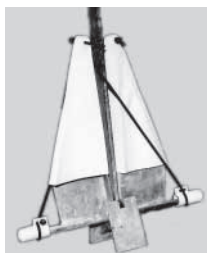


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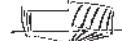
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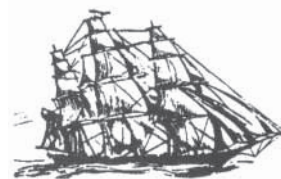


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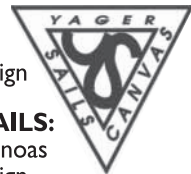
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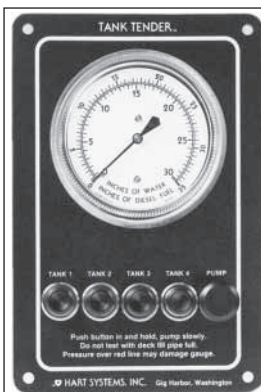
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Bruce Kirby,
continued from Page 47

Bruce was asked to design something fast and exciting but also capable of being handled by sailors of all ages, strengths, and skill levels. It also had to be trailerable and safe. Enter the Sonar, with its deep spade rudder and generous keel. It's become an international class boat, and more than 700 have been built and compete in many races including the U.S. Women's Championship, Cowes Week, and the U.S. Junior Championship.

Disabled sailing

A young friend who'd won junior races was hurt in an automobile accident and lost the use of his legs. Another close friend, Robbie Pierce, adapted the Sonar so it could be used by people with disabilities. "With its 75-percent fractional rig, it moves well in light air, allowing people with disabilities to manage the boat," Bruce says. "Robbie added a transverse seat so sailors can slide to either side of the boat. I'm proud the Sonar was used in the 1996 and 2000 Paralympics and will serve again in 2004."


Surprisingly, Bruce is also involved with boats in which no one can sit. He's developed a passion for radio-controlled Lasers. In the 1990s he collaborated with international champion Jon Elmaleh to produce a patented radio-controlled, one-quarter scale version of the Laser. At just over a yard long, the yacht has a bulb keel, comes as a kit that can snap together in less than five minutes, and requires no life jacket. It's another one-design class, and the racing — both in the U.S. and U.K. — is taken seriously.

Bruce has not confined himself to drawing small racing boats only. In between the International 14 and *Canada I*, perhaps his most loved vessel is the Admiral's Cupper, *Run-away*, a one-off 39-foot cold-molded boat built in 1979. A recent addition is a custom 43-foot cruiser based again on the flat-bottom, shallow-draft Sharpie. Another cruiser, of which several have been built, is the Georgian 34, named after the beautiful bay in Lake Huron. That said, he has no clear favorite design: "I guess my favorite would be the one that most satisfies the client and thus, by sheer numbers, it should be the Laser."

Does one have to be a degreed engineer to be a sailboat designer? Bruce's extraordinary success demonstrates one does not. But what he does advocate is early experience on a sailboat. "You must sail to design," he says with emphasis. "Engineers aren't necessarily good sailors. And look at all those designers without formal design training — Bob Perry, Doug Peterson, Olin Stephens. But you must have the ability to see, to re-create the visual aspect. I foresee many advances in boat design dic-

The Ideal 18, another Bruce Kirby design, is a popular team racer, particularly on Long Island Sound.



tated by materials. I might prefer wood, but fiberglass and now carbon fibers and Kevlar offer more flexibility. The new materials will create much higher ballast ratios and change design. But in the end, to design you must combine a good computer background with lots of time on the water while keeping your eye on the sails." 

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One thing more on tides

I liked Don Launer's article on tides (September 2003), but it did not fully resolve a question about tides that has bothered me for a long time. One simplistic model would be that the moon pulls the water to one side of the earth, so we would have only one tide a day. But it doesn't work that way. The water gets pulled toward the moon *and* away from the moon, so we have two tides a day. I hope Don can add a paragraph or two to clarify why water goes both toward and away from the moon so we end up with two tides per day.

Ben Staviss
Bala Cynwyd, Pa.

Don Launer responds

In the article I described that the center of gravity of the earth/moon combination follows a smooth orbit around the sun and that the moon and, to a lesser extent, the earth swing back and forth across this smooth orbit. I also mentioned that, as the earth moves back and forth across this smooth orbit, the water is "thrown" from one side of the earth to the other. If you'll look at the diagram in the article where the earth and moon are on the same side of the earth, you'll see that the earth is at its maximum point outside of that smooth orbit, causing the water to be "thrown" to the far side of the earth. The same thing happens (to a slightly lesser degree) when the moon is on the opposite side of the earth from the sun.

Don Launer
Forked River, N.J.

Woops (but what a tale)!

Improbable did not win the 1971 Fastnet Race (as reported in "An *Improbable* Conversion," September 2003). *Ragamuffin* won, and *Quailo III*, the boat I sailed on, was second. As I remember, *Improbable* was fifth or so. We came back from the rock in a Force 8 gale, and I still have the pictures to prove it.

I know *Improbable* didn't win because we bet about 30 bottles of champagne and had a really good party next to *Ragamuffin* after the race was over at about 4 or 5 a.m. I went to the masthead three times in that race to replace spinnaker halyards, and when we lost the last one in a Force 8 gale, we went with twin headsails. *Ragamuffin* passed us with a kite up and with a guy in the hatch with a flare gun in case they lost control. As I remember, they beat us by about an hour and a half.

I believe *Improbable* did not do well in the Fastnet because of the amount of upwind work that was needed on the way to the rock. Ron Holland was skipper of *Improbable* at that time. I believe the boat was built in 1970, the year prior to when it was shipped over to the UK for the Fastnet and Admiral's Cup series.

Roger Marshall
Jamestown, R.I.

Eastward Ho 24

I've owned this boat since 1986 and have never seen it mentioned in a magazine or anywhere else. The boat is an Eastward Ho 24, Hull No. 56 (built in 1977 in Portsmouth, Rhode Island). The LOA is 23 feet 7 inches, beam 8 feet

8 inches, draft 3 feet 10 inches, displ. 7,000 pounds, ballast 3,700 pounds, propulsion: Volvo MD7A. I sail mainly in Jamaica Bay and Raritan Bay, which are in New York and New Jersey. This is a great boat to sail in a small craft warning.

Larry Fox
West Orange, N.J.

Well, Larry, this time you're seeing the Eastward Ho 31 (Pages 36-39) and your own beautiful 24. Thanks for sending the photos.



The Eastward Ho 24 owned by Larry Fox.

Timely delivery

I built Dave Gerr's Nester Dinghy in 1996. I used cheap plywood because it was an experiment, but it has begun to come apart. This summer I decided that I liked the nesting dinghy so well it was time to make a new one. I've been researching plans, and they arrived in today's mail in *Good Old Boat* (September 2003)! Just what I wanted in cedar strip construction.

Greg Mansfield
Washington, N.C.

Victoria 18 specs

A couple of clarifications on the Victoria 18 article (July 2003) are in order. I own a 1981 Victoria 18 named *Half Moon*. Ballast is 550 pounds lead casting. Displacement is 1,200 pounds. Ballast/displacement is therefore 0.46 (*extremely* high!). Specs are available on the Victoria site: <<http://home.texoma.net/~jbwrenn/ten.html>>.

Bruce Buckman
via email

Strip-built Nester Dinghy

Kim Ode's article on the strip-plank version of the Nester Dinghy (September 2003) was very nice. What a fine job they did. I like the variation of my joining clamp. Not only would their fixed brass handles be easier on the hands, but they won't rattle occasionally as the sliding pins do. I wouldn't worry about the clamps being brass, rather than bronze. The only way they could dezincify is if the dinghy were left in the water for weeks at a time — salt water, too. I guess I'd switch to bronze before a world cruise.

Dave Gerr
New York, N.Y.

Trailers and trailering

A follow-up to "Trailersailing begins with 'trailer'" (March 2003). The article was informative and comprehensive. Obviously, Gregg Nestor is no stranger to the pitfalls and problems that boat trailers can cause. I have had to deal with many

of them and have come to regard the trailer as the weaker component of trailersailing. I am often amazed at how trailer manufacturers can put trailers on the market with so many weak and potentially hazardous design deficiencies.

Over the last 16 years or so I have trailered *Go Gently*, my Precision 23, for many road-miles (*Henk is mentioned with great respect in the editorial in the March 2003 issue –Eds*). Counting some 25 trips between my Ontario home and Florida plus more trips in the Great Lakes area, I estimate that I have traveled roughly a total of 50,000 miles. I guess I have gained some experience, but bad things keep

on surprising me. On our last trip down to Florida, we lost a rear trailer wheel due to bearing failure. I will return to this later.

I wholeheartedly agree with what Gregg says about tires. When I bought my trailer (along with the boat), it was outfitted with regular car tires. I ended up replacing quite a number of blown tires until a trailer repair outfit put me onto the right radials. These are 50 pounds. I've had far less trouble since then. It's important that your spare is up on pressure, so I carry a small 12-volt compressor. I use

Continued on Page 92




GOOD OLD BOAT EDITORS JERRY POWLAS AND KAREN LARSON sampled a couple of classic boat shows during the summer of 2003. These events run the gamut from small and informally homey to large and prestigious. Regardless of type or size, they are always educational and entertaining, filled with entirely charming wooden boats and populated with the nicest folks you'll ever meet.

Early in the summer we sailed across Lake Superior to Grand Marais, Minnesota, for the North House Folk School Wooden Boat Show and Summer Solstice Festival. The emphasis at this event is on small wooden vessels from kayaks to sailboats and on traditional handcrafts to charm and delight the nostalgic. The recently founded Folk School <<http://www.northhouse.org>> is flourishing. It's open year 'round offering classes in traditional skills (baking, crafts, boatbuilding, and more) to adults and children.

Next we ventured to Victoria, British Columbia, for the Classic Boat Festival, now in its 26th year (for more



information, call 250-385-7766). Here the emphasis is on brightwork and staying power, both in powerboats and sailing yachts. Small rowing skiffs and steam-powered launches were given the same respect as the 102-foot HMCS *Oriole* (the Canadian Navy's sail-training vessel) and beautifully restored grande dames from the previous century. This show is held smack in the center of Victoria each Labor Day Weekend (well, OK, Labour Day for the Canadians), and it's hard to tell who's having the most fun: those aboard the classics or the tourists who come to marvel and tour a few of the vessels. 

Boats on display in Grand Marais, Minnesota, in June, above left, and the North House Folk School sailing vessel, *Hjardis*, above right. Boats on display in September in the shadow of the Empress Hotel in Victoria, British Columbia, lower left. A view of the classic boats racing near Victoria, lower right, as seen from the HMCS *Oriole*.



Continued from Page 91

weight-distributing torsion bars; they're better for the tires and give a smoother ride as well. Initially the trailer wheels didn't track properly, but this has been fixed.

The winch post was too weak and started to break loose. I bolted in a length of square steel tubing angled down to the rear. Problems with grounding for the lights were solved by running white wires all the way down to the lights rather than relying on the trailer frame. Corrosion problems were experienced with the more expensive round connector. I find the flat, less expensive connector, as pictured in Gregg's coupler photo, superior.

Another problem was with the keel-rollers. When I'm retrieving the boat, the keel-nose will, at a certain point, hit one or two of the rollers and put a lot of strain on them. Mine were made with shafts of poor steel. In no time flat a fair number were bent, which prevented turning. I replaced the shafts with axle steel. This stopped the bending but didn't fix the problem for long, since the rubber rollers have gone flat on one side and won't turn. To fix this, a friend placed a 2-inch board covered with outdoor carpet on top of the rollers.

About one of the major problems I ran into: I was coming down a long incline and had to apply the brakes several times. Once I was off the hill, I heard a loud bang. I looked in the rearview mirror and saw flames and black smoke rolling across the highway. Once I got stopped, I had to use an entire fire extinguisher to put the fire out, the tire having almost completely burned up by now. The heat might well have set my boat on fire. This was major!

Not only the tire, but also the brake parts, bearings, oil seal, and bearing-protector were shot. Since it was getting dark, I removed all of the brake parts, replaced the bearings only slightly greased, and limped along for another 30 miles to a lighted shopping mall parking lot where I managed to redo the job after finding a new oil seal in my parts kit. I learned that the problem was due to the wheel-brake pistons. On my trailer, as on many others, these were made of cast aluminum. Even though I always try to rinse the brakes after saltwater submersion, some salt water got past the rubber seal. This caused corrosion of these pistons. Eventually they started to seize up. Hydraulic pressure would still push them out when the brakes were applied, but the retracting springs were not strong enough to retract the brake shoes. On a hill like the one I was on, the shoes soon heated up and the tire, having been dragged along the road, reached the point of ignition. I have since had copies

made out of stainless steel. I could also have used bronze.

Regarding bearings and greasing, use only marine-quality grease, as this doesn't break down when water gets to it. Greased seals often start failing due to wear of the seal area on the stub axle. Kits that consist of a stainless-steel ring, an O-ring, and a seal are available for this. I buy a kit called Spindo Seal, a Bearing Buddy product. Make sure you purchase the correct size.

For bearing-protectors, I initially tried the spring-loaded type that had a grease nipple in the center. The spring holds a disc in toward the bearings. Applying more grease will force the spring to contract. When a little grease escapes through a small hole at the side, you stop loading. The grease is now under some pressure. It's best to apply more grease just before submerging in water. The pressurized grease should prevent water from entering at the oil seals. I wasn't too lucky with the ones I had originally purchased, as they were an inferior make. I then went over to a well-known type with a rubber relief valve next to the grease nipple, but I wasn't too happy with these either, since they don't really pressurize the grease. I have now found a better version of the other type of protector, made by Bearing Buddy Inc., that has a stainless-steel, rather than a plastic, disc and a soft plastic boot over the end that seals water and dirt out.

Correct tightening of the spindle nut is important. Different people will give you different advice on this. At one time I thought I knew how to do it, but in the end I became totally confused. Then I talked to an expert who does this all the time. He says after placing the hub with bearings and so on back on the spindle, rotate the hub slowly with one hand while tightening the nut down to about 50 foot-pounds. If using a 12-inch wrench, use full hand force. This will set the bearings. Next, loosen the nut to remove all torque. Do *not* rotate the hub. Now finger-tighten the nut until just snug and then back off until the first crenellation lines up with the cotter-pin hole, insert the pin, and secure. The nut should now have a slight amount of movement.

After you have done everything correctly, you can go on your merry way convinced that no major breakdown will occur. Right? Wrong! We were on our way to Florida. It was already dark when we passed through Cincinnati. When we were some miles into Kentucky, a truck driver came alongside and pointed to our boat trailer. I continued to drive on for about 5 miles to the next rest area. It was dark and unpleasant weather. Everything felt OK so I assumed the



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problem was failure of the lights. But they were OK. When I took another turn around the trailer, I discovered that it was missing a rear wheel on the starboard side. Oops! The wheel and hub were gone, and the axle was dragging. What to do? It was too cold to stay where we were. There were no motels nearby. Someone suggested that we go on for another 25 miles to a town with repair facilities. So we limped there with our hazard lights on. The next day we were on our way again eight hours later with a newly fabricated axle.

The most likely cause, as indicated by the mangled spindle axle, was a complete bearing breakdown. This had happened to me once before. It seems that every time a double-axle trailer is pulled around a sharp turn, such as occurs at a service station to get to the pump or at a fast-food restaurant, the wheels are forced out of track. This is plain to see when you stop halfway through this kind of turn. A tremendous strain is put on the bearing-rollers that may well cause one or more of the rollers to break. Nothing will show you that this has happened. You go merrily on your way, and down the road the bits of broken roller take care of the rest. Once the bearings are gone, there is nothing to hold the hub and wheel in place. I have racked my brains for a solution to this problem but so far haven't had any luck in coming up with one... other than avoiding sharp turns. Is there a backyard inventor out there who would be interested in coming up with a solution?

Henk Vanderhulst
Sarnia, Ontario

Cutless bearings

I just read the article on Cutless bearings by Bill Sandifer in the May 2002 issue. My earliest memory is of a lignum vitae bearing in the '40s. We got rid of that and poured babbit metal bearings. Then a little later, Cutless bearings came in. All this time I have solved the removal problem by leaving about $\frac{3}{16}$ to $\frac{1}{4}$ inch sticking out when installing a new bearing. This doesn't seem to hurt anything, and it lets you simply screw it out with a pipe wrench without removing the shaft. Some people hated this practice because it didn't look "proper," but I wondered who else is going to see it but the fish? Am I wrong here? It always worked for me.

Larry Alexander
Port Townsend, Wash.

Really big runaways!

I found the article about the dangers of runaway diesels (July 2003) very good. This is a subject that I have never heard mentioned concerning small marine diesel engines. As noted in the article, this is a rare occurrence with diesels, but I have seen this event firsthand with larger diesels used on railroad locomotives. I have worked with railroad locomotives for more than 20 years but have only seen this once. In this case, it was caused by the shaft seal on the roots blower failing, allowing lube oil to be atomized by the blower. This fuel/air mixture was drawn into the cylinders, allowing the engine to overspeed and throw a few pistons and rods through the side of the engine block.

Even if you are able to prevent this type of damage once the maximum engine rpm is exceeded, you stand a good chance of damaging your crankshaft bearings, and they should be inspected. There is one other problem with diesel engines that can cause damage even in marine engines and

is much more common. This is fuel dilution of the lube oil caused by a failed injector or internal fuel line. Running a simple viscosity check on your oil regularly, such as when you change your oil, will alert you to problems that may be damaging your engine.

I would like to see articles on family cruising, as I am hoping to someday be able to explore the Inside Passage with my family. You're doing a wonderful job with this magazine; it must be one you enjoy greatly.

Donald Maywald
Vancouver, Wash.

Righting ability

I read Ted Brewer's comments concerning the Bristol 35.5, the Tartan 34C and 37, and Pearson 35 with great interest (September 2003). I have sailed the Bristol 35.5 many times, and I own a Tartan 34C. Both boats are wonderful performers and lovely to look at. I might also add that I agree with Ted that the Tartan 34 is the prettiest of the group, though the Bristol 35.5, when shined up, is very attractive as well.

Ted raises an important issue, however, when he discusses the righting ability of these centerboarders. He says they will right themselves in the event of a capsizing though a bit more slowly than the capsize screening factor might suggest. Is he sure? What rules of thumb can he suggest to apply to determine if, in fact, a hull is self-righting? Of what value is the IMS (International Measurement System) limit of positive stability number? While I am certain it is a rare occurrence, the ocean can be fickle. *Sayula*, Ramon Carlin's Sparkman & Stephens Swan 65, was rolled 180 degrees twice during her victory in the first Whitbread Race. I think this issue is of particular importance today, as boats seem to be getting shoaler and wider with more appendages above decks — like radar arches and the like — and more gadgets attached to the masts and rigging.

George Colligan
Turin, N.Y.

Ted responds

Your letter brings up some interesting points. Sorry to say there is no rule of thumb to tell if a hull is self-righting. Indeed, most beamy modern yachts would float happily upside down on a calm sea, at least until they took in enough water to sink. Fortunately, yachts *never* capsize



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in calm seas. Even in a squall, the vessel will be knocked down only as far as the point where the wind force diminishes due to the heel angle, say 60 to 70 degrees. Then, like a child's dumbbell, she pops back up once the squall passes over, provided she has not taken in a load of water through open hatches or ports.

It takes a high and/or breaking sea to capsize a yacht and, in my opinion, no yacht is immune to capsize under extreme conditions. Then, with luck, the next sea that comes along will roll her until she has some positive stability, in which case, she will come back upright. The yacht's safety in such conditions really depends on that speed of recovery.

Obviously, the sailboat with the lowest center of gravity will right more quickly. That is why I say that keel/center-boarders, with a higher VCG (vertical center of gravity) than a deep keel boat, will right more slowly than the capsize screening formula would indicate.

Similarly, a narrow boat will right more quickly than a beamy one of the same displacement and VCG, since she is less stable when inverted. It is really a matter of inverted stability, and the less the better in a capsize situation! As you say, raising the VCG with radar arches, hard dodgers, and other gimmicks can adversely affect the safety of the vessel.

Ted Brewer
Gabriola, British Columbia

On becoming a sailor

Enclosed please find my subscription request. While sitting in my doctor's office, I picked up a copy of your magazine. I thought it might be fun to take sailing lessons after glancing at your publication. I started my classes the next day and had a great time. Two days into the class, we were told we were going to race...I began to feel sick...we had just started...are these people *crazy*? I decided I was going to respectfully decline. Who do these kids (the instructors) think they are? We can't race. We just started!

Well, they paired us up with instructors, and I was placed with an older woman instructor who told me to relax; we could just stay at the end of the pack. That made me feel much better. They went over the rules and the course, and before I knew it we were racing. We were even passing other boats! As we rounded the first mark, we passed *all* the boats! We continued until we had rounded all the marks and headed toward the last leg. We won the race, and I was hooked!

The next day I went out in search of a boat. I live near Newport, Rhode Island, and there is an abundance of used boats for sale. I found an O'Day Daysailer for \$100. I completed my sailing lessons and went sailing. To my surprise, I could do it. I was a sailor! I sailed all over the pond at the end of my street and had a great summer.

While driving home one day I saw another boat, a 20-foot Balboa. To me, she looked great. She had only one hole. The sails were there. I towed her home for a give-away price. She was obviously sad to leave her old home, because she put up quite a fight on the way home. OK, I admit it: I should have done some pre-tow work on the trailer, but I was too excited. After a flat and a bearing replacement, we were again on our way.

At home I was greeted by fellow neighborhood boaters who told me that the boat I had purchased was not such a *good* old boat. They told me the sails were all out of shape and

that the boat was a poor design. I did not care. She was mine! I spent the winter getting her ready. I enjoyed the work and found many surprises in the old girl. Stuffed in the V-berth was an old Johnson outboard. I hung it on the back, filled it with gas, and, to my surprise, it started! The boat was always used in fresh water, so the stays were all in good shape, too. I filled the holes and cracks with the help of a fellow boater with fiberglass experience. I refinished the interior woodwork and replaced the wiring, halyards, sheets, blocks, and various other items. This was all done under a blue tarp in my driveway. My neighbors would laugh because I would often work into the night, and they would see the glow of my drop-light under the snow-covered tarp.

Soon the day came I had waited for. The snow was gone, and we were ready to launch. My skeptical fellow boaters told me I would not be happy and should have bought a boat like the ones they have. Well, I do understand that they all have fine boats, but my boat was different: she belonged to *me*! As she slipped into the water, I had a smile on my face that could not be removed.

I have been sailing her all summer, exploring the local waterways, taking day trips with my family, and having the time of my life. I don't notice the problems my friends say the boat has. Yes, I understand that this is just about the only boat I have sailed, and she doesn't quite fit in with the other high-dollar boats in the marina, but I have rebuilt her, she is fun, and she has also gotten me home during a sudden burst of bad weather. We have bonded. Will we be together forever? Probably not. But she will only go to a good home when it is time to upgrade. For now, we continue to sail on a daily basis. Oh, and those neighbors who spoke poorly of the old girl...they are still in the stands. I wave to them as I pull out of the marina.

P.S. The total project cost including the price of the boat was \$1,400.

Paul Silvia
Westport, Mass.

A first time for everything

I've received complimentary copies of the last two issues and found *Good Old Boat* very interesting. I've read both cover to cover, which I've never done with any other business or personal publication. After reading them, I even sent them on to an avid sailor friend, another first.

Kool-O-Matic manufactures fan and ventilation products for residential housing and recreational vehicle as well as for specialty markets (such as marine markets). One of our products is the Cabin-Cooler. I would like to place an ad in your good old classifieds to test what kind of response we would generate...I would also like a subscription...

Paul Van Belle, Kool-O-Matic
Niles, Mich.

With that sort of excitement about this magazine, Paul, we thought it only fair to give you a bit of ink in return. Your new ad is on Page 83. We hope it goes well for you!

Send questions and comments to Good Old Boat, 7340 Niagara Ln. N., Maple Grove, MN 55311-2655, or by email to jerry@goodoldboat.com. Please limit messages to 150 or fewer words. We reserve the right to edit.

Reality and fantasy

by Karen Larson


THERE ARE IDYLIC DAYS WHEN SAILING. MANY OF THEM. WE ALL recognize this fact, or we wouldn't be out there with all that canvas in the wind. Those are gorgeous days when nature combines all the elements just so, to create perfection. But those days have their counterparts.

We all know those days, too. It's breathless and beastly hot with an influx of biting flies, no-see-ums, mosquitoes, whatever. Sweat trickles down our bodies in small rivulets in search of sea level. There's nowhere to escape from the beating sun, the heat, the insects.

Or it's freezing cold. Not just brisk. Cold. Mix in a bit of wind-driven precipitation in any of water's natural states: rain, sleet, hail, snow. Sailors huddle beneath layers of clothing and foul weather gear hating to touch anything with a gloved hand for fear of soaking the last pair of dry gloves.

Or it's too windy. This comes to different boats at different levels on the Beaufort scale. Once you start reefing, pumping the main in the gusts, and dropping sails, you've arrived at that point, whether it's 15 knots of wind or 25 or 35.

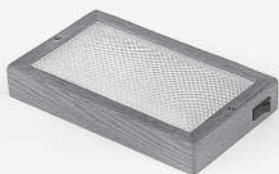
There are days, admittedly, when we step off the boat glad to be on solid ground once again. We're pleased that not much was broken this time or simply overjoyed to head for a shower with unlimited hot water. We know these moments exist. Even if we don't feel the need to kiss the ground now that we're safely ashore...even if we're thinking more of creature comforts than the chance to live another day, this sensation has certainly come to all of us.

Why then, as we're driving home and we take one last look at the boats sailing off in the distance, do we think wistfully about how serene, how peaceful they look? Why is it that reality blurs into the fantasy once more as we gaze longingly at the boats out there sailing and wish we could be there, too? 



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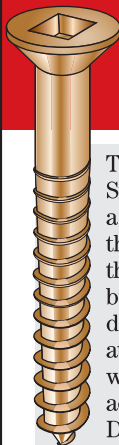


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WE TRAVEL IN A MAZE OF CONVOLUTED SHORELINES, NARROW passages invisible until we are right next to them, and points of land that appear out of mist and vanish into mist as we watch. Time and time again I shake my head in admiration for Cook, Vancouver, Baranof, and the others who first mapped all this. Plodding along in their ponderous converted coal carriers and merchant ships, extracting subtle clues from tides and currents the likes of which even they had never seen before, they made endless paper-and-pencil calculations, and they drew their charts as they went. The wonder of it is that, a century later, the very best satellite pictures show that most of the time they were dead accurate.

I have flown over this area a few times and each time marveled at our ability to get around at all. Seen from the wheel of a small boat when it's all at eye level, it is often impossible to know if that point ahead is the prominent cape I must pass with generous room or if it is just a minor point in the coastline, free of dangers, that I can cut close. Seen for the first time, there is simply no way of knowing whether the island ahead of you is the one you seek or if your snug cove lies on the next close one. Often what looks like one piece of land will separate into multiple pieces as you approach.

We carry somewhere around 80 charts for the roughly 1,200 miles we cover between Puget Sound and the upper regions of southeast Alaska. New charts cost more than \$20 each these days, so there is an active market in used ones. Some of ours are 30 years old. While the land itself has not changed, sometimes we don't find a buoy or marker light where we expect one. Our old charts, while they might horrify more compulsive — and better heeled — cruisers, have never gotten us into trouble, perhaps because they encourage a certain healthy skepticism.

Simple piloting

Knowing where we are is usually a simple matter of looking from chart to land in an “if this is that, and that is this, then we must be here” style of piloting. Every once in a while

we'll need a bit more precision, perhaps to thread our way past a reef. Then I'll reach for the traditional divider, rules, and other plotting tools that haven't changed since Cook's day. After a few minutes you might hear me say something like, “We'll hold a course of 230 until Skip Rock is abeam, then go to 275 until we clear Bull Point.”


Nothing causes such a deep visceral disquiet in a sailor's gut, though, than to look around and ask, usually to himself, “Where the heck *are* we, anyway?” Then I'll usually grumble,

*“Nothing causes
such a deep visceral
disquiet in a sailor's
gut, though, than to
look around and ask,
usually to himself,
‘Where the heck are we,
anyway?’ ”*

“I wonder if *Gypsy* is in the mood,” and reach for our little portable GPS satellite navigator. I'll punch it on and fidget while its tiny circuits and chips align their mysterious auras. (You may sense that I have a deeply ambivalent relationship with *Gypsy*.) Being the completely antiquated old girl that she is — seven years of age makes her an artifact — this always seems to take an eternity. Sometimes the auras simply will not align, and the screen stays obstinately blank. But usually she will decide to be a good old girl, and I'll say something like, “Ah, yes, N53.5 by W127.46,” followed — if there happen to be guests aboard

— by, “Just as I thought.”

For my wife, Wendy, who needs a bit more reassurance, we also have a radar, new for this trip. At more than \$2,000, I drew comparisons to other necessary items like hot water or more Irish whiskey, but Wendy likes it. And it does make us look somehow more modern — an odd concept when you consider that *Persistence* is 40 years old, made of wood and built to a design that goes back a hundred years. The practical fact is that with our style of “chicken cruising,” we are lots more likely to stay at anchor until the fog lifts or, seeing it coming, turn and flee to a safe nook. After our first full season, we haven't yet used the radar to actually find our way.

So, on we go, chugging from one bay to another, very occasionally meeting terrible weather or making an open ocean crossing, often planning our passages around tides and current, the most-often-asked question on *Persistence* remaining, “What day is today, anyway?” 

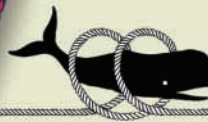
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