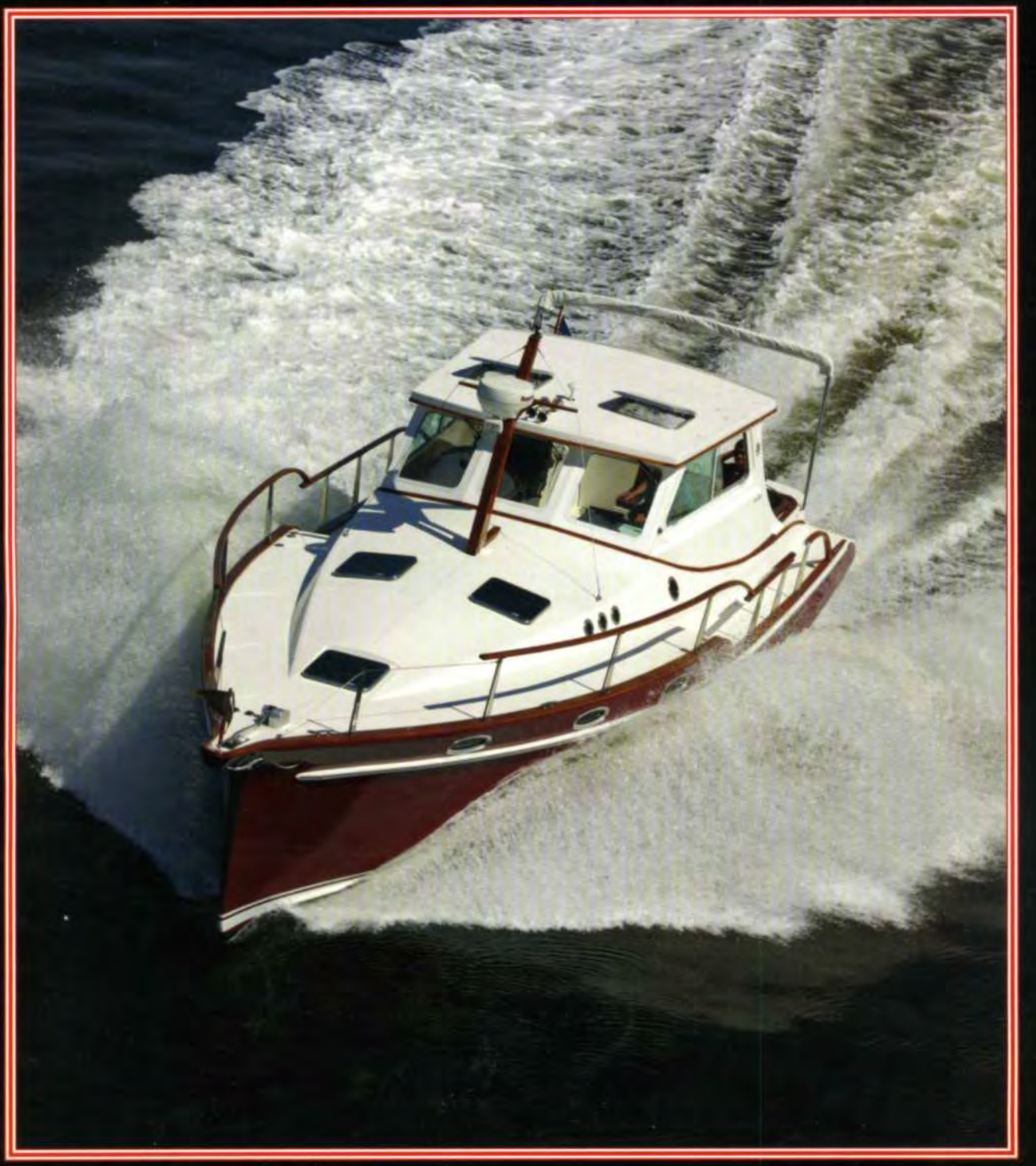
AS SEEN IN

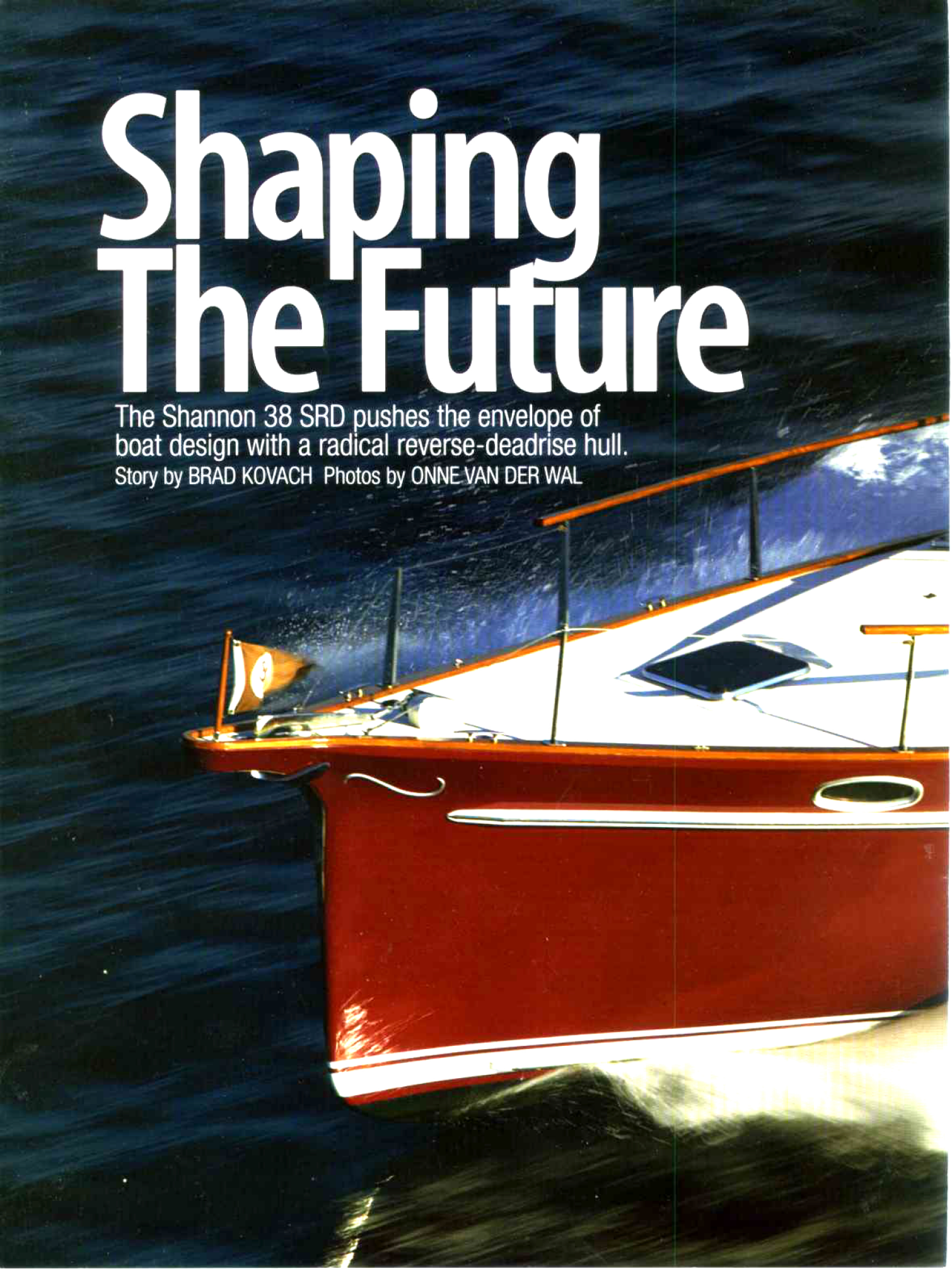
MOTORBOATING



Shaping The Future

The Shannon 38 SRD pushes the envelope of boat design with a radical reverse-deadrise hull.

Story by BRAD KOVACH Photos by ONNE VAN DER WAL



Well-known for its sailboats, which have logged more than a million blue-water miles, Shannon Yachts has been making semicustom voyagers since 1975. Walter Schulz, the outspoken head of the company, has been called one of the last "complete" boat builders; he holds four marine patents and has designed all of the firm's models during its 30 years of continuous operation. Shannon introduced its first powerboat in 1985 and now makes 36- and 44-foot motoryachts with modified-V hulls. The new Shannon 38 and its Schulz Reverse Deadrise (SRD) bottom, however, are of an entirely different breed.

A sharp forward hull section leads to a deep mid-section, but rather than a convex, positive deadrise at the stern—which has been the convention since the Phoenicians ruled the waves—the 38 SRD employs a concave, reverse deadrise aft. Schulz, who developed the form over a four-year period using sophisticated CAD software, explains it this way: "Inverting the aft section results in tremendous lift. While the forward section has a deep-V to prevent pounding, the hull shape is then twisted amidships to provide laminar flow that prevents suction at the concave section at the stern.

"My motivation was to give my knees a break," Schulz says. "I try to do 1,000 miles a year, so I wanted to end the conundrum of the up-and-down motion produced by most hulls." Add to that the desire to improve speed, range and fuel economy, and to create a shoal draft (24 inches) so the boat can run right up on the beach. "I expect the owners of the Shannon 38 SRD to go to faraway places, not just to go on picnics," Schulz says.

BACK TO THE FUTURE: The 38 SRD may look traditional, but it boasts a cutting-edge hull (top).

Driving the 38 SRD is a picnic unto itself. With twin 160-hp Yanmars, nearly half the power you'll find aboard many similar-sized planing vessels, we topped out at 20.5 knots. Fuel burn was 11 gph at a cruise speed of 18.6 knots, which means the standard 290 gallons of fuel can yield 440 nautical miles with a 10-percent reserve. Schulz plans to offer subsequent models with surface-piercing props—"the future of boating," he says—and anticipates additional speed gains and fuel savings of 25 percent over conventional props.

As a result of the enhanced lift created by the reverse deadrise, acceleration out of the hole is quick and even, with virtually no bow rise. This means the 38 SRD can be safely operated at any rpm, not just at "idle" or "plane" settings, like some mid-range-challenged V-hull craft. In addition, the added lift keeps the nose down and the boat steady when it encounters rough water, thus going a long way toward eliminating ups and downs at sea, as Schulz intended.

A molded "hollow" at the bow waterline throws spray wide and high, which resulted in some drops on the windshield on the blustery day I drove the boat. Astern, however, the wake was bubbly flat, indicating a minimum of wasted energy. The 38 SRD is a remarkably stable

case of grounding on rocks, there's a watertight crash compartment at the nose.

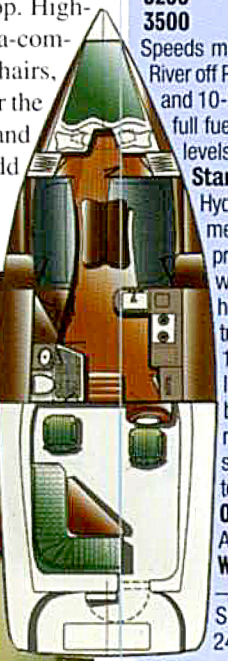
Owners will appreciate the range of available cabin and deck layouts. Three interior arrangements are available, and the cabin can sleep as many as seven people; the head can be ordered with a separate stall shower. The boat I tested had a single forward stateroom with a convertible salon settee, but I also had a chance to walk through a 38 SRD with an additional starboard-side stateroom with a sliding pocket door. Both boats were beautifully finished with mahogany bulwarks and trim, plus teak-and-holly soles. Another plan offers a forward stateroom, mid-cabin and convertible settee.

There are six choices for the exterior: soft top, hardtop (shown), hardtop with bimini, extended hardtop, flybridge and flybridge with extended hardtop. Highlights at the helm include ultra-comfortable Ultrasuede console chairs, plus a drawer-style fridge under the companion seat. A teak mast and teak-and-stainless bowrails add more than a touch of class, although I'd like to see the rail carried further forward at the nose. Engine access is tight, with a pull-up hatch in the sole and a small step-down compartment under the helm seat. A second, larger hatch aft or a hydraulic system that lifts the entire helm deck are two possible solutions.

Though the boat took four years to design, Schulz says he had the idea in the back of his head for almost 10 years. "I got so crazy toward the end on this project that I never slept," he says. "But, now, driving the boat, I'm happy. It's a real attitude adjuster."

Scientists have long held that evolution follows a snail-like pace that is nearly undetectable in the human time frame. But more recently, certain thinkers have proposed the idea of evolutionary "explosions," significant occurrences that can lead to periods of great change. Could the Shannon 38 SRD and its radical hull be a boating industry Big Bang? Only time will tell. But my attitude—and my knees—have never felt better.

INSIDE PASSAGE: Mahogany trim and teak-and-holly soles warm the cabin (below).



platform both at rest and in motion, with little to no lean when turning. "If you can make a cup of coffee and go to the head while under way, it's a sea boat," says Schulz. Mission accomplished.

The inverted-V also tucks the props and rudders up under the stern, enabling the 38 SRD to be enjoyed in shallow water. The hull laminate schedule was specifically engineered with beach landings in mind; it includes a Kevlar/S-glass hybrid that provides extra resistance to abrasion. In

PERFORMANCE

LOA ..... 38'3"
Beam ..... 13'0"
Draft ..... 2'0"
Disp. ..... 13,500 lbs.
Bridge Clearance ..... 11'8"
Water ..... 80 gals.
Fuel ..... 290 gals.

Test Power: (2) 160-hp Yanmar LH-series diesel inboards turning 18" x 16" four-blade Nibral props at a 2.5:1 gear ratio. Power options include single and twin diesels, and surface-piercing props.

RPM	MPH	Knots	dB-A
1000	6.9	6.0	73
1250	8.6	7.5	74
1500	9.8	8.5	78
1750	10.8	9.4	79
2000	12.3	10.7	82
2250	15.0	13.0	82
2500	17.6	15.3	83
2750	19.4	16.9	83
3000	21.4	18.6	85
3250	22.5	19.6	86
3500	23.6	20.5	88

Speeds measured by GPS in the Sakonnet River off Portsmouth, R.I., in a two-foot chop and 10-knot winds w/four people aboard, full fuel and 60 gallons of water. Sound levels measured at the helm in dB-A.

Standard Equipment (major items): Hydraulic tilt steering; full helm instrumentation; burlwood dash; hot/cold pressure water system; shore power w/50-foot cord; electric horn; mahogany bulkheads w/solid mahogany trim; teak-and-holly cabin sole; four 110-volt A.C. outlets; VacuFlush toilet w/holding tank; galley w/two-burner propane stove, microwave, refrigerator/freezer and sink; transom door; teak cockpit table; custom stainless steel and teak bowrail.

Optional Equipment (major items): As specified by owner.

Warranty: Ten-year hull coverage.

Shannon Yachts, (401) 253-2441. www.shannonyachts.com.

The Trawler & Ocean Motorboat Magazine

PassageMaker

Since 1995

Reprint from January/February 2005

Celebrating Our 10th Anniversary

Design Breakthrough?

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Big Dreams, Little Boats

I've been patiently waiting for this, and I knew it was just a matter of time before some of the bastions of the bluewater sailing world would enter our niche with true passagemaking motorboats. It has already happened as one-offs from custom builders, but the production and semi-custom offshore sailboat builders have been a bit more hesitant coming over to the dark side. Hinckley, Valiant, Shannon, Swan and Oyster are just some of the names that represent the highest-quality offshore yachts capable of going anywhere in safety and comfort.

I've always thought that if they built a passage-making ocean motorboat, the world would listen.

So I was excited when I learned Shannon Yachts was motoring our way, as I've long been impressed by its boats. Heavy-duty, rugged, impressive and competent are terms that I'd use to describe Shannon yachts of all sizes.

But I was not expecting the surprise that awaited me as I got into a discussion about this project and made my subsequent visit to the Shannon yard in Bristol, Rhode Island. The story of the new Shannon motorboat is one of creative design with futuristic vision.

At first, the Shannon 38 SRD seems to be another variation of the express-style cruiser theme, not really relevant to our cruising under power lifestyle. Perfectly able to offer cruising for short duration, the boat didn't really hit me as a long-distance, liveaboard boat to explore French Polynesia on its own bottom.

But I was in for a surprise–and a history lesson.

Designer With A Difference

Walter Schulz is the man behind Shannon Yachts, and he's been building quality yachts since 1975. He is a bearded Irishman whose two grandmothers were born in the lands around the magical Shannon River in Ireland, hence the origin of the company brand. When the first Shannon 38 made its debut at the Annapolis Sailboat show in 1975, Walt took five orders, and the company was on its way. In the 30 years since, Shannon Yachts has launched 335 boats, sail and power, and the company has earned an esteemed position among the ranks of top-quality yacht builders.

Throughout this period, Schulz always wanted to build long-range, offshore motorboats capable of crossing oceans; one strictly as a powerboat, another as a motorsailer. But he sensed an uphill battle on both fronts and chose to keep both projects in the background until it was time. He feels current types of powerboat hull shapes require too many compromises, which would hold him back.

The one-mile-per-gallon threshold of the typical deep-V hull is grossly inefficient in his mind, although its inherent hydrodynamic lift does provide stability under way.

He is also convinced that full displacement powerboats roll too much in certain sea conditions, forcing owners to install stabilizer systems to allow for crew comfort. But Walt feels such equipment is overly complicated, not totally reliable, and, in the case of flopperstopper paravanes, even dangerous.

Semi-displacement yachts have flat sections aft to reduce roll but can be horribly snappy, and they too often come equipped with stabilizers.

Power catamarans achieve stability under way by having the two hulls some distance apart, but Schulz thinks the hull form has

Photos by Bill Parlatore

Walter Schulz at the helm of his new 38 SRD and of Shannon Yachts. He is the real deal.

In his spare time, Schulz likes to restore boats, such as this 45-foot William Hand motorsailer. Note the slender, efficient hull form.

other issues, notably the pounding and crew-bashing when the seas pick up. It is not for him.

Power Sailing

Schulz is a keen fan of the motorsailer concept, especially the variation developed in the 1920s by William Hand, who lived in nearby Fairhaven, Rhode Island. Hand grew up during a time when the Gloucester-style sailboats were being repowered with developing gasoline engine technology. The commercial fishing boat hulls were very efficient and seaworthy, so even the low horsepower of early engine technology proved a huge improvement over sail power.

Seeing firsthand the benefits of motorboats with sailboat-shaped hulls, William Hand went on to become a preeminent designer of motorsailer yachts, drawing and building displacement powerboats that were both fuel efficient and seaworthy, and that used a reduced sail plan for stability, not propulsion. His evolution of work in the 1920s and 1930s show generous displacement and moderate freeboard and proved great sea boats in all conditions.

Coincidentally, Robert Beebe, very much like William Hand, also designed motorboats with sailboat-like hull shapes. Beebe and Hand went down the same road, but they came from very different reference points: Hand at the turn of the century, Beebe after WWII. While William Hand stabilized a boat with sails and Beebe used paravane systems, both used slippery, efficient sailboat hull shapes.

Walt Schulz knows the limitations of the general motorsailer, notably the lack of livability on all but the largest yachts. Relatively spartan accommodations in a slender hull are a difficult sell compared to beamy trawler yachts, and the buying public hasn't chosen to accept that limitation. Today's couples want their comfort systems, washer/dryer, additional staterooms for guests and lots of space for *stuff*.

Also working against the motorsailer concept are decades of negative opinions that motorsailers are not really very good at anything, although the success of William Hand's boats would seem to indicate otherwise.

I'm certain that Shannon Yachts could build one terrific motorsailer, with reduced sail plan and ballast for stability, following Hand's lead, and it so happens that the company went ahead and designed one. But the Rhode Island builder has yet to sell such a yacht, and concludes the market just isn't there for a motorsailing cruising boat.

So Walt Schulz has focused on a strict powerboat passagemaker.

Photos by Bill Parlatore

Above left: Wide side decks are found on all Shannon yachts, making for safe movement around the boat. Above right: The compact 38 SRD helm is perfect for the intended use of the 38-footer, but expect more dedicated helm space on the 53 SRD passagemaker.

The Plot Thickens

When I spoke at length with Walt Schulz on the subject of hull shapes, it was clear that he does not accept the aforementioned compromises of powerboat hull forms as appropriate solutions when one considers a passagemaker capable of circumnavigating. And he insists today's boats are way too complicated.

"I'm up the food chain when it comes to fixing mechanical things," Walt told me, "but today's boats are too much for me. They need to be less complicated. Some of them are downright frightening."

And he couldn't find a hull shape that pleased him in any case. "Basing such a powerboat on a fishing boat makes no sense," Walter explained. "A fishing boat or lobsterboat is designed to run out light, get to the grounds quickly, then run back heavy with its catch. The major benefit of the lobsterboat shape is that weight is infinitely adjustable. It works great, but such dual personality is lost on its use as a yacht. A yacht is always running light. Not to mention, the boat's motion in a seaway can be lively in sloppy seas, to say the least."

Nor is he too keen on the hard-chine, squared-off, semi-displacement powerboat hulls that first made the pleasure-boats scene in the 1960s and that are common today. Not for passagemaking, at least.

"If someone were to tell me that I'd be in the 21st century and everyone in this business would be marketing hull shapes from the 1960s, I'd laugh in their faces. Everything else in the world has moved forward, even the materials we use. But boat design hasn't changed at all. Underwater, nothing has changed from 1960 to 2004...nothing."

Above left: The 38 SRD interior is a blend of hardwood and contemporary appointments. The port-side dinette serves well for meals and relaxed card games when anchored in some snug harbor. Above right: The galley is well proportioned and does more with less.

Walt has experience on power cats and thinks they are a much better idea than a sailing cat. It's a step forward to him, but they, too, have issues, especially when pounding offshore. And Schulz knows all about pounding offshore, as he makes it a point of spending at least 1,000 miles offshore every year to stay grounded in reality.

A New Direction

Several years ago, one of Shannon's sailboat owners asked the company to build a smaller, second sailboat for sailing shallow Florida waters, and the Shoalsailer 32 was the result. The sailboat draws just 30 inches yet offers great windward sailing ability through a clever hull shape that provides stability through its beam and accelerates laminar flow of water that speeds past the leeward side of the hull and keel.

The success of this shoal draft hull shape led to some interesting subsequent CAD exercises on the computer to see how far it could be taken, perhaps as a motorboat. The effort developed into the Shannon 38 SRD, initially intended to be the powerboat version of this successful shoal draft sailboat. It would be a beachable cruiser.

But the first 38-footer proved to be much more than just another shallow-draft runabout. Indeed, the results of early sea trials of the new Shannon 38 SRD went off the charts, beyond everyone's expectations. The boat has unbelievable fuel efficiency and outstanding stability at speed. The builder has since become intrigued that this shape might work in a larger vessel intended for much more than beach parties.

In fact, Walt Schulz now wonders if perhaps he is finally working on the holy grail of his career–a

long-range passagemaker able to go around the world safely, efficiently, comfortably and with less complexity.

Intrigued? Thought so.

Shannon's Patented SRD

SRD stands for Schulz Reverse Deadrise, the design for which is patent pending. I think it best to explain it by walking around the cradled Hull Number 3, under construction at the Shannon yard.

The bow has a hollow entry that draws out into fuller sailboat sections. About 60 percent aft of the bow, the hull shape has a slight hollow formed into each side of the hull to create turbulence, much like vortex generators on aircraft wings. The hollow sections work to keep water from separating from the hull, increasing the laminar flow of water against the hull as long as possible.

Just aft of these hollow sections, the stern twists outward into a wide concave reverse deadrise, looking much like the Klingon Kahless fighter from Star Trek. (No, I'm not a Trekkie, and it took me a few minutes to find the name of that ship on the Internet. But it was the first image in my head when I saw that stern.)

What happens under way is that the slippery, round section of the forward hull does not push water outward as would a traditional powerboat hull, and the hollow midsections keep the water moving along the hull farther aft (again, rather than outward), where it is pushed under the stern, whose concave shape creates enormous lift.

The result is amazing efficiency and stability, opening the door to a major breakthrough in boat design. Ideally, a yacht with such a hull requires less horsepower to reach cruising speed, burns less fuel and attains stability through hydrodynamic lift.

The first 38 SRD has twin 150hp diesels and has a maximum speed of 25 knots. A traditional deep-V boat would need twice that horsepower to get such speed potential. More importantly to those working on this project, however, is that slowing down to 18 knots, the 38 SRD travels 2 miles per gallon, about half the fuel burn of the "normal" deep-V hull shape.

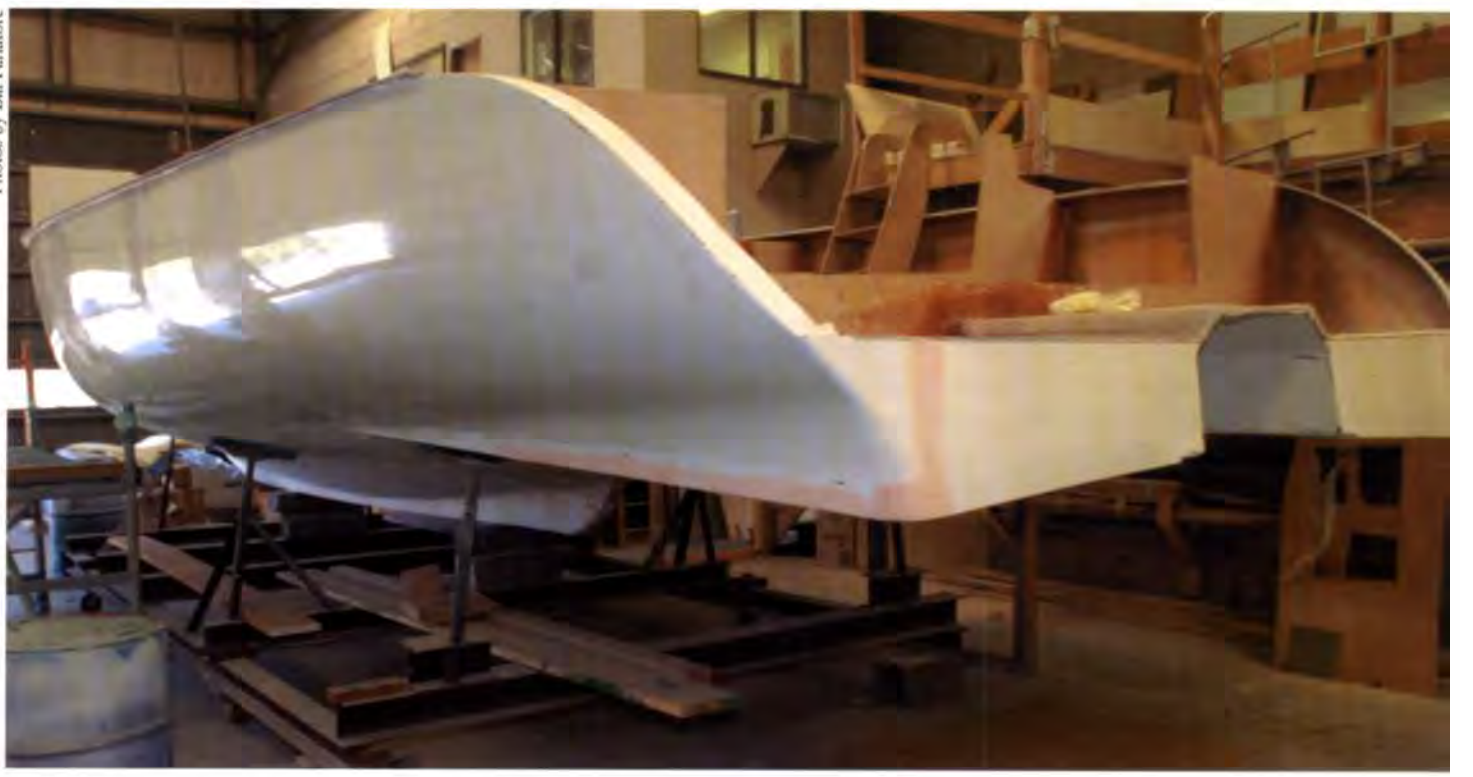
To Walt Schulz, the target is not top speed, but rather, efficiency. If he can build a boat that cruises at 12 knots with half of the traditional horsepower, the fuel burn goes down as well, allowing for longer range with a given amount of fuel. And a stable ride is achieved through hull shape, not complicated or dangerous roll-reducing gear.

It is this hull shape that Shannon Yachts now offers in a 53-foot passagemaker, taking that first step in the future of long-distance cruising.

A Mighty Fine Day For A Boat Ride

I went aboard the Shannon 38 SRD at the Newport show, while the powerful fury of Hurricane

Photos by Bill Parlatore



Ivan ravaged the waterfront city. The weather that Saturday afternoon was truly ghastly and effectively closed the show for several hours. We were seriously afraid of losing the *PMM* tent on the docks.

A good time for a boat ride, however–especially one out to prove a point.

Driving the boat at 18 knots in choppy seas with storm-strength winds churning the waves into a frothy maelstrom, I could not believe the way this boat handled the seas on all points. Slowing to 10 knots, I made runs with following, beam and head seas of nasty proportions, and the motion remained stable and comfortable with no pounding whatsoever, as if the boat wanted me to know it was up to the challenge. Pushing the throttles back up to 18 knots changed nothing except forward progress, and we ran circles around the bay with almost no wake, while an ocean tug headed out to sea, salt water spraying over the top of the 90-foot workboat.

Opposite: The SRD reverse deadrise stern can be clearly seen on a boat under construction. Above: This slippery shape results in almost no wake running at 17 knots.

The hull shape becomes active above 6 knots, the water flow interacting with the hull, with its changing underwater surfaces, as if the water is holding onto the hull, refusing to let go. I commented that it felt like a horizontal ice auger pulled along the surface of the water, and Schulz just smiled. I got it.

Later, back at the mooring, we were chatting some about the boat when the wake of a passing launch caused area boats to roll gently as it passed through Newport Harbor. The 38 SRD went through one roll evolution as the wake passed by, then stopped dead.

Despite its express cruiser, retro-style looks, the Shannon 38 SRD is proof of the SRD concept, and is one terrific seaboat. And as it draws only 24 inches, it is still beachable when you're not out conquering hurricane seas.

Each boat is custom tailored to owner needs; there are several accommodation plans and deck layouts to fit almost any requirements. But Shannon Yachts builds each 38-footer with a composite foam core for a high strength-to-weight ratio, and a completed 38 SRD displaces just 13,500 lbs. And Shannon characteristics for safety are evident, with wide side decks and a secure cockpit. Every Shannon yacht, sail or power, is first and foremost a safe boat.

I spent the night aboard the second boat in Florida, and it was a very pleasant experience. The forward stateroom has a traditional V-berth and storage for extended cruising. Just aft of that cabin is a comfortable dinette on the port side, with a second cabin opposite with a clever, sliding pocket door that really opens up the space when no one needs the privacy of that berthing area.

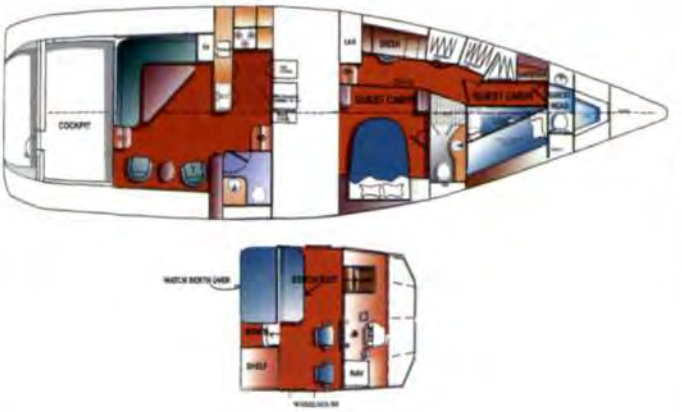
The galley is complete with all necessary essentials and appears to have more than enough storage for provisions and cooking equipment. A large head is opposite the galley and includes a separate shower. Overall, the boat works for its intended purpose.

The first 38 SRD has twin Yanmar engines and conventional propellers. The second boat has a single Yanmar and also a conventional drive. The third boat, however, is built with a single engine and a surface-piercing propeller.

Normally associated with high-speed racing boats, surface-piercing propellers are 20–30 percent more efficient than traditional propeller drives. With parasitic drag significantly reduced by having no appendages in the water, such drives also allow larger-diameter propellers and avoid cavitation by aerating the blades.

Schulz is experimenting with these exotic drives to see if any of that efficiency can be achieved at slower speeds in an SRD hull, which he feels is well suited for such propulsion drives. The special propeller is located in a prop tunnel inside the

Renderings courtesy of Shannon Yachts



SHANNON 53 SRD
INTERIOR PLAN

concave stern, and the air in the space is energized by exhaust gases and air forced in from baffled vents to "turbocharge" the air hitting the top half of the propeller, which remains out of the water at speed.

Sea trials will prove it one way or the other. More efficiency means less horsepower, which equates to less fuel and a longer range. That is the goal at Shannon Yachts for their new power passagemaker.

Shannon Yachts: The Next Generation

The 53 SRD is the next boat Shannon Yachts will build, using the benefits of the SRD hull form for a long-distance cruising boat. With an estimated range of over 2500 miles at 12 knots and 1000 gallons of fuel, the boat will have the legs to cross any ocean. And its 3-foot shoal draft makes it wonderfully suited for the shallow-water cruising at the other end of the passage.

The 53 SRD will be built on a custom basis, with a wide range of layouts and system choices. Initial renderings show a pilothouse and flybridge, a covered aft cockpit, an owner's stateroom amidship with guest cabin forward, and three heads in the boat. The low profile of the boat means bridge clearance will be about 16 feet.

If the 53 SRD performs as well as its smaller sistership, I predict this new passagemaker will be a hit. And without additional complexity so often found on larger trawler yachts, the maintenance of such a boat will ease ownership duties. It's all about the concept of "less is more."

"If I can't use sails, because the market is against it," Walt said, "I'm exploring another direction with the SRD."

The 38 SRD and the larger 53-footer have become personal efforts for a custom yacht builder exploring uncharted waters, quite literally.

We salute Shannon Yachts for pushing the envelope, and we wish them success. We'll stay tuned to its progress. But if you want to experience the future now, I suggest going for a ride on the Shannon 38 SRD.

It sure convinced me. Live long and prosper.

Shannon 38 And 53

	38 SRD	53 SRD
LOA	40' 6"	53' 3"
Beam	13'	17'
Draft	2'	3'
Displacement	13,500 lbs.	37,000 lbs.
Fuel	290 gal.	1000 gal.
Cruising Speed	18 knots	12–15 knots

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Photo by Bill Parlatore

POWER &MOTORYACHT

Defiance 46

Power & Motoryacht's Boat Test of the Defiance 46 by Shannon Yachts

Walter relies on 40-plus years of boatbuilding knowledge. He launched his first 38 sailboat in 1975 at the Annapolis Sailboat Show. "That first boat recently circumnavigated," he recalls like a proud father. A character like Walter is a fleeting commodity today. He is builder, designer, inventor, resident tinkerer, and the creative force behind the brand. He's interesting, darn opinionated, some may say slightly egotistical, and just the type of individual I would want to have build my boat.

SPECS

Year 2014

LOA 45'11"

Beam 14'9"

Draft 3'0"

Fuel Capacity (In Gallons) 500

Water Capacity (In Gallons) 150

Optional Power

2/480-hp Cummins QSB 5.9L diesels

Displacement 39,000 lb.

Photography by Billy Black

Walter relies on 40-plus years of boatbuilding knowledge. He launched his first 38 sailboat in 1975 at the Annapolis Sailboat Show. "That first boat recently circumnavigated," he recalls like a proud father. A character like Walter is a fleeting commodity today. He is builder, designer, inventor, resident tinkerer, and the creative force behind the brand. He's interesting, darn opinionated, some may say slightly egotistical, and just the type of individual I would want to have build my boat.

One subject on which Walter offers unrestrained opinion is hull design. "My God, a lot of boats have the same bottoms as the boats that I saw walking around the New York Boat Show as a kid. Are you kidding me?! My objective was for a hull design to b efficient throughout the speed curve," says Schulz as we sea trial the 46. "This is based on my SRD hull from 2003. The hull is combination of four shapes, with a reverse deadrise in the aftermost 10 feet. Look back there. There is no wake. Wake is fuel burn. It's just wasted energy."

The SRD acronym stands for Schulz Reverse Deadrise and begins with a fine entry forward that transitions to a twist at the mid-section which enhances the hydrodynamic flow toward the after concave sections providing lift when more throttle is applied. It's essentially a semi-displacement hull similar to that of a lobster boat, but instead of ending with a flat (or very shallow V-shape) at the transom, the design features a hollow area (shallow dome). It provides lift at higher speeds and lateral stability from rest to maximum speed.

Our power package proves that, although at first glance I find the profile conventional, there's nothing conventional about Walter Schulz and what's going on below the waterline. A 600-horspower Cummins diesel on the centerline is coupled to a four-bladed propeller. Sounds pretty routine, right? Schulz then installed a second engine—a 200-horsepower Cummins that powers two saildrive units via hydraulics. Are you with me so far? If you look at the 46 below the waterline you will see three propellers tucked about twelve inches above the foot of the keel.

With this three-propeller, two engine option, you can run the 46 several different ways. While docking, you simply operate the saildrives—which are abaft the main prop and to each side—like any twin-engine boat. She was a breeze to maneuver in close quarters and we spun the boat almost in her own boat length. Our thruster was left untouched.

"Going down the Intracoastal Waterway you can just run on these sail drives and you get serious fuel economy," says Walter. I fact our test reveals almost two miles per gallon at a speed of 8.9 knots and 80 percent load on the smaller Cummins. This represents a darn nice way to travel anytime added range is necessary or desired, and is better for the health of the larger engine as well. (Several engine options are offered, including a single or twins.)

Running on the single centerline 600-horspower alone, with the props on the saildrives folded, a top speed of 20 knots is effortless. In fact, the 46 operates efficiently throughout the speed curve.

Belowdecks, I find myself running my hands over the joinery looking for a flaw that never appears. Shannon remains a boutique custom yard and thus offers several interior layouts. Hull number one places the master stateroom forward with an amidships guest stateroom and a shared head. The down galley incorporates refreshing details that harken to Shannon's sailing pedigree, such as a single propane burner that complements the two burner electric stove tucked under a Corian cover. Double sinks are a nice touch as well. And I almost weep with joy when I see that the drawers throughout the boat are equipped with standard handles versus those bloody push-button pulls that only require maintenance, and inevitably are not pushed in properly. (A mistake soon discovered while heading out of an inlet when your silverware takes flight.)

The saloon and helm are large and benefit from an opening skylight hatch, a side door on the starboard side, and double opening doors to the large cockpit. Engine-room access is beneath the cabin sole. I'm not really sure how you could improve this interior.

Shannon offers a flying bridge option and the hardtop over the cockpit you see here is also an option.

Heading back to the boatyard I ask Walter why he named his latest line of boats Defiance. I expect his response to touch on th fact that after all these years he's still in Bristol, Rhode Island, building boats while others have long since closed shop or som similar bravado- fueled rant. I'm dead-ass wrong.

"It's in defiance to the conventional wisdom among some that powerboats don't go anywhere," he says. "That's why."

I'm glad there is still a builder like Walter. A contrarian? Yes. A visionary? You bet. And when that combination produces a fin cruising boat like the 46 it is impossible to disagree with him.

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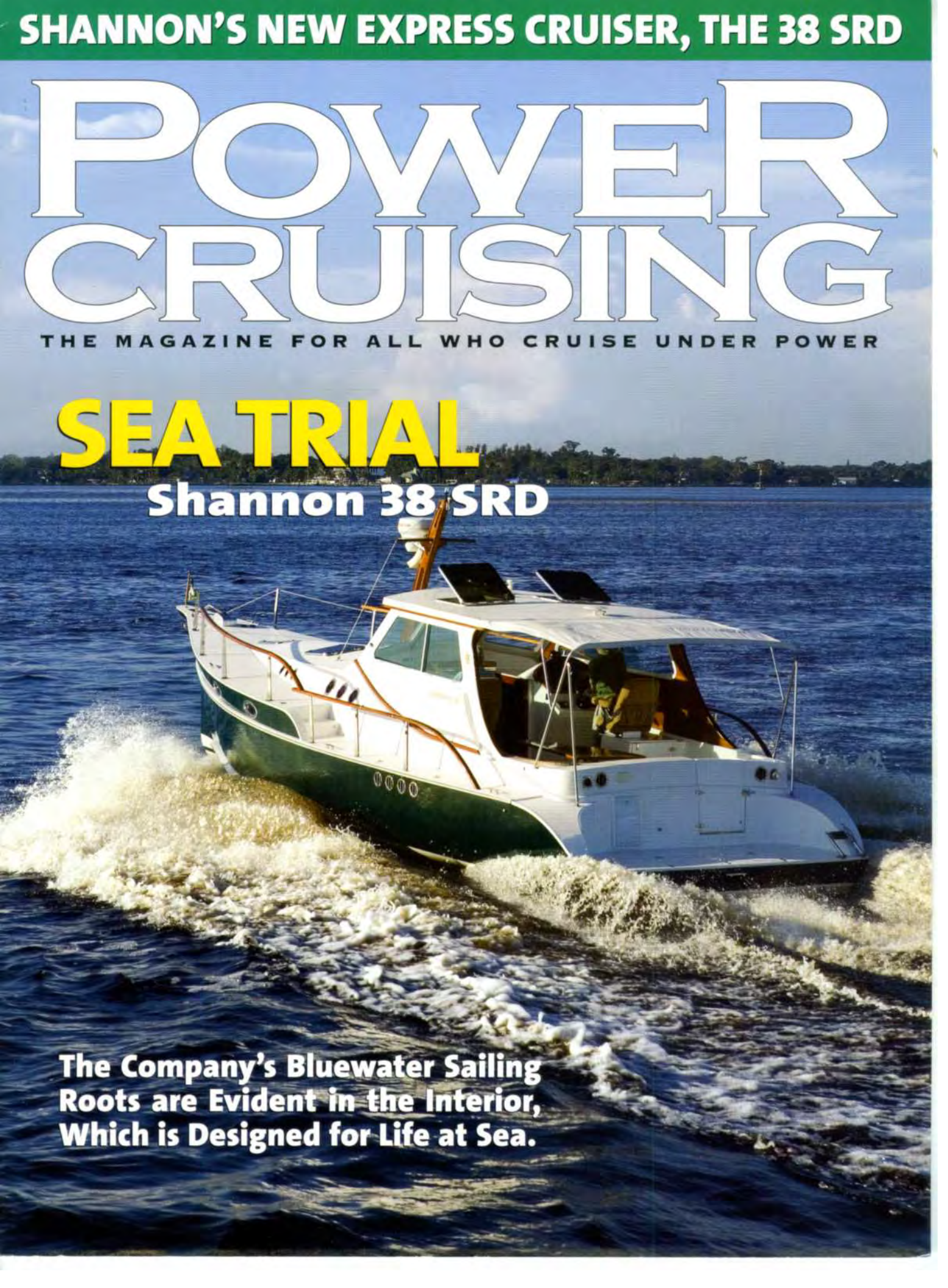
SHANNON'S NEW EXPRESS CRUISER, THE 38 SRD

POWER CRUISING

THE MAGAZINE FOR ALL WHO CRUISE UNDER POWER

SEA TRIAL

Shannon 38 SRD



The Company's Bluewater Sailing Roots are Evident in the Interior, Which is Designed for Life at Sea.

Sea Trial

Shannon 38 SRD

BY PIERCE HOOVER

In the past year, Shannon's new express cruiser, the 38 SRD, has received considerable media attention. Understandably so, for the story behind this innovative cruiser has all the elements that make a writer's job easy: a colorful and opinionated builder, eye-catching and somewhat unconventional styling, a hull design that challenges conventional wisdom, and real-world performance that validates this challenge.

Even more ink could be devoted to the story of Shannon's Walter Schultz and the genesis of his patented Schultz Reversed Deadrise (SRD) hull design. But lacking that space, the executive summary goes something like this:

Schultz wanted to create a fast, efficient power cruiser that he could run in rough water without punishing his aging knees. From studying the way water interacts with running surfaces at various speeds, he knew that once a boat gets above its displacement hull speed, it expends a lot of energy trying to dig itself out of a hole of its own making.

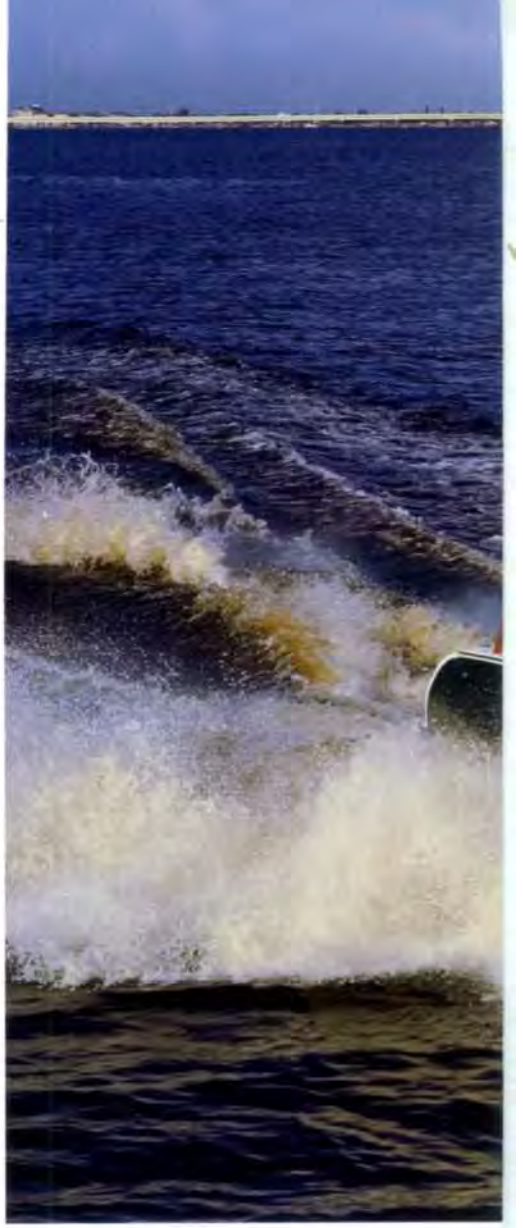
Most designers solve this problem by simply adding more horsepower. Schultz instead looked for ways to decrease the size of this hole and to make it easier for the boat to dig itself out. Using computer modeling, he engineered a hull form that combined three comfort-making and labor-saving functions: The sharp bow would carve easily into oncoming waves without pounding or pushing water into a wide wake, hollow sections amidships would redirect water flow to reduce suction aft, and the concave stern section would generate ample lift to keep the hull out of the hole.

Anyone wanting more than this simplistic explanation can study the literature — or spend a few minutes with Walter Schultz at most any major boat show. Ultimately, however, any discussion of theory must be put to the test, and this is where the Shannon 38 really sells itself.

To date, Schultz has launched two versions of the 38, and I've been fortunate enough to spend time aboard both. Hull No. 1, fitted with a pair of 160-hp Yanmar diesels, routinely achieves cruising speeds of 18 knots while burning just over 10 gallons per hour. As impressive as it was to compare the fuel flow meter with the GPS readout, the real fun was putting the boat through its paces and discovering that the SRD hull design does more than just boost fuel economy.

With a single engine engaged, it tracked straight, turned easily in both directions and held speeds of better than 12 knots. Pushing both throttles forward created minimal bow rise, and a glance aft confirmed that the stern was in fact riding high and leaving a smaller wake than would be expected of a conventional planing or semidisplacement hull — especially at speeds in the high teens.

The 38 also proved to be quite an impressive boat in a seaway. Into, across or with the seas, it delivered the knee-friendly ride Schultz hoped for. For a boat with a fine entry and a draft of less



The Shannon 38's unique, easily-driven hull provides exemplary running efficiency, but does not detract from the rough water ride — which is equally noteworthy. The company's bluewater sailing roots are evident in the interior, which is designed for life at sea.

WALT STEARNS (3)

than 2 feet, it also tracked quite well in following seas and offered the helmsman no surprises.

I later ran hull No. 2, which was fitted with a single 440-hp Yanmar. This configuration boosted top speeds to near 25 knots and provided slightly better than 2 nautical mpg at 18 knots.

Sea trials have proven the validity of the SRD hull form. Market reaction will dictate the success of the overall design. An obvious potential customer is the day-trip or weekend cruiser looking for a reasonably quick, highly economical platform. The amply sized cockpit and swim platform support this mission quite well, and the cabin can be fitted with twin settees that provide maximum flexibility for entertaining, dining and sleepovers for up to six guests.

An alternate layout, which was shown on hull No. 2, would also be well-suited for more lengthy voyages. It replaces the twin settees with a dinette and a private cabin with a pocket door, and it enlarges the head to include a separate shower.

While those more accustomed to the interior spaces of a trawler or motoryacht might not get it, anyone who has cruised aboard a well-found sailing vessel will consider the 38 more than adequate for extended life aboard. Although it can be fitted with a full range of creature comforts, it is not overly complex. Exactly the type of cruiser I'd want to take down island where the waters can get skinny and the fuel docks and boatyards are few and far between.

SPECIFICATIONS

LOA: 40' 6"
Beam: 13'
Draft: 2'
Fuel Capacity: 290 gal.
Power: Single or twin 320- to 440-hp
Price Range: $456,000 to $489,000
Information: 401-253-2441
www.shannonyachts.com

AS SEEN IN Yachting

SHANNON 38 SRD

Magic Carpet Ride

When the body speaks and the mind listens, innovation and increased comfort must surely follow

By Mike Smith

The world would be a better place with more characters like Walter Schulz around; if you meet him, I'm sure you'll agree. Schulz is the opinionated founder, yacht designer, chief boatbuilder and resident guru of Shannon Yachts in Bristol, Rhode Island. In the past 29 years, Schulz has not only supervised the building of hundreds of Shannon yachts, but has also been awarded four patents in the field of yacht design and construction—the latest is for the Schulz Reverse Deadrise hull of the Shannon 38 SRD. Yes, Walter Schulz is definitely a man who thinks out of the boat shop; he's also having some problems with his knees.

Like many of us who can remember Dwight Eisenhower, Schulz is feeling the effects of advancing age, and the constant pounding of conventional powerboat hulls wasn't helping. He covers about 1,000 miles per year offshore, he estimates, delivering Shannons to boat shows, undergoing sea trials of new hulls, taking prospective buyers on demo rides, and so forth. But after a day on the water, his knees hurt, so Schulz decided to build a hull that didn't pound. "Yes," he said, "my knees inspired this boat. Now, four years and $1 million later, here it is."

Easy Rider: Inspired by its designer's sore knees, the 38 SRD has "reverse deadrise" to soften its ride while offshore.

The Shannon 38 SRD is soft riding, fuel efficient, stable, fast with moderate horsepower and easy on one's joints. Rather than re-work an existing deep-V hull, Schulz started with a blank computer screen and a copy of MultiSurf software. Based on proprietary technology developed by Dr. John Letcher of AeroHydro Inc. (www.aerohydro.com), MultiSurf is a flexible and versatile program for general surface design; Dr. Letcher has a Master's Degree in naval architecture and a PhD in aeronautical engineering, so he knows plenty about this stuff. MultiSurf allowed Schulz to play with shapes on the computer, sometimes tossing conventional hydrodynamics out the shop door, until he'd developed a unique underbody combining sharp forward and deep midsections with inverted-V aft sections; Schulz calls this "reverse deadrise." The midsections are concave in places to provide laminar flow of water and prevent suction from developing in the twisted aft sections; nevertheless, there's still a lot of turbulence along the bottom. "But," said Schulz, "turbulence isn't always bad."

LOA: 40'6"
LWL: 37'7"
Beam: 13'0"
Draft: 2'0"
Bridge Clearance: 11'8"
Deadrise: Negative
Displ.: 13,500 lb.
Fuel: 290 gal.
Water: 80 gal.
Cabin Headroom: 6'4"
Design: Walter Schulz
Engines as Tested: 2x 160 hp Yanmar LH-series diesels
Optional Power: Single or twin diesels; surface-piercing propellers
Transmission: Newage 2.8:1
Props: Nibral 4-blade
Steering: Hydraulic
Base Price: $427,000

Apparently not: The Shannon 38 SRD we tested (hull number one) topped out at 20.4 knots, cruised at 18.5, with a pair of 160-hp Yanmar LH-series turbodiesels under the engine hatch. Fuel burn was approximately 11 gph at this speed, according to the boat's Floscan meters; do the math and you'll find the 290-gallon fuel capacity will produce a cruising range of nearly 440 nm, including a 10 percent reserve. Engine options include both single and twin diesel, with conventional or surface-piercing propellers; the surfacing props live under the hull, tucked high in the reverse deadrise. Schulz says that "surface drives are the future," and estimates speed gains and fuel savings of 25 percent over conventional props. (However, the propellers themselves are exotic and costly.) One of the Shannon 38 SRDs currently under construction will have surface-piercing props, so Schulz will soon be proven right, or wrong, empirically.

ONNE VAN DER WAL

Why no water-jet drives? Shulz feels that, despite water jets' current popularity, they're not suitable for an offshore powerboat like the Shannon 38 SRD because they're inefficient and, consequently, burn more fuel. The pumps are complicated and therefore costly and difficult to maintain. "I expect owners of the Shannon 38 SRD to go to faraway

places.... I also think these places will not be anywhere close to factory-authorized service representatives, so jet power doesn't make any sense."

The Shannon 38 SRD negates the shallow-draft advantage of water jets, too: The boat draws only two feet, and is designed and built for beaching. A wide, straight-docking keel protects the running gear and aids directional stability; the boat's cutaway forward profile lets it be driven right onto the sand. To protect against grounding damage, Shannon uses an extra-tough laminate schedule, comprising a layer of abrasion- and impact-resistant Kevlar/S-glass hybrid fabric along with bi- and triaxial laminates sandwiched around an Airex PVC foam core. In case of serious damage from high-speed impact, a watertight crash compartment under the V-berth will keep the hull afloat.

Cozy Quarters: The smooth ride continues in the accommodations with port and starboard settees and V-berths.

Under way, the Shannon 38 SRD's performance is remarkable. Because the boat doesn't plane the same way as a conventional hull, there's no awkwardness as it climbs over the hump. Instead, it lifts gradually as it accelerates, with just a hint of bow-rise that's easily counteracted by the trim tabs. Consequently, you can run the boat efficiently at any speed, not just either "slow" or "planing" as with a deep-V. Once up and running, the SRD hull produces very little wake, indicating a minimum of wasted energy, and punches through waves with no pounding, just like Schulz intended. On the day of our sea trial, Narragansett Bay was showing a two- to three-foot chop, but even at top speed we could hardly feel it as the hull sliced through the whitecaps.

The hull is extremely stable in motion, even in beam seas. Yes, as a wave passes under, the hull rolls, then rolls back again, but that's it—no secondary rolling, no ever-decreasing arcs. This is great when boat wakes hit from the beam: You go over a bit one way, back a bit the other, then stop on an even keel, like you're riding on shock absorbers. The same stability allows the SRD to stay level on hard-over turns, with neither the inward heel of a planing hull nor the outward lean of a displacement boat.

RPM	KNOTS	dB(A)
900	5.3	70
1200	7.3	73
1500	8.5	76
1800	9.7	79
2100	11.6	80
2400	14.1	82
2700	16.7	82
3000	18.6	83
3300	20.4	87

Speeds were collected in Narragansett Bay off Portsmouth, Rhode Island, in two- to three-foot chop with 3/4 fuel, 3/4 water and four persons aboard. Air temperature was 55 degrees with 15-knot winds. Water was more than 20-feet deep.

We saw no heavy weather on our test, but Shulz claims on a delivery trip to the Annapolis Boat Show he was able to keep going at 15 knots in conditions that forced much larger boats to slow down, and I believe him: The Shannon 38 SRD has a solid, seaworthy, confident feel. It should make an ideal boat for crossing a rambunctious Gulf Stream, punching through steep Chesapeake Bay seas, or just romping across the chop on Nantucket Sound.

Once at anchor, or maybe pulled up on a deserted beach, the Shannon offers a cozy home afloat. There are three standard arrangement plans: The test boat had the Plan A layout, with V-berths forward, port and starboard convertible settees with a drop-leaf table in-between, then galley to starboard, head to port. Plan B, suitable only for single-screw boats, steals a bit of space from the galley but adds a double quarter-berth under the pilothouse. Plan C replaces the cabin settees with a convertible dinette to port and a double-berthed cabin to starboard, and adds a separate stall shower to the head. Custom layouts are also available; whichever arrangement you choose, you get Shannon's fine workmanship and a high level of standard equipment.

There's also a choice of six deck configurations. The test boat had the hardtop version, but there's also an extended hardtop, a hardtop with bimini, soft top, flying bridge and flying bridge with extension to shade the cockpit. Each configuration includes wide sidedecks for going forward without acrobatics, teak rails with stainless stanchions, molded nonskid with recessed waterways, a custom pulpit that neatly conceals a stainless Bruce anchor, 14 opening ports with screens and three overhead hatches.

There are two more overhead hatches in the pilothouse, as well as two of the best helm seats I've ever seen: overstuffed ultrasuede upholstery on rugged, supportive stainless-steel frames, and more comfortable than Barcaloungers. They're just the ticket under way, or for relaxing after a day on the water. Yes, Walter Schulz designed the seats—maybe he's been having problems with his back, too. □

Contact: Shannon Yachts, (401) 253-2441, www.shannonsrd.com.

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