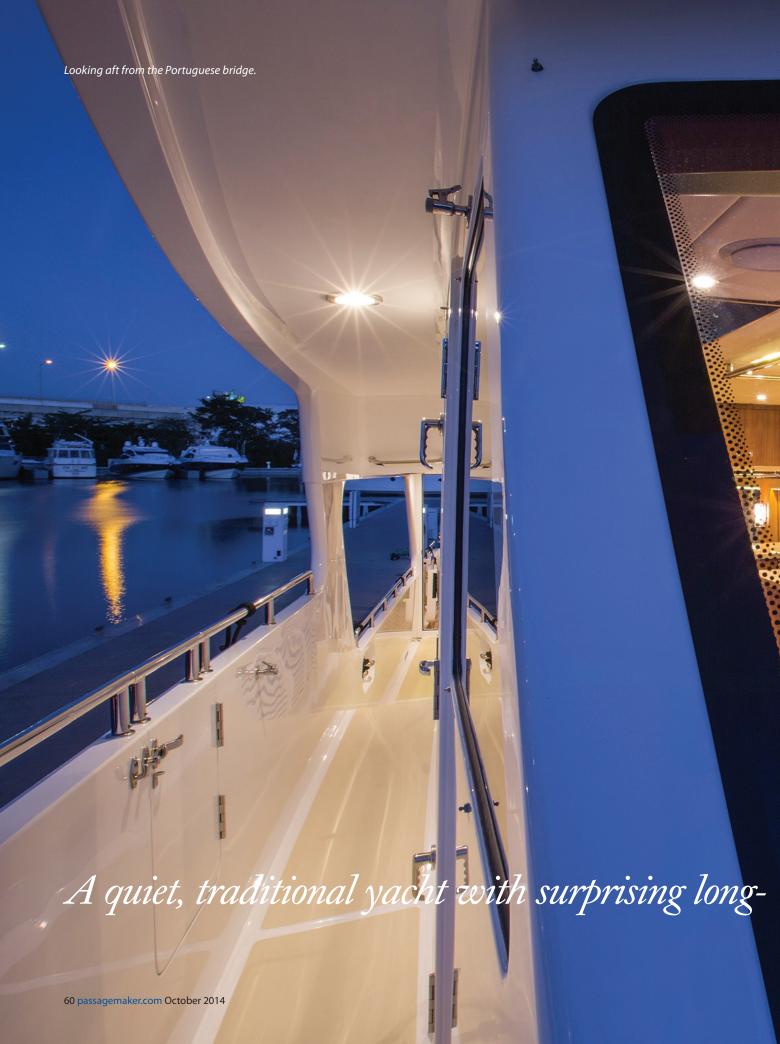
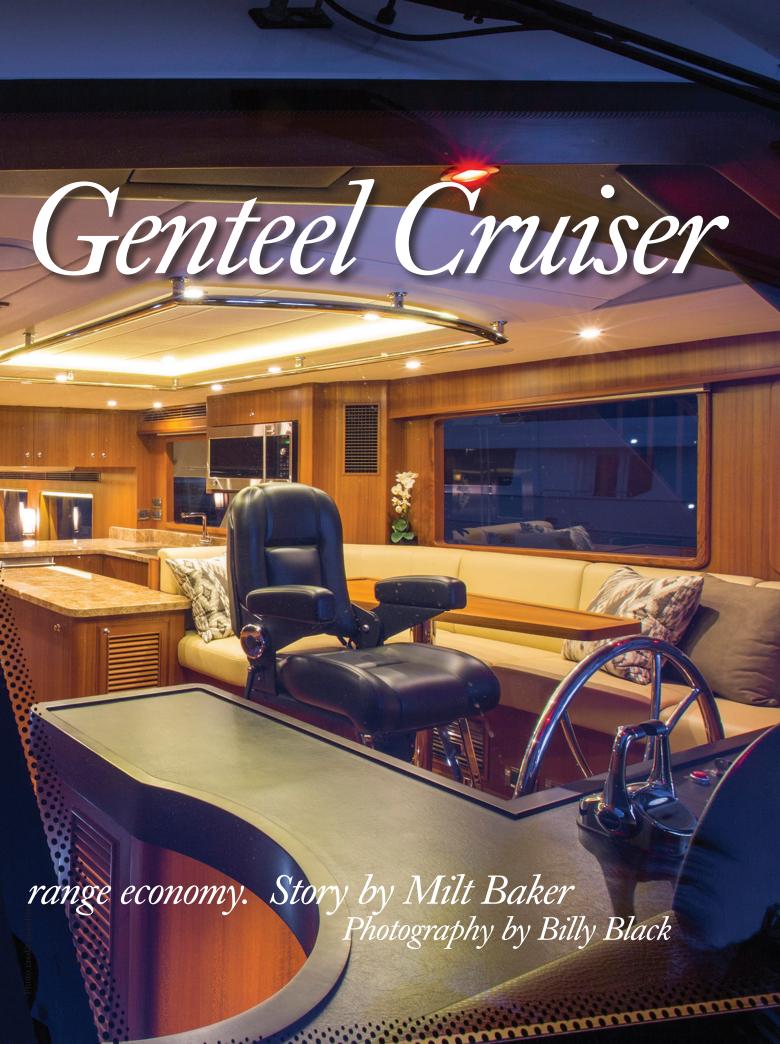
SEATTLE'S BOAT TECH MECCA | HOW TO TROUBLESHOOT SOLENOIDS tassage HE POWER CRUISING CRUISE LIKE A GENTLEMA OUTER REEF 630 **AGONY & ECSTASY ALASKAN 46 MAKEOVER REFINED: AMERICAN TUG 485** passagemaker.com







Ithough the company is just 12 years old, Outer Reef Yachts has established a reputation as a can-do company producing impeccably built fiberglass cruising yachts that make their owners uncommonly happy. With a salty trawler look, wide covered side and afterdecks, and moderate draft, these semi-displacement yachts offer an elegant way to cruise coastal waters and the islands in style and comfort. Think of Outer Reef yachts, at least the smaller ones, as ideal for genteel cruising.

"We do not sacrifice safety and comfort for speed," says Outer Reef's company philosophy. "Outer Reefs are designed for comfortable passages in less than ideal conditions. . . If you are willing to sacrifice comfort for speed, this is not the yacht for you. We don't mean to imply an Outer Reef will not go fast, but the fuel burn associated with extremely large engines is in conflict with our cruising philosophy."

That approach aligns perfectly with the mindset of Les Shapiro, an experienced yachtsman and the owner of a new Outer Reef 63 LRMY (long range motor yacht) named *Guided Discovery*. When I met Les he'd just closed on the first of this model to be delivered in the United States, the third one built, and he was so fired-up he simply couldn't resist talking about her.

"This is Lester's dream boat," Diana Shapiro said with an ear-to-ear smile as she stood on the pier admiring their new yacht. Together, Les and Diana completed a two-year, 6,150-mile Great Loop cruise in their previous boat, a 48-foot SeaRay that they operated mostly at displacement speeds. That experience on the Great Loop is what led them to place their order for a new Outer Reef.

When my wife, Judy, and I came aboard for *PassageMaker*'s sea trial March 15th, the forecast called for light easterly winds and seas of 2-3 feet. We would be aboard for the 50-mile run up the coast to Palm Beach where *Guided Discovery* would be on display at the Palm Beach International Boat Show.

As Les got his new yacht underway at the top of Fort Lauderdale's winding New River, he confided that he had very little experience handling a boat of this displacement, about 95,000 lb. with full tanks. Yet in the light winds that Saturday morning he eased her away from the pier like an expert, acknowledging that the 16hp hydraulic bow and stern thrusters made it a cinch.

While *Guided Discovery* made her way down the skinny river, an hour-long trip threading twists and turns, the yacht responded perfectly to Les' touch. Traffic was light—the Saturday morning sportfishermen were already offshore, and the small boats that jam the busy river on weekends weren't out yet. Les is a serious guy who rarely smiles, but I detected a hint of a smile or two along the way. Having been bitten by the boating bug when he was eight years old, he was in his element and very content. As *Guided Discovery* headed out Port Everglades Inlet, a light breeze opposed the outflowing current, but she bit into the chop, spray rails and the generous flair in her forward sections knocking down the spray.

The OR 630's behavior offshore impressed me. As owner of a yacht of roughly the same displacement, I found the motion familiar—it felt right: enough heft to carry through the seas with no hesitation, enough keel to track straight, enough rudder authority to respond to the helm well at any speed. Not a hint of vibration, not anywhere. Our sound meter confirmed what my ears told me: noise levels in the living spaces were about the same as normal conversation, even with the engines at their full rated 2500 rpm and a generator on the line. A quiet boat is a happy boat, and the sound dampening on this cruiser is impressive.

We also discovered that *Guided Discovery* is one very economical vessel at speeds below 9 knots, despite her pair of 503hp Caterpillar C9 Acert diesel engines. The yacht's waterline of 57 feet 11 inches gives her a theoretical hull speed (1.34 times the square root of her waterline length) of 10.2 knots. Back off a little over a knot and you're pushing nearly



100,000 lb. through the water at 8.9 knots with a fuel burn of 1.0nm per gallon for a predicted range of 1,150nm. Back off another knot to 7.9 and she's getting 1.6nm per gallon, giving her a predicted range of 1,849nm. This is more than enough to prove her long-range motoryacht chops. (Both ranges assume a 10-percent fuel reserve and no generator time.)

On deck, I found very effective non-skid. Her covered side decks (24 inches wide forward, 22 aft) made it easy to get around on deck, even with a big fender in tow. Among the thoughtful details are main fuel-tank fillers in protected compartments, grab rails well placed, sturdy side rails for hanging on and hanging fenders, robust hardware everywhere. Plenty of big hawses and big chocks and cleats for the yacht's ¾-inch black double-braid dock lines further reinforced the builder's commitment to providing a complete yacht.

While it's possible to shut down the generator and go "cold iron" for an afternoon at anchor or a daytrip on a nice spring day, as with most 60-plus-foot cruising yachts, this is fundamentally an AC-powered boat and her house bank of four 8D batteries reflects that. *Guided Discovery* carries two generators, and her owner's protocol calls for starting a genset to take the load before unplugging the big yellow cord. By my estimate, living at anchor on a Outer Reef 63 LRMY with 24/7 generator time will require about 30 gallons (114 liters) of fuel per day. At \$4 a gallon, that's well under the cost of a marina for a 63-foot yacht.

Construction

Tania Yacht Company in Kaohsiung, Taiwan, a yard established in 1986 and now building only Outer Reef yachts, manufactures every model under the supervision of an onsite dedicated project manager. Unlike most yachts her size, which use more, the Outer Reef 630 is built using only three major molds—strong, rugged and simple. *Guided Discovery* has a solid fiberglass bottom averaging 1.25 inches thick, and starting six inches above the waterline her hull is cored with

12-STEP PROGRAM

While it seemed like an eternity to Les, the new build took just over a year, with Outer Reef emailing him progress pictures of the construction every Friday. Like other Outer Reef customers building new yachts, he became addicted to the photos, eagerly awaiting the next installment. With construction completed late last December, his blog tells how the addiction ended: "I awoke this morning at 8:00 am and checked my email for Friday photos. Sure enough there was an email from (Outer Reef president) Jeff Druek: 'I hope you had a pleasant holiday. You will not find attached this week's photos of your boat under construction. We have a 12-step program for weaning you off the weekly construction photos. This is step one! LOL."

Divinycell PVC foam to reduce weight. The main and flying bridge decks also are cored.

For protection in case of grounding, the 630's full-length keel extends well below the propellers and rudders. Windows are ³/8-inch tempered glass on deck and ½-inch tempered glass in the pilothouse. Hefty FRP rub rails, quarter rails and cap rails are edged with heavy polished stainless steel strakes. Exterior teak is confined to the on-deck table, the swim platform and covered afterdeck.

Standard equipment is just what you'd expect in a yacht of the Outer Reef 630's pedigree. Familiar first-rate vendors include ABT/Trac thrusters and stabilizers, Glendinning electronic engine controls and Cablemaster shorepower system, Teleflex steering, Maxwell hydraulic anchor windlass, Fireboy fire suppression system, Aquamet 22 propeller shafts, Tides Marine shaft seals, Racor fuel filters, Caterpillar engines,







ZF transmissions and propellers, Northern Lights generators, Cruise Air chilled-water air conditioning, Headhunter domestic water pumps, Grohe galley and head faucets, Tecma toilets, Kahlenberg air horns, Cantallupi LED lighting, Aquasignal running nights and General Electric galley appliances.

Accommodations

Outer Reef will customize the 630's interior to the buyer's specifications via its many choices of woods, countertop materials, decking, and finishes. The workable three-stateroom, two-head layout has a full-beam master stateroom (king-size bed and en-suite head) on the lower deck just ahead of the engine room. Closets and a passageway between the spaces help to muffle the sound from engines and generators. Forward, the VIP guest stateroom has a queen-size island

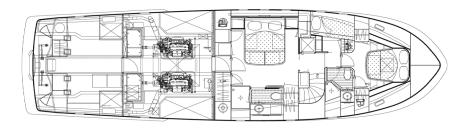
berth on the centerline and it shares the starboardside head with a small portside stateroom (upper and lower bunks). Side-by-side twin berths are optional.

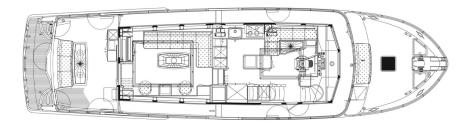
On the main deck, the pilothouse has the helm, with Stidd chair, on the centerline, providing good sightlines for offshore running. An L-shape settee and table seating four is adjacent on the port side. Within easy reach for conversation or serving food and drink is the elegant galley, just aft and to port. The optional center island closes the inboard side of the galley, making the chef safer in rough going. Lots of granite-topped counter space and functional stowage ought to make cooking a pleasure. The galley's location abaft the yacht's pitch axis reduces motion, and portside windows give the chef a wonderful view.

Abaft the galley and down three steps is a spacious saloon with a built-in L-settee, a freestanding coffee table, end table, room for two wing chairs, and, aboard *Guided Discovery*, a 40-inch TV that can be lowered from sight at the press of a button. A hefty sliding door opened to the covered full-beam afterdeck.

The covered flying bridge and boat deck can be accessed via interior stairs from the pilothouse or by way of a stainless steel ladder from the afterdeck. The flying bridge included a Stidd chair, big stainless steel wheel and a large electronics console, plus an L-shape settee upholstered with Sunbrella fabric. Sightlines from the helm are an ideal 360 degrees. The boat deck has ample room for a large dinghy (*Guided Discovery*'s is a 13-foot AB with a 60hp Yamaha outboard). A 1,300 lb. capacity Aritex hydraulic crane with 4-way control does the heavy lifting.

The Portuguese bridge, 42 inches high, provides a protected on-deck location and wave break ahead of the pilothouse. Access to the foredeck is by way of a hinged door. *Guided Discovery*'s foredeck has bulwarks topped by stainless steel rails (37 inches high), an anchor platform with two anchor rollers and stainless steel plow anchors of 110 and 75 lbs., and a big hydraulic Maxwell HWC3500C anchor windlass with two gypsies. Saltwater and freshwater wash-down pumps feed outlets at the windlass. Hawses, cleats, chocks and deck drains





are plentiful, large and robust.

Guided Discovery's engine room is neat, well lighted and well organized, and exceedingly well labeled. Headroom is 58 inches in the forward half and 68 inches aft. I measured 22½ inches between the main engines but only 63/4 inches clearance outboard of the engines, the latter too close for comfort. Guided Discovery can carry 1,300 gallons of fuel in two 500-gallon main tanks outboard in the engine room and two 150-gallon auxiliary tanks in the lazarette. Fuel tanks are aluminum and tested at the factory to 3 psi. The water tank is stainless steel. The vessel's nine AGM batteries are housed in the engine room where heat may shorten their lives. Ventilation of the engine room kept the temperature at 117 degrees F (42 degrees above ambient) on our sea trial at maximum (2500rpm) engine speed. Decking in the engine room and lazarette was beige Edura brand coin-dot vinyl: good looks, excellent traction and easy cleanup.

Les has organized his full-beam lazarette to carry two bicycles, cases of bottled water, plus much

miscellaneous gear in neatly stacking storage boxes. What a terrific stowage space for cruising liveaboards! A watertight door at the after end of the lazarette leads to *Guided Discovery*'s extended fiberglass swim platform with its teak decking and three removable two-inch diameter stainless steel safety rails. Three steps up a curving stairway to port and starboard lead to the afterdeck.

Notable upgrades aboard *Guided Discovery* include custom granite countertops, an elegant décor package with burl insets, overhead coffering wood beams throughout the maindeck spaces, upgraded appliances, backup pumps for the airconditioning system and domestic water system, oversize

LAMINATE SCHEDULE

Hull bottom: G+2M+M+6x(M'+R)+M'**Hull side:** G+Ms+2M'+M+M'+R+M'+D

3/4"+2(M'+R)+M'

Main deck:

G+M+2M+R+M'+D3/4+M'+R+M'

Flybridge deck:

G+M'+2M+R'+M'+D3/4+M'+R+M' **WT bulkheads**: M+R+R+3/4"plywood

KEY TO LAMINATE SCHEDULE

G Gelcoat

M' 300g/m fiberglass mat

M 450g/m fiberglass mat

R' 600g/m fiberglass woven roving

 ${\it R}$ 800g/m fiberglass woven roving

D3/4 3/4" Divnycell PVC foam coring

D1/2 1/2" Divnycell PVC foam coring

FOR MORE INFORMATION:

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www.outerreefyachts.com

OUTER REEF 63 LRMY HULL NUMBER 063 GUIDED DISCOVERY

LENGTH OVERALL 63'1"

LWL 57'11"

BEAM 17' 2"

DRAFT 5'0" fully loaded

DISPLACEMENT 95,000 lb. as tested with full tanks and owner's gear; 73,000 lb. empty

BRIDGE CLEARANCE 30'6" (antennas

up) 25' 11/2" (antennas down)

FUEL 1,300 U.S. gal. (4921 liters) in four aluminum tanks

WATER 300 U.S. gal. (1136 liters) in one stainless steel tank

HOLDING TANK 100 U.S. gal.

ENGINES Twin Caterpillar Acert C9 503 HP diesel engines

PROPELLERS ZF 35 x 2534" 4-blade, 21/2" Aguamet 22 shafts

MAXIMUM SPEED** 13.3 knots @ 2500

PREDICTED RANGE @ 9.9 kts (1700 RPM) 827 NM with 10% reserve

PREDICTED RANGE @ 7.9 kts (1300 RPM) 1849 NM with 10% reserve

DESIGNED BY Outer Reef Yachts **BUILDER** Outer Reef Yachts and Tania Yacht Co. I td.

PRICE AS TESTED The builder declined to provide pricing to *PassageMaker*.

**Speed as tested March 15, 2014 in the Atlantic between Fort Lauderdale and West Palm Beach, FL, as shown by Garmin 7215 GPSmap plotter; fuel burn as reported on Caterpillar Acert displays; predicted range based on actual fuel burn as shown by Caterpillar Acert displays.

The 30 gallons per day estimate for 24/7 generator usage was calculated like this: 12 hours on 12kW @ 1 GPH = 12 gallons 12 hours on 16kW @ 1.5 GPH = 18 gallons 12 + 18 = 30 gallons

ABT stabilizer fins, oversize dual-gypsy hydraulic windlass, shaft line cutters, Charles ISO-Boost isolation transformer, color shear stripe, gate doors port and starboard outboard of the pilot house, two wing doors port and starboard on the afterdeck, a hardtop over the flying bridge, an extended swim platform, and upgraded crane.

Outer Reef Yachts places a high priority on keeping its customers happy—before, during and after the sale. Les says that the word "no" is just not in their vocabulary. For a cruising couple wants to travel far and wide in a safe and elegant motor yacht, an Outer Reef 630 LRMY could be just the ticket.