RUDDER
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Hi, Ho, the Long Ranger! Testing the Hatteras 42

Patience, gentlemen. She won't blow the curl out of your hair, but this new long-range cruiser will take you a thousand miles at a stately pace.

by Edward H. Nabb

Here in North America, we've always revered—almost worshipped—speed over water. From the day of the Clipper Ships down to America's Cup defenders, Harmsworth racers, rum runners, record-breaking transatlantic liners and modern motor cruisers, we have always judged success by the miles passing under the keel in the shortest possible time. Our cousins in Great Britain and Northern Europe were never much about this hurrying; their cruising under power was judged by the number of pleasant hours and days spent upon the water. This latter philosophy isn't for everyone in this hectic world, and it may not be for you, but it is attracting a following among knowledgeable yachtsmen, such as Carleton Mitchell who is truly an expert's expert.

It calls for equipment that's unusual and which, until recently, could only be acquired from custom builders or by refitting a commercial vessel. The hulls are displacement type, usually round-bilged and deep draft; small diesel engines furnish power; large cabins have generous headroom and facilities for long periods of living aboard. The speed is slow and the range is long.

To the frustration of public relations men, these boats will probably always be called "trawlers." Indeed, some stock builders use the word "trawler" in their name or advertising, while others call their hulls "semi-displacement" (whatever that may be). Hatteras, long known for high speed cruisers, chose the term "Long Range" to identify its line of displacement cruisers. And they invited me down to North Carolina to have a look at hull No. 1 of the newest addition to this line—a 42-footer.

Some trawler types look short and tubby, but the Hatteras Long Range 42 is a graceful, functional cruiser. Left: Notice the clever self-stowing anchor attachment below the pulpit which overhangs the bow about two feet. Stainless life rails are custom-welded with no set screws. Below: Deck, cabin top and flying bridge are all well thought out.

PERFORMANCE AND HANDLING

The performance of the 42 is entirely predictable and hides no surprises. It tracks with no effort on the wheel, the long straight underwater design keeps it on course and the motion is easy. The test boat was equipped with Matlach "Air Stab" stabilizers, which are mounted about amidships, directly below each propulsion engine, and are designed something like a pair of rudders. They do not extend below the keel line and are not susceptible to damage. A sensing device turns them to counteract the tendency to roll and they are quite effective. When we approached a large, high speed cruising boat drawing a huge wake, the mate switched on the stabilizer control and my bracing for the roll was unnecessary. The units did the job, and I would recommend the somewhat shocking option price of $12,825 to any owner who intends to participate in long passages.

No trawler type is going to pull your cap off with speed, about 6 to 8 knots is the norm, and your prime planning effort will be to select the most economical cruising speed. The Hatteras cruises between 6 and 9.5 knots and most of the last half of the throttle is purely wasted effort. I would select about 1800 rpm, at which the speed checks out at 8.1 knots and fuel is burned at 4.8 gallons per hour. The boat smooths out best at about 2000 rpm and 8.6 knots, but fuel consumption goes to 7.0 gph—not a wise trade off. At 1800 rpm and 8.1 knots the boat has a range of about 1180 nautical miles. The builder

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doesn't agree with me—they opt for 1900 rpm, 5.75 gph and 1000 nautical miles range. The owner will work out his own set of figures and will decide at which speed the hull's movements appeal to him.

The dual rudders are moved by Morse controls and assisted by a Hynautic hydraulic steering device, resulting in the most effortless handling. I was surprised by the extremely short turning radius, with both engines in forward. We are all prone to repeat that impossibility of "turning in her own length," but the 42 does make easy figure eights. The Wood Freeman 423B autopilot makes abundant good sense on a boat intended for such long cruising periods. Back at the dock at New Bern, N.C., we analyzed the vessel.

HULL AND APPEARANCE

Beauty takes many forms and fashions. An offshore racer has to be long and low and mean, but a long range cruiser should be graceful and functional—it should look like a boat which is built to do a job. Many of them look too short and tubby, the sheer is so curved that they appear to be going uphill all the time. Freeboard must be ample, or the deckhouse will appear awkward; bows must be curved —almost apple bowed—for buoyancy, but without flat planes which reflect all the wrong angles. The hull must be plastic or framed with narrow planking in order to impart the correct image. In all respects the Hatteras 42 looks like a proper "trawler" type.

This is not a new approach for Hatteras; they have been producing 58 and 48-foot Long Range models for several years, with the same general appearance and construction. From the keel up—and remember that I was not in the High Point plant where the hulls are hand laid-up in solid molds—the bottom is fairly straight on the keel line, with enough fore and aft surfaces for straight line handling. The bottom sections could best be described as "curved V," rather than round-bottomed; the draft is 3' 10"; the sides are pleasantly curved with full bows and the transom is curved to avoid a boxy look. The sheer line is remarkably straight, giving a more modern appearance than most such hulls.

The topsides boast an outside white gel coat and a back up black gel coat. This makes it easier to spot air bubbles in the lay-up process. Topsides are 11 layers thick, 5 Fab-Mat and 1 mat, and the chines and botton have 13 plys. Sides average about ½" in thickness and the bottom is about ⅝". The Fab-Mat is composed of one layer of 24-ounce-per-square-yard woven roving and one layer of 1½-ounce-per-square-foot of mat. This is pre-assembled for uniformity and is cut into proper lengths and shapes so that the whole bolt of cloth doesn't have to be dragged around inside the mold. Interior stiffening and bracing is conventional, except that little wood is used; the stringers being heavy fiberglass lay-up with foam filling and steel plates imbedded for bolt-on strength.

The hull is designed to be painted on the outside with DuPont Imron, which is a polyurethane enamel intended for aircraft. It's unbelievably tough, wear resistant and bright. This means that you can get your Long Range 42 in a wide variety of color combinations and are not bound to gel coat coloring.

The superstructure mold is also one piece and the two forms meet at the sheer line with the conventional "coffee can" type of lip. The joining is by screws and through bolts, with inside lamination for water tightness. The entire deck and superstructure form is of hand laid fiberglass and has balsa inserts for stiffening and lightweight bulk.

The deck and cabin top have a non-skid surface, similar to sandpaper. Streamlining is important on slow boats, especially to prevent leeway, and has been given proper attention on this model. The minimum width of covering boards is 16 inches—taking care of the largest feet in boots —and they are smooth and level, except for a carpeted and courtesy-lighted "sink box" beside each sliding cabin door. The forward cabin top has a 24" by 28" translucent plastic hatch (all glass is safety laminate or heavy plastic). There are large sliding doors for the main cabin, large sliding windows, screens for all openings (they lock too!), drip shields over the doors, grab rails where they are needed and three windshields which are each 24" by 28". These boats do collect spray in a cross wind and the

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Left: Identical bunks in the owner's stateroom have five-inch cushions; reading lights and gadget racks are at hand. Not shown is the full-length mirror and hanging closet. Right: The main control station with its 28-inch wheel and overhead panel of electronic goodies which are optional and specified by the buyer. TV and tape deck on opposite counter are also options.

long-bladed wipers are needed. The aft cabin is 22" above the covering boards, making the plastic steps a necessity, and there is adequate room and strength for stowing a small boat. An aluminum mast and boom is used to launch the boat, haul aboard heavy objects and provide a platform for radio and radar antenna.

The aft deck is quite small; the rail tucks in to reduce the tendency of a stubby look. Electric and telephone service is located on the covering board and a small hatch provides access to steering and storage. Chocks and cleats are in the extreme corners, out of the way. Look over the stern and there is a teak swim platform and pivot safety ladder. These items are expensive options—something like $1735—but an absolute necessity in my opinion.

I am not a flybridge enthusiast, but this one does have eye appeal and comfort. There are grab rails everywhere, the steps are wide and the 17-inch venturi windshield works—even at modest speed. I especially liked the sturdy grab rail over the windshield. There is an aft seat for about six people, the Pompanette helmsman's seat pivots and has a built-in footrest, and there is stowage under seats and panel and room to repair the instruments. The panel was complete with dual ammeters, oil pressure gauges, thermometers, drive oil pressure gauges, tachometers, shut down switches, safety switch center, Morse controls and a 28-inch stainless destroyer wheel.

LIVING AREAS

Long range cruisers are not intended to convert into bedrooms for lots of friends; they are primarily for living aboard. The 42-foot size is on the break point of whether or not you need a paid hand. With the 58-footer there is no doubt—there is just too much boat for an owner to maintain unaided. The 42 could well be operated and kept up by an active, mechanically inclined owner who likes to putter about the boat.

Starting from the bow, there is a chain locker for the 300 feet of galvanized chain and a similar space for dock lines. The forward bulkhead has a door with no visible catch, it is hidden inside a small finger hole. The idea is carried out on many other doors on the ship and it is a good one, with nothing to catch sleeves or trouser legs. The overhead translucent hatch and 7" by 14" ports admit adequate daylight and the V berths are full 36" by 6' 6"—large enough for a big man. There are four drawers (4" deep by 26½" wide) beneath each bunk. Four 11-inch wide drawers are under the forward juncture of the V, and there is storage in the "cellar" beneath the carpeted floor. There is a full length mirror and a hanging closet 31" deep and 6'6" wide with automatic lighting. The 5-inch mattress raises the bunk tops a full 40 inches from the floor and this makes it difficult for a short person to crawl into bed. Everything that opens has bumpers and hooks and nothing rattles while underway. To starboard there is a "bathroom"—much too fully equipped to be called a head.

Let's pass through the deckhouse and take a look at the owner's stateroom or aft cabin. It is a large area, about 7' 11" by 8' 10". The floor is carpeted and the overhead and side walls are vinyl covered. Two 7" by 16" portlights are on each side. The large aft window also doubles as an escape hatch. As elsewhere in this small ship the headroom is generous—6' 6". The bunks are against each side, are identical, 3' 4" by 6' 6", and have five-inch cushions.

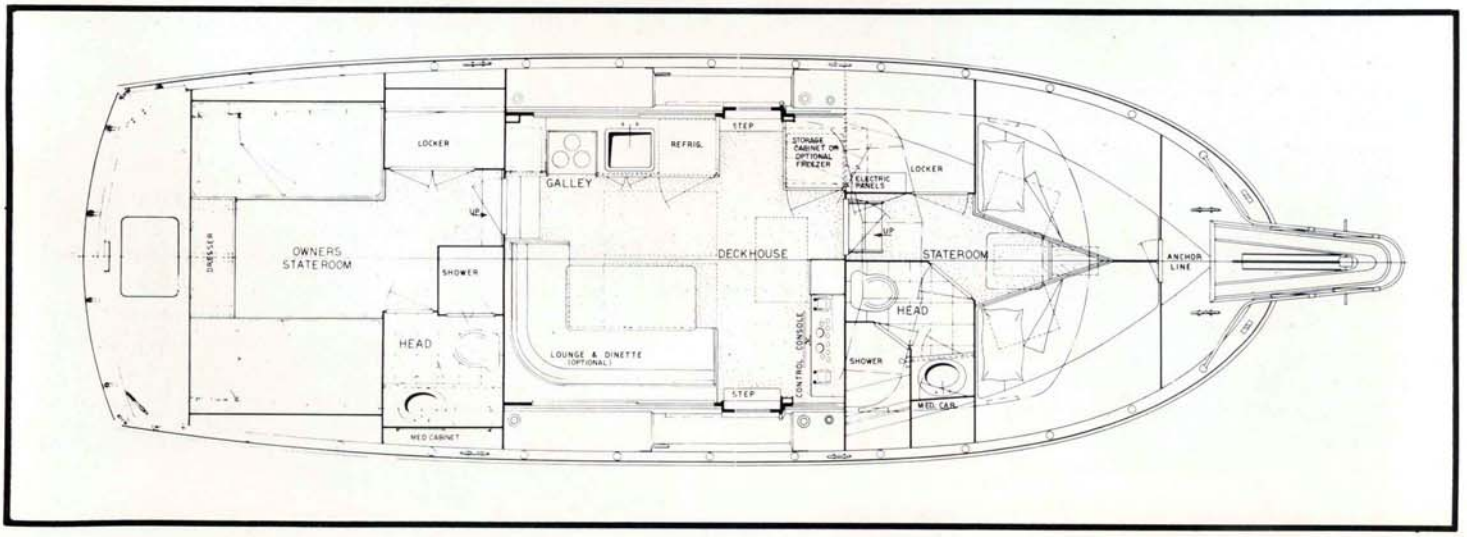
There is no storage under the bunks; here is where the 234-gallon fresh water tanks are located. There are hatches under the carpet to reach the shafts and struts and the side wall vinyl removes if you must reach the fiberglass exhaust lines and mufflers.

The bathroom for the owner's area has vinyl flooring and wall covering, 12V and 120V light fixtures and outlets, vitreous china lavatory set in a laminate counter top with storage beneath and a family-sized medicine cabinet. The optional electric toilet is Galley Maid (Groco is standard). The shower room is 29" by 27" with a neat folding door to conserve space. One nice touch—a retractable clothes line. Both cabins have stereo speakers and heating and air conditioning vents.

DECKHOUSE AND GALLEY

The starboard forward corner of the deckhouse is the location of the large chart area and main control station which is a duplication of the flybridge control station. Below the 28-inch stainless destroyer wheel is another panel with auto pilot, trim tab and stabilizer controls and all sorts of light switches, blowers, pumps and other necessities. The CO^2 system control is just aft of the pilot, to the rear of the starboard sliding door. Another large panel is above the pilot's head and this can house an array of radio equipment, loud hailer, depthsounder and knotmeter. Hatteras will install what you order.

Just to the pilot's left is the Decca 110 radar head, neatly built into the chart counter, with a storage space located beneath it.



In the companionway is the electrical center with control and distribution panels, including magnetic breakers, volt meters, ammeters, AC power loss indicator and a simple test system. Without going into great detail, this is one of the easiest and simplest control systems I have seen. The forward port corner of the deckhouse is the location of a rather large storage cabinet or optional SubZero freezer and ice maker which, I am told,are so popular that they are almost "stock."

The area aft the control station was fitted with two heavy chairs, a table and sofa; but options include a curved lounge which converts to a double bed and a dinette. Of course the entire area is carpeted and has vinyl headlining, varnished wood bulkheads and large windows. There is a windshield cover for privacy. The galley area is to port, with Princess 120V, three-burner range and oven with a wooden cutting board top. The stainless steel sink, 6½" deep and 1' 4" square, is set into a Formica counter top. There are drawers and storage below the sink and above the aft work space. The standard refrigerator, installed just forward of the sink, is SubZero and is 120V; however, on the test boat a Norcold was used and it works on either 12V or 120V with an automatic switch. When 120 is available it is used; when not, the 12V comes through. The 6' 8" headroom in the deckhouse is so high that a short person can't reach the overhead grab rails. These rails are an excellent idea and are placed so you can use them to make your way about all areas.

ENGINE ROOM & PROPULSION

Walk down into the forward cabin, turn about, lift the steps and you crawl into the "engine room." It is impossible to build a large engine space into a 42-foot cruiser without having a topheavy rig; but once inside, you have 38 inches of overhead space between main propulsion engines. Translated—it means that a 5' 10" man can sit on his tool box and work on the machinery without bumping his head. This is adequate. It is also conducive to hiring a small paid hand.

The model tested was equipped with a true pair of Detroit Diesel (General Motors 2 cycle) 4-53 engines of 212-cubic-inch displacement each, rated at 140 hp at 2800 rpm. Also available, at about $5700 less, are twin Lehman-Ford diesels, 6D380, 6 cylinder, 4 cycle, rated at 120 hp turning 2500 rpm. Either should provide adequate power, but I understand the Fords haven't been used in a hull to date. Each system has factory installed, closed cooling. There is adequate room to work, with about 26-inch clearance between engines and four feet between the engine and the side of the boat. If an engine must be removed you roll up the deckhouse rug, move the furniture and open the hatch which measures 59" by 48". There is another hatch (24" by 36") for removing the generator. Either engine can be removed without cutting the deck or hardtop, but you must maneuver it through the side window. All maintenance items are readily available. Drive is through Borg Warner gears with 2.9 to 1 reduction, the shafts are 1½" Armco Aquamet #22 stainless, props are 26" by 25", three-blade, Michigan bronze, control cables are properly anchored, engine mounts are solid but adjustable, dry sections of exhaust pipe are covered with insulation and the wet portions are of fiberglass.

The rest of the engine room is full—not crowded—but full. To starboard are three Cruisaire compressors for the Marine Development air conditioners with reverse cycle heat. The compressors can be removed (they are items which often require work) without great trauma. The large CO^2 bottles are located nearby and can also be readily removed. Forward of this is a fuel control manifold for selecting the proper tank for supply and for return. The ship carries some 745 gallons of diesel fuel, 700 of which are useable, in "saddle" tanks which conform to the hull shape and in "keel" tanks which fit the bottom. It is almost impossible to design a trustworthy fuel gauge system, so the skipper must use intelligence in fuel management.

The fresh water pump and hot water system are plumbed with copper tubing, except for flexible joints, and have an automatic valve to reduce dockside pressure down to 40 psi. There is a freshwater hose in the engine room to top off coolant and for washing down. The Onan 7.5 KW generator with freshwater cooling is fitted with a sound containing box and is—of course—diesel powered.

Beside the port engine are four Delco-Remy 12V batteries of 205 amp hours each. A La Marche 60 amp automatic battery charger works anytime 120V is available, and the high output alternators on the propulsion engines also charge while underway. There is no excuse for the batteries to be less than fully charged.

There are many extras in the engine room. All fuel lines have flame tubes on them, there are two 12V blowers and adequate engine intake air ventilation, the fire extinguisher system is automatic and manual and has a loud alarm bell, there are four automatic (and one manual) bilge pumps, the fuel filters had water separators and the 12V lights had cages. If you have ever broken a bulb with your backside in a crowded engine compartment, you will appreciate light cages.

ELECTRICS

We have touched upon the electrical capabilities of the boat, but in review—there are four 12V batteries of 205 ampere hours each. They are "pumped up" by the propulsion engines alternators and an automatic 60 amp battery charger which operates whenever 120V current is available. The 120V system is supplied by an Onan 7.5 kw diesel generator, fresh water cooled and in its own sound-containing box with muffled exhaust. While at dockside, the 120V shoreline is transformer connected to eliminate polarity problems. The 12 volt system operates most lighting, fresh water, controls, bilge and sump pumps, blowers and electric toilets (the optional AC/DC refrigerator also draws 12V). The 120V system takes care of certain lighting, hot water heater, battery charger, the standard refrigerator, stove, optional freezer and ice maker, garbage disposal and optional air conditioning and heat. The 42 is indeed an "electric home."

But how about going away from home—how long can you stay there? If for some reason you cannot or will not run the 120V system and can't start the propulsion engines, you could survive for about 60 hours on the three fully charged service batteries—and still have the fourth to crank the engines. This would mean minimum lights and no fresh water. For about 22 hours you could lead a normal life with lighting, alarm system, occasional fresh water cycling and heads.

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Hatteras Long Ranger

OWNER'S MANUAL

I have the strange feeling that I have been "had" on this subject. Apparently RUDDER has a reputation of being a bit critical of owner's manuals, and when I asked for this item I noticed a smile cross several faces as I was presented with three, large packages in waterproof envelopes. They were indeed owner's manuals and as complete as you will ever see. All told there were about 7 pounds of material, all 8" by 10" and punched for—and installed in—three-ring binders. Hatteras had included line drawings of about everything, including hauling specs and even the design for a storage cradle. All of the trademarked equipment manuals were included, along with warranty cards to be completed by the dealer. The spec sheets were well organized with all maintenance information easily located —down to light bulb specs and the serial numbers of most trademarked items.

And finally: a word of warning. The list price for the "stock" boat is $117,500 equipped with two six-cylinder Lehman-Ford diesels, and $123,500 when fitted with twin Detroit Diesel 4-53s. You could take delivery and sail away in a "stock" model—but you won't. If you know enough about cruising to buy this one, you will surely spend from $20,000 to $25,000 on optional equipment which is far less expensive to have installed while the boat is being built. We shall not list option costs, as they change too frequently, but the least you would want would be adequate radio and navigation equipment, swim platform, aluminum mast and boom, radar, stabilizers and auto pilot. Of lower priority—but still on the "probable" list are freezer and icemaker, spare props and shafts, an inside helmsman's chair, assorted covers and tops and some sort of entertainment center such as television, radio and stereo. You do want all the comforts of home—don't you?

Author Nabb pours over the 42's seven-pound owner's manual.

HATTERAS FORTY-TWO

LOA	42'6"
Beam	14'6"
Draft	3'10"
Freeboard Forward	7'2"
Freeboard Aft	4'6"
Fresh Water Capacity	220 gals.
Fuel Capacity	700 gals.
Holding Tank Capacity	55 gals.
Displacement (est.)	40,000 lbs.

AMF Hatteras Yachts, High Point, N. C. 27261