

# Hatteras 42 LRC

by Earl R. Hinz

I have long been a proponent of displacement yacht design because I believe that half the fun of boating is in getting there even when the weather is adverse and the other half of the fun is living on a boat that can have all the comforts of home underway or at anchor.

With the energy crunch upon us, the displacement yacht's more efficient use of fuel and its longer range between refuelings makes it even

more attractive. So when Hatteras Yachts said that they had the Mark II version of their 42-foot Long Range Cruiser ready for SEA Trials, how could I resist?

Hatteras is a name in the boating world that represents quality much like the name Mercedes-Benz means in the automotive world. With a hull designed by Jack Hargrave and construction by craftsmen schooled in the furniture trades, for which North

**Sea trials**<sup>TM</sup>

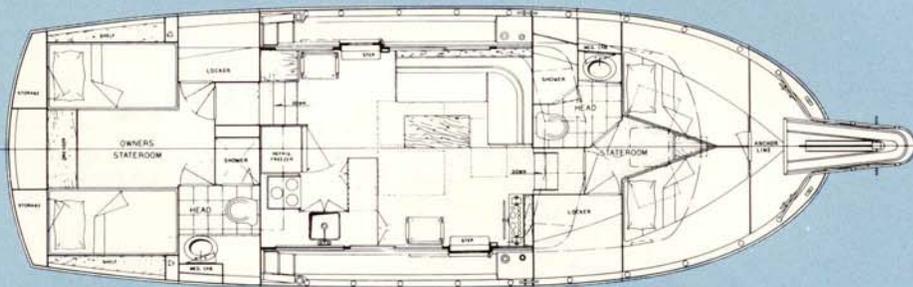
action photos by Jim McNitt, interior photos from Hatteras Yachts





## HATTERAS 42 LRC

**Designer:** Jack B. Hargrave  
**Builder:** Hatteras Yachts  
 P.O. Box 2690  
 High Point, NC 27261  
 Telephone (919) 885-6051



### DESIGN INFORMATION

Length, overall ..... 42 ft. 6 in.  
 Length, waterline ..... 38 ft. 3 in.  
 Beam ..... 14 ft. 6 in.  
 Draft ..... 3 ft. 10 in.  
 Freeboard, forward ..... 7 ft. 2 in.  
 Freeboard, aft ..... 4 ft. 6 in.  
 Height, bridge clearance ..... 20 ft. 7 in.  
 Dry weight, approximate ..... 28,600 lb.  
 Water capacity (two tanks) ..... 235 gal.  
 Sleeping accommodations ..... 6 adults

### PROPULSION

**Engines:** Twin GM 4-53N diesel  
 112 hp each at 2500 rpm  
**Gearboxes:** Borg Warner 72C  
 2.91:1 gear ratio  
**Propellers:** Michigan Michalloy 3-blade,  
 26-in. diameter by 23-in. pitch  
**Fuel capacity:** 755 gal. in four tanks

### EQUIPMENT INFORMATION

**Steering system:** Hydraulics manual hydraulic  
**Engine controls:** Morse Two-Lever  
**Instruments:** Sun tachs and AC gauges  
**Auxiliary generator:** Onan 7½-kw diesel

### PRICE

**Base price (FOB High Point, NC) \$169,900**

#### Includes:

Twin GM4-53N diesel engines  
 Automatic fire extinguisher  
 Two bilge blowers  
 Four automatic, one manual bilge pumps  
 Stainless steel propeller shafts  
 Fiberglass fuel tanks  
 12V caged engine compartment lights  
 Two banks 12V batteries  
 Automatic battery charger  
 120/240V AC shorepower  
 7½-kw AC auxiliary generator

120V AC refrigerator/freezer  
 240V AC 3-burner plus oven  
 Hot & cold pressure water  
 Dockside water connection  
 Two electric water closets  
 Bow anchor and chocks  
 Teak deck rail/stainless steel stanchions  
 Port & starboard boarding gates  
 Radio ground screen in hardtop

### FACTORY OPTION PRICES

Reverse cycle air conditioning ..... \$6510  
 Swim platform ..... 2250  
 Fiberglass pulpit ..... 3195  
 Electric windlass ..... 4240  
 Freshwater deck washdown ..... 295  
 Folding Bimini top ..... 1245  
 Bow docking lights ..... 795  
 Washer/dryer ..... 1315  
 Rudder angle indicator ..... 485  
 Transom lettering—name and port .... 220

Carolina is so famous, the 42 LRC just had to be good. I was not disappointed.

The Hatteras 42 LRC is not a totally new boat since it uses a proven hull essentially unchanged from its predecessor. The major change from the original Long Range Cruiser is a larger deckhouse and a full flush-deck aft cabin.

While Hatteras does not choose to call this boat a trawler design, it nevertheless has the lines and performance of a coastal trawler yacht. The deckhouse is set up over the engine compartment and there are cabins in the bow and stern. It operates in a displacement mode and is equipped for continuous operation over long distances.

The profile of the 42 belies the fact that it has two and one-half decks. A long sweeping sheerline and rounded surfaces on the forward cabin and bridge give the boat a sleeker appearance than its bridge clearance height of 20 feet would suggest. The bow is a rather steep clipper shape with a sharp entry and only a modest flare. Vertical dimensions of both bow and stern cabins have been maximized by elevating the foredeck to the sheerline and making the flush sun deck over the aft cabin.

The top weather deck is the flying bridge which is surrounded on three sides by a fiberglass coaming topped with a sturdy stainless steel handrail. Three pedestal seats are mounted on a platform for the driver and two passengers. Up to four other passengers can occupy a bench seat set athwartships at the aft edge of the bridge deck. The venturi windshield is typical Hatteras quality—formed acrylic sheet attached with stainless steel tabs and sealed to the bridge coaming all around.

The Hatteras 42 is made of three basic fiberglass mold-

ings—hull, deck and cabin, and bridge. A superficial look shows all of the surfaces to be fair with no signs of woven roving imprint. The gel coat is given a coating of polyurethane to add extra protection from the weather. Teak is used very sparingly on the exterior although it is lavishly used on the interior.

The interior is laid out in a basic three cabin arrangement—owner's stateroom aft, deckhouse amidships and a bow stateroom forward. The deckhouse is entered through the weatherdeck doors on either side. Inside the deckhouse are the steering station, a lounge area with L-settee and a full galley.

In changing the aft cabin design to a flush deck version, it also was moved aft displacing the lazarette with the result that the deckhouse was increased in size. This in turn permitted the incorporation of a large U-shaped galley which should warm the heart of any seagoing chef. One cannot be simply a cook on a Hatteras! It has a 220-volt Princess electric range, 120-volt General Electric refrigerator/freezer combination, hot and cold pressure water and abundant cabinet space. When I say having all of the comforts of home, this is what I mean.

Forward from the deckhouse and three steps down is the bow stateroom ostensibly for guests but really well enough fitted out to be a permanently occupied stateroom for long passages. The V-berths are spacious and set high affording space underneath for stacks of drawers for personal gear. In addition there is a commodious hanging locker at the foot of the deckhouse stairs for shore clothes. Part of the large hanging locker is lost, however, if you order the washer/dryer option such as was on the

## HATTERAS 42 LRC

SEA Trials boat, but the space tradeoff would be well worthwhile. Opposite this hanging locker is the general head compartment with the usual fixtures plus a large stall shower.

The owner's stateroom aft is the principal beneficiary of the broadened sun deck which characterizes the change from last year's model. The cabin has a very expansive look inside because it has full headroom across the beam. It is offered with either a centrally positioned queen-size bed or individual berths on either side as shown in the SEA Trials boat. Either plan brings with it superb teak joinerwork finished off in a satin finish bringing out the natural golden color of good teak. It is this craftsmanship that endears a Hatteras product to its owners.

The owner's stateroom gets natural light and ventilation from four opening portlights in the hull sides and one generous window in the transom. The overhead of this cabin, as well as all cabins, is covered in a perforated, soft, light-colored vinyl which helps deaden sound as well as make the stateroom brighter.

The heart of the displacement yacht is the propulsion system which is expected to run 24 hours a day and be maintained while at sea. This calls for good engines and accessories plus an engine compartment of considerable size and convenience.

From the big white GM 4-53N engines to the compact LaMarche converter you find quality in all of the propulsion components. They have also been installed in a quality fashion. The engines are mounted on vibration isolators bolted to foam-filled fiberglass stringers reinforced with metal plates both inside and outside. Although the two-cycle GM engines are noted for their smoothness of operation, the mountings assure that virtually no vibration is transmitted to the hull.

Another interesting installation was the four big batteries outboard of the starboard engine. Each battery is contained in its own fiberglass box bolted in place and provided with a removable fiberglass lid for checking battery condition. The battery box lids are well-ventilated to rid themselves of the explosive gases generated during long charging periods.

A subtle bit of Hatteras quality shows up in the wiring system of the boat. As you would expect, there are a lot of wires to handle the electric demands ranging from the all-electric galley to the running lights. It would be a maze of wires except for the neat bundling and routing of cables done by the factory. Repairs or additions to the electrical system are made easier because the wires are color coded and numbered and wiring diagrams are provided in the operating manual. When the boat is far away from its home base it's comforting to know that you can find your way through a complex electrical system.

Engine compartment access is gained through the sole of the deckhouse for major maintenance and under the forward cabin ladder for minor affairs. Headroom in the engine compartment is about 4½ feet so that you can comfortably kneel or sit for all work unless you remove the deckhouse sole hatches, in which case you can stand up.

SEA Trials of the Hatteras 42 Long Range Cruiser took place at Morehead City, NC, under a sparkling sun. It

seemed that the weatherman had been programmed for this effort since he not only provided a clear day but also gave us some good seas to check the seakeeping ability of this boat.

The boat was based at Spooners Creek for convenience of demonstrations and Eddie Condon, the factory's customer-service rep, had it all primed to go. We made the

### Design Comments from Jack B. Hargrave

The hull of the Hatteras 42 Long Range Cruiser has been well-proven over several years of use with the original cabin design. It is a true displacement hull with a fairly deep forefoot and a round bottom for 75 percent of its length. The last 25 percent is squared off giving essentially a flat bottom to resist squatting when the boat is overdriven.

There is a substantial keel evolving from the deep forefoot and carrying all the way aft; it extends well below the propellers to protect them in a grounding. Forward the keel is quite broad to give internal volume for the fuel tanks and it thins aft to about 3 inches wide which is the minimum thickness for good fiberglass layup work.

Although from a hydrodynamic standpoint the boat could be built lighter than it is and maintain good stability, unexpected sea conditions offshore demand the sturdy hull structure which Hatteras builds into its line of yachts. As fuel becomes more expensive, though, I would expect to see both lighter and more easily driven hulls used on all boats.

Twin engines are standard on all Hatteras yachts and I believe the redundancy of twin engines is good for the large majority of boat owners. We have a whole generation of boat owners who have been brought up on twin screws and know how to handle them and are accustomed to twin engine reliability. Handling a single screw boat is difficult for some people and auxiliary propulsion devices to get the boat home in case of engine trouble are more complicated than most people will accept. Besides, when you buy a boat of this quality the additional cost of twin engines is not significant.

The speed at which you operate this boat depends on what you want to do with it. For maximum distance that won't take an excessive amount of time I would recommend about 7 knots giving a speed/length ratio of about 1.1\*. If time is more important than economy then you can kick it up to 9 knots which is a speed/length ratio of about 1½. Unfortunately, boat operators seem to prefer to go about 11 knots, giving a speed/length ratio of about 1¾ which is, hydrodynamically, a bad place to operate. However, we size the engine for that eventuality and design the hull to prevent squatting when it is overdriven to that extent.

Incidentally, the GM 4-53 N engines are rated at 2500 rpm and they can be run there continuously if you want. Top rpm is 2800 and that should be considered intermittent. The 2000 rpm that were used in the SEA Trials is a very conservative operation.

\*Editor's note: Speed/length ratio is the speed in knots divided by the square root of the waterline length in feet. Hull speed represents a speed/length ratio of 1½.

## Design Comparisons

Boat	Prairie 42	Hatteras 42	Grand Banks 42
<b>Design Parameters</b>			
Length, overall	42 ft. 5 in.	42 ft. 6 in.	41 ft. 10 in.
Displacement	28,000 lb.	28,600 lb.	34,000 lb.
Displacement/ length ratio	229	227	228
Hull speed*	8.3 knots	8.3 knots	8.5 knots
Horsepower	260	224	240
Base price (FOB)	\$153,000	\$169,900	\$149,828
	(Clearwater, FL)	(High Point, NC)	(Long Beach, CA)

\*See note under Design Comments

half-hour trip from Spooners Creek to Morehead City checking out the low speed handling of the boat in quiet water. I also took the opportunity to check on the operating noise in the cabins. Only the steady hum of the two-cycle engines was noticeable in the forward cabin and the deckhouse. In the master stateroom the engine hum was replaced with the low growl of the propellers.

Passing through the Morehead City inlet we encountered steep seas caused by an ebbing tide colliding with onshore wind-driven seas on the outside. Now at a cruising speed of 2000 rpm (approximately 8 knots) we bucked our way through the inlet without noticeable speed loss and a minimum of discomfort. In the open ocean we took the boat through all headings in seas consisting of 2 to 3 foot waves and 6 to 8 foot, closely spaced, swells. It tracked well on all headings and rode comfortably over the lumpy waters. Although there are not high bulwarks on the boat, the foredeck remained dry and there was no sign of spray at bridge level.

One of the things that intrigues me about a displacement design is its constant speed. We set the throttles at 2000 rpm when we left Morehead City for the ocean and didn't change them till approaching Beaufort on the return. The 42 just kept driving along oblivious to the direction and magnitude of wind or waves.

Meanwhile, back at the factory the accountants were pricing out this boat which, in its base configuration, comes to \$169,900. In that figure you not only get the famous Hatteras quality but a pair of General Motors diesels, an Onan auxiliary generator with Sound Shield, and an all-electric galley. The standard equipment list makes you appreciate what you're getting in the base price.

But, of course, none of us ever buys a standard boat, so the price doesn't end there. Our SEA Trials boat priced out at \$188,525 which included air conditioning, a swim platform, electric windlass and a number of other desirable options that should be factory installed. About all that was missing was electronics and for this far-ranging boat that will take some study by the owner to meet his needs.

Although there are many displacement yachts built in the United States and abroad, there is only one Hatteras and that has to be the epitome of the class. Design, construction and performance are uniquely Hatteras and the owner of a Mark II 42-foot Long Range Cruiser can, indeed, be a proud skipper.

