

Blue Water SAILING

Solutions For Offshore Sailors

Reader Survey: The Caliber 40LRC is a well-thought-out passagemaker

"A well-constructed boat, interestingly conceived, reasonably priced"

A lot of thought has gone into the conception, construction and marketing of the Caliber 40LRC (Long Range Cruiser). That's your overriding thought as you study the plans and exhaustive product information provided by Caliber Yachts, Inc. of Clearwater, Florida. Owners of this boat who cruised through the Blue Water Sailing Subscriber Survey appear to be in complete agreement. Says one: "A well constructed boat, interestingly conceived, reasonably priced."

Caliber entered the cruising boat scene in 1981 with the launching of the first Caliber 28, which was built by George and Michael McCreary in a backyard garage. By 1985, the McCrearys were operating out of their own plant in Clearwater, which produced the Caliber 33, to be followed in 1987 by the 38 and, in 1991, by the 35 and 40, modification of the 38 with extended stern and swim platform. After introducing the Caliber 30 pocket cruiser, the McCrearys' launched their LRC (Long Range Cruiser) series with increased fuel and water tankage for long-distance cruising.

To the observer, it appeared that brothers George (the business head) and Michael (the naval architect) McCreary, carefully applied many of the best attributes of existing cruising designs to their own creations. This presented formidable competition for similar vessels of that era--the Moodys, Pearsons, Bristols and Endeavors. According to a cruising boat dealer of the mid--to late '80s, "They knocked our socks off

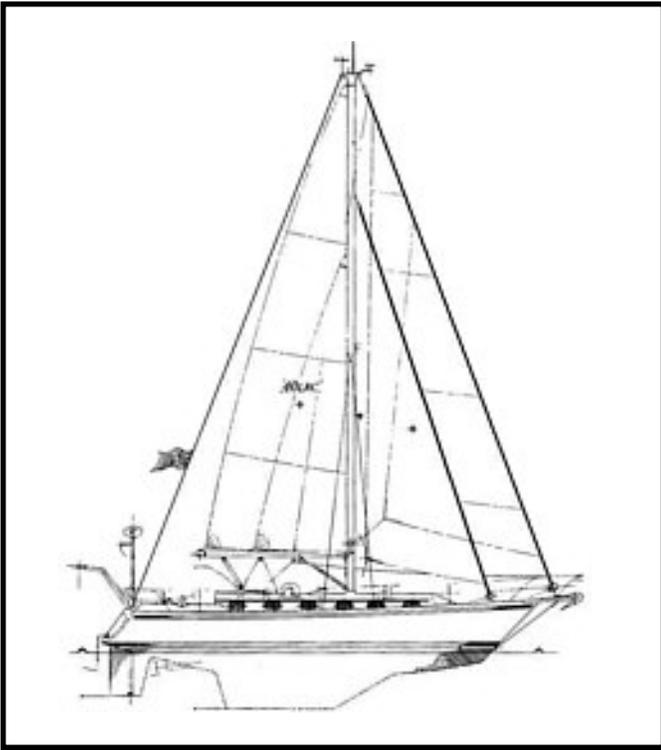


and grabbed a huge market share." Caliber did this by covering all the bases in design and construction and then marketing the Caliber to a niche market: the knowledgeable, quality-conscious customer wanting complete packages, ready to sail away into the sunset.

A glance at recent classified ads for "loaded" 1995 and 1996 Caliber 40LRCs (sloops with Caliber's Convertible Cutter Rigs) launched in the past two years reveals prices consistently between \$220,000 and \$225,000. The base price for the original 40 was \$154,000 in 1994. An ad for a '95 40LRC reads, "Absolutely mint, very well equipped, ready to go anywhere." We believe it. So many details have been incorporated into Michael McCreary's design to ensure their boats stand up to the test of the sea miles/time that all this boat asks is to be well sailed and it promises to take care of the rest.

Construction

BWS survey respondents are most impressed by the Caliber 40LRC's scantling and construction details. One testimonial reads: "After crawling around and poking into every



corner of my boat for the last three years, I...have found no area where Caliber has compromised on the strength and structural integrity of the boat. I don't believe there is a more strongly built boat on the market today." So it is no surprise that scores in construction categories average between 8 and 10. Average rating of overall hull construction is just under 9, with several perfect 10s, probably coincidentally for boats built in 1995. With heavy 24-oz. Woven roving and mat, Caliber creates thick hull laminates that are stiffer and have higher breaking strengths.

Caliber has married marketing education and effectively pitched a number of titled construction and design systems that cover the important seamanlike bases and help consumers make informed buying decisions. Thus, holing of the hulls is minimized by what Caliber calls, "Reinforced Impact Zones" at the bow in the area of the waterline and at the forward edge of the long modified fin keel. These are extra layers of solid fiberglass applied to those spots most likely to be damaged by striking floating and semi-submerged objects while under way. There's nothing particularly new about additional layers of woven roving, but the point is, they are there. Once an owner ran his 40LRC hard aground on a rock at seven knots and reported "insignificant cosmetic damage."

Similarly, Caliber's "Integral Strength-Grid System" probably accounts for high scores for "stringers & floors" (average score of 9). With this grid system, keel, tanks, lids, baffles, stringers and subsole are heavily glassed together to form a powerful grid structure that is integral to and the backbone of the hull and as the builder says, "spreads primary sea loads over a large area." Early varia-

tions of this idea were employed by both Ericson and Hunter in the early '80s. First designed by David Pedrick, and dubbed the "Triaxial Grid System" by Ericson, it really works. LRC owners know of this method's efficiency, and are justifiably impressed.

Unabashed enthusiasm for "bulkheads & braces" (average score of 9.3) are due in part to Caliber's "Multi-Bulkhead Bonding System." With this, all horizontal and vertical surfaces--e.g., bulkheads, frames and shelves--are completely hand-laminated to the hull with fiberglass tape, further strengthening and stiffening the hull and eliminating non-structural liners. This practice of incorporating the furniture as a structural component of the hull is also known as monocoque construction.

Also contributing to the high scores are such construction attributes as a watertight collision bulkhead, once the specialty of the Amel line of French ocean cruisers and builder of BOC and Vendee-Globe Challenge boats. The reinforced and watertight bulkhead is installed just aft of the forefoot between the bottom and the underside of the deck to contain seawater in the area should the boat be holed in the bow. The space forward of the collision bulkhead contains the holding tank.

Playing devil's advocate, if Caliber wanted a more effective collision bulkhead, they'd reposition it farther aft--say, at the bulkhead between the salon and the forward stateroom, which would account for holes that could be punched in the sides, forward, by a container. Then, Amel-style, they should add a heavily gasketed door, for access forward, with positive locking and sealing device. But, again, any collision bulkhead is a lot better than no such device, and Caliber is one-up on many builders for its presence on their boats.

Similarly, Caliber's waterline-high "rudder-post dam" is designed to contain seawater in the event of damage to, or failure of, the rudder stuffing box. This is a clever idea that makes a lot of sense

so long as the leak can be flagged early and the repair made quickly. Toward this end, rigging a bulge pump inside the dam to an alarm or light will give early notice of a leak at the rudder-post bushing.

Average ratings for hull construction and hull-deck joint are a relatively lofty 8.7, again due in part to 40LRC owners' knowledge and appreciation of the

Caliber 40LRC

LOA	40'11"
LWL	32'6"
Beam	12'8"
Draft	5'1"
Displ.	21,600 lbs.
Ballast	9,500 lbs.
SA	739 sq.ft.
D/L	281
SA/D	15.25
B/D	44%
Water	179 gals.
Fuel	212 gals.
Est. range	1,484 N.M.

"Quad-Seal Deck to Hull System" hull-deck joint. Caliber takes four steps to join and seal the deck to the hull--3M 5200 in the hull-deck flange; co-polymer tape around the inside perimeter of the flange; 5200 under the slotted aluminum toerail, which is also thru-bolted; 5200 between hull-deck seam and rubrail, which protects the hull-deck joint. An average score just under 9 for "dry below decks" bears out the success of this joint. Deck construction--fiberglass over marine plywood, which doesn't fail under compression--received a high score of 8.9.

Chainplates also received an average score of just under 9. Survey respondents thought highly of Caliber's "Double-Lock Chainplate System" that first locks the plate to the horizontal surface of the hull, then clamps it to an oversized bulkhead "thoroughly bonded" to the hull. This also further strengthens the hull-deck joint by reducing flexion between the deck and cabin molding and the hull.

The keel-hull joint received a 9.3, because the modified fin is integral to the hull with no external keel bolts, and its weight and the forces that come to bear on it are distributed over the grid structure. Internal or encapsulated ballast has its pros and cons. A serious grounding can permit the ingress of water to the hull laminate while an exposed lead keel will absorb the shock with no more than a dent incurred. That said, an exposed keel relies on keel bolts and a keel-hull joint that will, in the end, be a source of leaks. We can comfortably agree with Caliber and others that an encapsulated keel is a prudent and seamanlike design feature, especially insofar as Caliber totally seals the ballast under the



Handholds abound in the open saloon layout. The joinery is well executed.

hull laminate. "By glassing over the ballast, we've created a barrier that will block ingress of water into the hull should the keel be holed." says George McCreary.

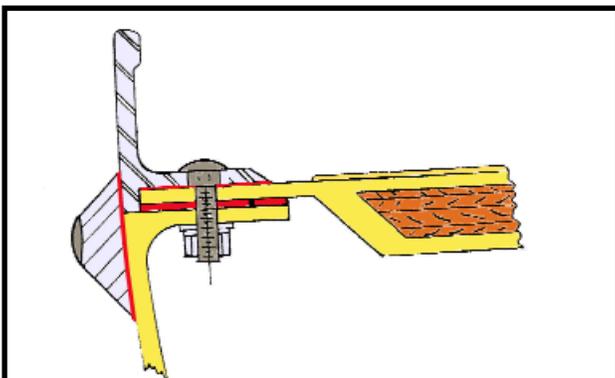
Caliber 40s also boast a "double-bottom effect" created by integral tanks in the bottom of the hull. "If you were to hole the hull in these areas," says McCreary, "water would be contained in the tanks. It's like an oil-tanker's double hull, but instead of keeping oil out of the ocean, we're trying to keep the ocean out of our boats."

Rudder & shaft rated an average score over 9.2, which probably can be attributed to Caliber's Triple-Support Rudder System, which distributes the rudder's load between three bearings--at the top of the 2" dia. s.s. shaft, at the bronze rudder port, and at the rudder shoe. Exterior stainless and trim averaged 9s, deck hardware averaged just over 8, thru-hull fittings received an average score of 8, and steering system received 7s and 8s.

Passagemaking/Performance

While many Caliber 40s have routinely logged ocean passages, including several transatlantics, and one is in the midst of a circumnavigation, none of the survey respondents had extensive offshore experience with the 40LRC. However, all had at least ventured overnight with their Calibers. More importantly, however, all had great plans for their Calibers' blue water futures, which should be exceeding bright, for this boat has been created with voyaging in mind.

First, the difference between the Caliber 40 and the Caliber 40LRC. "The major difference between the Forty and the Forty LRC is tankage," George McCreary told us. And what a difference! While the original 40 had 55-gal. and 156-gal. fuel and water capacities respectively, the 40LRC boasts 212 gals. of fuel and 179 gals. of water. This is a significant upgrade for those with extended cruises in their futures. Both figures are awesome. The 212 gals. fuel capacity provides an estimated



The four-way deck-bonding system, an example of a belt and suspender system which makes the Caliber 40LRC so rugged.

range of 1,484 miles with the standard 50-h.p. diesel; the 179-gal. water capacity preempts the need for a water-maker.

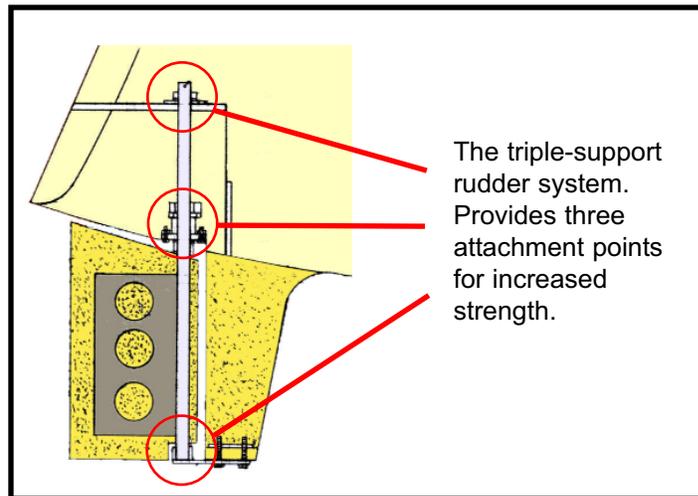
As a practical matter, 212 gallons of fuel allows the skipper to buy duty-free fuel when available, instead of having to buy it at premium prices when needed. For most long-range cruisers, this volume amounts to a six-month supply, which provides a comfortable margin of safety.

With a hefty displacement of 21,600 lbs. on a 32'6" waterline and a Displacement/Length Ratio (D/L) of 281, the 40LRC is moderately heavy by modern cruising boat standards; a Valiant 40 has D/L of 256; a Sabre 38, 224; a J/40, 176. But a modern underbelly with cut-away sections fore and aft of the keel presents minimal wetted surface, and high-lift, low-drag keel-foil sections improve performance. The relatively high D/L suggests to us that this boat will move easily with a kindly motion in a sea-way while carrying a long-term voyaging payload. Scores of 8 were given to roll factor and sea motion. Survey respondents gave scores of 8 for "sea motion" and "dry decks." With dodgers installed, scores for cockpit protection averaged 8.5

The Sail Area/Displacement Ratio (SA/D) of 15.3 is low by today's standards (the Sabre 38 has an SA/D of 17.9; the J/40, 20.2), but the venerable Valiant 40 has a similar SA/D of 15.5, and the V-40 is a classic and effective passagemaker in a wide range of conditions. Most respondents gave high scores for light-air performance--surprisingly (with such low SA/D), mostly 8s and 9s, with one 10--with positive comments about the design's maneuverability and drive in zephyrs. One skipper scored light-air performance at 4, but he admitted that he was just getting to know the boat.

The 40LRC's Ballast/Displacement Ratio is high at 44% (the Valiant 40's is 34%), with ballast positioned low in the keel, and when teamed with an average beam/length ratio of 30% (the V-40's also is 30%) should make for a stiff boat with excellent initial and ultimate stability. Performance in strong winds and storm handling was laced with 8s and 9s, with a 6 and 7 from the owner still learning his boat. The Convertible Cutter Rig on a retractable inner forestay provides a heavy-air rig for roller-furling staysail and reefed main.

Owners deemed performance in moderate wind conditions excellent, giving that category scores between 9 and 10. Upwind and downwind performance averaged 8, with tracking ability gaining an 8.5 due to the long fin and skeg. Tacking angles ranged from 85 degrees to 100 degrees, averaging about 95 degrees. Noon-to-noons in the trades will be between 130 and 150 miles; in the variables, about 120 to 140 miles. Under power, generally



with feathering three-bladed props, the boats handled extremely well, with scores averaging 9 for forward, reverse and while docking. The rudder/skeg positioned well aft and the modified fin assist in this department.

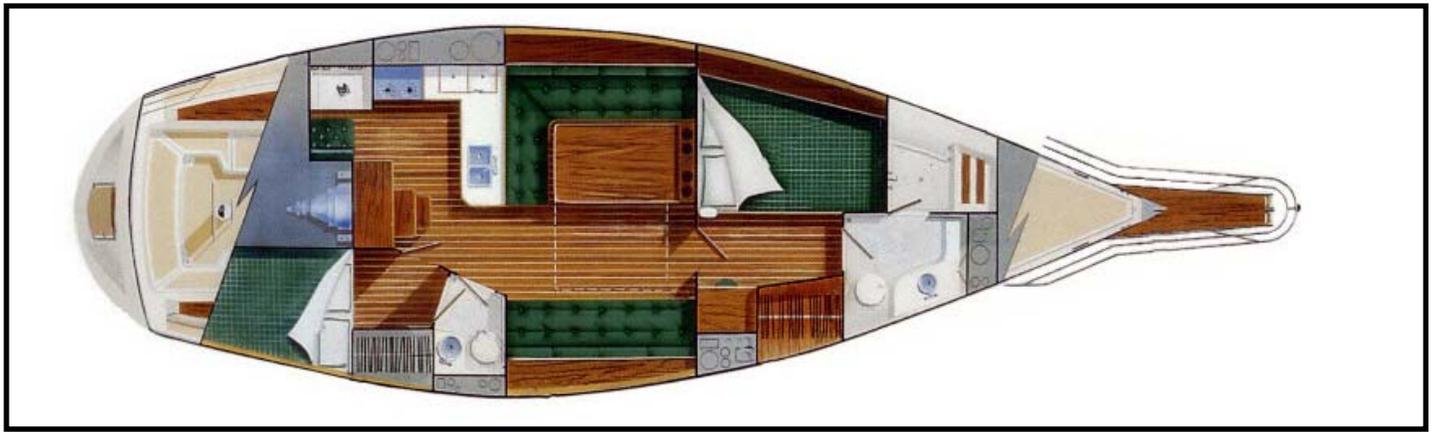
Dinghy storage rated a 7.5. Sea berths averaged 8s. There are three--the settee in the salon to starboard; the dinette settee, which converts to a double in port; and the aft cabin double-berth, with judicious use of a lee cloth or cushions and pillows.

The bowsprit is a neat attribute on a voyaging boat, for not only does it allow the headstay to be moved far forward, it also provides the perfect anchor platform far from the pristine topsides and a great spot to observe dolphins in the bow wave, and it will be invaluable in gaining access to a wharf or quay when moored Medstyle.

Accommodation

"Very comfortable accommodation; separate stall shower an asset," is a typical comment from survey respondents. We view this Caliber 40LRC as a "couple's boat," or at least an LRC for a small family. The forward stateroom, to port just forward of the dinette, is in essence a spacious in-port double for the owners. It's too far forward of amidships to be comfortable in a seaway. No problem; There are sufficient sea berths to accommodate a couple or small family while on passage. Berth size and comfort rated 9s.

The in-port double-berth is becoming increasingly popular with voyaging couples who like a real, well ventilated sleeping arrangement while in port. And this cabin need not be wasted space at sea, for the berth opens up useful storage space while on passage. For example, it is ideal for fresh produce, for which good ventilation is necessary for maximum life. The spacious forward head and separate shower can serve as a locker for sails, fenders and lines while under way. For a couple, the aft head (descend companionway; turn right) will be a great wet locker for boots and foul weather gear. The heads received an aver-



age score of 8, which we feel is well deserved. Within the "couples" configuration, they are well positioned and well thought out.

For serious offshore use, we'd like to see if the aft cabin could be converted into narrow upper & lower sea berths. Such berths will be safer and more comfortable at sea. Moreover, such an arrangement would open up additional access to the engine compartment. But as double berths go, this is a good one and is usable, for at the very least it has bulkheads port and starboard alongside of which is gravity can pull your weary bones on either tack. Pillows and triangular settee cushions are valuable seagoing tools in such applications. Having said all this, two good sea berths exist amidships.

The L-shaped galley is open and airy and has adequate storage space (average score of 7) over the range and fridge and under the sinks. A U-shaped galley design provides maximum working comfort in a seagoing boat, but the L-shaped galley will work fine with a galley harness. With the galley so close to the companionway, ventilation will be good, and it'll be a simple matter to hand a snack up to the watch in the cockpit. Survey respondents gave overall galley efficiency a 7.6. Other average galley scores: sinks-8, stove/oven installation-7.6, food & equipment storage-7.5, dining table-9.3. This table is very nice, with seamanlike fiddles and a leaf that extends to the starboard settee. Just aft of the galley is the well-positioned and snug nav-station, with quick and easy access to the cockpit and the helmsperson.

With 14 opening ports, seven hatches, two Dorades and a solar fan, ventilation is superb. Average score: 9.6! Cabinetry below is lovely and warm, as well as functional, and rated a well-deserved 9.7. This is a very open layout which, as one respondent noted, is "both good and bad," but he complimented the 40LRC of its strategically placed handholds. Respondents gave the Caliber 40LRC a score of 8.3 for "below-deck plan for living aboard and offshore sailing."

Rig

The rig is interesting. The retractable inner forestay is popular among survey respondents, most of whom made positive, unsolicited comments about the Convertible Cutter Rig. The two-part backstay not only disperses rigging loads between the quarters, it also keeps the versatile transom boarding platform clear and open for swimming, showering, diving, dinghy boarding and, if need be, recovering crew overboard.

Several owners mentioned that the wire rigging is heavy, and others appreciated the inboard chainplates and genoa tracks that enables them to sheet headsails in tighter, point higher, improve tacking angles, and enhance their boat's VMG. The coachroof mounted traveler system, turnbuckles, the keel mast-step, and wire rigging all received 8s or just above.

The in-mast furling mainsail, along with roller-furling jib and staysail, allows all sail reductions to be made from the cockpit--a wonderful safety factor offshore.

Summary

In reviewing the attributes of the Caliber 40LRC, it's easy for BWS to get excited about the boat's possibilities as a blue water boat. And it's not difficult to be enthusiastic about the prospects of the BWS Subscriber Survey respondents who are, as we write, preparing for their days in the sun and the trades. Sure, you can buy new or used boats for less, but seldom will you be able to acquire a stock boat as prepared for the rigors of the sea as is the Caliber 40LRC.

When George and Michael McCreary were boys growing up in the Tampa Bay, Fla., area, every waking hour was spent out on the water. During races to Key West and cruises to the Bahamas, the seeds of a dream were sown: to own their own boatbuilding enterprise. But simply to build boats was not enough. It was imperative to the McCrearys that they stay small to reduce overhead and produce "quality, seaworthy cruising yachts" at competitive prices. If the BWS Subscriber Survey is any indication, they have succeeded admirably. 1