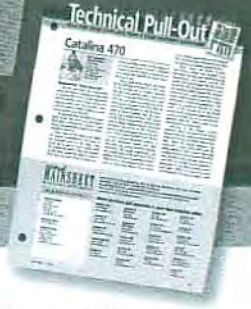
Technical Pull-Out



Q&A FOR YOUR CATALINA THAT'S BEEN FACTORY APPROVED

Catalina 470

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Beckoning, #76

Open Ocean Race Prep

Beckoning... (Hull # 76) , her crew (Larry Cohen [C470 *Comfortably Numb*], Steve Rosen, Bob Macaluso) and I crossed the starting line for the 2007 Caribbean 1500 race precisely at noon on November 4, 2007. Blue Water Marina in Hampton, VA is the gathering place for the fleet prior to the commencement of the race which terminates at a point between The Dogs and Beef Island in Tortola, British Virgin Islands. Village Cay Marina in Road Harbour is the terminus for the fleet once the race is completed.

Preparation for the race, as far as *Beckoning...* was concerned, started in July when I sent in the check for the entry fee to Steve Black and the Rally Association. A very complete race package is sent to every entrant immediately upon receipt of the entry fee. A required equipment list is included in the package; most C470s are well-equipped boats but for offshore racing some unique equipment is mandatory as is a boat inspection to verify the condition of the boat and the presence of the required equipment. Some of the equipment can be purchased used and then disposed of in Tortola if the boat will not be doing any further formal racing offshore. Technology has eliminated the need for MOB poles, sextants, bulky kapok lifejackets and similar archaic equipment.

The issues which primarily confronted *Beckoning* were fuel, dinghy carriage, food for 4 men for 14 days, water, and spares, spares, spares. As previously noted in this column, the boat had undergone a complete refit in the spring of 2007.

Beckoning carries the standard fuel tanks. Total usable fuel is considered to be 80 gallons. In previous years some Caribbean 1500 entrants have had to do significant motoring (motoring time is simply added to the total time enroute for race results) in order to get to the wind. Adding to this demand on the ships fuel is the requirement, when under sail, to charge batteries to power navigation equipment, run the radar, make water and operate the normal complement of on-board equipment necessary for life at sea. The Caribbean 1500 package has a very nice worksheet in it for fuel calculations. However, there is no magic number!! Each Captain must decide how much fuel to carry and how to carry it. If you have enough fuel to motor the boat into the slip in Tortola, then you guessed right. If you have to be towed into the slip, well... This race is not about the journey..It is about getting there!

I decided to carry fuel for 3/4 of the straight line race distance. To do this would require a total of 193 gallons of fuel. This fuel amount included the requirement for the Fischer-Panda genset. "Jerry cans" were an option for some fuel but to carry the extra 113 gallons would have required far too many!! Internet research led me to the NAUTA fuel bladders. I did not want to make the boat unstable due to too much weight on deck but could not store extra fuel,

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even in the NAUTA bladders, below decks. 113 gallons of fuel weighs 825 lbs...add to that the weight of both the jerry cans and the Nauta bladders and the number is about 860lbs..Equivalent to the weight of 4 big men. I felt that the C470 could easily handle this weight on deck and not have her stability compromised. The placement of the NAUTA bladders is shown in the accompanying photo.

The Jerry cans were lashed to trimmed and painted Poplar 1 X 6's which were themselves drilled and then lashed to stanchions with heavy line. I elected not to use U-Bolts to hold the poplar boards to the stanchions to provide a bit more "give" in the event of boarding seas. The added weight on deck served to significantly stiffen the boat in roll mode and induce a positive Phugoid oscillation in pitch mode. The overall result of the added fuel/weight was a nicer ride!!

Even with almost a hundred hours of motoring *Beckoning* arrived in Tortola with 80 gallons of fuel. Better to have it and not need it, than need it and not have it!

Many offshore cruisers carry their dinghy lashed to the foredeck. This would have worked even with the NAUTA fuel bladder tied down between the two forward hatches. However, it would have made getting to the forward fuel bladder very difficult especially in heavy seas. Having survived a Force 8 Gale and a knockdown with the dinghy on the davits I felt that moving the dinghy to the foredeck was unnecessary. In order to raise the dinghy higher from the surface of the water we removed the davit falls and lashed the dinghy directly to the davits using the normal lifting bridles and U-bolts. This raised the dinghy 14 inches above its normal carrying position. The photo below shows the dinghy in place. We also used heavy ratchet straps to hold the dinghy down as well as eliminate movement from side to side in seas. The dinghy, other than in rain, never moved or got wet. We stored the dive compressor, properly lashed and padded, in the dinghy and were able to use the dinghy for other equipment and the trash which we could not toss over the side.

The Caribbean 1500 requires that there be bottled water aboard in addition to Ships Stores. The 1500 requirement for a crew of 4 was 100 gallons plus 8 gallons of emergency water. We carried 16 gallon jugs plus the 200 gallons in the boat tanks. *Beckoning* has a 12v, 160gpd watermaker and we put it to good use to replenish what we used. Underway, when seas allowed, everyone had a daily shower and we did not have to restrict water usage. The idea was that we would use water only from the tank that the watermaker emptied into and hold the other tanks in reserve. That concept worked well and we arrived in Tortola with water to spare.

A requirement of the 1500 is to block off the hawsepipe. In continuous head seas, this opening into the anchor locker will allow significant water ingress. As the photo shows, the anchor locker was completely sealed with Mast Boot tape. A piece of 1/2 inch plywood was cut to fit over the vertical part of the opening and "FUN-NOODLES" were cut to stuff into the horizontal part of the hawsepipe opening. Mast Boot was used to seal all this in place and as you can see in the photo, also used to seal around the windlass and the crevice between the anchor locker lid and its supporting structure. Not a drop of water entered the anchor locker during the trip. We did not encounter much in the way of head seas but did see considerable spray and the occasional boarding sea when driving down into a trough. Covering the hawsepipe is a great idea and the use of MastBoot makes it very easy!!!

In order to carry enough food for 4 men for 14 days (last year it took some boats 14 days to make the trip due to lack of wind and lack of fuel) I emptied out all the under-seat stowage in the main Salon and, for the first time, used the lower freezer storage compartment. All beverages are carried in a 12v reefer lashed in the aft stateroom so that relieves the galley reefer from that stowage requirement. A trip to Sam's Club in Annapolis along with two trips to the local grocery prior to departure from Annapolis filled the dry/canned and frozen storage compartments. I used dry ice while in Hampton to aid in lowering the frozen food temps and keeping them there. While underway, we ate well when we could but quartering seas prevented much serious cooking. Small individual pizzas, ready-to-heat dinners, micro-waveable soups and fruit cups were handy, nourishing and easy to use. Lunches were normally sandwiches of sliced turkey, beef or chicken.

The Catalina 470 is a stout boat and the successful outcome of the trip was never in doubt. The only mechanical failure we experienced was the loss of the boom car. It remained attached to the mainsail but not to the boom so we were somewhat handicapped in our ability to remove twist from the top of the main. With an absurd PHRF rating of 99 generated by the 1500 consultant, our chances of winning were slim even before we left the dock. Even so, the last five days of the race proved to be exciting sailing as we had 18-30 kts of wind over the port quarter with quartering seas/swells also from the port quarter. This made for some extreme angles of heel, even heavily reefed, when surfing up the front of a steep incoming swell but allowed a magnificent broad reach for over 5 days. Sleeping was not easy (try doing it athwartships in rolling seas!!!) but the boat never saw SOG of less than 7.5 kts and at one time was keeping steady at 8.5. The new Raymarine radar and chartplotters did yeoman service and we avoided squalls and thunderstorms easily. The Navionics chip was exquisitely accurate throughout the trip and for the approach thru the BVI's and docking into Roadtown. The photo of a waterspout was taken less than 2 miles from the waterspout!! At that time we saw eight waterspouts all hanging from the same line of thunderstorms at the same time!! A video was taken of all eight and it was impressive.

Spares, spares, spares. I opted to have maximum spares on board for every conceivable failure. An Excel spread sheet was built to log the spare (by area of usage), its part number, cost, where purchased, how many are on board and most importantly, where it is located on the boat. Since leaving Hampton, I have used 2 oil filters, 10 quarts of oil and one bow thruster arming switch. The importance of having adequate spares cannot be overemphasized but neither can the reliability of the Catalina 470. The dollars spent are irrelevant when one is 900 miles out to sea and something fails. Belts, filters, nuts/bolts, plumbing fittings, pumps, alternators, tools, coolant, Oreo Cookies, fuel line, water line, clevis pins, autopilot gear drives, exhaust hose, Atomic Tape, electrical wire/terminals, a Sailrite sewing machine, sail cloth, sail repair tape and frozen Crème Brulee, are among the hundreds of items aboard. The C470 can carry an enormous amount of cargo in the form of spares...hopefully, you will not need them but as the saying goes... don't leave home without it!

A Caribbean 1500 race is well worth doing and overall is great sailing fun. I suggest that you do some serious overnight passages offshore with experienced crew aboard before attempting a trip such as this. Several boats were caught unaware by squalls and seas and suffered the loss of sails, backstays, engines and alternators. 9 days at sea in a small boat requires planning and execution not required of the coastal or Bay sailor. I personally inspected every square inch of *Beckoning* at least twice in the months prior to the race; had experts inspect it and advise on spares/maintenance and heavy weather improvements. However, the Inspectors for the C1500 still found areas where I needed to improve the boat for the offshore work. Their expertise must be listened to....most of the Inspectors have been doing this for over 10 years and they do know what they are talking about. *Beckoning* is now in the Caribbean for the winter! The trip down was at times grueling and uncomfortable, sometimes boring, often exciting but never without challenge. The reward is to look back on it and say, "I did that!!!" and you get a grin from ear-to-ear every time.