Extended Cruising in the Caribbean
Preparation for Departure

This is the second of a planned seven installments chronicling a seven month voyage of Windward Passage from the Chesapeake Bay to the Caribbean, sailing the islands of the Caribbean then returning in the late spring 2008. The first installment appeared in the September/October issue of the Lubber's Line.

Early in the planning phase I determined that I wanted to be able to minimize the use of the engine to charge batteries and provide refrigeration. To accomplish this, I added a battery driven refrigeration system to supplement the engine driven compressor system that has been on the boat since its launch in 1995. I purchased a Frigoboat system that operates using the boat batteries to drive the compressor. To maximize the efficiency we chose the "keel cooler" version which uses a plate on the exterior of the hull to cool the compressed Freon and eliminates the fan or heat exchanger pump used on most systems. Now we will no longer have to use the engine to run the refrigeration system but we still need to charge the batteries…there is no free lunch.

To charge the batteries without running the engine I installed a Fourwinds wind generator. This should provide about 8 to 15 amps input to the batteries when the wind is over 10 knots (which it is most of the time in the islands). To supplement the wind generator I also installed a generator that works off of a propeller that is towed on a line trailing the boat when the boat is under way. This generator can produce 10 amps when the boat speed is 7 knots and the amperage generated goes up with the cube of the boat speed. Since we normally cruise at 7 to 8.5 knots in typical Caribbean trade winds, we anticipate that these two generators will produce all of the electrical power that we need to run the boat systems without having to rely on the engine alternator. If you would like to see pictures of the upgrades that have been done visit my web page: http://mywebpages.comcast.net/windwardpassage/windward/index.htm and go to the Caribbean 2007 link.

I learned long ago that one never installs new equipment just before heading offshore. The WPS cruise provided a great opportunity to test these three new systems. Some of you may have wondered what kind of fish I expected to catch in the bay with a ½" line over the stern but that was the new tow behind generator. All systems worked extremely well and sailing in 10 knots of wind we generated all of the electricity we needed. Ocean sailors have reported that very large fish have been known to attack the towed propeller so I am carrying a spare propeller and line. Any fish big enough to swallow the 5 inch diameter propeller can have it – I'm not going to argue with them!

The auto pilot has given us intermittent problems on our past offshore ventures. Following recommendations from the manufacturer, I replaced the computer component last year and then the control head this year. Neither of these replacements solved the problem. I was convinced that the source of the problem was a voltage drop issue. I completely rewired the system and changed the way the control head was connected to the computer component with no success. Finally I investigated the circuit breaker panel and discovered that the screw that should connect the power buss bar to the autopilot circuit breaker was missing. The bar was being held against the circuit breaker by the screws on the other breakers but it could make an intermittent connection causing a power spike to the autopilot computer. Correcting this seems to have eliminated the intermittent failures but I will need to do considerable more testing under way before I can be sure. That will "force" me to maximize the sailing time that I squeeze in before the trip!

To give the offshore crew experience with the new systems and continue equipment testing, the four of us went sailing for two days in late September. The first day was mostly light air but the second day the wind picked up into the high teens and we were able to practice man overboard maneuvers and reefing the main. It also gave us a chance to stress the autopilot and it worked without fail.

My experience doing boat deliveries over the years has taught me that the most frequent problems that vessels venturing offshore encounter are electrical in nature. Consequently, I carry a spare alternator, a spare starter and a complete inventory of electrical wire and terminals in addition to the normal inventory of fuses and bulbs. Several years ago I replaced all of the running lights with LED lights and installed a redundant running light system so that we should always have effective lighting when sailing at night. I will keep the old auto pilot computer and control head as back ups in case the new units fail.

Obtaining insurance for the voyage was a major concern. Many of the Lubber Line's readers will remember my attempt to take Windward Passage to the Caribbean in December 2003 had to be aborted because we encountered a series of winter gales off Cape Hatteras. The late departure was a result of my insurance company not allowing me to leave before the "end of the hurricane season" on November 30. Most boats leaving for the Caribbean do so in the first two weeks of November to avoid the gales that form

off of Hatteras in December. This year the U.S. Power Squadron insurance carrier (St. Paul) agreed to let me leave on November 1 and provided a rider to my policy that was acceptable though the deductible and some of the other terms are a little less attractive than my Chesapeake Bay policy. If you have not investigated this insurance carrier you might be surprised at how competitive they are with other carriers.

Part of the insurance agreement required an in-the-water survey. The surveyor found Windward Passage to be in excellent condition but he did find three items that I had overlooked that could have led to problems offshore. All were corrected and several preventative maintenance issues were done including replacing most of the running rigging and several of the hardware items that showed some signs of wear though the surveyor did not feel that any of this equipment needed replacement at this time.

One of the most important attributes for offshore crew is that they be able to sleep when off watch. When we leave Norfolk we will be under way 24/7 for nine to eleven days. Crew who can not sleep become unreliable after about three days. I normally have four people plus myself on board for offshore passages. We had six people scheduled for the trip but one had surgery on his wrist in the spring and has had problems in the recovery which required that he and his wife drop out of the adventure. With a total of four people on board the watch schedule that we will maintain is: during the day two 6-hour watches and at night three 4-hour watches with two people on each watch. This provides a rotation schedule in which you are on two night watches one day and one the next. The off watch prepares an evening meal and cleans up. Each person will prepare their own breakfast and lunch and clean up after themselves.

John Ingram, Donna Zimmerman and Joe Irr will join me on Thursday, November 1 to leave North Point Marina and sail overnight to Norfolk. We should arrive by Friday evening and will continue directly offshore if the weather forecast is favorable. If there is a weather problem we will put in to the Little Creek marina at the entrance to the bay and wait for appropriate weather.

The classic mistake many cruisers make when heading for the Caribbean from the east coast is to go south too soon and end up beating east against the trade winds and a foul current of up to 1 to 1.5 knots. On departing Norfolk we will head for a way point at 25º N Latitude, 065º W Longitude then turn right to go down “highway 65” to Tortola. This is the classic delivery captain’s route to the BVI to take advantage of the prevailing east moving fronts on the first half and the easterly trade winds on the second half of the trip. I have subscribed to Commander Weather routing service and we will alter our course to accommodate their forecast for both weather conditions and Gulf Stream conditions. The course distance is just over 1300 miles. With decent winds Windward Passage makes an average of 7 knots so the passage should take just under 8 days if we can sail without a lot of tacking. However, for planning purposes I use a speed made good of 5.5 knots so our predicted passage is 9 to 10 days.

When provisioning for an offshore voyage one should assume a passage 1.5 times as long as the expected duration. This means 15 days of provisions for four people. Purchasing this quantity of food is a challenge but pales in comparison with finding space to stow it. We end up using every vacant space on the boat including much of the bilge area. A stowage list will be developed and maintained during the voyage so that we can find the items we need for a meal. If past experience is any guide, despite this organized approach, we will find some items from the initial provisioning when we clean the boat after sailing back to the Chesapeake in May!

Windward Passage carries 200 gallons of fresh water in her tanks and I take great care to ensure that this water is drinkable. I clean the tanks once per year with disinfectant and filter all water that is put into the tank with a filter that is fine enough to remove bacteria as well as particulate material. We carry about 20 gallons of bottled water for use in an emergency.

A modern offshore cruising boat has many complex systems. To help the crew understand these systems I maintain a complete operating manual for Windward Passage. I post this manual as a pdf file on my web site (http://mywebpages.comcast.net/windwardpassage/windward/index.htm) and ask anyone sailing offshore with me to review the manual before coming on board. This allows them to become familiar with what is in the manual and to become acquainted with how each of the major systems work. The printed manual is kept at the navigation station for reference during the passage. An added benefit is that the crew could operate and trouble shoot the systems if I should become incapacitated during the voyage.

In the next installment we should be well into the voyage I will share the passage conditions and try to convey the feeling of what it is like to be over 300 miles from land on a 44 ft. sailboat with no other boats in sight for days at a time. Each night of the passage I will send a position report via our SSB radio. If you would like to follow our progress you can do so on the internet by logging on to: http://shiptrak.org/ . In the “Call Sign” box enter kb3efy (my HAM call sign) and select “Last Year” in the “Show” box. Then

click on “View”. I have done a couple of position reports over the past few weeks so that there are some on the web site if you would like to see how the system works. You should find at least three reports there. I also send an email to family and friends who have asked to be copied on the daily briefings. Because the system goes through a modem to the SSB radio it is VERY slow (think 1980’s dial up modems!). Consequently, we just receive emails from family and those planning on joining us when we are sailing in the Caribbean. Once we are in port we will be up on the web at internet cafes and can communicate with more people. I intend to update my web page with pictures and comments as we go through the trip. I hope you will visit it to follow our progress in this adventure.