



Switching Sides

Longtime sailors make the switch to power

By Steve Dashew

It is 1730 ship time and the middle of August. We are sneaking across the North Atlantic between Greenland and Ireland, taking advantage of a temporary lull in what has otherwise been an exceptionally stormy summer. A compression gale is blowing a steady 35 knots, gusting higher, and we are surfing waves steepened by adverse current. Our trusty autopilot is barely having to work as we track easily down the seas at a comfortable 11-knot average. Motion is minimal, and it is 57 decibels quiet (around the level of normal conversation).

We are watching the weatherfaxes from the UK and NOAA, checking

GRIB files, and getting updates from Rick Shema (www.theweatherguy.com), our router for this passage. Our main concern is an intense low developing to the southeast. The new storm will bring strong headwinds and a confused sea state if we are delayed making port in Ireland.

This is the last ocean passage for the 2008 season. Just four months ago we were in Marina del Rey, California. Since then we've made a straight shot to Panama, spent three weeks in the Bahamas, then a short hop directly to Nova Scotia. We have explored Newfoundland and Labrador, and cruised Greenland past the Arctic Circle to Disco Bay, to the

wonderful Prince Christian Channels in the South.

By the time we reach Ireland two days hence we will have covered 11,000 miles, on our own without crew, the vast majority of which has been exceptionally comfortable, with little stress, and very little effort on our part. If it sounds hard to believe, we agree. Six years ago when we sold our last sailboat, the 78-foot ketch, *Beowulf*, we were looking for a way to extend our cruising as we "matured." We loved the challenge of handling *Beowulf's* sail plan alone, and sailing her into and out of tight spots. The sense of accomplishment that came from a passage well made



was unequaled by anything we did on land. But with the clock ticking, and looking at three years to design and build a replacement, we began to consider heresy.

THE UN-SAILBOAT

We have always looked askance at powerboats. The terms we used to describe them would not pass editorial muster in such magazines as this. Suffice it to say a background in the construction industry left us with appropriate descriptive terminology when they ruined an otherwise peaceful anchorage with a genset running 24 hours a day.

But what if we could take what we

had learned from the last 25 years of designing sailboats and cruising under sail and put it to use with an un-sailboat? Six months of intensive preliminary design work indicated it was possible to do something that just might suit our desire to continue crossing oceans without crew. A trade-off for giving up sail would be the ability to cruise in more challenging environments without paying a comfort penalty.

The key to this design goal was the ability to deal with heavy weather with a margin for operator error. From a comfort and safety standpoint we wanted the ability to recover from a wave induced capsize and to run before big seas comfortably and safely. We did not want to spend appreciably more per mile of operation than we were used to with sail. Finally we needed at least 10 knots—240 miles per day—of average boat speed to keep us out of the grip of adverse weather.

The design process led us to a lean configuration, similar in some respects to our sailing designs. Modest waterline beam meant efficiency under power and easy steering. With no need to worry about sail carrying stability we were able to carve away volume in the bow and stern to soften the uphill motion. By com-

binning a modest amount of ballast, with a very low center of gravity for systems and payload, and adding in the volume of the house, we were able to achieve a range of positive stability substantially better than our sailing designs. The addition of oversized hydraulically actuated and computer controlled stabilizer fins in theory minimize roll. Although we were confident of our design concept, before starting construction we undertook a series of tank tests to confirm our drag calculations and verified motion in different wave systems using computational fluid dynamics.

SHAKEDOWN PASSAGE

Fast forward two plus years and we are on our first ocean passage, between New Zealand's Bay of Islands and Fiji. It is blowing 35 to 40 knots, gusting higher in squalls. There are 15-foot to 20-foot swells from three directions with wind waves on top. Perfect conditions for the last phase of our sea trials.

The squalls bear down on us, whipping the tops off the waves, blowing spume horizontally, and we're tense. Do we have the right sail plan for this wind? Will we be overpowered, or not have sufficient speed for maneuvering in the waves?





Are the reef lines chafing? Habit, from more than 250,000 miles of sailing, has us on alert.

We simply cannot get used to the fact that *Wind Horse*, our FPB 83, has no sails with which we have to deal. There is no rig to watch, no sheets to trim or ease. We periodically adjust rpm on our 150-horsepower John Deere diesels to optimize for surfing, but otherwise we sit back and marvel at the scenery. Watch keeping now

entails checking engine instruments, inspecting the engine room each hour and doing our usual navigation and log entries.

This first voyage, 1,062 miles, is completed in 94 hours. Averaging 11.3 knots we arrive rested and ready for a favorite meal of Fijian curry at the Royal Suva Yacht Club.

What surprises us the most about *Wind Horse* is the lack of motion. Even in the large confused seas from the beam and quarters there is less movement than we would have experienced on one of our sailing designs. During the gale average heel is plus or minus four degrees. Maximum rolls from wave impacts are 12, 14 and 15 degrees (we record this motion data on our computer).

JUST AS INTERESTING AS SAILING

Jump with us to Hawaii. It is October and the Pacific high is stubbornly maintaining is sum-

mer position to the north. We could wait for the high to move south, allowing us an easy trip through the windless center, but have been away from family for seven months and want to get back. The passage under the high is 2,200 miles directly uphill. We decide to test how well we can handle the weather.

Nine days later, having averaged better than 10 knots (in spite of losing 15 miles per day to current) we are back. Six of the nine days were against strong northeasterly trade winds. Wind waves combine with a crossing northwest swell—an awful sea state—to try to impede our progress. We arrive rested, with the boat in perfect condition.

Two years later and we are in Alaska's Prince William Sound. It is late May, cold, raining much of the time, and spectacularly beautiful. Our cruising pattern has changed as we come to grips with what *Wind Horse* offers us. This is our second trip in a row with *Wind Horse* to Alaska from California with a brief cruise into the Sea of Cortez in between.

In the past we have minimized our time in crowded ports, preferring to be on our own. When we were first considering the apostasy of switching to power we assumed we would become more tourist oriented. After all, the passagemaking and boat handling part of this un-sailboat was going to be boring, right?

Wrong.

Surprisingly we have found cruising under power just as interesting as sailing. And we are spending more time under way, visiting more remote places than we ever did before. The buzz of sailing into and out of tight anchorages has been replaced by working *Wind Horse* into locations that we would never have considered under sail—some so small that we need to anchor with





Spectacular views: From Alaska to the Bahamas, *Wind Horse* has had no problems finding space in secluded anchorages, close to nature

just two-to-one scope to maintain swinging room (we love our big Rocna anchor—the best hook by far we have ever used). The payoff here in Alaska is isolated anchorages, filled with bear, eagles and whales.

Sailors know that the closer you are to the center of motion of the hull, the less you feel the waves. With this design we maintained the same approach, keeping watch standing, galley and sleeping areas low and centralized about the axis of motion. This results in a little less interior volume, but more storage (a big benefit for our style of cruising) and significantly better comfort.

COMFORT AND SPEED

Eventually the comfort got us to thinking about Europe. At our normal cruising speed the 8,000 miles between California and the UK represent just 32 days at sea, broken up by a variety of interesting countries. That sounds like fun. Twelve days to

Panama, a quick transit of the Canal, drop line handlers and Canal Pilot, a brief time at anchor to shower, eat dinner and secure the boat and we are off again.

Four days later and we are in the Bahamas. We figured one week would give us a taste and we'd push

on. But when we started putting our five-foot draft to work, the week stretched to two and then three.

Wind Horse has similar systems to our sailboats. She rarely needs her eight-kilowatt genset and can sit for five or six days without charging the batteries (they are recharged



MOTORSAILERS AND TRAWLERS



underway by a pair of four-kilowatt Electrodyne alternators). Inverters supply most AC power requirements. The big power consumers like the watermaker, or clothes dryer are handled at anchor by the genset and underway by the engine driven alternators. Fridge and freezer boxes are heavily insulated with isocyanurate foam. Four inches on the fridge, six on both of the freezers. We have found the Frigoboat evaporator plate systems to be efficient, quiet and reliable.

Our approach to air conditioning may surprise you. We have it of course, that is part of the powerboat drill. But we use it sailboat style, in other words, sparingly. Lots of awnings and hatches mean that even in May in the Bahamas we are comfortable without air con as long as there is five knots of wind. In the evening, when the breeze drops and the bugs arrive, we close the boat and run the air and genset for an hour or two. During the same time we are making water, doing a wash cycle and perhaps watching a movie. Two hours max and the temperature is



Wind Horse has a warm and comfortable interior even while cruising near icebergs. Modern conveniences are easy to use underway since the engines provide plenty of electricity

down to the low 70s (from high 80s) and humidity is under 60 percent. This keeps us comfortable until early in the morning when we open the hatches.

Passagemaking under power means no limits on electrical consumption under way. We are able to use ship size running lights, commercial grade radar, two computers and other navigation and convenience devices, without worrying about the state of the batteries.

Seven weeks later, 3,500 miles, and a brief taste of Nova Scotia, Newfoundland and Labrador are behind us. We are in Greenland now, a wild, barely populated and spectacularly beautiful land. There are huge fjords of ice to explore and icebergs galore to marvel at and avoid. The charts are for the most part without soundings, and in mid-summer water temperature is just above freezing. This is no place for the timid, and we love it.

All of our sailing designs have had at least two watertight bulkheads with extra reinforcements around the waterline and collision zone forward. *Wind Horse* takes this a step further. She has a complete double bottom (formed by fuel and water

tanks) with three full and two partial watertight bulkheads. Her framing and plating scantlings are twice that required by the Lloyds Special Service Rule. House windows are three-quarter inch toughened safety glass. All of which contributes to peace of mind.

Daytime temperature is typically in the 40s, nights just above freezing. At anchor we use a Kabola diesel boiler to pump hot water to small heating coils throughout the interior. Under way, waste heat from the engine keeps us warm.

Condensation is always a battle in cold climates. We deal with it by covering all plating with half-inch Armaflex insulation. On occasion, when the house windows begin to fog, running the air conditioning for a minute clears the moisture.

Which brings us back to the North Atlantic. The compression gale is behind us, we have beaten the new low, and Fastnet Rock is on the starboard beam. Eleven thousand

miles have passed under our keel since leaving California in April. With the exception of 18 hours in the Gulf Stream gale we have been as comfortable at sea as if we were at anchor. During this period our two little diesels consumed a total of 6.9 gallons of diesel per hour for propulsion, electrical and hydraulic power. Ninety percent of the time at sea we have run at 11 knots, with just a brief period of short passages in Canada at a more efficient 10. Allow for maintenance, and engine rebuilds, the costs workout to about a third less than the per-mile cost of sailing *Beowulf*.

After 37,000 miles in the last three and a half years we are starting to think maybe there is something worthwhile to cruising under power.

