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Veleda IV,
Aubrey and
Judy Millard's
Ontario 32,
cruises the
Bosporus
Strait on her
way into the
Black Sea.
The Millards
have been
cruising since
1998.

## Systems that work

### Eight years into a cruise, here's what's still operating well

by Aubrey Millard

WROTE AN ARTICLE FOR GOOD OLD Boat (January 2001) about the preparations we made for liveaboard bluewater cruising on Veleda IV, our 1978 Ontario 32. I talked about major upgrades we'd made, including a new Yanmar 3GM30 engine; a new dodger/ Bimini with a full vinyl and mosquito netting enclosure; a new electrical system including a 100-amp alternator, smart regulator, echo charger, Link 10 battery monitor, 30-amp marine battery charger, wind generator, four 110amp golf-cart batteries; and complete rewiring from domestic to marinegrade wiring. I also commented on our

Dinghy-Tow system, mast steps, radio/ tape deck/CD player, and a few other modifications and pieces of equipment we were using.

Time has moved on. Judy and I have been living aboard *Veleda* since July of 1998, when we left Toronto, Ontario, on our open-ended retirement journey. Since then we have sailed 27,000 nautical miles down the Mississippi, through the Bahamas, across the Atlantic, around the United Kingdom, through the rivers and canals of France, and the length of the Mediterranean and eastward to the Canary Islands. We have taken *Veleda* 

through 27 countries, including 9,305 nautical miles in the Mediterranean and 1,523 nautical miles around the Black Sea.

As I write this, we are in Porto Turistico di Roma, where the Tiber enters the Tyrrhenian Sea. Our plan is to exit the Mediterranean this summer (after cruising Elba, Corsica, and Sardinia), going through the Canal du Midi (instead of Gibraltar) from southern France up to the Bordeaux region on the Bay of Biscay. We will cruise down the Atlantic coasts of Spain and Portugal, over to Madeira, the Canaries, and the Cape Verde Islands before crossing the Atlantic to Barbados in December or January. We anticipate spending a few years in the Caribbean, then perhaps through the Panama Canal and into the Pacific. We trust our good old boat to take us anywhere in the world.

Here's a rundown of what has worked well for us.

#### Engine and electrical system

We are quite happy with our 1997 Yanmar 3GM30 diesel that replaced our original Yanmar 2QM15 and which now has over 4,250 engine hours on it. Our fuel tank has a capacity of only 28 gallons, and we keep another 30 gallons on deck in plastic jerry cans. We fill the tank only from the jerry cans, using a Baja filter, and we have two Racor fuel filters in line before the engine's own filter to ensure clean fuel in the engine. I use the dinghy to take empty jerry cans to fuel docks. When ashore, I go up the road to a local service station.

Our only problem has been with the water pump and with air getting into the water strainer. We have lowered the strainer below the waterline to ease the pressure and reduce air intake. A squeeze bulb in the fuel line leading from the tank makes it easier to pump fuel through when having to bleed air from the engine. We may have to replace the water pump eventually, as we have rebuilt it twice. Conscientious routine maintenance has kept the engine in good operating order.

We replaced our 100-amp alternator with another in Mallorca in 2001 and suspect the original one was out of alignment, causing wear on belts and bearings. However, we are very happy with the 100-amp heavy-duty alternator that replaced it. Its extra demand on the engine is hardly noticeable.

#### Efficient charging

Together with the smart regulator, our engine can fully charge our batteries in an hour or so of running once every two or three days at anchor. It is so efficient that I question the need for our wind generator. The 3 or 4 amps it puts out in wind over 10 knots are minimal to our requirements since we still have the Ontario 32's original refrigerator and freezer unit, installed in 1978.

We have it well insulated, but the thermostat seems defective and causes the refrigerator to run for 18 hours out of 24 if we leave it turned on. We have isolated our starting battery, so even if the house bank is drained we can start the engine and charge batteries rapidly. The combination of a 100-amp heavy-duty alternator with a smart regulator works extremely well.

We do not have room for (nor do we want) a generator. We do not have any

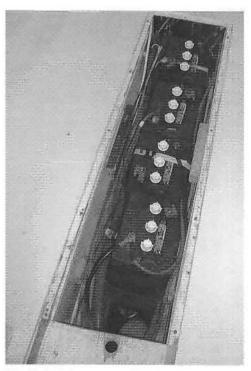
ies shown here, will go through more deep cycles than any of the sealed batteries, but if they are immersed in seawater a reaction will occur which will generate chlorine gas. This may be deadly in an enclosed space. -Ed.)

I really enjoy the Link 10 monitor LED readout about my batteries, indicating the amp hours used and remaining, the draw and charge rates from the engine, the 30-amp marine battery charger, or the wind generator. With this device, I can shut off all other current draws, turn on one piece of equipment, and immediately identify its battery draw.

The 1,500-watt industrial transformer we purchased in Horta in 1999 is still working well, delivering 110-volt power into *Veleda* from the 220-volt shore connections in Europe. Another advantage of the transformer is that we do not have to worry about the polarity of the connections.







The Link 10 battery monitor, top, shows a reading of 12.40 volts. The four golf-cart batteries, above and center, which are combined to serve as a single house bank, are small enough to fit on a shelf above the keelbolts and below the cabin sole.

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heavy draw tools or appliances that require it. Instead, we have a 175-watt cigarette lighter plug-in inverter that does well powering the laptop computer and charging batteries for our battery-operated drill, toothbrushes, portable shortwave radio, blender, and handheld VHF.

Our four Trojan golf-cart batteries (combined as a single house bank for a capacity of 440 amp hours) have served us well and are still working with no problems after almost seven years of constant use. However, we have replaced the dedicated 12-volt engine-starting battery twice. The golf-cart batteries are small enough that I was able to build a shelf above the keelbolts. We strap them in on this shelf below the cabin sole. (Caution: Putting batteries in the bilge of a boat is controversial. It is a fairly safe practice if sealed batteries like AGMs or gels are used. These batteries can be immersed in seawater without serious effects. Open vented cell designs, like the golf-cart batter-

#### Dodger/Bimini

The dodger/Bimini made for us in Toronto in 1998 is still working well, although we have replaced several vinyl windows and zippers over the years. We had the full dodger/Bimini with its side curtains up all the way across the Atlantic. I haven't used my foul weather gear for years, as Judy does the wet foredeck work and the cockpit is quite dry. The only other use of the side curtains has been in our winter moorings in London and in Porto Turistico di Roma, where they permitted the cockpit to be used as an additional room for winter marina living. We have rarely needed their mosquito screening. If planning again, given the money and opportunity, I would prefer a hard dodger and possibly a hard Bimini.

#### Dinghy

We bought a new Zodiac dinghy three years ago and immediately made a cover for the tubes to protect them from UV degradation. The fabric of