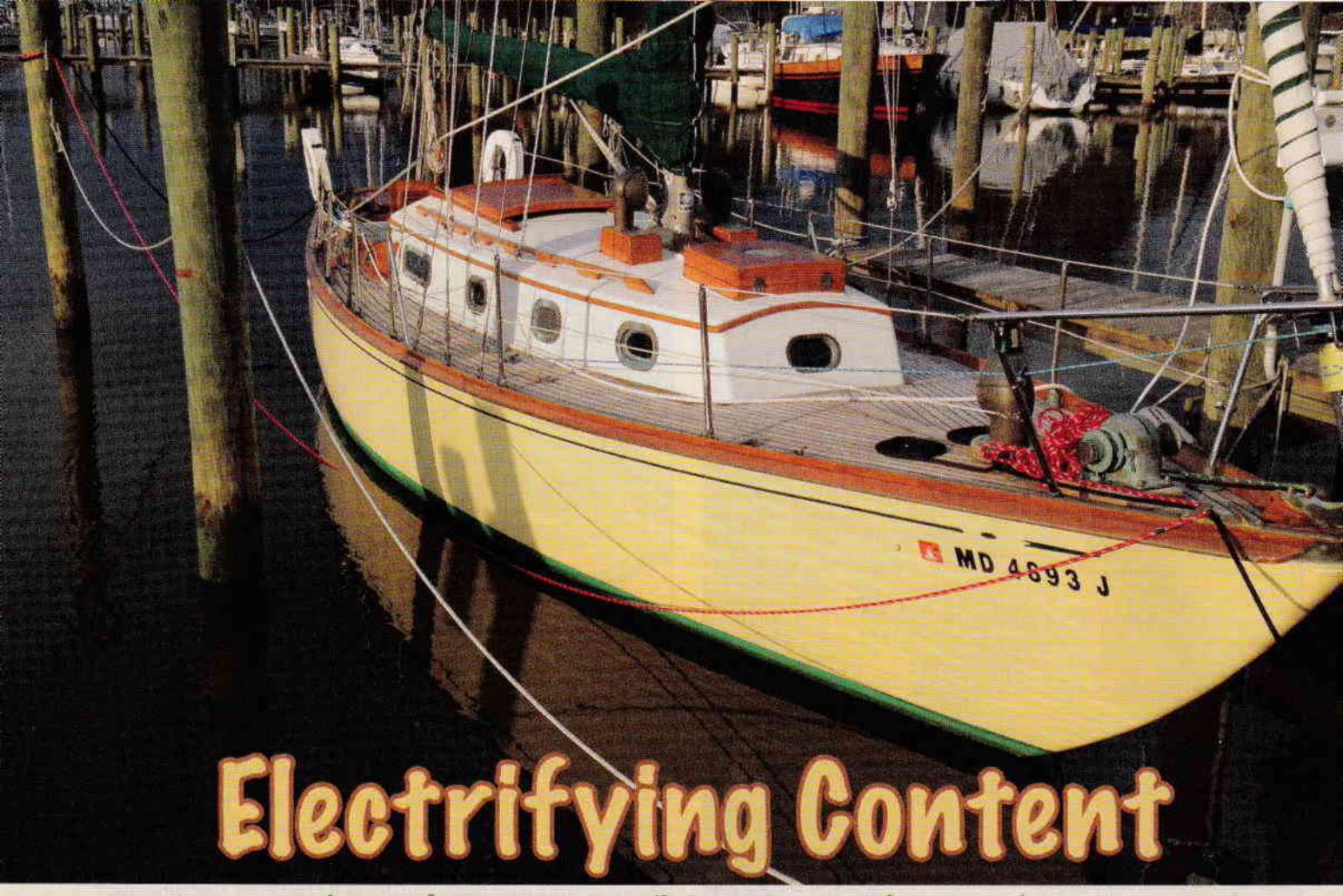


Electrifying Content

or, Teaching an Old Dog New Tricks

Bringing a 50-Year-Old Chesapeake 32 Classic into the 21st Century

By Bob Senseney

If you went to the Annapolis Sailboat Show on Columbus Day weekend but did not walk the pier near the old chandlery, you may have missed seeing what, unquestionably, was the oldest boat in the show, sporting the newest engine technology.

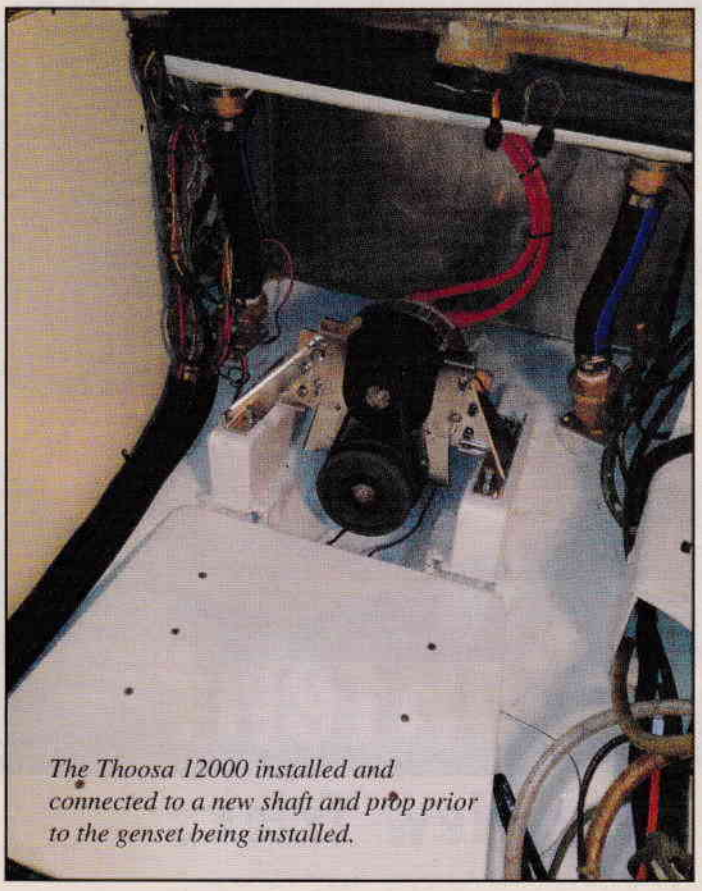
That boat was S/V *Content*. She is a Chesapeake 32, designed by Philip Rhodes and built in 1965 of solid fiberglass. She is hull #92 of approximately 98 which were built in Denmark and shipped back to the Chesapeake Bay for sale by a broker named George Walton.

A too close encounter the year before with a spit of land ominously named Bloody Point convinced me that the Greymarine Scout, which had served as *Content's* auxiliary for nearly 50 years, had reached its end. I spent the next boat show meeting with every engine manufacturer and gathering price estimates for repowering.

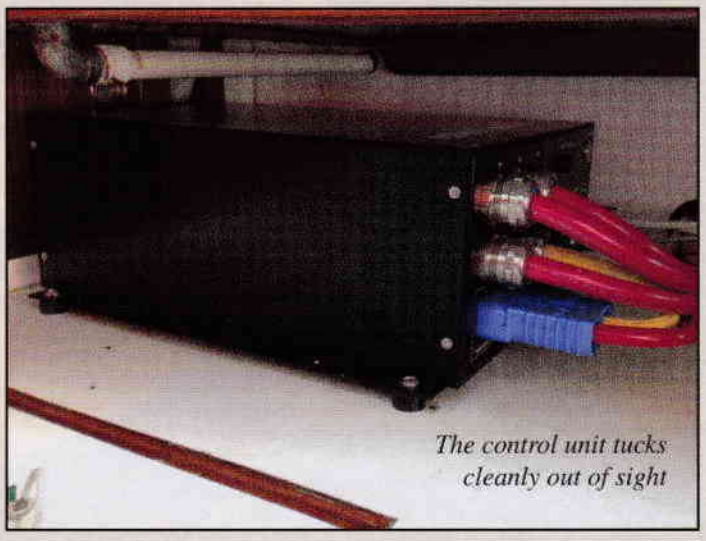
What surprised me during this process were the cost similarities between converting my gasoline-based system to diesel, with that of converting to electric propulsion. That was when I decided to make it green. I elected to repower with the Thoosa 12000 from Clean eMarine Americas.

I had the old 400-lb. gasoline engine pulled and the entire area power-washed and painted. The new 66-lb. Thoosa 12000 fit nicely into the engine bed and connected well to a new shaft and larger prop. Six Northstar sealed lead-acid batteries, which are stored along with their chargers and control systems under the port and starboard settees in the main cabin, provide the 72 volts needed to power the Thoosa 12000.

Under normal circumstances, this configuration gives me an effective motoring range of approximately 25 nm



The Thoosa 12000 installed and connected to a new shaft and prop prior to the genset being installed.



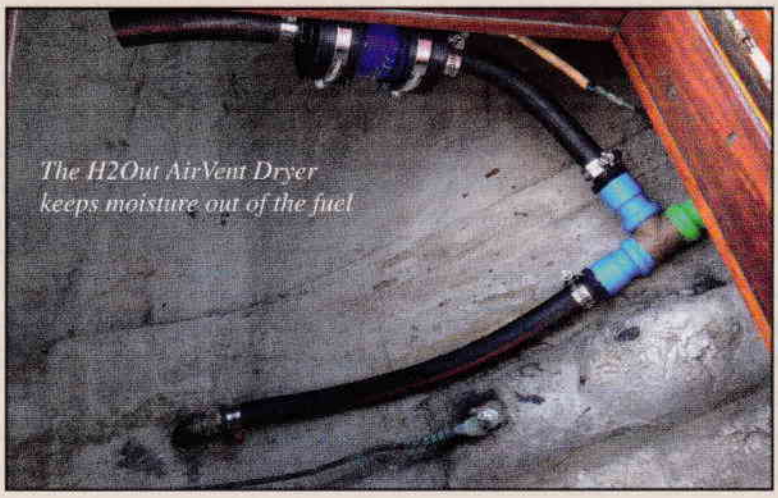
The control unit tucks cleanly out of sight

before I have to plug into shore power to bring the batteries up to full strength. Regeneration from the prop while sailing extends that considerably. However, I have longer, more extensive cruising plans and do not want to be dependent upon shore power alone to meet my power needs.

Solar was one option, so was wind generation, but I did not want to compromise the look of *Content's* classic exterior. So, I had *Content's* steel gasoline tank examined inside and out and converted to diesel with the addition of a return line. A small 5.5kW DC generator was added directly in front of the Thoosa 12000 to provide power to the batteries whenever their power level dips below 65%. A DC-to-DC converter modifies the generator's output to repower the house battery as well, while underway. A control box monitors the batteries, automatically engages and disengages the generator as needed, and determines the ion flow to the batteries.

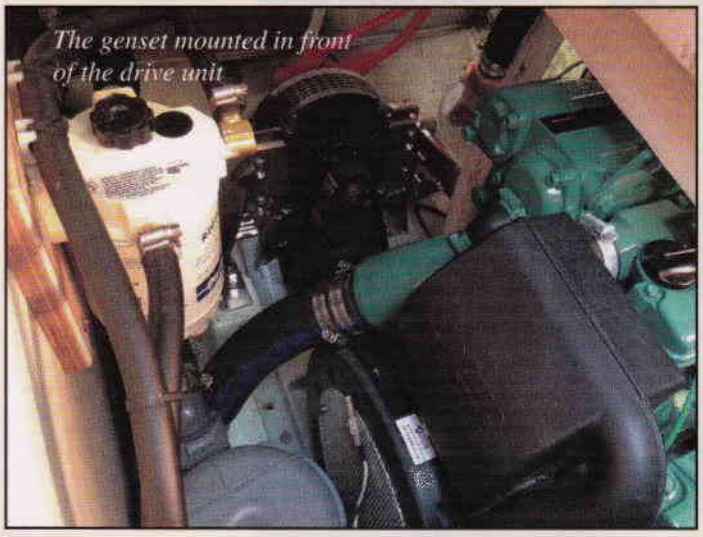
The generator seldom engages but, when it does, is very frugal with fuel. I added an H2Out Air Vent Dryer to keep moisture from entering the tank, and added the H2Out Space Dryers to the battery compartments to keep those areas moisture-free, as well.

The results? Combined, the Thoosa 12000 motor, the DC generator and the batteries weigh roughly the same as the gasoline engine I removed, but the weight is brought forward so *Content* sits about an inch higher in the water and sails better. The electric motor's power is instantly available and nearly silent. The boat is highly maneuverable at low RPMs and there is no yelling when docking.



The H2Out AirVent Dryer keeps moisture out of the fuel

I ghost past the marina fuel dock and



The genset mounted in front of the drive unit

Three batteries each stored under the port and starboard settees

laugh at the horrified looks on the dock hands' faces as they think I may be drifting without power through the marina. Thanks to regeneration under sail, I often return to my dock with more power in the batteries than when I left. *Content* reaches hull speed at half throttle. Bloody Point is just another spit of land in the Chesapeake Bay.