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LETTERS TO THE EDITOR

HYDRAULICS

Steve, I enjoyed your article about the numerous uses of hydraulics aboard ship, and the advantages over electrical equipment. I have wondered for quite awhile why there aren't hydraulic propulsion motors being used, since many vessels already have a "boatload" of hydraulics already. I would think that having one engine running a pump that services the main motor as well as all the ancillary equipment would be more efficient, and perhaps less costly in the long run. Hydraulic motors can drive electric generators, eliminating the need for a separate genny (other than for redundancy of course), and are already used for stabilizers, autopilots, capstans, cranes, etc.

What's the downside? Why don't we see this? Why don't we see the reverse as well? Why not more electric drives, like the ones railroads use?

*Bob Frederick
Louisville, Kentucky*

Bob, thanks for your note. This is a great question, and one I've been asked several times. In fact, until I knew more about hydraulics, it's one I too asked myself on many occasions. The short answer is efficiency. In the column, I noted, among hydraulic equipment's other attributes, that it was "efficient." That requires qualification. The systems as a whole do work efficiently in that they are compact, continuous duty, quick-acting (important for gear-like stabilizers), and very reliable, which reduces down time and maintenance costs and ultra-rugged and especially well suited to the marine environment. However, and there are many variables in this calculation so I'm painting with a broad brush, they are not more efficient than an electric, or direct engine driven component that essentially does

the same work. That is, a diesel engine driving a shaft through a transmission delivers more of its energy to the propeller than a diesel engine driving a hydraulic pump, sending fluid through hoses and pipes, to a hydraulic motor, which is then connected to a shaft and prop. The friction of the pump, and plumbing takes its toll on horsepower use.

I've encountered and worked on a handful of hydraulic drive systems in my career. In every case, they are used to improve orientation of the engine versus the shaft, rather than to improve efficiency or economy. When compared to a conventional, direct drive train they almost certainly are less fuel efficient. The same holds true for hydraulically driven alternators. For a time, they were all the rage. However, when compared to gear- or belt-driven units, the hydraulic option uses more energy and thus reduces the power output per gallon of fuel used. There are other similar scenarios that exemplify this phenomenon. Having said that, clearly hydraulics are very desirable, and in many cases, preferable over electric or other options, for all the reasons I stated above and in the column. The old engineering axiom of, 'there's no free lunch' applies to hydraulics as much as anywhere else.

Electric drives, in both series and parallel models are in use. With the advent of hybrid propulsion systems, there are more of these afloat today than ever before. Whether they are more efficient or not, particularly in terms of recreational marine applications, remains fertile ground for debate. One aspect of electric drive systems is certain: they are significantly more complex than conventional, direct drive propulsion systems, which is one of the reasons why systems used in ships and locomotive applications are always serviced and maintained by full-time, professionally trained crews.—Steve D'Antonio

NORDHAVN LOVE

John, your editorial on looking back at your Nordhavn Around The World (ATW) experience brought back many memories for us. While the PAE team was preparing and provisioning the ATW boat in Dana Point, we're commissioning our Nordhavn 40-29 *Kiva* in the adjacent slip. We were not only living vicariously through their ATW adventures, we were setting out on our own passagemaking dreams. We were part of the escorting send-off fleet as they left Dana Point and we watched them disappear over the horizon as we sat there on our own little ship dreaming of adventures to come.

Yes, it's been more than 10 years since the ATW departed and we cast off from Dana Point for the first time headed for Mexico and points south. If someone had suggested that we would be living the trawler dream for five years, we would have laughed at the suggestion. We had no specific plan and no idea how long we would be gone, but we were on our way. The years of dreaming, planning, and building a boat that could take us anywhere had finally paid off. The excitement of our first passage, saying goodbye to our friends, passing San Diego at night, crossing into Mexico, and arriving at Ensenada were things we will never forget.

Today, I am sitting on our beloved N64 *Oso Blanco* in the Whitsunday Islands of Australia. We have friends visiting from the States, and we'll probably move to a different anchorage to do a dive. There will be 'sundowners' on the flybridge, and another peaceful night hanging on the hook. Nearly 11 years, over 50,000 Nordhavn miles, and countless experiences and destinations later, we are still living the *PMM* lifestyle. It's been a great ride. Stay tuned! Keep up

LETTERS TO THE EDITOR

the great work of sharing trawler stories and encouraging people to cast off.

*Eric, Annie, and Bear Bloomquist
Nordhavn 64 Oso Blanco*

ELECTRONIC ANTIFOULING

I would like your recommendation on whether through-hull or external electrodes are better. Also, what is the best antifoulant approach for props and shafts? I have a 42 DeFever, a fiberglass 1981 model (modern aft cabin). Love your magazine!

*Ray Gulson
Canberra, Australia*

Ray, thanks for your note and very interesting query. When someone builds a practical, functional electronic antifouling system (electronic/anodic or acoustic),

recreational cruisers along with commercial and military users will beat a path to his or her door. I've seen a series of acoustic systems come and go over the years. I've installed and worked on a few, and each one claims to have perfected the science, yet none of the manufacturers seem to last because the products simply aren't effective. However, I continue to have an open mind because if some can perfect it the benefits will be substantial. Thus, the short answer to your question is, I have no recommendation for any system because I have yet to see one that truly works. If readers know of one that does, I welcome them to share their thoughts.—Steve D'Antonio

GAINING EXPERIENCE

Hi Rob! First of all, go Bucks!

My wife Kathy and I met you as we were having lunch outside at the Middleton Tavern during the boat show in Annapolis. You were with Ken Powers of Cleveland (who also introduced himself to us) and my Put-In Bay shirt drew his attention. In our brief conversation we learned you are a Buckeye (we graduated from there in 1979 and 1980) and you were kind enough to give me your card.

We love the magazine and have for years. Our dream has been to eventually buy a trawler, complete the Loop and stay on the boat part-time each year in different locations.

We currently boat on Buckeye Lake in central Ohio so we have the dream, but have not really experienced the lifestyle of a liveaboard trawler.

My purpose in writing is to ask for



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