

Walmart On The Water

By Elizabeth Ginns Britten



Perhaps this isn't the best way to describe the company founded by Tom Godart and Craig Gemmill, but the common thread it shares with the corporation that specializes in one-stop shopping is, well, specializing in one-stop shopping. Nuts and Boats Dockside Marine Service aims to give boat owners and operators a full range of service options, which means no more to-and-fro calling to get all of your boating demands met.

As you are well aware, maintaining a vessel is an around-the-clock job that, if neglected, can mean less time out on the water. Nuts and Boats' mission is to reduce the owner's active involvement by handling detailing, maintenance, and provisioning, things that until now could only be done by multiple contractors or a full-time crew.

At the heart of the business model is the Invisible Captain, a monthly total-vessel-maintenance program in which a Nuts and Boats technician performs a 150-point check of vital fluids, mechanical systems, electronics, and safety features. So whenever you come aboard, your boat's ready to go. You can even monitor the readiness of your boat through an online program or by calling the company.

For more lengthy, in-depth repairs, Nuts and Boats liaises with preferred providers that specialize in fiberglass, mechanical, and electrical work, managing each project without involving you.

According to the company, 1,300 owners currently employ Nuts and Boats from Dade to Palm Beach counties in Florida. Ultimately Godart hopes to have franchises nationwide, giving owners one number to call for any marine-related requirement, regardless of where they may be.

Nuts and Boats Dockside Marine Service 📞 (954) 832-0808.
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Ten Problems That Can Stop You Cold

Think you know all about maintaining your boat? We'll bet you forgot about these often-overlooked items.

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2. Water Tanks

Standing water in your boat's water tank naturally develops an unpleasant odor and taste, and bacteria and water contamination are both huge concerns in onboard drinking water. You wouldn't drink water that had been sitting around in a glass for six months, and the same theory applies to the water on your boat.

If you winterize, fully drain the tank at the end of the season, clean it by using a capful or two of bleach, then flush the system, and refill the tank with water in the spring. Make sure, though, that the hose you use to fill the tank is specifically made for potable water. It should be white—not green—and the package should state that it's designed to carry drinking water. Hoses not specifically designed for this purpose can develop bacteria and algae inside, so if you fill your tank using one of these hoses, the water you're adding could be contaminated.

If you didn't properly winterize your boat, particularly in cold climates, hoses and soft lines can freeze and crack, and you won't be aware of the problem until spring, when they start to leak. To prevent this, some maintenance experts recommend infiltrating the system with nontoxic antifreeze (pink in color) prior to winterizing.

Metal water tanks (especially common on older boats) are particularly prone to corrosion buildup on the inside. If you have one and can replace it, do so; if not, periodically clean it using the bleach mixture mentioned above and consider installing an in-line filter, like General Ecology's SeaGull IV, which will remove viruses, bacteria, chlorine, sediment, and pesticides.

3. Fuel Tank Contamination

Dirty fuel is a serious concern, especially for boats that have been idle for a few months in cold weather; it can clog your vessel's filters, damage fuel injectors, and in extreme cases ruin your engine. Although gasoline engines can tolerate small amounts of water, diesels cannot. Water is the primary source of bacterial contamination in a diesel fuel tank, since microorganisms that live in the tank feed off it. As those organisms decompose, their residue sinks to the bottom of the tank, resulting in a sludge-like substance that when sloshed around mixes with and can eventually clog fuel filters, which is one big reason why you should always carry spare filters aboard.

But even if you change filters regularly, some water can get through them, and besides, they only work when the engine is running. A better way to prevent contamination is to use filters in conjunction with a fuel-polishing system, which pulls fuel from the bottom of the tank, cleans it, and returns the clean fuel to the tank. There are a number of such units available, including Beloges Filtration Systems, Kayadon Filtration Group's Marine Fuel Guardian System, and Walker Engineering's FuelSep and AlgaeSep. In some cases you can install them yourself, while others will require a mechanic. Regardless, a fuel polisher can save you a lot of headaches down the road.

4. Anchor Rode

E. S. "Mack" Maloney, who has been editing *Chapman Piloting: Seamanship and Small Boat Handling* for more than 40 years, gave us a few tips on maintaining the anchor rode.

Most boats of less than 65 feet LOA use a rode of three-strand nylon spliced to a six- to eight-foot-long of chain that is in turn shackled to the anchor. These connecting points are the weakest links in your rode and are therefore susceptible to mechanical freezing and wear. Preventive maintenance should include coating shackle pins with waterproof grease or an antiseizing agent. Rotate them one-quarter turn from tight, using a black plastic cable tie (white is susceptible to UV degradation) to keep the

pins in place. Between the chain and line, work an eye splice around a thimble to prevent chafing, secure with another shackle, and fasten as before.

While three-strand nylon is resistant to mold and mildew, it's not resistant to rust. Affected areas must be cut out and spliced. Nylon is also not UV-resistant, so it should be stowed out of the sun's reach. If the rode is stiff, the sun has broken it down. If it's dirty, rinse the line with a low-pressure hose or dunk it in water. You can also scrub the lines with a stiff brush and soap and water to keep them clean, but make sure you have removed any grit first. Otherwise you're just forcing it into the fibers. Finally, switch the bitter end of your rode with the working end on an annual basis, thereby utilizing the entire length and extending its life.

Be vigilant about wear and tear, too. Purchase chafe guards, or create your own using pieces of canvas or garden hose. These should be used anywhere the rode comes in contact with your boat.

5. Seacocks

Seacocks are special valves that either admit or restrict the passage of water through the hull. Water entering and/or leaving sinks, MSDs, air-conditioning pumps, and gensets is typically controlled by seacocks. They are necessary in case a hose or pump fails or requires maintenance. Since seacocks are not always opened and closed regularly, they are subject to mechanical freezing and may not work when they are needed.

Seacocks are typically made of cast bronze or a special plastic called Marelon. In both cases, the ball valve that controls the flow of water has a very tight fit with the housing to prevent leakage, making this juncture susceptible to binding and freezing. J.P. Massana, OEM sales manager of Perko Marine, says that debris, long-term disuse, or failure to properly winterize a seacock will cause it to seize.

To prevent seizing, open and close your seacocks at least once a year, which shouldn't be a big problem for many boaters since they should be closed any time you are away from your boat for more than a few days.

If you winterize your boat, the seacocks should be winterized, too. Leave them open so that water doesn't get trapped in the ball valve; if it does and freezes, the valve or seals could rupture. A leaking seacock indicates damaged O-rings or ball-valve seats. Dismantling a seacock and repairing its O-rings, seats, and valves can only be done when the boat is out of the water, so take advantage of the time your boat is on the hard. When painting the hull, Dan Gross of Groco suggests plugging through-hulls with a rag to prevent paint from getting on the ball of the seacock. If it does, it's likely to leak.

6. Fuel Caps and Vents

Since proper ventilation is required for fuel to flow from the tank to the engine, even a small obstruction in the vent can cause problems for your engine and for the environment, too. During long periods of fuel storage, birds and insects build nests and set up camp in the vent. This becomes a problem at the fuel dock, since the blockage will cause backflow through the main fuel pipe and cause a fuel spill. To prevent spillage, maintenance expert Paul Esterle recommends cutting a three-inch hole in the center of an oil-absorbant pad and putting it over the fuel fill to catch any dribbles/spills.

But if the vent is completely blocked and air can't reach the tank, fuel flow to the engine is significantly reduced. If the pump is unable to pull enough fuel through the tank to supply the engine, the engine will shut down. This is of particular concern with high-horsepower engines that consume great quantities of fuel. To clear an obstructed vent, remove the hose from the vent and push any debris through to the outside. Failure to do so can cause debris to be sucked into the fuel tank and eventually into your engine.

Check the fuel cap to make sure that it's on tight; if it's not, water and dirt can work their way into your fuel (see "Fuel Tank Contamination"). Periodically inspect the gasket as well, and replace it if it shows signs of wear.

Finally, especially where a gasoline-powered boat is concerned, inspect fuel-fill and vent fittings to make sure bonding wires (usually green-coded) are corrosion-free and properly attached to the fittings. This will ensure safety while taking on fuel.

7. Hose Clamps, Connections, and Hoses

If you have faulty or improper hose clamps, water can work its way into or out of your pumps and engines. Keep in mind that not all hose clamps are created equal, and the stainless steel that the clamps are made of comes in a range of grades. For maximum protection, use 300-series stainless steel hose clamps and make sure the screw inside the clamp is also made of 300-plus-series stainless steel or plated carbon steel to prevent rust and corrosion. But be careful. If the clamp band is of proper-grade stainless steel, but the screw inside is not, the screw will rust and the clamp will loosen over time, allowing leakage. Marine-grade clamps are usually designed with 316 stainless steel.

In addition, double up on clamps everywhere below the waterline and at other critical connections (but don't make room for two if there is not enough barb!). Check all clamps periodically, and tighten them as necessary—but be careful not to overtighten them, as they can break or damage the hose when components expand due to heat.

All hosing—especially that for mechanical gear, fuel, and hull penetrations—should be inspected for cracks, softening, hardening, or other signs of service wear. If they show any of these signs, replace them.

8. Electrical Connections

Using the incorrect type and gauge of electrical wire or improperly sealed connections can lead to potentially catastrophic problems onboard. The marine environment is extremely harsh on wiring, and moisture will penetrate any unsealed connection. Furthermore, corrosion is the number one cause of electrical failure and can lead to an onboard fire, so choosing the appropriate wiring and sealing all connections is essential.

To begin, never use solid wire, as it will eventually crack or fray. Many boaters use copper wire, but even that is a no-no; copper will corrode over time, resulting in a heat buildup that can cause a fire. Instead, opt for marine-grade "Type 3" strand, tin-lined copper wiring for maximum protection against corrosion and electrolysis. According to Paul Esterle, who writes and lectures about marine maintenance and has his own maintenance column in *Voyaging*, Ancor's primary boat cable is a good choice, as it's made to American Wire Gauge standards and reportedly has up to 12

percent more tinned copper conductors than SAE wire. In addition, the company's boat cable exceeds all Underwriter's Laboratories and American Boat and Yacht Council (ABYC) standards and is available at most marine stores nationwide. Also remember to use the proper gage wire.

Nearly all wiring problems occur at the connection, so never twist wires together to make a connection, don't wrap a bare wire around a terminal screw, and avoid using wire nuts to secure connections or make splices. Although wire nuts are quick and easy to install, they eventually loosen, can admit moisture and therefore cause corrosion, and are not acceptable under the standards set by the ABYC.

9. Bedding Compounds

During spring commissioning, when you're normally adding new equipment to your boat, you often need to seal any mounting holes with bedding compound or caulk. It's imperative to apply them correctly the first time. If you do, you can almost forget about them. That's because modern bedding compounds require no maintenance after they properly cure. Poor surface preparation and improper application may result in leaks. We spoke with technicians at 3M and Boatlife, both manufacturers of marine sealants, and found that while it's difficult to generalize about the properties of all bedding compounds, most share some universal dos and don'ts.

Preparation should always begin with roughing or scoring the surface, then ensuring it's clean and dry by wiping it thoroughly with a nonalcohol-based solvent. Alcohol contains many of the same elements as water and will therefore disrupt the natural curing process of a moisture-cured system.

Apply bedding compounds sparingly and never in globs. Cover just a little more than the area you intend to bed; after curing, the sealant will shrink. A proper bead of caulking should not be less than 1/8 inch wide and not more than 1/2 inch wide. After applying the compound, loosely secure the pieces to be bonded with bolts or screws until the sealant becomes dry to the touch, then mechanically tighten the pieces.

Marine sealants are usually moisture-cured, which means they not only need moisture but also time to properly harden. Cure time can take anywhere from 24 hours to 20 days depending on the sealant used and relative humidity in the air, so it's important to read the directions. And don't rush to launch. Never launch your boat until all sealant has completely cured.

Once the compound has cured, there are a few things you can do to extend the life of the sealant. Exposure to strong solvents, oxalic acid (i.e., two-part teak cleaner), and industrial cleaners may break down the sealant over time. More likely, ultraviolet light will break down bedding compounds; signs of this are yellowing or a chalky residue. To remove damaged material, vigorously rub the affected area with the proper solvent or a mild abrasive until the discolored layer disappears. Reapply with the same-type sealant as before if necessary.

10. Shaft Alignment

The effects of a bent propeller shaft are not always as apparent as one might think. Only a few thousandths of a degree will wear struts, couplings, and bearings and put stress on your vessel's transmission and mounts. Intense vibration throughout the hull can occur well after these components have been damaged, and therefore

checks should be done before this occurs. We called Bradford Marine in Fort Lauderdale, Florida, and spoke with Ken Spaulding, the assistant foreman in the machine shop, to find out how he checks for a bent shaft.

Once the prop is removed, a dial indicator is used to give measurements at the transmission coupling and three places on the tapered end towards the prop. With each measurement, the shaft is rotated 360 degrees. A measurement of more than five thousandths of an inch constitutes an unacceptable amount of wobble in the shaft, and the shaft will either have to be trued or replaced.

Fortunately, you can check your boat for a bent shaft without such precision equipment. Clamp an ice pick or sharp screwdriver into a stand-alone vice. Position the tip against the underside of the shaft, just behind the strut. Rotate the shaft by using the prop for leverage, and look for gaps or gouges. It's no dial indicator, but it will help you zero in on a bent shaft when troubleshooting the source of your boat's vibration.