**SHAFT SEAL SQUEAL****MAINTENANCE**

→ I was powering at low rpm when my wife asked, "What is that high-pitched sound?" I thought it was a belt, but when I went below and looked in the engine box all seemed fine. The noise seemed to be coming from behind the engine, so I lifted the small hatch over the PSS (Packless Sealing System) unit and found that the shaft, boot, and clamps were too hot for me to touch.

I immediately knew what had happened. I had been diving to change the shaft zinc and clean the hull, and I had spent a lot of time around the shaft. Some of my air bubbles had traveled up the grooves in the Cutless bearing into the stern tube. The rising air displaced the water there and air instead of water had filled the bellows hose and shaft collar of the shaft seal. With no water lubricating the rotating bearing, things inevitably got hot. To solve the problem, I gently pulled and compressed the rubber bellows boot to break the air seal. A gush of water came in and cooled down the parts.

If you have this system, remember this when you go back into the water after a haulout, or if a diver spends a lot of time near the prop and shaft. If you have an older setup, as I do, always "burp" the bellows on the shaft seal to make sure it is filled with water. PYI ([pyiinc.com](http://pyiinc.com)) has installed a hose nipple on all PSS units built after 2002 that can either vent the air or inject water from the engine. —RON SCHAPER

**PROBLEM SOLVING****SEAMANSHIP**

→ According to veteran ocean cruiser and racer Don Street, every sailor who considers himself competent should also be an MBLU (Master of the Bastard Lash-Up), an accreditation he first learned to appreciate when he was a young crewmember aboard a Navy submarine.

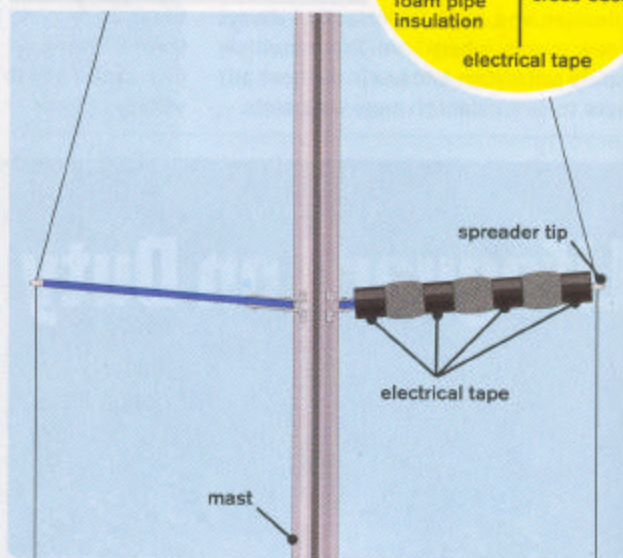
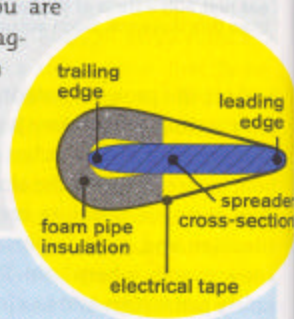
As an example, Street likes to tell about a delivery he made aboard a 40-foot ketch sailing from North Carolina to St. Thomas in the U.S. Virgin Islands. After several days at sea, the wind dropped completely and in order to keep to his schedule, Street turned on the gasoline auxiliary. But six hours later the engine's water pump packed up and there was no replacement on board.

But there were several five-gallon jerry cans of fuel on deck and that was all Street needed for an MBLU solution. After

**Mainsail Chafe****SAILS**

→ Nothing chafes a mainsail like prolonged contact with spreaders or shrouds, and a little bit of prevention is much cheaper than the cure. When sailing on a beam or broad reach, vang the boom down hard enough to prevent even the slightest up-and-down movement of the sail. Also tighten the outhaul to make the sail as flat as possible. If your spreaders are in line and not swept back, you should also sheet in the sail enough so its belly is not touching the spreaders.

If you have a fractional rig with aft-raked spreaders, the mainsail will touch them on every point of sail lower than a beam reach, so you have to be especially alert to avoid damage. You can fit plastic rollers over the shrouds, especially the aft lowers, because they tend to be the first to contact an eased main. You can also add Dacron chafe patches to the parts of the sail that might make contact with the spreaders. And if you are making long downwind passages, taping foam pipe insulation over the trailing edges of the spreaders can pay big dividends by reducing mainsail chafe. —PETER NIELSEN



emptying the contents of one jerry can into the main fuel tank, he cut off its bottom, turned it upside down and lashed it into the shrouds, making sure it was low enough that the shortest crewmember aboard could pour a bucket of water into it.

Next, Street collected all unused hoses and hooked them together to make one long hose running from the spout of the can to the engine's salt-water intake. With three other crewmembers on board, Street then established a schedule: one hour on watch steering—and pouring a bucket of seawater into the jerry can every minute—and three hours off. With the engine running at 1500 RPM, the system worked fine until the wind finally returned and he could hoist the sails again. Street concedes this might not work with some of today's engines. But that's not his main point. Every problem has a solution—just as long as there's an MBLU on board. —CHARLES MASON