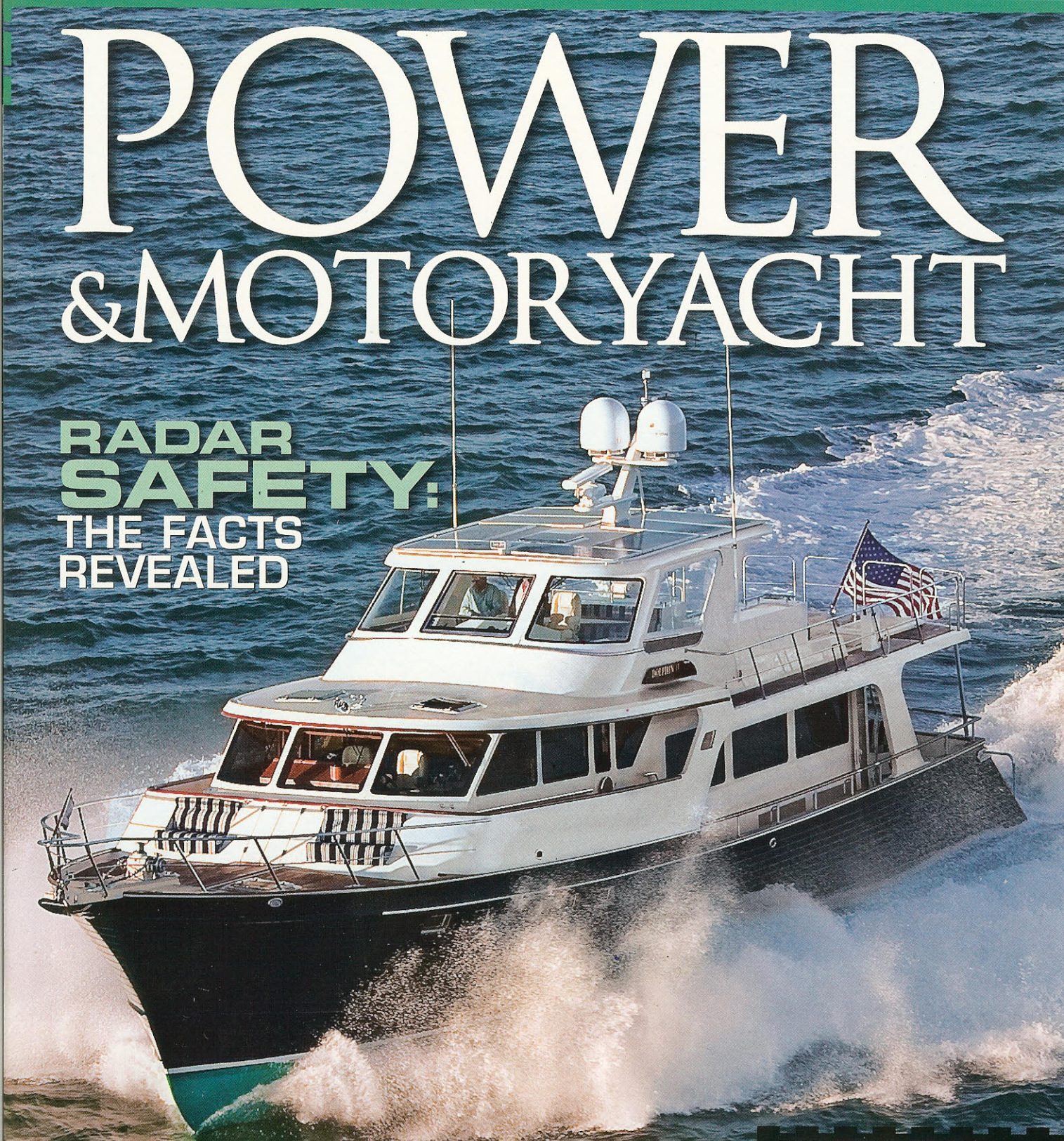
TESTED SEA SPIRIT / OCEAN ALEXANDER / AMERICAN TUG / ALTIMA / REGULATOR

# POWER &MOTORYACHT



## RADAR SAFETY: THE FACTS REVEALED

EXCLUSIVE TEST

## SOLAR-POWERED

Marlow Explorer 70E

POWERANDMOTORYACHT.COM

0 70992 30301 4 07

JULY 2009 ■ $5.99 US ■ $7.00 CAN

A SOURCE INTERLINK MEDIA PUBLICATION

# The Creepin' Crud

## Three ways to keep your raw-water cooling system clean.

Like lots of folks, I've got two diesel powerplants onboard, one for propulsion and the other for auxiliary power. And just a few months ago, the latter began showing signs of the creepin' crud—it was overheating, sounding hoarse, and exhaling a greasy gray smoke under load.

The most telling symptom, however, seemed to be that the cooling water that was supposed to be shooting out of the exhaust port was considerably diminished. I wondered: Could I solve the problem by merely changing the impeller in the raw-water pump?

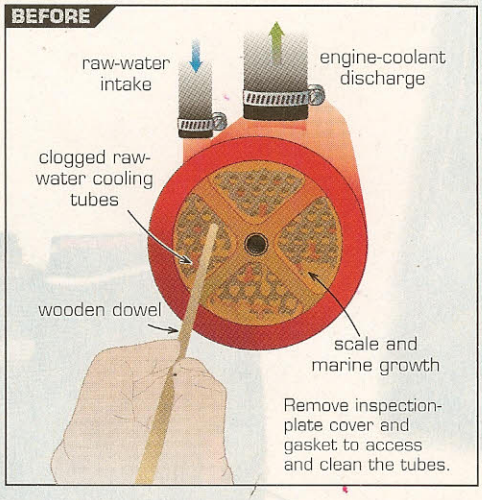
One Saturday afternoon I decided to find out. I broke out my tools, and with much struggle (access to my genset's raw-water pump is poor), I replaced the impeller with a spare. The result? If anything, my genset ran hotter, hoarser, smokier, and drier than before. And I was out of time—somehow Sunday afternoon had rolled around and I had to go home.

"Creepin' crud, eh?" said John Hice of Panama City's Gulf Coast Marine as I outlined the situation on the following Monday. "Maybe the bearings in your pump are shot." Indeed this was the case, and Hice showed me the old pump to prove it. But after he'd installed a new one, still with little improvement, he decided to try something else. He popped off the end cap of the genset's heat exchanger. Aha! About two-thirds of the cupronickel tubes inside were plugged with scale and marine growth.

Which brings me (rather circuitously, I admit) to the subject of this piece: the benefits of keeping tabs on your heat exchangers—be they on mains or gensets—as part of a savvy maintenance regime. Now I know, just what we all need is another chore, particularly when it involves a component we all figured needed little more than a periodic swap-out of its sacrificial zincs. But trust me, if you keep your heat exchangers healthy and free-flowing, your powerplants will be happy. Let 'em go, and gray smoke'll be the least of your worries.

There are two ways to clean a heat exchanger. The first is often recommended by magazine writers, most likely because they're not planning to actually do it. Remove one or both end caps and

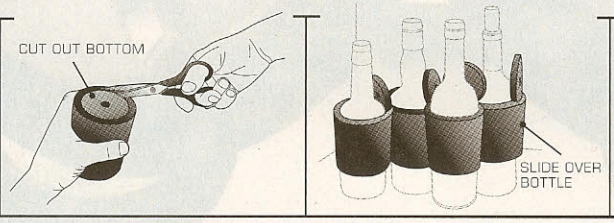
Continues on page 24




## GARMIN'S MAINTENANCE TIP OF THE MONTH

TIP SUGGESTED BY
RICHARD DUGAN MARATHON, FL

Use Koozies (drink insulators) to keep bottles stowed safely in cabinets. Keeps things from rattling and breaking.




**GARMIN'S** Oregon 400c handheld GPS

**CONTEST GUIDELINES:** For your chance to win a Garmin Oregon 400c handheld GPS, submit your best tip on our Maintenance forum at www.powerandmotoryacht.com. Registration is free.



ILLUSTRATIONS BY | PAUL MIRTO |

Continues from page 22

use a length of wooden doweling to clear all the tubing using a skewering motion. (Tamping it will cause blockages.) Avoid using metal rods since they're likely to damage the soft brass tubes. But if dowling doesn't work and you must resort to rods, use the stainless steel specimens with brushes, much like those used to clean rifle barrels.

The second method's easier. Temporarily tap into the upstream end of your engine's raw-water cooling system (usually just below the strainer) with a garden hose, then tap into the downstream end (usually just above the exhaust elbow) with another hose. Connect the two hoses to a submersible pump with a remote switch—Hice used a 500-gph bilge pump on my boat—and drop the pump into a five-gallon bucket. Pour in four gallons of cleaning solution (Hice uses Trac Ecological's Barnacle Buster mixed 50/50 with water), and hit the switch, letting the solution circulate for approximately five hours.

The second procedure sure did the trick for me. But while my genset now purrs like a kitten, Hice suggested I go one step further by permanently tapping into the upstream end of my genset's raw-water system with a hose that leads to a remote, screw-on fitting mounted in my cockpit. "All you need to do when you come back to the dock after a run," he explained, "is hook up city water to the fitting, turn on the spigot, and let your genset run for ten minutes or so. No more creepin' crud!" PMY

## JULY CHECKLIST: HEAT EXCHANGERS

**1) Zincs**.....☑
Check 'em often. If one is more than half gone, replace it.

**2) Flush**.....☑
Don't use muriatic acid or a muriatic-acid solution on heat exchangers. They can damage components.

**3) Examine**.....☑
Shine a light into the exchanger through the zinc hole.

**4) Secure**.....☑
Make sure end caps are tight.

**5) Pump it**.....☑
If you flush your exchanger, a 500-gph pump works for a genset but mains will need bigger pumps.