

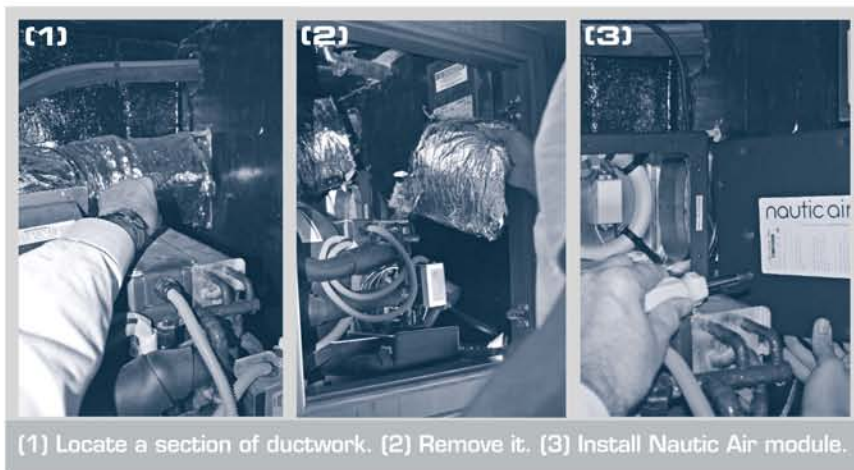
Got Allergies?

How to make the air you're breathing onboard cleaner.

As an unabashed booster for boats and boating, I'm a tad amazed to find myself admitting that we boaters have a wholly invisible but smelly problem: onboard air quality. Consider my own 21-year-old, meticulously maintained trawler *Betty Jane*. Like lots of other vessels, she mostly gets used on weekends, and throughout any given weekend, especially during the summer, she's likely to be almost hermetically sealed against the heat, with all her windows shut, her saloon door closed, and her two air-conditioning units going full blast.

A healthy situation?

"Probably not," opines Heath Schuman. He's president of Nautic Air of Stevensville, Maryland, which sells in-line, UV-light-activated modules designed to rid boat interiors of mold, mildew, bacteria, viruses, and various volatile compounds—including off-gassing varnishes, carpet glues, upholstery, etc. His system uses technology that won an Innovation Award at the International Boatbuilders' Exhibition (IBEX) last year. When I caught up with Schuman he was standing in the galley of a brand-new



(1) Locate a section of ductwork. (2) Remove it. (3) Install Nautic Air module.

Outer Reef 65 docked at Bay Bridge Marina, near Stevensville, watching a technician start a five-module install job expected to cost about \$8,500 (\$1,500 per module, plus ten hours of labor at \$98 per hour). I was standing next to him, having arrived earlier from Florida to scope out an installation and get a better understanding of Nautic Air's technology.

The job was short and sweet. While Schuman and I watched, the tech used a utility knife to remove eight inches of ductwork from the output side of a Cruisair combo-type air-conditioning unit in a galley cabinet. He then

connected the Nautic Air module to the back of the cabinet with screws, slipped the open ends of the ductwork over two flanges on opposite ends of the module, secured the ends with tie-wraps, tapped into a nearby junction box with an electrical cord, and finally screwed the front cover back on the module. The whole deal took about an hour, although access was admittedly easy and no structural modifications were necessary.

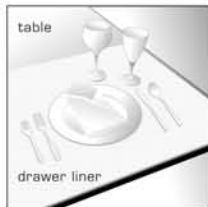
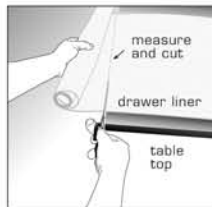
The story behind this product's short and sweet as well, and begins a couple of years ago with Schuman's severely allergic daughter. While investigating various

GARMIN'S MAINTENANCE TIP OF THE MONTH

TIP SUGGESTED BY

ERNE VALDES CORAL GABLES, FL

To keep things like plates and computers from sliding around underway, lay down perforated-plastic "drawer liners" like you would placemats. ➔



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.

ways to improve the air quality of her environment, he came across something called Photo Catalytic Oxidation or PCO, a process discovered in Japan in 1969. It combines a light source (UV works best), humidity, and a titanium dioxide catalyst to create Pac-Man-like hydroxyl radicals that instantaneously and benignly convert harmful microorganisms and chemicals (everything from formaldehyde to exhaust fumes) into harmless molecules of carbon dioxide and water.

Schuman tried PCO in his home and virtually nixed his daughter's allergies. That made him wonder how he might apply his find to the boat-detailing business he'd built up over the years. What resulted was the Nautic Air module, a small, rectangular box of riveted sheet aluminum (skinned with neoprene to prevent sweating) with a UV light inside

and interior walls sprayed with titanium dioxide over a proprietary primer.

My take on the technology's value? First, as one of the Innovation Awards judges at IBEX in 2008, I voted for it. Second, I'm big-time antsy to start road testing (for a later review in *PMY*) a portable, free-standing Nautic Air unit in the hotel rooms I stay in during my business trips. And third, while talking with Schuman for about an hour in his office in Stevensville—and breathing fresh, clean Nautic Air air all the time—I gotta say: the sinus problems I'd been dealing with over the previous two months disappeared. Really! **PMY**

Nautic Air (410) 604-2801.

www.nauticair.net.



Comments, questions, or want to see more photos and content?
GO TO CAPT. BILL PIKE'S BLOG @
POWERANDMOTORYACHT.COM

OCTOBER CHECKLIST: ONBOARD AIR IMPROVEMENT

1) Freshen.....

Place a fabric-softener sheet over a fin in each air-conditioning plenum grill onboard.

2) Sump.....

Remove shower-sump water before leaving for any extended period.

3) Holding Tank.....

Add Paritan's K.O. (with aerobic bacteria) to your holding tank after removing other anti-odor products.

4) Hoses.....

Replace low-grade sanitary hoses with higher-grade "no-odor" types.

PROFESSOR DIESEL

(Q&A)

Q: I'm planning to change the fluid in my marine transmissions and have three questions: First, is it okay to use different brands of ATF (Automatic Transmission Fluid) as long as the spec is the same? Second, my dipsticks have notches to indicate levels of fullness with "Full Hot" at the top. Should I run my boat to heat the transmissions and only then change the fluid? And third, what if I fill to Full Hot when the transmissions are cool? Will this cause problems?

—Paul B.
Destin, Florida

A: While all manufacturers require certain specifications for their ATF products, various brands use different

methods and chemicals to achieve them. So I don't recommend mixing brands since unforeseen reactions can cause marine gear failure. Certainly, if you're abnormally low on fluid and need to run, use whatever is at hand. Operating on low lubricant levels is way more problematic than running with a mix of lubricants for a few hours. But change to a single brand as soon as possible.

Regarding your second question, most manufacturers suggest transmissions be warm before changing fluid to ensure

contaminants are mixed before fluid's removed. Always follow your gear manufacturer's recommendation.

If it is to check ATF when it's hot, take your boat out for a short run. If the levels read "Full Hot" on the dipstick, fine. Otherwise, add or remove fluid as needed.

Your third question's easy: Don't overfill! If you top off to "Full Hot" when your gears are cool, the oil will foam as temperatures rise, reducing cooling and lubricating capacities and causing serious issues.



PROFESSOR DIESEL is Larry Berlin, director of Mack Boring's Training Services division.

ILLUSTRATION BY | SCOTT POLLACK |

QUESTIONS/FEEDBACK: Please submit all your questions to *PMY*'s senior editor Capt. Bill Pike via email at bill.pike@src.com.