

MOTORBOATING

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TROUBLESHOOTER

Solving Power Problems

Controlling Smoke

Bob White's 38 Bertram, *Island Time*, had a smoking problem. It generated an incredible amount of black smoke at startup, during acceleration from idle and while coming up onto plane after trolling. This smoke left a thick film on *Island Time's* transom that could only be removed with Soft Scrub cleanser.

I'll admit that two-stroke, 6-71 Detroit Diesels aren't known for being smoke-free, but White had done everything he could to keep the smoke under control. He installed AirSep air-filtration systems to clean up intake air. He dismantled and cleaned his turbochargers, and he inspected his fuel injectors, which didn't appear fouled. Clearly, it was time to do something about the fuel.

There are many off-the-shelf products available to treat diesel fuel ills of every kind. I wanted to try a new one. A call to Ralph Lewis at Power Research produced a gallon of

Pri-D "thermal stability" fuel additive designed to help reduce excessive smoke. Lewis could talk a blue streak (no pun intended) about fuel chemistry, but I wanted to see the product work in the field first and get the technical explanation from Lewis later.

After mixing Pri-D with a tank full of diesel, White and I ran the boat and found that, though not scientifically measured for opacity and volume, the smoke plume was about half the size it had been under the same operating conditions. The real surprise came after we got back from our fishing trip. The transom was clean!

Lewis explained that Pri-D works because it never allows clumps of carbon to get larger than a 0.10 micron. Carbon formation is a by-product of combustion, but when carbon is limited to this size, it can be burned as fuel instead of falling out of suspension and depositing on piston crowns, exhaust valves and turbocharger blades.



Pri-D is available in pints, quarts and gallons from many marine retailers, including Boater's World and E&B/West Marine. Power Research, Dept. MB, (954) 581-6600. www.priproducts.com.