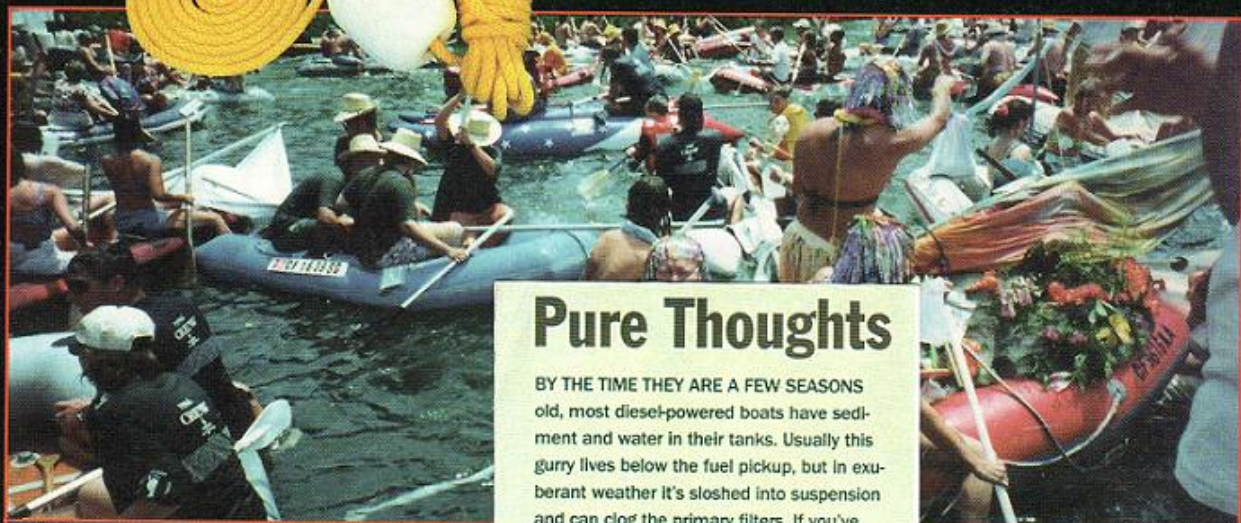


# DOCKSIDE™

SOUTHERN CAL

INE EQUIPMENT AND SERVICES

AUGUST, 1997 VOL. V, NO. 8



## Pure Thoughts

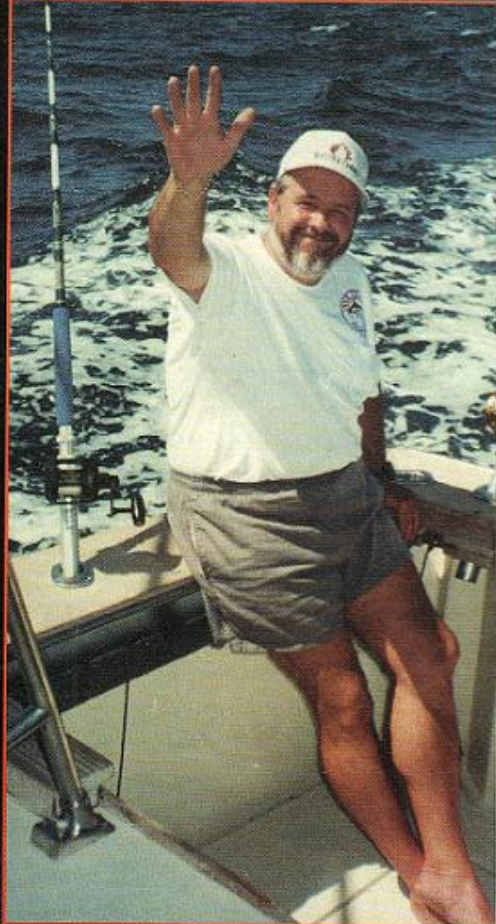
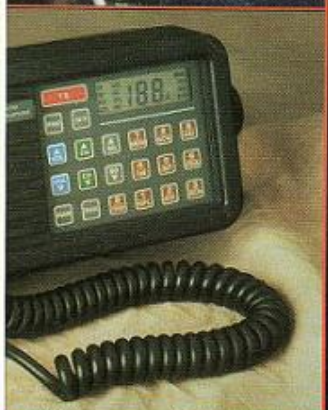
BY THE TIME THEY ARE A FEW SEASONS old, most diesel-powered boats have sediment and water in their tanks. Usually this gurry lives below the fuel pickup, but in exuberant weather it's sloshed into suspension and can clog the primary filters. If you've ever tried to drain and clean a filter in rough weather while straddling a hot exhaust manifold, you know how annoying this is.

Try an RCI Marine Diesel Purifier. We installed one aboard a 45' Bayliner plagued with fuel problems. After three hours of running on supposedly clean diesel, we drained an amazing volume of water and dirt from the Purifier—contamination that would have migrated into the filters, which instead remained clean and unclogged.

The RCI Purifier scrubs fuel centrifugally: As fuel flows through the filter, a cleverly designed system of baffles steers it into a circular motion until it collides with a deflector that separates water, suspended solids and other contaminants. RCI claims the Purifier removes 100 percent of the water and up to 98 percent of the natural contaminants from diesel fuel. Similar RCI Purifiers have been used on trucks, buses, construction equipment and other vehicles for years, so the technology is well-proven.

There are five Marine Diesel Fuel Purifiers for engines up to 1,000 hp. All are powder-coated for corrosion protection, and include mounting hardware. Prices start at \$275. The RCM 80-E I tested is \$328. Contact RCI Purifier West at 800/868-2088.

—John Barr



# A New Spin on Clean Fuel

by John Barr

**W**e've all heard a horror story or experienced contaminated diesel fuel. As is to be expected of the unexpected, these problems will always occur at the most inopportune times, as when you are entering the breakwater with a hundred other boats, or when maneuvering into your slip with an audience and a fifteen knot crossing breeze. Many a cruise or fishing trip has come to a disappointing conclusion because you simply run out of filters after a badly contaminated batch of fuel. This problem also occurs when your fuel is simply not used allowing for condensation, algae, and other contaminants to build up in the old fuel. It is a common problem but there is a solution. It's simple and it works.

#### What is This Miracle Fuel Purifier?

The RCI Marine Diesel Fuel Purifier is a simple one-step unit that the manufacturer claims removes 100% of the free water and 95% to 98% of dust, dirt, and other normal and natural contaminants found in all diesel fuel. Now, that's a pretty hefty claim, so we put it to the test.

The test rig consisted of a RCI Purifier with a 12 volt fuel pump, a conventional diesel fuel filter, and a container of clean diesel fuel with clear fuel lines so we could see the fuel's progress. The RCI Purifier was in line before the fuel filter. First, we ran clean fuel throughout the system. Nothing exciting there. But then came the real test. We had some

diesel fuel that looked like a chocolate layer cake — water on the bottom and layers of contaminants. We shook it up and added it in the fuel container with the clean fuel and watched it pass through the clear fuel lines to the RCI Purifier. We expected to see the contaminated fuel come out of the outlet side of the RCI Purifier. But, much to our amazement, not a drop of water or contaminants was visible. We then opened the drain valve at the bottom of the purifier and lo and behold out came the water and contaminants.

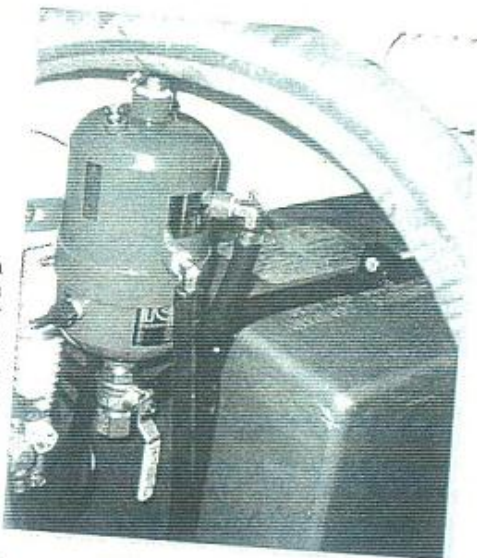
#### How Does it Work?

Now that we know it works, we wanted to know how. The RCI Marine Diesel Fuel Purifier utilizes a well known "centrifugal" process. By using this principle and the differences in specific gravity of water including the contaminants and diesel fuel, the fuel and the water containing the contaminants are separated.

As the fuel enters the purifier it flows through an internal baffle system that causes the fuel to move in a circular motion. Once the fuel is moving in this manner, it collides with a deflector plate that separates free water, suspended solids, and contaminants from the fuel. These

impurities accumulate at the bottom of the purifier and remain there to be drained. Only the clean fuel is delivered to the engine's filters. The fuel purifier also incorporates a specially designed interior baffle system for rough seas. This baffle system prevents water and separated solid contaminants from migrating to the fuel outlet. By removing the contamination immediately before the fuel enters the engine's filter system, the purifier delivers clean fuel virtually eliminating filter clogging and therefore greatly extending maintenance intervals. Keep in mind that the RCI Marine Diesel Fuel Purifier does not contain a filtering medium or any moving parts.

The unit is constructed of high quality steel with a powder coated exterior, is corrosion resistant and designed for marine environment. It also features a solid brass fill plug, stainless steel air purge valve, UL approved brass drain valve, and stainless steel mounting hardware. On the



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## dockside test

RC-80-E, RC-100-E, and RC-600-M a heating element is supplied to pre-heat the fuel which helps liquefy the paraffin providing better lubrication for the entire fuel system including the pump and injectors, and eliminates any wax or gelling problems in cold climates or conditions.

#### Testing, Testing

We were so impressed with the RCI Purifier that we ordered a unit for installation on a C&C 38' sailboat equipped with a Yanmar 35 hp engine that had suffered numerous fuel contamination problems over the years. The owner had assured us that his current diesel fuel supply was fresh and had not been a problem. We plumbed the purifier before the Racor filters. The installation was simple and trouble free. (Anyone with average mechanical ability can accomplish

fuel hoses and shooting the breeze with the old salts who inquired about what we were up to.

We purged air from the fuel lines and started the engine. After two hours of running time, we were both amazed by the amount of

**The RCI Marine Diesel Fuel Purifier utilizes a well known "centrifugal" process. By using this principle and the differences in specific gravity of water including the contaminants and diesel fuel, the fuel and the water containing the contaminants are separated.**

water and contaminants that were trapped by the RCI Purifier. The RCI Marine Diesel Fuel Purifier had acquired another convert.

To simplify system maintenance, the RCI Purifier has an optional

buzzer followed by a red indicator light will come on when the water level in the purifier reaches the sensor level and needs to be purged. The buzzer will sound for 10 seconds and the light will stay on until the unit is purged of the water and contaminants. A great option for those of us who are absent minded.

Not only does the RCI Marine Diesel Fuel Purifier take care of the obvious problems associated with diesel fuel, but also the not so obvious economic benefits such as reduced down time, extended life of the injection pump and injectors, and a dramatic reduction in the need to replace the primary diesel fuel filters.

Ask for it at your local chandlery or contact the manufacturer.

#### RESOURCES

RCI Purifier West