Letters

Refining Oil Filters

I am really interested in the Purifiner lube oil filters, but have a couple of questions not answered in your article (BB June, 1986).

You say that vaporized water and fuel are vented out of the filter: Where do they go?

Are replacement cotton filters readily available?

How do I locate the manufacturer?

John Etlinger
Boston, MA

To begin at the end, the filters we examined are manufactured by Refineco, 7655 West 20th Avenue, Hialeah, FL 33014, (305) 563-0225.

The cotton filters should not be hard to find. We called our local Purifiner distributor, and he said that he stocks them in several sizes.

Impurities vaporized out of the lube oil escape through a vent in the top of the Purifiner into the engine compartment. If you wish, you can attach a hose to vent them outside the engine compartment, but it's not necessary to do so.

Before you rush out to buy a Purifiner, read the rest of these letters for more comments on the system.

Another Opinion on Oil Refiners

As a marine engineer who worked for a major oil company (Shell) for many years, I have to take exception to your June article "New Lube Oil Filters-Can They really Eliminate Oil Changes?". Besides working with Shell's marine group I also had responsibilities in their railroad, trucking, and small engine groups,

Not changing oil and depending on filtration can be very dangerous. In some engines it can work. These are usually large, medium to slow speed diesels that have large oil capacities (200 to 4,000 gallons); oil consumption is controlled, which means fresh oil is constantly being added; the engine is watched by a professional; and the oil is being constantly analyzed.

We have all heard the phrase "lube oil does not wear out", which is basically true. But let us not forget that additives deplete themselves, and they are the backbone of modern, high performance lubricants. Small engines in marine use have a tendency to soot up and also become contaminated with other combustion products, including raw fuel. None of these makes a very good lubricant.

The filter mentioned in the article eliminates particles down to 3 microns in size. Most combustion products are under .25 micron in size.

It is also mentioned that the filter's heating element reaches 200 "F, which would remove water and trapped fuel. In any properly working engine you have many areas that the oil comes in contact with which reach 200 "F, and thus water from condensation is removed through the engine's own breathing system. Only a very small amount of raw fuel will be vaporized at 200 "F, and again the engine's own breathing system will eliminate the' light ends of the fuel. The heavy portions of fuel (ie #2 D/F) do not start vaporizing until 350 "F, so the filtering unit is not effective for them.

My advice is to set the engine up so that changing the oil is easier. The simplest way to do this is to tap into the drain plug and run a 3/8" or larger tube up along the side of the engine so that the highest point of the tube is higher than the engine, putting a removable cap at the upper end of the tube. When you change oil you just pump out from the upper end.

These thoughts could go on for many pages, yet these few paragraphs should give the boat owner something to think about.

The article on engine oil analysis in the same issue is very well done. Analysts, Inc, mentioned in the article, is an excellent company.

Hal Noring
President
Petro America, Inc.
Long Beach, CA

BETTER BOAT asked George Moler, vice-president of Refineco, to respond to Mr Noring. Refineco is a major manufacturer of refiner-type oil filters.

Mr Moler made the following comments:

- Oil additives are supplemented in sufficient quantities when the oil sup ply is replenished.
- Some oil additives are added to lessen the effects of water in the oil (including acid formation). Refiners remove water, eliminating the need for those additives.
- Engines can vaporize fuel and water, but only those that are run for long periods of time do it effectively. Sailboat engines are run infrequently and for short durations and so don't get hot enough or stay hot long enough to vaporize contaminants on their own. Plus, the moist marine environment (and the fact that all engines, even new ones, suffer from cylinder blow-by) means new contaminants are being added constantly.
- Refineco filters eliminate particles down to 1 micron, Particles smaller than that actually help polish metal surfaces. Racing powerboats actually choose to use recycled oil because it contains these minute abrasives that help increase engine performance.
- Refiner-type filters will not remove heavier fuel portions, but oil analysis after installation invariably shows significantly lowered fuel contamination in the oil supply.
- Refiner-type filters are suitable for small-engine installations: More than 50 % of Refineco filter sales are for use on engines of 40 horsepower or less.

We agree that, for many people, frequent oil changes may be more practical and more economical. But we've also seen nothing in the technical literature that disproves the claims of refiner-type filter manufacturers. An added bonus in using these filters is that fewer oil changes means less discarded oil, which-despite everyone's best intentions-inevitably will result in less oil pollution and contamination.