

## More Than Just Mileage: New Fluid Diagnosis Kits Tell Operators – and Customers – What Fluid Service Intervals Should Really Be

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Are manufacturer-recommended service intervals enough? We hear the message preached all the time: The only surefire way to avoid charges of overselling is to carefully follow automaker-recommended intervals.

The problem with that attitude is that strictly doing so can be disingenuous to your customers. After all, how many of them really get under the hood to inspect the condition of their power steering fluid or brake fluid or transmission fluid? And, let's face it, not all miles driven are equal. I know plenty of little old ladies who probably don't tax their cars' fluids very much, but having been a teenage boy once upon a time, I also know that some of us are prone to driving our cars harder than they were ever designed to be driven, something that can have a deleterious impact on fluid life.

The problem, then, lies in how to tell at a glance what a fluid's condition is. There's the "sniff test," but the problem with that approach is that by the time a fluid smells burned, significant damage may have already been done to the particular system associated with that fluid. There's also the "color test," but put virgin motor oil in an older engine and run it for even a day or two and see if you can really discern much difference.

Yet 63 percent of operators and managers polled in a recent online survey said that while following manufacturer drain intervals is important, you have to monitor the individual condition of the fluids, as well.

Which is where a new generation of fluid diagnostic tools comes in. And we're not talking about having a fluid diagnosed in a laboratory or using an expensive machine, either. These days, it's as simple as



A technician takes a sample of brake fluid for testing. In many cases, radial planar chromatographic tests can quickly and easily tell if a lubricant or fluid needs to be replaced.

applying a small fluid sample to a piece of paper.

“The radial planar chromatographic — RPC — analysis process has been used by chemists and lubricant engineers for many years to monitor the condition of in-service lubricants and to determine if the fluids are acceptable or should be condemned,” said Ron McElroy, co-founder and chief technical officer of Fluid Rx, a manufacturer of instant lubricant diagnostics kits. “RPC results provide a unique and permanent record of the condition of the lubricant.”

According to McElroy, railroads developed the RPC process in the 1930s to monitor and set fluid service intervals for locomotive engines. Automakers even used the RPC technology from the 1950s through the 1990s to monitor oxidation, cycling and wear test results on ATF.

“All modern lubricants contain additives that inhibit breakdown. As these additives are depleted, sludge is formed. (The RPC) analysis tool provides a measure of additive depletion and the level of sludge or debris in a lubricant, indicating whether the fluid is in good condition, needs to be changed or is overdue for replacement,” McElroy said.

The process is simple. When a sample of lubricant is placed on a special filter paper, or substrate, the lubricant will begin to percolate through the substrate, leaving any sludge or debris behind. The presence of a significant amount of sludge or debris, generally visible as a dark ring on the substrate, gives technicians and consumers a clear indication of whether the fluid has reached or passed its useful life.

The differences between this process and the old “color test” that attempted to ascertain fluid condition based solely on color are many.

“This is not a color test. It’s a subjective scientific analysis that is repeatable and verifiable. You can’t fool the substrate,” McElroy said.

In fact, McElroy had Canada’s Department of National Defence test the system. Fluids were tested both with the RPC process and with laboratory analysis. In 93 of 97 tests, the samples correlated exactly with each other in determining fluid condition.

Operators with long memories of color test strips and the hassles — up to and including potential legal issues — that went with them may be reluctant to use RPC technology, which is why McElroy said the industry has gone to great lengths to get RPC fluid analysis products approved. The Fluid Rx system has

been tested not only by Canada's DND, but also Herguth Laboratories and the Noria Corporation. The RPC process meets several ASTM standards for testing fluids, and has been approved for use by the Automotive Maintenance and Repair Association/Motorist Assurance Program (AMRA/MAP), the California Automotive Business Coalition, the California Bureau of Automotive Repair and even OEMs like Ford, Fleetgard, Detroit Diesel, Hyundai and Kia. In fact, Ford dealerships use the RPC instant fluid diagnosis kits in many of their service departments.

Operators who have taken the plunge have come away impressed.

"We started using (the fluid analysis kits) for a couple of reasons," said Monte Benedick, operator of Brake and Wheel Center in Leandro, California. "First, I wanted to have proof of what I am selling customers, that when we check something I have a way to back up what I am telling a customer. Second, I also wanted to be better than the other shops around me. I wanted something that sets me apart from the others. We are always looking to be better than our competition, and this helped."

Benedick said technicians love the instant fluid analysis because it gives confirmation to their recommended service intervals.

"There are no questions. There's no need to second guess anything," he said. "What I like most is I have proof. We put the test paper with the work orders so I can come back to it for any reason to say, 'See, we tested this fluid and, yes, it needed to be flushed.'"

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Tom McVey  
Quality Tune-Up Shops

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And technicians aren't the only ones relieved to see concrete evidence of a fluid's condition.

"The customers I have talked to all love it. I keep the cards on the desk where the customers are being helped. Customers will pick it up and ask what it is, so we get a chance to talk with them about it. I tell them that we actually test the fluid, not just guess that the fluid needs to be flushed. That seems to put customers at ease. Some of our regular customers even ask to make sure we are testing their fluids."

Other operators agreed. “We require all of our shops to use (the fluid analysis kits). All of our fluid maintenance services are sold based on the test results,” said Tom McVey, a principal with Quality Tune-Up Shops, a chain of nearly 40 automotive service facilities in central California. “The fluid samples make for a nice presentation, and it makes it easier for the employees or service writers to sell the service. It’s a legitimate chemical test. No one is selling a service that is not needed.”

Neither Benedick nor McVey said they’ve had any questions from customers about the legitimacy of the kits.

“I’ve been present during presentations, and it’s easy for a customer to see he needs the service. I think it makes our shops more credible to the customer,” McVey said. “We use a standard checklist, and we staple the fluid test results to the checklist. As with anywhere else, the stores that offer to do the needed services get the most add-ons.”

Both operators also said they’ve noticed the impact the fluid analysis kits have made on their operations.

“Since we began checking the fluids, our fluid flush sales have gone up for sure. When we checked fluids without the fluid analysis kits, we were not consistent about fluid condition. I have 22 years experience in this business, and I still cannot look at a fluid and say with any consistency whether or not it needs to be flushed,” Benedick said. “With (these kits), I can.”

McVey seconded that notion. “I think this is one of the best ways to aid the sales process at the stores,” he said.

McElroy mentioned that some operations even go so far as to charge for a fluid analysis, but he said he believes shops can get a bigger return on investment by offering to do fluid analysis for free and profiting from the extra add-on sales it can lead to. McVey agreed, adding that they pay for the test kits in a unique way.

“We pay for the instant fluid diagnostics with part of the shop’s advertising budget,” he said.

As with any recommendation, results from the fluid diagnosis must be reported honestly, and the one thing instant fluid diagnostic kits cannot do is guarantee that every car that pulls into your shop will need fluid service. In fact, McElroy said that tests in association with various laboratories have shown that, most

often, half of all cars tested will be within the bell curve of what their OEMs recommend as far as fluid maintenance intervals. Further, another 20 percent (like those driven by the little old ladies mentioned earlier) will probably be in a situation where they could extend fluid maintenance intervals past those recommended by the OEM — though to do so could impact any warranty they may have on the vehicle, McElroy cautioned.

It is that remaining 30 percent of vehicles, however, that will need fluid maintenance services before the time/mileage intervals recommended by the OEM, a fact drivers of these vehicles wouldn't have known if not for the fluid diagnosis.

“This really is a ‘diagnostic’ on the fluid. It identifies a need and gives the customer a call to action. It allows customers to understand a car’s fluid maintenance needs, and that it’s about more than just mileage,” McElroy said.