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Pouring This Stuff In Your Car Is Money Down The Drain Automotive Alchemy Is A Fool's Errand

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The word “alchemy” is defined as “medieval chemistry.” A survey of synonyms reveals terms like allurement, conjuring, enchantment, hocus-pocus and abracadabra -- all references to magic. But the belief in fantastic fixes for your automotive woes can only lead to one unpleasantly real trick, and that’s making your money disappear.

As the economy has plummeted and the recovery has stagnated, it seems that companies promising false hope are on the rise. In the automotive realm, these are the firms peddling formulas that claim to solve various mechanical problems such as engine knocks, transmission slippage and oil consumption. Some even claim that their products will enable your car’s engine to harmlessly run without oil. Preying on the ignorance and wishful desires of the public, these products are snake oil of the first order.

Let’s shine some light onto these product claims and expose them, so you don’t get suckered by such foolishness. There’s no such thing as a “Mechanic in a Can” to solve mechanical problems.

1. Fuel Mileage Enhancers

Many products have been “developed” to improve fuel mileage. Just pour the stuff into the fuel tank, they say, claiming improvements of 20 percent or more. But the only one laughing all the way to the bank will be the companies hawking these products, because they don’t work.

The EPA has evaluated the following fuel additives, finding absolutely no improvement in mileage for any of them: Bycosin, EI-5 Fuel Additive, Fuelon Power, Johnson Fuel Additive, NRG #1 Fuel Additive, QEI 400 Fuel Additive, Rolfite Upgrade Fuel Additive, Sta-Power Fuel Additive, Stargas Fuel Additive, SYNeRGy-1, Technol G Fuel Additive, ULX-15/ULX-15D, Vareb 10 Fuel Additive, XRG #1 Fuel Additive.

2. Fuel System Cleaners

There are many fuel system cleaners on the market that claim they clean your fuel system of deposits and carbon buildup by simply adding the product to the fuel tank. Do they work? To understand the question, we need to take a closer look at the nature of these deposits.

The deposits that build up on the inside of the fuel delivery system are the result of varnish deposits from fuel flow. These tough deposits can only be removed by applying equally tough, aggressive cleaning agents, much tougher than those found in cans that cost a few bucks. Carbon buildup is the result of unburned gasoline that forms a rock-hard deposit on the inside of the engine where fuel flows. As more gasoline soaks into the carbon and combustion fire hardens it, the more difficult it is to remove from the inside of the engine. The only way to remove such buildup is to soak it with industrial grade cleaners in order to dissolve it and blow it out the tail pipe. Again, such chemical strength is not found in a can.

Only a professional fuel system cleaning can clean fuel delivery systems effectively. During a professional fuel delivery/carbon cleaning, an industrial grade cleaner is injected into the fuel system through the fuel rail or intake manifold while the engine is running. This process cleans the rail, intake plenum, injectors, valves, cylinder head and piston tops. Then a high grade cleaner is added to the fuel tank to clean the fuel lines, pickup assembly, screen, and pump.

3. Engine Oil Additives

Years ago I "threw down the gauntlet" to the companies that produce lubricant enhancers. My challenge? Present to me solid, scientific proof that their elixirs really do lengthen the life of an internal combustion engine. What do I get? Countless testimonial letters from people that claim they have run their engines dry of oil. Then, in response to an article I wrote, I got an e-mail from a reader who suggests I view a website that offers "scientific proof" that a particular oil additive works. The site presented more personal testimonies reminiscent of late night infomercial programming.

It seems that everyone is looking for the magic elixir, the "Engine Extender," the "Fountain of Youth," the "Mechanic in a Can." Is this a reasonable quest? Companies that make these products claim that by using their oil additive, the oil in your engine performs better and lasts longer. Unfortunately, the intense claims of these products give people a false sense of security. As a result, people put off oil and filter changes and the consequence is often premature engine failure.

Consumer Reports once duplicated the test seen in the infomercial for the engine-oil additive Prolong to see if the product really did offer extra engine protection. The commercial said it added Prolong to the engine's oil supply, then drained the oil and ran the car with no oil plugs or filters. The product makers say they ran the car with no oil for four hours without damaging the engine. (The infomercial has a small-print disclaimer: "Never run your car without oil or water").

Testers at Consumer Reports used two former taxicabs with rebuilt GM V6 engines when they duplicated the infomercial test. After breaking the engines in, and changing their oil, they added Prolong to only one car, and drove them both more than 100 miles. Then they drained the oil and removed the filters, just like in the infomercial. Next, testers drove the cars around a test track to see what would happen. "We drove the cars around the test track at speeds between 20 and 30 miles per hour," Consumer Reports tester Marc McEntee said. "We were able to go for 13 minutes, 5 miles, until both cars died within about 100 yards of one another." Testers later took the engines apart. The damage to both cars, including the one with Prolong, was extensive.

The results are clear: Don't buy the oil additives and make sure to keep your eye on your oil change intervals. Changing your oil and filter every 3,000 miles is a rule of thumb, but longer intervals are okay for synthetics. You should always follow the recommendations of your vehicle manufacturer, and if your vehicle has an engine oil monitoring system, change your oil when it tells you to. This is the real secret to finding the Automotive Fountain of Youth.

4. Radiator Stop Leak

How do stop-leak products work? When installed in a cooling system, the stop leak product rushes through the cooling system under pressure to the site of the leak. When it exits the point of the leak, it builds up on itself, thus sealing up the leak. The problem? It only seals for a short time until either another leak springs or the existing leak gets larger. This is true for either an internal leak like a head gasket or an external leak in a radiator.

With a head gasket leak, either the gasket material has degraded or the metal is cracked or warped, resulting in a leak. In the case of a radiator leak, more often than not another leak will spring somewhere in the core in short order because wear and degradation is relative to the age of the unit. If you're getting leaks, in the final analysis the engine has lost its sealing ability internally or externally. Mating and sealing surfaces or component integrity must be restored to stop the coolant leak.

In extreme cases the overuse of radiator stop leak can clog up the heater core and even stop the heater from working. It can also stop an entire bank of water jackets, resulting in a constant state of overheating. To solve this problem, the expansion plugs have to be removed from the entire engine block and the block has to be power-flushed in order to clean out the stop leak product. This stuff harms more cars than it fixes, period.

5. Transmission and Engine Oil Stop Leak

These products are supposed to stop engine oil and transmission fluid leaks when added to the oil. They work by softening the hardened rubber seals that have shrunk away from their sealing surfaces. When softened, the rubber seals swell and fit tightly to the metal sealing surface, stopping the fluid leaks. Once the chemical product wears out, which will always happen in short order, the seals return to their hard state and the fluid starts leaking again. The only way to solve these sorts of problems is to restore gasket and seal mating surfaces, which means a rebuild.