FLUID MAINTENANCE

by Larry Barnes

Learning to Live With the Price of Gas

As the price of fuel continues to ebb and flow — mostly flow — consumers are more attuned to achieving fuel economy. They will drive miles out of their way if they can pocket five more bucks. With fuel prices remaining a simmering issue, now is an excellent time to recommend a fuel system service to your customers, when needed. Get them used to the fact that it's just as normal and just as essential to do a periodic cleaning of their fuel system as it is to change their oil.

A Dirty Fuel System is a Dirty Deal

A recent study found that a consumer driving a vehicle 30,000 miles per year with a dirty fuel system could actually spend an estimated $500 more on fuel due to lost fuel economy. This was calculated when fuel was being pumped at $2.29 per gallon. In my neck of the woods (Atlanta, Georgia), the cost at the time of writing this article was $2.75 per gallon for regular and $2.95 for premium. My point: The key to selling a fuel cleaning service is to explain how it relates to savings and how the service will benefit customers economically and in terms of improved performance.

Today's fuel injection systems operate at optimum efficiency but only under very strict conditions and with microscopic tolerances. Even the smallest speck of dirt, carbon or other deposits can directly affect fuel delivery. The sophistication of these systems is at the heart of why cleanliness is vital, unless, that is, people have money to burn.

Deposits can also build on other delicate system components that will develop into problems. Thus, the intake manifold, valves, combustion chamber, EGR valve, O2 sensor and the catalytic converter should also be cleaned for the vehicle to operate at an optimum level. Deposits on these components will affect the engine's performance, fuel economy and emissions.

New vehicles today run as designed: They provide smooth and quick acceleration, great fuel economy and plenty of horsepower. However, after 5,000 to 6,000 miles these magnificent engines begin to lose that initial responsiveness and efficiency, and guess why. That's right — an accumulation of fuel-related contaminants.

Why Do Deposits Form?

Fuel-related deposits form from a combination of gasoline additives, engine heat and driving habits. A high quality detergent gasoline may help control deposit formation, but the same gasoline also contributes to it. While these detergents work well in most cases, they can cause other problems in an engine, and it's interesting to follow the dirt trail.

Here's how it happens. After driving to work in the morning, you park the car and turn off the engine. The gas that remains in the injector tips, intake manifold and combustion chamber quickly evaporates due to residual engine heat. This is called "hot soak." But not all of the components of the gasoline evaporate. The remaining components — the fuel additives — begin to oxidize. This creates gums and resins that will collect any solids from the combustion chamber or airborne dirt that finds its way into the manifold through the PCV and EGR systems. These minute deposits continue to build up after every engine shut-off until they begin to affect the performance of the engine.

Since the opening of a fuel injector is no larger than the diameter of a human hair, it doesn't take very long for these deposits to build up and begin restricting the fuel delivery and the spray pattern of the injectors. These deposits also build up in the intake manifold, on the back of the intake valves, inside the combustion chamber, on the O2 sensor and also in the catalytic converter. Airflow is also affected, and a 15 percent reduction in fuel and airflow can result in a 50 percent loss in power. That's 50 percent! Deposits can also cause the added aggravation of waiting in line at one of those emission-testing facilities, only to fail.

Fortunately, there are solutions (literally) for all of these fuel-related problems due to deposit buildup — a professional fuel system service. It's the only way to go to ease the pain of pricey petrol. Clean up the system, restore a vehicle's optimum operating efficiency and give your customers a shot at holding on to a little more of their hard-earned money.

And remember, "Keep It Clean!"

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