YOUR WHEELS

Something else to hate about gasoline

High sulfur content can ruin fuel-sending units and today's mix tends to be dirtier than what you used to buy.

By RALPH VARTABEDIAN
Times Staff Writer

A typical two-vehicle American family can easily spend $5,000 a year for gasoline, a product they never see that goes from an underground storage tank into a hole in the side of their car or truck.

It's not easy to judge the quality of that product, but without question there are batches of garbage gasoline that sometimes cause serious problems.

Take, for example, the issue of high sulfur — elemental sulfur and sulfur oxide — that contaminates a tank and can lead to false gauge readings. Tens of thousands of motorists in recent years have sustained damage to their vehicles from such gasolines distributed in areas across the country, according to lawsuits and gas experts.

The high sulfur fuels can damage fuel sending units that operate the dashboard gas gauges, causing them to give erratic readings — false high readings and false low readings.

Until recently, the only fix to the problem has involved draining the tank and replacing the sending units, a repair that costs up to $1,000. But fuel additive manufacturers in the last year have come up with a much cheaper fix.

Although oil companies and auto manufacturers know a lot about the problem of sulfur contamination that affects fuel sensors, relatively few motorists have heard about the issue. More broadly, until the last few years, the average quality of gasoline had been slipping.

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Expensive, yes, but it's dirtier too

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expert at Chevron Corp. "It is an industry fact."

It seems that as gasoline prices have gone up, the quality has gone down.

In 2004, Marathon Petroleum Co. discovered that it had sold gasoline to thousands of motorists in the Louisville, Ky., market that had high levels of elemental sulfur, causing damage to the gasoline sensors. It paid out about $500 per vehicle to motorists whose fuel-sending units were affected.

A Marathon spokeswoman said the problem was caused by a refinery that had undergone modifications that caused unusually high levels of elemental sulfur. At the time, there was no industry specification for the chemical, but since then a limit has been placed on elemental sulfur — the amount of sulfur that gas can contain.

In another case, a class-action lawsuit against refiner Motiva Enterprises resulted in a multimillion-dollar settlement for consumers who purchased gasoline at any of hundreds of stations in Florida, Mississippi, Louisiana and Alabama in 2004. The gasoline was marketed under a variety of retail names.

The decline in gasoline quality prompted four major auto manufacturers to come together about two years ago and set a standard themselves for so-called "top tier" gasoline. The group noted that since the EPA established additive standards in 1995 the average level of detergent had slipped by 50%.

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At the time, the federal government set the quality standard below what many in the industry were actually producing, causing a drop rather than an increase in quality. It is a prime example of lousy government regulation.

The auto makers — BMW, General Motors, Honda and Toyotaset stringent requirements on detergent additives that would help control engine deposits, both those that accumulate inside and outside the combustion chamber. So, the additives help keep fuel injectors clean and control carbon deposits on valves.

A cleaner engine theoretically runs better and more efficiently than a dirty engine, reducing fuel consumption and pollutants. The retailers that meet the specification include many household names such as Chevron and Shell, but also many smaller brands such as Aloha Petroleum and Jiffy Mart. You can get more information about gasoline that qualifies under the program at *www.toptiergas.com*.

What do you do if you are stung by bad gas that has broken your fuel-sending unit? Before you go to the high expense of replacing the unit, you might try an additive. Late last year, Chevron introduced an additive called Techron Concentrate Plus that is formulated to clean the sulfur deposits from the fuel sending units.

Most sending units use a strip of silver or silver palladium to transmit electrical signals to the dashboard. Only a few luxury brands use gold, rather than silver.

The sulfur in gasoline can contaminate the silver or silver palladium and the Chevron concentrate is designed to remove it in one tank of treatment, Cushing said. A bottle for a 20-gallon tank costs about $10. It is sold at most auto parts stores and big discount stores. (Although Chevron puts Techron in its gasoline, the gasoline does not contain the ingredient that cleans the fuel sending units, Cushing said.)

Chevron is not the only company that markets an additive to clean fuel sensor valves. When Marathon encountered its problem with bad gas, it gave out free samples of Valvoline's SynPower Complete Fuel System additive. It is also marketing MaxLife Fuel System Cleaner, which Marathon said cleans and restores sensors.

Ralph Vartabedian can be reached at ralph.vartabedian@latimes.com.