

## Auto Maintenance is Essential For Maximum Efficiency, Fuel Economy

Fuel costs are rising, and for the motorist the challenge increasingly is to keep every vehicle in top running order to maximize fuel economy — and keep it that way. The key to this is proper vehicle maintenance to ensure that every mile is driven at maximum vehicle efficiency.

Good driving habits and keeping your vehicle properly maintained can help maximize gas mileage from almost any vehicle — and save you money.

"A vehicle idling rough, performing sluggishly, stalling and sputtering and delivering poor gas mileage usually means vehicle maintenance has been ignored, and a tune-up, is very much in order," says Reid Smith, Product Manager for Spark Plugs at Bosch. "There is less to tune in today's vehicles, but if you start by installing a fresh set of premium spark plugs, such as Bosch's Ir Fusion Platinum Iridium plugs and premium spark plug wires. A well-tuned engine delivers the best balance of power and fuel economy."

Spark plug performance is absolutely vital to an engine's very operation. The spark plug ignites the air-fuel mixture in the engine, and this produces the energy that moves a car. Over time and after thousands of miles, spark plugs may begin to show wear between the electrodes. "This wear increases stress on the ignition system and can prevent the spark plug from igniting the air-fuel mixture efficiently, decreasing the car's performance as well as gas mileage.

"Increasing vehicle fuel efficiency is really a matter of extracting more energy on the same amount of gas," he explained. "The better the spark, the more efficiently the gas is burned — the more power there is to drive the vehicle on the same amount of gas. Checking the plugs regularly and replacing them when needed with superior spark plugs will almost always improve the performance and fuel economy of a vehicle."

To meet the growing need and market demand for superior spark plugs, automotive parts supplier Bosch has introduced its newest member of the Bosch premium spark plug family — the Bosch Platinum Ir Fusion, the industry's only spark plug that combines iridium and platinum in a patented fused fine wire center electrode design.

"This combination provides a more durable and long lasting center electrode, better heat dissipation, and lower, more stable ignition voltage requirements," explained Smith. "It uses Bosch's exclusive surface air gap technology and yttrium-enhanced ground electrodes to deliver better performance."

Fusion's four yttrium-enhanced ground electrodes, maximizes the strength and longevity of the spark. "When combined with nickel chromium, Yttrium produces a more stable alloy with significantly improved resistance to spark wear from erosion and oxidation," Smith said. "It provides optimal access to the air-fuel mixture and delivers the most efficient fuel combustion for optimum horsepower. And the factory pre-set gap never requires adjustment."

"Our durability tests confirm that the reduced gap wear of the Bosch Platinum Ir Fusion lowers the voltage requirement on the ignition system, yielding better, more consistent performance and longer service life," said Smith.

"This plug provides the most powerful spark possible without increasing voltage requirements, and offers greater fuel efficiency and excellent performance under all driving conditions."

And check those spark plug wires. Underhood heat really cooks the ignition wires and to ensure peak, long lasting engine efficiency, install fresh premium wire sets, such as those from Bosch.

### Oxygen Sensors, Filters Very Important to Vehicle Dependability & Efficiency

Another very important aspect of proper vehicle maintenance is making sure all the vehicle's oxygen sensors are operating properly. The oxygen sensor measures the oxygen in the exhaust to determine if the correct air/fuel ratio is being burned in the engine, and is crucial to efficient fuel management and engine operations. When operating properly, the oxygen sensor helps keep vehicle performance and fuel economy at their peak.

"Have the oxygen sensor or sensors checked and if worn out replaced with the appropriate top quality premium technology sensor, such as those available from Bosch, the inventor of the automotive oxygen sensor. This often improves fuel efficiency as well as drivability, especially in older vehicles."

Oxygen sensors are subjected to intense heat, severe cold, thermal shock, vibration, and the ravages of exhaust and external contaminants — but they still are expected to function properly for tens of thousands of miles. This is made possible by engineering excellence and manufacturing precision. Quality definitely counts, and sensors that go the distance are produced in plants such as Bosch's facility in Anderson, SC.

And by all means oil and oil filter changes will help keep your vehicle engine clean. If you regularly make short trips, drive in stop and go, dusty or dirty air conditions or operate your vehicle under extended idle periods, regular oil changes and oil filter replacement are your best investment. The recommended Car Care Council service change interval is every 3000 miles. Quality oil filters such as Bosch premium oil filters trap contaminants, allowing the oil to flow through the engine unrestricted. Filters, including oil, air, fuel and cabin are normal wear items that should be regularly checked for replacement to help maximize the longevity and fuel efficiency of your vehicle.