Save money: Take care of your car's problems before they happen

According to auto experts, if you own a car with an advanced electronic ignition system, don't overlook the importance of a periodic tune-up, no matter how well or how long your engine has been performing. Advanced ignition systems don't always show signs of wear, even though certain parts may be going bad.

Cars with conventional ignition systems (points and condenser) used to start hard, idle rough, spew smoke and offer other telltale signs of problems when a tune-up was needed. This isn't always the case with electronic ignition cars.

Electronic ignition systems are often sophisticated enough to compensate for problems until things get so severe that major components such as caps, rotors and ignition wires start burning out. The results can be poor vehicle performance and an expensive repair bill...problems that could have been avoided with preventive maintenance.

As a rule, conventional ignition systems should be tuned every year or 12,000 miles (whichever comes first). Advanced ignition systems should receive a tune-up check every 15,000 to 20,000 miles.

If you are a severe service driver (i.e., you subject your car to continual stop-and-go driving, a lot of short trips, or pulling heavy loads such as a boat or trailer), your car may need tuning more often.

Tune-ups involve checking the car's ignition and fuel systems and either adjusting or replacing parts. Prices and extent of tune-up work vary from shop to shop; what is considered standard at one shop may be an "extra" at another. Shop around, compare tune-up offers, and always get an itemized quote before work is performed, in order to see what you're paying for.

If you own one of the new computer-equipped cars and your "check engine" light has been coming on, you'll need a diagnostic checkup followed by a "maintenance" tune-up as needed.

You'll pay more for this type of checkup, but it's the only way to pinpoint whether you have a computer-related or deep-rooted tune-up problem.

Above all, stick with a good tune-up source once you've found one. A shop that knows your car's history is in the best position to recommend ideal tune-up intervals and help you cut corners on costs based on previous work performed.

The following is intended to serve as a guide. For further information on tune-up intervals, check the owner's manual for your particular vehicle.

• *Air Filter:* Replace as often as necessary, but at least every 20,000 miles. Check and replace more frequently if you drive in dusty or dirty areas.

• *PCV Valve:* Replace every 12,000 miles. This handy device allows some unburned fuel and emissions fumes to be reburned in the cylinders, thereby lowering air pollution and increasing fuel economy.

• *Fuel Filter:* Replace once a year or every 20,000 miles.

• *Points and Condenser:* This applies to conventional ignition systems only. Replace as part of tune-up.

• *Spark Plug Wires and Boots:* Replace as needed and always in sets.

• *Ignition Timing:* Check and adjust every time points are replaced in conventional systems and every time plugs are replaced in electronic systems.

• *Distributor Cap.* With each tune-up, check for cracks and erosion of the terminals. With conventional ignition systems, cap and rotor always should be replaced in a set.

• *Emissions Filters:* Today's cars can have several of these devices. Replacement intervals vary widely from car to car (consult your owner's manual). Some vehicles have warning lights to remind you when these filters need changing.

CHECK FUEL LINE HOSES, GAS FILTER THIS WINTER

In the winter, many oil companies sell high-oxygen fuels—gasolines blended with alcohol or ether. While the gas may reduce carbon monoxide and improve air quality, The Gates Rubber Company says it may be harmful to some metal, plastic and rubber engine parts. Gates recommends that motorists be alert for problems with gas filters, fuel injection systems and rubber fuel line hoses.

Slow warmup can harm engine

A familiar scene on a cold morning is a car idling in a driveway with exhaust billowing from its tailpipe. In the house, the owner comfortably finishes a second cup of coffee. The car will be toasty warm when the time comes to take off for work.

The owner may justify this wasteful practice with the excuse that the car operates better when it is allowed to warm up before driving.

Wrong, says Car Care Council. When the choke is set, as is the case when a cold engine is started and then left at fast idle, the car is burning gas at a furious rate.

Engine wear is accelerated because raw fuel from the enriched mixture washes lubricating oil down the cylinder walls. This also contaminates the oil in the engine crankcase, further inviting engine damage.

There is a greater tendency for spark plugs to foul under these conditions, too. The excessively rich mixture is an ideal environment for plug fouling.

Another consideration is the possibility of overheating the catalytic converter in the exhaust system. Unburned fuel in the exhaust is burned off in the converter.

If it gets hot enough, it could set something on fire, especially if the car is parked over a flammable substance which could ignite. The car itself could catch fire.

In any type of weather, the car should be started, run for a minute or less at idle, and then driven at moderate speed until the engine has reached normal operating temperature.

Change your motor oil at the start of each season for the best results

Motor oil, the most common purchase by automotive do-it-yourselfers, is also the product that tends to evoke the most questions—particularly, when should I change it and what kind of oil should I use?

Usually, automobile manufacturers' guidelines for oil change intervals are based on mileage figures for "normal" and "severe service" driving. Most drivers consider their regular home-to-store, stop-and-go driving to be normal service.

But, the fact is, short trips around home are not normal for an engine. Heavy traffic, stop-and-go conditions, and frequent heating and cooling of the engine all accelerate the contamination of an engine's motor oil.

This means that most drivers should change their oil to meet "severe service" driving conditions, and most owner's manuals say that is every 3,000 miles or three months, whichever comes first.

Determining the proper oil change interval can be confusing. But Joseph V. Brancato, research director for motor oils and lubricants at Quaker State Corporation, notes that since most people drive under severe service conditions at least part of the time, most oil changes should occur at least every three months. He points out there is one easy memory trick many car owners can use.

"Change your motor oil at the start of each season," says Brancato. "For most private cars operating around home, changing motor oil four times a year provides safe and sure protection for a car's engine."

Brancato explains that, "The motor oil doesn't wear out from use. It becomes overloaded with contaminants which prevent important additives from doing their job. Seasonal oil changes allow contaminants suspended in the oil to be removed before they cause engine damage."

To make sure you're getting the latest and best additives, look to the back of the bottle for the letters SG-CD. The SG formulation, a new standard introduced in 1988, includes an increased amount of dispersants and detergents to control potential sludge deposits and reduce engine wear.

Also check to see what SAE Grade your automaker recommends. Some popular motor oils, such as Quaker State's 10W-30, are considered good year-round oils, and they also improve fuel economy with an additive that reduces friction.

When temperatures fall below zero degrees Fahrenheit, oils such as Quaker State's 5W-30 are a popular choice.