Rust can be expensive

Have you ever stopped to wonder how many cases of car trouble are directly attributed to engine neglect?

Several may come to mind: the dirty spark plug that caused your engine to misfire; the worn valve ring that created cylinder trouble, and the loose battery cable that prevented your car from starting that cold morning last February.

Yet, out of all the possible results of neglect, one that is overlooked the most, is corrosion.

An increasingly costly hazard, corrosion inside your car's cooling system can spell disaster. Today's average car has 6 metals— steel, cast iron, copper, brass, solder and aluminum—in its cooling system, and all of them are continually exposed to the ravages of corrosion.

A survey done by the Prestone people of some 1200 cars revealed that more than a third of the 3-year-old models checked, had corrosion in their coolants. The percentages of cars with rust in their coolants were: one-year-old—22%; Two-year old—32%, Three-year-old—36%.

The consequences of internal corrosion can create a vicious cycle, and a very deceptive one too, since corrosion is invisible.

When corrosion starts, it creates deposits within the cooling system. Clogging tubes, pipes and other coolant passages, the corrosion deposits reduce the rate of the coolant flow and consequently the coolant's ability to remove heat. And, if excess heat is not removed from vital components such as valves, their deterioration is accelerated and they can: • Gradually lose their sealing effect and thus reduce compression;

• Reduce the number of miles per gallon because of the lowered compression ratio; and

• Waste fuel by permitting "blow-by" (unburned) gases passing into the exhaust system.

Furthermore, not only does corrosion provoke tiny holes in the water pump and radiator, but it can cause engine overheating which can warp and crack cylinder heads and serious internal damage to various other components.

The final upshot of all these expensive attacks on your cooling system is that your car's fuel economy is reduced and your maintenance costs are increased. For example, a clogged radiator caused by corrosive tube blockage may cost up to $300 to repair while burned valves caused by corrosion, rust and scale build up may cost you as much as $700.

The results of that Prestone survey also indicated that most drivers still believe that a so-called "permanent" anti-freeze/coolant can be left in the car for three years or more,—despite the fact that car-engine design has changed significantly in the last few years. But engineers and chemists at Prestone's automotive research laboratories recommended annual changes of anti-freeze/coolant; and certainly no longer than every 2 years.

The ideal coolant, the experts say, is a 70/30 mixture of a reliable anti-freeze/coolant with special corrosion inhibitors and water.

Prestone II, for example contains a complex patented silicone/silicate inhibitor formula which applies a tough, protective film to all metal surfaces inside the cooling system.

Anti-freeze/coolant inhibitors will eventually break down under the high heat operating conditions common in today's cars. If you want to keep your cooling system in top condition, your anti-freeze/coolant should be replaced every twelve months and after it has been thoroughly backflushed.

The reverse-flush operation is not difficult to do; Prestone offers a special Flush and Fill kit in sizes to fit most cars. Once installed, the kit stays in position and on your heater inlet hose and can be used as often as you like.

Using a garden hose and normal water pressure, you can clean out the old sediment and coolant, refill the radiator with a 70/30 mixture Prestone II and water in just 15 minutes.

Winter readiness

It's winter car care time. . . which all too often is associated only with a quick antifreeze check and a change to snow tires. But that's not enough. Now is the time to have all your belts and hoses checked to make sure the cooling heating system will stay in good working order all winter long.

When you take your car to a service station for winterizing the cooling system before the cold weather comes, be sure your serviceman checks the belts and hoses. If the hoses feel mushy or are in otherwise questionable condition, they should be replaced.

Belts are another concern. Experience shows that when one cooling system part needs replacement, chances are other parts should be changed as well. If your automobile's V-belts are four years old, have your serviceman replace them, regardless of how they look.