TECH TIPS
USED OIL FILTER ANALYSIS

What Your Filter Can Tell You About Your Engine.

Even if you have a good maintenance program in place, it's a good idea to occasionally inspect a used oil filter in an effort to detect the beginning of serious engine problems. This inspection takes only a few minutes to complete and may save you time and money by avoiding damage to your engine.

The following are some common identifiers of potential engine related problems that can be found by inspecting a used oil filter:

- **Deformed Canister or Gasket Blowout** (see Figure 1) – indicates excessive oil system pressure, which is typically caused by a stuck or malfunctioning oil pressure regulator valve in the oil pump assembly. This problem should not be attributed to the filter.

- **Media Covered with Thick, Loosely Held Sludge** (see Figure 2) – indicates an excessive amount of fuel soot. This can be the result of a wide range of factors. A good mechanic who knows the vehicle can identify the root cause of the problem.

- **Wavy Media Pleats, Deteriorated Outer Wrap or Sticky, Shiny, Tightly Held Sludge** (see Figure 3) – indicates moisture present in the system.

- **Gel-like Coating on Media** (see Figure 4) – indicates that certain oil additives may have trapped water.

- **Wear Debris on Media** (see Figure 5) – indicates system component wear. A laboratory can help you to identify the debris in an effort to determine specific components that may need replaced.

**WARNING:** These products can expose you to chemicals, including Diisononyl Phthalate, Carbon black extracts, Nickel, 1,3 Butadiene, Ethylene Oxide, Epichlorohydrin, which are known to the State of California to cause cancer, and Bisphenol-A, Ethylene Glycol, Ethylene Oxide, 1,3 Butadiene, Epichlorohydrin, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.