

# USING YOUR SENSES TO TROUBLE SHOOT MOTOR VEHICLE PROBLEMS

## LOOKS LIKE TROUBLE

Identifying the cause of a puddle of fluid under your vehicle may save you serious trouble down the road. Small stains or an occasional drop may be of little concern. But wet spots deserve attention and bigger puddles should be checked immediately by the nearest service station.

Fluids can be identified by their color and consistency:

- \* **Yellowish green, pastel blue or florescent orange colors** indicate an overheated engine or an antifreeze leak caused by a bad hose, water pump or leaking radiator.
- \* **Dark brown or black oily fluid** means the engine is leaking oil. The leak could be caused by a bad seal or gasket.
- \* **A red oily spot** indicates a transmission or power-steering fluid leak.
- \* **A puddle of clear water** is usually no problem. It may be normal condensation from your vehicle air conditioner.

## SMELLS LIKE TROUBLE

Some problems can be detected simply by following your nose. Consider these causes if you smell something unusual about your vehicle:

- \* **Burned toast or a light, sharp odor** often signals an electrical short and burning insulation. To be safe, try not to drive the vehicle until the problem is diagnosed.
- \* **Rotten eggs or a continuous burning-sulphur smell** usually indicates a problem in the catalytic converter or other emission control devices. Do not delay diagnosis and repair.
- \* **A thick acrid odor** usually means burning oil. Look for signs of a leak.
- \* If you smell **gasoline vapors** after a failed start, you may have flooded the engine. Wait a few minutes before trying again. If you constantly smell gas, you probably have a leak in the fuel system. This is a potentially dangerous problem that should be repaired immediately.
- \* **Burning resin or an acrid chemical odor** may signal overheated brakes or clutch. Check the parking brake. Stop and allow the brakes to cool after repeated hard braking on mountain roads. Light smoke coming from a wheel indicates a stuck brake. The vehicle should be towed for repair.
- \* **A sweet, steamy odor** indicates a coolant leak. If the temperature gauge or warning light does not indicate overheating, drive carefully to the nearest service station, keeping an eye on your gauge. If the odor is accompanied by a **hot, metallic scent** and steam from under the hood, your engine has overheated. Pull over immediately. Continued driving could cause severe engine damage. The vehicle should be towed for repair.

## SOUNDS LIKE TROUBLE

Squeaks, squeals, rattles, rumbles and other sounds can provide valuable clues about problems and maintenance needs. Here are a number of the more common noises and what they may mean:

**Squeal** - A shrill, sharp noise, usually related to engine speed.

- \* Loose or worn power steering, fan or air conditioning belt.

**Click** - A slight sharp noise, related to either engine speed or vehicle speed.

- \* Loose wheel cover.
- \* Loose or bent fan blade.
- \* Stuck valve lifter or low engine oil.

**Screech** - A high-pitched, piercing metallic sound, usually occurs while the vehicle is in motion.

- \* It is caused by brake wear indicators to alert the driver that brake maintenance is needed.

**Rumble** - A low-pitched rhythmic sound.

- \* Defective exhaust pipe, converter or muffler.
- \* Worn universal joint or other drive-line component.

**Ping** - A high-pitched metallic tapping sound, related to engine speed.

- \* Usually caused by fuel with a lower octane rating than recommended. Check your owner's manual for the proper octane rating. You may want to switch to a different gas octane or gas station. If the problem persists, engine ignition timing could be the culprit.

**Heavy Knock** - A rhythmic pounding sound.

- \* Worn crankshaft or connecting rod bearings.
- \* Loose transmission torque converter.

**Clunk** - A random thumping sound.

- \* Loose shock absorber or other suspension component.
- \* Loose exhaust pipe or muffler.

### **FEELS LIKE TROUBLE**

Difficult handling, a rough ride, vibration and poor performance are the kinds of symptoms you can feel. When the driving experience doesn't feel quite right, look for:

#### **Steering**

- \* Wandering or difficulty steering in a straight line can be caused by misaligned front wheels and/or worn steering components such as the idler arm or ball joints.
- \* Pulling, the vehicle's tendency to steer to the left or right, can be caused by something as simple as under-inflated tires, or as serious as a damaged or misaligned front end.

#### **Ride and Handling**

- \* Worn shock absorbers or other suspension components can contribute to poor cornering characteristics. Also check for proper tire inflation.
- \* While there is no hard and fast rule about when to replace shock absorbers or struts, try this test: bounce the vehicle up and down hard at each wheel and then let go. See how many times the vehicle bounces. Weak shocks will allow the vehicle to bounce twice or more.
- \* Springs do not normally wear out and do not need replacement unless one corner of the vehicle is lower than the others. Overloading your vehicle can damage your springs.
- \* Tires always should be balanced properly. An unbalanced or improperly balanced tire will cause the vehicle to vibrate and may prematurely wear steering and suspension components.

#### **Brakes**

The following symptoms indicate problems with your brakes. Diagnosis and repair should be scheduled.

- \* The vehicle pulls to the left or right when the brakes are applied.
- \* The brake pedal sinks to the floor when braking pressure is maintained.
- \* Scraping or grinding is heard or felt during braking.
- \* The "brake" light on the instrument panel is lit.

## **Engine**

All of the following symptoms indicate problems with your engine. Diagnosis and repair are needed.

- \* Difficulty starting the engine.
- \* Rough idling or stalling.
- \* Poor acceleration.
- \* Poor fuel economy.
- \* Excessive oil use (more than one quart between changes).
- \* The "check engine" light on the instrument panel is lit.

## **Transmission**

Poor transmission performance may come from actual component failure or a simple disconnected hose or plugged filter. Make sure the technician checks the simple items first; transmission repairs are normally expensive. Some of the most common symptoms of transmission problems are:

- \* Abrupt or hard shifts between gears.
- \* Delayed or no response when shifting from neutral to drive or reverse.
- \* Failure to shift during normal acceleration.
- \* Slippage during acceleration. The engine speeds up, but the vehicle does not respond.