

# AUTOMATIC TRANSMISSION EXPLANATIONS

---

## OIL CONDITION

### **Oil Condition = Oxidation/Nitration or Coolant**

Varnish is formed when air is mixed with hot fluid in your transmission. You should change your fluid on a regular schedule to avoid varnish build-up. High **Oxidation** and **Nitration** (*Acid build-up*) are signs of going too long between fluid changes or over heating the transmission. Varnish can plug fluid passages and cause poor shifting, slipping, and can lead to early transmission failure. High **Nitration** is corrosive to transmission parts.

### **Coolant Contamination = Potassium + Sodium (Glycol or water)**

Your automatic transmission has a transmission oil cooler in the radiator. This helps keep the transmission at the proper operating temperature. Antifreeze (**Glycol**) can gain entrance through a defective transmission cooler. Catching this problem early can save a major repair bill or transmission replacement. In rare instances, if antifreeze (**Glycol**) *ONLY* is detected and there is *NO Potassium plus Sodium*, then an oil additive may cause a false positive antifreeze or **Glycol** reading. **Potassium** alone may be part of an oil additive.

### **Water Contamination = Water in oil**

Low levels of **Water** can come from condensation caused by short drives or from a defective transmission cooler when there is **Water** only (*no antifreeze*) in the radiator. Servicing your transmission fluid and doing further diagnostics are suggested to locate the source of the contamination. Abnormal levels of **Water** could come in from an outside source such as being in a flood.

### **Transmission Fluid = Wear or Contamination**

The useful life of oil has reached its end due to the presence of wear metal contamination. This may be caused by incoming dirt, overheating, restricted lubrication, coolant contamination or going too long between transmission services which can cause varnish build-up. *On new (under 30,000 miles) or recently rebuilt transmissions, it is normal for break-in material to be found. Check with your servicing dealer for service suggestions.*