

## **About Emissions Failures:**

The Vehicle Inspection Report (VIR), provided by the emissions inspection station, could indicate that your vehicle failed for excessive tail pipe emissions.

High Carbon Monoxide (CO) Readings - occur when the air/fuel mixture is too rich. This is caused by too much fuel being introduced into the engine or not enough air is available for complete combustion.

High Hydrocarbons (HC) Readings - result from unburned fuel. Typically this is caused by an engine misfire.

If your vehicle failed the OBD II test, please ask your inspection station representative for a pamphlet explaining **(A New Way to Test Vehicle Emissions). OBD II**

Proper repair and maintenance of your vehicle to pass an emission test will not only reduce emissions, but will usually result in improved performance, better gas mileage and longer vehicle life.

In addition, there are seven (7) visual equipment inspection requirements that may apply to your vehicle. Failing any one of these visual inspection components will cause your vehicle to fail the emissions test. Listed below are five components, along with their impact on tail pipe emissions.

### **Catalytic Converter (CAT)**

A chamber built into your vehicle's exhaust system designed to break down tailpipe emissions through a catalytic (chemical) reaction. The catalytic converter reduces carbon monoxide, hydrocarbons and oxides of nitrogen tailpipe pollutants, and is critical for vehicle emissions control.

### **Air Injection System (AIR)**

The air injection system introduces oxygen into a vehicles exhaust system to help burn pollutants. It primarily impacts HC and CO readings, the pollutants tested for in Utah County.

### **Exhaust Gas Reticulation Valve (EGR)**

This system introduces a predetermined amount of exhaust gas back into the intake system reducing NOX emissions by reducing combustion temperatures some vehicles are able to accomplish this with computer controlled or variable valve timing and do not have an EGR valve.

### **Evaporative System (EVAP)**

The evap. system allows for proper fuel ventilation while preventing fuel vapors from reaching the atmosphere. The vapors must be caught and stored while the engine is off, which is when most fuel evaporation occurs. When the engine is started, these vapors can be removed from storage and burned. In most

systems, storage is provided by an activated charcoal or (carbon canister)

### **Positive Crankcase Ventilation (PCV)**

The PCV system is designed to keep crankcase vapors from reaching the atmosphere, by using intake manifold vacuum to draw vapors from the crankcase and create a positive air flow through the engine while it is running, the vapors mix with the intake air and are sent to the combustion chambers for burning.

### **Gas Cap**

The fuel cap is there as part of the EVAP system to keep fuel vapors from reaching the atmosphere after refueling. Most filler caps since 1991 have a pressure and vacuum relief valve to vent excessive pressure to the atmosphere in extreme conditions.

### **Malfunction Indicator Lamp (MIL)**

The malfunction indicator light, on all OBDII vehicles is to alert the operator, of an emissions system malfunction and to remind them to get the vehicle in for service as soon as possible. **A flashing MIL** means the vehicle needs immediate service, or damage to the emissions control systems will occur.