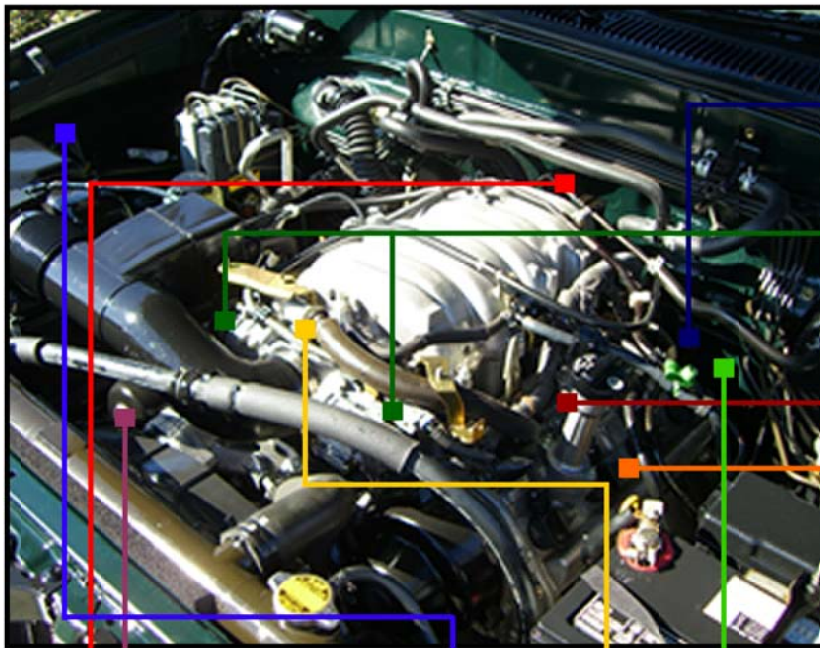
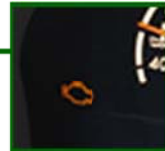


Top Reasons for Smog Check Failures



Oxygen Sensor

The Oxygen Sensor is responsible for delivering data to the ECU relating to the oxygen content in the exhaust stream. The ECU will determine how much fuel to send the combustion chambers based on this data. A faulty oxygen sensor will alter fuel delivery, resulting in increased emissions.



Check Engine Light

An illuminated Check Engine Light will cause an automatic smog check failure. Defective ECU (engine control unit) sensors such as the throttle position sensor (TPS), engine coolant temperature sensor (ECT) and manifold absolute pressure sensor (MAP) may illuminate the Check Engine Light.



Fuel Injection/Carb

A faulty carburetor or defective fuel injector/s (depending on which an engine is equipped with) may deliver either too much or inadequate fuel to the combustion chambers. Dirty fuel injector/s may restrict adequate fuel flow, causing lean fuel mixtures. Carburetors may develop similar faults.



Ignition/Spark Plugs

An engine's ignition system consists of ignition coils, distributor*, distributor cap/rotor*, ignition wires, and spark plugs. If any of these components have severe carbon build up, fuel will not ignite properly, leaving behind high HC and CO. *Electronic control ignitions may not have these components.



EGR System

The exhaust gas recirculation system is designed to route a small amount of partially inert exhaust gas into the intake manifold. This function lowers combustion temperatures, reducing NOx.



EVAP System

The evaporative control system stores gas tank vapors in a charcoal canister until needed by the engine and routed to the intake manifold. An EVAP fault may disturb air/fuel ratio.



PCV Valve/Hose

The fuel combustion process produces corrosive gases. High pressure during an engine's power stroke forces some of these gases past the piston rings, causing them to mix with engine oil. The PCV system routes these harmful gases to the intake manifold. A defective PCV may cause vacuum leaks.



Gas Cap

A vehicle's gas cap and filler neck are inspected during the smog test. They will have to be of proper fit and design. The gas cap must be able to hold pressure at factory specifications. This test is to insure harmful fumes are not released from the vehicle's gas tank.



Air Injection

The air injection system (AIS) delivers air to an engine's exhaust as it exits the exhaust manifold. Adding oxygen increases exhaust temperatures, promoting thorough combustion.



Catalytic Converter

The catalytic converter is a device installed between an engine's exhaust manifold and muffler, designed to significantly reduce HC, CO, and NOx emissions. A catalyst within the CAT rapidly increases exhaust temperatures, burning off harmful emissions. A defective CAT may cause a smog check failure.

HC - Hydrocarbon Faults

- Incorrect Ignition Timing
- Faulty Spark Plugs and/or Wires
- Lean Fuel Mixtures
- Vacuum Leaks
- Low Cylinder Compression

CO - Carbon Monoxide Faults

- Faulty Oxygen Sensor/s
- Defective MAP Sensor
- Defective TPS Sensor
- Defective ECT Sensor
- Faulty Fuel Injection/Carburetor

NOx - Nitrous Oxide Faults

- Defective EGR System
- Lean Fuel Mixtures
- Overheating Engine
- High Cylinder Compression
- Defective Catalytic Converter

Note: The emissions faults described above will vary based on vehicle make/model. Vehicles may experience emissions failures described above due to components not listed, and/or components listed in different failure categories. This guide is not intended to replace a hands-on diagnosis.

SmogTips.com™

"California's Leading Smog Check Support Group"

Smog Check Coupons & Support Online

www.smogtips.com 1.877.766.TIPS