

Module 31

Catalyst Monitor

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PGMFI Training Modules

- The PGMFI System Overview—Part 1
- The PGMFI System Overview—Part 2
- PGMFI Flash Type DTCs
- Inputs / Outputs—Part 1
- Inputs / Outputs—Part 2
- Engine Control Module
- Air Flow / MAP Sensor—Base Inj Pulse Width
- Fuel Delivery System
- Closed Loop Strategies—Theory
- Closed Loop Strategies—Case Studies
- Thermistor Inputs
- Throttle Position Sensor
- EGR Valve Lift Sensor
- MAP / BARO Sensor
- Ignition Inputs
- Vehicle Speed Sensor
- Oxygen Sensor
- Lean Air Fuel Sensor
- Miscellaneous Input Signals
- Fuel Injectors—Multi-Port Injection
- Fuel Injectors—Dual Point Injection
- Ignition System—Outputs
- Idle Air Control Valve

OBD-II Training Modules

- On Board Diagnostics—General Overview
- Diagnostic Trouble Codes
- MIL / Freeze Frame
- Scan Tool
- Scan Tool—Advanced
- Monitor Tests—Overview
- Comprehensive Component Monitor
- Catalyst Monitor
- EGR Monitor
- Evaporative Monitor
- Fuel System Monitor
- Misfire Monitor
- Oxygen Sensor Monitor
- Oxygen Sensor Heater Monitor
- "P" Codes

Miscellaneous Training Material

- Glossary of Terms

31 Catalyst Monitor

Run:	Once-Per-Trip
Enable Criteria:	<ol style="list-style-type: none"> 1. Start the engine and allow it to warm up 2. Drive the vehicle at 40-55 mph for at least 2 minutes 3. Decelerate for over 3 seconds with the throttle closed - Do not touch the brakes or clutch. 4. Reduce the speed to 35 mph and maintain this speed until the monitor runs.
DTC	<p>A diagnostic trouble codes (DTC) generated from this monitor is stored on the third malfunction during a consecutive trip.</p> <p>All DTCs set from this monitor are standard priority within the freeze frame writing strategy. A freeze frame written by one of these DTCs can only be over written by a high priority DTC, not another standard priority DTC.</p>
MIL Info	<p>Illumination The malfunction indicator light (MIL) is illuminated when a third DTC is stored.</p> <p>Extinguishing The MIL is extinguished after three trips without a malfunction reoccurring.</p>
General Info:	<p>The ECM/PCM checks catalyst efficiency by comparing the signals from the primary and secondary O2 sensors.</p> <p>If a catalytic converter DTC has been set follow this diagnostic procedure:</p> <ol style="list-style-type: none"> 1. With the car fully warmed and catalyst at operating temperature check the secondary O2 sensor voltage. 2. If the voltage is steady and between .5 and .8 volts the catalyst is operating normally. If the voltage is varying and below .5 volts, go to step 3. 3. Measure the converter inlet and outlet temperature. 4. If the outlet is not at least 100° F hotter than the inlet replace the converter. If it is 100° F or more than the inlet go to step 5. 5. On deceleration (during fuel cut) the secondary O2 sensor voltage should drop to .1 volt or less. If the voltage does not drop to this point, replace the converter.

<i>DTCs Generated by the Catalyst Monitor</i>			
OBD Code	MIL Flash	Trips	Description
P0420	67	3	Catalyst system efficiency below threshold