

Module 30

Comprehensive Component 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

30 Comprehensive Component Monitoring

Run:	Continuously
Enable Criteria:	None
DTC Info	<p>Most diagnostic trouble codes (DTC)s generated from this monitor are stored on the first malfunction. A few do require multiple malfunctions on consecutive trips.</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 DTC is stored in the ECM/PCM.</p> <p>Extinguishing The MIL is extinguished after 3 trips without the malfunction re-occurring.</p>
General Info:	<p>This monitor includes the entire sensor monitoring responsibilities of the OBD-I systems. The monitor runs continuously and the DTCs generated can require multiple trip malfunctions, but most are single trip malfunction DTCs.</p> <p>Input Checks This monitor checks all inputs for lack of circuit continuity and out of range values. The inputs are also checked for rationality. If an input is irrational as it relates to other input information it could set a DTC. Any DTC description that ends in "Lower / Higher Than Expected" is reporting an irrational input.</p> <p>Output Checks This monitor must check output components for a proper functional response. The preferred way to do this is to watch for expected changes in inputs when an output is activated. In cases where this is not feasible, the circuit should be checked for proper circuit continuity and out of range values.</p> <p>Idle Control System Check The idle control system is monitored for proper response to engine control module (ECM) commands. If the idle control system cannot maintain the idle speed to within +200 and -100 of the target idle speed in a specified amount of time, a DTC will set</p>

Time to Closed Loop Check

OBD-II regulations require that a DTC be set if a vehicle takes too long to enter into the closed loop (CL) mode. The time is not to exceed 2 minutes if the car is started at or above 50 deg F and 5 minutes if started at or above 20 deg F but below 50 deg F. Manufacturers can submit a request to CARB to disable this check below 20 deg F. Most do and most are allowed to do this.

Note: I have yet to see a DTC that would indicate a too long to CL situation in the Honda service manuals. The code may be programmed into the Honda ECM's but just not included in the service manuals. The SAE defined DTC for this is P0125 - Insufficient Coolant Temp for Closed Loop Operation.

<i>DTCs Generated by the Comprehensive Component Monitor Note: Not Every DTC is Used on All Hondas</i>			
OBD Code	MIL Code	Trips	Description
P0106	5	2	MAP Circuit - Range / Performance
P0107	3	1	MAP Circuit - Low Input
P0108	3	1	MAP Circuit - High Input
P1128	5	?	MAP Lower Than Expected
P1129	5	?	MAP Higher Than Expected
P0111	10	?	IAT Circuit - Range / Performance Problem
P0112	10	1	IAT Circuit - Low Input
P0113	10	1	IAT Circuit - High Input
P0116	86	2	ECT - Range Performance Problem
P0117	6	1	ECT Circuit - Low Input
P0118	6	1	ECT Circuit - High Input
P0122	7	1	TP Sensor - Low Input
P0123	7	1	TP Sensor - High Input
P1121	7	?	TP Sensor - Lower Than Expected
P1122	7	?	TP Sensor - Higher Than Expected
P0325	23	2	Knock Sensor Circuit - Malfunction
P0335	4	2	Crankshaft Position Sensor - Malfunction
P0336	4	2	Crankshaft Position Sensor - Range/Performance
P0452	91	1	Fuel Tank Pressure Sensor Circuit -Low Input
P0453	91	1	Fuel Tank Pressure Sensor Circuit - High Input
P0500	17	1	VS S Circuit - Malfunction (MT)

P0501	17	2	VSS Circuit - Malfunction (AT)
P0505	14	2	Idle Control System Malfunction
P1106	13	?	BARO Circuit - Range / Performance Problem
P1107	13	1	BARO Circuit - Low Input
P1108	13	1	BARO Circuit - High Input
P1253	21	1	VTEC System Malfunction
P1257	22	?	VTEC System Malfunction
P1258	22	?	VTEC System Malfunction
P1259	22	2	VTEC System Malfunction
P1297	20	1	Electrical Load Detector Circuit - Low Input
P1298	20	1	Electrical Load Detector Circuit - High Input
P1336	54	1	Crankshaft Speed Fluctuation Sensor - Intermittent
P1337	54	1	Crankshaft Speed Fluctuation Sensor - No Signal
P1359	8	1	Top Dead Center Sensor - Connector Disconnection
P1361	8	1	Top Dead Center Sensor - Intermittent Interruption
P1362	8	1	Top Dead Center Sensor - No Signal
P1366	58	1	Top Dead Center Sensor (Bank 2) - Intermittent
P1367	58	1	Top Dead Center Sensor (Bank2) - No Signal
P1381	9	1	Cylinder Position Sensor - Intermittent Interruption
P1382	9	1	Cylinder Position Sensor - No Signal
P1508	14	1	Idle Air Control Valve Circuit - Failure
P1519	14	1	Idle Air Control Valve Circuit - Failure
P1498	12	1	EGR Valve Lift - High Voltage
P1607	N/A	1	ECM/PCM Internal Circuit Failure "A"