

Module 32

EGR 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

32 EGR 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 second 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 second DTC is stored.</p> <p>Extinguishing The MIL is extinguished after three trips without a malfunction reoccurring.</p>
General Info:	<p>If a car is equipped with an exhaust gas recirculation (EGR) system, OBD-II regulations require that it be monitored. The EGR valve must be tested once-per-trip for proper lift. The EGR system exhaust gas flow must be checked once-per-trip for proper flow.</p> <p>As you can see from looking at the enabling criteria, Honda does its EGR checks during deceleration. This keeps the test from affecting driveability.</p> <p>When the EGR monitor is activated, the EGR valve is lifted and the EGR lift sensor voltage is compared to expected values. If the actual EGR lift sensor voltage is not within a normal range the DTC, P1491 - EGR Valve Lift - Insufficient is recorded as a pending DTC or a stored DTC.</p> <p>The EGR monitor then checks for proper gas flow by monitoring the affects the opening of the EGR Valve had on the <u>manifold</u> absolute pressure (MAP) sensor input voltage. If the response is not within a normal range, the DTC P0401 - Insufficient Flow Detected is recorded as a pending DTC or a stored DTC.</p>

<i>DTCs Generated by the EGR Monitor</i>			
OBD Code	MIL Flash	Trips	Description
P0401	80	2	EGR - Insufficient Flow Detected
P1491	12	2	EGR Valve - Insufficient Lift