



Service Bulletin

PRELIMINARY INFORMATION

Subject: Diagnostic Tips For Malfunction Indicator Lamp (MIL) Intermittently Illuminated, DTCs P013B, P013D, P167E, P0171 or P0174 Set

Models: 2013-2015 Chevrolet Silverado 2500/3500
2013-2015 GMC Sierra 2500/3500
Equipped with V8, 6.0L Bi-Fuel Gasoline/Compressed Natural Gas (CNG) Engine — RPO LC8

Condition/Concern

Some customers may comment that the malfunction indicator lamp (MIL) will intermittently illuminate. They may also comment that they are unable to switch the fuel mode from gasoline to CNG.

Upon inspection, the Technician may observe on a scan tool DTC P013B, P013D, P167E, P0171 or P0174 set as Current or in History.

Recommendation/Instructions

DTC Descriptors

- **DTC P013B: HO2S Slow Response Lean to Rich Bank 1 Sensor 2**

The ECM increases the fuel delivery to the CNG fuel system and then monitors the response of the heated oxygen sensor to the change. DTC P013B will set when the ECM detects that the HO2S Bank 1 Sensor 2 has a slow response when the accumulated mass air flow (MAF) monitored during lean-to-rich transitions between 350–650 mV is greater than a calibrated value.

- **DTC P013D: HO2S Slow Response Lean to Rich Bank 2 Sensor 2**

The ECM increases the fuel delivery to the CNG fuel system and then monitors the response of the heated oxygen sensor to the change. DTC P013D will set when the ECM detects that the HO2S Bank 2 Sensor 2 has a slow response when the accumulated mass air flow (MAF) monitored during lean-to-rich transitions between 350–650 mV is greater than a calibrated value.

- **DTC P167E: Engine Control Module (ECM) Requested Fuel Injector Control Module Failure Record**

DTC P167E is set by the CNG control module to inform the Technician that the engine was operating on CNG when an emissions related DTC was set in the engine control module (ECM). When the ECM sets the emissions related DTC, the ECM commands the MIL ON. The illumination of the MIL causes the CNG control module to set DTC P167E and to switch the fuel mode from CNG to gasoline.

- **DTC P0171: Fuel Trim System Lean Bank 1**

A positive fuel trim parameter value indicates that the ECM is adding fuel in order to compensate for a lean condition. A negative fuel trim parameter value indicates that the ECM is reducing the amount of fuel in order to compensate for a rich condition. DTC P0171 will set when the average long term fuel trim weighted average value is greater than a calibrated value.

- **DTC P0174: Fuel Trim System Lean Bank 2**

A positive fuel trim parameter value indicates that the ECM is adding fuel in order to compensate for a lean condition. A negative fuel trim parameter value indicates that the ECM is reducing the amount of fuel in order to compensate for a rich condition. DTC P0174 will set when the average long term fuel trim weighted average value is greater than a calibrated value.

1. Perform the Diagnostic System Check - Vehicle.
 - ⇒ If DTCs P013B, P013D, P167E, P0171 or P0174 are set, Go to Step 2.
 - ⇒ If any other DTCs are set, Go to Diagnostic Trouble Code (DTC) List - Vehicle.
2. Follow the diagnostic procedures for the DTC or DTCs that are set in SI.
 - ⇒ If no trouble is found, **DO NOT** replace any parts in an attempt to correct the intermittent condition and the intermittent MIL. Go to Step 3.
3. Clear any DTCs.
4. Start the engine and press the fuel selector switch for **gasoline** mode.
5. Allow the engine to reach normal operating temperature.
6. With the engine running, observe the HO2S parameters for Bank 1 Sensor 2 and Bank 2 Sensor 2 with a scan tool. The HO2S parameter values should vary from approximately 40 mV to approximately 900 mV, and respond to fueling changes.
 - ⇒ If the HO2S parameter values vary from approximately 40 mV to approximately 900 mV, and respond to fueling changes, Go to Step 7.
 - ⇒ If the HO2S parameter values do not vary from approximately 40 mV to approximately 900 mV, and do not respond to fueling changes, refer to the diagnostic procedures for DTCs P013B and/or P013D in SI. If no trouble is found, Go to Step 7.
7. With the engine running, observe the Short Term Fuel Trim parameter and the Long Term Fuel Trim parameter. The parameters should be between +10 and -10 % with 0 % being the optimum.
 - ⇒ If the Short Term Fuel Trim parameter and the Long Term Fuel Trim parameter are between +10 and -10 %, Go to Step 8.
 - ⇒ If the Short Term Fuel Trim parameter and the Long Term Fuel Trim parameter are not between +10 and -10 %, refer to the diagnostic procedures for DTCs P0171 and/or P0174 in SI. If no trouble is found, then Go to Step 8.
8. Advise the customer that if the MIL continues to intermittently illuminate, the vehicle can be driven in gasoline mode and the MIL will clear when the Conditions for Clearing the DTC have been met.

Refer to the Customer Information statement in this Bulletin.

Customer Information

Please communicate to the customer that we apologize for this inconvenience and that General Motors is working on a solution for this Condition/Concern. Once a solution is available, this PI will be updated with additional details - allowing dealership personnel to contact the customer to schedule a service appointment and repair the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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