



Preliminary Information

PIT5994 Diagnostic Tip for Reduced or Low Engine Power on Acceleration

Product Investigation Review Required

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Buick	Regal	2012 - 2020	All	All	All	All Automatic
Chevrolet	Cruze	2012 - 2019	All	All	All	All Automatic
Chevrolet	Equinox	2012 - 2023	All	All	All	All Automatic
Chevrolet	Malibu	2012 - 2023	All	All	All	All Automatic
GMC	Terrain	2012 - 2023	All	All	All	All Automatic

Involved Region or Country	North America
Condition	Some customers may comment that the vehicle has a low or reduced engine power under acceleration with no driver information messages. Technician may find DTC's P057B, P057C and/or P057E set as a history code.
Cause	This issue may be caused by an incorrect Brake Pedal Position (BPP) sensor input to the ECM. If the ECM is reading that the brake pedal is being applied, when it is not, can cause this issue to occur.

Correction:

To view the BPP data in the ECM, use the scan tool to build the vehicle as follows:

Tech 2 (2013 and older models): Powertrain > Select Engine Type > Engine Control Module > Data Display > Automatic Transmission Data

GDS2 (2014 and newer models): Module Diagnostics > Engine Control Module > Data Display > Automatic Transmission Data

Once the correct data list has been entered, scroll down, and view the parameters listed below.

These parameters can help determine what value the ECM has learned for the brake pedal learned released voltage and what the actual BPP voltage is according to the ECM.

With the brake pedal released, the actual "BPP Sensor" voltage should equal, or be very close to what the "BPP Sensor Learned Released Position" voltage is.

BPP Sensor (%) = 0% to 100% (should read "0%" with brake pedal released)

BPP Sensor (Voltage) = Voltage (typical voltage with pedal released is approximately 1 volt +/- .3 volt)

BPP Sensor Learned Released Position = Voltage (should equal the BPP sensor voltage with pedal released)

When the ECM has learned the BPP sensor learned released position voltage, this voltage should not change.

The ECM will continuously monitor this voltage for a lower-than-expected value.

If there is a condition with the wiring, a connection issue or internal issue with the BPP sensor that would cause the ECM to see a lower value, then the ECM will learn the lower value as the new learned released position.

When the faulted condition is no longer present and the BPP voltage returns to the previous learned voltage, the ECM will interrupt this as the brake is applied. BPP apply (%) will be greater than 0.

If it is suspected that the before mentioned condition exists, turning off the traction control or performing an ECM BPP learn will temporarily correct the reduced engine power concern.

Any condition that can cause a loss of or lower than expected voltage on the 5v reference to the BPP sensor or signal return circuit to the ECM such as; short to ground, terminal fretting or an intermittent open in the circuits, will need to be addressed.

Version History

Version	1
Modified	03/23/2023 - Created on.



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