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2009 CHEVROLET Silverado 1500 Regular Cab OEM Service and Repair Workshop Manual

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• If between 4.8–5.2 V

5. Verify the scan tool CPP Sensor voltage parameter is less than 0.1 V.

• If 0.1 V or greater

- 1. Ignition OFF, disconnect the X1 harness connector at the K20 Engine Control Module, Ignition ON.
- 2. Test for less than 1 V between the signal circuit terminal B and ground.
 - If 1 V or greater, repair the short to voltage on the circuit.
 - If less than 1 V, replace the K20 Engine Control Module.

• If less than 0.1 V

- 6. Install a 3 A fused jumper wire between the signal circuit terminal B and the 5 V reference circuit terminal C.
- 7. Verify the scan tool CPP Sensor voltage parameter is greater than 4.9 V.

• If 4.9 V or less

- 1. Ignition OFF, remove the jumper wire, disconnect the X1 harness connector at the K20 Engine Control Module.
- 2. Test for infinite resistance between the signal circuit terminal B and ground.
 - If less than infinite resistance, repair the short to ground on the circuit.
 - If infinite resistance
- 3. Test for less than 2 Ω in the signal circuit end to end.
 - If 2 Ω or greater, repair the open/high resistance in the circuit.
 - If less than 2 Ω , replace the K20 Engine Control Module.

• If greater than 4.9 V

8. Test or replace the B25B Clutch Pedal Position Sensor.

Component Testing

Static Test

- 1. Ignition OFF, disconnect the harness connector of the B25B Clutch Pedal Position Sensor.
- 2. Measure the resistance between the signal terminal B and the low reference terminal A at the B25B Clutch Pedal Position Sensor. Depress the clutch pedal through the entire range. The resistance should

YOUR CURRENT VEHICLE

DTC P080A

DTC P080A

Diagnostic Instructions

- Perform the Diagnostic System Check Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

DTC Descriptor

DTC P080A Clutch Pedal Position (CPP) Not Learned

Circuit/System Description

The clutch pedal position (CPP) is a 3-wire sensor, connected to a 5 V reference circuit, a low reference circuit, and a signal circuit. The engine control module supplies 5 V to the CPP sensor, and also provides a sensor ground path on the low reference circuit. The CPP sensor sends a voltage signal to the ECM on the signal circuit. The voltage on the signal circuit will vary from a voltage near 4 V when the clutch pedal is released to a voltage near 1 V when the clutch pedal is applied.

Conditions for Running the DTC

Ignition is ON.

Conditions for Setting the DTC

CPP sensor learned apply position not learned.

- 3. Perform the clutch pedal position sensor learn procedure.
 - **If the clutch pedal position sensor learn was not successful** Refer to Circuit/System Testing.
 - If the clutch pedal position sensor learn was successful
- 4. Ignition ON.
- 5. Verify DTC P080A ran and passed this ignition cycle. Operate the vehicle within the conditions for running the DTC. You may also operate the vehicle within the conditions that you observed from the Freeze Frame/Failure Records.
 - $\circ~$ If the scan tool indicates DTC P080A failed

Refer to Circuit/System Testing.

- If the scan tool indicates DTC P080A ran and passed this ignition cycle
- 6. All OK.

Circuit/System Testing

- 1. Verify the clutch pedal is not loose and is properly torqued. Refer to Clutch Pedal Replacement.
 - If a condition is found with the clutch pedal

Repair or replace as necessary.

- If no condition is found with the clutch pedal
- 2. Replace the K20 Engine Control Module.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the diagnostic procedure.

- Clutch Pedal Position Learn
- Control Module References for ECM replacement, setup and programming

• P17A2 runs continuously when the above conditions are met.

Conditions for Setting the DTC

The ECM detects excessive slipping of the clutch system if the measured gear ratio is greater than 108% of the actual gear ratio, and accumulated slip time is greater than 5 s within 10 km (6 mi).

Action Taken When the DTC Sets

- P17A2 is a Type C DTC.
- ECM will momentarily reduce engine torque.
- Driver information center (DIC) messages are displayed to alert the driver that engine performance has been reduced, use of the clutch needs to be reduced, and to service the transmission.

Conditions for Clearing the MIL/DTC

P17A2 is a Type C DTC.

Diagnostic Aids

- Excessive slipping of the clutch can occur if the system is overheated for example by vehicle launches with high engine speed and torque, an abusive customer behavior, or a defective/worn clutch system.
- The scan tool Distance Since Excessive Clutch Slip Detected parameter may aid in determining conditions of the last clutch slip event.
- A vehicle speed sensor/transmission output shaft speed sensor fault may cause DTC P17A2 to set.
- A vehicle speed sensor rotor that is loose on the output shaft may cause DTC P17A2 to set.

Reference Information

Schematic Reference

- Manual Transmission Schematics
- Engine Controls Schematics

Connector End View Reference

Component Connector End Views

Description and Operation