C0110 Pump Motor Circuit

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 C0110 00: Pump Motor Circuit

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	C0110 00	C0110 00	—	—
Ground	—	C0110 00	—	—

Circuit/System Description

The pump motor is an integral part of the brake pressure modulator valve (BPMV), while the pump motor relay is integral to the electronic brake control module (EBCM). The pump motor relay is not engaged during normal system operation. When the antilock brake system (ABS) or traction control system (TCS) operation is required the EBCM activates the pump motor relay and turns the pump motor ON.

Conditions for Running the DTC

- Ignition is ON.
- Initialization is complete.

Conditions for Setting the DTC

- The EBCM detects a short to ground or an open/high resistance on the B+ circuit.
- The EBCM detects an open/high resistance on the ground circuit.
- The EBCM detects the pump motor runs continuously.
- The EBCM detects the pump motor is binding or stalled.

Action Taken When the DTC Sets

- The EBCM disables the ABS/ traction control system (TCS)/ vehicle stability enhancement system (VSES) for the duration of the ignition cycle.
- The ABS indicator illuminates.
- The Red brake indicator illuminates.
- The Stability Control indicator illuminates.
- The driver information center (DIC) displays All Wheel Drive OFF, Service Stabilitrak and Service Traction Control messages.

Conditions for Clearing the DTC

- The condition for the DTC is no longer present and the ECE 13 response is completed by driving the vehicle at speeds greater than 15 km/h (10 mph) to complete the self test, and the EBCM will turn off the ABS indicator.
- The EBCM clears the history DTC when a current DTC is not detected in 100 consecutive drive cycles.

Reference Information

Schematic Reference

Antilock Brake System Schematics

Connector End View Reference

Component Connector End Views

Description and Operation

ABS Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information

Circuit Verification

Ignition ON, perform the Pump Motor Test with a scan tool and listen/feel the Pump Motor turn ON and OFF.

Circuit/System Testing

1). Ignition OFF, disconnect the harness connector at the EBCM.
2). Test for less than 1 ohm between the ground circuits listed below and ground.

- Terminal 38
- Terminal 13

If greater than the specified range, test the ground circuit for an open/high resistance.

3). Ignition ON, verify that a test lamp illuminates between the B+ circuits listed below and ground.

- Terminal 25
- Terminal 1

If the test lamp does not illuminate, test the B+ circuit for a short to ground or an open/high resistance. If the circuit tests normal and the B+ circuit fuse is open, replace the BPMV.

4). If all circuits test normal, replace the BPMV/EBCM assembly.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the diagnostic procedure.

- Brake Pressure Modulator Valve Replacement
- Control Module References forEBCM replacement, setup, and programming