

DTC B1517

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 Descriptors

DTC B1517 03: Battery Voltage Below Threshold – BCM

DTC B1517 07: Battery Voltage Above Threshold –BCM

DTC B1517 5A: Battery Voltage Plausibility Failure –BCM

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
B+	B1517 03, B1517 5A	B1517 03, B1517 5A	—	—
Ground	—	B1517 03, B1517 5A	—	—

Typical Scan Tool Data

Battery Voltage – BCM

Circuit	Short to Ground	Open	Short to Voltage
Operating Conditions: Ignition ON, Engine OFF. Parameter Normal Value: 12.60 Volts			
BCM B+	25.60 Volts	25.60 Volts	—

Batt. Voltage High Res. – BCM

Circuit	Short to Ground	Open	Short to Voltage
Operating Conditions: Ignition ON, Engine OFF. Parameter Normal Value: 12.600 Volts			
RVC B+	0.000 Volts	0.000 Volts	—

Circuit/System Description

The body control module (BCM) monitors the battery voltage to ensure that the voltage stays within the proper range. Damage to components, and incorrect data may occur when the voltage is out of range. The BCM monitors the vehicle system voltage on the following 2 B+ circuits:

- a) X3 terminal 3, supplied by the HVAC fuse.
- b) X4 terminal 10, supplied by the RVC SNSR fuse.

If the BCM detects the system voltage is outside an expected range, or if the two BCM battery sense circuits differ, DTC B1517 will set.

Conditions for Running the DTC**B1517 03, B1517 07**

The ignition is ON.

B1517 5A

The BCM is awake.

Conditions for Setting the DTC**B1517 03**

One of the following conditions exists for 15 seconds:

- a) The engine is OFF and the battery voltage is less than 11 volts.
- b) The engine is running and the battery voltage is less than 12 volts.

B1517 07

The battery voltage is greater than 16 volts for 15 seconds.

B1517 5A

The voltage on the two BCM battery sense circuits differ by 3 volts for 10 seconds.

Action Taken When the DTC Sets

- a) The charge indicator turns ON.
- b) The driver information center (DIC) displays the SERVICE BATTERY CHARGING SYSTEM warning message.

Conditions for Clearing the DTC

- a) DTC B1517 03 and B1517 07 will pass when the condition for setting the DTC is no longer present for 15 seconds.
- b) DTC B1517 5A will pass when the voltage on the two BCM battery sense circuits are within 0.5 volts of each other for 1 second.
- c) A history DTC will clear after 50 consecutive ignition cycles have occurred without a malfunction.

Diagnostic Aids

- a) A high or low voltage DTC in multiple modules indicates a concern in the charging system.
- b) This DTC may be set by overcharging with a battery charger, or jump by starting.

Circuit/System Verification

- 1) Engine running, accessories OFF, measure and record the battery voltage at the battery terminals. The voltage should be between 12.6 and 15.0 volts.
If not within the specified range, refer to Charging System Test (Acadia or Enclave) or Charging System Test (OUTLOOK).
- 2) Observe the scan tool BCM Battery Voltage parameter and the Batt. Voltage High Res. parameter. Both readings should be between 12.60 and 15.00 volts.

Circuit/System Testing

- 1) Ignition OFF, disconnect the harness connectors at the BCM.
- 2) Ignition OFF and scan tool disconnected, open and close the driver door, and wait 1 minute.
- 3) Test for less than 5 ohms between the ground circuit terminals listed below and ground.
 - a) Terminal 1 X3
 - b) Terminal 5 X3
 - c) Terminal 9 X4

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

- 4) Ignition ON, verify that a test lamp illuminates between the B+ circuit

terminals listed below and ground.

- a) Terminal 3 X3
- b) Terminal 10 X4

If the test lamp does not illuminate, test the appropriate B+ circuit for a short to ground

- 5) or an open/high resistance.
- 6) If all circuits test normal, replace the BCM.

LAUNCH