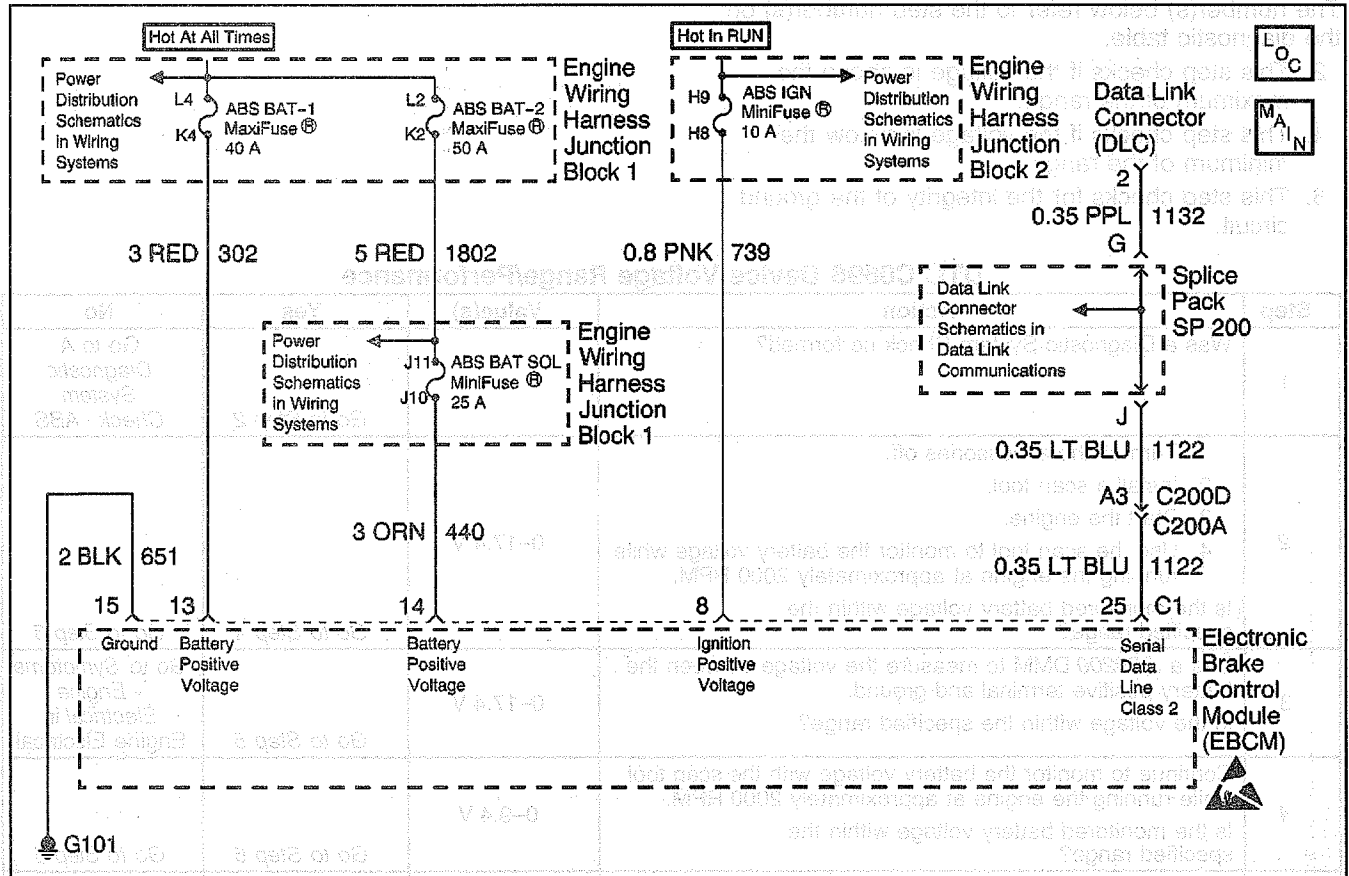


DTC C0896 Device Voltage Range/Performance



519691

**Circuit Description**

The EBCM is required to operate within a specified range of voltage to function properly. During ABS and TCS operation, there are current requirements that will cause the voltage to drop. Because of this, voltage is monitored out of ABS/TCS control to indicate a good charging system condition, and also during ABS/TCS control when voltage may drop significantly. The EBCM also monitors for high voltage conditions which could damage the EBCM.

**Conditions for Setting the DTC**

- The EBCM operating voltage falls below 9.4 volts out of ABS/TCS control, or 8.8 volts during ABS/TCS control.
- The EBCM operating voltage rises above 17.4 volts.
- The low voltage or the high voltage is detected for more than 500 milliseconds with the vehicle speed above 6 km/h (3.6 mph).

**Action Taken When the DTC Sets**

- A malfunction DTC is stored.
- The ABS and the Traction Control indicators are turned on.
- The ABS/TCS is disabled.
- The Red BRAKE Warning indicator turns on.

**Conditions for Clearing the DTC**

- The condition for the DTC is no longer present, the scan tool Clear DTCs function is used.
- 100 ignition cycles have passed with no DTCs detected.

**Diagnostic Aids**

- It is very important that a thorough inspection of the wiring and connectors be performed. Failure to carefully and fully inspect wiring and connectors may result in misdiagnosis, causing part replacement with reappearance of the malfunction.
- Thoroughly inspect any circuitry that may be causing the complaint for the following conditions:
  - Backed out terminals
  - Improper mating
  - Broken locks
  - Improperly formed or damaged terminals
  - Poor terminal-to-wiring connections
  - Physical damage to the wiring harness
- The following conditions may cause an intermittent malfunction:
  - A poor connection
  - Rubbed-through wire insulation
  - A broken wire inside the insulation
- If an intermittent malfunction exists refer to *Inducing Intermittent Fault Conditions* in Electrical Diagnosis for further diagnosis.

## Test Description

The number(s) below refer to the step number(s) on the diagnostic table.

2. This step checks if the voltage is above the maximum of the range.
4. This step checks if the voltage is below the minimum of the range.
6. This step checks for the integrity of the ground circuit.

## DTC C0896 Device Voltage Range/Performance

Step	Action	Value(s)	Yes	No
1	Was a Diagnostic System Check performed?	—	Go to Step 2	Go to A Diagnostic System Check - ABS
2	<ol style="list-style-type: none"> <li>1. Turn all the accessories off.</li> <li>2. Install a scan tool.</li> <li>3. Start the engine.</li> <li>4. Use the scan tool to monitor the battery voltage while running the engine at approximately 2000 RPM.</li> </ol> Is the monitored battery voltage within the specified range?	0–17.4 V	Go to Step 4	Go to Step 3
3	Use a <i>J 39200</i> DMM to measure the voltage between the battery positive terminal and ground. Is the voltage within the specified range?	0–17.4 V	Go to Step 5	Go to Symptoms - Engine Electrical in Engine Electrical
4	Continue to monitor the battery voltage with the scan tool while running the engine at approximately 2000 RPM. Is the monitored battery voltage within the specified range?	0–9.4 V	Go to Step 6	Go to Step 5
5	<ol style="list-style-type: none"> <li>1. Turn the ignition switch to the OFF position.</li> <li>2. Disconnect the scan tool if still connected.</li> <li>3. Test drive the vehicle above 6 km/h (3.5 mph).</li> </ol> Did DTC C0896 reset?	—	Go to Step 10	Go to A Diagnostic System Check - ABS
6	<ol style="list-style-type: none"> <li>1. Turn the ignition switch to the OFF position.</li> <li>2. Disconnect the EBCM connector C1.</li> <li>3. Install the <i>J 39700</i> Universal Pinout Box with the <i>J 39700-530</i> Cable Adapter to the EBCM harness connector C1 only.</li> <li>4. Use a <i>J 39200</i> DMM to measure the resistance between the <i>J 39700</i> terminal 15 and a good ground.</li> </ol> Is the resistance within the specified range?	0-5Ω	Go to Step 8	Go to Step 7
7	Repair open or high resistance in CKT 651. Refer to <i>Wiring Repairs</i> . Is the repair complete?	—	Go to A Diagnostic System Check - ABS	—
8	<ol style="list-style-type: none"> <li>1. Turn the ignition switch to the RUN position.</li> <li>2. Use a <i>J 39200</i> DMM to measure the voltage between the <i>J 39700</i> terminal 8 and 15.</li> </ol> Is the voltage within the specified range?	Above 9.4 Volts	Go to Step 9	Go to Symptoms - Engine Electrical in Engine Electrical
9	<ol style="list-style-type: none"> <li>1. Turn the ignition switch to the OFF position.</li> <li>2. Reconnect the EBCM connector C1.</li> <li>3. Disconnect the scan tool if the scan tool is still connected.</li> <li>4. Test drive the vehicle above 6 km/h (3.5 mph).</li> </ol> Did DTC C0896 reset?	—	Go to Step 10	Go to A Diagnostic System Check - ABS
10	Replace the EBCM. Refer to <i>Electronic Brake Control Module (EBCM) Replacement</i> . Is the repair complete?	—	Go to A Diagnostic System Check - ABS	—