C0870 This voltage is monitored by the EBCM for an over or under voltage condition

Circuit Description

The EBCM supplies voltage to the brake pressure sensor, steering angle sensor, and yaw rate/lateral accelerometer sensor. This voltage is monitored by the EBCM for an over or under voltage condition.

Conditions for Running the DTC

- The ignition is ON.
- Ignition voltage is greater than 8 volts.

Conditions for Setting the DTC

One of the follow conditions exists for 0.1 seconds:
- The sensor supply voltage is greater than 5.2 volts.
- The sensor supply voltage is less than 4.8 volts.

Action Taken When the DTC Sets

- The EBCM disables the VSES for the duration of the ignition cycle.
- ACC braking function disabled.
- TCS is degraded.
- The Traction Control and Active Handling indicator turns ON.
- The DIC displays the Service Active Handling message.

Conditions for Clearing the DTC

- The condition for the DTC is no longer present and the DTC is cleared with a scan tool.
- The electronic brake control module (EBCM) automatically clears the history DTC when a current DTC is not detected in 100 consecutive drive cycles.

Diagnostic Aids

The following conditions can cause this concern:
- The sensor supply circuit is open, shorted to ground, or shorted to battery.
- Internal sensor malfunction.
- Internal EBCM malfunction.

Test Description

The numbers below refer to the step numbers on the diagnostic table.
5. Tests for a short at the brake pressure sensor.
6. Tests for a short at the steering wheel position sensor.
7. Tests for a short at the yaw rate/lateral accelerometer sensor.

Step	Action	Values	Yes	No
Schematic Reference: ABS Schematics Connector End View Reference: ABS Connector End Views				
1	Did you perform the Diagnostic System Check – ABS?	—	Go to Step 2	Go to Diagnostic System Check -ABS
2	Test the 5-volt reference circuit from the EBCM for the following conditions: • An open • A short to ground • A high resistance Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	—	Go to Step 16	Go to Step 3
3	Test the 5-volt reference circuit from the EBCM for a short to voltage. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. Did you find and correct the condition?	—	Go to Step 16	Go to Step 4

Step	Action	Values	Yes	No
4	1. Turn OFF the ignition. 2. Disconnect the EBCM. 3. Install the J 39700 Universal Pinout Box with the J 39700-530 Cable Adapter between the EBCM and the EBCM harness connector. 4. Turn ON the ignition, with the engine OFF. 5. Using the DMM, measure the voltage between the 5 volt reference circuit and ground. Is the voltage within the specified value?	4.8–5.2 V	Go to Diagnostic Aids	Go to Step 5
5	1. Turn OFF the ignition. 2. Disconnect the brake pressure sensor. 3. Turn ON the ignition, with the engine OFF. 4. Using the DMM, measure the voltage between the 5 volt reference circuit and ground. Is the voltage within the specified value?	4.8–5.2 V	Go to Step 8	Go to Step 6
6	1. Turn OFF the ignition. 2. Disconnect the steering wheel position sensor connector 3. Turn ON the ignition, with the engine OFF. 4. Using the DMM, measure the voltage between the 5 volt reference circuit and ground. Is the voltage within the specified value?	4.8–5.2 V	Go to Step 9	Go to Step 7

Step	Action	Values	Yes	No
7	1. Turn OFF the ignition. 2. Disconnect the yaw rate/lateral accelerometer sensor connector 3. Turn ON the ignition, with the engine OFF. 4. Using the DMM, measure the voltage between the 5 volt reference circuit and ground. Is the voltage within the specified value?	4.8–5.2 V	Go to Step 10	Go to Step 11
8	Inspect for poor connections at the harness connector of the brake pressure sensor. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	—	Go to Step 16	Go to Step 12
9	Inspect for poor connections at the harness connector of the steering wheel position sensor. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	—	Go to Step 16	Go to Step 13
10	Inspect for poor connections at the harness connector of the yaw rate/lateral accelerometer sensor. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	—	Go to Step 16	Go to Step 14
11	Inspect for poor connections at the harness connector of the EBCM. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	—	Go to Step 16	Go to Step 15

Step	Action	Values	Yes	No
12	Replace the brake pressure sensor. Refer to Brake Fluid Pressure Sensor Replacement. Did you complete the repair?	—	Go to Step 16	—
13	Replace the steering wheel position sensor. Refer to Steering Wheel Position Sensor or Steering Shaft Lower Bearing Replacement in Steering Wheel and Column. Did you complete the repair?	—	Go to Step 16	—
14	Replace the yaw rate/lateral accelerometer sensor. Refer to Yaw Rate Sensor/Lateral Accelerometer Replacement. Did you complete the repair?	—	Go to Step 16	—
15	Replace the EBCM. Refer to Electronic Brake Control Module (EBCM) Replacement. Did you complete the repair?	—	Go to Step 16	—
16	1. Clear the DTCs using the scan tool. 2. Operate the vehicle within the Conditions for Running the DTC as specified in the supporting text. Does the DTC reset?	—	Go to Step 2	System OK