

# C0220-C0229 The EBCM microprocessor activates individual valve solenoids

## Circuit Description

The system relay is energized when the ignition is ON. The system relay supplies voltage to the valve relay. The EBCM activates the valve relay to supply voltage to the valve solenoids. This voltage is referred to as the system voltage. The EBCM microprocessor activates individual valve solenoids by grounding the valve solenoid control circuits.

## Conditions for Running the DTC

- The ignition is ON.
- The vehicle is experiencing an ABS event.

## Conditions for Setting the DTC

This code is set when the following criteria are met.

- The EBCM is commanding a valve solenoid to release brake pressure.
- The wheel that is commanded to release brake pressure has a speed below 5 km/h (3 mph) for 1.25 seconds.

## Action Taken When the DTC Sets

If equipped, the following actions occur.

- The EBCM disables ABS/TCS.
- ACC Braking is degraded.
- VSES is disabled.
- The ABS indicator turns ON.
- The traction off indicator turns ON.

## 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 solenoid valve circuit is internal to the EBCM. The solenoid valve circuit is not diagnosable external to the EBCM. The DTC sets when there is a malfunction in the solenoid circuit internal to the EBCM. Possible causes for this concern:

- Intermittent wheel speed sensor
- Wheel speed sensor is equal to 0 km/h (0 mph)
- Contaminated hydraulic unit

## Test Description

The number below refers to the step number on the diagnostic table.

2. Determines whether the DTC is current.

Step	Action	Yes	No
1	Did you perform the Diagnostic System Check – ABS?	Go to Step 2	Go to Diagnostic System Check -ABS
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. 3. Use the scan tool in order to clear the DTCs. 4. Use the scan tool to perform the Automated Test. Refer to Scan Tool Output Controls Does the DTC reset as a current DTC?	Go to Step 3	Go to Testing for Intermittent and Poor Connections in Wiring Systems
3	Replace the EBCM. Refer to Electronic Brake Control Module (EBCM) Replacement Did you complete the replacement?	Go to Step 4	—
4	1. Use the scan tool in order to clear the DTCs 2. With the scan tool, perform the Automated Test. Does the DTC reset?	Go to Step 3	System OK