DTC B2960

Circuit Description

The Passlock™ system is provided in order to prevent vehicle theft if the ignition lock cylinder is forced to rotate or the ignition switch is operated while separated from the ignition lock cylinder case. The body control module (BCM) provides security system sensor power and low reference for the Passlock™ sensor. The BCM also measures the security system sensor voltage.

When the correct key is used to start the vehicle, a magnet on the lock cylinder passes close to the Passlock™ sensor within the ignition lock cylinder case. The magnet activates the security hall effect sensor in the Passlock™ sensor which completes a circuit from the security sensor signal circuit through a resistor to the security sensor low reference circuit. The resistance value will vary from vehicle to vehicle. The BCM will measure the voltage on the security sensor signal circuit and compare this voltage to a previously learned voltage. If the voltage measured is within the valid range, the BCM will send a class 2 message to the powertrain control module (PCM) to enable vehicle starting. If the voltage measured is not within the valid range, a class 2 message will be sent to the PCM to disable starting of the vehicle.

DTC Descriptor

This diagnostic procedure supports the following DTC:

DTC B2960 Security System Sensor Data Incorrect But Valid

Conditions for Setting the DTC

- The BCM will inspect for a valid code when the ignition is rotated from ON to CRANK and will continue to monitor the signal during the engine running period.
- The BCM is reading a valid but different code value than previously learned form the Passlock™ sensor.

Action Taken When the DTC Sets

- The vehicle will not start if the fault occurs before you start the vehicle. The SECURITY indicator will be flashing.
- If the vehicle is running when the fault occurs, the BCM will be in the fail enable mode allowing the vehicle to start and run. The security indicator will be ON.

Conditions for Clearing the DTC

- The DTC will clear once an ignition cycle occurs without the fault recurring.
- The BCM history codes will clear once 100 concurrent ignition cycles occur without the fault recurring.
- Using a scan tool to clear DTCs.

Diagnostic Aids

- Use a scan tool in order to inspect the Passlock™ data voltage and the Passlock™ code.
- Inspect for poor connections at the Passlock™ sensor. Refer to Testing for Intermittent Conditions and Poor Connections in Wiring Systems.

Test Description

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

6. This step tests for the proper operation of the circuit in the normal voltage range.

Step	Action	Values	Yes	No
Schematic Reference: Theft Deterrent System Schematics *Connector End View Reference:* Theft Deterrent System Connector End Views				
1	Did you perform the Diagnostic System Check - Vehicle?	--	Go to Step 2	Go to Diagnostic System Check - Vehicle in Vehicle DTC Information
2	1. Install a scan tool. 2. Momentarily rotate the ignition switch to CRANK. Do not start the vehicle. 3. Release the ignition switch to ON. 4. Select the body control module (BCM) display DTCs function on the scan tool. Does the scan tool display DTC B2960 as a current DTC?	--	Go to Step 3	Go to Testing for Intermittent Conditions and Poor Connections in Wiring Systems
3	Does the scan tool display DTC B2947, B2948, B2957, or B2958?	--	Go to Diagnostic Trouble Code (DTC) List - Vehicle in Vehicle DTC Information	Go to Step 4
4	Have you replaced the Passlock™ sensor on this vehicle?	--	Go to Step 5	Go to Step 6
5	Have you performed a Passlock™ learn procedure after replacing the Passlock™ sensor?	--	Go to Step 6	Go to Step 9
6	With a scan tool, observe the Passlock™ data voltage for 1 minute. Does the scan tool indicate that the Passlock™ data voltage is changing more than the specified value?	±0.02 V	Go to Step 7	Go to Step 9

7	Inspect for poor connections at the Passlock™ sensor. Refer to Testing for Intermittent Conditions and Poor Connections and Connector Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 10	Go to Step 8
8	Replace the Passlock™ sensor in the ignition lock cylinder case. Refer to Ignition Lock Cylinder Case Replacement in Steering Wheel and Column. Did you complete the replacement?	--	Go to Step 9	--
9	Perform the Programming Theft Deterrent System Components procedure. Is the repair complete?	--	Go to Step 10	--
10	1. Use the scan tool in order to clear the DTCs. 2. Turn OFF the ignition. **Important** Do not start the vehicle. 3. Momentarily rotate the ignition switch to CRANK. 4. Release the ignition switch to ON. 5. Select the BCM display DTCs function on the scan tool. Does the DTC reset?	--	Go to Step 3	System OK