

Power Door Locks Inoperative

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.

Diagnostic Fault Information

Circuit	Short to Ground	Open/High Resistance	Short to Voltage	Signal Performance
Switch Side Supply Voltage Relay	1	1	--	--
Door Lock/Unlock Signal	2	2	2	--
Door Latch Control	1	1	1	--
Driver Door Lock Switch Ground	--	2	2	--
Passenger Front Door Lock Switch Ground	--	2	2	--
BCM Ground	--	1,2	1,2	--
1. Door Lock Malfunction				
2. Door Lock Switch Malfunction				

Circuit/System Description

The DR LCK fuse supplies battery positive voltage to the body control module BCM for the door lock system. The BCM supplies and monitors a reference voltage to the door lock switch through the door lock switch lock/unlock signal circuit. The door lock switch also receives a constant ground source. If a door lock switch is placed in the lock position, the reference voltage is taken directly to ground and the BCM senses 0.0 volts on the signal circuit. If a door lock switch is placed in the unlock position, the reference voltage is taken to ground through a 1.5k ohm resistor that is internal to the door lock switches and senses approximately 2.9 volts on the signal circuit. This is how the BCM determines what portion of the door lock switch was activated.

The BCM, upon receipt of a door lock switch lock or unlock signal, will switch the appropriate door lock actuator control circuits to battery positive voltage. The opposing side of the door lock actuators are connected to ground internally within the BCM through the other door lock actuator control circuit and the doors will lock or unlock appropriately.

Vehicles without keyless entry have two internal drivers in the BCM to control the door lock actuators. All door lock and all door unlock. Vehicles equipped with keyless entry have three internal drivers in the BCM. Driver door unlock, passenger door unlock and all door lock. This is done to isolate the driver door lock actuator so it can be unlocked by itself using the keyless entry transmitter.

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Reference Information

Schematic Reference

[Door Lock/Indicator Schematics](#)

Connector End View Reference

- [Vehicle Access Connector End Views](#)
- [Data Communication Connector End Views](#)

Description and Operation

[Power Door Locks Description and Operation](#)

Electrical Information Reference

- [Circuit Testing](#)
- [Connector Repairs](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

Scan Tool Reference

- [Scan Tool Output Controls](#)
- [Scan Tool Data List](#)
- [Scan Tool Data Definitions](#)

Circuit/System Verification

1. Ignition ON, observe the Door Lock switch parameter while pressing the appropriate Door Lock Switch. The reading should change between Lock and Unlock.
 - ⇒ If the reading does not change between commanded states, refer to Door Lock Switch Malfunction.
2. Ignition ON, command the Door Latch to Lock and Unlock with the scan tool, the door should Lock and Unlock.
 - ⇒ If the door does not Lock and Unlock when changing between commanded states, refer to Door Lock Malfunction.

Circuit/System Testing

Door Lock Switch Malfunction

1. Ignition OFF, disconnect the harness connector at the appropriate Door Lock Switch.
2. Ignition OFF, test for less than 1.0 ohm for resistance between the ground circuit terminal E and ground.
 - ⇒ If greater than the specified range, test the ground circuit for an open/high resistance.

3. Ignition ON, verify the scan tool Door Lock Switch is Idle.
 - ⇒ If not the specified value, test the signal circuit terminal A for a short to ground. If the circuit tests normal, replace the BCM.
4. Install a 3A fused jumper wire between the signal circuit terminal A and ground. Verify the scan tool Door Lock Switch is Lock or Unlock.
 - ⇒ If not the specified value, test the signal circuit for a short to voltage or an open/high resistance. If the circuit tests normal, replace the BCM.
5. If all circuits test normal, test or replace the applicable door lock switch.

Door Lock Malfunction

1. Ignition OFF, disconnect the harness connector C4 at the BCM.
2. Ignition OFF, test for less than 1.0 ohm of resistance between the ground circuit terminal E12 and ground.
 - ⇒ If greater than the specified range, test the ground circuit for an open/high resistance.
3. Ignition OFF, reconnect the harness connector C4 and disconnect the harness connector at the appropriate Door Latch.
4. Ignition OFF, test for less than 1.0 ohm of resistance between the control circuit terminal 2 and ground.
 - ⇒ If greater than the specified range, test the control circuit for a short to voltage or an open/high resistance. If circuits test normal, replace the BCM.
5. Ignition OFF, test for less than 1.0 ohm of resistance between the control circuit terminal 3 and ground.
 - ⇒ If greater than the specified range, test the control circuit for a short to voltage or an open/high resistance. If circuits test normal, replace the BCM.
6. Connect a test lamp between control circuit terminal 2 and control circuit terminal 3.
7. Ignition ON, command the Door Latch to LOCK and UNLOCK with a scan tool. The test lamp should turn ON when commanding the LOCK and UNLOCK states.
 - ⇒ If the test lamp remains OFF during either of the commands and the DR LCK fuse is good, test for a short to ground on either control circuit. If the circuits test normal, replace the BCM.
 - ⇒ If the test lamp is always OFF and the DR LCK fuse is open, test the control circuit for a short to ground. If the circuit tests normal, test or replace the Door Latch.
8. If all circuits test normal, test or replace the appropriate door latch.

Component Testing

Door Lock Switch Test

1. Ignition OFF, disconnect the harness connector at the applicable door lock switch.
2. Test for infinite resistance between the signal terminals A and the ground terminal E with the switch in the open position.
 - ⇒ If less than infinite resistance, replace the applicable door lock switch.
3. Test for less than 2 ohms of resistance between the signal terminal A and the ground terminal E with the switch in the lock position.
 - ⇒ If greater than 2 ohms, replace the applicable door lock switch.
4. Test for 1.4K-1.6K ohms of resistance between the signal terminal A and the ground terminal E with the switch in the unlock position.
 - ⇒ If greater or less than the specified range, replace the applicable door lock switch.

Door Lock Actuator Test

1. Install a 15A fused jumper wire between the control terminal 3 and 12 volts. Install a jumper wire between the ground terminal 2 and ground.
2. Verify the actuator turns ON & OFF.
 - ⇒ If the function does not perform as specified, replace the applicable door latch.

Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- [Door Lock Switch Replacement](#)
- [Front Side Door Lock Replacement](#)
- [Rear Door Lock Replacement](#)
- [Control Module References](#) for BCM replacement, setup, and programming