

&lt;- Back

Forward -&gt;

Document ID# 675859  
2004 Chevrolet Blazer - 4WD

Print

# Power Door Locks Description and Operation

## Door Lock System Components

The power door lock system consists of the following components:

- Left front door lock switch
- Right front door lock switch
- Endgate/liftgate lock cylinder switch (utilities only)
- Door lock relay
- Door unlock relay
- Driver door unlock relay
- Body Control Module (BCM)
- Reversible door lock actuators in each of the doors
- MIR/LOCK 3A fuse (switch supply voltage)
- PWR LKS15A fuse (relay supply voltage)

## Door Lock System Controls

The power door lock system can be controlled by any of the following:

- A power door lock or unlock switch activation
- A keyless entry transmission (if equipped)

## Driver and Passenger Door Lock Operation

When any of the door lock switches are placed in the lock position, voltage is applied to the door lock control circuit and the lock relay winding. Since the other side of the lock relay winding is connected to ground, the relay is energized. This causes the contacts to close and complete the path from the PWR LKS fuse through the battery voltage circuit. Voltage is then applied to the lock side of the door lock actuators. Since the other side of the passenger door lock actuator(s) are connected to the normally closed contacts of the unlock relay to ground and the driver door lock actuator is connected to the normally closed contacts of the driver door unlock relay to ground, the doors lock.

The lock function can also be accomplished by the BCM supplying voltage to the door lock control circuit by any of the following:

- A keyless entry lock transmission
- A delay lock function (utilities only)

## Driver Door Unlock Operation

The driver door unlock control circuit uses a dedicated driver door unlock relay. This is done so that the driver door may be unlocked by itself using a keyless entry unlock transmission. The driver door unlock

relay differs slightly from the unlock relay in that the coil side of the relay is connected to the PWR LKS fuse and the door unlock control circuit is pulled to ground by the BCM to energize the relay.

When any of the door lock switches are placed in the unlock position, a voltage is applied to the unlock relay and to the BCM. When the BCM senses the voltage signal, it grounds the driver door unlock control circuit. Since the other side of the driver door unlock relay winding is connected to the PWR LKS fuse through the battery voltage circuit, the relay is energized. This causes the contacts to close and complete the path from the PWR LKS fuse through the battery voltage circuit. Voltage is then applied to the unlock side of the driver door lock actuator. Since the other side of the driver door lock actuator is connected to the normally closed contacts of the lock relay to ground, the driver door unlocks.

The unlock function can also be accomplished by the BCM supplying voltage to the door lock control circuit during a keyless entry unlock transmission.

### Passenger Door Unlock Operation

When any of the door lock switches are placed in the unlock position, voltage is applied to the door unlock control circuit. The door unlock control circuit supplies voltage to the unlock relay winding and the BCM. Since the other side of the unlock relay winding is connected to battery voltage, the relay is energized. This causes the contacts to close and complete the path from the PWR LKS fuse through the battery voltage circuit. Voltage is then applied to the unlock side of the door lock actuators. Since the other side of the passenger(s) door lock actuators are connected to the normally closed contacts of the lock relay to ground, the doors unlock.

The unlock function can also be accomplished by the BCM supplying voltage to the door lock control circuit during a keyless entry unlock transmission.

### Lockout Prevention

This feature prevents the locking of the driver door if the ignition key is left in the ignition lock cylinder. If a lock function occurs from any door lock switch and the BCM senses an active state on either the left front door latch signal, secondary door latch switch signal and/or the lift gate ajar switch signal circuits and the key in ignition switch signal circuit is in the yes state, the BCM will cycle the door lock relay to lock the doors and then cycle the driver door unlock relay to unlock the driver door.

### Programmable Automatic Door Locks-Manual Transmission

The automatic door lock feature can be programmed to control the door lock system. The automatic door lock feature is factory programmed to have no doors lock or unlock. For detailed instructions on programming the automatic door locks, refer to in Personalization.

When the automatic door lock feature is programmed to control the door lock system, the BCM will lock the vehicle doors if the following inputs are true:

- Ignition 1 input is active.
- All door jamb switch inputs are inactive.
- Vehicle speed is greater than 24 km/h (15 mph) for 2 seconds.

This automatic door lock function will only occur once per ignition cycle unless, a door jamb switch input changes state to active and back to inactive. Then the BCM will lock all doors again.

Once the automatic door lock feature has locked the doors, the BCM will then unlock all the doors once the ignition key is removed from the ignition.

#### **Programmable Automatic Door Locks-Automatic Transmission**

The automatic door lock feature can be programmed to control the door lock system. The automatic door lock feature is factory programmed to have all doors lock and unlock. For detailed instructions on programming the automatic door locks, refer to in Personalization.

When the automatic door lock feature is programmed to control the door lock system, the BCM will lock the vehicle doors if the following inputs are true:

- Ignition 1 input is active.
- All door jamb switch inputs are inactive.
- Cargo door or lift gate/lift glass ajar inputs are inactive.
- Transmission is shifted out of park.

This automatic door lock function will only occur once per ignition cycle unless, a door jamb switch input changes state to active and back to inactive. Then the BCM will lock all doors again.

Once the automatic door lock feature has locked the doors, the BCM will then unlock all the doors when the transmission is shifted into park.

---

[<- Back](#)

[Forward ->](#)

**Document ID# 675859**  
**2004 Chevrolet Blazer - 4WD**

[Print](#)