

Description and Operation

System Operation

Battery Saver

The battery saver feature is use to save battery voltage. The BCM (body control module) provides automatic shut-off of the interior and exterior lamps after a time-out period when the ignition is off.

Battery Load Shed

The BCM uses the battery current sensor to keep track of the battery state of charge in order to save the remaining battery charge when necessary.

Transport Mode

During vehicle build, some modules (such as the IPC (instrument panel cluster) and the BCM) are set to factory mode. When the vehicle build is complete, the vehicle is set to transport mode.

Transport mode reduces the drain on the battery during longer periods when the vehicle is not used. Various system functions can be altered or disabled when in the transport mode. While in transport mode, the IPC displays TRANSPORT MODE CONTACT DEALER in the message center. Transport mode can be disabled and placed into normal operation mode.

Component Description

BCM

The BCM is a multifunction module that requires a PMI (programmable module installation) when replaced.

DSM (driver front seat module)

The driver seat control switch and power memory seat motors are hard-wired to the DSM. The DSM controls the operation of the power memory seat. The DSM communicates on the MS-CAN (medium speed-controller area network). The DSM hard stop/soft stops must be set/reset any time a new DSM, driver seat track or driver seat backrest is installed. The DSM requires PMI when replaced.

DDM (driver door module)

The DDM receives power window commands from the driver door window control switch through a LIN (local interconnect network). The DDM supplies voltage and ground to operate the driver door window regulator motor.

The DDM also communicates driver door window control switch requests to the Driver Rear Door Module through a LIN and to the PDM (passenger door module) through the MS-CAN.

For the power mirror function, the DDM controls the LH (left-hand) exterior mirror glass position by supplying voltage and ground to the LH exterior mirror motors based on inputs from the exterior mirror control switch. When the RH (right-hand) exterior mirror is selected, the DDM forwards the movement requests to the PDM through the MS-CAN. To control the heated mirror function, the DDM supplies voltage and ground to the LH exterior mirror glass heating element based on messages received from the FCIM (front controls interface module). For the memory mirror function, the DDM supplies voltage and ground to the LH mirror motor potentiometers. The DDM monitors the feedback from these potentiometers to determine the mirror glass position. Memory mirror positions are stored in the DDM memory.

PDM

For the power window function, the PDM receives power window commands from the passenger door window control switch or from the DDM through the MS-CAN. The PDM supplies voltage and ground to operate the passenger door window regulator motor.

The **PDM** also communicates driver door window control switch requests to the Passenger Rear Door Module (PRDM) through a **LIN**.

For the power mirror function, the **PDM** controls the **RH** exterior mirror glass position by supplying voltage and ground to the **RH** exterior mirror motors based on messages received from the **DDM**. To control the heated mirror function, the **PDM** supplies voltage and ground to the **RH** exterior mirror glass heating element based on messages received from the **FCIM**. For the memory mirror function, the **PDM** supplies voltage and ground to the **RH** mirror motor potentiometers. The **PDM** monitors the feedback from these potentiometers to determine the mirror glass position. Memory mirror positions are stored in the **PDM** memory.

Driver Rear Door Module

The Driver Rear Door Module receives power window commands from the **LH** rear window control switch or from the **DDM** through a private **LIN**. The Driver Rear Door Module supplies voltage and ground to operate the **LH** rear power window motor.

Passenger Rear Door Module

The Passenger Rear Door Module receives power window commands from the **RH** rear window control switch or from the **PDM** through a private **LIN**. The Passenger Rear Door Module supplies voltage and ground to operate the **RH** rear power window motor.

RTM (radio transceiver module)

The **RTM** communicates all **RKE (remote keyless entry)** and passive key information to the **BCM** over a K-Line circuit and (when the network is awake) the **CAN (controller area network)**. The **RTM** is an antenna that receives the high frequency signals from Integrated Keyhead Transmitters and passive keys. The **RTM** requires **PMI** when replaced.