The stability-traction control indicator informs the driver the stability-traction control system is active by flashing the indicator or that a fault condition exists by illuminating the indicator steady.

The IPC receives the stability-traction control indicator request message from the GWM over the HS-CAN3. The GWM receives the stability-traction control indicator request message from the ABS over the HS-CAN2.

Refer to ABS/Brake/Stability-Traction Control System Indication description for information on the conditions when the stability-traction control indicator (sliding car icon) is turned on.

Stability-Traction Control Disabled Indicator (Sliding Car OFF Icon)

When the driver enables or disables the stability-traction control system, the ABS module sends the stability-traction control disabled indicator request message to the GWM over the HS-CAN2. The GWM sends the stability-traction control disabled indicator request message to the IPC over the HS-CAN3 to illuminate or turn off the stability-traction control disabled indicator (sliding car OFF icon) based upon the system state.

Refer to ABS/Brake/Stability-Traction Control System Indication description for information on the conditions when the stability-traction control disabled indicator (sliding car OFF icon) is turned on.

When a MyKey ® administrator has set the AdvanceTrac ® feature to always on and a MyKey ® programmed key is in use, the stability-traction control system cannot be disabled. The menu selection in the message center used to disable the stability-traction control system does not display when a MyKey ® is in use, but remains active for the MyKey ® administrator to select the AdvanceTrac ® always on feature off. The stability-traction control indicator still functions normally to indicate a stability-traction control system fault and a stability-traction control active event.

Refer to ABS/Brake/Stability-Traction Control System Indication description for information on the conditions when the stability-traction control indicator (sliding car icon) is turned on.

TPMS Warning Indicator

The IPC receives the tire pressure warning indicator message from the GWM over the HS-CAN3. The GWM receives the tire pressure warning indicator message from the BCM over the HS-CAN1.

If the BCM determines the tire pressure has exceeded the low tire pressure limits, the tire pressure warning indicator request message is sent to the IPC to illuminate the TPMS warning indicator.

If a TPMS monitor or sensor fault condition exists, the BCM sends the tire pressure warning indicator request message to the IPC to flash the TPMS warning indicator. The IPC flashes the TPMS warning indicator for 75 seconds then turns the indicator on solid.

Tow Haul Indicator

The tow haul indicator illuminates when the tow haul system has been engaged and is actively providing tow haul control for the vehicle. When the system is actively providing tow haul control, the PCM sends the powertrain drive mode status message to the GWM over the HS-CAN1. The IPC receives the powertrain drive mode status message from the GWM over the HS-CAN3.

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Brake Fluid Level Switch

The brake fluid level switch is mounted in the master cylinder reservoir and is hardwired to the BCM through a signal circuit and grounded through a separate body ground circuit. The BCM provides a reference voltage to the brake fluid level switch. When the brake fluid level is low, the float drops, allowing the switch to close, pulling the reference voltage low. When the brake fluid level is high, the float lifts, opening the switch contacts, sending the reference voltage high on the signal circuit to the BCM.

The brake fluid level switch uses an internal resistor in parallel. This enables the BCM to differentiate between a disconnected brake fluid level switch connector and a full level condition.

Fuel Level Sender

The fuel level sender is mounted to the fuel pump assembly or the fuel level sensor. The fuel level sender is a dual sweep potentiometer style resistor connected to a float mechanism. The dual sweep design provides a second resistance measurement that reduces the intermittent loss of data due to corrosion between the resistor wires and the sweep arm. As the fuel level changes, the float rises or falls with the fuel level moving the sweep arm across the resistor wires. This movement either increases or decreases the resistance through the unit. The fuel level sensor resistance ranges from 180 ohms ± 4 ohms at empty (E) to 10 ohms ± 2 ohms at full (F). When the fuel level is low, the fuel level sensor resistance is high. When the fuel level is high, the fuel level sensor resistance is low.

Both the fuel pump assembly and fuel level sensor are hardwired to the IPC through separate signal and return circuits. The fuel level return circuits are grounded internally in the IPC. The IPC provides a reference voltage on the fuel level signal circuit. As the fuel level changes, the change in resistance raises or lowers the fuel level signal voltage depending on the resistance of the fuel level sender.

IPC

The IPC provides the driver with a system status and alerts the driver when certain conditions exist in the vehicle. The IPC receives the ignition status from the BCM through the GWM over the HS-CAN3. The IPC requires Programmable Module Installation (PMI) when the IPC is replaced.

Oil Pressure Switch (3.5L Engine)

The oil pressure switch is a normally open switch that is hardwired to the PCM through a single signal circuit. The ground is provided by the switch housing when it is mounted on the engine. The PCM provides a reference voltage to the oil pressure switch. When oil pressure is low, the oil pressure switch remains open, sending the reference voltage high. When the oil pressure is sufficient, the oil pressure switch closes, pulling the reference voltage low to the PCM.

Oil Pressure Switch (2.7L And 5.0L Engine)

The oil pressure sensor is hardwired to the PCM through voltage reference (VREF), signal and return circuits. The PCM provides the sensor voltage supply on the VREF circuit and monitors the change in voltage though the signal and return circuits as the oil pressure changes.

Park Position Detect Switch

The park position detect switch is hardwired to the IPC through a single signal circuit and is grounded by a separate circuit through the selector lever. The IPC provides a reference voltage to the park position detect switch. When the selector lever is in PARK (P), the park position detect switch closes to ground, pulling the reference voltage low. When the selector lever is moved out of PARK (P), the park position detect switch opens to ground, sending the reference voltage high to the IPC.

Safety Belt Buckle Sensor

The safety belt buckles contain integrated Hall-effect sensors. The safety belt buckle sensors are