

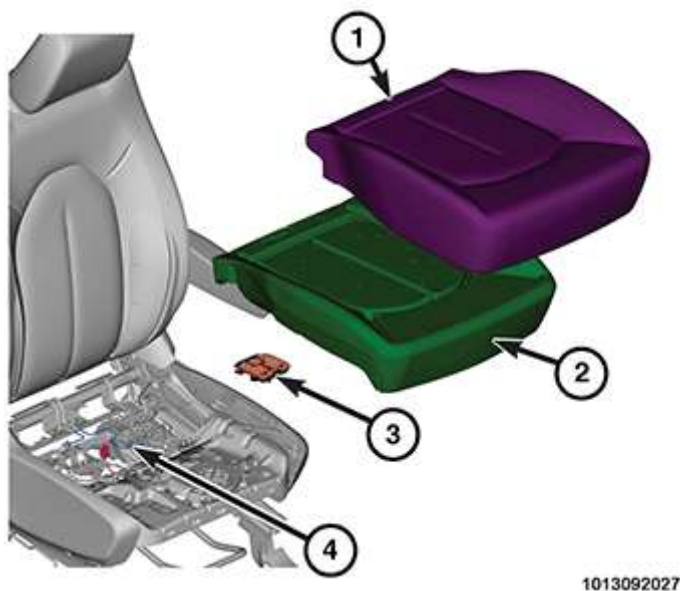
YOUR CURRENT VEHICLE

2018 Chrysler Pacifica

Description & Operation

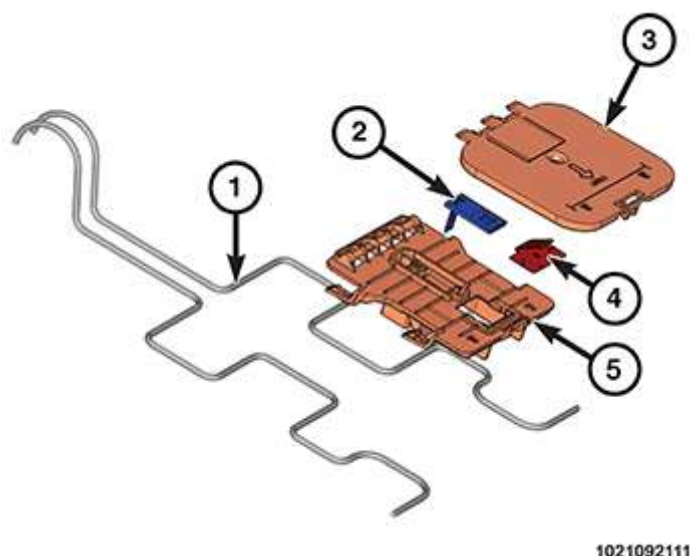
DESCRIPTION AND OPERATION

DESCRIPTION



The Occupant Detection Sensor (ODS) (3) is used in certain markets and located directly below the passenger side front seat cushion and trim cover (2). This sensor provides information to the Occupant Restraint Controller (ORC) used for control of the passenger belt alert feature.

The ODS determines when sufficient weight is on the seat cushion (centered in the middle of the cushion cross-wise) such that an occupant is in the seat.



The ODS is comprised of a top plastic piece (3), a bottom plastic piece (5), a spring (4), a dome switch and 9 resistors (2) (the switch and resistors reside on a circuit board inserted into the bottom plastic piece). The bottom plastic piece (5) has 4 integral latches that are inserted onto the bottom cushion suspension wires (1) and hold the unit in location. The bottom piece (5) also has a feature for the seat harness to connect the unit into the electrical circuitry of the vehicle. The top plastic piece (3) is designed to activate the dome switch (2) when a person is sitting in the seat but also, to not activate the dome switch when typical items (purse, backpack, briefcase, etc.) are placed in the seat.

The force required to move the top piece (3) towards the bottom piece (5) and activate the switch is determined by the spring (4). The spring is tuned to the seat assembly by design - no additional calibration is needed.

The dome switch and nine resistors (2) give the required signal to the ORC.

The ODS cannot be adjusted or repaired, and must be replaced if damaged or ineffective.

OPERATION

The ODS acts as a simple switch to detect loads placed upon the passenger side front seat cushion. The sensor circuits are connected to and monitored by the ORC whenever the ignition switch is in the On position. The ODS sends two resistance values to the ORC. The higher resistance value is sent to the ORC when the switch is not activated and the lower is sent to the ORC when the switch is activated.

The ORC microcontroller continuously monitors all of the Supplemental Restraint System (SRS) electrical circuits to determine the system status and readiness. If the ORC detects a monitored system fault, it sets a Diagnostic Trouble Code (DTC). However, because the ODS input is only used for control of the passenger belt alert feature, which has no effect on SRS component features or functions, the airbag indicator is **NOT** illuminated in response to a detected ODS circuit fault.

The ODS receives source current and a clean ground through dedicated sensor plus and minus circuits from the ORC. The ORC then sends the appropriate sensor status information over the Controller Area Network (CAN) data bus to the Instrument Panel Cluster (IPC), which uses this information as an additional logic input used for control of the seat belt indicator and the passenger belt alert feature.

The hard wired circuits between the ODS and the ORC may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. However, conventional diagnostic methods will not prove conclusive in the diagnosis of the ODS or the electronic controls and communication between other modules and devices that provide some features of the passenger belt alert feature. The most reliable, efficient and accurate means to diagnose the ODS or the electronic controls and communication related to the passenger belt alert feature operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.