CHILTON LIBRARY

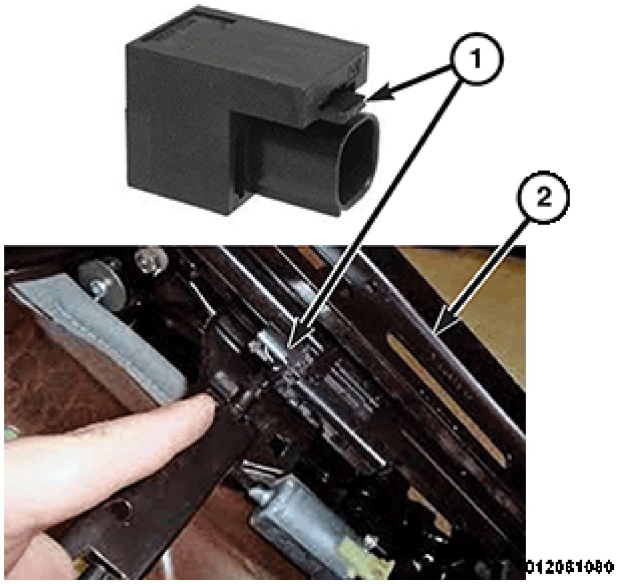
YOUR CURRENT VEHICLE

2018 Chrysler Pacifica

Description & Operation

DESCRIPTION AND OPERATION

DESCRIPTION



Vehicles manufactured for the North America Free Trade Agreement (NAFTA) market are equipped with a Seat Track Position Sensor (STPS) (1) for each front seat. The STPS is a Hall-effect sensor designed to provide seat position data to the ORC indicating whether the driver or passenger side front seat is in a full forward or a not full forward position. The Occupant Restraint Controller (ORC) uses the seat guide input as a factor in determining the appropriate force to be used when deploying the multistage driver or passenger airbag.

The seat guide position sensor receives a 5 V reference voltage from the ORC. The sensor communicates the seat position by modulating the voltage returned to the ORC. The ORC monitors the current produced by the modulating voltage. The ORC also monitors the condition of the sensor circuits and will store a DTC for any detected fault and make a request to the Body Control Module (BCM) over CAN-C to switch on the airbag warning light in the instrument panel.

The seat track position sensor is located on the inboard side at the rear of the outer seat track (2) of both front seats.

The STPS cannot be adjusted or repaired and, if ineffective or damaged, the entire STPS unit must be replaced.

OPERATION

The STPS is designed to provide a seat position data input to the ORC indicating whether the driver or passenger front seat is in a full forward or a not full forward position. The ORC uses this data as an additional logic input for use in determining the appropriate deployment force to be used when deploying the multistage Driver AirBag (DAB) and Passenger AirBag (PAB).

The STPS receives a nominal five volt supply from the ORC. The STPS communicates the seat position by modulating the voltage returned to the ORC on a sensor data circuit. The ORC also monitors the condition of the STPS circuits and will store a DTC for any fault that is detected. The ORC then sends messages over the CAN data bus to control the illumination of the airbag indicator in the Instrument Panel Cluster (IPC).

The hard wired circuits between the STPS 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 STPS or the electronic controls and communication between other modules and devices that provide features of the Supplemental Restraint System (SRS). The most reliable, efficient and accurate means to diagnose the STPS or the electronic controls and communication related to STPS operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.