CHILTON LIBRARY

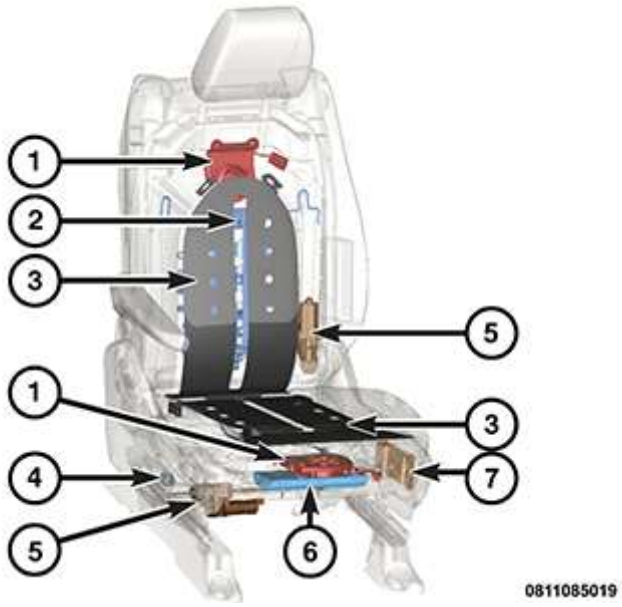
YOUR CURRENT VEHICLE

2018 Chrysler Pacifica

Description & Operation

DESCRIPTION AND OPERATION

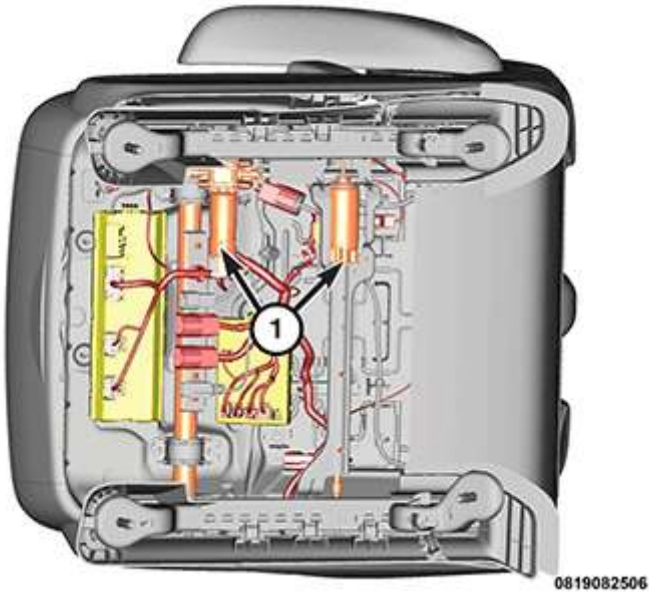
DESCRIPTION



FRONT POWER SEAT	
1	Seat back and seat cushion vented seat fan motors
2	Lumbar bladder
3	Heated seat back and bottom pads
4	Seat sensor
5	Power seat motors
6	Memory Seat Module (MSM)

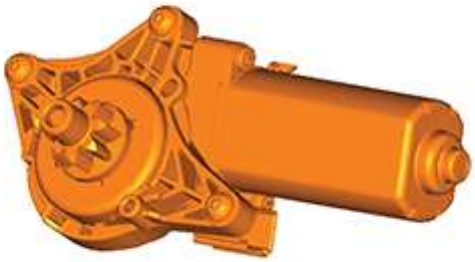
FRONT POWER SEAT	
7	Power seat and Lumbar swiches

POWER SEAT SYSTEM



The power seat system allows the driver and front seat passenger to electrically adjust their seating positions using the power seat switches located on the outboard seat cushion side shield of each front seat.

The available driver and passenger side eight-way power seat includes a six-way adjustable seat cushion track and a two-way power seat back. The power seats can be adjusted up, down, front up, front down, forward, rearward, recliner forward, and recliner rearward. An available two-way power lumbar support can be adjusted forward and rearward. The power seat system is also available with a memory seat option that automatically positions the power seat for two different drivers.



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The power seat adjuster contains two reversible motors that are connected to worm-drive gearboxes that move the seat adjusters through screw-type drive units. These motors are the height adjust motor and the front tilt motor. The third motor on the power seat adjuster is responsible for the fore and aft movement of the power seat. The fore/aft motor is a reversible motor that is connected through two flex drive cables to a worm-drive gearbox that moves the seat adjuster through a screw-type drive unit. Each motor contains a self-resetting circuit breaker to protect it from overload. Consecutive or frequent resetting of the circuit breakers may damaged the motors.

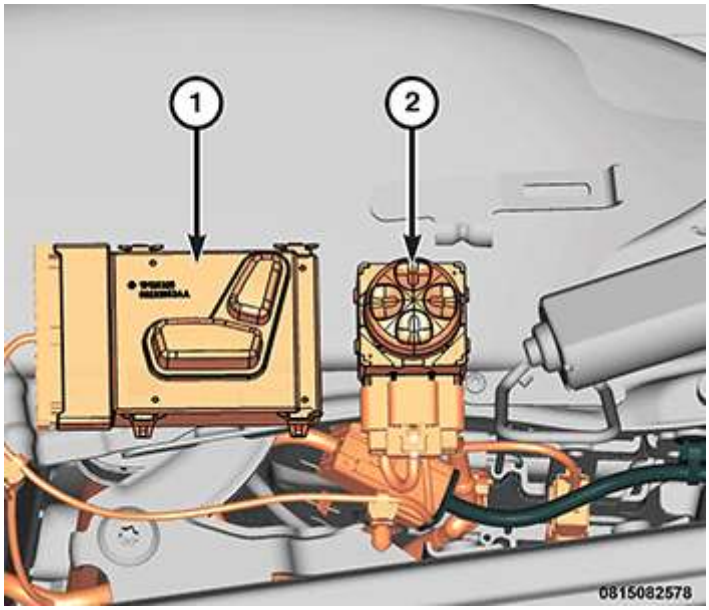
The power seat adjuster assembly includes the following major components:

- **Front Tilt Motor** - located on the upper power seat adjuster assembly. Controls the up and down movement of the seat front only. Is available as a service part and if inoperative or damaged can be replaced.
- **Height Adjust Motor** - located on the rear of the lower power seat adjuster assembly. Controls the up and down movement of the entire seat. Is available as a service part and if inoperative or damaged can be replaced.
- **Fore/Aft Motor** - located on the upper power seat adjuster assembly. Controls the fore and aft movement of the power seat. Is a reversible motor that is connected through two flex drive cables to a worm-drive gearbox that moves the seat adjuster through a screw-type drive unit. Is available as a service kit that includes the flex drive cables and if inoperative or damaged can be replaced.

The power seat back assembly includes the two following major components:

- **Power Lumbar Motor** - located on the inboard side of the seat back. Controls the in and out movement of the lumbar support.
- **Power Seat Recliner Motor** - located on the outboard side of the seat back. Controls the up and down movement of the seat back.

The power lumbar support and power seat recliner cannot be adjusted or repaired and if inoperative or damaged, the entire seat back must be replaced as an assembly.



The front power seat is controlled by the two following switches located on the outboard seat cushion side shield.

- **Power Seat Switch** (1) - has paddle-type levers. Vehicles may be equipped with driver only, or driver and passenger power seat switches. One seat switch is used for each front seat. Movement of the seat cushions and backs mimics the action of the switch paddles. The driver power seat switch type (memory or non-memory) can be identified by the color of the switch electrical connector receptacle. Memory switches have a light gray connector receptacle and non-memory have a black receptacle.
- **Power Lumbar Switch** (2) - is a four way switch. Press front of switch and lumbar protrudes out of the seat back. Push rear of switch and lumbar recedes into the seat back. Same concept applies for up and down buttons.

MEMORY SEAT SYSTEM

An electronic memory seat system is available on certain models. The memory system is able to store and recall all driver side power seat positions, outside mirror positions and power adjustable pedal positions. The system can be set for two different drivers. On vehicles with a factory installed radio connected to the Controller Area Network (CAN) data bus network, the memory system is also able to store and recall up to twelve radio station presets (six AM and six FM), for two drivers. The memory system will also store and recall the last station listened to for each driver, even if it is not one of the twelve preset stations.

Vehicles equipped with the memory seat system can be identified by the memory seat switch, located in the interior driver door handle bezel. The memory system will automatically recall all driver side power seat positions, outside mirror positions and power adjustable pedal position settings, when a button of the memory switch is pressed, or when the doors are unlocked using a Remote Keyless Entry (RKE) transmitter (if enabled).

The memory system has an “Easy Entry and /Exit” feature that provides the driver with more room to enter or exit the vehicle by automatically moving the driver seat rearward 55 millimeters (2.1 inches), or to the end of its travel, whichever occurs first. This is also a customer programmable feature of the Electronic Vehicle Information Center (EVIC).

The memory system also has a "Tilt in Reverse" feature that tilts the outside mirrors down a fixed, incremental angle when the vehicle is shifted into REVERSE with the ignition switch in the Run position. This feature provides the customer with a better view of the ground and vehicle in the area of the rear tires when backing up. The mirrors move back to their previous position when the vehicle is shifted out of REVERSE.

The memory system includes the following components:

- **Memory Switch** - located in the interior driver door handle bezel.
- **Memory Seat Module (MSM)** - located underneath both driver front and passenger front seats. Controls the power drivers seat, power driver mirror and adjustable pedals, when equipped.
- **Driver Door Module (DDM)** - located in the driver door, behind the trim panel.
- **Passenger Door Module (PDM)** - located in the passenger door, behind the trim panel.
- **Hall Effect Sensors - Driver Seat** - located in each of the power seat track motors. Are used to provide reference signal to the memory seat module to inform the module of the position of the seat cushion and seat back. Are not serviced separately.
- **Hall Effect Sensors - Driver Mirror** - located on the outside driver mirror motors. Is used to provide a reference signal to the memory seat module to inform the module of the position of the mirror glass. Are not serviced separately.
- **Hall Effect Sensor - Adjustable Pedals** - located on the adjustable pedal motor, when equipped. Is used to provide a reference signal to the memory seat module to inform the module of the position of the pedals. Is not serviced separately.

Certain functions and features of the memory system rely upon resources shared with other electronic modules in the vehicle over the Controller Area Network (CAN) data bus. The CAN bus allows the sharing of sensor information. This helps to reduce wire harness complexity, internal controller hardware, and component sensor current loads. At the same time, this system provides increased reliability, enhanced diagnostics, and allows the addition of many new feature capabilities. A scan tool is required for proper diagnostics of the electronic components and the CAN bus.

OPERATION

POWER SEAT SYSTEM

The power seat system receives battery current through a fuse in the Power Distribution Center (PDC), so that the power seats remain operational, regardless of the ignition switch position.

When a power seat switch is actuated, a battery feed and a ground path are applied through the power seat switch contacts to the appropriate motor or motors. The motor and drive unit operate to move the seat in the selected direction until the switch is released, or until the travel limit of the power seat adjuster is

reached. When the switch is moved in the opposite direction, the battery feed and ground path to the motor is reversed through the switch contacts. This causes the motor to run in the opposite direction. All three power seat track motors can be serviced separately from the track.

The power recliner motor and mechanism, and the power lumbar support motor and mechanism cannot be adjusted or repaired, and If found inoperative or damaged, the entire seat back must be replaced.

MEMORY SEAT SYSTEM

The Memory Seat Module (MSM) receives battery current through a fuse located in the Power Distribution Center (PDC) and remains operational, regardless if the vehicle is running or not. When a driver memory seat switch button is actuated, a resistance signal is sent to the MSM over the Controller Area Network (CAN) Interior High Speed (IHS) bus. The MSM is responsible for the battery feed and ground path to the power seat adjuster motors. The adjuster motors operate to move the power seat to the correct preset location.

The MSM receives memory set/position switch input over the CAN bus. The MSM also receives hard wired input from the hall effect sensors, mounted on each of the driver power seat adjuster motors, driver side view mirror motors and power adjustable steering column motors, when equipped. The programmed software in the module allows it to know where the seat/mirror/column is located in its designed travel by a pulse count generated from the hall effect sensors. This way, when the memory switch is pressed the module will power the seat adjuster/mirror/column motors until the correct preset location is achieved. The module will prevent the seat memory recall function from being initiated if the transmission gear selector lever is not in the Park position, or if the vehicle is moving. These inputs are monitored over the CAN IHS bus by the MSM.

A memory setting is saved by pressing the “set” button, then pressing either the memory “1” or “2” button within five seconds of pressing the “set” button.

A memory setting is recalled by pressing either the memory “1” or “2” button, or by pressing the unlock button on a “linked” FOBIK transmitter.

For driver safety, memorized settings can not be recalled if the transmission is in a position other than Park or the seat belt is latched.

Certain functions and features of the memory seat system rely upon resources shared with other electronic modules in the vehicle over the CAN IHS bus. The CAN IHS bus allows the sharing of sensor information. This helps to reduce wire harness complexity, internal controller hardware and component sensor current loads. At the same time, the memory seat system provides increased reliability, enhanced diagnostics and allows the addition of new feature capabilities.

NOTE

Anytime a new Memory Seat Module (MSM) or a driver power seat motor or seat track is replaced, the MSM must be cleared of all learned parameters using a scan tool and the Power Seat System Verification

test must be performed.

The use of a scan tool is needed for diagnosis of the memory seat system, CAN IHS bus and other electronic modules (Refer to DTC-Based Diagnostics/MODULE, Memory Seat (MSMD) - Diagnosis and Testing)(Refer To List 1).

Refer To List:

List 1

- 28 - DTC-Based Diagnostics / MODULE, Memory Seat, Driver (MSMD) / Diagnosis and Testing
- 28 - DTC-Based Diagnostics / MODULE, Memory Seat, Passenger (MSMP) / Diagnosis and Testing