2007 ACCESSORIES AND EQUIPMENT Power Seats - Service Information - Nitro

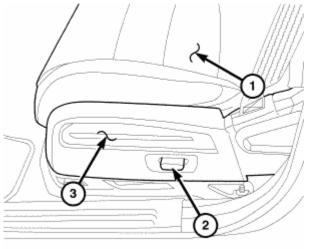
# 2007 ACCESSORIES AND EQUIPMENT

# **Power Seats - Service Information - Nitro**

# **POWER SEATS - SERVICE INFORMATION**

# DESCRIPTION

### POWER SEAT SYSTEM



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# **Fig. 1: Identifying Power Seat Switch, Seat Cushion & Seat Cushion Side Shield** Courtesy of CHRYSLER LLC

The power seat system allows the driver to electrically adjust the seating position using the power seat switch assembly (2) located on the outboard seat cushion side shield (3).

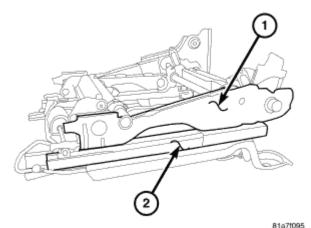
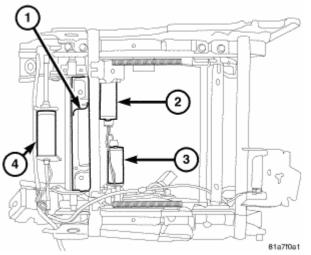


Fig. 2: Identifying Upper Power Seat Adjuster & Lower Power Seat Adjuster Courtesy of CHRYSLER LLC

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A driver side six-way power seat is available on this vehicle. The power seat includes a six-way adjustable seat cushion track. The six-way power seat can be adjusted back up, back down, front up, front down, forward and rearward. The power seat system is also available with the heated seat option, refer to **DESCRIPTION** for additional information on the heated seats.

The power seat adjuster is made up of the upper and lower power seat adjuster assemblies. The upper power seat adjuster (1) contains two reversible motors that are connected to worm-drive gearboxes that move the seat adjusters through screw-type drive units. These motors control the front seat tilt, rear seat tilt and when activated together the height of the driver seat. The lower power seat adjuster (2) contains one reversible motor that is connected to a worm-drive gearbox that moves the seat adjuster through a screw-type drive unit. This motor is responsible for the fore and aft movement of the driver seat. 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.



# Fig. 3: Front/Rear Tilt Motor, Reversible Motor & Power Seat Track Unit Courtesy of CHRYSLER LLC

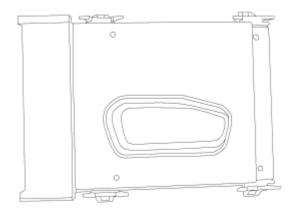
The power seat system for this vehicle includes the following major components:

The **Front Tilt Motor (2)** is located on the upper power seat adjuster assembly and controls the up and down movement of the seat front only. The front tilt motor is part of the power seat track unit (1) and must be replaced as an assembly. See **<u>REMOVAL</u>**.

The **Rear Tilt Motor (3)** is located on the upper power seat adjuster assembly and controls the up and down movement of the seat rear only. The front tilt motor is part of the power seat track unit (1) and must be replaced as an assembly. See **<u>REMOVAL</u>**.

The **Lower Power Seat Adjuster** contains one reversible motor (4) that is connected to a worm-drive gearbox that moves the seat adjuster through a screw-type drive unit. This motor is responsible for the fore and aft movement of the driver seat. The motor is part of the power seat track unit (1) and must be replaced as an assembly, See **<u>REMOVAL</u>**.

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## Fig. 4: Power Seat Switch Courtesy of CHRYSLER LLC

**Power Seat Switch** - Vehicles may be equipped with a driver side six-way power seat switch. The power seat switch has a paddle-type lever mounted on the outboard seat side shield. Movement of the seat cushion mimics the action of the switch paddle.

# **OPERATION**

### POWER SEAT SYSTEM

The power seat system receives battery current through a fuse in the Totally Integrated Power Module (TIPM) 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 track 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.

# **DIAGNOSIS AND TESTING**

#### POWER SEAT SYSTEM

Operate the power seat switch and move the seat in all directions. The seat should move in each of the selected directions.

If the power seat adjuster fails to operate in more than one direction, proceed as follows:

- 1. Inspect the power seat track adjuster motors to ensure the electrical connectors are fully seated to the motors. If OK, go to step 2. If not OK, connect the electrical connector to the fully seated position.
- 2. Check the power seat fuse in the Totally Integrated Power Module (TIPM). If OK, go to step 3. If not OK replace the inoperative fuse

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- 3. Remove the power seat switch from the seat cushion side shield. See <u>**REMOVAL**</u>. Check for battery voltage at the fused B(+) circuit cavity of the power seat switch wire harness connector. If OK, go to step 4. If not OK, repair the open circuit to the TIPM as required.
- 4. Check for continuity between the ground circuit cavity of the power seat switch wire harness connector and a good ground. There should be continuity. If OK, go to step 5. If not OK, repair the open circuit to ground as required.
- 5. See <u>**DIAGNOSIS AND TESTING</u>**. If the switch tests OK, check the wire harness between the power seat switch and the motor. If the circuits check OK, replace the faulty power seat track assembly. If the circuits are not OK, repair the wire harness as required.</u>

### **SWITCH - POWER SEAT**

#### DESCRIPTION

#### SEAT SWITCH

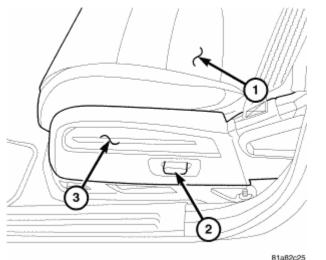


Fig. 5: Identifying Power Seat Switch, Seat Cushion & Seat Cushion Side Shield Courtesy of CHRYSLER LLC

The driver power seat can be adjusted in six different ways using the power seat switch. The power seat switch (2) is located on the lower outboard side of the seat cushion (1) on the seat cushion side shield (3). The power seat system incorporates a seat switch with a seat cushion control paddle.

The individual components in the power seat switch assembly cannot be repaired. If the switch is damaged or inoperative, the entire power seat switch must be replaced.

#### **OPERATION**

#### SEAT SWITCH

When a power seat switch is actuated, a battery feed and a ground path are applied through the switch contacts to the power seat track adjuster motor. The selected adjuster motor operates to move the seat through its drive

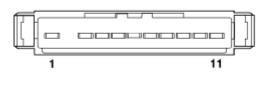
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unit in the selected direction until the switch is released, or until the travel limit of the adjuster is reached. When the switch is moved in the opposite direction, the battery feed and ground path to the motor are reversed through the switch contacts. This causes the adjuster motor to run in the opposite direction.

No power seat switch should be held applied in any direction after the adjuster has reached its travel limit. The power seat adjuster motors each contain a self-resetting circuit breaker to protect them from overload. However, consecutive or frequent resetting of the circuit breaker may result in motor damage.

### DIAGNOSIS AND TESTING

#### SWITCH-SEAT



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# **Fig. 6: Identifying Power Seat Switch** Courtesy of CHRYSLER LLC

- 1. Disconnect and isolate the battery negative cable.
- 2. Remove the power seat switch from the power seat. See **<u>REMOVAL</u>**.
- Use an ohmmeter to test the continuity of the power seat switch. Refer to <u>POWER SEAT SWITCH</u> <u>CONTINUITY</u>. If not OK, replace the faulty power seat switch. If switch tests OK. See <u>DIAGNOSIS</u> <u>AND TESTING</u>.

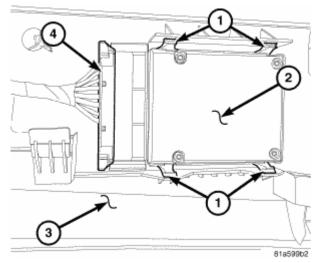
### POWER SEAT SWITCH CONTINUITY

| SWITCH POSITION     | CONTINUITY BETWEEN                       |
|---------------------|--|
| OFF                 | 7-1, 7-3, 7-4, 7-5, 7-8, 7-9, 7-10, 7-11 |
| HORIZONTAL FORWARD  | 6-8, 7-1, 7-3, 7-4, 7-5, 7-9, 7-10, 7-11 |
| HORIZONTAL REARWARD | 6-4, 7-1, 7-3, 7-5, 7-8, 7-9, 7-10, 7-11 |
| FRONT TILT DOWN     | 6-5, 7-1, 7-3, 7-4, 7-8, 7-9, 7-10, 7-11 |
| FRONT TILT UP       | 6-9, 7-1, 7-3, 7-4, 7-5, 7-8, 7-10, 7-11 |
| REAR TILT DOWN      | 6-10, 7-1, 7-3, 7-4, 7-5, 7-8, 7-9, 7-11 |
| REAR TILT UP        | 6-11, 7-1, 7-3, 7-4, 7-5, 7-8, 7-9, 7-10 |

#### REMOVAL

SEAT SWITCH

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### Fig. 7: Identifying Mounting Tabs, Power Seat Switch, Seat Cushion Side Shield & Power Seat Switch <u>Electrical Harness Connector</u> Courtesy of CHRYSLER LLC

- 1. Disconnect and isolate the battery negative cable.
- 2. Remove the outboard seat cushion side shield (3).
- 3. Disconnect the power seat switch electrical harness connector (4).
- 4. Using a small flat bladed tool, gently release the four mounting tabs (1) that secure the power seat switch (2) and separate switch from side shield (3).

#### INSTALLATION

#### SEAT SWITCH

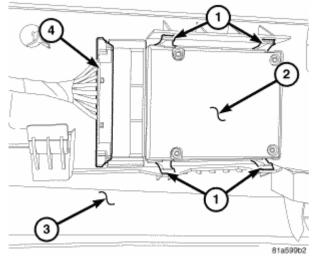


Fig. 8: Identifying Mounting Tabs, Power Seat Switch, Seat Cushion Side Shield & Power Seat Switch Electrical Connector Courtesy of CHRYSLER LLC

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- 1. Position the power seat switch (2) onto the seat cushion side shield (3). Gently apply pressure to the switch until the four mounting tabs (1) are fully seated into place.
- 2. Connect the power seat switch electrical connector (4).
- 3. Install the seat cushion outboard side shield.
- 4. Connect the battery negative cable.
- 5. Verify normal operation of the power seat assembly.

# **TRACK - POWER SEAT**

### REMOVAL

### POWER SEAT TRACK

- 1. Disconnect and isolate the battery negative cable.
- 2. Remove the driver front seat, refer to **<u>REMOVAL</u>**.
- 3. Remove seat cushion side shields.
- 4. Remove bolts attaching seat frame to cushion pan.
- 5. Disconnect wire harness fasteners from cushion pan.
- 6. Remove seat back.
- 7. Remove seat cushion tension springs.
- 8. Remove power seat track nuts.
- 9. Remove power seat track from riser.
- 10. Remove any parts that need to be transferred to the new seat track assembly.

### INSTALLATION

#### POWER SEAT TRACK

- 1. Install any parts that need to be transferred from the old seat track assembly.
- 2. Place power seat track in position on the seat frame ensuring motor is installed correctly into seat risers.
- 3. Install power seat track to seat riser nuts.
- 4. Install seat springs.
- 5. Connect wire harness fasteners to the cushion pan.
- 6. Install bolts attaching power seat track to cushion pan.
- 7. Install seat back. Tighten recliner bolts to 12 N.m (9 ft. lbs.) torque. Tighten pivot bolts to 40 N.m (30 ft. lbs.) torque.
- 8. Install cushion side shields.
- 9. Install seat in vehicle, refer to **<u>REMOVAL</u>**.
- 10. Connect the battery negative cable.
- 11. Verify normal operation of the power seat assembly.