POWER SEAT SYSTEMS

CONTENTS

GENERAL INFORMATION

INTRODUCTION

Six-way power seats are an available factory-installed option for Left-Hand Drive (LHD) versions of this model. Refer to 8W-63 - Power Seat in Group 8W - Wiring Diagrams for complete circuit descriptions and diagrams.

NOTE: This group covers both Left-Hand Drive (LHD) and Right-Hand Drive (RHD) versions of this model. Whenever required and feasible, the RHD versions of affected vehicle components have been constructed as mirror-image of the LHD versions. While most of the illustrations used in this group represent only the LHD version, the diagnostic and service procedures outlined can generally be applied to either version. Exceptions to this rule have been clearly identified as LHD or RHD, if a special illustration or procedure is required.

POWER SEAT SYSTEM

The power seat system option allows the front seating positions to be electrically adjusted for optimum control and comfort using the power seat switches located on the outboard seat cushion side shield. The power seat system allows the seating position to be adjusted forward, rearward, front up, front down, rear up, or rear down. The power seat system receives battery current through a fuse in the Power Distribution Center and a circuit breaker in the junction block, regardless of the ignition switch position.

The power seat system includes the power seat adjuster and motors unit, the power seat switch, and the circuit breaker. Following are general descriptions of the major components in the power seat system. Refer to the owner's manual in the vehicle glove box for more information on the features, use and operation of the power seat system.

DESCRIPTION AND OPERATION

POWER SEAT SWITCH

The power seat can be adjusted in six different ways using the power seat switch. The switch is located on the lower outboard side of the seat cushion on the seat cushion side shield. Refer to the owner's manual for more information on the power seat switch functions and the seat adjusting procedures.

The individual switches in the power seat switch unit cannot be repaired. If one switch is damaged or faulty, the entire power seat switch unit must be replaced.

POWER SEAT ADJUSTER AND MOTORS

There are three reversible motors that operate the power seat adjuster. The motors are connected to worm-drive gearboxes that move the seat adjuster through a combination of screw-type drive units.

The front and rear of a seat are operated by different motors. They can be raised or lowered independently of each other. When the center seat switch is pushed to the Up or Down position, both the front and rear motors operate in unison, moving the entire seat up or down. The forward-rearward motor is operated by pushing the center seat switch to the Forward or Rearward position.

When a switch is actuated, a battery feed and a ground path are applied through the switch contacts to the motor(s). The motor(s) and drives operate to move the seat in the selected direction until the

DESCRIPTION AND OPERATION (Continued)

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(s) are reversed through the switch contacts. This causes the motor to run in the opposite direction.

Each motor contains a self-resetting circuit breaker to protect it from overload. Consecutive or frequent resetting of the circuit breakers must not be allowed to continue, or the motors may be damaged. Make the necessary repairs.

The power seat adjuster and motors cannot be repaired, and are serviced only as a complete unit. If any component in this unit is faulty or damaged, the entire power seat adjuster and motors assembly must be replaced.

CIRCUIT BREAKER

An automatic resetting circuit breaker in the junction block is used to protect the power seat system circuit. The circuit breaker can protect the system from a short circuit, or from an overload condition caused by an obstructed or stuck seat adjuster.

The circuit breaker cannot be repaired and, if faulty or damaged, it must be replaced.

DIAGNOSIS AND TESTING

POWER SEAT SYSTEM

Before any testing of the power seat system is attempted, the battery should be fully-charged and all wire harness connections and pins cleaned and tightened to ensure proper continuity and grounds. For circuit descriptions and diagrams, refer to 8W-63 - Power Seat in Group 8W - Wiring Diagrams.

With the dome lamp on, apply the power seat switch in the direction of the failure. If the dome lamp dims, the seat may be jamming. Check under and behind the seat for binding or obstructions. If the dome lamp does not dim, proceed with testing of the individual components and circuits.

CIRCUIT BREAKER

For circuit descriptions and diagrams, refer to 8W-63 - Power Seat in Group 8W - Wiring Diagrams.

(1) Locate the correct circuit breaker in the junction block. Pull out the circuit breaker slightly, but be certain that the circuit breaker terminals still contact the terminals in the junction block cavities.

(2) Connect the negative lead of a 12-volt DC voltmeter to a good ground.

(3) With the voltmeter positive lead, check both terminals of the circuit breaker for battery voltage.

If only one terminal has battery voltage, the circuit breaker is faulty and must be replaced. If neither terminal has battery voltage, repair the open circuit from the Power Distribution Center (PDC) as required.

POWER SEAT ADJUSTER AND MOTORS

For circuit descriptions and diagrams, refer to 8W-63 - Power Seat in Group 8W - Wiring Diagrams.

Operate the power seat switch to move all three seat motors in each direction. The seat should move in each of the selected directions. If the power seat adjuster fails to operate in only one direction, move the adjuster a short distance in the opposite direction and test again to be certain that the adjuster is not at its travel limit. If the power seat adjuster still fails to operate in only one direction, see Power Seat Switch in the Diagnosis and Testing section of this group. If the power seat adjuster fails to operate in more than one direction, proceed as follows:

(1) Test the circuit breaker in the junction block as described in this group. If OK, go to Step 2. If not OK, replace the faulty circuit breaker.

(2) Remove the power seat switch from the seat. Check for battery voltage at the fused B(+) circuit cavity of the power seat switch wire harness connector. If OK, go to Step 3. If not OK, repair the open circuit to the junction block as required.

(3) 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 4. If not OK, repair the open circuit to ground as required.

(4) Test the power seat switch as described in this group. If the switch tests OK, check the wire harness for the inoperative power seat motor(s) between the power seat switch and the motor for shorts or opens. If the circuits check OK, replace the faulty power seat adjuster and motors assembly. If the circuits are not OK, repair the wire harness as required.

POWER SEAT SWITCH

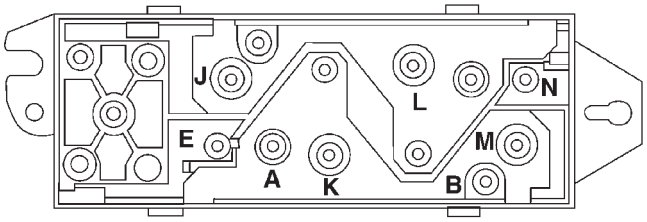
For circuit descriptions and diagrams, refer to 8W-63 - Power Seat in Group 8W - Wiring Diagrams.

(1) Disconnect and isolate the battery negative cable.

(2) Remove the power seat switch from the power seat.

(3) Use an ohmmeter to test the continuity of the power seat switches in each position. See the Power Seat Switch Continuity chart (Fig. 1). If OK, see the diagnosis for the Power Seat Adjuster and Motors in this group. If not OK, replace the faulty power seat switch module.

DIAGNOSIS AND TESTING (Continued)



POWER SEAT SWITCH	
LEFT SEAT SWITCH	
SWITCH POSITION	**CONTINUITY BETWEEN**
Off	B-E, B-J, B-K, B-L, B-M, B-N
Vertical Up	A-J, A-M, B-E, B-N
Vertical Down	A-E, A-N, B-J, B-M
Horizontal Forward	A-L, B-K
Horizontal Rearward	A-K, B-L
Front Tilt Up	A-M, B-N
Front Tilt Down	A-N, B-M
Rear Tilt Up	A-J, B-E
Rear Tilt Down	A-E, B-J

RIGHT SEAT SWITCH	
SWITCH POSITION	**CONTINUITY BETWEEN**
Off	A-E, A-J, A-K, A-L, A-M, A-N
Vertical Up	A-J, A-N, B-E, B-M
Vertical Down	A-E, A-M, B-J, B-N
Horizontal Forward	A-L, B-K
Horizontal Rearward	A-K, B-L
Front Tilt Up	A-N, B-M
Front Tilt Down	A-M, B-N
Rear Tilt Up	A-J, B-E
Rear Tilt Down	A-E, B-J

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Fig. 1 Power Seat Switch Continuity

REMOVAL AND INSTALLATION

POWER SEAT SWITCH

(1) Disconnect and isolate the battery negative cable.

(2) Remove the three screws that secure the seat cushion side shield to the outboard seat cushion frame.

(3) Pull the seat cushion side shield away from the seat cushion frame far enough to access the power seat switch wire harness connector.

(4) Unplug the wire harness connector from the power seat switch.

(5) Remove the seat cushion side shield from the seat.

(6) Remove the two screws that secure the power seat switch to the inside of the seat cushion side shield (Fig. 2).

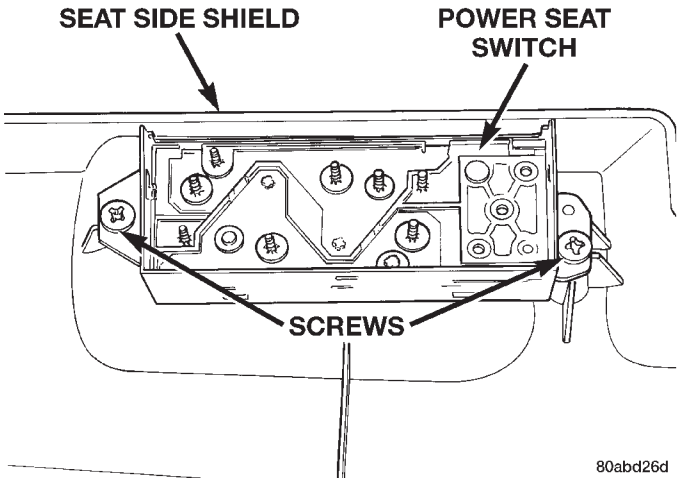

Fig. 2 Power Seat Switch Remove/Install

REMOVAL AND INSTALLATION (Continued)

(7) Remove the power seat switch from the seat cushion side shield.

(8) Reverse the removal procedures to install. Tighten the mounting screws to 2.2 N·m (20 in. lbs.).

POWER SEAT ADJUSTER AND MOTORS

(1) Move the seat to its fully raised and fully forward position, if possible.

(2) Disconnect and isolate the battery negative cable.

(3) Unplug the seat belt switch wire harness connector from the driver side seat belt buckle half on the inboard side of the seat (Fig. 3).

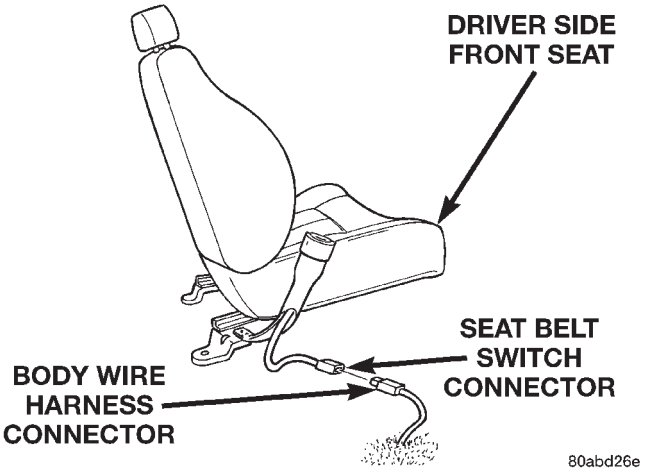

Fig. 3 Driver Seat Belt Switch Connector

(4) Remove the two screws that secure the front of the seat adjuster frame to the floor panel seat mounting reinforcement (Fig. 4).

(5) Remove the screw that secures the outboard rear of the seat adjuster frame to the floor panel.

(6) Remove the nut that secures the inboard rear of the seat adjuster frame to the stud on the floor panel.

(7) Unplug the power seat wire harness connector from the body wire harness connector.

(8) Remove the driver side power seat and adjuster assembly from the vehicle.

(9) Unplug the power seat wire harness connectors at each of the three power seat motors.

(10) Remove the four nuts that secure the seat adjuster and motors assembly to the seat cushion frame (Fig. 5).

(11) Remove the adjuster and motors assembly from the seat cushion frame.

(12) Reverse the removal procedures to install. Tighten the seat mounting hardware as follows:

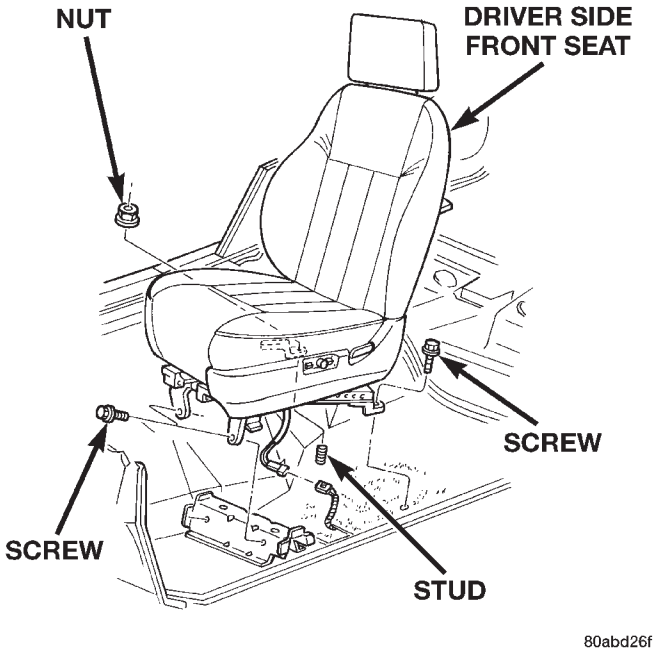

Fig. 4 Power Seat Remove/Install

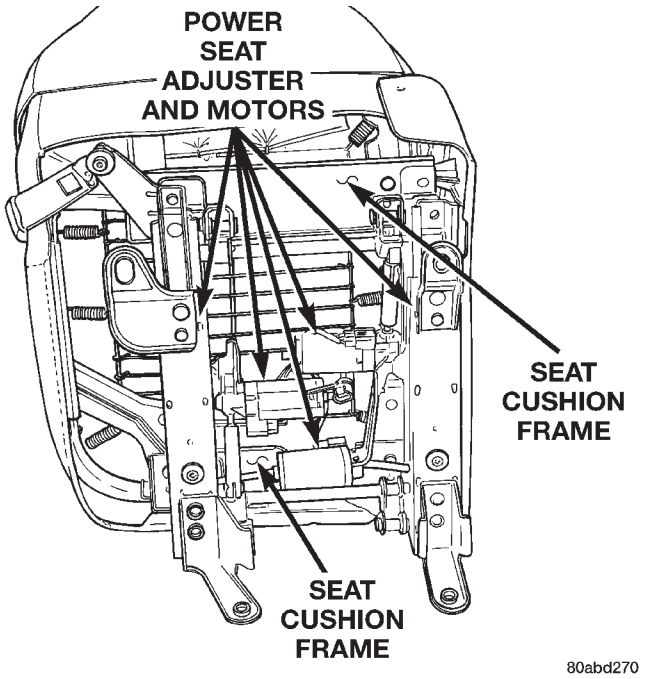

Fig. 5 Power Seat Adjuster and Motors Remove/ Install

- Seat adjuster to seat cushion frame nuts - 25 N·m (18 ft. lbs.)
- Seat adjuster to floor panel screws - 27 N·m (20 ft. lbs.)
- Seat adjuster to floor panel nut - 40 N·m (30 ft. lbs.).