POWER SEAT SYSTEMS

CONTENTS

GENERAL INFORMATION

INTRODUCTION

A six-way driver side power seat is an available factory-installed option for Left-Hand Drive (LHD) versions of this model. The power seat system receives battery feed through a fuse in the Power Distribution Center and a circuit breaker in the junction block at all times.

Following are general descriptions of the major components in the power seat system. 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.

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 frame. Refer to the owner's manual for more information on power seat switch functions and seat adjusting procedures.

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

DESCRIPTION AND OPERATION (Continued)

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 sure that the 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. The seat should move in each selected direction. If a motor fails to operate in only one direction, move the seat a short distance in the opposite direction and test again to be certain the adjuster is not at its travel limit. If one or more of the motors operate, see the diagnosis for the Power Seat Switch in this group. If no motors operate, 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 as described in this group. 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 motor between the 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) Remove the power seat switch as described in this group.

(2) Use an ohmmeter to test the continuity of the 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.

REMOVAL AND INSTALLATION

POWER SEAT SWITCH

(1) Disconnect and isolate the battery negative cable.

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

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

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

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

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

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

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

REMOVAL AND INSTALLATION (Continued)

SWITCH POSITION	CONTINUITY BETWEEN
OFF	B-N, B-J, B-M, B-E, B-L, B-K
VERTICAL UP	A-E, A-M, B-N, B-J
VERTICAL DOWN	A-J, A-N, B-M, B-E
HORIZONTAL FORWARD	A-L, B-K
HORIZONTAL AFT	A-K, B-L
FRONT TILT UP	A-M, B-N
FRONT TILT DOWN	A-N, B-M
REAR TILT UP	A-E, B-J
REAR TILT DOWN	A-J, B-E

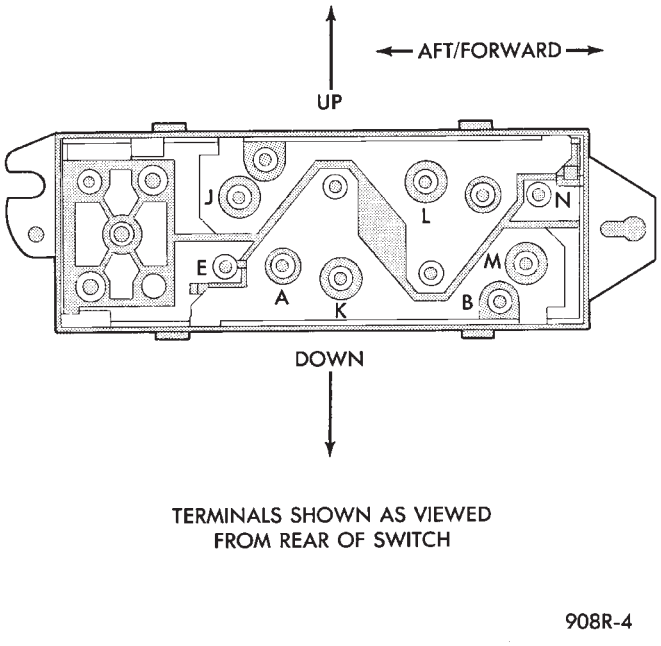

Fig. 1 Power Seat Switch Continuity

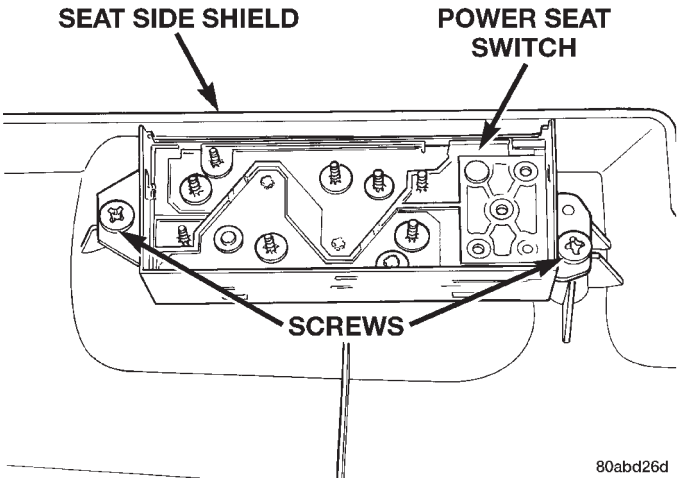

Fig. 2 Power Seat Switch Remove/Install

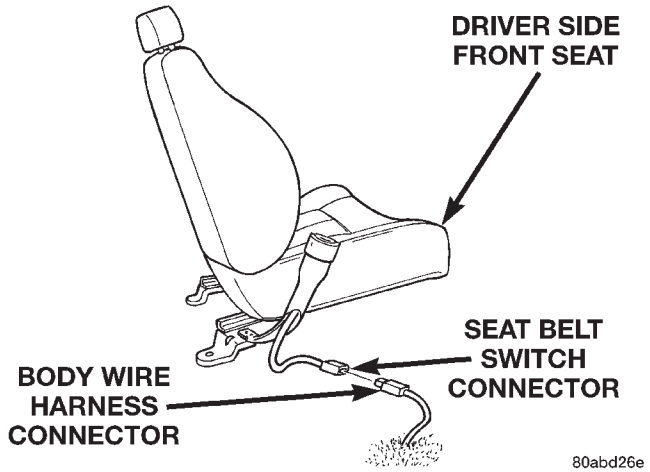

Fig. 3 Driver Seat Belt Switch Connector

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).

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

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

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

(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 and remove the adjuster and motors assembly from the seat (Fig. 5).

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

REMOVAL AND INSTALLATION (Continued)

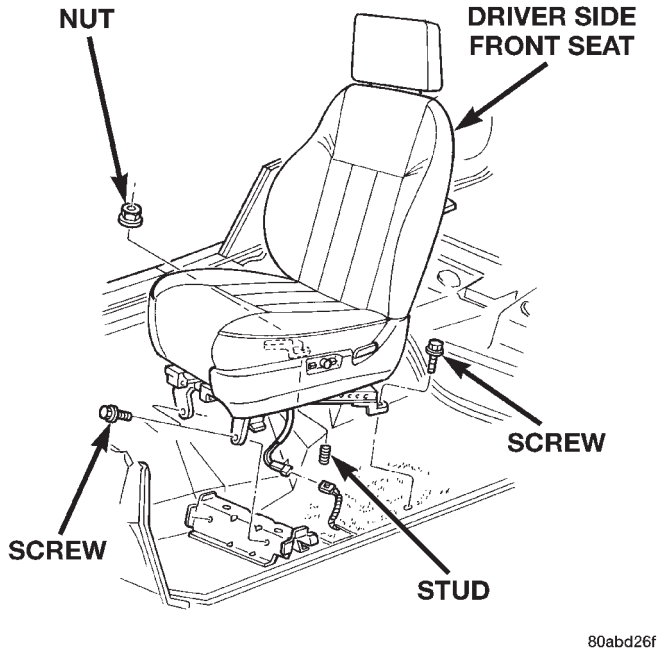

Fig. 4 Power Seat Remove/Install

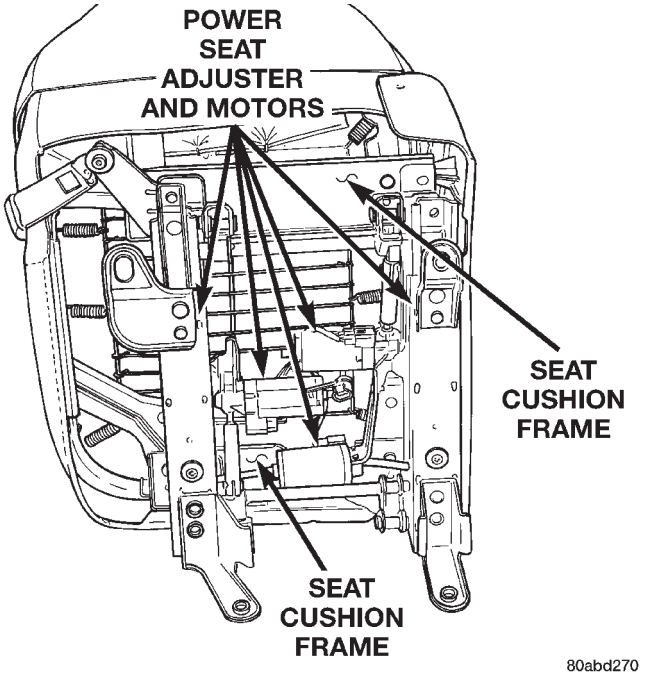

Fig. 5 Power Seat Adjuster and Motors Remove/ Install

- 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.).