

SEATS - POWER

1995 Volvo 850

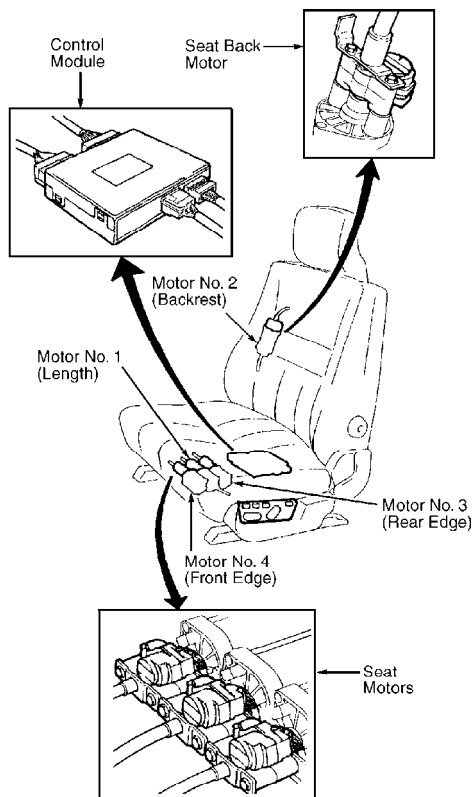
1995-96 ACCESSORIES & EQUIPMENT
Volvo Power Seats

850

WARNING: Vehicles are equipped with side impact air bags located in seat backs. During front seat service, always install Transport Safety Device (9156562-2) on seat firing mechanism. Transport safety device is attached to inside of seat. Never apply external force to side of seat, as air bag could deploy.
See SERVICE PRECAUTIONS and DISABLING & ACTIVATING AIR BAG SYSTEM, for 1995 850, see AIR BAG RESTRAINT SYSTEM, for 1996 850, see AIR BAG RESTRAINT SYSTEM article.

DESCRIPTION & OPERATION

Power driver and passenger seats are available as a factory option. Control module, located under seat, operates 4 separate motors. Three motors are located under the seat and the fourth is located in the back rest. See Fig. 1. Control module with memory takes information on seat position from signals from 4 position sensors. Sensors are potentiometers driven by worm gears on output shaft of each motor. Power seat system includes an integral self-diagnostic system.



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Fig. 1: Locating Power Seat Components
Courtesy of Volvo Cars of North America

TROUBLE SHOOTING

On 850, check circuit breakers No. 39 and 40, located in engine compartment fuse box. Check all connectors for good terminal contact. Check voltage supply and ground wires for continuity.

SYSTEM TESTS

SELF-DIAGNOSTIC SYSTEM

1) Use Volvo Scan Tool (998-8686-3) to diagnose system. Ensure correct power seat memory module is used in scan tool. Scan tool must be connected to Diagnostic Link Connector (DLC). DLC is located on center console in front of shift lever.

2) When DIAGNOSTIC TEST is selected, scan tool will display a maximum of 8 Diagnostic Trouble Codes (DTCs) set by control module. See POWER SEAT DIAGNOSTIC TROUBLE CODES table. If no DTCs are set, use EXIT to return to function menu.

3) DTCs cannot be erased until all have been displayed. Press EXIT once to return to function menu. A NOT PERMITTED message will appear if an attempt is made to erase DTCs before all have been read. After DTCs have been erased or if there are no DTCs, display will read NO DTC:S FOUND. Press ENTER button to confirm. Scan tool checks with control module memory and indicates all DTCs have been erased.

POWER SEAT DIAGNOSTIC TROUBLE CODES TABLE

DTC	Diagnostic Test No.
112	1
121	1
122	1
123	3
131	3
132	3
133	3
143	4
144	4
211	1
212	2
214	4
222	2
223	2
224	4
312	2
321	5
322	5
323	5
411	10
412	10
413	10
414	10
421	7
422	8
423	9
424	6

DIAGNOSTIC TEST NO. 1

DTC 112 (Motor No. 1 Potentiometer, Seat Forward/Backward Control),
DTC 121 (Motor No. 2, Back Rest Rake), DTC 122 (Motor No. 3, Seat Rear Edge Height Adjustment), or
DTC 211 (Seat Cushion Front Edge Height Adjustment)

1) Check for connector contact resistance. Check faulty potentiometer motor No. 1, 2, 3 or 4. See Fig. 1. Check for open in ground wire between control module and seat motor.

2) Check for faulty control module. Check for short to voltage in wiring to and from potentiometer and control module.

DIAGNOSTIC TEST NO. 2

DTC 212 (Motor No. 1 Potentiometer, Seat Backward/Forward Adjustment, Value Too Low),
DTC 222 (Motor No. 2 Potentiometer, Back Rest Rake, Value Too Low),
DTC 223 (Motor No. 3 Potentiometer, Seat Cushion Rear Edge Height Adjustment, Value Too Low) & DTC 312 (Potentiometer, Motor No. 4, Seat Cushion Front Edge Height Adjustment, Value Too Low)

1) Check for connector contact resistance. Check for loose connector contact. Check for faulty potentiometer motor No. 1, 2, 3 or 4. See Fig. 1. Check for loose potentiometer connector. Check for open in voltage wire between control module and potentiometer motor No. 1, 2, 3 or 4. See Fig. 1.

2) Check for open in signal wire between control module and potentiometer motor No. 1. See Fig. 1. Check signal wire between control module and potentiometer motor No. 1 for a short to ground. Check for faulty control module.

DIAGNOSTIC TEST NO. 3

DTC 123 (Motor No. 1 Running Even Though Corresponding Button Not Operated),
DTC 131 (Motor No. 2 Running Even Though Corresponding Button Not Operated),
DTC 132 (Motor No. 3 Running Even Though Corresponding Button Not Operated) &
DTC 133 (Motor No. 4 Running Even Though Corresponding Button Is Not Being Operated)

Check for faulty control module, wires connected incorrectly, or wires pinched or damaged. See Fig. 1.

DIAGNOSTIC TEST NO. 4

DTC 143 (Motor No. 1 Turning In Wrong Direction),
DTC 144 (Motor No. 2 Running In Wrong Direction),
DTC 214 (Motor No. 3 Turning In Wrong Direction) & DTC 224 (Motor No. 4 Turning In Wrong Direction)

Check for poor electrical connection. Check for faulty control module. See Fig. 1.

DIAGNOSTIC TEST NO. 5

DTC 323 (Fault In Stored Memory Position No. 1),
DTC 322 (Fault In Stored Memory Position No. 2),
DTC 321 (Fault In Stored Memory Position No. 3)

Check for faulty control module. Check for defective wiring and controls. See Fig. 1.

DIAGNOSTIC TEST NO. 6

DTC 424 (Seat Control Panel Not Connected Or Connected Incorrectly)

Check if control panel 16-pin connector is properly connected. Check for defective control panel wiring. Check for defective controls.

DIAGNOSTIC TEST NO. 7

DTC 421 (Fault In Control Module)

Replace control module. See Fig. 1.

DIAGNOSTIC TEST NO. 8

DTC 422 (Voltage Too Low For Memory Functions To Operate)

Check for fault in seat wiring. Check for internal fault in control module. Check whether battery supply voltage is too low or was recently too low. See Fig. 1.

DIAGNOSTIC TEST NO. 9

DTCs 423 (Button Pressed For More Than 60 Seconds)

Check if button is stuck in the down position. Check for an internal control fault. Check for an open or short to ground in wiring between seat control and control module. Check for internal fault in control module.

DIAGNOSTIC TEST NO. 10

DTCs 411, 412, 413 & 414 (Limits Calibrated Incorrectly)

Check if motors are prevented from reaching their limits. Check motors for wrong calibration. Check for faulty control module.

REMOVAL & INSTALLATION

NOTE: For power seat removal and installation, see SEATS - POWER MEMORY article.

WIRING DIAGRAMS

NOTE: For power seat removal and installation, see SEATS - POWER MEMORY article.

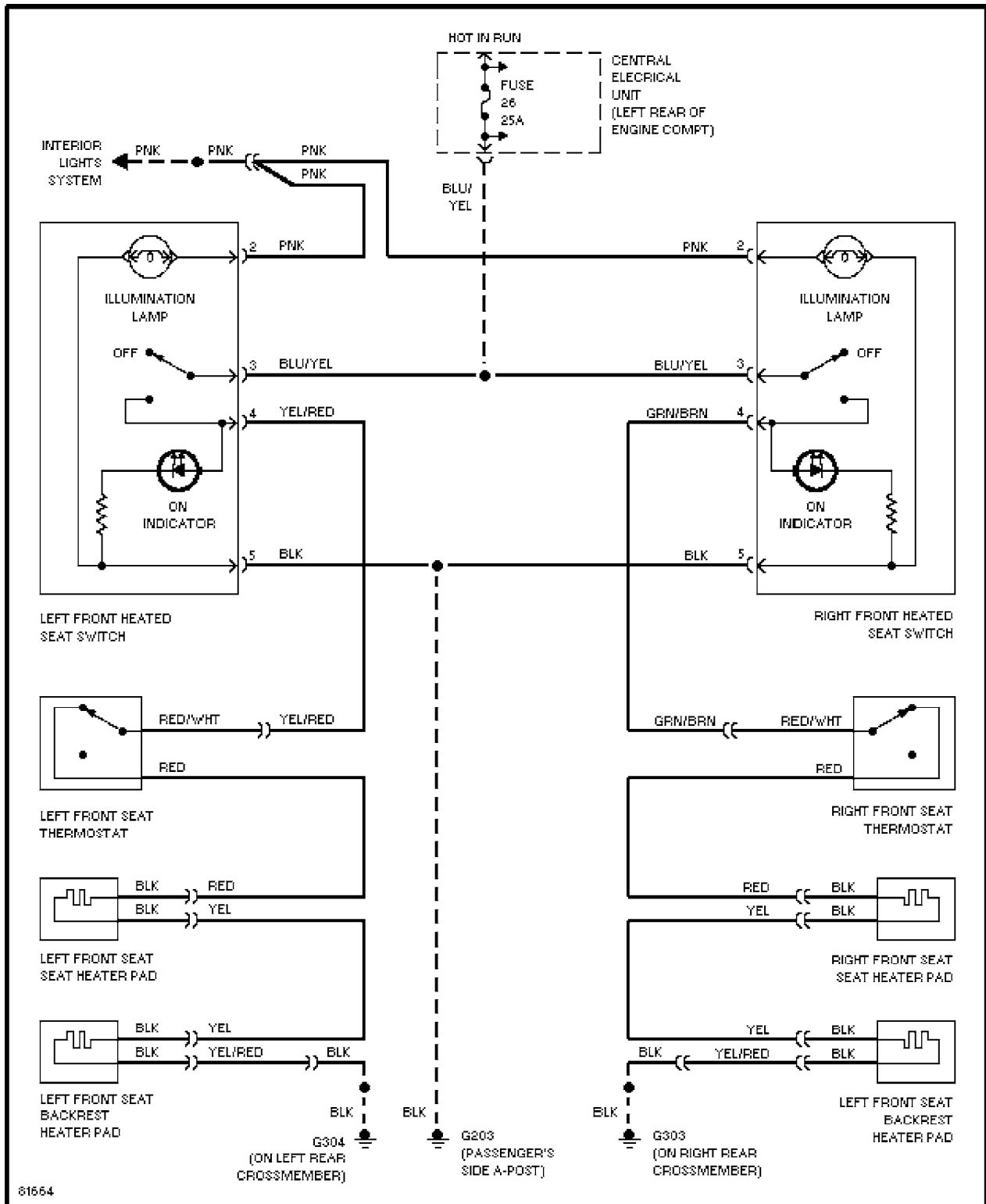


Fig. 2: Power Heated Seat System Wiring Diagram (1995-96 - Front)

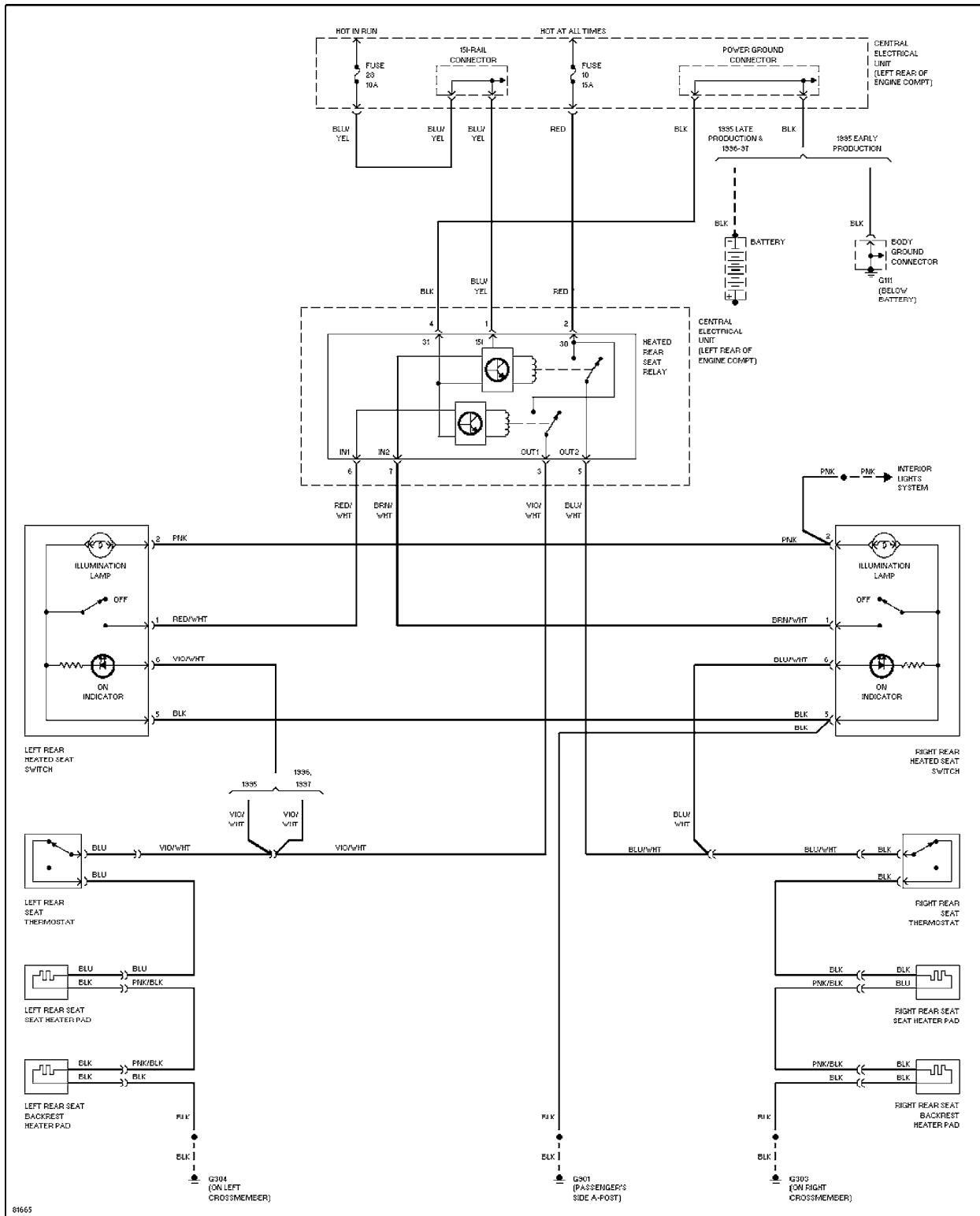


Fig. 3: Power Heated Seat System Wiring Diagram (1995-96 - Rear)