POWER WINDOWS

1995 Toyota 4Runner

1995-96 ACCESSORIES & EQUIPMENT
Toyota Power Windows - Trucks

4Runner

DESCRIPTION & OPERATION

System components consist of a power window relay, power window switches and power window motors for each door. With ignition switch in ON position, battery voltage is supplied through power window relay to power window switches. Power window switch supplies power and ground for power window motors. 4Runner also has a power window switch and lock switch for the tailgate door.

Driver's side power window switch offers one-touch operation of driver's side window. Driver's side power window switch also includes a lock-out feature to prevent passengers from operating any of the other power window switches.

TROUBLE SHOOTING

All Windows & Power Door Locks Inoperative
Check for defective fuse (GAUGE, POWER), power main relay, ignition switch, integration relay, door lock control relay, driver's side power window switch or wiring harness.

All Windows Inoperative, But Power Door Locks Operate
Check for defective fuse (GAUGE, POWER), ignition switch, integration relay, door lock control relay, driver's side power window switch, power main relay or wiring harness.

Lock Switch Inoperative
Check driver's side power window lock switch.

Window Lock Illumination Does Not Operate
Check driver's side power window switch.

One-Touch Feature Is Inoperative
Check driver's side power window switch.

One Window Does Not Operate
Check driver's side power window switch for appropriate window, power window switch, power window motor and wiring harness for appropriate window.

Window Does Not Operate With Key Off
Check for defective fuse (GAUGE, POWER), ignition switch, door courtesy switch or wiring harness.

NOTE: For door lock control relay and integration relay testing, see DOOR LOCKS - POWER article. For ignition switch testing, see appropriate STEERING COLUMN SWITCHES article.

COMPONENT TESTS

POWER WINDOW SWITCH CONTINUITY TEST (DRIVER'S SIDE SWITCH)

Using an ohmmeter, check continuity between specified terminals with driver's side power window switch in specified

position. See POWER WINDOW SWITCH CONTINUITY TEST (DRIVER'S SIDE) table. See Fig. 1. If continuity does not exist at specified terminals, replace power window switch.

POWER WINDOW SWITCH CONTINUITY TEST (DRIVER'S SIDE)

Application & Position	(1) Terminal No.
1995	
Driver's Side Switch (Locked & Unlocked)	
UP	2 & 13; 6 & 8
OFF	2, 6 & 13
DOWN	2 & 6; 8 & 13
Passenger Side Switch	
Locked	
UP	2 & 5; 8 & 12
OFF	2, 5 & 12;
DOWN	2 & 12; 5 & 8
Unlocked	
UP	8 & 12
OFF	5 & 12
DOWN	5 & 8
Left Rear Switch	
Locked	
UP	2 & 9; 8 & 10
OFF	2, 9 & 10
DOWN	2 & 10; 8 & 9
Unlocked	
UP	8 & 10
OFF	9 & 10
DOWN	8 & 9
Right Rear Switch	
Locked	
UP	2 & 14; 8 & 11
OFF	2, 11 & 14
DOWN	2 & 11; 8 & 14
Unlocked	
UP	8 & 11
OFF	11 & 14
DOWN	8 & 14
1996	
Driver's Side Switch (Locked & Unlocked)	
UP	4, 5 & 6; 3, 8 & 9
OFF	3, 4 & 5; 4, 5 & 6
DOWN	3, 4 & 5; 6, 8 & 9
Passenger Side Switch	
Locked	
UP	8, 9 & 11
OFF	11 & 13
DOWN	8, 9 & 13
Unlocked	
UP	4, 5 & 13; 8, 9 & 11
OFF	4, 5 & 11; 4, 5 & 13
DOWN	4, 5 & 11; 8, 9 & 13
Left Rear Switch	
Locked	
UP	8, 9 & 10
OFF	10 & 12
DOWN	8, 9 & 12
Unlocked	
UP	4, 5 & 12; 8, 9 & 10
OFF	4, 5 & 10; 4, 5 & 12
DOWN	4, 5 & 10; 8, 9 & 12

Right Rear Switch		
Locked		
UP		7, 8 & 9
OFF		7 & 14
DOWN		8, 9 & 14
Unlocked		
UP		4, 5 & 14; 7, 8 & 9
OFF		4, 5 & 7; 4, 5 & 14
DOWN		4, 5 & 7; 8, 9 & 14

(1) - See Fig. 1.

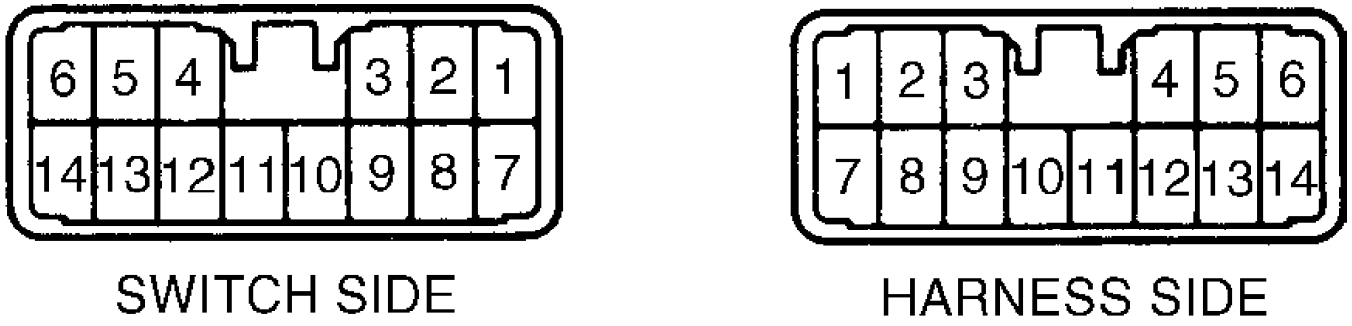

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Fig. 1: Power Window Switch Connector ID - Driver's Side Master Switch
Courtesy of Toyota Motor Sales, U.S.A., Inc.

POWER WINDOW SWITCH CONTINUITY TEST (PASSENGER SIDE & REAR SWITCHES)

Using an ohmmeter, check continuity between specified terminals with power window switch in specified position. See the POWER WINDOW SWITCH CONTINUITY TEST (PASSENGER SIDE & REAR) table. See Fig. 2. If continuity does not exist at specified terminals, replace appropriate power window switch.

POWER WINDOW SWITCH CONTINUITY TEST (PASSENGER SIDE & REAR)

Application & Position	(1) Terminals No.
1995 4Runner	
UP	1 & 5; 3 & 4
OFF	1 & 2; 3 & 4
DOWN	1 & 2; 4 & 5
1996 4Runner	
UP	1 & 2; 3 & 5
OFF	1 & 2; 4 & 5
DOWN	1 & 3; 4 & 5

(1) - See Fig. 2.

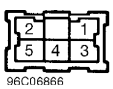


Fig. 2: Power Window Switch Connector ID - Passenger Side & Rear Switches
Courtesy of Toyota Motor Sales, U.S.A., Inc.

POWER WINDOW SWITCH CONTINUITY TEST (BACK DOOR/TAILGATE)

Using an ohmmeter, check continuity between specified terminals with back door/tailgate power window switch in specified position. See POWER WINDOW SWITCH CONTINUITY TEST (BACK DOOR/TAILGATE) table. See Fig. 3. If continuity does not exist at specified terminals, replace appropriate power window switch.

POWER WINDOW SWITCH CONTINUITY TEST (BACK DOOR/TAILGATE)

Application & Position	(1) Terminals No.
1995 Models	
UP	2 & 5
OFF	None
DOWN	1 & 2
Switch Illumination (UP, OFF & DOWN)	3 & 4
1996 Models	
UP	3 & 6
OFF	None
DOWN	3 & 5
Switch Illumination (UP, OFF & DOWN)	1 & 2

(1) - See Fig. 3.

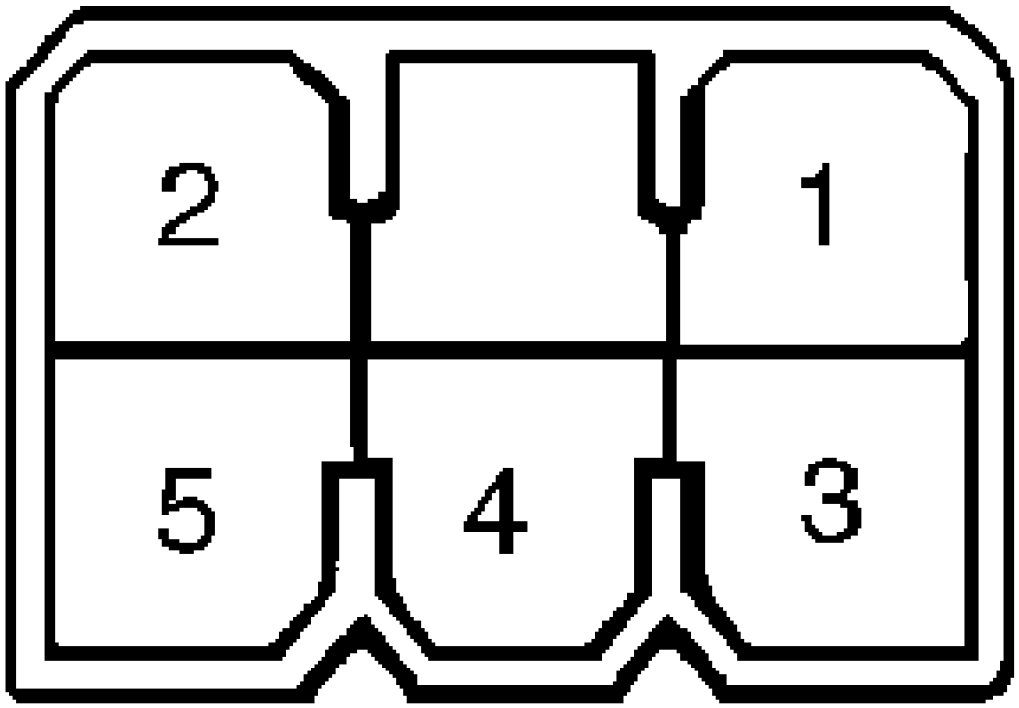


Fig. 3: Power Window Switch Connector ID - Back Door/Tailgate Switch (1995)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

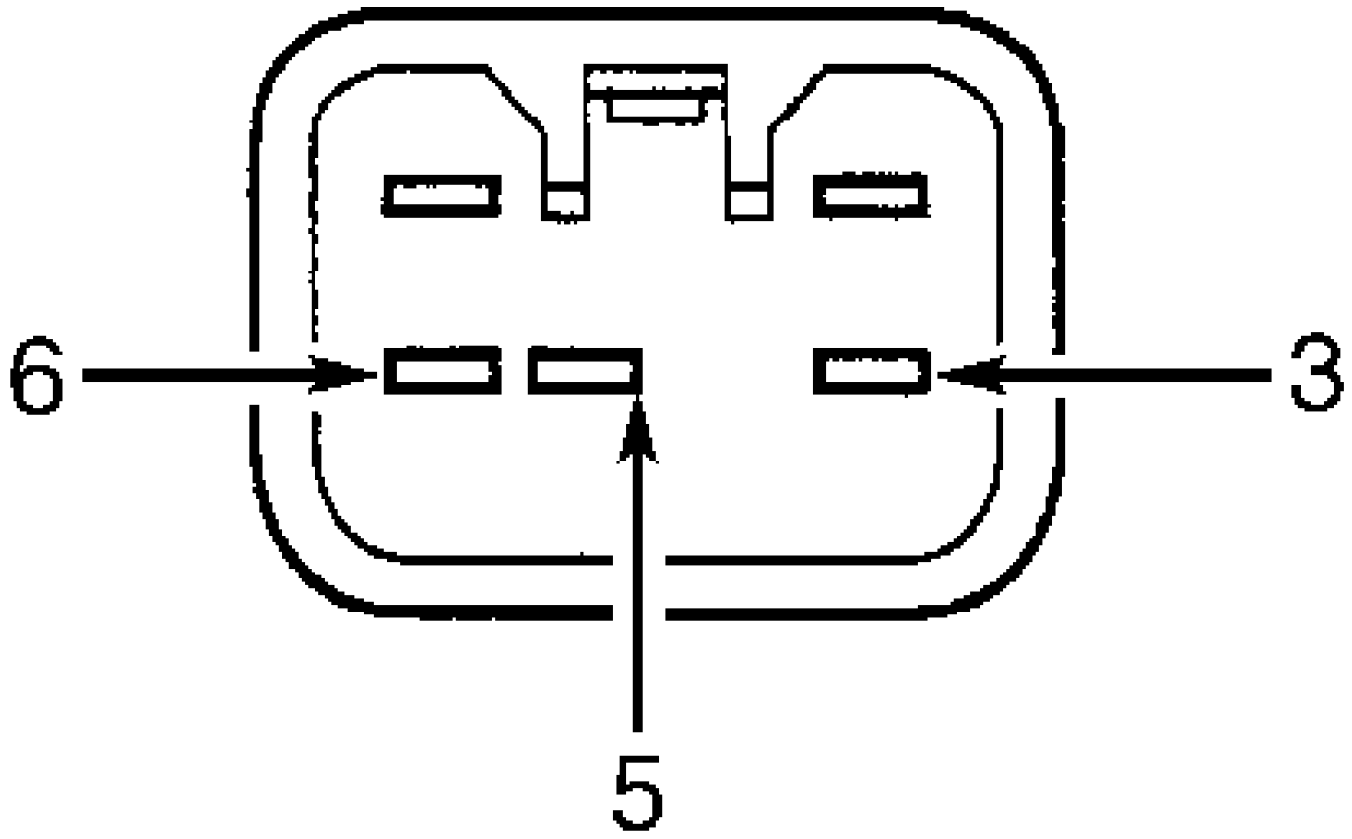


Fig. 4: Power Window Switch Connector ID - Back Door/Tailgate Switch (1996)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

POWER WINDOW MAIN RELAY

NOTE: 1995 4Runner models use a door lock control relay. For testing information, see DOOR LOCKS - POWER article.

1996

1) Remove power window main relay, located in junction block No. 1 at left side of instrument panel.

2) Using an ohmmeter, check continuity between power window main relay terminals No. 1 and 2. Continuity should exist. See Fig. 5. Apply battery voltage to terminal No. 1 and ground terminal No. 2. Continuity should exist at terminals No. 3 and 5. If relay does not test as described, replace power window main relay.

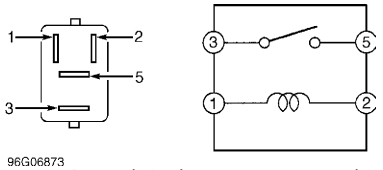


Fig. 5: Identifying Power Window Main Relay Terminals (1996)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

POWER WINDOW RELAY (BACK DOOR/TAILGATE)

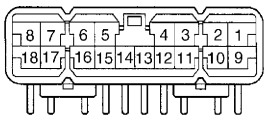
1995 4Runner Tailgate Door

1) Disconnect 20-pin relay connector, located inside vehicle at left rear quarter panel. Using a 12-volt battery, connect jumper wire from positive battery terminal to connector terminal No. 16 (Red wire). Connect jumper wire from negative battery terminal to connector terminal No. 5 (Green wire).

2) Tailgate door power window motor should operate. If motor does not operate, check wiring circuit and power window motor. See POWER WINDOW MOTOR TEST. If circuit and motor are okay, replace power window relay.

1996 4Runner

Disconnect 18-pin control relay connector, located inside back door/tailgate. Using a Digital Volt-Ohmmeter, check each circuit individually using test chart. See Fig. 6. If after testing all control relay circuits, values are as specified and back door/tailgate window does not operate properly, replace back door/tailgate relay and recheck operation.



CONTROL RELAY CONNECTOR (WIRING HARNESS SIDE)

Tester connection	Condition	Specified condition
*1 – 9	Constant	Continuity
2 – Ground	Back door control switch OFF or DOWN for 0.75 sec. or more	No continuity
2 – Ground	Back door control switch UP for 0.75 sec. or more	Continuity
*4 – Ground	Rear washer switch OFF	No continuity
*4 – Ground	Rear washer switch ON	Continuity
5 – 15	Constant	Continuity
6 – Ground	Window limit switch OFF	No continuity
6 – Ground	Window limit switch ON	Continuity
*7 – Ground	Rear wiper switch OFF or INT	No continuity
*7 – Ground	Rear wiper switch ON	Continuity
*8 – Ground	Rear wiper arm stop position	Continuity
*8 – Ground	Rear wiper arm not stop position	No continuity
10 – Ground	Back door control switch OFF or UP for 0.75 sec. or more	No continuity
10 – Ground	Back door control switch DOWN for 0.75 sec. or more	Continuity
11 – Ground	Window lock switch LOCK	No continuity
11 – Ground	Window lock switch UNLOCK and back door power window control switch OFF or DOWN	No continuity
11 – Ground	Window lock switch UNLOCK and back door power window control switch UP	Continuity
13 – Ground	Window lock switch LOCK	No continuity
13 – Ground	Window lock switch UNLOCK and back door power window control switch OFF or UP	No continuity
13 – Ground	Window lock switch UNLOCK and back door power window control switch DOWN	Continuity
14 – Ground	Constant	Continuity
*17 – Ground	Rear wiper switch OFF or ON	No continuity
*17 – Ground	Rear wiper switch INT	Continuity
*18 – Ground	Rear wiper arm stop or rise up position	Continuity
*18 – Ground	Rear wiper arm not stop or not rise up position	No continuity
3 – Ground	Ignition switch LOCK or ACC	No voltage
3 – Ground	Ignition switch ON	Battery positive voltage
12 – Ground	Constant	Battery positive voltage

* With Rear Wiper

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Fig. 6: Back Door/Tailgate Control Relay Circuit Testing (1996)
Courtesy of Toyota Motor Sales, U.S.A., Inc.

POWER WINDOW MOTOR TEST

Using a 12-volt battery, connect positive battery lead to either power window motor terminal. Connect negative battery lead to other power window motor connector terminal. Motor should operate. Reverse battery leads. Motor should operate in opposite direction. If motor does not test as described, replace motor.

POWER WINDOW LOCK SWITCH

1995 4Runner Tailgate Door

Disconnect power window lock switch 4-pin connector, located on center console. Using an ohmmeter, check continuity between terminals No. 2 and 4 (White/Red wire and White/Black wire), with lock switch in unlocked position. Continuity should exist. With lock switch in locked position, continuity should not exist. If continuity is not as specified, replace switch.

1996 4Runner Tailgate Door

Disconnect power window lock switch 10-pin connector, located on left side of instrument panel. Using an ohmmeter, check continuity between terminals No. 7 and 10 (White/Black wire and Green/Black wire), with lock switch in unlocked position. Continuity should exist. With lock switch in locked position, continuity should not exist. If continuity is not as specified, replace switch.

POWER WINDOW LIMIT SWITCH

4Runner Tailgate Door

Disconnect power window limit switch 3-pin connector, located on left side of tailgate door, behind trim panel. Using an ohmmeter, check continuity between terminals No. 1 and 2 (Red/Blue wire and White/Black wire) with switch in ON position. Continuity should exist. With switch in OFF position, continuity should not exist. If continuity is not as specified, replace switch.

SYSTEM TESTS

POWER WINDOW SYSTEM CURRENT TEST

1995

1) Disconnect connector from driver's side power window switch. Connect positive lead of ammeter to driver's side power window switch connector (harness side) terminal No. 6.

2) Connect ammeter negative lead to negative terminal of 12-volt battery. Connect jumper wire from positive battery terminal to driver's side power window switch connector terminal No. 13. See Fig. 1.

3) While lowering driver's side window, current should be about 7 amps. When window operation is stopped, current should increase to about 14.5 amps or more. If current is as described, replace driver's side power window switch. If current is not as described, check and repair appropriate circuit.

1996

1) Disconnect connector from driver's side power window switch. Connect positive lead of ammeter to driver's side power window switch connector (harness side) terminal No. 3.

2) Connect ammeter negative lead to negative terminal of 12-volt battery. Connect jumper wire from positive battery terminal to driver's side power window switch connector terminal No. 6. See Fig. 1

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3) While lowering driver's side window, current should be about 7 amps. When window operation is stopped, current should increase to about 14.5 amps or more. If current is as described, replace driver's side power window switch. If current is not as described, check and repair appropriate circuit.

REMOVAL & INSTALLATION

POWER WINDOW MOTOR

Removal & Installation

Remove door trim panel and waterproof shield. Remove glass retaining bolts and glass. Remove window regulator nuts and remove window regulator. Remove power window motor retaining screws and remove motor from window regulator. To install, reverse removal procedure.

POWER WINDOW SWITCH

Removal & Installation

Disconnect negative battery cable. Pry out power window switch from door panel using flat screwdriver. Disconnect power window switch connectors and remove switch. To install, reverse removal procedure.

WIRING DIAGRAMS

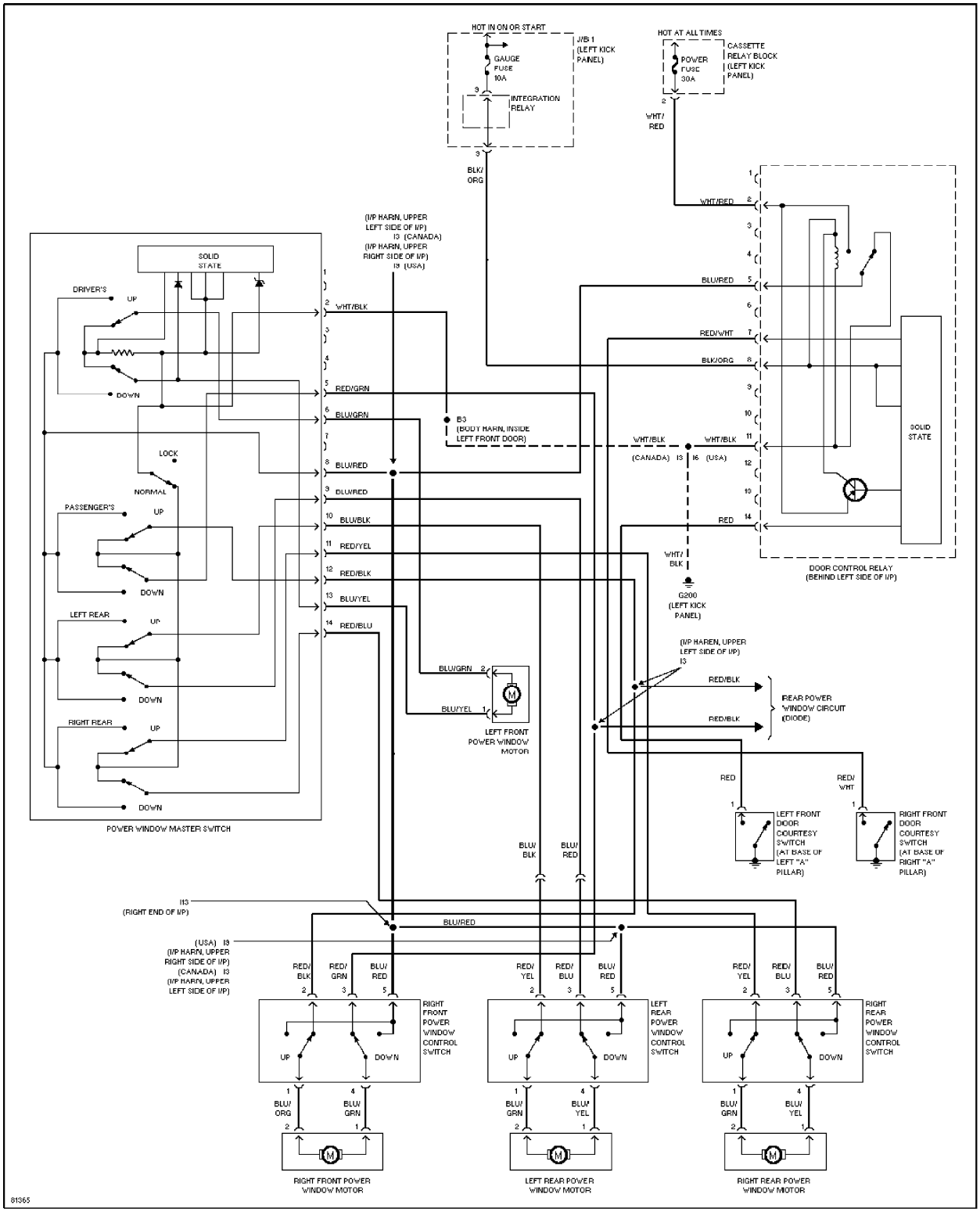

Fig. 7: Power Window System Wiring Diagram (1995)

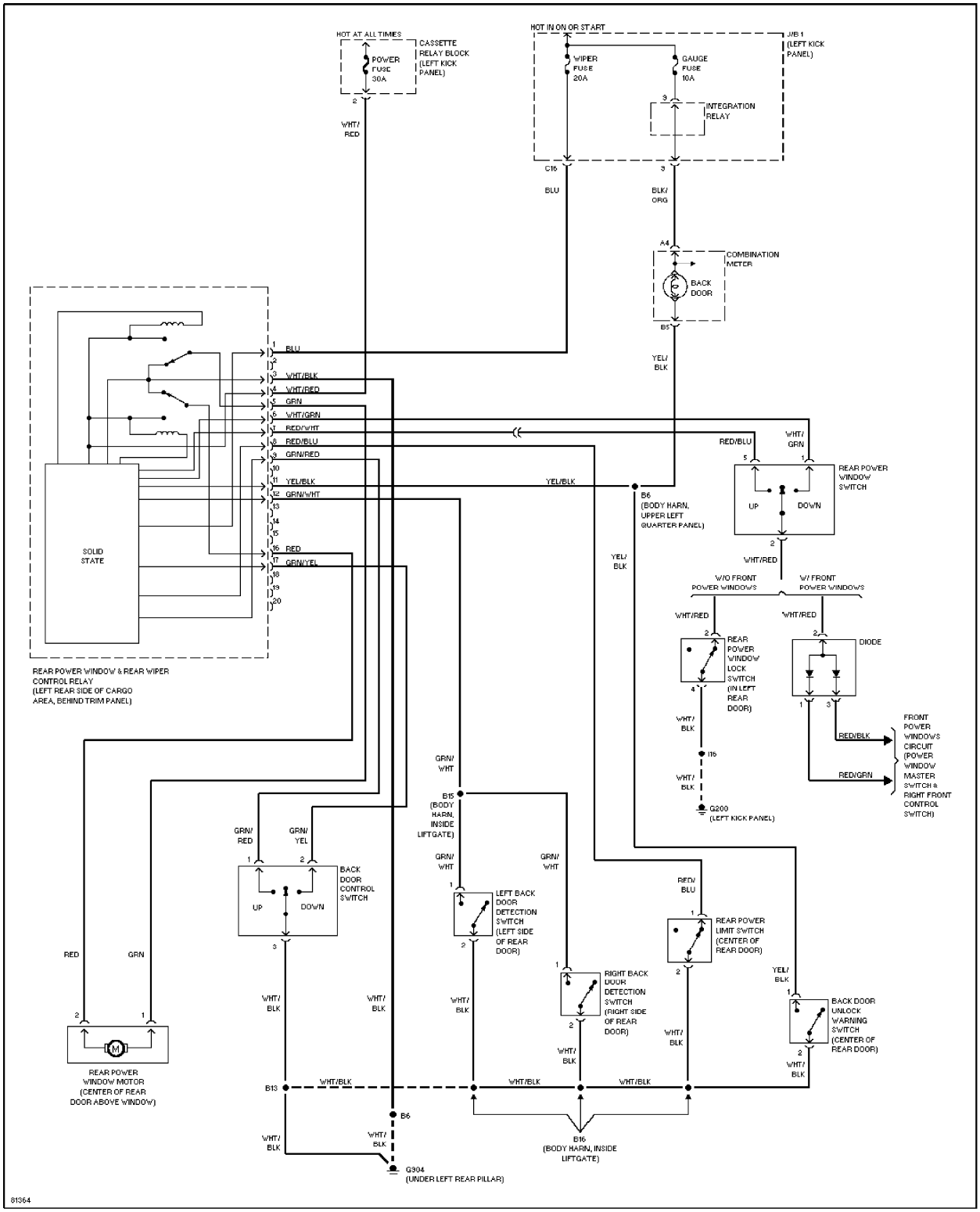

Fig. 8: Power Window System Wiring Diagram (1995 - Tailgate)

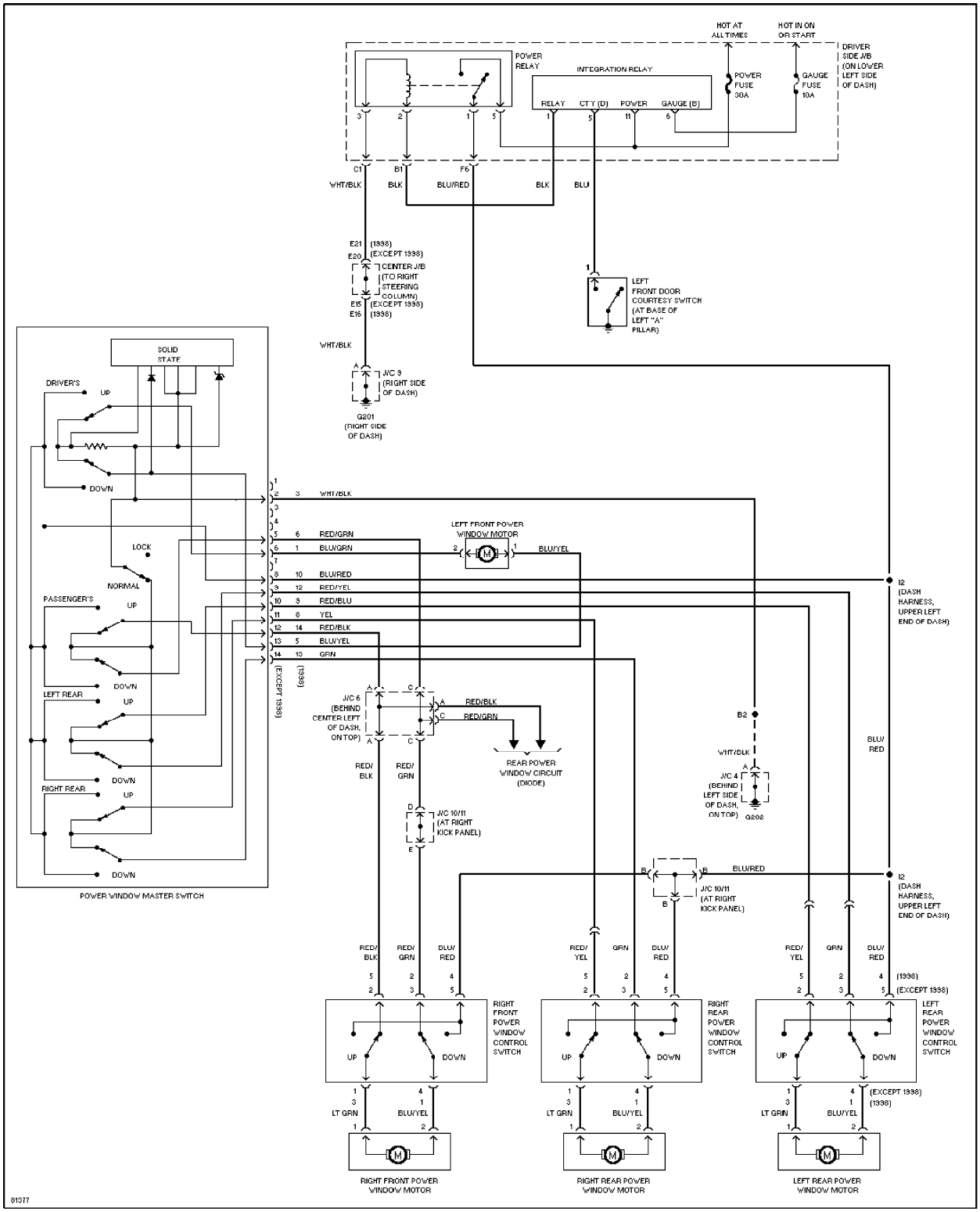

Fig. 9: Power Window System Wiring Diagram (1996)

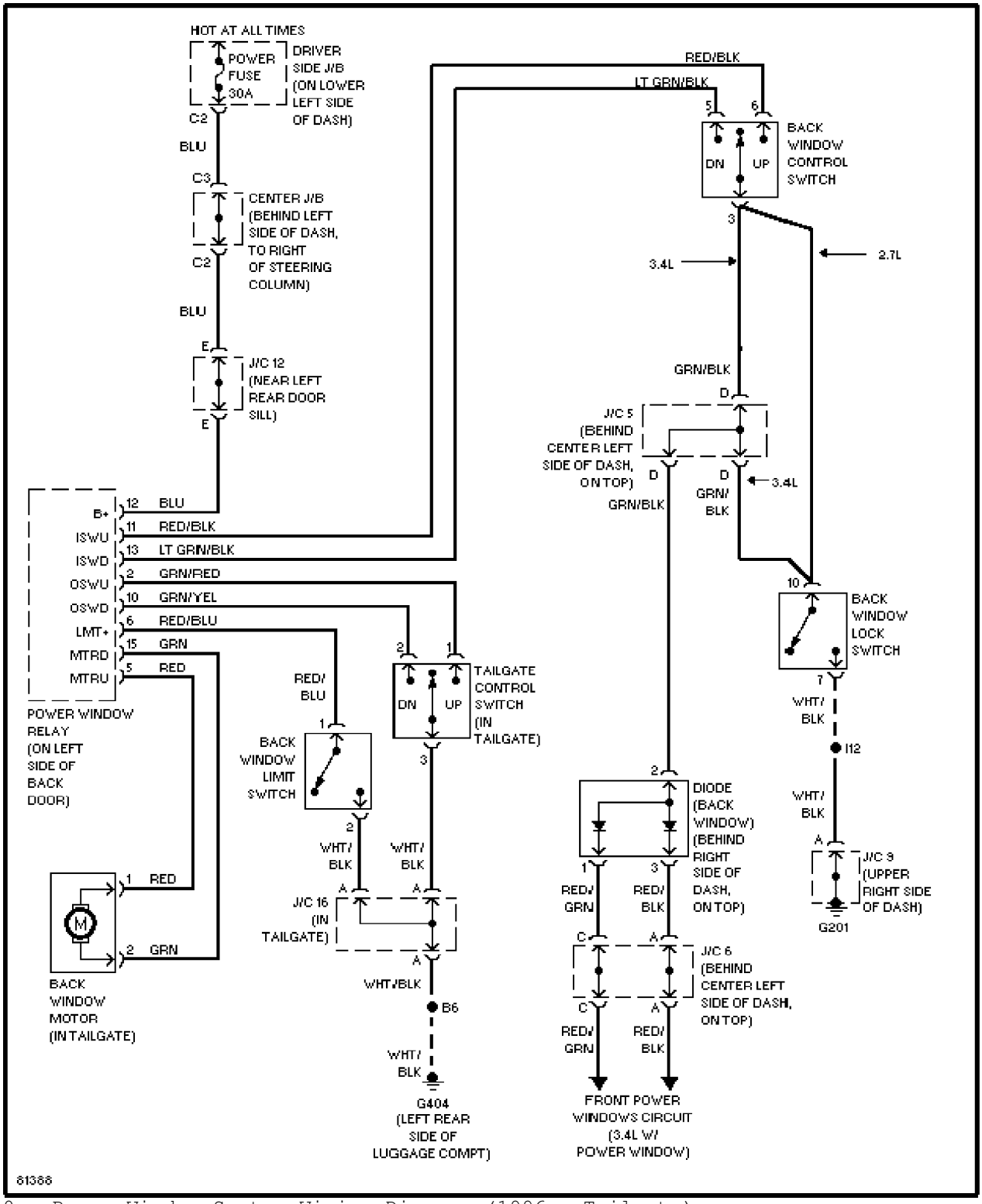

Fig. 10: Power Window System Wiring Diagram (1996 - Tailgate)