

Power Windows

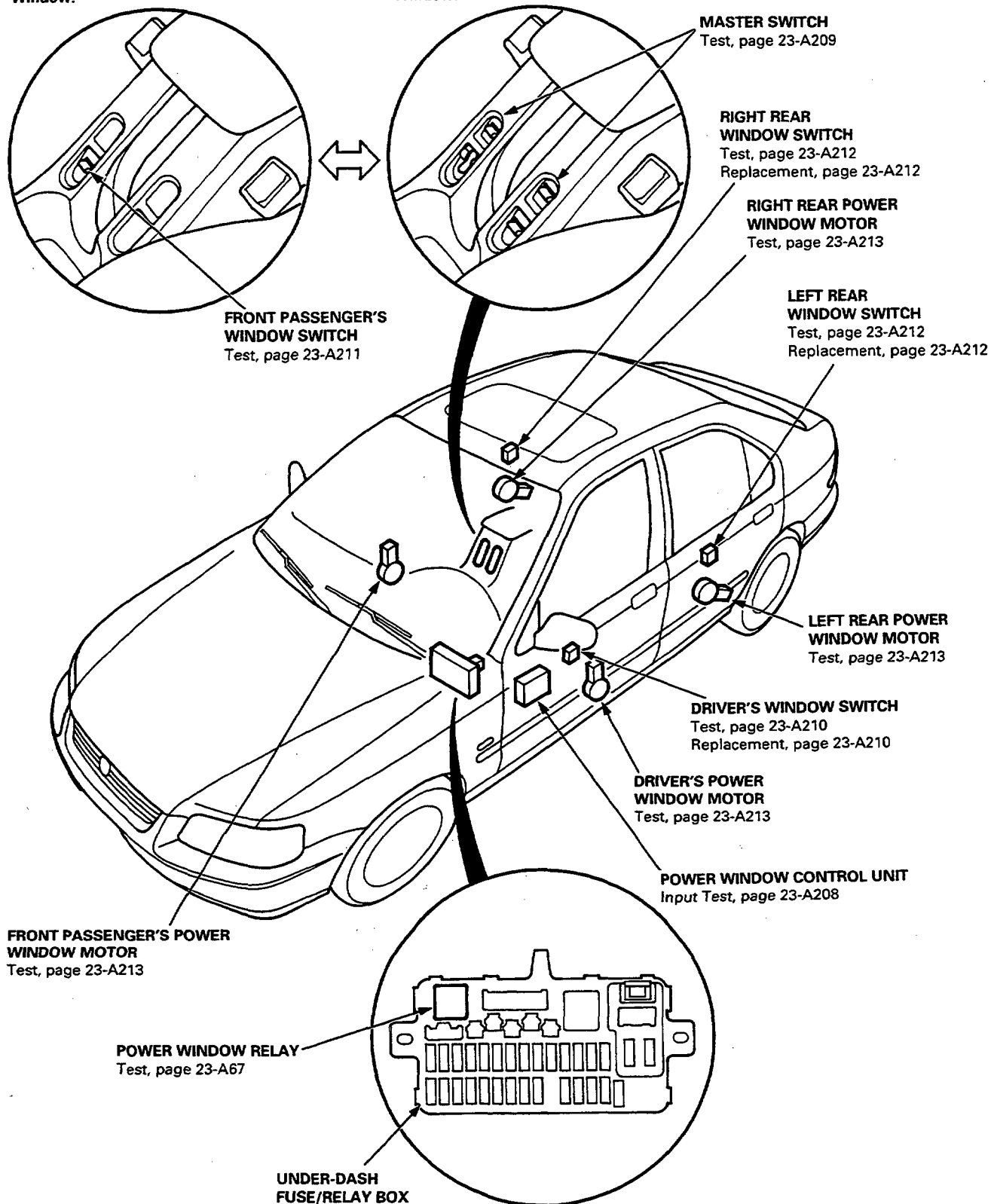


Component Location Index

NOTE: LHD type is shown; RHD type is symmetrical.

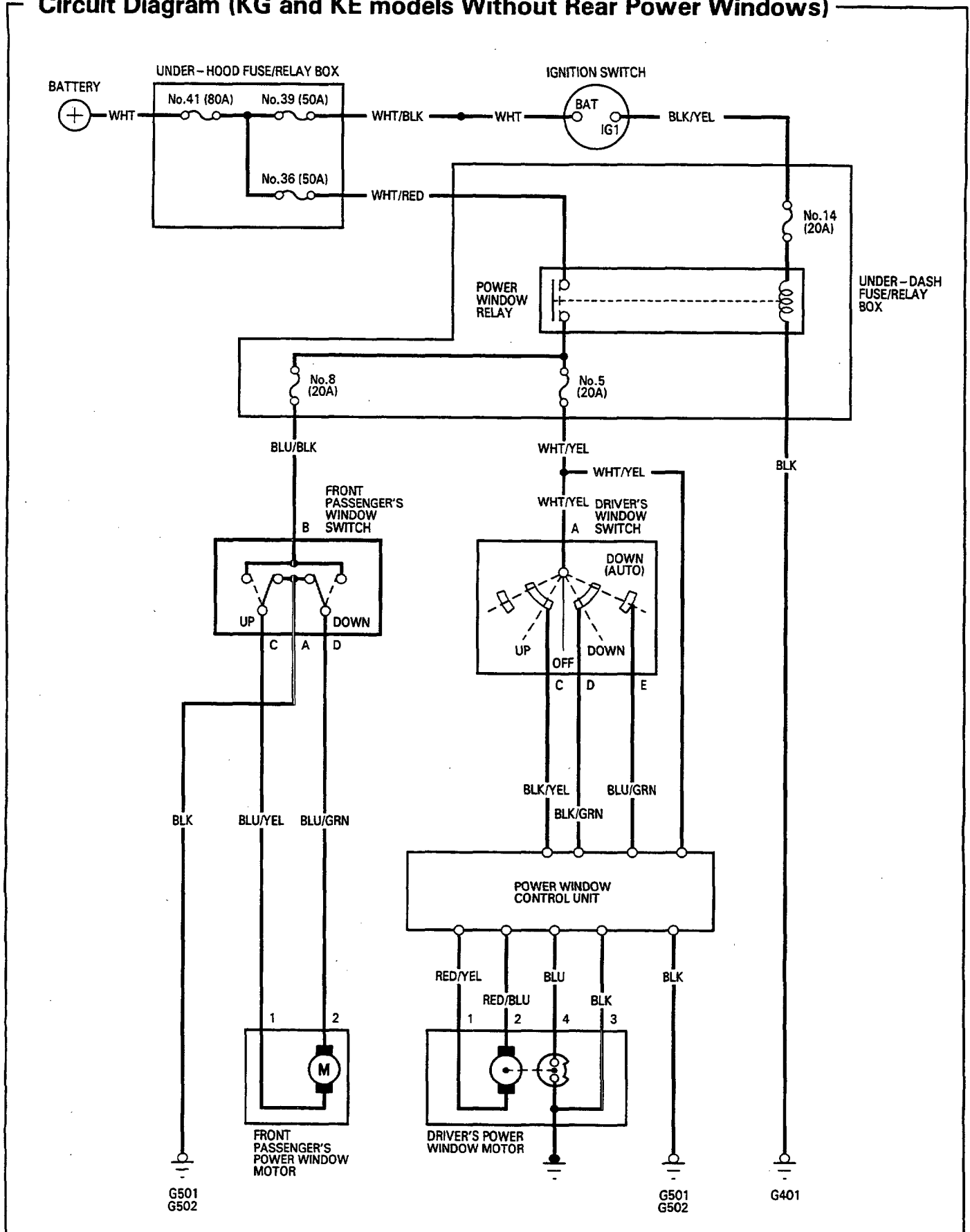
Without Rear Power Window:

With Rear Power Window:



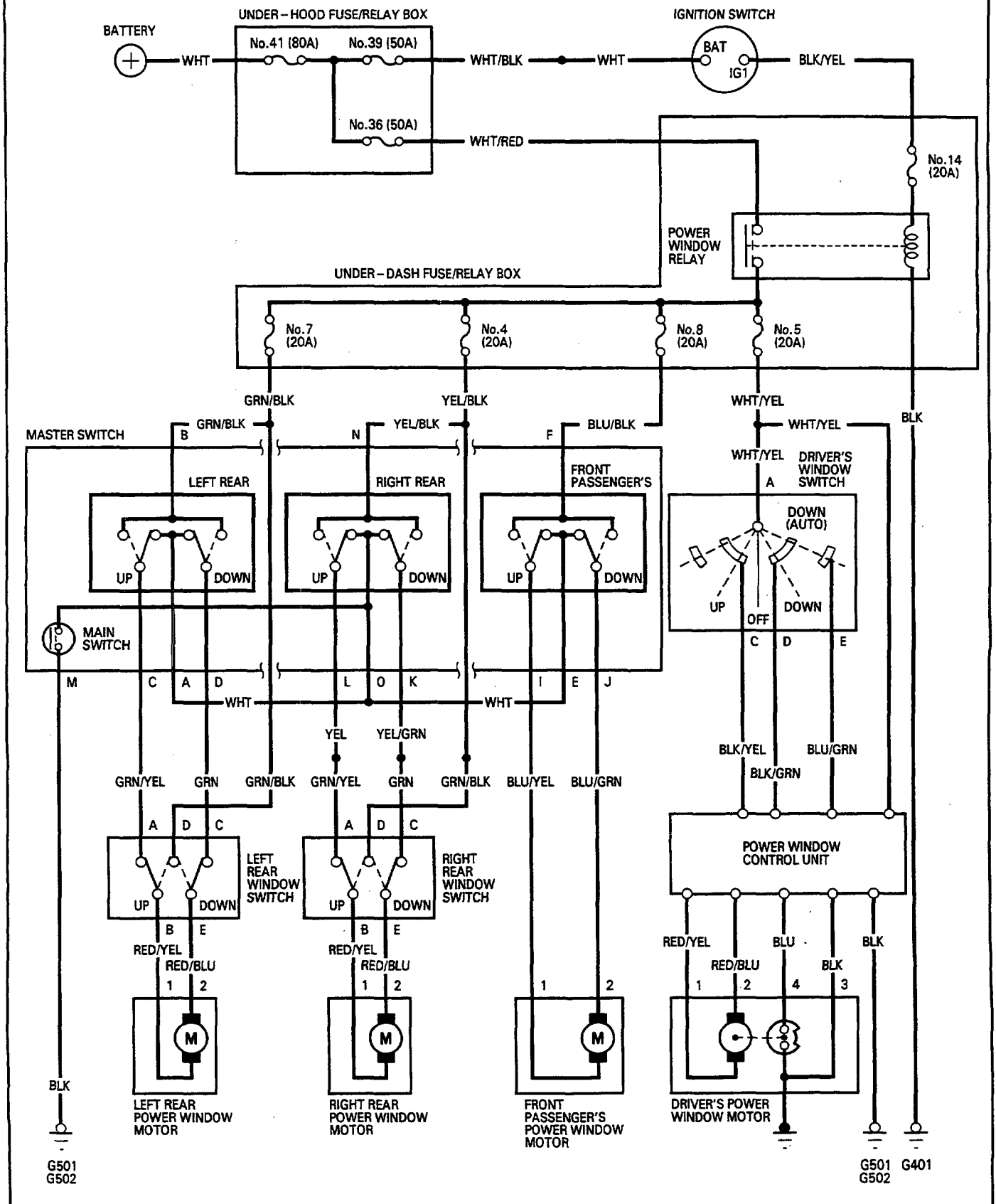
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Circuit Diagram (KG and KE models Without Rear Power Windows)



Power Windows

Circuit Diagram (KE model With Rear Power Window)





Troubleshooting

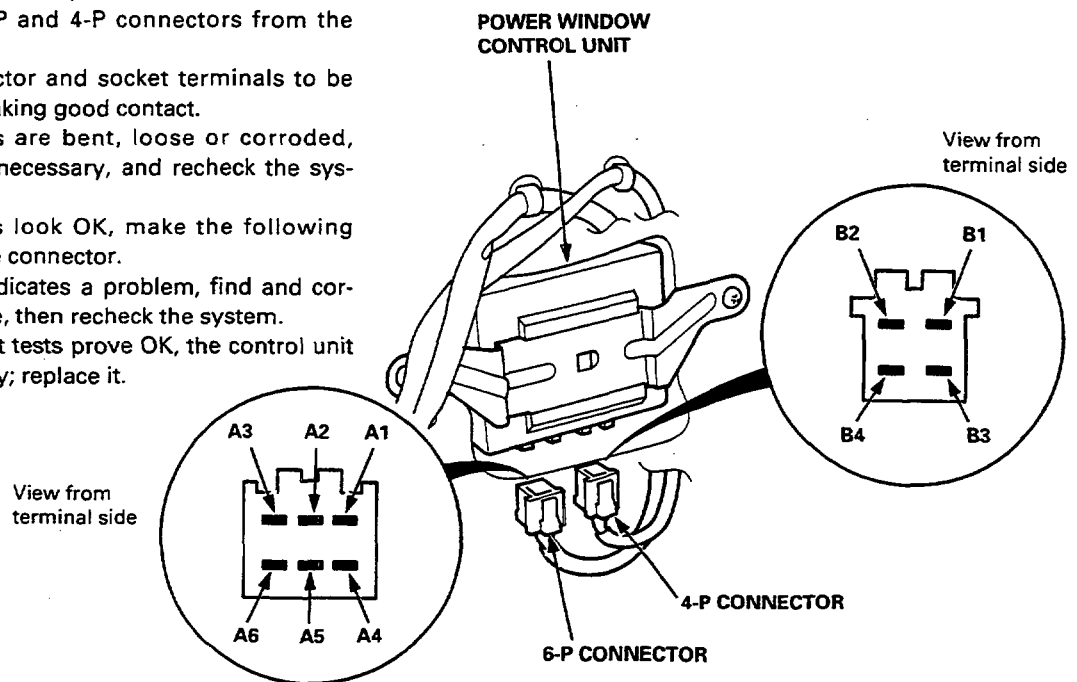
NOTE: The numbers in the table show the troubleshooting sequence.

Symptom		Item to be inspected																	
		State of charge, and clean and tight connections of battery	Blown No. 14 (20 A) fuse (In the under-dash fuse/relay box)	Power window relay	In the under-dash fuse/relay box				Master switch	Driver's window switch	Passenger's window switch	Driver's motor	Pulser (In driver's motor)	Passenger's motor	Window regulator	Power window control unit input test	Poor ground	Open circuit in the wires, loose or disconnected terminals	
All windows do not work.		1	2	3														G401	BLK/YEL
Driver's window does not work.					1					3		2						G501 G502	WHT/YEL
Driver's window does not work in AUTO.										1			2			3			BLU
Passenger's windows do not work.	Front Passenger's					1			2		3			4	5				BLU/BLK
	Left rear							1	2		3			4	5				GRN/BLK
	Right rear						1		2		3			4	5				YEL/BLK

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Control Unit Input Test

1. Remove the driver's door panel (see section 20).
2. Disconnect the 6-P and 4-P connectors from the control unit.
3. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, make the following input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, the control unit must be faulty; replace it.



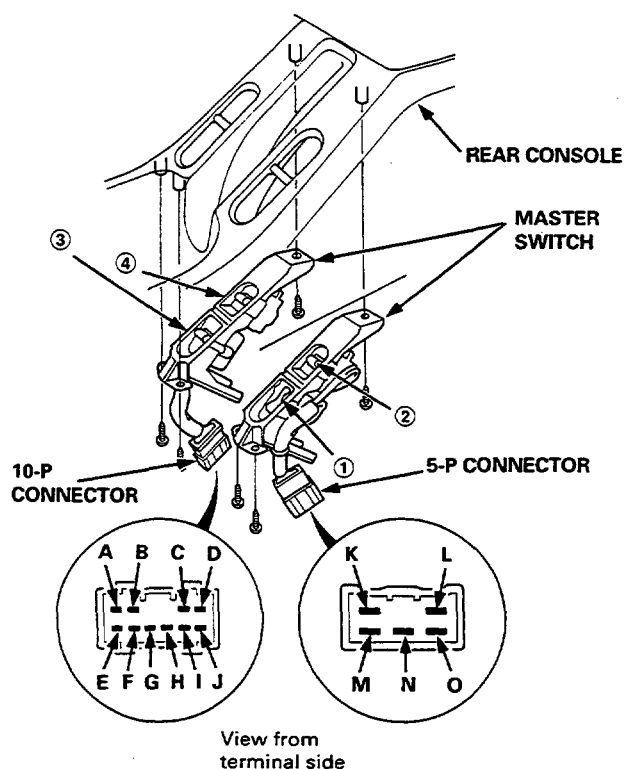
Terminal No.	Wire	Test condition	Test: Desired result	Possible cause if result is not obtained
A4	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	<ul style="list-style-type: none"> • Poor ground (G501, G502) • An open in the wire
A3	WHT/YEL	Ignition switch "ON"	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> • Blown No. 14 (20 A) fuse in the under-dash fuse/relay box • Blown No. 5 (20 A) fuse in the under-dash fuse/relay box • Faulty power window relay
A5	BLK/YEL	Ignition switch ON (II), driver's window switch UP	Check for voltage to ground: There should be battery voltage.	<ul style="list-style-type: none"> • Faulty driver's window switch • An open in the wire
A6	BLK/GRN	Ignition switch ON (II), driver's window switch DOWN		
A2	BLU/GRN	Ignition switch ON (II), driver's window switch DOWN (AUTO)		
B1	RED/BLU	Connect the A3 terminal to the B1 terminal and the A4 terminal to the B2 terminal, then turn the ignition switch ON (II).	Check the driver's power window motor: It should run (the window moves down).	<ul style="list-style-type: none"> • Faulty driver's power window motor • An open in the wire
B2	RED/YEL			
B3	BLU	Connect the A3 terminal to the B2 terminal and the A4 terminal to the B1 terminal, then turn the ignition switch ON (II).	Check for resistance between the B3 and B4 terminals: Between 20 – 50 ohms should be indicated as the driver's motor runs.	<ul style="list-style-type: none"> • Faulty pulser • Faulty driver's power window motor • An open in the wire
B4	BLK			



Master Switch Test/Replacement (With Rear Power Window)

1. Remove the rear console (see section 20).
2. Disconnect the 10-P and 5-P connectors from the master switch.
3. Remove the master switch from the rear console.

NOTE: LHD type is shown, RHD type is symmetrical.



- ①: Main switch
 ②: Left rear switch
 ③: Front passenger's switch
 ④: Right rear switch

4. Check for continuity between the terminals in each switch position according to the tables.

FRONT PASSENGER'S SWITCH

Terminal	E	F	I	J
Position				
OFF	○		○	○
UP	○	○	○	○
DOWN	○	○	○	○

LEFT (* RIGHT) REAR SWITCH

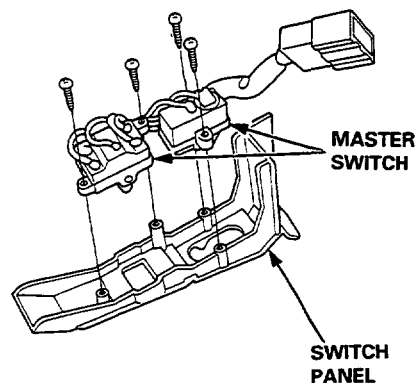
Terminal	K	L	M	N	O
Position	Main switch				
OFF	ON	○	○	○	○
	OFF	○	○		○
UP	ON	○	○	○	○
	OFF	○	○	○	○
DOWN	ON	○	○	○	○
	OFF	○	○	○	○

RIGHT (* LEFT) REAR SWITCH

Terminal	A	B	C	D
Position				
OFF	○		○	○
UP	○	○	○	○
DOWN	○	○	○	○

* : KE model

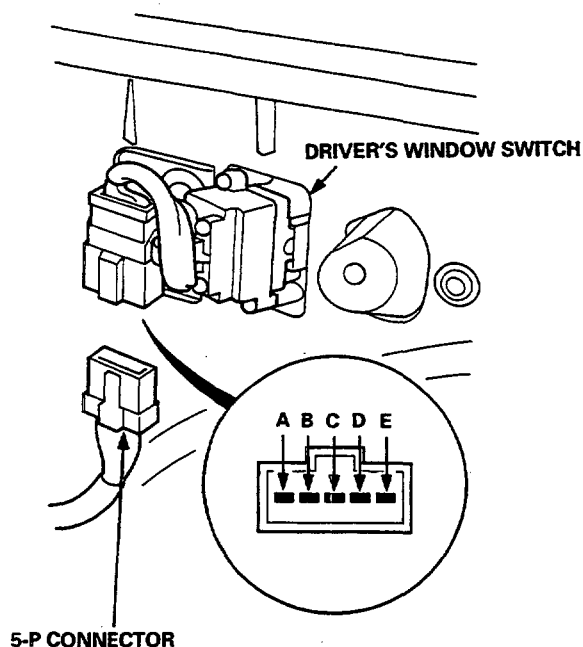
5. Remove the screws, then remove the master switch from the switch panel.



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Driver's Window Switch Test

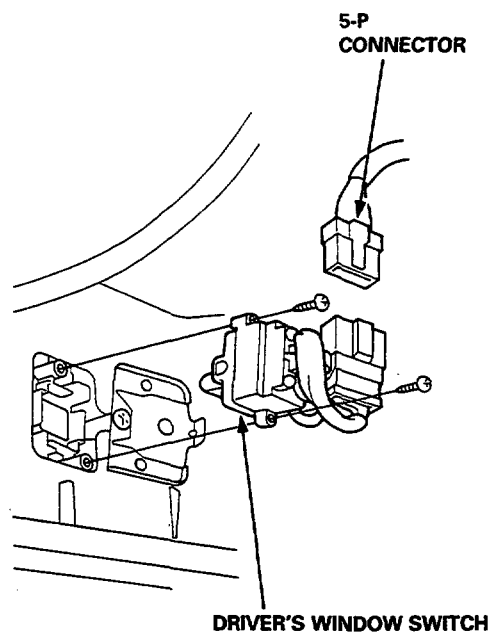
1. Remove the driver's door panel (see section 20).
2. Disconnect the 5-P connector from the switch.
3. Check for continuity between the terminals in each switch position according to the table.



Terminal	A	C	D	E
Position				
UP	○	○		
OFF				
DOWN	○		○	
DOWN (AUTO)	○			○

Driver's Window Switch Replacement

1. Remove the driver's door panel (see section 20).
2. Disconnect the 5-P connector from the switch.
3. Remove the switch from the door panel by removing the two screws.

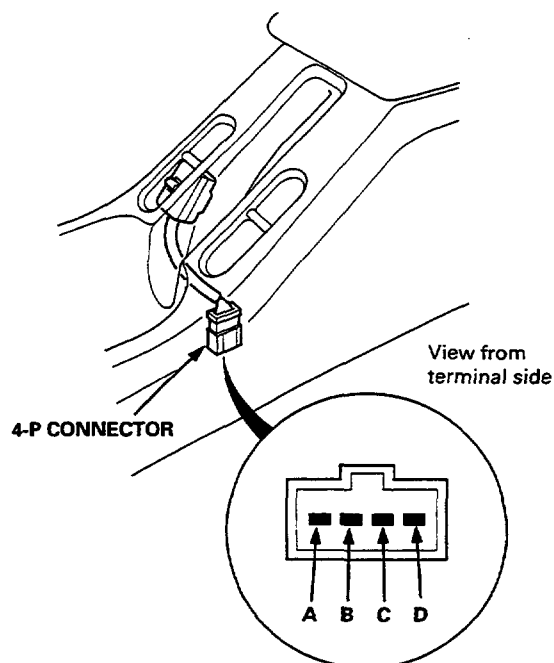




Front Passenger's Window Switch Test (Without Rear Power Window)

1. Remove the rear console (see section 20).
2. Disconnect the 4-P connector.

NOTE: LHD type is shown, RHD type is symmetrical.

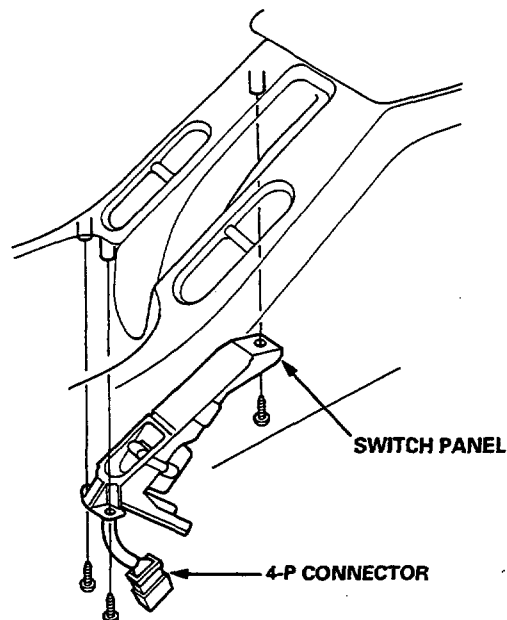


3. Check for continuity between the terminals in each switch position according to the table.

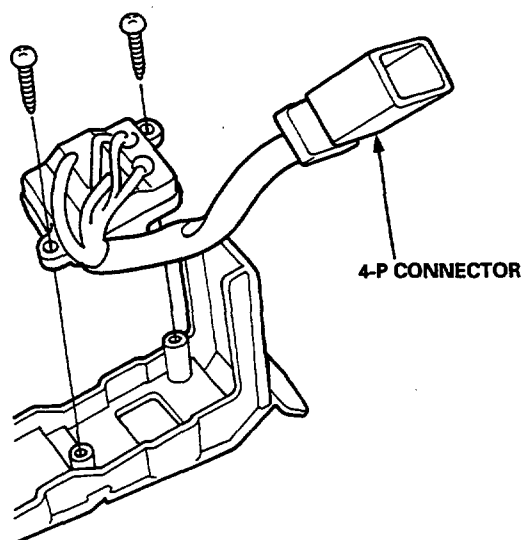
Terminal	A	B	C	D
Position				
UP		○	○	
OFF	○		○	○
DOWN	○	○	○	

Front Passenger's Window Switch Replacement (Without Rear Power Window)

1. Remove the rear console (see section 20).
2. Disconnect the 4-P connector from the switch.
3. Remove the three screws, then remove the switch panel.



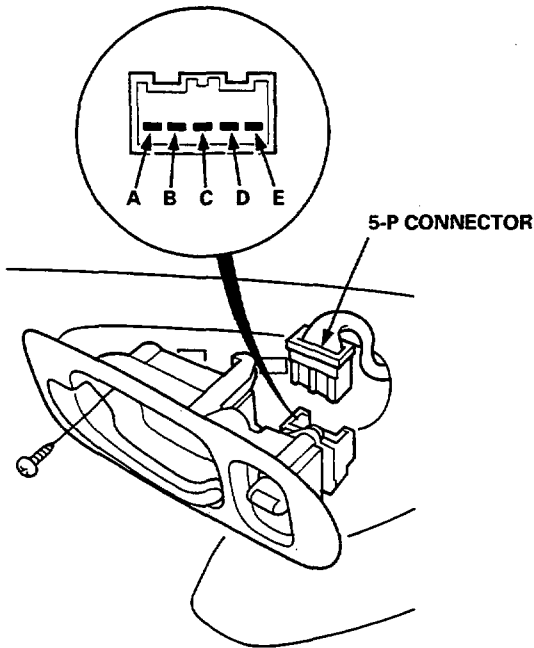
4. Remove the two screws and the switch.



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Rear Window Switch Test

- 1. Remove the door inside handle.
- 2. Disconnect the 5-P connector.

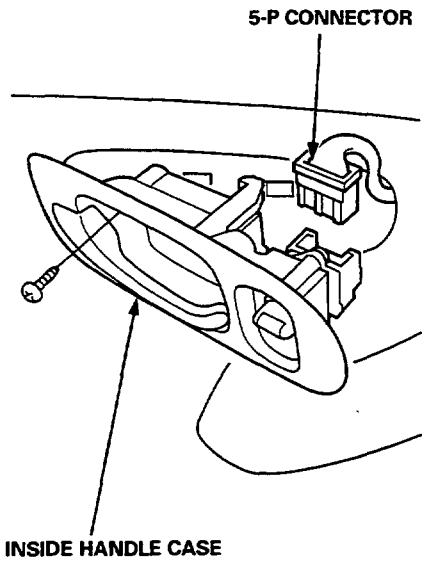


- 3. Check for continuity between the terminals in each switch position according to the table.

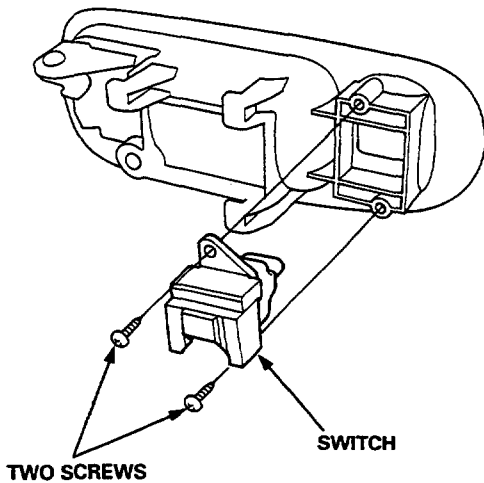
Terminal Position	A	B	C	D	E
UP		○	○	○	
OFF	○	○			○
DOWN	○	○		○	○

Rear Window Switch Replacement

- 1. Remove the door inside handle.
- 2. Disconnect the 5-P connector.



- 3. Remove the two screws from the switch.

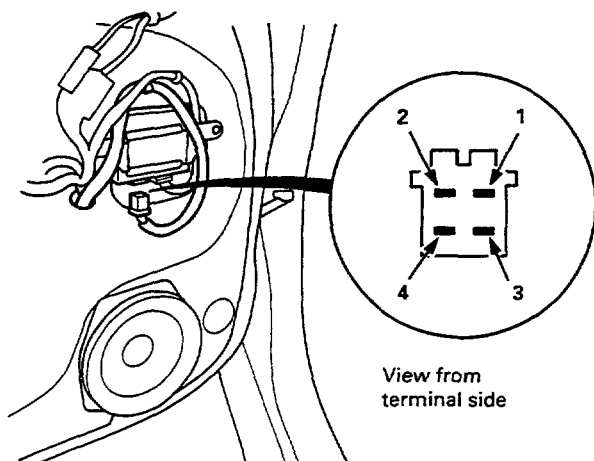




Driver's Power Window Motor Test

Motor Test:

1. Remove the driver's door panel (see section 20).
2. Disconnect the 4-P connector from the motor.



3. Test the motor in each direction by connecting battery power and ground according to the table.

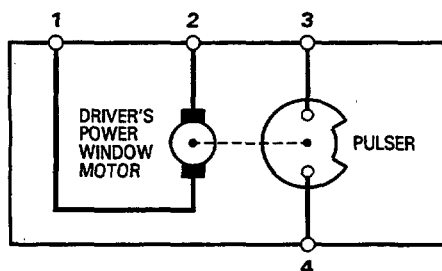
Direction	Terminal 1	Terminal 2
UP	⊖	⊕
DOWN	⊕	⊖

CAUTION: When the motor stops running, disconnect one lead immediately.

4. If the motor does not run or fails to run smoothly, replace it.

Pulser Test:

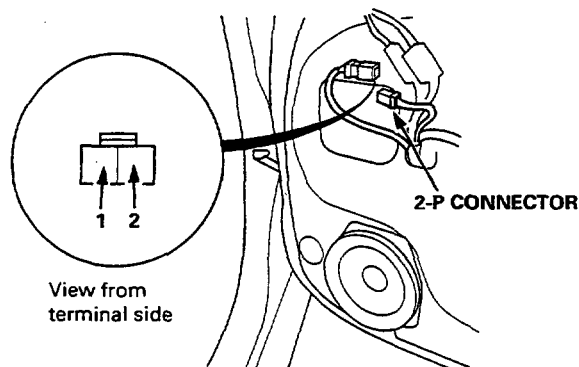
5. Connect the test leads of an analog ohmmeter to the No. 3 and No. 4 terminals.
6. Run the motor by connecting power and ground to the No. 1 and No. 2 terminals. The ohmmeter needle should move back and forth alternately.



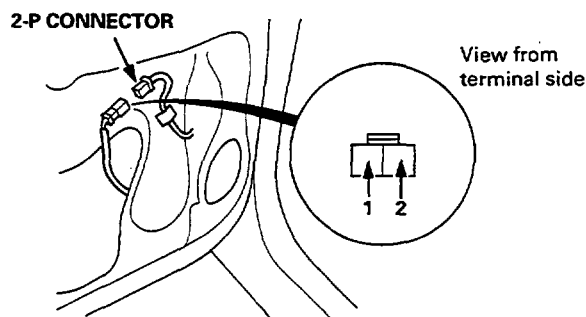
Passenger's Power Window Motor Test

1. Remove the passenger's door panel.
2. Disconnect the 2-P connector from the motor.

NOTE: LHD type is shown, RHD type is similar.

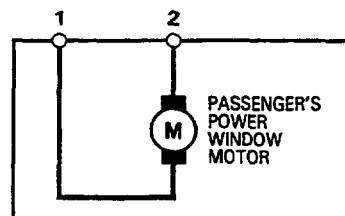


NOTE: The illustration shows the left rear window motor; the right rear window motor is symmetrical.



3. Check window motor operation by connecting power and ground according to the table.

Direction	Terminal 1	Terminal 2
UP	⊕	⊖
DOWN	⊖	⊕



CAUTION: When the motor stops running, disconnect one lead immediately.

4. If the motor does not run or fails to run smoothly, replace it.