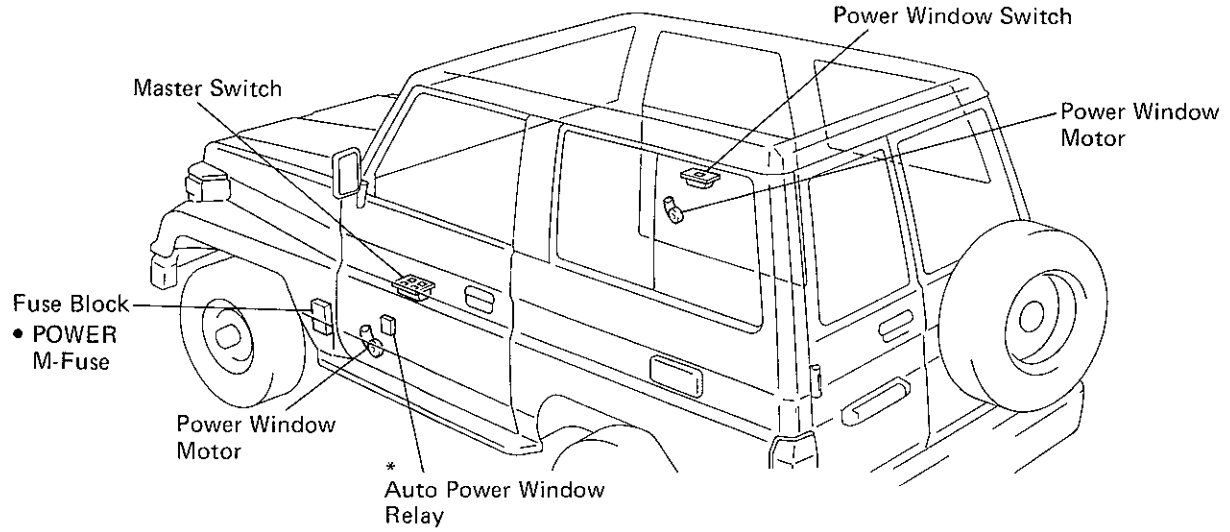
POWER WINDOW CONTROL SYSTEM

Parts Location

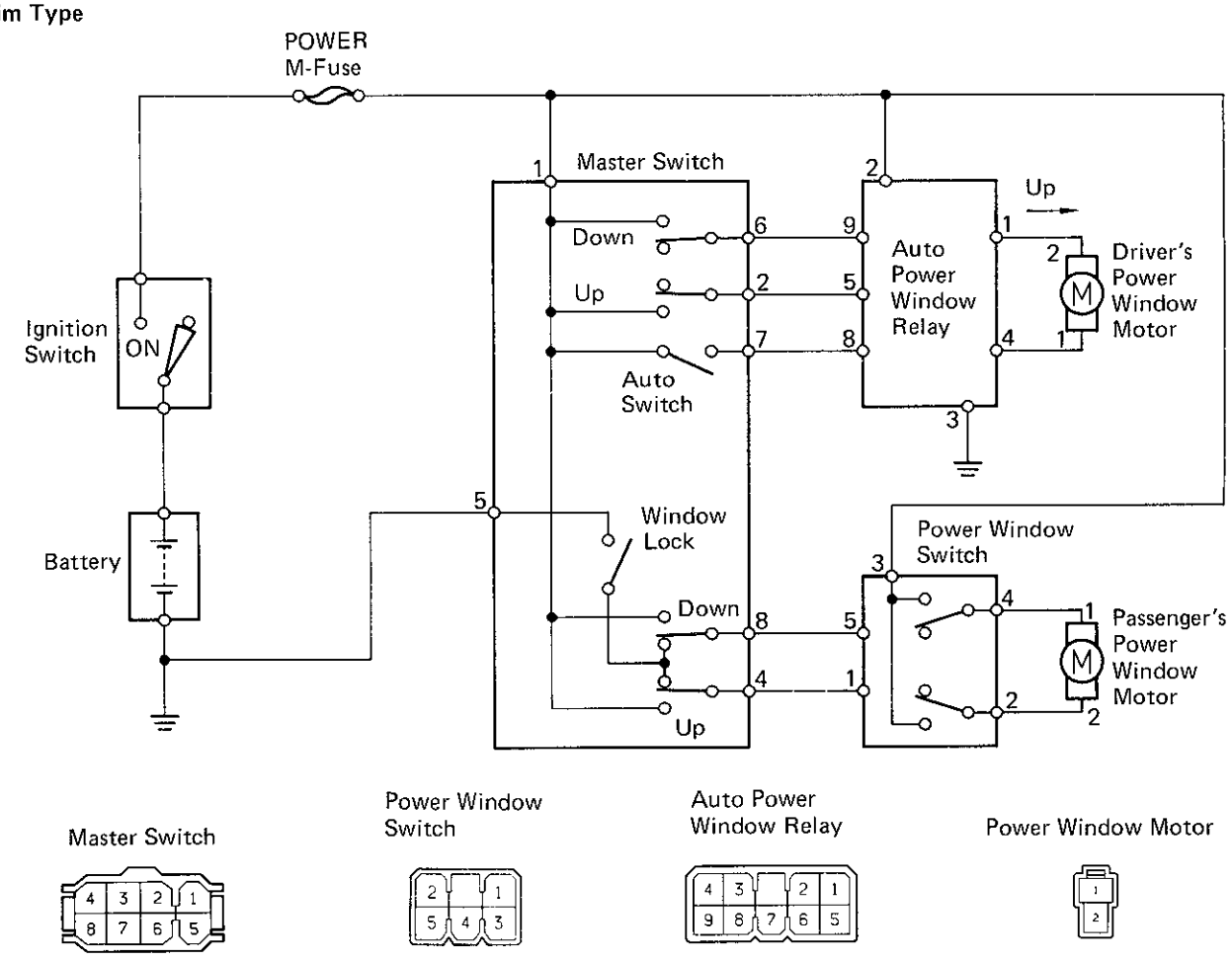


* Trim Type or Armrest Type (24 V)

BE5314

Wiring and Connector Diagrams

Trim Type



Master Switch

Power Window Switch

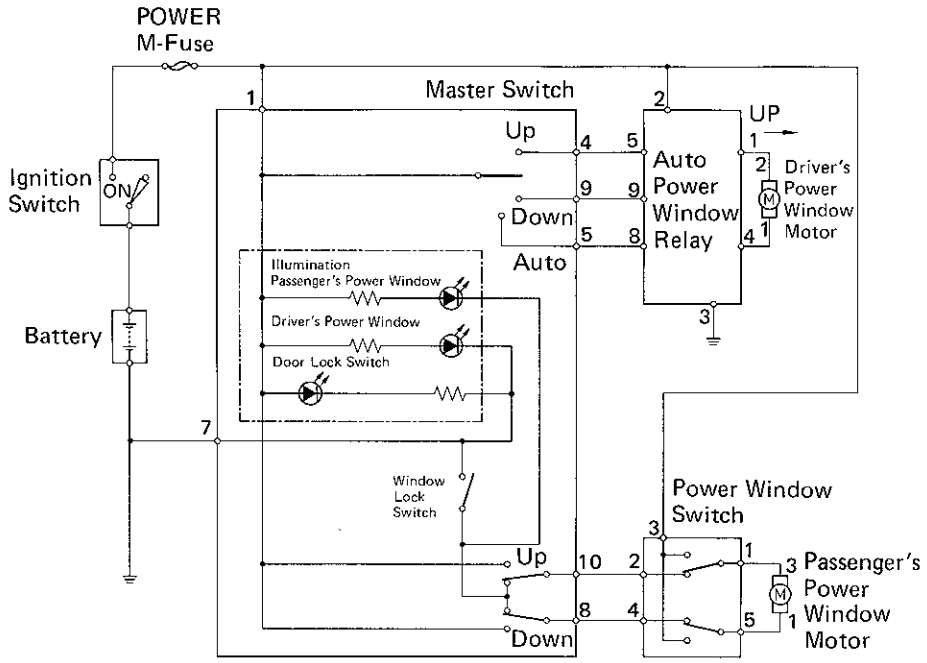
Auto Power Window Relay

Power Window Motor

The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10, 11, 12.

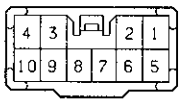
BE5315
GA-8-2-A G-5-2 G-9-2 H-2-2

Armrest Type (24 V)



The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10, 11, 12.

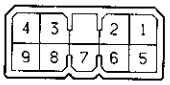
Master Switch



Power Window Switch



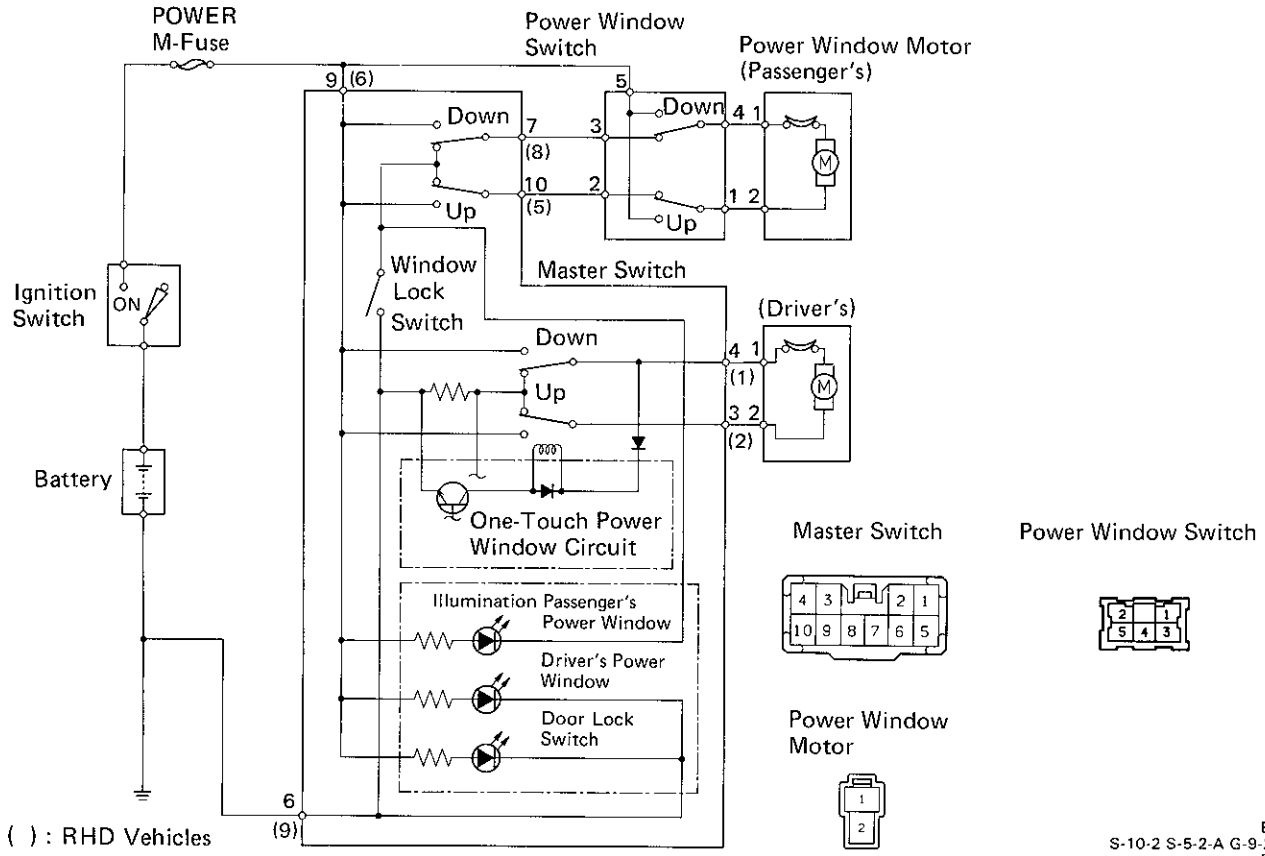
Auto Power Window Relay



Power Window Motor



Armrest Type (12 V)



Master Switch

Power Window Switch

Power Window Motor

The POWER SOURCE CIRCUIT has been simplified. For full details, see pages BE-10, 11, 12.

BE5316
S-10-2 S-5-2-A G-9-2 H-2-2
BE5317
S-10-2 G-5-2-A
H-2-2

Troubleshooting

Problem	Possible cause	Remedy	Page
Power window does not operate at all	POWER fuse blown Wiring or ground faulty	Replace fuse and check for short Repair as necessary	BE-4
One-touch power window does not operate	Power window master switch faulty *Auto power window relay faulty *Wiring faulty	Check switch Check relay Repair as necessary	BE-76 BE-81
Driver's power window does not operate	Power window master switch faulty *Auto power window relay faulty Power window motor faulty Wiring faulty	Check switch Check relay Check motor Repair as necessary	BE-76 BE-81 BE-80
Passenger's power window does not operate	Power window switch faulty Power window master switch faulty Power window motor faulty Wiring faulty	Check switch Check switch Check motor Repair as necessary	BE-80 BE-76 BE-80

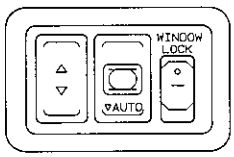
*: Trim Type or Armrest Type (24 V) Power Window Switch

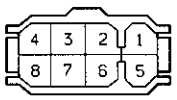
Parts Inspection

1. **INSPECT SWITCHES (Master Switch/Continuity)**

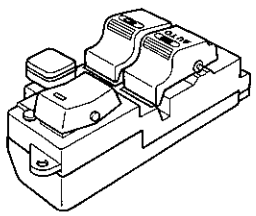
   Trim Type or Armrest Type (24 V)

Trim Type

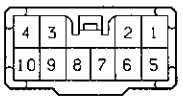




Armrest Type (24 V)



Connector "A"



Connector "B"

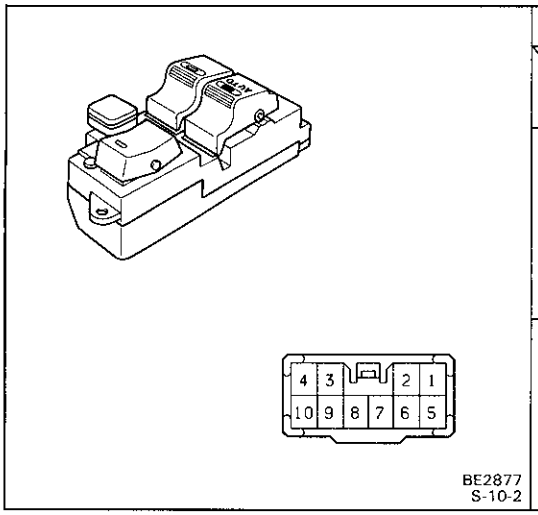


BE5318 GA-8-2-A
S-10-2
BE2877 GA-2-2-C

Window operation		Driver's				Passenger's			
Terminal	Trim Type	1	2	6	7	1	4	5	8
Switch position	Armrest Type (24 V)	1	4	9	5	1	10	7	8
Manual (Window unlock)	UP	○—○				○—○		○—○	
	OFF						○—○	○—○	
	DOWN	○———○				○———○			
Manual (Window lock)	UP	○—○				○—○			
	OFF								
	DOWN	○———○				○———○			
AUTO	OFF								
	DOWN	○———○———○							

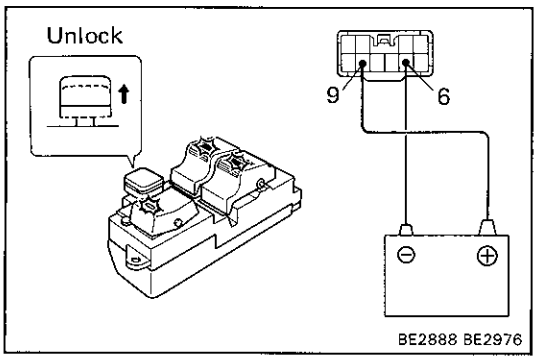
If continuity is not as specified, replace the master switch.

Armrest type (12 V)



Window operation		Driver's				Passenger's			
Terminal	LHD	3	4	6	9	6	7	9	10
Switch position	RHD	2	1	9	6	9	8	6	5
Window unlock	UP	○		○	○	○	○	○	○
	OFF	○	○	○		○	○		○
	DOWN	○		○	○	○		○	○
Window lock	UP	○		○	○			○	○
	OFF	○	○	○			○		○
	DOWN	○		○	○		○	○	

If continuity is not as specified, replace the switch.

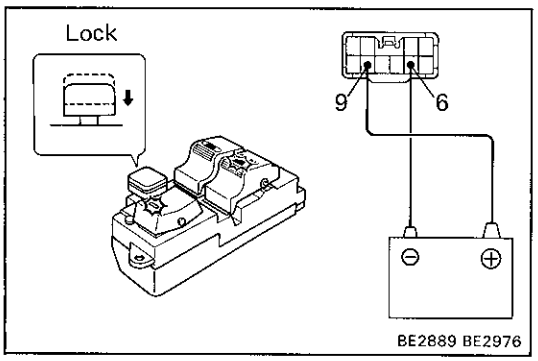


(Armrest Type Master Switch: Illumination)

LHD

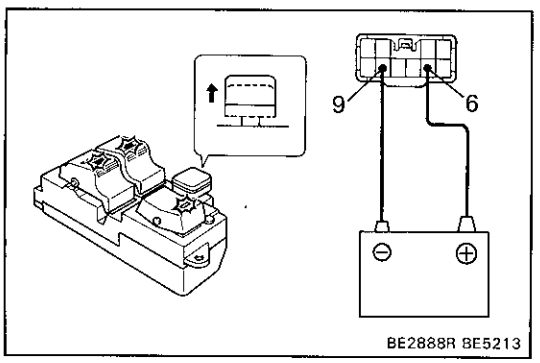
(a) Set the window lock switch to the unlock position.

(b) Connect the positive (+) lead from the battery to terminal 9 and the negative (−) lead to terminal 6, check that all the illuminations light up.



(c) Set the window lock switch to the lock position, check that all the passenger's power window switch illumination goes out.

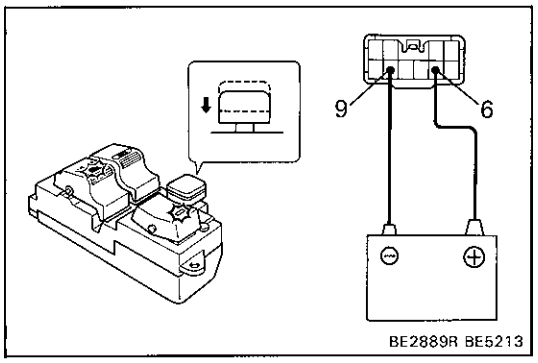
If operation is not as specified, replace the master switch.



RHD

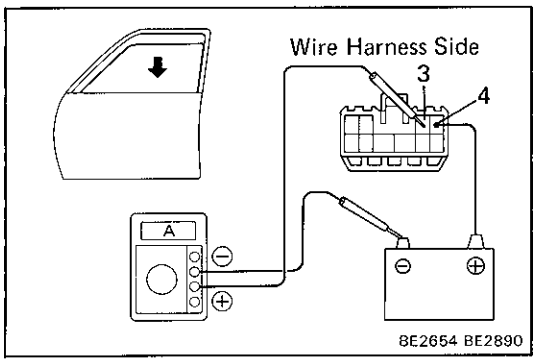
(a) Set the window lock switch to the unlock position.

(b) Connect the positive (+) lead from the battery to terminal 6 and the negative (−) lead to terminal 9, check that all the illuminations light up.



(c) Set the window lock switch to the lock position, check that the passenger's power window switch illumination goes out.

If operation is not as specified, replace the master switch.



(Armrest Type Mastor Switch (12 V): One Touch Power Window System)

LHD

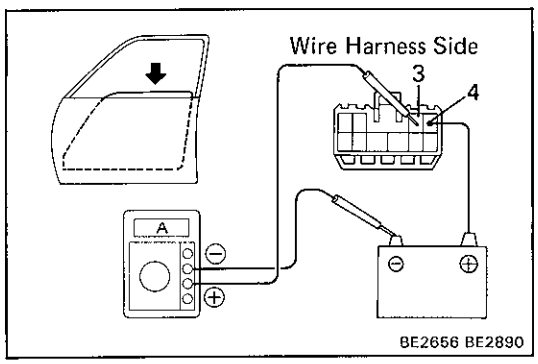
Inspection using an ammeter:

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the ammeter to terminal 3 on the wire harness side connector and the negative (−) lead to negative terminal of the battery.

(c) Connect the positive (+) lead from the battery to terminal 4 on the wire harness side connector.

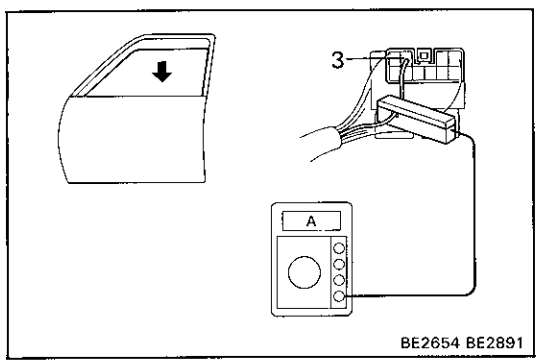
(d) As the window goes down, check that the current flows approximately 7 A.



(e) Check that the current increases approximately 14.5 A or more when the window stops going down.

HINT: The circuit breaker opens some 4 — 40 seconds after the window stops going down, so the check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.



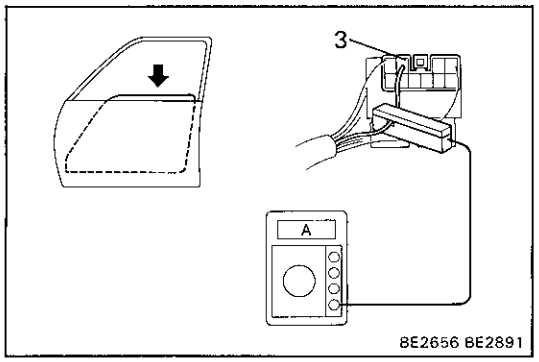
Inspection using an ammeter with a current-measuring probe:

(a) Remove the master switch with connector connected.

(b) Attach a current-measuring probe to terminal 3 of the wire harness.

(c) Turn the ignition switch ON and set the power window switch in the down position.

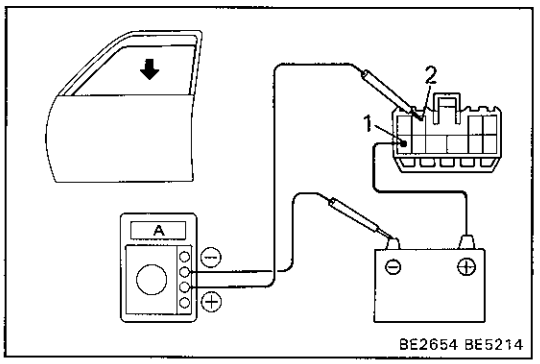
(d) As the window goes down, check that the current flows approximately 7 A.



(e) Check that the current increases approximately 14.5 A or more when the window stops going down.

HINT: The circuit breaker opens some 4 — 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.



RHD

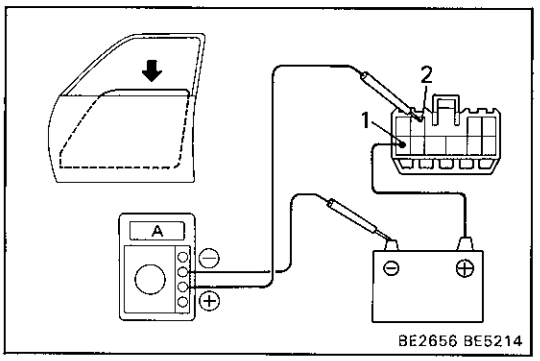
Inspection using an ammeter:

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the ammeter to terminal 2 on the wire harness side connector and the negative (—) lead to negative terminal of the battery.

(c) Connect the positive (+) lead from the battery to terminal 1 on the wire harness side connector.

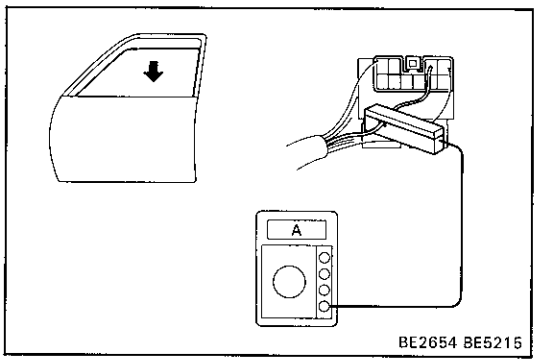
(d) As the window goes down, check that the current flows approximately 7 A.



(e) Check that the current increases approximately 14.5 A or more when the window stops going down.

HINT: The circuit breaker opens some 4 — 40 seconds after the window stops going down, so the check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.



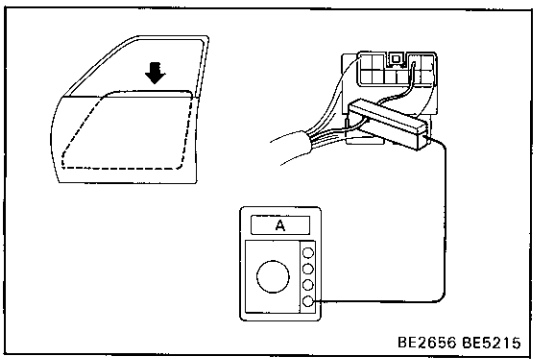
Inspection using an ammeter with a current-measuring probe:

(a) Remove the master switch with connector connected.

(b) Attach a current-measuring probe to terminal of the wire harness.

(c) Turn the ignition switch ON and set the power window switch in the down position.

(d) As the window goes down, check that the current flows approximately 7 A.



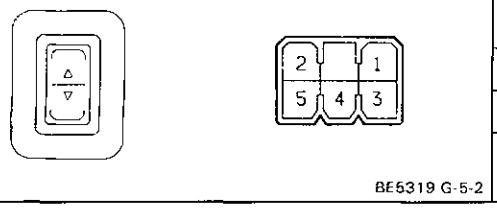
(e) Check that the current increases approximately 14.5 A or more when the window stops going down.

HINT: The circuit breaker opens some 4 — 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.

(Power Window Switch/Continuity)

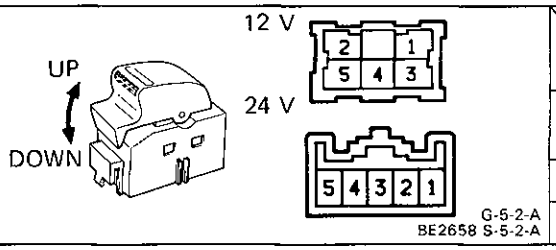
Trim Type



Terminal / Switch position	1	2	3	4	5
UP	○	○		○	○
OFF	○		○	○	○
DOWN	○		○		
		○			○

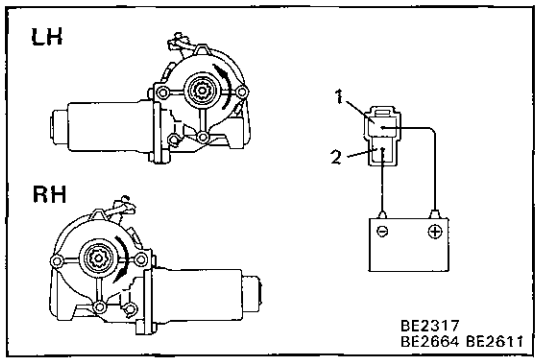
If continuity is not as specified, replace the switch.

Armrest Type



Terminal / Switch position	12 V / 24 V	1	2	3	4	5
UP		○				○
				○	○	
OFF		○	○	○	○	
DOWN		○	○		○	○

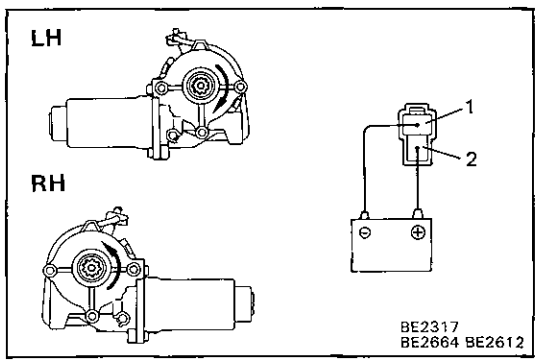
If continuity is not as specified, replace the switch.



2. INSPECT POWER WINDOW MOTOR

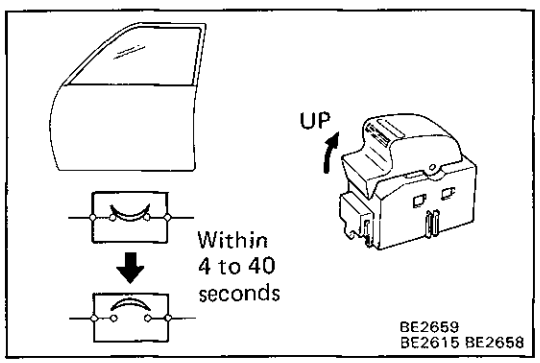
(Motor Operation)

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (−) lead to terminal 2, check that the motor turns downward.



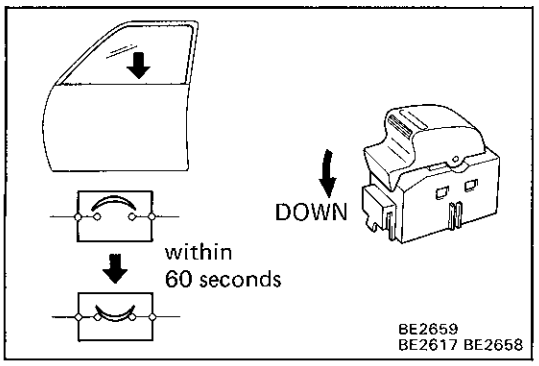
(b) Reverse the polarity, check that the motor turns upward.

If operation is not as specified, replace the motor.



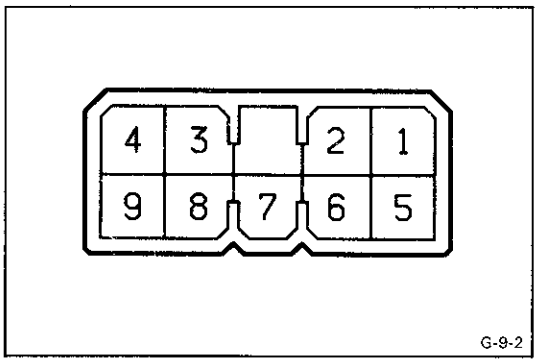
(Circuit Breaker/Operation)

(a) With the window in the full closed position, hold the power window switch in "UP" position and check that there is a circuit breaker operation noise within 4 to 40 seconds.



(b) With the window in the full closed position, hold the switch in "DOWN" and check that the window begins to descend within 60 seconds.

If operation is not as specified, replace the motor.



3. Trim Type or Armrest Type (24 V)
INSPECT AUTO POWER WINDOW RELAY

(Relay Circuit)

Disconnect the connector from the relay and inspect the connector on the wire harness side as shown in the chart.

Check for	Tester connection	Condition		Specified value
Continuity	1 — 4	Constant		Continuity
	3 — Ground	Constant		Continuity
Voltage	2 — Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage
	5 — Ground	Master switch position when ignition switch turned ON (Driver's switch)	OFF or DOWN	No voltage
			UP	Battery voltage
	8 — Ground	Master switch position when ignition switch turned ON (AUTO switch)	OFF	No voltage
			DOWN	Battery voltage
	9 — Ground	Master switch position when ignition switch turned ON (Driver's switch)	OFF	No voltage
			DOWN	Battery voltage

If circuit is as specified, replace the relay.