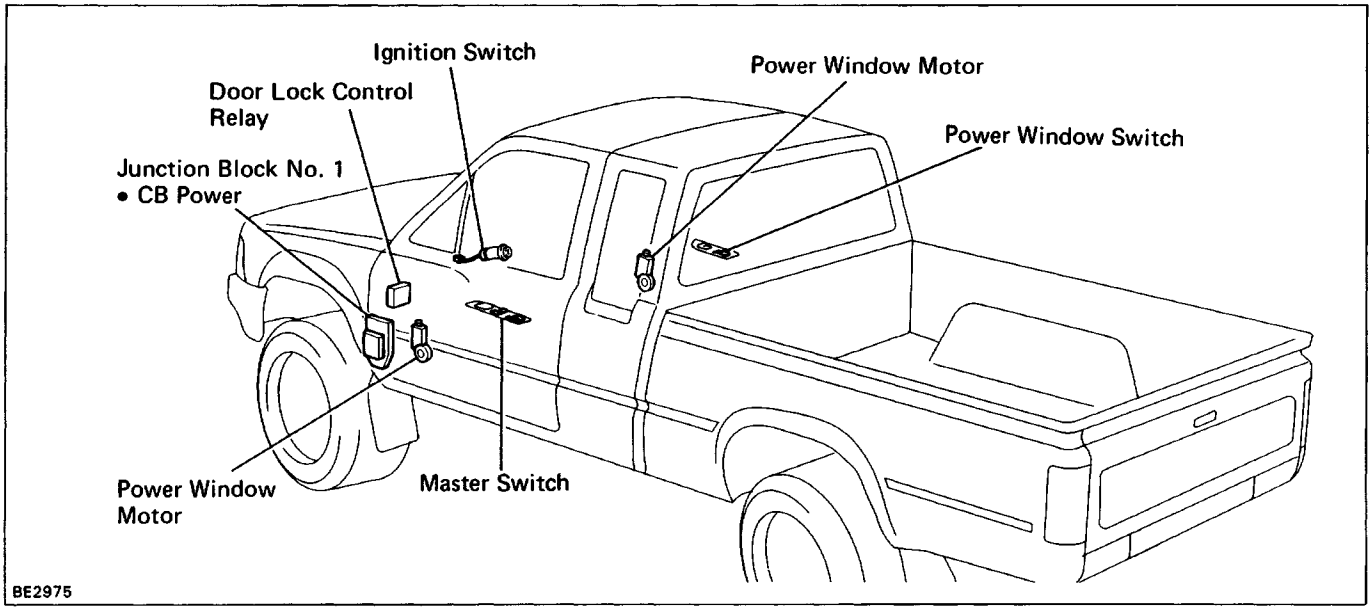
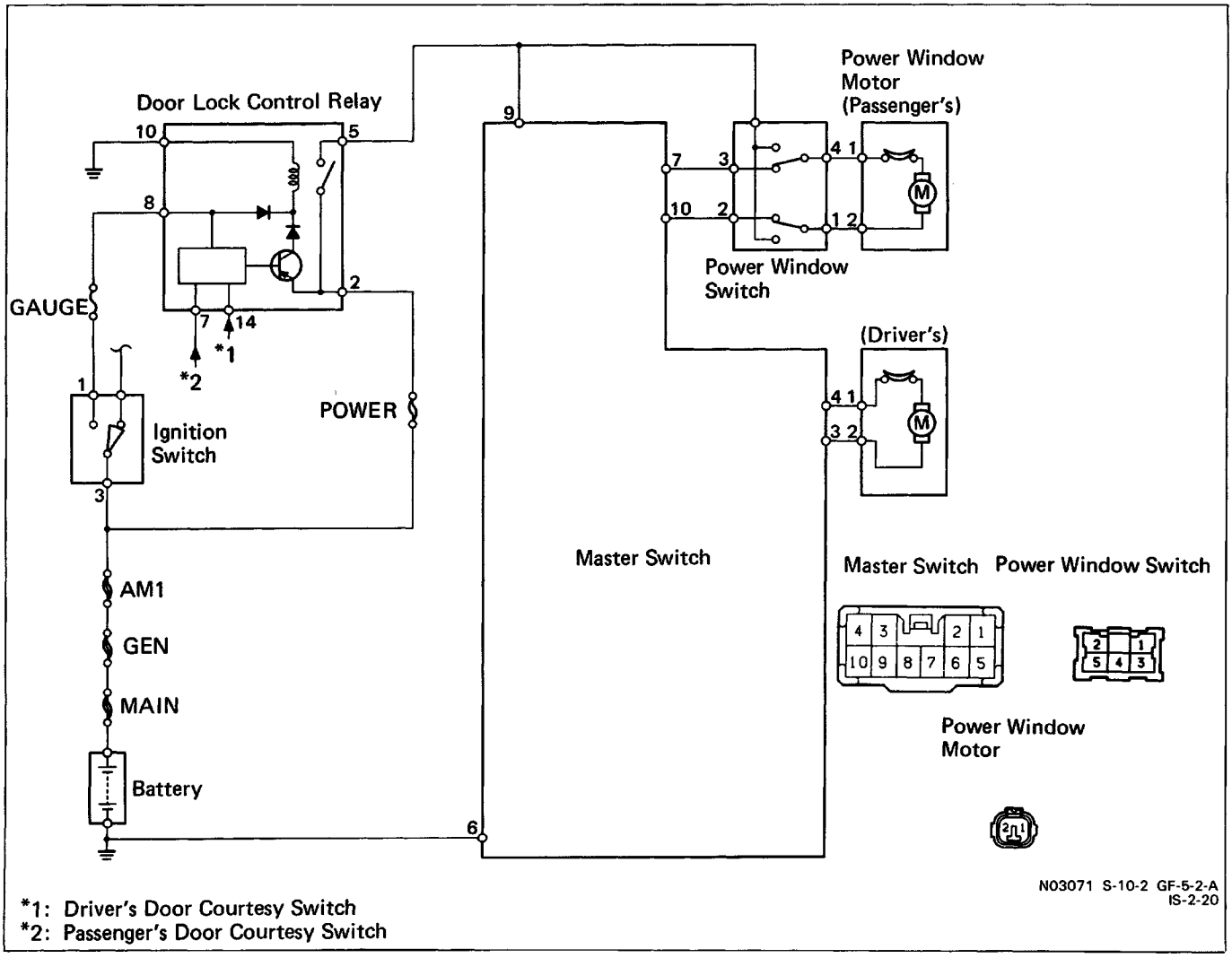
# POWER WINDOW CONTROL SYSTEM

## Parts Location




## Wiring and Connector Diagrams



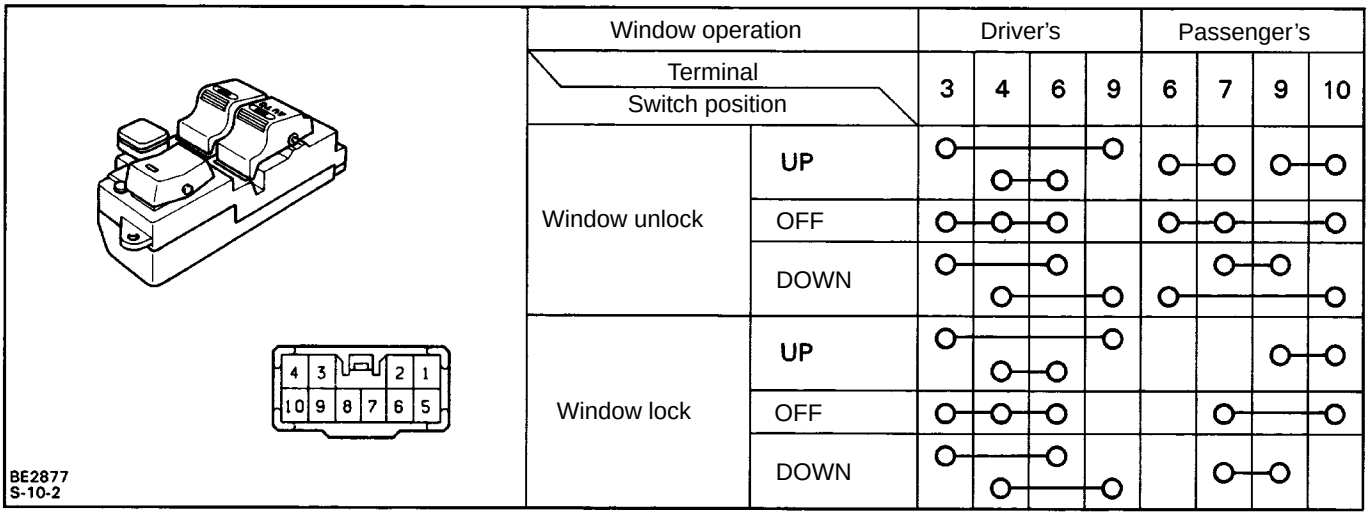
# Troubleshooting

| Problem | Possible cause | Remedy | Page |
|---|---|---|---|
| Power window does not operate at all | GAUGE fuse blown | Replace fuse and check for short | BE–3 |
| | Door lock control relay faulty | Check relay | |
| | Wiring or ground faulty | Repair as necessary | BE–51 |
| One touch power window does not operate | Power window master switch faulty | Check switch | BE–44 |
| Only one window does not operate | Power window switch faulty | Check switch | BE–46 |
| | Power window motor faulty | Check motor | BE–46 |
| | Wiring or ground faulty | Repair as necessary | |

# Parts Inspection

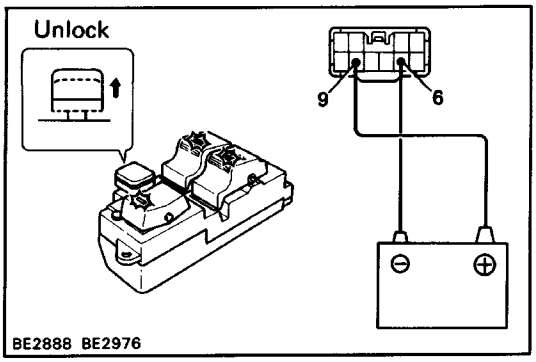
**1. INSPECT SWITCHES**

(Master Switch/Continuity)




| Window operation | | Driver's | | | | Passenger's | | | |
|---|---|---|---|---|---|---|---|---|---|
| Terminal / Switch position | | 3 | 4 | 6 | 9 | 6 | 7 | 9 | 10 |
| Window unlock | UP | ○ | | ○ | ○ | ○ | ○ | ○ | ○ |
| | OFF | ○ | ○ | ○ | | ○ | ○ | | ○ |
| | DOWN | ○ | | ○ | | ○ | | ○ | |
| | | | ○ | | ○ | | ○ | | ○ |
| Window lock | UP | ○ | | | ○ | | | ○ | ○ |
| | OFF | ○ | ○ | ○ | | | ○ | | ○ |
| | DOWN | ○ | | ○ | | | ○ | ○ | |
| | | | ○ | | ○ | | | | |

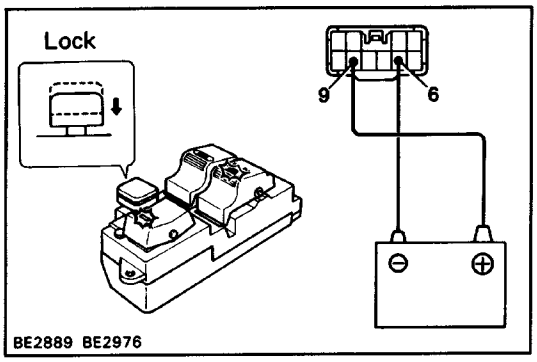
If continuity is not as specified, replace the switch.




**(Master Switch: Illumination)**

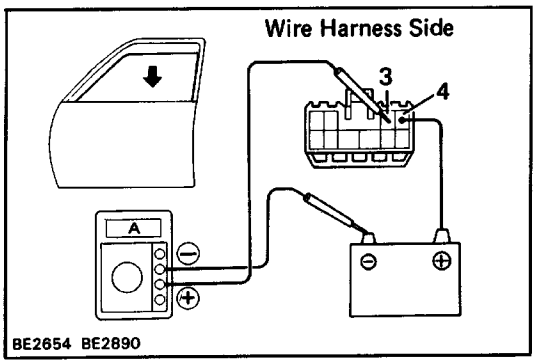
(a) Set the window lock switch to the unlock position.

(b) Connect the positive (+) lead from the battery to terminal 9 and negative (–) lead to terminal6, 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.




**(Master Switch: One Touch Power Window System)**

**Inspection using an ammeter:**

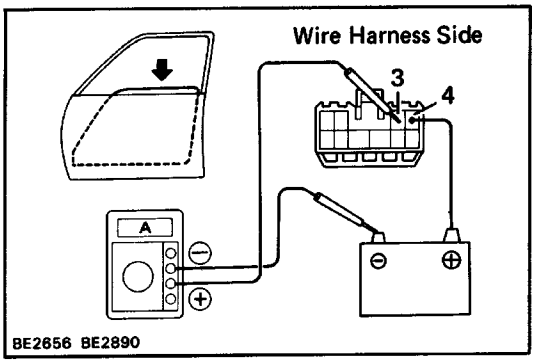
(a) Disconnect the connector from the master switch.

(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 not as specified, replace the master switch.

**Inspection using an ammeter with a current–measuring probe:**

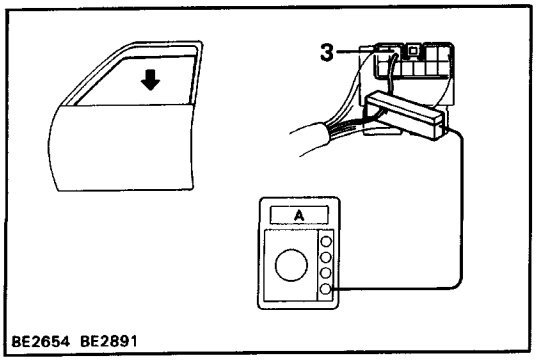
(a) Remove the master switch with connector con–nected.

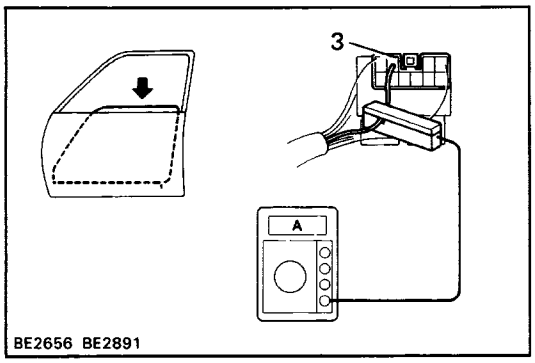
(b) Attach a current–measuring probe to terminal 3 of the wire harness.

i Turn the ignition switch ON and set the power win–

dow switch in the down position.

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

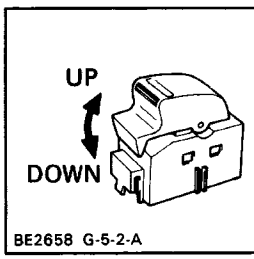





(e) Check that the current increases approximately 14.5 A or more when the window stops going down.

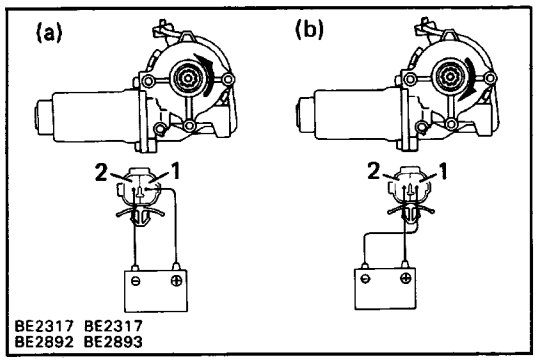
HINT: The circuit breaker opens some 4–40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.
If operation is not as specified, replace the master switch.

**(Power Window Switch/ Continuity)**




| Switch position \ Terminal | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| UP | ○ | | ○ | ○ | ○ |
| OFF | ○ | ○ | ○ | ○ | |
| DOWN | ○ | ○ | | ○ | ○ |

If continuity is not as specified, replace the switch.



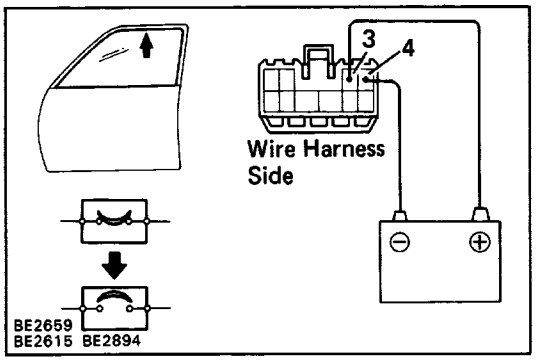

**2. INSPECT POWER WINDOW MOTOR**

(Left Side Door Motor/ Motor Operation)

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

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

If operation is not as specified, replace the motor.



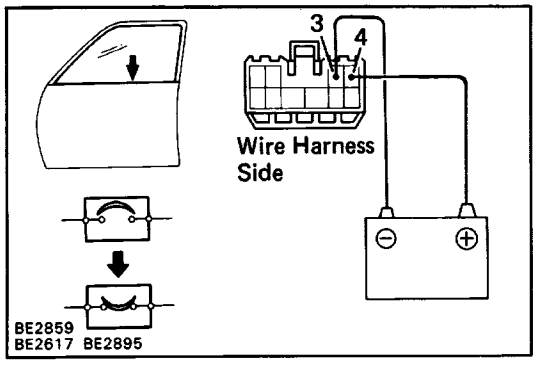

**(Left Side Door Motor/ Circuit Breaker Operation)**

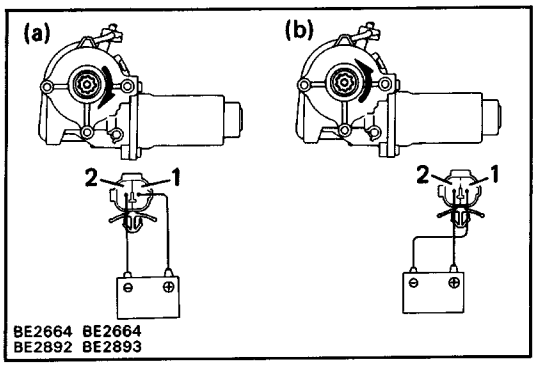
(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the battery to terminal 3 and negative (–) lead to terminal 4 on the wire harness side connector, and raise the window to full closed position.

(c) Continue to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.

(d) Reverse the polarity, check that the window begins to descend within approximately 60 seconds.
If operation is not as specified, replace the motor.



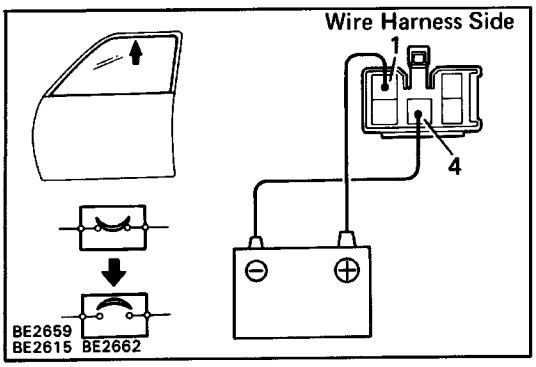



**(Right Side Door Motor/ Motor Operation)**

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

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

If operation is not as specified, replace the motor.




**(Right Side Door Motor/ Circuit Breaker Operation)**

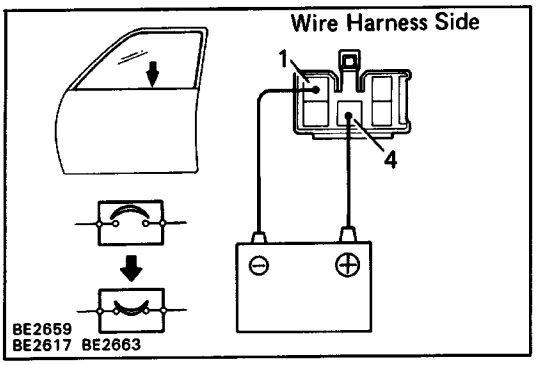
(a) Disconnect the connector from the power window switch.

(b) Connect the positive (+) lead from the battery to terminal 1 and negative (–) lead to terminal 4 on the wire harness side connector, and raise the window to full closed position.

(c) Continue to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.

(d) Reverse the polarity, check that the window begins to descend within approximately 60 seconds.

If operation is not as specified, replace the motor.




**3. INSPECT DOOR LOCK CONTROL RELAY**

See step 3 of Power Door Lock Control System on page BE–52.