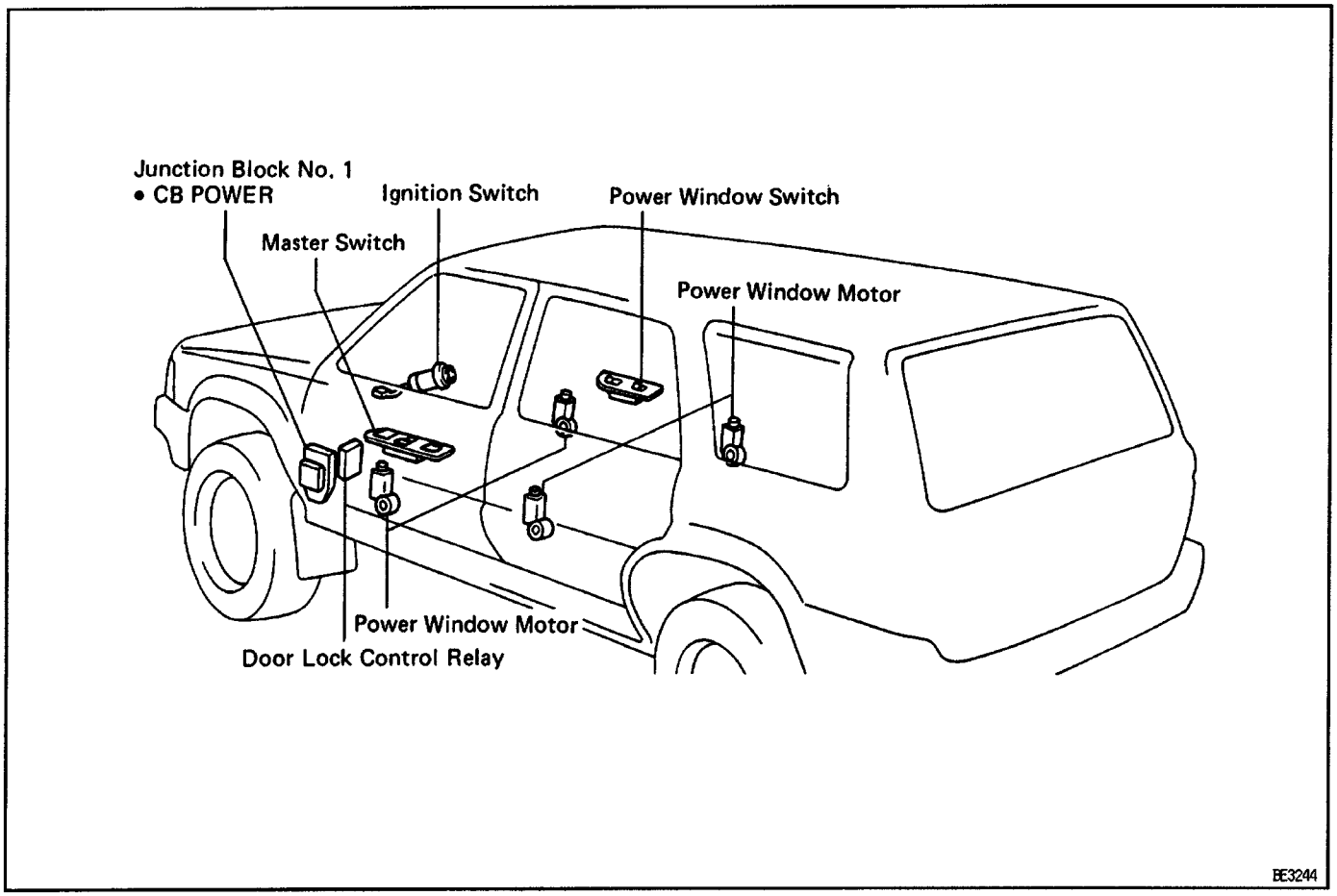
POWER WINDOW CONTROL SYSTEM

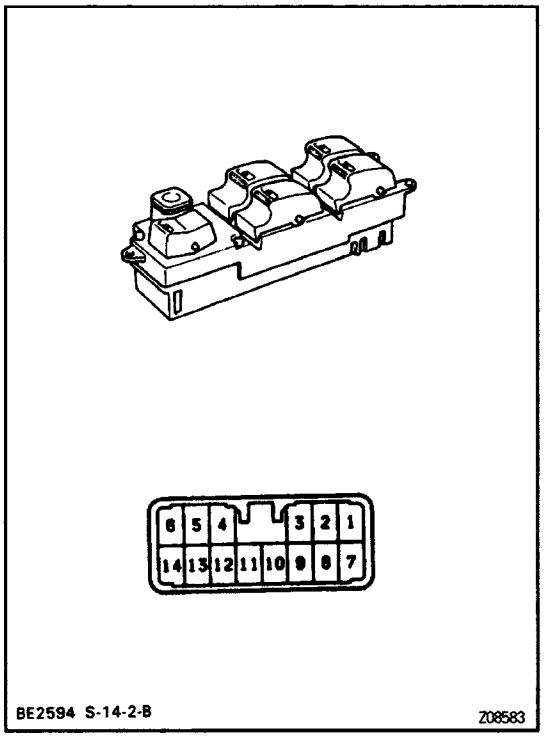
PARTS LOCATION



TROUBLESHOOTING

The table below will be useful for you in troubleshooting these electrical problems. The most likely causes of the malfunction are shown in the order of their probability. Inspect each part in the order shown, and replace the part when it is found to be faulty.

Trouble	Parts name	(See page)
Power Window does not operate at all	1. GAUGE Fuse	(BE–11)
	2. Circuit Breaker OFF	
	3. Door Lock Control Relay	(BE–82)
	4. Wire Harness	
One Touch Power window does not operate	1. Power Window Master Switch	(BE–62)
Only one Window does not operate	1. Power Window Switch	(BE–65)
	2. Power Window Motor	(BE–66)
	3. Wire Harness	



POWER WINDOW MASTER SWITCH INSPECTION

INSPECT POWER WINDOW MASTER SWITCH CONTINUITY

Front Driver's switch (Window unlock)

Switch position	Tester connection to terminal number	Specified condition
UP	6 – 8 2 – 13	Continuity
OFF	2 – 6 – 13	Continuity
DOWN	2 – 6 8 – 13	Continuity

Front Driver's Switch (Window lock)

Switch position	Tester connection to terminal number	Specified condition
UP	6 – 8 2 – 13	Continuity
OFF	2 – 6 – 13	Continuity
DOWN	2 – 6 8 – 13	Continuity

Front Passenger's Switch (Window unlock)

Switch position	Tester connection to terminal number	Specified condition
UP	8 – 12	Continuity
OFF	5 – 12	Continuity
DOWN	5 – 8	Continuity

Front Passenger's Switch (Window lock)

Switch position	Tester connection to terminal number	Specified condition
UP	2 – 5 8 – 12	Continuity
OFF	2 – 5 – 12	Continuity
DOWN	5 – 8 2 – 12	Continuity

Rear Left switch (Window unlock)

Switch position	Tester connection to terminal number	Specified condition
UP	8 – 10	Continuity
OFF	9 – 10	Continuity
DOWN	8 – 9	Continuity

Rear Left Switch (Window lock)

Switch position	Tester connection to terminal number	Specified condition
UP	2 – 9 8 – 10	Continuity
OFF	2 – 9 – 10	Continuity
DOWN	8 – 9 2 – 10	Continuity

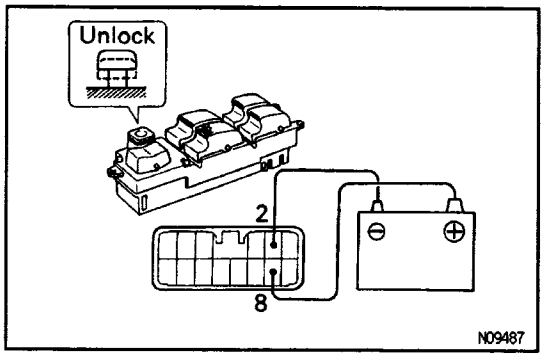
Rear Right Switch (Window unlock)

Switch position	Tester connection to terminal number	Specified condition
UP	8 – 11	Continuity
OFF	11 – 14	Continuity
DOWN	8 – 14	Continuity

Rear Right Switch (Window lock)

Switch position	Tester connection to terminal number	Specified condition
UP	8 – 11 2 – 14	Continuity
OFF	2 – 11 – 14	Continuity
DOWN	2 – 11 8 – 14	Continuity

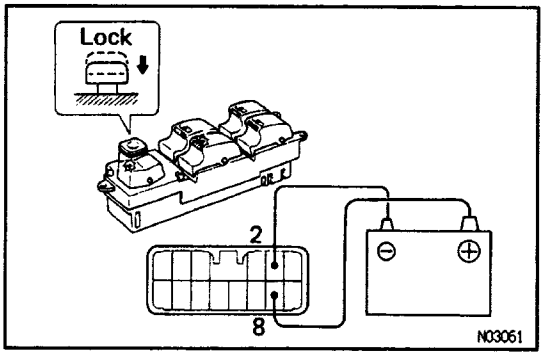
If continuity is not as specified, replace the switch.



2. INSPECT POWER WINDOW MASTER SWITCH ILLUMINATION

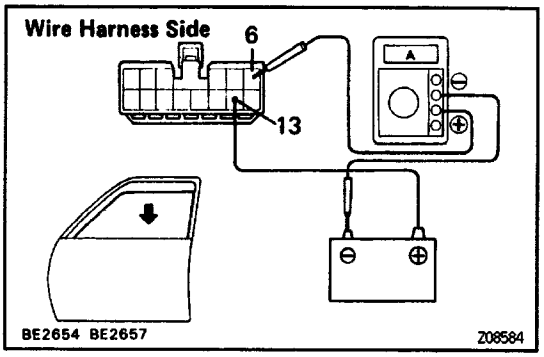
(a) Set the window lock switch to the unlock position.

(b) Connect the positive (+) lead from the battery to terminal 8 and the negative (–) lead to terminal 2, 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 illuminations go out.

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



3. INSPECT ONE TOUCH POWER WINDOW SYSTEM

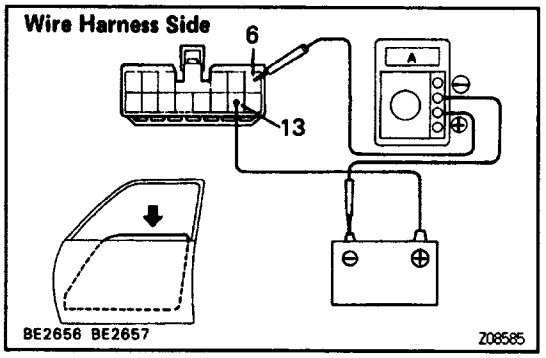
Inspection using an ammeter:

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the ammeter to terminal 6 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 13 on the wire harness side connector.

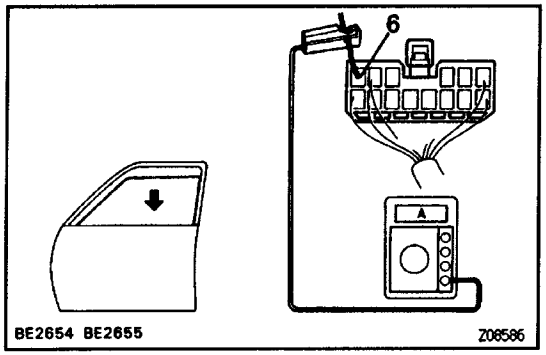
(d) As the window goes down, check that the current increases to approximately 7 amperes.

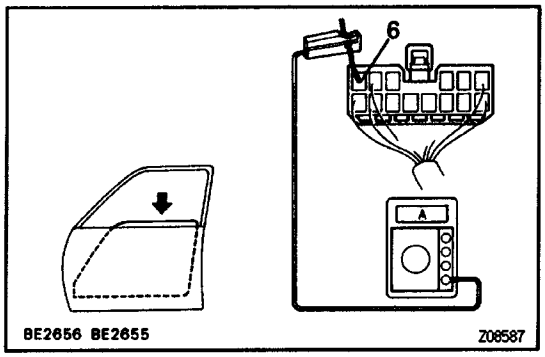


(e) Check that the current increases up to approximately 14.5 amperes or more when the window stops going down.

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.



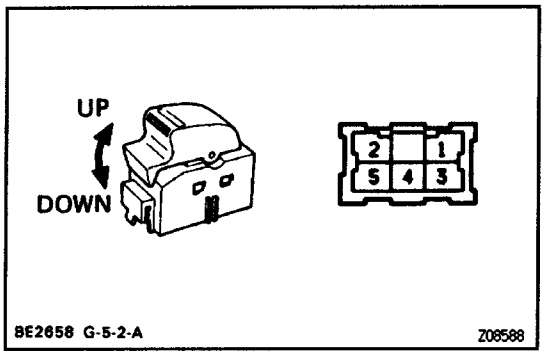


Inspection using an ammeter with a current–measuring probe:

(a) Remove the master switch with connector connected.
(b) Attach a current–measuring probe to terminal 6 of the wire harness.
(e) 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 increases to approximately 7 amperes.
(e) Check that the current increases up to approximately 14.5 amperes 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 circuit breaker operates.

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

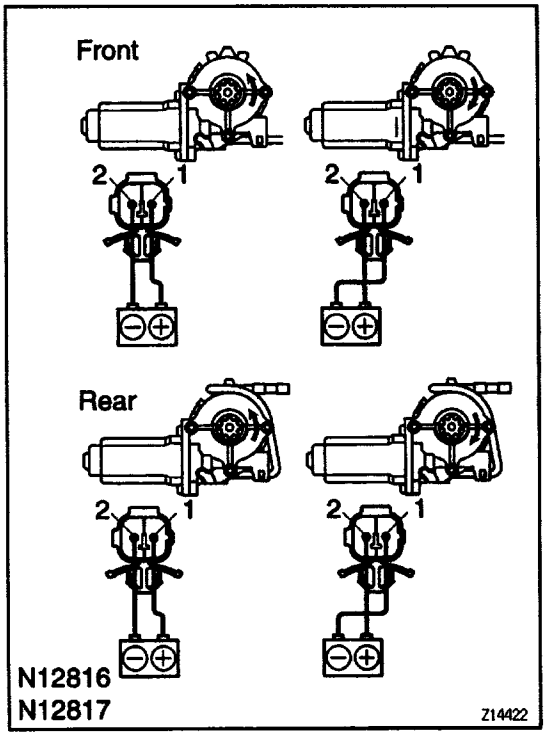


POWER WINDOW SWITCH INSPECTION

INSPECT POWER WINDOW SWITCH CONTINUITY

Switch position	Tester connection to terminal number	Specified condition
UP	**1 – 5** **3 – 4**	**Continuity**
OFF	**1 – 2** **3 – 4**	**Continuity**
DOWN	**1 – 2** **4 – 5**	**Continuity**

If continuity is not as specified, replace the switch.



POWER WINDOW MOTOR INSPECTION

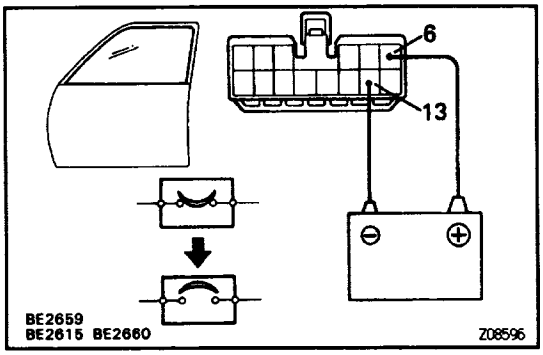
1. INSPECT POWER WINDOW MOTOR OPERATION

Left Side Door Motor

(a) Connect the positive (+) lead from the battery to terminal 1 and the 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.



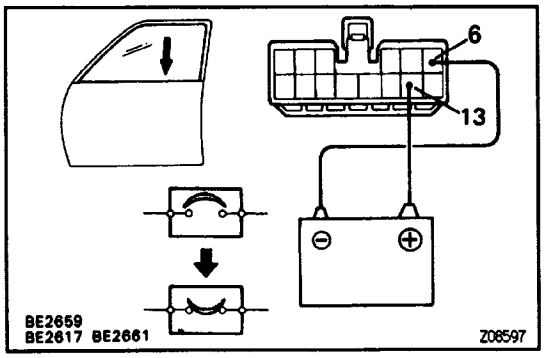
2. INSPECT POWER WINDOW MOTOR CIRCUIT BREAKER OPERATION

Left Side Door Motor/ Driver': Door:

(a) Disconnect the connector from the master switch.

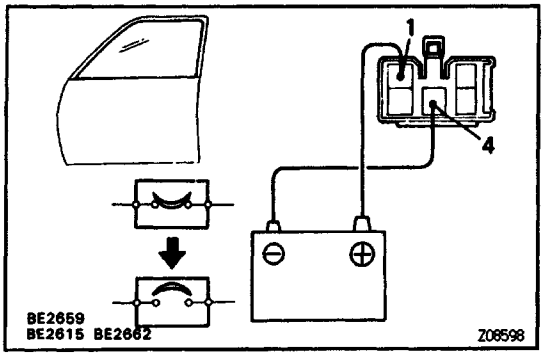
(b) Connect the positive (+) lead from the battery to terminal 6 and the negative (–) lead to terminal 13 on the wire harness side connector, and raise the window to the fully closed position.

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



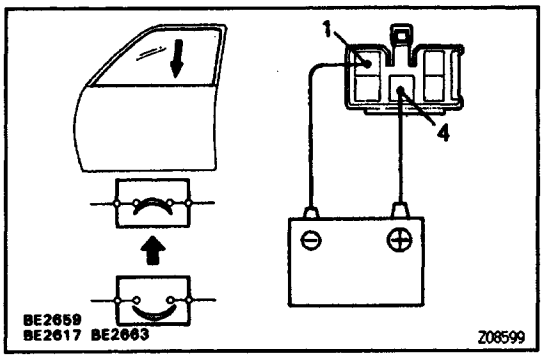
(d) Reverse the polarity, check that the window begins to descend within approximately 60 seconds.

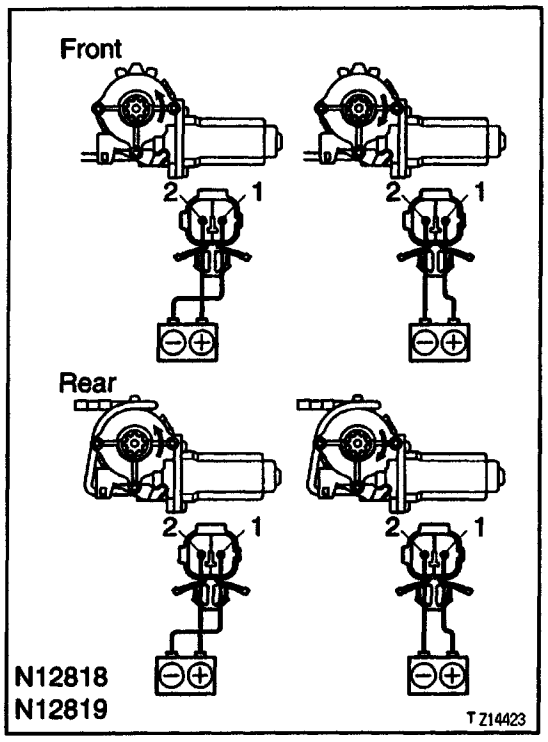
If operation is not as specified, replace the motor.



Passenger's Door:

(a) Disconnect the connector from the power window switch.
(b) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 4 on the wire harness side connector, and raise the window to the fully closed position.
(c) Continue to apply voltage, check there is a circuit breaker operation noise within approximately 4 – 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 POWER WINDOW MOTOR OPERATION

Right Side Door Motor

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1, 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.

4. INSPECT POWER WINDOW MOTOR CIRCUIT BREAKER OPERATION

Right Side Door Motor

See Passenger's Door on page BE–67.

POWER DOOR LOCK CONTROL RELAY INSPECTION

See Power Door Lock Control Relay on page BE–82