

INSPECTION

1. INSPECT POWER WINDOW MASTER SWITCH CONTINUITY

Front Driver's Switch (Window unlock)

Switch position	Tester connection	Specified condition
UP	4 – 10 8 – 9	Continuity
OFF	8 – 9 8 – 10	Continuity
DOWN	4 – 9 8 – 10	Continuity

Front Driver's Switch (Window lock)

Switch position	Tester connection	Specified condition
UP	4 – 10 8 – 9	Continuity
OFF	8 – 9 8 – 10	Continuity
DOWN	4 – 9 8 – 10	Continuity

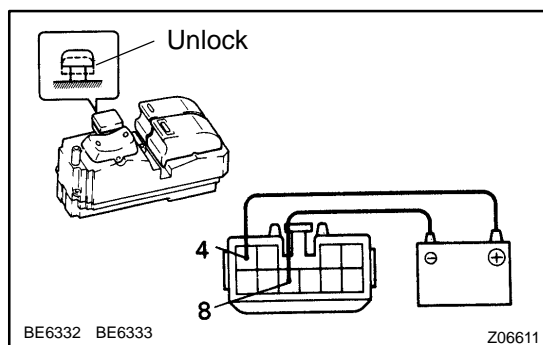
Front Passenger's Switch (Window unlock)

Switch position	Tester connection	Specified condition
UP	4 – 5 7 – 8	Continuity
OFF	5 – 8 7 – 8	Continuity
DOWN	4 – 7 5 – 8	Continuity

Front Passenger's Switch (Window lock)

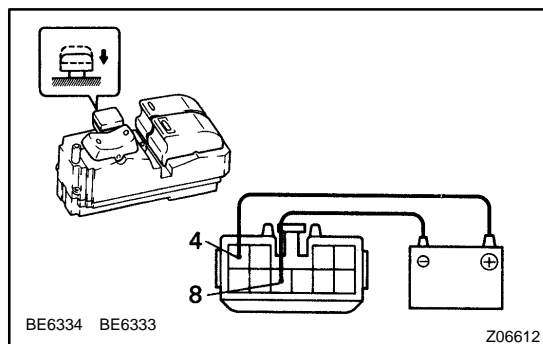
Switch position	Tester connection	Specified condition
UP	4 – 5	Continuity
OFF	5 – 7	Continuity
DOWN	4 – 7	Continuity

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



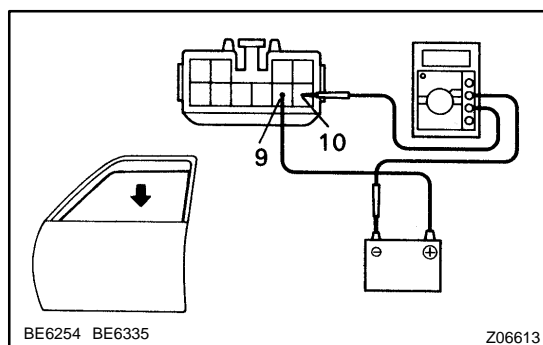
2. INSPECT POWER WINDOW MASTER SWITCH ILLUMINATION

- Set the window lock switch to the unlock position.
- Connect the positive (+) lead from the battery to terminal 4 and the negative (–) lead to terminal 8, check that all the illuminations light up.



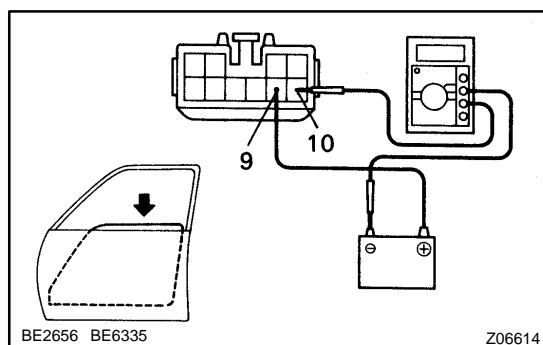
- (c) Set the window lock switch to the lock position, check that all the passenger's power window switch illuminations go out.

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



3. Inspection using an ammeter: ONE TOUCH POWER WINDOW SYSTEM/ CURRENT OF CIRCUIT

- (a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the ammeter to terminal 9 on the wire harness side connector and the negative (–) lead to the negative terminal of the battery.
(c) Connect the positive (+) lead from the battery to terminal 10 on the wire harness side connector.

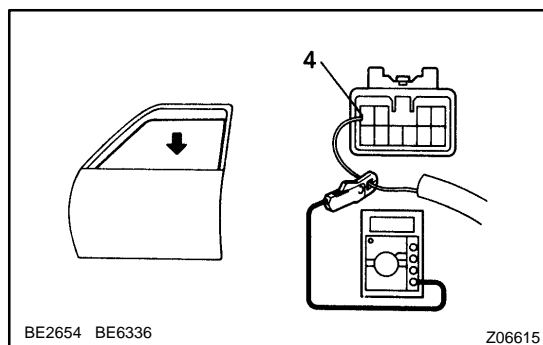


- (d) As the window goes down, check that the current flow is approximately 7 amperes.
(e) Check that the current increases up to approximately 14.5 amperes or more when the window stops going down.

HINT:

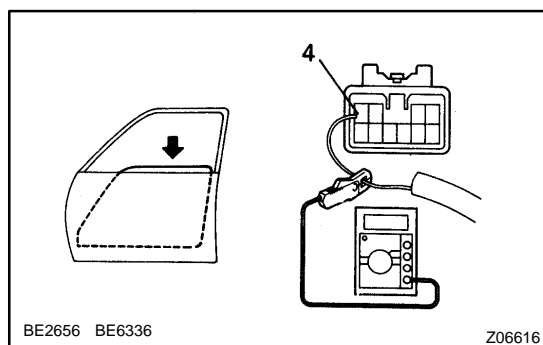
The circuit breaker opens some 4–40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

If the operation is as specified, replace the master switch.



4. Inspection using an ammeter with a current-measuring probe: ONE TOUCH POWER WINDOW SYSTEM/ CURRENT OF CIRCUIT

- (a) Remove the master switch with connector connected.
(b) Attach a current-measuring probe to terminal 4 of the wire harness.
(c) Turn the ignition switch ON and set the power window switch in the down position.

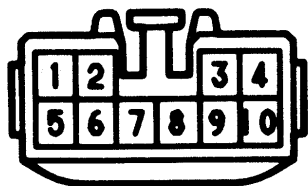


- (d) As the window goes down, check that the current flow is approximately 7 amperes.
(e) Check that the current increases up to approximately 14.5 amperes or more when the window stops going down.

HINT:

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

If operation is as specification, replace the master switch.

Wire Harness Side

e-10-1

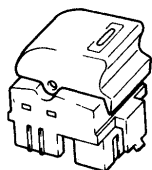
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5. INSPECT POWER WINDOW MASTER SWITCH CIRCUIT

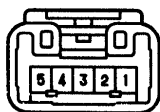
Disconnect the connector from the master switch and inspect the connector on the wire harness side, as shown.

Tester connection	Condition	Specified condition
8 – Ground	Constant	Continuity
4 – Ground	Ignition switch ON	Battery positive voltage

If the circuit is not as specified, inspect the circuits connected to other parts.



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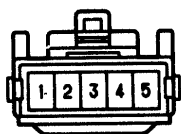


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6. INSPECT POWER WINDOW SWITCH CONTINUITY

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

If continuity is not as specified, replace the switch.

Wire Harness Side

e-5-1

Z06619

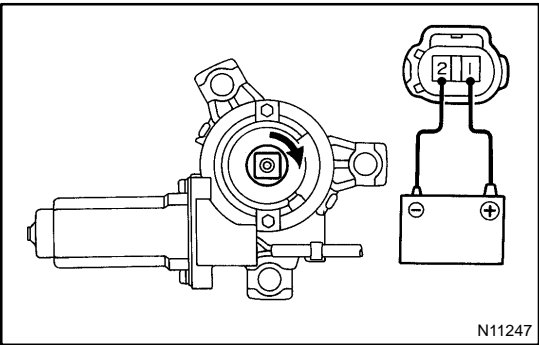
7. INSPECT POWER WINDOW SWITCH CIRCUIT

Disconnect the connector from the switch and inspect the connector on the wire harness side, as shown.

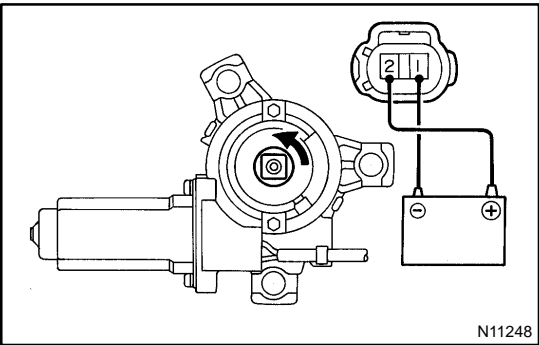
Tester connection	Condition	Specified condition
2 – Ground	Ignition switch ON and master switch OFF	No voltage
2 – Ground	Ignition switch ON and master switch DOWN	Battery positive voltage
3 – Ground	Ignition switch ON	Battery positive voltage

4 – Ground	Ignition switch ON and master switch OFF	No voltage
4 – Ground	Ignition switch ON and master switch UP	Battery positive voltage

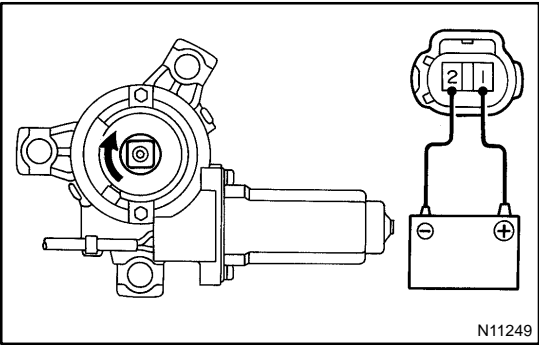
If the circuit is not as specified, inspect the circuits connected to other parts.



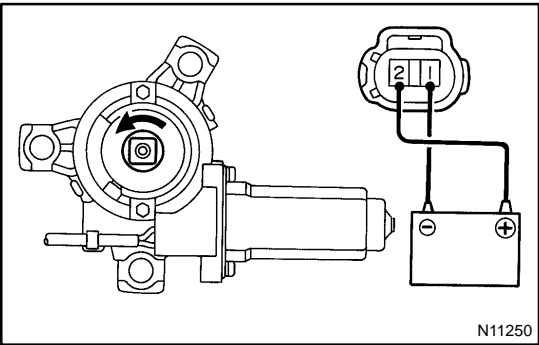
8. Left Side Door:
INSPECT POWER WINDOW MOTOR OPERATION
- (a) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, check that the motor turns clockwise.



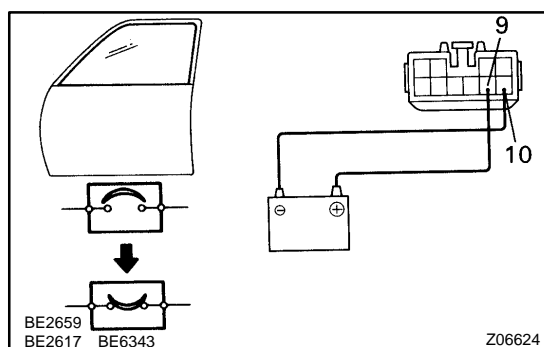
- (b) Reverse the polarity, check that the motor turns counter-clockwise.
If operation is not as specified, replace the motor.



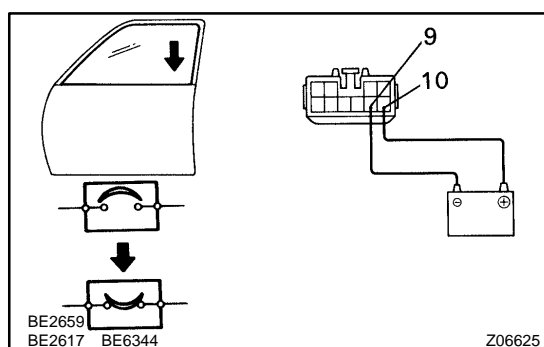
9. Right Side Door:
INSPECT POWER WINDOW MOTOR OPERATION
- (a) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, check that the motor turns clockwise.



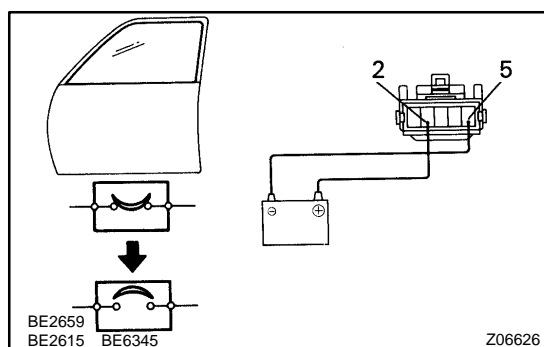
- (b) Reverse the polarity, check that the motor turns counter-clockwise.
If operation is not as specified, replace the motor.

**10. Driver's Door:****INSPECT CIRCUIT BREAKER OPERATION**

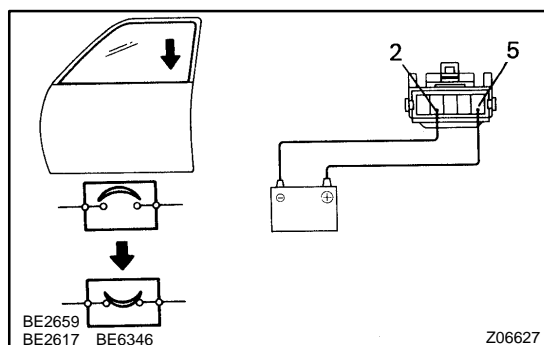
- Disconnect the connector from the master switch.
- Connect the positive (+) lead from the battery to terminal 9 and the negative (-) lead to terminal 10 on the wire harness side connector raise the window to the fully closed position.
- Continuity to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.



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

**11. Passenger's Door:****INSPECT CIRCUIT BREAKER OPERATION**

- Disconnect the connector from the power window switch.
 - Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 5 on the wire harness side connector, and raise the window to the fully close position.
 - Continue to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.
 - Reverse the polarity, check that the window begins to descend within approximately 60 seconds.
- If operation is not as specified, replace the motor.

**12. Rear Door:****INSPECT CIRCUIT BREAKER OPERATION (See Passenger's Door on page [BE-109](#))**

Wire Harness Side



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Z06630

13. INSPECT POWER WINDOW MOTOR CIRCUIT

- (a) Disconnect the connector from the motor.
- (b) Connect the connector to the master switch and power window switch.
- (c) Inspect the connector on the wire harness side, as shown.

Tester connection	Condition	Specified condition
1 – Ground	Ignition switch ON and master switch UP or OFF	No voltage
1 – Ground	Ignition switch ON and master switch DOWN	Battery positive voltage
1 – Ground	*Ignition switch ON and power window switch UP or OFF	No voltage
1 – Ground	*Ignition switch ON and power window switch DOWN	Battery positive voltage
2 – Ground	Ignition switch ON and master switch DOWN or OFF	No voltage
2 – Ground	Ignition switch ON and master switch UP	Battery positive voltage
2 – Ground	*Ignition switch ON and power window switch DOWN or OFF	No voltage
2 – Ground	*Ignition switch ON and power window switch UP	Battery positive voltage

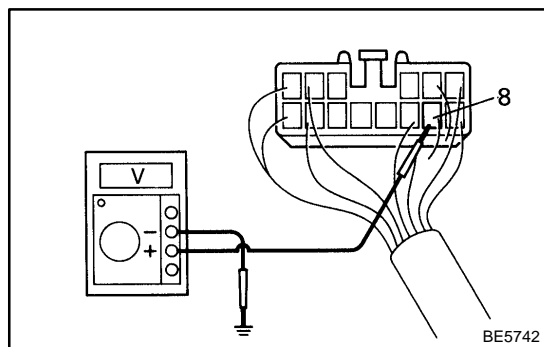
*: Set the window lock switch to the unlock position.

If the circuit is not as specified, Inspect the circuits connected to other parts.

14. INSPECT THEFT DETERRENT AND DOOR LOCK CONTROL ECU CIRCUIT

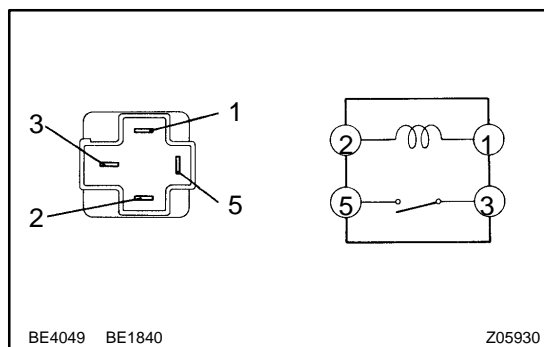
- (a) Inspect ECU Power Source Circuit (See page DI-665).
- (b) Inspect Actuator Power Source Circuit (See page DI-668).
- (c) Inspect Ignition Switch Circuit (See page DI-744).
- (d) Inspect Door Open Detection Switch Circuit (See page DI-688).

If circuit is as specified, inspect ECU operation.



15. INSPECT THEFT DETERRENT AND DOOR LOCK CONTROL ECU OPERATION

- With the connectors connected, shut all doors.
 - Check that there is 10 V~14 V between terminal B8 and ground when the ignition switch is turned ON.
 - After turning the ignition switch OFF, check within 60 seconds that there is battery positive voltage between terminal B8 and ground.
 - Turn the ignition switch ON then OFF, and check that there is 10 V~14 V between terminal B8 and ground when the ignition is switched OFF.
 - Open the front door within 60 seconds of turning the ignition off and check that there is no voltage between terminal B8 and ground.
 - Close all the doors and turn the ignition switch ON.
 - When a front door is opened, check that there is battery positive voltage between terminal B8 and ground.
 - Check that there is no voltage between terminal B8 and ground when the ignition switch is turned to OFF.
- If operation is not as specified, replace the ECU.



16. INSPECT POWER MAIN RELAY CONTINUITY

Condition	Tester connection	Specified condition
Constant	1 – 2	Continuity
Apply B+ between terminals 1 and 2.	3 – 5	Continuity

If continuity is not as specified, replace the relay.

17. INSPECT POWER MAIN RELAY CIRCUIT (See page [BE-16](#))