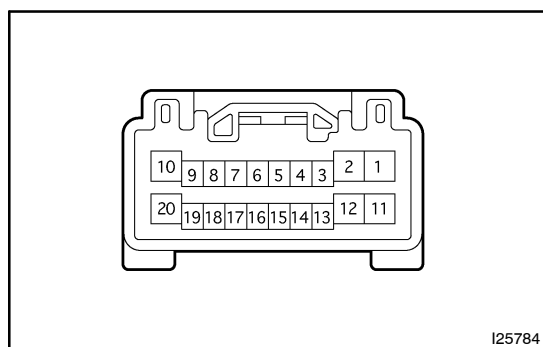




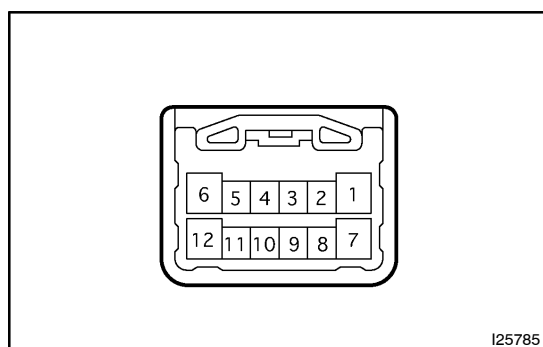
INSPECTION

1. INSPECT POWER WINDOW MASTER SWITCH CIRCUIT

Check the voltage and continuity of each terminal of the wire harness side connector.

Tester connection	Condition	Specified condition
2 (GND) – Body ground	Constant	Continuity
10 (BDR) – 2 (GND)	Constant	10 – 14V
9 (CPUB) – 2 (GND)	Constant	10 – 14V
20 (SIG) – 2 (GND)	Ignition switch OFF → ON	0V → 10 – 14V
1 (UP) – 11 (DN)	Constant	Continuity
5 (LMT) – 13 (SGND)	Driver door glass fully closed	No continuity
	Driver door glass opened by 4 mm (1.06in.)	Continuity

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

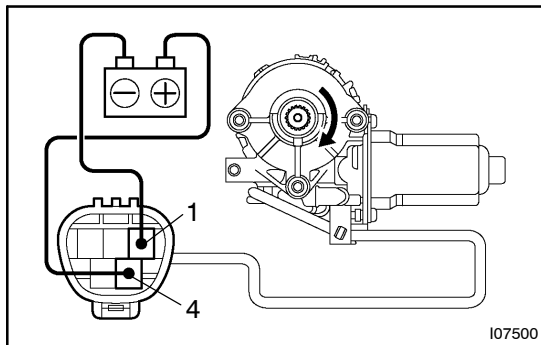


2. INSPECT POWER WINDOW SWITCH CIRCUIT

Check the voltage and continuity of each terminal of the wire harness side connector.

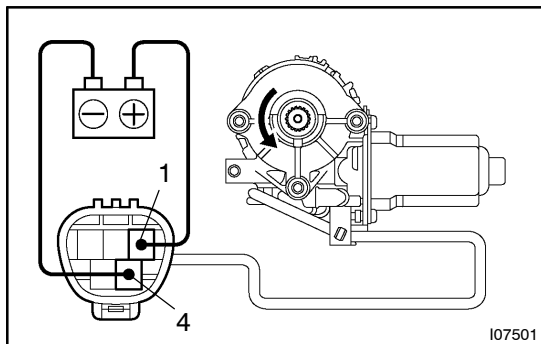
Tester connection	Condition	Specified condition
7 (GND) – Body ground	Constant	Continuity
12 (BDR) – 7 (GND)	Constant	10 – 14V
6 (UP) – 1 (DN)	Constant	Continuity
3 (LMT) – 5 (SGND)	Driver door glass fully closed	No continuity
	Driver door glass opened by 4 mm (1.06in.)	Continuity
9 – Body ground	Always (Front RH side only)	Continuity
10 – Body ground	Always (Rear LH side only)	Continuity

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



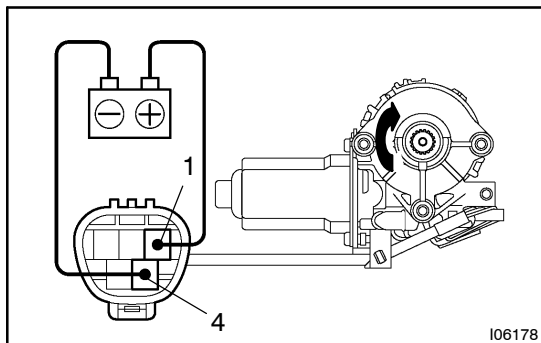
**3. Driver's door and rear right door:
INSPECT POWER WINDOW MOTOR OPERATION**

- (a) Connect the battery positive (+) lead to terminal 1 and the battery negative (-) lead to terminal 4, and check that the motor turns counterclockwise.



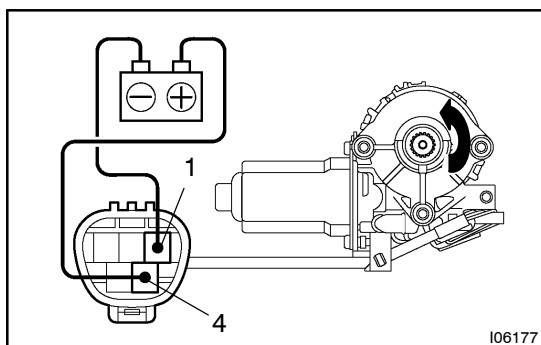
- (b) Reverse the polarity, and check that the motor turns clockwise.

If operation is not as specified, replace the motor.



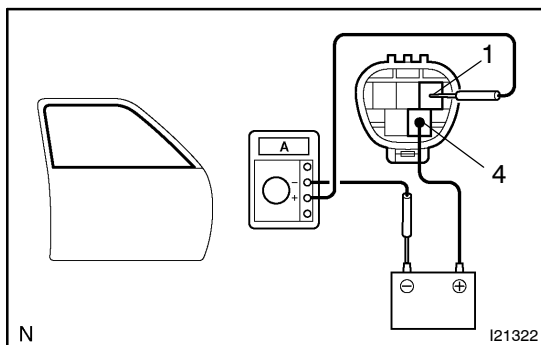
**4. Passenger's door and rear left door:
INSPECT POWER WINDOW MOTOR OPERATION**

- (a) Connect the battery positive (+) lead to terminal 4 and the battery negative (-) lead to terminal 1, and check that the motor turns clockwise.



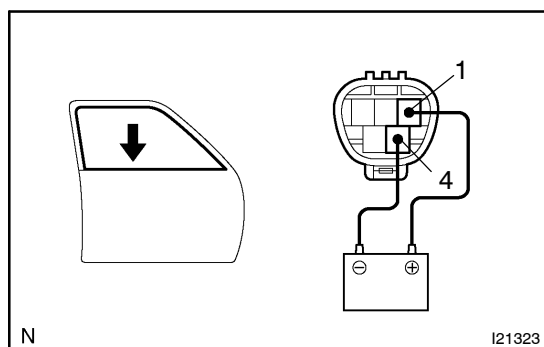
- (b) Reverse the polarity, and check that the motor turns counterclockwise.

If operation is not as specified, replace the motor.



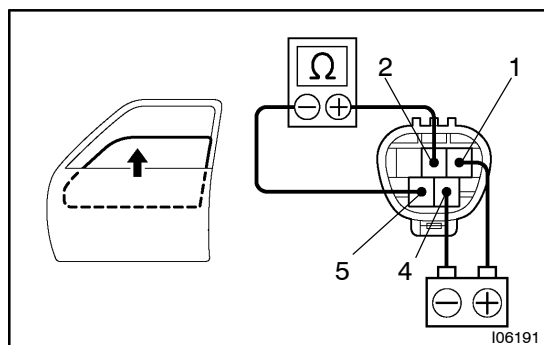
5. INSPECT POWER WINDOW MOTOR PTC THERMISTOR OPERATION

- (a) Disconnect the connector from the power window motor.
 (b) Connect the ammeter positive (+) lead to terminal 1 on the wire harness side connector and the ammeter negative (-) lead to negative terminal of the battery.
 (c) Connect the battery positive (+) lead to terminal 4 on the wire harness side connector, and raise the window to the fully position.



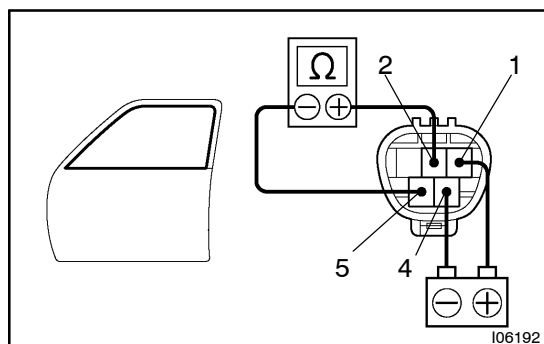
- (d) Continue to apply voltage and check that the current changes to less than 1 A within 4 to 90 seconds.
- (e) Disconnect the leads from the terminals.
- (f) Approximately 60 seconds later, connect the battery positive (+) lead to terminal 1 and the battery negative (-) lead to terminal 4, and check that the window begins to descend.

If operation is not as specified, replace the motor.



6. INSPECT JAM PROTECTION LIMIT SWITCH OPERATION

- (a) Connect the ohmmeter positive (+) lead to terminal 2 and the ohmmeter negative (-) lead to terminal 5.
- (b) Connect the battery positive (+) lead to terminal 1 and the battery negative (-) lead to terminal 4.
- (c) Check that the continuity exists when the window goes up.

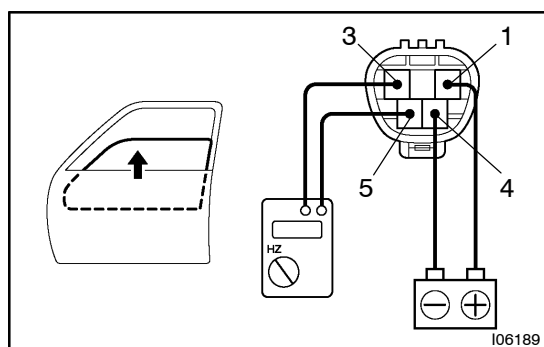


- (d) Check that no continuity exists when the window is in the fully closed position.

If operation is not as specified, replace the motor.

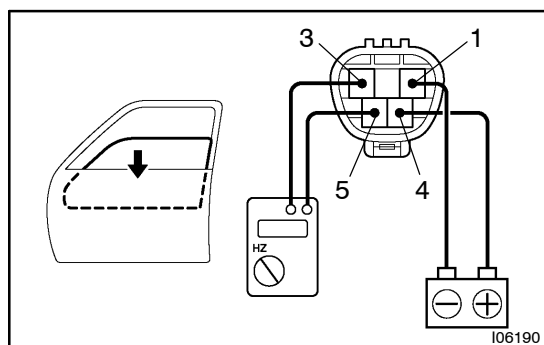
NOTICE:

If connecting the wire harness wrongly, the sensor might be damaged, so caution is necessary.



7. INSPECT JAM PROTECTION PULSE SWITCH OPERATION

- (a) Connect the TOYOTA electrical tester positive (+) lead to terminal 3 and the TOYOTA electrical tester negative (-) lead to terminal 5.
- (b) Connect the battery positive (+) lead to terminal 1 and the battery negative (-) lead to terminal 4.
- (c) Check that pulse is generated during the motor running.



- (d) Reverse the polarity and check that pulse is generated.
- If operation is not as specified, replace the motor.

NOTICE:

If connecting the wire harness wrongly, the sensor might be damaged, so caution is necessary.

8. INSPECT JAM PROTECTION FUNCTION**NOTICE:**

Be careful that any part of your body is not to be caught when checking.

HINT:

In the case of resetting the limit switch, perform checking after repeating up and down of the glass with automatic operation.

- (a) Confirmation of AUTO up operation:
Confirm that the window to be fully closed with AUTO up operation.
- (b) Checking of the operation of the jam protection function:
 - (1) Move up the window with AUTO up operation and check that the window goes down when it touches the handle of the hammer handle.
 - (2) Confirm that the window stops going down at about 200 mm.

HINT:

In the case of removing the glass, glass guide, regulator and etc., be sure to perform checking on the jam protection function. If the jam protection does not function properly, adjust the power window motor reset switch and the pulse switch.