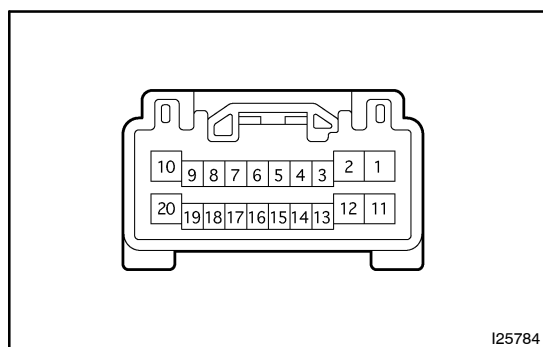




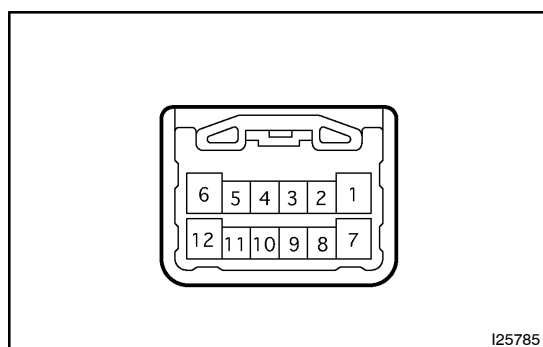
## INSPECTION

### 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.

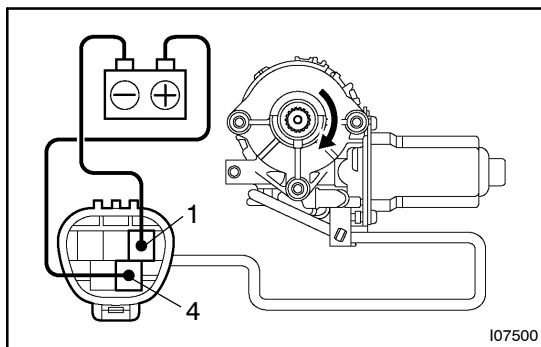


### 2. INSPECT POWER WINDOW SWITCH CIRCUIT

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

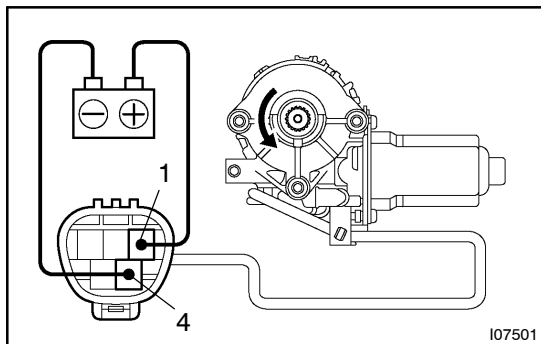
| Tester connection     | Condition                                  | Specified condition |
|-----------------------|--------------------------------------------|---------------------|
| 7 (GND) – Body ground | Constant                                   | Continuity          |
| 12 (BDR) – 7 (GND)    | 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          |

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



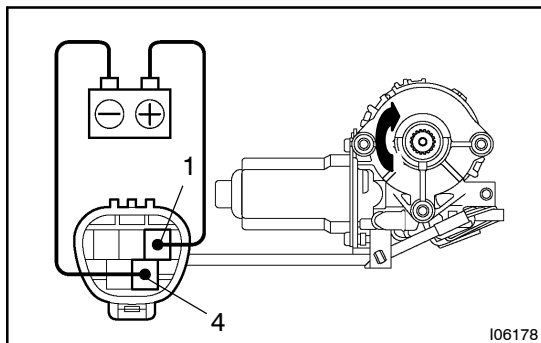
**3. Driver's door and rear right door:  
INSPECT POWER WINDOW MOTOR OPERATION**

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



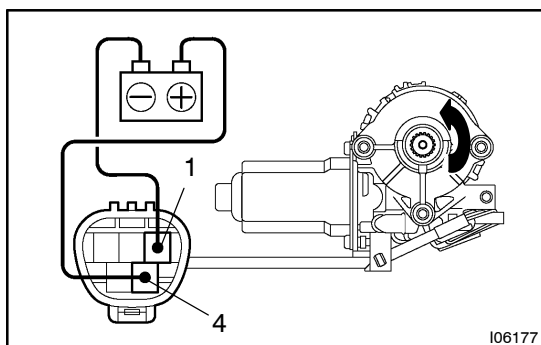
- (b) Reverse the polarity, check that the motor turns clockwise.

If operation is not as specified, replace the motor.



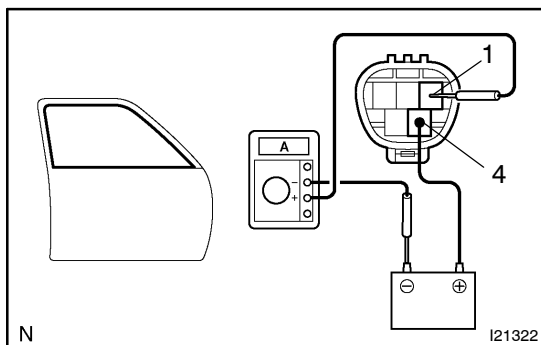
**4. Passenger's door and rear left door:  
INSPECT POWER WINDOW MOTOR OPERATION**

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



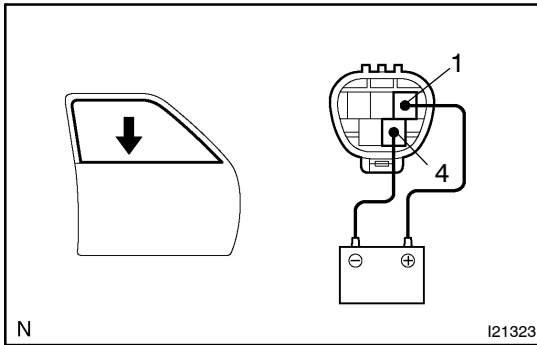
- (b) Reverse the polarity, check that the motor turns counterclockwise.

If operation is not as specified, replace the motor.



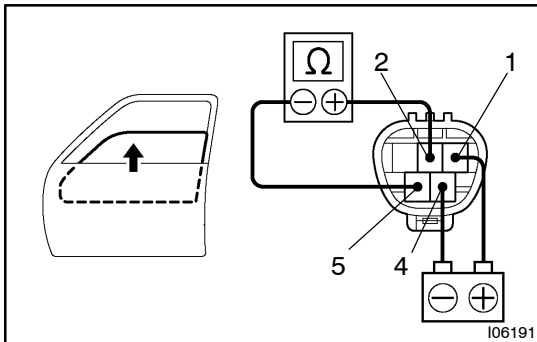
**5. INSPECT POWER WINDOW MOTOR PTC THERMISTOR OPERATION**

- (a) Disconnect the connector from the power window motor.  
(b) Connect the positive (+) lead from the ammeter to terminal 1 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, and raise the window to the fully position.



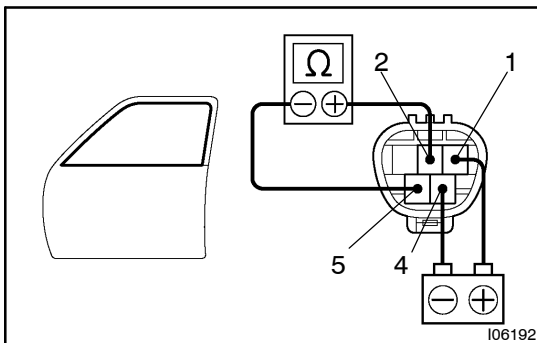
- (d) Continue to apply voltage and check that the current changes to less than 1 A within 4 to 90 seconds.
- (e) Disconnect the leads from the terminals.
- (f) Approximately 60 seconds later, connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 4, and check 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 positive (+) lead from the ohmmeter to terminal 2 and the negative (-) lead to terminal 5.
- (b) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 4.
- (c) Check that the Continuity exists when the window goes up.

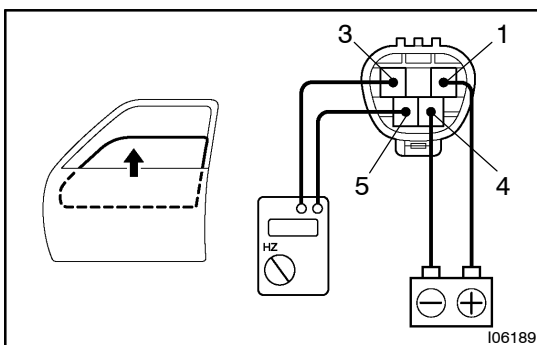


- (d) Check that the No Continuity exists when the window is in the fully closed position.

If operation is not as specified, replace the motor.

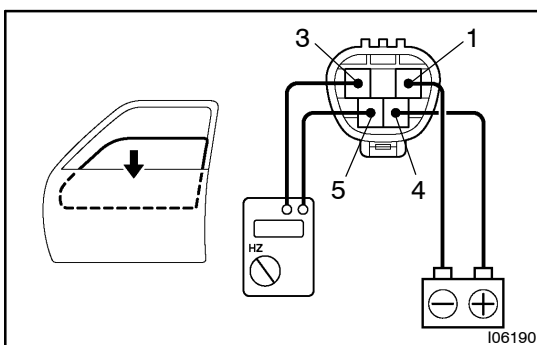
### NOTICE:

**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 positive (+) lead from the TOYOTA electrical tester to terminal 3 and the negative (-) lead to terminal 5.
- (b) Connect the positive (+) lead from the battery to terminal 1 and the 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:**

**Never, ever be caught any part of your body when checking.**

**HINT:**

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

- (a) Confirmation of AUTO up operation:  
Confirm that the window will 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 will go down when it touches the handle of the hammer setted.
  - (2) Confirm that the window will then stop going down about 200 mm.

**HINT:**

In case of removing the glass, glass guide, regulator and etc. be sure to perform checking of the jam protection function.

If the jam protection is not functioning properly, adjust power window motor reset switch and pulse switch.