

## WINDOWS CANNOT BE OPERATED VIA REGULATOR SWITCH AT EACH SEAT

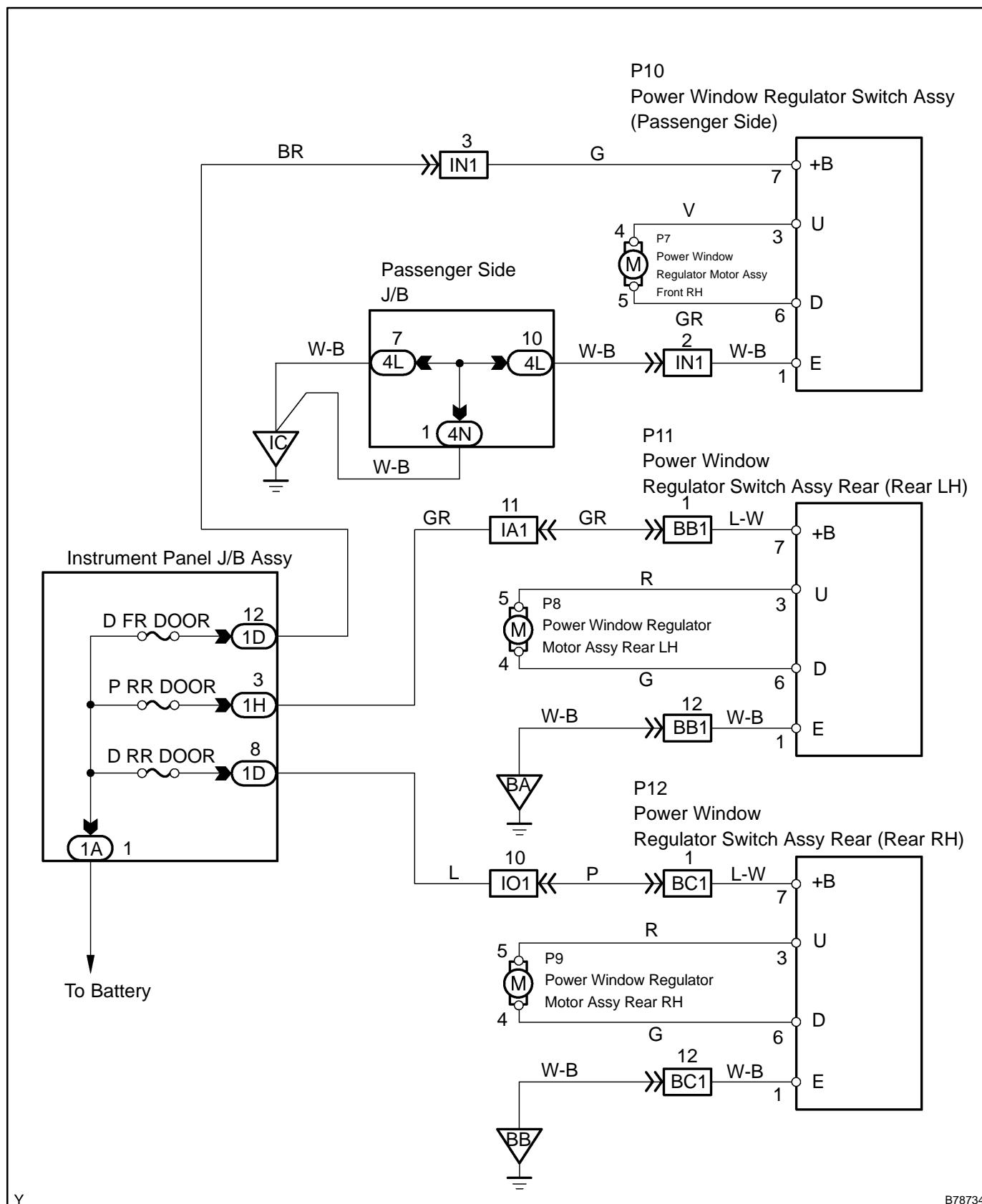
### CIRCUIT DESCRIPTION

With the ignition switch ON and the window lock switch at NORMAL (except driver side), each regulator switch drives each power window motor.

#### **NOTICE:**

The power window system has a function with a large-scale body multiplex communications. First of all, inspect the communication function depending on the "how to proceed with troubleshooting", and check that there is no abnormality in the communication system. Then finally proceed with the troubleshooting.

## WIRING DIAGRAM



Y

B78734

## INSPECTION PROCEDURE

### 1 CHECK FUSE

- (a) Check whether the regulator switch fuses D FR DOOR 25 A, P RR DOOR 20 A and D RR DOOR 20 A of inoperative seats are normal.

HINT:

- If the fuse for the passenger side door is normal, proceed to OK-A.
- If the fuse for the rear RH and LH doors is normal, proceed to OK-B.
- If the fuse for the passenger side door is defective, proceed to NG-A.
- If the fuse for the rear RH door is defective, proceed to NG-B.
- If the fuse for the rear LH door is defective, proceed to NG-C.

**OK-B** Go to step 6

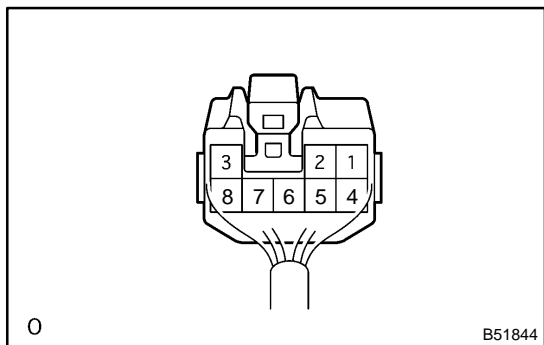
**NG-A** REPLACE FUSE (D FR DOOR 25 A)

**NG-B** REPLACE FUSE (P RR DOOR 20 A)

**NG-B** REPLACE FUSE (D RR DOOR 20 A)

**OK-A**

### 2 CHECK POWER WINDOW REGULATOR SWITCH ASSY (PASSENGER SIDE)



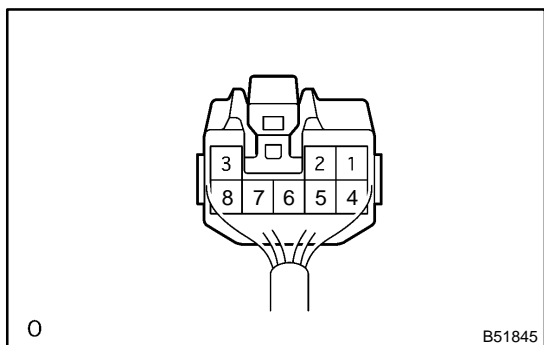
- (a) Inspect the power source voltage.
- (1) Disconnect the regulator switch connector.
  - (2) Check the voltage between terminal 7 (B) of the regulator switch vehicle's side connector and the body ground.

**Standard: 10 - 14 V with ignition switch ON**

**NG** REPAIR OR REPLACE HARNESS AND CONNECTOR

**OK**

### 3 CHECK POWER WINDOW REGULATOR SWITCH ASSY (PASSENGER SIDE)



- (a) Inspect the GND.
- (1) Disconnect the regulator switch connector.
  - (2) Check the continuity between terminal 1 (E) of the regulator switch vehicle's side connector and the body ground.

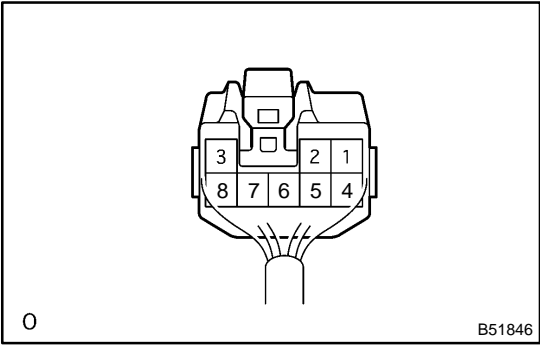
**Standard: Continuity (constant)**

**NG** REPAIR OR REPLACE HARNESS AND CONNECTOR

**OK**

4

CHECK POWER WINDOW REGULATOR MOTOR ASSY RH (PASSENGER SIDE)



- (a) Inspect the motor operation.
- (1) Disconnect the regulator switch connector.
  - (2) Inspect the door glass operation when the battery voltage is applied between terminals 3 (U) and 6 (D) of the regulator switch vehicle's side connector.

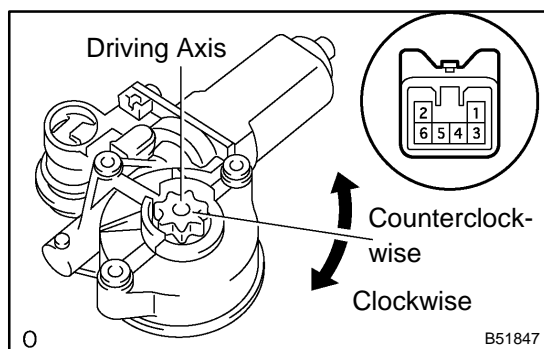
Standard:

Measuring Condition	Operational Direction
Battery positive - Terminal 3 (U) Battery negative - Terminal 6 (D)	Upward
Battery positive - Terminal 6 (D) Battery negative - Terminal 3 (U)	Downward

OK

REPLACE POWER WINDOW REGULATOR SWITCH ASSY

NG

**5 INSPECT POWER WINDOW REGULATOR MOTOR ASSY RH (PASSENGER SIDE)**

- (a) Inspect the operation of the front LH power window regulator motor assembly.
- (1) Check that the motor operates smoothly when the battery voltage is applied to each terminal of the connector.

**Standard:**

Measuring Condition	Operational Direction
Battery positive - Terminal 4 Battery negative - Terminal 5	Clockwise rotation toward driving axis
Battery positive - Terminal 5 Battery negative - Terminal 4	Counterclockwise rotation toward driving axis

- (b) Inspect the PTC operation inside the power window regulator motor.

**NOTICE:**

The inspection should be performed with the power window regulator and door glass installed to the vehicle.

- (1) Set a DC 400 A probe of the electrical tester in the wire harness of terminal 1 or 2.

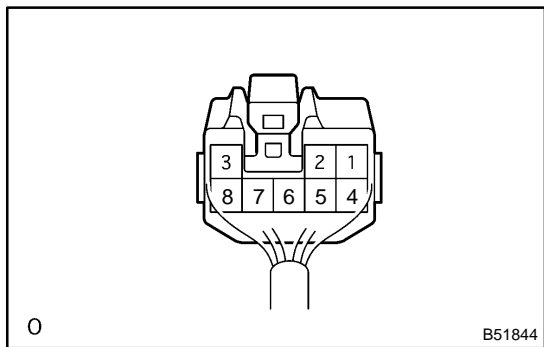
**NOTICE:**

Match the arrow mark of the probe with the current direction.

- (2) Set the door glass in the fully closed position.
- (3) When 60 seconds have elapsed after the door glass is fully closed, check how long the current takes to charge, from approximately 16 - 34 A into 1 A or less, when the power window switch is turned UP once again.

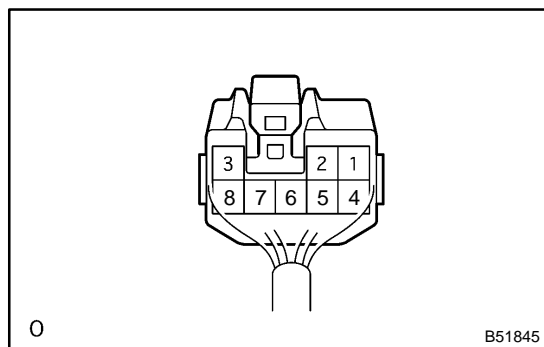
**Standard: Approximately 4 - 90 seconds**

- (4) When approximately 60 seconds have elapsed after the inspection of the current cut-off, check that the door glass goes down when the power window regulator switch is turned DOWN.

**OK****REPAIR OR REPLACE HARNESS AND CONNECTOR****NG****REPLACE POWER WINDOW REGULATOR MOTOR ASSY RH****6 CHECK POWER WINDOW REGULATOR SWITCH ASSY REAR (REAR RH AND LH)**

- (a) Inspect the power source voltage.
- (1) Disconnect the regulator switch connector.
- (2) Check the voltage between terminal 7 (+B) of the regulator switch vehicle's side connector and the body ground.

**Standard: 10 - 14 V with ignition switch ON****NG****REPAIR OR REPLACE HARNESS AND CONNECTOR****OK**

**7 CHECK POWER WINDOW REGULATOR SWITCH ASSY REAR (REAR RH AND LH)**

- (a) Inspect the GND.
- (1) Disconnect the regulator switch connector.
  - (2) Check the continuity between terminal 1 (E) of the regulator switch vehicle's side connector and the body ground.

**Standard: Continuity (constant)**

**NG**

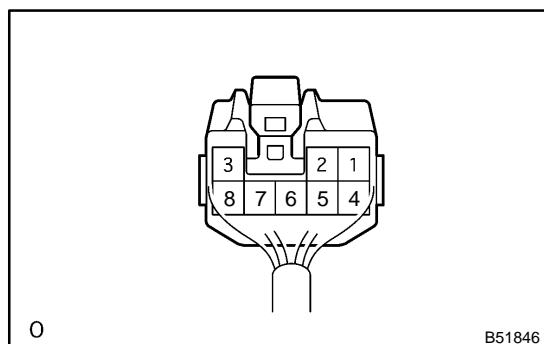
**REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK-A**

**Go to step 8 (In case Rear RH side)**

**OK-B**

**Go to step 10 (In case Rear LH side)**

**8 CHECK POWER WINDOW REGULATOR MOTOR ASSY RH (REAR RH)**

- (a) Inspect the motor operation.
- (1) Disconnect the regulator switch connector.
  - (2) Inspect the door glass operation when the battery voltage is applied between terminals 3 (U) and 6 (D) of the regulator switch vehicle's side connector.

**Standard:**

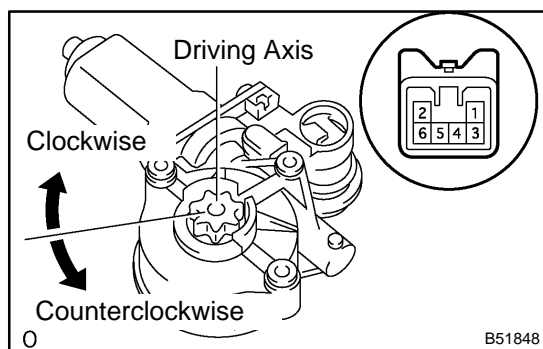
Measuring condition	Operational direction
Battery positive - Terminal 3 (U) Battery negative - Terminal 6 (D)	Upward
Battery positive - Terminal 6 (D) Battery negative - Terminal 3 (U)	Downward

**OK**

**REPLACE POWER WINDOW REGULATOR SWITCH ASSY REAR**

**NG**

## 9 INSPECT POWER WINDOW REGULATOR MOTOR ASSY RH (REAR RH)



(a) Inspect the operation of the power window regulator motor assy RH (Rear RH side).

- (1) Check that the motor operates smoothly when the battery voltage is applied to each terminal of the connector.

### Standard:

Measuring Condition	Operational Direction
Battery positive - Terminal 5 Battery negative - Terminal 4	Clockwise rotation toward driving axis
Battery positive - Terminal 4 Battery negative - Terminal 5	Counterclockwise rotation toward driving axis

(b) Inspect the PTC operation inside the power window regulator motor.

### NOTICE:

The inspection should be performed with the power window regulator and door glass installed to the vehicle.

- (1) Set a DC 400 A probe of the electrical tester in the wire harness of terminal 1 or 2.

### NOTICE:

Match the arrow mark of the probe with the current direction.

- (2) Set the door glass in the fully closed position.
- (3) When 60 seconds have elapsed after the door glass is fully closed, check how long the current takes to charge, from approximately 16 - 34 A into 1 A or less, when the power window switch is turned UP once again.

**Standard: Approximately 4 - 90 seconds**

- (4) When approximately 60 seconds have elapsed after the inspection of the current cut-off, check that the door glass goes down when the power window regulator switch is turned DOWN.

OK

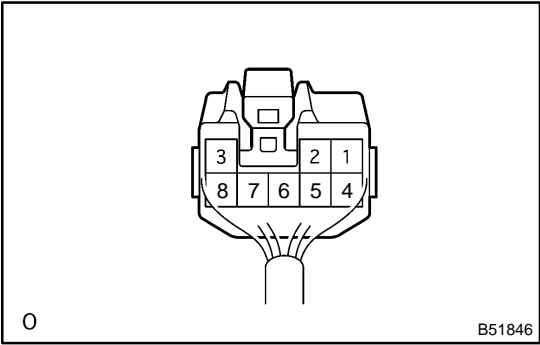
REPAIR OR REPLACE HARNESS AND CONNECTOR

NG

REPLACE POWER WINDOW REGULATOR MOTOR ASSY RH

10

CHECK POWER WINDOW REGULATOR MOTOR ASSY LH (REAR LH)



- (a) Inspect the motor operation.
- (1) Disconnect the regulator switch connector.
  - (2) Inspect the door glass operation when the battery voltage is applied between terminals 3 (U) and 6 (D) of the regulator switch vehicle's side connector.

Standard:

Measuring condition	Operational direction
Battery positive - Terminal 3 (U) Battery negative - Terminal 6 (D)	Upward
Battery positive - Terminal 6 (D) Battery negative - Terminal 3 (U)	Downward

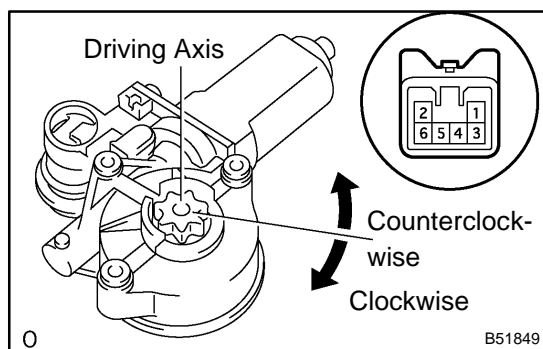
OK

REPLACE POWER WINDOW REGULATOR SWITCH ASSY REAR

NG



# 11 INSPECT POWER WINDOW REGULATOR MOTOR ASSY LH (REAR LH)



- (a) Inspect the operation of the power window regulator motor assy LH (Rear LH side).
- (1) Check that the motor operates smoothly when the battery voltage is applied to each terminal of the connector.

## Standard:

Measuring condition	Operational direction
Battery positive - Terminal 4 Battery negative - Terminal 5	Clockwise rotation toward driving axis
Battery positive - Terminal 5 Battery negative - Terminal 4	Counterclockwise rotation toward driving axis

- (b) Inspect the PTC operation inside the power window regulator motor.

## NOTICE:

The inspection should be performed with the power window regulator and door glass installed to the vehicle.

- (1) Set a DC 400 A probe of the electrical tester in the wire harness of terminal 1 or 2.

## NOTICE:

Match the arrow mark of the probe with the current direction.

- (2) Set the door glass in the fully closed position.
- (3) When 60 seconds have elapsed after the door glass is fully closed, check how long the current takes to charge, from approximately 16 - 34 A into 1 A or less, when the power window switch is turned UP once again.

**Standard: Approximately 4 - 90 seconds**

- (4) When approximately 60 seconds have elapsed after the inspection of the current cut-off, check that the door glass goes down when the power window regulator switch is turned DOWN.

NG

**REPLACE POWER WINDOW REGULATOR MOTOR ASSY LH**

OK

**REPAIR OR REPLACE HARNESS AND CONNECTOR**