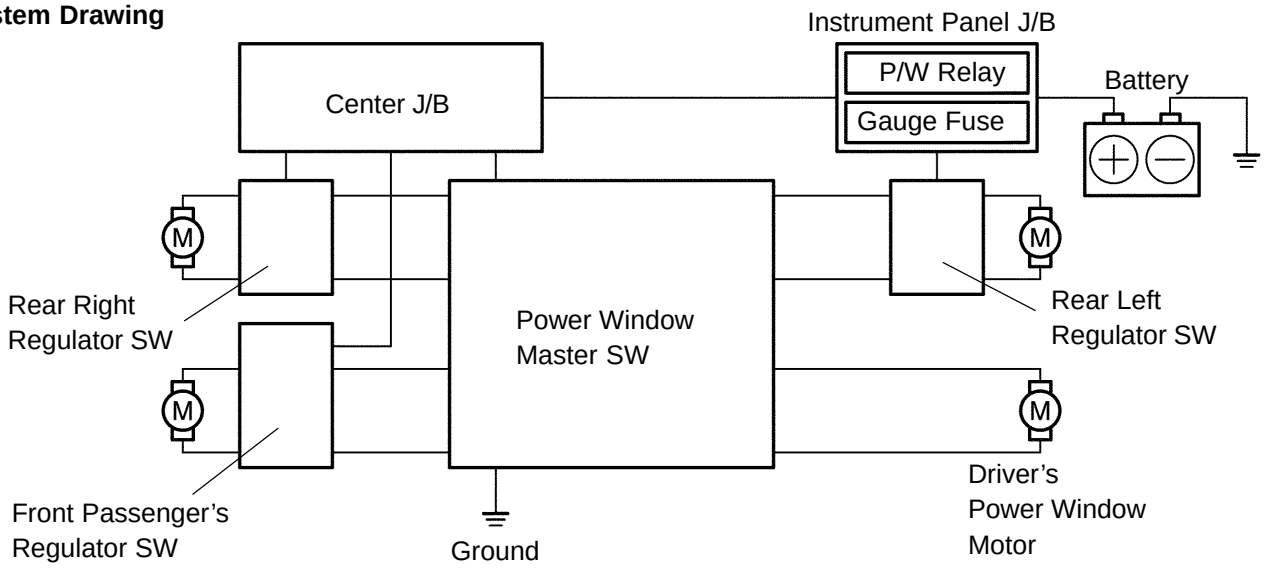
700GM–01

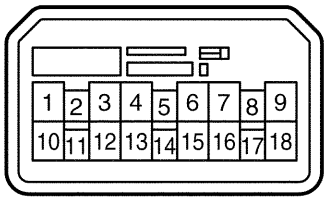
INSPECTION

1. POWER WINDOW SYSTEM CIRCUIT

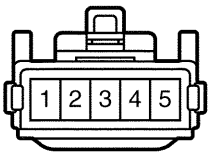
System Drawing



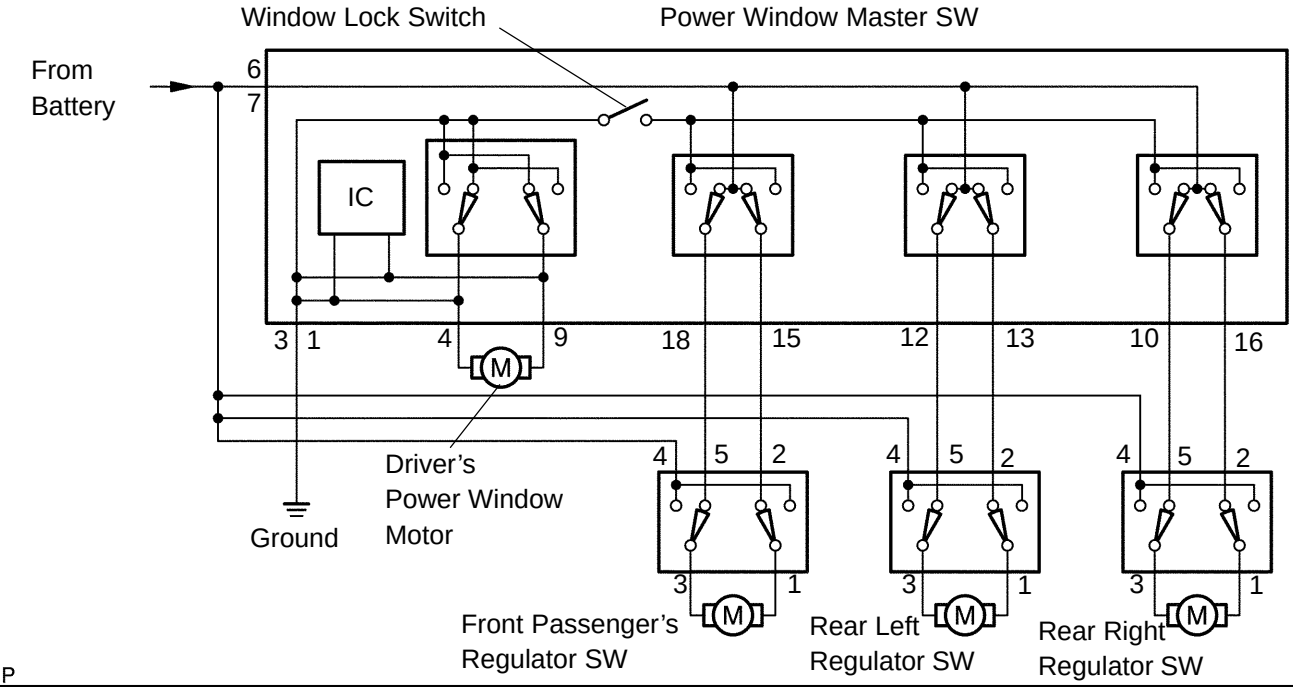
Power Window Master SW Connector
(Wire Harness Side)



Power Window Regulator SW Connector
(Wire Harness Side)



Switch Inner Circuit



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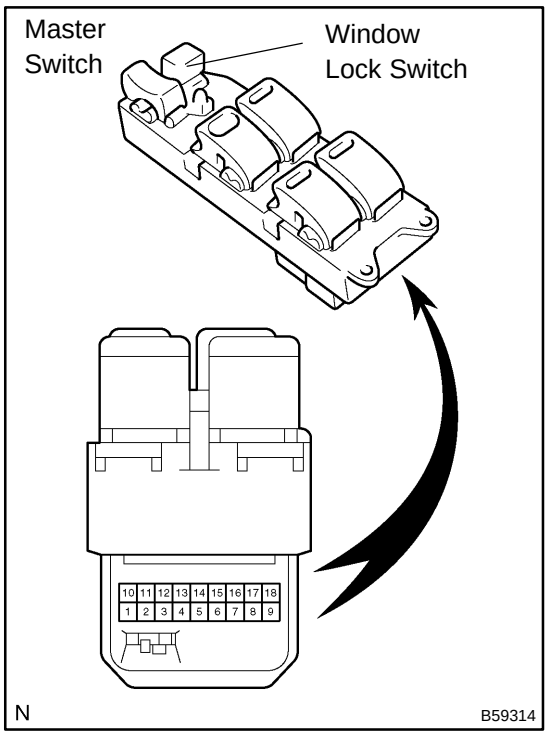


2. INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSY

(a) Inspect the master switch continuity.

[Driver's switch (Window unlock and lock)]

Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	DU (4) ⇔ B (6) ⇔ B (7)	Continuity
	E (1) ⇔ E (3) ⇔ DD (9)	
OFF	E (1) ⇔ E (3) ⇔ DU (4)	Continuity
	E (1) ⇔ E (3) ⇔ DD (9)	
DOWN	E (1) ⇔ E (3) ⇔ DU (4)	Continuity
	B (6) ⇔ B (7) ⇔ DD (9)	
AUTO DOWN	E (1) ⇔ E (3) ⇔ DU (4)	Continuity
	B (6) ⇔ B (7) ⇔ DD (9)	

[Front passenger's switch (Window unlock)]

Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	E (1) ⇔ E (3) ⇔ PD (15)	Continuity
	B (6) ⇔ B (7) ⇔ PU (18)	
OFF	E (1) ⇔ E (3) ⇔ PD (15)	Continuity
	E (1) ⇔ E (3) ⇔ PU (18)	
DOWN	E (1) ⇔ E (3) ⇔ PU (18)	Continuity
	B (6) ⇔ B (7) ⇔ PD (15)	

[Front passenger's switch (Window lock)]

Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	B (6) ⇔ B (7) ⇔ PU (18)	Continuity
OFF	PD (15) ⇔ PU (18)	Continuity
DOWN	B (6) ⇔ B (7) ⇔ PD (15)	Continuity

[Rear left switch (Window unlock)]

Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	E (1) ⇔ E (3) ⇔ RLD (13)	Continuity
	B (6) ⇔ B (7) ⇔ RLU (12)	
OFF	E (1) ⇔ E (3) ⇔ RLD (13)	Continuity
	E (1) ⇔ E (3) ⇔ RLU (12)	
DOWN	E (1) ⇔ E (3) ⇔ RLU (12)	Continuity
	B (6) ⇔ B (7) ⇔ RLD (13)	

[Rear left switch (Window lock)]

Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	B (6) ⇔ B (7) ⇔ RLU (12)	Continuity
OFF	RLU (12) ⇔ RLD (13)	Continuity
DOWN	B (6) ⇔ B (7) ⇔ RLD (13)	Continuity

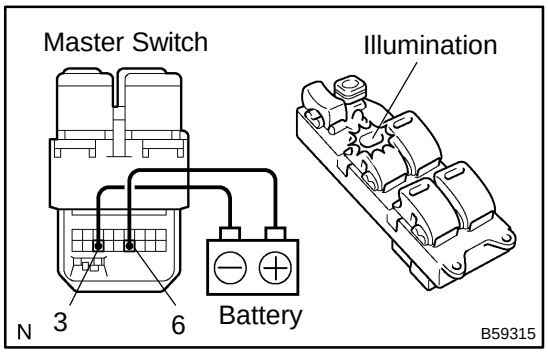
[Rear right switch (Window unlock)]
Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	B (6) ⇔ B (7) ⇔ RRU (10)	Continuity
	E (1) ⇔ E (3) ⇔ RRD (16)	
OFF	E (1) ⇔ E (3) ⇔ RRU (10)	Continuity
	E (1) ⇔ E (3) ⇔ RRD (16)	
DOWN	E (1) ⇔ E (3) ⇔ RRU (10)	Continuity
	B (6) ⇔ B (7) ⇔ RRD (16)	

[Rear right switch (Window lock)]
Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	B (6) ⇔ B (7) ⇔ RRU (10)	Continuity
OFF	RRU (10) ⇔ RRD (16)	Continuity
DOWN	B (6) ⇔ B (7) ⇔ RRD (16)	Continuity

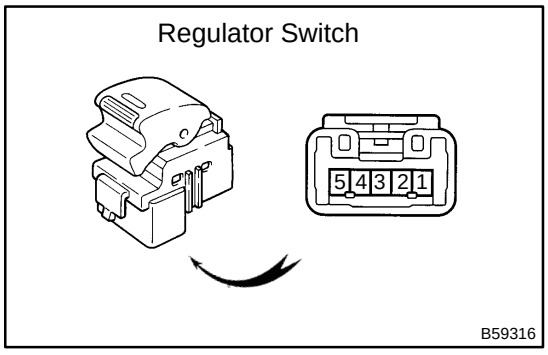
If the result is not as specified, replace the master switch.



(b) Inspect the master switch illumination.
Standard:

Measuring condition	Specified condition
Battery positive (+) Terminal – 6 Battery negative (–) Terminal – 3	Switch illumination lights up

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



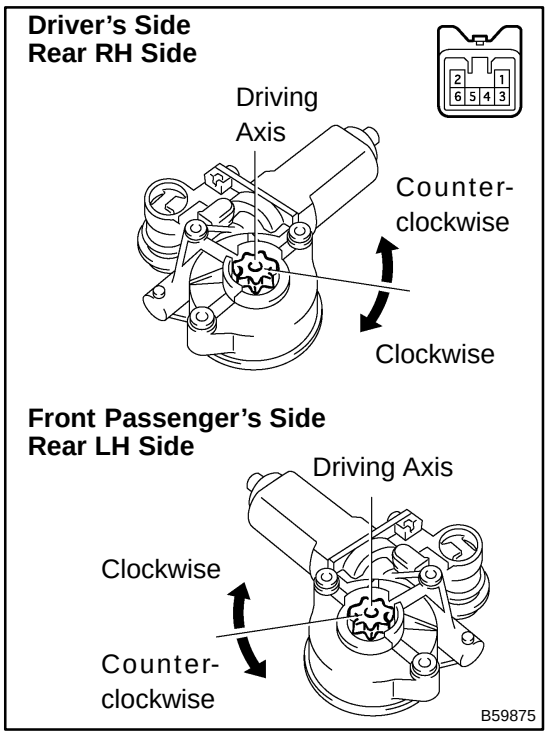
3. INSPECT POWER WINDOW REGULATOR SWITCH ASSY

HINT:
All the regulator switches (front passenger's, rear left, rear right) should be inspected in the same procedure.

(a) Inspect the regulator switch continuity.
Standard:

Switch position	Symbols (Terminal No.)	Specified condition
UP	D (1) ⇔ SD (2)	Continuity
	U (3) ⇔ B (4)	
OFF	D (1) ⇔ SD (2)	Continuity
	U (3) ⇔ SU (5)	
DOWN	D (1) ⇔ B (4)	Continuity
	U (3) ⇔ SU (5)	

If the result is not as specified, replace the regulator switch.



4. INSPECT POWER WINDOW REGULATOR MOTOR

(a) Inspect the regulator motor operation.

HINT:

- Driver's side and rear RH regulator motors should be inspected in the same procedure.
- Passenger's side and rear LH regulator motors should be inspected in the same procedure.

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

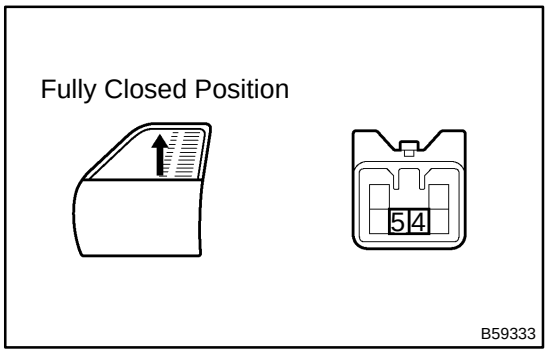
Standard [Driver's side and rear RH side]:

Measuring condition	Operational direction
Battery positive (+) Terminal – 4 Battery negative (–) Terminal – 5	Clockwise toward driving axis
Battery positive (+) Terminal – 5 Battery negative (–) Terminal – 4	Counterclockwise toward driving axis

Standard [Front passenger's side and rear LH side]:

Measuring condition	Operational direction
Battery positive (+) Terminal – 5 Battery negative (–) Terminal – 4	Clockwise toward driving axis
Battery positive (+) Terminal – 4 Battery negative (–) Terminal – 5	Counterclockwise toward driving axis

If the result is not as specified, replace the motor.



(b) Inspect the PTC operation inside the 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 TOYOTA electrical tester in the wire harness of terminal 4 or 5.

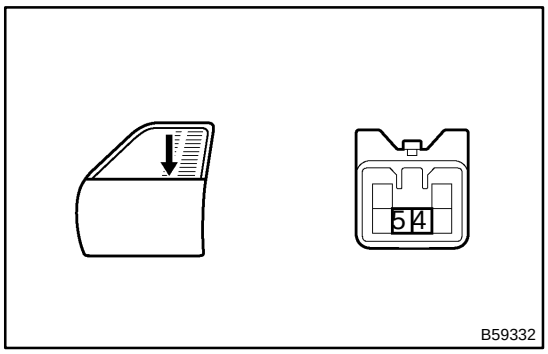
NOTICE:

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

(2) Set the door glass in the fully closed position.

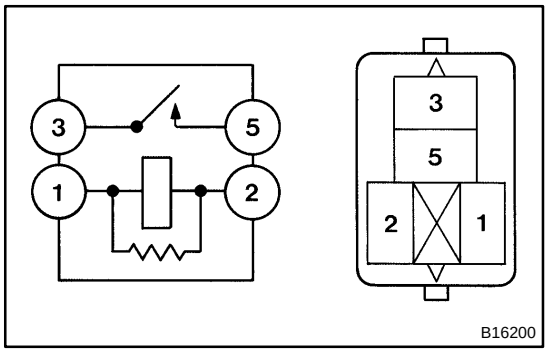
(3) When 60 seconds have elapsed after the door glass is fully closed, check how long it takes for the current to change from approximately 16 – 34 A into 1 A or less when the power window switch is turned UP once again.

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.

If the result is not as specified, replace the motor.



5. INSPECT RELAY (Making: P/W)

(a) Remove the power window relay from the instrument panel J/B.

(b) Inspect the power window relay.

Condition	Terminal No.	Specified condition
Constant	1 ⇔ 2	Continuity
Apply B+ between Terminals 1 and 2	3 ⇔ 5	Continuity

If the result is not as specified, replace the relay.