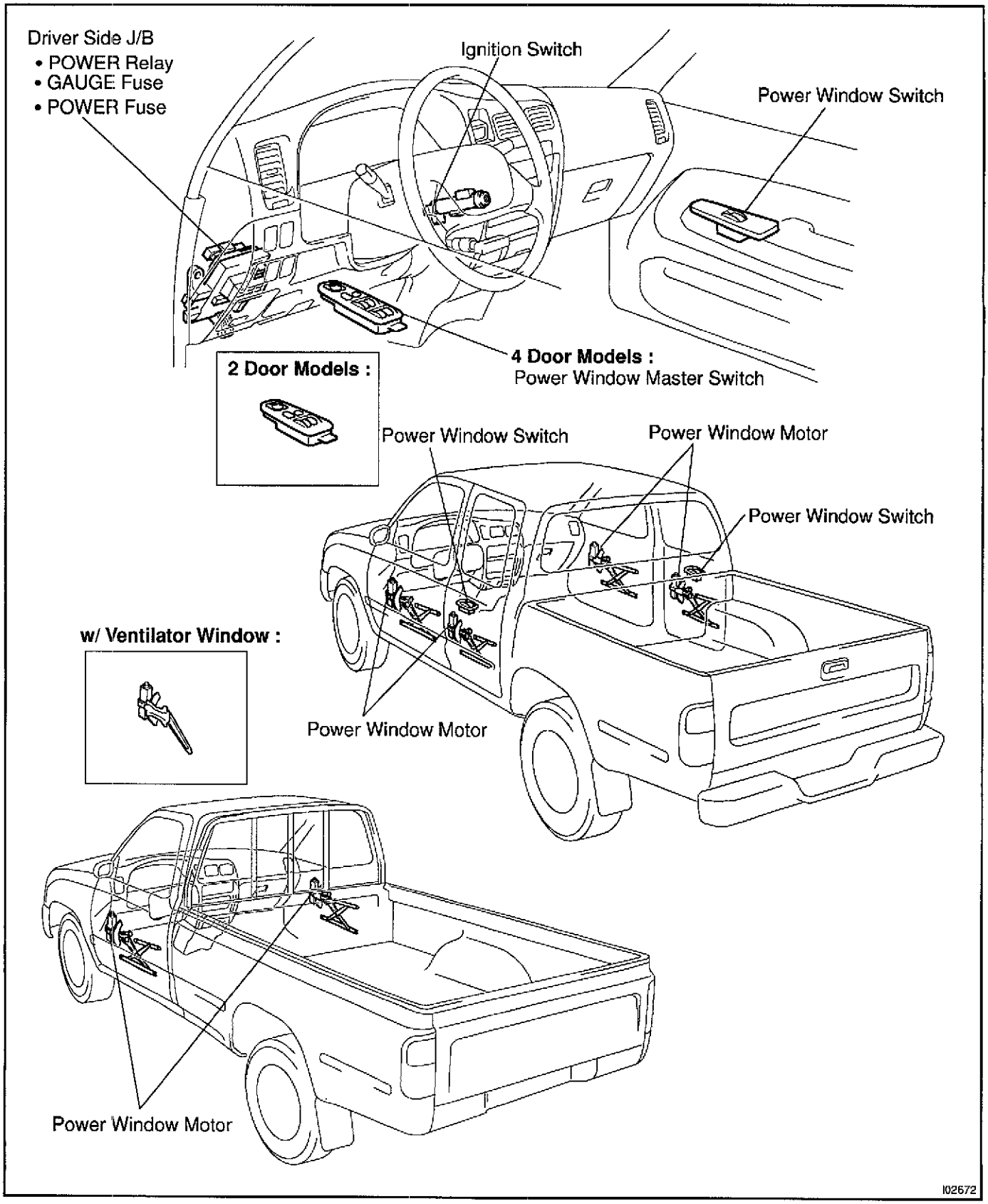
POWER WINDOW CONTROL SYSTEM

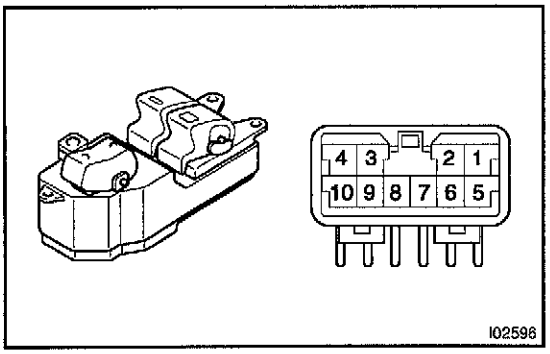
LOCATION

BE094-01



BE09I–01

INSPECTION



1. LHD 2 Door Models :

INSPECT POWER WINDOW MASTER SWITCH CONTINUITY

Driver's Switch :

Switch position	Tester connection	Specified condition
UP	1 – 4 3 – 9	Continuity
OFF	1 – 3 1 – 4	Continuity
DOWN	1 – 3 4 – 9	Continuity

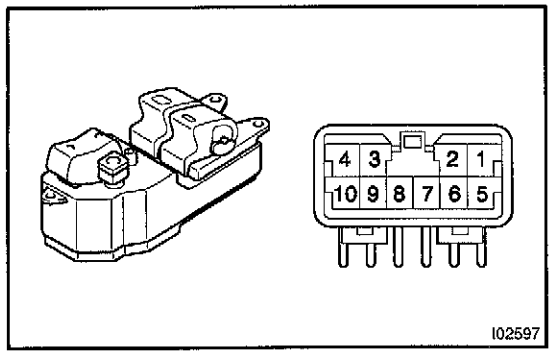
Passenger's Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	1 – 10 8 – 9	Continuity
OFF	1 – 10 1 – 8	Continuity
DOWN	1 – 8 9 – 10	Continuity

Passenger's Switch (Window Lock) :

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

If continuity is not as specified, replace the switch.



2. RHD 2 Door Models :

INSPECT POWER WINDOW MASTER SWITCH CONTINUITY

Driver's Switch :

Switch position	Tester connection	Specified condition
UP	1 – 4 2 – 6	Continuity
OFF	1 – 4 2 – 4	Continuity
DOWN	1 – 6 2 – 4	Continuity

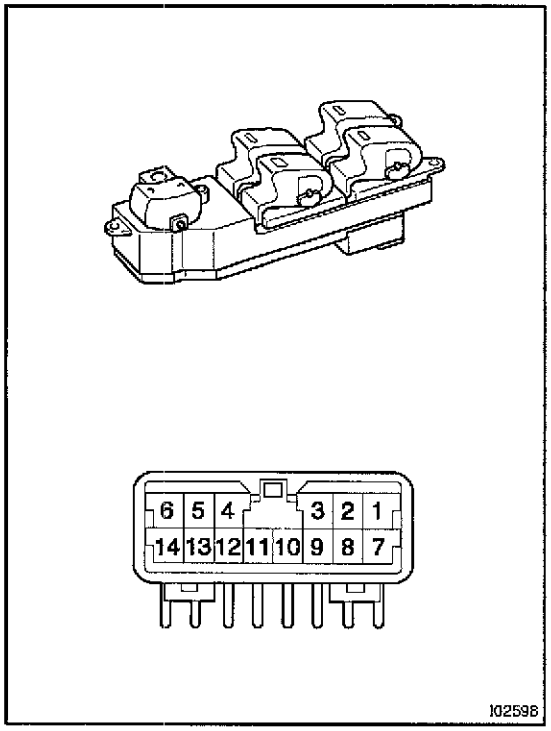
Passenger's Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	4 – 5 6 – 7	Continuity
OFF	4 – 5 4 – 7	Continuity
DOWN	4 – 7 5 – 6	Continuity

Passenger's Switch (Window Lock) :

Switch position	Tester connection	Specified condition
UP	6 – 7	Continuity
OFF	5 – 7	Continuity
DOWN	5 – 6	Continuity

If continuity is not as specified, replace the switch.



3. LHD 4 Door Models :

INSPECT POWER WINDOW MASTER SWITCH CONTINUITY

Front Driver's Switch :

Switch position	Tester connection	Specified condition
UP	1 – 10, 1 – 11 3 – 5, 4 – 5	Continuity
OFF	1 – 3, 1 – 4 3 – 5, 4 – 5	Continuity
DOWN	5 – 10, 5 – 11 1 – 3, 1 – 4	Continuity
DOWN AUTO	5 – 10, 5 – 11 1 – 3, 1 – 4	Continuity

Front Passenger's Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	10 – 14, 11 – 14 3 – 6, 4 – 6	Continuity
OFF	3 – 14, 4 – 14 3 – 6, 4 – 6	Continuity
DOWN	6 – 10, 6 – 11 3 – 14, 4 – 14	Continuity

Front Passenger's Switch (Window Lock) :

Switch position	Tester connection	Specified condition
UP	10 – 14, 11 – 14	Continuity
OFF	6 – 14	Continuity
DOWN	6 – 10, 6 – 11	Continuity

Rear Left Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	9 – 10, 9 – 11 3 – 12, 4 – 12	Continuity
OFF	3 – 9, 4 – 9 3 – 12, 4 – 12	Continuity
DOWN	10 – 12, 11 – 12 3 – 9, 4 – 9	Continuity

Rear Left Switch (Window Lock) :

Switch position	Tester connection	Specified condition
UP	9 – 10, 9 – 11	Continuity
OFF	9 – 12	Continuity
DOWN	10 – 12, 11 – 12	Continuity

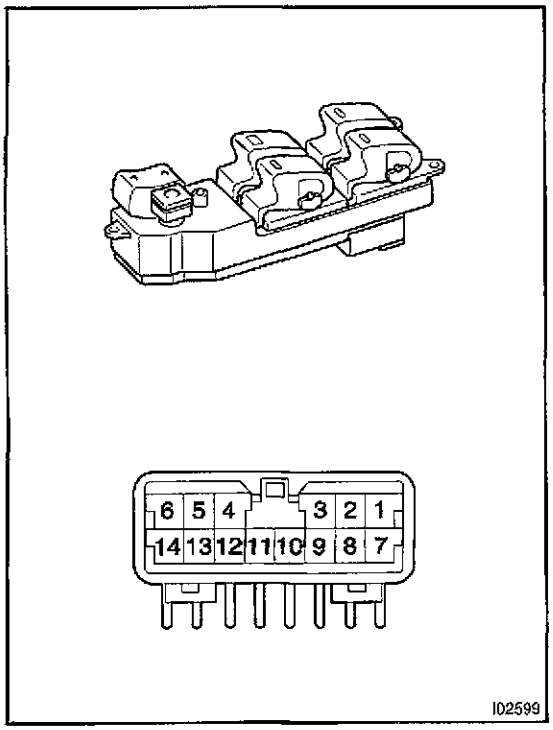
Rear Right Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	8 – 10, 8 – 11 3 – 13, 4 – 13	Continuity
OFF	3 – 8, 4 – 8 3 – 13. 4 – 13	Continuity
DOWN	10 – 13, 11 – 13 3 – 8, 4 – 8	Continuity

Rear Right Switch (Window Lock) :

Switch position	Tester connection	Specified condition
UP	8 – 10, 8 – 10	Continuity
OFF	8 – 13	Continuity
DOWN	10 – 13, 11 – 13	Continuity

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



4. RHD 4 Door Models :
INSPECT POWER WINDOW MASTER SWITCH CONTINUITY
Front Driver's Switch :

Switch position	Tester connection	Specified condition
UP	6 – 10, 6 – 11 3 – 2, 4 – 2	Continuity
OFF	6 – 3, 6 – 4 3 – 2, 4 – 2	Continuity
DOWN	2 – 10, 2 – 11 6 – 3, 6 – 4	Continuity
DOWN AUTO	2 – 10, 2 – 11 6 – 3, 6 – 4	Continuity

Front passenger's Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	10 – 7, 11 – 7 3 – 1, 4 – 1	Continuity
OFF	3 – 7, 4 – 7 3 – 1, 4 – 1	Continuity
DOWN	1 – 10, 1 – 11 3 – 7, 4 – 7	Continuity

Front passenger's Switch (Window Lock) :

Switch position	Tester connection	Specified condition
UP	10 – 7, 11 – 7	Continuity
OFF	1 – 7	Continuity
DOWN	1 – 10, 1 – 11	Continuity

Rear Left Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	13 – 10, 13 – 11 3 – 8, 4 – 8	Continuity
OFF	3 – 13, 4 – 13 3 – 8, 4 – 8	Continuity
DOWN	10 – 8, 11 – 8 3 – 13, 4 – 13	Continuity

Rear Left Switch (Window Lock) :

Switch position	Tester connection	Specified condition
UP	13 – 10, 13 – 11	Continuity
OFF	8 – 13	Continuity
DOWN	10 – 8, 11 – 8	Continuity

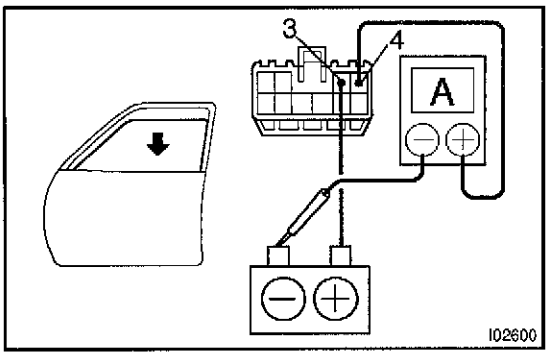
Rear Right Switch (Window Unlock) :

Switch position	Tester connection	Specified condition
UP	12 – 10, 12 – 11 3 – 9, 4 – 9	Continuity
OFF	3 – 12, 4 – 12 3 – 9, 4 – 9	Continuity
DOWN	10 – 9, 11 – 9 3 – 12, 4 – 12	Continuity

Rear Right Switch (Window Lock) :

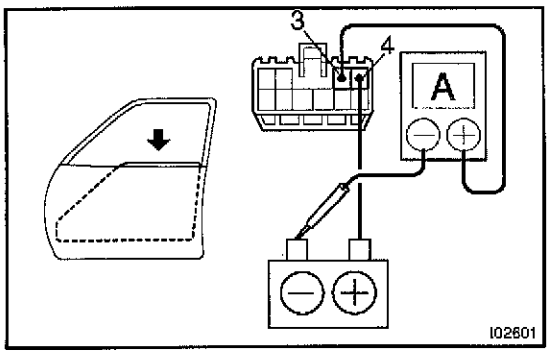
Switch position	Tester connection	Specified condition
UP	12 – 10, 11 – 10	Continuity
OFF	9 – 12	Continuity
DOWN	10 – 9, 11 – 9	Continuity

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



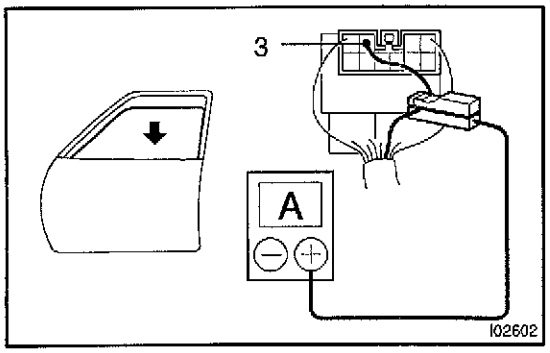
5. LHD 2 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM (Using an ammeter)

(a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the ammeter to terminal 3 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 4 on the wire harness side connector.
(d) As the window goes down, check that the current is approximately 7 A.



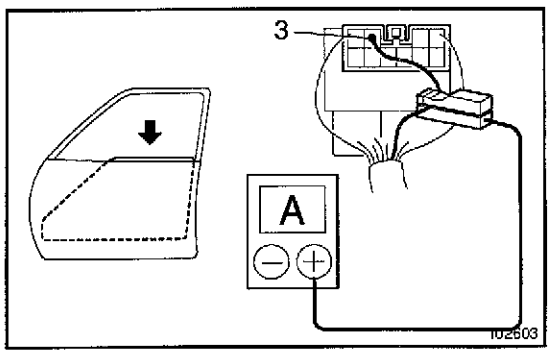
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:
The circuit breaker opens for 7 – 13 seconds after the window stops going down, so that check must be made before the circuit breaker operates.
If operation is not as specified, replace the master switch.



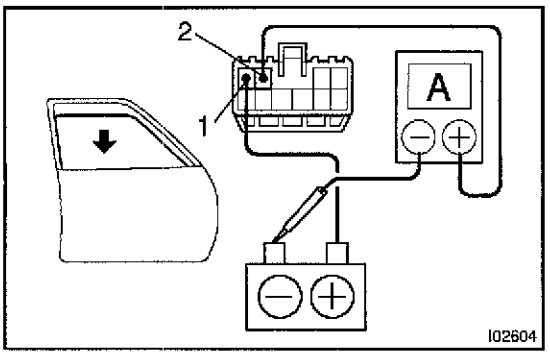
6. LHD 2 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM (Using an ammeter with a current – measuring probe)

(a) Remove the master switch with connector connected.
(b) Attach a current – measuring probe to terminal 3 of the wire harness.
(c) Turn the ignition switch ON, and set the power window switch in the down position.



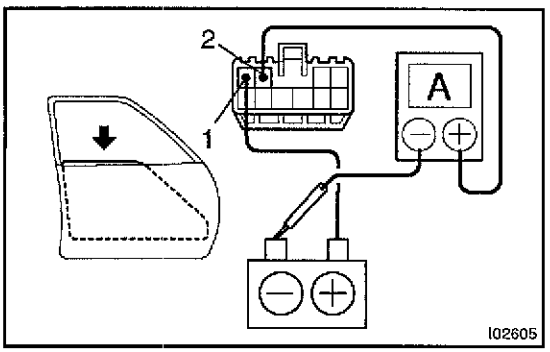
(d) As the window goes down, check that the current is approximately 7 A.
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:
The circuit breaker opens for 7 – 13 seconds after the window stops going down, so that check must be made before the circuit breaker operates.
If operation is not as specified, replace the master switch.



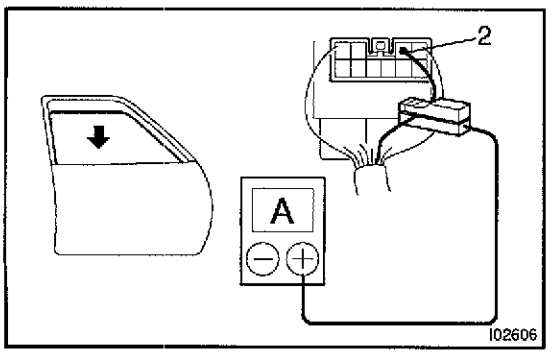
7. RHD 2 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM (Using an ammeter)

(a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the ammeter to terminal 2 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 1 on the wire harness side connector.
(d) As the window goes down, check that the current is approximately 7 A.



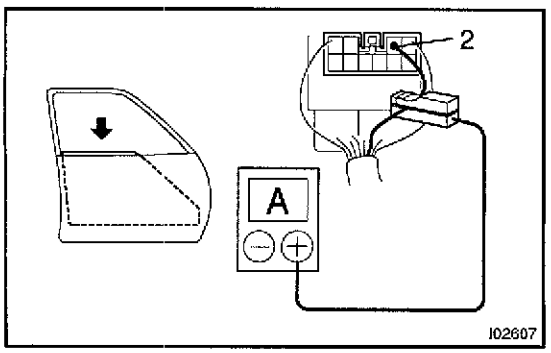
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:
The circuit breaker opens for 7 – 13 seconds after the window stops going down, so that check must be mate before the circuit breaker operates.
If operation is not as specified, replace the master switch.



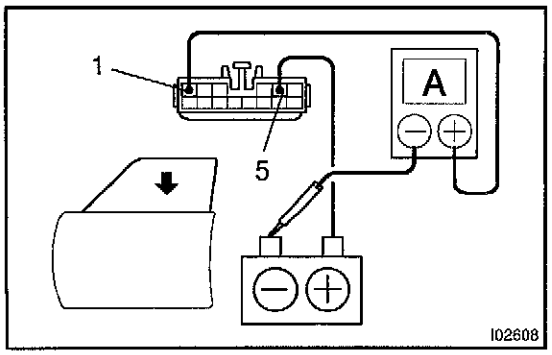
8. RHD 2 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM (Using an ammeter with a current – measuring probe)

(a) Remove the master switch with connector connected.
(b) Attach a current – measuring probe to terminal 2 of the wire harness.
(c) Turn the ignition switch ON, and set the power window switch in the down position.



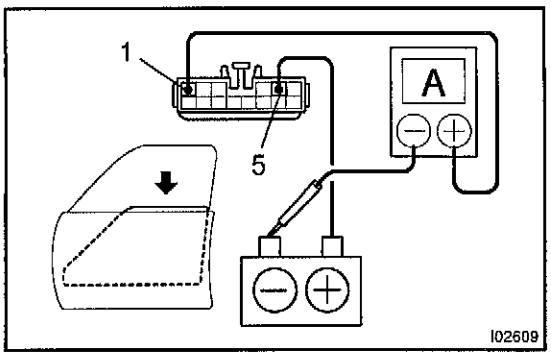
(d) As the window goes down, check that the current is approximately 7 A.
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:
The circuit breaker opens for 7 – 13 seconds after the window stops going down, so that check must be made before the circuit breaker operates.



9. LHD 4 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM
(Using an ammeter)

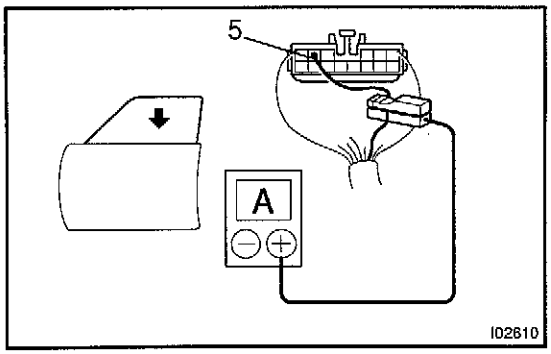
(a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the ammeter to terminal 1 on the wire harness side connector and the negative (–) lead to the negative terminal of the battery.
(c) Connect the positive (+) lead from the battery to terminal 5 on the wire harness side connector.
(d) As the window goes down, check that the current flow is approximately 7 A.



(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

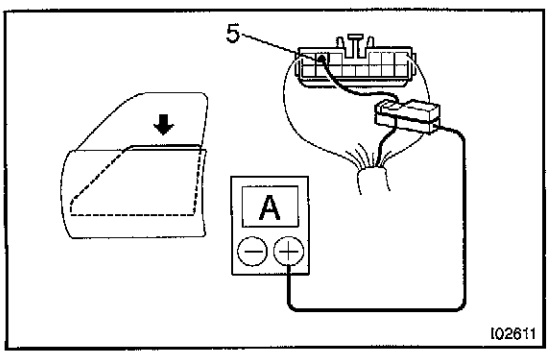
HINT: The circuit breaker opens some 4 – 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

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



10. LHD 4 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM
(Using an ammeter with a current – measuring probe)

(a) Remove the master switch with connector connected.
(b) Attach a current – measuring probe to terminal 5 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 A.

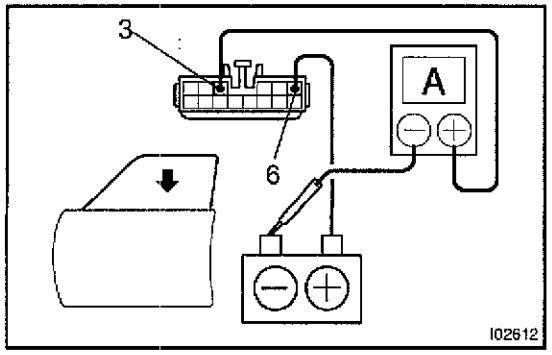


(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:

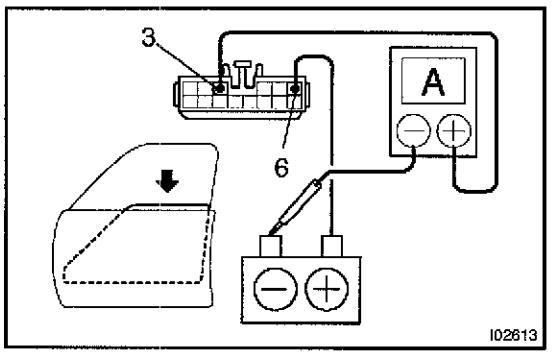
The circuit breaker opens for 4 – 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.



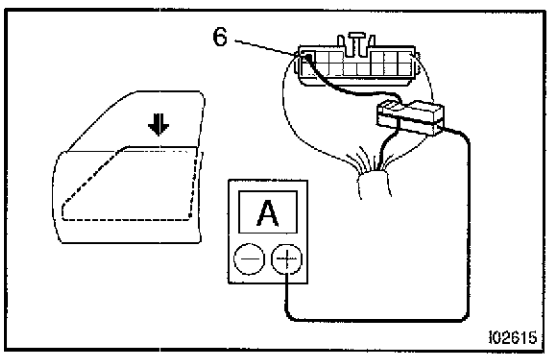
11. RHD 4 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM (Using an ammeter)

(a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the ammeter to terminal 3 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 6 on the wire harness side connector.
(d) As the window goes down, check that the current flow is approximately 7 A.



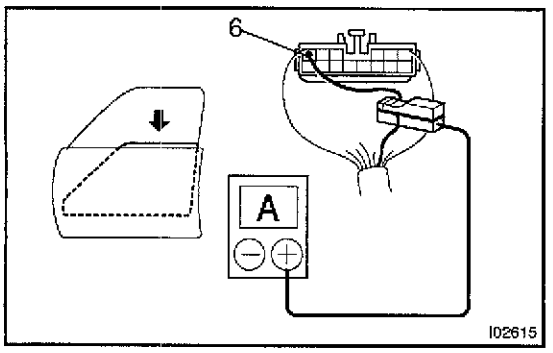
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:
The circuit breaker opens for 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.



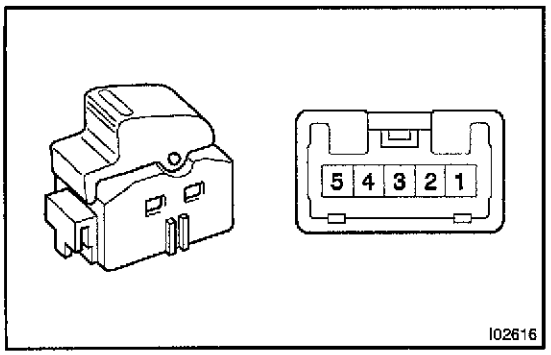
12. RHD 4 Door Models :
INSPECT ONE TOUCH POWER WINDOW SYSTEM (Using an ammeter with a current – measuring probe)

(a) Remove the master switch with connector connected.
(b) Attach a current – measuring probe to terminal 6 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 A.



(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

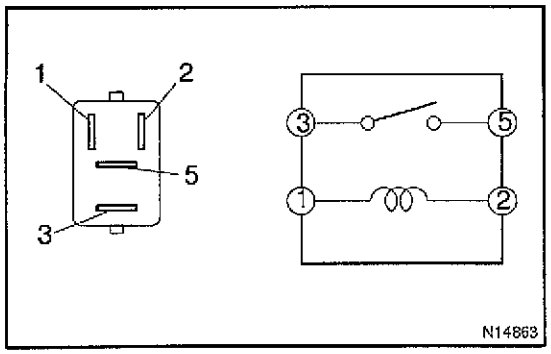
HINT:
The circuit breaker opens for 4 – 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.
If operation is as specified, replace the master switch.



13. INSPECT FRONT PASSENGER'S AND REAR POWER WINDOW SWITCH CONTINUITY

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

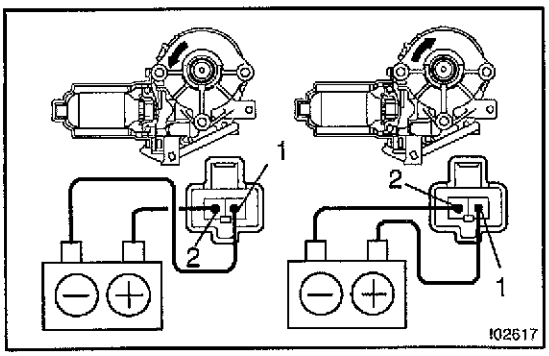
If continuity is not as specified, replace the switch.



14. 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 switch.

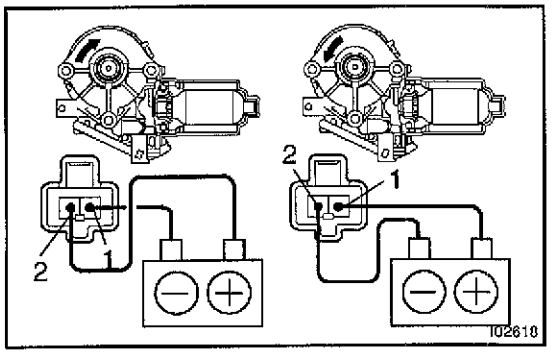


15. Front Left Side Door : INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1 and 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.

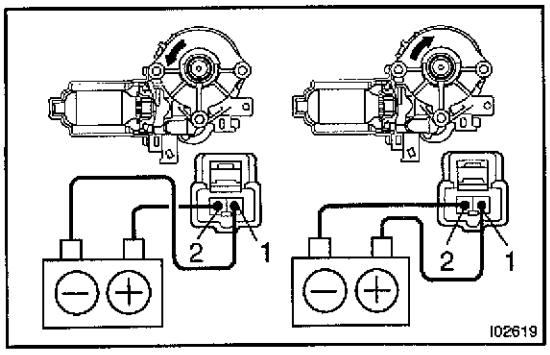


16. Front Right Side Door : INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1, and 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.

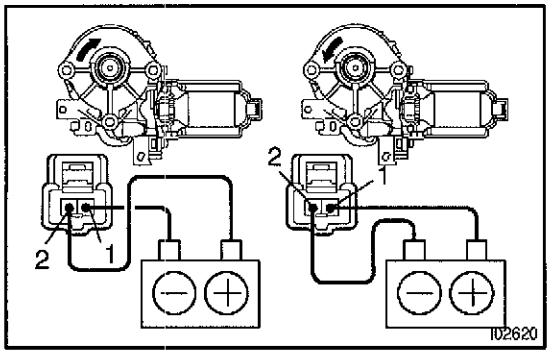


17. Rear Left Side Door : INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1, and 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.



18. Rear Right Side Door :
INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1, and 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.