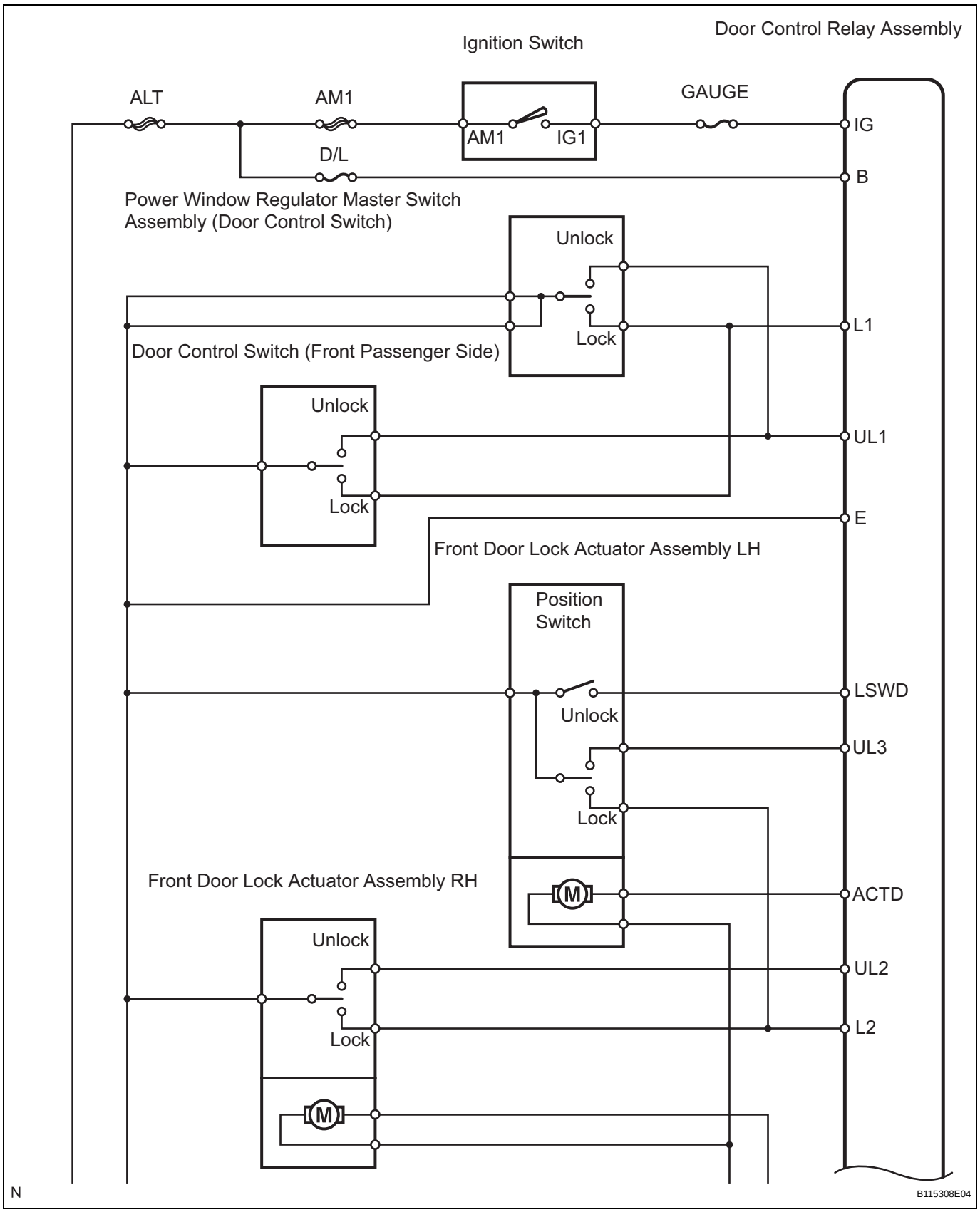
All Doors cannot be Locked / Unlocked Simultaneously

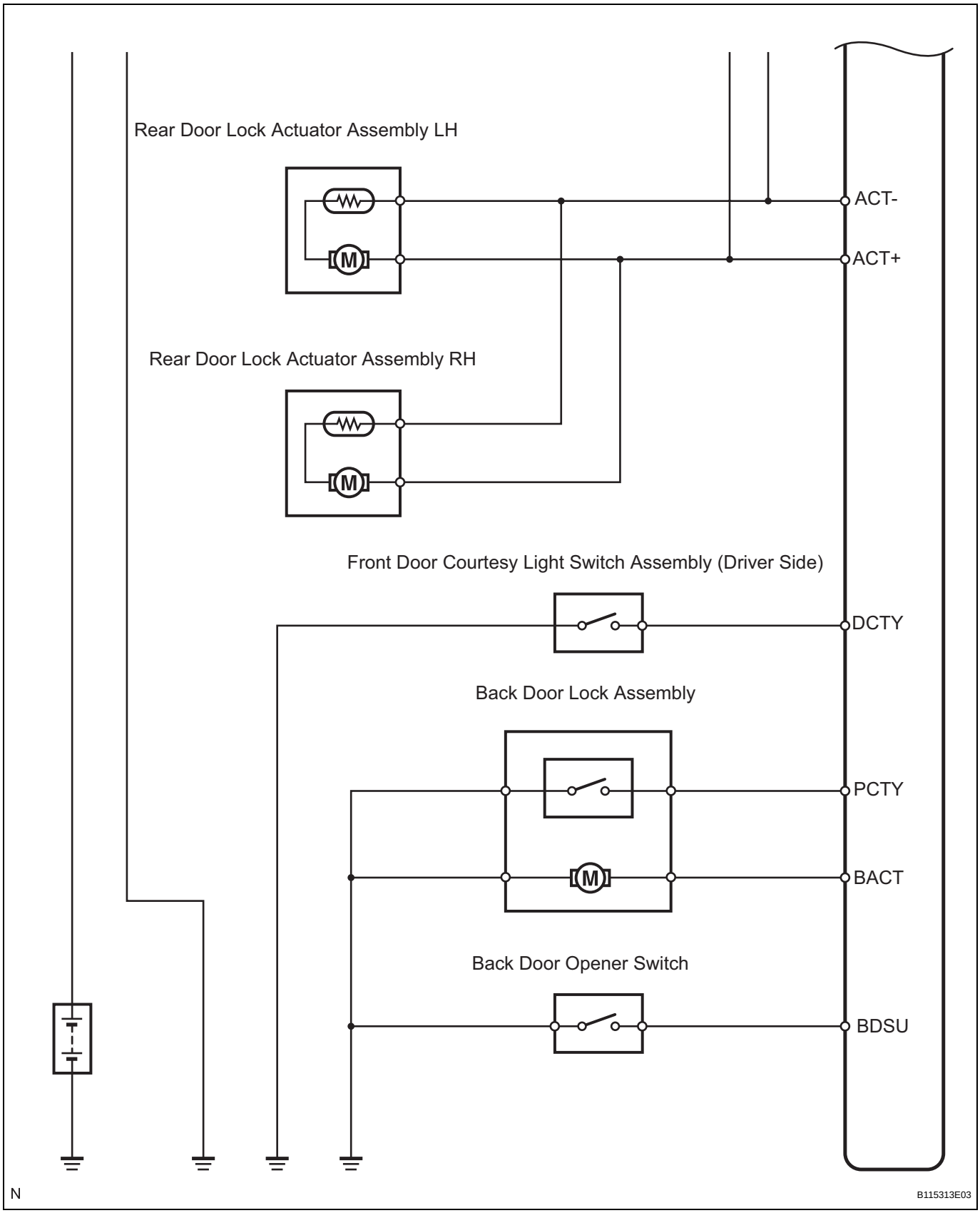
DESCRIPTION

The door control relay drives the door lock motors with switch signals from the master switch, door control switch, and driver / front passenger side door key cylinder.

WIRING DIAGRAM



DL


Rear Door Lock Actuator Assembly LH
ACT-
ACT+
Rear Door Lock Actuator Assembly RH
Front Door Courtesy Light Switch Assembly (Driver Side)
DCTY
Back Door Lock Assembly
PCTY
BACT
Back Door Opener Switch
BDSU
N
B115313E03

1	**INSPECT ALL DOOR LOCK / UNLOCK OPERATION**

(a) All doors can be locked/unlocked at once using the following:
- Door control switch on the master switch (switch operation)
- Door control switch on the front passenger side (switch operation)
- Door key cylinder linked with door lock on the driver side (key operation)
- Door key cylinder linked with door lock on the front passenger side (key operation)

(b) Proceed to the next step according to the symptom if all the doors cannot be locked/unlocked at once.

Symptom	Proceed to
All doors cannot be locked / unlocked at once using door control switch on master switch or door key cylinder on driver side	A
All doors cannot be locked / unlocked at once using door control switch on front passenger side or door key cylinder on front passenger side	B
All items listed above are malfunctioning	C

B → **Go to step 3**

C → **Go to step 24**

A

2	**CHECK DRIVER SIDE SWITCH AND KEY OPERATION**

(a) Proceed to the next step according to the symptom listed in the table below.

Symptom	Proceed to
All doors cannot be locked / unlocked at once using door control switch on master switch.	A
All doors cannot be locked / unlocked at once using door key cylinder on driver side.	B
All doors cannot be locked / unlocked at once using either door control switch on master switch or door key cylinder on driver side.	C

A → **Go to step 4**

B → **Go to step 8**

C → **Go to step 14**

3	**CHECK FRONT PASSENGER SWITCH AND KEY**

(a) Proceed to the next step according to the symptom listed in the table below.

Symptom	Proceed to
All doors cannot be locked / unlocked at once using door control switch on front passenger side.	A
All doors cannot be locked / unlocked at once using door key cylinder on front passenger side.	B
All doors cannot be locked / unlocked at once using either door control switch or door key cylinder on front passenger side.	C

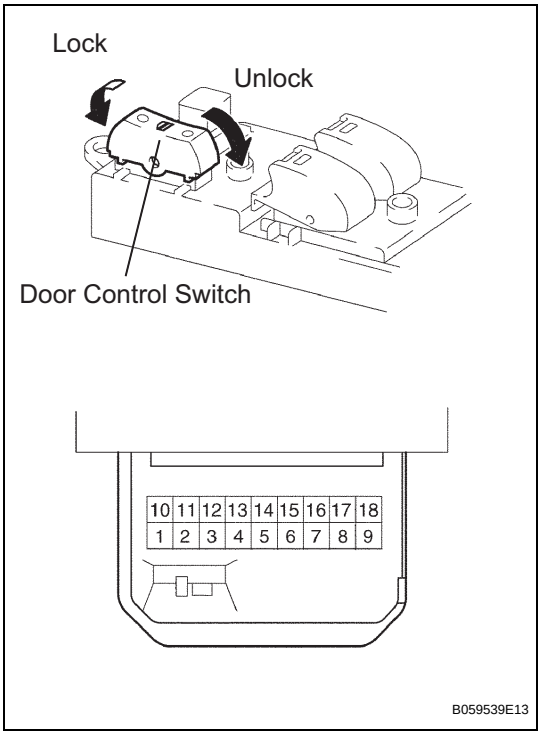
A → **Go to step 6**

B → **Go to step 11**

C → **Go to step 19**

DL

4 INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (DOOR CONTROL SWITCH)



(a) Remove the master switch.
(b) Measure the resistance of the door control switch.

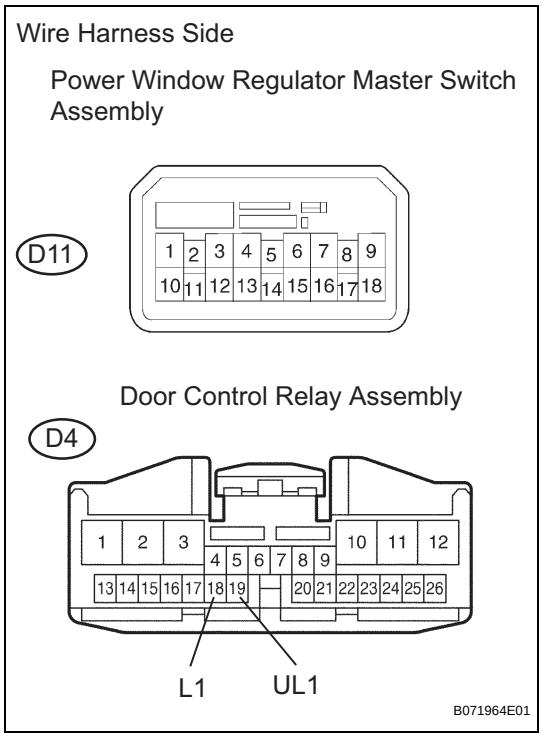
Standard resistance

Tester Connection	Switch Condition	Specified Condition
1 - 5, 3 - 5	Lock	Below 1 Ω
1 - 5, 3 - 5 1 - 8, 3 - 8	OFF	10 kΩ or higher
1 - 8, 3 - 8	Unlock	Below 1 Ω

NG → **REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY**

OK

5 CHECK WIRE HARNESS (MASTER SWITCH - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D11 switch connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

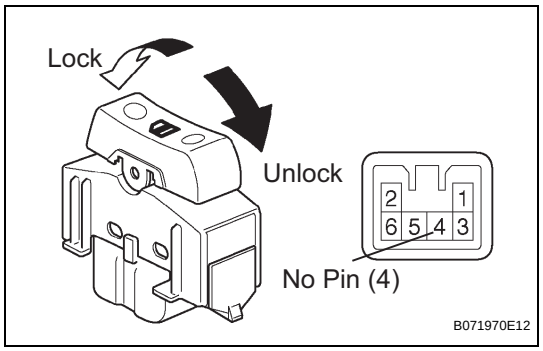
Tester Connection	Specified Condition
D11-5 - D4-18 (L1)	Below 1 Ω
D11-8 - D4-19 (UL1)	Below 1 Ω
D11-1 - Body ground	Below 1 Ω
D11-3 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

6 INSPECT DOOR CONTROL SWITCH ASSEMBLY



(a) Remove the door control switch.
(b) Measure the resistance of the switch.

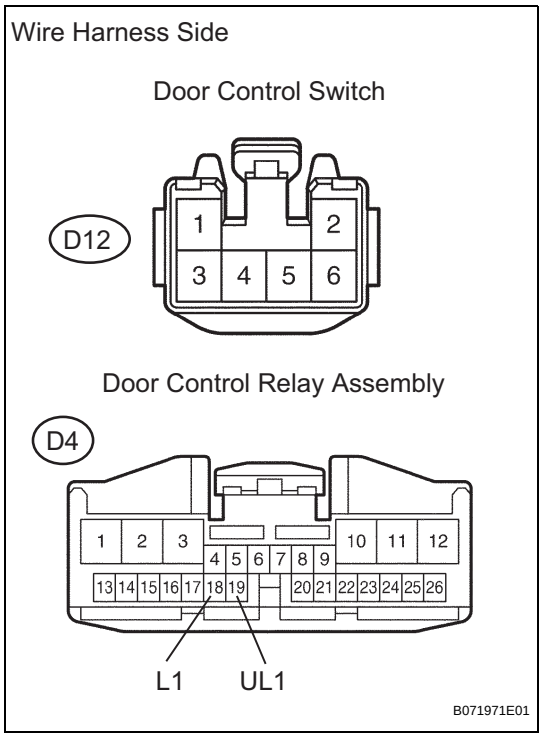
Standard resistance

Tester Connection	Switch Condition	Specified Condition
3 - 6	Lock	Below 1 Ω
3 - 5, 3 - 6	OFF	10 kΩor higher
3 - 5	Unlock	Below 1 Ω

NG → **REPLACE DOOR CONTROL SWITCH ASSEMBLY**

OK

7	CHECK WIRE HARNESS (DOOR CONTROL SWITCH - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D12 switch connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

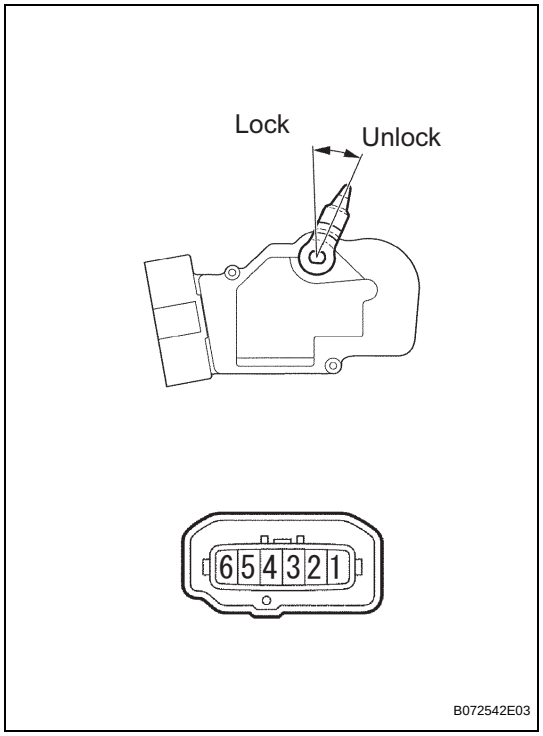
Tester Connection	Specified Condition
D12-5 - D4-19 (UL1)	Below 1 Ω
D12-6 - D4-18 (L1)	Below 1 Ω
D12-3 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

8 INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY LH (DOOR LOCK MOTOR)



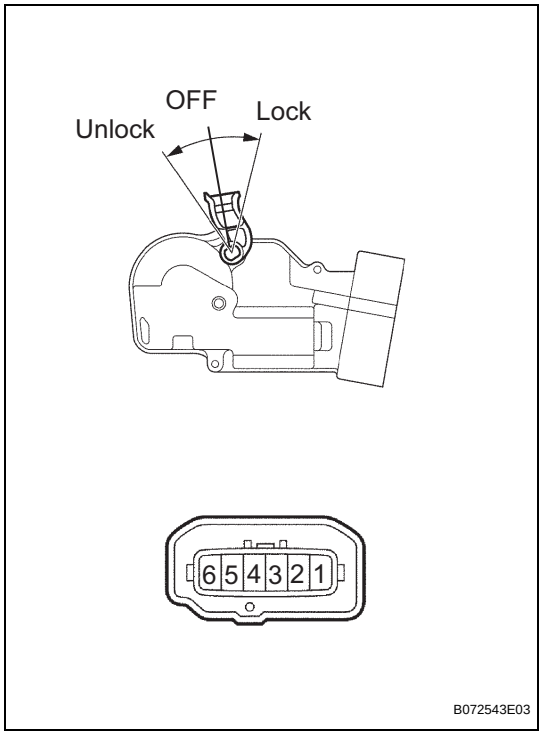
(a) Apply battery voltage to the actuator terminals and check operation of the door lock motor.
OK

Measurement Condition	Specified Condition
Battery positive (+) →Terminal 2 Battery negative (-) →Terminal 1	Lock
Battery positive (+) →Terminal 1 Battery negative (-) →Terminal 2	Unlock

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY LH**

OK

9 INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY LH (DOOR LOCK AND UNLOCK SWITCH, POSITION SWITCH)



(a) Measure the resistance of the door lock and unlock switch and position switch.
Standard resistance:
Door lock and unlock switch

Tester Connection	Switch Condition	Specified Condition
3 - 5	Lock	Below 1 Ω
3 - 5, 3 - 6	OFF	10 kΩ or higher
3 - 6	Unlock	Below 1 Ω

Position switch

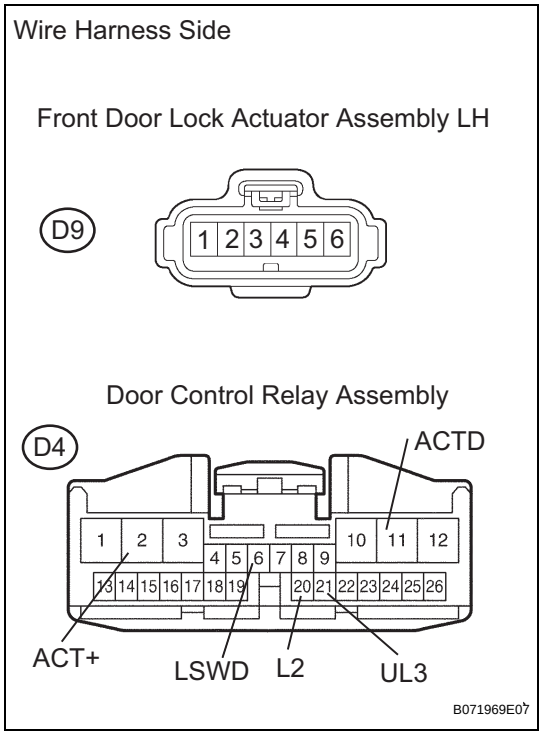
Tester Connection	Switch Condition	Specified Condition
3 - 4	Lock	10 kΩ or higher
3 - 4	Unlock	Below 1 Ω

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY LH**

DL

OK

10	CHECK WIRE HARNESS (ACTUATOR - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D9 actuator connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

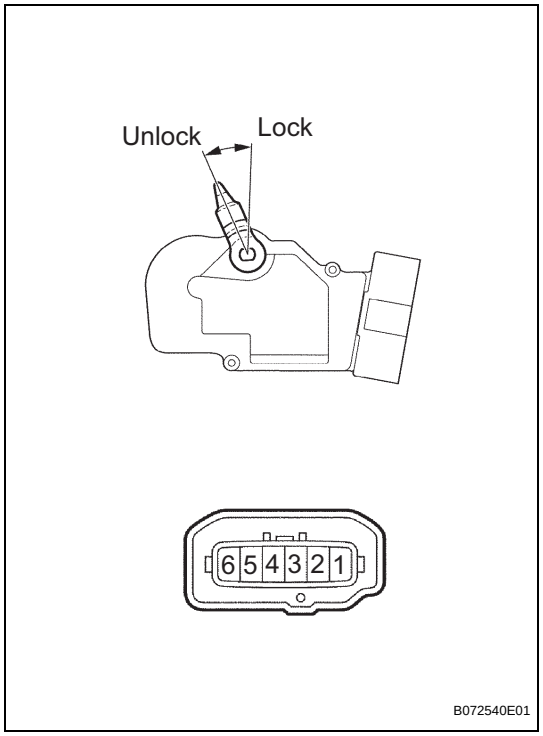
Tester Connection	Specified Condition
D9-1 - D4-11 (ACTD)	Below 1 Ω
D9-2 - D4-2 (ACT+)	Below 1 Ω
D9-4 - D4-6 (LSWD)	Below 1 Ω
D9-5 - D4-20 (L2)	Below 1 Ω
D9-6 - D4-21 (UL3)	Below 1 Ω
D9-3 - Body ground	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

11 INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY RH (DOOR LOCK MOTOR)



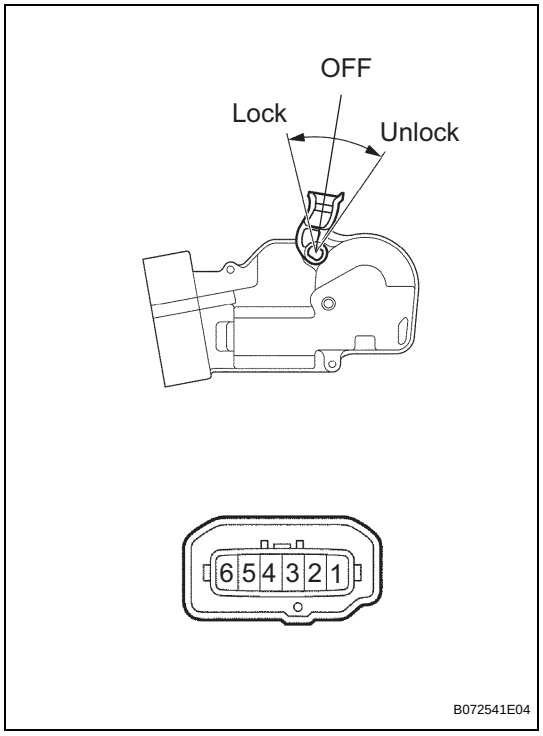
(a) Apply battery voltage to the actuator terminals and check operation of the door lock motor.
OK

Measurement Condition	Specified Condition
Battery positive (+) →Terminal 6 Battery negative (-) →Terminal 5	Lock
Battery positive (+) →Terminal 5 Battery negative (-) →Terminal 6	Unlock

NG → **INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY RH**

OK

12 INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY RH (DOOR LOCK AND UNLOCK SWITCH)



(a) Measure the resistance of the door lock and unlock switch.
Standard resistance

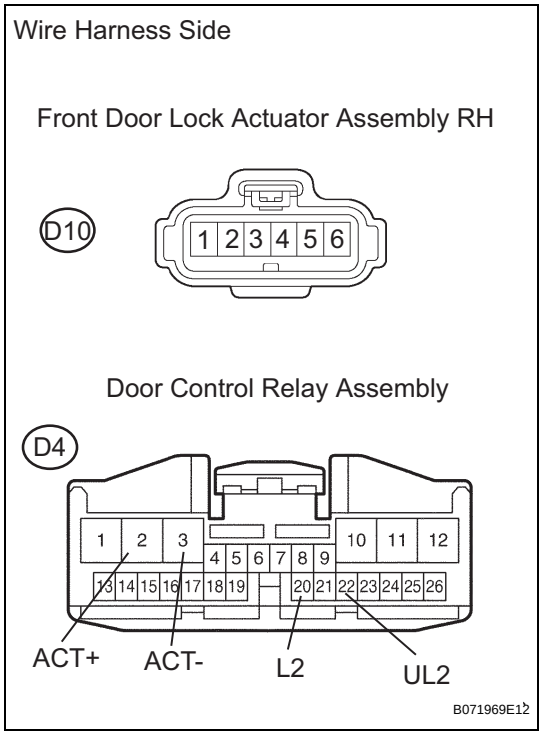
Tester Connection	Switch Condition	Specified Condition
2 - 4	Lock	Below 1 Ω
1 - 4, 2 - 4	OFF	10 kΩ or higher
1 - 4	Unlock	Below 1 Ω

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY RH**

DL

OK

13	CHECK WIRE HARNESS (ACTUATOR - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D10 actuator connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

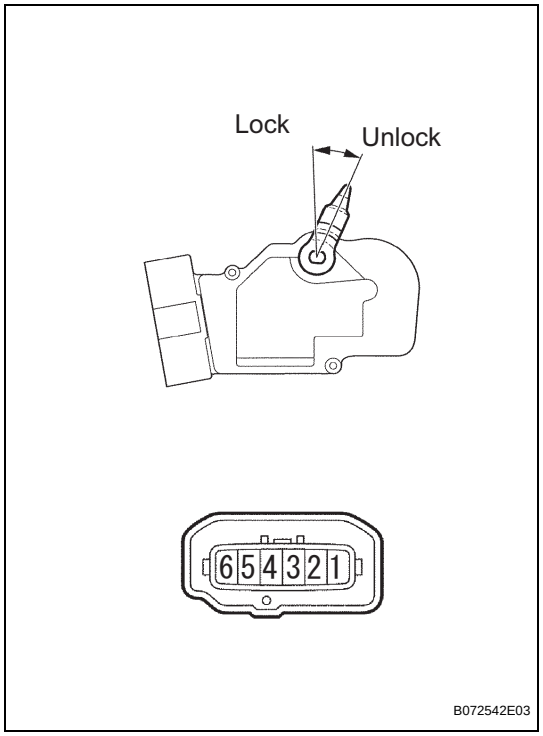
Tester Connection	Specified Condition
D10-1 - D4-22 (UL2)	Below 1 Ω
D10-2 - D4-20 (L2)	Below 1 Ω
D10-5 - D4-3 (ACT-)	Below 1 Ω
D10-6 - D4-2 (ACT+)	Below 1 Ω
D10-4 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

14 INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY LH (DOOR LOCK MOTOR)



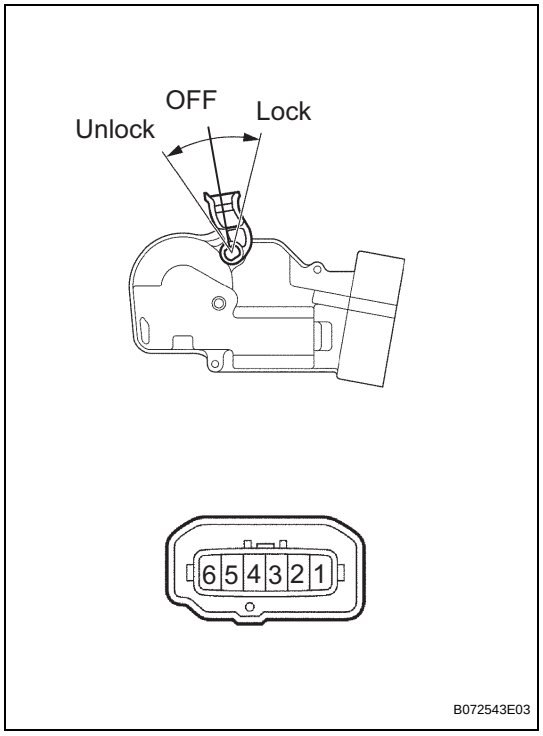
(a) Apply battery voltage to the actuator terminals and check operation of the door lock motor.
OK

Measurement Condition	Specified Condition
Battery positive (+) →Terminal 2 Battery negative (-) →Terminal 1	Lock
Battery positive (+) →Terminal 1 Battery negative (-) →Terminal 2	Unlock

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY LH**

OK

15 INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY LH (DOOR LOCK AND UNLOCK SWITCH, POSITION SWITCH)



(a) Measure the resistance of the door lock and unlock switch and position switch.
Standard resistance:
Door lock and unlock switch

Tester Connection	Switch Condition	Specified Condition
3 - 5	Lock	Below 1 Ω
3 - 5, 3 - 6	OFF	10 kΩ or higher
3 - 6	Unlock	Below 1 Ω

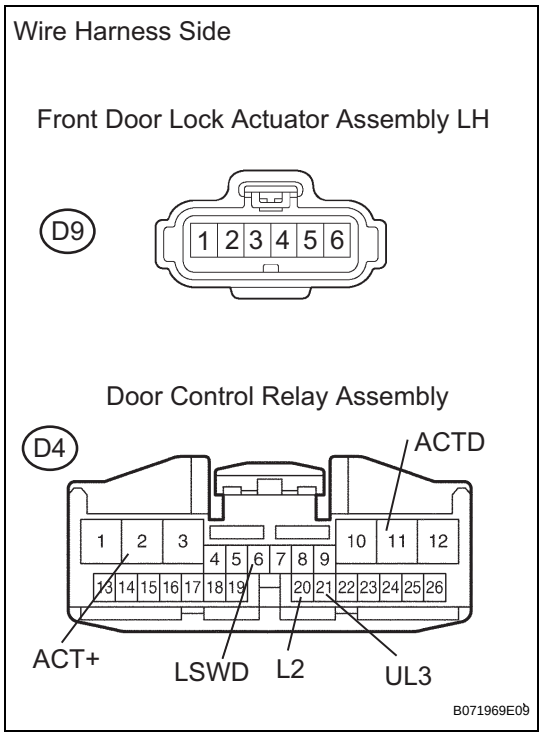
Position switch

Tester Connection	Switch Condition	Specified Condition
3 - 4	Lock	10 kΩ or higher
3 - 4	Unlock	Below 1 Ω

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY LH**

OK

16 CHECK WIRE HARNESS (ACTUATOR - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D9 actuator connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

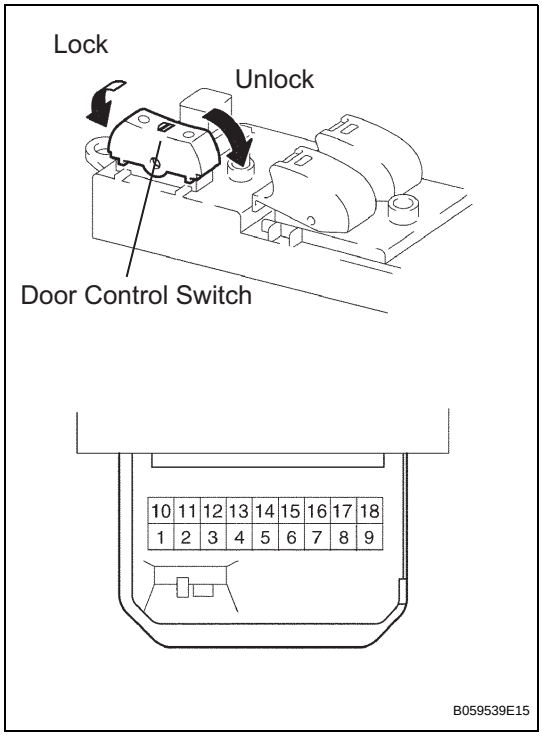
Standard resistance

Tester Connection	Specified Condition
D9-1 - D4-11 (ACTD)	Below 1 Ω
D9-2 - D4-2 (ACT+)	Below 1 Ω
D9-4 - D4-6 (LSWD)	Below 1 Ω
D9-5 - D4-20 (L2)	Below 1 Ω
D9-6 - D4-21 (UL3)	Below 1 Ω
D9-3 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

17 INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY



(a) Remove the master switch.
(b) Measure the resistance of the door control switch.

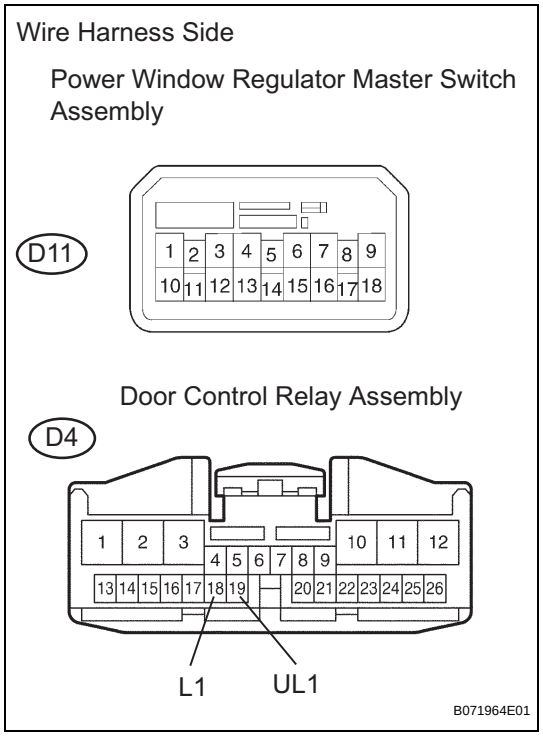
Standard resistance

Tester Connection	Switch Condition	Specified Condition
1 - 5, 3 - 5	Lock	Below 1 Ω
1 - 5, 3 - 5 1 - 8, 3 - 8	OFF	10 kΩ or higher
1 - 8, 3 - 8	Unlock	Below 1 Ω

NG → **REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY**

OK

18	CHECK WIRE HARNESS (MASTER SWITCH - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D11 switch connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
D11-5 - D4-18 (L1)	Below 1 Ω
D11-8 - D4-19 (UL1)	Below 1 Ω
D11-1 - Body ground	Below 1 Ω
D11-3 - Body ground	Below 1 Ω

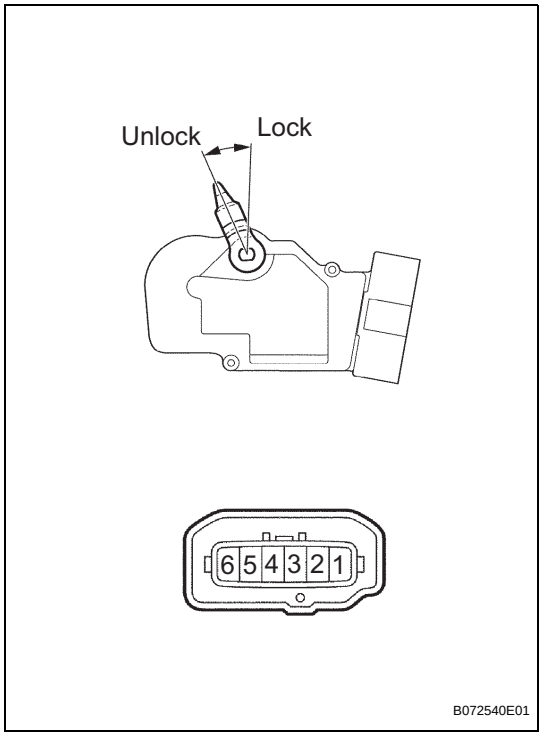
DL

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

19	INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY RH (DOOR LOCK MOTOR)



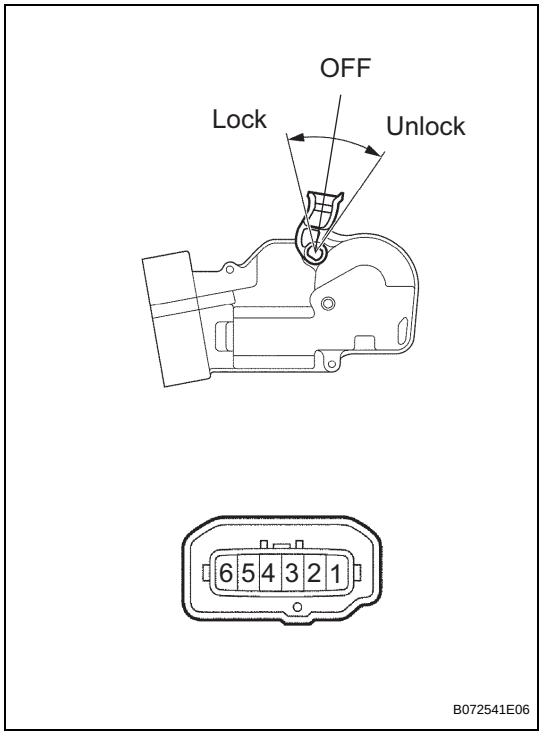
(a) Apply battery voltage to the actuator terminals and check operation of the door lock motor.
OK

Measurement Condition	Specified Condition
Battery positive (+) →Terminal 6 Battery negative (-) →Terminal 5	Lock
Battery positive (+) →Terminal 5 Battery negative (-) →Terminal 6	Unlock

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY RH**

OK

20	INSPECT FRONT DOOR LOCK ACTUATOR ASSEMBLY RH (DOOR LOCK AND UNLOCK SWITCH)



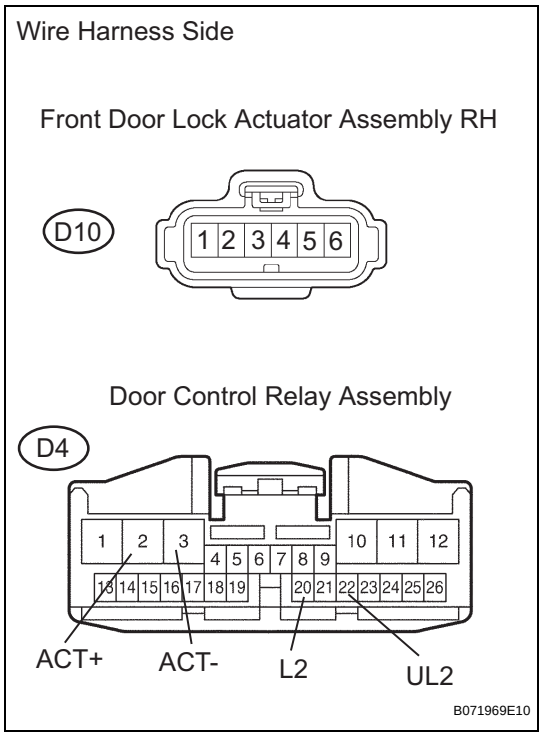
(a) Measure the resistance of the door lock and unlock switch.
Standard resistance

Tester Connection	Door Lock Condition	Specified Condition
2 - 4	Lock	Below 1 Ω
1 - 4, 2 - 4	OFF	10 kΩ or higher
1 - 4	Unlock	Below 1 Ω

NG → **REPLACE FRONT DOOR LOCK ACTUATOR ASSEMBLY RH**

OK

21 CHECK WIRE HARNESS (ACTUATOR - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D10 actuator connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

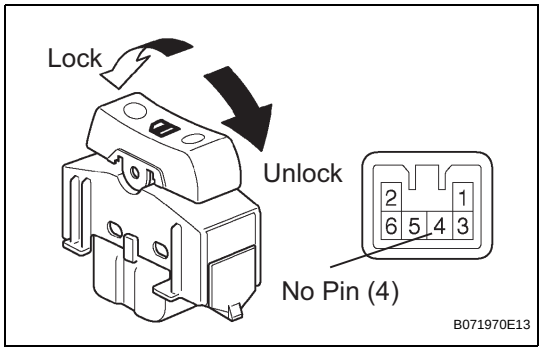
Standard resistance

Tester Connection	Specified Condition
D10-1 - D4-22 (UL2)	Below 1 Ω
D10-2 - D4-20 (L2)	Below 1 Ω
D10-5 - D4-3 (ACT-)	Below 1 Ω
D10-6 - D4-2 (ACT+)	Below 1 Ω
D10-4 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

22 INSPECT DOOR CONTROL SWITCH ASSEMBLY



(a) Remove the door control switch.
(b) Measure the resistance of the switch.

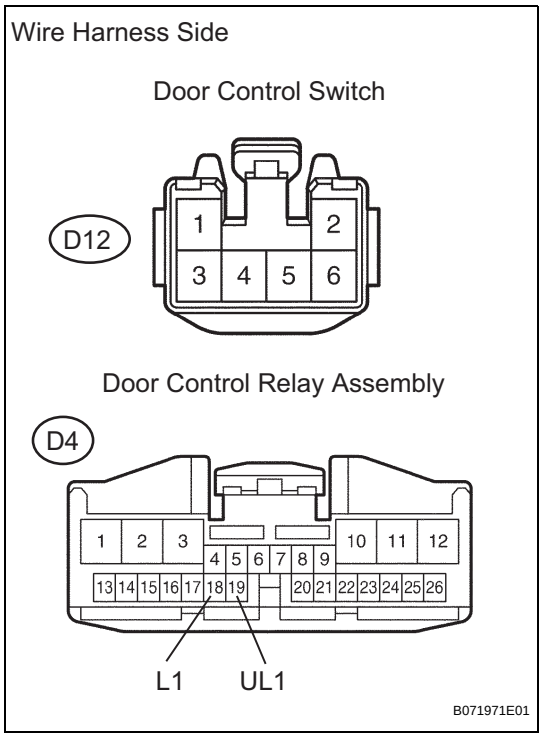
Standard resistance

Tester Connection	Switch Condition	Specified Condition
3 - 6	Lock	Below 1 Ω
3 - 5, 3 - 6	OFF	10 kΩ or higher
3 - 5	Unlock	Below 1 Ω

NG → **REPLACE DOOR CONTROL SWITCH ASSEMBLY**

OK

23	CHECK WIRE HARNESS (DOOR CONTROL SWITCH - DOOR CONTROL RELAY AND BODY GROUND)



(a) Disconnect the D12 switch connector.
(b) Disconnect the D4 relay connector.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
D12-5 - D4-19 (UL1)	Below 1 Ω
D12-6 - D4-18 (L1)	Below 1 Ω
D12-3 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

24	INSPECT FUSE (D/L, GAUGE)

(a) Remove the D/L and GAUGE fuses from the instrument panel junction block.
(b) Measure the resistance of the switch.

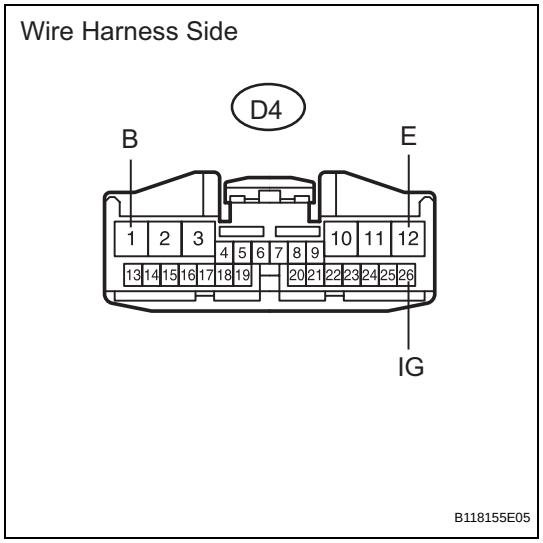
Standard resistance:

Below 1 Ω

NG → **REPLACE FUSE**

OK

25 CHECK WIRE HARNESS (DOOR CONTROL RELAY - BODY GROUND)



(a) Disconnect the D4 relay connector.
(b) Check the voltage of the wire harness side connector.
Standard voltage

Tester Connection	Condition	Specified Condition
D4-1 (B) - Body ground	Always	10 to 14 V
D4-26 (IG) - Body ground	Ignition switch ON	10 to 14 V

(c) Check the resistance of the wire harness side connector.
Standard resistance

Tester Connection	Specified Condition
D4-12 (E) - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE DOOR CONTROL RELAY ASSEMBLY

DL