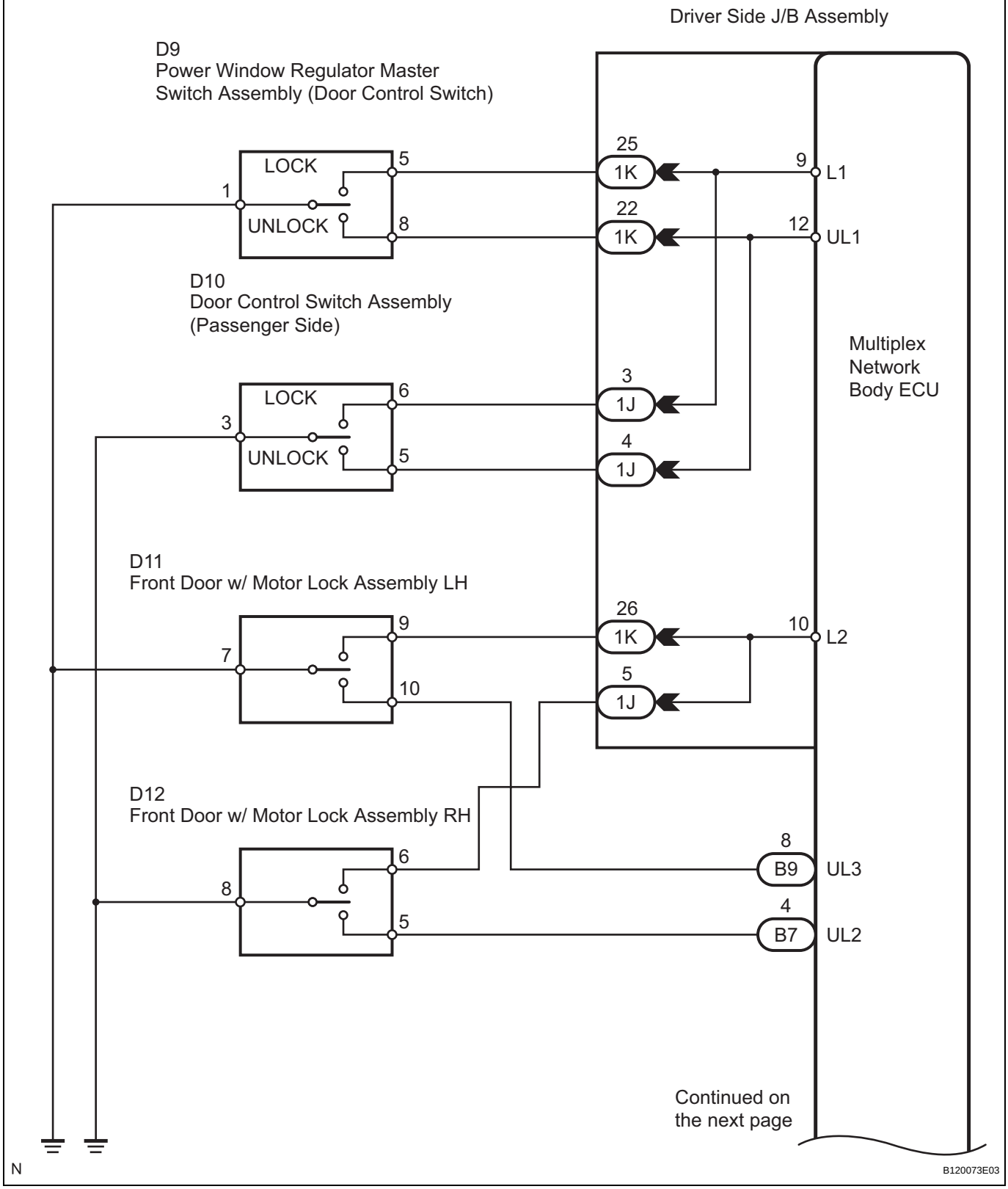
Only Back Door cannot be Opened

DESCRIPTION

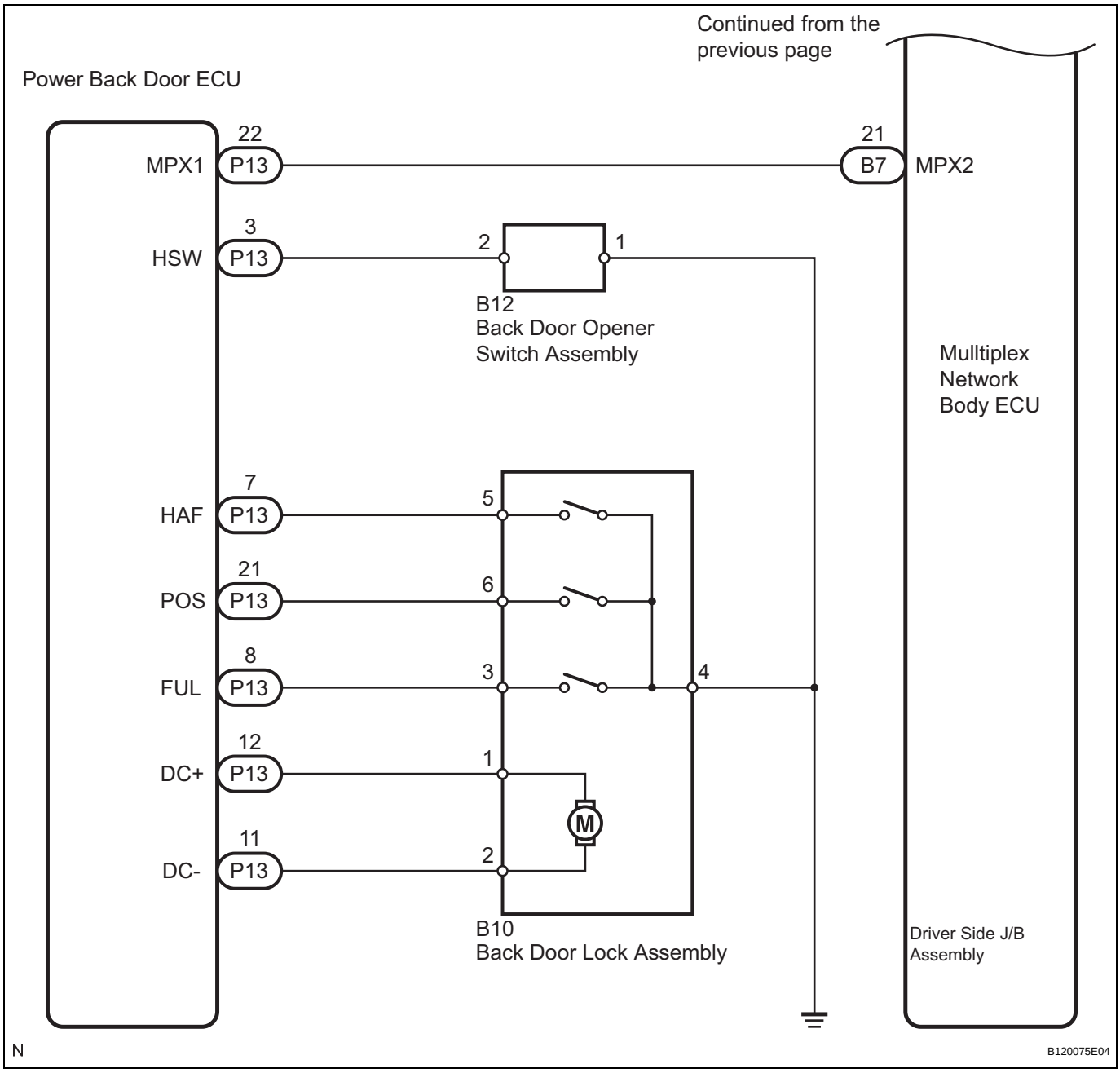
With power back door: The signal for manual locking/unlocking operation of the driver/passenger side door and the signal for locking/unlocking operation interlocked with the driver side door key cylinder are sent to the back door ECU from the body ECU using the MPX line. In response to these signals, the back door ECU causes the back door lock to be locked/unlocked. The ON signal of the back door opener switch, which is output when the switch is pressed, is directly sent to the back door ECU. In response to this signal, the back door ECU causes the back door lock to be open.
Without power back door: The signal for manual locking/unlocking operation of the driver/passenger side door and the signal for locking/unlocking operation interlocked with the driver side door key cylinder are sent to the body ECU. The ON signal of the back door opener switch, which is output when the switch is pressed, is sent to body ECU.

WIRING DIAGRAM

w/ Power Back Door

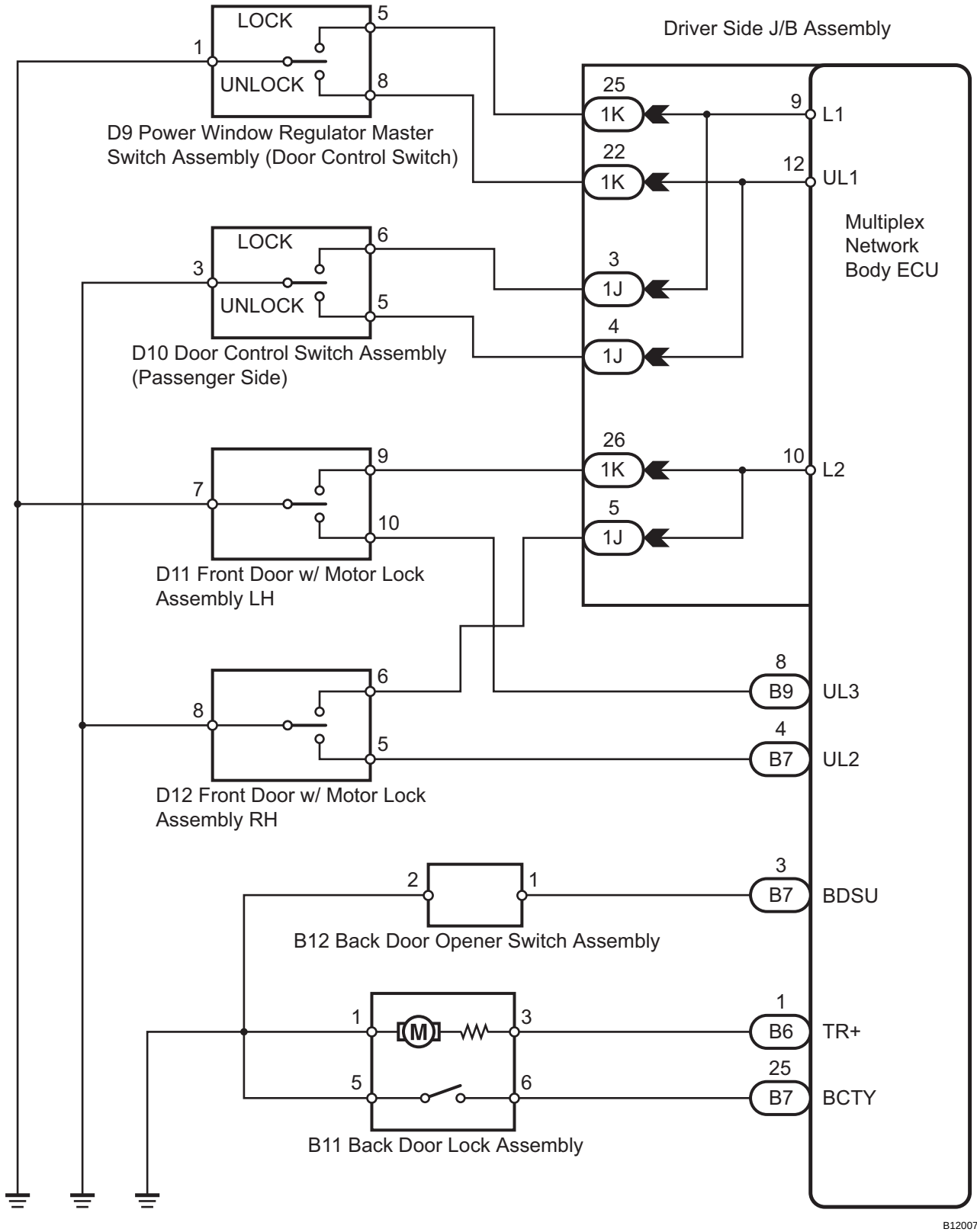


DL


Continued from the previous page
Power Back Door ECU
22
MPX1
P13
21
B7
MPX2
3
HSW
P13
2
1
B12
Back Door Opener Switch Assembly
Mulltiplex Network Body ECU
7
HAF
P13
5
21
POS
P13
6
8
FUL
P13
3
4
12
DC+
P13
1
M
11
DC-
P13
2
B10
Back Door Lock Assembly
Driver Side J/B Assembly
N
B120075E04

DL

w/o Power Back Door



DL

INSPECTION PROCEDURE

1	CHECK POWER BACK DOOR

(a) Choose the system to be inspected.

System	Go to step
with power back door system	A
without power back door system	B

B → **Go to step 9**

A

2	CHECK DTC

(a) Use the intelligent tester to check for normal function of the multiplex communication system.
   (1) (ECU unconnected, communication line malfunctioning) Without DTC B1214, B1215 or B1287 outputs, proceed to A.
   (2) (ECU unconnected, communication line malfunctioning) With DTC B1214, B1215 or B1287 outputs, proceed to B

B → **GO TO MULTIPLEX COMMUNICATION SYSTEM**

A

3	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Select the ACTIVE TEST and then check that the power door lock operates.
HINT:
During the ACTIVE TEST, the intelligent tester sends a signal to the body ECU to drive all the power door lock motors. If all the power door locks operate, the power door lock motors and the harness between the power door lock motors and body ECU are considered to be functioning normally.

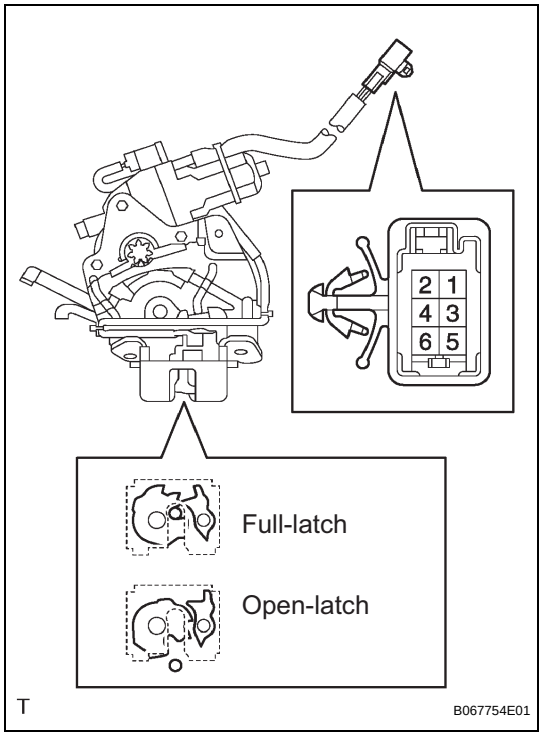
BODY (Multiplex network body ECU)

Item	Test Details	Diagnostic Note
DOOR LOCK	Operate the door lock motor for all doors OFF/LOCK/UNLOCK	-

OK → **REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU)**

NG

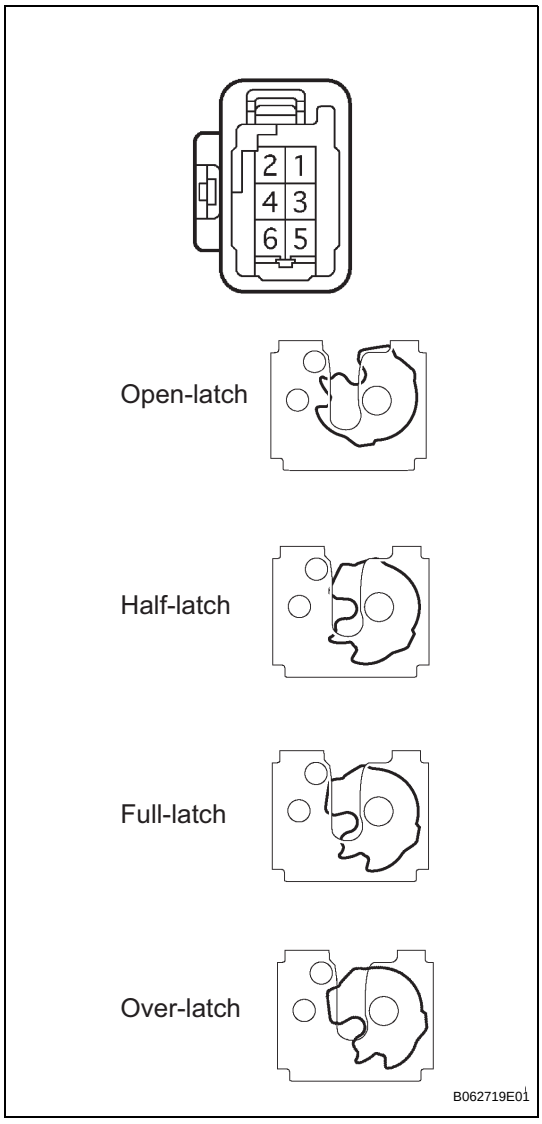
4	**INSPECT BACK DOOR LOCK ASSEMBLY**



(a) Check operation of the door lock.
  (1) Using a screwdriver, push the latch in order to put the back door lock in the locked condition (full-latch position).
  (2) Connect the battery positive (+) lead to terminal 1 and the battery negative (-) lead to terminal 2. Then, check operation of the latch.
  Standard:
  The latch turns to the open-latch position
  (3) Inspect motor operation when battery voltage is applied to the normals.
  Standard

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Clockwise (Motor in normal rotation)
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Counterclockwise (Motor in reverse rotation)

DL



(b) Check the back door courtesy light switch resistance.
(1) Check the resistance between the terminals of the courtesy switch.
Standard resistance

Terminal No.	Door Lock Latch Position	Specified Condition
3 - 4	Open-latch position, Half- latch position	Below 1 Ω
	Full-latch position, Over- latch position	10 kΩ or higher

(c) Check the back door latch switch resistance.
(1) Check the resistance between the terminals of the courtesy switch.
Standard resistance

Terminal No.	Door Lock Latch Position	Specified Condition
4 - 5	Open-latch position, Over-latch position	Below 1 Ω
	Half-latch position, Full-latch position	10 kΩ or higher

(d) Check the position switch resistance.
(1) Connect the battery positive (+) lead to connector terminal 1 and the negative (-) lead to connector terminal 2.
(2) Check the resistance between the terminals of the courtesy switch.
Standard resistance

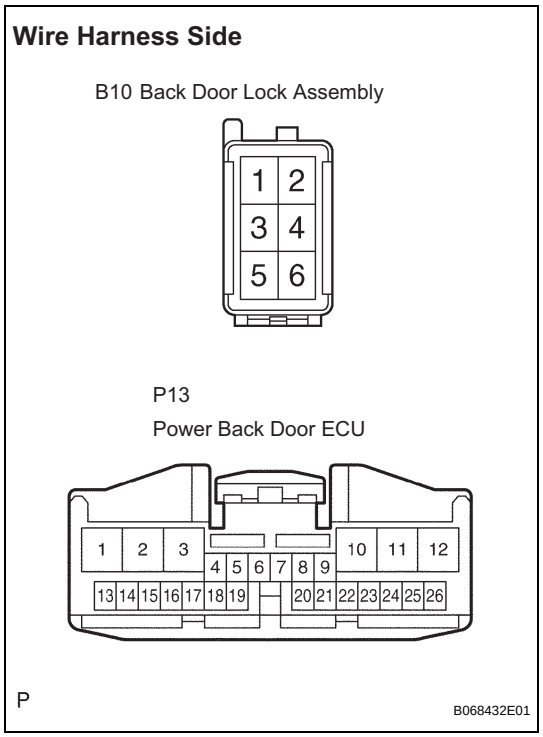
Terminal No.	Door Lock Latch Position	Specified Condition
4 - 6	Any position other than motor stop position (Motor in operation)	10 kΩ or higher
	Motor stop position (Gear in original position)	Below 1 Ω

NG → **REPLACE BACK DOOR LOCK ASSEMBLY**

OK

DL

5	CHECK HARNESS AND CONNECTOR (BACK DOOR LOCK ASSEMBLY - POWER BACK DOOR ECU)



(a) Disconnect the B10 lock and P13 ECU connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Symbol (Terminal No.)	Specified Condition
(B10-5) - HAF (P13-7)	Below 1 Ω
(B10-6) - POS (P13-21)	Below 1 Ω
(B10-3) - FUL (P13-8)	Below 1 Ω
(B10-1) - DC+ (P13-12)	Below 1 Ω
(B10-2) - DC- (P13-11)	Below 1 Ω

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

OK

6	READ VALUE OF DATA LIST

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the back door opener switch.

BODY (Multiplex network body ECU)

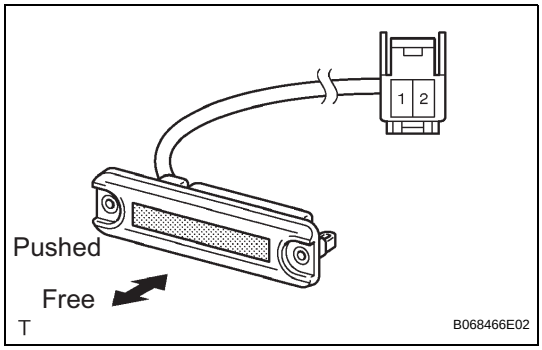
Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
B DOR OPEN SW	Back door opener switch signal/ON or OFF	ON: Back door opener switch is pushed OFF: Back door opener switch is not pushed	-

OK → **REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU)**

NG

DL

7	INSPECT BACK DOOR OPENER SWITCH ASSEMBLY



(a) Remove the back door opener switch.
(b) Measure the resistance according to the value(s) in the table below.

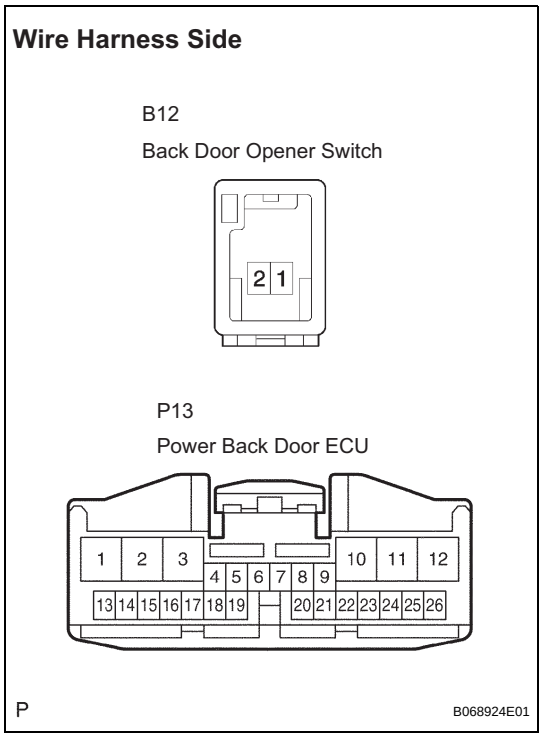
Standard resistance

Terminal No.	Condition	Specified Condition
1 - 2	Free	10 kΩ or higher
	Pushed	Below 1 Ω

NG → **REPLACE BACK DOOR OPENER SWITCH ASSEMBLY**

OK

8	CHECK HARNESS AND CONNECTOR (BACK DOOR OPENER SWITCH - POWER BACK DOOR ECU - BODY GROUND)



(a) Disconnect the B12 switch and P13 ECU connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Symbol (Terminal No.)	Specified Condition
(B12-1) - HSW (P13-3)	Below 1 Ω
(B12-2) - Body ground	Below 1 Ω

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

OK

REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU)

9	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Select the ACTIVE TEST and then check that the power door lock operates.

HINT:
During the ACTIVE TEST, the intelligent tester sends a signal to the body ECU to drive all the power door lock motors. If all the power door locks operate, the power door lock motors and the harness between the power door lock motors and body ECU are considered to be functioning normally.

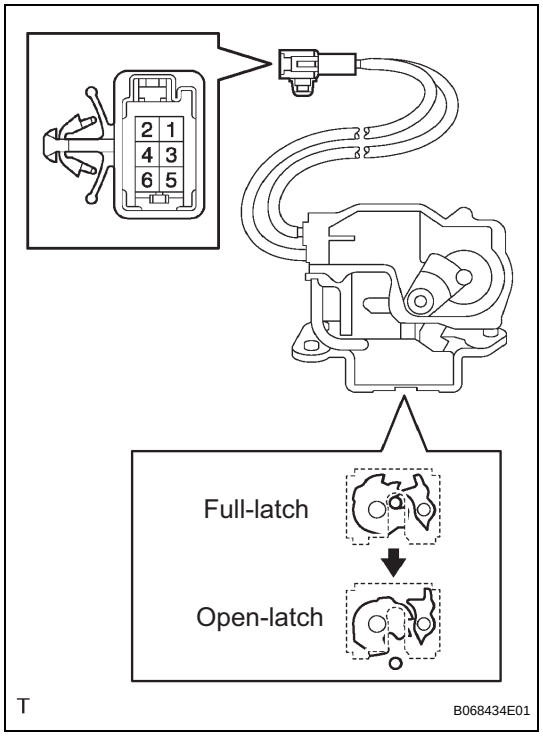
BODY (Multiplex network body ECU)

Item	Test Details	Diagnostic Note
DOOR LOCK	Operate the door lock motor for all doors OFF/LOCK/ UNLOCK	-

OK → **REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU)**

NG

10 INSPECT BACK DOOR LOCK ASSEMBLY



(a) Check operation of the door lock.
(1) Using a screwdriver, push the latch in order to put the back door lock in the locked condition (full-latch position).
(2) Connect the battery positive (+) lead to terminal 3 and the battery negative (-) lead to terminal 1. Then, check operation of the latch.
Standard:
The latch turns to the open-latch position
(3) Inspect motor operation when battery voltage is applied to the normals.
Standard

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 3 Battery negative (-) → Terminal 1	**Clockwise (Motor in normal rotation)**

(b) Inspect the resistance of the courtesy switch.
Standard resistance

Terminal No.	Door Lock Latch Position	Specified Condition
5-6	**Open-latch position**	**Below 1 Ω**
5-6	**Full-latch position**	**10 kΩ or higher**

NG → **REPLACE BACK DOOR LOCK ASSEMBLY**

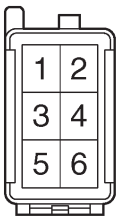
OK

DL

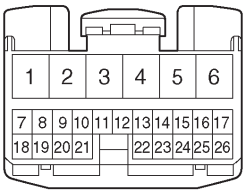
11	CHECK HARNESS AND CONNECTOR (BACK DOOR LOCK ASSEMBLY - DRIVER SIDE J/B)

Wire Harness Side

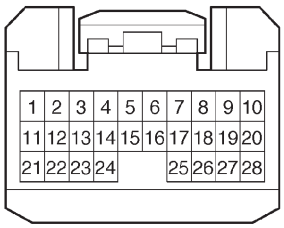
B11
Back Door Lock Assembly



B6
Driver Side J/B Assembly
(Multiplex Network Body ECU)



B7
Driver Side J/B Assembly
(Multiplex Network Body ECU)



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B068922E02

(a) Disconnect the B11 lock, B6 and P7 ECU connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Symbol (Terminal No.)	Specified Condition
(B11-3) - TR+ (B6-1)	Below 1 Ω
(B11-6) - BCTY(B7-25)	Below 1 Ω
(B11-1) - Body ground	Below 1 Ω
(B11-5) - Body ground	Below 1 Ω

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

OK

12	READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the back door opener switch.

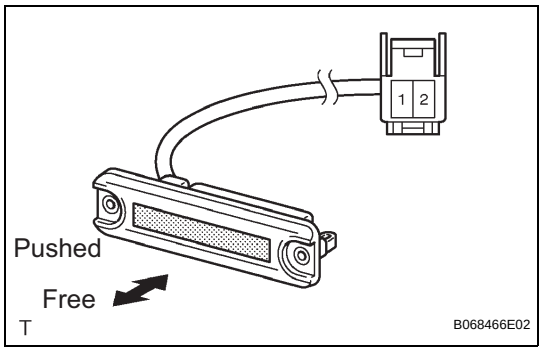
BODY

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
B DOR OPEN SW	Back door opener switch signal/ON or OFF	ON: Back door opener switch is pushed OFF: Back door opener switch is not pushed	-

OK → **REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU)**

NG

13	INSPECT BACK DOOR OPENER SWITCH ASSEMBLY



(a) Remove the back door opener switch.
(b) Measure the resistance according to the value(s) in the table below.

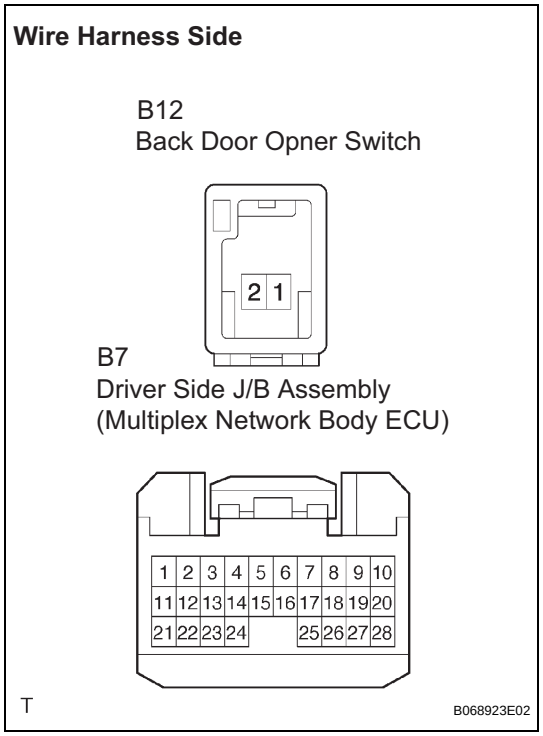
Standard resistance

Terminal No.	Condition	Specified Condition
1 - 2	Free	10 kΩ or higher
	Pushed	Below 1 Ω

NG → **REPLACE BACK DOOR OPENER SWITCH ASSEMBLY**

OK

14	CHECK HARNESS AND CONNECTOR (BACK DOOR OPENER SWITCH - DRIVER SIDE J/B)



(a) Disconnect the B12 switch and P7 ECU connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Symbol (Terminal No.)	Specified Condition
(B12-1) - BDSU (B7-3)	Below 1 Ω
(B12-2) - Body ground	Below 1 Ω

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

OK

REPLACE DRIVER SIDE JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU)

DL