PROBLEM SYMPTOMS TABLE

HINT:
Inspect the fuse and relay before investigating the suspected areas shown in the table below.

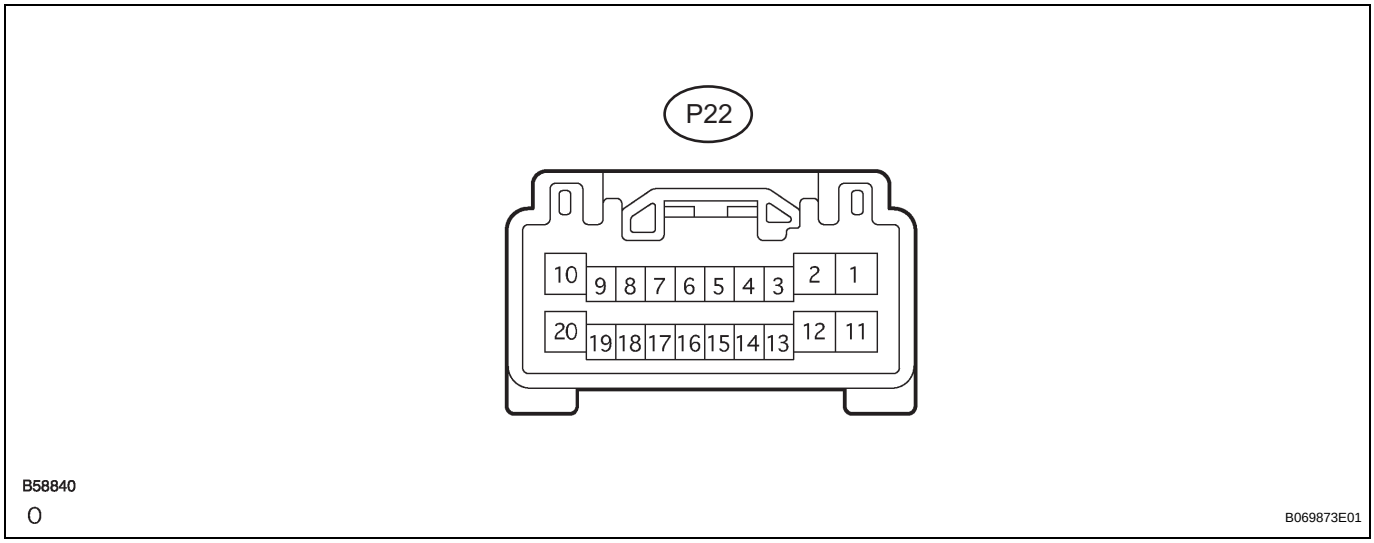
POWER WINDOW CONTROL SYSTEM

Symptom	Suspected area	See page
All doors cannot be locked/unlocked simultaneously by neither door control switch nor door key cylinder	1. Power source circuit (Body ECU)	DL-9
	2. Body ECU	-
All doors cannot be locked/unlocked simultaneously by driver side door control switch	1. Multiplex network master switch assembly	DL-16
	2. Body ECU	-
All doors cannot be locked/unlocked simultaneously by front passenger	1. Door control switch circuit (Front passenger side door)	DL-54
	2. Body ECU	-
All doors cannot be locked/unlocked simultaneously by door key cylinder	1. Driver side door key lock and unlock switch circuit	DL-51
	2. Multiplex network master switch assembly	DL-16
	3. Body ECU	-
Driver side door lock does not operate	1. Driver side door lock motor circuit	DL-39
	2. Body ECU	-
Passenger side door lock does not operate	1. Front passenger side door lock motor circuit	DL-42
	2. Body ECU	-
Rear LH side door lock does not operate	1. Rear door lock motor LH circuit	DL-45
	2. Body ECU	-
Rear RH side door lock does not operate	1. Rear door lock motor RH circuit	DL-48
	2. Body ECU	-
Key lock-in prevention function does not work properly (manual operation and key-linked lock are active)	1. Door courtesy switch circuit (Driver side)	LI-130
	2. Unlock warning switch circuit	DL-107
	3. Body ECU	-
One or more doors cannot be locked/unlocked simultaneously (Wireless key operation)	1. Troubleshooting	DL-61
	2. Driver side door unlock detection switch circuit	DL-27
	3. Front passenger door unlock detection switch circuit	DL-30
	4. Rear door unlock detection switch LH circuit	DL-33
	5. Rear door unlock detection switch RH circuit	DL-48
	6. Body ECU	-
One or more doors cannot be locked/unlocked simultaneously (Theft deterrent operation)	1. Troubleshooting	TD-4
	2. Driver side door unlock detection switch circuit	DL-27
	3. Front passenger door unlock detection switch circuit	DL-42
	4. Rear door unlock detection switch LH circuit	DL-33
	5. Rear door unlock detection switch RH circuit	DL-36

TERMINALS OF ECU

1. CHECK MULTIPLEX NETWORK MASTER SWITCH ASSEMBLY

(a) Disconnect the P22 switch connector.



(b) Measure the voltage and resistance according to the value(s) in the table below.

Standard

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
CPUB (P22-9) - Body ground	L-B - Body ground	+B (CPUB) power supply	Always	10 to 14 V
BDR (P22-10) - Body ground	G - Body ground	+B (BDR) power supply	Always	10 to 14 V
SIG (P22-20) - Body ground	BR - Body ground	+B (SIG) power supply	Ignition switch OFF → ON	Below 1 V → 10 to 14 V
GND (P22-2) - Body ground	W-B - Body ground	Ground	Constant	Below 1 Ω
KL (P22-4) - Body ground	BR - Body ground	Driver door key linked door lock input	Driver door key cylinder OFF → LOCK	10 kΩ or higher → Below 1 Ω
KUL (P22-14) - Body ground	GR - Body ground	Driver door key linked door unlock input	Driver door key cylinder OFF → UNLOCK	10 kΩ or higher → Below 1 Ω
LSW (P22-16) - Body ground	P - Body ground	Driver door lock position switch input	Driver door UNLOCK → LOCK	10 kΩ or higher → Below 1 Ω

HINT:
If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the switch connector and measure the voltage according to the value(s) in the table below.

Standard voltage

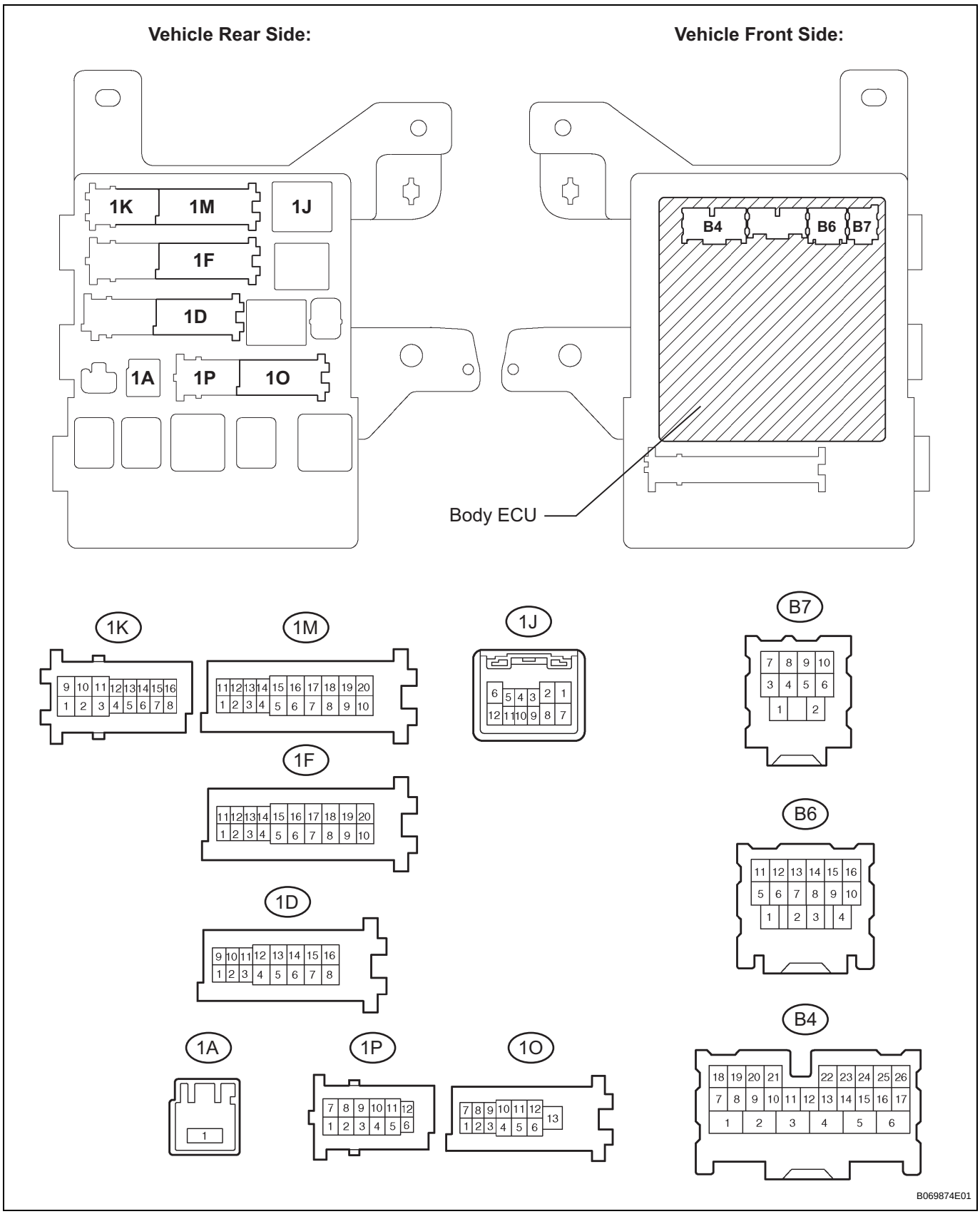
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
KL (P22-4) - Body ground	BR - Body ground	Driver door key linked door lock input	Driver door key cylinder OFF → LOCK	10 to 14 V → Below 1 V
KUL (P22-14) - Body ground	GR - Body ground	Driver door key linked door unlock input	Driver door key cylinder OFF → UNLOCK	10 to 14 V → Below 1 V
LSW (P22-16) - Body ground	P - Body ground	Driver door lock position switch input	Driver door UNLOCK → LOCK	Below 1 V → 10 to 14 V (or pulse generation)

HINT:

- Use an oscilloscope to check the output voltages of terminal LSW.
- If the result is not as specified, the switch (door ECU) may have a malfunction.

2. CHECK INSTRUMENT PANEL J/B ASSEMBLY (BODY ECU)

(a) Disconnect the 1A, 1D, 1F, 1J, 1M, 1O, B4, B5 and B6 connectors.



(b) Measure the voltage and resistance according to the value(s) in the table below.

Standard

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
BECU (1D-10) - Body ground	L-B - Body ground	+B (BECU) power supply	Always	10 to 14 V
ALTB (1D-16) - Body ground	W - Body ground	+B (power system, generator system) power supply	Always	10 to 14 V
BATB (1A-1) - Body ground	W - Body ground	+B (power system, battery system) power supply	Always	10 to 14 V
KSW (B4-21) - Body ground	B - Body ground	Key unlock warning switch input	No key in ignition key cylinder → Key inserted	10 kΩ or higher → Below 1 Ω
GND1 (1F-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (1M-9) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
L1 (1J-3) - Body ground	V - Body ground	Passenger door control switch LOCK input	Passenger door control switch OFF → LOCK	10 kΩ or higher → Below 1 Ω
UL1 (1J-4) - Body ground	BR - Body ground	Passenger door control switch UNLOCK input	Passenger door control switch OFF → UNLOCK	10 kΩ or higher → Below 1 Ω
DCTY (B6-14) - Body ground	L - Body ground	Driver door courtesy switch input	Driver door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω
PCTY (B5-23) - Body ground	L - Body ground	Passenger door courtesy switch input	Passenger door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω
LCTY (1O-7) - Body ground	B - Body ground	Rear left door courtesy switch input	Rear left door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω
RCTY (B6-16) - Body ground	GR - Body ground	Rear right door courtesy switch input	Rear right door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω
PBDS (B5-2)*1 - Body ground	V - Body ground	Power back door opener/closer switch input	Power back door opener/close switch OFF → ON	10 kΩ or higher → Below 1 Ω
BDSU (B5-3)*2 - Body ground	W - Body ground	Back door opener switch (outside handle switch) input	Back door opener switch OFF → ON	10 kΩ or higher → Below 1 Ω
BCTY (B5-25) - Body ground	P - Body ground	Back door courtesy switch input	Back door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω

HINT:

- If the result is not as specified, there may be a malfunction on the wire harness side.
- *1: w/ Power back door
- *2: w/o Power back door

(c) Reconnect the J/B and ECU connectors and measure the voltage according to the value(s) in the table below.

Standard voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IG (1F-11) - Body ground	Y - Body ground	Ignition power supply	Ignition switch OFF → ON	10 to 14 V → Below 1 V

DL

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
ACT+ (1K-2) - Body ground	L - Body ground	Door lock motor LOCK drive output (Driver door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → LOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
ACT+ (1J-1) - Body ground	L - Body ground	Door lock motor LOCK drive output (Passenger door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → LOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
ACT+ (1P-11) - Body ground	R-Y - Body ground	Door lock motor LOCK drive output (Rear left door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → LOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
ACT+ (1F-5) - Body ground	L - Body ground	Door lock motor LOCK drive output (Rear right door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → LOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
TR+ (B4-1)* - Body ground	BR - Body ground	Door lock motor LOCK drive output (Back door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → LOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
ACTD (B6-4) - Body ground	R - Body ground	Door lock motor UNLOCK drive output (Driver door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → UNLOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
ACT- (1J-2) - Body ground	R - Body ground	Door lock motor UNLOCK drive output (Passenger door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → UNLOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
ACT- (1P-6) - Body ground	P - Body ground	Door lock motor UNLOCK drive output (Rear left door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → UNLOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V

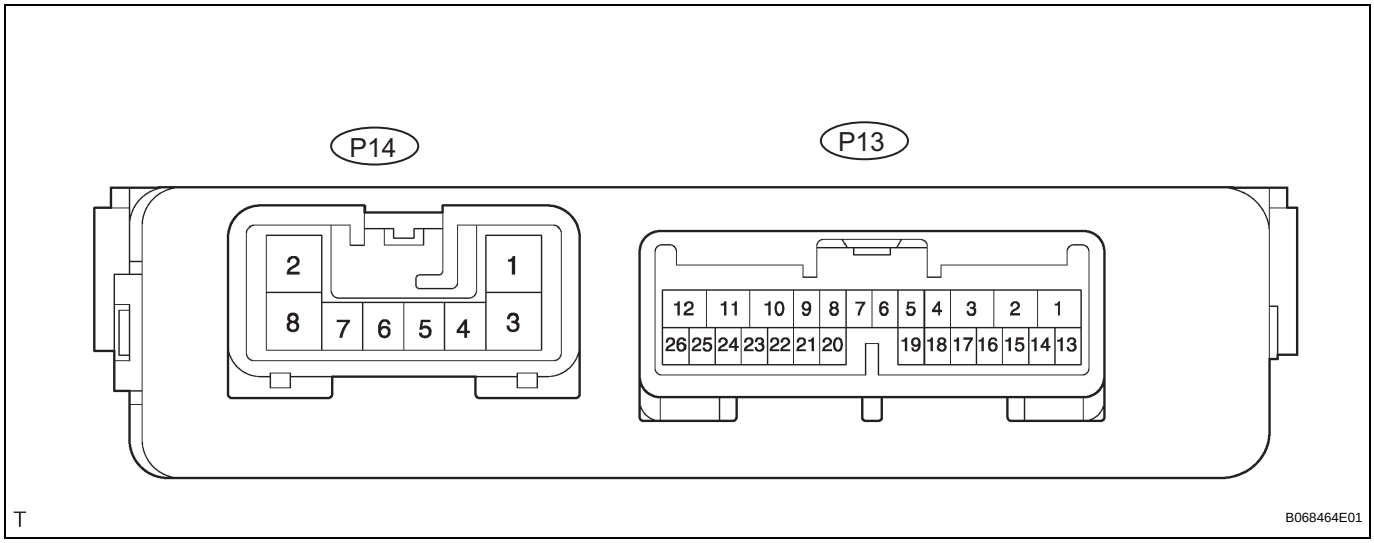
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
ACT- (1F-18) - Body ground	R - Body ground	Door lock motor UNLOCK drive output (Rear right door)	Door control switch (Master switch or passenger side switch) or driver side door key cylinder OFF → UNLOCK → OFF	Below 1 V → 10 to 14 V → Below 1 V
LSWP (B5-27) - Body ground	Y - Body ground	Passenger door lock position switch input	Passenger door UNLOCK → LOCK	Below 1 V → 10 to 14 V (or pulse generation)
LSWL (1P-5) - Body ground	GR - Body ground	Rear left door lock position switch input	Rear left door UNLOCK → LOCK	Below 1 V → 10 to 14 V (or pulse generation)
LSWR (B5-5) - Body ground	B - Body ground	Rear right door lock position switch input	Rear right door UNLOCK → LOCK	Below 1 V → 10 to 14 V (or pulse generation)

HINT:

- *: w/o Power Back Door
- Use an oscilloscope to check the output voltages of terminals LSWP, LSWL and LSWR.
- If the result is not as specified, the J/B (body ECU) may have a malfunction.

3. CHECK POWER BACK DOOR ECU (w/ Power back door system)

(a) Disconnect the P13 and P14 ECU connectors.



(b) Measure the voltage and resistance according to the value(s) in the table below.

Standard voltage and resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
ECUB (P13-10) - Body ground	BR - Body ground	ECU (ECUB) power supply	Always	10 to 14 V
B (P14-2) - Body ground	Y - Body ground	+B (ECUB) power supply	Always	10 to 14 V
GND (P14-8) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
IG (P13-9) - Body ground	GR - Body ground	Ignition switch input	Ignition switch OFF → ON	Below 1 V → 10 to 14 V

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
CTYE (P13-7) - Body ground	P - Body ground	Back door courtesy switch input	Back door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω
CTYO (P13-19) - Body ground	BR - Body ground	Back door courtesy switch output	Back door CLOSED → OPEN	10 kΩ or higher → Below 1 Ω
HSW (P13-3) - Body ground	GR - Body ground	Back door opener switch (outside handle switch) input	Back door opener switch OFF → ON	10 kΩ or higher → Below 1 Ω

HINT:
If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the ECU connectors and measure the voltage according to the value(s) in the table below.

Standard voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
POS (P13-21) - Body ground	LG - Body ground	Back door lock position switch input	Back door OPEN → Closer in operation → CLOSED	Below 1 V → 10 to 14 V → Below 1 V →
FUL (P13-18) - Body ground	V - Body ground	Back door lock full-latch switch input	Back door CLOSED → OPEN	10 to 14 V → Below 1 V
HAF (P13-8) - Body ground	R - Body ground	Back door lock half-latch switch input	Back door OPEN → Closer in operation → CLOSED	Below 1 V → 10 to 14 V → Below 1 V →
DC+ (P13-12) - Body ground	G - Body ground	Back door lock closer motor drive output (Close)	Back door OPEN → Not completely closed → Motor in normal rotation → Motor in reverse rotation → Operation completed (Back door CLOSED)	Below 1 V → Below 1 V → 10 to 14 V → Below 1 V → Below 1 V →
DC- (P13-11) - Body ground	B - Body ground	Back door lock closer motor drive output (Release)	Back door OPEN → Not completely closed → Motor in normal rotation → Motor in reverse rotation → Operation completed (Back door CLOSED)	Below 1 V → Below 1 V → Below 1 V → 10 to 14 V → Below 1 V →

HINT:
If the result is not as specified, the ECU may have a malfunction.