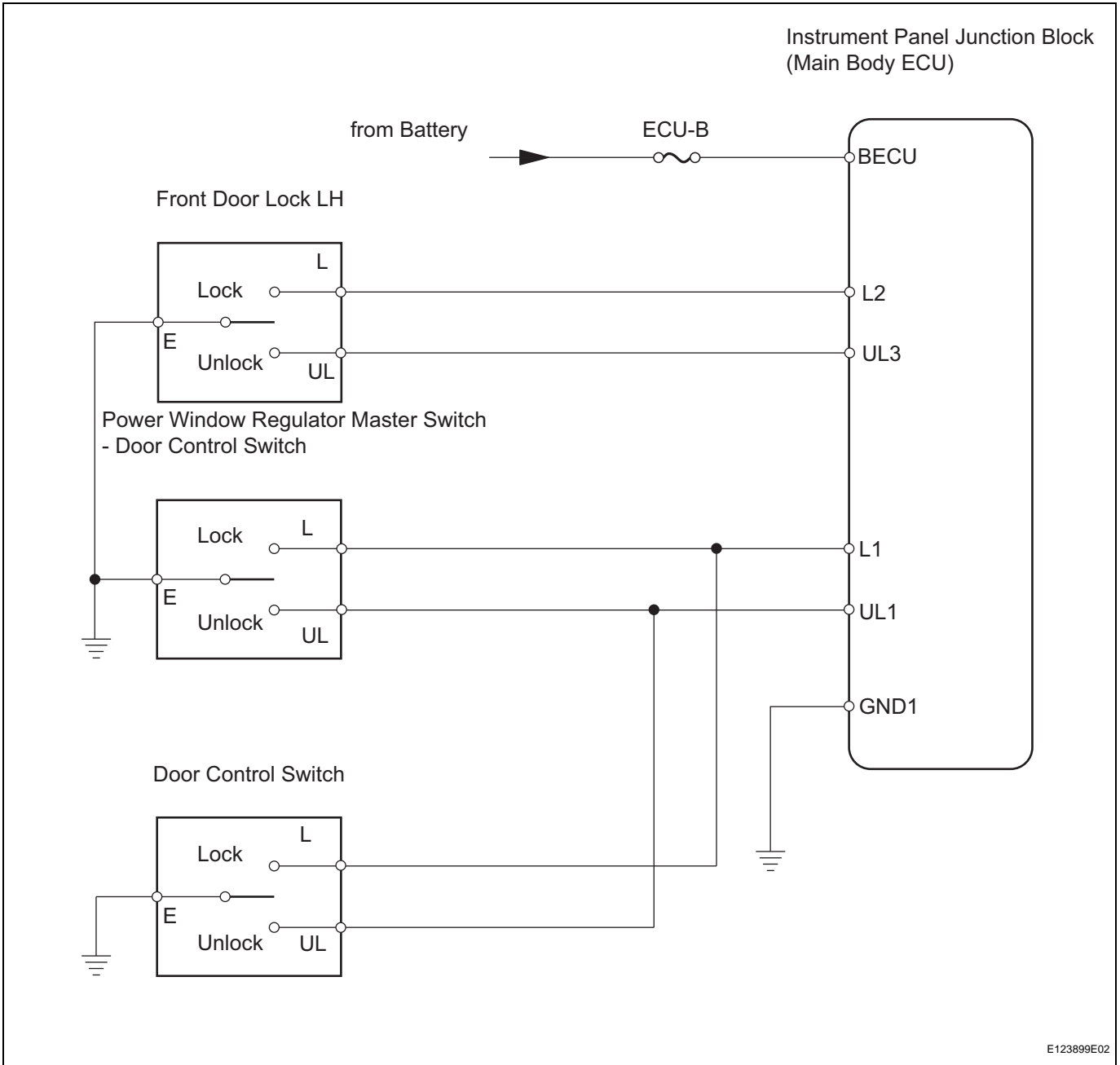


All Doors cannot be Locked / Unlocked Simultaneously

DESCRIPTION

The main body ECU receives switch signals from the door control switch on the power window regulator master switch, door control switch and driver side door key cylinder, and activates the door lock motor on each door accordingly.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER (DOOR LOCK)

- (a) Select the ACTIVE TEST, use the intelligent tester to generate a control command, and then check that the doors lock / unlock.

Main body ECU

Item	Test Details	Diagnostic Note
DOOR LOCK	Operate door lock motor LOCK / UNLOCK	-

OK:

Doors can lock / unlock.

OK

Go to step 4

NG

2 INSPECT FUSE (ECU-B)

- (a) Remove the ECU-B fuse from the engine room No. 2 relay block.
(b) Measure the resistance.

Standard resistance:**Below 1 Ω**

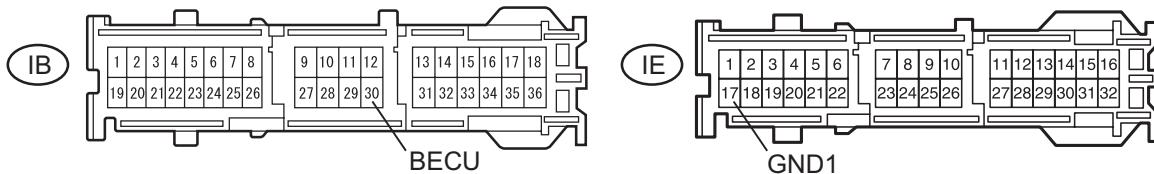
NG

REPLACE FUSE

OK

3 CHECK WIRE HARNESS (ECU - BATTERY AND BODY GROUND)

Wire Harness Side

Instrument Panel Junction Block
(Main Body ECU)Instrument Panel Junction Block
(Main Body ECU)

E123923E02

- (a) Disconnect the IH and IE junction block connectors.
(b) Measure the voltage of the wire harness side connector.
Standard voltage

Tester Connection	Specified Condition
IB-30 (BECU) - Body ground	10 to 14 V

- (c) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
IE-17 (GND1) - Body ground	Below 1 Ω

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

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)

4 INSPECT ALL DOORS 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)
- (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	B

B → **Go to step 12**

A

5 INSPECT DRIVER SIDE DOOR LOCK / UNLOCK 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 power window regulator 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 both door control switch on master switch and door key cylinder on driver side	C

B → **Go to step 9**

C → **REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)**

DL

A

6 READ VALUE OF INTELLIGENT TESTER (DOOR CONTROL SWITCH ON MASTER SWITCH)

- (a) Use the DATA LIST to check if the door control switch is functioning properly.

Main body ECU

Item	Measurement / Display (Range)	Normal Condition	Diagnostic Note
D/L SW-LOCK	Door manual lock switch signal / ON or OFF	ON: Door control switch on power window regulator master switch is pushed to lock position OFF: Door control switch on power window regulator master switch is not pushed	-
D/L SW-UNLOCK	Door manual unlock switch signal / ON or OFF	ON: Door control switch on power window regulator master switch is pushed to unlock position OFF: Door control switch on power window regulator master switch is not pushed	-

OK:

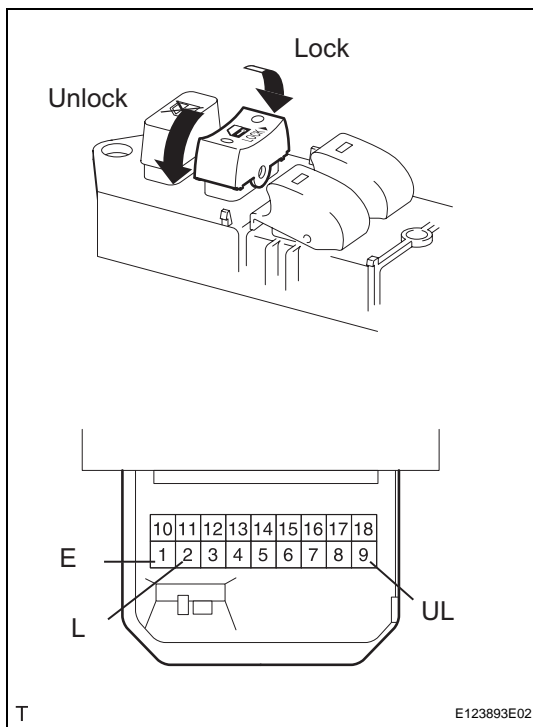
When the switch is operating, the intelligent tester should display as shown in the table.

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)

NG

7 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
2 (L) - 1 (E)	Lock	Below 80 Ω
2 (L) - 1 (E)	OFF	10 k Ω or higher
9 (UL) - 1 (E)	Unlock	Below 80 Ω
9 (UL) - 1 (E)	OFF	10 k Ω or higher

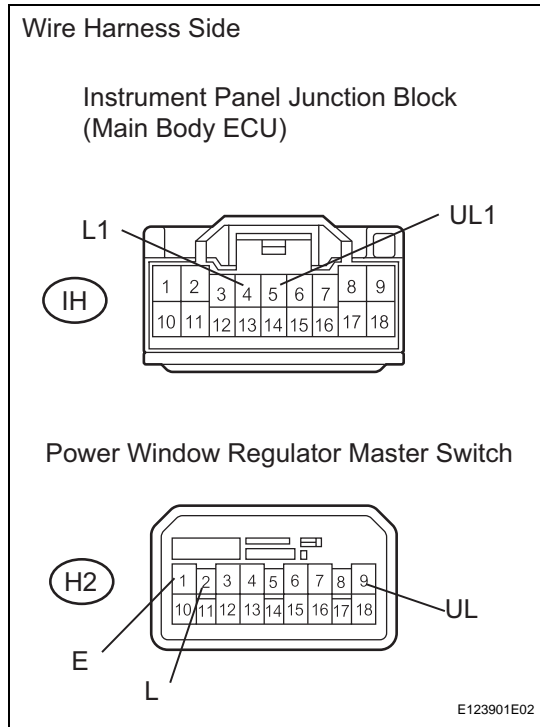
NG

REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

DL

OK

8 CHECK WIRE HARNESS (MASTER SWITCH - ECU AND BODY GROUND)



- (a) Disconnect the H2 master switch connector.
- (b) Disconnect the IH junction block connector.
- (c) Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
H2-2 (L) - IH-4 (L1)	Below 1 Ω
H2-2 (L) - Body ground	10 kΩ or higher
IH-4 (L1) - Body ground	10 kΩ or higher
H2-9 (UL) -IH-5 (UL1)	Below 1 Ω
H2-9 (UL) - Body ground	10 kΩ or higher
IH-5 (UL1) - Body ground	10 kΩ or higher
H2-1 (E) - Body ground	Below 1 Ω

NG REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)

9 READ VALUE OF INTELLIGENT TESTER (DOOR KEY SWITCH)

- (a) Use the DATA LIST to check if the door key is functioning properly.

Main body ECU

Item	Measurement / Display (Range)	Normal Condition	Diagnostic Note
DOR KEY SW-LOCK	Door key linked lock switch signal / ON or OFF	ON: Driver side door key cylinder is turned to lock position OFF: Driver side door key cylinder is not turned	-
D DOR KEY SW-UL	Door key linked lock switch signal / ON or OFF	ON: Driver side door key cylinder is turned to unlock position OFF: Driver side door key cylinder is not turned	-

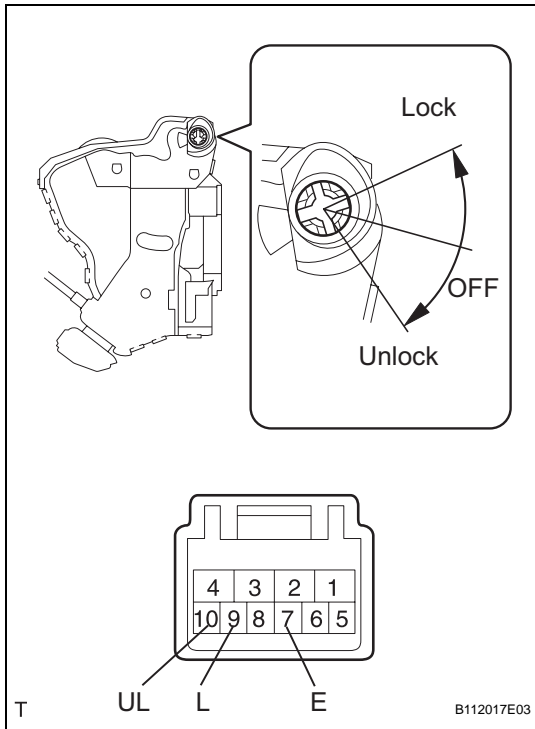
OK:

When the door key is operating, the intelligent tester should display as shown in the table.

OK REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)

NG

10 INSPECT FRONT DOOR WITH MOTOR LOCK ASSEMBLY LH



- (a) Remove the front door lock.
- (b) Measure the resistance of the door lock and unlock switch.

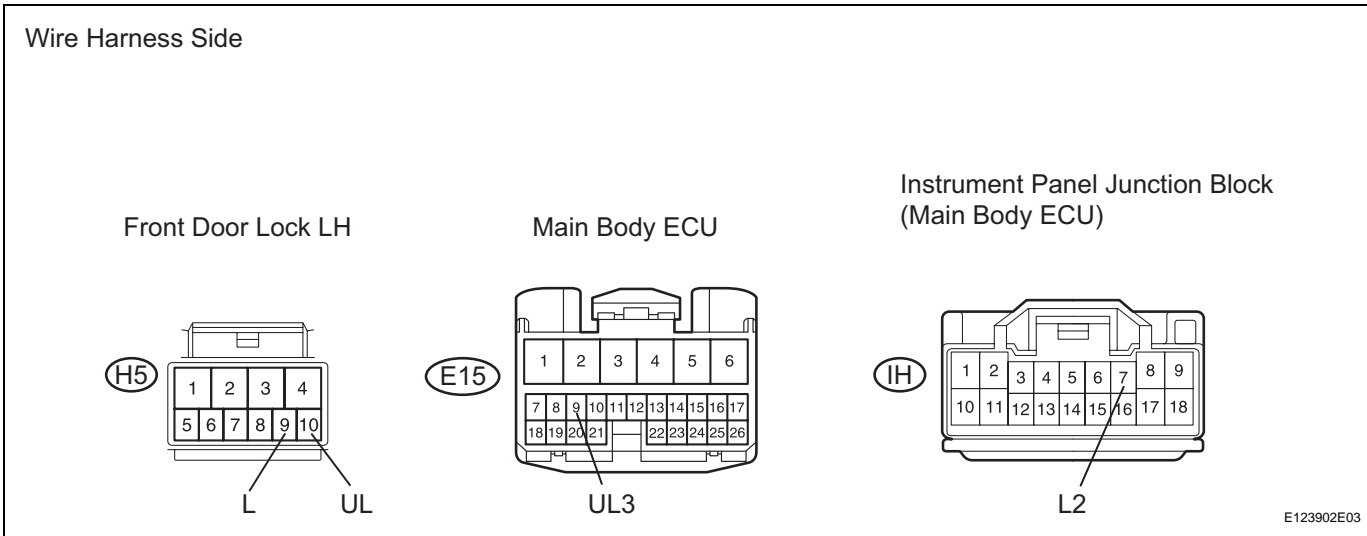
Standard resistance

Tester Condition	Switch Condition	Specified Condition
9 (L) - 7 (E)	Lock	Below 1 Ω
9 (L) - 7 (E)	OFF	10 kΩ or higher
10 (UL) - 7 (E)	Unlock	Below 1 Ω
10 (UL) - 7 (E)	OFF	10 kΩ or higher

NG → **REPLACE FRONT DOOR WITH MOTOR LOCK ASSEMBLY LH**

OK

11 CHECK WIRE HARNESS (MOTOR - ECU AND BODY GROUND)



- (a) Disconnect the H5 door lock motor connector.
- (b) Disconnect the E15 ECU connector.
- (c) Disconnect the IH junction block connector.
- (d) Measure the resistance of the wire harness side connectors.

DL

Standard resistance

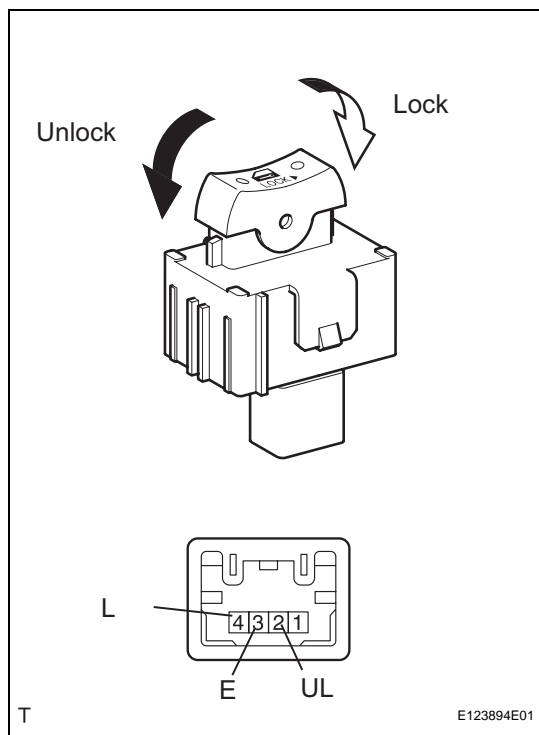
Tester Connection	Specified Condition
H5-9 (L) - IH-7 (L2)	Below 1 Ω
H5-9 (L) - Body ground	10 k Ω or higher
IH-7 (L2) - Body ground	10 k Ω or higher
H5-10 (UL) - E15-9 (UL3)	Below 1 Ω
H5-10 (UL) - Body ground	10 k Ω or higher
E15-9 (UL3) - Body ground	10 k Ω or higher

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

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)

12 INSPECT DOOR CONTROL SWITCH ASSEMBLY



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

Standard resistance

Tester Connection	Switch Condition	Specified Condition
4 (L) - 3 (E)	Lock	Below 200 Ω
4 (L) - 3 (E)	OFF	10 k Ω or higher
2 (UL) - 3 (E)	Unlock	Below 200 Ω
2 (UL) - 3 (E)	OFF	10 k Ω or higher

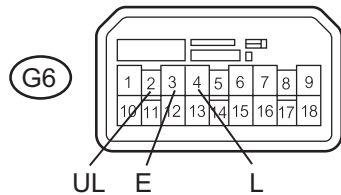
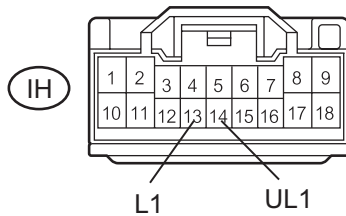
NG → **REPLACE DOOR CONTROL SWITCH ASSEMBLY**

OK

13 CHECK WIRE HARNESS (SWITCH - ECU AND BODY GROUND)

Wire Harness Side

Door Control Switch

Instrument Panel Junction Block
(Main Body ECU)

E123908E01

- Disconnect the G6 switch connector.
- Disconnect the IH junction block connector.
- Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
G6-4 (L) - IH-13 (L1)	Below 1 Ω
G6-4 (L) - Body ground	10 k Ω or higher
IH-13 (L1) - Body ground	10 k Ω or higher
G6-2 (UL) - IH-14 (UL1)	Below 1 Ω
G6-2 (UL) - Body ground	10 k Ω or higher
IH-14 (UL1) - Body ground	10 k Ω or higher
G6-3 (E) - Body ground	Below 1 Ω

NG**REPAIR OR REPLACE HARNESS AND CONNECTOR****OK****REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)**