Power Slide Door LH does not Operate When Satellite Switch is Pressed

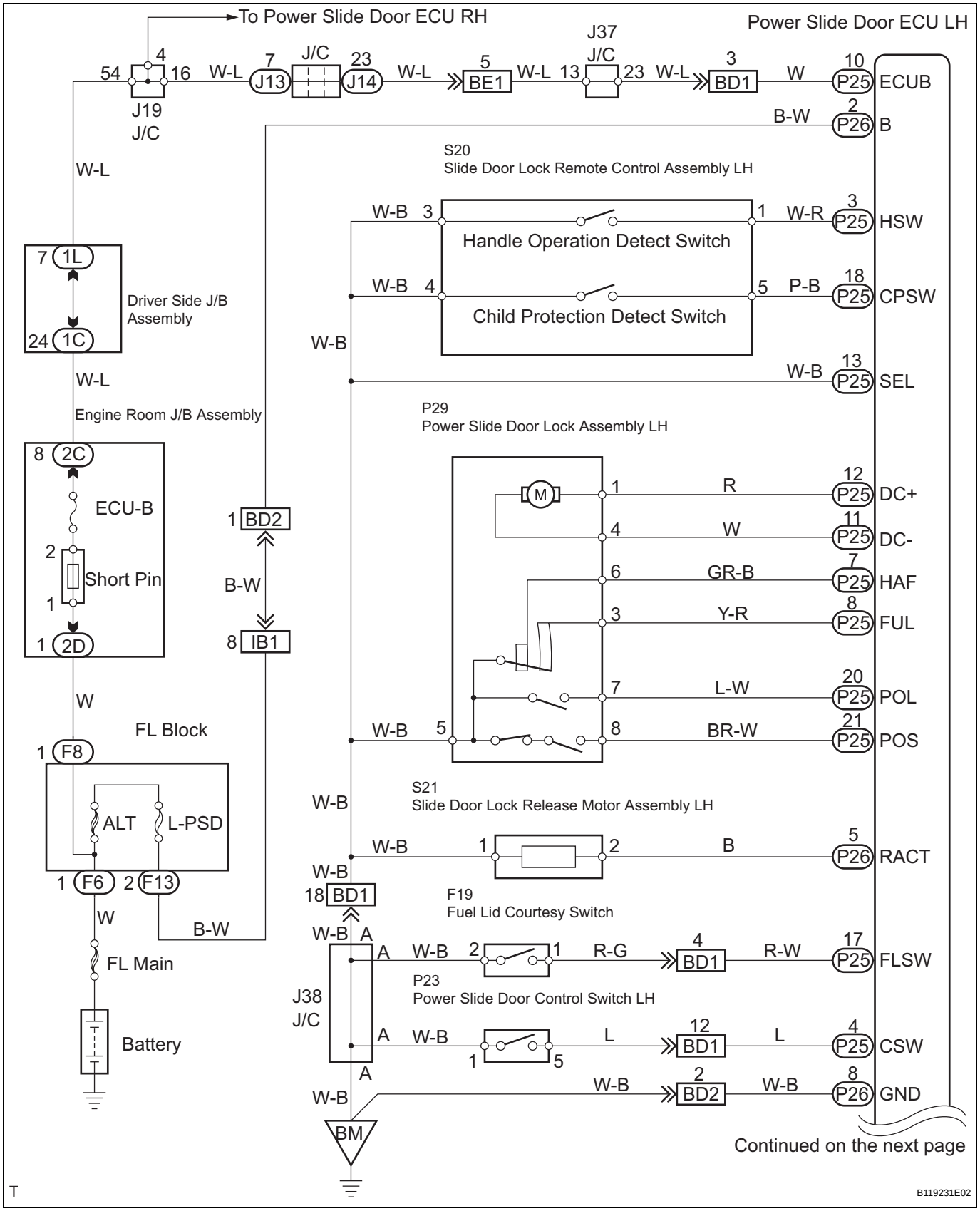
DESCRIPTION

- The power slide door operates only when the power slide door main switch is ON (switch free: orange paint on the top of the switch appears). The power slide door ECU LH controls the power slide door LH, which activates the slide door motor to open / close the slide door.
- A request signal from the satellite switch for the power slide door LH is input to the the driver side junction block ECU, which then sends this request signal using a BEAN line to the power slide door ECU LH.
- A request signal from the power slide door control switch LH is directly input to the power slide door ECU LH.
- When the child lock is in the locked condition, the power slide door control switch LH is disabled, thus the power slide door LH is not activated by this switch.
- When the fuel lid is open, the power slide door does not operate. Opening the fuel lid while the power slide door is operating stops the power slide door operation and switches the system to manual operation mode.
- When the touch sensor has an open / short-circuit, closing of the power slide door is disabled.

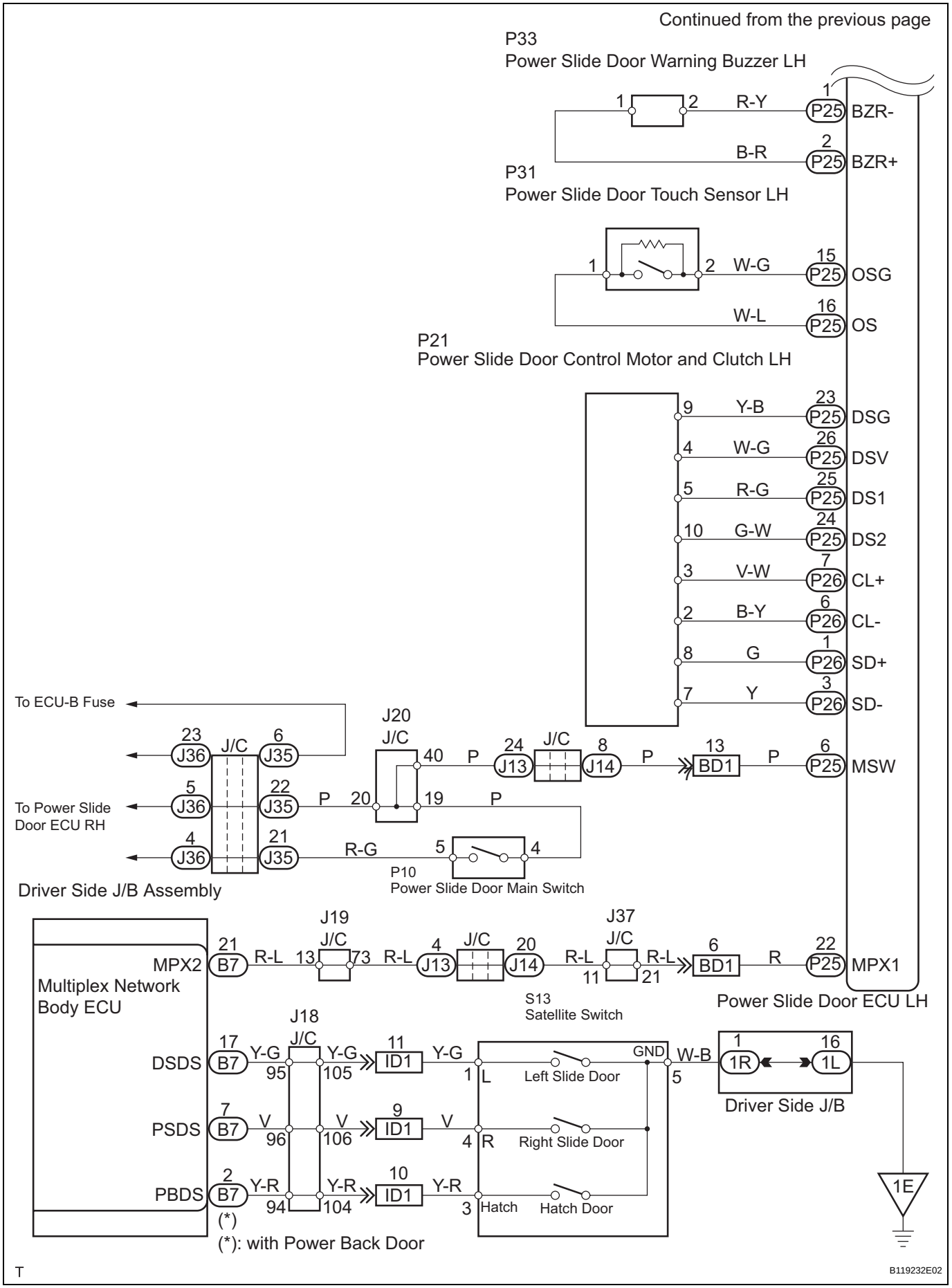
NOTICE:

When disconnecting the negative (-) terminal cable of the battery or control motor and clutch, initialize the power slide door system (See page ED-15).

WIRING DIAGRAM



ED


Continued from the previous page
P33
Power Slide Door Warning Buzzer LH
1
2
R-Y
P25
BZR-
B-R
P25
BZR+
P31
Power Slide Door Touch Sensor LH
W-G
P25
OSG
W-L
P25
OS
P21
Power Slide Door Control Motor and Clutch LH
Y-B
P25
DSG
W-G
P25
DSV
R-G
P25
DS1
G-W
P25
DS2
V-W
P26
CL+
B-Y
P26
CL-
G
P26
SD+
Y
P26
SD-
To ECU-B Fuse
J20
J/C
J36
J35
J13
J14
BD1
P25
MSW
To Power Slide
Door ECU RH
P
R-G
P10
Power Slide Door Main Switch
Driver Side J/B Assembly
J19
J37
MPX2
B7
R-L
J13
J14
BD1
R
P25
MPX1
Multiplex Network
Body ECU
S13
Satellite Switch
Power Slide Door ECU LH
J18
DSDS
PSDS
PBDS
Y-G
V
Y-R
ID1
GND
W-B
1R
1L
Left Slide Door
Right Slide Door
Hatch
Hatch Door
Driver Side J/B
1E
(*)
(*): with Power Back Door
T
B119232E02

INSPECTION PROCEDURE

1	BASIC INSPECTION

(a) Check the conditions necessary for the power slide door to open:
  (1) Power slide door main switch is in the ON position (switch free: orange paint on the top of the switch appears).
  (2) Slide door is unlocked (door lock position switch is in the ON position when the slide door is fully closed).
  (3) Shift lever is in the P position when the ignition switch is ON (When the ignition switch is OFF, the power slide door operates at any position of the shift lever.)

(b) Check the conditions necessary for the power slide door to close:
  (1) Power slide door main switch is in the ON position (switch free: orange paint on the top of the switch appears).
  (2) Slide door is between approximately the half-open position and the fully open position.
  (3) Slide door touch sensor is not damaged / deformed.

OK

2	INSPECT FUSE (ECU-B)

(a) Inspect the ECU-B fuse.

NG → **REPLACE FUSE**

OK

3	CHECK DTC

(a) Check for DTC B2224, DTC B224 indicates a pulse sensor malfunction.
  (1) Without code outputs, proceed to A.
  (2) With code output, proceed to B.

B → **GO TO DTC B2224**

A

4	INSPECT COMMUNICATION FUNCTION OF LARGE-SCALE BODY MULTIPLEX COMMUNICATION SYSTEM (BEAN)

(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 B1217 outputs, proceed to A.
(2) (ECU unconnected, communication line malfunctioning) With DTC B1214, B1215 or B1217 outputs, proceed to B.

B → **GO TO MULTIPLEX COMMUNICATION SYSTEM**

A

5 READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the power slide door main switch.

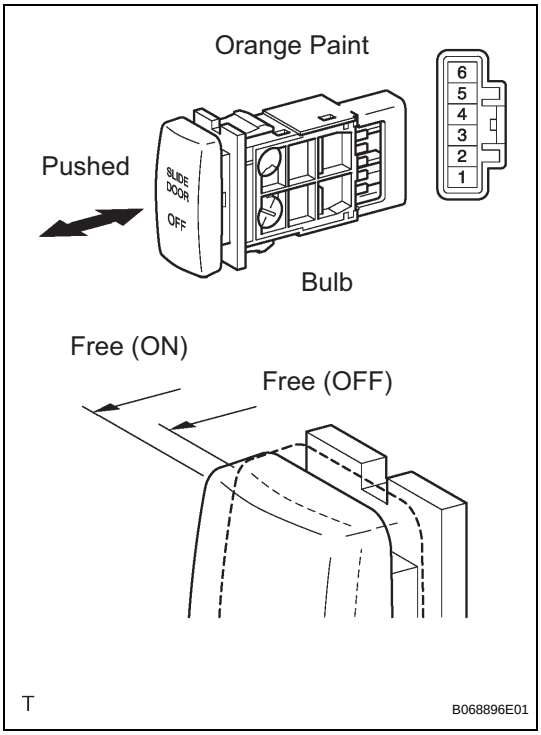
OK (Power slide door ECU LH):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
PSD MAIN SW	Power slide door main SW / ON or OFF	ON: Orange paint on top of the switch appears OFF: Orange paint on top of the switch does not appear	-

OK → **Go to step 10**

NG

6 INSPECT POWER SLIDE DOOR MAIN SWITCH



(a) Inspect the resistance of the main switch.
Resistance

Terminal No.	Condition	Specified Condition
4 - 5	Free (ON)	Below 1 Ω
	Pushed (OFF)	10 kΩ or higher

HINT:
If the switch does not illuminate, it will not affect the ON / OFF function of the switch (See page ED-225).

NG → **REPLACE POWER SLIDE DOOR MAIN SWITCH**

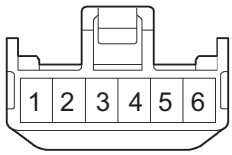
OK

ED

7	CHECK WIRE HARNESS (POWER SLIDE DOOR MAIN SWITCH - POWER SLIDE DOOR ECU LH)

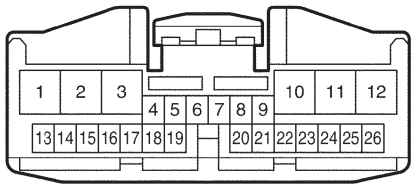
Wire Harness Side

P10 Power Slide Door Main Switch



Y

P25 Power Slide Door ECU LH



B068444E01

(a) Disconnect the P10 switch and P25 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
P10-4 - P25-6 (MSW)	Below 1 Ω

(c) Check the resistance between the P10 switch connector and body ground.
Resistance (Check for short circuit)

Terminal No.	Specified Condition
P10-4 - Body ground	10 kΩ or higher

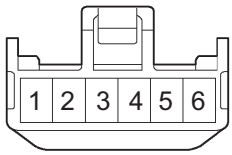
NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

8	CHECK WIRE HARNESS (POWER SLIDE DOOR MAIN SWITCH - POWER SLIDE DOOR ECU RH)

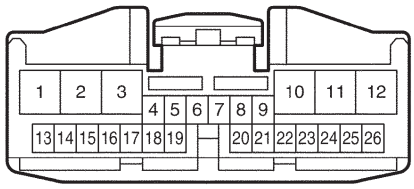
Wire Harness Side

P10 Power Slide Door Main Switch



Y

P27 Power Slide Door ECU RH



B068444E02

(a) Disconnect the P10 switch and P27 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
P10-4 - P27-6 (MSW)	Below 1 Ω
P10-5 - P27-5 (MSE)	

(c) Check the resistance between the S13 switch connector and body ground.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
S13-5 (GND) - Body ground	Below 1 Ω

NG → **REPLACE HARNESS AND CONNECTOR**

ED

OK

9 READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the power slide door main switch.

OK (Power slide door ECU RH):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
PSD MAIN SW	Power slide door main SW / ON or OFF	ON: Orange paint on top of the switch appears OFF: Orange paint on top of the switch does not appear	-

NG → **REPLACE POWER SLIDE DOOR ECU RH**

OK

REPLACE POWER SLIDE DOOR ECU LH

10 CHECK SWITCH OPERATION

(a) If the power slide door does not respond to using the satellite switch, proceed to A.

(b) If the power slide door does not respond to using the power slide door control switch (child lock is set at UNLOCK.), proceed to B.

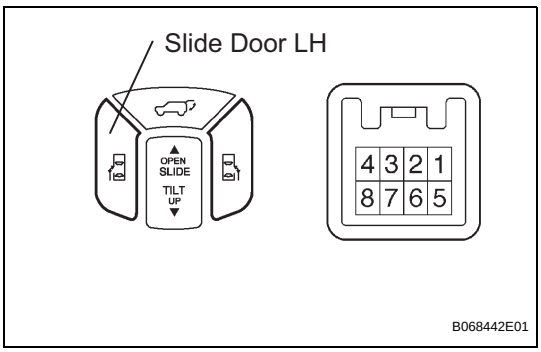
HINT:

If the power slide door cannot operate using the power slide door control switch even when the child lock is unlocked, there may be a malfunction in the child lock switch. In this case, check the handle switch circuit (See page ED-65).

B → **Go to step 13**

A

11 INSPECT SATELLITE SWITCH



(a) Inspect the resistance of the LH switch.

Resistance

Terminal No.	Condition	Specified Condition
1 - 5	Free	10 kΩ or higher
	Pushed	Below 1 Ω

HINT:

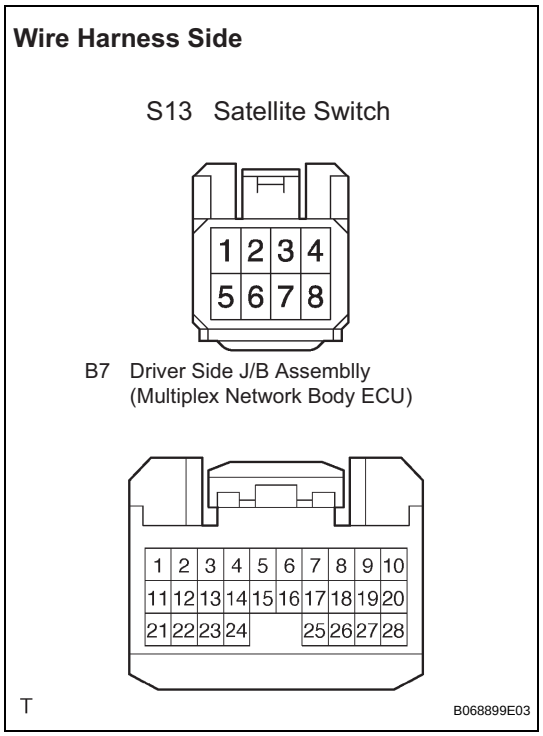
If the switch does not illuminate, it will not affect the ON / OFF function of the switch. For the illumination check, refer to SLIDE DOOR SYSTEM (See page ED-6).

NG → **REPLACE SATELLITE SWITCH**

ED

OK

12 CHECK WIRE HARNESS (SATELLITE SWITCH - DRIVER SIDE J/B, BODY GROUND)



(a) Disconnect the S13 switch and B7 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
S13-1 (L) - B7-17 (DSDS)	Below 1 Ω

(c) Check the resistance between the S13 switch connector and body ground.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
S13-5 (GND) - Body ground	Below 1 Ω

NG → **Go to step 16**

OK

REPAIR OR REPLACE HARNESS AND CONNECTOR

13 READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the power slide door control switch LH.

OK (Power slide door ECU LH):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
B PILLAR SW*	Power slide door control switch* signal / ON or OFF	ON: Power slide door control switch* is pushed OFF: Power slide door control switch* is not pushed	-

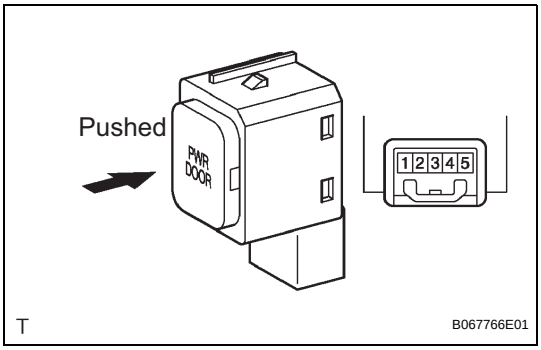
* "B PILLAR SW" appears on the display of the intelligent tester, however the name of the part corresponding to the display of the tester is "Power slide door control switch".

OK → **Go to step 16**

NG

ED

14 INSPECT POWER SLIDE DOOR CONTROL SWITCH LH



(a) Inspect the resistance of the switch.
Resistance

Terminal No.	Condition	Specified Condition
1 - 5	Free	10 kΩ or higher
	Pushed	Below 1 Ω

HINT:
If the switch does not illuminate, it will not affect the ON / OFF function of the switch. For the illumination check, refer to SLIDE DOOR SYSTEM (See page ED-208).

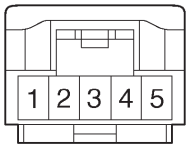
NG → **REPLACE POWER SLIDE DOOR CONTROL SWITCH LH**

OK

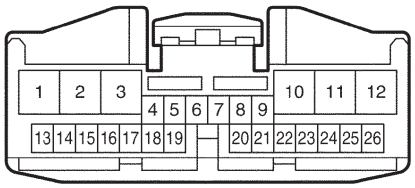
15 CHECK WIRE HARNESS (DOOR CONTROL SWITCH - POWER SLIDE DOOR ECU, BODY GROUND)

Wire Harness Side

P23
Power Slide Door Control Switch LH



P25
Power Slide Door ECU LH



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(a) Disconnect the P23 switch and P25 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
P23-5 - P25-4 (CSW)	Below 1 Ω

(c) Check the resistance between the P23 switch connector and body ground.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
P23-1 - Body ground	Below 1 Ω

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

ED

OK

REPLACE POWER SLIDE DOOR ECU LH

16	READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check that a power slide door touch sensor LH signal is output when the sensor is operated.

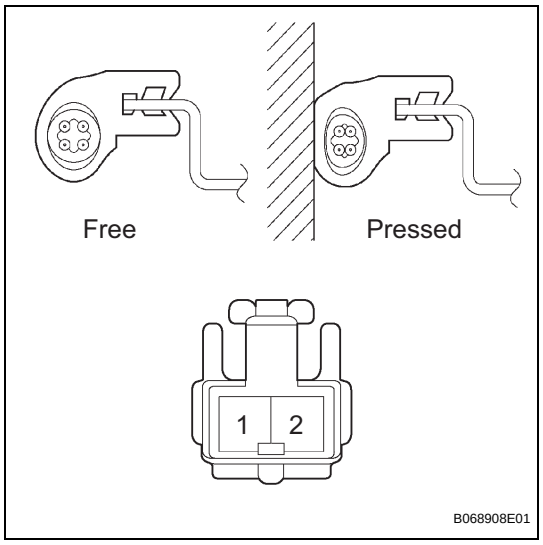
OK (Power slide door ECU LH):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
PSD TOUCH SEN	Power slide door touch sensor / OFF, ON or OPEN	OFF: Power slide door touch sensor is free ON: Power slide door touch sensor is pressed OPEN: Power slide door touch sensor is opened	-

OK → **Go to step 19**

NG

17	INSPECT POWER SLIDE DOOR TOUCH SENSOR LH



(a) Inspect the resistance of the sensor.
Resistance

Terminal No.	Condition	Specified Condition
1 - 2	Free	Approx. 1 kΩ
	Pressed	Less than 100 Ω

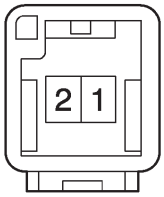
NG → **REPLACE POWER SLIDE DOOR TOUCH SENSOR LH**

OK

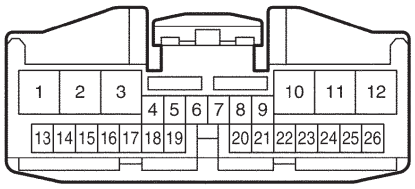
18	CHECK WIRE HARNESS (POWER SLIDE DOOR TOUCH SENSOR LH - POWER SLIDE DOOR ECU LH)

Wire Harness Side

P31
Power Slide Door Touch Sensor LH



T P25
Power Slide Door ECU LH



B068446E01

(a) Disconnect the P31 sensor and P25 ECU connectors.
(b) Check the resistance between the wire harness side connectors.

Resistance (Check for open circuit)

Terminal No.	Specified Condition
P31-1 - P25-16 (OS)	Below 1 Ω
P31-2 - P25-15 (OSG)	

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

OK

REPLACE POWER SLIDE DOOR ECU LH

19	READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the fuel lid courtesy switch.

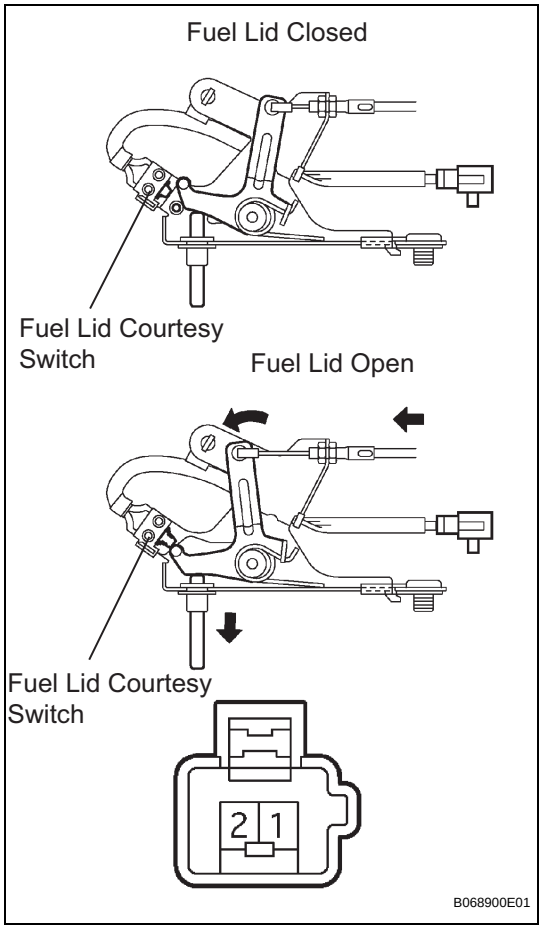
OK (Power slide door ECU LH):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
FUEL LID SW	Fuel lid courtesy switch signal / ON or OFF	ON: Fuel lid is closed OFF: Fuel lid is open	-

OK → **Go to step 22**

NG

20	INSPECT FUEL LID COURTESY SWITCH



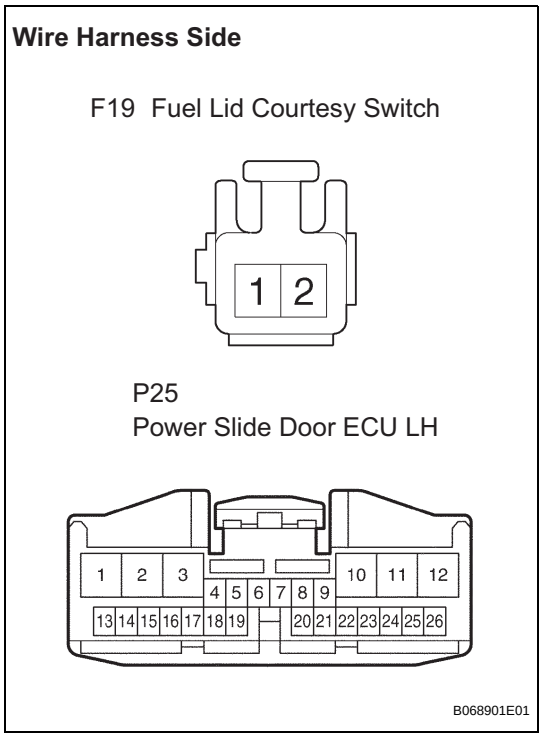
(a) Inspect the resistance of the switch.
Resistance

Terminal No.	Condition	Specified Condition
1 - 2	ON (Fuel lid closed)	Below 1 Ω
	OFF (Fuel lid open)	10 kΩ or higher

NG → **REPLACE FUEL LID COURTESY SWITCH**

OK

21	CHECK WIRE HARNESS (FUEL LID COURTESY SWITCH - DOOR ECU LH AND BODY GROUND)



(a) Disconnect the F19 switch and P25 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
F19-1 - P25-17 (FLSW)	Below 1 Ω

(c) Check the resistance between the F19 switch connector and body ground.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
F19-2 - Body ground	Below 1 Ω

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

OK

REPLACE POWER SLIDE DOOR ECU LH

22	PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Select the ACTIVE TEST and then check that the power slide door control motor and clutch LH operates.
HINT:
During the ACTIVE TEST, the intelligent tester sends a signal to the power slide door ECU LH to drive the motor and clutch. If the motor and clutch operate, the motor and clutch itself and the wire harness between the motor and clutch and the power slide door ECU LH are considered to be functioning normally.

OK (Power slide door ECU LH):

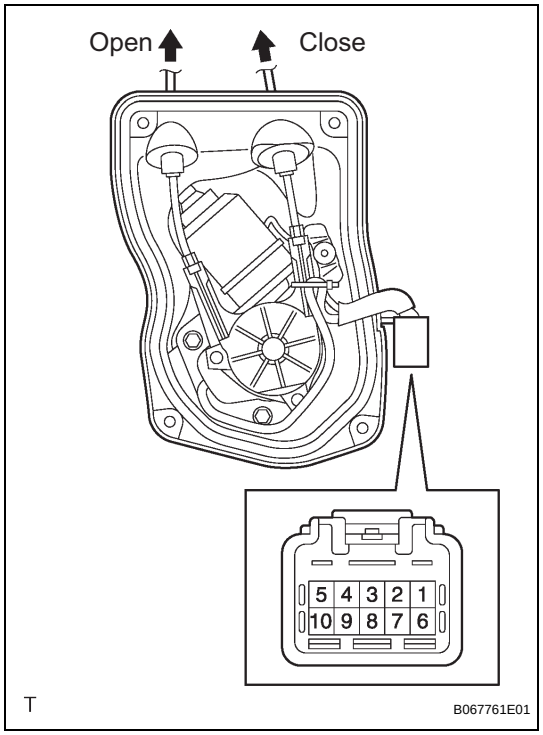
Item	Test Details	Diagnostic Note
PSD MOTOR	Power slide door control motor is in operation OFF / FORWARD / REVERAE	Clutch is OFF while power slide door motor is operating
PSD CLUTCH	Power slide door control clutch is release OFF / ON	Power slide door motor is OFF when clutch is ON

OK → **Go to step 25**

ED

NG

23 INSPECT SLIDE DOOR CONTROL MOTOR AND CLUTCH ASSEMBLY LH



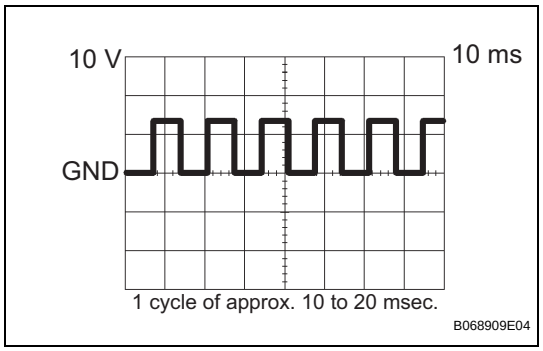
(a) Remove the motor and clutch.
(b) Connect the battery positive (+) lead to terminal 3 and battery negative (-) terminal lead to terminal 2.
(c) Apply battery voltage to the terminals and check the motor operation.
OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 8 Battery negative (-) → Terminal 7	Open
Battery positive (+) → Terminal 7 Battery negative (-) → Terminal 8	Close

(d) Check the resistance of the clutch terminals.
Resistance

Terminal No.	Specified Condition
2 - 3	4.0 Ω

(e) Reinstall the motor and clutch with the connector connected.



(f) Check the pulse of the pulse sensor.
(1) Using an oscilloscope, check the pulse generated when the door is manually opened and closed.
Reference

Terminal	Tool setting	Vehicle condition
5 - 9, 9 - 10	10 V/DIV., 10 ms/DIV.	Door moving

HINT:
A cycle of the pulse changes between approx. 10 to 20 msec. according to the speeds that the slide door is moving.
NOTICE:
When disconnecting the control motor and clutch, initialize the power slide door system (See page ED-15).

NG → **REPLACE SLIDE DOOR CONTROL MOTOR AND CLUTCH ASSEMBLY LH**

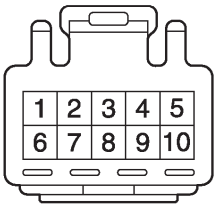
OK

ED

24	CHECK WIRE HARNESS (POWER SLIDE DOOR CONTROL MOTOR - POWER SLIDE DOOR ECU LH)

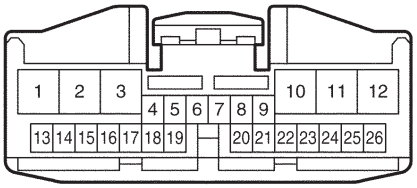
Wire Harness Side

P21
Power Slide Door Control Motor and Clutch LH



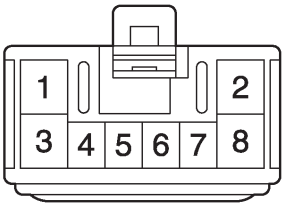
T

P25 Power Slide Door ECU LH



P

P26 Power Slide Door ECU LH



T

B068440E04

(a) Disconnect the P21 motor and clutch, the P25 and P26 ECU connectors.
(b) Check the resistance between the wire harness side connectors.

Resistance (Check for open circuit)

Terminal No.	Specified Condition
P21-9 - P25-23 (DSG)	Below 1 Ω
P21-4 - P25-26 (DSV)	
P21-5 - P25-25 (DS1)	
P21-10 - P25-24 (DS2)	
P21-3 - P26-7 (CL+)	
P21-2 - P26-6 (CL-)	
P21-8 - P26-1 (SD+)	
P21-7 - P26-3 (SD-)	

NG → **REPAIR OR REPLACE WIRE HARNESS**

OK

REPLACE POWER SLIDE DOOR ECU LH

ED

25	READ VALUE OF INTELLIGENT TESTER

(a) Using the intelligent tester, check the DATA LIST for proper functioning of the switches listed below.

OK (Power slide door ECU LH):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
POLE* SW	Power slide door lock pawl* position switch signal / ON or OFF	ON: Slide door is unlatched OFF: Slide door is latched	-

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
HALF SW	Power slide door lock half latch switch signal / ON or OFF	ON: Slide door is not completely closed OFF: Slide door is closed	-
FULL SW	Power slide door lock full latch switch signal / ON or OFF	ON: Slide door is open OFF: Slide door is closed	-
CLOSER POS SW	Power slide door lock closer position switch signal / ON or OFF	ON: Closer is not in the initial position and inside / outside handle is not pulled OFF: Closer is in the initial position and inside / outside handle is pulled	-

* "POLE" appears on the display of the intelligent tester, however the name of the part corresponding to the display of the tester is "pawl".

OK → **Go to step 28**

NG

26 INSPECT POWER SLIDE DOOR LOCK ASSEMBLY LH

NG → **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY LH**

OK

27 CHECK WIRE HARNESS (POWER SLIDE DOOR LOCK ASSEMBLY LH - POWER SLIDE DOOR ECU LH)

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

OK

REPLACE POWER SLIDE DOOR ECU LH

28 PERFORM ACTIVE TEST BY INTELLIGENT TESTER

(a) Select the ACTIVE TEST and then check that the slide door lock release motor LH operates.
HINT:
During the ACTIVE TEST, the intelligent tester sends a signal to the power slide door ECU LH to drive the release motor. If the release motor operates, the release motor itself and the wire harness between the release motor and power slide ECU LH are considered to be functioning normally.

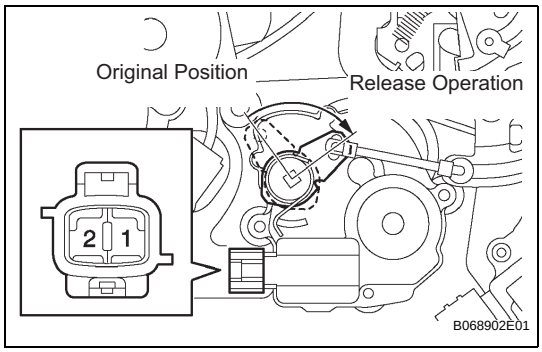
OK (Power slide door ECU LH):

Item	Test Details	Diagnostic Note
RELEASE ACT	Slide door lock release motor is release OFF / ON	-

OK → Go to step 31

NG

29 INSPECT SLIDE DOOR LOCK RELEASE MOTOR ASSEMBLY



(a) Apply battery voltage and inspect operation of the release motor.
OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Release operation
No battery voltage is applied	Original position

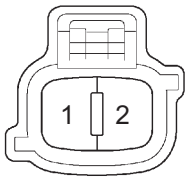
NG → **REPLACE SLIDE DOOR LOCK RELEASE MOTOR ASSEMBLY**

OK

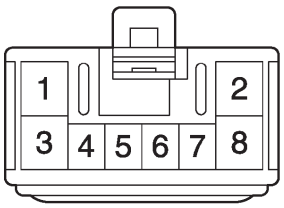
30 CHECK WIRE HARNESS (SLIDE DOOR LOCK RELEASE MOTOR LH - POWER SLIDE DOOR ECU LH)

Wire Harness Side

S21 Slide Door Lock Release Motor Assembly LH



P26 Power Slide Door ECU LH



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(a) Disconnect the S21 motor and P26 ECU connectors.
(b) Check the resistance between the wire harness side connectors.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
S21-2 - S26-5 (RACT)	Below 1 Ω

(c) Check the resistance between the S21 motor connector and body ground.
Resistance (Check for open circuit)

Terminal No.	Specified Condition
S21-1 - Body ground	Below 1 Ω

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

ED

OK

31 REPLACE POWER SLIDE DOOR ECU LH

(a) Check the power slide door for normal OPEN / CLOSE operation.

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

OK

SYSTEM NORMAL