

ACCESSORIES & EQUIPMENT

Slide Door Closer System (Diagnostic Codes & Circuit Tests) - Sienna

SLIDE DOOR CLOSER SYSTEM

DTC B2254: SLIDE DOOR CLOSER SWITCH RH MALFUNCTION

DESCRIPTION

This DTC is output when a half latch switch ON signal and full latch switch OFF signal are sent to the ECU simultaneously due to a switch malfunction.

DTC No.	DTC Detection Condition	Trouble Area
B2254	Slide door closer switch RH malfunction	• Power slide door lock assembly RH • Rear door wire RH • Slide door motor unit RH (Power slide door ECU RH)

WIRING DIAGRAM

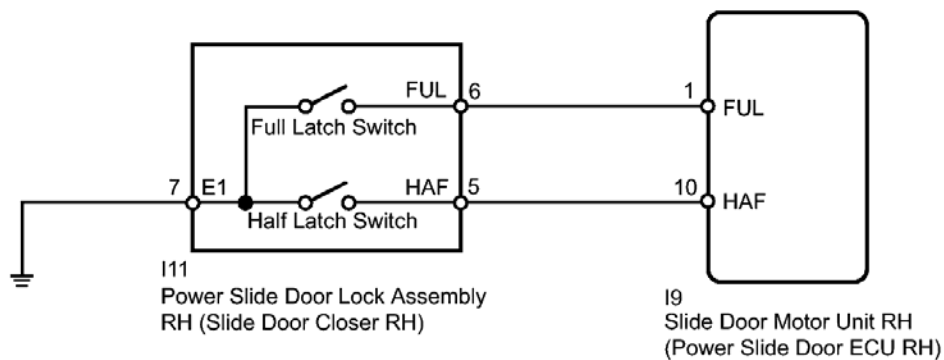


Fig. 1: Slide Door Closer Switch RH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM (POSITION SWITCH)

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Rear Right Door / Data List.
- Read the Data List according to the display on the Techstream.

REAR RIGHT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Half Switch	Status of the half latch switch / OFF or ON	ON: Slide door open --> just before half latched OFF: Slide door half latched --> fully closed	-
Full	Status of the full latch	ON: Slide door open --> just before fully	

Switch	switch / OFF or ON	closed OFF: Slide door fully closed	-
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OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 4

2. **INSPECT POWER SLIDE DOOR LOCK ASSEMBLY RH (FULL LATCH SWITCH, HALF LATCH SWITCH)**
 - a. Disconnect the I11 power slide door lock assembly RH connector.
 - b. Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly RH)

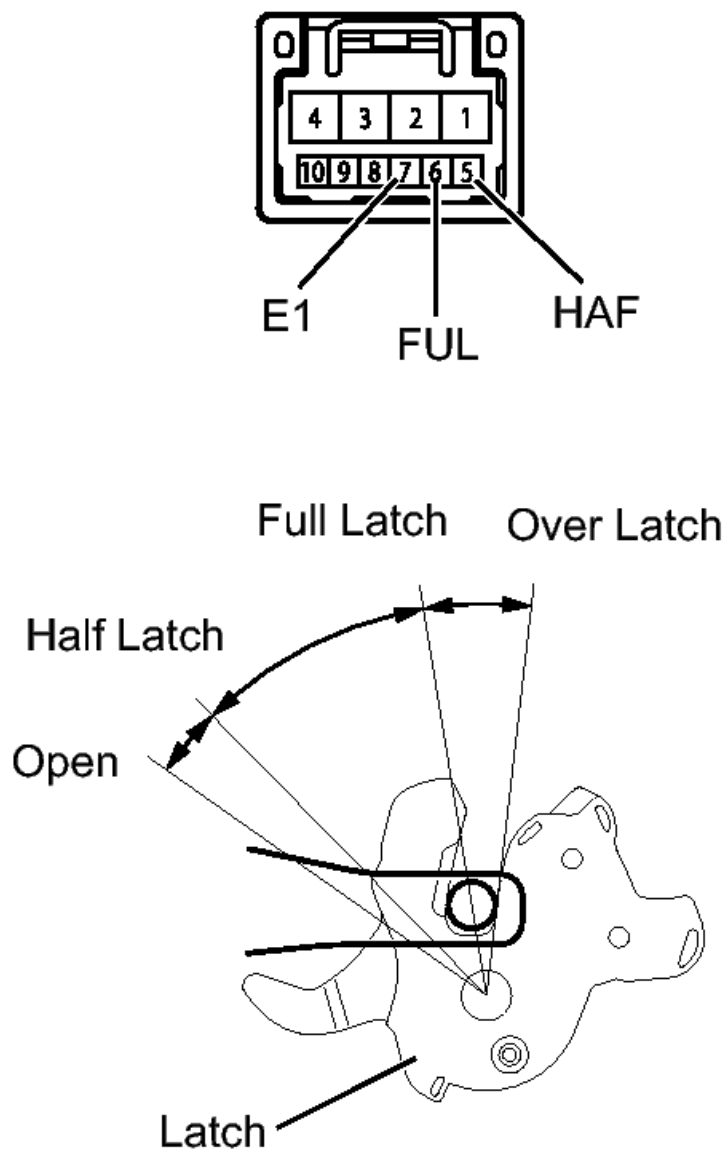


Fig. 2: Inspecting Power Slide Door Lock Assembly RH (Full Latch Switch, Half Latch Switch)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

Half Latch Switch

FULL LATCH SWITCH

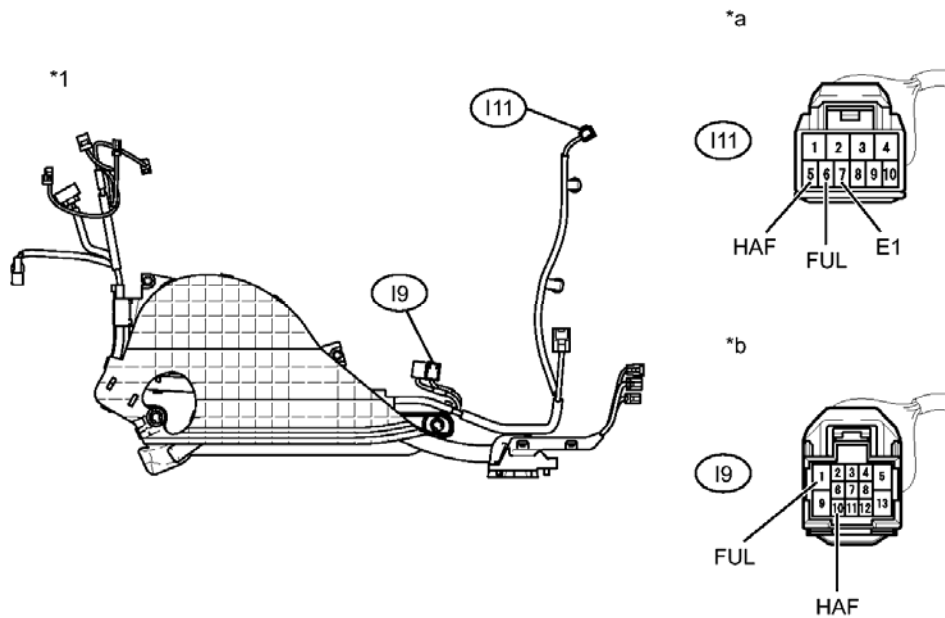
Tester Connection	Condition	Specified Condition
6 (FUL) - 7 (E1)	Open	Below 1 ohms
6 (FUL) - 7 (E1)	Half latch	Below 1 ohms
6 (FUL) - 7 (E1)	Full latch	10 kohms or higher
6 (FUL) - 7 (E1)	Over latch	10 kohms or higher

Tester Connection	Condition	Specified Condition
5 (HAF) - 7 (E1)	Open	Below 1 ohms
5 (HAF) - 7 (E1)	Half latch	10 kohms or higher
5 (HAF) - 7 (E1)	Full latch	10 kohms or higher
5 (HAF) - 7 (E1)	Over latch	10 kohms or higher

NG --> See step 5

OK: Go to next step

3. **CHECK REAR DOOR WIRE RH (POWER SLIDE DOOR LOCK ASSEMBLY RH - POWER SLIDE DOOR ECU RH)**
 - a. Disconnect the I9 power slide door ECU RH connector.
 - b. Disconnect the I11 power slide door lock assembly RH connector.
 - c. Measure the resistance according to the value(s) in the table below.



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Fig. 3: Checking Rear Door Wire RH (Power Slide Door Lock Assembly RH - Power Slide Door ECU RH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire RH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly RH)	*b	Front view of wire harness connector (to Power Slide Door ECU RH)

Standard Resistance

Tester Connection	Condition	Specified Condition
I11-6		Below 1

(FUL) - I9-1 (FUL)	Always	ohms
I11-5 (HAF) - I9-10 (HAF)	Always	Below 1 ohms
I11-7 (E1) - Body ground	Always	Below 1 ohms
I11-6 (FUL) - Body ground	Always	10 kohms or higher
I11-5 (HAF) - Body ground	Always	10 kohms or higher

NG --> See step 6

OK --> See step 4

4. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY RH. Refer to DISASSEMBLY**
6. **REPAIR OR REPLACE REAR DOOR WIRE RH. Refer to DISASSEMBLY**

DTC B2255: SLIDE DOOR CLOSER SWITCH LH MALFUNCTION

DESCRIPTION

This DTC is output when a half latch switch ON signal and full latch switch OFF signal are sent to the ECU simultaneously due to a switch malfunction.

DTC No.	DTC Detection Condition	Trouble Area
B2255	Slide door closer switch LH	• Power slide door lock assembly LH • Rear door wire LH

	malfunction	Slide door motor unit LH (Power slide door ECU LH)
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WIRING DIAGRAM

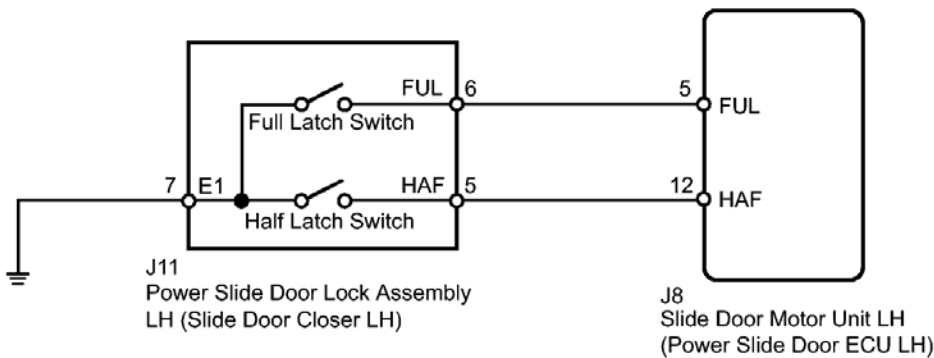


Fig. 4: Slide Door Closer Switch LH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **READ VALUE USING TECHSTREAM (POSITION SWITCH)**
 - a. Connect the Techstream to the DLC3.
 - b. Turn the ignition switch to ON.
 - c. Turn the Techstream on.
 - d. Enter the following menus: Body Electrical / Rear Left Door / Data List.
 - e. Read the Data List according to the display on the Techstream.

REAR LEFT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
		ON: Slide door open --> just before	

Half Switch	Status of the half latch switch / OFF or ON	half latched OFF: Slide door half latched --> fully closed	-
Full Switch	Status of the full latch switch / OFF or ON	ON: Slide door open --> just before fully closed OFF: Slide door fully closed	-

OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 4

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY LH (FULL LATCH SWITCH, HALF LATCH SWITCH)

- a. Disconnect the J11 power slide door lock assembly LH connector.
- b. Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly LH)

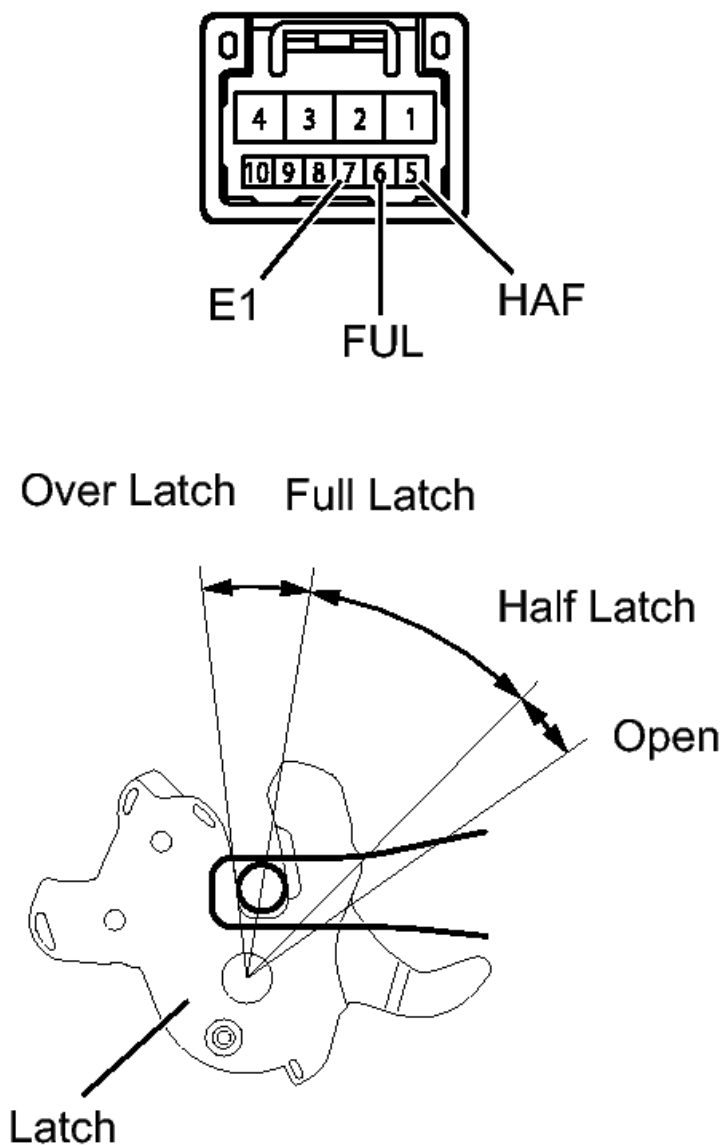


Fig. 5: Inspecting Power Slide Door Lock Assembly LH (Full Latch Switch, Half Latch Switch)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

Half Latch Switch

FULL LATCH SWITCH

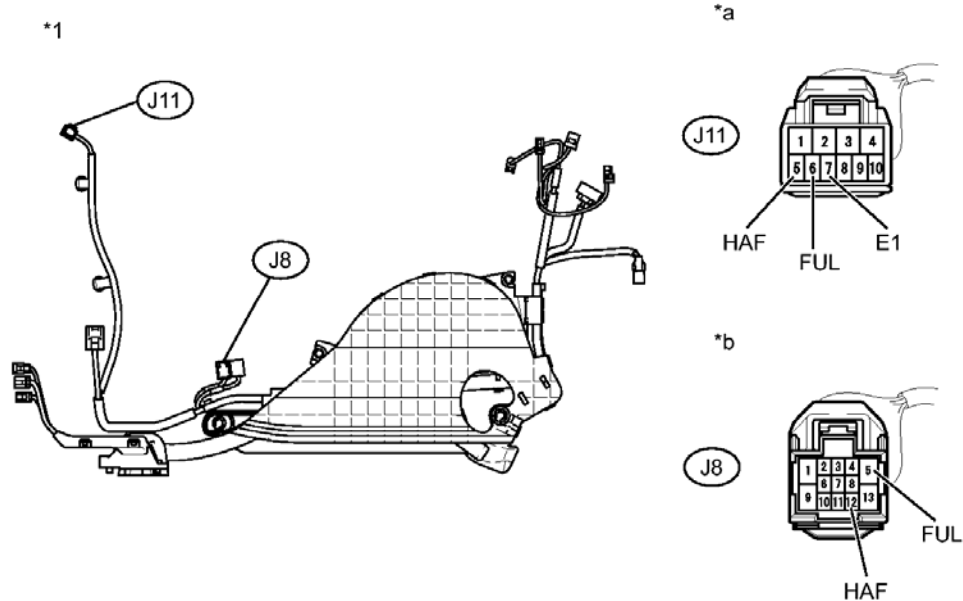
Tester Connection	Condition	Specified Condition
6 (FUL) - 7 (E1)	Open	Below 1 ohms
6 (FUL) - 7 (E1)	Half latch	Below 1 ohms
6 (FUL) - 7 (E1)	Full latch	10 kohms or higher
6 (FUL) - 7 (E1)	Over latch	10 kohms or higher

Tester Connection	Condition	Specified Condition
5 (HAF) - 7 (E1)	Open	Below 1 ohms
5 (HAF) - 7 (E1)	Half latch	10 kohms or higher
5 (HAF) - 7 (E1)	Full latch	10 kohms or higher
5 (HAF) - 7 (E1)	Over latch	10 kohms or higher

NG --> See step 5

OK: Go to next step

3. **CHECK REAR DOOR WIRE LH (POWER SLIDE DOOR LOCK ASSEMBLY LH - POWER SLIDE DOOR ECU LH)**
 - a. Disconnect the J8 power slide door ECU LH connector.
 - b. Disconnect the J11 power slide door lock assembly LH connector.
 - c. Measure the resistance according to the value(s) in the table below.



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Fig. 6: Checking Rear Door Wire LH (Power Slide Door Lock Assembly LH - Power Slide Door ECU LH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire LH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly LH)	*b	Front view of wire harness connector (to Power Slide Door ECU LH)

Standard Resistance

Tester Connection	Condition	Specified Condition
J11-6		Below 1

	Neutral Position (NPC)	-->	Close Operation	-->	Close Return Operation	-->	Neutral Position (NPC)
NPC SW	OFF	-->	ON	-->	ON	-->	OFF
NPR SW	OFF	-->	OFF	-->	OFF	-->	OFF

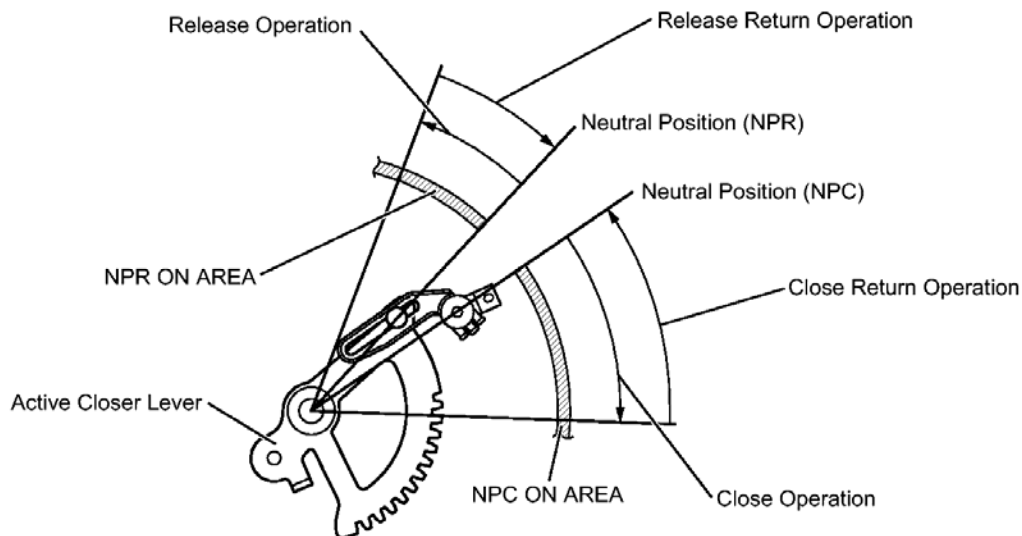


Fig. 7: Identifying Power Slide Door Neutral Closer Operation
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DTC No.	DTC Detection Condition	Trouble Area
B225E	- With the neutral position SW (NPC) ON, the neutral position SW (NPR) is simultaneously turned ON. - The close return operation continues for 1.4 seconds or more. - During the release return operation following release operation, after the neutral position SW (NPC) is OFF, the operation continues for 1.4 seconds or more.	- Power slide door lock assembly RH - Rear door wire RH - Slide door motor unit RH (Power slide door ECU RH)

WIRING DIAGRAM

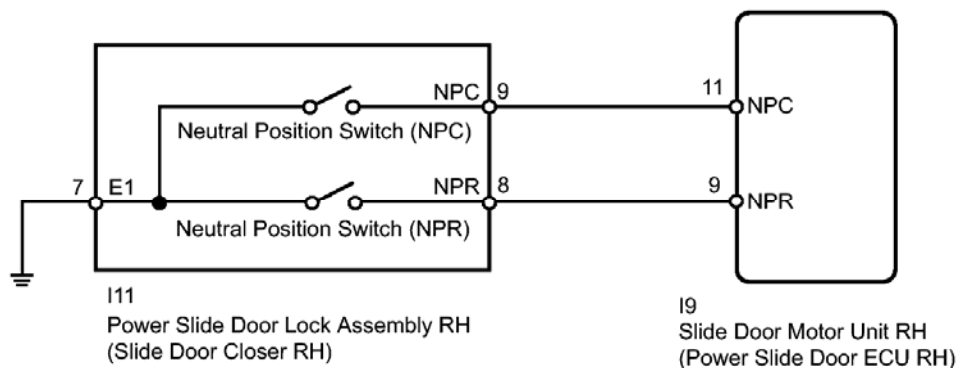


Fig. 8: Power Slide Door Neutral Closer Switch RH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM (POSITION SWITCH)

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Rear Right Door / Data List.
- Read the Data List according to the display on the Techstream.

REAR RIGHT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Neutral Position Close Switch	Status of the neutral position close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active closer mechanism	-

		is not engaged to close the door	
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 4

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY RH

- Remove the Power slide door lock assembly RH.
- Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly RH)

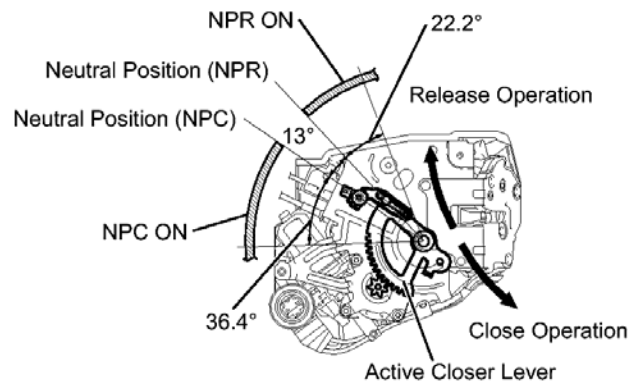
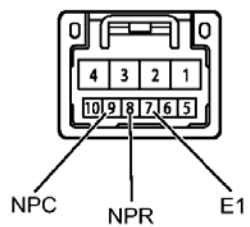


Fig. 9: Inspecting Power Slide Door Lock Assembly RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

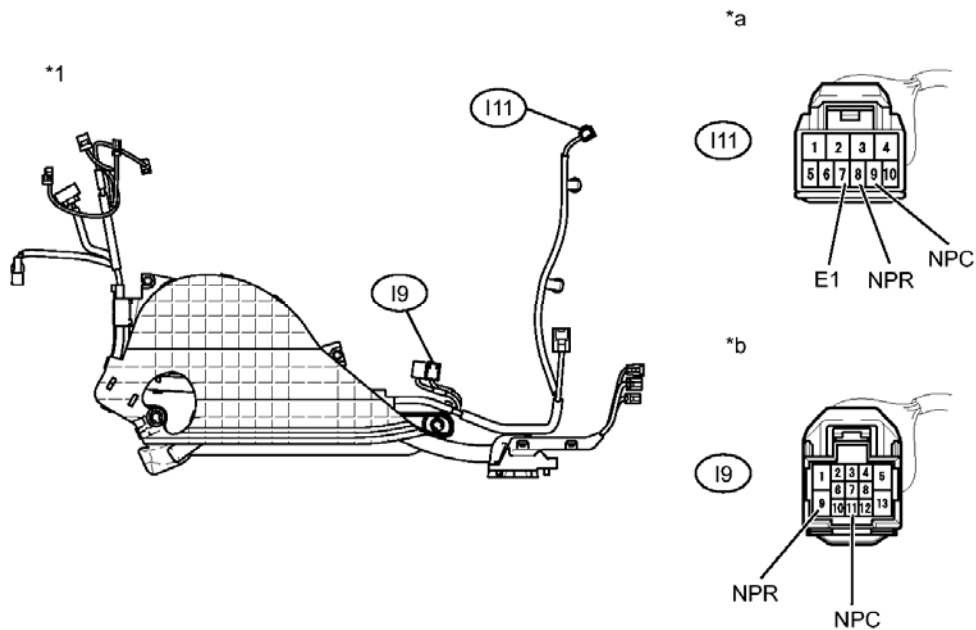
Standard Resistance

Tester Connection	Condition	Specified Condition
8 (NPR) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
9 (NPC) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
8 (NPR) - 7 (E1)	Active lever moved to close operation side	10 kohms or higher
9 (NPC) - 7 (E1)	Active lever moved to close operation side	Below 1 ohms

NG --> See step 5

OK: Go to next step

- 3. CHECK REAR DOOR WIRE RH (POWER SLIDE DOOR LOCK ASSEMBLY RH - POWER SLIDE DOOR ECU RH)**
 - a. Disconnect the I9 power slide door ECU RH connector.
 - b. Disconnect the I11 power slide door lock assembly RH connector.
 - c. Measure the resistance according to the value(s) in the table below.



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Fig. 10: Checking Rear Door Wire RH (Power Slide Door Lock Assembly RH - Power Slide Door ECU RH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire RH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly RH)	*b	Front view of wire harness connector (to Power Slide Door ECU RH)

Standard Resistance

Tester Connection	Condition	Specified Condition
I11-9		Below 1

(NPC) - I9-11 (NPC)	Always	ohms
I11-8 (NPR) - I9-9 (NPR)	Always	Below 1 ohms
I11-7 (E1) - Body ground	Always	Below 1 ohms
I11-9 (NPC) - Body ground	Always	10 kohms or higher
I11-8 (NPR) - Body ground	Always	10 kohms or higher

NG --> See step 7

OK --> See step 6

4. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY RH. Refer to DISASSEMBLY**
6. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**
7. **REPAIR OR REPLACE REAR DOOR WIRE RH. Refer to DISASSEMBLY**

DTC B225F: POWER SLIDE DOOR NEUTRAL CLOSER SWITCH LH MALFUNCTION DURING CLOSE OPERATION

DESCRIPTION

Refer to DTC B225E. Refer to **DESCRIPTION**.

DTC No.	DTC Detection Condition	Trouble Area
B225F	• With the neutral position SW (NPC) ON, the neutral position SW (NPR) is simultaneously turned ON. • The close return operation continues for 1.4 seconds or more. • During the release return operation following release operation, after the neutral position SW (NPC) is OFF, the operation continues for 1.4 seconds or more.	• Power slide door lock assembly LH • Rear door wire LH • Slide door motor unit LH (Power slide door ECU LH)

WIRING DIAGRAM

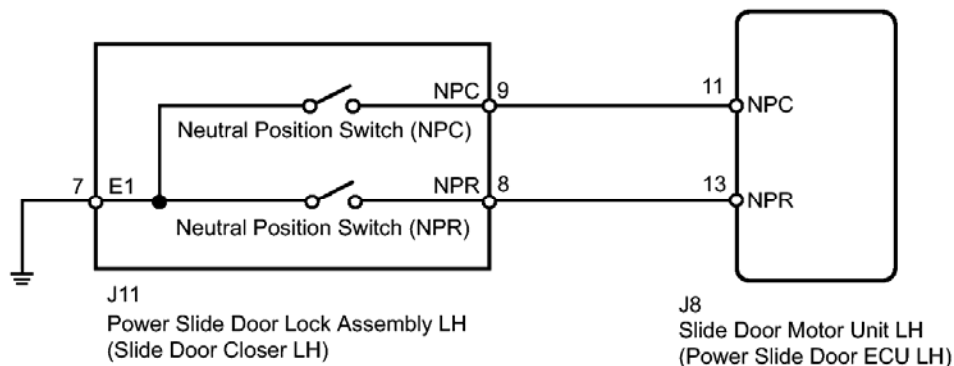


Fig. 11: Power Slide Door Neutral Closer Switch LH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **READ VALUE USING TECHSTREAM (POSITION SWITCH)**
 - a. Connect the Techstream to the DLC3.
 - b. Turn the ignition switch to ON.
 - c. Turn the Techstream on.
 - d. Enter the following menus: Body Electrical / Rear Left Door / Data List.
 - e. Read the Data List according to the display on the Techstream.

REAR LEFT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Neutral Position Close Switch	Status of the neutral position close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active	-

		closer mechanism is not engaged to close the door	
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 4

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY LH

- Remove the Power slide door lock assembly LH.
- Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly LH)

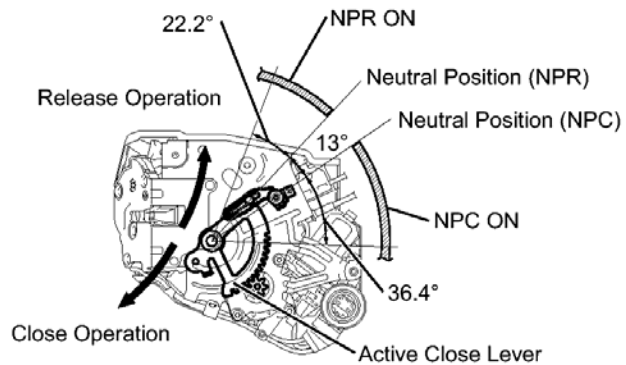
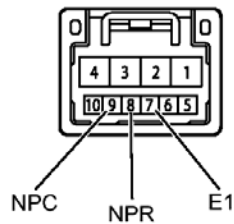


Fig. 12: Inspecting Power Slide Door Lock Assembly LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

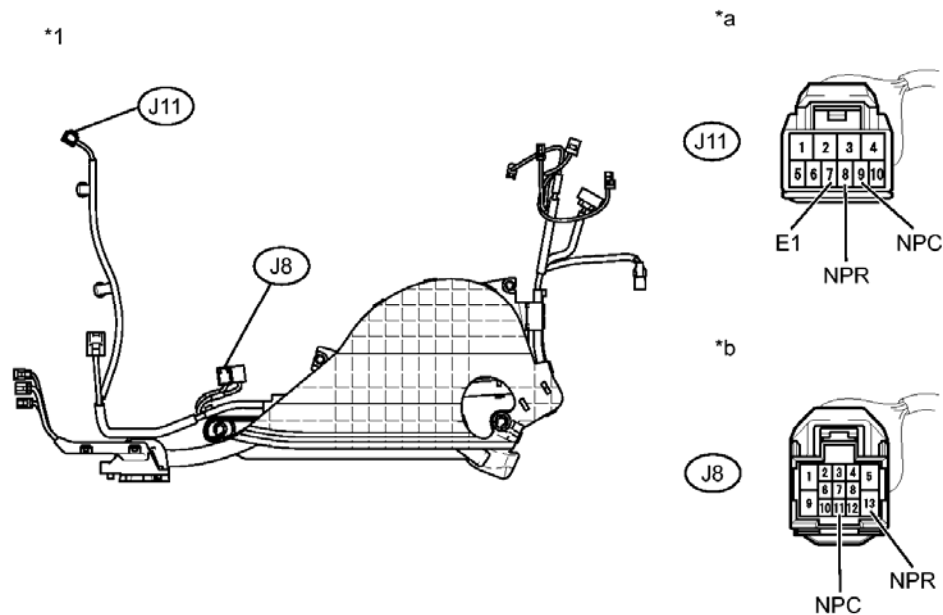
Tester Connection	Condition	Specified Condition
8 (NPR) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
9 (NPC) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
8 (NPR) - 7 (E1)	Active lever moved to close operation side	10 kohms or higher
9 (NPC) - 7 (E1)	Active lever moved to close operation side	Below 1 ohms

NG --> See step 5

OK: Go to next step

3. **CHECK REAR DOOR WIRE LH (POWER SLIDE DOOR LOCK ASSEMBLY LH - POWER SLIDE DOOR ECU LH)**
 - a. Disconnect the J8 power slide door ECU LH connector.
 - b. Disconnect the J11 power slide door lock assembly LH connector.

c. Measure the resistance according to the value(s) in the table below.



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Fig. 13: Checking Rear Door Wire LH (Power Slide Door Lock Assembly LH - Power Slide Door ECU LH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire LH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly LH)	*b	Front view of wire harness connector (to Power Slide Door ECU LH)

Standard Resistance

Tester	Condition	Specified
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Connection		Condition
J11-9 (NPC) - J8-11 (NPC)	Always	Below 1 ohms
J11-8 (NPR) - J8-13 (NPR)	Always	Below 1 ohms
J11-7 (E1) - Body ground	Always	Below 1 ohms
J11-9 (NPC) - Body ground	Always	10 kohms or higher
J11-8 (NPR) - Body ground	Always	10 kohms or higher

NG --> See step 7

OK --> See step 6

4. **REPLACE SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY LH. Refer to DISASSEMBLY**
6. **REPLACE SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH). Refer to DISASSEMBLY**
7. **REPAIR OR REPLACE REAR DOOR WIRE LH. Refer to DISASSEMBLY**

DTC B2260: POWER SLIDE DOOR NEUTRAL CLOSER SWITCH RH MALFUNCTION DURING OPEN OPERATION

DESCRIPTION

The neutral position switch is installed to the power slide door lock assembly, and detects the neutral position of the active closer lever. During a slide door open operation, if the neutral position cannot be accurately detected due to a malfunction in either the neutral position switch (NPR) or neutral position switch (NPC) signal, the power slide door ECU stores a DTC.

WARNING: A malfunction in the neutral position switch may cause the power slide door to open unexpectedly, even when the vehicle is in motion.

HINT:

After the release operation, the active closer lever returns to the neutral position area by means of the release return operation. During this operation, the neutral position SW (NPR) and neutral position SW (NPC) operate according to the following table.

	Neutral Position (NPR)	-->	Release Operation	-->	Release Return Operation	-->	Neutral Position (NPR)
NPC SW	OFF	-->	OFF	-->	OFF	-->	OFF
NPR SW	OFF	-->	ON	-->	ON	-->	OFF

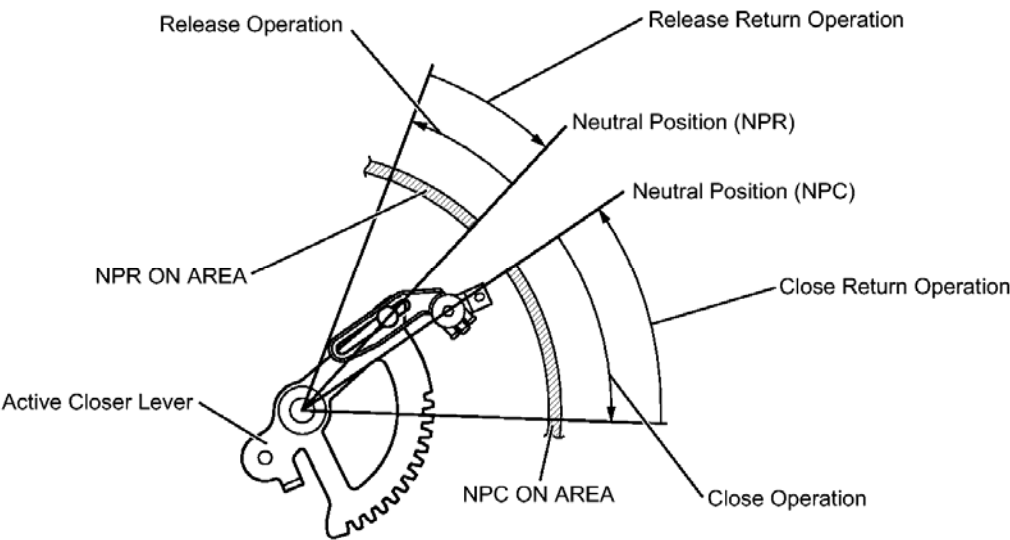


Fig. 14: Identifying Power Slide Door Neutral Closer Operation
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

DTC No.	DTC Detection Condition	Trouble Area
B2260	• The release operation begins with the neutral position SW (NPR) in the ON position. • With the neutral position SW (NPR) ON, the neutral position SW (NPC) is simultaneously turned ON. • The release return operation continues for 1.4 seconds or more.	• Power slide door lock assembly RH • Rear door wire RH • Slide door motor unit RH (Power slide door ECU RH)

WIRING DIAGRAM

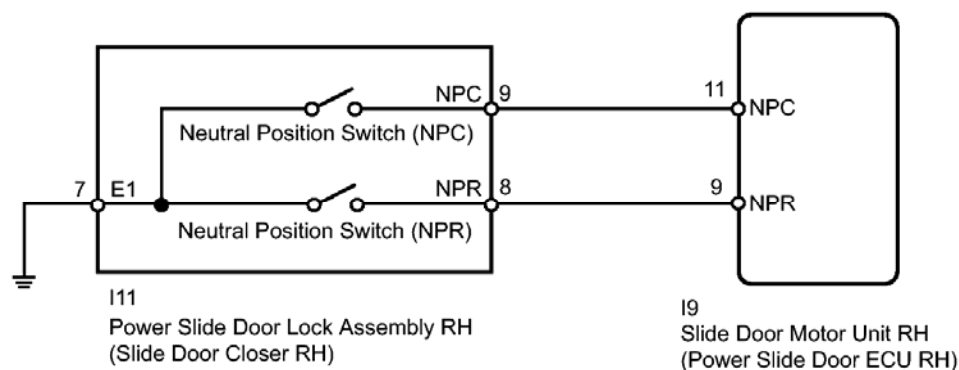


Fig. 15: Power Slide Door Neutral Closer Switch RH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM (POSITION SWITCH)

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Rear Right Door / Data List.
- Read the Data List according to the display on the Techstream.

REAR RIGHT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Neutral Position Close Switch	Status of the neutral position close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active closer mechanism	-

		is not engaged to close the door	
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 4

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY RH

- Remove the Power slide door lock assembly RH.
- Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly RH)

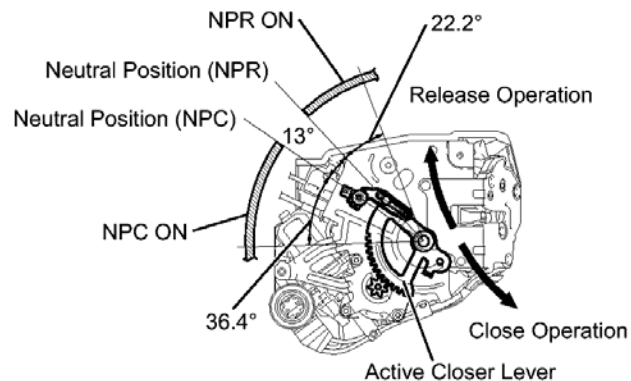
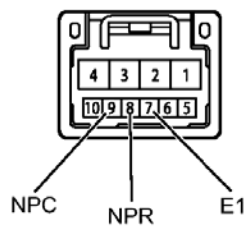


Fig. 16: Inspecting Power Slide Door Lock Assembly RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

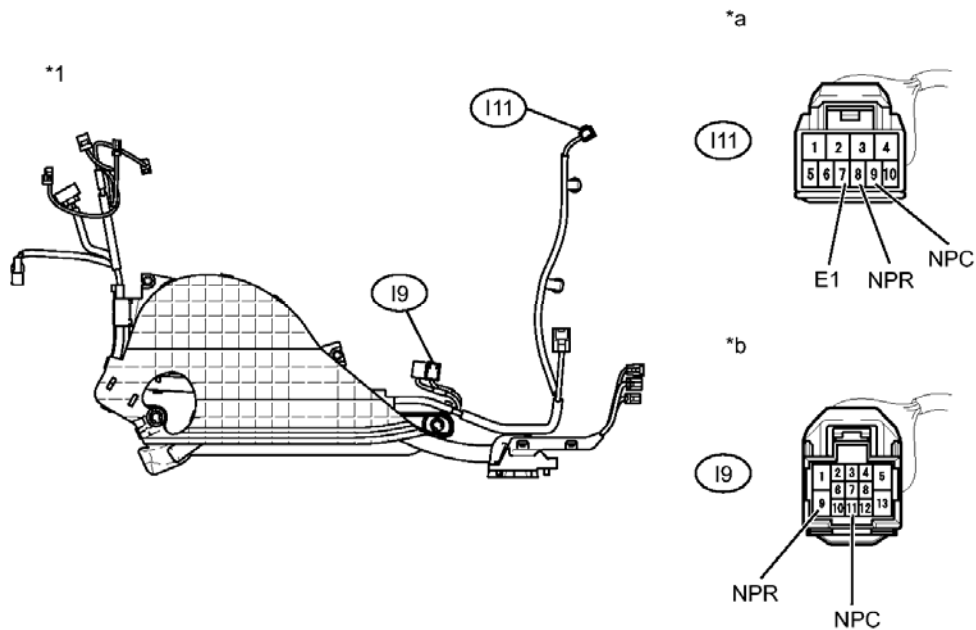
Standard Resistance

Tester Connection	Condition	Specified Condition
8 (NPR) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
9 (NPC) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
8 (NPR) - 7 (E1)	Active lever moved to release operation side	Below 1 ohms
9 (NPC) - 7 (E1)	Active lever moved to release operation side	10 kohms or higher

NG --> See step 5

OK: Go to next step

3. **CHECK REAR DOOR WIRE RH (POWER SLIDE DOOR LOCK ASSEMBLY RH - POWER SLIDE DOOR ECU RH)**
 - a. Disconnect the I9 power slide door ECU RH connector.
 - b. Disconnect the I11 power slide door lock assembly RH connector.
 - c. Measure the resistance according to the value(s) in the table below.



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Fig. 17: Checking Rear Door Wire RH (Power Slide Door Lock Assembly RH - Power Slide Door ECU RH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire RH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly RH)	*b	Front view of wire harness connector (to Power Slide Door ECU RH)

Standard Resistance

Tester Connection	Condition	Specified Condition
I11-9		Below 1

(NPC) - I9-11 (NPC)	Always	ohms
I11-8 (NPR) - I9-9 (NPR)	Always	Below 1 ohms
I11-7 (E1) - Body ground	Always	Below 1 ohms
I11-9 (NPC) - Body ground	Always	10 kohms or higher
I11-8 (NPR) - Body ground	Always	10 kohms or higher

NG --> See step 7

OK --> See step 6

4. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY RH. Refer to DISASSEMBLY**
6. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**
7. **REPAIR OR REPLACE REAR DOOR WIRE RH. Refer to DISASSEMBLY**

DTC B2261: POWER SLIDE DOOR NEUTRAL CLOSER SWITCH LH MALFUNCTION DURING OPEN OPERATION

DESCRIPTION

Refer to DTC B2260. Refer to **DESCRIPTION**.

DTC No.	DTC Detection Condition	Trouble Area
B2261	• The release operation begins with the neutral position SW (NPR) in the ON position. • With the neutral position SW (NPR) ON, the neutral position SW (NPC) is simultaneously turned ON. • The release return operation continues for 1.4 seconds or more.	• Power slide door lock assembly LH • Rear door wire LH • Slide door motor unit LH (Power slide door ECU LH)

WIRING DIAGRAM

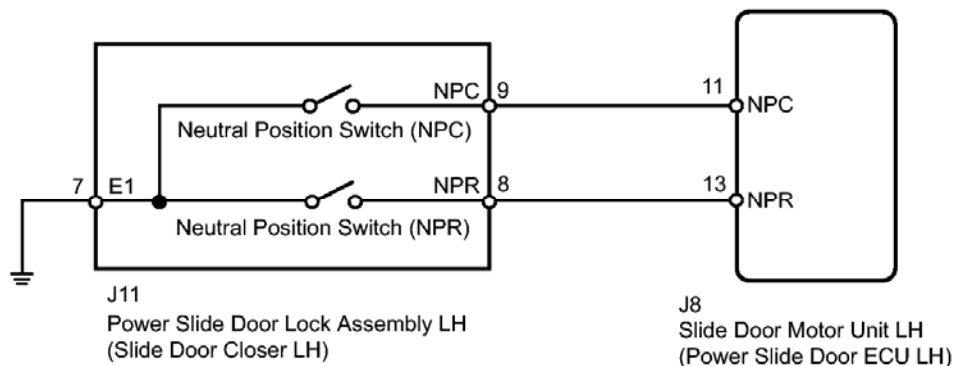


Fig. 18: Power Slide Door Neutral Closer Switch LH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM (POSITION SWITCH)

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Rear Left Door / Data List.
- Read the Data List according to the display on the Techstream.

REAR LEFT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Neutral Position Close Switch	Status of the neutral position close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active	-

		closer mechanism is not engaged to close the door	
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 4

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY LH

- Remove the Power slide door lock assembly LH.
- Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly LH)

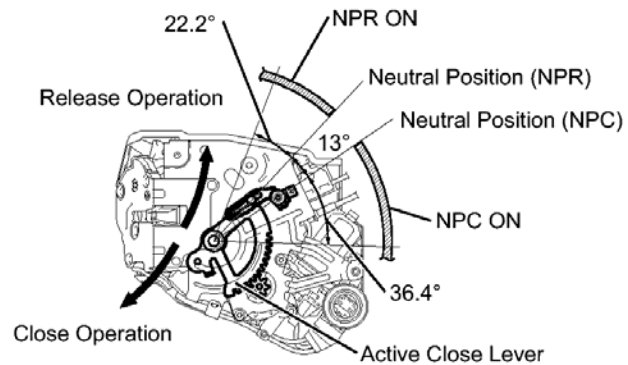
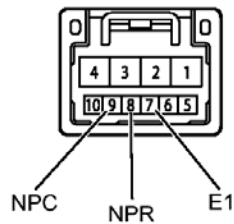


Fig. 19: Inspecting Power Slide Door Lock Assembly LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

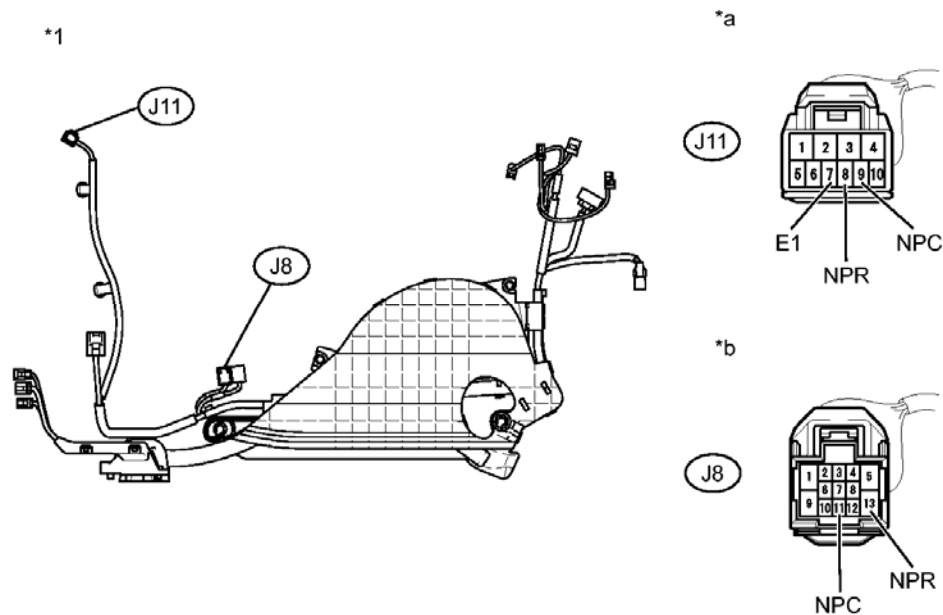
Tester Connection	Condition	Specified Condition
8 (NPR) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
9 (NPC) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
8 (NPR) - 7 (E1)	Active lever moved to release operation side	Below 1 ohms
9 (NPC) - 7 (E1)	Active lever moved to release operation side	10 kohms or higher

NG --> See step 5

OK: Go to next step

3. **CHECK REAR DOOR WIRE LH (POWER SLIDE DOOR LOCK ASSEMBLY LH - POWER SLIDE DOOR ECU LH)**
 - a. Disconnect the J8 power slide door ECU LH connector.
 - b. Disconnect the J11 power slide door lock assembly LH connector.

c. Measure the resistance according to the value(s) in the table below.



P

Fig. 20: Checking Rear Door Wire LH (Power Slide Door Lock Assembly LH - Power Slide Door ECU LH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire LH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly LH)	*b	Front view of wire harness connector (to Power Slide Door ECU LH)

Standard Resistance

Tester	Condition	Specified
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Connection		Condition
J11-9 (NPC) - J8-11 (NPC)	Always	Below 1 ohms
J11-8 (NPR) - J8-13 (NPR)	Always	Below 1 ohms
J11-7 (E1) - Body ground	Always	Below 1 ohms
J11-9 (NPC) - Body ground	Always	10 kohms or higher
J11-8 (NPR) - Body ground	Always	10 kohms or higher

NG --> See step 7

OK --> See step 6

4. **REPLACE SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY LH. Refer to DISASSEMBLY**
6. **REPLACE SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH). Refer to DISASSEMBLY**
7. **REPAIR OR REPLACE REAR DOOR WIRE LH. Refer to DISASSEMBLY**

CIRCUIT TESTS

Slide Door Lock Motor LH Circuit

DESCRIPTION

The power slide door ECU controls the slide door lock motor to open/close the slide door. This ECU applies current to terminals DC+ and DC- to operate the motor to close the door. It reverses the direction of the current to operate the motor to open the door.

WIRING DIAGRAM

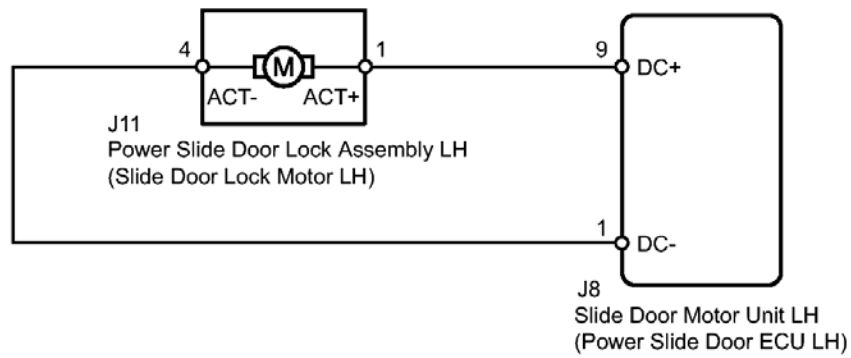


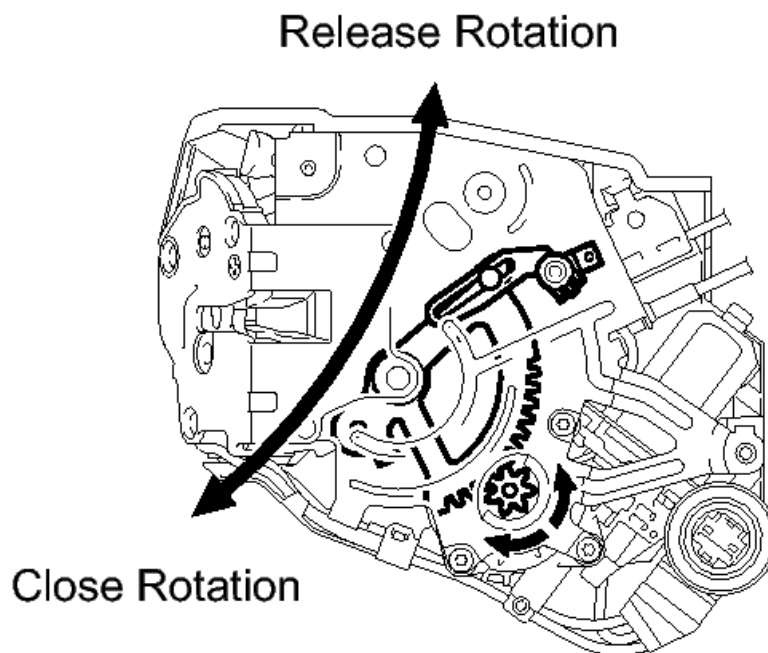
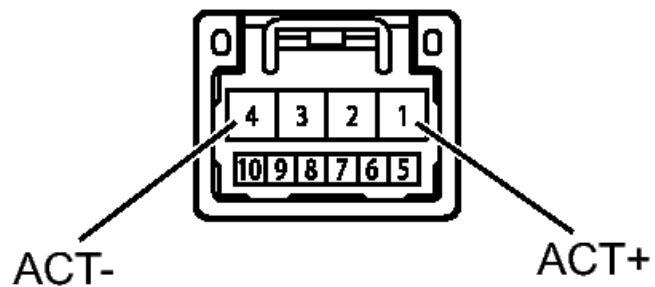
Fig. 21: Slide Door Lock Motor LH Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. **INSPECT POWER SLIDE DOOR LOCK ASSEMBLY LH**
 - a. Disconnect the J11 power slide door lock assembly LH connector.
 - b. Check the operation of the slide door lock motor.

Component without harness connected:
(Power Slide Door Lock Assembly LH)



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Fig. 22: Inspecting Power Slide Door Lock Assembly LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK

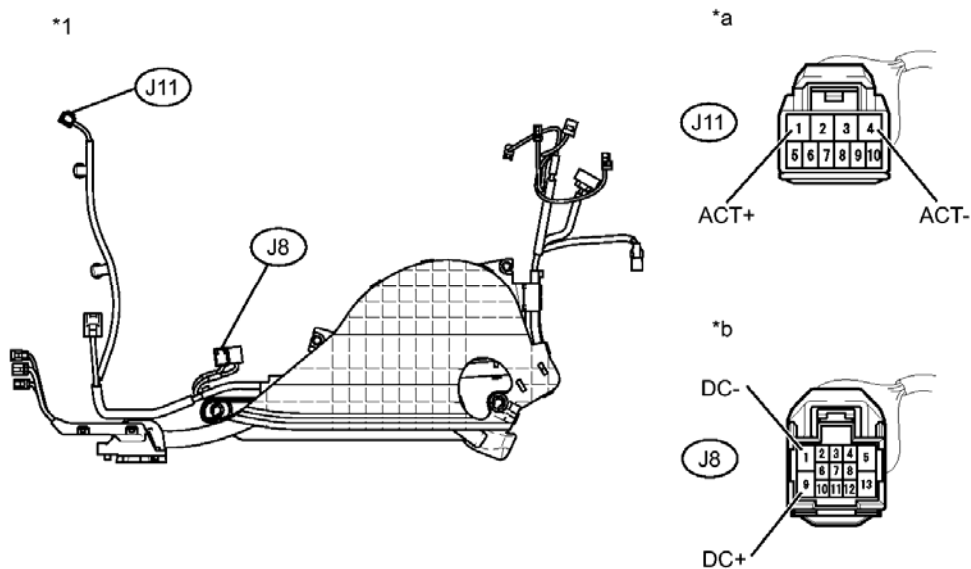
Measurement Condition	Specified Condition
Battery positive (+) -- > Terminal 1 (ACT+) Battery negative (-) -- > Terminal 4 (ACT-)	Close rotation
Battery positive (+) -- > Terminal 4 (ACT-) Battery negative (-) -- > Terminal 1 (ACT+)	Release rotation

NG --> See step 3

OK: Go to next step

2. CHECK REAR DOOR WIRE LH (POWER SLIDE DOOR LOCK ASSEMBLY LH - POWER SLIDE DOOR ECU LH)

- a. Disconnect the J8 power slide door ECU LH connector.
- b. Disconnect the J11 power slide door lock assembly LH connector.
- c. Measure the resistance according to the value(s) in the table below.



P

Fig. 23: Checking Rear Door Wire LH (Power Slide Door Lock Assembly LH - Power Slide Door ECU LH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire LH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly LH)	*b	Front view of wire harness connector (to Power Slide Door ECU LH)

Standard Resistance

Tester Connection	Condition	Specified Condition
J11-1		Below 1

(ACT+) - J8-9 (DC+)	Always	ohms
J11-4 (ACT-) - J8-1 (DC-)	Always	Below 1 ohms
J11-1 (ACT+) - Body ground	Always	10 kohms or higher
J11-4 (ACT-) - Body ground	Always	10 kohms or higher

NG --> See step 4

OK --> See step 5

3. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY LH. Refer to DISASSEMBLY**
4. **REPAIR OR REPLACE REAR DOOR WIRE LH. Refer to DISASSEMBLY**
5. **REPLACE SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH). Refer to DISASSEMBLY**

Slide Door Lock Motor RH Circuit

DESCRIPTION

The power slide door ECU controls the slide door lock motor to open/close the rear lock for the slide door. This ECU applies current to terminals DC+ and DC- to operate the motor to close the lock. It reverses the direction of the current to operate the motor to open the lock.

WIRING DIAGRAM

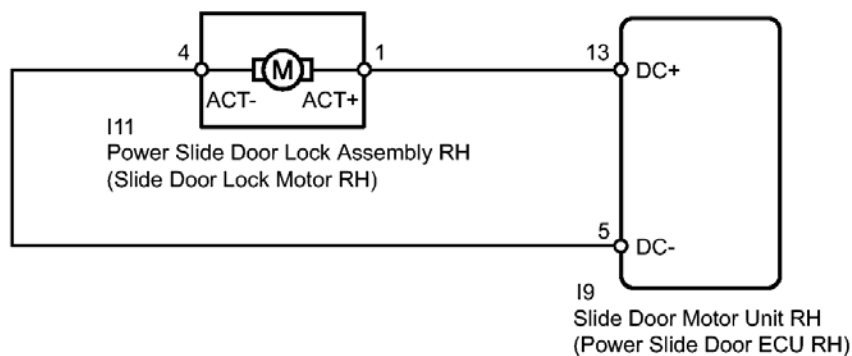


Fig. 24: Slide Door Lock Motor RH Circuit - Wiring Diagram

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

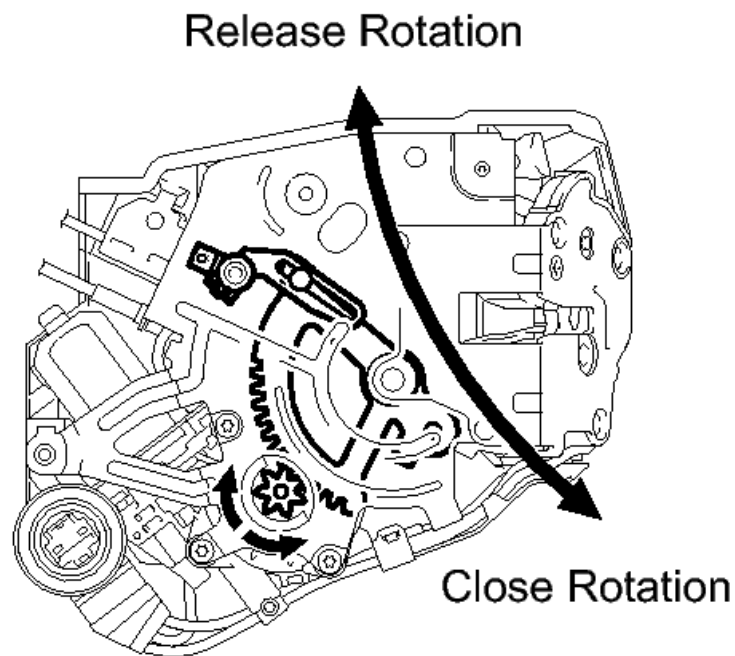
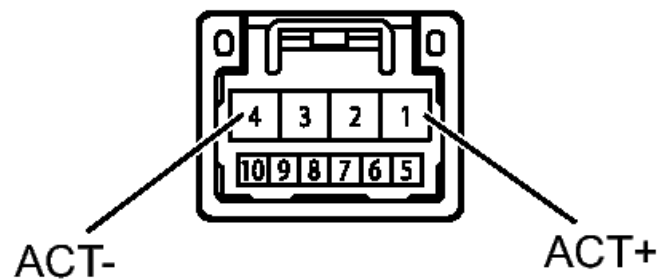
INSPECTION PROCEDURE

PROCEDURE

1. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY RH

- a. Disconnect the I11 power slide door lock assembly RH connector.
- b. Check the operation of the slide door lock motor.

Component without harness connected:
(Power Slide Door Lock Assembly RH)



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Fig. 25: Inspecting Power Slide Door Lock Assembly RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

OK

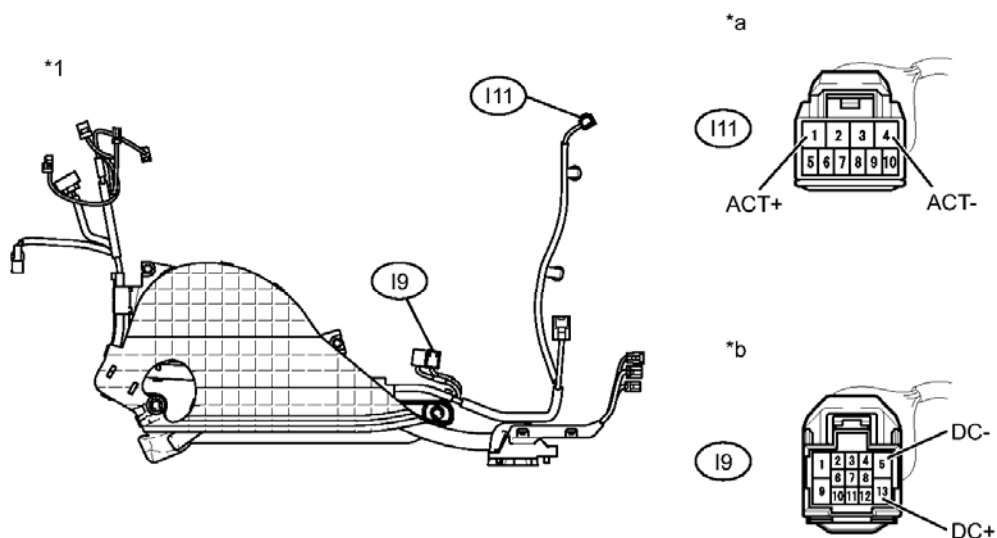
Measurement Condition	Specified Condition
Battery positive (+) -- > Terminal 1 (ACT+) Battery negative (-) -- > Terminal 4 (ACT-)	Close rotation
Battery positive (+) -- > Terminal 4 (ACT-) Battery negative (-) -- > Terminal 1 (ACT+)	Release rotation

NG --> See step 3

OK: Go to next step

2. CHECK REAR DOOR WIRE RH (POWER SLIDE DOOR LOCK ASSEMBLY RH - POWER SLIDE DOOR ECU RH)

- a. Disconnect the I9 power slide door ECU RH connector.
- b. Disconnect the I11 power slide door lock assembly RH connector.
- c. Measure the resistance according to the value(s) in the table below.



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Fig. 26: Checking Rear Door Wire RH (Power Slide Door Lock Assembly RH - Power Slide Door ECU RH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire RH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly RH)	*b	Front view of wire harness connector (to Power Slide Door ECU RH)

Standard Resistance

Tester Connection	Condition	Specified Condition
I11-1		

(ACT+) - I9-13 (DC+)	Always	Below 1 ohms
I11-4 (ACT-) - I9-5 (DC-)	Always	Below 1 ohms
I11-1 (ACT+) - Body ground	Always	10 kohms or higher
I11-4 (ACT-) - Body ground	Always	10 kohms or higher

NG --> See step 4

OK --> See step 5

3. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY RH. Refer to DISASSEMBLY**
4. **REPAIR OR REPLACE REAR DOOR WIRE RH. Refer to DISASSEMBLY**
5. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**

Slide Door Closer Position Switch LH Circuit

DESCRIPTION

The switch turns on when the slide door is opened and turns off when the door is closed. Slide door position state signals are sent to the power slide door ECU.

WIRING DIAGRAM

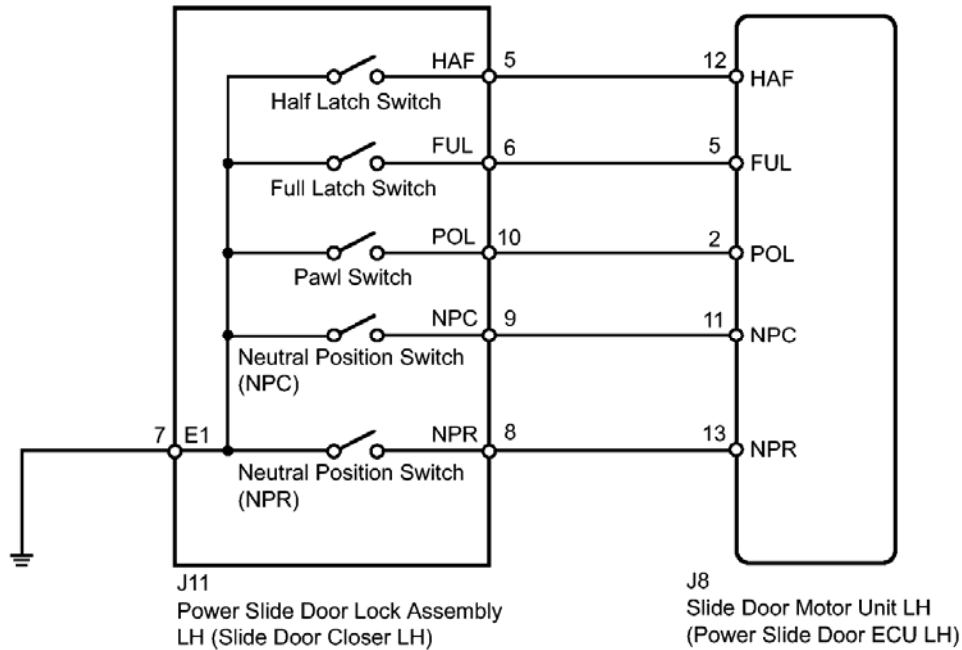


Fig. 27: Slide Door Closer Position Switch LH Circuit - Wiring Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

1. READ VALUE USING TECHSTREAM (POSITION SWITCH)

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Rear Left Door / Data List.
- Read the Data List according to the display on the Techstream.

REAR LEFT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Pawl	Status of the pawl position	ON: Slide door open --> half latched or slide door half latched --> fully	-

Switch	switch / OFF or ON	closed OFF: Slide door fully open, closed or half latched	
Half Switch	Status of the half latch switch / OFF or ON	ON: Slide door open --> just before half latched OFF: Slide door half latched --> fully closed	-
Full Switch	Status of the full latch switch / OFF or ON	ON: Slide door open --> just before fully closed OFF: Slide door fully closed	-
Neutral Position Close Switch	Status of the neutral position close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active closer mechanism is not engaged to close the door	-
		ON: During latch release at start of	

Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	open or close operation OFF: Except during latch release at start of open or close operation	-
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OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 7

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY LH

Component without harness connected:
(Power Slide Door Lock Assembly LH)

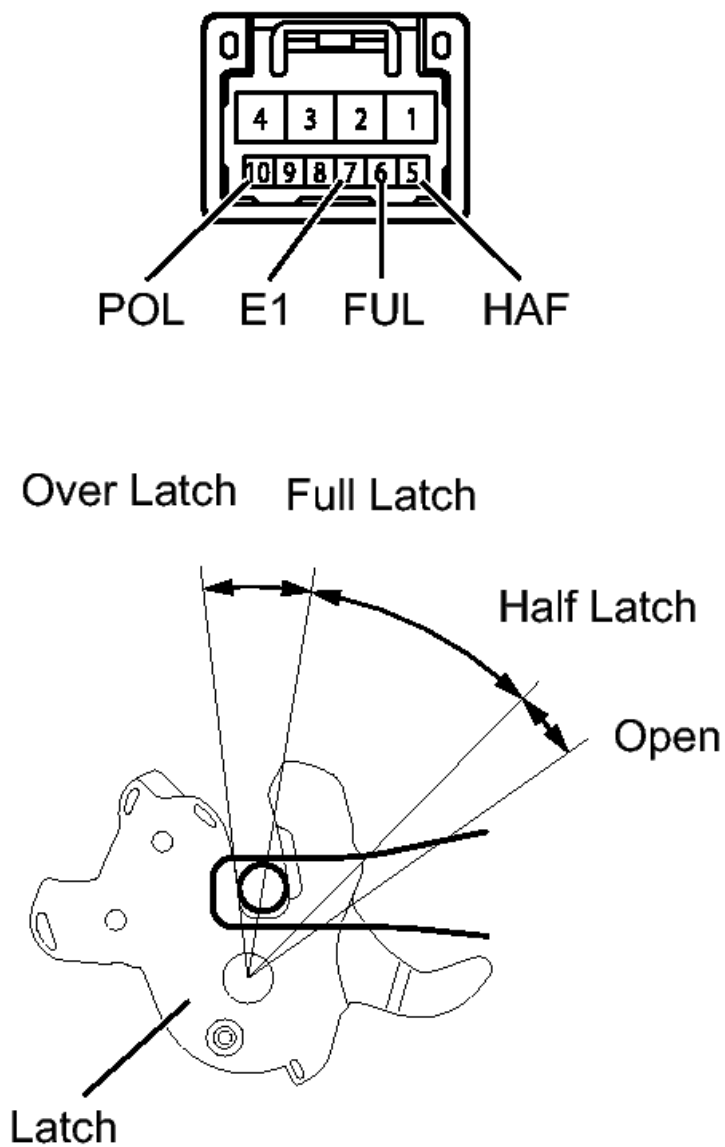


Fig. 28: Inspecting Power Slide Door Lock Assembly LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Disconnect the J11 power slide door lock assembly LH connector.
- Measure the resistance according to the value(s) in the table below.

Standard Resistance

Half Latch Switch

Pawl Switch

FULL LATCH SWITCH

Tester Connection	Condition	Specified Condition
6 (FUL) - 7 (E1)	Open	Below 1 ohms
6 (FUL) - 7 (E1)	Half latch	Below 1 ohms
6 (FUL) - 7 (E1)	Full latch	10 kohms or higher
6 (FUL) - 7 (E1)	Over latch	10 kohms or higher

Tester Connection	Condition	Specified Condition
5 (HAF) - 7 (E1)	Open	Below 1 ohms
5 (HAF) - 7 (E1)	Half latch	10 kohms or higher
5 (HAF) - 7 (E1)	Full latch	10 kohms or higher
5 (HAF) - 7 (E1)	Over latch	10 kohms or higher

Tester Connection	Condition	Specified Condition
10 (POL) - 7 (E1)	Open	10 kohms or higher
10 (POL) - 7 (E1)	Between open and half latch	10 kohms or higher -> Below 1 ohms
10 (POL) - 7 (E1)	Half latch	10 kohms or higher
10 (POL) - 7 (E1)	Between half latch and full latch	10 kohms or higher -> Below 1 ohms
10 (POL) - 7 (E1)	Full latch	10 kohms or higher

10 (POL) - 7 (E1)	Over latch	10 kohms or higher
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- c. Remove the power door lock assembly LH.
- d. Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly LH)

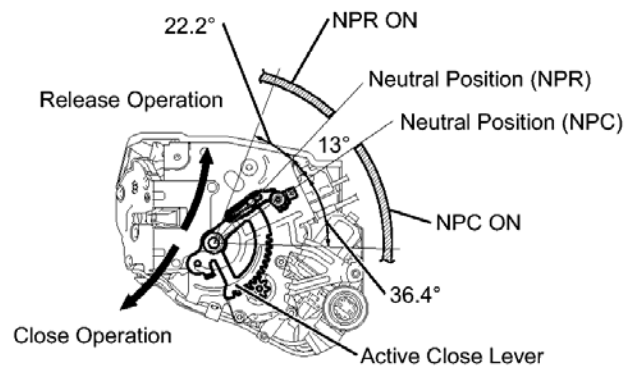
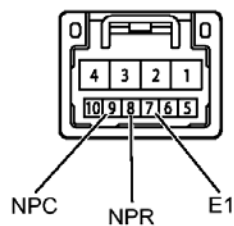


Fig. 29: Inspecting Power Slide Door Lock Assembly LH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

NEUTRAL POSITION SWITCH (NPR)

Tester Connection	Condition	Specified Condition
8 (NPR) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
8 (NPR) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
8 (NPR) - 7 (E1)	Active lever moved to release operation side	Below 1 ohms
8 (NPR) - 7 (E1)	Active lever moved to close operation side	10 kohms or higher

NEUTRAL POSITION SWITCH (NPC)

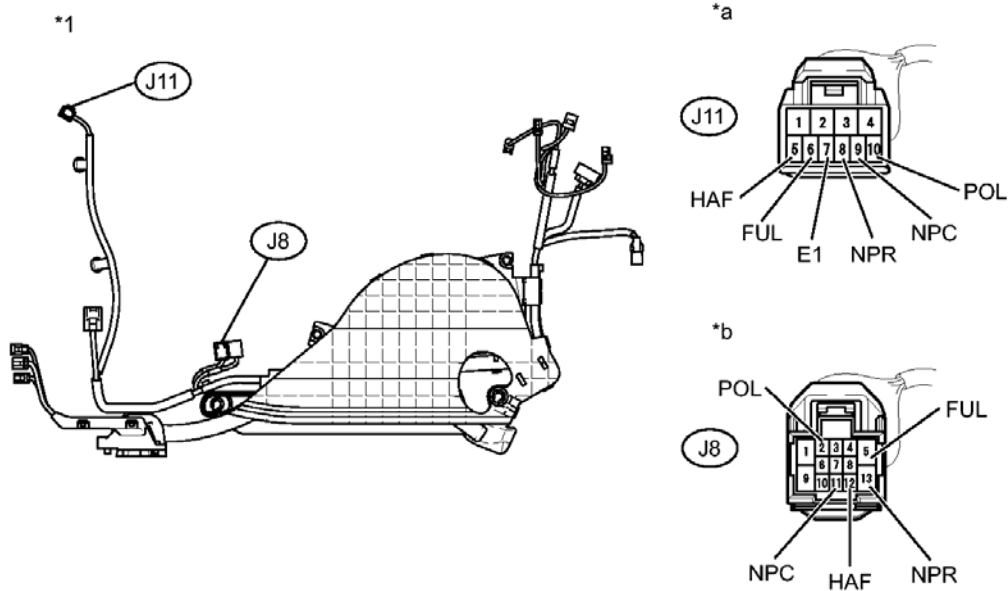
Tester Connection	Condition	Specified Condition
9 (NPC) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
9 (NPC) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
9 (NPC) - 7 (E1)	Active lever moved to release operation side	10 kohms or higher
9 (NPC) - 7 (E1)	Active lever moved to close operation side	Below 1 ohms

NG --> See step 5

OK: Go to next step

3. CHECK REAR DOOR WIRE LH (POWER SLIDE DOOR LOCK ASSEMBLY LH - POWER SLIDE DOOR ECU LH)

- a. Disconnect the J8 power slide door ECU LH connector.
- b. Disconnect the J11 power slide door lock assembly LH connector.
- c. Measure the resistance according to the value(s) in the table below.



P

Fig. 30: Checking Rear Door Wire LH (Power Slide Door Lock Assembly LH - Power Slide Door ECU LH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire LH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly LH)	*b	Front view of wire harness connector (to Power Slide Door ECU LH)

Standard Resistance

Tester Connection	Condition	Specified Condition
J11-5		Below 1

(HAF) - J8-12 (HAF)	Always	ohms
J11-6 (FUL) - J8-5 (FUL)	Always	Below 1 ohms
J11-8 (NPR) - J8-13 (NPR)	Always	Below 1 ohms
J11-9 (NPC) - J8-11 (NPC)	Always	Below 1 ohms
J11-10 (POL) - J8-2 (POL)	Always	Below 1 ohms
J11-7 (E1) - Body ground	Always	Below 1 ohms
J11-5 (HAF) - Body ground	Always	10 kohms or higher
J11-6 (FUL) - Body ground	Always	10 kohms or higher
J11-8 (NPR) - Body ground	Always	10 kohms or higher
J11-9 (NPC) - Body ground	Always	10 kohms or higher
J11-10 (POL) - Body ground	Always	10 kohms or higher

NG --> See step 6

OK --> See step 4

4. **REPLACE SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY LH. Refer to DISASSEMBLY**
6. **REPAIR OR REPLACE REAR DOOR WIRE LH. Refer to DISASSEMBLY**

7. PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE. Refer to PROBLEM SYMPTOMS TABLE

Slide Door Closer Position Switch RH Circuit

DESCRIPTION

The switch turns on when the slide door is opened and turns off when the door is closed. Slide door position state signals are sent to the power slide door ECU RH.

WIRING DIAGRAM

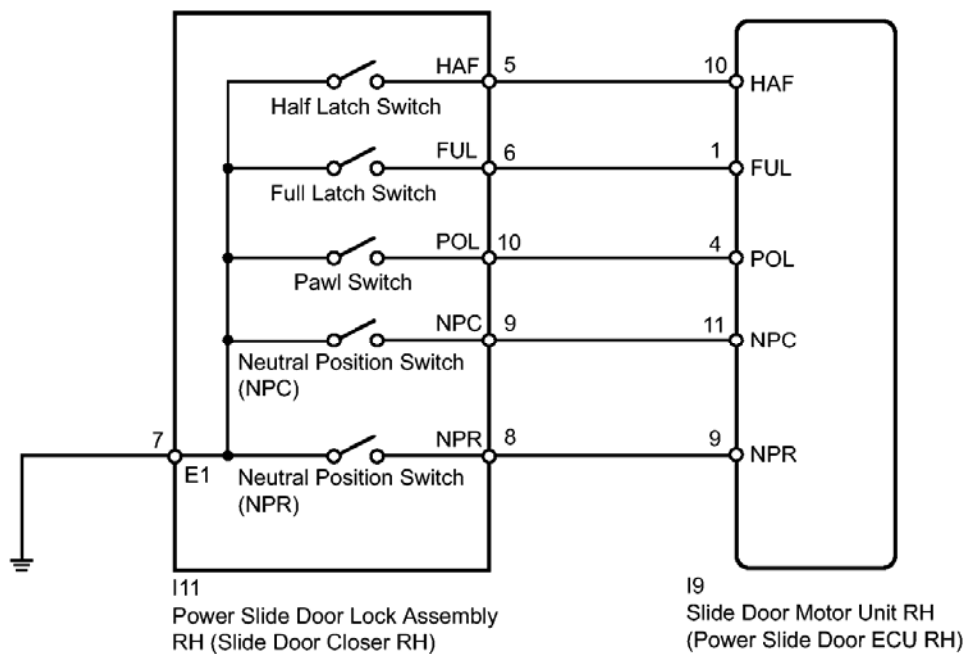


Fig. 31: Slide Door Closer Position Switch RH Circuit - Wiring Diagram
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

INSPECTION PROCEDURE

PROCEDURE

- 1. READ VALUE USING TECHSTREAM (POSITION SWITCH)**
 - a. Connect the Techstream to the DLC3.
 - b. Turn the ignition switch to ON.
 - c. Turn the Techstream on.
 - d. Enter the following menus: Body Electrical / Rear Right Door / Data List.
 - e. Read the Data List according to the display on the Techstream.

REAR RIGHT DOOR

Tester Display	Measurement Item / Range	Normal Condition	Diagnosis Note
Pawl Switch	Status of the pawl position switch / OFF or ON	ON: Slide door open --> half latched or slide door half latched --> fully closed OFF: Slide door fully open, closed or half latched	-
Half Switch	Status of the half latch switch / OFF or ON	ON: Slide door open --> just before half latched OFF: Slide door half latched --> fully closed	-
Full Switch	Status of the full latch switch / OFF or ON	ON: Slide door open --> just before fully closed OFF: Slide door fully closed	-
Neutral Position Close Switch	Status of the neutral position close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active	-

		closer mechanism is not engaged to close the door	
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

OK

When the switch is operating, the Techstream should display as shown in the above table.

NG --> See step 2

OK --> See step 7

2. INSPECT POWER SLIDE DOOR LOCK ASSEMBLY RH

Component without harness connected:
(Power Slide Door Lock Assembly RH)

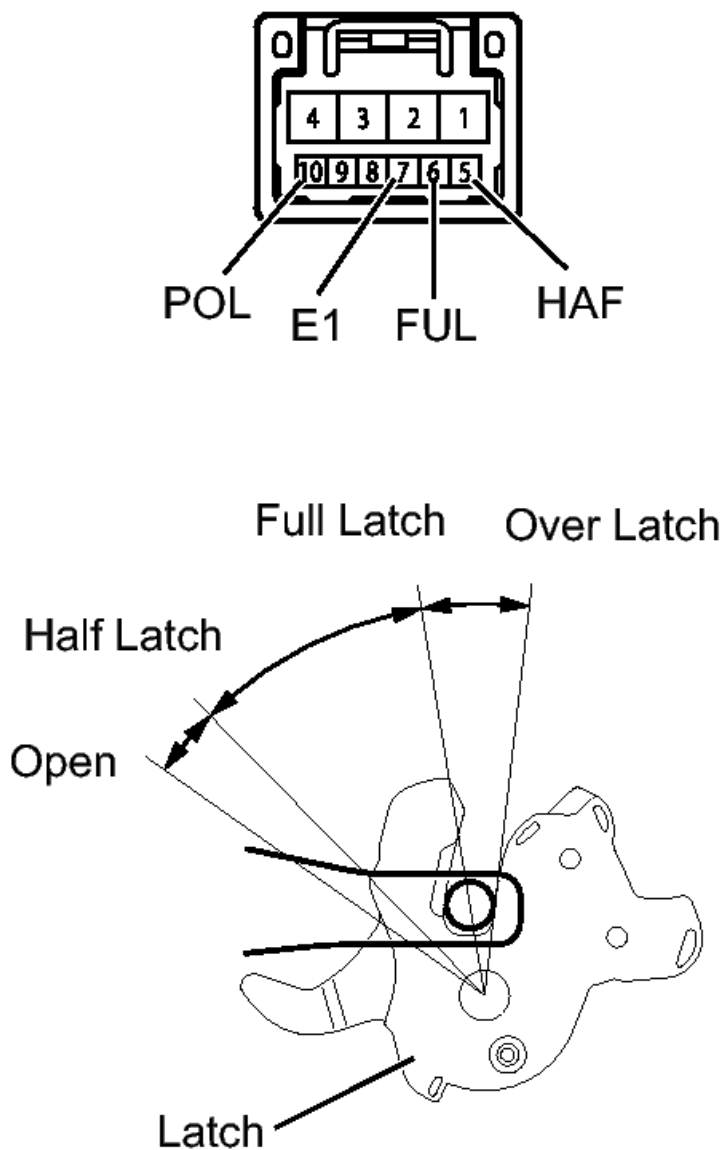


Fig. 32: Inspecting Power Slide Door Lock Assembly RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Disconnect the I11 power slide door lock assembly RH connector.
- Measure the resistance according to the value(s) in the table below.

Standard Resistance

Half Latch Switch

Pawl Switch

FULL LATCH SWITCH

Tester Connection	Condition	Specified Condition
6 (FUL) - 7 (E1)	Open	Below 1 ohms
6 (FUL) - 7 (E1)	Half latch	Below 1 ohms
6 (FUL) - 7 (E1)	Full latch	10 kohms or higher
6 (FUL) - 7 (E1)	Over latch	10 kohms or higher

Tester Connection	Condition	Specified Condition
5 (HAF) - 7 (E1)	Open	Below 1 ohms
5 (HAF) - 7 (E1)	Half latch	10 kohms or higher
5 (HAF) - 7 (E1)	Full latch	10 kohms or higher
5 (HAF) - 7 (E1)	Over latch	10 kohms or higher

Tester Connection	Condition	Specified Condition
10 (POL) - 7 (E1)	Open	10 kohms or higher
10 (POL) - 7 (E1)	Between open and half latch	10 kohms or higher -> Below 1 ohms
10 (POL) - 7 (E1)	Half latch	10 kohms or higher
10 (POL) - 7 (E1)	Between half latch and full latch	10 kohms or higher -> Below 1 ohms
10 (POL) - 7 (E1)	Full latch	10 kohms or higher

10 (POL) - 7 (E1)	Over latch	10 kohms or higher
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- c. Remove the power slide door lock assembly RH.
- d. Measure the resistance according to the value(s) in the table below.

Component without harness connected:
(Power Slide Door Lock Assembly RH)

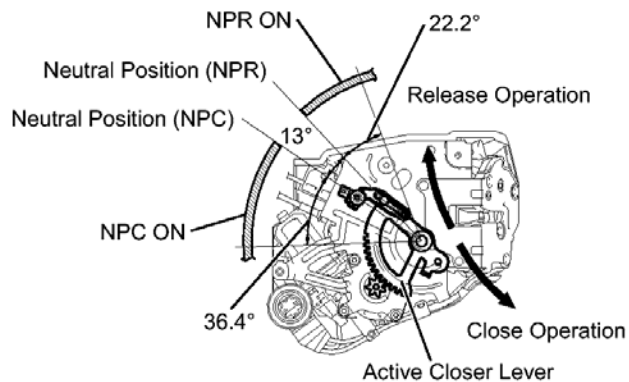
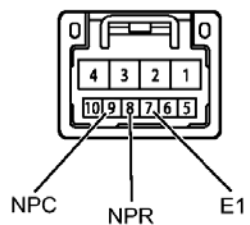


Fig. 33: Inspecting Power Slide Door Lock Assembly RH
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

Standard Resistance

NEUTRAL POSITION SWITCH (NPR)

Tester Connection	Condition	Specified Condition
8 (NPR) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
8 (NPR) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
8 (NPR) - 7 (E1)	Active lever moved to release operation side	Below 1 ohms
8 (NPR) - 7 (E1)	Active lever moved to close operation side	10 kohms or higher

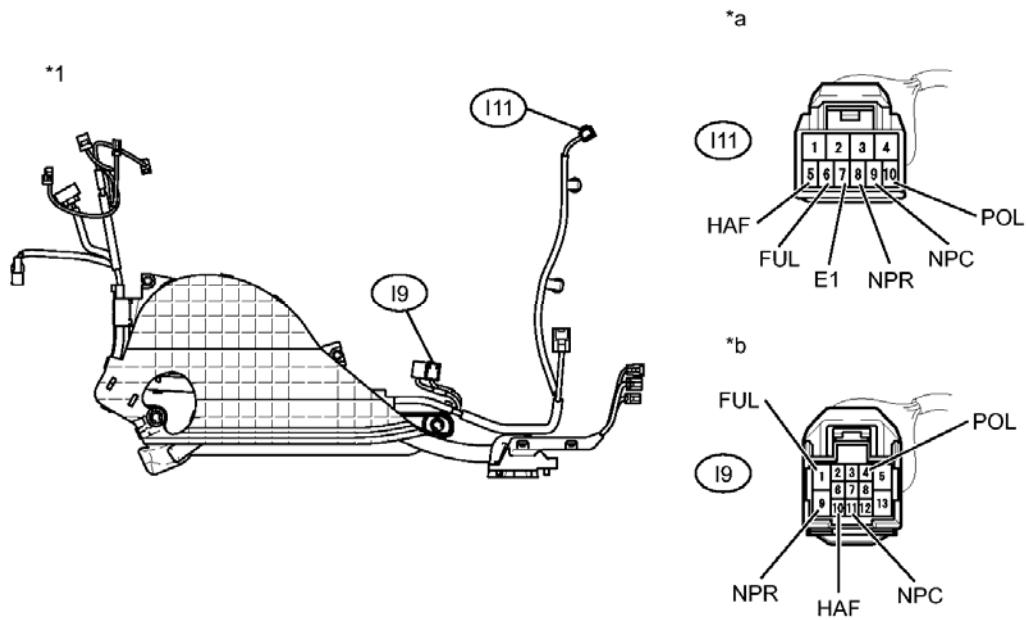
NEUTRAL POSITION SWITCH (NPC)

Tester Connection	Condition	Specified Condition
9 (NPC) - 7 (E1)	Neutral position (NPR)	10 kohms or higher
9 (NPC) - 7 (E1)	Neutral position (NPC)	10 kohms or higher
9 (NPC) - 7 (E1)	Active lever moved to release operation side	10 kohms or higher
9 (NPC) - 7 (E1)	Active lever moved to close operation side	Below 1 ohms

NG --> See step 5

OK: Go to next step

3. **CHECK REAR DOOR WIRE RH (POWER SLIDE DOOR LOCK ASSEMBLY RH - POWER SLIDE DOOR ECU RH)**
 - a. Disconnect the I9 power slide door ECU RH connector.
 - b. Disconnect the I11 power slide door lock assembly RH connector.
 - c. Measure the resistance according to the value(s) in the table below.



P

Fig. 34: Checking Rear Door Wire RH (Power Slide Door Lock Assembly RH - Power Slide Door ECU RH)

Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

TEXT IN ILLUSTRATION

*1	Rear Door Wire RH	-	-
*a	Front view of wire harness connector (to Power Slide Door Lock Assembly RH)	*b	Front view of wire harness connector (to Power Slide Door ECU RH)

Standard Resistance

Tester Connection	Condition	Specified Condition
I11-5		Below 1

(HAF) - I9-10 (HAF)	Always	ohms
I11-6 (FUL) - I9-1 (FUL)	Always	Below 1 ohms
I11-8 (NPR) - I9-9 (NPR)	Always	Below 1 ohms
I11-9 (NPC) - I9-11 (NPC)	Always	Below 1 ohms
I11-10 (POL) - I9-4 (POL)	Always	Below 1 ohms
I11-7 (E1) - Body ground	Always	Below 1 ohms
I11-5 (HAF) - Body ground	Always	10 kohms or higher
I11-6 (FUL) - Body ground	Always	10 kohms or higher
I11-8 (NPR) - Body ground	Always	10 kohms or higher
I11-9 (NPC) - Body ground	Always	10 kohms or higher
I11-10 (POL) - Body ground	Always	10 kohms or higher

NG --> See step 6

OK --> See step 4

4. **REPLACE SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH). Refer to DISASSEMBLY**
5. **REPLACE POWER SLIDE DOOR LOCK ASSEMBLY RH. Refer to DISASSEMBLY**
6. **REPAIR OR REPLACE REAR DOOR WIRE RH. Refer to DISASSEMBLY**

7. **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE. Refer to PROBLEM SYMPTOMS TABLE**

ACCESSORIES & EQUIPMENT

Slide Door Closer System (Diagnostics - Introduction) - Sienna

SLIDE DOOR CLOSER SYSTEM

PRECAUTION

PRECAUTION

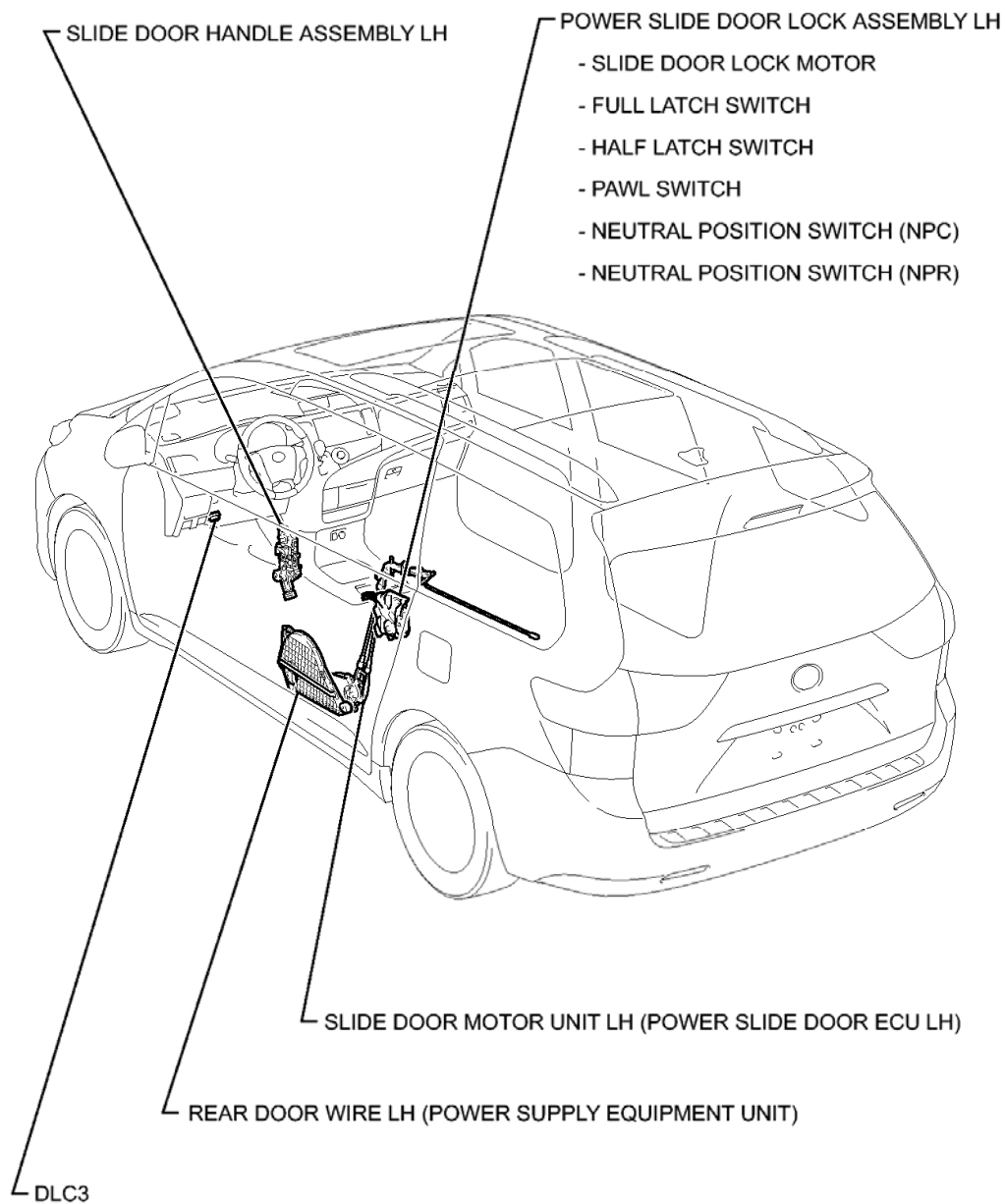
1. IGNITION SWITCH EXPRESSIONS

- a. The type of ignition switch used on this model differs according to the specifications of the vehicle. The expressions listed in the table below are used in this information.

Expression	Ignition Switch (Position)	Engine Switch (Condition)
Ignition Switch off	Off	Off
Ignition Switch ON	ON	On (IG)
Ignition Switch ACC	ACC	On (ACC)
Engine Start	START	Start

PARTS LOCATION

ILLUSTRATION



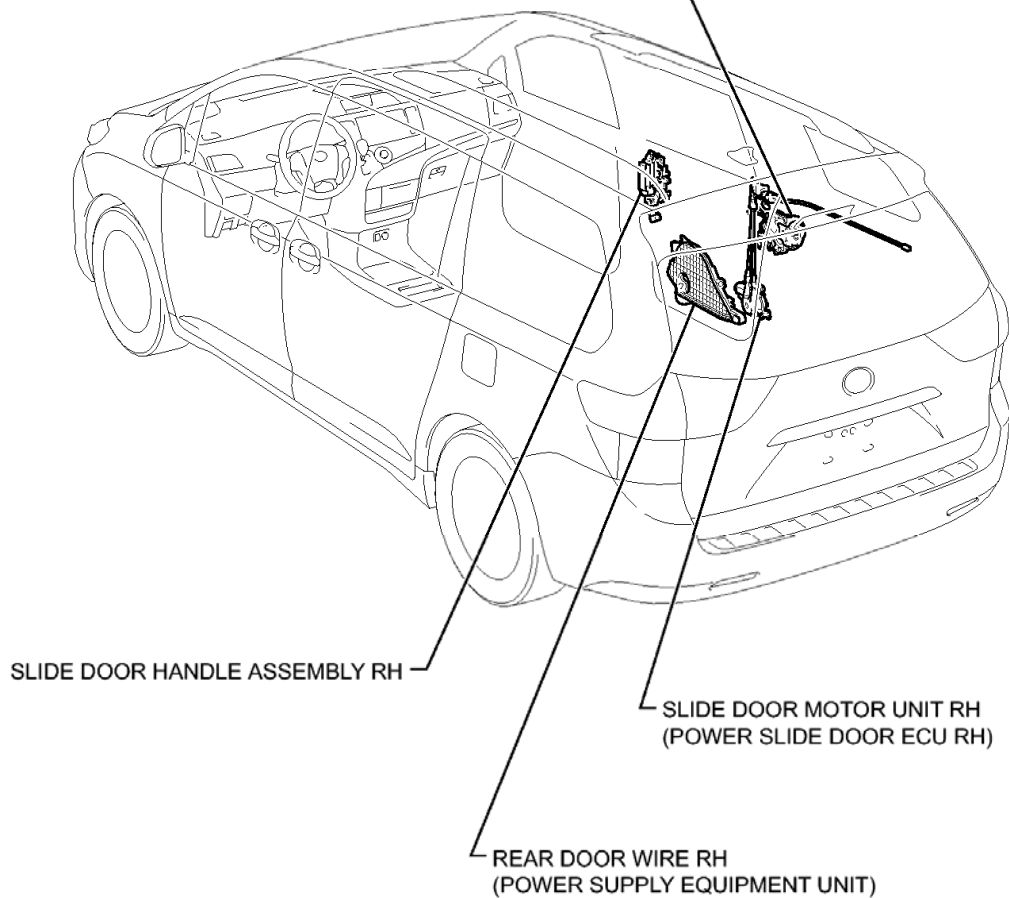
P

Fig. 1: Slide Door Closer System Components Location (1 Of 2)
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

ILLUSTRATION

POWER SLIDE DOOR LOCK ASSEMBLY RH

- SLIDE DOOR LOCK MOTOR
- FULL LATCH SWITCH
- HALF LATCH SWITCH
- PAWL SWITCH
- NEUTRAL POSITION SWITCH (NPC)
- NEUTRAL POSITION SWITCH (NPR)



P

Fig. 2: Slide Door Closer System Components Location (2 Of 2)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DIAGRAM

SYSTEM DIAGRAM

1. for SLIDE DOOR LH

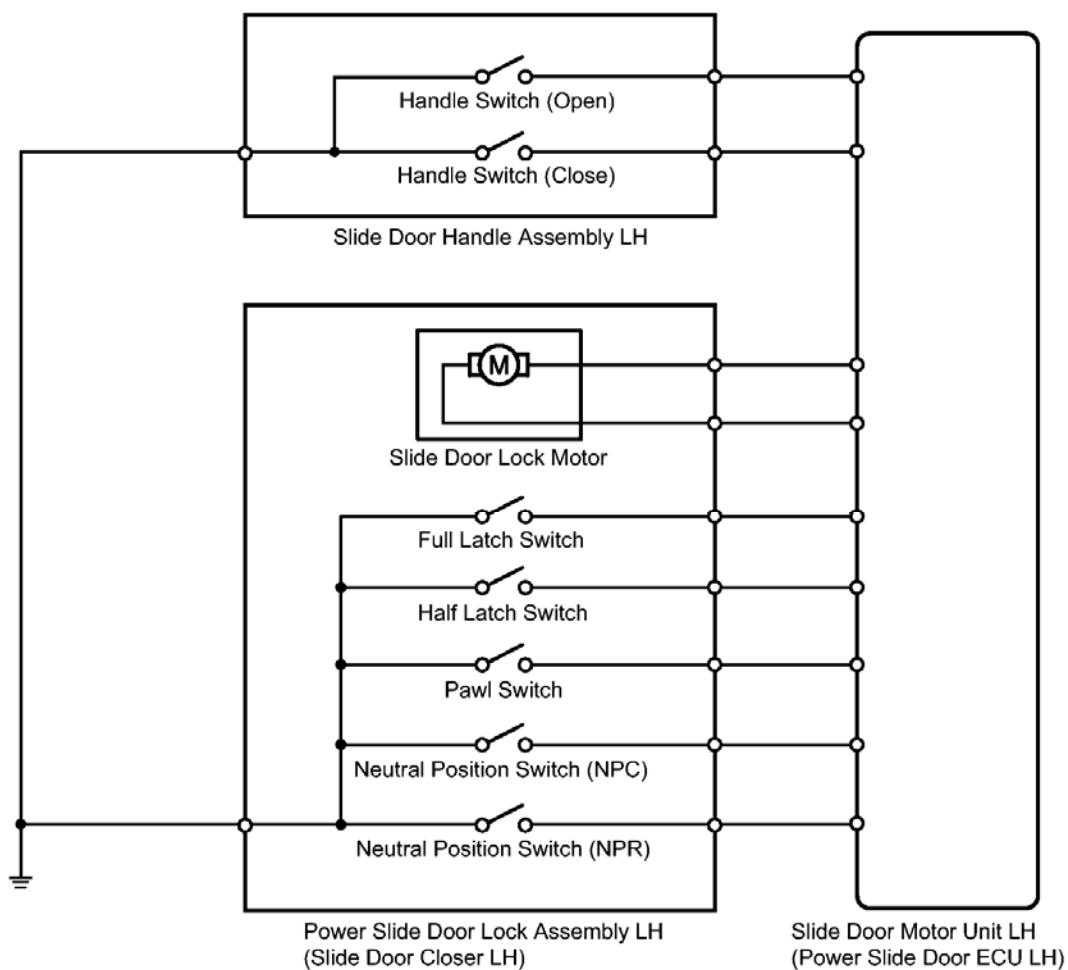


Fig. 3: Slide Door LH System Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

2. for SLIDE DOOR RH

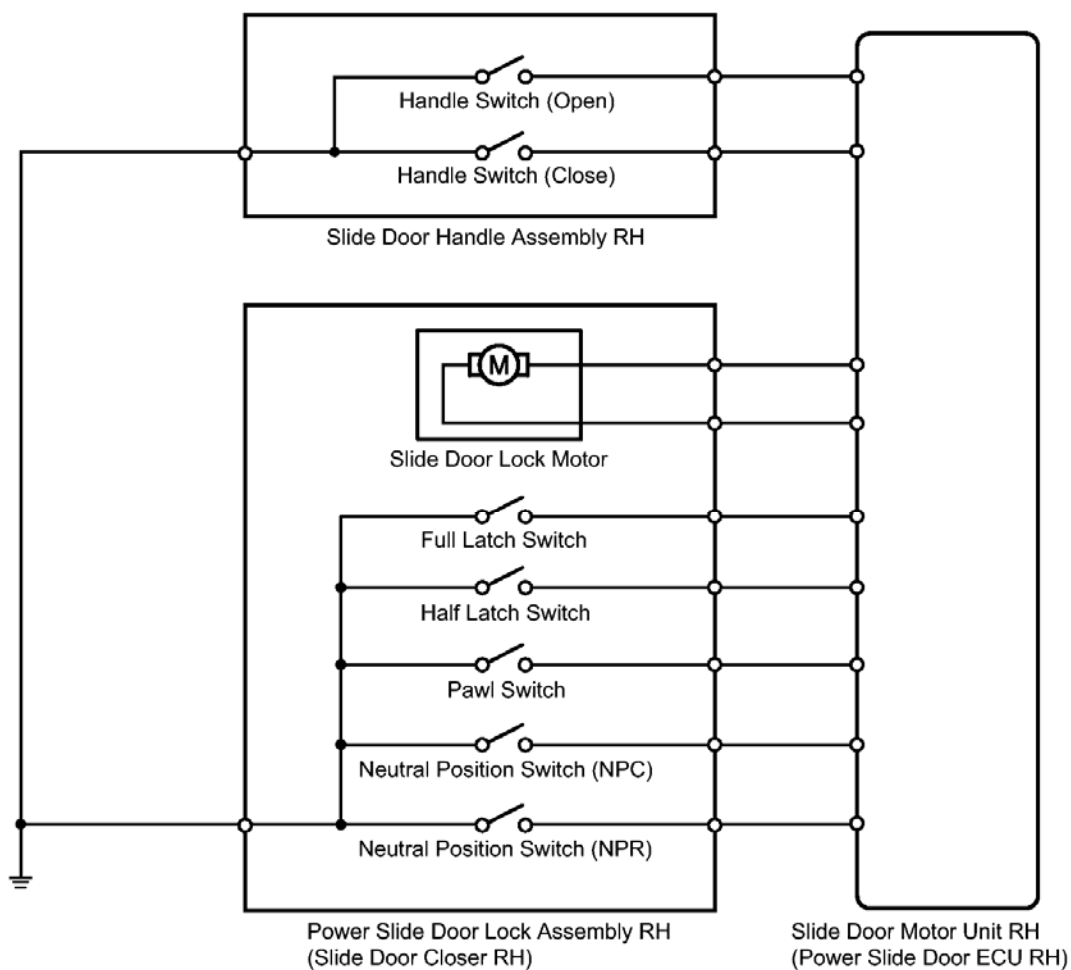


Fig. 4: Slide Door RH System Diagram
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

SYSTEM DESCRIPTION

SYSTEM DESCRIPTION

1. FUNCTION OF MAIN COMPONENTS

Component	Function
	The power slide door ECU, which is built into the power slide door

Slide Door Motor Unit (Power Slide Door ECU)		motor unit, controls the slide door closer system in accordance with the signals received from the power slide door lock assembly and the slide door handle assembly.
	Slide Door Lock Motor	Actuates the built-in motor forward or backward to fully close the slide door lock if it is half latched (ajar), or open the lock if it is fully closed (fully latched).
	Neutral Position Switch (NPC)	Detects the neutral position of the active closer lever of the slide door lock motor. The switch is on when the slide

Power Slide Door Lock Assembly		door lock begins to operate in the closing direction.
	Neutral Position Switch (NPR)	Detects the neutral position of the active closer lever of the slide door lock motor. The switch is on when the slide door lock begins to operate in the releasing direction.
	Full Latch Switch	Detects the fully closed position of the latch, turns on in the over latch condition.
	Half Latch Switch	Detects the ajar position of the latch, turns on in the open latch condition.
Rear Door Wire (Power Supply Equipment Unit)		Provides continuous power to the various units in the power slide door

	system, and the slide door closer system.
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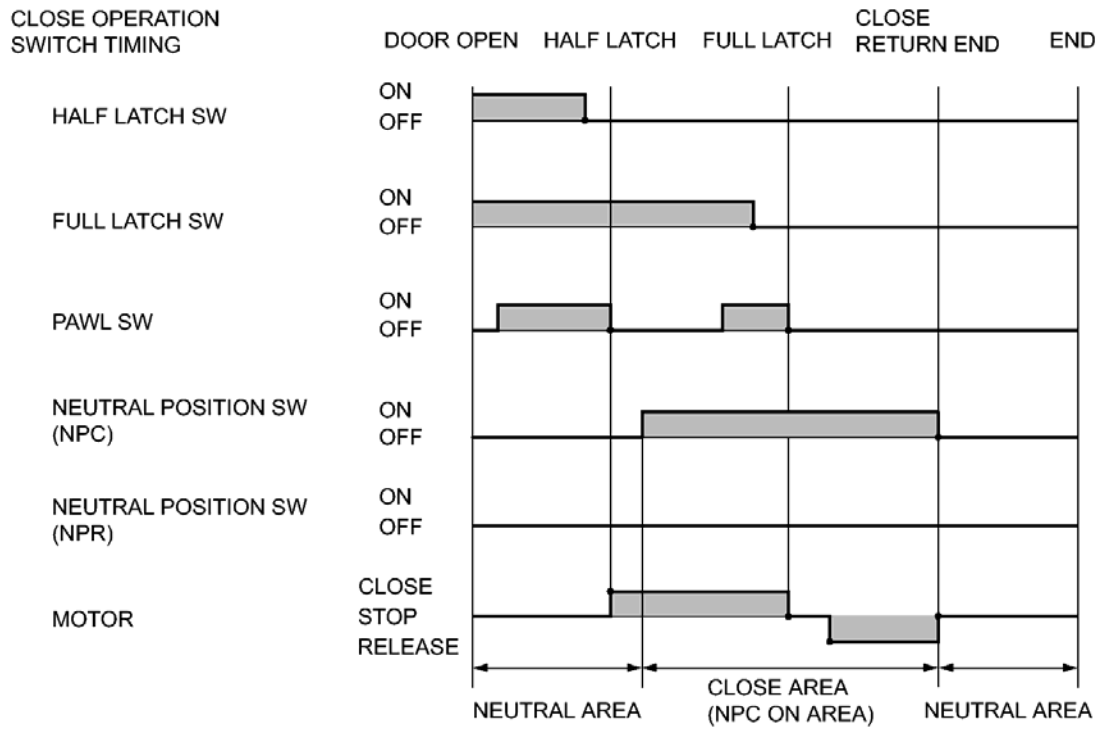


Fig. 5: Identifying Close Operation Switch Timing
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

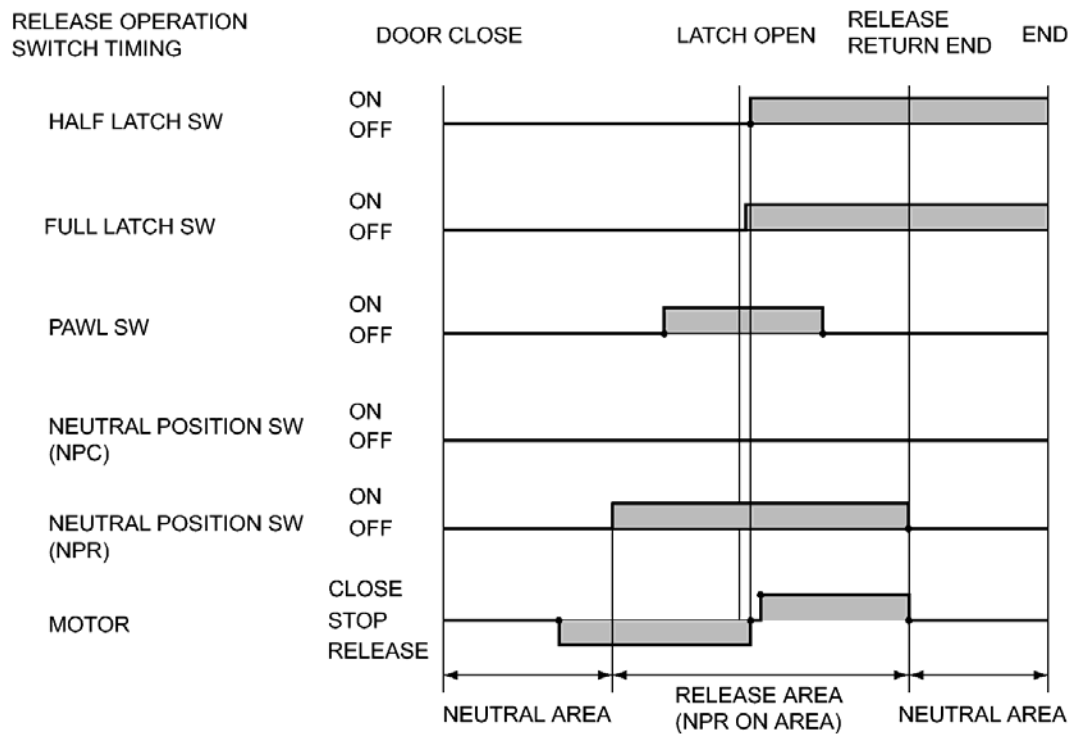


Fig. 6: Identifying Release Operation Switch Timing
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

HOW TO PROCEED WITH TROUBLESHOOTING

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- The slide door closer system troubleshooting procedure is based on the premise that the power slide door system is operating normally. Check the power slide door system first before troubleshooting the slide door closer system. Refer to **PROBLEM SYMPTOMS TABLE**.
- Use the following procedure to troubleshoot the slide door closer system.
- *: Use the Techstream.

1. VEHICLE BROUGHT TO WORKSHOP

NEXT: Go to next step

2. CUSTOMER PROBLEM ANALYSIS

HINT:

- In troubleshooting, confirm that the problem symptoms have been accurately identified. Preconceptions should be discarded in order to make an accurate judgment. To clearly understand what the problem symptoms are, it is extremely important to ask the customer about the problem

and the conditions at the time the malfunction occurred.

- Gather as much information as possible for reference. Past problems that seem unrelated may also help in some cases.
- The following 5 items are important points in the problem analysis:

What	Vehicle model, system name
When	Date, time, occurrence frequency
Where	Road conditions
Under what conditions?	Running conditions, driving conditions, weather conditions
How did it happen?	Problem symptoms

NEXT: Go to next step

3. INSPECT BATTERY VOLTAGE

Standard voltage

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding to the next step.

NEXT: Go to next step

4. CHECK FOR DTC*

- Check for DTCs. Refer to **DTC CHECK / CLEAR**.
- Clear the DTCs.
- Recheck for DTCs.

RESULT

Result	Proceed to
DTC is not	A

output	
DTC is output	B

B --> GO TO DIAGNOSTIC TROUBLE CODE CHART. Refer to DIAGNOSTIC TROUBLE CODE CHART

A: Go to next step

5. PROBLEM SYMPTOMS TABLE

- Refer to PROBLEM SYMPTOMS TABLE.

RESULT

Result	Proceed to
Fault is not listed in Problem Symptoms Table	A
Fault is listed in Problem Symptoms Table	B

B --> Go to step 7

A: Go to next step

6. OVERALL ANALYSIS AND TROUBLESHOOTING*

- Operation Check. Refer to OPERATION CHECK
- Terminals of ECU. Refer to TERMINALS OF ECU
- Data List / Active Test. Refer to DATA LIST / ACTIVE TEST

NEXT: Go to next step

7. REPAIR OR REPLACE

NEXT: Go to next step

8. CONFIRMATION TEST

NEXT --> END

OPERATION CHECK

OPERATION CHECK

1. CHECK BASIC OPERATION

- Check that the slide door lock motor operates to close the slide door to the fully latched position when the door is half latched.
- After performing the check above, check that the slide door opens normally.
- Check that the slide door lock motor does not operate if the outside handle or inside handle is pulled immediately after moving the slide door to the half latch position (motor is not operating).

INITIALIZATION

INITIALIZATION

1. RESET SLIDE DOOR CLOSED POSITION

- When disconnecting the cable from the negative (-) battery terminal, close the slide door fully to turn off the courtesy switch.

HINT:

If the slide door is closed when disconnecting the cable from the negative (-) battery terminal, it is not necessary to reset it.

PROBLEM SYMPTOMS TABLE

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

SLIDE DOOR CLOSER SYSTEM

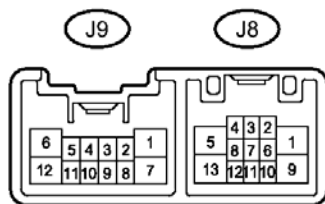
Symptom	Suspected Area	See
Slide door closer LH does not operate	Power slide door ECU LH power source circuit	Refer to <u>Power Slide Door ECU LH Power Source Circuit</u>
	Slide door lock motor LH circuit	Refer to <u>Slide Door Lock Motor LH Circuit</u>
	Slide door closer position switch LH	Refer to <u>Slide Door Closer</u>

	circuit	<u>Position Switch LH Circuit</u>
	Slide door handle switch LH circuit	Refer to <u>Slide Door Handle Switch LH Circuit</u>
Slide door closer RH does not operate	Power slide door ECU RH power source circuit	Refer to <u>Power Slide Door ECU RH Power Source Circuit</u>
	Slide door lock motor RH circuit	Refer to <u>Slide Door Lock Motor RH Circuit</u>
	Slide door closer position switch RH circuit	Refer to <u>Slide Door Closer Position Switch RH Circuit</u>
	Slide door handle switch RH circuit	Refer to <u>Slide Door Handle Switch RH Circuit</u>

TERMINALS OF ECU

TERMINALS OF ECU

1. CHECK SLIDE DOOR MOTOR UNIT LH (POWER SLIDE DOOR ECU LH)



H

Fig. 7: Slide Door Motor Unit LH (Power Slide Door ECU LH) Connector Terminal Identification
 Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Disconnect the J8 and J9 power slide door ECU LH connectors.
- Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
			Slide door fully closed --> half latched (latch pushed slightly toward full latch	10 kohms or higher -> Below 1 ohms --> 10 kohms or higher

J8-2 (POL) - J9-1 (GND)	V - W- B	PAWL switch input	position)	
			Half latched	Below 1 ohms
			Slide door fully open --> half latched (latch pushed slightly toward full latch position)	10 kohms or higher - -> Below 1 ohms -- > 10 kohms or higher
J8-5 (FUL) - J9-1 (GND)	Y - W- B	Full latch switch input	Slide door open --> fully closed	Below 1 ohms --> 10 kohms or higher
J8-7 (DS2) - J9-1 (GND)	R - W- B	Handle switch	Handle not operated	10 kohms or higher
			Outside handle pulled or inside handle turned to close	Below 1 ohms
J8-8 (OS) - J8-4 (OSG)	BR - P	Touch sensor input	Power slide door sensor pushed	Below 100 ohms
			Power slide door sensor not pushed	Between 950 ohms and 1050 ohms
J8-10 (DS1) - J9-1 (GND)	W - W- B	Handle switch	Handle not operated	10 kohms or higher
			Outside handle pulled or inside handle turned to open	Below 1 ohms
J8-12			Slide door	Below 1

(HAF) - J9-1 (GND)	GR - W-B	Half latch switch input	fully open --> half latched	ohms --> 10 kohms or higher
J9-1 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 ohms
J9-4 (IG) - J9-1 (GND)	B - W-B	IG power supply	Ignition switch ON	11 to 14 V
J9-7 (B) - J9-1 (GND)	LG - W-B	Battery power supply	Always	11 to 14 V
J9-8 (MSW) - J9-1 (GND)	P - W-B	Main switch input	Power slide door main switch off and fuel lid closed	Below 1 ohms
			Power slide door main switch on or fuel lid open	10 kohms or higher
J9-12 (ECUB) - J9-1 (GND)	SB - W-B	Battery power supply	Always	11 to 14 V

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

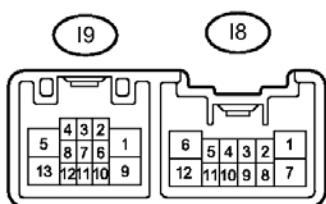
- c. Reconnect the J8 and J9 power slide door ECU LH connectors.
- d. Measure the voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
J8-1 (DC-) - J9-1 (GND)	W - W-B	Door closer output (Release rotation)	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	Below 1 V
			Release	11 to 14 V

			rotation	
			Operation finished	Below 1 V
J8-9 (DC+) - J9-1 (GND)	R - W-B	Door closer output (Close rotation)	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	11 to 14 V
			Release rotation	Below 1 V
			Operation finished	Below 1 V
J8-11 (NPC) - J9-1 (GND)	G - W-B	Neutral position switch (NPC) input	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	11 to 14 V
			Release rotation	Below 1 V
			Operation finished	Below 1 V
J8-13 (NPR) - J9-1 (GND)	P - W-B	Neutral position switch (NPR) input	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	Below 1 V
			Release rotation	11 to 14 V
			Operation finished	Below 1 V

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

2. CHECK SLIDE DOOR MOTOR UNIT RH (POWER SLIDE DOOR ECU RH)



H

Fig. 8: Slide Door Motor Unit RH (Power Slide Door ECU RH) Connector Terminal Identification
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

- Disconnect the I8 and I9 power slide door ECU RH connectors.
- Measure the voltage and resistance according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
I8-3 (IG) - I8-6 (GND)	B - W-B	IG power supply	Ignition switch ON	11 to 14 V
I8-6 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 ohms
I8-7 (ECUB) - I8-6 (GND)	SB - W-B	Battery power supply	Always	11 to 14 V
I8-11 (MSW) - I8-6 (GND)	P - W-B	Main switch input	Power slide door main switch off	Below 1 ohms
			Power slide door main switch on	10 kohms or higher
I8-12 (B) - I8-6 (GND)	LG - W-B	Battery power supply	Always	11 to 14 V
I9-1 (FUL) - I8-6 (GND)	Y - W-B	Full latch switch input	Slide door open --> fully closed	Below 1 ohms --> 10 kohms or higher
			Slide door fully closed -->	10 kohms

I9-4 (POL) - I8-6 (GND)	L - W- B	PAWL switch input	half latched (latch pushed slightly toward full latch position)	or higher - -> Below 1 ohms -- > 10 kohms or higher
			Half latched	Below 1 ohms
			Slide door fully open --> half latched (latch pushed slightly toward full latch position)	10 kohms or higher - -> Below 1 ohms -- > 10 kohms or higher
I9-6 (OS) - I9-2 (OSG)	BR - G	Touch sensor input	Power slide door sensor pushed	Below 100 ohms
			Power slide door sensor not pushed	Between 950 ohms and 1050 ohms
I9-7 (DS2) - I8-6 (GND)	B - W- B	Handle switch	Handle not operated	10 kohms or higher
			Outside handle pulled or inside handle turned to close	Below 1 ohms
I9-10 (HAF) - I8-6 (GND)	GR - W-B	Half latch switch input	Slide door fully open --> half latched	Below 1 ohms --> 10 kohms or higher
I9-12			Handle not operated	10 kohms or higher
			Outside	

(DS1) - I8-6 (GND)	R - W- B	Handle switch	handle pulled or inside handle turned to open	Below 1 ohms
--------------------------	-------------	------------------	--	-----------------

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

- c. Reconnect the I8 and I9 power slide door ECU RH connectors.
- d. Measure the voltage according to the value(s) in the table below.

Terminal No. (Symbol)	Wiring Color	Terminal Description	Condition	Specified Condition
I9-5 (DC-) - I8-6 (GND)	W - W-B	Door closer output (Release rotation)	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	Below 1 V
			Release rotation	11 to 14 V
			Operation finished	Below 1 V
I9-13 (DC+) - I8-6 (GND)	R - W-B	Door closer output (Close rotation)	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	11 to 14 V
			Release rotation	Below 1 V
			Operation finished	Below 1 V
I9-11 (NPC) - I8-6 (GND)	P - W-B	Neutral position switch (NPC) input	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	11 to 14 V
			Release rotation	Below 1 V
			Operation finished	Below 1 V

I9-9 (NPR) - I8-6 (GND)	V - W-B	Neutral position switch (NPR) input	Slide door open	Below 1 V
			Half latched	Below 1 V
			Close rotation	Below 1 V
			Release rotation	11 to 14 V
			Operation finished	Below 1 V

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

DIAGNOSIS SYSTEM

DIAGNOSIS SYSTEM

1. DESCRIPTION

The power slide door ECU controls the vehicle slide door closer system functions. Slide door closer system data and Diagnostic Trouble Code (DTC) can be read through the vehicle Data Link Connector 3 (DLC3). When the system seems to be malfunctioning, use the Techstream to check for malfunctions and perform repairs.

2. CHECK DLC3

- Check the DLC3. Refer to **GENERAL INFORMATION**.

3. INSPECT BATTERY VOLTAGE

- Measure the battery voltage.

Standard voltage

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery.

DTC CHECK / CLEAR

DTC CHECK / CLEAR

1. CHECK DTC

- Connect the Techstream to the DLC3.
- Turn the ignition switch to ON.
- Turn the Techstream on.
- Enter the following menus: Body Electrical / Rear Left Door or Rear Right Door / DTC.
- Check for DTCs and then write them down.

HINT:

Refer to the Techstream operator's manual for further details.

- f. Confirm the details of the DTCs.

2. CLEAR DTC

- a. Connect the Techstream to the DLC3.
- b. Turn the ignition switch to ON.
- c. Turn the Techstream on.
- d. Enter the following menus: Body Electrical / Rear Left Door or Rear Right Door / DTC / Clear.

HINT:

Refer to the Techstream operator's manual for further details.

- e. Clear the DTCs by following the directions on the Techstream screen.

DATA LIST / ACTIVE TEST

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors, actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTE: In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

- a. Connect the Techstream to the DLC3.
- b. Turn the ignition switch to ON.
- c. Turn the Techstream on.
- d. Enter the following menus: Body Electrical / Rear Left Door / Data List.
- e. Read the Data List according to the display on the Techstream.

REAR LEFT DOOR

Tester Display	Measurement Item/Range	Normal Condition	Diagnosis Note
		ON: Slide	

Pawl Switch	Status of the pawl switch / OFF or ON	door open --> half latched or slide door half latched --> fully closed OFF: Slide door fully open, closed or half latched	-
Half Switch	Status of the half latch switch / OFF or ON	ON: Slide door open --> just before half latched OFF: Slide door half latched --> fully closed	-
Full Switch	Status of the full latch switch / OFF or ON	ON: Slide door open --> just before fully closed OFF: Slide door fully closed	-
Neutral Position Close Switch	Status of the neutral position Close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active closer mechanism is not engaged to	-

		close the door	
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

f. Enter the following menus: Body Electrical / Rear Right Door / Data List.

REAR RIGHT DOOR

Tester Display	Measurement Item/Range	Normal Condition	Diagnosis Note
Pawl Switch	Status of the pawl position switch / OFF or ON	ON: Slide door open --> half latched or slide door half latched --> fully closed OFF: Slide door fully open, closed or half latched	-
Half Switch	Status of the half latch switch / OFF or ON	ON: Slide door open --> just before half latched OFF: Slide door half	-

		latched --> fully closed	
Full Switch	Status of the full latch switch / OFF or ON	ON: Slide door open --> just before fully closed OFF: Slide door fully closed	-
Neutral Position Close Switch	Status of the neutral position Close switch / OFF or ON	ON: Active closer mechanism has engaged to close the door OFF: Active closer mechanism is not engaged to close the door	-
Neutral Position Release Switch	Status of the neutral position release switch / OFF or ON	ON: During latch release at start of open or close operation OFF: Except during latch release at start of open or close operation	-

DIAGNOSTIC TROUBLE CODE CHART

DIAGNOSTIC TROUBLE CODE CHART

HINT:

If a trouble code is displayed during the DTC check, inspect the trouble areas listed for that code. For details of the code, refer to the following information.

SLIDE DOOR CLOSER SYSTEM

DTC Code	Detection Item	Trouble Area	See
B2254	Slide Door Closer Switch RH Malfunction	- Power slide door lock assembly RH - Rear door wire RH - Slide door motor unit RH (Power slide door ECU RH)	Refer to <u>DTC B2254: Slide Door Closer Switch RH Malfunction</u>
B2255	Slide Door Closer Switch LH Malfunction	- Power slide door lock assembly LH - Rear door wire LH - Slide door motor unit LH (Power slide door ECU LH)	Refer to <u>DTC B2255: Slide Door Closer Switch LH Malfunction</u>
B225E	Power Slide Door Neutral Closer Switch RH Malfunction during Close Operation	- Power slide door lock assembly RH - Rear door wire RH - Slide door motor unit RH (Power slide door ECU RH)	Refer to <u>DTC B225E: Power Slide Door Neutral Closer Switch RH Malfunction during Close Operation</u>
B225F	Power Slide Door Neutral Closer Switch LH Malfunction during Close Operation	- Power slide door lock assembly LH - Rear door wire LH - Slide door motor unit LH (Power slide door ECU LH)	Refer to <u>DTC B225F: Power Slide Door Neutral Closer Switch LH Malfunction during Close Operation</u>
B2260	Power Slide Door Neutral Closer Switch RH Malfunction during Open Operation	- Power slide door lock assembly RH - Rear door wire RH - Slide door motor unit RH (Power slide door ECU RH)	Refer to <u>DTC B2260: Power Slide Door Neutral Closer Switch RH Malfunction during Open Operation</u>
B2261	Power Slide Door Neutral Closer Switch LH Malfunction during Open Operation	- Power slide door lock assembly LH - Rear door wire LH - Slide door motor unit LH (Power slide door ECU LH)	Refer to <u>DTC B2261: Power Slide Door Neutral Closer Switch LH Malfunction during Open Operation</u>