

SECTION **PWC**

POWER WINDOW CONTROL SYSTEM

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

CONTENTS

BASIC INSPECTION	3	POWER WINDOW MAIN SWITCH (KING CAB) : Diagnosis Procedure	12
DIAGNOSIS AND REPAIR WORKFLOW	3	POWER WINDOW MAIN SWITCH (KING CAB) : Component Inspection	14
Work Flow	3		
FUNCTION DIAGNOSIS	4	FRONT POWER WINDOW SWITCH	14
POWER WINDOW SYSTEM	4	FRONT POWER WINDOW SWITCH : Descrip- tion	14
System Diagram	4	FRONT POWER WINDOW SWITCH : Compo- nent Function Check	14
System Description	4	FRONT POWER WINDOW SWITCH : Diagnosis Procedure	14
Component Parts Location	5		
Component Description	6	REAR POWER WINDOW SWITCH	15
DIAGNOSIS SYSTEM (BCM)	7	REAR POWER WINDOW SWITCH : Description....	15
COMMON ITEM	7	REAR POWER WINDOW SWITCH : Component Function Check	16
COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)	7	REAR POWER WINDOW SWITCH : Diagnosis Procedure	16
RETAINED PWR	7	REAR POWER WINDOW SWITCH : Component Inspection	17
RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)	7		
COMPONENT DIAGNOSIS	8	POWER WINDOW MOTOR	19
POWER SUPPLY AND GROUND CIRCUIT	8	DRIVER SIDE	19
POWER WINDOW MAIN SWITCH (CREW CAB)	8	DRIVER SIDE : Description	19
POWER WINDOW MAIN SWITCH (CREW CAB) : Description	8	DRIVER SIDE : Component Function Check	19
POWER WINDOW MAIN SWITCH (CREW CAB) : Component Function Check	8	DRIVER SIDE : Diagnosis Procedure	19
POWER WINDOW MAIN SWITCH (CREW CAB) : Diagnosis Procedure	8	DRIVER SIDE : Component Inspection	20
POWER WINDOW MAIN SWITCH (CREW CAB) : Component Inspection	11	PASSENGER SIDE	20
POWER WINDOW MAIN SWITCH (KING CAB)	12	PASSENGER SIDE : Description	20
POWER WINDOW MAIN SWITCH (KING CAB) : Description	12	PASSENGER SIDE : Component Function Check	20
POWER WINDOW MAIN SWITCH (KING CAB) : Component Function Check	12	PASSENGER SIDE : Diagnosis Procedure	20
		PASSENGER SIDE : Component Inspection	21
		REAR LH	22
		REAR LH : Description	22
		REAR LH : Component Function Check	22
		REAR LH : Diagnosis Procedure	22
		REAR LH : Component Inspection	23

PWC

REAR RH	23	FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE	55
REAR RH : Description	23	Diagnosis Procedure	55
REAR RH : Component Function Check	23	REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE	56
REAR RH : Diagnosis Procedure	24	Diagnosis Procedure	56
REAR RH : Component Inspection	25	REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE	57
DOOR SWITCH	26	Diagnosis Procedure	57
KING CAB	26	AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE)	58
KING CAB : Description	26	Diagnosis Procedure	58
KING CAB : Component Function Check	26	POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY	59
KING CAB : Diagnosis Procedure	26	Diagnosis Procedure	59
CREW CAB	28	POWER WINDOW LOCK SWITCH DOES NOT FUNCTION	60
CREW CAB : Description	28	Diagnosis Procedure	60
CREW CAB : Component Function Check	28	PRECAUTION	61
CREW CAB : Diagnosis Procedure	28	PRECAUTIONS	61
POWER WINDOW LOCK SWITCH	31	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	61
Description	31	ON-VEHICLE REPAIR	62
Component Function Check	31	POWER WINDOW MAIN SWITCH	62
ECU DIAGNOSIS	32	Removal and Installation	62
BCM (BODY CONTROL MODULE)	32	FRONT POWER WINDOW SWITCH	63
Reference Value	32	Removal and Installation	63
Terminal Layout	34	REAR POWER WINDOW SWITCH	64
Physical Values	34	Removal and Installation - Rear Door Switch (if equipped)	64
Wiring Diagram	40		
POWER WINDOW SYSTEM	44		
Terminal Layout for Power Window Main Switch ...	44		
Physical Values for Power Window Main Switch ...	44		
Wiring Diagram	45		
SYMPTOM DIAGNOSIS	53		
NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH	53		
Diagnosis Procedure	53		
DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE	54		
Diagnosis Procedure	54		

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003303048

DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicle in.

>> GO TO 2

2. REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

Use "Symptom diagnosis" from the symptom inspection result in step 2 and then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 4

4. IDENTIFY THE MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

>> GO TO 5

5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6

6. FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Are the malfunctions corrected?

YES >> Inspection End.

NO >> GO TO 3

A
B
C
D
E
F
G
H
I
J
PWC
L
M
N
O
P

POWER WINDOW SYSTEM

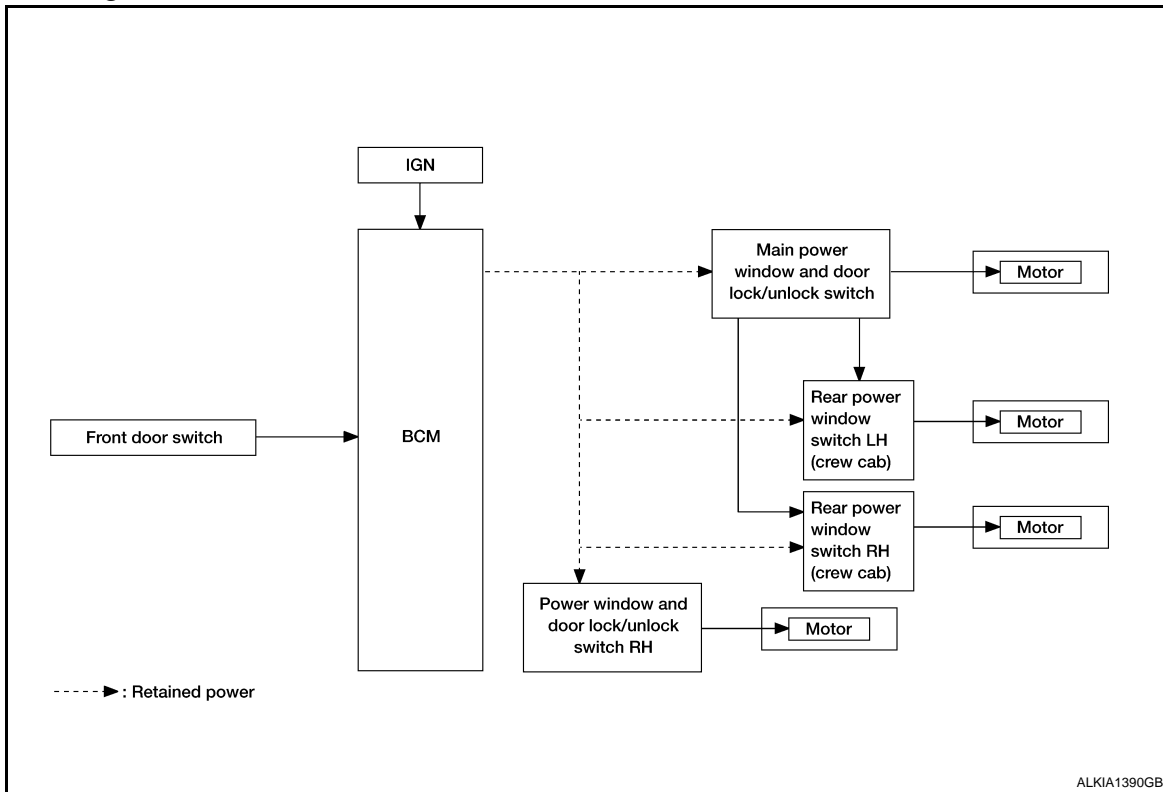
< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

INFOID:000000003303049



System Description

INFOID:000000003303050

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to main power window and door lock/unlock switch	Main power window and door lock/unlock switch function	Actuator
Main power window and door lock/unlock switch	All power window motor UP/DOWN signal	Power window control	Power window motors
Power window and door lock/unlock switch RH	Front power window motor RH UP/DOWN signal		Front power window motor RH
Rear power window switch (crew cab)	Rear power window motor UP/DOWN signal		Rear power window motor
BCM	RAP signal		—

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to front power window switch	Front power window switch function	Actuator
Power window and door lock/unlock switch RH	Front power window motor RH UP/DOWN signal	Power window control	Front power window motor RH
BCM	RAP signal		

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Main power window and door lock/unlock switch can open/close all windows.
- Power window and door lock unlock switch RH & rear power window switches LH and RH (crew cab) can open/close the corresponding windows.

POWER WINDOW AUTO DOWN OPERATION (FRONT LH)

- AUTO DOWN operation can be performed when main power window turns to AUTO.

RETAINED POWER OPERATION

- Retained power operation is an additional power supply function that enables power window system to operate during the 45 seconds even when ignition switch is turned OFF

Retained power function cancel conditions

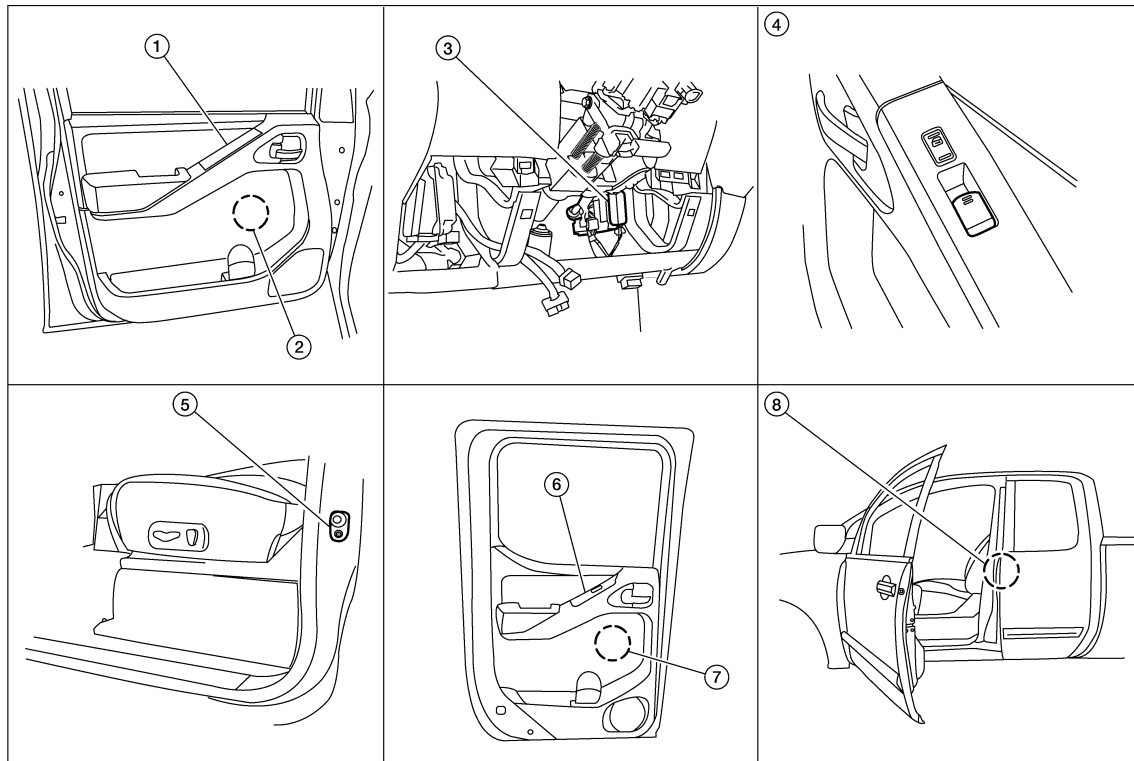
- Front door CLOSE (door switch OFF)→OPEN (door switch ON).
- When ignition switch is ON.
- When timer time passes. (45 seconds)

POWER WINDOW LOCK

Ground circuit inside main power window and door lock/unlock switch shuts off when power window lock switch is ON. This inhibits power window switch operation except with the main power window and door lock/unlock switch.

Component Parts Location

INFOID:000000003303051



ALKIA1391ZZ

1. Main power window and door lock/unlock switch D7
2. Front power window motor LH D9, RH D104
3. BCM M18, M19, M20 (view with lower instrument panel LH removed)
4. Power window and door lock/unlock switch RH D105
5. Front door switch (crew cab) LH B8, RH B108
6. Rear power window switch LH D203, RH D303
7. Rear power window motor LH D204, RH D304
8. Front door switch (king cab) LH D213, RH D314

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000003303052

FRONT WINDOW ANTI-PINCH SYSTEM

Component	Function
BCM	<ul style="list-style-type: none">• Supplies power supply to power window switch.• Controls retained power.
Main power window and door lock/unlock switch	Directly controls all power window motor of all doors.
Power window and door lock/unlock switch RH	Controls front power window motor RH.
Rear power window switch (crew cab)	Controls rear power window motors LH and RH.
Front power window motor LH	Starts operating with signals from main power window and door lock/unlock switch.
Front power window motor RH	Starts operating with signals from main power window and door lock/unlock switch & power window and door lock/unlock switch RH.
Rear power window motor (crew cab)	Starts operating with signals from main power window and door lock/unlock switch & rear power window switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000003303053

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-46, "DTC Index" .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
RAP system	RETAINED PWR		×	

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:000000003303054

Data monitor

PWC

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH (CREW CAB)

POWER WINDOW MAIN SWITCH (CREW CAB) : Description

INFOID:000000003303056

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when main power window and door lock/unlock switch is operated.

POWER WINDOW MAIN SWITCH (CREW CAB) : Component Function Check

INFOID:000000003303056

Main Power Window And Door Lock/Unlock Switch

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Does power window motor operate with main power window and door lock/unlock switch operation?

Is the inspection result normal?

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.

NO >> Refer to [PWC-8. "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Diagnosis Procedure"](#).

POWER WINDOW MAIN SWITCH (CREW CAB) : Diagnosis Procedure

INFOID:000000003303057

Main Power Window And Door Lock/Unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

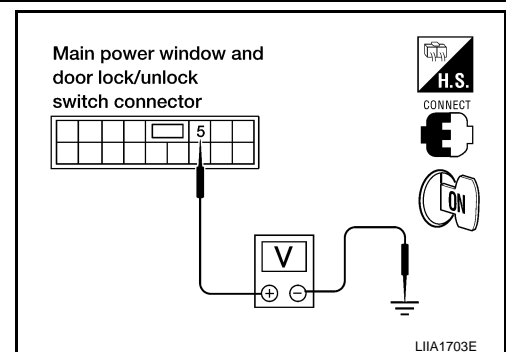
1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector D7 terminal 5 and ground.

5 - Ground : Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2

NO >> GO TO 3



2. CHECK GROUND CIRCUIT

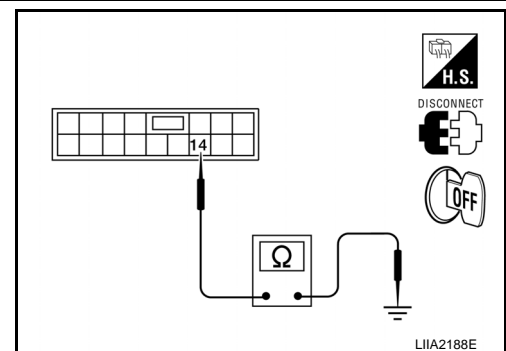
1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector D7 terminal 14 and ground.

Connector	Terminals		Continuity
Main power window and door lock/unlock switch: D7	14	Ground	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.



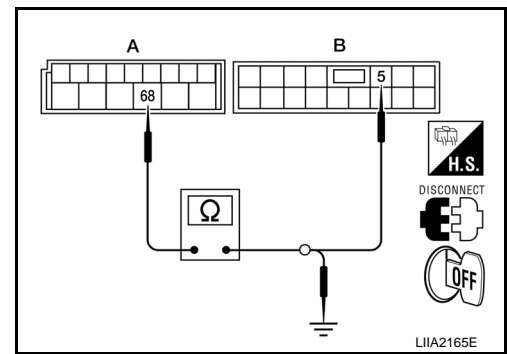
3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect BCM and main power window and door lock/unlock switch.
3. Check continuity between BCM and main power window and door lock/unlock switch.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
BCM: M20	68	Main power window and door lock/unlock switch: D7	5	Yes



4. Check continuity between BCM and ground.

A		Ground	Continuity
Connector	Terminal		
BCM: M20	68		No

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-62, "Removal and Installation"](#).
- NO >> Repair or replace harness.

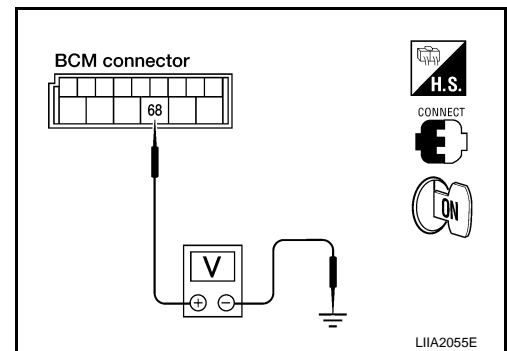
4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M20 terminal 68 and ground.

68 - Ground : Battery voltage

Is the measurement value within the specification?

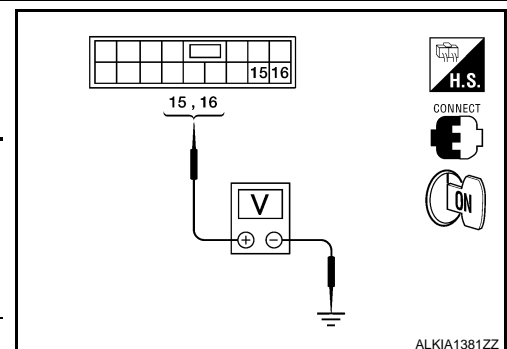
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6
- NO >> Replace BCM. Refer to [BCS-49, "Removal and Installation"](#).



5. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector and ground.

Terminal (+)		Terminal (-)	Window condition	Voltage (V) (Approx.)
Main power window and door lock/unlock switch connector	Terminal			
D7	15	Ground	UP	Battery voltage
			DOWN	0
	16		UP	0
			DOWN	Battery voltage



Is the measurement value within the specification?

- YES >> GO TO 7

POWER SUPPLY AND GROUND CIRCUIT

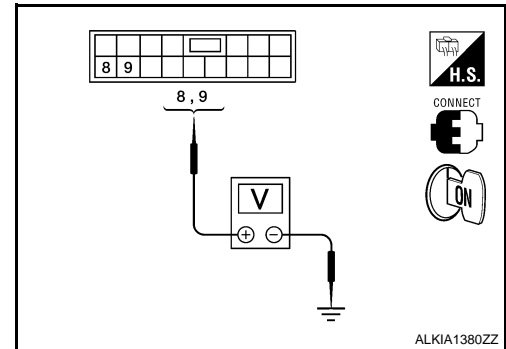
< COMPONENT DIAGNOSIS >

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).

6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector and ground.

Terminal (+)		Terminal (-)	Window condition	Voltage (V) (Approx.)
Main power window and door lock/unlock switch connector	Terminal			
D7	8	Ground	UP	Battery voltage
			DOWN	0
	9		UP	0
			DOWN	Battery voltage



Is the measurement value within the specification?

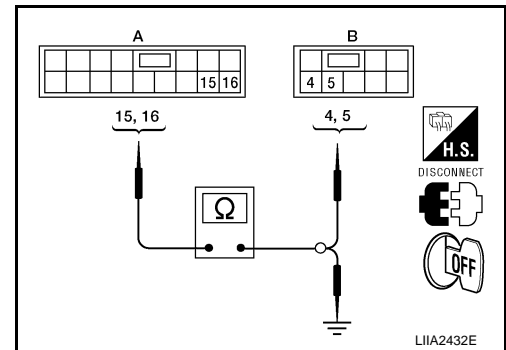
YES >> GO TO 8

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).

7. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7	15	D203	4	Yes
	16		5	



4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	15		
	16		

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair or replace harness.

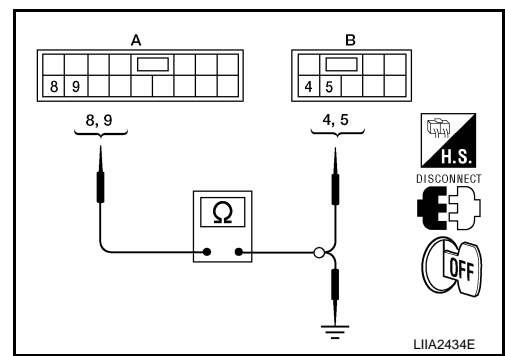
8. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7	8	D303	4	Yes
	9		5	



4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	8		No
	9		

Is the inspection result normal?

- YES >> GO TO 9
 NO >> Repair or replace harness.

9. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to [PWC-11. "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Component Inspection"](#).

Is the inspection result normal?

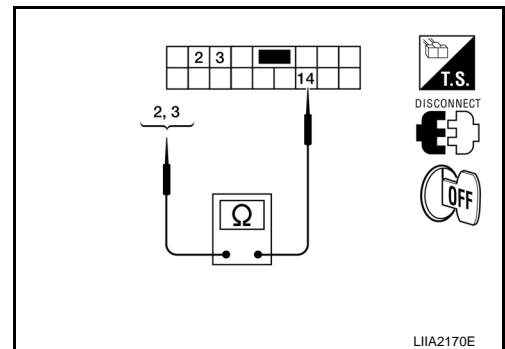
- YES >> Check intermittent incident. Refer to [GI-51. "Intermittent Incident"](#).
 NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).

POWER WINDOW MAIN SWITCH (CREW CAB) : Component Inspection INFOID:000000003303058

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

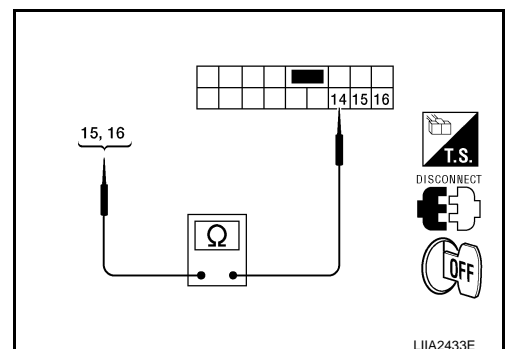
1. Check continuity between main power window and door lock/unlock switch terminals for front window RH.

Main power window and door lock/unlock switch	Terminals		Condition	Continuity
	14	2	Lock switch UNLOCK	Yes
Lock switch LOCK			No	
3		Lock switch UNLOCK	Yes	
		Lock switch LOCK	No	



2. Check continuity between main power window and door lock/unlock switch terminals for rear window LH.

Main power window and door lock/unlock switch	Terminals		Condition	Continuity
	14	15	Lock switch UNLOCK	Yes
Lock switch LOCK			No	
16		Lock switch UNLOCK	Yes	
		Lock switch LOCK	No	



POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

3. Check continuity between main power window and door lock/unlock switch terminals for rear window RH.

	Terminals		Condition	Continuity
	Main power window and door lock/unlock switch	14	8	Lock switch UNLOCK
Lock switch LOCK				No
9		Lock switch UNLOCK	Yes	
		Lock switch LOCK	No	

Is the inspection result normal?

- YES >> Main power window and door lock/unlock switch is OK.
 NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).

POWER WINDOW MAIN SWITCH (KING CAB)

POWER WINDOW MAIN SWITCH (KING CAB) : Description

INFOID:000000003303128

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when main power window and door lock/unlock switch is operated.

POWER WINDOW MAIN SWITCH (KING CAB) : Component Function Check

INFOID:000000003303129

Main Power Window And Door Lock/Unlock Switch

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Does power window motor operate with main power window and door lock/unlock switch operation?

Is the inspection result normal?

- YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.
 NO >> Refer to [PWC-12. "POWER WINDOW MAIN SWITCH \(KING CAB\) : Diagnosis Procedure"](#).

POWER WINDOW MAIN SWITCH (KING CAB) : Diagnosis Procedure

INFOID:000000003303130

Main Power Window And Door Lock/Unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

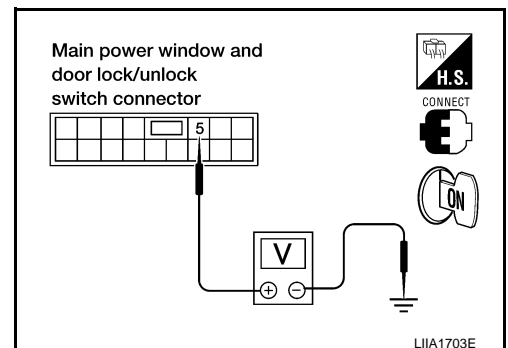
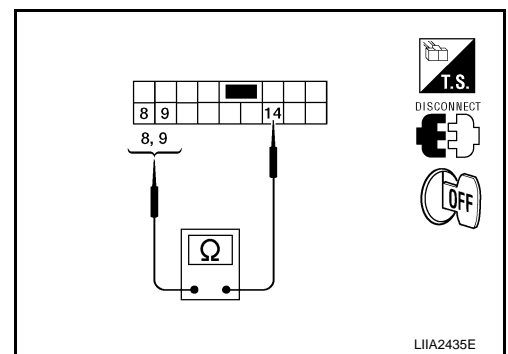
1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector D7 terminal 5 and ground.

5 - Ground : **Battery voltage**

Is the measurement value within the specification?

- YES >> GO TO 2
 NO >> GO TO 3

2. CHECK GROUND CIRCUIT



POWER SUPPLY AND GROUND CIRCUIT

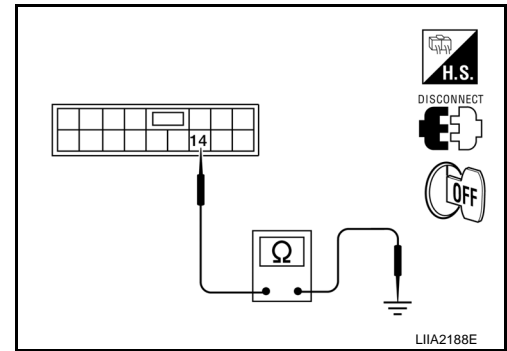
< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector D7 terminal 14 and ground.

Connector	Terminals		Continuity
Main power window and door lock/unlock switch: D7	14	Ground	Yes

Is the inspection result normal?

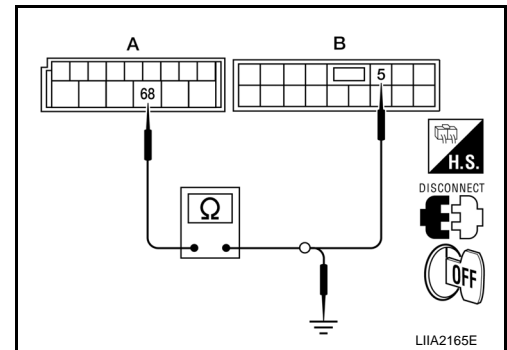
- YES >> GO TO 4
 NO >> Repair or replace harness.



3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and main power window and door lock/unlock switch.
3. Check continuity between BCM and main power window and door lock/unlock switch.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
BCM: M20	68	Main power window and door lock/unlock switch: D7	5	Yes



4. Check continuity between BCM and ground.

A		Ground	Continuity
Connector	Terminal		
BCM: M20	68	No	

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).
 NO >> Repair or replace harness.

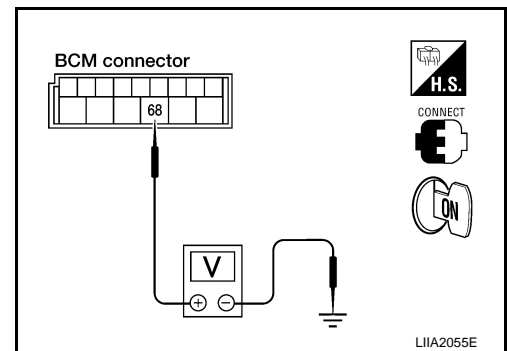
4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector M20 terminal 68 and ground.

68 - Ground : Battery voltage

Is the measurement value within the specification?

- YES >> GO TO 5
 NO >> Replace BCM. Refer to [BCS-49. "Removal and Installation"](#).



5. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.
 Refer to [PWC-14. "POWER WINDOW MAIN SWITCH \(KING CAB\) : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-51. "Intermittent Incident"](#).
 NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

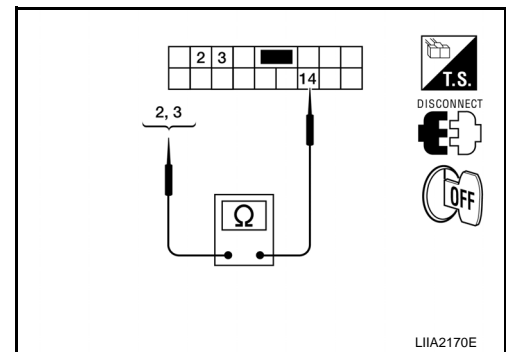
POWER WINDOW MAIN SWITCH (KING CAB) : Component Inspection

INFOID:000000003303131

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch terminals for front window RH.

	Terminals		Condition	Continuity
	Main power window and door lock/unlock switch	14	2	Lock switch UNLOCK
Lock switch LOCK				No
3		Lock switch UNLOCK	Yes	
		Lock switch LOCK	No	



Is the inspection result normal?

YES >> Main power window and door lock/unlock switch is OK.

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62, "Removal and Installation"](#).

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

INFOID:000000003303059

- BCM supplies power.
- Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:000000003303060

Power Window And Door Lock/Unlock Switch RH

1. CHECK FRONT POWER WINDOW MOTOR RH FUNCTION

Does front power window motor RH operate with power window and door lock/unlock switch RH operation?

Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.

NO >> Refer to [PWC-14, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure"](#).

FRONT POWER WINDOW SWITCH : Diagnosis Procedure

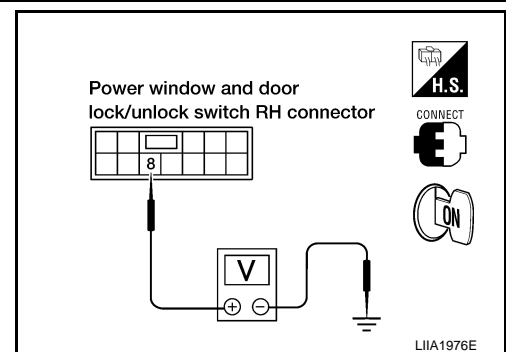
INFOID:000000003303061

Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window and door lock/unlock switch RH connector and ground.

Terminal (+)		Terminal (-)	Voltage (V) (Approx.)
Power window and door lock/unlock switch RH connector	Terminal		
D105	8	Ground	Battery voltage



Is the measurement value within the specification?

YES >> GO TO 3

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect BCM and power window and door lock/unlock switch RH.
3. Check continuity between BCM connector (A) and power window and door lock/unlock switch RH connector (B).

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M20 (A)	68	D105 (B)	8	Yes

4. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M20 (A)	68		No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector and ground.

Connector	Terminals	Continuity
Power window and door lock/unlock switch RH: D105	11	Yes
	12	Yes

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH.
Refer to [PWC-63, "Removal and Installation"](#).

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector and ground.

Terminals		Voltage (V) (Approx.)
(+)	(-)	
BCM connector	Terminal	
M20	68	Battery voltage

Is the measurement value within the specification?

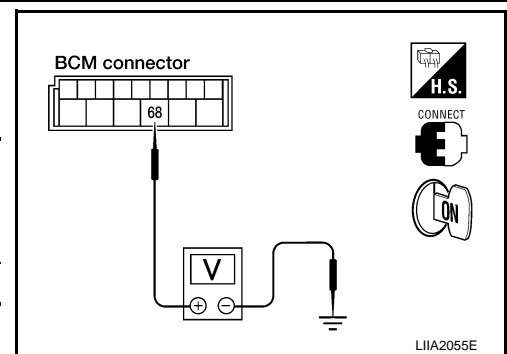
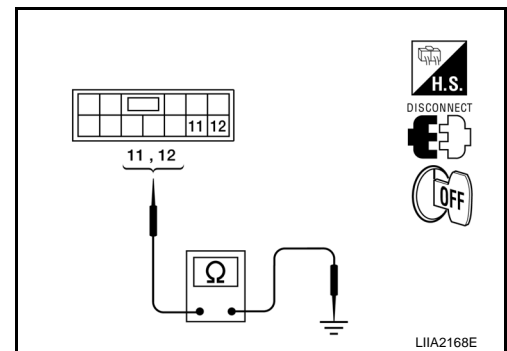
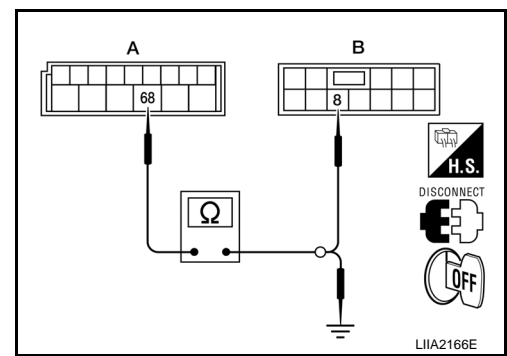
YES >> Replace power window and door lock/unlock switch RH.
Refer to [PWC-63, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-49, "Removal and Installation"](#).

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Description

- BCM supplies power.
- Rear power window motor will be operated if rear power window switch is operated.



A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

PWC

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

REAR POWER WINDOW SWITCH : Component Function Check

INFOID:000000003303063

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Does rear power window motor operate with rear power window switch operation?

Is the inspection result normal?

- YES >> Rear power window switch power supply and ground circuit are OK.
- NO >> Refer to [PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"](#).

REAR POWER WINDOW SWITCH : Diagnosis Procedure

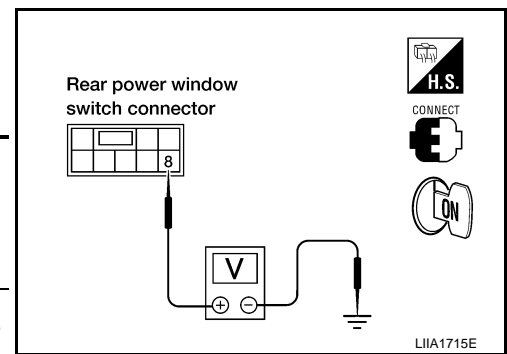
INFOID:000000003303064

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between rear power window switch connector and ground.

Terminal (+)		Terminal (-)	Condition	Voltage (V) (Approx.)
Rear power window switch connector	Terminal			
LH	D203	8	Ground	Ignition switch ON
RH	D303			
				Battery voltage



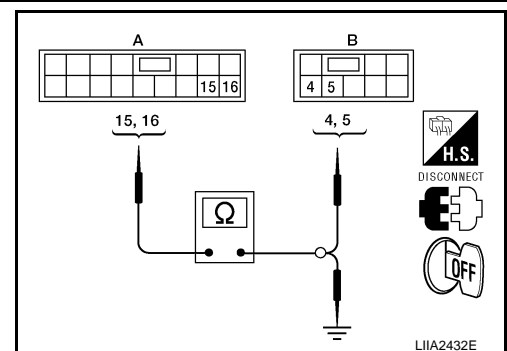
Is the measurement value within the specification?

- YES >> GO TO 2 (Rear power window switch LH)
- YES >> GO TO 3 (Rear power window switch RH)
- NO >> GO TO 4

2. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and rear power window switch LH.
3. Check continuity between main power window and door lock/unlock switch connector (A) and rear power window switch LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7 (A)	15	D203 (B)	4	Yes
	16		5	



4. Check continuity between main power window and door lock/unlock switch connector (A) and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	15	Ground	No
	16		

Is the inspection result normal?

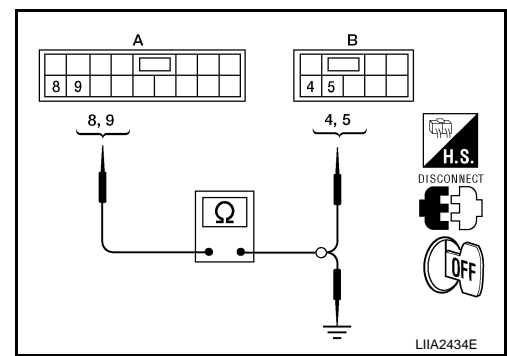
- YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).
- NO >> Repair or replace harness.

3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
3. Check continuity between main power window and door lock/unlock switch connector (A) and rear power window switch RH connector (B).



Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7 (A)	8	D303 (B)	4	Yes
	9		5	

4. Check continuity between main power window and door lock/unlock switch connector (A) and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	8	Ground	No
	9		

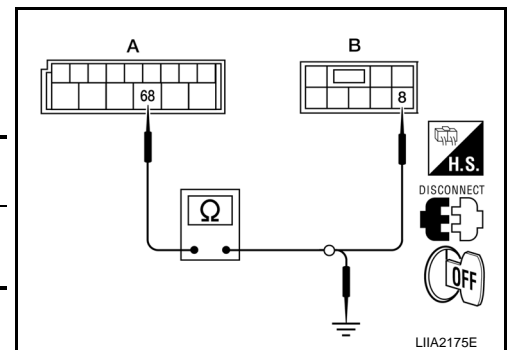
Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

1. Disconnect BCM and rear power window switch.
2. Check continuity between BCM connector (A) and rear power window switch connector (B).



BCM connector	Terminal	Rear power window switch connector	Terminal	Continuity
M20 (A)	68	LH	D203 (B)	Yes
		RH	D303 (B)	

3. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M20 (A)	68	Ground	No

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-17, "REAR POWER WINDOW SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

NO >> Replace rear power window switch. Refer to [PWC-64, "Removal and Installation - Rear Door Switch \(if equipped\)"](#).

REAR POWER WINDOW SWITCH : Component Inspection

INFOID:000000003303065

COMPONENT INSPECTION

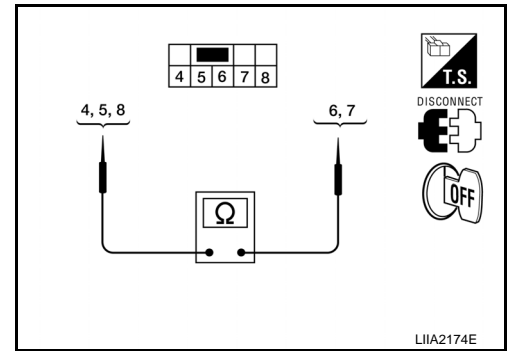
1. CHECK REAR POWER WINDOW SWITCH

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Check rear power window switch.

	Terminals		Condition	Continuity	
	6	8			
Rear power window switch LH or RH	6	5	DOWN	No	
			NEUTRAL or UP	Yes	
	8	8	NEUTRAL or UP	No	
			DOWN	Yes	
	7	4	UP	No	
			NEUTRAL or DOWN	Yes	
		8	8	NEUTRAL or DOWN	No
				UP	Yes



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to [PWC-64, "Removal and Installation - Rear Door Switch \(if equipped\)"](#).

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000003303066

Door glass moves UP/DOWN by receiving the signal from power window main switch.

DRIVER SIDE : Component Function Check

INFOID:000000003303067

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does front power window motor LH operate when operating main power window and door lock/unlock switch?
Is the inspection result normal?

- YES >> Front power window motor LH is OK.
- NO >> Refer to [PWC-19. "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

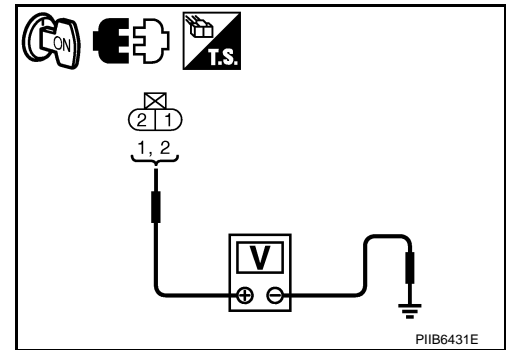
INFOID:000000003303068

Front Power Window Motor LH Circuit Check

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

1. Disconnect front power window motor LH.
2. Turn ignition switch ON.
3. Check voltage between front power window motor LH connector and ground.

Terminal (+)		Terminal (-)	Main power window and door lock/unlock switch condition	Voltage (V) (Approx.)
Power window motor LH connector	Terminal			
D9	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage



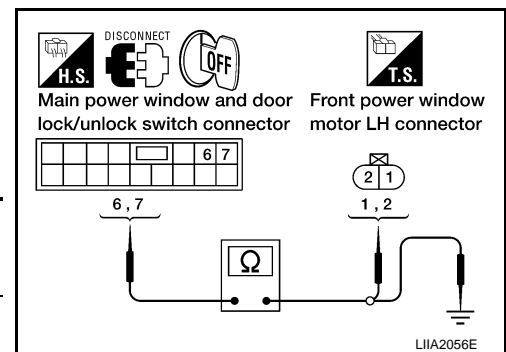
Is the measurement value within the specification?

- YES >> GO TO 2
- NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector and front power window motor LH.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	6	D9	2	Yes
	7		1	



4. Check continuity between main power window and door lock/unlock switch connector (A) and ground.

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	6		Ground
	7		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR

Check front power window motor LH.

Refer to [PWC-20, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

NO >> Replace power window motor LH. Refer to [GW-16, "Front Door Glass Regulator"](#).

DRIVER SIDE : Component Inspection

INFOID:000000003303069

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

Does motor operate by connecting the battery voltage directly to power window motor?

Terminal		Motor condition
(+)	(-)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Replace front power window motor LH. Refer to [GW-16, "Front Door Glass Regulator"](#).

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:000000003303070

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

PASSENGER SIDE : Component Function Check

INFOID:000000003303071

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does power window motor operate when operating main power window and door lock/unlock switch or power window and door lock/unlock switch RH?

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to [PWC-20, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000003303072

Front Power Window Motor RH Circuit Check

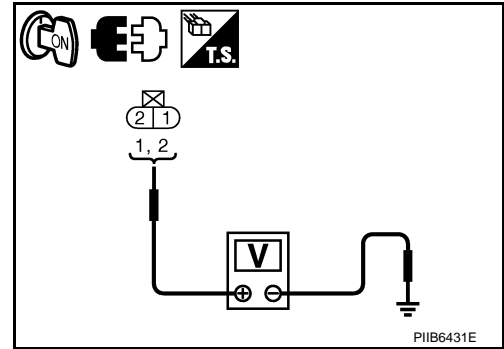
1. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

1. Disconnect front power window motor RH.
2. Turn ignition switch ON.
3. Check voltage between front power window motor RH connector and ground.

Terminal (+)		Terminal (-)	Front power window motor RH condition	Voltage (V) (Approx.)
Front power window motor RH connector	Terminal			
D104	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage



Is the measurement value within the specification?

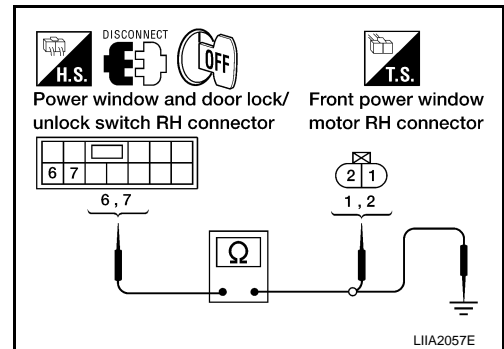
YES >> GO TO 2

NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-63, "Removal and Installation"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	6	D104	1	Yes
	7		2	



4. Check continuity between power window and door lock/unlock switch RH connector and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105	6	Ground	No
	7		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to [PWC-21, "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

NO >> Replace front power window motor RH. Refer to [GW-16, "Front Door Glass Regulator"](#).

PASSENGER SIDE : Component Inspection

INFOID:000000003303073

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to front power window motor RH?

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

Terminal		Motor condition
(+)	(-)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Replace front power window motor RH. Refer to [GW-16. "Front Door Glass Regulator"](#).

REAR LH

REAR LH : Description

INFOID:000000003303074

Door glass moves UP/DOWN by receiving the signal from power window main switch or rear power window switch LH.

REAR LH : Component Function Check

INFOID:000000003303075

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Does rear power window motor LH operate with main power window and door lock/unlock switch or rear power window switch LH?

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to [PWC-22. "REAR LH : Diagnosis Procedure"](#).

REAR LH : Diagnosis Procedure

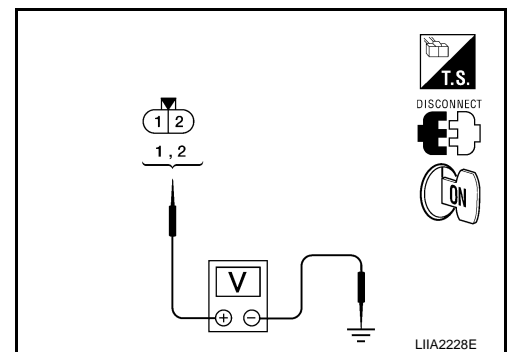
INFOID:000000003303076

Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

1. Disconnect rear power window motor LH.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor LH connector and ground.

Terminal		Window condition	Voltage (V) (Approx.)
(+)	(-)		
Rear power window motor LH connector	Terminal		
D204	1	UP	Battery voltage
		DOWN	0
	2	UP	0
		DOWN	Battery voltage



Is the measurement value within the specification?

YES >> GO TO 2

NO >> Check rear power window switch LH. Refer to [PWC-16. "REAR POWER WINDOW SWITCH : Component Function Check"](#).

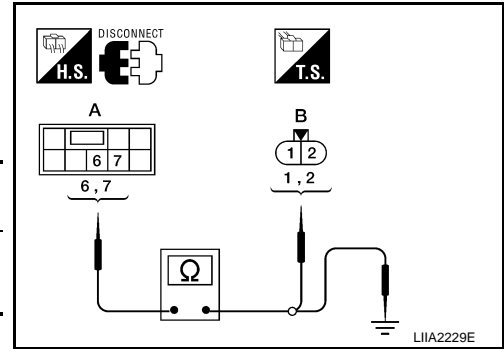
2. CHECK HARNESS CONTINUITY

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH.
3. Check continuity between rear power window switch LH connector (A) and rear power window motor LH connector (B).

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203 (A)	6	D204 (B)	1	Yes
	7		2	



4. Check continuity between rear power window switch LH connector (A) and ground.

Rear power window switch LH connector	Terminal	Ground	Continuity
D203 (A)	6	Ground	No
	7		

Is the inspection result normal?

- YES >> GO TO 3
 NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to [PWC-23, "REAR LH : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).
 NO >> Replace rear power window motor LH. Refer to [GW-20, "Rear Door Glass Regulator"](#).

REAR LH : Component Inspection

INFOID:000000003303077

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

Does motor operate by connecting the battery voltage directly to rear power window motor LH?

PWC

Terminal		Motor condition
(+)	(-)	
2	1	DOWN
1	2	UP

Is the inspection result normal?

- YES >> Rear power window motor LH is OK.
 NO >> Replace rear power window motor LH. Refer to [GW-20, "Rear Door Glass Regulator"](#).

REAR RH

REAR RH : Description

INFOID:000000003303078

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or rear power window switch RH.

REAR RH : Component Function Check

INFOID:000000003303079

1. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

Does rear power window motor RH operate with operating main power window and door lock/unlock switch or rear power window switch RH?

Is the inspection result normal?

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

- YES >> Rear power window motor RH is OK.
 NO >> Refer to [PWC-24, "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

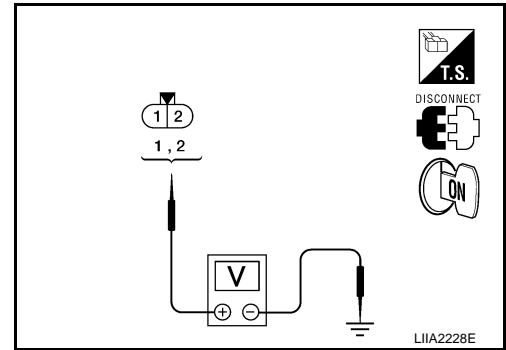
INFOID:000000003303080

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect rear power window motor RH.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor RH connector and ground.

Terminal (+)		Terminal (-)	Rear power window switch RH condition	Voltage (V) (Approx.)
Rear power window motor RH connector	Terminal			
D304	1	Ground	UP	Battery voltage
			DOWN	0
	2		UP	0
			DOWN	Battery voltage



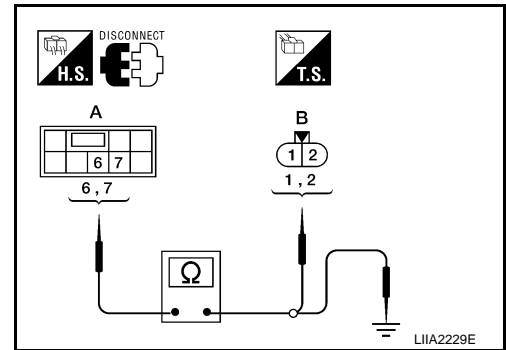
Is the measurement value within the specification?

- YES >> GO TO 2
 NO >> Check rear power window switch RH. Refer to [PWC-16, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH.
3. Check continuity between rear power window switch RH connector (A) and rear power window motor RH connector (B).

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303 (A)	6	D304 (B)	1	Yes
	7		2	



4. Check continuity between rear power window switch RH connector (A) and ground.

Rear power window switch RH connector	Terminal	Ground	Continuity
D303 (A)	6	Ground	No
	7		

Is the inspection result normal?

- YES >> GO TO 3
 NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.
 Refer to [PWC-25, "REAR RH : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).
 NO >> Replace rear power window motor RH. Refer to [GW-20, "Rear Door Glass Regulator"](#).

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

REAR RH : Component Inspection

INFOID:000000003303081

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to rear power window motor RH?

Terminal		Motor condition
(+)	(-)	
2	1	DOWN
1	2	UP

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Replace rear power window motor RH. Refer to [GW-20, "Rear Door Glass Regulator"](#).

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

DOOR SWITCH

< COMPONENT DIAGNOSIS >

DOOR SWITCH

KING CAB

KING CAB : Description

INFOID:000000003303846

Detects door open/close condition.

KING CAB : Component Function Check

INFOID:000000003303847

1. CHECK FUNCTION

With CONSULT-III

Check door switches in data monitor mode with CONSULT-III.

Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN: OFF → ON
DOOR SW-AS	

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to [PWC-26. "KING CAB : Diagnosis Procedure"](#).

KING CAB : Diagnosis Procedure

INFOID:000000003303848

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-III

Check door switches ("DOOR SW-DR", "DOOR SW-AS") in DATA MONITOR mode with CONSULT-III. Refer to [DLK-15. "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

- When any doors are open:

DOOR SW-DR :ON

DOOR SW-AS :ON

- When any doors are closed:

DOOR SW-DR :OFF

DOOR SW-AS :OFF

Without CONSULT-III

Check voltage between BCM connector M18 or M19 terminals 12, 47 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M19	Door switches LH	47	Ground	Open ↓ Closed	0 ↓ Battery voltage
M18	Door switches RH	12			

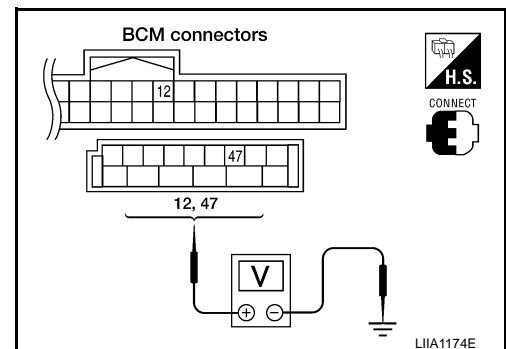
Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> GO TO 2.

2. CHECK BCM OUTPUT VOLTAGE

- Turn ignition switch OFF.
- Disconnect door switches.



DOOR SWITCH

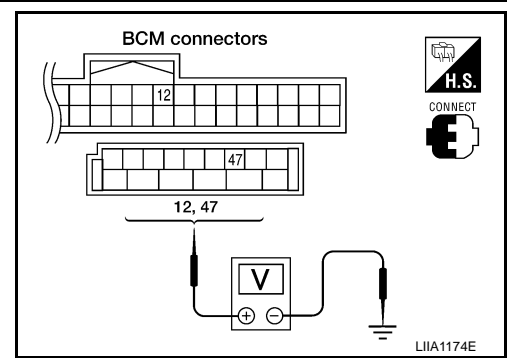
< COMPONENT DIAGNOSIS >

3. Check voltage between BCM connector M18, M19 terminals 12, 47 and ground.

12 - Ground : Battery voltage
47 - Ground : Battery voltage

Is the inspection result normal?

- YES >> GO TO 3.
 NO >> Replace BCM. Refer to [BCS-49, "Removal and Installation"](#).



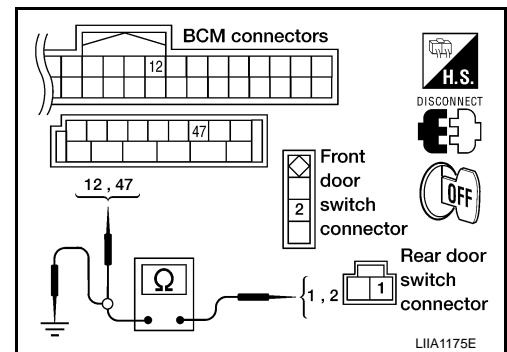
3.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM.
2. Check continuity between door switch connector D213 (Front LH), D314 (Front RH) terminal 2, D211 (Rear upper LH), D312 (Rear upper RH), D212 (Rear lower LH), D313 (Rear lower RH) terminal 1 and BCM connector M18, M19 terminals 12, and 47.

2 - 47 : Continuity should exist
2 - 12 : Continuity should exist
1 - 47 : Continuity should exist
1 - 12 : Continuity should exist

3. Check continuity between door switch connector D213 (Front LH), D314 (Front RH) terminal 2, D211 (Rear upper LH), D312 (Rear upper RH), D212 (Rear lower LH), D313 (Rear lower RH) terminal 1 and ground.

2 - Ground : Continuity should not exist
1 - Ground : Continuity should not exist



Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Repair or replace harness.

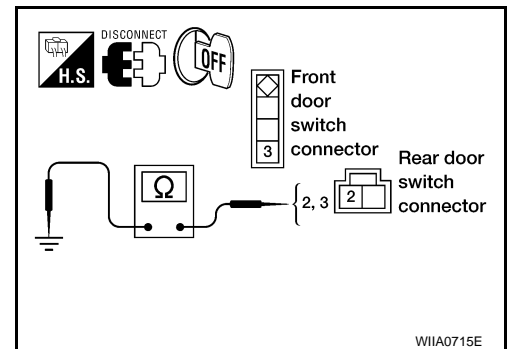
4.CHECK DOOR SWITCHES GROUND CIRCUIT

Check continuity between door switch connector D213 (Front LH), D314 (Front RH) terminal 3, D211 (Rear upper LH), D312 (Rear upper RH), D212 (Rear lower LH), D313 (Rear lower RH) terminal 2 and ground.

3 - Ground : Continuity should not exist
2 - Ground : Continuity should not exist

Is the inspection result normal?

- YES >> GO TO 5.
 NO >> Repair or replace harness.



5.CHECK DOOR SWITCHES

Check continuity between door switch terminals.

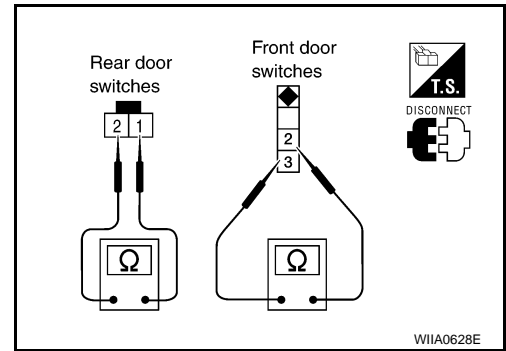
A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

DOOR SWITCH

< COMPONENT DIAGNOSIS >

Item	Terminal	Condition	Continuity
Door switches (front)	2 - 3	Open	Yes
		Closed	No
Door switches (rear upper and lower)	1 - 2	Open	Yes
		Closed	No



Is the inspection result normal?

- YES >> Check condition of harness and connector.
- NO >> Replace door switch.

CREW CAB

CREW CAB : Description

INFOID:000000003303849

Detects door open/close condition.

CREW CAB : Component Function Check

INFOID:000000003303850

1. CHECK FUNCTION

With CONSULT-III

Check door switches in data monitor mode with CONSULT-III.

Monitor item	Condition
DOOR SW-DR	CLOSE → OPEN: OFF → ON
DOOR SW-AS	
DOOR SW-RL	
DOOR SW-RR	

Is the inspection result normal?

- YES >> Door switch is OK.
- NO >> Refer to [PWC-28. "CREW CAB : Diagnosis Procedure"](#).

CREW CAB : Diagnosis Procedure

INFOID:000000003303851

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-III

Check door switches ("DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR") in DATA MONITOR mode with CONSULT-III. Refer to [DLK-15. "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

- When any doors are open:

DOOR SW-DR : ON
 DOOR SW-AS : ON
 DOOR SW-RL : ON
 DOOR SW-RR : ON

- When any doors are closed:

DOOR SW-DR : OFF
 DOOR SW-AS : OFF
 DOOR SW-RL : OFF
 DOOR SW-RR : OFF

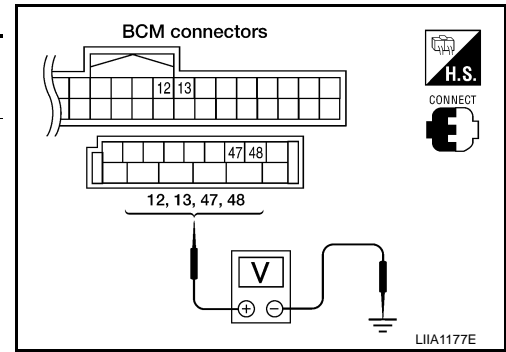
Without CONSULT-III

DOOR SWITCH

< COMPONENT DIAGNOSIS >

Check voltage between BCM connector M18 or M19 terminals 12, 13, 47, 48 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M19	Front door switch LH	47	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Rear door switch LH	48			
M18	Front door switch RH	12			
	Rear door switch RH	13			



Is the inspection result normal?

- YES >> Door switch circuit is OK.
- NO >> GO TO 2.

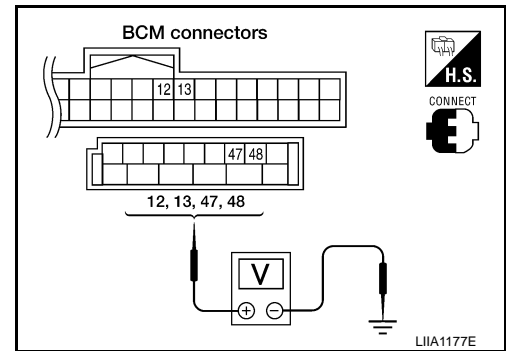
2.CHECK BCM OUTPUT VOLTAGE

1. Turn ignition switch OFF.
2. Disconnect door switches.
3. Check voltage between BCM connector M18, M19 terminals 12, 13, 47, 48 and ground.

- 12 - Ground : Battery voltage**
- 13 - Ground : Battery voltage**
- 47 - Ground : Battery voltage**
- 48 - Ground : Battery voltage**

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Replace BCM. Refer to [BCS-49. "Removal and Installation"](#).



3.CHECK DOOR SWITCH CIRCUIT

1. Disconnect door switch and BCM.
2. Check continuity between door switch connector B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 and BCM connector M18, M19 terminals 12, 13, 47 and 48.

- 2 - 47 : Continuity should exist.**
- 2 - 12 : Continuity should exist.**
- 2 - 48 : Continuity should exist.**
- 2 - 13 : Continuity should exist.**

3. Check continuity between door switch connector B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 and ground.

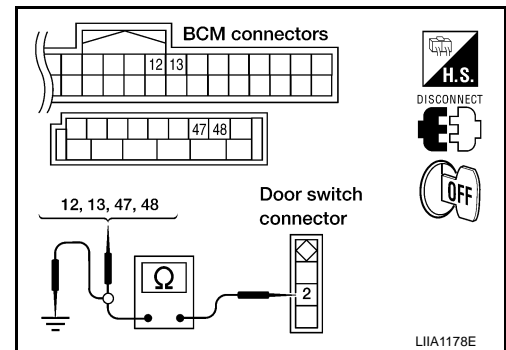
- 2 - Ground : Continuity should not exist.**

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace harness.

4.CHECK DOOR SWITCHES

1. Disconnect door switch.
2. Check continuity between door switch terminals.



DOOR SWITCH

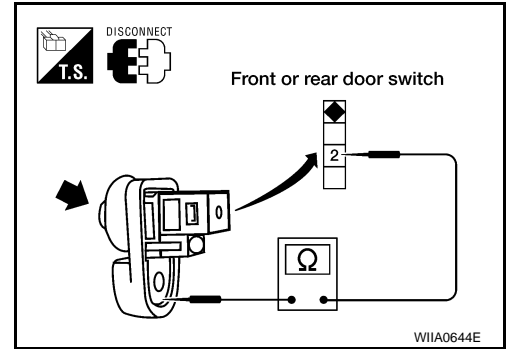
< COMPONENT DIAGNOSIS >

	Terminal	Condition	Continuity
Door switch	2 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

YES >> Check switch case ground condition.

NO >> Replace door switch.



POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

POWER WINDOW LOCK SWITCH

Description

INFOID:000000003303086

Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch.

Component Function Check

INFOID:000000003303087

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked.

Does power window lock operate?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-62. "Removal and Installation"](#).
- NO >> Check condition of harness and connector.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003303251

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the LOCK side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the UNLOCK side	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1st	ON
HEADLAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HEADLAMP SW2	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HI BEAM SW	High beam switch OFF	OFF
	High beam switch HI	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
H/L WASH SW	NOTE: The item is indicated, but not monitored	OFF
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
IGN SW CAN	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
KEYLESS LOCK	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	ON
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	OFF
	Ignition switch ON	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
RKE LOCK AND UN-LOCK	NOTE: The item is indicated, but not monitored	OFF
		ON
TAIL LAMP SW	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
TURN SIGNAL L	Turn signal switch OFF	OFF
	Turn signal switch LH	ON
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

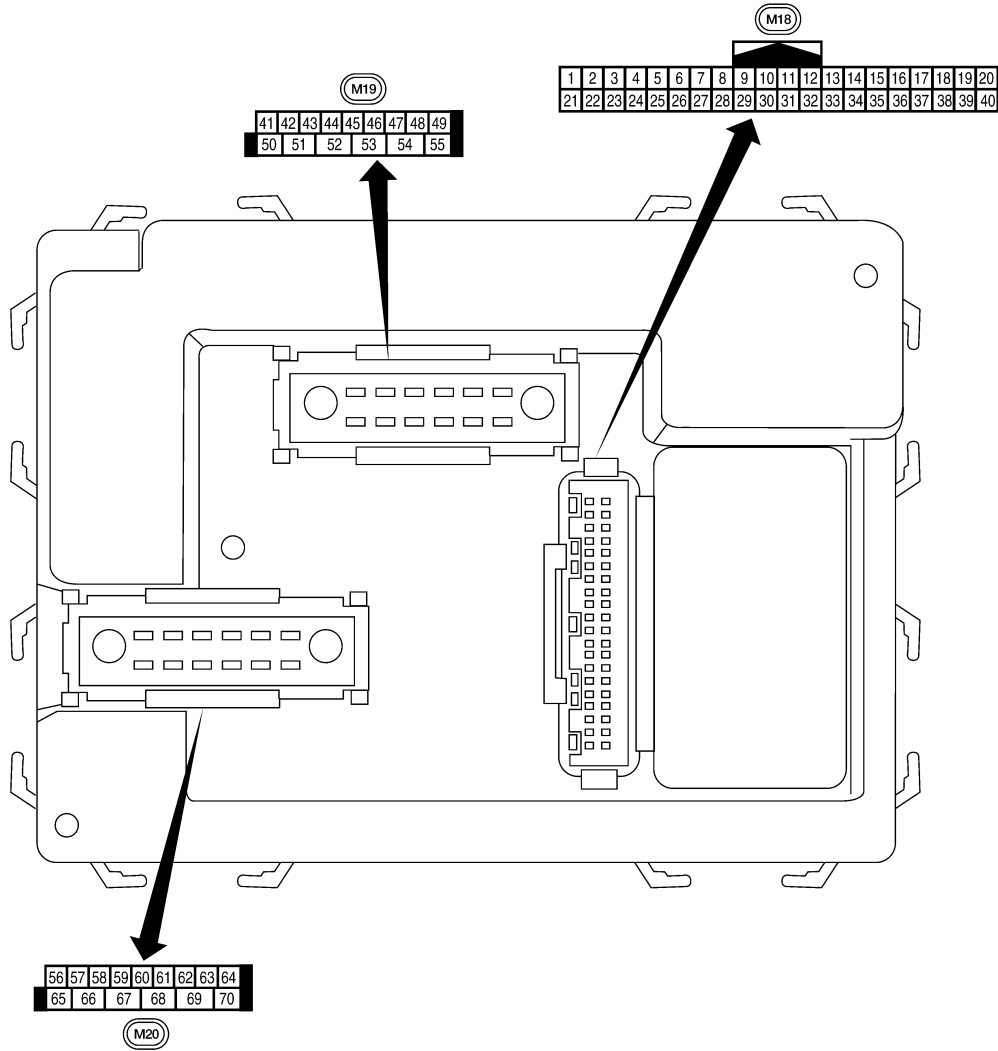
A
B
C
D
E
F
G
H
I
J
PWC
L
M
N
O
P

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000003303252




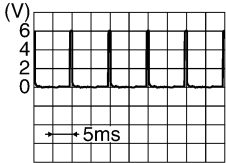

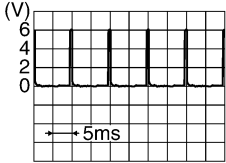
Physical Values

LIA2443E

INFOID:000000003303253

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

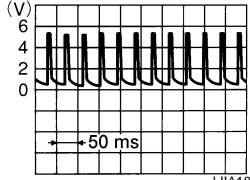
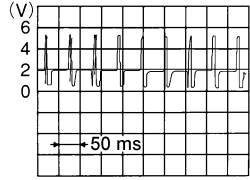
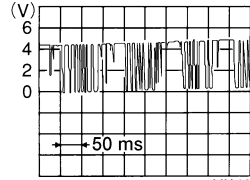
Terminal	Wire color	Item	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
5	L	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
6	R	Combination switch input 1				
7	GR	Front door lock assembly LH (key cylinder switch) unlock	Input	OFF	ON (open, 2nd turn)	Momentary 1.5V
8	SB	Front door lock assembly LH (key cylinder switch) lock			OFF (closed)	0V
			On (open)	Momentary 1.5V		
9	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper RH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower RH (King Cab)				

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Item	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
13	L	Rear door switch RH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	—	5V
18	BR	Remote keyless entry receiver (Ground)	Output	OFF	—	0V
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LIA1893E
20	G	Remote keyless entry receiver signal (Signal)	Input	OFF	Stand-by (keyfob buttons released)	 LIA1894E
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LIA1895E
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
23	G	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V
31	GR	Cargo lamp switch	Input	OFF	ON	0V
					OFF	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

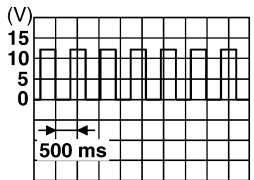
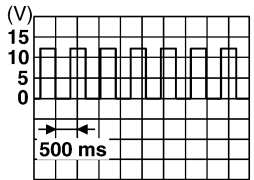
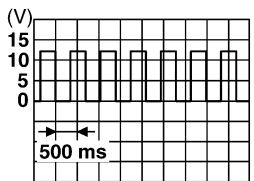
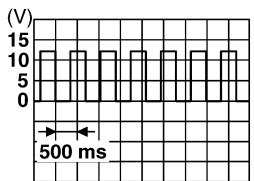
Terminal	Wire color	Item	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right; font-size: small;">SKIA5291E</p>
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right; font-size: small;">SKIA5292E</p>
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right; font-size: small;">SKIA5291E</p>
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right; font-size: small;">SKIA5292E</p>
36	LG	Combination switch output 1				
37	B	Key switch	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
45	V	Lock switch	Input	OFF	ON (lock)	0V
					OFF	Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)	0V
					OFF	Battery voltage
47	GR	Front door switch LH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper LH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower LH (King Cab)				
48	P	Rear door switch LH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
50	P	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Item	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
51	G	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	V	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
56	V	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	R/Y	Battery power supply	Input	—	—	Battery voltage
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	GR	Front door lock assembly LH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
61	G	Turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
63	BR	Interior room/map lamp	Output	OFF	Any door switch ON (open)	0V
					OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	L	Front door lock actuator RH, rear door lock actuators LH/RH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

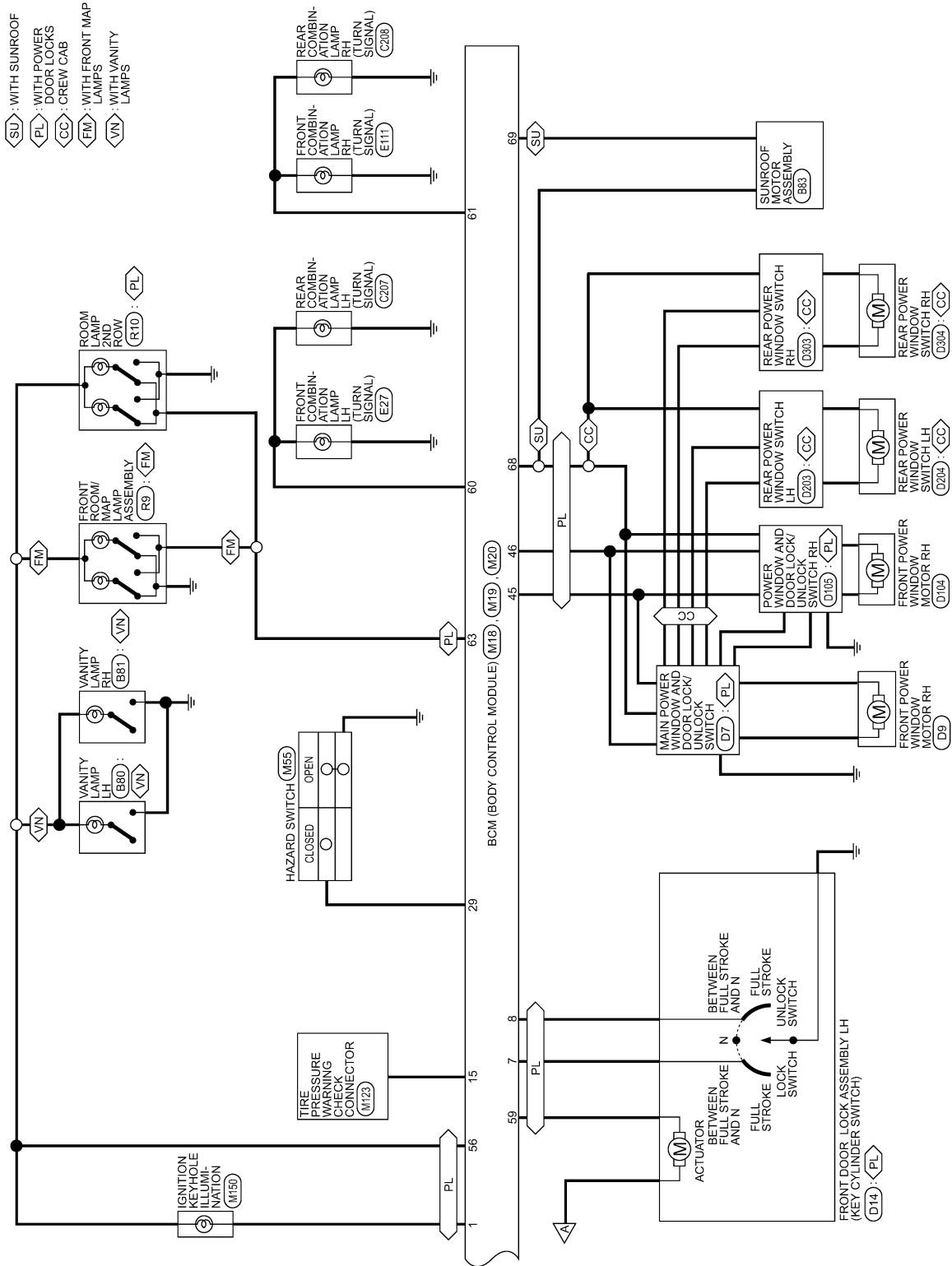
Terminal	Wire color	Item	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
68	O	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	P	Power window power supply (BAT)	Output	OFF	—	Battery voltage
70	W	Battery power supply	Input	OFF	—	Battery voltage

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



AWMWA0179G

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

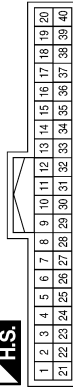
PWC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE) CONNECTORS

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BR	KEY RING OUTPUT
2	P	COMBI SW INPUT 5 (LOW SIDE)
3	SB	COMBI SW INPUT 3 (LOW SIDE)
4	V	COMBI SW INPUT 4 (LOW SIDE)
5	L	COMBI SW INPUT 2 (LOW SIDE)
6	R	COMBI SW INPUT 1 (LOW SIDE)

Terminal No.	Color of Wire	Signal Name
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
9	Y	RR DEFOGGER SW
10	-	-
11	G/B	ACC. SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
14	-	-
15	W	TPMS MODE TRIGGER SW
16	-	-
17	-	-
18	BR	KEYLESS & AUTO LIGHT SENSOR GND
19	V	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G	KEYLESS TUNER SIGNAL
21	GR	IMMOBILISER ATNENNA SIG (CLOCK)

Terminal No.	Color of Wire	Signal Name
22	-	-
23	G	SECURITY INDICATOR OUTPUT
24	-	-
25	BR	IMMOBILISER ATNENNA SIGNAL (TX,RX)
26	-	-
27	W	AIRCON SW
28	R	BLOWER FAN SW
29	G	HAZARD SW
30	GR	-
31	GR	CARGO LAMP SW
32	O	COMBI SW OUTPUT 5 (PULL UP SIDE)
33	GR	COMBI SW OUTPUT 4 (PULL UP SIDE)
34	G	COMBI SW OUTPUT 3 (PULL UP SIDE)
35	BR	COMBI SW OUTPUT 2 (PULL UP SIDE)
36	LG	COMBI SW OUTPUT 1 (PULL UP SIDE)
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

AWMIA0382GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



41	42	43	44	45	46	47	48	49
----	----	----	----	----	----	----	----	----

Terminal No.	Color of Wire	Signal Name
41	-	-
42	-	-
43	-	-
44	-	-

Terminal No.	Color of Wire	Signal Name
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
49	-	-
50	P	CARGO LAMP CARGO OUTPUT
51	G	TRAILER FLASHER OUTPUT (RIGHT)
52	V	TRAILER FLASHER OUTPUT (LEFT)
53	-	-
54	-	-
55	-	-

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



56	57	58	59	60	61	62	63	64
----	----	----	----	----	----	----	----	----

Terminal No.	Color of Wire	Signal Name
56	V	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
58	W	AUTO LIGHT SENSOR INPUT 2
59	GR	DOOR UNLOCK OUTPUT (DR)
60	LG	FLASHER OUTPUT (LEFT)

Terminal No.	Color of Wire	Signal Name
61	G	FLASHER OUTPUT (RIGHT)
62	-	-
63	BR	ROOM LAMP OUTPUT
64	-	-
65	V	DOOR LOCK OUTPUT (ALL)
66	L	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
68	O	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP)
69	P	POWER WINDOW POWER SUPPLY OUTPUT (BAT)
70	W	BAT (F/L)

AWMIA0383GB

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

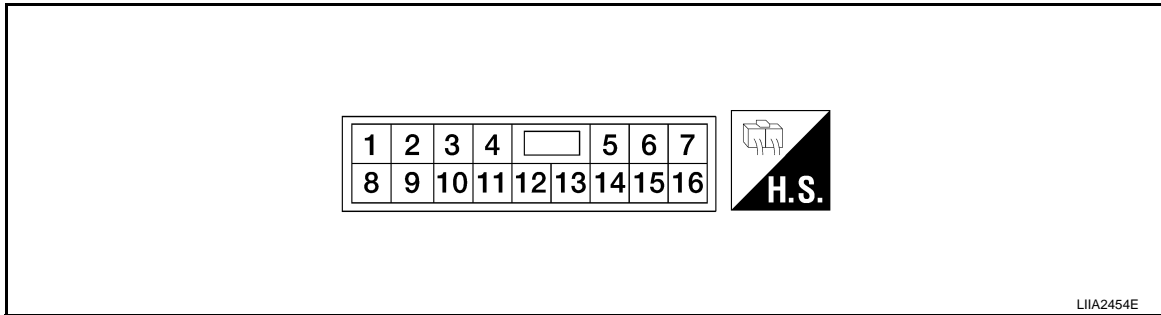
POWER WINDOW SYSTEM

< ECU DIAGNOSIS >

POWER WINDOW SYSTEM

Terminal Layout for Power Window Main Switch

INFOID:000000003303092



LIA2454E

Physical Values for Power Window Main Switch

INFOID:000000003303093

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
2	G/Y	Front power window motor RH DOWN signal	When power window motor is operated DOWN	Battery voltage
3	L/W	Front power window motor RH UP signal	When power window motor is operated UP	Battery voltage
5	W/R	RAP signal	When ignition switch ON	Battery voltage
			Within 45 seconds after ignition switch is turned to OFF	Battery voltage
			More than 45 seconds after ignition switch is turned to OFF	0
			When front door LH or RH open or power window timer operates	0
6	G/R	Front power window motor LH UP signal	When power window motor is operated UP	Battery voltage
7	G/W	Front power window motor LH DOWN signal	When power window motor is operated DOWN	Battery voltage
8*	G/B	Rear power window RH UP signal	When rear RH switch in main power window and door lock/unlock switch is operated UP	Battery voltage
9*	R	Rear power window RH DOWN signal	When rear RH switch in main power window and door lock/unlock switch is operated DOWN	Battery voltage
14	B	Ground	—	0
15*	R/B	Rear power window LH UP signal	When rear LH switch in main power window and door lock/unlock switch is operated UP	Battery voltage
16*	R/Y	Rear power window LH DOWN signal	When rear LH switch in main power window and door lock/unlock switch is operated DOWN	Battery voltage

*: Crew cab

POWER WINDOW SYSTEM

< ECU DIAGNOSIS >

POWER WINDOW SYSTEM CONNECTORS

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



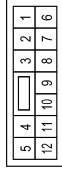
Terminal No.	Color of Wire	Signal Name
4P	G/B	-
15P	W/R	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



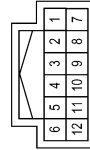
Terminal No.	Color of Wire	Signal Name
6	W	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L	-
4	P	-
5	Y	-
6	P	-
9	B	-
10	SB	-
11	LG	-
12	V	-

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



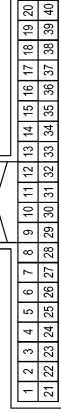
Terminal No.	Color of Wire	Signal Name
8	LG	-

Connector No.	M17
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	Y	-
15	W	-
16	P	-

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

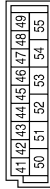


Terminal No.	Color of Wire	Signal Name
11	G/B	ACC. SW
12	LG	DOOR SW (AS)
38	W/R	IGN SW

POWER WINDOW SYSTEM

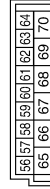
< ECU DIAGNOSIS >

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



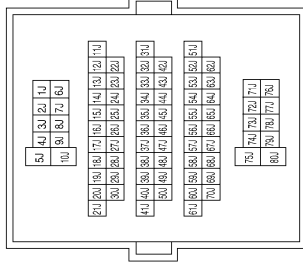
Terminal No.	Color of Wire	Signal Name
47	GR	DOOR SW (DR)

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



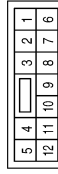
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
68	O	POWER WINDOW POWER SUPPLY (LINKER TO RAP)
70	W	BAT (F/L)

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10J	W	-
61J	GR	-
75J	R	-
80J	LG	-

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



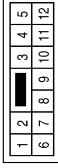
Terminal No.	Color of Wire	Signal Name
5	W	-
8	P	-
9	SB	-

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-

Connector No.	B6
Connector Name	WIRE TO WIRE (CREW CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
7	R	-
8	LG	-

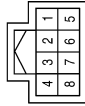
AWKIA0480GB

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

POWER WINDOW SYSTEM

< ECU DIAGNOSIS >

Connector No.	B6
Connector Name	WIRE TO WIRE (KING CAB)
Connector Color	WHITE



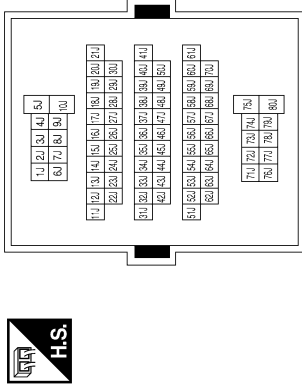
Terminal No.	Color of Wire	Signal Name
7	R	-
8	GR	-

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



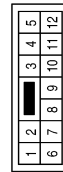
Terminal No.	Color of Wire	Signal Name
2	GR	-

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



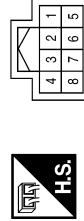
Terminal No.	Color of Wire	Signal Name
10J	W	-
61J	GR	-
70J	V	-
80J	LG	-

Connector No.	B106
Connector Name	WIRE TO WIRE (CREW CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
7	B	-
8	LG	-

Connector No.	B106
Connector Name	WIRE TO WIRE (KING CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	B	-
8	LG	-

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



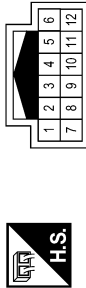
Terminal No.	Color of Wire	Signal Name
2	LG	-

AWKIA0481GB

POWER WINDOW SYSTEM

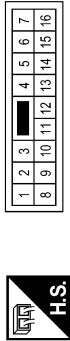
< ECU DIAGNOSIS >

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE



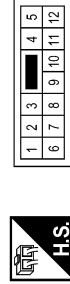
Terminal No.	Color of Wire	Signal Name
8	LG	-

Connector No.	B163
Connector Name	WIRE TO WIRE
Connector Color	WHITE



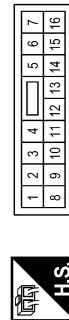
Terminal No.	Color of Wire	Signal Name
7	Y	-
15	W	-
16	P	-

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G/Y	-
4	R	-
5	G/B	-
6	L/W	-
9	B	-
10	W/R	-
11	R/B	-
12	R/Y	-

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/Y	-
3	L/W	-
5	W/R	-
6	G/R	-
7	G/W	-
8	G/B	-
9	R	-

Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/B	-
16	R/Y	-

Connector No.	D9
Connector Name	FRONT POWER WINDOW MOTOR LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G/W	-
2	G/R	-

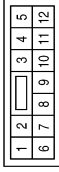
AWKIA0482GB

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

POWER WINDOW SYSTEM

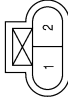
< ECU DIAGNOSIS >

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE



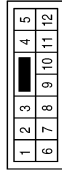
Terminal No.	Color of Wire	Signal Name
6	G	-
7	L	-
8	W/R	-
11	G/Y	-
12	L/W	-

Connector No.	D104
Connector Name	FRONT POWER WINDOW MOTOR RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	G	-
2	L	-

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



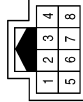
Terminal No.	Color of Wire	Signal Name
5	W/R	-
8	L/W	-
9	G/Y	-

Connector No.	D203
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	LG	-
5	R	-
6	Y	-
7	L	-
8	W	-

Connector No.	D201
Connector Name	WIRE TO WIRE (KING CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	B	-
8	LG	-

Connector No.	D201
Connector Name	WIRE TO WIRE (CREW CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
7	LG	-
8	R	-

AWKIA0483GB

POWER WINDOW SYSTEM

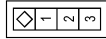
< ECU DIAGNOSIS >

Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	L	-

Connector No.	D213
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



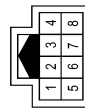
Terminal No.	Color of Wire	Signal Name
2	LG	-
3	B	-

Connector No.	D301
Connector Name	WIRE TO WIRE (CREW CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
7	B	-
8	LG	-

Connector No.	D301
Connector Name	WIRE TO WIRE (KING CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	B	-
8	LG	-

Connector No.	D303
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	LG	-
5	R	-
6	Y	-
7	L	-
8	W	-

Connector No.	D304
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	L	-

AWKIA0484GB

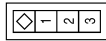
A B C D E F G H I J L M N O P

PWC

POWER WINDOW SYSTEM

< ECU DIAGNOSIS >

Connector No.	D314
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	LG	-
3	B	-

AWKIA0485GB

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:000000003303095

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to [BCS-27, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window switch.

Refer to [PWC-11, "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Component Inspection"](#) or [PWC-14, "POWER WINDOW MAIN SWITCH \(KING CAB\) : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62, "Removal and Installation"](#).

3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window switch main power supply and ground circuit.

Refer to [PWC-8, "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Component Function Check"](#) or [PWC-12, "POWER WINDOW MAIN SWITCH \(KING CAB\) : Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000003303096

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to [PWC-19, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000003303097

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to [PWC-14, "FRONT POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to [PWC-11, "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Component Inspection"](#) or [PWC-14, "POWER WINDOW MAIN SWITCH \(KING CAB\) : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62, "Removal and Installation"](#).

3. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to [PWC-20, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000003303098

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to [PWC-16, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to [PWC-11, "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62, "Removal and Installation"](#).

3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to [PWC-22, "REAR LH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000003303099

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to [PWC-16, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to [PWC-11, "POWER WINDOW MAIN SWITCH \(CREW CAB\) : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-62, "Removal and Installation"](#).

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to [PWC-23, "REAR RH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:000000003303100

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Replace main power window and door lock/unlock switch and check operation. Refer to [PWC-62, "Removal and Installation"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:000000003303101

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to [DLK-23, "CREW CAB : Component Function Check"](#) or [DLK-21, "KING CAB : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:000000003303102

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Replace main power window and door lock/unlock switch and check operation.
Refer to [PWC-62, "Removal and Installation"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to [GI-51, "Intermittent Incident"](#).

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000003303825

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

POWER WINDOW MAIN SWITCH

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

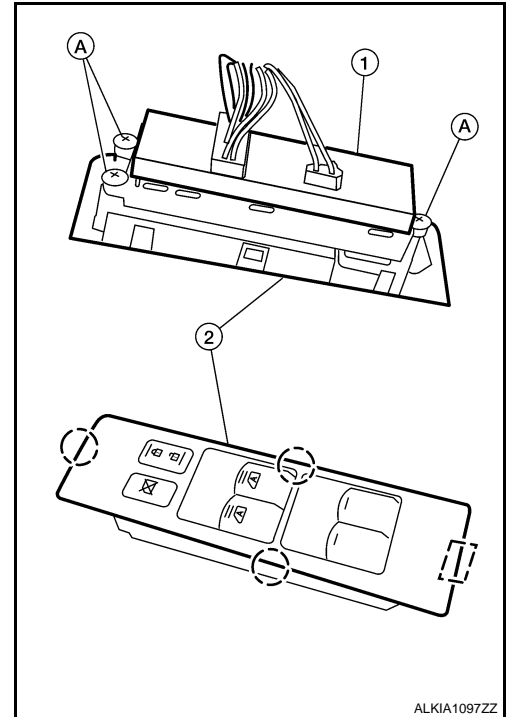
POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:000000003303826

REMOVAL

1. Remove the power window main switch finisher (2) from the front door finisher LH. Refer to [INT-13. "Removal and Installation"](#).
2. Remove the three screws (A) from the power window main switch (1), then separate from the finisher (2).



INSTALLATION

Installation is in the reverse order of removal.

FRONT POWER WINDOW SWITCH

< ON-VEHICLE REPAIR >

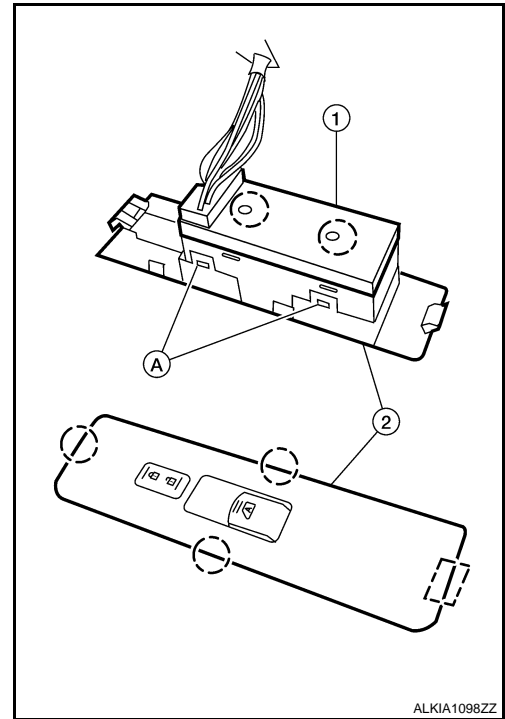
FRONT POWER WINDOW SWITCH

Removal and Installation

INFOID:000000003303827

REMOVAL

1. Remove the front power window switch finisher (2) from the front door finisher RH. Refer to [INT-13, "Removal and Installation"](#).
2. Release the four tabs (A), two on each side, then separate the front power window switch (1) from the finisher (2).



INSTALLATION

Installation is in the reverse order of removal.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

REAR POWER WINDOW SWITCH

< ON-VEHICLE REPAIR >

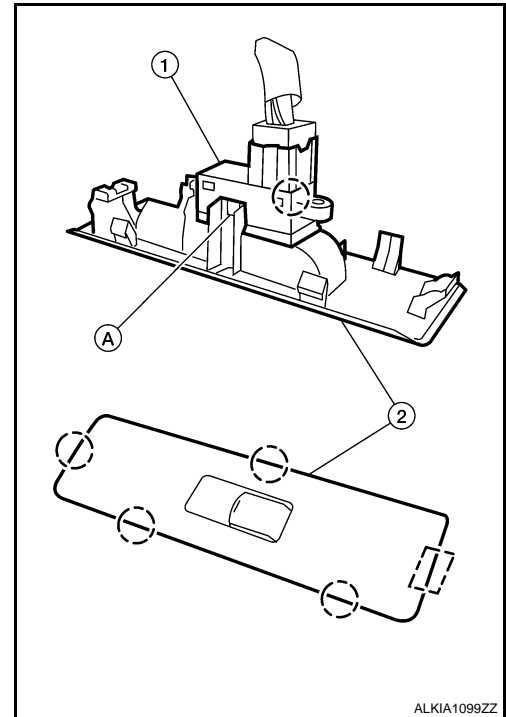
REAR POWER WINDOW SWITCH

Removal and Installation - Rear Door Switch (if equipped)

INFOID:000000003303828

REMOVAL

1. Remove the rear power window switch finisher (2) from the rear door finisher. Refer to [INT-13, "Removal and Installation"](#).
2. Release the two tabs (A), one on either side, then separate the rear power window switch (1) from the finisher (2).



INSTALLATION

Installation is in the reverse order of removal.