

CONTENTS

LH ONLY WINDOW ANTI-PINCH
BASIC INSPECTION5
DIAGNOSIS AND REPAIR WORKFLOW 5 Work Flow
INSPECTION AND ADJUSTMENT8
BASIC INSPECTION
FUNCTION DIAGNOSIS9
POWER WINDOW SYSTEM9System Diagram9System Description9Component Parts Location11Component Description11
DIAGNOSIS SYSTEM (BCM)13
COMMON ITEM
RETAINED PWR
COMPONENT DIAGNOSIS14
POWER SUPPLY AND GROUND CIRCUIT14
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Special Repair Requirement19
FRONT POWER WINDOW SWITCH19 FRONT POWER WINDOW SWITCH : Description19
FRONT POWER WINDOW SWITCH : Component Function Check
REAR POWER WINDOW SWITCH
POWER WINDOW MOTOR25
DRIVER SIDE
DRIVER SIDE: Description
DRIVER SIDE: Description
DRIVER SIDE : Description

D

Е

F

Н

PWC

REAR RH : Description	30	AUTO OPERATION DOES NOT OPERATE	
REAR RH: Component Function Check		BUT MANUAL OPERATE NORMALLY	
REAR RH : Diagnosis Procedure		(DRIVER SIDE)5	5
REAR RH : Component Inspection	31	Diagnosis Procedure5	5
ENCODER	32	POWER WINDOW RETAINED POWER OP-	
DRIVER SIDE	32	ERATION DOES NOT OPERATE PROPERLY	
DRIVER SIDE : Description	32	5	-
DRIVER SIDE : Component Function Check	32	Diagnosis Procedure5	6
DRIVER SIDE : Diagnosis Procedure		POWER WINDOW LOCK SWITCH DOES	
DRIVER SIDE : Special Repair Requirement	34	NOT FUNCTION5	7
DOOR SWITCH	35	Diagnosis Procedure5	
Description			
Component Function Check		PRECAUTION5	8
Diagnosis Procedure		PRECAUTIONS5	_
Component Inspection		Precaution for Supplemental Restraint System	ŏ
•		(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	
POWER WINDOW LOCK SWITCH		SIONER"5	Ω
Description		SIGNER	O
Component Function Check		ON-VEHICLE MAINTENANCE5	9
Special Repair Requirement	37		
ECU DIAGNOSIS	38	PRE-INSPECTION FOR DIAGNOSTIC5	
		Basic Inspection5	9
BCM (BODY CONTROL MODULE)		ON-VEHICLE REPAIR6	^
Reference Value	38	ON VEHICLE KEI AIK IIIIIIIIIIII 0	U
POWER WINDOW MAIN SWITCH	20	POWER WINDOW MAIN SWITCH 6	0
Reference Value		Removal and Installation6	0
Wiring Diagram		LH&RH FRONT WINDOW ANTI-PINCH	
Fail Safe			
		BASIC INSPECTION 6	1
SYMPTOM DIAGNOSIS	49	DIAGNOSIS AND REPAIR WORKFLOW 6	1
NONE OF THE POWER WINDOWS CAN BI	_	Work Flow	
OPERATED USING ANY SWITCH			
Diagnosis Procedure	_	INSPECTION AND ADJUSTMENT 6	4
Diagnosis Flocedule	49	ADDITIONAL SERVICE WHEN REMOVING BAT-	
DRIVER SIDE POWER WINDOW ALONE		TERY NEGATIVE TERMINAL6	4
DOES NOT OPERATE	50	ADDITIONAL SERVICE WHEN REMOVING	•
Diagnosis Procedure	50	BATTERY NEGATIVE TERMINAL : Description 6	4
FRONT DASSENCED SIDE DOWED WIN		ADDITIONAL SERVICE WHEN REMOVING	
FRONT PASSENGER SIDE POWER WIN-		BATTERY NEGATIVE TERMINAL : Special Re-	
DOW ALONE DOES NOT OPERATE		pair Requirement6	4
Diagnosis Procedure	51	ADDITIONAL SERVICE WHEN REPLACING	
REAR LH SIDE POWER WINDOW ALONE		CONTROL UNIT6	,
DOES NOT OPERATE	52	ADDITIONAL SERVICE WHEN REPLACING	4
Diagnosis Procedure		CONTROL UNIT : Description6	4
· ·		ADDITIONAL SERVICE WHEN REPLACING	7
REAR RH SIDE POWER WINDOW ALONE		CONTROL UNIT : Special Repair Requirement 6	4
DOES NOT OPERATE			
Diagnosis Procedure			
		FUNCTION DIAGNOSIS6	6
ANTI-PINCH SYSTEM DOES NOT OPERAT	53		
ANTI-PINCH SYSTEM DOES NOT OPERAT NORMALLY (DRIVER SIDE)	53 E	POWER WINDOW SYSTEM 6	6
NORMALLY (DRIVER SIDE)	53 E 54	POWER WINDOW SYSTEM 6 System Diagram6	6
	53 E 54	POWER WINDOW SYSTEM	6 6
NORMALLY (DRIVER SIDE)	53 E 54	POWER WINDOW SYSTEM 6 System Diagram6	6 6 6 8

DIA CNICCIC CVCTEM (DCM)	DEAD III
DIAGNOSIS SYSTEM (BCM)70	REAR LH84
COMMON ITEM70	REAR LH : Description84 A
COMMON ITEM : CONSULT-III Function (BCM -	REAR LH : Component Function Check84
	REAR LH : Diagnosis Procedure85
COMMON ITEM)70	REAR LH: Component Inspection86
RETAINED PWR70	REAR RH86
RETAINED PWR : CONSULT-III Function (BCM -	
RETAINED PWR)70	REAR RH : Description86
RETAINED I WILL	REAR RH : Component Function Check86
COMPONENT DIAGNOSIS71	REAR RH : Diagnosis Procedure86 REAR RH : Component Inspection87
POWER SUPPLY AND GROUND CIRCUIT71	ENCODER88
POWER WINDOW MAIN SWITCH71	DRIVER SIDE88
POWER WINDOW MAIN SWITCH: Description71	
POWER WINDOW MAIN SWITCH : Component	
Function Check71	DRIVER SIDE : Component Function Check88
POWER WINDOW MAIN SWITCH : Diagnosis	DRIVER SIDE : Diagnosis Procedure88
Procedure71	PASSENGER SIDE90
POWER WINDOW MAIN SWITCH : Component	PASSENGER SIDE : Description90
Inspection74	
POWER WINDOW MAIN SWITCH : Special Re-	PASSENGER SIDE : Component Function Check
pair Requirement75	90 C PASSENGER SIDE : Diagnosis Procedure91
FRONT POWER WINDOW SWITCH75	DOOD SWITCH
FRONT POWER WINDOW SWITCH : Descrip-	DOOR SWITCH94
•	Description94
tion	Component Function Check94
FRONT POWER WINDOW SWITCH : Compo-	Diagnosis Procedure94
nent Function Check76	Component Inspection95
FRONT POWER WINDOW SWITCH : Diagnosis	
Procedure76	DOOR KEY CYLINDER SWITCH96
FRONT POWER WINDOW SWITCH: Special	Description96
Repair Requirement77	Component Function Check96
	Diagnosis Procedure96
REAR POWER WINDOW SWITCH77	Component Inspection97
REAR POWER WINDOW SWITCH: Description77	Special Repair Requirement98
REAR POWER WINDOW SWITCH : Component	
Function Check78	POWER WINDOW SERIAL LINK99
REAR POWER WINDOW SWITCH : Diagnosis	
Procedure78	POWER WINDOW MAIN SWITCH99
REAR POWER WINDOW SWITCH: Component	POWER WINDOW MAIN SWITCH: Description99
Inspection79	POWER WINDOW MAIN SWITCH : Component
	Function Check99
POWER WINDOW MOTOR81	POWER WINDOW MAIN SWITCH : Diagnosis
DRIVER OIDE	Procedure99
DRIVER SIDE81	EPONT POWER WINDOW SWITCH 100
DRIVER SIDE : Description81	TRONT FOWER WINDOW SWITCH100
DRIVER SIDE : Component Function Check81	FRONT POWER WINDOW SWITCH: Descrip-
DRIVER SIDE : Diagnosis Procedure81	tion100
DRIVER SIDE : Component Inspection82	FRONT POWER WINDOW SWITCH : Compo-
DRIVER SIDE : Special Repair Requirement82	nent Function Check100
·	FRONT POWER WINDOW SWITCH: Diagnosis
PASSENGER SIDE82	Procedure101
PASSENGER SIDE : Description82	Г
PASSENGER SIDE : Component Function Check	POWER WINDOW LOCK SWITCH103
83	Description103
PASSENGER SIDE : Diagnosis Procedure83	Component Function Check103
PASSENGER SIDE : Component Inspection84	Special Repair Requirement103
PASSENGER SIDE: Special Repair Requirement	oposiai regaii regaii omone illiniii 100
1 MODE NOEM OIDE . Opedial Nepall Nequilement	ECH DIAGNOSIS 404

BCM (BODY CONTROL MODULE) 104 Reference Value104	AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY
POWER WINDOW MAIN SWITCH 105 Reference Value 105 Wiring Diagram 107 Fail Safe 113	(DRIVER SIDE)
FRONT POWER WINDOW SWITCH 115 Reference Value 115 Wiring Diagram 117 Fail Safe 123	SENGER SIDE)
SYMPTOM DIAGNOSIS125	134 Diagnosis Procedure134
NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH 125 Diagnosis Procedure	DOES NOT OPERATE BY KEY CYLINDER SWITCH
DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE	KEYLESS POWER WINDOW DOWN DOES NOT OPERATE
FRONT PASSENGER SIDE POWER WIN- DOW ALONE DOES NOT OPERATE	POWER WINDOW LOCK SWITCH DOES NOT FUNCTION137 Diagnosis Procedure137
REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE128	PRECAUTION138
Diagnosis Procedure128 REAR RH SIDE POWER WINDOW ALONE	PRECAUTIONS
DOES NOT OPERATE 129 Diagnosis Procedure	(SRS) "AIR BAG" and "SEAT BELT PRE-TEN- SIONER"138
ANTI-PINCH SYSTEM DOES NOT OPERATE	ON-VEHICLE MAINTENANCE139
NORMALLY (DRIVER SIDE) 130 Diagnosis Procedure130	PRE-INSPECTION FOR DIAGNOSTIC139 Basic Inspection
ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE)131	ON-VEHICLE REPAIR140
Diagnosis Procedure131	POWER WINDOW MAIN SWITCH140 Removal and Installation140

Α

D

PWC

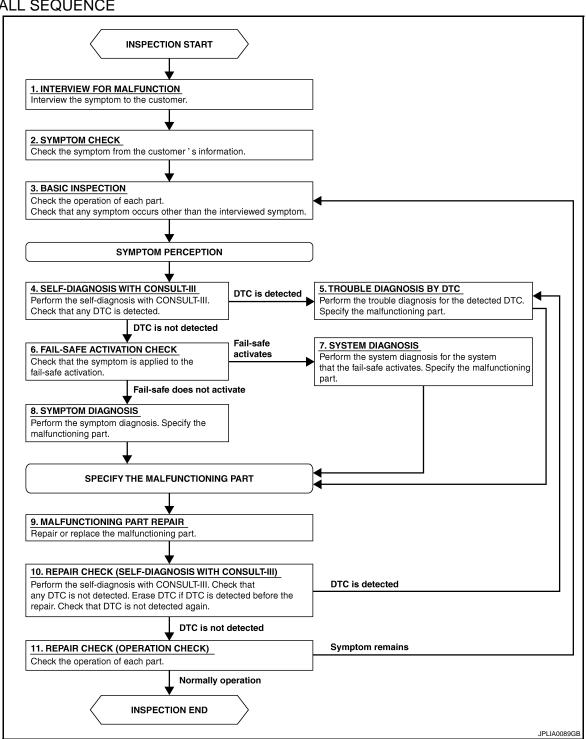
Ν

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000001505110 В

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[LH ONLY WINDOW ANTI-PINCH]

< BASIC INSPECTION >

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

>> GO TO 2

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4

4. SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

$oldsymbol{5}$. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III)

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5

DIAGNOSIS AND REPA	AIR WORKFLOW [LH ONLY WINDOW ANTI-PINCH]
< BASIC INSPECTION > NO >> GO TO 11	[EITORET WIRDOW ARTTHRON]
11. REPAIR CHECK (OPERATION CHECK)	
Check the operation of each part.	
Does it operate normally?	
YES >> Inspection End. NO >> GO TO 3	
116 22 66 166	
	,
	I
	P
	ı
	1

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH ONLY WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT BASIC INSPECTION

BASIC INSPECTION: Special Repair Requirement

INFOID:0000000001505111

BASIC INSPECTION

1. INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- Battery voltage.

Is the inspection result normal?

YES >> Inspection End.

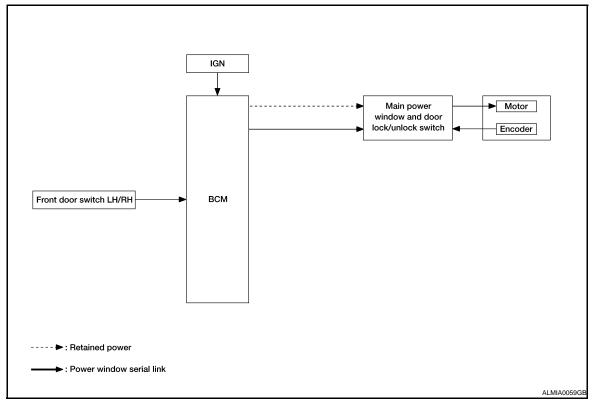
NO >> Repair or replace the malfunctioning parts.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM



System Description

INFOID:0000000001505113

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	
Encoder	Encoder pulse signal		Front power window motor	
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal			
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power window control		
BCM	RAP signal			
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor	

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.
- Front & rear power window switches can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (FRONT LH)

PWC

Ν

Р

Α

D

Е

F

Н

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

- AUTO UP/DOWN operation can be performed when main power window and door lock/unlock switch turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits to main power window and door lock/unlock switch as the encoder pulse signal while power window motor is operating.
- Main power window and door lock/unlock switch reads the changes of encoder signal and stops AUTO operation when door glass is at fully opened/closed position.
- Power window motor is operable in case encoder is malfunctioning.

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.

ANTI-PINCH OPERATION (FRONT LH)

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to main power window and door lock/unlock switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

 When door glass AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed)

NOTE:

Depending on environment and driving conditions, if a similar impact or load is applied to the door glass, it may lower.

Component Parts Location

INFOID:0000000001505114

Α

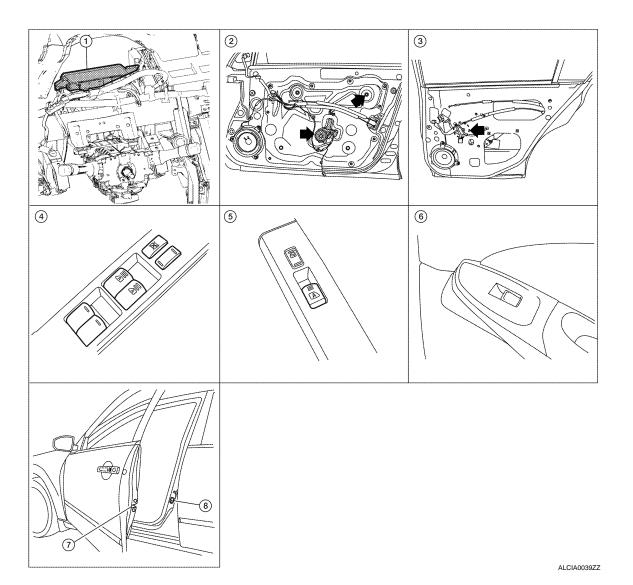
В

D

Е

F

Н



PWC

Ν

0

Р

- BCM M16, M17, M18, M19
- 4. Main power window and door lock/ unlock switch D7, D8
- 7. Front door lock assembly LH
- Front power window motor LH D9, RH D104
- Power window and door lock/unlock 6. switch RH D105
- 8. Front door switch LH B8, RH B108
- Rear power window motor LH D204, RH D304
- . Rear power window switch LH D203, RH D303

Component Description

INFOID:0000000001505115

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM

Component	Function
ВСМ	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. Controls anti-pinch operation of front power window LH.
Power window and door lock/unlock switch RH	Controls front power window motor RH.
Rear power window switch	Controls rear power window motors LH and RH.

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Component	Function
Front power window motor LH	 Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from main power window and door lock/unlock switch. Transmits power window motor rotation as a pulse signal to 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	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 >

[LH ONLY WINDOW ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000001505116

Α

В

D

Е

F

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-74, "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		
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
RAP system	RETAINED PWR		×	

RETAINED PWR

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

INFOID:000000000150511

Data monitor

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.

PWC

N /1

Ν

C

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

• 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: Component Function Check

INFOID:0000000001505119

INFOID:0000000001505118

Main Power Window And Door Lock/unlock Switch

${f 1}$. 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? <u>Is the inspection result normal?</u>

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

NO >> Refer to PWC-14, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

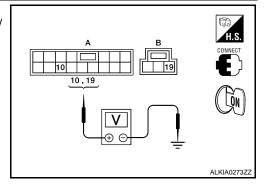
INFOID:0000000001505120

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 connectors (A and B) and ground.

Ter			
(+)		Voltage (V)	
Main power window and door lock/unlock switch Terminal connector		(–)	(Approx.)
D7 (A)	10	Ground	Battery voltage
D8 (B)	19	Giodila	Battery voltage



Is the measurement value within the specification?

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

$2.\,$ CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B and C).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
WHO (A)	2	D8 (C)	19	163

A
B
C
LIST
DISCONNECT

ALKIAO274ZZZ

4. Check continuity between BCM connector and ground.

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

BCM connector	Terminal		Continuity
M16 (A)	3	Ground	No
WTO (A)	2		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 main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector and ground.

Main power window and door lock/un- lock switch connector	Terminal	Ground	Continuity
D8	17		Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation".

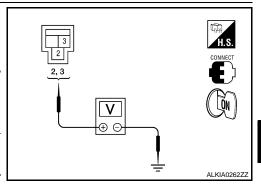
After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

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.

Term	V (16 0.0)			
(+)			Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	, , ,	
M16	3	Ground	Battery voltage	
WITO	2	Giodila	Battery voltage	

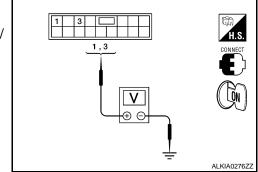


Is the measurement value within the specification?

- 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-78, "Removal and Installation".

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

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



H.S.
DISCONMECT

OFF

ALKIA0275ZZ

Н

Α

В

D

Е

F

ı

J

PWC

M

...

Ν

Р

Ρ

Teri	Terminal				
(+)	(+)		Window	Voltage (V)	
Main power window and door lock/unlock switch connector	Terminal	(–)	condition	(Approx.)	
	3	1		UP	Battery voltage
D7		Ground	DOWN	0	
DI .		Ground	UP	0	
			DOWN	Battery voltage	

Is the measurement value within the specification?

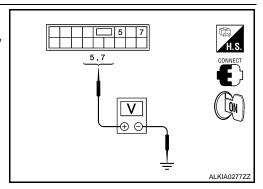
YES >> GO TO 7

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

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

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

Terminal				
(+)	(+)		Window	Voltage (V)
Main power window and door lock/unlock switch connector	Terminal	(-)	condition	(Approx.)
	7		UP	Battery voltage
D7	,	Ground	DOWN	0
וט	5	Giodila	UP	0
		,	DOWN	Battery voltage



Is the measurement value within the specification?

YES >> GO TO 8

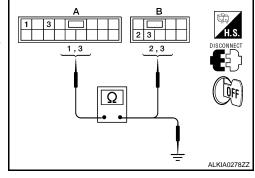
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

7. 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.
- 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)	1	D203 (B)	2	Yes
D7 (A)	3	D203 (B)	3	162



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

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	1		No
D7 (A)	3		NO

Is the inspection result normal?

YES >> GO TO 9

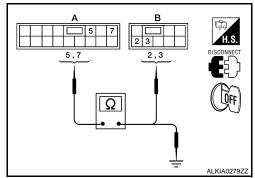
NO >> Repair or replace harness.

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

1. Turn ignition switch OFF.

- 2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- 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)	5	D303 (B)	3	Yes
Dr (A)	7	D303 (B)	2	163



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		Continuity
D7 (A)	5	Ground	No
Dr (A)	7		INO

Is the inspection result normal?

YES >> GO TO 9

NO

NO >> Repair or replace harness.

$oldsymbol{9}.$ CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-17, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

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

PWC

Α

В

D

Е

F

Н

. ...

_

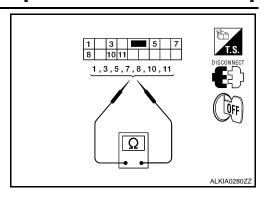
I\ /I

Ν

INFOID:0000000001505121

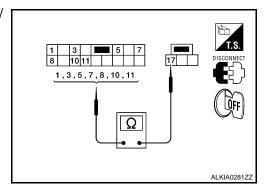
1. Check main power window and door lock/unlock switch.

		Ī		
Terr	minal	Main power window switch	Continuity	
10	1	Rear LH		
10	7	Rear RH	UP	
10	8	Front RH		
1	3	Rear LH		
5	7	Rear RH	NEUTRAL	Yes
8	11	Front RH		
10	3	Rear LH		
10	5	Rear RH	DOWN	
10	11	Front RH		



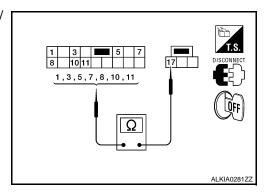
2. Check continuity between main power window and door lock/ unlock switch (power window lock switch) (Lock operation).

Terr	minal	Main power window and door lock/unlock switch condition		Continuity
3		Rear LH		
5		Rear RH	UP	
11		Front RH		
1		Rear LH		
3		ixeai Li i		
5		Rear RH	NEUTRAL	No
7	17	Neal KH	NEOTRAL	NO
8		Front RH		
11		FIOILKI		
1		Rear LH		
7		Rear RH	DOWN	
8		Front RH		



 Check continuity between main power window and door lock/ unlock switch (power window lock switch) (Unlock operation).

Terr	minal	Main power window lock switch	Continuity	
3		Rear LH		
5		Rear RH	UP	
11		Front RH		
1		Rear LH		
3	17	Real LFI		
5		Rear RH	NEUTRAL	Yes
7	17	ixeai ixii	NEOTIVAL	163
8		Front RH		
11		FIUILKI		
1		Rear LH		
7		Rear RH	DOWN	
8		Front RH		



< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Is the inspection result normal?

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

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000001505122

$oldsymbol{1}_{\scriptscriptstyle -}$ PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

>> Refer to PWC-88, "DRIVER SIDE: Component Function Check" NO

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

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

Power Window And Door Lock/unlock Switch RH

${f 1}$. 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-19, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

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

CHECK POWER SUPPLY CIRCUIT

Turn ignition switch ON.

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

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

⊕ ⊝ ALKIA0282Z

Is the measurement value within the specification?

YES >> GO TO 3 **PWC**

Α

В

D

Е

Н

INFOID:0000000001505123

INFOID:0000000001505124

INFOID:0000000001505125

Ν

< COMPONENT DIAGNOSIS >

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 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
M16 (A)	3	D105 (B)	8	Yes

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

A B B Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω	H.S. DISCONNECT
	ALKIA0283ZZ

BCM connector	Terminal	Ground	Continuity	
M16 (A)	3	Glound	No	

Is the inspection result normal?

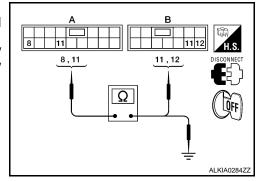
YES >> GO TO 4

NO >> Repair or replace harness.

3. Check harness continuity (power window and door lock/unlock switch RH)

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

Main power win- dow and door lock/unlock switch connector	Terminal	Power window and door lock/un- lock switch RH connector	Terminal	Continuity
D7 (A)	11	D105 (B)	11	Yes
D1 (A)	8	D 103 (B)	12	165



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	0	Continuity
D7 (A)	8	Ground	No
Dr (A)	11		INO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

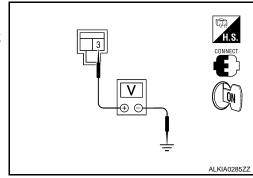
4. CHECK BCM OUTPUT SIGNAL

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

7	V 14 0 0		
(+)	(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	,
D105	8	Ground	Battery voltage



Is the measurement value within the specification?

YES >> GO TO 5

NO >> Repair or replace harness.

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

Check power window and door lock/unlock switch RH.

Refer to PWC-79, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

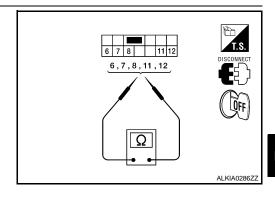
NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation".

COMPONENT INSPECTION

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

Check power window and door lock/unlock switch RH.

Terr	ninal	Power window switch condition	Continuity
8	6	UP	
12	7	UF	
12	7	NEUTRAL	Yes
6	11	NEOTIVAL	165
8	7	DOWN	
6	11	DOWN	



Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH is OK.

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "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. Rear power window switch.

REAR POWER WINDOW SWITCH : Component Function Check

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-78, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

PWC

M

Ν

Р

INFOID:0000000001505126

INFOID:0000000001505127

Α

В

D

F

Н

PWC-21

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

REAR POWER WINDOW SWITCH: Diagnosis Procedure

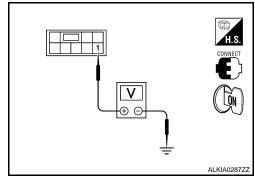
INFOID:0000000001505128

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					
	(+)			Condition	Voltage (V)
•	wer window connector	Terminal			(Approx.)
LH	D203	1	Ground	Ignition switch	Battery
RH	D303	'	Giodila	ON	voltage



Is the measurement value within the specification?

YES >> GO TO 2 (Rear power window switch LH)

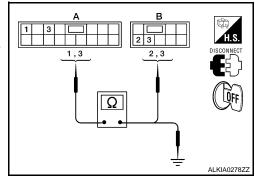
YES >> GO TO 3 (Rear power window switch RH)

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.
- 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 win- dow switch LH connector	Terminal	Continuity
D7 (A)	1	D203 (B)	2	Yes
Dr (A)	3	D203 (B)	3	163



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

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	1		No
D7 (A)	3		INO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

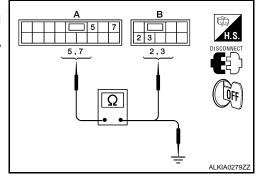
3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- 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)	5	D303 (B)	3	Yes
D1 (A)	7	D303 (B)	2	163



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)	5		No
D7 (A)	7		INO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

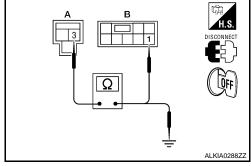
NO >> Repair or replace harness.

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
M16 (A)	3	LH	D203 (B)	1	Yes
WITO (A)	6 (A) 3	RH	D303 (B)	ı	162

Check continuity between BCM connector and ground.



BCM connector Terminal		Ground	Continuity
M16	3	Orodria	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-79, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window switch. Refer to PWC-60, "Removal and Installation".

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

PWC

Ν

INFOID:0000000001505129

Α

В

D

Е

Н

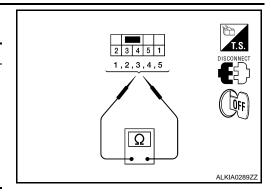
PWC-23

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Check rear power window switch.

Terr	ninal Power window switch condition		Continuity
1	5	UP UP	
3	4	01	
3	4	NEUTRAL	Yes
2	5	NESTICLE	103
1	4	DOWN	
2	5	DOWN	



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-60, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000001505130

Α

В

D

Е

F

Н

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

DRIVER SIDE: Component Function Check

INFOID:0000000001505131

CHECK FRONT POWER WINDOW MOTOR LH CIRCUIT

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

YES >> Front power window motor LH is OK.

>> Refer to PWC-25, "DRIVER SIDE: Diagnosis Procedure". NO

DRIVER SIDE : Diagnosis Procedure

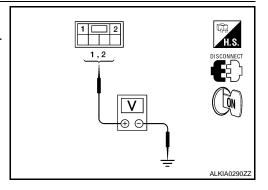
INFOID:0000000001505132

Front Power Window Motor LH Circuit Check

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

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

Terminal					
(+)			Main power win- dow and door	Voltage (V)	
Front power window motor LH connector	Terminal	(–)	lock/unlock switch condition	(Approx.)	
	2	2	UP	Battery voltage	
D9		Ground	DOWN	0	
59	1	Giouna	UP	0	
	•		DOWN	Battery voltage	



PWC

Is the measurement value within the specification?

YES >> GO TO 2

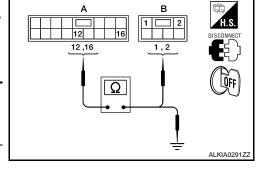
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	16	D9 (B)	2	Yes
DI (A)	12	D9 (B)	1	162



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

Ν

< COMPONENT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	16		No
D7 (A)	12		INO

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

${f 3.}$ CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-82, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-26</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE: Component Inspection

INFOID:0000000001505133

COMPONENT INSPECTION

${f 1}$.CHECK FRONT POWER WINDOW MOTOR LH

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

Terminal		Motor condition
(+)	(–)	Wotor 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 <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-26</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE: Special Repair Requirement

INFOID:0000000001505134

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-32, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

INFOID:0000000001505135

INFOID:0000000001505136

INFOID:0000000001505137

Α

В

D

Е

F

PASSENGER SIDE: Description

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

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCIUT

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

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-27, "PASSENGER SIDE : Diagnosis Procedure".

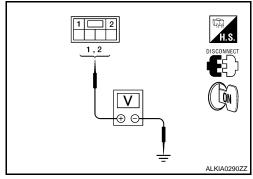
PASSENGER SIDE: Diagnosis Procedure

Front Power Window Motor RH Circuit Check

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

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



Is the measurement value within the specification?

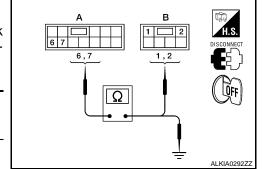
YES >> GO TO 2

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation".

2. CHECK HARNESS CONTINUITY

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

Power window and door lock/unlock-switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	6	D104 (B)	1	Yes
D105 (A)	7	D104 (B)	2	162



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

I

Н

PWC

M

N

0

< COMPONENT DIAGNOSIS >

Power window and door lock/ unlock switch RH connector	Terminal		Continuity	
D105 (A)	6	Ground	No	
D103 (A)	7		INO	

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-28, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor RH. Refer to PWC-60, "Removal and Installation".

PASSENGER SIDE: Component Inspection

INFOID:0000000001505138

COMPONENT INSPECTION

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

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

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

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor RH. Refer to <u>GW-18</u>, "Removal and Installation".

REAR LH

REAR LH: Description

INFOID:0000000001505139

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

REAR LH: Component Function Check

INFOID:0000000001505140

${f 1}$. 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-28, "REAR LH: Diagnosis Procedure"

REAR LH: Diagnosis Procedure

INFOID:0000000001505141

Rear Power Window Motor LH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

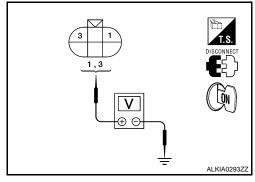
POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

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



Is the measurement value within the specification?

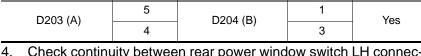
YES >> GO TO 2

NO >> Check rear power window switch LH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

$2.\,$ CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect rear power window switch LH.
- 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)	5	D204 (B)	1	Yes
D203 (A) 4		D204 (B)	3	163



A B 3 1 1 3 1 1 3 1 1 3 1 1 3 1 1 1 1 1 1	H.S. DISCONNECT
<u> </u>	ALKIA0294ZZ

4.	Check continuity between rear power window switch LH connec-
	tor (A) and ground.

Rear power window switch LH connector	Terminal		Continuity
D203 (A)	5	Ground	No
D203 (A)	4		NO

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-29, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace rear power window motor LH. Refer to GW-24, "Removal and Installation". NO

REAR LH: Component Inspection

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

Α

В

D

Е

Н

Terr	minal	Motor condition	
(+) (-)		iviolor corruition	
3	1	DOWN	
1	3	UP	

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to <u>GW-24, "Removal and Installation"</u>.

REAR RH

REAR RH: Description

INFOID:0000000001505143

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:0000000001505144

1. CHECK POWER WINDOW MOTOR 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?

YES >> Power window motor is OK.

NO >> Refer to PWC-30, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

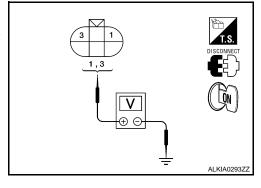
INFOID:0000000001505145

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.

Te	erminal		Voltage (V)		
(+)				Rear power windowswitch	
Rear power window motor RH connector	Terminal	(–)	RH condition	(Approx.)	
	1	1	UP	Battery voltage	
D304	'	Ground	DOWN	0	
D304	0	Ground	UP	0	
3			DOWN	Battery voltage	



Is the measurement value within the specification?

YES >> GO TO 2

NO >> Check rear power window switch RH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check".

$2.\,$ CHECK HARNESS CONTINUITY

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

- 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)	D303 (A)		1	Yes
D303 (A)	4	D304 (B)	3	163

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

ALKIA0294ZZ

Rear power window switch RH connector	Terminal	Ground	Continuity
D303 (A)	5		No
D303 (A)	4		NO

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-31, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-24</u>, "Removal and Installation".

REAR RH: Component Inspection

INFOID:0000000001505146

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
(+)	(-)	Wotor condition
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-24, "Removal and Installation"</u>.

PWC

Α

В

D

Е

F

Н

M

 \cap

Ν

ENCODER

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000001505147

Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE: Component Function Check

INFOID:0000000001505148

1. CHECK ENCODER OPERATION

Does front door glass LH perform AUTO open/close operation normally with main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-88, "DRIVER SIDE : Diagnosis Procedure"

DRIVER SIDE: Diagnosis Procedure

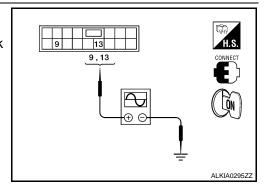
INFOID:0000000001505149

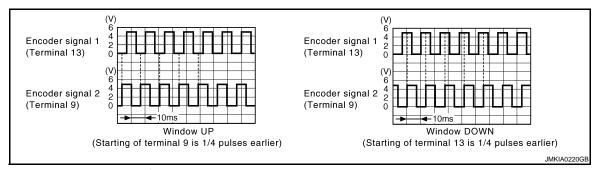
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Connect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check signal between main power window and door lock/unlock switch connector and ground with oscilloscope.

7			
(+)			
Main power window and door lock/unlock switch connector	Terminal	(-)	Signal (Reference value)
D7	9	Ground	Refer to following signal





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

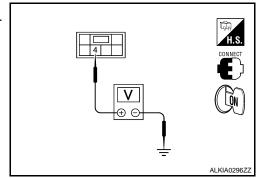
NO >> GO TO 2

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

[LH ONLY WINDOW ANTI-PINCH]

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

Term			
(+)		Voltage (V)	
Front power window motor LH connector	Terminal	(–)	(Approx.)
D9	4	Ground	10



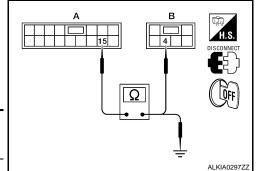
Is the measurement value within the specification?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

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

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	15	D9 (B)	4	Yes



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		No

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-34, "DRIVER SIDE: Special Repair Requirement".
- NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check continuity between front power window motor LH connector and ground.

		_	Ground	
D9 6 Yes	D9	6		Yes

Δ LKIA0298ZZ

Is the inspection result normal?

YES >> GO TO 6 NO >> GO TO 5

5. CHECK HARNESS CONTINUITY 2

PWC

J

Α

В

D

Е

F

Н

M

L

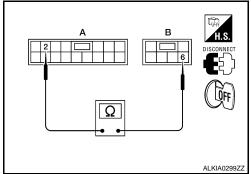
Ν

0

[LH ONLY WINDOW ANTI-PINCH]

- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	2	D9 (B)	6	Yes



Is the inspection result normal?

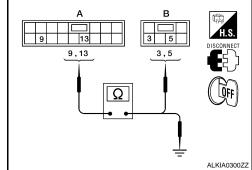
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-34, "DRIVER SIDE : Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power win- dow motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	3	Yes
D7 (A)	13	D9 (B)	5	163



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)	9		No
D7 (A)	13		140

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-26</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

DRIVER SIDE : Special Repair Requirement

INFOID:0000000001505150

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-8, "BASIC INSPECTION: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DOOR SWITCH

Description INFOID:000000001505151

Detects door open/close condition and transmits the signal to BCM.

Component Function Check

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-13, "RETAINED PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

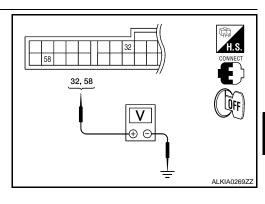
NO >> Refer to PWC-35, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

	Terminals					
(+)			Door condition		Voltage (V)	
BCM connector	Terminal	(–)			(Approx.)	
	32		Front door	OPEN	0	
M18	32	Ground	RH	CLOSE	Battery voltage	
IVITO	58	Giodila	Front door	OPEN	0	
	50		LH	CLOSE	Battery voltage	



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

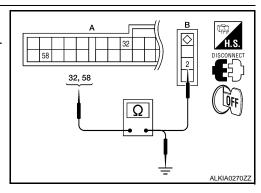
1. Turn ignition switch OFF.

Disconnect BCM and front door switch.

Check continuity between BCM connector (A) and front door switch connector (B).

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M18 (A)	32	RH: B108 (B)	2	Yes
M18 (A)	58	LH: B8 (B)	۷	163

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



D

Е

Α

В

INFOID:0000000001505152

INFOID:0000000001505153

Н

ı

J

PWC

M

Ν

0

BCM connector	Terminal		Continuity
M18	32	Ground	No
	58		INO

Is the inspection result normal?

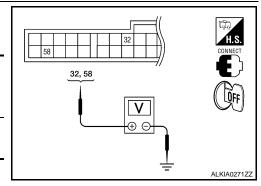
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM connector.
- 2. Check voltage between BCM connector and ground.

	V 1 00		
(+)		(-)	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	(11 /
M18	32	Ground	Battery voltage
	58		



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-36, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door switch.

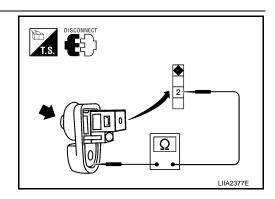
Component Inspection

INFOID:0000000001505154

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Terminal		Door switch	Continuity
Door switches		Door Switch	
2	Ground part of door switch	Pressed	No
		Released	Yes



Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace front door switch.

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Ν

Р

POWER WINDOW LOCK SWITCH Α Description INFOID:0000000001505155 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:0000000001505156 1. CHECK POWER WINDOW LOCK SIGNAL D Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. Does power window lock operate? >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Instal-Е lation". After that, PWC-8, "BASIC INSPECTION: Special Repair Requirement" NO >> Check condition of harness and connector. Special Repair Requirement INFOID:0000000001505157 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-8, "BASIC INSPECTION: Special Repair Requirement". Is the inspection result normal? YES >> Inspection end. Н NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". **PWC**

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
DOOR SW-DR	Front door LH closed	OFF
DOOK OW-DIX	Front door LH opened	ON
DOOR SW-AS	Front door RH closed	OFF
DOOK SW-AS	Front door RH opened	ON

TERMINAL LAYOUT

Refer to BCS-43, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-44, "Physical Values".

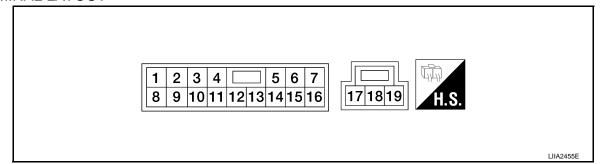
POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

	nal No. color)	Description		Condition	Voltage [V]		
+	_	Signal name	Input/ Output	Condition	(Approx.)		
1 (G/B)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage		
2 (W/B)	Ground	Encoder ground	_	_	0		
3 (G/O)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage		
5 (G/R)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage		
6 (GR/R)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0		
7 (G/W)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is operated UP.	Battery voltage		
8 (R/B)	11	Front power window motor RH UP signal	Output	When front RH switch in power window main switch is operated UP.	Battery voltage		
9 (G/W)	2	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms		

PWC

J

Α

В

C

D

Е

F

G

Н

L

M

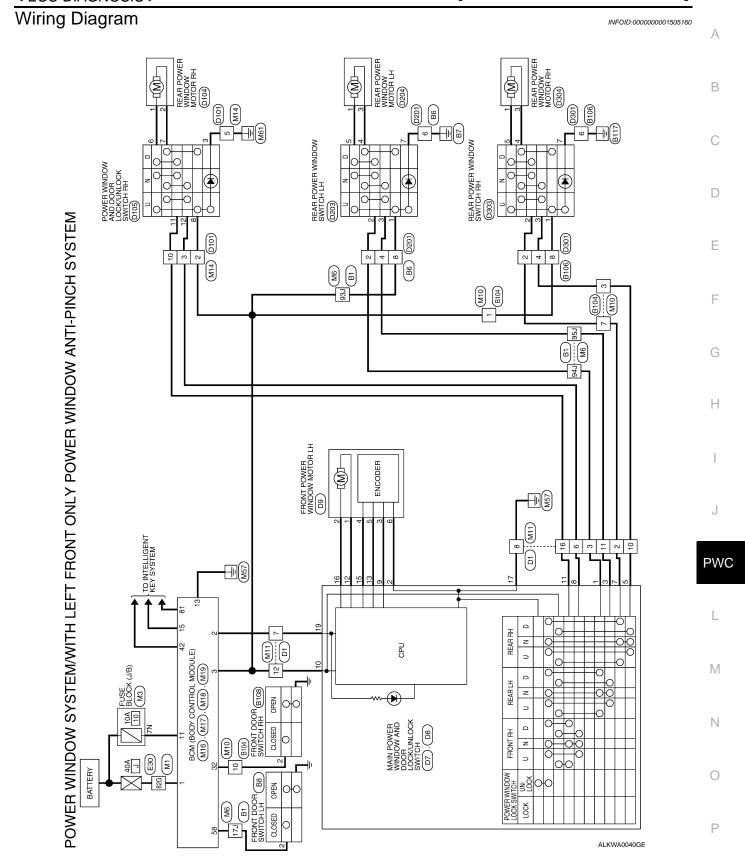
Ν

0

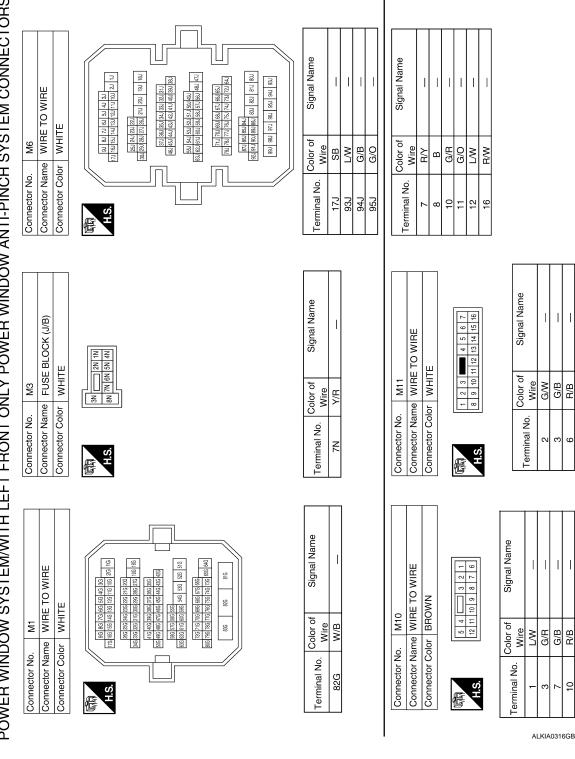
POWER WINDOW MAIN SWITCH

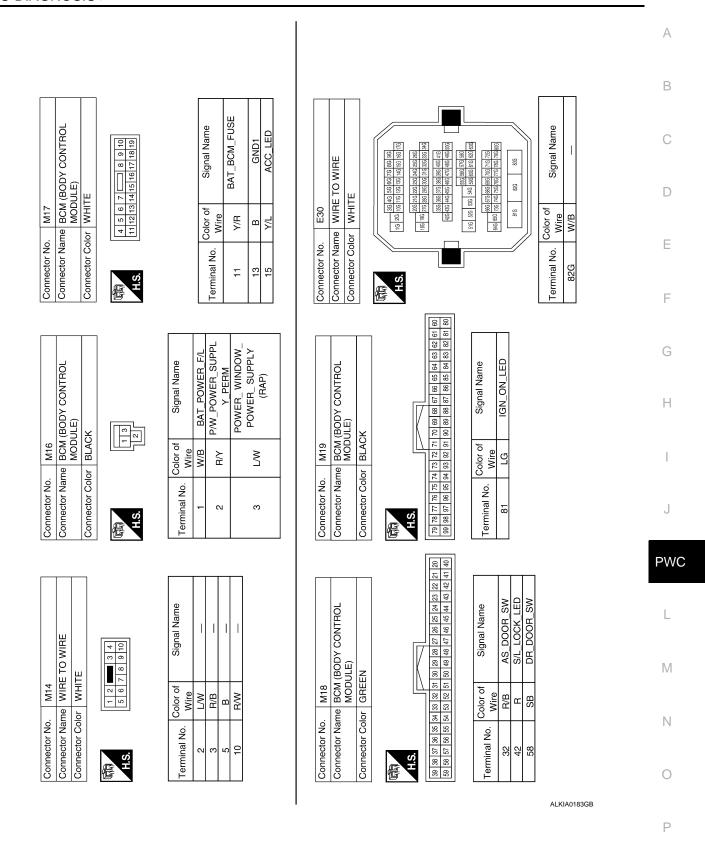
[LH ONLY WINDOW ANTI-PINCH]

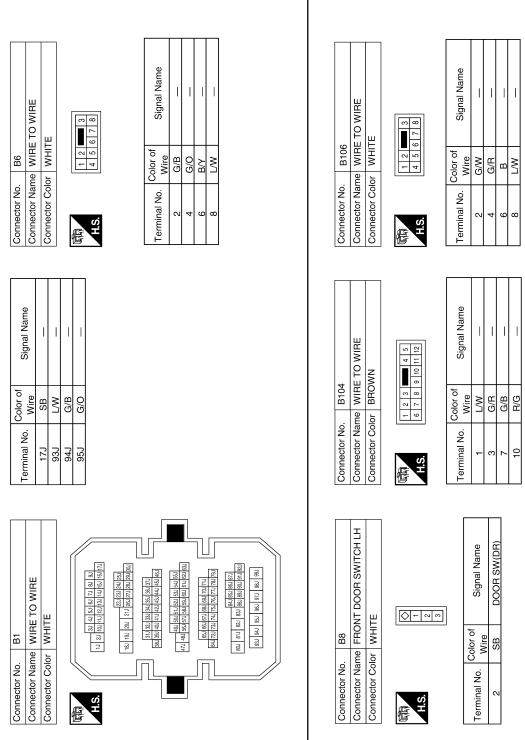
	nal No. color)	Description		Condition	Voltage [V]	
+	_	Signal name	Input/ Output	Condition	(Approx.)	
				IGN SW ON	Battery voltage	
10	Ground	round RAP signal		Within 45 second after ignition switch is turned to OFF.	Battery voltage	
(L/W)		3	Input	When driver side or passenger side door is opened during retained power operation.	0	
11 (R/W)	8	Front power window motor RH DOWN signal	Output	When front RH switch in power window main switch is operated DOWN.	Battery voltage	
12 (L/B)	16	Front power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage	
13 (G/Y)	2	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms	
15 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10	
16 (L/R)	12	Front power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage	
17 (B)	Ground	Ground	_	_	0	
19 (R/Y)	Ground	Battery power supply	Input	_	Battery voltage	



POWER WINDOW SYSTEM/WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM CONNECTORS







ALKIA0317GB

																							А
																			1	_	7		В
									No.	Connector Name (WITH LEFT FRONT ONLY POWER WINDOW	SYSTEM) R WINDOW AN	CK SWITCH					,		Signal Name	GND	BAT		С
									8	MINITER I	AIN POWE	OCK/UNIC	WHITE			17 18 19				+	_		D
									Connector No. D8	ector Name (W	ŽΣ	<u>9</u>	Connector Color M	ſ			J	Color of	Š.		19 R/Y		Е
									Conn	200			Conn		F	H.S.			Lerm				F
		аше							me		GND	2	Z	Y		SIG2		Z	SIG1	5	OWER		G
E TO WIRE	3 2 1 3 2 1 1 10 9 8	Signal Name			1	1 1	1		Signal Name	RL_UP	ENCODER GND	HL DOWN	RR_DOWN	UNLOCK	RR UP	ENCODER SIG2	IGN	AS DOWN	FNCODER SIG1		ENCODER POWER		Н
. D1 me WIRE T lor WHITE	7 6 5 4 16 15 14 13	Color of Wire G/W	G/B R/B	B	G/R	Ş, <u>N</u>	M/A		Color of	G/B	M/B	0,5	G/R	GR/R	G/W	g/N	- N	₩ .	9/S	5	G/R	<u>-</u>	I
Connector No. D1 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No.	0 9	~ 8	5 5	12	16		Terminal No.	-	2 0	m <	2	9	7	0 0	10	- 5	7 5	4	15	<u> </u>	J
							_							7						<u>1 </u>	1 1		PWO
OR SWITCH RH			Signal Name	DOOR SW (AS)						T FRONT ONLY IINDOW	ANTI-PINCH SYSTEM) MAIN POWER WINDOW	UNLOCK			7 8 6 7	13 14 15							L
B108 FRONT DOOR SW WHITE		6							07	WITH LEFT FRON	NTI-PINCI IAIN POW	ND LOCK	WHITE		2 3 4	10 11 12							M
			No. Color of Wire	R/G						r Name () F	∢≥	: « (r Color	_	-	80							N
Connector No. Connector Name Connector Color	H.S.		Terminal No.	2					Connector No.	Connector Name			Connector Color			V H							0
								I														ALKIA0318GB	Р

R R

П

> ₩ W ш

5

Ø,

Terminal No.

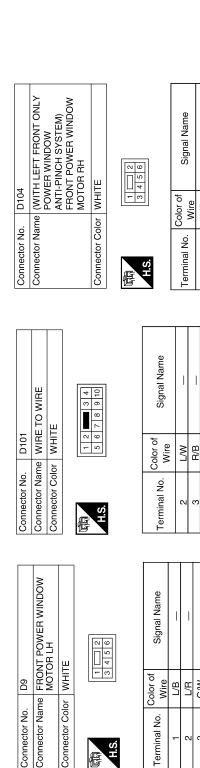
H.S.

E

G/R

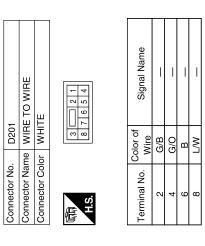
G/Y W/B

4 LC.



Connector Color

Connector No.

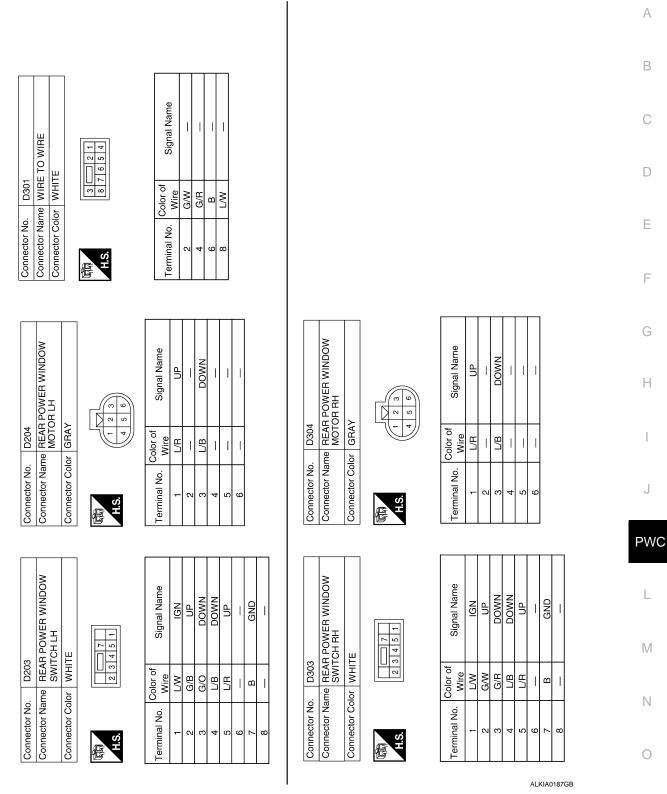








ALKIA0422GB



Fail Safe

FAIL-SAFE CONTROL

Switches to fail-safe control when malfunction is detected in encoder signal that detects up/down speed and direction of door glass. Switches to fail-safe control when error beyond regulation value is detected between the fully closed position and the actual position of the glass.

POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors mal- function	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet up- dated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

- Auto-up operation
- Anti-pinch function
- Retained power function

Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or in motor.

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH SYMPTOM DIAGNOSIS > [LH ONLY WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH** В **Diagnosis Procedure** INFOID:0000000001505162 1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT C Check BCM power supply and ground circuit. Refer to BCS-34, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. Е 2. check main power window and door lock/unlock switch power supply and **GROUND CIRCUIT** Check main power window and door lock/unlock switch power supply and ground circuit. F Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts. 3. 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: Component Function Check". Is the inspection result normal? YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

M

Ν

0

Ρ

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001505163

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-25, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE [LH ONLY WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-

ATE Diagnosis Procedure

INFOID:0000000001505164

Α

В

C

D

Е

F

Н

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

Check power window and door lock/unlock switch RH.

Refer to PWC-19, "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 FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to PWC-27, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

J

M

Ν

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001505165

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-21, "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 REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-28, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Р

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000001505166 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power winodw switch RH. Refer to PWC-21, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. D 2. CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-30, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Inspection End. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO F Н J **PWC** L M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH ONLY WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000001505167

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- · A foreign material adheres to window glass or glass run rubber.
- · Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000001505168

Α

В

C

D

Е

F

Н

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

J

M

L

Ν

0

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000001505169

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-35, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000001505170

Replace main power window and door lock/unlock switch.

Refer to <u>PWC-60</u>, "Removal and Installation". After that, <u>PWC-19</u>, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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

Е

Α

В

C

D

F

G

Н

J

PWC

L

M

Ν

0

PRECAUTION

PRECAUTIONS

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

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 SRS 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 SRS 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.

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH ONLY WINDOW ANTI-PINCH]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

BASIC INSPECTION

1.INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- · Battery voltage.

Is the inspection result normal?

YES >> Inspection end.

NO >> Repair or replace the malfunctioning parts.

PWC

J

Α

В

C

D

Е

F

Н

L

M

Ν

0

INFOID:0000000001505173

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

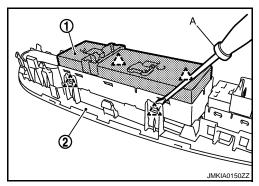
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

Do not fold the pawl of power window main switch finisher. NOTE:

The same procedure is also performed for front power window and door lock/unlock switch RH and rear power window switch (LH & RH).



INSTALLATION

Install in the reverse order of removal.

Α

D

PWC

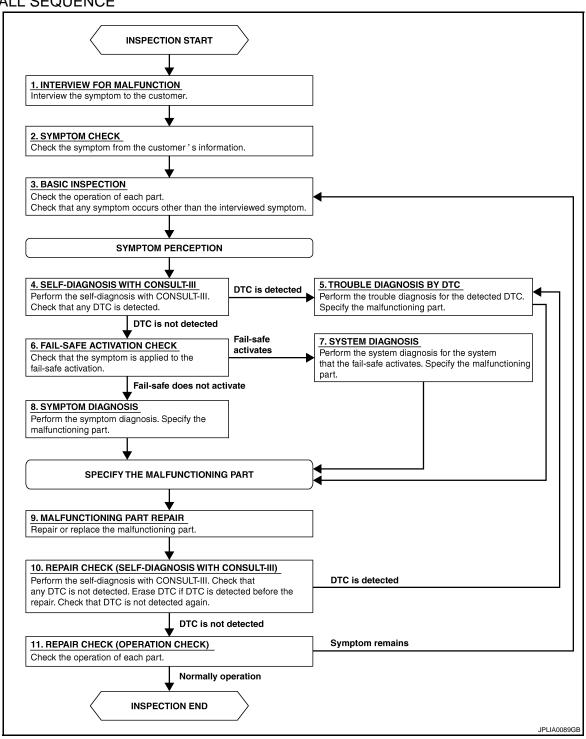
Ν

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[LH&RH FRONT WINDOW ANTI-PINCH]

< BASIC INSPECTION >

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

>> GO TO 2

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4

4. SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

$oldsymbol{5}$. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III)

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5

DIAGNOSIS AND REPAIR WORKFLOW	NOUI
< BASIC INSPECTION > [LH&RH FRONT WINDOW ANTI-PI	NCHJ
NO >> GO TO 11	Λ
11. REPAIR CHECK (OPERATION CHECK)	Α
Check the operation of each part.	
Does it operate normally?	В
YES >> Inspection End. NO >> GO TO 3	
NO >> GO 10 3	
	С
	D
	Е
	F
	G
	Н
	I
	J
	PWC
	L
	M
	N
	0

[LH&RH FRONT WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

Initial setting is necessary when battery terminal is diconnected.

CAUTION:

The following specified operations are not performed under the non-initialized condition.

- Auto-up operation
- Anti-pinch function
- Retained power operation

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INITIALIZATION PROCEDURE

- Disconnect battery negative terminal or main power window and door lock/unlock switch. Reconnect it after a minute or more.
- 2. Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more.
- Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-113, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000001505177

Initial setting is necessary when replacing main power window and door lock/unlock switch.

CAUTION:

The following specified operations are not performed under the non-initialized condition.

- Auto-up operation
- Anti-pinch function
- Retained power operation

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

INITIALIZATION PROCEDURE

1. Disconnect battery negative terminal or main power window and door lock/unlock switch. Reconnect it after a minute or more.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 2. Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more.
- 5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the main power window and door lock/unlock switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-113, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

PWC

В

D

F

Н

B /

Ν

(

Р

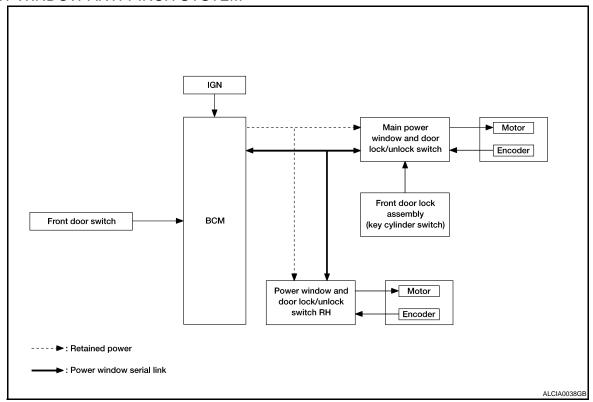
PWC-65

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000001505180

POWER WINDOW MAIN 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		
Key cylinder switch	LOCK/UNLOCK signal (more than 1.5 seconds over)				
Encoder	Encoder pulse signal		Front power window motor		
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal	Power window control			
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power willdow control			
BCM	RAP signal				
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor		

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

[LH&RH FRONT WINDOW ANTI-PINCH]

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	
Encoder	Encoder pulse signal		. rempener milder meter run	
BCM	RAP signal			

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 can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (FRONT LH & RH)

- AUTO UP/DOWN operation can be performed when main power window and door lock/unlock switch & power window and door lock/unlock switch RH turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Power window switch reads the changes of encoder signal and stops AUTO operation when door glass is at fully opened/closed position.
- · Power window motor is operable in case encoder is malfunctioning.

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.

ANTI-PINCH OPERATION (FRONT LH & RH)

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

 When all door glass AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed)

NOTE:

Depending on environment and driving conditions, if a similar impact or load is applied to the door glass, it may lower.

KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for more than 1 second to OPEN or CLOSE front power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.

OPERATION CONDITION

Ignition switch OFF

PWC

M

Ν

Α

В

D

Е

Ρ

PWC-67

POWER WINDOW SYSTEM

[LH&RH FRONT WINDOW ANTI-PINCH]

< FUNCTION DIAGNOSIS >

- Hold door key cylinder to LOCK position for more than 1 second to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for more than 1 second to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN OPERATION (FRONT LH & RH)

Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3(NOTE) seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.

The power window opening stops when the following operations are performed:

- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- · When the unlock button is released.

While retained power operation activate, keyless power window down function cannot be operated.

NOTE:

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to SEC-21, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

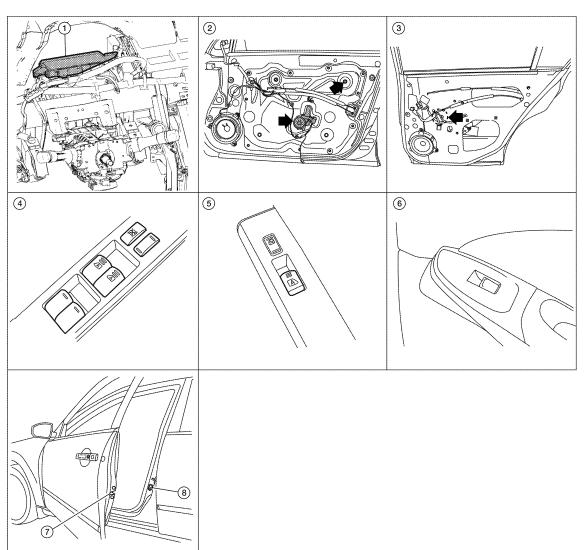
NOTE:

Use CONSULT-III to change settings.

MODE 1 (3sec) / MODE 2 (OFF) / MODE 3 (5sec)

Component Parts Location

INFOID:0000000001505181



ALCIA0039ZZ

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. BCM M16, M17, M18, M19 (view with instrument panel removed)
- Main power window and door lock/ unlock switch D7, D8
- 7. Front door lock assembly LH (key cylinder switch) D10
- 2. Front power window motor LH D9, RH D104
- 5. Power window and door lock/unlock 6. switch RH D105
- 8. Front door switch LH B8, RH B108
- 3. Rear power window motor LH D204, RH D304
- Rear power window switch LH D203, RH D303

INFOID:0000000001505182

Α

В

D

Е

F

Н

Component Description

FRONT WINDOW ANTI-PINCH SYSTEM

Component	Function
BCM	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. Controls anti-pinch operation of front power window LH.
Power window and door lock/unlock switch RH	 Controls front power window motor RH. Controls anti-pinch operation of front power window RH.
Rear power window switch	Controls rear power window motors LH and RH.
Front power window motor LH	 Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from main power window and door lock/unlock switch. Transmits power window motor rotation as a pulse signal to 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	Starts operating with signals from main power window and door lock/unlock switch & rear power window switch.
Front door lock assembly LH (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

PWC

M

Ν

0

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000001505183

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-74, "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					
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST			
BCM	BCM	×					
RAP system	RETAINED PWR		×				

RETAINED PWR

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

INFOID:0000000001505184

Data monitor

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.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

- 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: Component Function Check

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? <u>Is the inspection result normal?</u>

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

NO >> Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

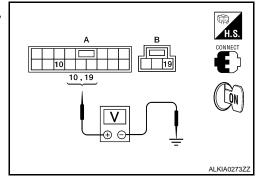
POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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 connectors (A and B) and ground.

Terminal			
(+)			Voltage (V)
Main power window and door lock/unlock switch connector	Terminal	(-)	(Approx.)
D7 (A)	10	Ground	Battery voltage
D8 (B)	19	Ground	



Is the measurement value within the specification?

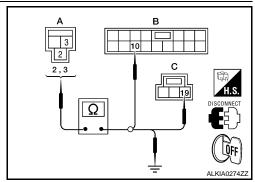
YES >> GO TO 3 NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B and C).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
WITO (A)	2	D8 (C)	19	163

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



Е

D

Α

В

INFOID:0000000001505185

INFOID:0000000001505186

INFOID:0000000001505187

F

Н

J

PWC

M

N

 \circ

BCM connector	Terminal		Continuity
M16	3	Ground	No
IVITO	2		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 main power window and door lock/unlock switch.
- 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
D8	17		Yes

ALKIA0275ZZ

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-140, "Removal and Installation".

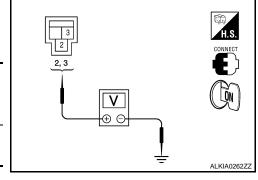
After that, refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement"</u>.

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	(-)	(11 -)
M16	3	Ground	Battery voltage
	2		

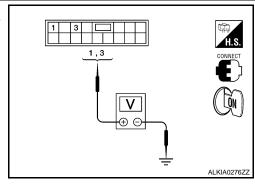


Is the measurement value within the specification?

- 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-78. "Removal and Installation".

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

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



Terminal				
(+)			Window	Voltage (V)
Main power window and door lock/unlock switch connector	Terminal	(-)	condition	(Approx.)
	1	1 Ground	UP	Battery voltage
D7			DOWN	0
UI .	3		UP	0
			DOWN	Battery voltage

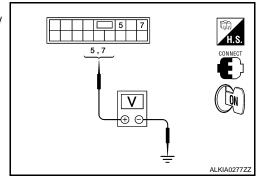
Is the measurement value within the specification?

YES >> GO TO 7

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-140, "Removal and Installation". After that, refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT: Special Repair Requirement".

- 6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-**ER WINDOW SWITCH RH)**
- Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connector and ground.

Terminal				
(+)				
Main power win- dow and door lock/unlock switch connector	door ock Terminal (–)		Window condition	Voltage (V) (Approx.)
	7	Ground	UP	Battery voltage
D7			DOWN	0
	5		UP	0
			DOWN	Battery voltage



PWC

M

Ν

0

Р

Is the measurement value within the specification?

YES >> GO TO 8

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-140, "Removal and Installation". After that, refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CON-TROL UNIT: Special Repair Requirement".

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

- Turn ignition switch OFF.
- Disconnect rear power window switch LH.
- 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
	1	D203	2	Yes
DI.	3	D203	3	162

Ω ALKIA0278ZZ

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

Н

Α

В

D

PWC-73

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	1		No
U	3		140

Is the inspection result normal?

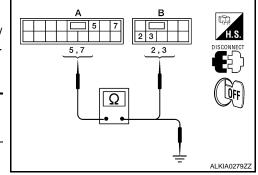
YES >> GO TO 9

NO >> Repair or replace harness.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- 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
	5	D303	3	Yes
DI	7	D303	2	165



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

Main power window and door lock/unlock switch connector	or Terminal		Continuity
D7	5	Ground	No
D1	7		NO

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-74, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. After that, refer to PWC-64, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

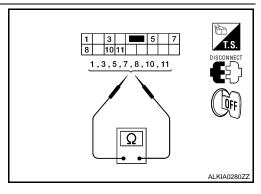
POWER WINDOW MAIN SWITCH: Component Inspection

INFOID:0000000001505188

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

1. Check main power window and door lock/unlock switch.

		,		
Terr	minal	Main power window and door lock/un- lock switch condition		Continuity
10	1	Rear LH	UP	
10	7	Rear RH	01	
1	3	Rear LH	NEUTRAL	Yes
5	7	Rear RH	NEOTIVAL	165
10	3	Rear LH	DOWN	
10	5	Rear RH	DOWN	



< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

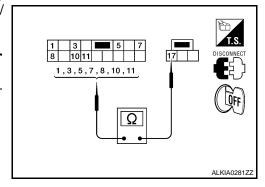
Check continuity between main power window and door lock/ unlock switch (power window lock switch). (Lock operation).

Tern	ninal	Main power window and door lock/unlock switch condition		·		Continuity
3		Rear LH	UP			
5		Rear RH	OF .			
1		Rear LH				
3	17	Real LH	NEUTRAL	No		
5	17	Rear RH	NEOTIVAL	INO		
7		Real KH				
1		Rear LH	DOWN			
7		Rear RH	DOWN			

1 3 5 7 8 10 11 17 DISCONNECT Ω

Check continuity between main power window and door lock/ unlock switch (power window lock switch). (Unlock operation).

Terr	minal	Main power window and door lock/unlock switch condition		Continuity
3		Rear LH	UP	
5		Rear RH	OI OI	
1		Rear LH		
3	17	Near Lit	NEUTRAL	Yes
5	17	Rear RH	NEOTIVAL	163
7		iteal tti		
1		Rear LH	DOWN	
7		Rear RH	DOWN	



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-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-88, "DRIVER SIDE : Component Function Check"

FRONT POWER WINDOW SWITCH

PWC

Ν

INFOID:0000000001505189

Α

В

D

Е

F

Н

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH: Description

- 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:0000000001505191

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-76, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

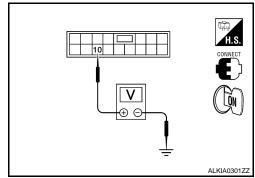
INFOID:0000000001505192

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

1. CHECK POWER SUPPLY CIRCUIT

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

Terr			
(+)		Voltage (V)	
Power window and door lock/ unlock switch RH connector	unlock Terminal		(Approx.)
D105 10		Ground	Battery voltage



Is the measurement value within the specification?

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

$2.\,$ CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M16 (A)	2	D105 (B)	10	Yes

Check continuity between BCM connector (A) and ground.

А В	THE STATE OF THE S
	H.S. DISCONNECT OFF
-	ALKIA0302ZZ

BCM connector	Terminal	Ground	Continuity
M16 (A)	2	Glodila	No

Is the inspection result normal?

>> GO TO 4 YES

NO >> Repair or replace harness.

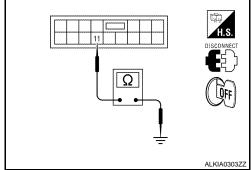
$3.\,$ CHECK GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

Power window and door lock/unlock switch RH	Terminal	Ground	Continuity
D105	11		Yes



Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation". After that,

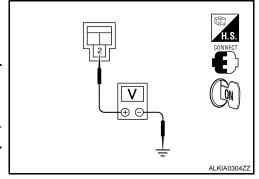
refer to PWC-77, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

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.

	V 14 00			
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	(11 - 7	
M16	2	Ground	Battery voltage	



Is the measurement value within the specification?

YES >> Replace power window and door lock/unlock switch RH.

Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-77</u>, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

FRONT POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000001505193

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-90, "PASSENGER SIDE : Component Function Check".

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. Rear power window switch.

PWC

Н

Α

В

D

M

0

REAR POWER WINDOW SWITCH: Component Function Check

INFOID:000000000150519

Rear Power Window Switch

${f 1}$. 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-78, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

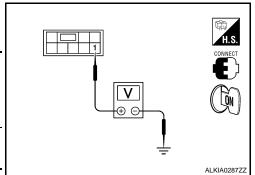
INFOID:0000000001505196

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

	Terminal					
(+)			Condition	Voltage (V)		
•	Rear power window switch connector Terminal		(-)		(Approx.)	
LH	D203	1	Ground	Ignition switch	Battery voltage	
RH	D303	'	Giodila	ON	Battery voltage	



Is the measurement value within the specification?

YES >> GO TO 2 (Rear power window switch LH)

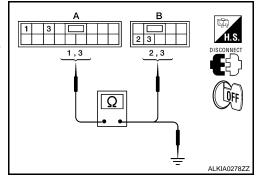
YES >> GO TO 3 (Rear power window switch RH)

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.
- 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)	1	D203 (B)	2	Yes
DI (A)	3	D203 (B)	3	163



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

Main power window and door lock/un- lock switch connector	Terminal		Continuity
D7 (A)	1	Ground	No
DI (A)	3		NO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

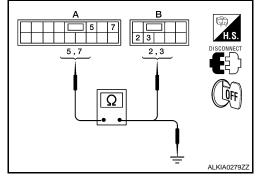
3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and 2. rear power window switch RH.
- 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)	5	D303 (B)	3	Yes
D7 (A)	7	D303 (B)	2	168



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	01	Continuity
D7 (A)	5	Ground	No
Dr (A)	7		NO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

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
M16 (A)	3	LH	D203 (B)	1	Yes
WTO (A)	3	RH	D303 (B)	'	163

Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M16 (A)	3	Ground	No

Ω

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-79, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace rear power window switch. Refer to PWC-60, "Removal and Installation". NO

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Α

В

D

Е

F

Н

PWC

M

Ν

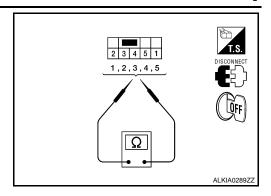
INFOID:0000000001505197

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Check rear power window switch.

Terr	ninal	Power window switch condition	Continuity
1	5	UP	
3	4	UF	
3	4	NEUTRAL	Yes
5	2	NEOTIVAL	163
1	4	DOWN	
5	2	DOWN	



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-60, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000001505198

Α

В

D

Е

F

Н

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

DRIVER SIDE: Component Function Check

INFOID:0000000001505199

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does front power window motor LH operate with 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-81, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

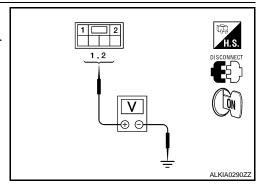
INFOID:0000000001505200

Front Power Window Motor LH Circuit Check

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

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

7	Terminal			
(+)	(+)		Main power win- dow and door lock/	Voltage (V)
Power window motor LH con- nector	Terminal	(–)	unlock switch con- dition	(Approx.)
	2		UP	Battery voltage
D9		Ground	DOWN	0
D9	1	Giodila	UP	0
			DOWN	Battery voltage



PWC

Ν

Р

Is the measurement value within the specification?

YES >> GO TO 2

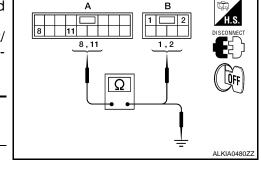
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Main power window and door lock/unlock switch connector	Terminal	Front power win- dow motor LH con- nector	Terminal	Continuity
D7 (A)	8	D9 (B)	2	Yes
DI (A)	11	D9 (B)	1	165



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

< COMPONENT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	8		No
Dr (A)	11		NO

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-82, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window motor LH. Refer to <u>GW-18, "Removal and Installation"</u>. After that, refer to <u>PWC-82, "DRIVER SIDE: Special Repair Requirement"</u>.

DRIVER SIDE: Component Inspection

INFOID:0000000001505201

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	
(+)	(–)	- Wiotor Corruition	
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 <u>GW-18</u>, "Removal and Installation". After that, refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

DRIVER SIDE : Special Repair Requirement

INFOID:0000000001505202

INFOID:0000000001505203

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-88, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

PASSENGER SIDE : Description

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:0000000001505204

Α

В

D

Е

F

Н

1. CHECK POWER WINDOW MOTOR CIRCIUT

Does power window motor operate with 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-83, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

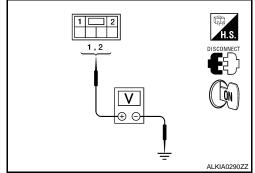
INFOID:0000000001505205

Front Power Window Motor RH Circuit Check

1. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

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



Is the measurement value within the specification?

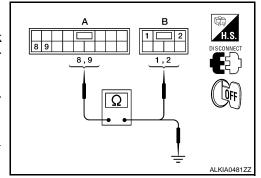
YES >> GO TO 2

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-77, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	8	D104 (B)	2	Yes
D103 (A)	9	D 104 (B)	1	163



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

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	8		No
D105 (A)	9		140

Is the inspection result normal?

PWC

J

L

M

Ν

0

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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-84, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor RH. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-84, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE: Component Inspection

INFOID:0000000001505206

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

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

Terminal		- Motor condition	
(+)	(–)	- Wotor 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 <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-84</u>, "<u>PASSENGER SIDE</u>: <u>Special Repair Requirement</u>".

PASSENGER SIDE: Special Repair Requirement

INFOID:0000000001505207

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2 . CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-90, "PASSENGER SIDE : Component Function Check".

REAR LH

REAR LH: Description

INFOID:0000000001505208

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:0000000001505209

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?

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-85, "REAR LH: Diagnosis Procedure"

REAR LH: Diagnosis Procedure

INFOID:0000000001505210

Α

В

D

Е

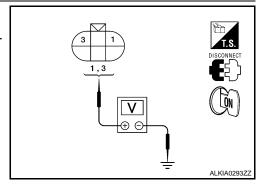
Н

Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

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

Terminal				
(+)			Window	Voltage (V)
Rear power window motor LH connector	Terminal	(–)	condition	(Approx.)
	1		UP	Battery voltage
D204		Ground	DOWN	0
3	2	Giouna	UP	0
		DOWN	Battery voltage	



Is the measurement value within the specification?

YES >> GO TO 2

>> Check rear power window switch LH. Refer to PWC-78, "REAR POWER WINDOW SWITCH : NO Component Function Check".

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 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)	5	D204 (B)	1	Yes
D203 (A) 4		D204 (B)	3	163

4 5 4,5 ALKIA0294ZZ

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

Rear power window switch LH connector	Terminal		Continuity
D203 (A)	5	Ground	No
	4		INO

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-86, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-24, "Removal and Installation".

PWC

M

Ν

REAR LH: Component Inspection

INFOID:0000000001505211

COMPONENT INSPECTION

${f 1}$. CHECK REAR POWER WINDOW MOTOR LH

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

Terminal		Motor condition	
(+)	(-)	- Wotor condition	
3	1	DOWN	
1	3	UP	

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to GW-24, "Removal and Installation".

REAR RH

REAR RH: Description

INFOID:0000000001505212

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:0000000001505213

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?

YES >> Rear power window motor RH is OK.

NO >> Refer to PWC-86, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

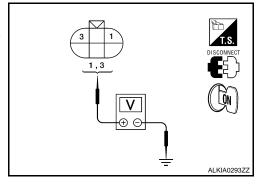
INFOID:0000000001505214

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

Terminal				
(+)			Rear power window switch	Voltage (V)
Rear power window motor RH connector	Terminal	(–)	RH condition	(Approx.)
	1 Ground	1 Cround	UP	Battery voltage
D304			DOWN	0
D304 =		Giodila	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-78, "REAR POWER WINDOW SWITCH: Component Function Check".

CHECK HARNESS CONTINUITY

POWER WINDOW MOTOR

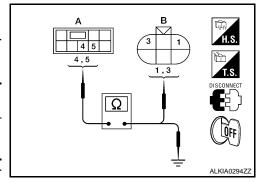
< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- 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)	5	D304 (B)	1	Yes
D303 (A)	4	D304 (B)	3	165

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



Rear power window switch RH connector	Terminal	01	Continuity
D303 (A)	5	Ground	No
D303 (A)	4		INO

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-87, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-24</u>, "<u>Removal and Installation</u>".

REAR RH: Component Inspection

INFOID:0000000001505215

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

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

Terr	minal	Motor condition
(+)	(-)	Wotor condition
3	1	DOWN
1	3	UP

Is the inspection result normal?

NO

YES >> Rear power window motor RH is OK.

>> Replace rear power window motor RH. Refer to GW-24, "Removal and Installation".

Р

PWC-87

Α

В

D

Е

F

G

Н

PWC

M

Ν

ENCODER

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000001505216

Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE: Component Function Check

INFOID:0000000001505217

1. CHECK ENCODER OPERATION

Does front door glass LH perform AUTO open/close operation normally when operating main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-88, "DRIVER SIDE : Diagnosis Procedure"

DRIVER SIDE: Diagnosis Procedure

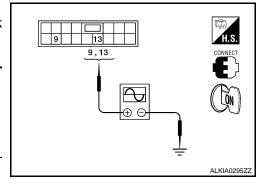
INFOID:0000000001505218

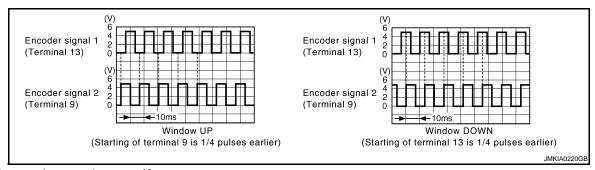
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Turn ignition switch ON.
- 2. Check signal between main power window and door lock/unlock switch connector and ground with oscilloscope.

Т			
(+)			Signal
Main power window and door lock/unlock switch connector	Terminal	(–)	(Reference value)
D7	9	Ground	Refer to following signal





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

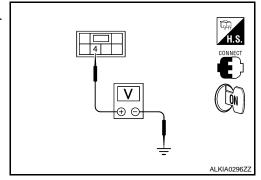
NO >> GO TO 2

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

[LH&RH FRONT WINDOW ANTI-PINCH]

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

(+)			Voltage (V)
Front power win- dow motor LH con- nector	Terminal	(–)	(Approx.)
D9	4	Ground	10



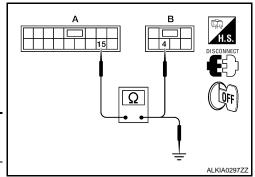
Is the measurement value within the specification?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

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

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	15	D9 (B)	4	Yes



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		No

Is the inspection result normal?

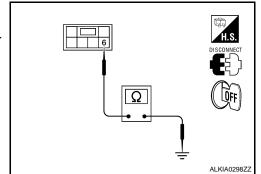
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check continuity between front power window motor LH connector and ground.

Front power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes



Is the inspection result normal?

YES >> GO TO 6 NO >> GO TO 5

CHECK HARNESS CONTINUITY 2

Α

В

С

D

Е

F

G

Н

PWC

M

L

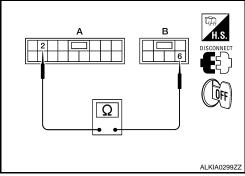
Ν

0

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power win- dow motor LH con- nector	Terminal	Continuity
D7 (A	2	D9 (B)	6	Yes



Is the inspection result normal?

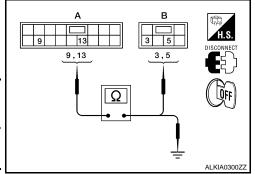
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	3	Yes
DI (A)	13	D9 (B)	5	165



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		Continuity
D7 (A)	9	Ground	No
DI (A)	13		110

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000001505219

Detects condition of the front power window motor RH operation and transmits to power window and door lock/unlock switch RH as pulse signal.

PASSENGER SIDE : Component Function Check

INFOID:0000000001505220

1. CHECK ENCODER OPERATION

Does front door glass RH perform AUTO open/close operation normally when operating power window and door lock/unlock switch RH?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-91, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000001505221

Α

В

D

Е

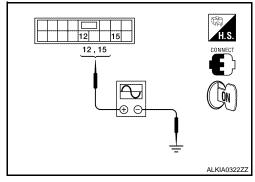
F

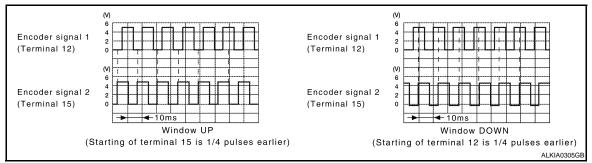
Н

1. CHECK ENCODER SIGNAL

- 1. Connect front power window motor RH.
- 2. Turn ignition switch ON.
- 3. Check signal between power window and door lock/unlock switch RH connector and ground with oscilloscope.

-			
(+)	(+)		Signal
Power window and door lock/unlock switch RH connector	Terminal	(-)	(Reference value)
D105	12	Ground	Refer to following
D103	15	Ground	signal





Is the inspection result normal?

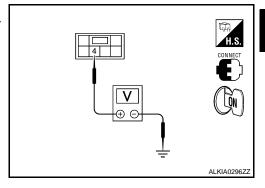
YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2

$2.\,$ Check front power window motor RH power supply

- Turn ignition switch ON.
- Check voltage between front power window motor RH connector and ground.

(+)	Voltage (V)		
Front power window motor RH connector	Terminal	(–)	(Approx.)
D105	4	Ground	10

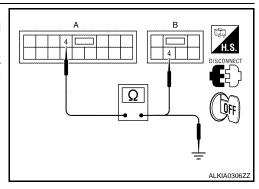


Is the measurement value within the specification?

YES >> GO TO 4 NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

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



PWC

L

M

Ν

0

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	4	D104 (B)	4	Yes

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

Power window and door lock/ unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	4		No

Is the inspection result normal?

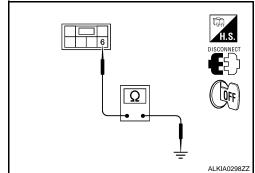
YES >> Replace power window and door lock/unlock switch RH. Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-77</u>, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- 3. Check continuity between front power window motor RH connector and ground.

Front power window motor RH connector	Terminal	Ground	Continuity
D104	6		Yes



Is the inspection result normal?

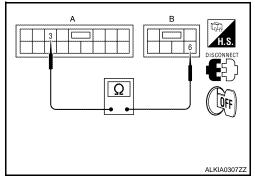
YES >> GO TO 6 NO >> GO TO 5

5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH.

 Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	3	D104 (B)	6	Yes



Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH.

Refer to <u>PWC-60</u>, "Removal and Installation". After that, refer to <u>PWC-77</u>, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

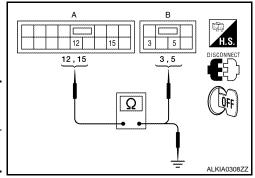
ENCODER

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	5	Yes
D105 (A)	15	D 104 (B)	3	163



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

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	12		No
D103 (A)	15		NO

Is the inspection result normal?

YES >> Replace front power window motor RH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-84</u>, "<u>PASSENGER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

PWC

J

Α

В

C

D

Е

F

G

Н

L

M

Ν

0

DOOR SWITCH

Description

Detects door open/close condition and transmits the signal to BCM.

Component Function Check

INFOID:0000000001505223

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-70, "RETAINED PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

NO >> Refer to PWC-94, "Diagnosis Procedure".

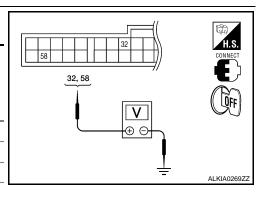
Diagnosis Procedure

INFOID:0000000001505224

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

	Terminals					
(+)			Door c	ondition	Voltage (V)	
BCM connector	Terminal	(–)			(Approx.)	
	32 58		Front door	OPEN	0	
M18		Ground	RH	CLOSE	Battery voltage	
WITO		Giouna	Front door	OPEN	0	
	30		LH	CLOSE	Battery voltage	



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".

NO >> GO TO 2

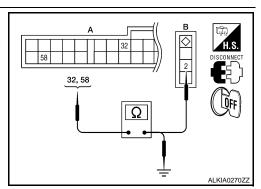
2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- Disconnect BCM and front door switch.
- 3. Check continuity between BCM connector (A) and front door switch connector (B).

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M18 (A)	32	RH: B108 (B)	2	Yes
W10 (A)	58	LH: B8 (B)	2	165

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



BCM connector	Terminal		Continuity
M18 (A)	32	Ground	No
WTO (A)	58	- IN	INO

Is the inspection result normal?

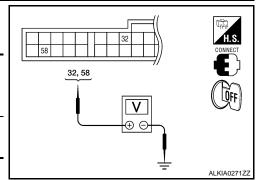
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM connector.
- 2. Check voltage between BCM connector and ground.

	Malka (M)			
(+)			Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	,	
M18	32	Ground	Battery voltage	
IVITO	58	Giodila	battery voltage	



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-95, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door switch.

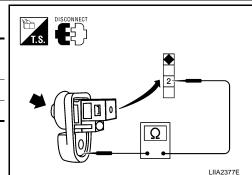
Component Inspection

INFOID:0000000001505225

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Terminal		Door switch	Continuity	
Door switches		Door Switch		
2	Ground part of door switch	Pressed	No	
2		Released	Yes	



Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace front door switch.

PWC

Α

В

D

Е

F

M

Ν

0

DOOR KEY CYLINDER SWITCH

Description INFOID:000000001505226

Main power window and door lock/unlock switch detects condition of the door key cylinder and transmits to BCM as the LOCK or UNLOCK signals.

Component Function Check

INFOID:0000000001505227

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to SEC-20, "COMMON ITEM: CONSULT-III Function".

Monitor item	Condition		
KEY CYL LK-SW	Lock	: ON	
RET OTE ER-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
RET CTL UN-SW	Neutral / Lock	: OFF	

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-96, "Diagnosis Procedure".

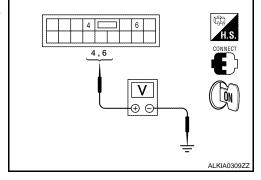
Diagnosis Procedure

INFOID:000000001505228

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Te	erminals				
(+)				Voltage (V)	
Main power window and door lock/unlock switch connector	Terminal	(-)	Key position	(Approx.)	
	4		Lock	0	
D7			Neutral/Unlock	5	
D1	6	Ground	Unlock	0	
			Neutral/Lock	5	



Is the measurement value within the specification?

YES >> Replace main power window and door lock/unlock switch. After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

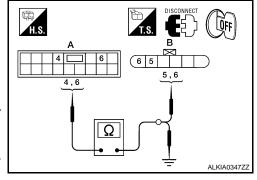
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).
- 3. Check continuity between main power window and door lock/ unlock switch connector (A) and front door lock assembly LH (key cylinder switch) connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front door lock as- sembly LH (key cylin- der switch) connector	Terminal	Continuity
D7 (A)	4	D10 (B)	6	Yes
DI (A)	6	D10 (B)	5	163



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		Continuity	
D7 (A)	4	Ground	No	
DI (A)	6	1	INO	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.

Front door lock assembly LH (key cylinder switch) connector	Terminal	Ground	Continuity
D10	4		Yes

DISCONNECT OFF

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-97, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door lock assembly LH (door key cylinder switch). After that, refer to PWC-98, "Special Repair Requirement".

Component Inspection

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

PWC

M

Ν

Р

INFOID:0000000001505229

Α

В

D

Е

F

Н

PWC-97

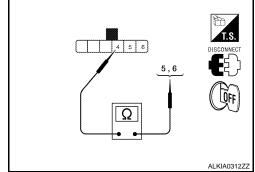
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Check front door lock assembly LH (key cylinder switch).

Terminal			
Front door lock assembly LH (key cylinder switch) connector		Key position	Continuity
	5	Unlock	Yes
3		Neutral/Lock	No
6	6	Lock	Yes
6		Neutral/Unlock	No



Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). After that, refer to PWC-98, "Special Repair Requirement".

Special Repair Requirement

INFOID:0000000001505230

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special</u> Repair Requirement"

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000001505231

Α

В

D

Е

Н

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000001505232

 ${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to SEC-20, "COMMON ITEM: CONSULT-III Function".

Monitor item	Condition	
CDL LOCK SW	LOCK	: ON
CDL LOCK SW	UNLOCK	: OFF
CDL UNLOCK SW	LOCK	: OFF
	UNLOCK	: ON

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-99, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000001505233

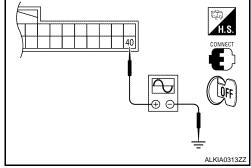
Power Window Serial Link Check

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

Remove Intelligent Key, and close front door LH and RH.

2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".



PWC

M

Ν

Terminal				
(+)		()	Signal (Reference value)	
BCM connector	Terminal	(–)	(**************************************	
M18	40	Ground	(V) 15 10 5 0 10 ms	

Is the inspection result normal?

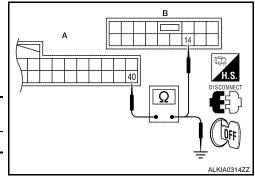
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M18 (A)	40	D7 (B)	14	Yes



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

BCM connector	Terminal	Ground	Continuity
M18 (A)	40	Giodila	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH operation signal
- Power window control by key cylinder switch signal
- Retained power operation signal
- Power window lock switch signal

FRONT POWER WINDOW SWITCH: Component Function Check

ΛΙ

INFOID:0000000001505234

INFOID:0000000001505235

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

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT-III. Refer to SEC-20, "COMMON ITEM: CONSULT-III Function".

Monitor item	Condition		
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

>> Refer to PWC-101, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure". NO

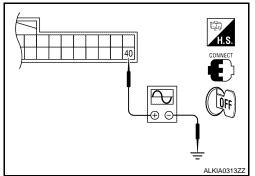
FRONT POWER WINDOW SWITCH: Diagnosis Procedure

Power Window Serial Link Check

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

- Remove Intelligent Key, and close the front door LH and RH.
- Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

	Terminal	Signal (Reference value)		
(+)				(_)
BCM connector	Terminal	(-)	(
M18	40	Ground	(V) 15 10 5 0 10 ms	



Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- 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
M18 (A)	40	D105 (B)	16	Yes

В Ω ALKIA03157

Check continuity between BCM connector (A) and ground.

PWC

Α

В

D

Е

F

Н

INFOID:0000000001505236

Ν

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

BCM connector	Terminal	Terminal Ground	
M18 (A)	40	Ground	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-60, "Removal and Installation". After that, refer to PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Description INFOID:000000001505237

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

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-60, "Removal and Installation". After that, refer to PWC-103, "Special Repair Requirement"

NO >> Check condition of harness and connector.

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

Α

D

Е

Н

INFOID:0000000001505238

INFOID:0000000001505239

Ι\ /Ι

Ν

C

BCM (BODY CONTROL MODULE) [LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
	Front door RH closed	OFF
DOOR SW-AS	Front door RH opened	ON
KEY CYL LK-SW	Other than front door key cylinder LH LOCK position	OFF
RET CTL LK-SW	Front door key cylinder LH LOCK position	ON
KEY CYL UN-SW	Other than front door key cylinder LH UNLOCK position	OFF
KET CTL UN-SW	Front door key cylinder LH UNLOCK position	ON
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	OFF

TERMINAL LAYOUT

Refer to BCS-43, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-44, "Physical Values".

POWER WINDOW MAIN SWITCH

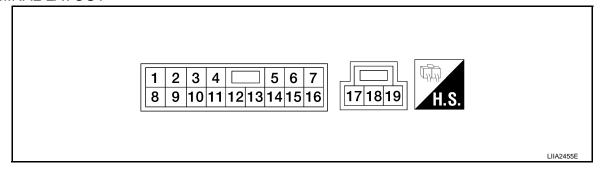
< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Terminal No.		Description			Voltage [V]	
+	_	Signal name	Input/ Output	Condition	(Approx.)	
1 (G/B)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage	
2 (W/B)	Ground	Encoder ground	_	_	0	
3 (G/O)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage	
4 (L/B)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0	
5 (G/R)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage	
6 (L/R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0	
7 (G/W)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is operated UP.	Battery voltage	
8 (L/R)	11	Front door power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage	
9 (G/W)	2	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms	

PWC

J

Α

В

C

D

Е

F

G

Н

M

L

N

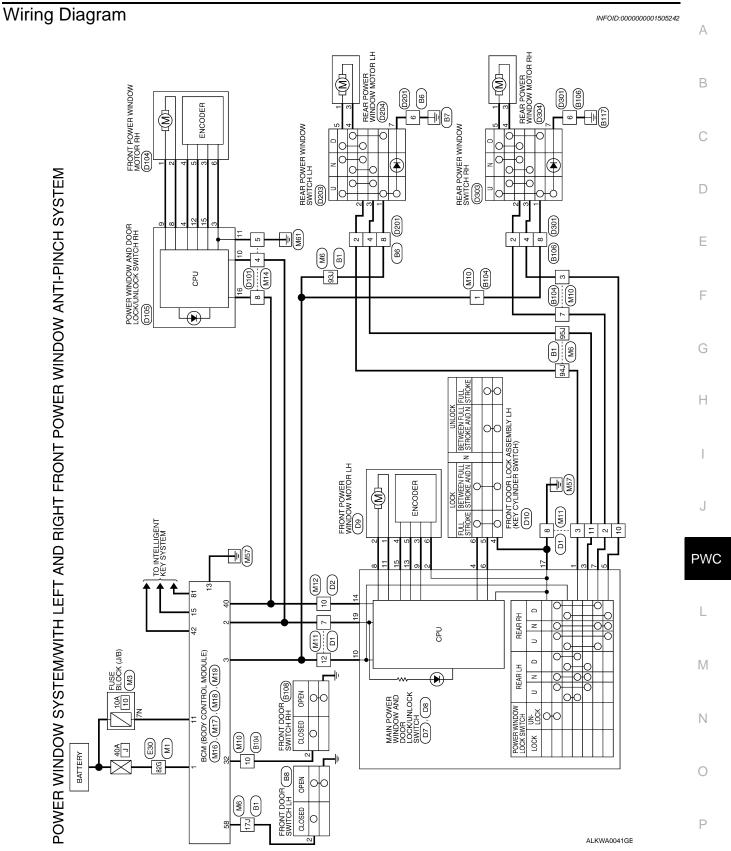
0

POWER WINDOW MAIN SWITCH [LH&RH FRONT WINDOW ANTI-PINCH]

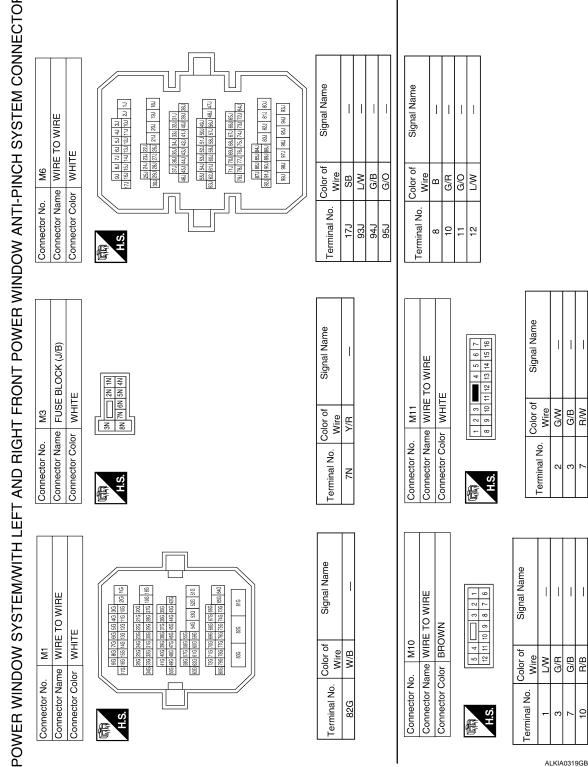
< ECU DIAGNOSIS >

Terminal No.		Description			Voltago [V]	
+	_	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)	
				IGN SW ON	Battery voltage	
10 (L/W)	Ground	RAP signal	Input	Within 45 second after ignition switch is turned to OFF.	Battery voltage	
				When front LH or RH door is opened during retained power operation.	0	
11 (L/B)	8	Front door power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage	
13 (G/Y)	2	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms	
14 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB	
15 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10	
17 (B)	Ground	Ground	_	_	0	
19 (R/Y)	Ground	Battery power supply	Input	_	Battery voltage	

[LH&RH FRONT WINDOW ANTI-PINCH]



POWER WINDOW SYSTEM/WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM CONNECTORS



POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

<	F	٦I	1 [ור	Δ	G	NΙ	\cap	Q I	9	_
<	-1		, ,	71	~	ורי	w		ורי	• •	_

	Connector Name BCM (BODY CONTROL	MODULE)	×		2	ī	Signal Name	BAT_POWER_F/L	P/W POWER SUPPL	Y_PERM	POWER_ WINDOW_	POWER_ SUPPLY	(HAP)
M16	e BCM	MOD	ır BLAC			-1	Color of Wire	W/B	, , ,	H/Y		3	
Connector No.	Connector Nan		Connector Color BLACK	4	S.H		Terminal No.	-	(N		က	
						3							
	TO WIRE			8 8 8	8 9 10		Signal Name	1		1			
M14	WIRE.	WHITE			5 6 7		Color of Wire	R/Υ	В	Y/G			
Connector No. M14	Connector Name WIRE TO WIRE	Connector Color WHITE		E	H.S.		Terminal No.	4	5	8			
			_		_				1				
	ro wire				5 6 7 8 13 14 15 16		Signal Name	I					
ΟI	Connector Name WIRE TO W	Connector Color WHITE			1 2 3 4 9 10 11 12		Terminal No. Wire	Y/G					
Connector No. M12	-				- 6	Ш	0	\vdash					

Connector No.	M19	
Connector Name	me BCM MOD	BCM (BODY CONTROL MODULE)
Connector Color	or BLACK	X
H.S.		
7 27 77 77 87 67	74 73 72 71	70 69 68 67 66 65 64 63 62 61 60
99 98 97 96 99	96 95 94 93 92 91 90 89	90 89 88 87 86 85 84 83 82 81 80
Terminal No.	Color of Wire	Signal Name
6	-	CH I NO NO

				21 20	41 40	١.,						
	BCM (BODY CONTROL MODULE)	EN		31 30 29 28 27 26 25 24 23 22	51 50 49 48 47 46 45 44 43 42		Signal Name		AS_DOOR_SW	BW K-LINE	S/L LOCK LED	DR DOOR SW
M18		or GREEN		34 33 32 3	54 53 52 5		Color of	Wire	B/B	Y/G	۳	SB
Connector No.	Connector Name	Connector Color	南 H.S.	39 38 37 36 35	59 58 57 56 55 8		Toximinal No	ellilla NO.	32	40	42	58

						Γ
BCM (BODY CONTROL MODULE)	TE	11 12 13 14 15 16 17 18 19	Signal Name	BAT_BCM_FUSE	GND1	1 J J J J J J J J J J J J J J J J J J J
	or WHITE	11 12 13	Color of	γ/R	В	5
Connector Name	Connector Color	所 H.S.	Terminal No.	11	13	7

ALKIA0189GB

Α

В

С

D

Е

F

G

Н

J

PWC

L

 \mathbb{N}

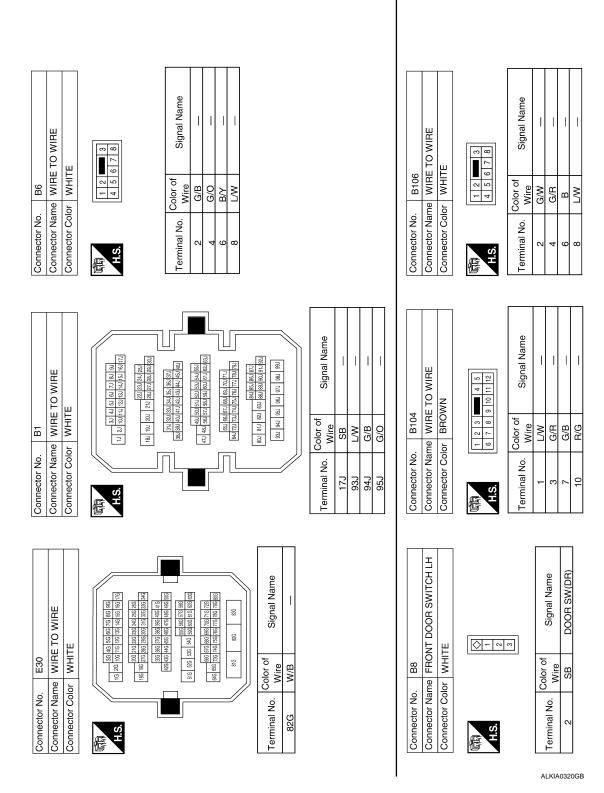
Ν

0

Р

M17

Connector No.



POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

									Г			_		
	TO WIRE				5 4 3 2 1 13 12 11 10 9					Signal Name		I		
D2	ne WIRE	or WHITI			8 7 6 16 15 14					Color of	Wire	5/A		
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		E	H.S.					Terminal No.		10		
	IRE			3 2 1	8 6 0		Signal Name		1		ı		I	1
1	IIRE TO WI	/ніте		5 4 3	14 13 12 11 10			>				_		/
lo. D1	Jame M	color M		9 /	16 15 14		Color o	Ø/W	G/B	R/Α	В	G/R	9/0	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		E	H.S.		Terminal No. Wire	8	c	7	ω	10	1	12
			1						г		1	_		
	IT DOOR SWITCH RH	ш			» - «	1 0	จไ			Signal Name	1	DOOR SW (AS)		
B108	e FRON	r WHIT		Ľ		_				Solor of	Wire	M/B		
Connector No. B108	Connector Name FRONT DOOI	Connector Color WHITE		E	H.S.					Terminal No. Color of	,	22		

			г			
	Connector Name (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH	TE	18 19	Signal Name	GND	BAT
B0	FROM ANTI-	r WHITE		Color of Wire	В	2
Connector No.	Connector Nam	Connector Color	H.S.	Terminal No.	17	Ç

Terminal No.	Color of	Signal Name
	wire	•
-	G/B	RL_UP
2	W/B	ENCODER_GND
3	G/0	RL_DOWN
4	I/B	LOCK
5	G/R	RR_DOWN
6	L/R	UNLOCK
7	G/W	RR_UP
8	L/R	AS_UP
9	G/W	ENCODER_SIG2
10	Γ/W	IGN
11	L/B	AS_DOWN
12		
13	G/Y	ENCODER_SIG1
14	Y/G	COM
15	G/R	ENCODER_POWER
16		

Connector No.	ш	10							
Connector Name (WITH LEFT AND RIGHT FRONT POWER WINDO ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCKUNLOCK SWITCH	STA S A S	FRONT IN THE LEGANT IN THE LEG	IESEESE	□□뜬들유엉뚱	严ら豆≶犬	(WITH LEFT AND RIGHT FRONT POWER WINDO ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCKUNLOCK SWITCH	STI STI VIN	SE ES	WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color WHITE	>	¥	ΙĒ	l					
									_
	-	2 3 4 [3	4	Ш	2	9	7	
¥	8	6	10	11	12	8 9 10 11 12 13 14 15 16	15	16	





ALKIA0321GB

Α

В

С

D

Е

F

G

Н

J

PWC

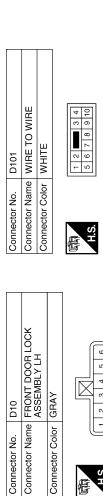
L

 \mathbb{N}

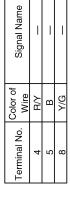
Ν

0

Ρ

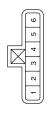


世	5 6 7 8 9 10	Signal Name	_	_	
or WHI	1 2 9	Color of Wire	R/Y	В	
onnector Color WHITE	H.S.	erminal No.	4	5	



Terminal No.	Color of Wire	Signal Name
1	ı	_
2	I	1
3	M/B	GND
4	G/R	ENCODER POWER
5	ı	_
9	١	-
7	ı	_
8	L/R	UP
6	I/B	DOWN
10	R/Y	BATT
11	В	GND
12	G/Y	ENCODER SIG1
13	1	_
14	1	_
15	G/W	ENCODER SIG2
9	ל/ט	MOO





Signal Name	Olginal Ivalino	GND	DOOR_KEY/C UNLOCK SW	DOOR_KEY/C
Color of	Wire	В	В/Л	L/B
Terminal No	cillia No.	4	5	9

GND	DOOR_KEY/C UNLOCK_SW	DOOR_KEY/(LOCK_SW	
ш	L/R	L/B	
4	5	9	







Connector No.





Signal Name	1	1	1	1	I	I
Color of Wire	L/B	L/R	G/W	G/R	G/Y	M/B
Terminal No.	-	2	8	4	2	9

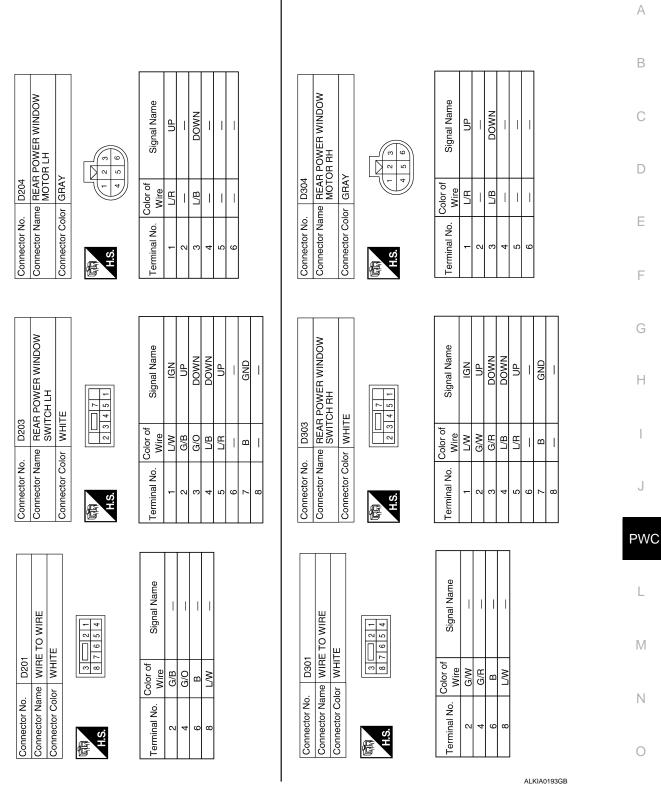
No. D104	Connector Name (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) FRONT POWER WINDOW MOTOR RH	Connector Color WHITE	
Connector No.	Connector Na	Connector Col	

	2	9	1
	П	2	
	Ш	4	
	-	3	
١			_



_	_	_	_	_	_	_	_
omely leaving	Signal Name	_	_	_	I	Ī	I
Color of	Wire	Я/Ί	H/T	W/S	G/R	IJ/5	M/B
Torminal No	ם ווווום	1	2	3	4	5	9

ALKIA0423GB



Fail Safe

FAIL-SAFE CONTROL

Switches to fail-safe control when malfunction is detected in encoder signal that detects up/down speed and direction of door glass. Switches to fail-safe control when error beyond regulation value is detected between the fully closed position and the actual position of the glass.

[LH&RH FRONT WINDOW ANTI-PINCH]

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors mal- function	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet up- dated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

- Auto-up operation
- Anti-pinch function
- Retained power function

Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or in motor.

FRONT POWER WINDOW SWITCH

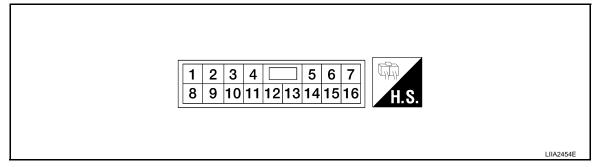
[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Termi	nal No.	Description			Voltage [V]
+	_	Signal name Encoder ground Encoder power supply Power window motor JP signal Power window motor OWN signal Battery power supply Ground	Input/ Output	Condition	(Approx.)
3 (W/B)	Ground	Encoder ground	_	_	0
4 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
8 (L/R)	9	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
9 (L/B)	8	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage
10 (R/Y)	Ground	Battery power supply	Input	_	Battery voltage
11 (B)	Ground	Ground	_	_	0
12 (G/Y)	3	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB

PWC

J

Α

В

C

D

Е

F

G

Н

L

M

Ν

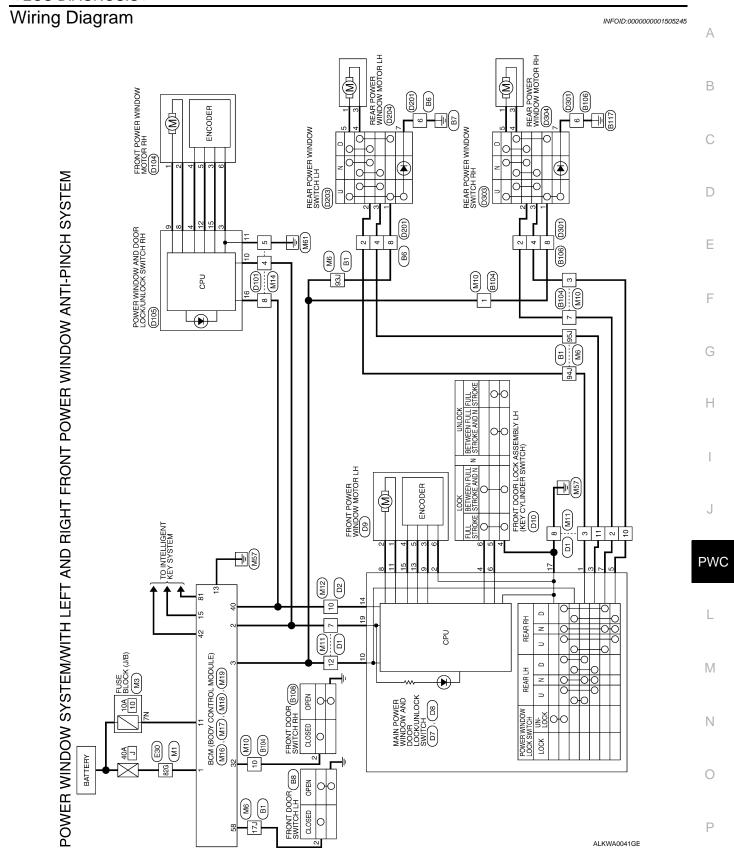
0

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Termi	inal No.	Description			Voltage [V]
+	_	Signal name	Input/ Output	Condition	(Approx.)
15 (G/W)	3	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
16 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB



Signal Name

Color of

Wire SB

rerminal No.

Signal Name

Color of Wire

Ferminal No.

Signal Name

Color of

Terminal No. 82G

Wire W/B

POWER WINDOW SYSTEM/WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM CONNECTORS 25J 24J 23J 22J 30J 25J 25J 27J 25J 21J 20J 15J 18J 55J 54J 53J 52J 51J 50J 49J 63J 62J 61J 60J 59J 58J 57J 56J 48J 47J Connector No. M6 Connector Name WIRE TO WIRE 71J 70J 69J 68J 67J 66J 65J 79J 78J 77J 76J 75J 74J 73J 77J 8 37J 36J 35J 34J 33J 32J 31J 46J 45J 44J 43J 42J 41J 40J 39J Connector Color WHITE Connector No. M3 Connector Name FUSE BLOCK (J/B) WHITE Connector Color 58G 57G 56G 55G 65G 62G 61G 60G 59G 54G 53G 52G 51G WIRE TO WIRE 826 Connector Color WHITE Ξ 836 Connector Name Connector No.

	_	_	_	1	Signal Name		I	I	I	1							
	SB	L/W	G/B	9/0	Color of	Wire	В	G/R	0/9	MΠ							
	17.1	931	94J	95J	Torminal No		8	10	11	12							
2=:	7N Y/R —				Connector No. M11	Connector Name WIRE TO WIRE	THE TANK TOLON TOPOGRADO				H.S.		Color of Signal Name		2 G/W —	3 G/B —	1
	1				10	Connector Name WIRE TO WIRE	NWO	NAC		4 3 2 1	11 10 9 8 7 6	: Signal Name			1	_	
> -	M/B				No. M10	Name W	Jalor B	ם ו		2	12 1	Color of	Wire	L/W	G/R	G/B	ć
	82G				Connector No.	Connector	NWO a rolo 2 roto and 2			唇	H.S.	Color of	reminal No.	1	က	7	,
													_	_		_	_

ALKIA0319GB

FRONT POWER WINDOW SWITCH [LH&RH FRONT WINDOW ANTI-PINCH]

Α

В

С

D

Е

F

G

Н

J

PWC

L

M

Ν

0

Ρ

Signal Name Signal Name 1 Connector Name WIRE TO WIRE Connector Name | WIRE TO WIRE 1 2 **• 3** 4 5 6 7 8 1 2 **1** 3 4 5 6 7 8 Connector Color WHITE Connector Color WHITE B106 Color of Wire Color of B6 G/R G/B \sim ш Connector No. Connector No. Terminal No. Ferminal No. ဖ 8 H.S. 6 偃 Signal Name Signal Name 47J 48J 56J 57J 58J 53J 54J 55J 47J 48J 56J 57J 58J 59J 60J 61J 62J 63J 1 33 44 54 64 73 84 93 14 23 10/11/12/13/14/15/16/17/ 18J 19J 20J 21J 28J 28J 28J 30J 80J 81J 82J 83J 88J 89J 90J 92J 31J 32J 33J 34J 35J 36J 37J 38J 39J 40J 41J 42J 43J 44J 45J 46J 931 941 951 961 971 981 991 Connector Name WIRE TO WIRE Connector Color BROWN 1 2 3 1 4 5 6 7 8 9 10 11 12 Connector Name | WIRE TO WIRE WHITE B104 Color of Wire Color of G/B G/B Wire M R/G G/B 9/0 H SB Connector Color Connector No. Connector No. Ferminal No. Terminal No. 17 93J 94J 95 9 H.S. E 僵 Connector Name FRONT DOOR SWITCH LH DOOR SW(DR) Signal Name Signal Name 36 4G 5G 6G 7G 8G 9G 10 10 116 126 138 146 156 166 176 200 210 220 230 246 250 286 386 196 270 286 286 380 340 36G 36G 37G 38G|39G 40G 41G 42G|43G|44G|46G|47G|48G|49G|50G 51G 52G 53G 54G 55G 57G 58G 51G 52G 53G 54G 55G 61G 52G 53G Connector Name | WIRE TO WIRE 8 950 Q - α ε Connector Color | WHITE Connector Color WHITE Color of Wire 816 E30 Color of Wire W/B SB Connector No. Connector No. Terminal No. Terminal No. 82G

ALKIA0320GB

E

H.S. E

FRONT POWER WINDOW SWITCH [LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

								_		1	_		
2	/IRE TO WIRE	/HITE		7 6 5 4 3 2 1 15 14 13 12 11 10 9					of Signal Name				
Connector No. D2	Connector Name WIRE TO WIRE	Connector Color WHITE		S. 16				(Terminal No.	IIAA I	10 7/G		
	E TO WIRE	TE	1 3 2 1	13 12 11 10 9 8		Signal Name	I		I	1	1	I	
D1	e WIR	- WH	7 6 5 4	16 15 14 1;	Color of	Wire	G/W	G/B	R/Υ	В	G/R	0/9	Γ/M
Connector No. D1	Connector Name WIRE TO WIRE	Connector Color WHITE		H.S.		l erminal No. Wire	2	က	7	8	10	=	12
	Connector Name FRONT DOOR SWITCH RH	Ш		2 - 1	3				Signal Name		DOOR SW (AS)		
B108	e FRON	r WHIT	Ľ	1	_ث				Color of	WIFE	R/B		
Connector No.	Connector Nam	Connector Color WHITE	E	H.S.					Terminal No.		2		

	A W					I
	Connector Name (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH	旦	18 19	Signal Name	GND	
D8	PERON ANTI- MAIN LOCK	or WHITE		Color of Wire	В	
Connector No.	Connector Nar	Connector Color	赋 H.S.	Terminal No.	11	

	Color of	2
ı erminai No.	Wire	Signal Name
1	G/B	RL_UP
2	W/B	ENCODER_GND
ε	G/O	RL_DOWN
4	L/B	LOCK
2	G/R	RR_DOWN
9	L/R	UNLOCK
7	G/W	RR_UP
8	L/R	AS_UP
6	G/W	ENCODER_SIG2
10	L/W	IGN
11	L/B	AS_DOWN
12		
13	G/Y	ENCODER_SIG1
14	Y/G	COM
15	G/R	ENCODER_POWER
16		

Ĕ

ALKIA0321GB

В

Α

С

D

Е

F

G

Н

J

PWC

L

 \mathbb{N}

Ν

0

ENCODER POWER

W/B G/R

က

9

Signal Name

Color of

Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

₽ S S G/R G/Y W/B

ľΒ

ENCODER SIG2 COM

G/W

5 5 4

ENCODER SIG1

UP BATT GND

L/B RΥ G/Y В

9

6 Ξ 김의

			7				ı					Ī
	E TO WIRE	<u> </u>		3 4	7 8 9			Signal Name	ı	1	1	
D101	ne WIRE	or WHI	-	-	. 10			Color of Wire	R/Y	В	J/K	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE			S			Terminal No.	4	2	8	
			_			-						
	Connector Name FRONT DOOR LOCK	ASSEMBLY LT	_			3 4 5 6		Signal Name	GND	DOOR KFY/C	UNLOCK_SW_	DOOR_KEY/C_ LOCK_SW
D10	ne FROI	ASSE	or GRA			-		Color of Wire	В	4		L/B
Connector No.	Connector Nar		Connector Color GRAY		F	H.S.		Terminal No.	4	ις	•	9

Connector Name FRONT POWER WINDOW MOTOR LH

60

Connector No.

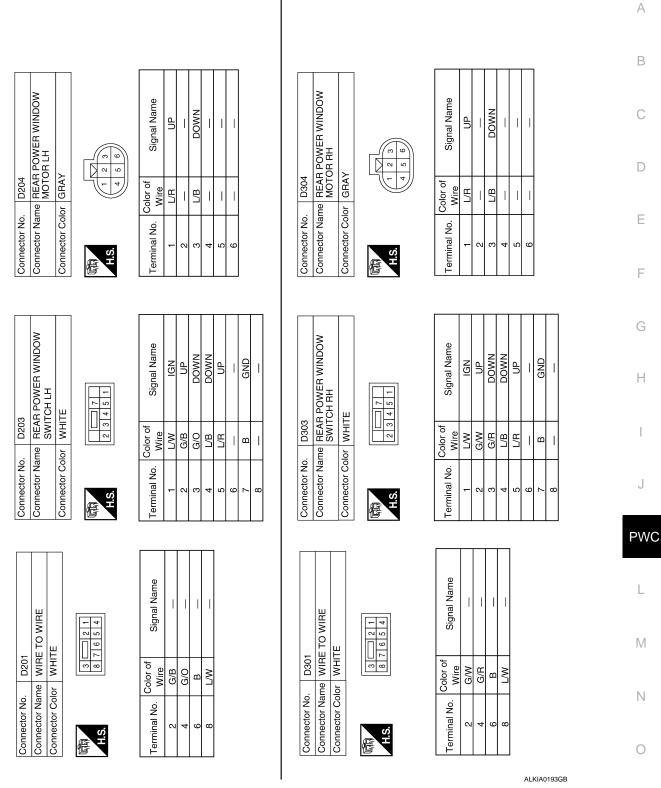
Connector Color WHITE

Connector No.	D105
Connector Name	Connector Name (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color WHITE	WHITE
- 8	2 3 4 5 7 8 6 7 8 9 10 11 12 13 14 15 16

Connector No.	. D104	
onnector Na	me (WIT FROI	Connector Name (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)
	FRO	FRONT POWER WINDOW
Connector Color	lor WHITE	巴
H.S.	- 6	6 2
Terminal No	Color of	Signal Name
dillia NO.	Wire	Olgilal Marrie
-	I/B	I
2	H/I	I

ALKIA0192GB

5 9



Fail Safe

FAIL-SAFE CONTROL

Switches to fail-safe control when malfunction is detected in encoder signal that detects up/down speed and direction of door glass. Switches to fail-safe control when error beyond regulation value is detected between the fully closed position and the actual position of the glass.

[LH&RH FRONT WINDOW ANTI-PINCH]

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors mal- function	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet up- dated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

- Auto-up operation
- Anti-pinch function
- Retained power function

Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window switch or in motor.

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH SYMPTOM DIAGNOSIS > [LH&RH FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH В Diagnosis Procedure INFOID:0000000001505247 $oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to BCS-34, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. Е 2. check main power window and door lock/unlock switch power supply and **GROUND CIRCUIT** Check power window switch main power supply and ground circuit. F Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts. 3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH SERIAL CIRCUIT Check main power window and door lock/unlock switch serial circuit. Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 4 NO >> Repair or replace the malfunctioning parts. $oldsymbol{4}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Check main power window and door lock/unlock switch. Refer to PWC-71, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? **PWC** YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". Ν

PWC-125

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001505248

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-81, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

II H&RH FRONT WINDOW ANTI-PINCHI

< SYMPTOM DIAGNOSIS >	[LH&RH FRONT WINDOW ANTI-PINCH]
FRONT PASSENGER SIDE POWER WIN ATE	IDOW ALONE DOES NOT OPER-
Diagnosis Procedure	INFOID:000000001505245
1. CHECK POWER WINDOW AND DOOR LOCK/UNLOC	K SWITCH RH
Check power window and door lock/unlock switch RH. Refer to PWC-76, "FRONT POWER WINDOW SWITCH: C	component Function Check".
Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts.	
2. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK	K SWITCH RH SERIAL LINK CIRCUIT
Check power window and door lock/unlock switch RH serial Refer to PWC-100, "FRONT POWER WINDOW SWITCH:	
Is the inspection result normal? YES >> GO TO 3 NO >> Repair or replace the malfunctioning parts.	
3. CHECK FRONT POWER WINDOW MOTOR RH CIRCL	JIT
Check front power window motor RH circuit. Refer to PWC-83, "PASSENGER SIDE: Component Function	on Check".
Is the inspection result normal? YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Inte	ermittent Incident".

Ν

0

Ρ

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001505250

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-78, "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 REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-84, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Р

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000001505251 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power winodw switch RH. Refer to PWC-78, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. D 2. CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-86, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Inspection End. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO F Н J **PWC** L M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH&RH FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000001505252

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- · A foreign material adheres to window glass or glass run rubber.
- Glass run rubber wear or deformation.
- · Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the malfunctioning parts.

$3.\,$ check encoder circuit

Check encoder circuit.

Refer to PWC-88, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE) [LH&RH FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS >

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER Α SIDE) **Diagnosis Procedure** INFOID:0000000001505253 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? D YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART · A foreign material adheres to window glass or glass run rubber.

Glass run rubber wear or deformation.

· Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-90, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

Е

F

Н

M

Ν

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000001505254

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-88, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (PASSENGER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (PASSENGER SIDE)

Diagnosis Procedure

INFOID:0000000001505255

Α

В

D

Е

F

Н

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-64, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-90, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

J

M

L

Ν

C

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000001505256

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-94, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000001505257

Α

В

D

Е

F

Н

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-64</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning parts.

2. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check front door lock assembly LH (key cylinder switch).

Refer to PWC-96, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PWC

J

L

M

Ν

C

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001505258

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to DLK-111, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000001505259

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

Replace main power window and door lock/unlock switch.

Refer to PWC-60, "Removal and Installation". After that, PWC-75, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

Е

Α

В

C

D

F

G

Н

J

PWC

L

M

Ν

0

PRECAUTIONS

[LH&RH FRONT WINDOW ANTI-PINCH]

PRECAUTION

PRECAUTIONS

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

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 SRS 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 SRS 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.

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH&RH FRONT WINDOW ANTI-PINCH]

ON-VEHICLE MAINTENANCE PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

BASIC INSPECTION

1. INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/fusible link blown.
- Poor connection, open or short circuit of harness connector.
- · Battery voltage.

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace the malfunctioning parts.

PWC

J

Α

C

D

Е

F

Н

M

L

Ν

0

POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

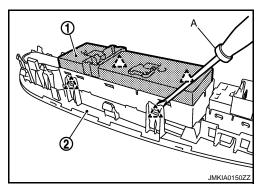
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

Do not fold the pawl of power window main switch finisher. NOTE:

The same procedure is also performed for power window and door lock/unlock switch RH and rear power window switch (LH & RH).



INFOID:0000000001505262

INSTALLATION

Install in the reverse order of removal.