SECTION PWC

POWER WINDOW CONTROL SYSTEM

CONTENTS

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

WorkFlow

INFOID:0000000005492192

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

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

>> GO TO 3.

3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH “SYMPTOM DIAGNOSIS”

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

>> GO TO 4.

4.IDENTIFY THE MALFUNCTIONING PARTS WITH “COMPONENT DIAGNOSIS”

Perform the diagnosis with “Component diagnosis” of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

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

Are the malfunctions corrected?

YES >> INSPECTION END
NO >> GO TO 3.

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000005492193

If any of the following work has been done Initial setting is necessary.
- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.
- Operation of regulator assembly as an independent unit.
- Removal and installation of glass.
- Removal and installation of door glass run.

NOTE:
The following specified operations can not be performed under the non-initialized condition.
- Auto-up operation
- Anti-pinch function
- Retained power operation

Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000005492194

INITIALIZATION PROCEDURE

1. Disconnect battery minus terminal or power window main switch connector. 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 2 seconds or more.
5. Initializing procedure is completely.
6. 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 (5.9 in) without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:
- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **Do not check with hands and other body parts because they may be pinched. Do not get pinched.**
- **It may switch to fail-safe mode if open/close operation is performed continuously without full close. Perform initial setting in that situation. Refer to PWC-87, "Fail Safe"**
- **Finish initial setting. Otherwise, next operation cannot be done.**

1. Auto-up operation
2. Anti-pinch function
3. Retained power operation

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000005492195

Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description".

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000005492196

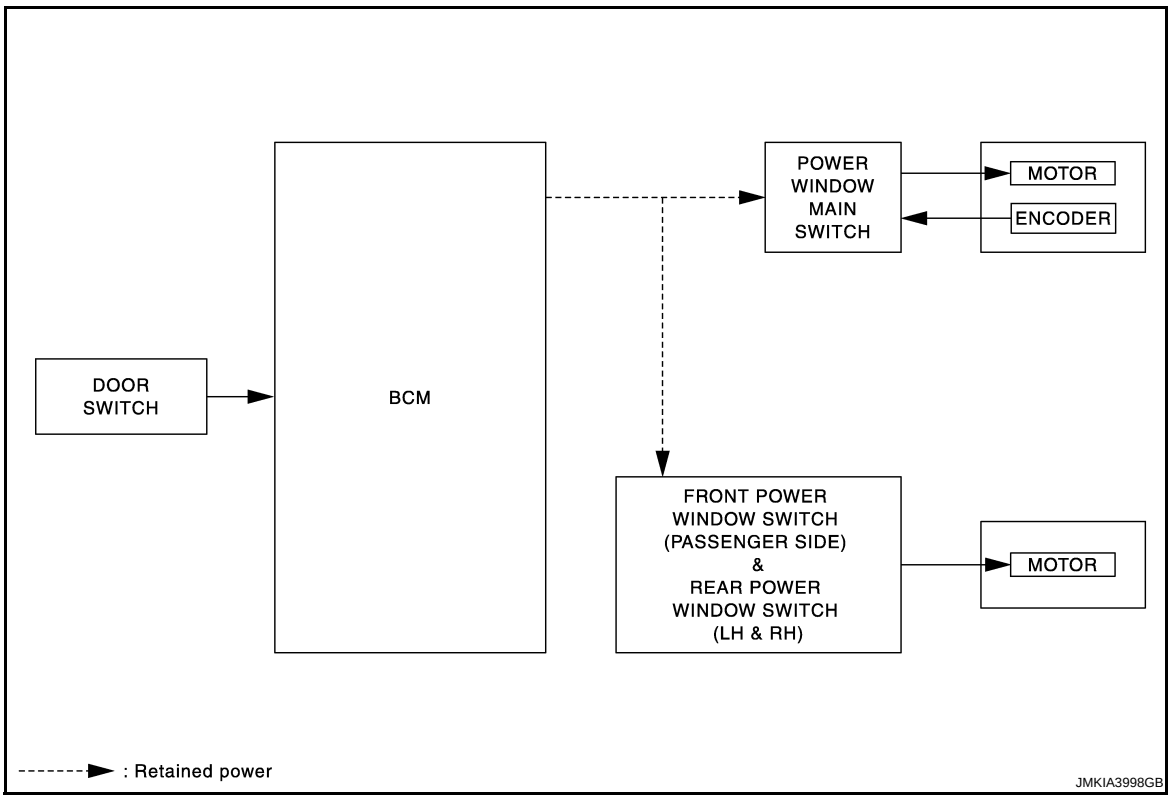
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement" for initialization procedure and check anti-pinch function.

SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000005492197



System Description

INFOID:0000000005492198

POWER WINDOW OPERATION

- Power window main switch can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.
- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.

POWER WINDOW AUTO-OPERATION (FRONT DRIVER SIDE)

- AUTO UP/DOWN operation can be performed when power window main switch 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 for 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 again.
- When timer time passes. (45 seconds)

POWER WINDOW LOCK

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

ANTI-PINCH SYSTEM (FRONT DRIVER SIDE)

- 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 (5.9 in) when detected.
- Encoder continues detecting the movement of front power window motor (driver side) and transmits to power window main switch as the encoder pulse signal while front power window motor (driver side) is operating.
- Resistance is applied to the front power window motor (driver side) rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window main switch controls to lower the window glass for 150 mm (5.9 in) after it detects encoder pulse signal frequency change.

OPERATION CONDITION

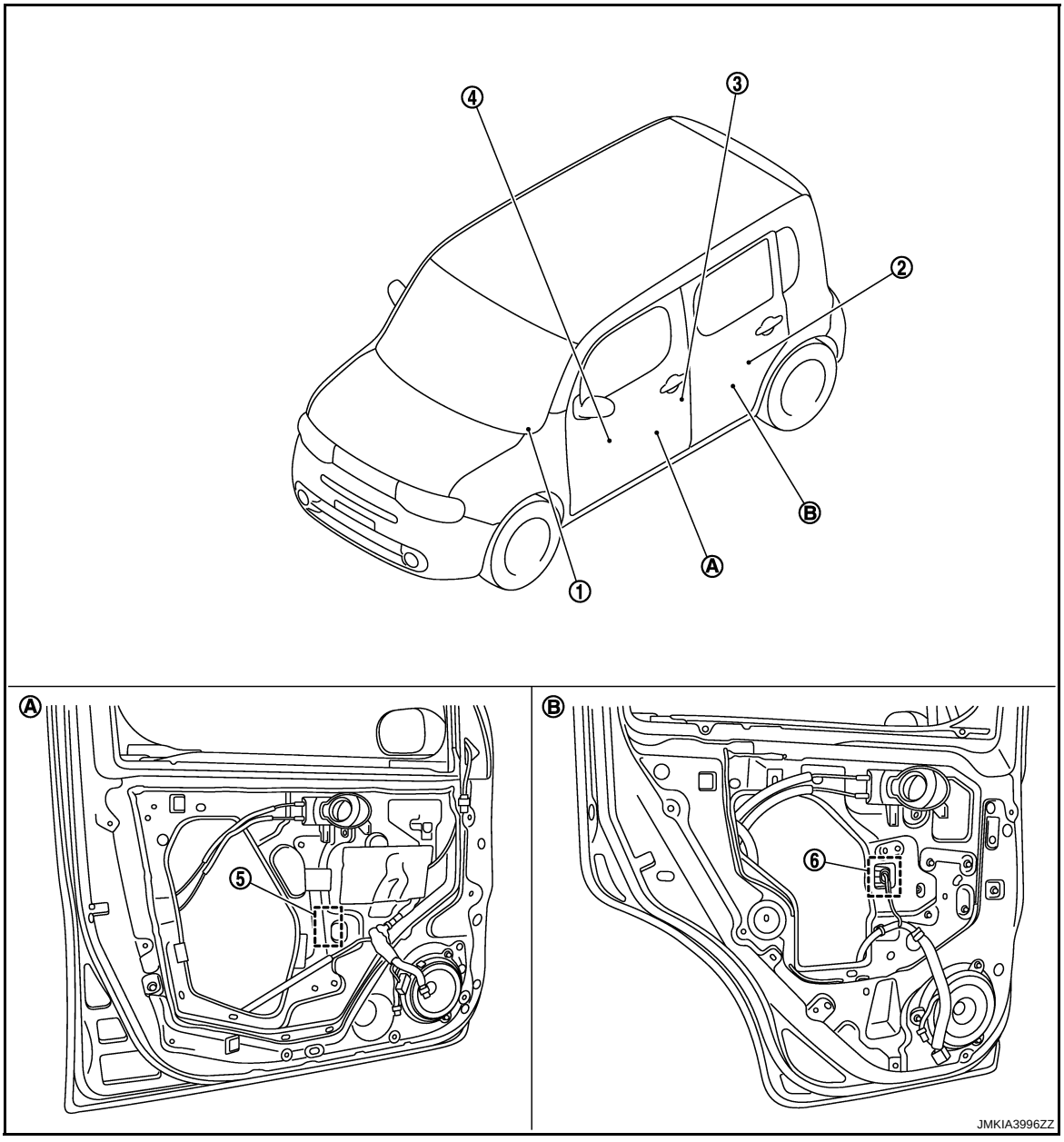
- When front door glass (driver side) AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed)

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:0000000005492199



1. BCM Refer to BCS-9, "Component Parts Location" M68, M69, M70 (With Intelligent Key) M65, M66, M67 (Without Intelligent Key)
2. Rear power window switch LH D63
3. Front door switch (driver side) B34
4. Power window main switch D5, D6
5. Front power window motor (driver side) D7
6. Rear power window motor LH D67

A. View with front door finisher removed.
B. View with rear door finisher removed.

Component Description

INFOID:0000000005492200

Component	Function
BCM	• Supplies power supply to power window switch. • Controls retained power.
Power window main switch	• Directly controls all power window motor of all doors. • Controls anti-pinch operation of power window.
Front power window switch	Controls power window motor of front passenger side door.
Rear power window switch (LH & RH)	Controls power window motor of rear right and left doors.
Front power window motor (driver side)	• Integrates the encoder and power window motor. • Starts operating with signals from power window main switch. • Transmits front power window motor (driver side) rotation as a pulse signal to power window main switch.
Front power window motor (passenger side)	Starts operating with signals from power window main switch & front power window switch (passenger side).
Rear power window motor (LH & RH)	Starts operating with signals from power window main switch & rear power window switch (LH & RH).
Front door switch (diver side)	Detects door open/close condition and transmits to BCM.

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

INFOID:0000000005492201

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 Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
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	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

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.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Automatic air conditioner	AIR CONDITONER		×	×
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”.) to low power consumption mode
	LOCK		Power supply position is “LOCK” (Ignition switch OFF with steering is locked.)
	OFF		Power supply position is “OFF” (Ignition switch OFF with steering is unlocked.)
	ACC		Power supply position is “ACC” (Ignition switch ACC)
	ON		Power supply position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power supply position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

RETAIND PWR

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

INFOID:0000000005492202

Data monitor

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000005492203

With Intelligent Key

1.CHECK FUSE AND FUSIBLE LINK

1.Turn ignition switch OFF.
2.Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
38	Ignition power supply	2 (10A)
57	Battery power supply	8 (10A)
70		G (40A)

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
BCM				
Connector	Terminal			
M68	38	Ground	Ignition switch ON	Battery voltage
M70	57		Ignition switch OFF	
	70			

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M70	67		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace harness or connector.

Without Intelligent Key

1.CHECK FUSE AND FUSIBLE LINK

1.Turn ignition switch OFF.
2.Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
38	Ignition power supply	2 (10A)
57	Battery power supply	8 (10A)
70		G (40A)

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

(+)		(–)	Condition	Voltage (Approx.)
BCM				
Connector	Terminal			
M65	38	Ground	Ignition switch ON	Battery voltage
M67	57		Ignition switch OFF	
	70			

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	67		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace harness or connector.

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000005492204

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition OFF.
2. Disconnect power window main switch connector.
3. Turn ignition switch ON.
4. Check voltage between power window main switch harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Power window main switch			
Connector	Terminal		
D5	10	Ground	Battery voltage
D6	19		

Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D6	17		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace harness.

3.CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and power window main switch harness connector.

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M67	68	D5	10	Existed
	69	D6	19	

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	68		Not existed
	69		

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation" (With Intelligent Key).Refer BCS-146, "Removal and Installation" (Without Intelligent Key).
NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000005492205

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Turn ignition switch ON.
4. Check voltage between front power window switch (passenger side) harness connector and ground.

(+)		(–)	Condition	Voltage (V) (Approx.)
Front power window switch (passenger side)				
Connector	Terminal			
D25	8	Ground	Ignition switch ON	Battery voltage

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and front power window switch (passenger side) harness connector.

BCM		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M67	68	D25	8	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	68		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation" (With Intelligent Key). Refer to BCS-81, "Removal and Installation" (Without Intelligent Key).
NO >> Repair or replace harness.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000005492206

1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Turn ignition switch ON.
4. Check voltage between rear power window switch harness connector and ground.

(+)			(–)	Condition	Voltage (V) (Approx.)
Rear power window switch					
Connector		Terminal			
LH	D63	1	Ground	Ignition switch ON	Battery voltage
RH	D43				

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and rear power window switch harness connector.

BCM		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
M67	68	LH	D63	1	Existed
		RH	D43		

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	68		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation" (With Intelligent Key). Refer to BCS-146, "Removal and Installation" (Without Intelligent Key).
NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Description

INFOID:0000000005492207

Front power window motor (passenger side) will be operated if front power window switch (passenger side) is operated.

Component Function Check

INFOID:0000000005492208

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) FUNCTION

Check front power window motor (passenger side) operation with front power window switch (passenger side).

Is the inspection result normal?

YES >> Front power window switch (passenger side) is OK.
NO >> Refer to PWC-15, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005492209

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Turn ignition switch ON.
4. Check voltage between front power window switch (passenger side) harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Front power window switch (passenger side)					
Connector	Terminal				
D25	12	Ground	Power window main switch (passenger side)	UP	Battery voltage
				DOWN	0
	11			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

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

2. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-16, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace front power window switch (passenger side). Refer to PWC-99, "Removal and Installation".

3. CHECK FRONT WINDOW SWITCH (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch harness connector and front power window switch (passenger side) harness connector.

Power window main switch		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	16	D25	12	Existed
	12		11	

4. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	16		Not existed
	12		

Is the inspection result normal?

YES >> Replace power window main switch.Refer to PWC-99, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000005492210

1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

1. Turn ignition OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Check front power window switch (passenger side).

Front power window switch (passenger side)	Terminal		Front power window switch condition	Continuity
D45	8	7	UP	Existed
	11	6		
	11	6	NEUTRAL	
	12	7		
	8	6	DOWN	
	12	7		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front power window switch (passenger side). Refer to PWC-99, "Removal and Installation".

REAR POWER WINDOW SWITCH

Description

INFOID:0000000005492211

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

Component Function Check

INFOID:0000000005492212

1. CHECK REAR POWER WINDOW SWITCH FUNCTION

Check rear power window motor operation with rear power window switch.

Is the inspection result normal?

YES >> Rear power window switch is OK.
NO >> Refer to PWC-17, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005492213

1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Turn ignition switch ON.
4. Check voltage between rear power window switch harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Rear power window switch					
Connector	Terminal				
LH: D63	2	Ground	Power window main switch: LH	UP	Battery voltage
				DOWN	0
	3			UP	0
				DOWN	Battery voltage
RH: D43	2		Power window main switch: RH	UP	Battery voltage
				DOWN	0
	3			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-18, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace rear power window switch. Refer to PWC-99, "Removal and Installation".

3. CHECK REAR POWER WINDOW SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch harness connector and rear power window switch harness connector.

Power window main switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
D5	1	LH	D63	2	Existed
	3			3	
	5	RH	D43	3	
	7			2	

4. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	1		Not existed
	3		
	5		
	7		

Is the inspection result normal?

YES >> Replace power window main switch.Refer to PWC-99, "Removal and Installation" .
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000005492214

1.CHECK REAR POWER WINDOW SWITCH

1. Turn ignition switch OFF.
2. Disconnect rear power window switch connector.
3. Check rear power window switch.

Rear power window switch	Terminal		Rear power window switch condition	Continuity
LH:D63 RH:D43	1	5	UP	Existed
	3	4		
	3	4	NEUTRAL	
	2	5		
	1	4	DOWN	
	2	5		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace rear power window switch. Refer to PWC-99, "Removal and Installation".

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005492215

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

DRIVER SIDE : Component Function Check

INFOID:0000000005492216

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) OPERATION

Check front power window motor (driver side) operation with power window main switch.

Is the inspection result normal?

YES >> Front power window motor (driver side) is OK.
NO >> Refer to PWC-19, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005492217

1. CHECK POWER WINDOW MOTOR (DRIVER SIDE) INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front power window motor (driver side) connector.
3. Turn ignition switch ON.
4. Check voltage between power window motor (driver side) harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window motor (driver side)					
Connector	Terminal				
D7	1	Ground	Power window main switch	UP	Battery voltage
				DOWN	0
	3			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

YES >> Replace power window motor (driver side). Refer to GW-21, "Removal and Installation".
NO >> GO TO 2.

2. CHECK POWER WINDOW MOTOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch harness connector and front power window motor (driver side) harness connector.

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	8	D7	1	Existed
	11		3	

4. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	8		Not existed
	11		

Is the inspection result normal?

YES >> Replace power window main switch.Refer to PWC-99, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005492218

Door glass moves UP/DOWN by receiving the signal from power window main switch or front power window switch (passenger side).

PASSENGER SIDE : Component Function Check

INFOID:0000000005492219

1. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) OPERATION

Check front power window motor (passenger side) operation with power window main switch or front power window switch (passenger side).

Is the inspection result normal?

YES >> Power window motor (passenger side) is OK.
NO >> Refer to PWC-20, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005492220

1. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect front power window motor (passenger side) connector.
3. Turn ignition switch ON.
4. Check voltage between front power window motor (passenger side) harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Front power window motor (passenger side)					
Connector	Terminal				
D27	2	Ground	Front power window switch (passenger side)	UP	Battery voltage
				DOWN	0
	1			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-21, "Removal and Installation".
NO >> GO TO 2.

2. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector.
3. Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector.

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D25	6	D27	1	Existed
	7		2	

4. Check continuity between front power window switch (passenger side) harness connector and ground.

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D25	6		Not existed
	7		

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).PWC-99, "Removal and Installation".

NO >> Repair or replace harness.

REAR LH

REAR LH : Description

INFOID:0000000005492221

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:0000000005492222

1.CHECK REAR POWER WINDOW MOTOR LH OPERATION

Check rear power window motor LH operation with power window main switch or rear power window switch LH.

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Refer to PWC-21, "REAR LH : Diagnosis Procedure"

REAR LH : Diagnosis Procedure

INFOID:0000000005492223

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Rear power window motor LH					
Connector	Terminal				
D97	1	Ground	Rear power window switch LH	UP	Battery voltage
				DOWN	0
	2			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to GW-25, "Removal and Installation".
NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector.
3. Check continuity between rear power window switch LH harness connector and rear power window motor LH harness connector.

Rear power window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D63	4	D67	2	Existed
	5		1	

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D83	4		Not existed
	5		

Is the inspection result normal?

YES >> Replace rear power window switch LH.Refer to PWC-99, "Removal and Installation".
NO >> Repair or replace harness.

REAR RH

REAR RH : Description

INFOID:0000000005492224

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

REAR RH : Component Function Check

INFOID:0000000005492225

1. CHECK REAR POWER WINDOW MOTOR RH OPERATION

Check rear power window motor RH operation with power window main switch or rear power window switch RH.

Is the inspection result normal?

YES >> Rear power window motor RH is OK.
NO >> Refer to PWC-22, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:0000000005492226

1.CHECK REAR POWER WINDOW MOTOR RH INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Rear power window motor RH					
Connector	Terminal				
D47	1	Ground	Rear power window switch RH	UP	Battery voltage
				DOWN	0
	2			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to GW-25, "Removal and Installation".
NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH connector.
3. Check continuity between rear power window switch RH harness connector and rear power window motor RH harness connector.

Rear power window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D43	4	D47	2	Existed
	5		1	

4. Check continuity between rear power window switch RH harness connector and ground.

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D43	4		Not existed
	5		

Is the inspection result normal?

YES >> Replace rear power window switch RH.Refer to PWC-99, "Removal and Installation".
NO >> Repair or replace harness.

ENCODER CIRCUIT

Description

INFOID:0000000005492227

Detects condition of the front power window motor (driver side) operation and transmits to power window main switch as pulse signal.

Component Function Check

INFOID:0000000005492228

1.CHECK ENCODER OPERATION

Check front driver side door glass perform AUTO open/close operation normally when power window main switch.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-24, "Diagnosis Procedure"

Diagnosis Procedure

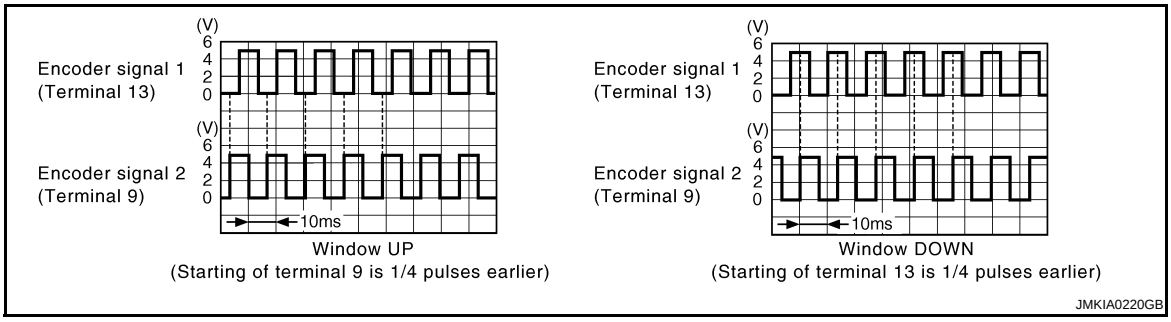
INFOID:0000000005492229

Encoder Circuit Check

1.CHECK ENCODER OPERATION

1. Turn ignition switch ON.
2. Check signal between power window main switch harness connector and ground with oscilloscope.

(+)		(–)	Signal (Reference value)
Power window main switch			
Connector	Terminal		
D5	9	Ground	Refer to following signal
	13		



Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and front power window motor (driver side) connector.
3. Check continuity between power window main switch harness connector and front power window motor (driver side) harness connector.

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	9	D7	6	Existed
	13		5	

4. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	9		Not existed
	13		

Is the inspection result normal?

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

3. CHECK ENCORDER POWER SUPPLY CIRCUIT

1. Connect power window main switch connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor (driver side) harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Front power window motor (driver side)			
Connector	Terminal		
D7	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between front power window motor (driver side) harness connector and ground.

Front power window motor (driver side)		Ground	Continuity
Connector	Terminal		
D7	4		Existed

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 6.

5. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Check continuity between power window main switch harness connector and front power window motor (driver side) harness connector.

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	15	D7	2	Existed

3. Check continuity between power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	15		Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-99, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 2

1. Disconnect power window main switch connector.

2. Check continuity between power window main switch harness connector and front power window motor (driver side) harness connector.

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	2	D7	4	Existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-99, "Removal and Installation".
NO >> Repair or replace harness.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-35, "Intermittent Incident".

>> INSPECTION END

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)
WITH INTELLIGENT KEY

WITH INTELLIGENT KEY : Reference Value

INFOID:0000000005817229

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
	Rear wiper is not in STOP position	On
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On

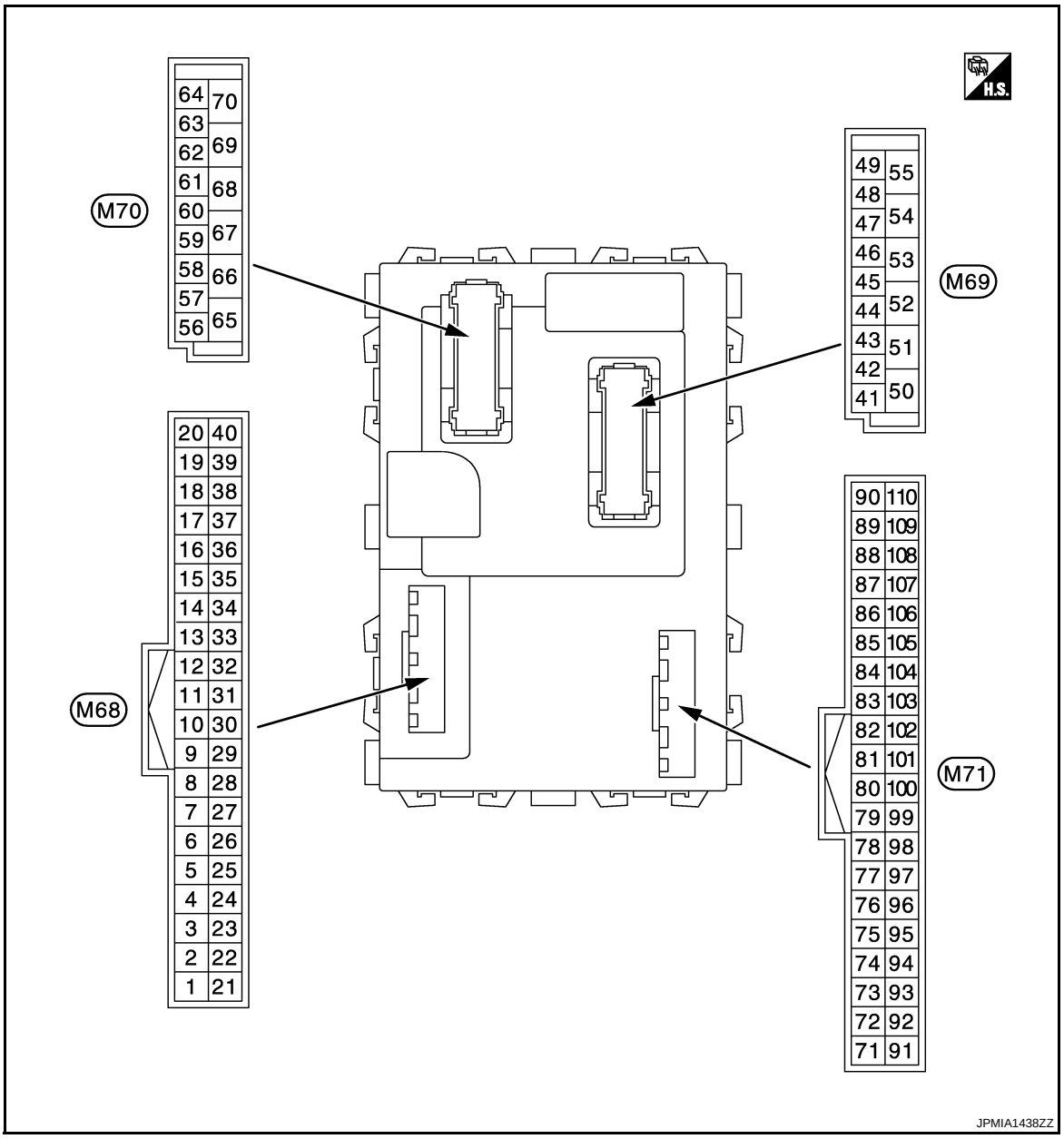
Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
TR/BD OPEN SW	**NOTE:** The item is indicated, but not monitored.	Off
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
FAN ON SIG	Blower fan OFF	Off
	Blower fan ON	On
AIR COND SW	Air conditioner OFF (A/C switch indicator OFF)	Off
	Air conditioner ON (A/C switch indicator ON)	On
RKE-LOCK	LOCK button of the key is not pressed	Off
	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed	On
RKE-TR/BD	BACK DOOR OPEN button of the key is not pressed	Off
	BACK DOOR OPEN button of the key is pressed	On
RKE-PANIC	PANIC button of the key is not pressed	Off
	PANIC button of the key is pressed	On
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V

Monitor Item	Condition	Value/Status
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V
OPTICAL SENSOR	**NOTE:** The item is indicated, but not monitored.	Off
RAIN SENSOR	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -RL	**NOTE:** The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
CLUCH SW	**NOTE:** The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	Off
	The brake pedal is depressed	On
BRAKE SW 2	The brake pedal is depressed when No. 7 fuse is blown	Off
	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Steering is unlocked	Off
	Steering is locked	On
UNLK SEN -DR	Driver door is locked	Off
	Driver door is unlocked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On

Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is locked	Off
	Steering is unlocked	On
S/L UNLK-IPDM	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-REQ	Steering is unlocked	Off
	Steering is locked	On
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Steering is locked	Reset
	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	**NOTE:** The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	**NOTE:** The item is indicated, but not monitored.	—
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
NOT REGISTERED	BCM detects registered key ID, or BCM does not detect key ID.	ID OK
	BCM detects non-registration key ID.	ID NG
TP 4	The ID of fourth key is not registered to BCM	Yet
	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
	Tire pressure warning alarm is sounding	On

TERMINAL LAYOUT

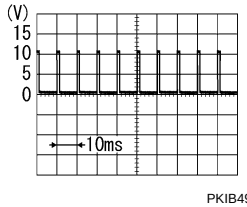
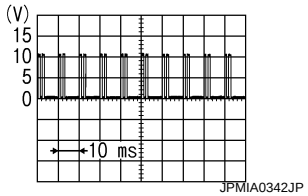
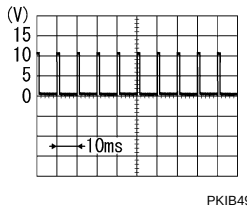
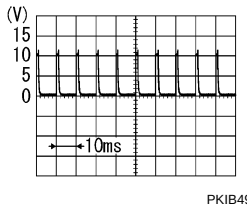
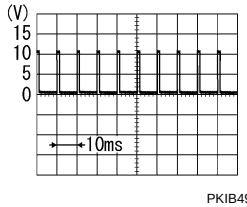


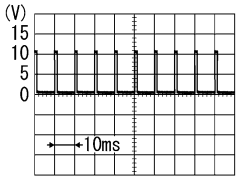
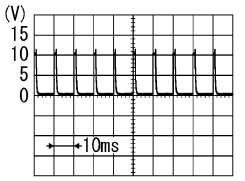
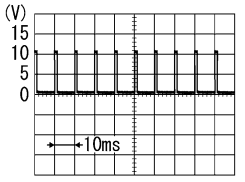
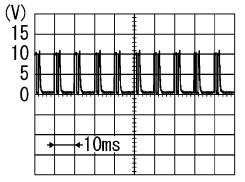
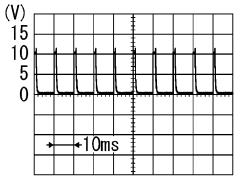
NOTE:

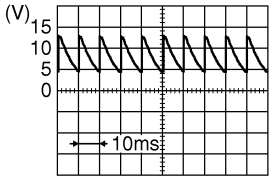
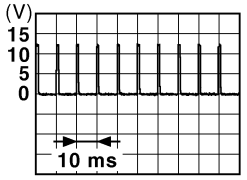
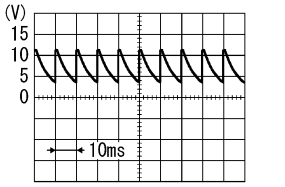
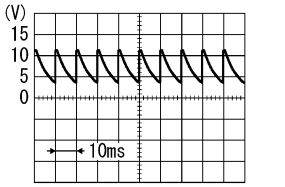
Connector color

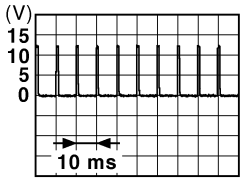
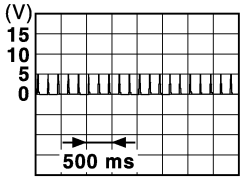
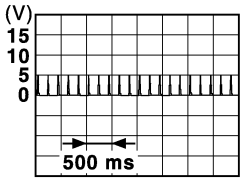
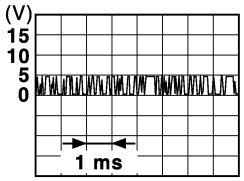
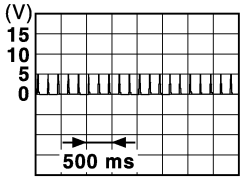
- M68, M70: Black
- M69, M71: White

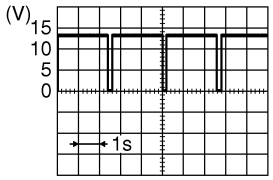
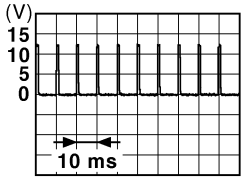
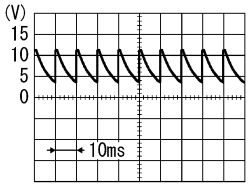
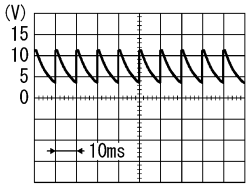
PHYSICAL VALUES

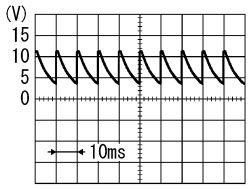
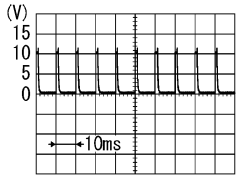
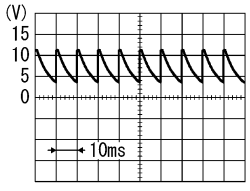
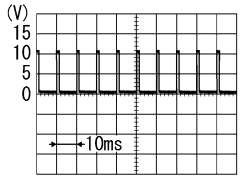
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
2 (BR/W)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch RH	 PKIB4958J 1.0 V
					Lighting switch HI	
					Lighting switch 1ST	
					Lighting switch 2ND	 JPMIA0342JP 2.0 V
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch LH	 PKIB4958J 1.0 V
					Lighting switch PASS	
					Lighting switch 2ND	
					Front fog lamp switch ON	 PKIB4956J 0.8 V
4 (L/Y)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Front wiper switch LO	 PKIB4958J 1.0 V
					Front wiper switch MIST	
					Front wiper switch INT	
					Lighting switch AUTO	

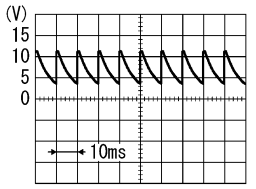
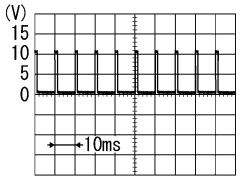
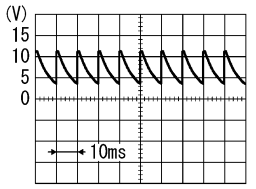
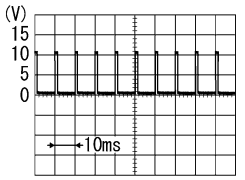
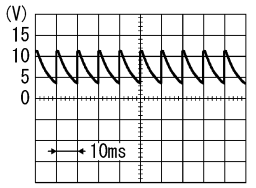
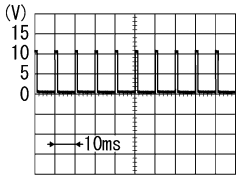
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear washer ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
					Rear wiper switch ON (Wiper intermittent dial 4)	 PKIB4956J 0.8 V
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3 (All switch OFF)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	 PKIB4952J 1.9 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4956J 0.8 V

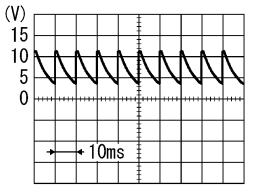
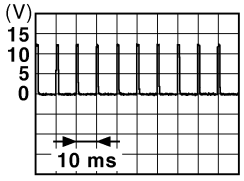
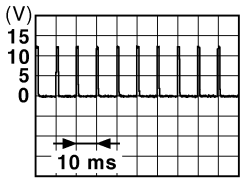
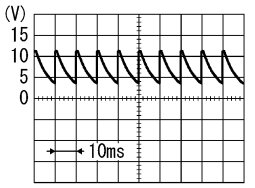
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position	 JPMIA0587GB 8.0 - 8.5 V
					UNLOCK position	0 V
8 (W/B)	Ground	Door key cylinder switch LOCK	Input	Door key cylinder switch	NEUTRAL position	12 V
					LOCK position	0 V
9 (R)	Ground	Stop lamp switch 1	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
10 (V/W)	Ground	Tire pressure warning check switch	Input	Ignition switch OFF		 JPMIA0012GB 1.0 - 1.5 V
11 (L/Y)	Ground	ACC feedback	Input	Ignition switch OFF		0 V
				Ignition switch ACC or ON		Battery voltage
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
14 (L/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V

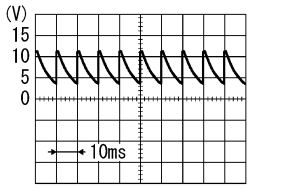
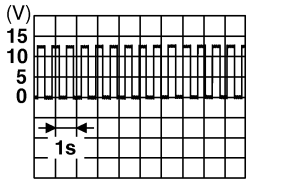
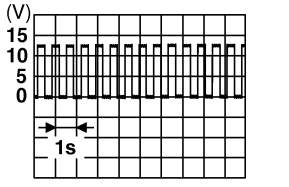
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
15 (W/L)	Ground	Rear window defogger switch	Input	Rear window defogger switch	Not pressed	 JPMIA0012GB 1.0 - 1.5 V
					Pressed	0 V
17 (R/G)	Ground	Optical sensor power supply	Output	Ignition switch	OFF, ACC	0 V
					ON	5 V
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
19 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		 JMKIA3838GB
20 (G/Y)	Ground	Remote keyless entry receiver communication	Input	Waiting		 JMKIA3838GB
				Signal receiving		 JMKIA3841GB
21 (P/L)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
22 (W/G)	Ground	Remote keyless entry receiver RSSI	Input	Waiting		0 V
				Signal receiving		 JMKIA3838GB

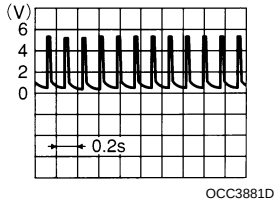
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
23 (R/Y)	Ground	Security indicator lamp	Output	Security indicator	ON	0 V
					Blinking (Ignition switch OFF)	 JPMIA0590GB 12.0 V
					OFF	Battery voltage
24* (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch OFF		5 V
25 (LG)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
27 (Y/G)	Ground	A/C switch	Input	Air conditioner	OFF (A/C switch indicator: OFF)	 JPMIA0012GB 1.0 - 1.5 V
					ON (A/C switch indicator: ON)	0 V
28 (G/W)	Ground	Blower fan switch	Input	Blower fan	OFF	0 V
					ON	 PKIB4960J 7.0 - 8.0 V
29 (L/W)	Ground	Hazard switch	Input	Hazard switch	OFF	12 V
					ON	0 V
31 (G/B)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	 PKIB4960J 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V

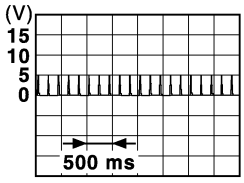
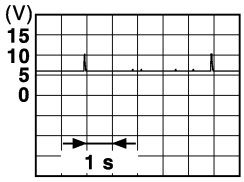
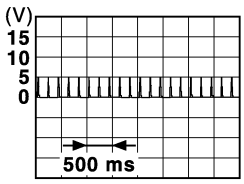
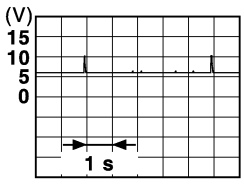
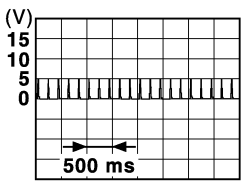
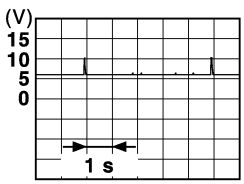
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 PKIB4956J 1.0 V
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 PKIB4958J 1.2 V
					Lighting switch AUTO (Wiper intermittent dial 4)	
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	

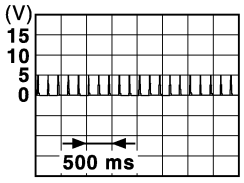
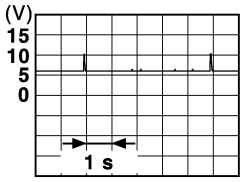
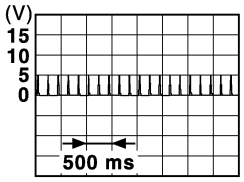
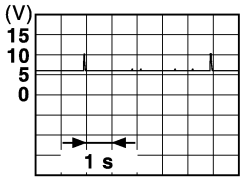
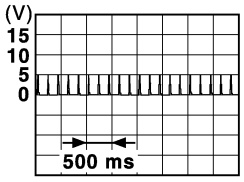
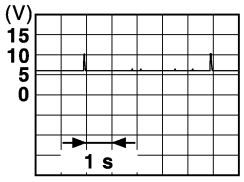
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 PKIB4958J 1.2 V
					Lighting switch HI (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	
35 (R/L)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 2ND	 PKIB4958J 1.2 V
					Lighting switch PASS	
					Front wiper switch INT	
					Front wiper switch HI	
36 (L/O)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 PKIB4960J 7.0 - 8.0 V
					Turn signal switch RH	 PKIB4958J 1.2 V
					Turn signal switch LH	
					Front wiper switch LO (Front wiper switch MIST)	
					Front washer switch ON	

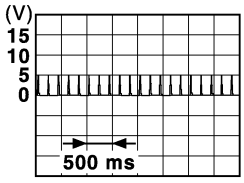
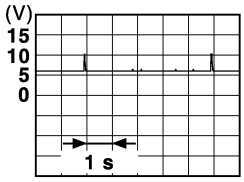
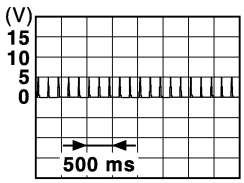
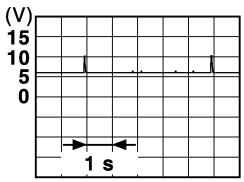
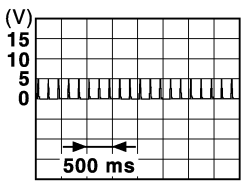
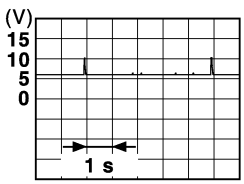
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
37 (G/O)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	12 V
38 (O)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
39 (L)	Ground	CAN-H	Input/ Output	—		—
40 (P)	Ground	CAN-L	Input/ Output	—		—
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 PKIB4960J 9.5 - 10.0 V
					ON (When back door opened)	0 V
44 (LG)	Ground	Rear wiper stop position	Input	Ignition switch ON	Rear wiper stop position	12 V
					Any position other than rear wiper stop position	0 V
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V

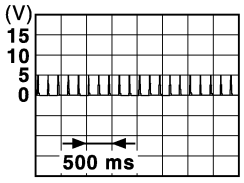
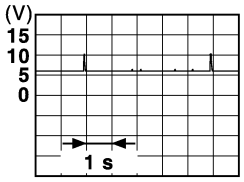
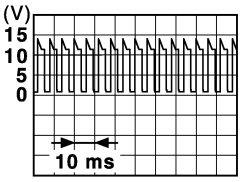
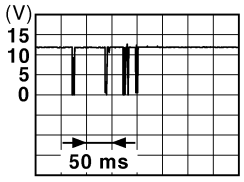
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When rear door LH opened)	0 V
54 (L/W)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Activated)	12 V
55 (G)	Ground	Rear door UNLOCK	Output	Rear door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
56 (L)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
57 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (G)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKIC6370E 6.0 V
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKIC6370E 6.0 V
63 (BR)	Ground	Interior room lamp timer control	Output	Interior room lamp	OFF	12 V
					ON	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
65 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
					Other then LOCK (Actuator is not activated)	0 V
66 (L/B)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
71 (R)	Ground	Tire pressure receiver communication	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
72 (R/W)	Ground	Back door lock actuator relay control	Output	Back door	LOCK (Actuator is activated)	0 V
					Other than LOCK (Actuator is not activated)	Battery voltage
75 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
76 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
77 (W)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
78 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
79 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
80 (BR/Y)	Ground	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
81 (L/Y)	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
82 (W/B)	Ground	Back door antenna (+)	Output	When the back door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
83 (B/W)	Ground	Back door antenna (-)	Output	When the back door request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
84 (Y/G)	Ground	Room antenna (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
85 (Y/L)	Ground	Room antenna (-) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
86 (P)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
87 (L)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is not in the antenna detection area	 JMKIA3838GB
					When Intelligent Key is in the antenna detection area	 JMKIA3839GB
90 (W/L)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON	12 V
					OFF	0 V
91 (Y)	Ground	ACC/ON indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0.5 V
92 (BR/R)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JPMIA1554GB 6.0 - 7.0 V
93 (GR/W)	Ground	Intelligent Key warning buzzer	Output	Intelligent Key warning buzzer	Sounding	0 V
					Not sounding	12 V
94 (Y/R)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	12 V
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UNLOCK	12 V
					15 seconds or later after UNLOCK	0 V
95 (W/G)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
96 (G)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
97 (L/R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0 V
98 (BR)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
99 (W/R)	Ground	Ignition relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
100 (L/O)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	12 V
102 (G)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V
104 (Y/R)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch ON		12 V
105 (B/O)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		Battery voltage
106 (Y/B)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
107 (L/W)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	12 V
108 (P/L)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	12 V
					UNLOCK status	0 V
110 (BR/W)	Ground	Tire pressure receiver power supply	Output	Ignition switch	OFF or ACC	0 V
					ON	5 V

*: For Canada

WITH INTELLIGENT KEY : Wiring Diagram - BCM -

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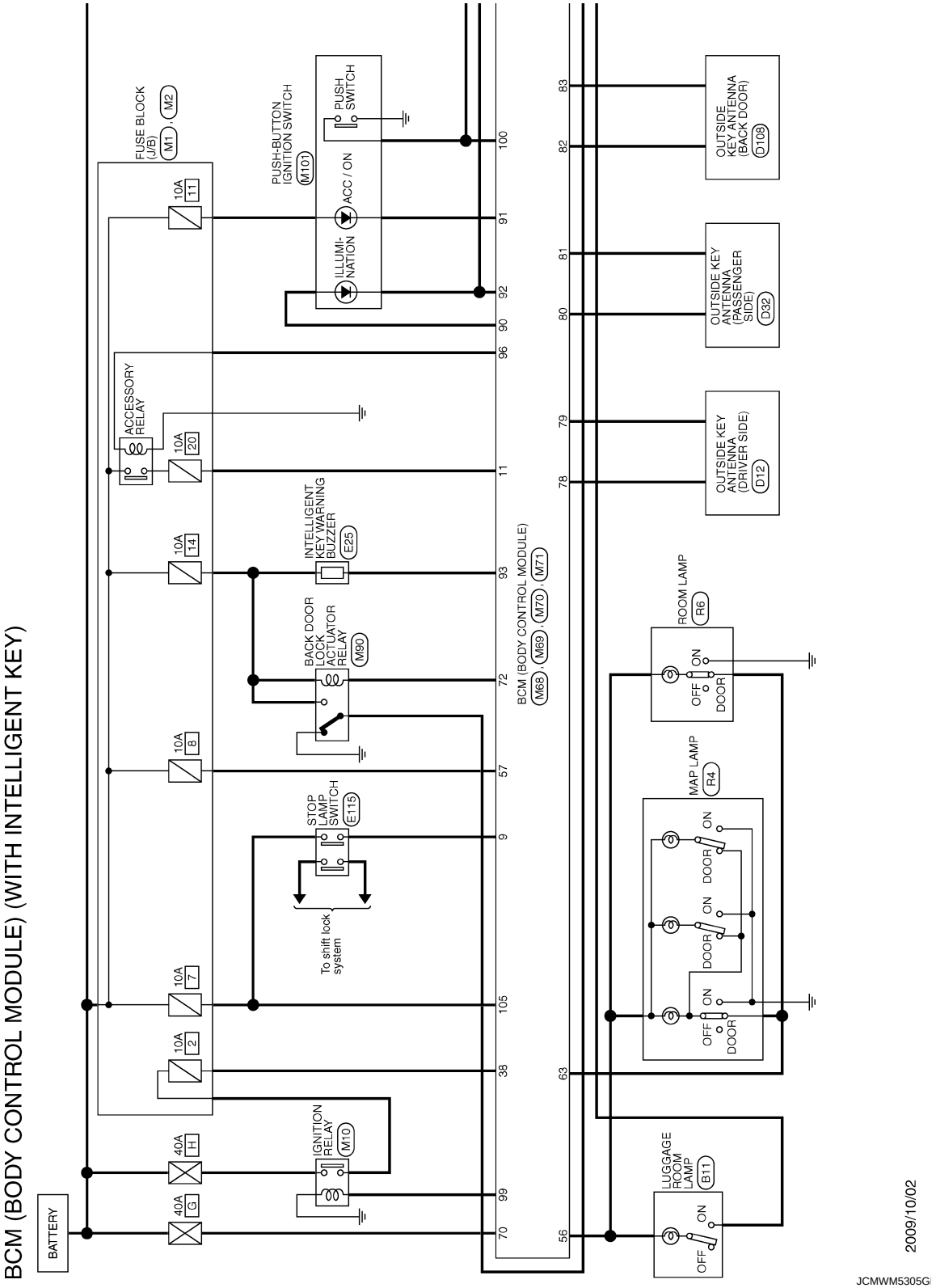
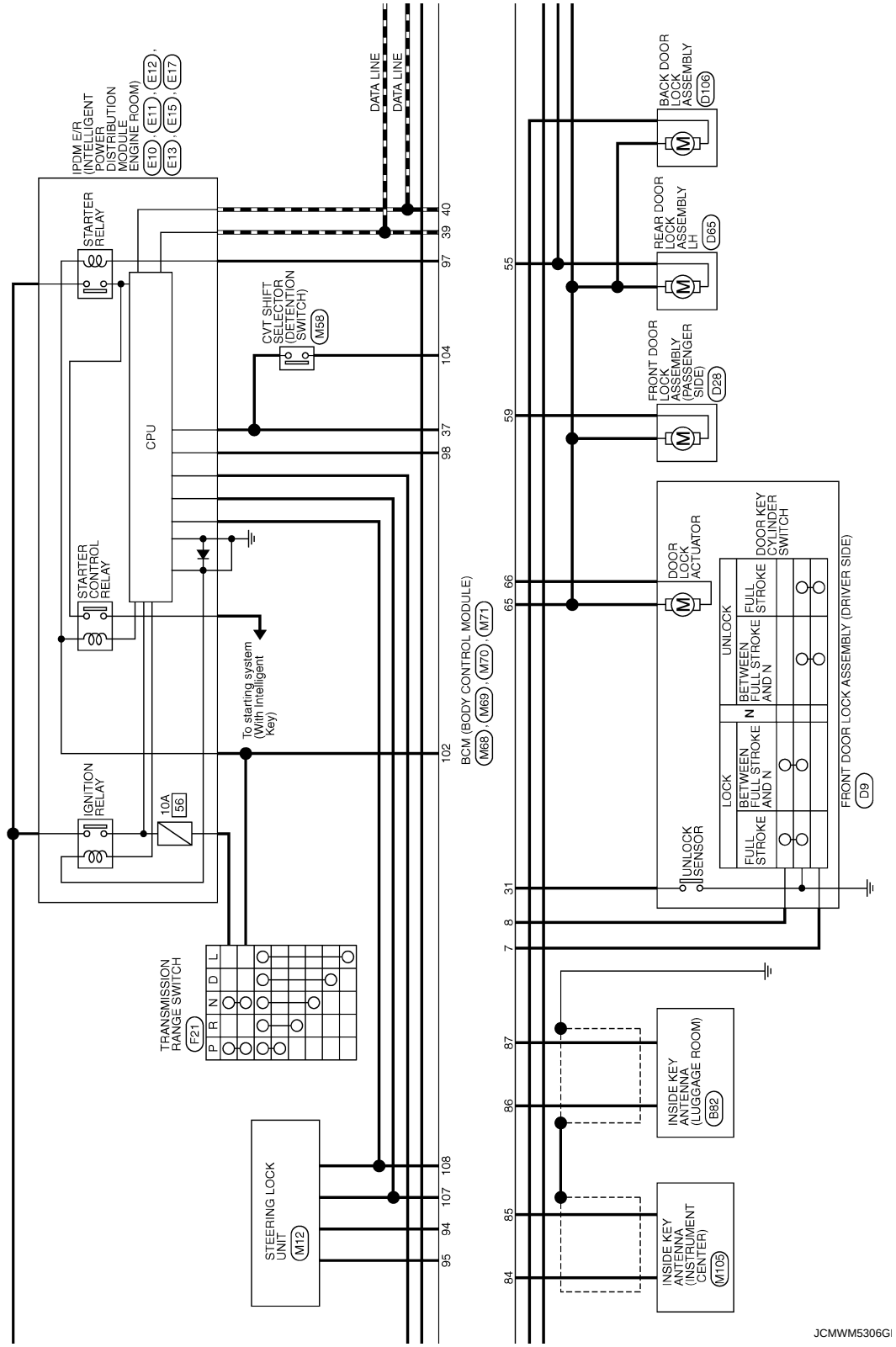
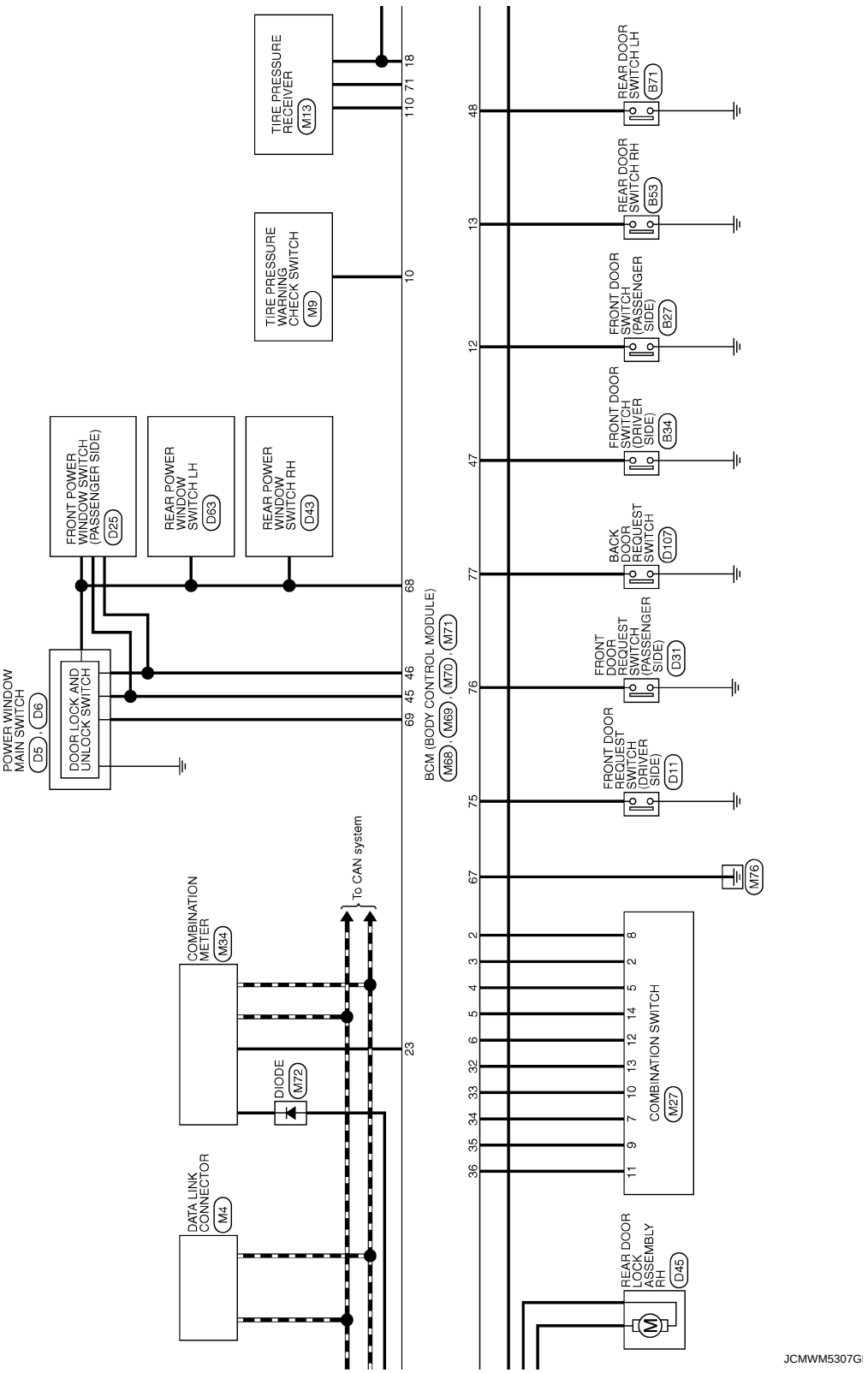
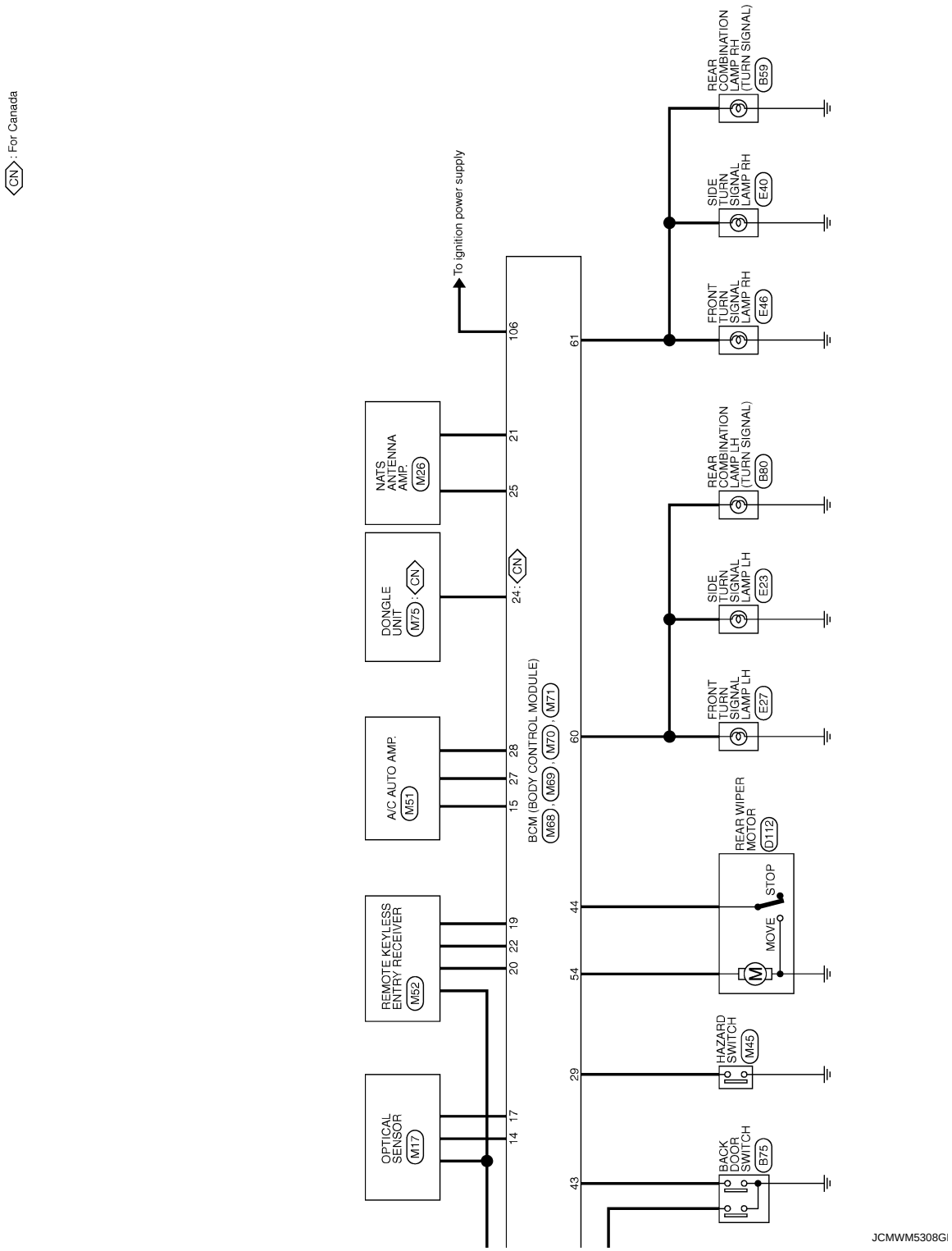
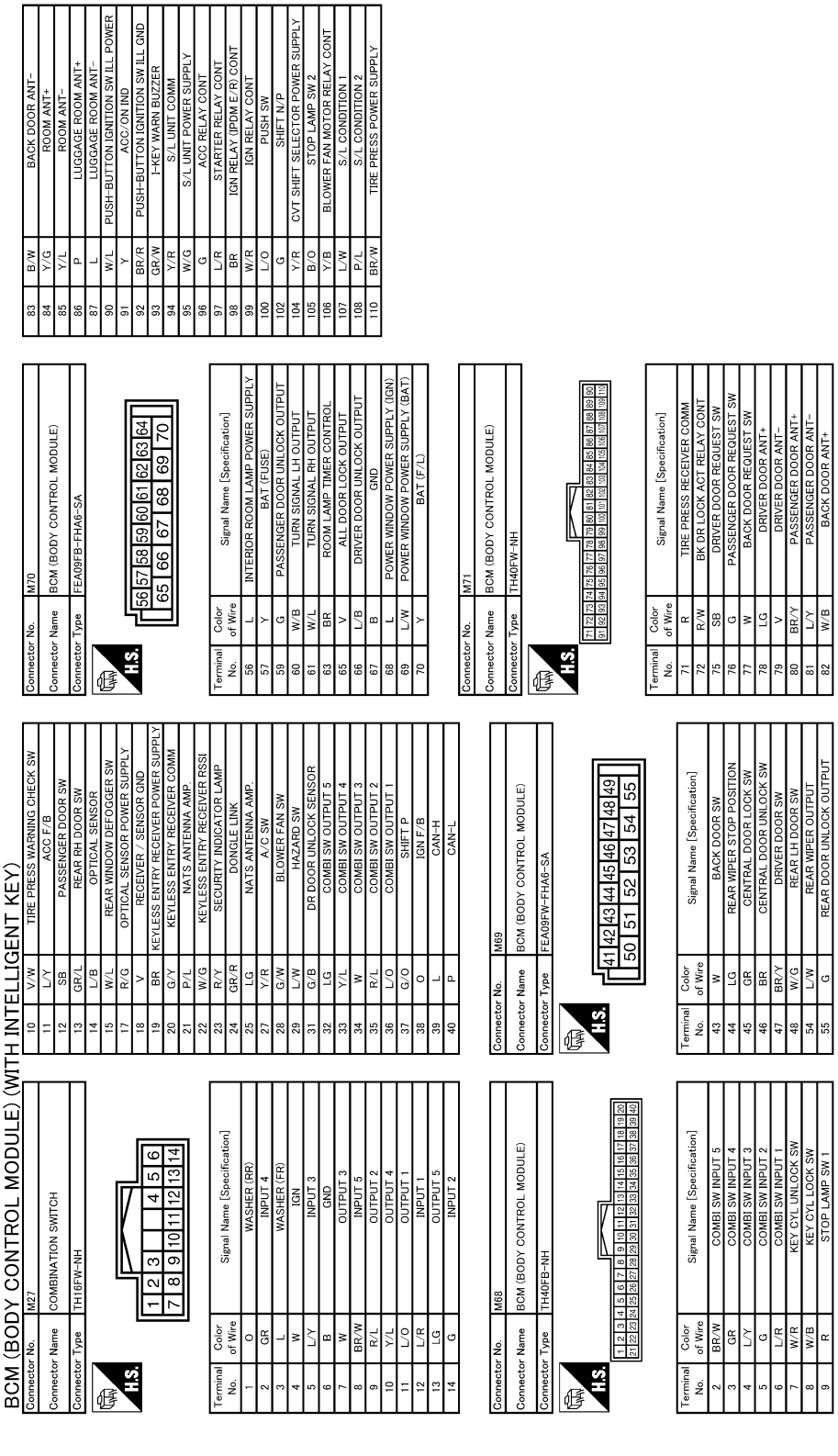



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E10, E11, E12, E13, E15, E17
DATA LINE
DATA LINE
STARTER RELAY
CPU
CVT SHIFT SELECTOR (DETENTION SWITCH) M58
STARTER CONTROL RELAY
To starting system (With intelligent Key)
IGNITION RELAY
10A 56
TRANSMISSION RANGE SWITCH F21
P R N D L
STEERING LOCK UNIT M12
BCM (BODY CONTROL MODULE) M68, M69, M70, M71
40 39 97 104 37 98 102 108 107 94 95
BACK DOOR LOCK ASSEMBLY D106
REAR DOOR LOCK ASSEMBLY LH D65
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) D28
DOOR LOCK ACTUATOR
UNLOCK SENSOR
DOOR KEY CYLINDER SWITCH
LOCK
UNLOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) D9
55 59 66 65 31 8 7
INSIDE KEY ANTENNA (LUGGAGE ROOM) B82
INSIDE KEY ANTENNA (INSTRUMENT CENTER) M105
87 86 85 84
JCMWM5306GB


TIRE PRESSURE RECEIVER M13
TIRE PRESSURE WARNING CHECK SWITCH M9
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) D25
REAR POWER WINDOW SWITCH LH D63
REAR POWER WINDOW SWITCH RH D43
POWER WINDOW MAIN SWITCH D5, D6
DOOR LOCK AND UNLOCK SWITCH
BCM (BODY CONTROL MODULE) M68, M69, M70, M71
COMBINATION METER M34
DIODE M72
DATA LINK CONNECTOR M4
To CAN system
REAR DOOR SWITCH LH B71
REAR DOOR SWITCH RH B53
FRONT DOOR SWITCH (PASSENGER SIDE) B27
FRONT DOOR SWITCH (DRIVER SIDE) B34
BACK DOOR REQUEST SWITCH D107
FRONT DOOR REQUEST SWITCH (PASSENGER SIDE) D31
FRONT DOOR REQUEST SWITCH (DRIVER SIDE) D11
M76
COMBINATION SWITCH M27
REAR DOOR LOCK ASSEMBLY RH D45
JCMWM5307G


CN : For Canada
To ignition power supply
REAR COMBINATION LAMP RH (TURN SIGNAL) B59
SIDE TURN SIGNAL LAMP RH E40
FRONT TURN SIGNAL LAMP RH E46
REAR COMBINATION LAMP LH (TURN SIGNAL) B80
SIDE TURN SIGNAL LAMP LH E23
FRONT TURN SIGNAL LAMP LH E27
REAR WIPER MOTOR D112
STOP
MOVE
HAZARD SWITCH M45
BACK DOOR SWITCH B75
NATS ANTENNA AMP. M26
DONGLE UNIT M75 : CN
A/C AUTO AMP. M51
REMOTE KEYLESS ENTRY RECEIVER M52
OPTICAL SENSOR M17
BCM (BODY CONTROL MODULE) M68 , M69 , M70 , M71
106
61
21
25
24 : CN
60
28
27
15
44
54
19
22
20
29
17
14
43
JCMWM5308GI



JCMWM5309G

WITH INTELLIGENT KEY : Fail-safe

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FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	When communication between BCM and steering lock unit are communicated normally.
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	When communication between BCM and steering lock unit are communicated normally.
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When the following CAN signal status (vehicle speed signal) becomes consistent • Vehicle speed signal (ABS) • Vehicle speed signal (Meter)
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P position switch signal: Except P position (12 V) - Selector lever P/N position signal: Except P and N positions (0 V) • Status 2 - Ignition switch is in the ON position - Selector lever P position switch signal: P position (0 V) - Selector lever P/N position signal: P or N positions (12 V)
B2604: PNP/CLUTCH SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (12 V) - Shift position signal (CAN): P or N position • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - Shift position signal (CAN): Except P and N position
B2605: PNP/CLUTCH SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled • Status 1 - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (12 V) - Interlock/PNP switch signal (CAN): ON
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When the following steering lock conditions agree • BCM steering lock control status • Steering lock condition No. 1 signal status • Steering lock condition No. 2 signal status
B260B: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC

Display contents of CONSULT	Fail-safe	Cancellation
B260D: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	• Inhibit engine cranking • Inhibit steering lock	When any of the following conditions are fulfilled • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B26EF: STRG LCK RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Steering lock relay signal (CAN): ON • Steering lock unit status signal (CAN): ON
B26F0: STRG LCK RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Steering lock relay signal (CAN): OFF • Steering lock unit status signal (CAN): OFF
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): ON • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled • Ignition switch ON signal (CAN: Transmitted from BCM): OFF • Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): OFF • Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): ON • Starter control relay signal (CAN: Transmitted from IPDM E/R): ON
B26F7: BCM	Inhibit engine cranking by Intelligent Key system	When room antenna and luggage room antenna functions normally
U0415: VEHICLE SPEED	Inhibit steering lock	When vehicle speed signal (Meter) (CAN) is received normally

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.
When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation
1. More than 1 minute is passed after the rear wiper stop.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

WITH INTELLIGENT KEY : DTC Inspection Priority Chart

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If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE
2	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI-SCANNING • B2196: DONGLE NG • B2198: NATS ANTENNA AMP

Priority	DTC
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP/CLUTCH SW • B2605: PNP/CLUTCH SW • B2608: STARTER RELAY • B2609: S/L STATUS • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: BCM • B2615: BCM • B2616: BCM • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B26E9: LOCK MALFUNCTION • B26EF: STRG LCK RELAY OFF • B26F0: STRG LCK RELAY ON • B26F1: IGN RELAY OFF • B26F2: IGN RELAY ON • B26F3: START CONT RLY ON • B26F4: START CONT RLY OFF • B26F5: STRG LCK STS SW • B26F6: BCM • B26F7: BCM • B26F8: BCM • B26FC: KEY REGISTRATION • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1734: CONTROL UNIT
6	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA
7	• B2626: OUTSIDE ANTENNA • B2627: OUTSIDE ANTENNA • B2628: OUTSIDE ANTENNA

WITH INTELLIGENT KEY : DTC Index

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NOTE:
The details of time display are as follows.
- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-18, "COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM	—	—	—	—	BCS-39
U1010: CONTROL UNIT (CAN)	—	—	—	—	BCS-40
U0415: VEHICLE SPEED	×	—	×	—	BCS-41
B2013: ID DISCORD BCM-S/L	×	×	×	—	SEC-45
B2014: CHAIN OF S/L-BCM	×	×	×	—	SEC-46
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-35
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-37
B2195: ANTI-SCANNING	×	—	—	—	SEC-38
B2196: DONGLE NG	×	—	—	—	SEC-39
B2198: NATS ANTENNA AMP	×	—	—	—	SEC-41
B2553: IGNITION RELAY	—	×	×	—	PCS-77
B2555: STOP LAMP	—	×	×	—	SEC-49
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-51
B2557: VEHICLE SPEED	×	×	×	—	SEC-53
B2562: LOW VOLTAGE	—	×	—	—	BCS-42
B2601: SHIFT POSITION	×	×	×	—	SEC-54
B2602: SHIFT POSITION	×	×	×	—	SEC-57
B2603: SHIFT POSI STATUS	×	×	×	—	SEC-60
B2604: PNP/CLUTCH SW	×	×	×	—	SEC-65
B2605: PNP/CLUTCH SW	×	×	×	—	SEC-68
B2608: STARTER RELAY	×	×	×	—	SEC-70
B2609: S/L STATUS	×	×	×	—	SEC-72
B260B: STEERING LOCK UNIT	×	×	×	—	SEC-75
B260C: STEERING LOCK UNIT	—	×	×	—	SEC-76
B260D: STEERING LOCK UNIT	×	×	×	—	SEC-77
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-78
B2612: S/L STATUS	×	×	×	—	SEC-79
B2614: BCM	—	×	×	—	PCS-79
B2615: BCM	—	×	×	—	PCS-82
B2616: BCM	—	×	×	—	PCS-85
B2618: BCM	—	×	×	—	PCS-88
B2619: BCM	×	×	×	—	SEC-82
B261A: PUSH-BTN IGN SW	—	×	×	—	PCS-89
B2621: INSIDE ANTENNA	—	×	—	—	DLK-44
B2622: INSIDE ANTENNA	—	×	—	—	DLK-46
B2626: OUTSIDE ANTENNA	—	×	—	—	DLK-48

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2627: OUTSIDE ANTENNA	—	×	—	—	DLK-50
B2628: OUTSIDE ANTENNA	—	×	—	—	DLK-52
B26E9: LOCK MALFUNCTION	—	×	× (Turn ON for 15 seconds)	—	SEC-83
B26EF: STRG LCK RELAY OFF	×	×	×	—	SEC-84
B26F0: STRG LCK RELAY ON	×	×	×	—	SEC-86
B26F1: IGN RELAY OFF	×	×	×	—	PCS-91
B26F2: IGN RELAY ON	×	×	×	—	PCS-94
B26F3: START CONT RLY ON	×	×	×	—	SEC-87
B26F4: START CONT RLY OFF	×	×	×	—	SEC-88
B26F5: STRG LCK STS SW	—	×	×	—	SEC-90
B26F6: BCM	—	×	×	—	PCS-97
B26F7: BCM	×	×	×	—	SEC-93
B26F8: BCM	—	×	×	—	SEC-94
B26FC: KEY REGISTRATION	—	×	×	—	SEC-95
C1704: LOW PRESSURE FL	—	—	—	×	WT-30
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	
C1708: [NO DATA] FL	—	—	—	×	WT-32
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	WT-35
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	WT-37
C1734: CONTROL UNIT	—	—	—	×	WT-39

WITHOUT INTELLIGENT KEY

WITHOUT INTELLIGENT KEY : Reference Value

INFOID:0000000005817234

VALUES ON THE DIAGNOSIS TOOL

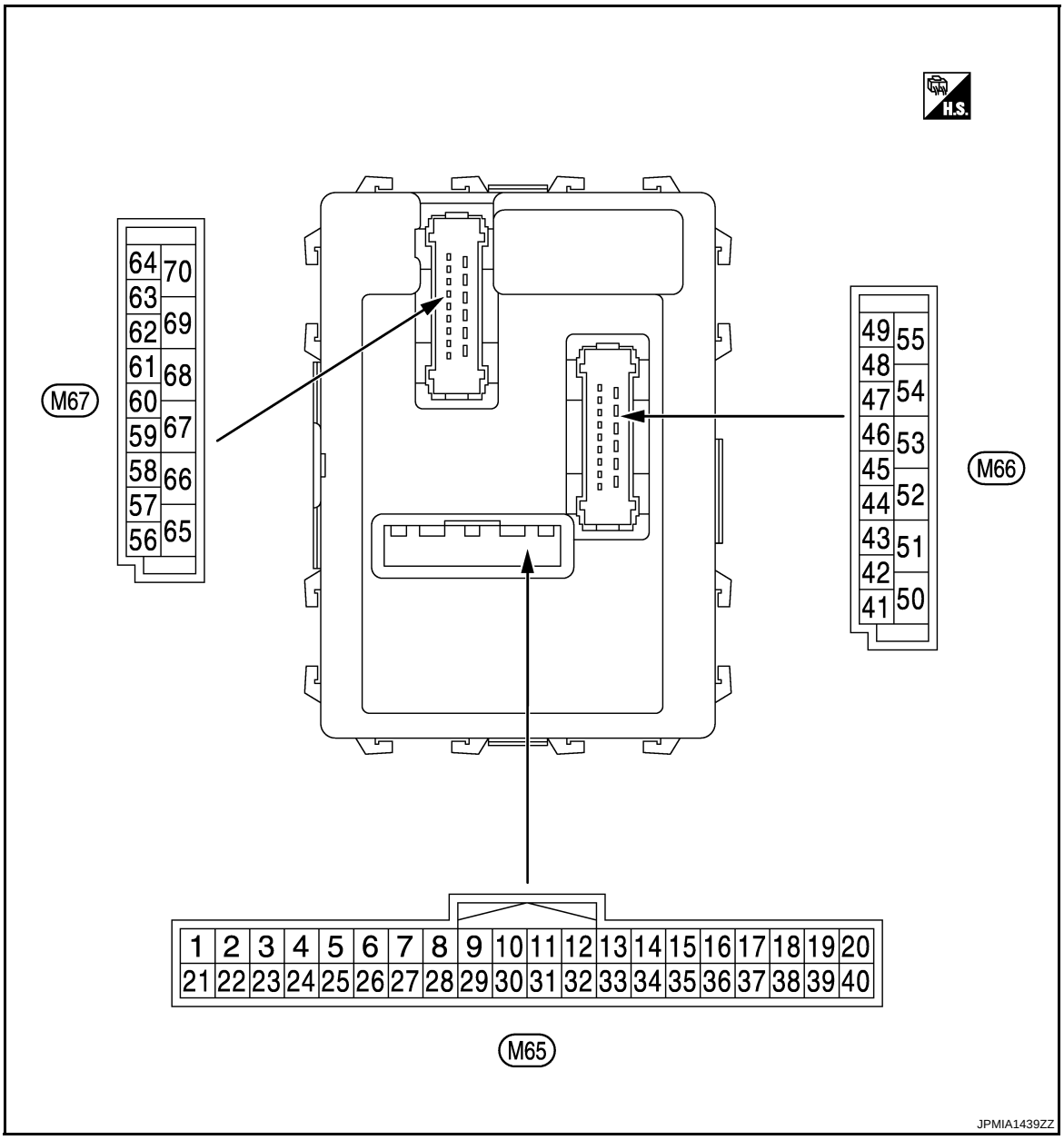
Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the lock side	On

Monitor Item	Condition	Value/Status
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the unlock side	On
DOOR SW-DR	Driver's door closed	Off
	Driver's door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
BACK DOOR SW	Back door closed	Off
	Back door opened	On
LOCK STATUS	**NOTE:** The item is indicated, but not monitored.	Off
ACC ON SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
KEYLESS LOCK	“LOCK” button of key fob is not pressed	Off
	“LOCK” button of key fob is pressed	On
KEYLESS UNLOCK	“UNLOCK” button of key fob is not pressed	Off
	“UNLOCK” button of key fob is pressed	On
SHOCK SENSOR	**NOTE:** The item is indicated, but not monitored.	NORMAL
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
VEHICLE SPEED	While driving	Equivalent to speed-ometer reading
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
REVERSE SW CAN	**NOTE:** The item is indicated, but not used.	Off
		On
TAIL LAMP SW	Lighting switch OFF	Off
	Lighting switch 1ST	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) OFF]	Off
	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) ON]	On
TRNK/HAT MNTR	**NOTE:** The item is indicated, but not monitored.	Off
ACC SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
KYLS TRNK/HAT	**NOTE:** The item is indicated, but not monitored.	Off
KEYLESS PANIC	PANIC button of key fob is not pressed	Off
	PANIC button of key fob is pressed	On

Monitor Item	Condition	Value/Status
HI BEAM SW	Lighting switch OFF	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Lighting switch OFF	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
	Lighting switch 2ND	On
AUTO LIGHT SW	Lighting switch OFF	Off
	Lighting switch AUTO	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
RR FOG SW	**NOTE:** The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On
PKB SW	Parking brake switch is OFF	Off
	Parking brake switch is ON	On
ENGINE RUN	Engine stopped	Off
	Engine running	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V
LIG SEN COND	**NOTE:** The item is indicated, but not monitored.	OFF
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
RR WIPER ON	Rear wiper switch OFF	Off
	Rear wiper switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On

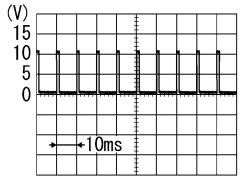
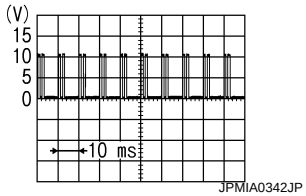
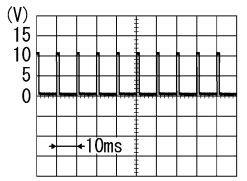
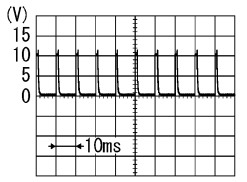
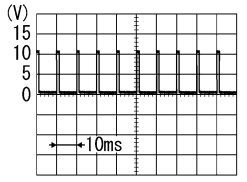
Monitor Item	Condition	Value/Status
RR WIPER STOP	Rear wiper stop position	Off
	Other than rear wiper stop position	On
RAIN SENSOR	**NOTE:** The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch OFF	Off
	Hazard switch ON	On
FAN ON SIG	Blower control dial OFF	Off
	Other than blower control dial OFF	On
AIR COND SW	• Air conditioner OFF (A/C switch indicator OFF) (Automatic air conditioner) • A/C switch OFF (Manual air conditioner)	Off
	• Air conditioner ON (A/C switch indicator ON) (Automatic air conditioner) • A/C switch ON (Manual air conditioner)	On
THERMO AMP **NOTE:** At models with automatic air conditioner this item is not monitored.	Ignition switch ON	Off
	Evaporator is extremely low temperature	On
FR DEF SW	Other than A/C mode defroster ON position	Off
	A/C mode defroster ON position	On
KEYLESS TRUNK	**NOTE:** The item is indicated, but not monitored.	Off
TRNK OPNR SW	**NOTE:** The item is indicated, but not monitored.	Off
TRNK OPN MNTR	**NOTE:** The item is indicated, but not monitored.	Off
HOOD SW	Close the hood	Off
	Open the hood	On
TRANSPONDER	Other than the ignition switch is ON by key registered to BCM.	Off
	The ignition switch is ON by key registered to BCM.	On
INTELLI KEY	**NOTE:** The item is indicated, but not used.	Off
AUTO RELOCK	**NOTE:** The item is indicated, but not monitored.	Off
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	Off
	Ignition switch ON	On
BRAKE SW	Brake pedal is not depressed	Off
	Brake pedal is depressed	On

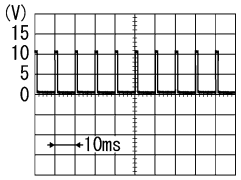
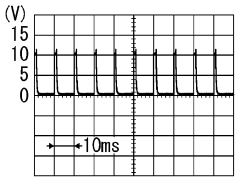
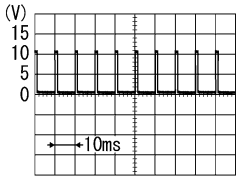
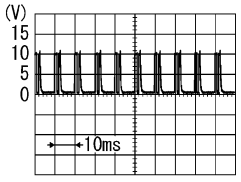
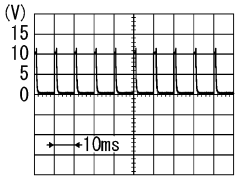
TERMINAL LAYOUT

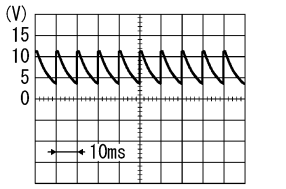
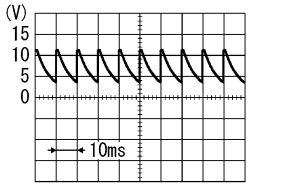
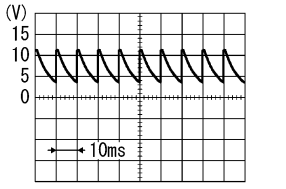


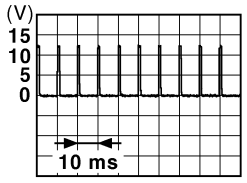
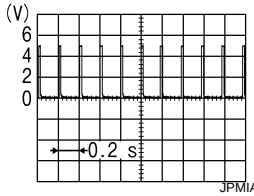
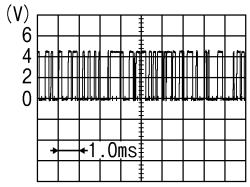
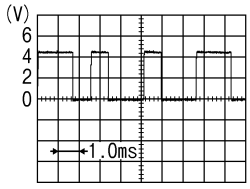
NOTE:
- M65, M66: White
- M67: Black

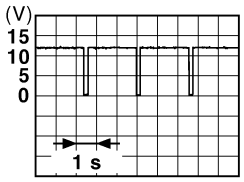
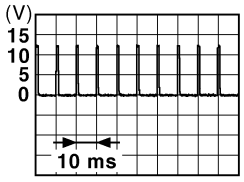
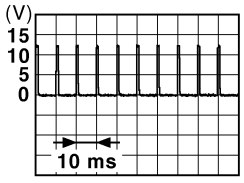
PHYSICAL VALUES

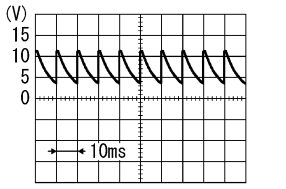
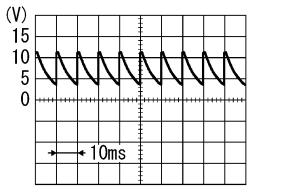
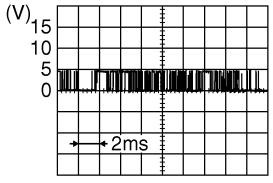
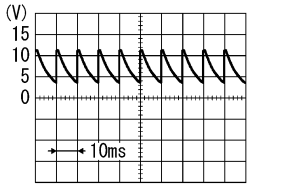
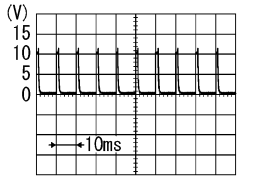
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
2 (BR/W)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch RH Lighting switch HI Lighting switch 1ST	 PKIB4958J 1.0 V
					Lighting switch 2ND	 JPMIA0342JP 2.0 V
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Turn signal switch LH Lighting switch PASS Lighting switch 2ND	 PKIB4958J 1.0 V
					Front fog lamp switch ON	 PKIB4956J 0.8 V
4 (L/Y)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	0 V
					Front wiper switch LO Front wiper switch MIST Front wiper switch INT Lighting switch AUTO	 PKIB4958J 1.0 V

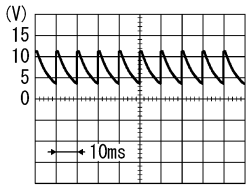
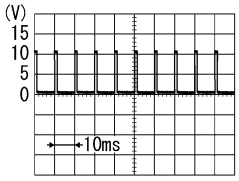
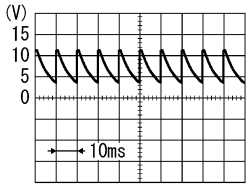
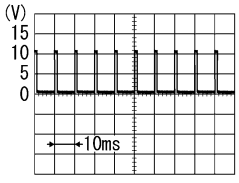
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
					Rear wiper switch ON (Wiper intermittent dial 4)	 PKIB4956J 0.8 V
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 PKIB4958J 1.0 V
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3 (All switch OFF)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	 PKIB4952J 1.9 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	 PKIB4956J 0.8 V

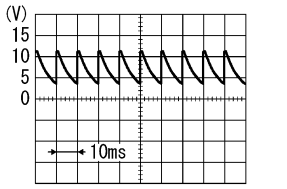
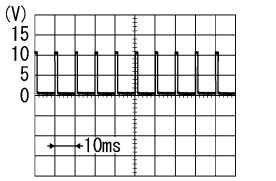
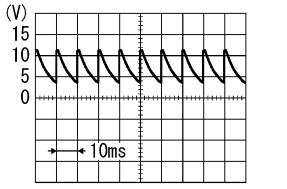
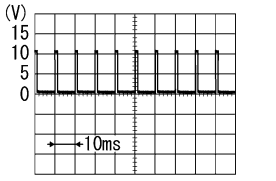
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position	 PKIB4960J 7.0 - 8.0 V
					UNLOCK position	0 V
8 (W/B)	Ground	Door key cylinder switch LOCK	Input	Door key cylinder switch	NEUTRAL position	12 V
					LOCK position	0 V
9 (R)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
10 (W/L)	Ground	Rear window defogger switch	Input	Rear window defogger switch	OFF (Not pressed)	12 V
					ON (Pressed)	0 V
11 (L/Y)	Ground	Ignition switch ACC	Input	Ignition switch OFF		0 V
				Ignition switch ACC or ON		Battery voltage
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
14 (L/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V

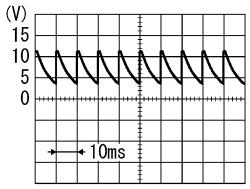
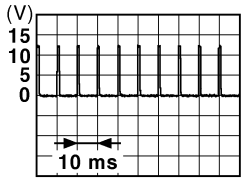
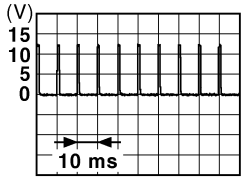
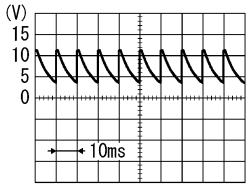
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
15 (V/W)	Ground	Tire pressure warning check switch	Input	Ignition switch OFF		 JPMIA0012GB 1.0 - 1.5 V
17 (R/G)	Ground	Optical sensor power supply	Output	Ignition switch	OFF, ACC	0 V
					ON	5 V
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
19 (BR)	Ground	Remote keyless entry receiver power supply	Input	Ignition switch OFF	Insert mechanical key into ignition key cylinder	0 V
					Remove mechanical key from ignition key cylinder (Any door opened)	5 V
					Remove mechanical key from ignition key cylinder (Any door closed)	 JPMIA0338JP
20 (G/Y)	Ground	Remote keyless entry receiver communication	Input	Ignition switch OFF	Insert mechanical key into ignition key cylinder	0 V
					Waiting	 PIIB7728J
					Signal receiving	 PIIB7729J
21 (P/L)	Ground	Immobilizer antenna (Clock)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.

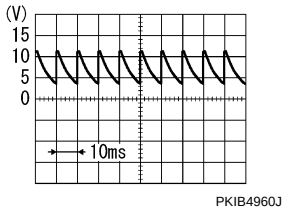
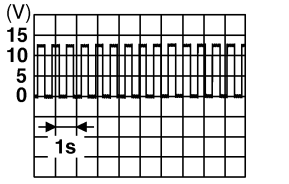
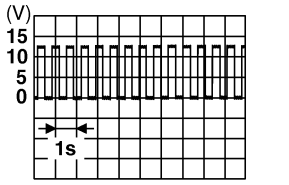
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
23 (R/Y)	Ground	Security indicator	Input	Security indicator	ON	0 V
					Blinking (Ignition switch OFF)	 JPMIA0014GB 11.3 V
					OFF	12 V
24 (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch OFF		5 V
25 (LG)	Ground	Immobilizer antenna (Rx, Tx)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
26*1 (GR)	Ground	Thermo control amp.	Input	Ignition switch ON		0 V
				Evaporator is extremely low temperature		12 V
27 (Y/G)*2 (Y/R)*3	Ground	A/C switch (Automatic air conditioner)	Input	A/C	OFF (A/C switch indicator: OFF)	 JPMIA0012GB 1.0 - 1.5 V
					ON (A/C switch indicator: ON)	0 V
		A/C switch (Manual air conditioner)		A/C switch	OFF	 JPMIA0012GB 1.0 - 1.5 V
					ON	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
28 (G/W)	Ground	Blower fan switch (Automatic air conditioner)	Input	Fan switch	Blower fan switch OFF	0 V
					Blower fan switch ON	 PKIB4960J 7.0 - 8.0 V
		Blower fan switch (Manual air conditioner)		Fan switch	Blower fan switch OFF	 PKIB4960J 7.0 - 8.0 V
					Blower fan switch ON	0 V
29 (L/W)	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage
					ON	0 V
31 (G/Y)	Ground	Front defroster switch	Input	Ignition switch ON	A/C mode defroster ON position	0 V
					Other than A/C mode defroster ON position	 JPMIA0589GB 8.0 - 9.0 V
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 PKIB4956J 1.0 V
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 PKIB4958J 1.2 V
					Lighting switch AUTO (Wiper intermittent dial 4)	
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 PKIB4958J 1.2 V
					Lighting switch HI (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (R/L)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 PKIB4960J 7.0 - 8.0 V
					Lighting switch 2ND Lighting switch PASS Front wiper switch INT Front wiper switch HI	 PKIB4958J 1.2 V
36 (L/O)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	 PKIB4960J 7.0 - 8.0 V
					Turn signal switch RH Turn signal switch LH Front wiper switch LO (Front wiper switch MIST) Front washer switch ON	 PKIB4958J 1.2 V
37 (R/W)	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder		Battery voltage
				Remove mechanical key from ignition key cylinder		0 V
38 (O)	Ground	Ignition switch ON	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		Battery voltage
39 (L)	Ground	CAN-H	Input/ Output	—		—
40 (P)	Ground	CAN-L	Input/ Output	—		—

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When back door opened)	0 V
44 (LG)	Ground	Rear wiper stop position	Input	Ignition switch ON	Rear wiper stop position	12 V
					Any position other than rear wiper stop position	0 V
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	 JPMIA0012GB 1.0 - 1.5 V
					UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V

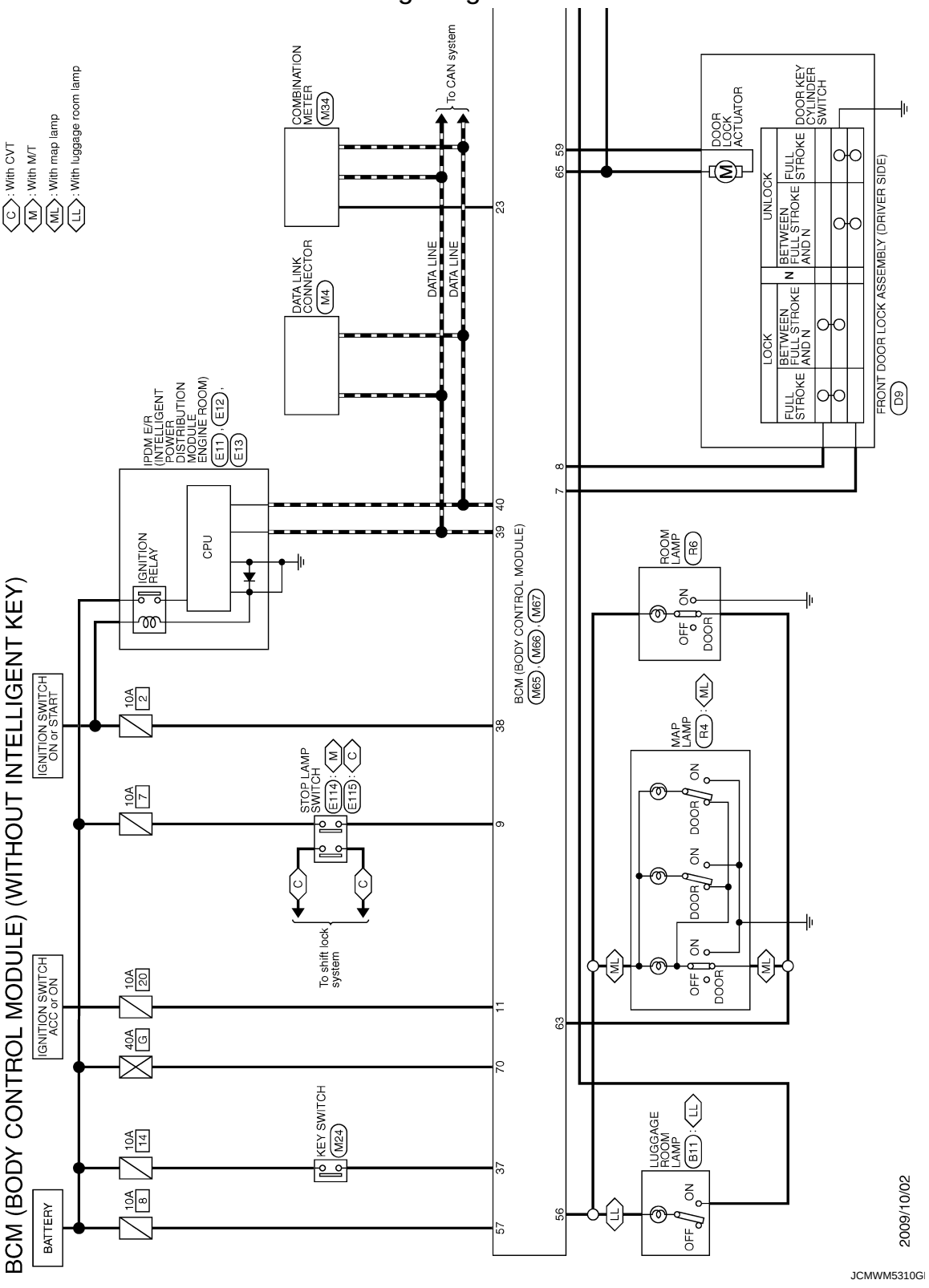
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	 PKIB4960J 7.0 - 8.0 V
					ON (When rear LH door opened)	0 V
50*1 (SB)	Ground	A/C indicator	Output	A/C indicator	OFF	12 V
					ON	0 V
54 (L/W)	Ground	Rear wiper	Output	Ignition switch ON	Rear wiper switch OFF	0 V
					Rear wiper switch ON	12 V
56 (L)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
57 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (L/B)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKIC6370E 6.0 V
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKIC6370E 6.0 V
63 (BR)	Ground	Interior room lamp timer control	Output	Interior room lamp	OFF	12 V
					ON	0 V

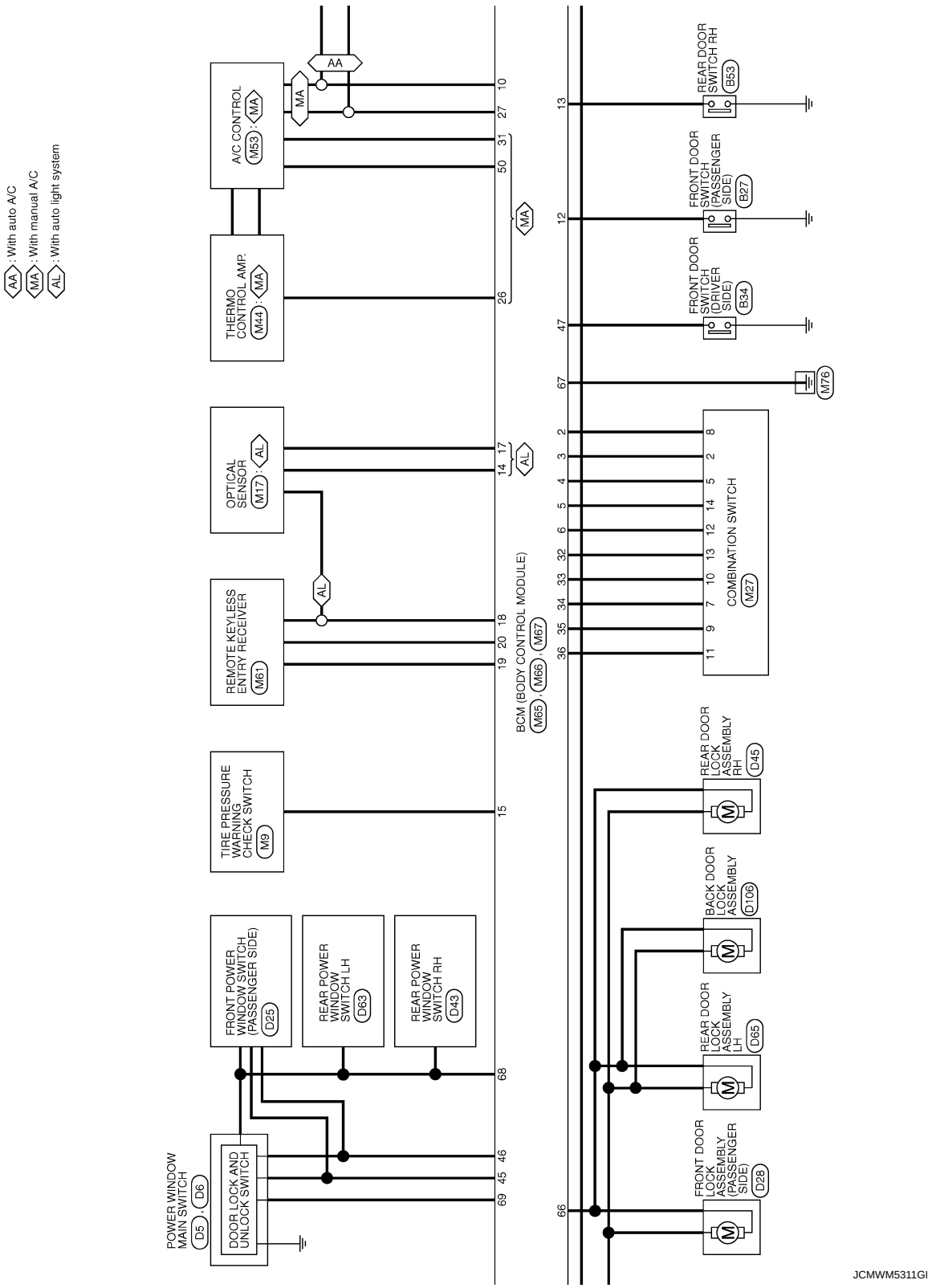
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	–					
65 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
					Other then LOCK (Actuator is not activated)	0 V
66 (G)	Ground	Passenger door and rear door UNLOCK	Output	Passenger door and rear door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage

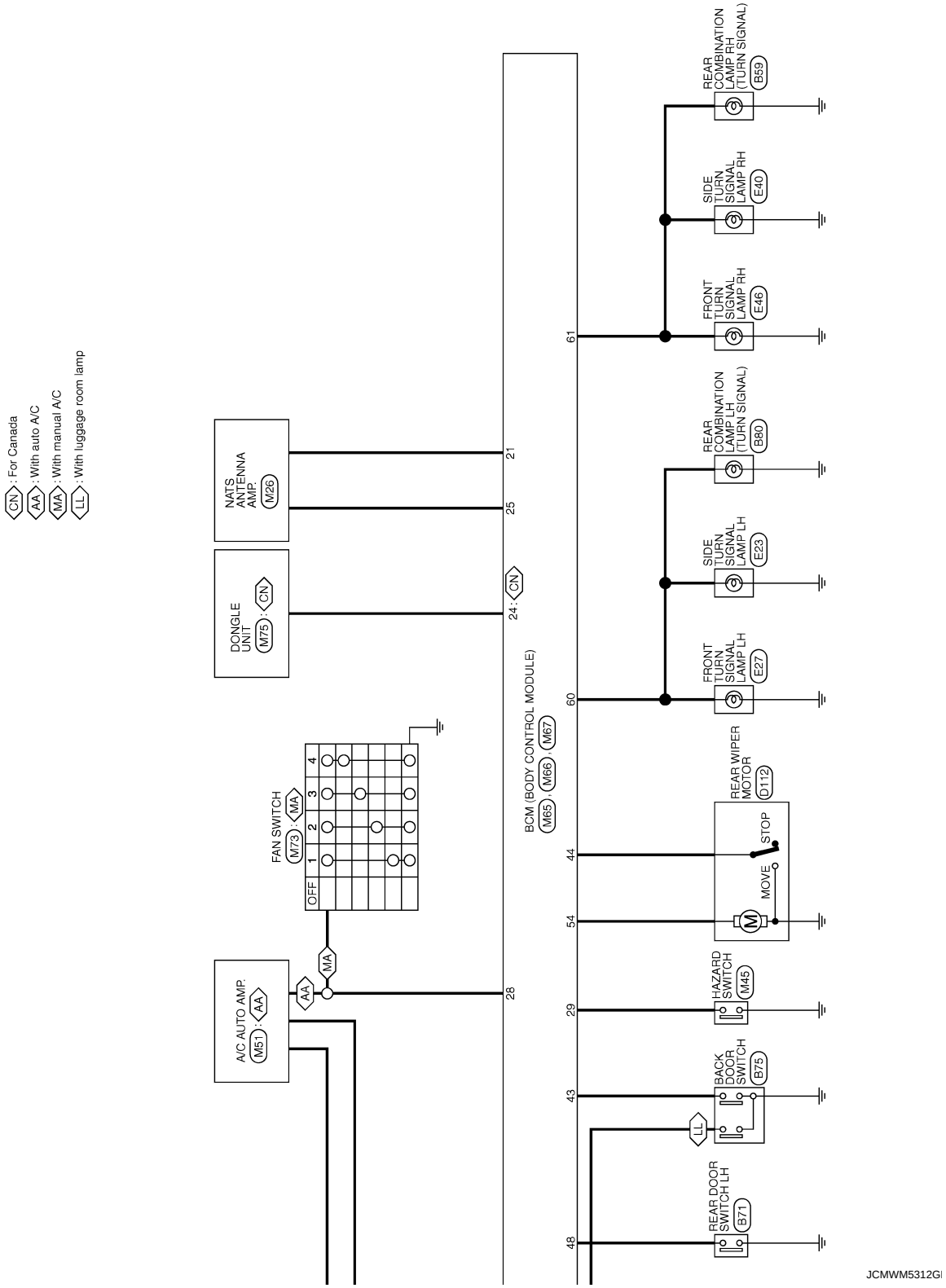
- *1: Only manual air conditioner
- *2: Automatic air conditioner
- *3: Manual air conditioner

WITHOUT INTELLIGENT KEY : Wiring Diagram - BCM -

INFOID:0000000005817235




AA : With auto A/C
MA : With manual A/C
AL : With auto light system
A/C CONTROL (M53) MA
THERMO CONTROL AMP. (M44) : MA
OPTICAL SENSOR (M17) AL
REMOTE KEYLESS ENTRY RECEIVER (M61)
TIRE PRESSURE WARNING CHECK SWITCH (M9)
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) (D25)
REAR POWER WINDOW SWITCH LH (D63)
REAR POWER WINDOW SWITCH RH (D43)
POWER WINDOW MAIN SWITCH (D5), (D6)
DOOR LOCK AND UNLOCK SWITCH
BCM (BODY CONTROL MODULE) (M65), (M66), (M67)
COMBINATION SWITCH (M27)
REAR DOOR SWITCH RH (B53)
FRONT DOOR SWITCH (PASSENGER SIDE) (B27)
FRONT DOOR SWITCH (DRIVER SIDE) (B34)
M76
REAR DOOR LOCK ASSEMBLY RH (D45)
BACK DOOR LOCK ASSEMBLY (D106)
REAR DOOR LOCK ASSEMBLY LH (D65)
FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE) (D28)
JCMWM5311GI


CN : For Canada
AA : With auto A/C
MA : With manual A/C
LL : With luggage room lamp
NATS ANTENNA AMP. M26
DONGLE UNIT M75 : CN
A/C AUTO AMP. M51 : AA
FAN SWITCH M73 : MA
OFF 1 2 3 4
BCM (BODY CONTROL MODULE) M65 M66 M67
21
25
24 : CN
28
61
60
44
54
29
43
48
REAR COMBINATION LAMP RH (TURN SIGNAL) B59
SIDE TURN SIGNAL LAMP RH E40
FRONT TURN SIGNAL LAMP RH E46
REAR COMBINATION LAMP LH (TURN SIGNAL) B80
SIDE TURN SIGNAL LAMP LH E23
FRONT TURN SIGNAL LAMP LH E27
REAR WIPER MOTOR D112
STOP
MOVE
HAZARD SWITCH M45
BACK DOOR SWITCH B75
REAR DOOR SWITCH LH B71
JCMWM5312GI

BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY)

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH

H.S.

1	2	3		4	5	6
7	8	9	10	11	12	13	14

Terminal No.	Color of Wire	Signal Name [Specification]
1	O	WASHER (RR)
2	GR	INPUT 4
3	L	WASHER (FR)
4	W	IGN
5	L/Y	INPUT 3
6	B	GND
7	W	OUTPUT 3
8	BR/W	INPUT 5
9	R/L	OUTPUT 2
10	Y/L	OUTPUT 4
11	L/O	OUTPUT 1
12	L/R	INPUT 1
13	LG	OUTPUT 5
14	G	INPUT 2

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/W	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L/Y	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	L/R	COMBI SW INPUT 1
7	W/R	KEY CYL UNLOCK SW
8	W/B	KEY CYL LOCK SW
9	R	STOP LAMP SW
10	W/L	REAR WINDOW DEFOGGER SW
11	L/Y	ACC
12	SB	PASSENGER DOOR SW
13	GR/L	REAR RH DOOR SW
14	L/B	OPTICAL SENSOR
15	V/W	TIRE PRESS WARNING CHECK SW
17	R/G	OPTICAL SENSOR POWER SUPPLY
18	V	RECEIVER/SENSOR GND
19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
20	G/Y	KEYLESS ENTRY RECEIVER COMM
21	P/L	NATS ANTENNA AMP
23	R/Y	SECURITY INDICATOR LAMP
24	GR/R	DONGLE LINK
25	LG	NATS ANTENNA AMP.
26	GR	THERMO CONTROL AMP.
27	Y/G	A/C SW [With auto A/C]
27	Y/R	A/C SW [With manual A/C]
28	G/W	BLOWER FAN SW
29	L/W	HAZARD SW
31	G/Y	FR DEFROSTER SW
32	LG	COMBI SW OUTPUT 5
33	Y/L	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/L	COMBI SW OUTPUT 2
36	L/O	COMBI SW OUTPUT 1
37	R/W	KEY SWITCH
38	O	IGN
39	L	CAN-H
40	P	CAN-L
54	L/W	REAR WIPER OUTPUT

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FHA6-SA

H.S.

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name [Specification]
56	L	INTERIOR ROOM LAMP POWER SUPPLY
57	Y	BAT (FUSE)
59	L/B	DRIVER DOOR UNLOCK OUTPUT
60	W/B	TURN SIGNAL LH OUTPUT
61	W/L	TURN SIGNAL RH OUTPUT
63	BR	ROOM LAMP TIMER CONTROL
65	V	ALL DOOR LOCK OUTPUT
66	G	PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT
67	B	GND
68	L	POWER WINDOW POWER SUPPLY (IGN)
69	L/W	POWER WINDOW POWER SUPPLY (BAT)
70	Y	BAT (F/L)

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name [Specification]
43	W	BACK DOOR SW
44	LG	REAR WIPER STOP POSITION
45	GR	CENTRAL DOOR LOCK SW
46	BR	CENTRAL DOOR UNLOCK SW
47	BR/Y	DRIVER DOOR SW
48	W/G	REAR LH DOOR SW
50	SB	A/C INDICATOR OUTPUT

JCMWM5313G

WITHOUT INTELLIGENT KEY : Fail-safe

INFOID:0000000005817236

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper auto stop signal.
When the rear wiper auto stop signal does not change more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation
1. Pass more than 1 minute after the rear wiper stop.
2. Turn rear wiper switch OFF.
3. Operate the rear wiper switch or rear washer switch.

WITHOUT INTELLIGENT KEY : DTC Inspection Priority Chart

INFOID:0000000005817237

If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	• U1000: CAN COMM • U1010: CONTROL UNIT (CAN)
2	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2195: ANTI SCANNING • B2196: DONGLE NG
3	C1735: IGN CIRCUIT OPEN
4	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1729: VHCL SPEED SIG ERR • C1734: CONTROL UNIT

WITHOUT INTELLIGENT KEY : DTC Index

INFOID:0000000005817238

NOTE:
Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

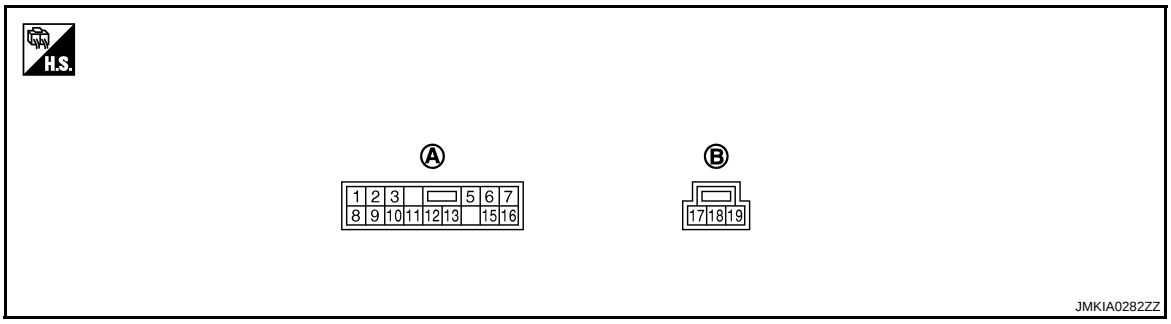
CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference
U1000: CAN COMM	—	—	BCS-115
U1010: CONTROL UNIT (CAN)	—	—	BCS-116
B2190: NATS ANTENNA AMP	×	—	SEC-219
B2191: DIFFERENCE OF KEY	×	—	SEC-222
B2192: ID DISCORD BCM-ECM	×	—	SEC-223
B2193: CHAIN OF BCM-ECM	×	—	SEC-225
B2195: ANTI SCANNING	×	—	SEC-226
B2196: DONGLE NG	×	—	SEC-227
C1704: LOW PRESSURE FL	—	×	WT-30
C1705: LOW PRESSURE FR	—	×	
C1706: LOW PRESSURE RR	—	×	
C1707: LOW PRESSURE RL	—	×	
C1708: [NO DATA] FL	—	×	WT-32
C1709: [NO DATA] FR	—	×	
C1710: [NO DATA] RR	—	×	
C1711: [NO DATA] RL	—	×	
C1716: [PRESS DATA ERR] FL	—	×	WT-35
C1717: [PRESS DATA ERR] FR	—	×	
C1718: [PRESS DATA ERR] RR	—	×	
C1719: [PRESS DATA ERR] RL	—	×	
C1729: VHCL SPEED SIG ERR	—	×	WT-37
C1734: CONTROL UNIT	—	×	WT-39
C1735: IGN CIRCUIT OPEN	—	—	BCS-117

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:0000000005492240

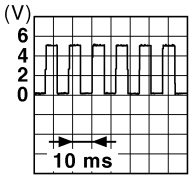
TERMINAL LAYOUT

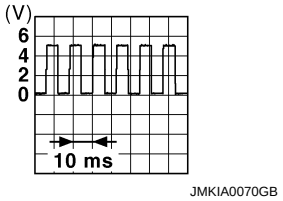


A. D5 B. D6

PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

Terminal No. (Wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
1 (R)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated.	Battery voltage
2 (LG)	Ground	Encoder ground	—	—	0
3 (O)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	Battery voltage
5 (Y)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	Battery voltage
7 (LG)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is UP at operated.	Battery voltage
8 (BR)	Ground	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is UP at operated.	Battery voltage
9 (V)	Ground	Encoder pulse signal 2	Input	When front power window motor (driver side) operates.	 JMKIA0070GB
10 (L)	Ground	Ignition switch power supply	Input	Ignition switch ON	Battery voltage
				Other than above	0
11 (GR)	Ground	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	Battery voltage

Terminal No. (Wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
12 (SB)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front RH switch in power window main switch is DOWN at operated.	Battery voltage
13 (R)	Ground	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	 JMKIA0070GB
15 (G)	Ground	Encoder power supply	Output	Ignition switch ON.	Battery voltage
16 (W)	Ground	Front power window motor (passenger side) UP signal	Output	When front RH switch in power window main switch is UP at operated.	Battery voltage
17 (B)	Ground	Ground	—	—	0
19 (P)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage

Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

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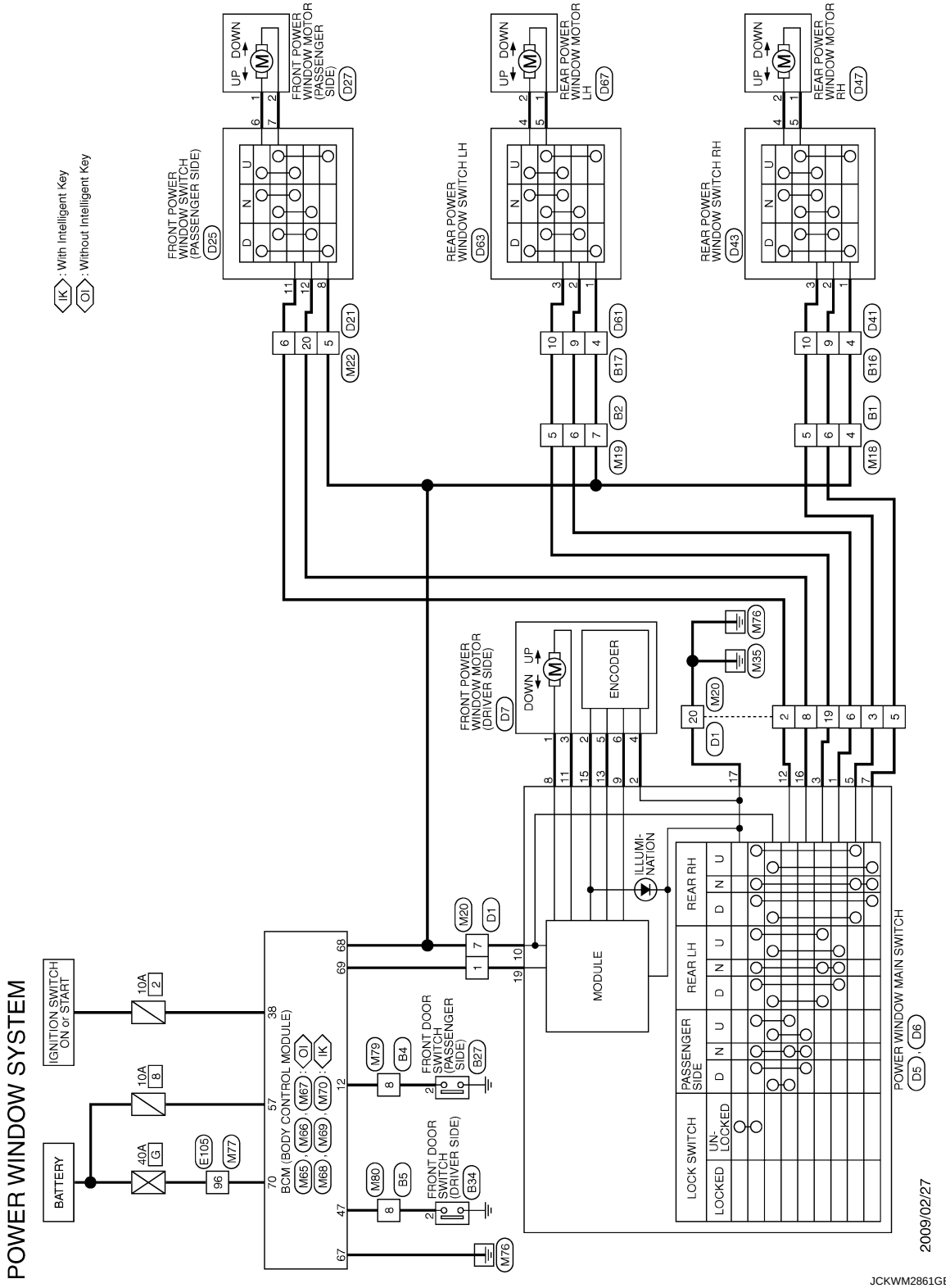
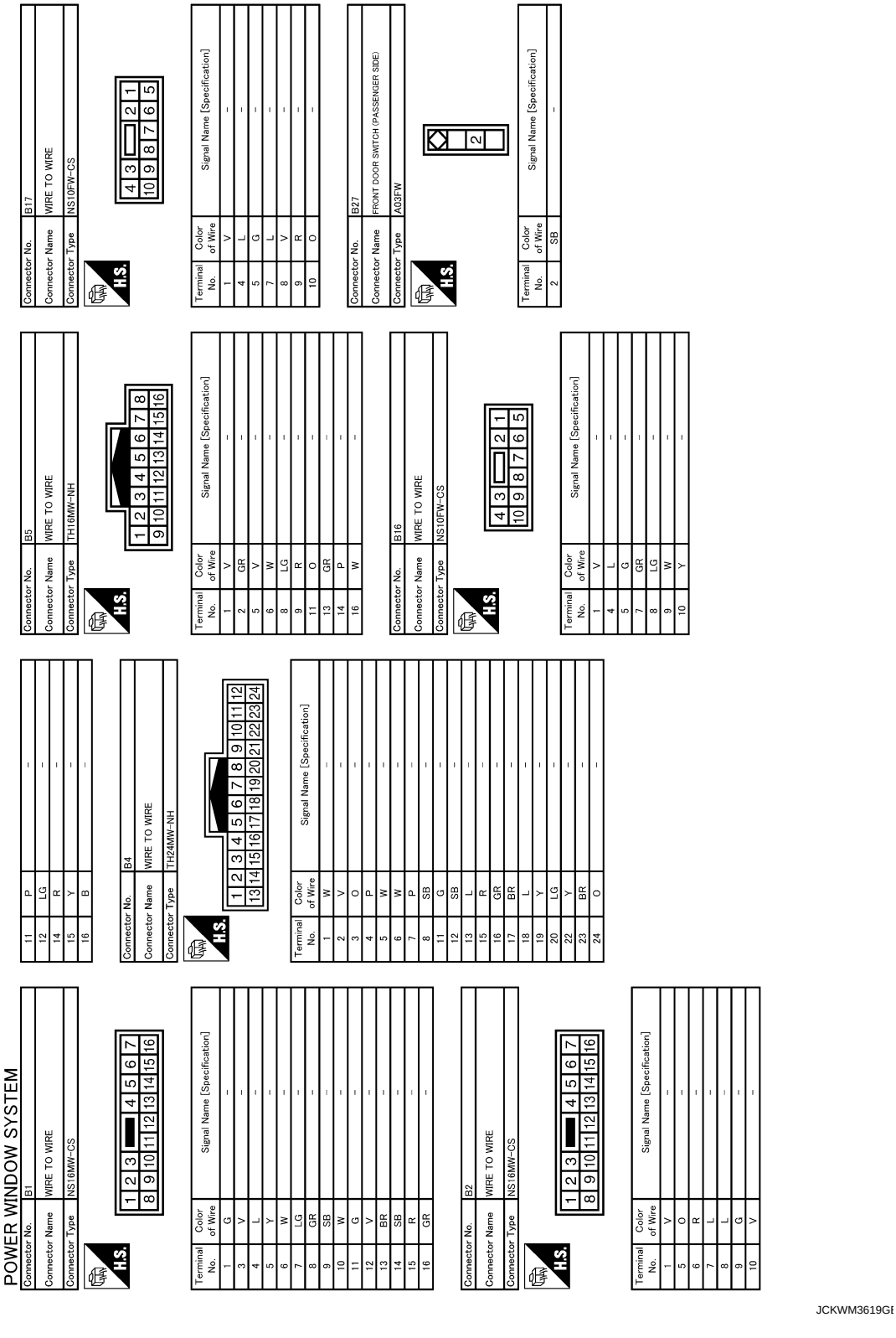
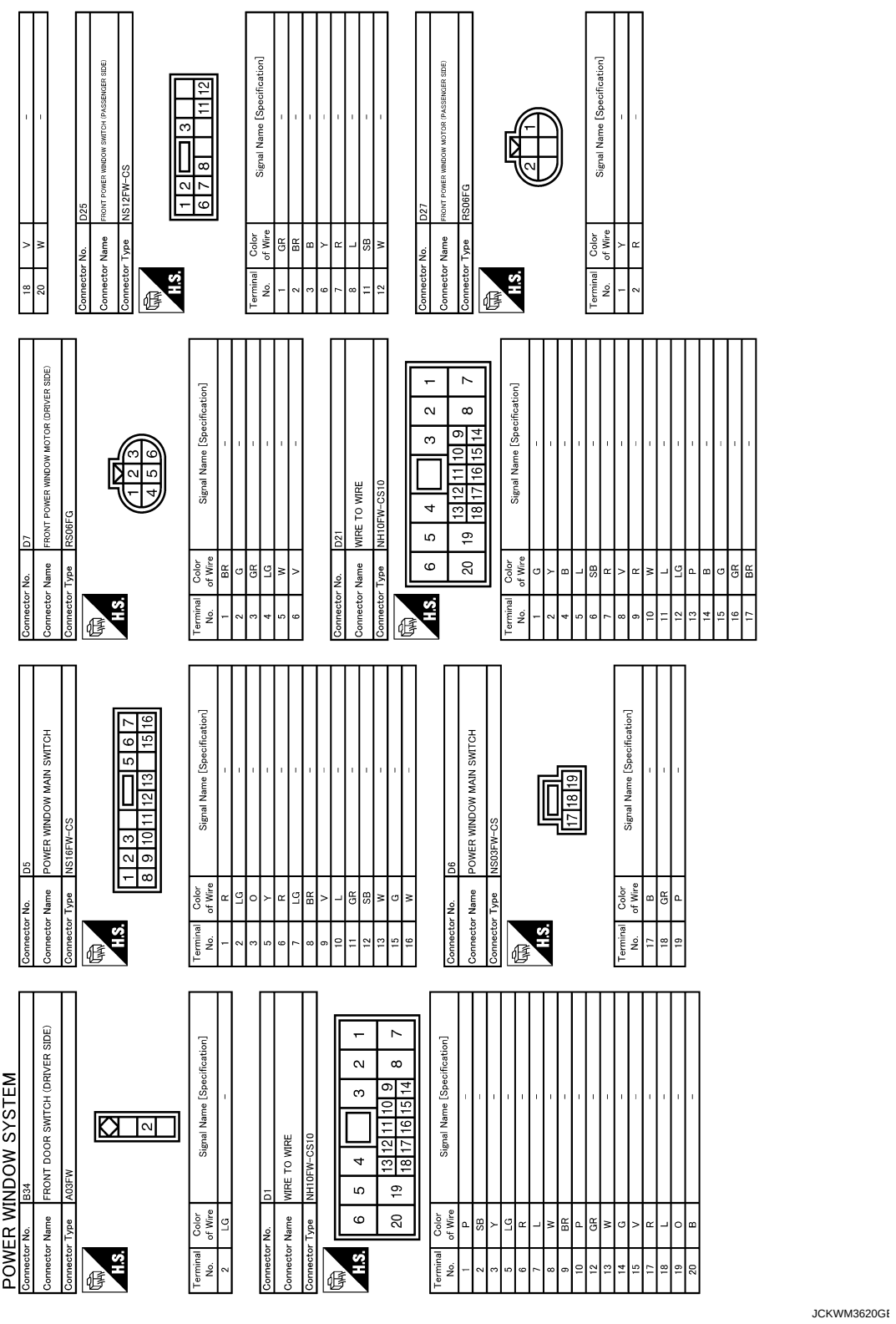



POWER WINDOW SYSTEM
Connector No. B1
Connector Name WIRE TO WIRE
Connector Type NS16MW-CS
H.S.
1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
Terminal No. Color of Wire Signal Name [Specification]
1 G –
3 V –
4 L –
5 Y –
6 W –
7 LG –
8 GR –
9 SB –
10 W –
11 G –
12 V –
13 BR –
14 SB –
15 R –
16 GR –
Connector No. B2
Connector Name WIRE TO WIRE
Connector Type NS16MW-CS
H.S.
1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
Terminal No. Color of Wire Signal Name [Specification]
1 V –
5 O –
6 R –
7 L –
8 L –
9 G –
10 V –
11 P –
12 LG –
14 R –
15 Y –
16 B –
Connector No. B4
Connector Name WIRE TO WIRE
Connector Type TH24MW-NH
H.S.
1 2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17 18 19 20 21 22 23 24
Terminal No. Color of Wire Signal Name [Specification]
1 W –
2 V –
3 O –
4 P –
5 W –
6 W –
7 P –
8 SB –
11 G –
12 SB –
13 L –
15 R –
16 GR –
17 BR –
18 L –
19 Y –
20 LG –
22 Y –
23 BR –
24 O –
Connector No. B5
Connector Name WIRE TO WIRE
Connector Type TH16MW-NH
H.S.
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Terminal No. Color of Wire Signal Name [Specification]
1 V –
2 GR –
5 V –
6 W –
8 LG –
9 R –
11 O –
13 GR –
14 P –
16 W –
Connector No. B16
Connector Name WIRE TO WIRE
Connector Type NS10FW-CS
H.S.
4 3 2 1
10 9 8 7 6 5
Terminal No. Color of Wire Signal Name [Specification]
1 V –
4 L –
5 G –
7 GR –
8 LG –
9 W –
10 Y –
Connector No. B17
Connector Name WIRE TO WIRE
Connector Type NS10FW-CS
H.S.
4 3 2 1
10 9 8 7 6 5
Terminal No. Color of Wire Signal Name [Specification]
1 V –
4 L –
5 G –
7 L –
8 V –
9 R –
10 O –
Connector No. B27
Connector Name FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type A03FW
H.S.
2
Terminal No. Color of Wire Signal Name [Specification]
2 SB –
JCKWM3619GB

POWER WINDOW SYSTEM



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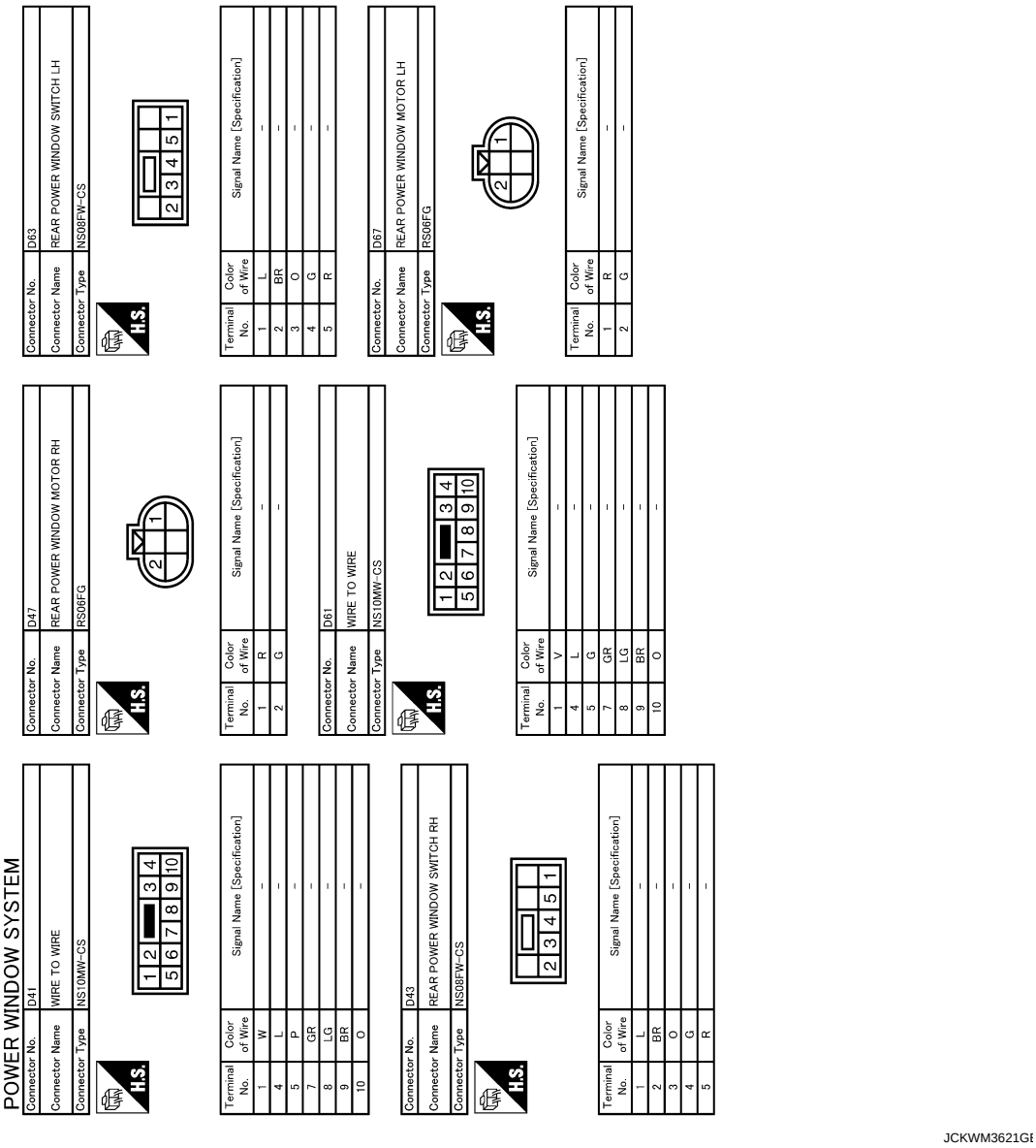

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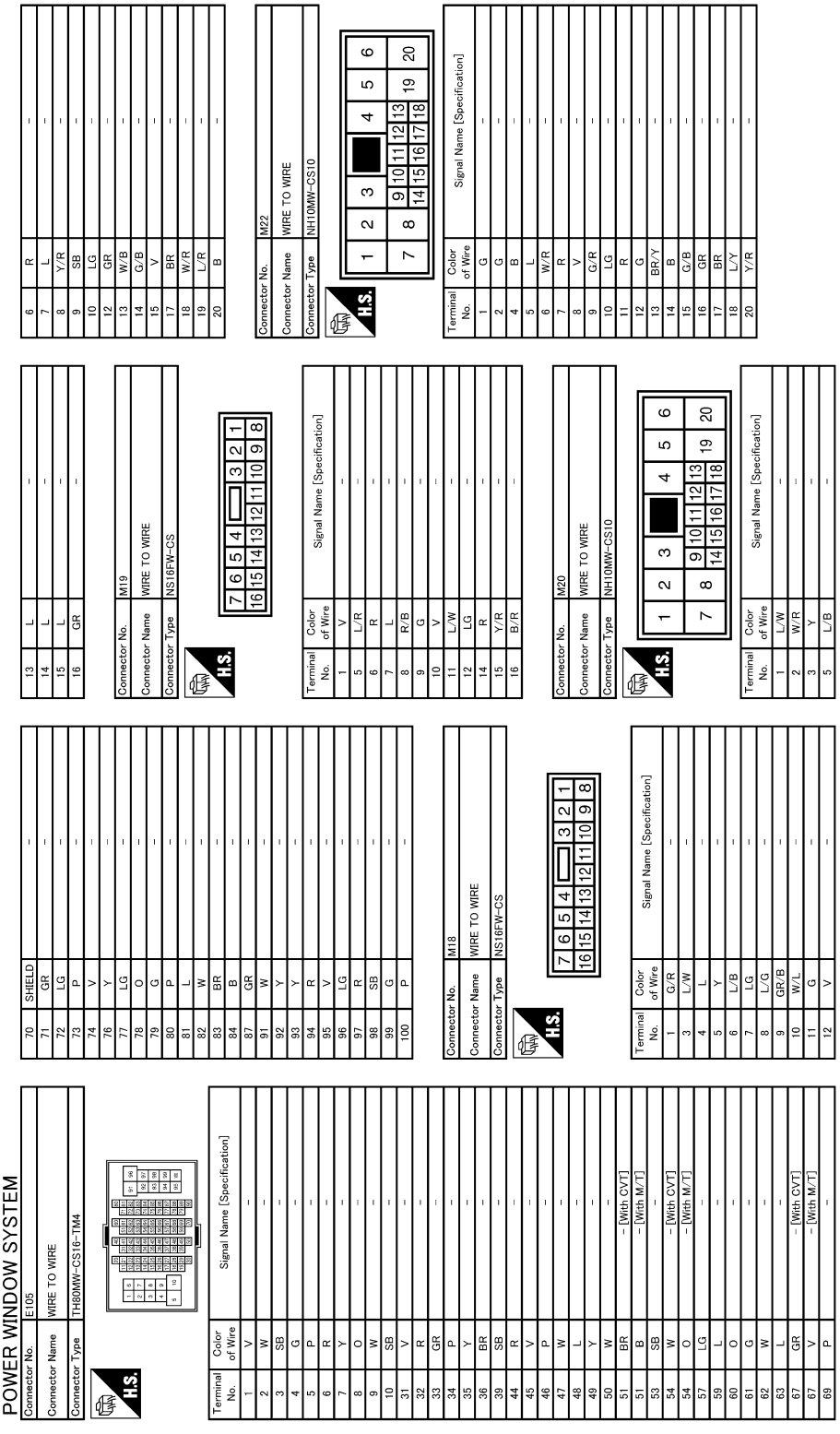

JCKWM3622GB

POWER WINDOW SYSTEM

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/W	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L/Y	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	L/R	COMBI SW INPUT 1
7	W/R	KEY CYL UNLOCK SW
8	W/B	KEY CYL LOCK SW
9	R	STOP LAMP SW
10	W/L	REAR WINDOW DEFOGGER SW
11	L/Y	ACC
12	SB	PASSENGER DOOR SW
13	GR/L	REAR RH DOOR SW
14	L/B	OPTICAL SENSOR
15	V/W	TIRE PRESS WARNING CHECK SW
17	R/G	OPTICAL SENSOR POWER SUPPLY
18	V	RECEIVER / SENSOR GND
19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
20	G/Y	KEYLESS ENTRY RECEIVER COMM
21	P/L	NATS ANTENNA AMP.
23	R/Y	SECURITY INDICATOR LAMP
24	GR/R	DONGLE LINK
25	LG	NATS ANTENNA AMP.
26	GR	THERMO CONTROL AMP.
27	Y/G	A/C SW [With auto A/C]
27	Y/R	A/C SW [With manual A/C]
28	G/W	BLOWER FAN SW
29	L/W	HAZARD SW
31	G/Y	FR DEFROSTER SW
32	LG	COMBI SW OUTPUT 5
33	Y/L	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/L	COMBI SW OUTPUT 2
36	L/O	COMBI SW OUTPUT 1
37	R/W	KEY SWITCH
38	O	IGN
39	L	CAN-H
40	P	CAN-L

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name [Specification]
43	W	BACK DOOR SW
44	LG	REAR WIPER STOP POSITION
45	GR	CENTRAL DOOR LOCK SW
46	BR	CENTRAL DOOR UNLOCK SW
47	BR/Y	DRIVER DOOR SW
48	W/G	REAR LH DOOR SW
50	SB	A/C INDICATOR OUTPUT
54	L/W	REAR WIPER OUTPUT

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FHA6-SA

H.S.

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name [Specification]
56	L	INTERIOR ROOM LAMP POWER SUPPLY
57	Y	BAT (FUSE)
59	L/B	DRIVER DOOR UNLOCK OUTPUT
60	W/B	TURN SIGNAL LH OUTPUT
61	W/L	TURN SIGNAL RH OUTPUT
63	BR	ROOM LAMP TIMER CONTROL
65	V	ALL DOOR LOCK OUTPUT
66	L/B	DRIVER DOOR UNLOCK OUTPUT
67	B	GND
68	L	POWER WINDOW POWER SUPPLY (IGN)
69	L/W	POWER WINDOW POWER SUPPLY (BAT)
70	Y	BAT (F/L)

Connector No.	M68
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name [Specification]
2	BR/W	COMBI SW INPUT 5
3	GR	COMBI SW INPUT 4
4	L/Y	COMBI SW INPUT 3
5	G	COMBI SW INPUT 2
6	L/R	COMBI SW INPUT 1
7	W/R	KEY CYL UNLOCK SW
8	W/B	KEY CYL LOCK SW
9	R	STOP LAMP SW 1
10	V/W	TIRE PRESS WARNING CHECK SW
11	L/Y	ACC F/B
12	SB	PASSENGER DOOR SW
13	GR/L	REAR RH DOOR SW
14	L/B	OPTICAL SENSOR
15	W/L	REAR WINDOW DEFOGGER SW
17	R/G	OPTICAL SENSOR POWER SUPPLY
18	V	RECEIVER / SENSOR GND
19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY
20	G/Y	KEYLESS ENTRY RECEIVER COMM
21	P/L	NATS ANTENNA AMP.
22	W/G	KEYLESS ENTRY RECEIVER RSSI
23	R/Y	SECURITY INDICATOR LAMP
24	GR/R	DONGLE LINK
25	LG	NATS ANTENNA AMP.
27	Y/R	A/C SW
28	G/W	BLOWER FAN SW
29	L/W	HAZARD SW
31	G/B	DR DOOR UNLOCK SENSOR
32	LG	COMBI SW OUTPUT 5
33	Y/L	COMBI SW OUTPUT 4
34	W	COMBI SW OUTPUT 3
35	R/L	COMBI SW OUTPUT 2
36	L/O	COMBI SW OUTPUT 1
37	G/O	SHIFT P
38	O	IGN F/B
39	L	CAN-H
40	P	CAN-L

Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name [Specification]
43	W	BACK DOOR SW
44	LG	REAR WIPER STOP POSITION
45	GR	CENTRAL DOOR LOCK SW
46	BR	CENTRAL DOOR UNLOCK SW
47	BR/Y	DRIVER DOOR SW
48	W/G	REAR LH DOOR SW
54	L/W	REAR WIPER OUTPUT
55	G	REAR DOOR UNLOCK OUTPUT

Connector No.	M70
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FB-FHA6-SA

H.S.

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name [Specification]
56	L	INTERIOR ROOM LAMP POWER SUPPLY
57	Y	BAT (FUSE)
59	G	PASSENGER DOOR UNLOCK OUTPUT
60	W/B	TURN SIGNAL LH OUTPUT
61	W/L	TURN SIGNAL RH OUTPUT
63	BR	ROOM LAMP TIMER CONTROL
65	V	ALL DOOR LOCK OUTPUT
66	L/B	DRIVER DOOR UNLOCK OUTPUT
67	B	GND
68	L	POWER WINDOW POWER SUPPLY (IGN)
69	L/W	POWER WINDOW POWER SUPPLY (BAT)
70	Y	BAT (F/L)

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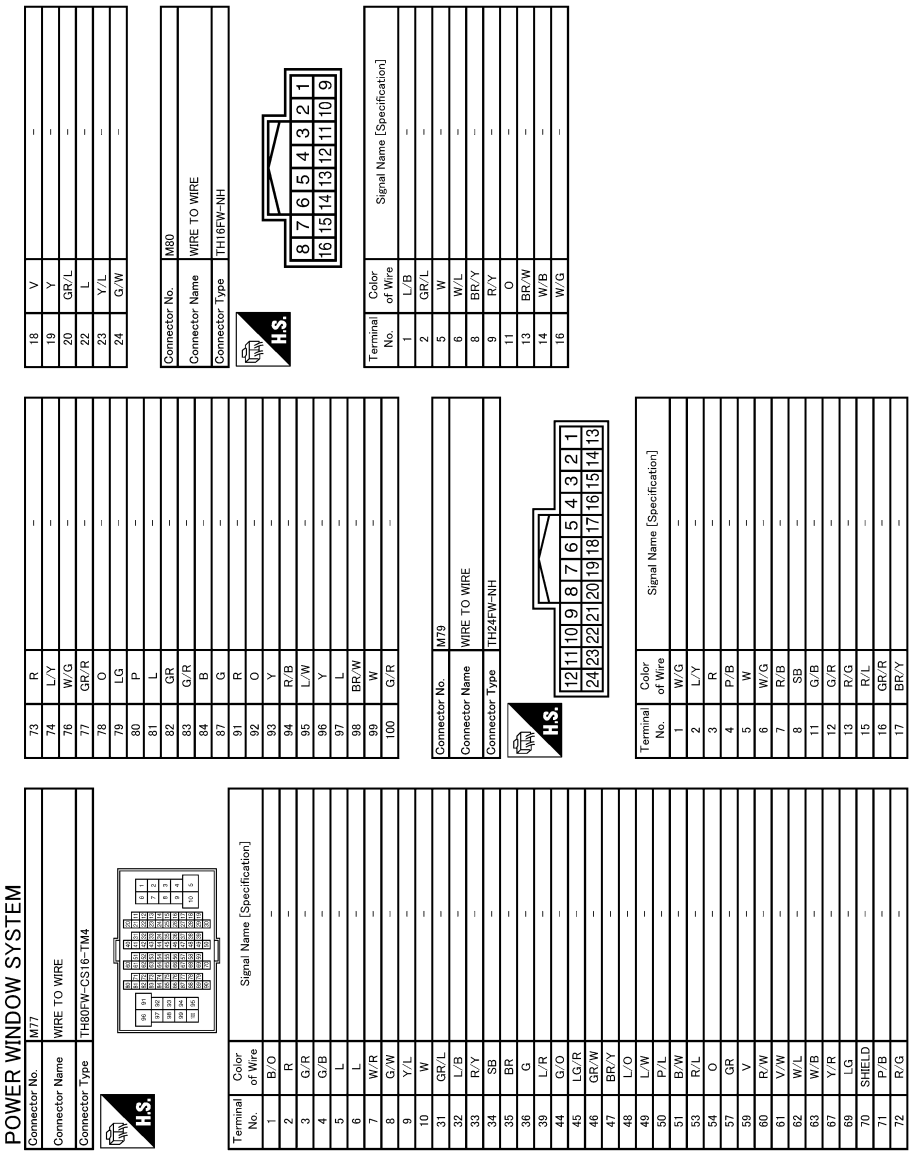


JCKWM3624GB

Fail Safe

INFOID:0000000005492242

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.

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 malfunction	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 updated 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

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 main switch or front power window motor (driver side).

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000005492243

1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to PWC-11, "BCM : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000005492244

1.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window main switch power supply and ground circuit
Refer to PWC-12, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check power window motor.
Refer to PWC-19, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE POWER WINDOW SWITCH

WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000005492245

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-15, "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 (PASSENGER SIDE)

Check front power window motor (passenger side).
Refer to PWC-20, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

WITH FRONT POWER WINDOW SWITCH ONLY

WITH FRONT POWER WINDOW SWITCH ONLY : Diagnosis Procedure

INFOID:0000000005492246

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT

Check front power window switch (passenger side) power supply and ground circuit.
Refer to PWC-13, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-15, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

REAR LH SIDE POWER WINDOW DOES NOT OPERATE

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH : Diagnosis Procedure

INFOID:0000000005492247

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-17, "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-21, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

WITH REAR POWER WINDOW SWITCH LH ONLY

WITH REAR POWER WINDOW SWITCH LH ONLY : Diagnosis Procedure

INFOID:0000000005492248

1.CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check rear power window switch power supply and ground circuit.
Refer to PWC-14, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-17, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

REAR RH SIDE POWER WINDOW DOES NOT OPERATE

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH : Diagnosis Procedure

INFOID:0000000005492249

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-17, "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 RH

Check rear power window motor RH.
Refer to PWC-22, "REAR RH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

WITH REAR POWER WINDOW SWITCH RH ONLY

WITH REAR POWER WINDOW SWITCH RH ONLY : Diagnosis Procedure

INFOID:0000000005492250

1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check rear power winodw switch power supply and ground circuit.
Refer to PWC-14, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-17, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000005492251

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK ENCODER CIRCUIT

Check encoder circuit.
Refer to PWC-24, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000005492252

1.CHECK DOOR SWITCH

Check door switch.
Refer to DLK-55, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000005492253

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 2.

2.CHECK ENCODER

Check encoder.
Refer to PWC-24, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-35, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000005492254

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer toPWC-99, "Removal and Installation".

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005492255

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 AIR BAG” and “SEAT BELT” 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 AIR BAG”.**
- **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.**

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.**
- **When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.**

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Exploded View

INFOID:0000000005492256

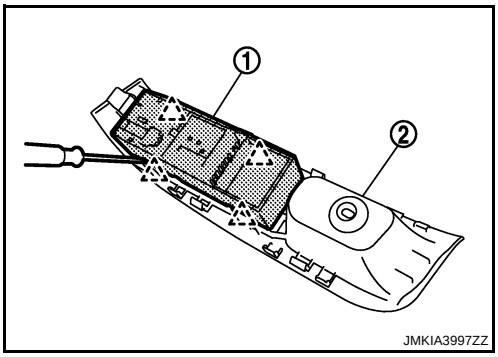
Refer to INT-11, "Exploded View".

Removal and Installation

INFOID:0000000005492257

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.



: Pawl

CAUTION:

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

NOTE:

The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).

INSTALLATION

Install in the reverse order of removal.

NOTE:

Power window main switch is exchanged or is detached it is necessary to do the initialization procedure.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".