

SECTION INL

INTERIOR LIGHTING SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

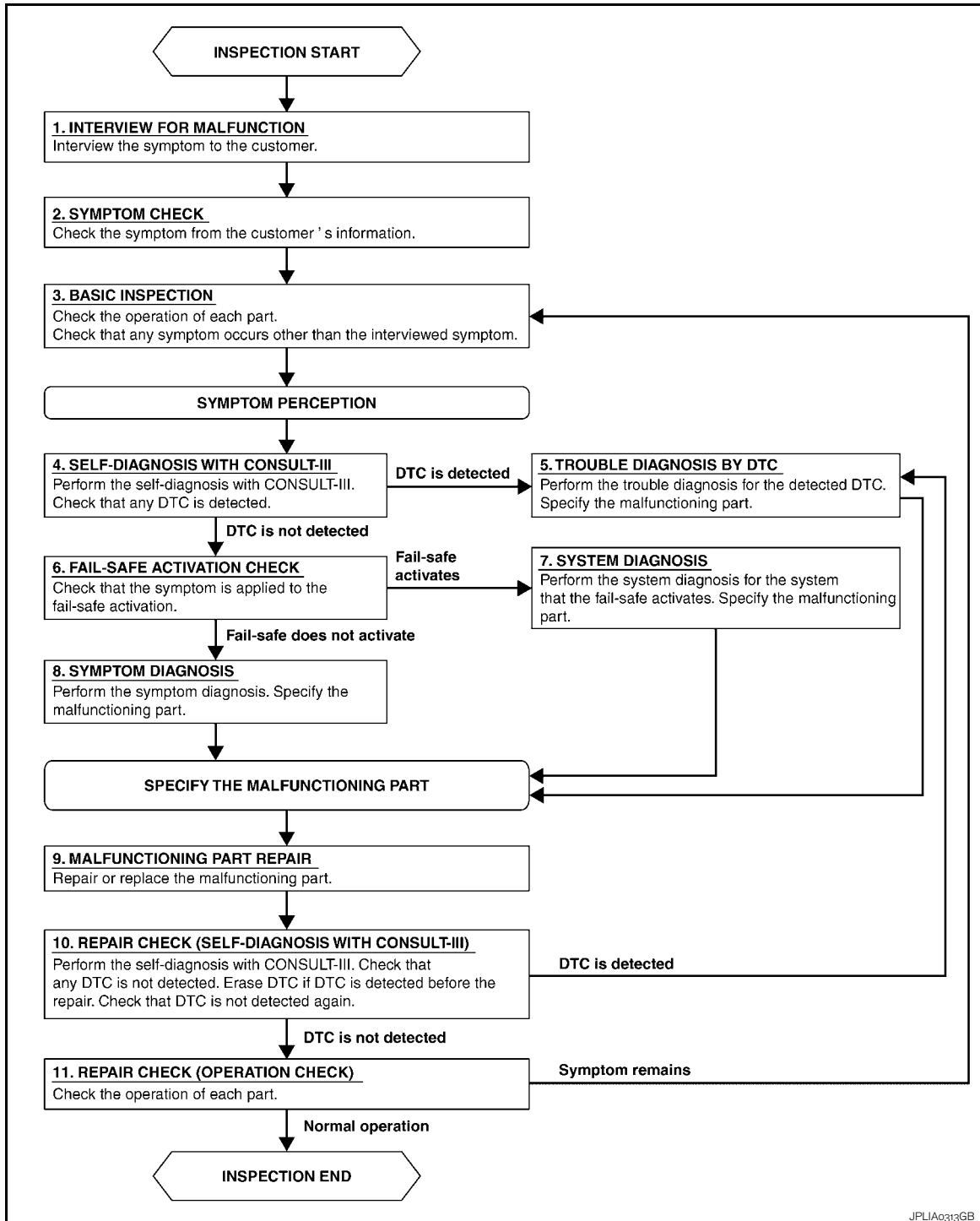
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001078335

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

>> GO TO 2.

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3.

3. BASIC INSPECTION

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

>> GO TO 4.

4. SELF-DIAGNOSIS WITH CONSULT-III

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

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

5. TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6. FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7.

NO >> GO TO 8.

7. SYSTEM DIAGNOSIS

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

>> GO TO 9.

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

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

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

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 11.

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

YES >> INSPECTION END

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

NO >> GO TO 3.

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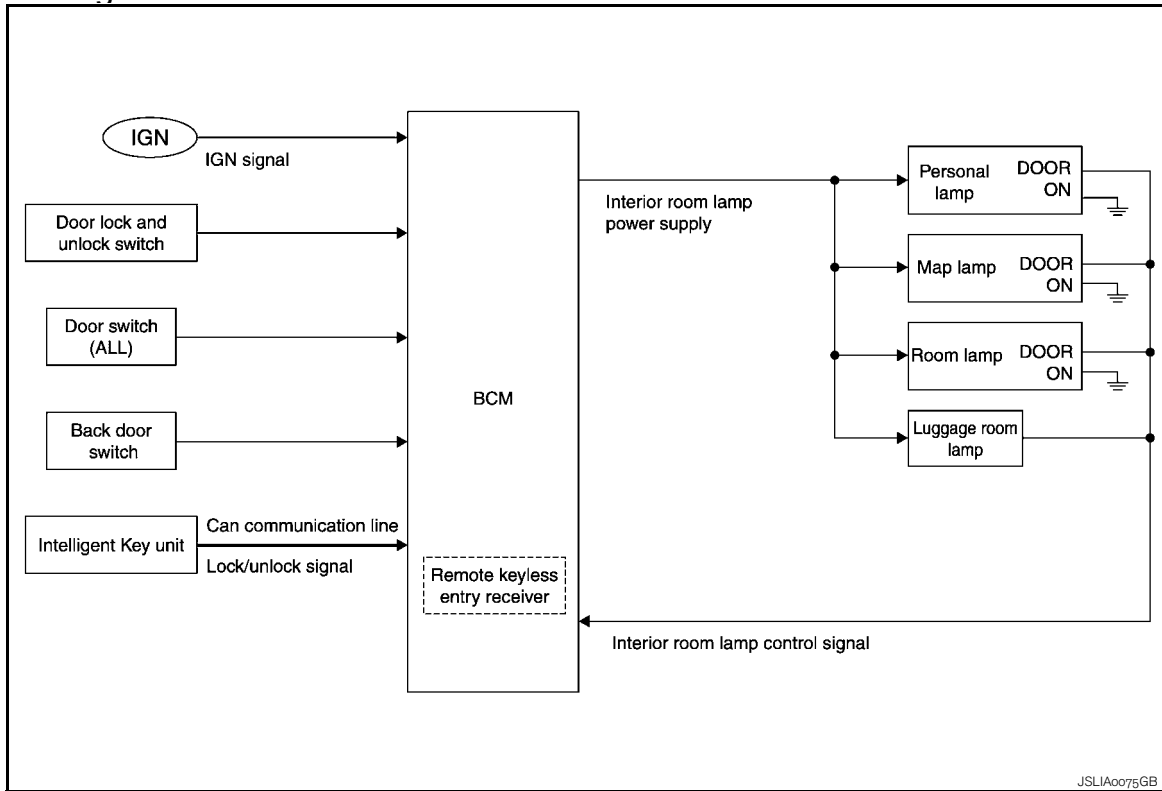
INTERIOR ROOM LAMP CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram



System Description

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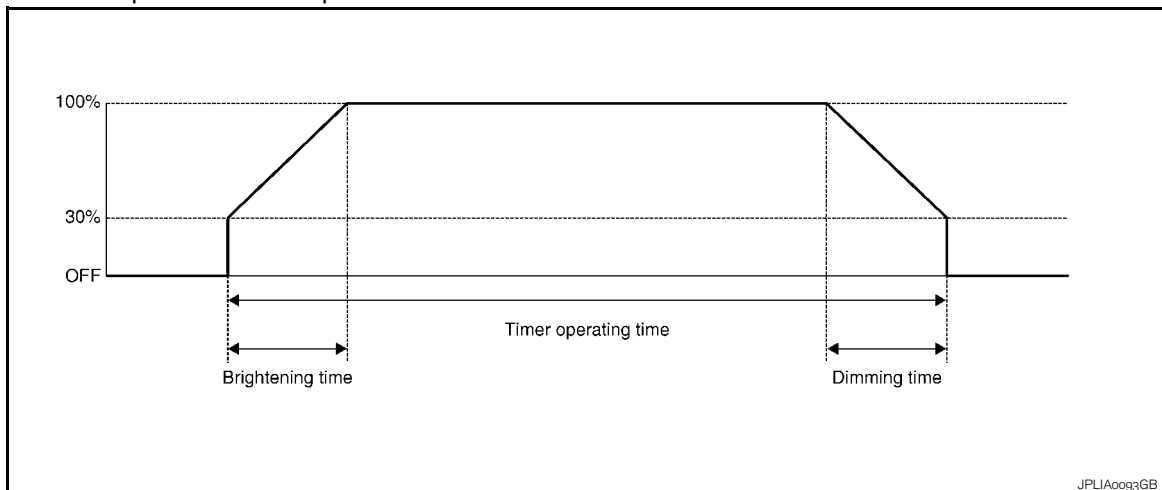
OUTLINE

Interior room lamps* are controlled by interior room lamp timer control function of BCM.

*: Map lamp, room lamp, personal lamp and luggage room lamp (when applicable lamp switch is in DOOR position).

INTERIOR ROOM LAMP TIMER CONTROL

Interior Room Lamp Timer Basic Operation



- The interior room lamp turns ON and OFF (gradual brightening and dimming) by the interior room timer.
- BCM judges the vehicle condition with the following items. It activates the interior room lamp timer.
 - Ignition switch status

INTERIOR ROOM LAMP CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

- Door switch signal (ALL)
- Door lock/unlock signal (Remote keyless entry receiver, each request switch, door lock and unlock switch)

NOTE:

Each function of interior room lamp timer can be set by CONSULT-III. Refer to [INL-15. "INT LAMP : CONSULT-III Function \(BCM - INT LAMP\)"](#).

Interior Room Lamp ON Operation

- BCM always turns the interior room lamp ON when any door opens.
- BCM activates the interior room timer in any of the following conditions to turn the interior room lamp ON for a period of time.
 - Any door opens before all doors close.
 - Ignition switch is turned ON → OFF.
 - Any door unlock signal is detected when all doors close with ignition switch OFF.

NOTE:

Restart the timer if new condition is input during the timer operating time.

Interior Room Lamp OFF Operation

BCM stops the timer in any of the following conditions to turns the interior room lamp OFF.

- The timer operating time is expired.
- Ignition switch position is other than OFF with all doors close.
- Any door lock operation is detected with all doors close.

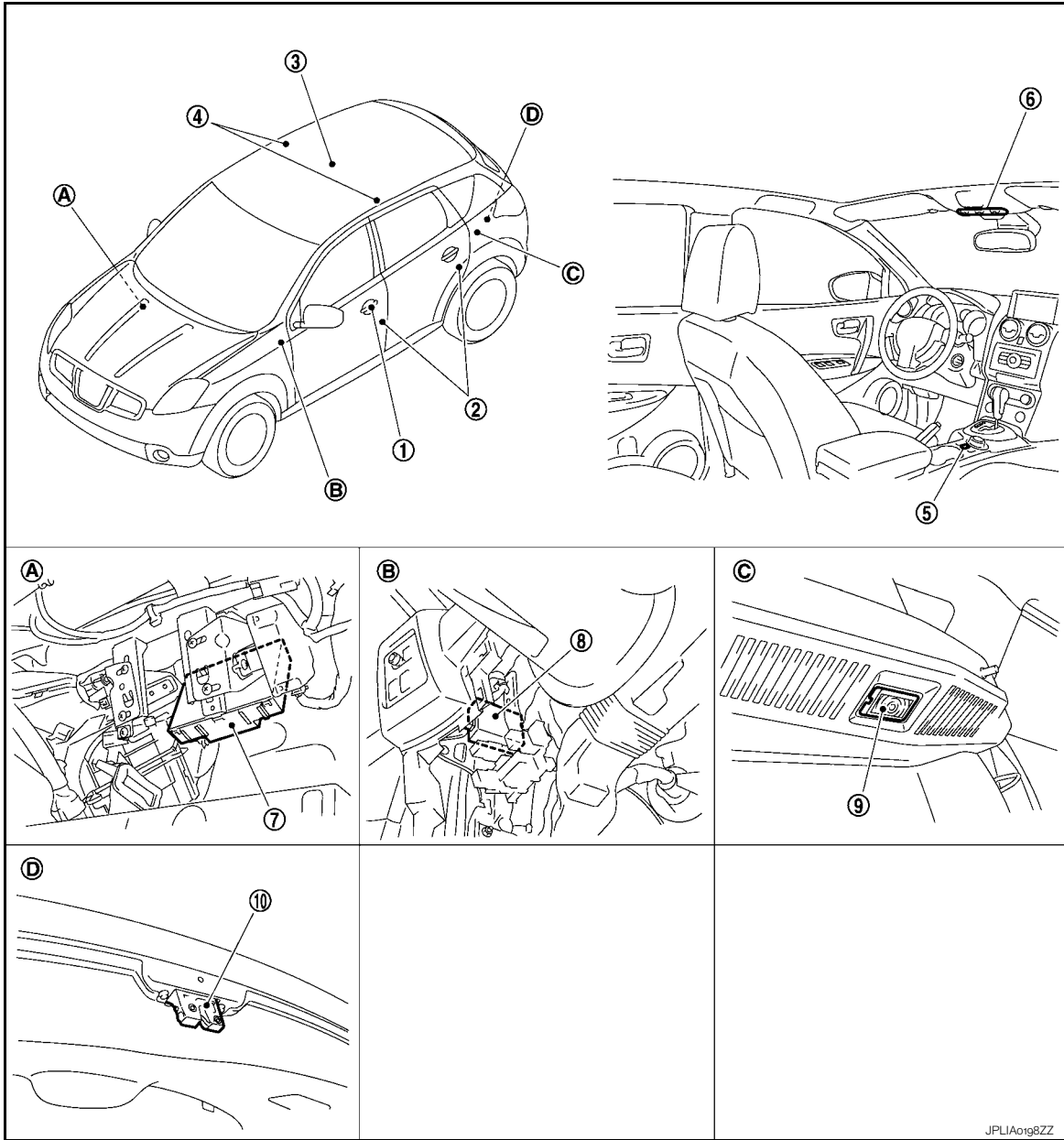
Component Parts Location

INFOID:000000001033361

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INTERIOR ROOM LAMP CONTROL SYSTEM

< FUNCTION DIAGNOSIS >



- | | | |
|---|---|--|
| 1. Request switch | 2. Door switch | 3. Room lamp
(Without glass top roof) |
| 4. Personal lamp
(With glass top roof) | 5. Door lock and unlock switch | 6. Map lamp |
| 7. BCM | 8. Intelligent Key unit | 9. Luggage room lamp |
| 10. Back door switch | | |
| A. Over the glove box | B. Over the instrument lower panel
(driver side) | C. Luggage room upward |
| D. Back door lock assembly | | |

Component Description

INFOID:000000001033362

INTERIOR ROOM LAMP CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

Part	Description
BCM	Activates the interior room lamp timer depending on the vehicle condition to turn the interior room lamps ON/OFF.
Remote keyless entry receiver (integrated in the BCM)	Receives the lock/unlock signal from Keyfob.
Intelligent Key unit	Transmits the lock/unlock signal to BCM with CAN communication.
Door lock and unlock switch	Inputs the lock/unlock signal to BCM.
- Door switch - Back door switch	Inputs the door switch signal to BCM.

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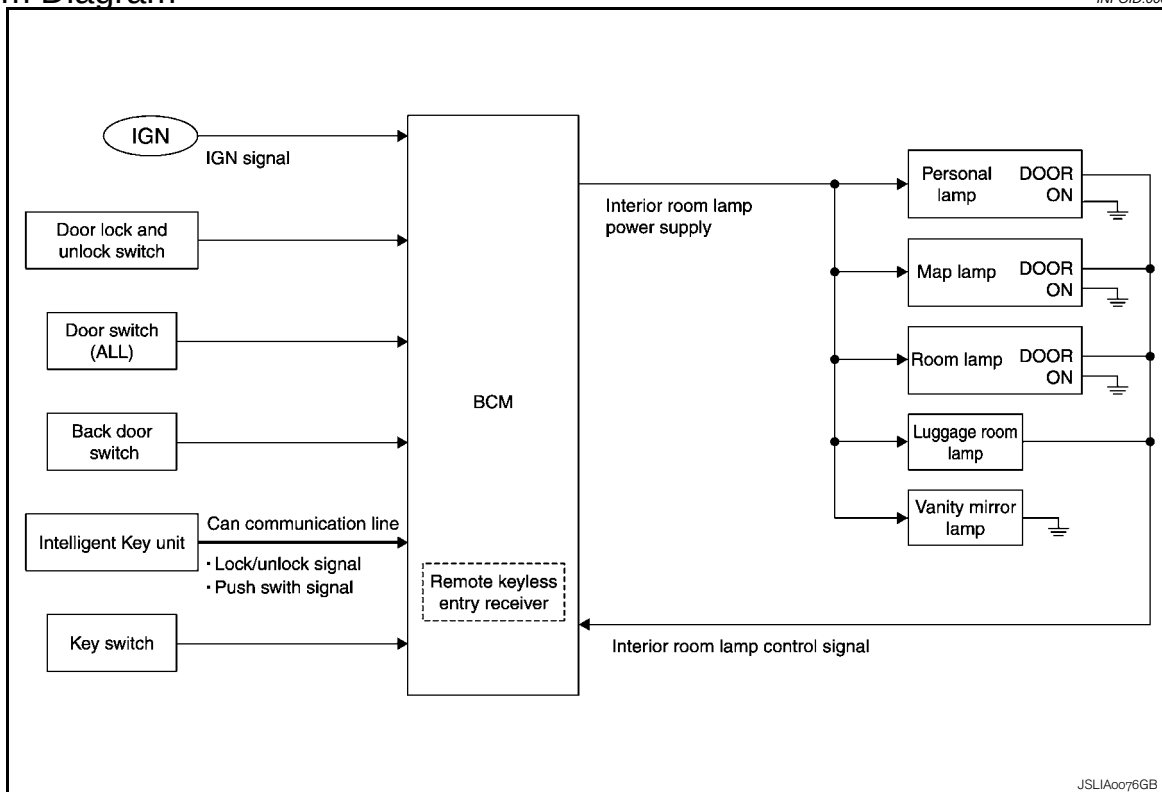
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INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

< FUNCTION DIAGNOSIS >

INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

System Diagram



System Description

INFOID:0000000001033364

OUTLINE

- Interior room lamp battery saver is controlled by BCM.
- BCM turns applicable lamps OFF depending on the vehicle condition. This function prevents the battery from over-discharging if the driver neglect turning OFF the any lamps.

Applicable lamps

- Map lamp
- Personal lamp
- Room lamp
- Luggage room lamp
- Vanity mirror lamp

INTERIOR ROOM LAMP BATTERY SAVER FUNCTION

- When the ignition switch is turned OFF, BCM operates the timer for a period of time to cut the interior room lamp power supply.
- BCM restart the timer when any of the following signals changes while operating the timer.
 - Ignition switch status
 - Door switch signal (ALL)
 - Door lock/unlock signal (Remote keyless entry receiver, each request switch, door lock and unlock switch)
 - Key switch signal
 - Push switch signal
- BCM provides the interior room lamp power supply continuously when the ignition switch position is other than OFF.

NOTE:

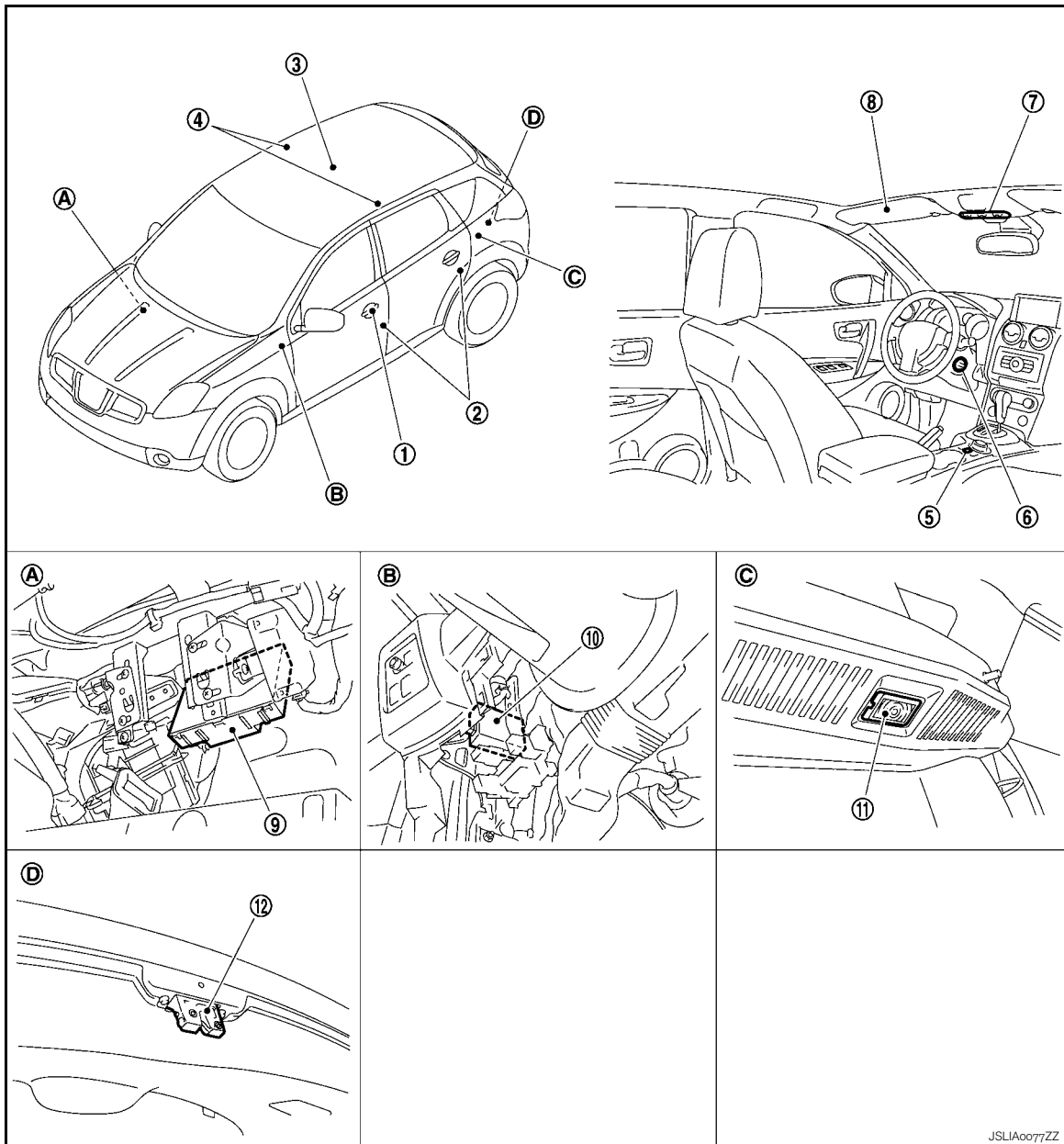
Each function of interior room lamp battery saver can be set by CONSULT-III. Refer to [INL-17, "BATTERY SAVER : CONSULT-III Function \(BCM - BATTERY SAVER\)"](#).

Component Parts Location

INFOID:0000000001033365

INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

< FUNCTION DIAGNOSIS >



- | | | |
|---|---|---|
| 1. Request switch | 2. Door switch | 3. Room lamp
(Without glass top roof) |
| 4. Personal lamp
(With glass top roof) | 5. Door lock and unlock switch | 6. • Key switch
• Push switch (With Intelligent Key) |
| 7. Map lamp | 8. Vanity mirror lamp | 9. BCM |
| 10. Intelligent Key unit | 11. Luggage room lamp | 12. Back door switch |
| A. Over the glove box | B. Over the instrument lower panel
(driver side) | C. Luggage room upward |
| D. Back door lock assembly | | |

Component Description

INFOID:000000001033366

INTERIOR ROOM LAMP BATTERY SAVER SYSTEM

< FUNCTION DIAGNOSIS >

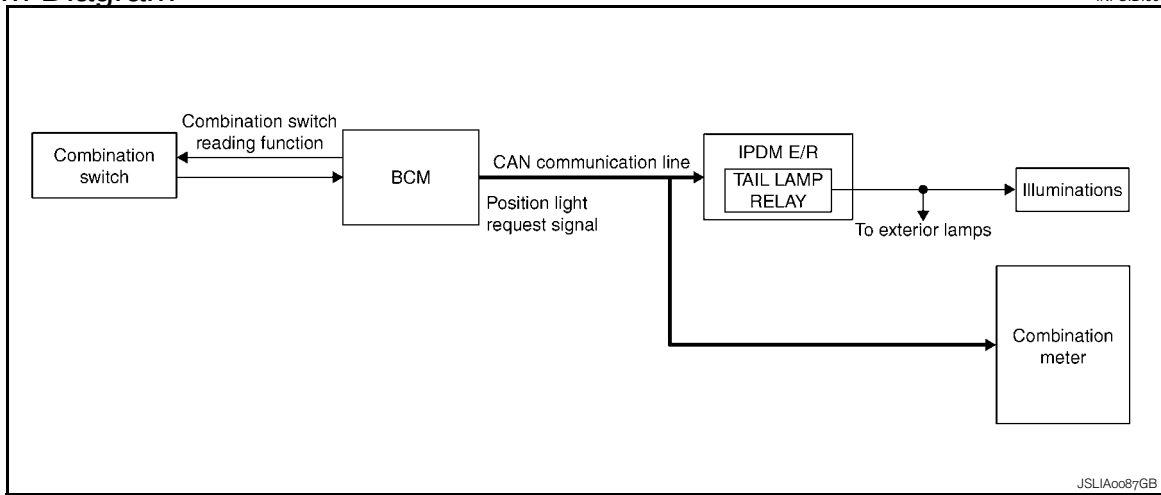
Part	Description
BCM	Operates the interior room lamp battery saver depending on the vehicle condition to cut the interior room lamp power supply.
Remote keyless entry receiver (integrated in the BCM)	Receives the lock/unlock signal from Keyfob.
Intelligent Key unit	Transmits the lock/unlock signal and push switch signal to BCM with CAN communication.
Door lock and unlock switch	Inputs the lock/unlock signal to BCM.
• Door switch • Back door switch	Inputs the door switch signal to BCM.
Key switch	Inputs the key switch signal to BCM.

ILLUMINATION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

ILLUMINATION CONTROL SYSTEM

System Diagram



System Description

INFOID:0000000001033368

OUTLINE

Each illumination lamp is controlled by each function of BCM and IPDM E/R.

Control by BCM

- Combination switch reading function
- Headlamp control function

Control by IPDM E/R

- Relay control function

ILLUMINATION CONTROL

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits position light request signal to IPDM E/R and combination meter according to tail lamp ON condition.

Tail lamp ON condition

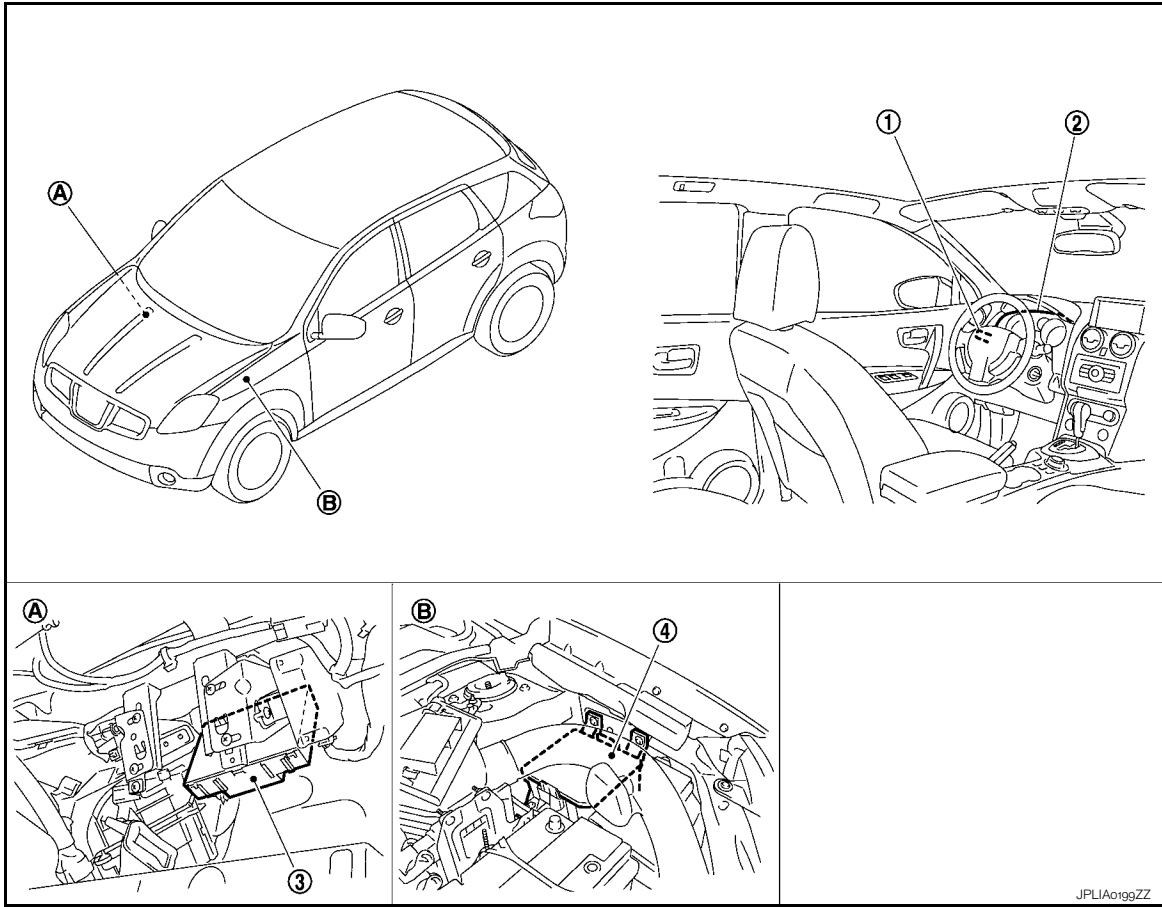
- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment (With auto light system)
- IPDM E/R turns the integrated tail lamp relay ON according to position light request signal. It provides the power supply to each illumination lamp.
- Combination meter illuminates the meter illumination according to position light request signal.

Component Parts Location

INFOID:0000000001033369

ILLUMINATION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >



1. Combination switch

2. Combination meter

3. BCM

4. IPDM E/R

A Over the glove box

B. Engine room (left side)

Component Description

INFOID:0000000001033370

Part	Description
BCM	- Judges each switch condition by the combination switch reading function. - Judges the illumination lamp ON/OFF status depending on the vehicle condition. And then it transmits position light request signal to IPDM E/R and combination meter (with CAN communication).
IPDM E/R	Controls the integrated relay according to the request from BCM (with CAN communication).
COMBINATION METER	Illuminates the meter illumination according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000001116335

APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-61, "DTC Index" .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	- Enables to read and save the vehicle specification. - Enables to 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.

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
—	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
PTC heater system	PTC HEATER		×	×

INT LAMP

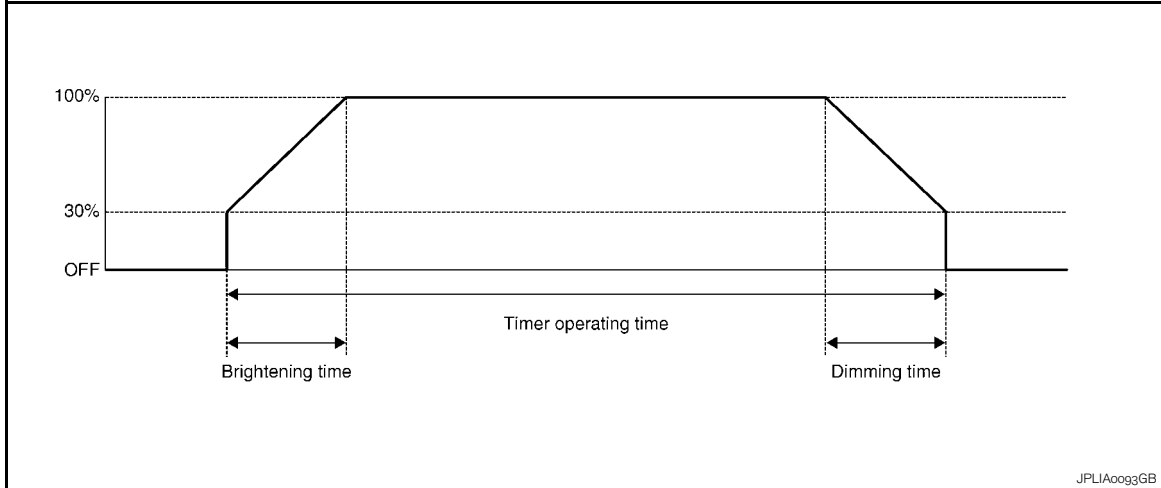
INT LAMP : CONSULT-III Function (BCM - INT LAMP)

INFOID:0000000001033372

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

WORK SUPPORT



Service item	Setting item	Setting	
ROOM LAMP TIMER SET	MODE 1	0 sec.	Sets the interior room lamp ON time. (Timer operating time)
	MODE 2	7.5 sec.	
	MODE 3*	15 sec.	
	MODE 4	30 sec.	
SET I/L D-UNLCK INTCON	ON*	With the interior room lamp timer function	
	OFF	Without the interior room lamp timer function	
ROOM LAMP ON TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual brightening time.
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual dimming time.
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	
R LAMP TIMER LOGIC SET	MODE 1*	Interior room lamp timer activates with synchronizing all doors.	
	MODE 2	Interior room lamp timer activates with synchronizing the driver door only.	

*: Initial setting

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)
ACC SW [ON/OFF]	Ignition switch (ACC) status judges from ACC signal (ACC power supply)

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor item [Unit]	Description
KEY ON SW [ON/OFF]	The switch status input from key switch
PUSH SW [ON/OFF]	Push switch status received from Intelligent Key unit by CAN communication
DOOR SW-DR [ON/OFF]	The switch status input from front door switch (driver side)
DOOR SW-AS [ON/OFF]	The switch status input from front door switch (passenger side)
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH
DOOR SW- RL [ON/OFF]	The switch status input from rear door switch LH
BACK DOOR SW [ON/OFF]	The switch status input from back door switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
I-KEY LOCK [ON/OFF]	Lock signal status received from Intelligent Key unit by CAN communication
I-KEY UNLOCK [ON/OFF]	Unlock signal status received from Intelligent Key unit by CAN communication
KEYLESS LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver (integrated in the BCM)

ACTIVE TEST

Test item	Operation	Description
INT LAMP	ON	Outputs the interior room lamp control signal to turn the interior room lamps ON. [Map lamp, personal lamp, room lamp, luggage room lamp (when applicable lamps switch is in DOOR position.)]
	OFF	Stops the interior room lamp control signal to turn the interior room lamps.

BATTERY SAVER

BATTERY SAVER : CONSULT-III Function (BCM - BATTERY SAVER)

INFOID:000000001033373

WORK SUPPORT

Service item	Setting item	Setting	
ROOM LAMP TIMER SET	MODE 1*	30 min.	Sets the interior room lamp battery saver timer operating time.
	MODE 2	60 min.	

*: Initial setting

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)
ACC SW [ON/OFF]	Ignition switch (ACC) status judges from ACC signal (ACC power supply)
KEY ON SW [ON/OFF]	The switch status input from key switch
PUSH SW [ON/OFF]	Push switch status received from Intelligent Key unit by CAN communication
DOOR SW-DR [ON/OFF]	The switch status input from front door switch (driver side)
DOOR SW-AS [ON/OFF]	The switch status input from front door switch (passenger side)
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH
DOOR SW- RL [ON/OFF]	The switch status input from rear door switch LH
BACK DOOR SW [ON/OFF]	The switch status input from back door switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
I-KEY LOCK [ON/OFF]	Lock signal status received from Intelligent Key unit by CAN communication
I-KEY UNLOCK [ON/OFF]	Unlock signal status received from Intelligent Key unit by CAN communication
KEYLESS LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver (integrated in the BCM)

ACTIVE TEST

Test item	Operation	Description
BATTERY SAVER	OFF	Cuts the interior room lamp power supply to turn interior room lamps OFF.
	ON	Outputs the interior room lamp power supply to turn interior room lamps ON.*

*: Each lamp switch is in ON position.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:000000001099291

1.CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

Terminal No.	Signal name	Fuses and fusible link No.
41	Battery power supply	9
57		J
37	ACC power supply	5
38	Ignition power supply	4

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. Turn ignition switch OFF.
2. Disconnect BCM connectors.
3. Check voltage between BCM harness connector and ground.

Terminals		Ignition switch position		
(+) BCM		(-)		
Connector	Terminal	OFF	ACC	ON
M65	37	Approx. 0 V	Battery voltage	Battery voltage
	38	Approx. 0 V	Approx. 0 V	Battery voltage
M66	41	Battery voltage	Battery voltage	Battery voltage
M67	57	Battery voltage	Battery voltage	Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M67	55		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT

Description

INFOID:0000000001033375

Provides the interior room lamp power supply. Also cuts the power supply when the interior room lamp battery saver activating.

Component Function Check

INFOID:0000000001033376

1.CHECK INTERIOR ROOM LAMP POWER SUPPLY FUNCTION

CONSULT-III ACTIVE TEST

1. Turn ignition switch ON.
2. Turn each interior room lamp ON.
 - Map lamp
 - Room lamp
 - Personal lamp
 - Vanity mirror lamp
 - Luggage room lamp
3. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
4. With operating the test items, check that each interior room lamp is turned ON/OFF.

OFF : Interior room lamp OFF

ON : Interior room lamp ON

Is the interior room lamp turned ON/OFF?

YES >> Interior room lamp power supply circuit is normal.

NO >> Refer to [INL-20. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000001033377

1.CHECK INTERIOR ROOM LAMP POWER SUPPLY OUTPUT

CONSULT-III ACTIVE TEST

1. Turn ignition switch ON.
2. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
3. With operating the test item, check voltage between BCM harness connector and ground.

Terminals		Test item	Voltage (Approx.)
(+)	(-)		
BCM		BATTERY SAVER	0 V
Connector	Terminal		
M66	42	OFF	0 V
		ON	Battery voltage

Is the measurement value normal?

YES >> GO TO 2.

NO >> Replace BCM. Refer to [BCS-64. "Exploded View"](#).

2.CHECK INTERIOR ROOM LAMP POWER SUPPLY OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
 - Map lamp
 - Room lamp
 - Personal lamp (RH)
 - Personal lamp (LH)
 - Vanity mirror lamp (driver side)
 - Vanity mirror lamp (passenger side)
 - Luggage room lamp

INTERIOR ROOM LAMP POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

3. Check continuity between BCM harness connector and each interior room lamp harness connector.

BCM		Each interior room lamp			Continuity
Connector	Terminal	Connector		Terminal	
M66	42	Map lamp	R4	4	Existed
		Room lamp	R15	4	
		Personal lamp (RH)	R8	2	
		Personal lamp (LH)	R7	2	
		Vanity mirror lamp (passenger side)	R10	1	
		Vanity mirror lamp (driver side)	R9	1	
		Luggage room lamp	B83	1	

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK INTERIOR ROOM LAMP POWER SUPPLY SHORT CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M66	42		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Check that each interior room lamp has no internal short circuit.

INTERIOR ROOM LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP CONTROL CIRCUIT

Description

INFOID:000000001033378

Controls each interior room lamp (ground side) by PWM signal.

NOTE:

PWM signal control period is approximately 250 Hz (in the gradual brightening/dimming).

Component Function Check

INFOID:000000001033379

CAUTION:

Before the diagnosis, check that the following items are normal.

- Interior room lamp power supply
- Map lamp bulb
- Room lamp bulb
- Personal lamp bulb
- Luggage room lamp bulb

1.CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

CONSULT-III ACTIVE TEST

1. Switch the map lamp switch to DOOR.
2. Turn ignition switch ON.
3. Select "INT LAMP" of BCM (INT LAMP) active test item.
4. With operating the test items, check that each interior room lamp turns ON/OFF (gradual brightening/dimming).

ON : Interior room lamp gradual brightening

OFF : Interior room lamp gradual dimming

Does the interior room lamp turns ON/OFF (gradual brightening/dimming)?

YES >> Interior room lamp control circuit is normal.

NO >> Refer to [INL-22, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001033380

1.CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

CONSULT-III ACTIVE TEST

1. Turn ignition switch OFF.
2. Remove all the bulbs of following lamps.
 - Map lamp
 - Room lamp
 - Personal lamp (RH)
 - Personal lamp (LH)
 - Luggage room lamp
3. Select "INT LAMP" of BCM (INT LAMP) active test item.
4. With operating the test item, check continuity between BCM harness connector and ground.

BCM		Ground	Test item	Continuity
Connector	Terminal		INT LAMP	
M66	52		ON	Existed
			OFF	Not existed

Is the measurement value normal?

YES >> GO TO 2.

Fixed ON>>GO TO 3.

Fixed OFF>>Replace BCM. Refer to [BCS-64, "Exploded View"](#).

INTERIOR ROOM LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

2.CHECK INTERIOR ROOM LAMP CONTROL OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
 - Map lamp
 - Room lamp
 - Personal lamp (RH)
 - Personal lamp (LH)
 - Luggage room lamp
3. Check continuity between BCM harness connector, map lamp harness connector, and personal lamp harness connector.

BCM		Map lamp/personal lamp			Continuity
Connector	Terminal	Connector		Terminal	
M66	52	Map lamp	R4	2	Existed
		Room lamp	R15	2	
		Personal lamp (RH)	R8	3	
		Personal lamp (LH)	R7	3	
		Luggage room lamp	B83	4	

Does continuity exist?

YES >> Replace the map lamp or the personal lamp.

NO >> Repair the harnesses or connectors.

3.CHECK INTERIOR ROOM LAMP CONTROL SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector, map lamp connector and personal lamp connector.
3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M66	52		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

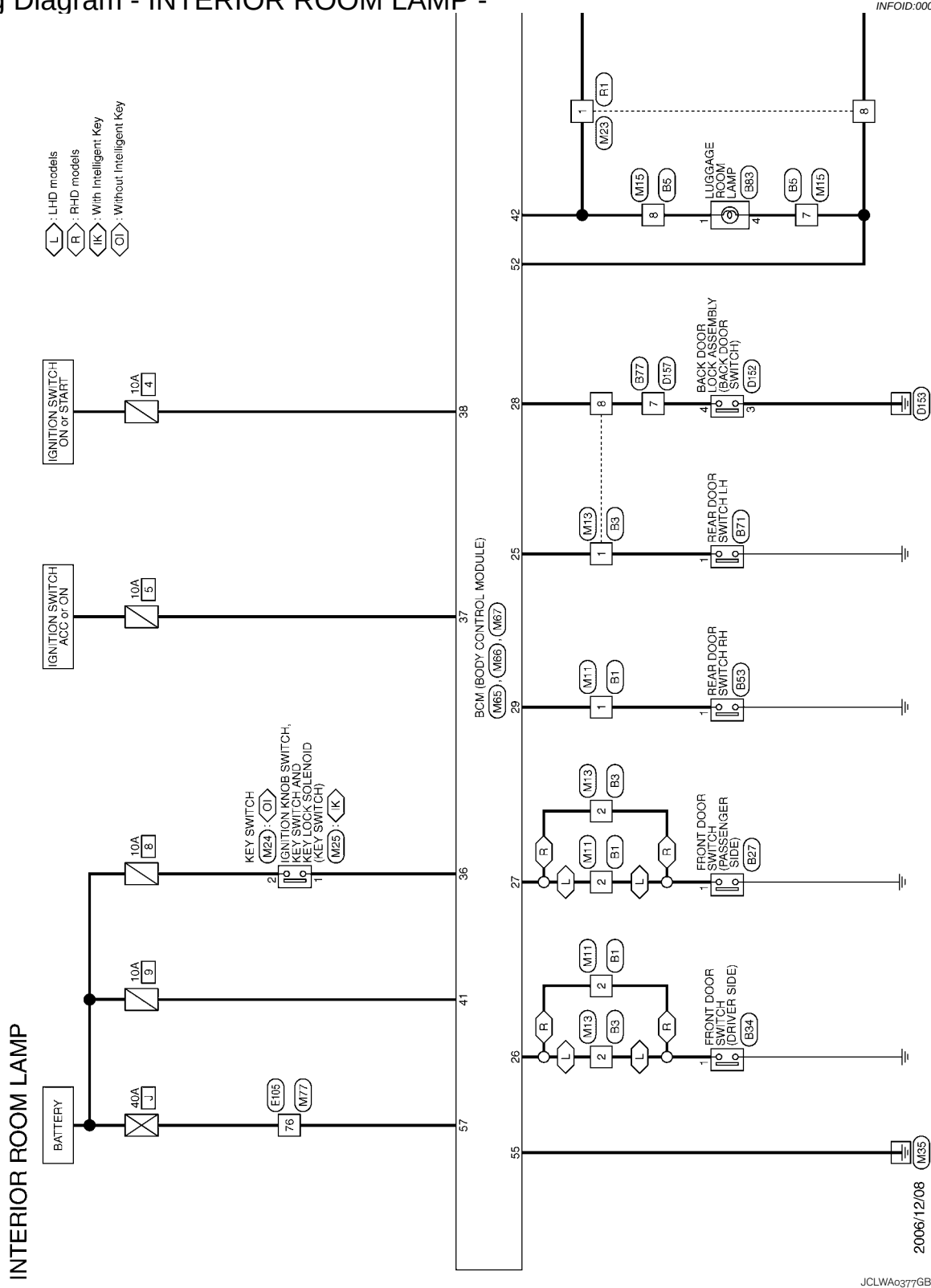
NO >> Replace BCM. Refer to [BCS-64. "Exploded View"](#).

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

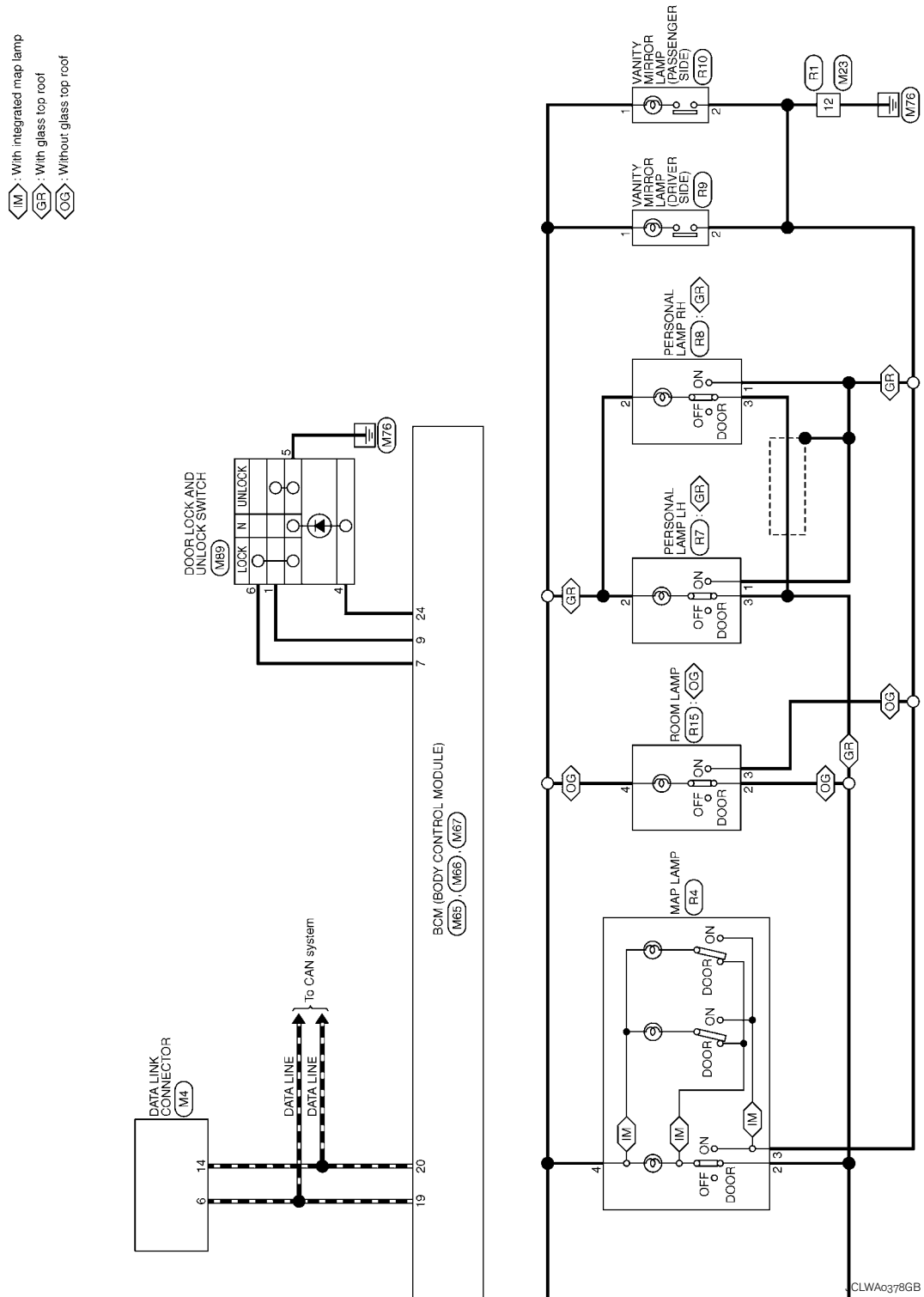
INTERIOR ROOM LAMP CONTROL SYSTEM

Wiring Diagram - INTERIOR ROOM LAMP -



INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >



INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH24MW



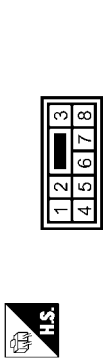
Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	—
2	BR	—[LHD models] —[RHD models]
2	R/W	—

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH24MW



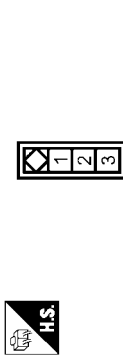
Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	—
2	R/W	—[LHD models] —[RHD models]
2	BR	—
8	G	—

Connector No.	B5
Connector Name	WIRE TO WIRE
Connector Type	NS30MH-CS



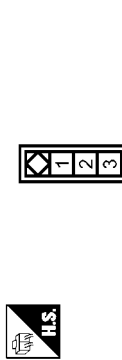
Terminal No.	Color of Wire	Signal Name [Specification]
7	R	—
8	V	—

Connector No.	B27
Connector Name	FRONT DOOR SWITCH (PASSENGER SIDE)
Connector Type	AG3FW



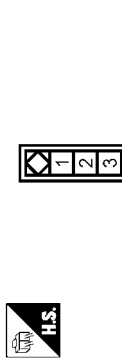
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	—

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	AG3FW



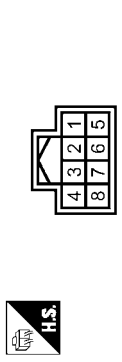
Terminal No.	Color of Wire	Signal Name [Specification]
1	R/W	—

Connector No.	B71
Connector Name	REAR DOOR SWITCH LH
Connector Type	AG3FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	—

Connector No.	B77
Connector Name	WIRE TO WIRE
Connector Type	TH30FW



Terminal No.	Color of Wire	Signal Name [Specification]
7	G	—

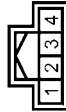
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INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP

Connector No.	B83
Connector Name	LUGGAGE ROOM LAMP
Connector Type	TH04FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
4	R	-

Connector No.	D152
Connector Name	BACK DOOR LOCK ASSEMBLY
Connector Type	CINCH 49309 EV 4M9



Terminal No.	Color of Wire	Signal Name [Specification]
3	B	-
4	G	-

Connector No.	D157
Connector Name	WIRE TO WIRE
Connector Type	TH08MW



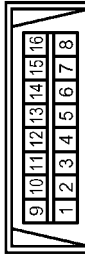
Terminal No.	Color of Wire	Signal Name [Specification]
7	G	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH63MW-NS16-TM4



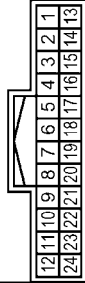
Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



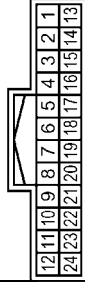
Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH24FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-
2	BR	-[LHD models]
2	R	-[RHD models]

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH24FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	-
2	R	-[LHD models]
2	BR	-[RHD models]
8	G	-

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-OS



Terminal No.	Color of Wire	Signal Name [Specification]
7	R	-
8	V	-

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INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP

Connector No.	M23
Connector Name	WIRE TO WIRE
Connector Type	TK10FW-11S8



10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
8	R	-
12	B	-

Connector No.	M24
Connector Name	KEY SWITCH
Connector Type	AU2MW



2	1
---	---

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
2	Y	-

Connector No.	M25
Connector Name	IGNITION KNOB SWITCH, KEY SWITCH AND KEY LOCK SOLENOID
Connector Type	TK06MGY



1	2	3	4	5	6
---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
2	Y	-

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB4CFB



31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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Terminal No.	Color of Wire	Signal Name [Specification]
7	P	LOCK/UNLOCK SW (LOCK)
9	BR	LOCK/UNLOCK SW (UNLOCK)
19	L	CAN-H
20	P	CAN-L
24	GR	DOOR LOCK STATUS IND
25	GR	DOOR SW (RL)
26	R	DOOR SW (DR)
27	BR	DOOR SW (AS)
28	G	DOOR SW (BACK)
29	LG	DOOR SW (RR)
36	V	KEY SW

37	R	ACC SW
38	W/L	IGN SW

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 21PC122S1017



52	51	50	49	48	47	46	45	44	43	42	41
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Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(FUSE)
42	V	ROOM LAMP POWER SUPPLY
52	R	ROOM LAMP OUTPUT

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 21PC085S017



60	59	58	57	56	55	54	53
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Terminal No.	Color of Wire	Signal Name [Specification]
55	B	GN2(POWER)
57	Y	BAT(F/L)

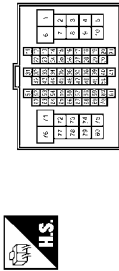
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INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH60FW-NS15-TM4



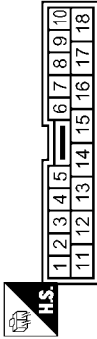
Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Connector No.	M89
Connector Name	DOOR LOCK AND UNLOCK SWITCH
Connector Type	7703197574



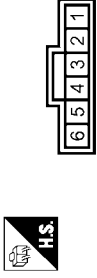
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	-
4	GR	-
5	B	-
6	P	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Type	TK10MWF-NS8



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
8	G	- [With glass top roof]
12	B	- [Without glass top roof]

Connector No.	R4
Connector Name	MAP LAMP
Connector Type	G&H 13423-601-501



Terminal No.	Color of Wire	Signal Name [Specification]
2	G	- [With glass top roof]
2	R	- [Without glass top roof]
3	B	-
4	V	-

Connector No.	R7
Connector Name	PERSONAL LAMP LH
Connector Type	TK03FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
2	V	-
3	G	- [With glass top roof]

Connector No.	R8
Connector Name	PERSONAL LAMP RH
Connector Type	TK03FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
2	V	-
3	G	- [With glass top roof]

Connector No.	R9
Connector Name	VANITY MIRROR LAMP (DRIVER SIDE)
Connector Type	K02FB



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
2	B	-

Connector No.	R10
Connector Name	VANITY MIRROR LAMP (PASSENGER SIDE)
Connector Type	K02FB



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
2	B	-

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INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

INTERIOR ROOM LAMP

Connector No.	R15
Connector Name	ROOM LAMP
Connector Type	3&4 13423-601-501



6

5

4

3

2

1

Terminal No.	Color of Wire	Signal Name [Specification]
2	R	-
3	B	-
4	V	-

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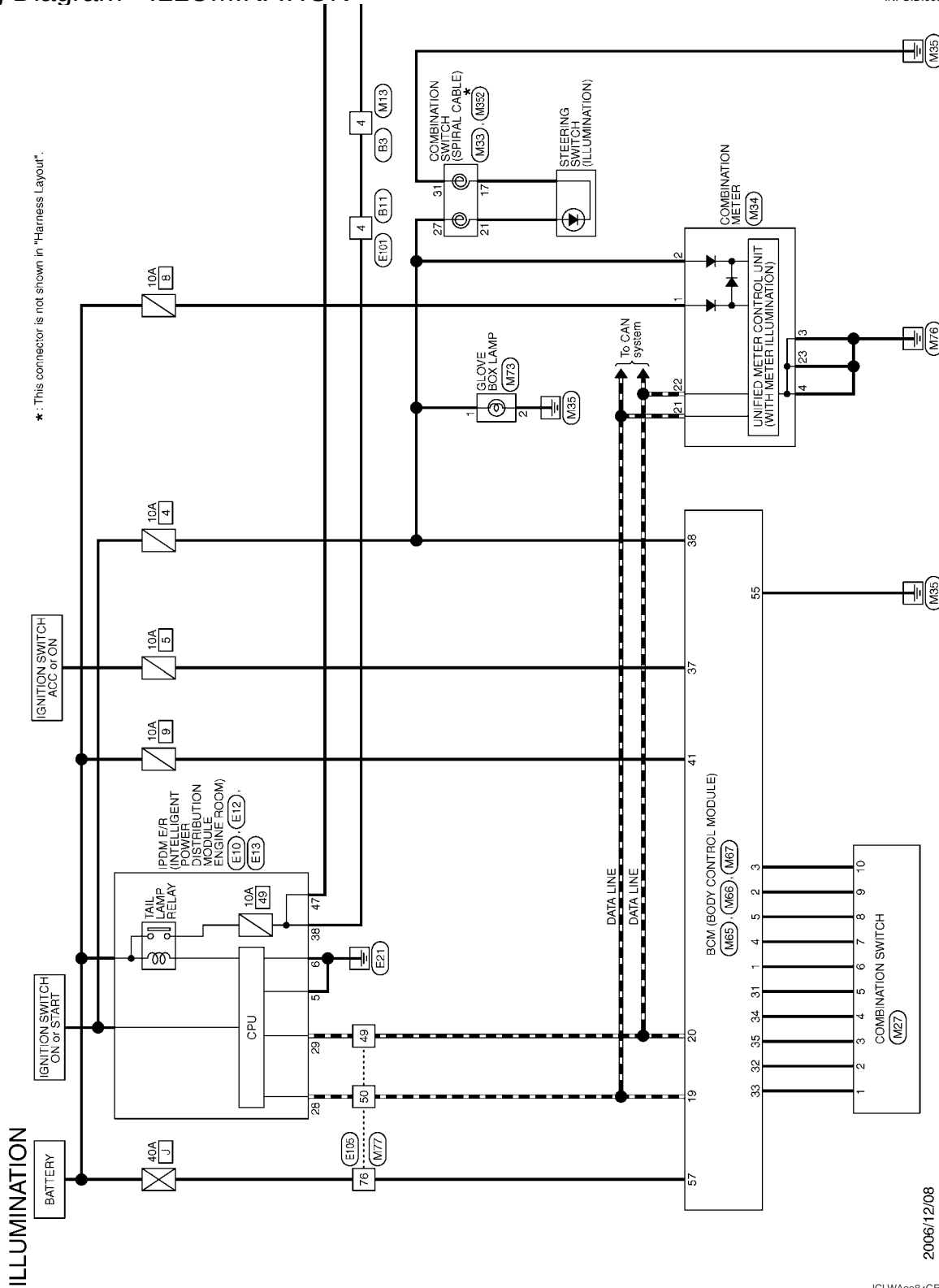
ILLUMINATION

< COMPONENT DIAGNOSIS >

ILLUMINATION

Wiring Diagram - ILLUMINATION -

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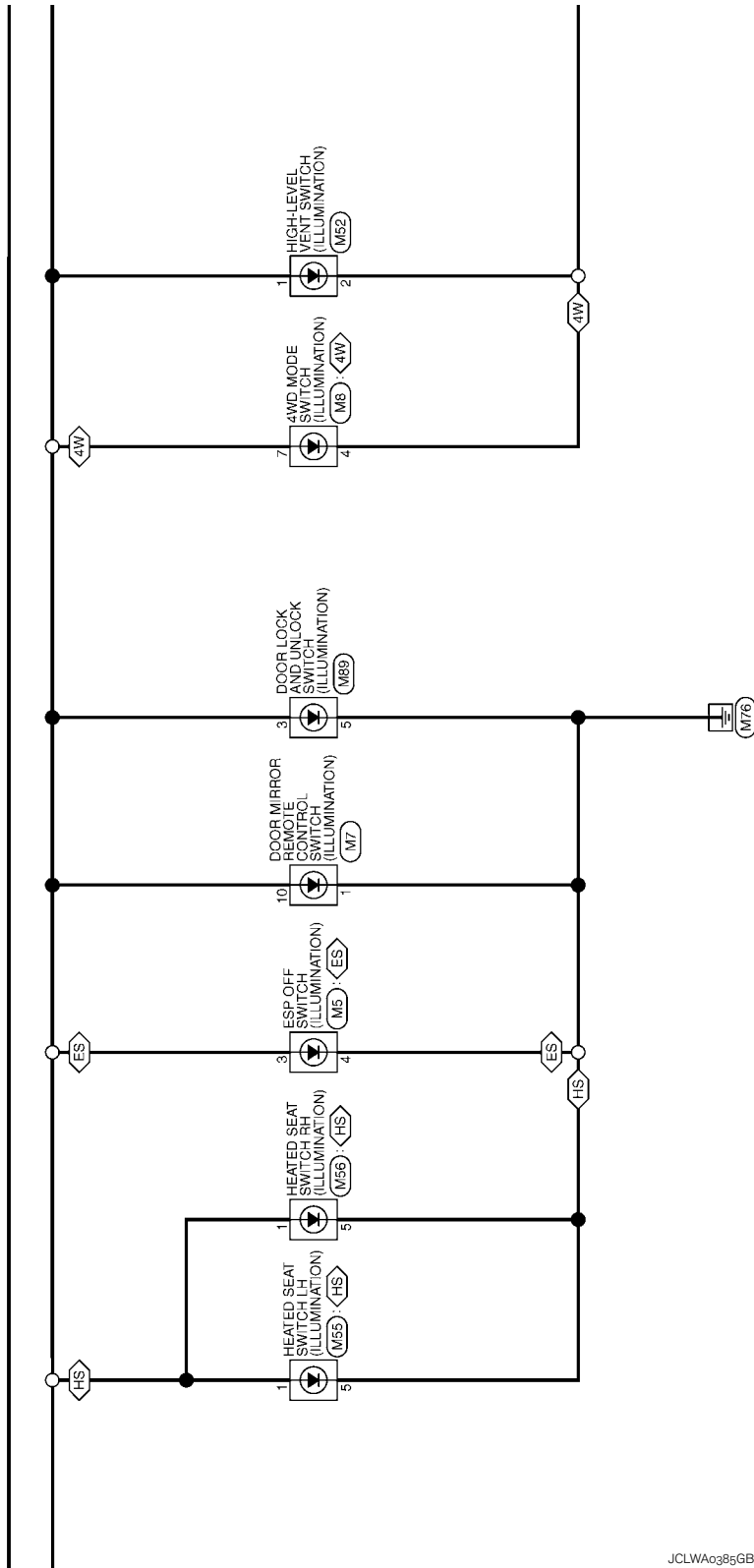
2006/12/08

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ILLUMINATION

< COMPONENT DIAGNOSIS >

4W : 4WD models
 ES : With ESP
 HS : With heated seat

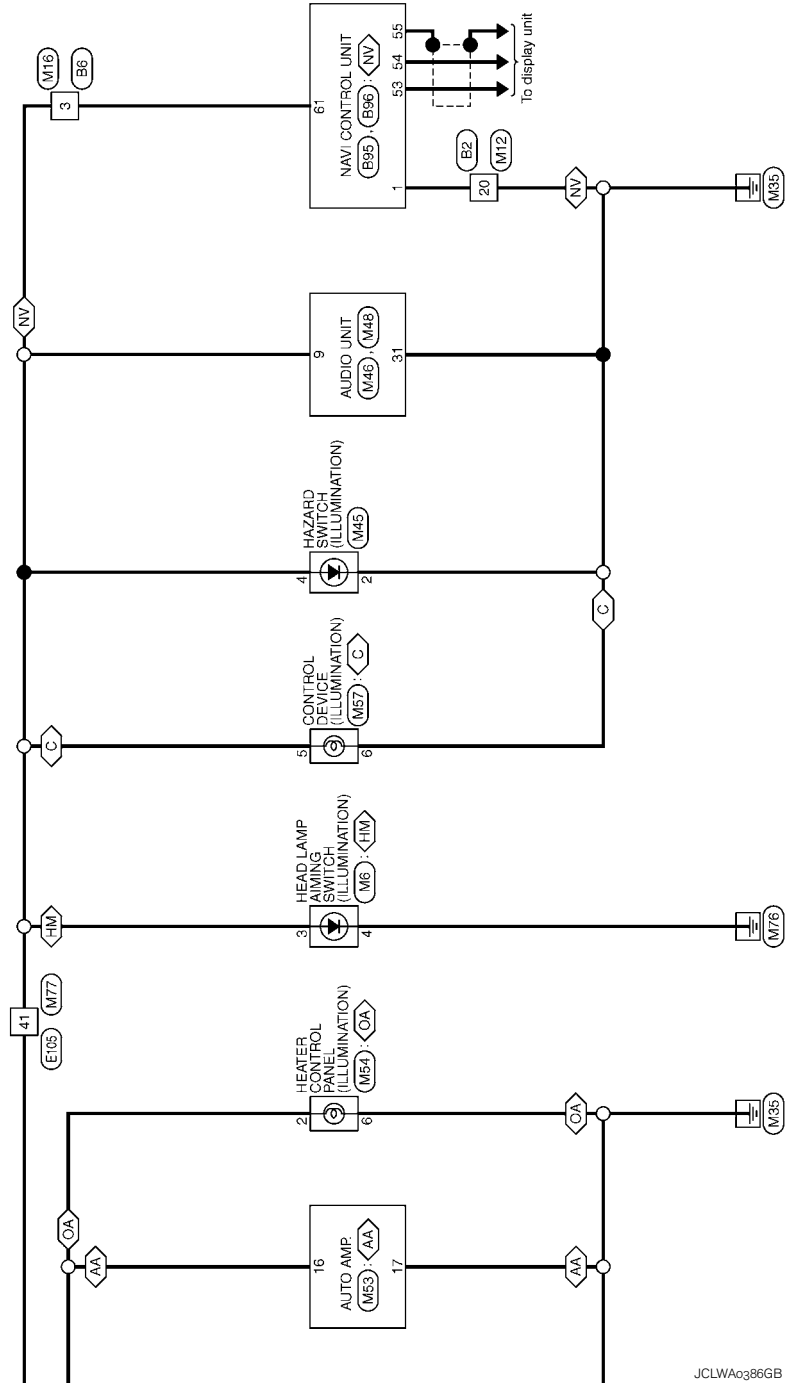


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ILLUMINATION

< COMPONENT DIAGNOSIS >

- C : With CVT
- AA : With auto A/C
- OA : Without auto A/C
- HM : With headlamp manual aiming
- NV : With navigation system



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ILLUMINATION

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH24MW



Terminal No.	20
Color of Wire	B
Signal Name [Specification]	—

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH24MW



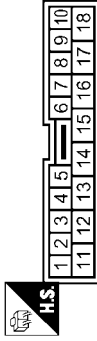
Terminal No.	4
Color of Wire	R/L
Signal Name [Specification]	—

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	TH12MW



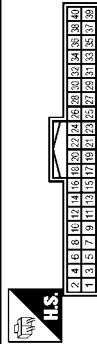
Terminal No.	3
Color of Wire	R/L
Signal Name [Specification]	—

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH10MW-NSS



Terminal No.	4
Color of Wire	R/L
Signal Name [Specification]	—

Connector No.	B35
Connector Name	NAVI CONTROL UNIT
Connector Type	TH40PW



Terminal No.	1
Color of Wire	B
Signal Name [Specification]	GNL

Connector No.	B36
Connector Name	NAVI CONTROL UNIT
Connector Type	TH32PW



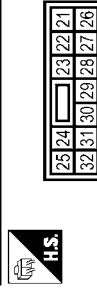
Terminal No.	53
Color of Wire	W
Signal Name [Specification]	COMM (CONT->DISP)
Terminal No.	54
Color of Wire	O
Signal Name [Specification]	COMM (DISP->CONT)
Terminal No.	55
Color of Wire	SHIELD
Signal Name [Specification]	ILLUMINATION
Terminal No.	81
Color of Wire	R/L

Connector No.	E10
Connector Name	IPSW L R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	MOF8-LG



Terminal No.	5
Color of Wire	B
Signal Name [Specification]	—
Terminal No.	6
Color of Wire	B
Signal Name [Specification]	—

Connector No.	E12
Connector Name	IPSW L R INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	NS12PW-CS



Terminal No.	28
Color of Wire	L
Signal Name [Specification]	—
Terminal No.	29
Color of Wire	P
Signal Name [Specification]	—

ILLUMINATION

Connector No.	E13
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS16FW-CS



39 38 37 36	35 34 33
48 47 46 45 44 43 42 41 40	

Terminal No.	Color of Wire	Signal Name [Specification]
38	R/L	-
47	R/L	-

Connector No.	E101
Connector Name	WIRE TO WIRE
Connector Type	TK10FW-NS8



10 9 8 7 6	5 4 3 2 1
18 17 16 15 14 13 12 11	

Terminal No.	Color of Wire	Signal Name [Specification]
4	R/L	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	T1-60MW-NS16-TM4



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	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Terminal No.	Color of Wire	Signal Name [Specification]
41	R/L	-
49	P	-
50	L	-
75	Y	-

Connector No.	M5
Connector Name	ESP OFF SWITCH
Connector Type	TK08FGY



6	5	4	3	2	1
---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name [Specification]
3	R	-
4	B	-

Connector No.	M6
Connector Name	HEADLAMP AIMING SWITCH
Connector Type	A04FW



2	1	3	4
---	---	---	---

Terminal No.	Color of Wire	Signal Name [Specification]
3	R	-
4	B	-

Connector No.	M7
Connector Name	DOOR MIRROR REMOTE CONTROL SWITCH
Connector Type	NS10FW-CS



4	5	6	7
1	8	2	10
3	9		

Terminal No.	Color of Wire	Signal Name [Specification]
1	B	-
10	R	-

Connector No.	M8
Connector Name	4WD MODE SWITCH
Connector Type	T1-08FW



5	6	7	8
1	2	3	4

Terminal No.	Color of Wire	Signal Name [Specification]
4	B	-
7	R	-

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Type	T1424FW



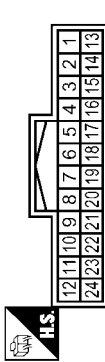
12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name [Specification]
20	B	-

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ILLUMINATION

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH24FW



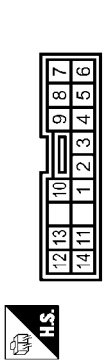
Terminal No.	Color of Wire	Signal Name [Specification]
4	R	—

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Type	TH12FW



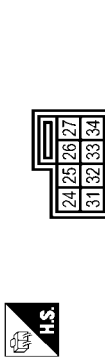
Terminal No.	Color of Wire	Signal Name [Specification]
3	R	—

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TK16FW



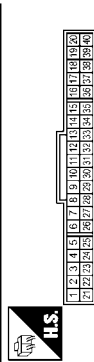
Terminal No.	Color of Wire	Signal Name [Specification]
1	V	INPUT1
2	G	INPUT2
3	L	INPUT3
4	GR	INPUT4
5	BR	INPUT5
6	P	OUTPUT1
7	R	OUTPUT2
8	W	OUTPUT5
9	Y	OUTPUT4
10	LG	OUTPUT3

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08FGY-1V



Terminal No.	Color of Wire	Signal Name [Specification]
27	W/L	—
31	B	—

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAG4FW



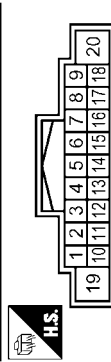
Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	BAT
2	GR	IGN
3	B	GND
4	B	GND(ILLUM)
21	L	CAN-H
22	P	CAN-L
23	B	GND

Connector No.	M45
Connector Name	HAZARD SWITCH
Connector Type	CINCH REF 4830E(V4M9) (WHITE)



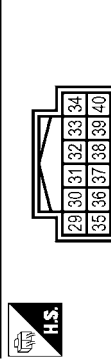
Terminal No.	Color of Wire	Signal Name [Specification]
2	B	—
4	R	—

Connector No.	M46
Connector Name	AUDIO UNIT
Connector Type	TH16FW-C52



Terminal No.	Color of Wire	Signal Name [Specification]
9	R	ILLUMINATION

Connector No.	M48
Connector Name	AUDIO UNIT
Connector Type	TH12FW



Terminal No.	Color of Wire	Signal Name [Specification]
31	O	TEL VOICE SIGNAL (-) (With navigation system)
31	B	CONTROL SIGNAL (Without navigation system)

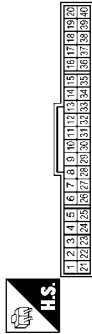
ILLUMINATION

Connector No.	M52
Connector Name	HIGH-LEVEL VENT SWITCH
Connector Type	GINCH 48302EV4M5



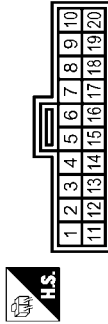
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	—
2	B	—

Connector No.	M53
Connector Name	AUTO AMP.
Connector Type	SAB40FW



Terminal No.	Color of Wire	Signal Name [Specification]
16	R	ILL+
17	B	GND

Connector No.	M54
Connector Name	HEATER CONTROL PANEL
Connector Type	TK20FGY



Terminal No.	Color of Wire	Signal Name [Specification]
2	R	—
6	B	—

Connector No.	M55
Connector Name	HEATED SEAT SWITCH LH
Connector Type	MOLEX 98172-1005 (BROWN)

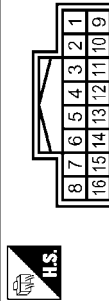


Terminal No.	Color of Wire	Signal Name [Specification]
1	R	—
5	B	—

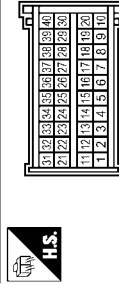
Connector No.	M56
Connector Name	HEATED SEAT SWITCH RH
Connector Type	MOLEX 98172-1002 (BLACK)



Connector No.	M57
Connector Name	CONTROL DEVICE
Connector Type	TH18FW



Connector No.	M55
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	JAB4UFB



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	—
5	B	—

Terminal No.	Color of Wire	Signal Name [Specification]
1	P	COMBI SW OUTPUT 1
2	Y	COMBI SW OUTPUT 4
3	LG	COMBI SW OUTPUT 3
4	R	COMBI SW OUTPUT 2
5	W	COMBI SW OUTPUT 5
19	L	CAN-H
20	P	CAN-L
31	BR	COMBI SW INPUT 5
32	G	COMBI SW INPUT 2
33	V	COMBI SW INPUT 1
34	GR	COMBI SW INPUT 4

35	L	COMBI SW INPUT 3
37	R	ACC SW
38	W/L	IGN SW

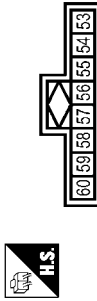
ILLUMINATION

Connector No.	M86
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC122S1017



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(FUSE)

Connector No.	M87
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC083S017



Terminal No.	Color of Wire	Signal Name [Specification]
55	B	GND(POWER)
57	Y	BAT(F/L)

Connector No.	M73
Connector Name	GLOVE BOX LAMP
Connector Type	WBS-1006N



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	B	-

Connector No.	M77
Connector Name	WIPE TO WIRE
Connector Type	TH40PW-NS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
41	R	-
49	P	-
50	L	-
76	Y	-

Connector No.	M89
Connector Name	DOOR LOCK AND UNLOCK SWITCH
Connector Type	7703197874



Terminal No.	Color of Wire	Signal Name [Specification]
3	R	-
5	B	-

Connector No.	M852
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08MGY-X



Terminal No.	Color of Wire	Signal Name [Specification]
17	-	-
21	-	-

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000001116336

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
ACC ON SW	Ignition switch OFF		OFF
	Ignition switch ACC or ON		ON
AIR COND SW	A/C switch OFF		OFF
	A/C switch ON		ON
AUT LIGHT SYS	Outside of the room is dark		OFF
	Outside of the room is bright		ON
AUTO LIGHT SW	Lighting switch OFF		OFF
	Lighting switch AUTO		ON
BACK DOOR SW	Back door closed		OFF
	Back door opened		ON
BATTERY VOLT NOTE: Diesel engine models only	Ignition switch ON		Approximately the same as power supply voltage
BUCKLE SW	Driver's seat belt unfastened		OFF
	Driver's seat belt fastened		ON
CDL LOCK SW	Door lock/unlock switch does not operate		OFF
	Press door lock/unlock switch to the LOCK side		ON
CDL UNLOCK SW	Door lock/unlock switch does not operate		OFF
	Press door lock/unlock switch to the UNLOCK side		ON
DOOR SW-AS	Passenger door closed		OFF
	Passenger door opened		ON
DOOR SW-DR	Driver door closed		OFF
	Driver door opened		ON
DOOR SW-RL	Rear LH door closed		OFF
	Rear LH door opened		ON
DOOR SW-RR	Rear RH door closed		OFF
	Rear RH door opened		ON
ELEC PWR CUT NOTE: Diesel engine models only	Engine running	Fan switch ON (when engine coolant is cool) NOTE: Depending on the ambient temperature, battery voltage, etc.	OFF
		The current status maintained with the signal from ECM received.	FREEZ
		- Fan switch OFF - Fan switch ON after engine warming UP NOTE: Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
ENG COOLNT T NOTE: Diesel engine models only	Engine running	Approximately the same as water temperature gauge reading
ENGINE RPM NOTE: Diesel engine models only	Engine running	Approximately the same as tachometer reading
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
ENGINE STATUS NOTE: Diesel engine models only	Engine stopped	STOP
	While the engine stalls	STALL
	Engine running	RUN
	At engine cranking	CRA
FAN ON SIG	Fan switch OFF	OFF
	Fan switch ON	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
HEAD LAMP SW 1	Lighting switch OFF	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Lighting switch OFF	OFF
	Lighting switch 2ND	ON
HI BEAM SW	Lighting switch OFF	OFF
	Lighting switch HI	ON
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	OFF
	Open the hood	ON
H/L WASH SW	NOTE: The item is indicated, but not monitored	OFF
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
IGN SW CAN	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
I-KEY LOCK	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF
	UNLOCK button of Intelligent Key is pressed	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
KEYLESS LOCK	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	ON
LIT-SEN FAIL	Light & rain sensor is in normal condition	OK
	Light & rain sensor is with internal error	NOTOK
OIL PRESS SW	- Ignition switch OFF or ACC - Engine running	OFF
	Ignition switch ON	ON
OUT SIDE TEMP NOTE: Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
PUSH SW	Return to ignition switch to LOCK position	OFF
	Press ignition switch	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RKE LOCK AND UN-LOCK	NOTE: The item is indicated, but not monitored	OFF
		ON
RR FOG SW	Rear fog lamp switch OFF	OFF
	Rear fog lamp switch ON	ON
RR WASHER SW	Rear washer switch OFF	OFF
	Rear washer switch ON	ON
RR WIPER INT	Rear wiper switch OFF	OFF
	Rear wiper switch INT	ON
RR WIPER ON	Rear wiper switch OFF	OFF
	Rear wiper switch ON	ON
RR WIPER STOP	Rear wiper stop position	OFF
	Other than rear wiper stop position	ON
SHOCK SENSOR	Ignition switch ON	NOMAL
	After the reception of air bag deployment signal from air bag diagnosis sensor unit	OFF
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	ON
TAIL LAMP SW	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	ON

A

B

C

D

E

F

G

H

I

J

K

INL

M

N

O

P

BCM (BODY CONTROL MODULE)

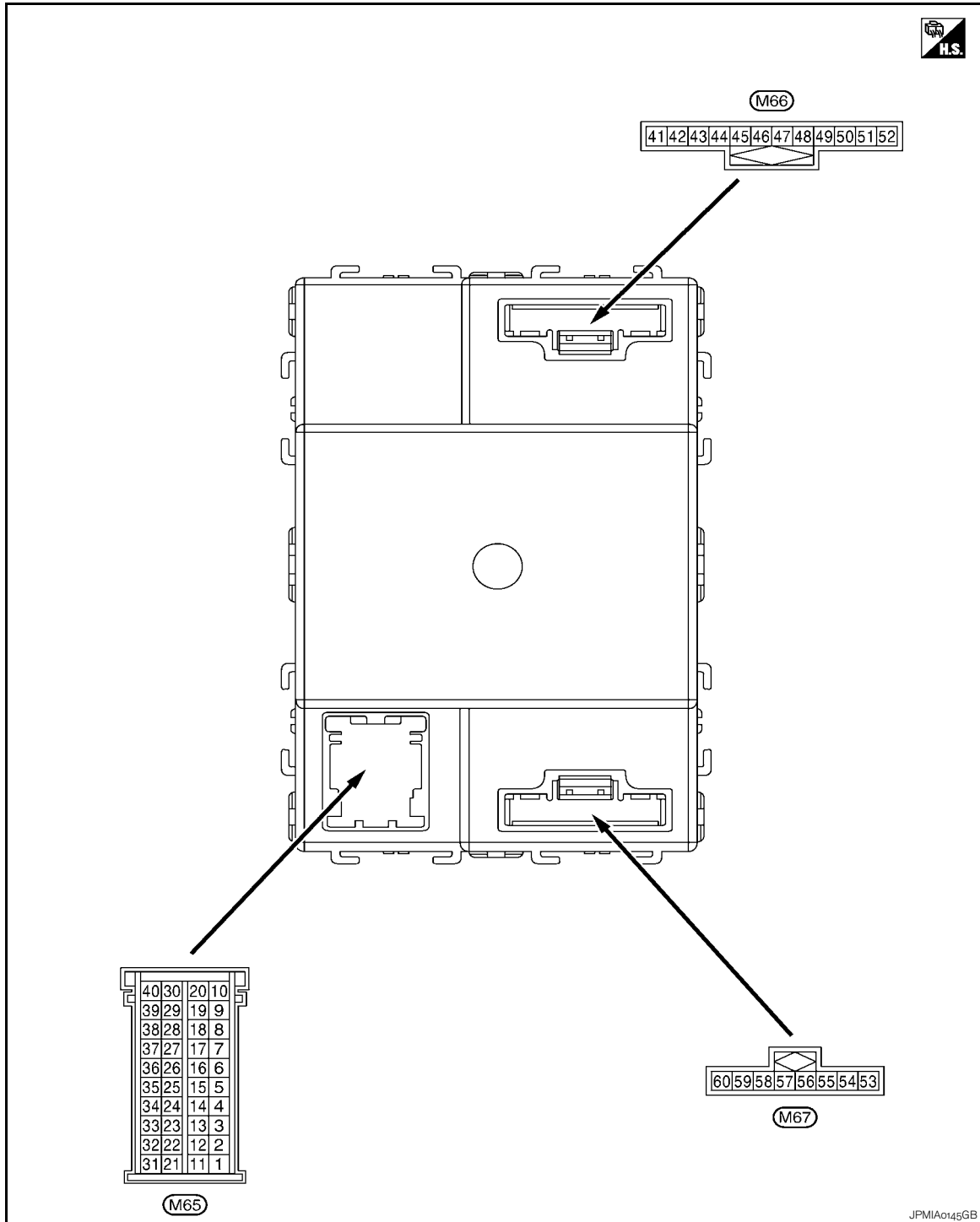
< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TURN SIGNAL L	Turn signal switch OFF	OFF
	Turn signal switch LH	ON
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
UNLOCK WITH DR	NOTE: The item is indicated, but not monitored	OFF
		ON
UNLOCK SHOCK	Other than the following	OFF
	During the unlock operation interlocked with air bag	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

TERMINAL LAYOUT



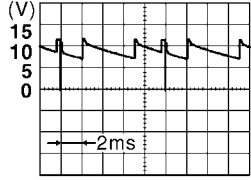
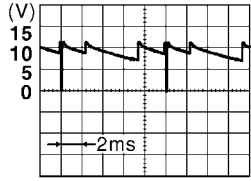
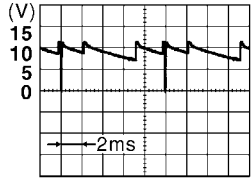
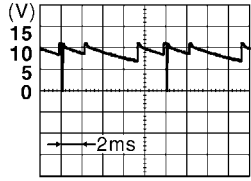
PHYSICAL VALUES

CAUTION:

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT -III. Refer to [BCS-26, "COMB SW : CONSULT-III Function \(BCM - COMB SW\)"](#).
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to [BCS-7, "System Description"](#).

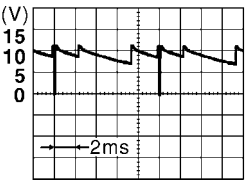
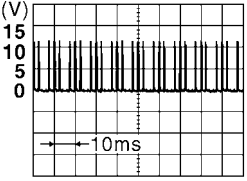
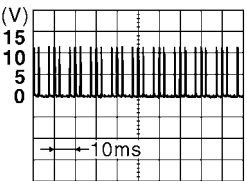
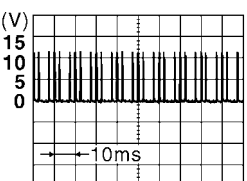
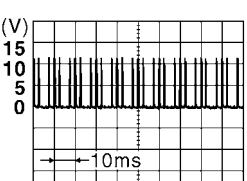
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 9.1 V
					Rear wiper switch INT (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 • Wiper intermittent dial 6 • Wiper intermittent dial 7	
2 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 2ND	 9.3 V
					Lighting switch PASS	
					Front fog lamp switch ON	
					Turn signal switch LH	
3 (LG)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch AUTO	 9.3 V
					Rear fog lamp switch OFF	
					Front wiper switch MIST	
					Front wiper switch INT	
					Front wiper switch LO	
4 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 9.1 V
					Rear wiper switch ON (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 5 • Wiper intermittent dial 6	

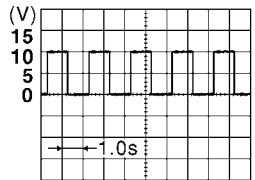
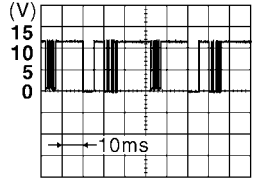
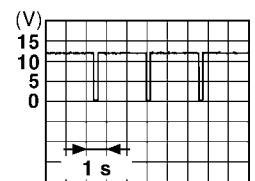
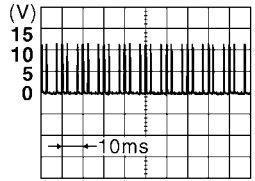
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
5 (W)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	
					Lighting switch 2ND	
					Lighting switch HI	
					Turn signal switch RH	9.1 V
7 (P)	Ground	Door lock/unlock switch (Lock)	Output	Door lock/un- lock switch	Not pressed	 1.2 V
					Pressed to the lock side	0 V
8 (LG)	Ground	Hazard switch	Output	Hazard switch	Not pressed	 1.3 V
					Pressed	0 V
9 (BR)	Ground	Door lock/unlock switch (Unlock)	Output	Door lock/un- lock switch	Not pressed	 1.2 V
					Pressed to the unlock side	0 V
12 (P)	Ground	Back door opener switch	Output	Back door opener switch	Not pressed	 1.2 V
					Pressed	0 V

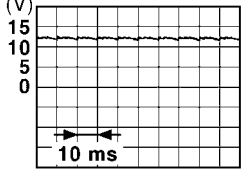
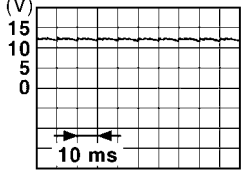
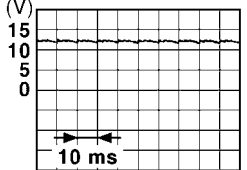
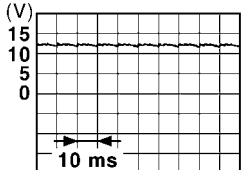
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
13 (R)	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		 6.0 V JPMIA0155GB
14 (L/R)	Ground	A/C switch	Output	A/C switch	Not pressed	Battery voltage
					Pressed	0 V
15 (LG/B)	Ground	Fan switch	Output	Fan switch	Not pressed	Battery voltage
					Pressed	0 V
16 (GR)	Ground	Alarm link	Input	—		—
17 (BR)	Ground	Light & rain sensor serial link	Output	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		 8.7 V JPMIA0156GB
18 (SB)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 10.3 V JPMIA0014GB
					OFF	Battery voltage
19 (L)	—	CAN-H	Input/ Output	—		—
20 (P)	—	CAN-L	Input/ Output	—		—
21 (SB)	Ground	Rear window defog- ger switch	Output	Rear window defogger switch	Not pressed	 1.1 V JPMIA0154GB
					While pressing	0 V

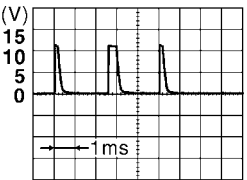
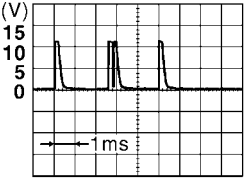
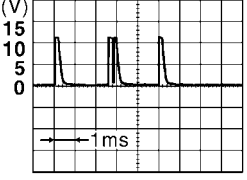
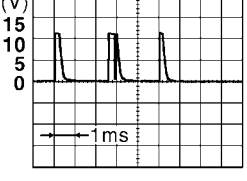
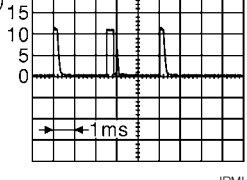
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
24 (GR)	Ground	Door lock status indicator	Output	Door lock status indicator	ON	Battery voltage
					OFF	0 V
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	 11.2 V
					ON (When rear door LH opened)	0 V
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 11.2 V
					ON (When driver door opened)	0 V
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 11.2 V
					ON (When passenger door opened)	0 V
28 (G)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	Battery voltage
					ON (When back door opened)	0 V
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	 11.2 V
					ON (When rear door RH opened)	0 V
30 (SB)	Ground	Audio link	Output	—	—	—

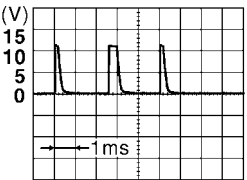
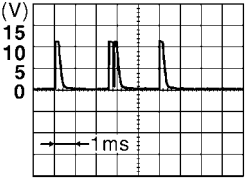
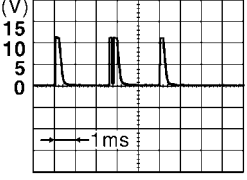
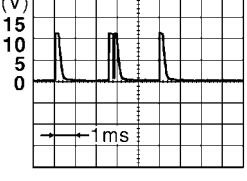
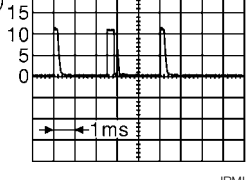
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
31 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)  1.3 V
					Front fog lamp switch ON (Wiper intermittent dial 4)  1.3 V
					Rear fog lamp switch ON (Wiper intermittent dial 4)  1.3 V
					Rear wiper switch ON (Wiper intermittent dial 4)  1.3 V
					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  1.3 V

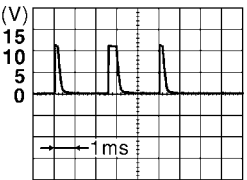
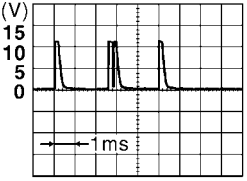
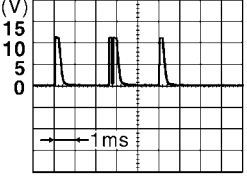
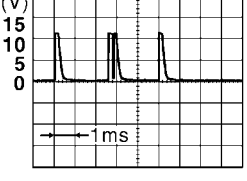
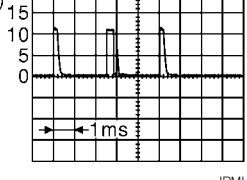
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF  1.4 V
					Lighting switch PASS  1.3 V
					Lighting switch 2ND  1.3 V
					Front wiper switch INT  1.3 V
					Front wiper switch HI  1.3 V

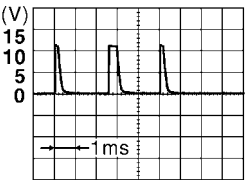
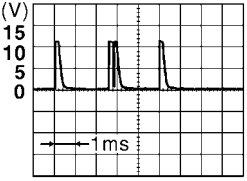
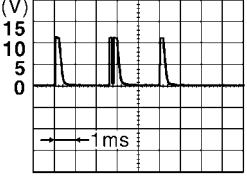
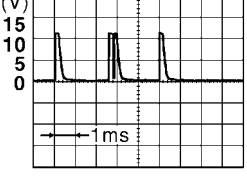
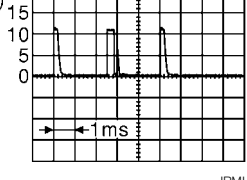
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
33 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	 JPMIAor165GB 1.4 V
					 JPMIAor167GB 1.3 V
					 JPMIAor166GB 1.3 V
					 JPMIAor168GB 1.3 V
					 JPMIAor196GB 1.3 V

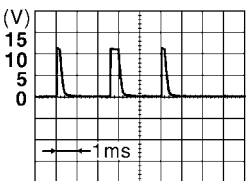
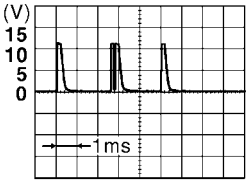
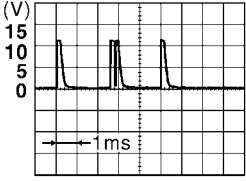
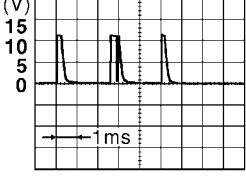
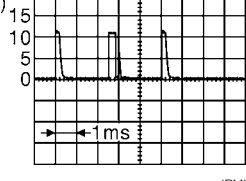
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)  JPMIA0165GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)  JPMIA0167GB 1.3 V
					Lighting switch 1ST (Wiper intermittent dial 4)  JPMIA0166GB 1.3 V
					Rear wiper INT (Wiper intermittent dial 4)  JPMIA0167GB 1.3 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 6  JPMIA0196GB 1.3 V

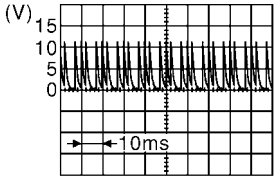
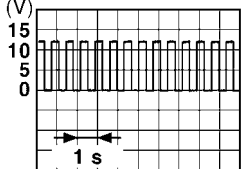
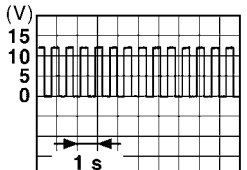
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
35 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIAor165GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIAor166GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIAor167GB 1.3 V
					Rear wiper switch ON	 JPMIAor169GB 1.3 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIAor196GB 1.3 V
36 (V)	Ground	Key switch	Output	Insert mechanical key into ignition key cylinder	Battery voltage	
				Remove mechanical key from ignition key cylinder	0 V	
37 (R)	Ground	ACC power supply	Output	Ignition switch OFF	0 V	
				Ignition switch ACC or ON	Battery voltage	
38 (W/L)	Ground	Ignition power supply	Output	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	Battery voltage	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
41 (V)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
42 (V)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0 V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
43 (L)	Ground	Rear wiper motor	Output	Rear wiper switch OFF		0 V
				Rear wiper switch ON		Battery voltage
44 (L/W)	Ground	Rear wiper auto stop	Output	Ignition switch ON	Rear wiper stop position	0 V
					Any position other than rear wiper stop position	 JPMIA0197GB
45 (GR)	Ground	Back door lock actuator	Output	Back door opener switch	Pressed	Battery voltage (300ms)
					Not pressed	0 V
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
48 (G/B)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
49 (Y)	Ground	Rear fog lamp	Output	Lighting switch 1ST and front fog lamp switch ON	Rear fog lamp switch OFF	0 V
					Rear fog lamp switch ON	Battery voltage
51 (R/W)*1 (R)*2	Ground	Stop lamp switch	Output	Depress the brake pedal		Battery voltage
				Release the brake pedal		0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
52 (R)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
53 (L)	Ground	Power window power supply	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
54 (O)	Ground	Door unlock (All)	Output	Door lock/unlock switch	Pressed to the unlock side	Battery voltage
					Pressed to the lock side	0 V
55 (B)	Ground	Ground	—	Ignition switch ON		0 V
56 (Y) ^{*1} (SB) ^{*2}	Ground	Door lock (All)	Output	Door lock/unlock switch	Pressed to the unlock side	0 V
					Pressed to the lock side	Battery voltage
57 (Y)	Ground	Battery power supply	Output	Ignition switch OFF		Battery voltage
58 (P)	Ground	Power window power supply	Output	Ignition switch OFF		Battery voltage
59 (BR)	Ground	Super lock	Output	When lock button of key fob or Intelligent Key is not pressed		0 V
				When lock button of key fob or Intelligent Key is pressed		Battery voltage
60 (GR)	Ground	Driver door unlock	Output	Door lock/unlock switch	Pressed to the unlock side	Battery voltage
					Pressed to the lock side	0 V

*1: With Intelligent Key system

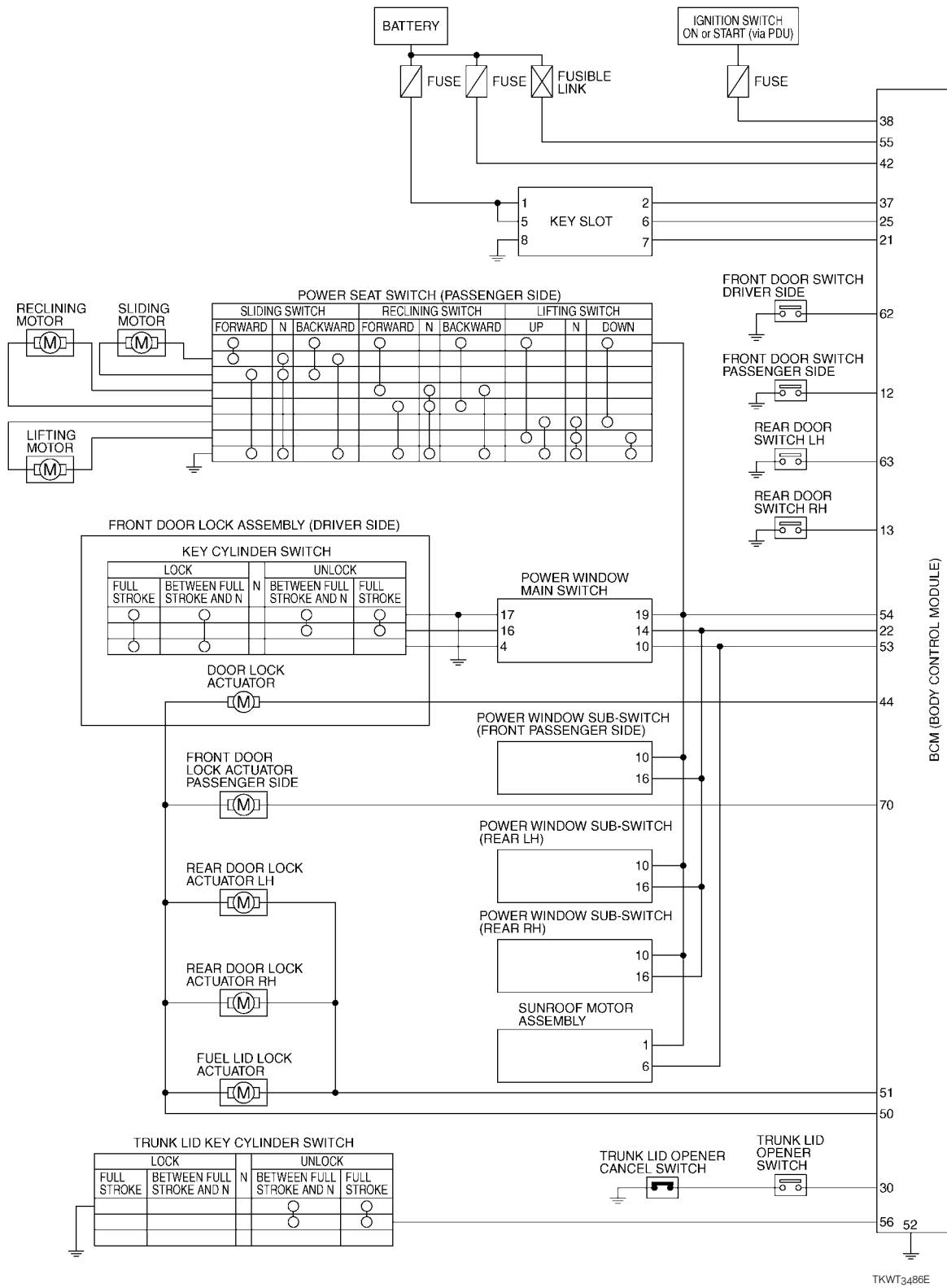
*2: Without Intelligent Key system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

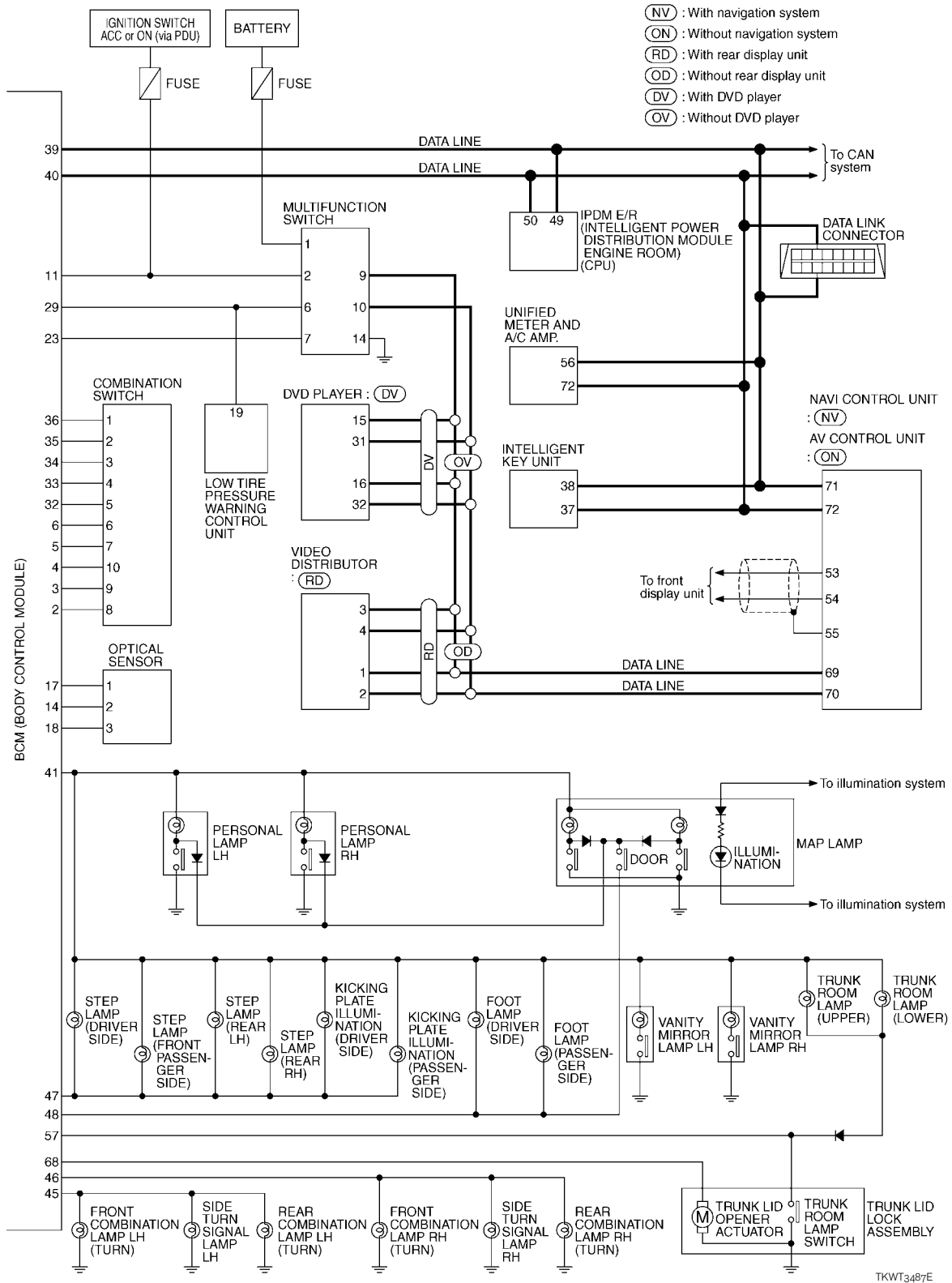
Wiring Diagram - BCM -

INFOID:000000001116337



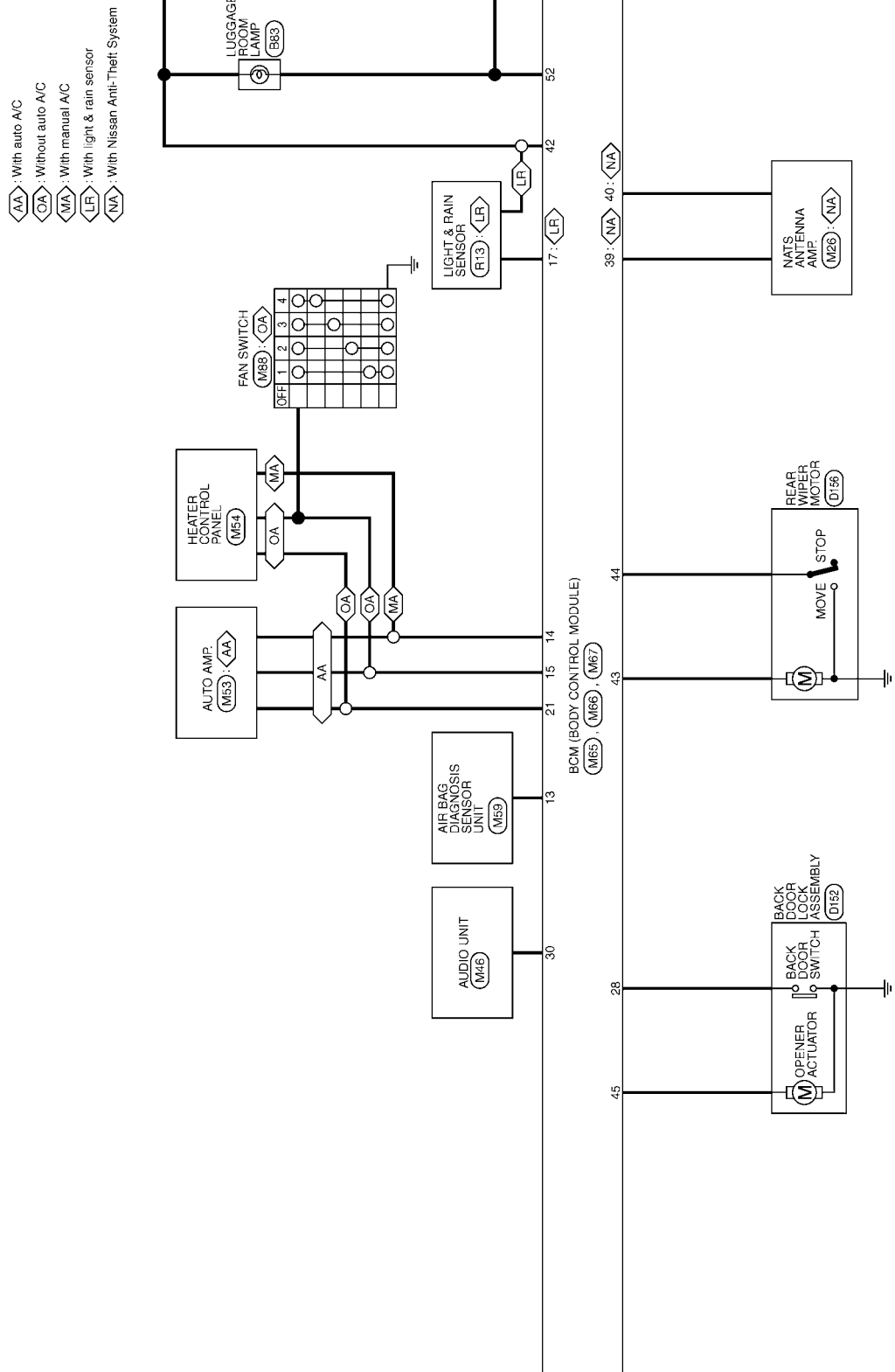
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



BCM (BODY CONTROL MODULE)

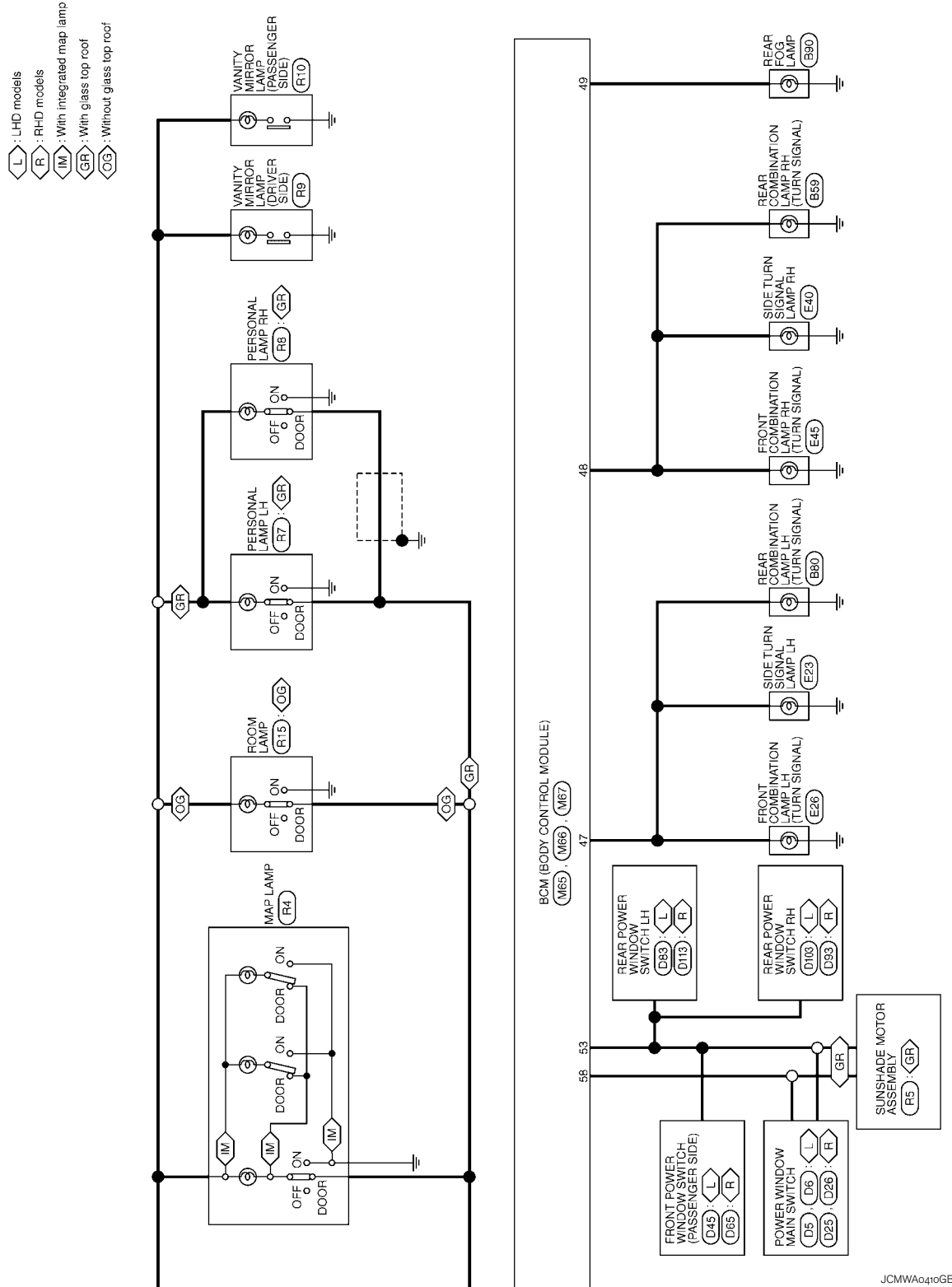
< ECU DIAGNOSIS >



JCMW0409GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



JCMWA0410GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TK16FW



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

Terminal No.	Color of Wire	Signal Name [Specification]
1	V	INPUT1
2	G	INPUT2
3	L	INPUT3
4	GR	INPUT4
5	BR	INPUT5
6	P	OUTPUT1
7	R	OUTPUT2
8	W	OUTPUT5
9	Y	OUTPUT4
10	LG	OUTPUT3

Connector No.	M67
Connector Name	BOM (BODY CONTROL MODULE)
Connector Type	FCI 211PC38S0017



60	69	58	57	56	55	54	53
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Terminal No.	Color of Wire	Signal Name [Specification]
53	L	POWER WDW PWR SUPPLY (LINKED TO IGN)
54	O	DOOR UNLOCK OUTPUT (OTHER)
55	B	GRND/POWER
56	Y	DOOR LOCK OUTPUT (ALL (With Intelligent Key))
56	SB	DOOR LOCK OUTPUT (ALL (Without Intelligent Key))
57	Y	BAT(F/L)
58	P	POWER WDW PWR SUPPLY (BAT)
59	BR	SUPER LOCK SET OUTPUT
60	GR	UNLOCK (DR)

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AA840FB



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

Terminal No.	Color of Wire	Signal Name [Specification]
1	P	COMBI SW OUTPUT 1
2	Y	COMBI SW OUTPUT 4
3	LG	COMBI SW OUTPUT 3
4	R	COMBI SW OUTPUT 2
5	W	COMBI SW OUTPUT 5
7	P	LOCK/UNLOCK SW (LOCK)
8	LG	HAZARD SW
9	BR	LOCK/UNLOCK SW (UNLOCK)
12	P	TRUNK/BACK DOOR OPEN SW
13	R	SHOCK DETECT SIG
14	L/R	A/C SW

15	LG/B	BLOWER FAN SW
16	GR	ALARM LINK
17	BR	LIGHT & RAIN SENS
18	SB	SECURITY INDICATOR
19	L	CAN-H
20	P	CAN-L
21	SB	REAR DEFOGGER SW
24	GR	DOOR LOCK STATUS IND
25	GR	DOOR SW (RL)
26	R	DOOR SW (DR)
27	BR	DOOR SW (LS)
28	G	DOOR SW (BACK)
28	LG	DOOR SW (RR)
30	SB	AUDIO LINK
31	BR	COMBI SW INPUT 5
32	G	COMBI SW INPUT 2
33	V	COMBI SW INPUT 1
34	GR	COMBI SW INPUT 4
35	L	COMBI SW INPUT 3
36	V	KEY SW
37	R	ACC SW
38	W/L	IGN SW
39	P	NATS ANTENNA AMP
40	LG	NATS ANTENNA AMP

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC123S017



62	51	50	49	48	47	46	45	44	43	42	41
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Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(FUSE)
42	V	ROOM LAMP POWER SUPPLY
43	L	REAR WIPER MOTOR OUTPUT
44	L/W	REAR WIPER AUTO STOP
45	GR	BACK DOOR OPENER
47	G/Y	FLASHER OUTPUT (LEFT)
48	G/B	FLASHER OUTPUT (RIGHT)
49	Y	REAR FOG LAMP
51	R/W	STOP LAMP SW (With Intelligent Key)
51	R	STOP LAMP SW (Without Intelligent Key)
52	R	ROOM LAMP OUTPUT

Fail Safe

Fail-safe index

BCM performs fail-safe control when any DTC listed below is detected.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	- Inhibits engine cranking - Inhibits steering lock unlocking (Intelligent Key unit) - Fuel cut (ECM)	Erase DTC
B2191: DIFFERENCE OF KEY	- Inhibits engine cranking - Inhibits steering lock unlocking (Intelligent Key unit) - Fuel cut (ECM)	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	- Inhibits engine cranking - Inhibits steering lock unlocking (Intelligent Key unit) - Fuel cut (ECM)	Erase DTC
B2195: ANTI SCANNING	- Inhibits engine cranking - Inhibits steering lock unlocking (Intelligent Key unit) - Fuel cut (ECM)	Erase DTC
B2196: DONGLE NG	- Inhibits engine cranking - Inhibits steering lock unlocking (Intelligent Key unit) - Fuel cut (ECM)	Erase DTC

REAR WIPER CONTROL

BCM detects a rear wiper stopping position according to a rear wiper auto stop signal.

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Auto stop signal
ON	OFF	Rear wiper stop position signal cannot be input 5 seconds.
	ON	The signal does not change for 5 seconds.

NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

Auto Light Control

Headlamp is turned ON.

Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

DTC Inspection Priority Chart

INFOID:0000000001116339

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Priority	DTC
1	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
2	- B2190: NATS ANTENNA AMP - B2191: DIFFERNCE OF KEY - B2192: ID DISCORD BCM-ECM - B2193: CHAIN OF BCM-ECM - B2194: DISCORD BCM-I-KEY - B2195: ANTI SCANNING - B2196: DONGLE NG

DTC Index

INFOID:000000001116340

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.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 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	TIME		Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	0	1 - 39	—	BCS-32
U1010: CONTROL UNIT (CAN)	0	1 - 39	—	BCS-33
B2190: NATS ANTENNA AMP	CRNT	PAST	×	- With Intelligent Key system SEC-33 - Without Intelligent Key system SEC-174
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	- With Intelligent Key system SEC-35 - Without Intelligent Key system SEC-176
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	- With Intelligent Key system SEC-36 - Without Intelligent Key system SEC-177
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	- With Intelligent Key system SEC-38 - Without Intelligent Key system SEC-178
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	SEC-39
B2195: ANTI SCANNING	CRNT	PAST	×	- With Intelligent Key system SEC-179 - Without Intelligent Key system SEC-179
B2196: DONGLE NG	CRNT	PAST	×	- With Intelligent Key system SEC-41 - Without Intelligent Key system SEC-180

INTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:000000001033401

CAUTION:

Perform the self-diagnosis with CONSULT-III before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom	Possible cause	Inspection item
All the following lamps do not turn ON. • Map lamp • Room lamp • Personal lamp • Luggage room lamp • Vanity mirror lamp	• Harness between BCM and each interior room lamp • BCM	Interior room lamp power supply circuit Refer to INL-20.
• Interior room lamp does not turn ON even though the door is open. (It turns ON when turning the interior room lamp ON.) • Interior room lamp does not turn OFF even though the door is closed.	• Harness between BCM and each door switch • Harness between BCM and each interior room lamp • BCM	Door switch circuit Refer to the following. WITH I-KEY, WITHOUT SUPER LOCK • Driver side: DLK-83 • Passenger side: DLK-84 • Rear LH: DLK-86 • Rear RH: DLK-87 • Back door: DLK-89 WITH I-KEY & SUPER LOCK • Driver side: DLK-347 • Passenger side: DLK-348 • Rear LH: DLK-350 • Rear RH: DLK-351 • Back door: DLK-353 WITHOUT I-KEY & SUPER LOCK • Driver side: DLK-589 • Passenger side: DLK-590 • Rear LH: DLK-592 • Rear RH: DLK-593 • Back door: DLK-595 WITHOUT I-KEY, WITH SUPER LOCK • Driver side: DLK-749 • Passenger side: DLK-750 • Rear LH: DLK-752 • Rear RH: DLK-753 • Back door: DLK-755 Interior room lamp control circuit Refer to INL-22.
Interior room lamp timer does not activate. (It turns ON/ OFF when the door opens/closes.)	—	Check the interior room lamp setting. Refer to INL-15.
Interior room lamp battery saver does not activate.	—	Check the interior room lamp battery saver setting. Refer to INL-17.

cardiagn.com

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001078350

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 SRC and SB section of this Service Manual.

WARNING:

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

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INL

MAP LAMP

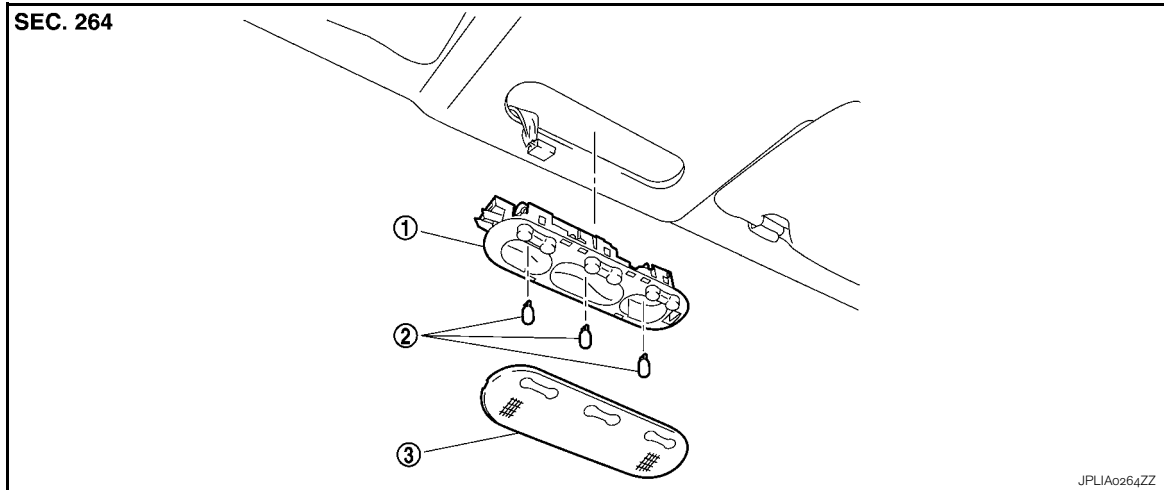
< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

MAP LAMP

Exploded View

INFOID:000000001033403



1. Map lamp bulb housing

2. Bulb

3. Lens

Removal and Installation

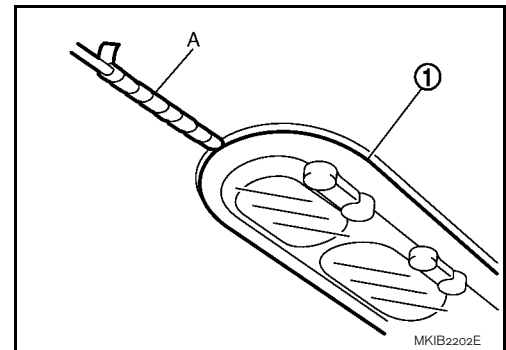
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CAUTION:

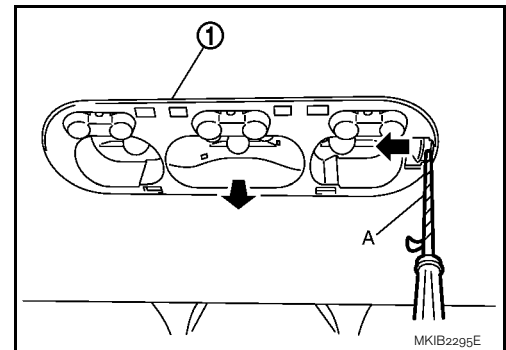
Disconnect the battery negative terminal or the fuse.

REMOVAL

1. Insert any appropriate tool (A) into the gap between the lens (1) and then remove the lens.



2. Press the pawl to the arrow direction (↩) with any appropriate tool (A). And then pull the map lamp bulb housing (1) to the arrow direction (↩).
3. Disconnect the connector, and remove the map lamp bulb housing.



INSTALLATION

Install in the reverse order of removal.

MAP LAMP

< ON-VEHICLE REPAIR >

Replacement

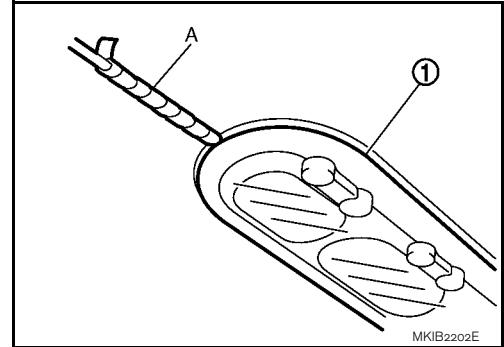
INFOID:000000001033405

CAUTION:

Disconnect the battery negative terminal or the fuse.

MAP LAMP BULB

1. Insert any appropriate tool (A) into the gap between the lens (1) and then remove the lens.
2. Remove the bulb.



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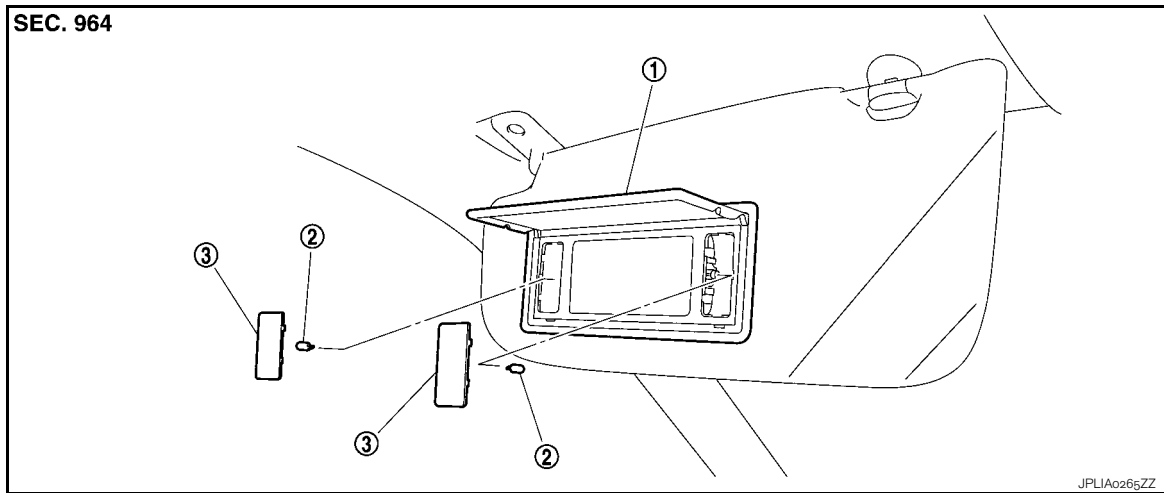
VANITY MIRROR LAMP

< ON-VEHICLE REPAIR >

VANITY MIRROR LAMP

Exploded View

INFOID:000000001033406



1. Vanity mirror assembly

2. Bulb

3. Lens

Replacement

INFOID:000000001033407

CAUTION:

Disconnect the battery negative terminal or the fuse.

VANITY MIRROR LAMP BULB

1. Insert any appropriate tool into the gap between the lens. Remove the lens.
2. Remove the bulb.

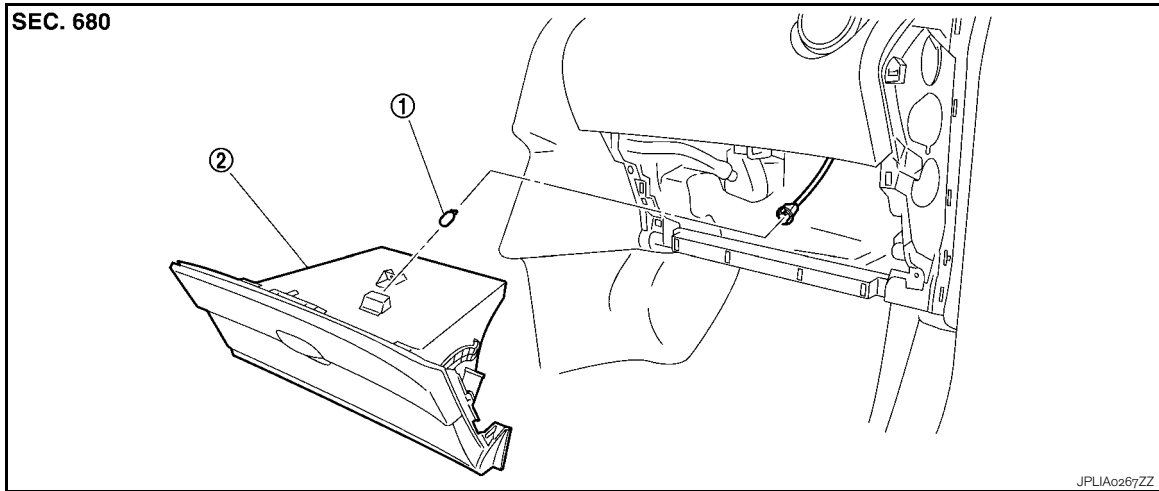
GLOVE BOX LAMP

< ON-VEHICLE REPAIR >

GLOVE BOX LAMP

Exploded View

INFOID:000000001033410



1. Bulb

2. Glove box

Replacement

INFOID:000000001033411

CAUTION:

Disconnect the battery negative terminal or the fuse.

GLOVE BOX LAMP BULB

1. Remove the glove box assembly. Refer to [IP-11, "Exploded View"](#).
2. Rotate the bulb socket counterclockwise and unlock it.
3. Remove the bulb.

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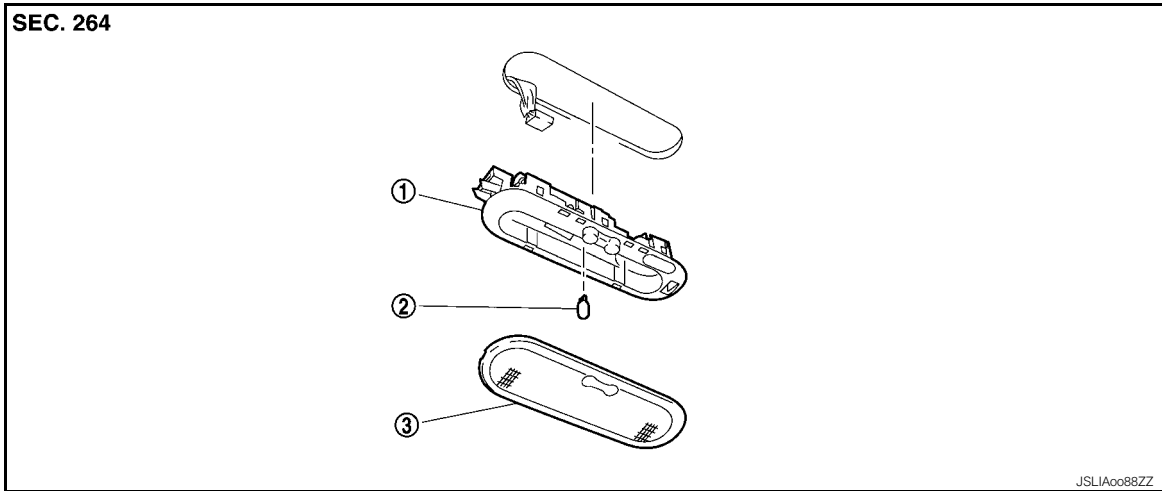
ROOM LAMP

< ON-VEHICLE REPAIR >

ROOM LAMP

Exploded View

INFOID:000000001080084



1. Room lamp bulb housing

2. Bulb

3. Lens

Removal and Installation

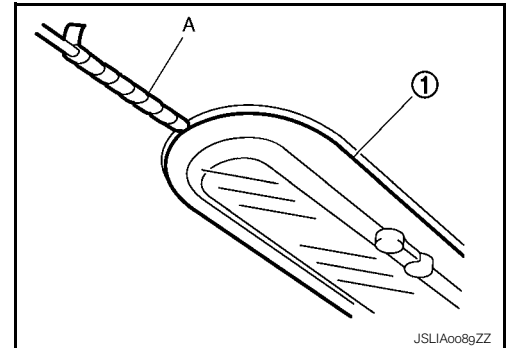
INFOID:000000001080085

CAUTION:

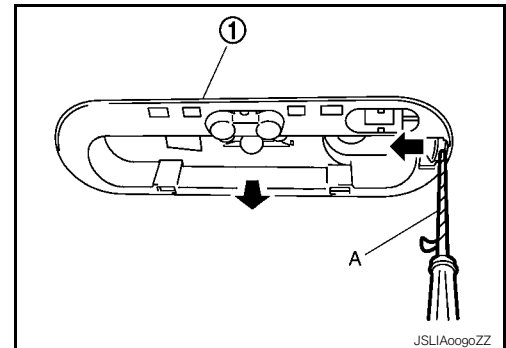
Disconnect the battery negative terminal or the fuse.

REMOVAL

1. Insert any appropriate tool (A) into the gap between the lens (1) and then remove the lens.



2. Press the pawl to the arrow direction (←) with any appropriate tool (A). And then pull the room lamp bulb housing (1) to the arrow direction (←).
3. Disconnect the connector, and remove the room lamp bulb housing.



INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:000000001080086

ROOM LAMP

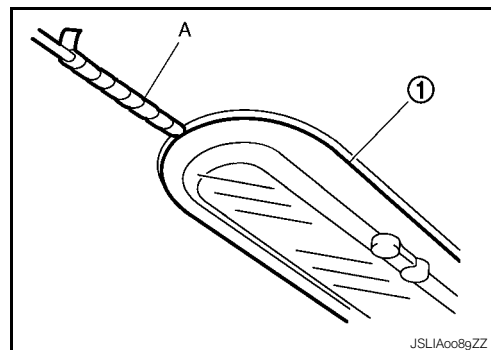
< ON-VEHICLE REPAIR >

CAUTION:

Disconnect the battery negative terminal or the fuse.

ROOM LAMP BULB

1. Insert any appropriate tool (A) into the gap between the lens (1) and then remove the lens.
2. Remove the bulb.



A

B

C

D

E

F

G

H

I

J

K

INL

M

N

O

P

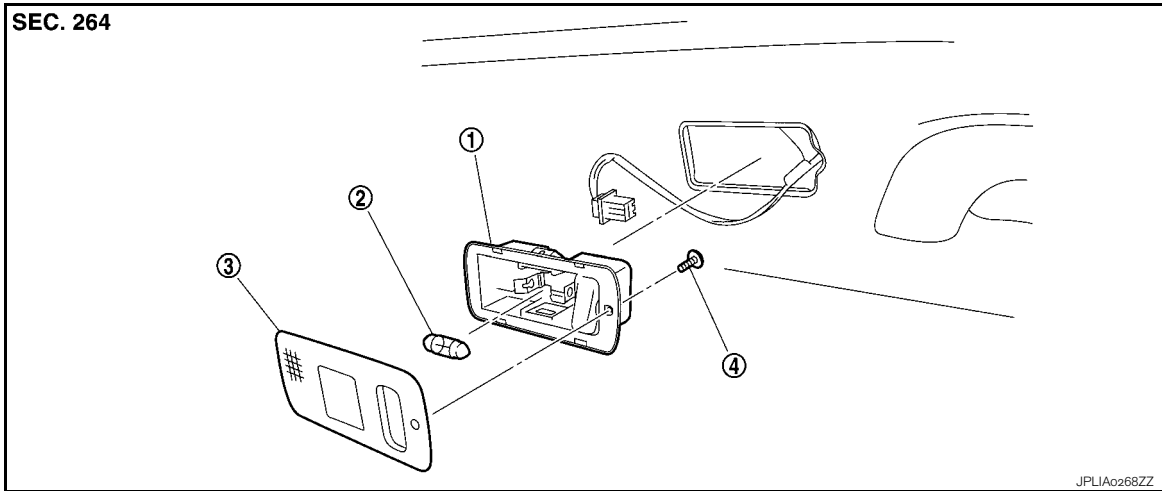
PERSONAL LAMP

< ON-VEHICLE REPAIR >

PERSONAL LAMP

Exploded View

INFOID:000000001033415



- | | | |
|--------------------------|---------|---------|
| 1. Personal lamp housing | 2. Bulb | 3. Lens |
| 4. Screw | | |

Removal and Installation

INFOID:000000001033416

CAUTION:

Disconnect the battery negative terminal or the fuse.

REMOVAL

1. Insert any appropriate tool into the gap between the personal lamp. Remove the personal lamp.
2. Disconnect the connector.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:000000001033417

CAUTION:

Disconnect the battery negative terminal or the fuse.

PERSONAL LAMP BULB

1. Remove the personal lamp.
2. Remove the screw, and remove the lens.
3. Remove the bulb.

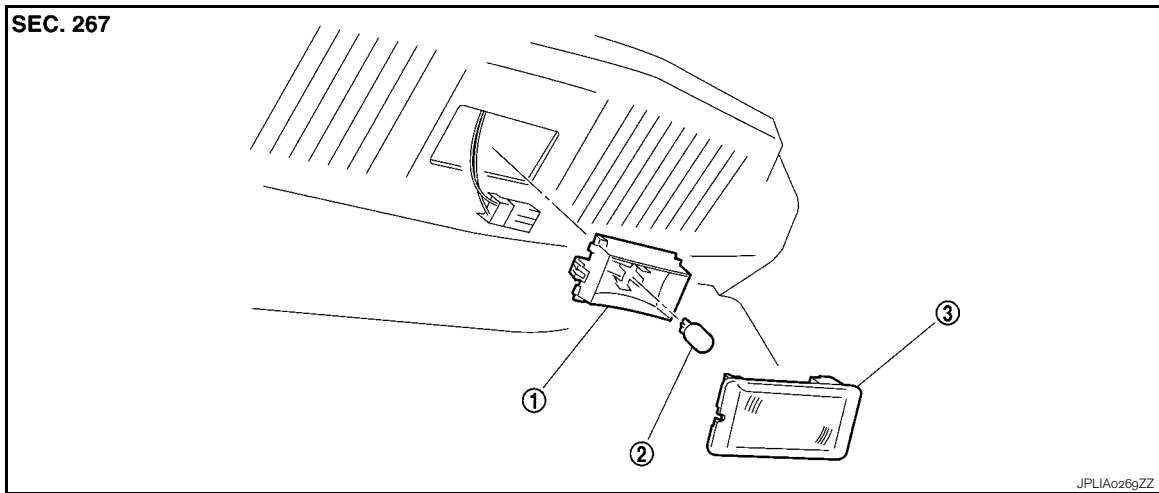
LUGGAGE ROOM LAMP

< ON-VEHICLE REPAIR >

LUGGAGE ROOM LAMP

Exploded View

INFOID:000000001033418



1. Luggage room lamp housing

2. Bulb

3. Lens

Removal and Installation

INFOID:000000001033419

CAUTION:

Disconnect the battery negative terminal or the fuse.

REMOVAL

1. Insert any appropriate tool into the gap between the luggage room lamp. Remove the luggage room lamp.
2. Disconnect the connector.

INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:000000001033420

CAUTION:

Disconnect the battery negative terminal or the fuse.

LUGGAGE ROOM LAMP BULB

1. Remove the luggage room lamp.
2. Insert any appropriate tool into the gap between the lens. Remove the lens.
3. Remove the bulb.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000001033421

Item	Type	Wattage (W)
Map lamp	Wedge	5
Vanity mirror lamp	Wedge	1.2
Glove box lamp	Wedge	5
Room lamp (Without glass top roof)	Wedge	5
Personal lamp (With glass top roof)	—	8
Luggage room lamp	Wedge	8