

A
B
C

SECTION INL

INTERIOR LIGHTING SYSTEM

CONTENTS

WITH POWER DOOR LOCKS	Component Function Check14	F
	Diagnosis Procedure14	
BASIC INSPECTION 3	INTERIOR ROOM LAMP CONTROL CIRCUIT	G
DIAGNOSIS AND REPAIR WORKFLOW 3	...16	
Work Flow3	Description16	
FUNCTION DIAGNOSIS 5	Component Function Check16	H
INTERIOR ROOM LAMP CONTROL SYSTEM	Diagnosis Procedure16	
..... 5	CARGO LAMP CONTROL CIRCUIT18	I
System Diagram5	Description18	
System Description5	Diagnosis Procedure18	
Component Parts Location6	Component Inspection20	J
Component Description7	IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT21	
ILLUMINATION CONTROL SYSTEM 8	Description21	K
System Diagram8	Component Function Check21	
System Description8	Diagnosis Procedure21	
Component Parts Location9	INTERIOR ROOM LAMP CONTROL SYSTEM	
Component Description9	...23	INL
DIAGNOSIS SYSTEM (BCM)10	Wiring Diagram23	
COMMON ITEM10	ILLUMINATION35	M
COMMON ITEM : CONSULT-III Function 10	Wiring Diagram35	
INT LAMP10	ECU DIAGNOSIS46	N
INT LAMP : CONSULT-III Function 10	BCM (BODY CONTROL MODULE)46	
BATTERY SAVER12	Reference Value46	O
BATTERY SAVER : CONSULT-III Function 12	Terminal Layout48	
COMPONENT DIAGNOSIS13	Physical Values48	
POWER SUPPLY AND GROUND CIRCUIT13	Wiring Diagram54	P
BCM13	DTC Inspection Priority Chart57	
BCM : Diagnosis Procedure 13	DTC Index58	
BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT14	SYMPTOM DIAGNOSIS60	
Description 14	INTERIOR LIGHTING SYSTEM SYMPTOMS ...60	
	Symptom Table60	

PRECAUTION	61	Component Inspection (Door Switch)	76
PRECAUTIONS	61	CARGO LAMP CONTROL CIRCUIT	77
Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	61	Description	77
General precautions for service operations	61	Diagnosis Procedure	77
ON-VEHICLE REPAIR	62	Component Inspection	79
INTERIOR ROOM LAMP	62	IGNITION KEYHOLE ILLUMINATION	80
Removal and Installation	62	Diagnosis Procedure	80
ILLUMINATION	65	Component Inspection (Door Switch)	81
Removal and Installation	65	INTERIOR ROOM LAMP	82
SERVICE DATA AND SPECIFICATIONS (SDS)	66	Wiring Diagram	82
BULB SPECIFICATIONS	66	ILLUMINATION	90
Interior Lamp/Illumination	66	Wiring Diagram	90
WITHOUT POWER DOOR LOCKS		ECU DIAGNOSIS	101
BASIC INSPECTION	67	BCM (BODY CONTROL MODULE)	101
DIAGNOSIS AND REPAIR WORKFLOW	67	Reference Value	101
Work Flow	67	Terminal Layout	103
FUNCTION DIAGNOSIS	69	Physical Values	103
INTERIOR ROOM LAMP	69	Wiring Diagram	109
System Diagram	69	DTC Inspection Priority Chart	112
System Description	69	DTC Index	113
Component Parts Location	70	SYMPTOM DIAGNOSIS	115
Component Description	70	INTERIOR LIGHTING SYSTEM SYMPTOMS ..	115
ILLUMINATION CONTROL SYSTEM	71	Symptom Table	115
System Diagram	71	PRECAUTION	116
System Description	71	PRECAUTIONS	116
Component Parts Location	72	Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	116
Component Description	72	General precautions for service operations	116
DIAGNOSIS SYSTEM (BCM)	73	ON-VEHICLE REPAIR	117
COMMON ITEM	73	INTERIOR ROOM LAMP	117
COMMON ITEM : CONSULT-III Function	73	Removal and Installation	117
INT LAMP	73	ILLUMINATION	120
INT LAMP : CONSULT-III Function	73	Removal and Installation	120
COMPONENT DIAGNOSIS	75	SERVICE DATA AND SPECIFICATIONS (SDS)	121
INTERIOR ROOM LAMP	75	BULB SPECIFICATIONS	121
Diagnosis Procedure	75	Interior Lamp/Illumination	121

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH POWER DOOR LOCKS]

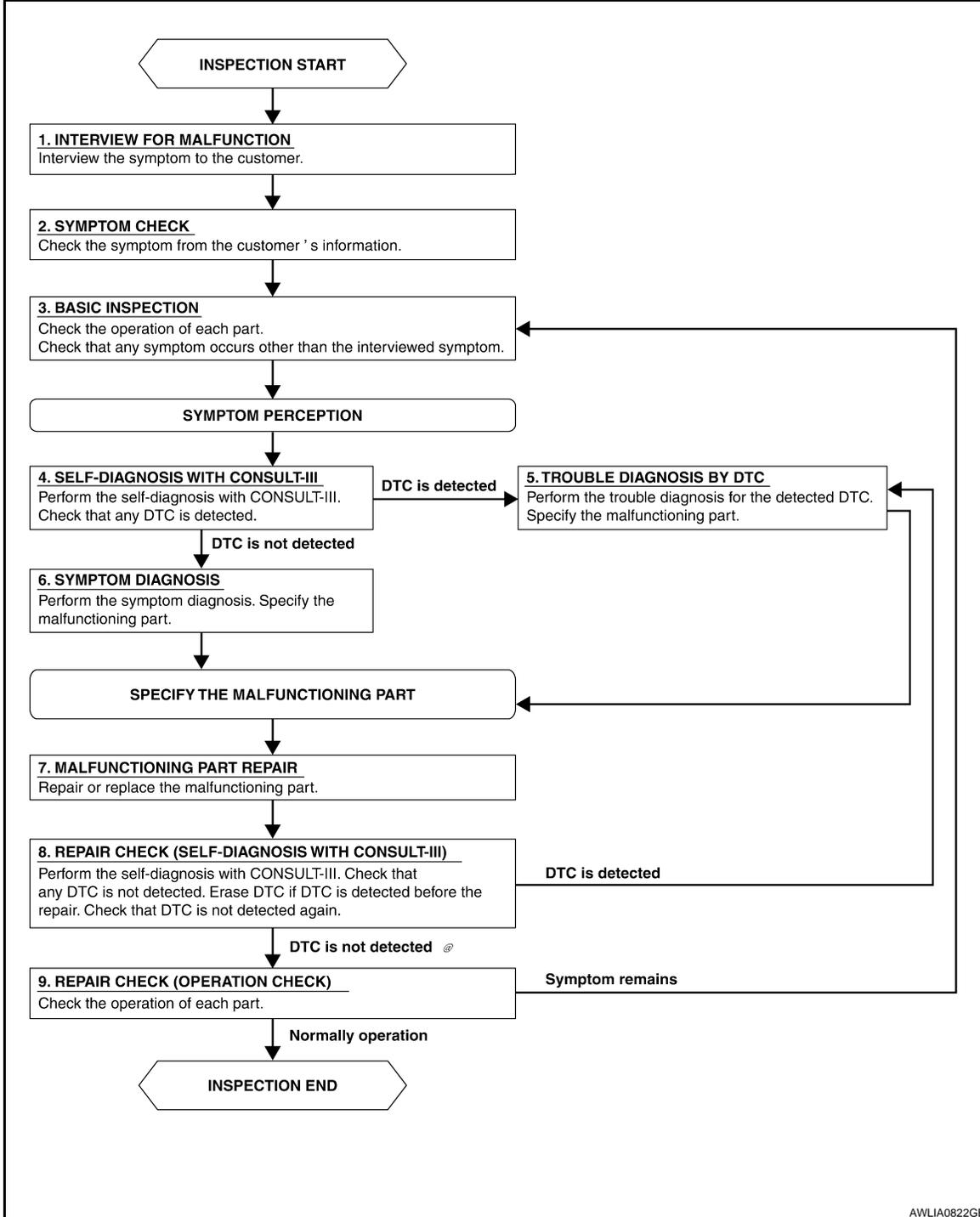
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003229824

OVERALL SEQUENCE



AWLIA0822GB

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH POWER DOOR LOCKS]

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2

2. SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

Check the operation of each part. Check that any concerns occur other than those mentioned in the customer interview.

>> 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 7

6. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 7

7. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 8

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

Perform the self-diagnosis with CONSULT-III. Verify that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 9

9. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

YES >> Inspection End

NO >> GO TO 3

INTERIOR ROOM LAMP CONTROL SYSTEM

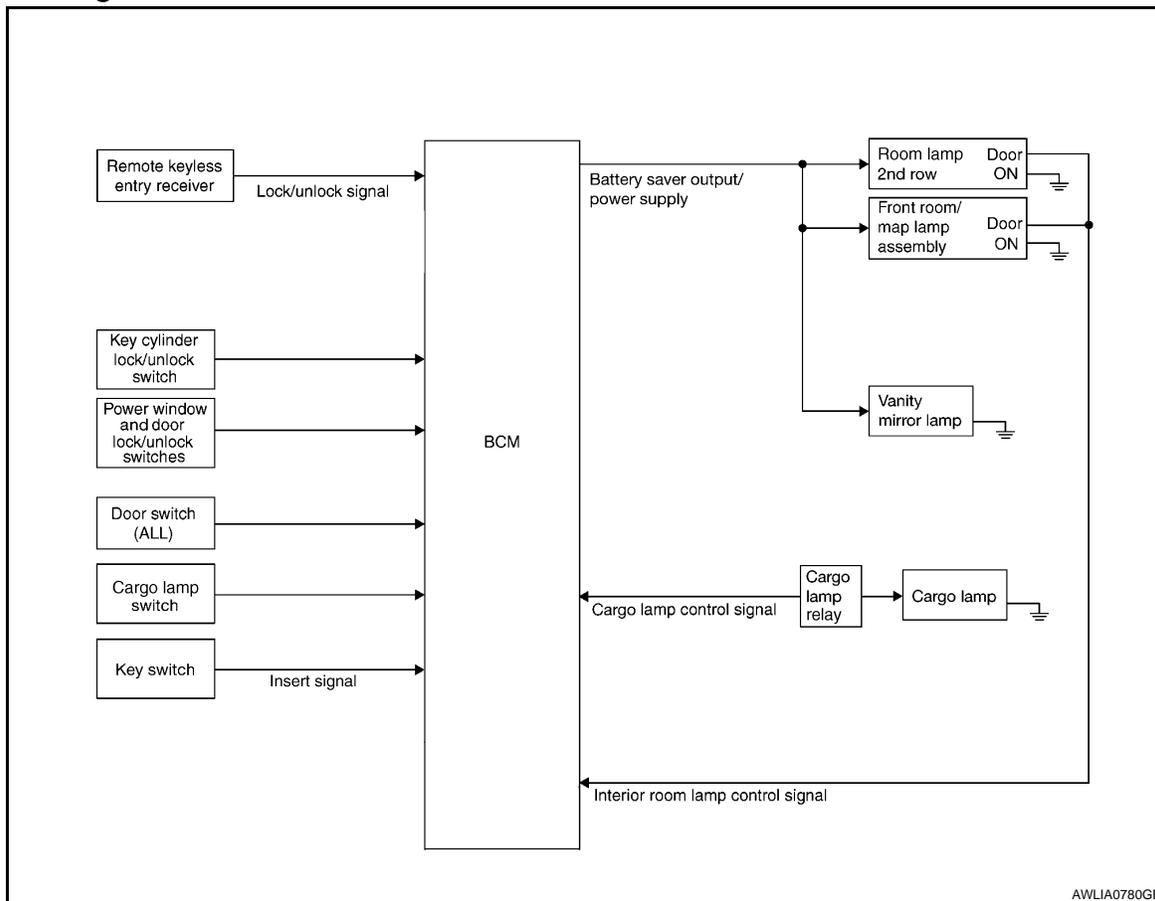
< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram



System Description

INFOID:000000003229826

OUTLINE

- Front room/map lamp and room lamp 2nd row are controlled by the interior room lamp timer control function of the BCM.
 - Cargo lamp is controlled by the cargo lamp control function of the BCM.
- The timer control functions of the BCM activate based on inputs from the remote keyless entry receiver, the key cylinder lock/unlock switch, the door switches, the key switch and the power window and door lock/unlock switches.

ROOM LAMP TIMER OPERATION

When the interior room lamp switch is in the DOOR position and when all conditions below are met, the BCM begins timer control (maximum 30 seconds) for interior room lamp ON/OFF.

- When the front door LH is unlocked [with main power window and door lock/unlock switch, or front door lock assembly (key cylinder switch)].
- When a door opens → closes.

Timer control is cancelled under the following conditions.

- When the front door LH is locked [with main power window and door lock/unlock switch, or front door lock assembly (key cylinder switch)].
- A door is opened (door switch turns ON).

Interior lamp operational settings can be changed with the function setting of CONSULT-III.

INTERIOR LAMP BATTERY SAVER CONTROL

A
B
C
D
E
F
G
H
I
J
K

INL

M
N
O
P

INTERIOR ROOM LAMP CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

If an interior lamp is left ON and does not turn OFF even when the doors are closed, the BCM turns off power to the interior lamps automatically to save the battery 30 minutes after the ignition switch is turned OFF.

The BCM controls power and ground to all interior lamps.

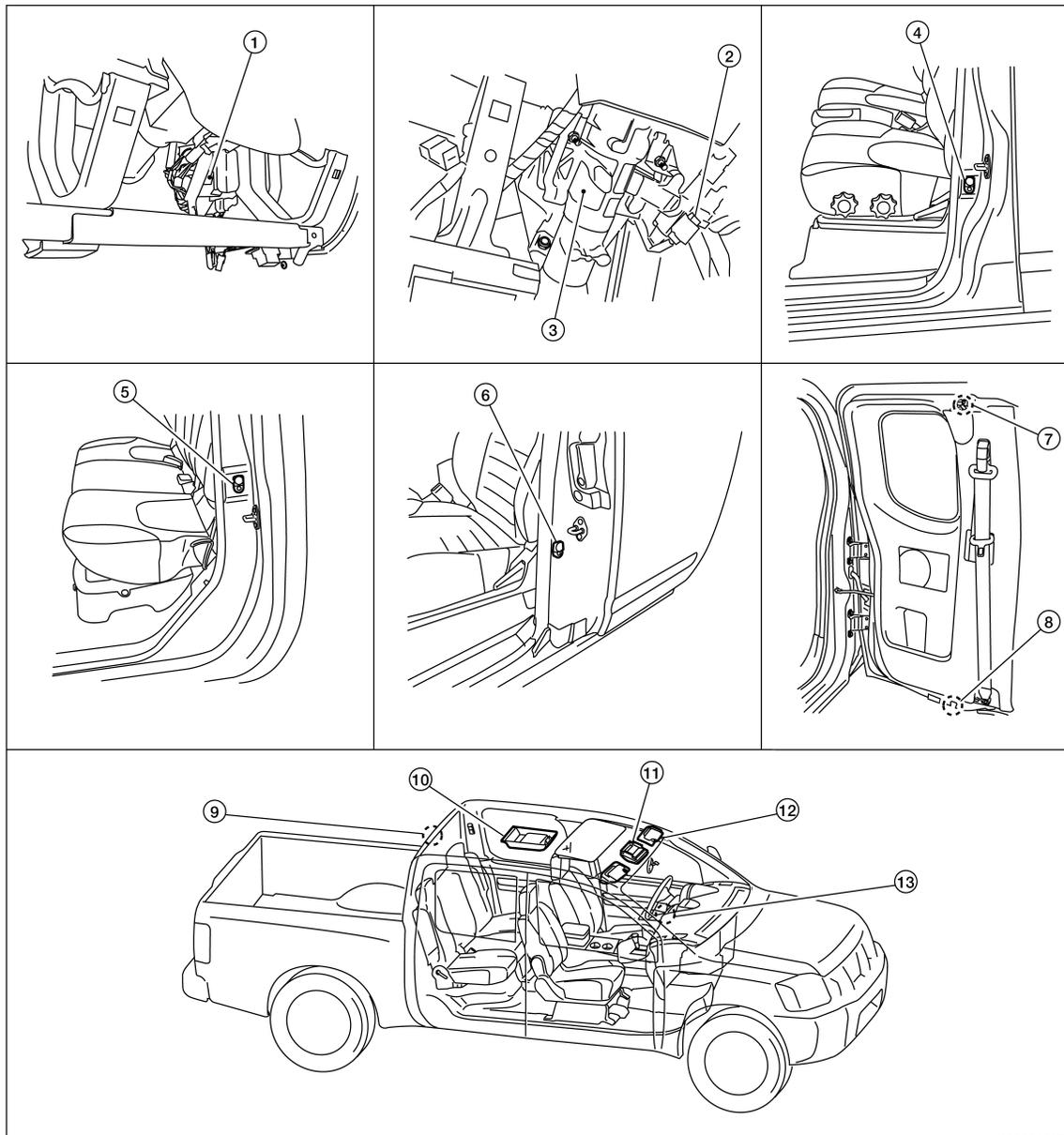
After the battery saver system turns the lamps OFF, the lamps will illuminate again when

- a signal is received from a main power window and door lock/unlock switch, or when the front door LH lock assembly (key cylinder switch) is locked or unlocked
- a door is opened or closed

The interior lamp battery saver control time period can be changed with the function setting of CONSULT-III.

Component Parts Location

INFOID:000000003229827



- | | | |
|---|---|---|
| 1. BCM M18, M19, M20 (view with lower instrument panel LH removed) | 2. Key switch M27 | 3. Steering column assembly |
| 4. Front door switch LH B8 (crew cab)
Front door switch RH B108 (crew cab) | 5. Rear door switch LH B18 (crew cab)
Rear door switch RH B116 (crew cab) | 6. Front door switch LH D213 (king cab)
Front door switch RH D316 (king cab) |
| 7. Rear door switch upper LH D211 (king cab)
Rear door switch upper LH D312 (king cab) | 8. Rear door switch lower LH D212 (king cab)
Rear door switch lower LH D313 (king cab) | 9. Cargo lamp B161 |

INTERIOR ROOM LAMP CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

- | | | |
|--|-------------------------------------|--|
| 10. Room lamp 2nd row R10 | 11. Front room/map lamp assembly R9 | 12. Vanity lamp LH B80
Vanity lamp RH B81 |
| 13. Ignition keyhole illumination M150 | | |

A

Component Description

INFOID:000000003229828

B

Part name	Description
BCM	Provides power and ground and controls timer functions for the interior room lamps and cargo lamp.
Key switch	Provides key in ignition status to the BCM.
Door switches	Provides door OPEN/CLOSED status to the BCM.
Back door switch	Provides back door OPEN/CLOSED status to the BCM.
Main power window and door lock/unlock switch	Provides door lock/unlock position switch status to the BCM.
Power window and door lock/unlock switch RH	
Front door lock assembly LH (key cylinder switch)	Provides door lock/unlock status to the BCM.

C

D

E

F

G

H

I

J

K

INL

M

N

O

P

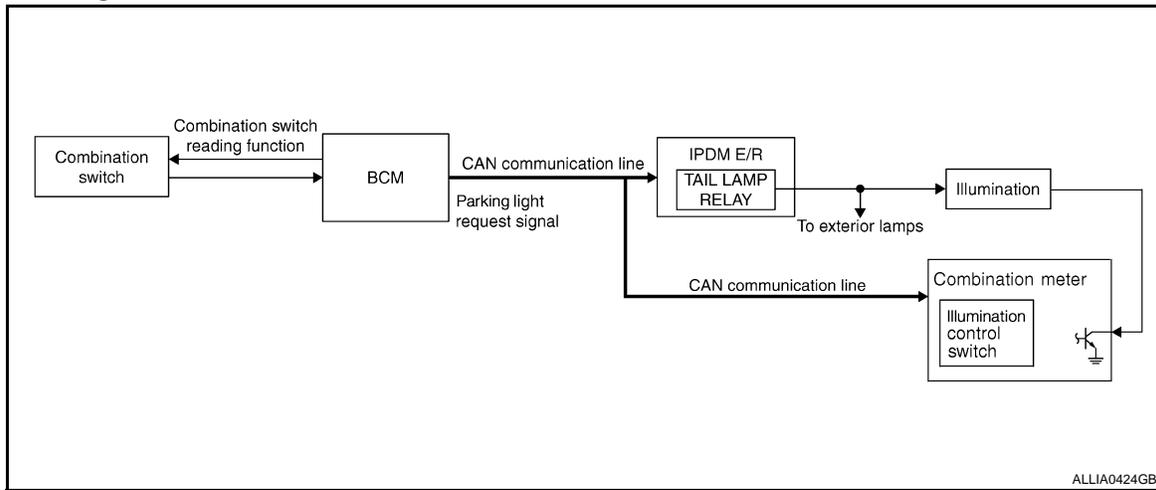
ILLUMINATION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

ILLUMINATION CONTROL SYSTEM

System Diagram



System Description

INFOID:000000003229830

The illumination lamps operation is dependent upon the position of the lighting switch (combination switch). When the lighting switch is placed in the 1ST or 2ND position the BCM (body control module) receives input requesting the parking lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) via the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the tail lamp relay coil. When energized, this relay directs power to the parking and illumination lamps, which then illuminate.

BATTERY SAVER CONTROL

When the lighting switch (combination switch) is in the 1ST or 2ND position and the ignition switch is turned from ON or ACC to OFF, the battery saver control feature is activated. Under this condition, the illumination lamps remain illuminated for 30 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the illumination lamps are turned off after a 30 second delay. When the lighting switch is turned from OFF to 1ST or 2ND position after illumination lamps have been turned off by the battery saver control, the illumination lamps illuminate again.

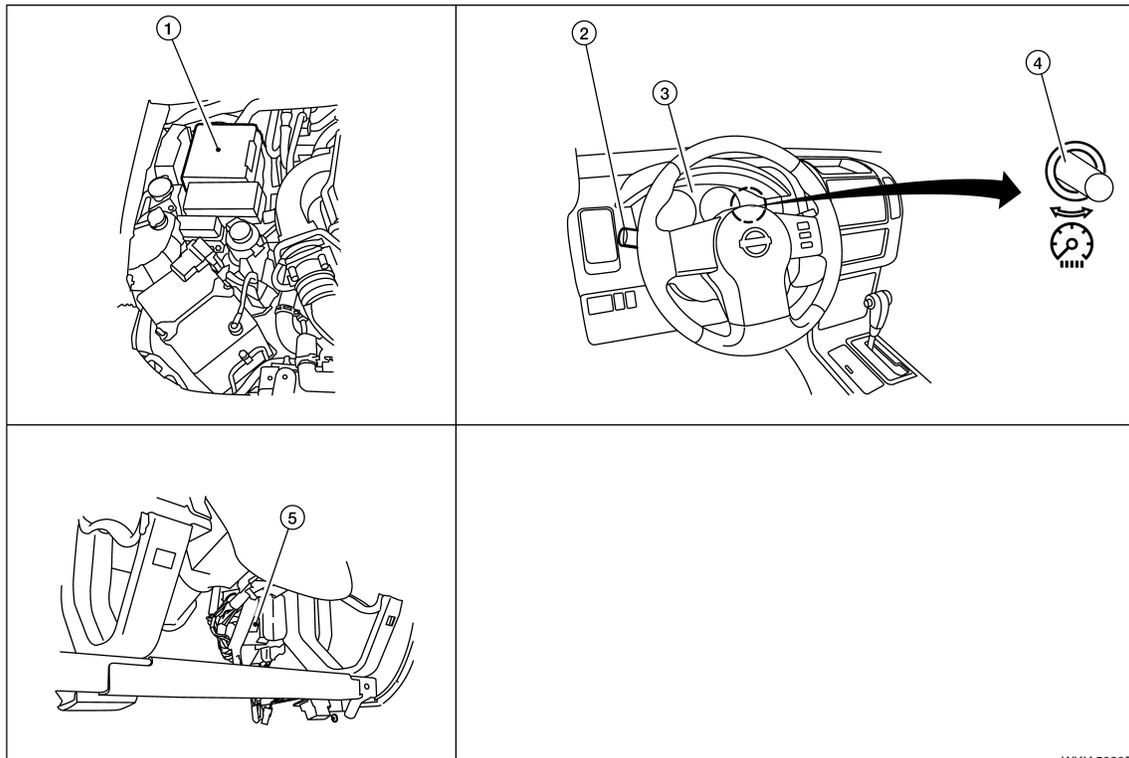
ILLUMINATION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Component Parts Location

INFOID:000000003229831



- 1. IPDM E/R E122, E124
- 2. Combination switch M28
- 3. Combination meter M24
- 4. Illumination control switch (built into combination meter)
- 5. BCM M18, M20 (view with instrument lower panel LH removed)

WKIA5029E

Component Description

INFOID:000000003229832

Part name	Description
BCM	The BCM monitors the lighting switch position with the combination switch reading function. The BCM requests, via CAN communication, that the IPDM E/R activate the tail lamp relay.
IPDM E/R	The IPDM E/R activates the tail lamp relay based on inputs received from the BCM via the CAN communication network.
Combination meter (illumination control switch)	The illumination control switch is a part of the combination meter. The combination meter controls illumination intensity by varying ground to the illumination lamps based on the illumination control switch position.
Combination switch	The combination switch provides input to the BCM about the lighting switch position.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function

INFOID:000000003229833

CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

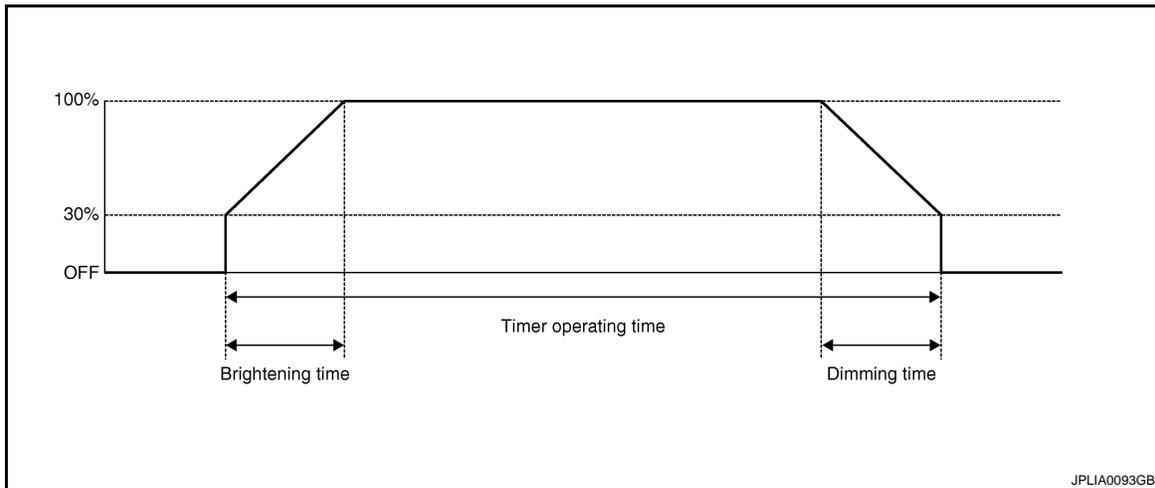
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

INT LAMP

INT LAMP : CONSULT-III Function

INFOID:000000003229834

WORK SUPPORT



Service item	Setting item	Setting
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.
	MODE 2	1 sec.
	MODE 3	2 sec.
	MODE 4	3 sec.
	MODE 5	4 sec.
	MODE 6	5 sec.
	MODE 7	0 sec.

Sets the interior room lamp gradual brightening time.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Service item	Setting item	Setting
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.
	MODE 2	1 sec.
	MODE 3	2 sec.
	MODE 4	3 sec.
	MODE 5	4 sec.
	MODE 6	5 sec.
	MODE 7	0 sec.

Sets the interior room lamp gradual dimming time.

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	The switch status input from ignition switch
KEY ON SW [ON/OFF]	Key switch status input from key slot
DOOR SW-DR [ON/OFF]	The switch status input from front door switch LH
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
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]	This item is not used for this model
KEY CYL LK-SW [ON/OFF]	Lock switch status received from key cylinder switch
KEY CYL UN-SW [ON/OFF]	Unlock switch status received from key cylinder switch
CDL LOCK SW [ON/OFF]	Lock switch status received from door lock/unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status received from door lock/unlock switch
KEYLESS LOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

Test item	Operation	Description
INT LAMP	ON	Outputs the interior room lamp control signal to turn the front room/map lamp and personal lamp (switches are in DOOR position) ON.
	OFF	Stops the interior room lamp control signal to turn the front room/map lamp and personal lamp (switches are in DOOR position) OFF.
IGN ILLUM	ON	Outputs the ignition keyhole illumination signal to turn the ignition keyhole illumination ON.
	OFF	Stops the ignition keyhole illumination signal to turn the ignition keyhole illumination OFF.
LUGGAGE LAMP TEST	ON	This item is not used for this model
	OFF	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

BATTERY SAVER

BATTERY SAVER : CONSULT-III Function

INFOID:000000003229835

WORK SUPPORT

Service item	Setting item	Setting
ROOM LAMP TIMER SET	MODE 1 (ON)	Interior room lamp timer activates with synchronizing all doors.
	MODE 2 (OFF)	Interior room lamp timer activates with synchronizing the front door LH only.

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	The switch status input from ignition switch
KEY ON SW [ON/OFF]	Key switch status input from key slot
DOOR SW-DR [ON/OFF]	The switch status input from front door switch LH
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
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]	This item is not used for this model
KEY CYL LK-SW [ON/OFF]	Lock switch status received from key cylinder switch by power window serial link
KEY CYL UN-SW [ON/OFF]	Unlock switch status received from key cylinder switch by power window serial link
CDL LOCK SW [ON/OFF]	Lock switch status received from door lock/unlock switch by power window serial link
CDL UNLOCK SW [ON/OFF]	Unlock switch status received from door lock/unlock switch by power window serial link
KEYLESS LOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

Test item	Operation	Description
BATTERY SAVER	ON	Outputs the battery saver output/power supply to turn the interior lamps ON.
	OFF	Stops the battery saver output/power supply to turn the interior lamps OFF.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:000000003301467

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	18 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

Is the fuse blown?

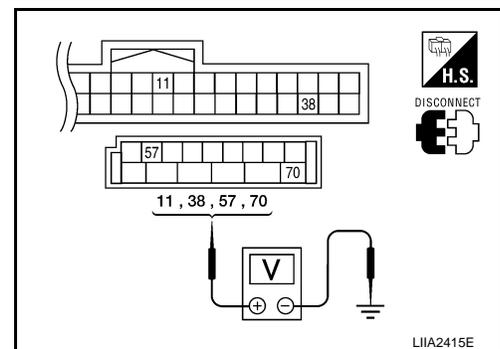
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM.
- Check voltage between BCM harness connector and ground.

Connector	Terminals		Power source	Condition	Voltage (V) (Approx.)
	(+)	(-)			
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

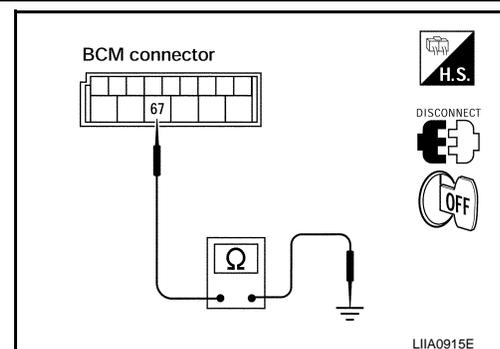
Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

Description

INFOID:000000003229837

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

Component Function Check

INFOID:000000003229838

1.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY FUNCTION

CONSULT-III

1. Turn ignition switch ON.
2. Turn each interior room lamp ON.
 - Front room/map lamp assembly (if equipped)
 - Vanity lamps (if equipped)
 - Cargo lamp
 - Room lamp 2nd row
3. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
4. While operating the test items, check that each interior room lamp turns ON/OFF.

OFF : Interior room lamp OFF

ON : Interior room lamp ON

Is the inspection result normal?

YES >> Battery saver output/power supply circuit is normal.

NO >> Refer to [INL-14, "Diagnosis Procedure"](#).

Diagnosis Procedure

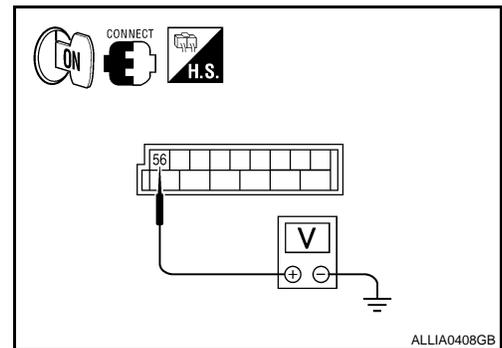
INFOID:000000003229839

1.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OUTPUT

CONSULT-III

1. Turn ignition switch ON.
2. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
3. With test item operating, check voltage between BCM harness connector M20 terminal 56 and ground.

(+)		(-)	Test item	Voltage
Connector	Terminal		BATTERY SAVER	
M20	56	Ground	OFF	0V
			ON	Battery voltage



Is the inspection result normal?

YES >> GO TO 2

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

2.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the following connectors.
 - BCM M20
 - Ignition key hole illumination
 - Front room/map lamp assembly (if equipped)
 - Vanity lamp LH (if equipped)
 - Vanity lamp RH (if equipped)
 - Room lamp 2nd row
3. Check continuity between BCM harness connector and each interior room lamp harness connector.

BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

BCM		Each interior room lamp			Continuity
Connector	Terminal	Connector	Terminal		
M20	56	Ignition key hole illumination	M150	1	Yes
		Front room/map lamp assembly (if equipped)	R9	1	
		Vanity lamp LH (if equipped)	B80	1	
		Vanity lamp RH (if equipped)	B81	1	
		Room lamp 2nd row	R10	2	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair the harnesses or connectors.

3. CHECK BATTERY SAVER OUTPUT/POWER SUPPLY SHORT CIRCUIT

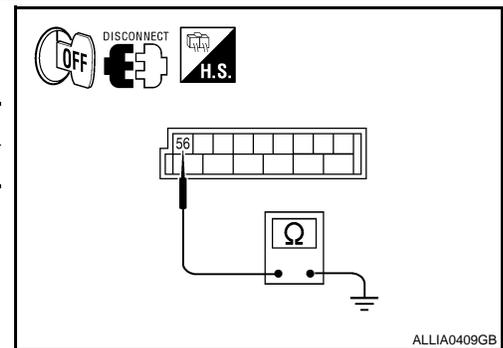
Check continuity between BCM harness connector M20 terminal 56 and ground.

Connector	Terminal	—	Continuity
M20	56	Ground	No

Is the inspection result normal?

YES >> Replace the interior room lamp. Refer to [INL-62](#).
"Removal and Installation".

NO >> Repair the harnesses or connectors.



A
B
C
D
E
F
G
H
I
J
K

INL

M
N
O
P

INTERIOR ROOM LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

INTERIOR ROOM LAMP CONTROL CIRCUIT

Description

INFOID:000000003229840

Controls the following interior room lamps (ground side) by PWM signal

- Front room/map lamp assembly (if equipped)
- Room lamp 2nd row

NOTE:

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

Component Function Check

INFOID:000000003229841

CAUTION:

Before performing the diagnosis, check that the following is normal.

- Battery saver output/power supply
- Front room/map lamp bulbs
- Room lamp 2nd row bulb

1. CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

CONSULT-III

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

ON : Interior room lamp gradual brightening

OFF : Interior room lamp gradual dimming

Is the inspection result normal?

YES >> Interior room lamp control circuit is normal.

NO >> Refer to [INL-16. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000003229842

1. CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

CONSULT-III

1. Turn ignition switch ON.
2. Select "INT LAMP" of BCM (INT LAMP) active test item.
3. While operating the test item, check voltage between BCM harness connector M20 terminal 63 and ground.

(+)		(-)	INT LAMP	Voltage
Connector	Terminal			
M20	63	Ground	ON	0V
			OFF	Battery voltage

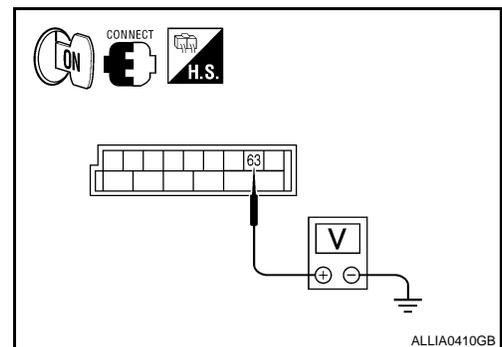
Is the inspection result normal?

YES >> Interior room lamp control circuit is operating normally.

Fixed ON>>GO TO 3

Fixed OFF>> GO TO 2

2. CHECK INTERIOR ROOM LAMP CONTROL OPEN CIRCUIT



ALLIA0410GB

INTERIOR ROOM LAMP CONTROL CIRCUIT

[WITH POWER DOOR LOCKS]

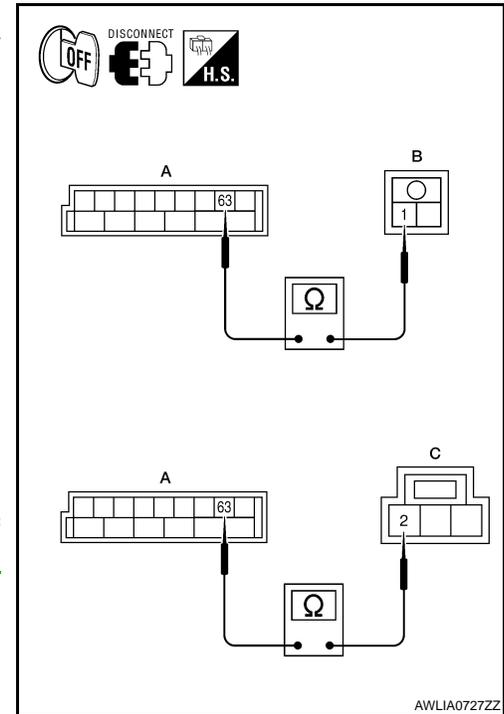
< COMPONENT DIAGNOSIS >

1. Turn ignition switch OFF.
2. Disconnect BCM connector M20, room lamp 2nd row connector and front room/map lamp connector (if equipped).
3. Check continuity between BCM harness connector M20 terminal 63 and interior room lamp connectors.

Terminal		Terminal			Continuity
Connector	Terminal	Component	Connector	Terminal	
A: M20	63	Room lamp 2nd row	B: R10	1	Yes
		Front room/map lamp (if equipped)	C: R9	2	

Is the inspection result normal?

- YES >> Check interior room lamp for an open. If OK, replace the BCM. Refer to [BCS-49, "Removal and Installation"](#). If NG, replace the interior room lamp. Refer to [INL-62, "Removal and Installation"](#).
- NO >> Repair the harnesses or connectors.



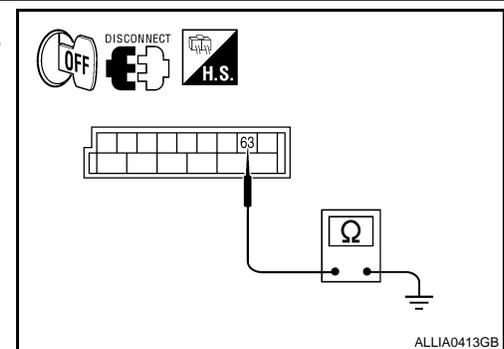
3. CHECK INTERIOR ROOM LAMP CONTROL SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M20, room lamp 2nd row connector and front room/map lamp connector (if equipped).
3. Check continuity between BCM harness connector and ground.

Connector	Terminal	—	Continuity
M20	63	Ground	No

Is the inspection result normal?

- YES >> Check interior room lamp for a short circuit. If OK, replace the BCM. Refer to [BCS-49, "Removal and Installation"](#). If NG, replace the interior room lamp. Refer to [INL-62, "Removal and Installation"](#).
- NO >> Repair the harnesses or connectors.



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

INL

CARGO LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

CARGO LAMP CONTROL CIRCUIT

Description

INFOID:000000003229843

Controls the cargo lamp relay coil (ground side) to turn the cargo lamp ON and OFF.

Diagnosis Procedure

INFOID:000000003229845

CAUTION:

Before performing the diagnosis, check that the following is normal.

- Fuse
- Cargo lamp bulbs

1. CHECK CARGO LAMP OPERATION

Check the cargo lamp operation from the cargo lamp switch, the door switches, and a keyfob (if equipped).

Is the cargo lamp inoperative from all of the above switches and the keyfob (if equipped)?

YES >> GO TO 4

- NO >>
- Inoperative from cargo lamp switch only, GO TO 2
 - Inoperative from door switches only, refer to [DLK-21, "KING CAB : Description"](#) (king cab), [DLK-23, "CREW CAB : Description"](#) (crew cab).
 - Inoperative from keyfob only, refer to [DLK-44, "Description"](#).

2. CHECK CARGO LAMP SWITCH

Check the cargo lamp switch. Refer to [INL-20, "Component Inspection"](#).

Is the inspection result normal?

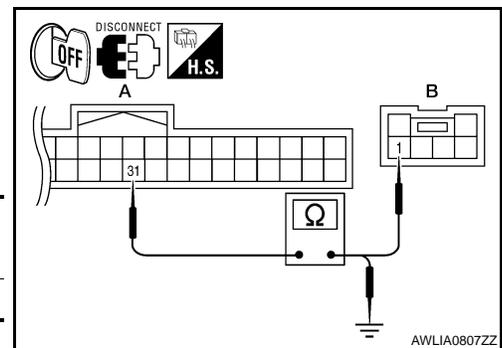
YES >> GO TO 3

NO >> Replace the cargo lamp switch.

3. CHECK CARGO LAMP SWITCH CIRCUIT

1. Disconnect BCM connector M18 and cargo lamp switch connector.
2. Check continuity between BCM harness connector M18 (A) terminal 31 and cargo lamp switch harness connector M71 (B) terminal 1.

BCM		Cargo lamp switch		Continuity
Connector	Terminal	Connector	Terminal	
M18 (A)	31	M71 (B)	1	Yes



3. Check continuity between BCM harness connector M18 terminal 31 and ground.

Connector	Terminal	—	Continuity
M18 (A)	31	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-49, "Removal and Installation"](#).

NO >> Repair harnesses or connectors.

4. CHECK CARGO LAMP RELAY

Check the cargo lamp relay. Refer to [INL-20, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace the cargo lamp relay.

5. CHECK CARGO LAMP RELAY CONTROL

CARGO LAMP CONTROL CIRCUIT

[WITH POWER DOOR LOCKS]

< COMPONENT DIAGNOSIS >

While operating the cargo lamp switch, check voltage between BCM harness connector M19 terminal 50 and ground.

Connector	Terminal	—	Cargo lamp switch	Voltage
M19	50	Ground	ON	0V
			OFF	Battery voltage

Is the inspection result normal?

YES >> GO TO 6

NO >> GO TO 8

6.CHECK CARGO LAMP VOLTAGE

1. Disconnect the cargo lamp harness connector.
2. While operating the cargo lamp switch, check voltage between cargo lamp harness connector B161 terminal 3 and ground.

Connector	Terminal	—	Cargo lamp switch	Voltage
B161	3	Ground	ON	Battery voltage

Is the inspection result normal?

YES >> Replace cargo lamp.

NO >> GO TO 7

7.CHECK CARGO LAMP RELAY VOLTAGE PART 1

Check voltage between cargo lamp relay harness connector M165 terminal 5 and ground.

Cargo lamp relay		Ground	Voltage
Connector	Terminal		
M165	5		Battery voltage

Is the inspection result normal?

YES >> Repair harness or connectors between cargo lamp relay and cargo lamp.

NO >> Repair harness or connector between splice and cargo lamp relay.

8.CHECK CARGO LAMP RELAY VOLTAGE PART 2

Check voltage between cargo lamp relay harness connector M165 terminal 2 and ground.

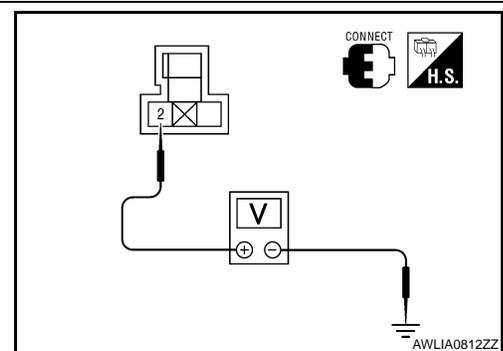
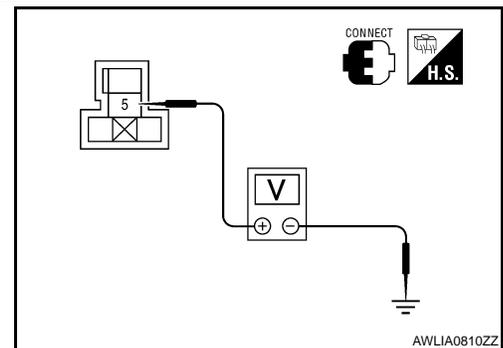
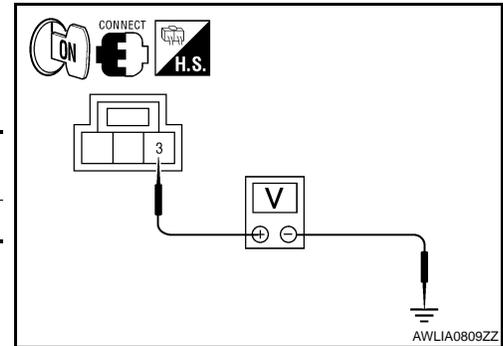
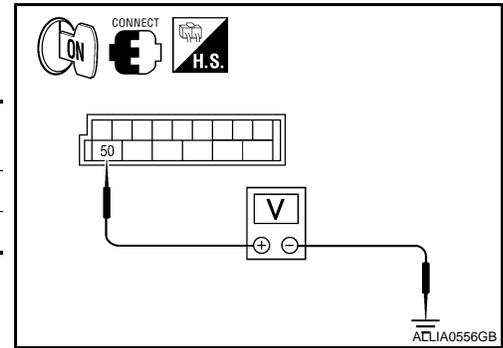
Cargo lamp relay		Ground	Voltage
Connector	Terminal		
M165	2		Battery voltage

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harnesses or connectors.

9.CHECK CARGO LAMP RELAY CONTROL CIRCUIT



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

INL

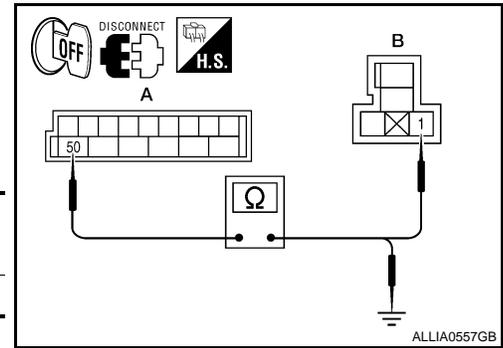
CARGO LAMP CONTROL CIRCUIT

[WITH POWER DOOR LOCKS]

< COMPONENT DIAGNOSIS >

1. Disconnect BCM connector M19 and cargo lamp relay connector.
2. Check continuity between BCM harness connector M19 (A) terminal 50 and cargo lamp relay harness connector B161 (B) terminal 1.

BCM		Cargo lamp relay		Continuity
Connector	Terminal	Connector	Terminal	
M19 (A)	50	B161 (B)	1	Yes



3. Check continuity between BCM harness connector M19 terminal 50 and ground.

Connector	Terminal	—	Continuity
M19 (A)	50	Ground	No

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-49. "Removal and Installation"](#).
 NO >> Repair harnesses or connectors.

Component Inspection

INFOID:000000003301694

CARGO LAMP SWITCH

INSPECTION PROCEDURE

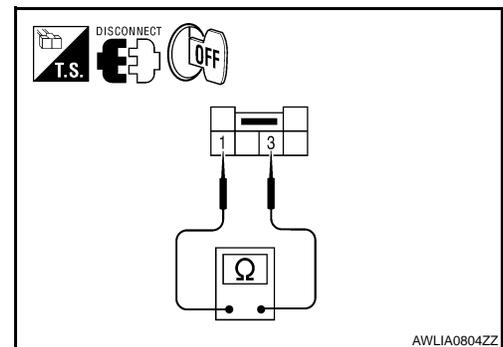
1. CHECK CARGO LAMP SWITCH

1. Turn ignition switch OFF.
2. Disconnect cargo lamp switch harness connector.
3. Check continuity between cargo lamp switch terminals.

Cargo lamp switch	Condition	Continuity
Terminal		
1 - 3	ON	Yes
	OFF	No

Is the inspection result normal?

- YES >> Inspection End
 NO >> Replace cargo lamp switch.



CARGO LAMP RELAY

INSPECTION PROCEDURE

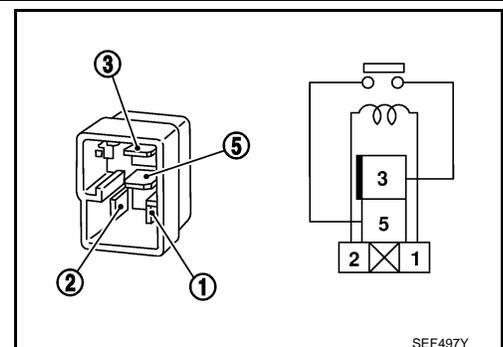
1. CHECK CARGO LAMP RELAY

1. Turn ignition switch OFF.
2. Disconnect cargo lamp relay harness connector.
3. Supply power to terminal 2 and ground to terminal 1 of the cargo lamp relay.
4. Check continuity between cargo lamp relay terminals 3 and 5.

Terminal	Condition	Continuity
3 5	Power and ground supplied to terminals 1 and 2	Yes
	No power and ground supplied	No

Is the inspection result normal?

- YES >> Inspection End
 NO >> Replace cargo lamp relay.



IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

Description

INFOID:000000003229846

Controls the ignition keyhole illumination (ground side) to turn the ignition keyhole illumination ON and OFF.

Component Function Check

INFOID:000000003229847

CAUTION:

Before performing the diagnosis, check that the following is normal.

- Battery saver output/power supply circuit
- Ignition keyhole illumination bulb

1. CHECK IGNITION KEYHOLE ILLUMINATION OPERATION

CONSULT-III

1. Turn the ignition switch ON.
2. Select "IGN ILLUM" of BCM (INT LAMP) active test item.
3. While operating the test items, check that the ignition keyhole illumination turns ON/OFF

ON : Ignition keyhole illumination ON

OFF : Ignition keyhole illumination OFF

Is the inspection result normal?

- YES >> Ignition keyhole illumination circuit is normal.
 NO >> Refer to [INL-21, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000003229848

1. CHECK IGNITION KEYHOLE OUTPUT

CONSULT-III

1. Turn ignition switch ON.
2. Select "IGN ILLUM" of BCM (INT LAMP) active test item.
3. While operating the test item, check voltage between BCM harness connector M18 terminal 1 and ground.

Connector	Terminal	—	IGN ILLUM	Voltage
M18	1	Ground	ON	0V
			OFF	Battery voltage

Is the inspection result normal?

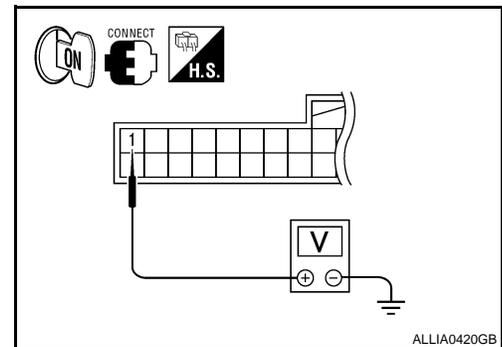
- YES >> Ignition keyhole illumination control circuit is operating normally.
 Fixed ON>>GO TO 3.
 Fixed OFF>> GO TO 2.

2. CHECK IGNITION KEYHOLE ILLUMINATION OPEN CIRCUIT

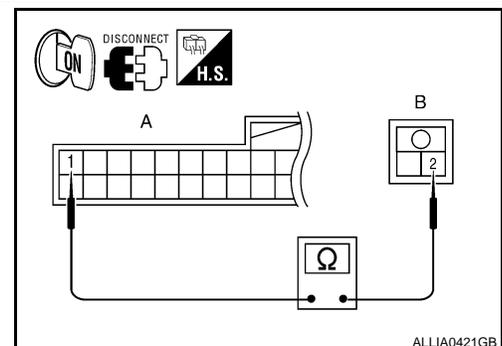
1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and ignition keyhole illumination connector M150.
3. Check continuity between BCM harness connector M18 (A) terminal 1 and ignition keyhole illumination harness connector M150 (B) terminal 2.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M18	1	M150	2	Yes

Is the inspection result normal?



ALLIA0420GB



ALLIA0421GB

IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

[WITH POWER DOOR LOCKS]

< COMPONENT DIAGNOSIS >

- YES >> Check the ignition keyhole illumination for an open. If OK, replace the BCM. Refer to [BCS-49. "Removal and Installation"](#). If NG, replace ignition keyhole illumination.
- NO >> Repair harnesses or connectors.

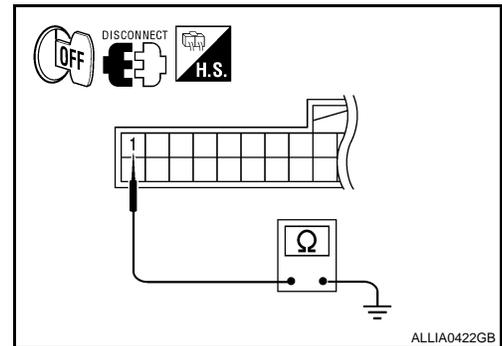
3. CHECK IGNITION KEYHOLE ILLUMINATION SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M18 and ignition keyhole illumination connector M150.
3. Check continuity between BCM harness connector M18 terminal 1 and ground.

Connector	Terminal	—	Continuity
M18	1	Ground	No

Is the inspection result normal?

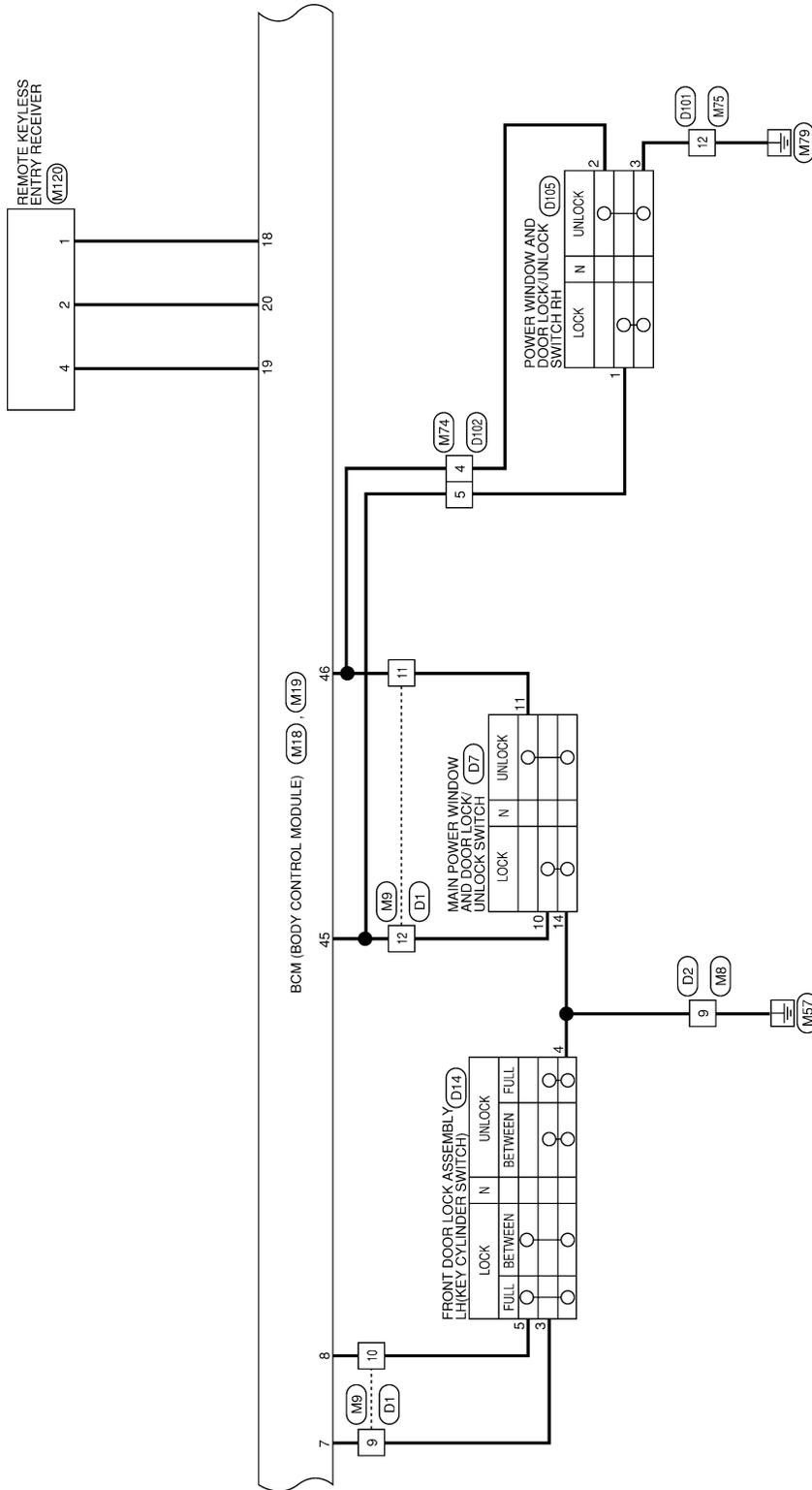
- YES >> Check the ignition keyhole illumination for a short circuit. If OK, replace the BCM. Refer to [BCS-49. "Removal and Installation"](#). If NG, replace ignition keyhole illumination.
- NO >> Repair harnesses or connectors.



INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]



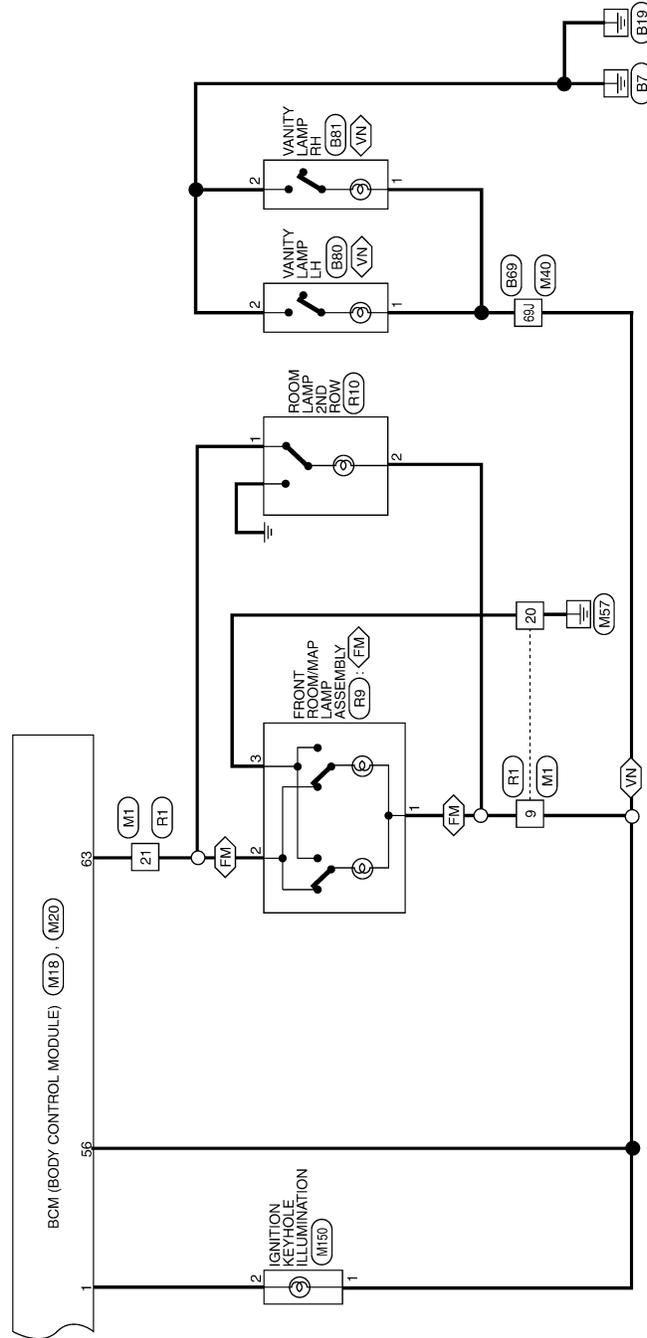
AWLWA0132GE

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

VIN : WITH VANITY LAMPS
FM : WITH FRONT MAP LAMPS



AWLWA0133GE

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

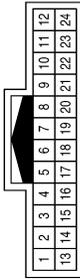
INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

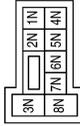
INTERIOR ROOM LAMP CONNECTORS - WITH POWER DOOR LOCKS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	R/Y	-
20	B	-
21	BR	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4N	R/Y	-

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



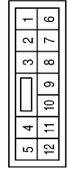
Terminal No.	Color of Wire	Signal Name
15P	W/R	-

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



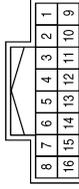
Terminal No.	Color of Wire	Signal Name
6	W	-

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



Terminal No.	Color of Wire	Signal Name
9	B	-

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	GR	-
10	SB	-
11	LG	-
12	V	-

AWLIA0441GB

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Terminal No.	Color of Wire	Signal Name
18	BR	KEYLESS & AUTO LIGHT SENSOR GND
19	V	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G	KEYLESS TUNER SIGNAL
31	GR	CARGO LAMP SW
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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



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
1	BR	KEY RING OUTPUT
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)

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



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

Terminal No.	Color of Wire	Signal Name
7	L	-
8	LG	-
12	G	-

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE



2	1
---	---

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



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

Terminal No.	Color of Wire	Signal Name
56	V	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
63	BR	ROOM LAMP OUTPUT
67	B	GND (POWER)
70	W	BAT (F/L)

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



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

Terminal No.	Color of Wire	Signal Name
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
50	P	CARGO LAMP OUTPUT

AWLIA0442GB

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

INL

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

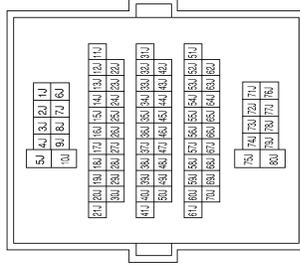
[WITH POWER DOOR LOCKS]

Connector No.	M71
Connector Name	CARGO LAMP SWITCH
Connector Color	WHITE



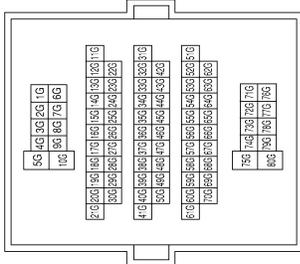
Terminal No.	Color of Wire	Signal Name
1	GR	-
3	B	-

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



Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	GR	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
55G	Y	-

Connector No.	M120
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	WHITE



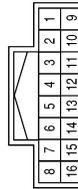
Terminal No.	Color of Wire	Signal Name
1	BR	GND
2	G	SIGNAL
4	V	PWR

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



Terminal No.	Color of Wire	Signal Name
12	B	-

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	LG	-
5	P	-

AWLIA0443GB

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Connector No.	M150
Connector Name	IGNITION KEYHOLE ILLUMINATION
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R/Y	-
2	BR	-

Connector No.	M165
Connector Name	CARGO LAMP RELAY
Connector Color	BLUE



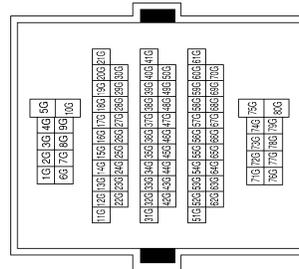
Terminal No.	Color of Wire	Signal Name
1	P	-
2	R/Y	-
3	G	-
5	R/Y	-

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



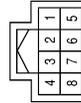
Terminal No.	Color of Wire	Signal Name
6	W	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
55G	Y	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
2	GR	-

AWLIA0444GB

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

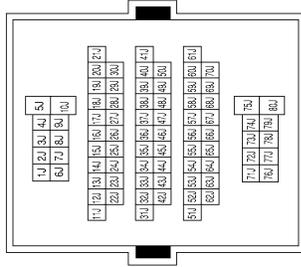


INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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



Terminal No.	Color of Wire	Signal Name
60J	P	-
61J	GR	-

Connector No.	B80
Connector Name	VANITY LAMP LH
Connector Color	WHITE



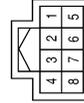
Terminal No.	Color of Wire	Signal Name
1	R/Y	-
2	B	-

Connector No.	B81
Connector Name	VANITY LAMP RH
Connector Color	WHITE



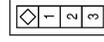
Terminal No.	Color of Wire	Signal Name
1	R/Y	-
2	B	-

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
2	LG	-

Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	L	-

AWLIA0445GB

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Connector No.	B161
Connector Name	HIGH MOUNTED STOP LAMP(CARGO LAMP)
Connector Color	WHITE



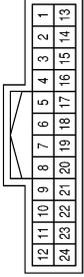
Terminal No.	Color of Wire	Signal Name
2	B	-
3	G	-

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



Terminal No.	Color of Wire	Signal Name
7	L	-
8	LG	-
12	G	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	R/Y	-
20	B	-
21	BR	-

Connector No.	R9
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	WHITE



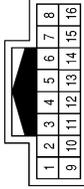
Terminal No.	Color of Wire	Signal Name
1	R/Y	-
2	Y	-
3	B	-

Connector No.	R10
Connector Name	ROOM LAMP 2ND ROW
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BR	-
2	R/Y	-

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	R/W	-
10	SB	-
11	W	-
12	LG	-

AWLIA0446GB

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

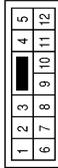


INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

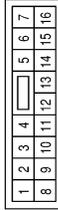
[WITH POWER DOOR LOCKS]

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



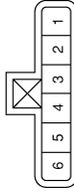
Terminal No.	Color of Wire	Signal Name
9	B	—

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



Terminal No.	Color of Wire	Signal Name
10	LG	—
11	W	—
14	B	—

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH(KEY CYLINDER SWITCH)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	R/W	—
4	B	—
5	SB	—

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



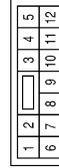
Terminal No.	Color of Wire	Signal Name
12	B	—

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	W	—
5	LG	—

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



Terminal No.	Color of Wire	Signal Name
1	LG	—
2	W	—
3	B	—

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Connector No.	D212
Connector Name	REAR DOOR SWITCH LOWER LH
Connector Color	BLACK



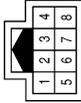
Terminal No.	Color of Wire	Signal Name
1	L	-
2	B	-

Connector No.	D211
Connector Name	REAR DOOR SWITCH UPPER LH
Connector Color	BLACK



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

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



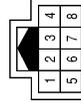
Terminal No.	Color of Wire	Signal Name
7	B	-
8	LG	-

Connector No.	D312
Connector Name	REAR DOOR SWITCH UPPER RH
Connector Color	BLACK



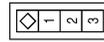
Terminal No.	Color of Wire	Signal Name
1	L	-
2	B	-

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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



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

AWLIA0448GB

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

INL

INTERIOR ROOM LAMP CONTROL SYSTEM

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Connector No.	M71
Connector Name	CARGO LAMP SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	P	-
4	V	-

Connector No.	M59
Connector Name	GLOVE BOX LAMP
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	R	-
2	B	-

AWLIA0868GB

ILLUMINATION

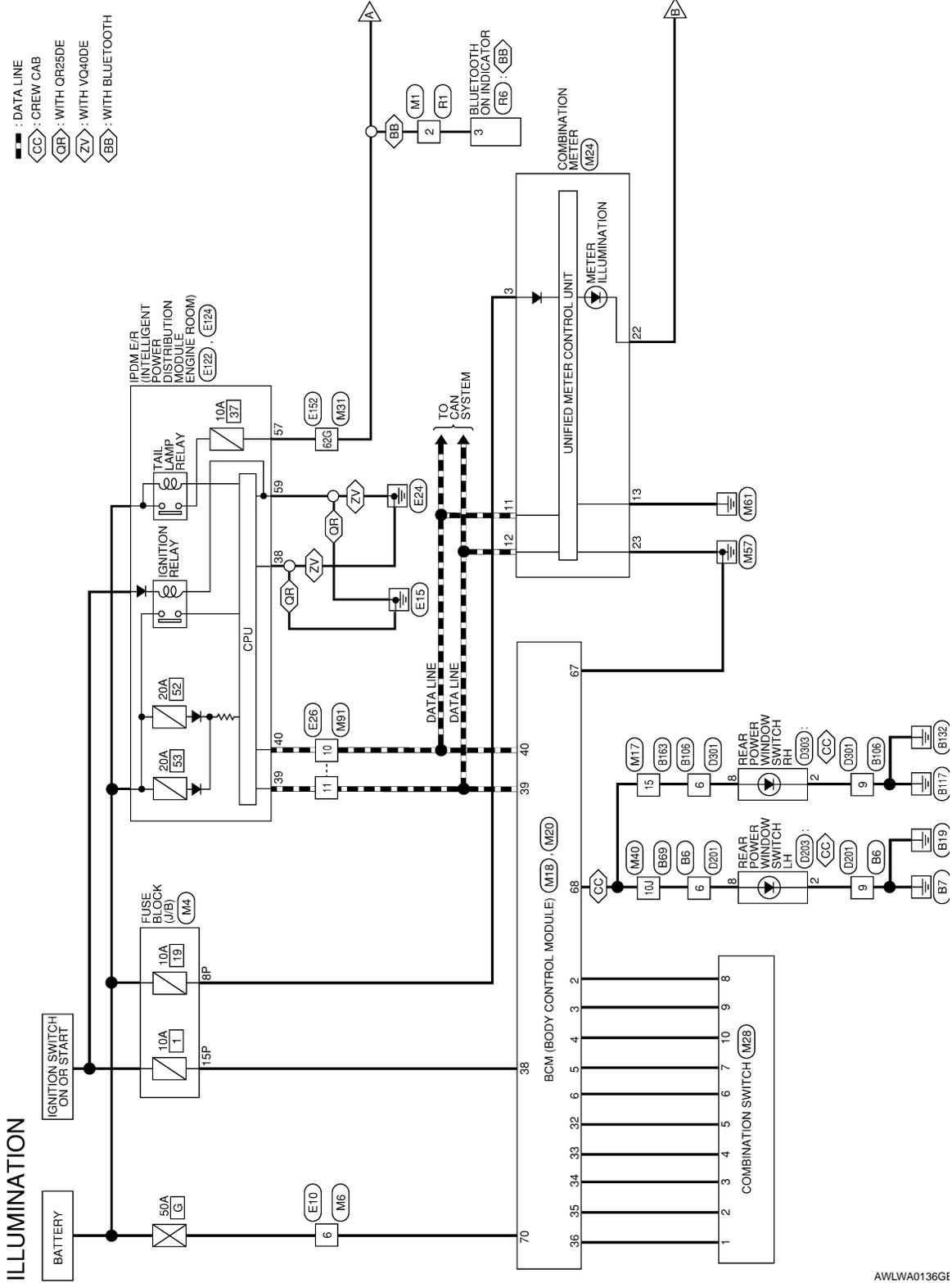
< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

ILLUMINATION

Wiring Diagram

INFOID:000000003229850



AWLWA0136GE

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

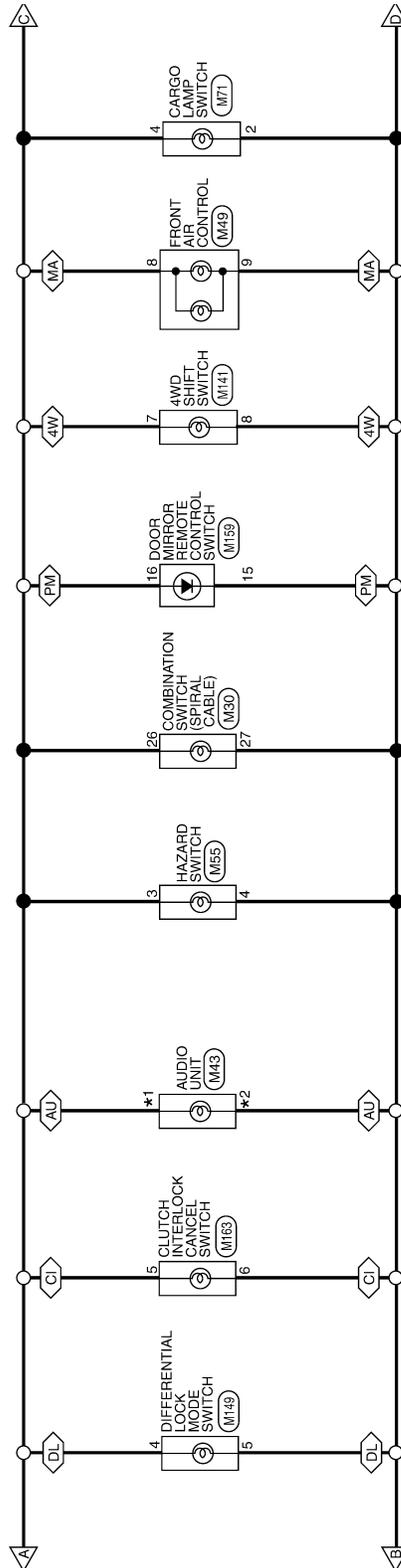
INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

- <CI> : WITH CLUTCH INTERLOCK CANCEL SWITCH
 - <PM> : WITH POWER OUTSIDE MIRRORS
 - <MA> : WITH MANUAL A/C
 - <EB> : EXCEPT BASE AUDIO SYSTEM
 - <EA> : WITH BASE AUDIO SYSTEM
 - <AU> : WITH AUDIO UNIT
 - <4W> : WITH 4 WHEEL DRIVE
- *1 <EB> : 8
 - <EA> : 9
 - *2 <EB> : 7
 - <EA> : 8



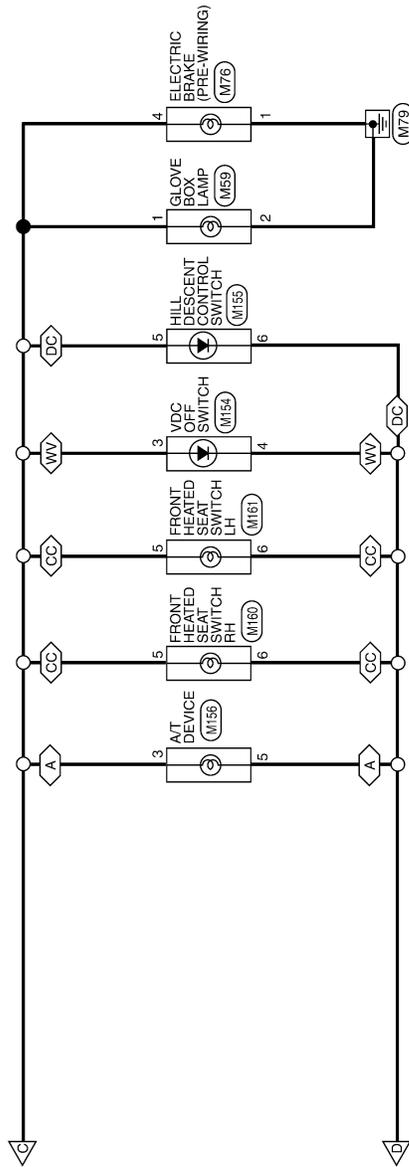
AWLWA0137GE

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

- ◊DC : WITH HILL DESCENT CONTROL AND HILL START ASSIST
- ◊A : WITH A/T
- ◊CC : CREW CAB
- ◊WV : WITH VDC

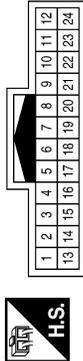


- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- INL**
- M
- N
- O
- P

AWLWA0138GE

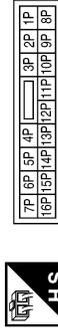
ILLUMINATION CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	2	Color of Wire	R	Signal Name	-
--------------	---	---------------	---	-------------	---

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



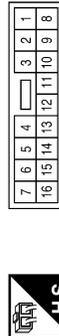
Terminal No.	8P	Color of Wire	R/Y	Signal Name	-
Terminal No.	15P	Color of Wire	W/R	Signal Name	-

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



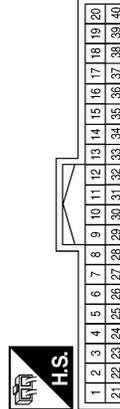
Terminal No.	6	Color of Wire	W	Signal Name	-
--------------	---	---------------	---	-------------	---

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



Terminal No.	15	Color of Wire	W	Signal Name	-
--------------	----	---------------	---	-------------	---

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



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

Terminal No.	32	Color of Wire	O	Signal Name	COMBI SW OUTPUT 5 (PULL UP SIDE)
Terminal No.	33	Color of Wire	GR	Signal Name	COMBI SW OUTPUT 4 (PULL UP SIDE)
Terminal No.	34	Color of Wire	G	Signal Name	COMBI SW OUTPUT 3 (PULL UP SIDE)
Terminal No.	35	Color of Wire	BR	Signal Name	COMBI SW OUTPUT 2 (PULL UP SIDE)
Terminal No.	36	Color of Wire	LG	Signal Name	COMBI SW OUTPUT 1 (PULL UP SIDE)
Terminal No.	38	Color of Wire	W/R	Signal Name	IGN SW
Terminal No.	39	Color of Wire	L	Signal Name	CAN-H
Terminal No.	40	Color of Wire	P	Signal Name	CAN-L

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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



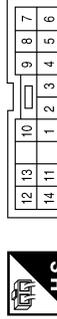
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
68	O	POWER WINDOW POWER SUPPLY OUT (LINKED TO RAP)
70	W	BAT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



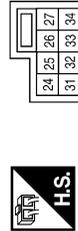
Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
11	P	CAN-L
12	L	CAN-H
13	GR	GROUND
22	BR	ILLUMINATION CONTROL
23	B	GND (POWER)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



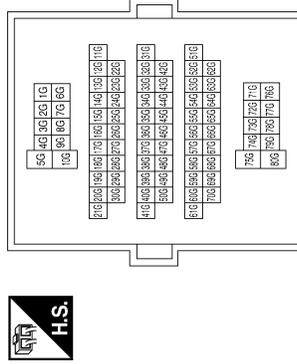
Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUTPUT1
7	L	OUTPUT2
8	P	OUTPUT5
9	SB	OUTPUT4
10	V	OUTPUT3

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



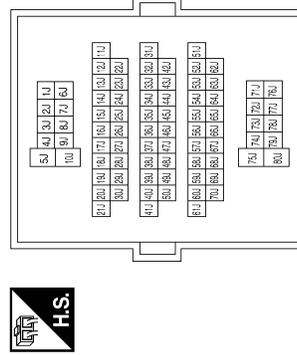
Terminal No.	Color of Wire	Signal Name
26	R	ILL+
27	G	ILL-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
62G	R	-

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



Terminal No.	Color of Wire	Signal Name
10J	W	-

AWLIA0458GB

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

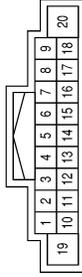
INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

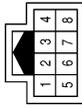
[WITH POWER DOOR LOCKS]

Connector No.	M43
Connector Name	AUDIO UNIT (BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	GR	ILL CONT
9	R	LIGHT SW

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



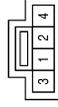
Terminal No.	Color of Wire	Signal Name
6	V	-
7	B	-
8	LG	-

Connector No.	R10
Connector Name	ROOM LAMP 2ND ROW
Connector Color	WHITE



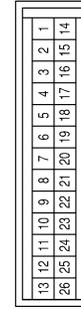
Terminal No.	Color of Wire	Signal Name
1	BR	-
2	R/Y	-

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE



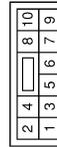
Terminal No.	Color of Wire	Signal Name
3	R	-
4	BR	-

Connector No.	M49
Connector Name	FRONT AIR CONTROL
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	G	-
9	BR	-

Connector No.	M43
Connector Name	AUDIO UNIT (EXCEPT BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	G	LIGHT SW

AWLIA0459GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Connector No.	M141
Connector Name	4WD SHIFT SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
7	R	LIGHT_SW
8	BR	GND

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

Connector No.	M76
Connector Name	ELECTRIC BRAKE(PRE-WIRING)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GROUND
4	R	ILL (TAIL)

Connector No.	M155
Connector Name	HILL DESCENT CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	BR	-

Connector No.	M154
Connector Name	VDC OFF SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	R	-
4	BR	-

Connector No.	M149
Connector Name	DIFFERENTIAL LOCK MODE SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	-
5	BR	-

AWLIA0460GB

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

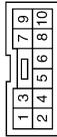
INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

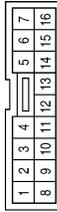
[WITH POWER DOOR LOCKS]

Connector No.	M156
Connector Name	A/T DEVICE (SHIFT LOCK)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	-
5	BR	-

Connector No.	M159
Connector Name	DOOR MIRROR REMOTE CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	BR	-
16	R	-

Connector No.	M160
Connector Name	FRONT HEATED SEAT SWITCH RH
Connector Color	BROWN



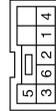
Terminal No.	Color of Wire	Signal Name
5	SB	-
6	O	-

Connector No.	M161
Connector Name	FRONT HEATED SEAT SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	BR	-

Connector No.	M163
Connector Name	CLUTCH INTERLOCK CANCEL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	BR	-

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



Terminal No.	Color of Wire	Signal Name
6	W	-

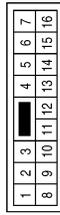
AWLIA0461GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



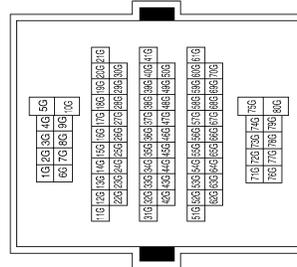
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



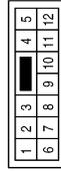
Terminal No.	Color of Wire	Signal Name
57	GR	TAIL LAMP
59	B	GND (POWER)

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



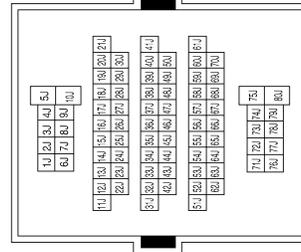
Terminal No.	Color of Wire	Signal Name
62G	R	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

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



Terminal No.	Color of Wire	Signal Name
10J	W	-

AWLIA0462GB

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

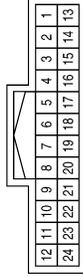
INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

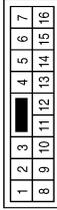
[WITH POWER DOOR LOCKS]

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



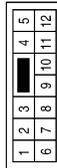
Terminal No.	Color of Wire	Signal Name
2	R	-

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



Terminal No.	Color of Wire	Signal Name
15	W	-

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



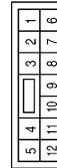
Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

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



Terminal No.	Color of Wire	Signal Name
2	B	-
8	W	-

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

Connector No.	R6
Connector Name	BLUETOOTH ON INDICATOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	DAY/NIGHT_ILL_SIG

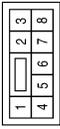
AWLIA0463GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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



Terminal No.	Color of Wire	Signal Name
2	B	-
8	W	-

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

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

AWLIA0464GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003301811

VALUES ON THE DIAGNOSIS TOOL

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

A
B
C
D
E
F
G
H
I
J
K

INL

M
N
O
P

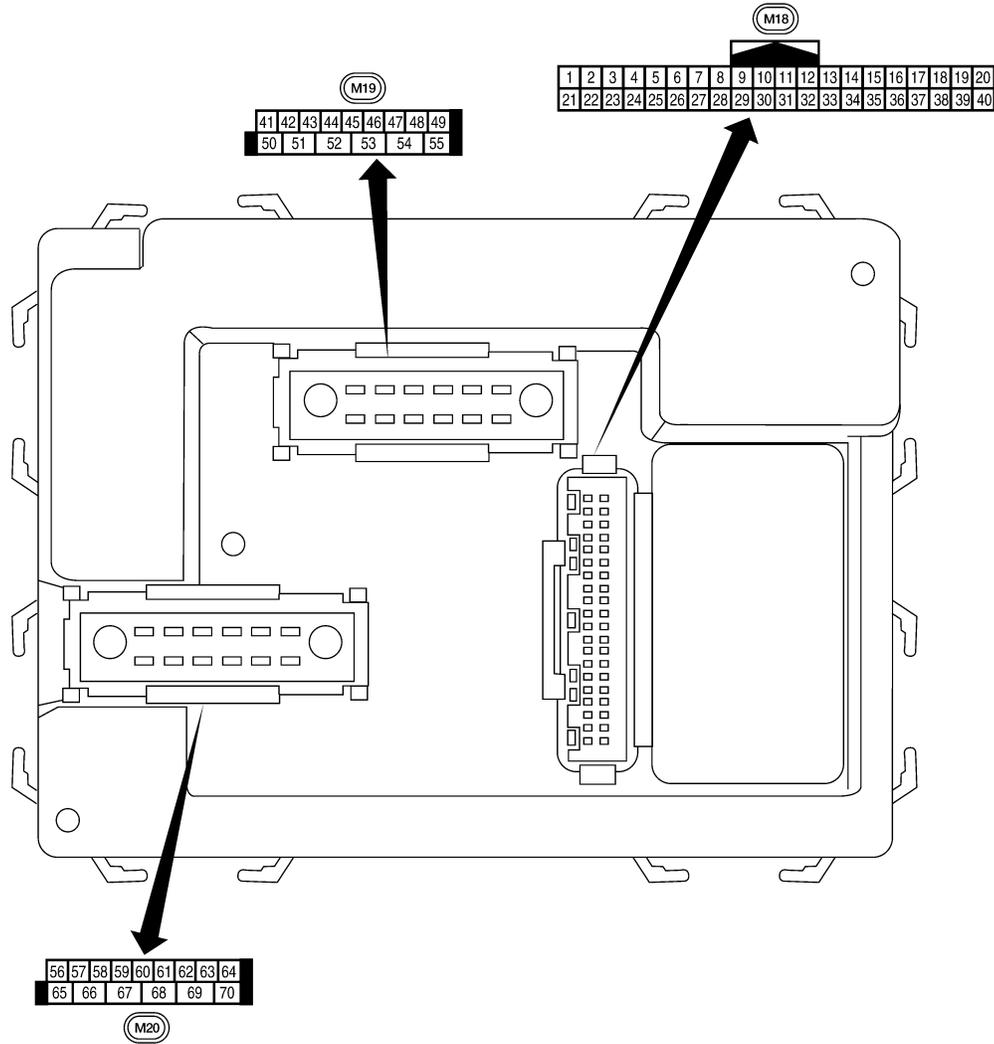
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Terminal Layout

INFOID:000000003301812



Physical Values

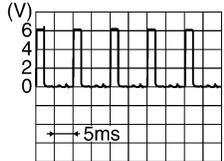
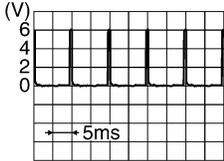
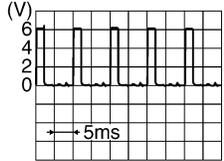
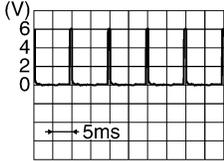
LIA2443E

INFOID:000000003301813

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

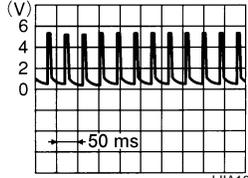
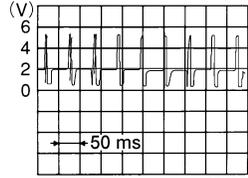
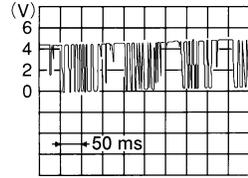
A
B
C
D
E
F
G
H
I
J
K
M
N
O
P

INL

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

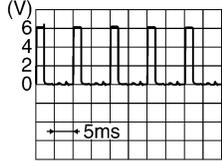
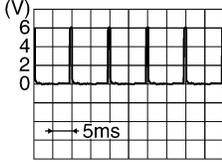
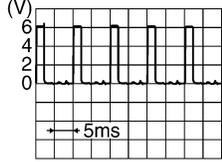
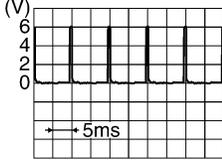
[WITH POWER DOOR LOCKS]

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

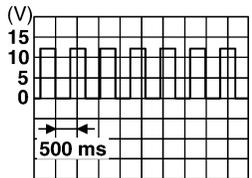
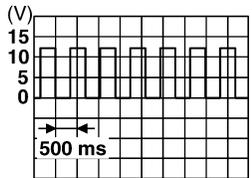
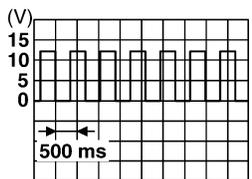
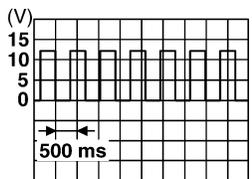
A
B
C
D
E
F
G
H
I
J
K
M
N
O
P

INL

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

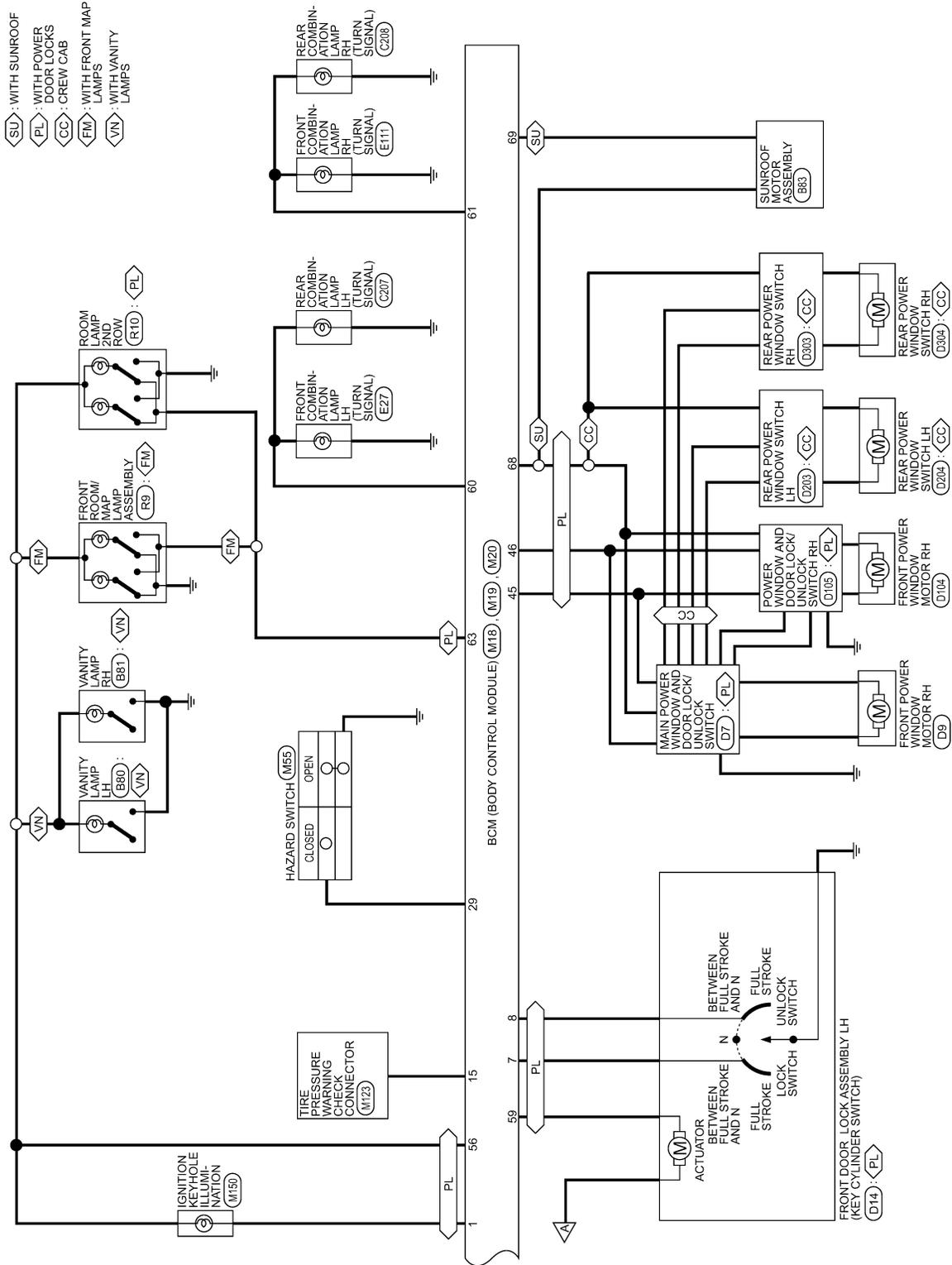
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

INL

BCM (BODY CONTROL MODULE)

[WITH POWER DOOR LOCKS]

< ECU DIAGNOSIS >



AWMWA0179G

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

INL

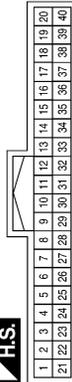
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

BCM (BODY CONTROL MODULE) CONNECTORS

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



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

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

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

AWMIA0382GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

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



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

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

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

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



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

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

DTC Inspection Priority Chart

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

AWMIA0383GB

INFOID:000000003301815

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Priority	DTC
1	<ul style="list-style-type: none"> • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	<ul style="list-style-type: none"> • B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM
3	<ul style="list-style-type: none"> • C1729: VHCL SPEED SIG ERR
4	<ul style="list-style-type: none"> • 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 • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL

DTC Index

INFOID:000000003301816

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	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 CIRCUIT	—	—	—	BCS-25
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-26
B2190: NATS ANTENNA AMP	—	—	—	SEC-17
B2191: DIFFERENCE OF KEY	—	—	—	SEC-20
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-21
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-23
C1708: [NO DATA] FL	—	—	—	WT-13
C1709: [NO DATA] FR	—	—	—	WT-13

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1710: [NO DATA] RR	—	—	—	WT-13
C1711: [NO DATA] RL	—	—	—	WT-13
C1712: [CHECKSUM ERR] FL	—	—	—	WT-15
C1713: [CHECKSUM ERR] FR	—	—	—	WT-15
C1714: [CHECKSUM ERR] RR	—	—	—	WT-15
C1715: [CHECKSUM ERR] RL	—	—	—	WT-15
C1716: [PRESSDATA ERR] FL	—	—	—	WT-17
C1717: [PRESSDATA ERR] FR	—	—	—	WT-17
C1718: [PRESSDATA ERR] RR	—	—	—	WT-17
C1719: [PRESSDATA ERR] RL	—	—	—	WT-17
C1720: [CODE ERR] FL	—	—	—	WT-15
C1721: [CODE ERR] FR	—	—	—	WT-15
C1722: [CODE ERR] RR	—	—	—	WT-15
C1723: [CODE ERR] RL	—	—	—	WT-15
C1724: [BATT VOLT LOW] FL	—	—	—	WT-15
C1725: [BATT VOLT LOW] FR	—	—	—	WT-15
C1726: [BATT VOLT LOW] RR	—	—	—	WT-15
C1727: [BATT VOLT LOW] RL	—	—	—	WT-15
C1729: VHCL SPEED SIG ERR	—	—	—	WT-18

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

INL

INTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH POWER DOOR LOCKS]

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:000000003229852

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 of the following lamps do not turn ON <ul style="list-style-type: none"> • Front room/map lamp assembly • Room lamp 2nd row • Vanity mirror lamps • Ignition keyhole illumination 	<ul style="list-style-type: none"> • Harness between BCM and each interior room lamp • Harness between BCM and each door switch • BCM 	Battery saver output/power supply circuit Refer to INL-14 .
Some or all of the following interior room lamps do not turn ON/OFF <ul style="list-style-type: none"> • Front room/map lamp assembly • Room lamp 2nd row 	<ul style="list-style-type: none"> • Harness between BCM and each interior room lamp • BCM 	Interior room lamp control circuit Refer to INL-16 .
Cargo lamp does not turn ON/OFF	<ul style="list-style-type: none"> • Harness between fuse block (J/B) and cargo lamp relay • Harness between cargo lamp relay and cargo lamp • Harness between BCM and cargo lamp relay • BCM 	Cargo lamp control circuit Refer to INL-18 .
Ignition keyhole illumination does not turn ON/OFF	<ul style="list-style-type: none"> • Harness between BCM and ignition keyhole illumination • BCM 	Ignition keyhole illumination circuit Refer to INL-21
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-10 .
Interior room lamp battery saver does not activate.	—	Check the interior room lamp battery saver setting. Refer to INL-10 .

PRECAUTION

PRECAUTIONS

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

INFOID:000000003229853

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

WARNING:

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

General precautions for service operations

INFOID:000000003229854

- When removing or disassembling any part, be careful not to damage or deform it. Protect parts which may get in the way with cloth.
- When removing parts with a screw driver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If a non-reuseable part is removed, replace it with a new one.
- After re-assembly has been completed, make sure each part functions correctly.
- Never work with wet hands.
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps or remove sealant residue.

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

INL

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

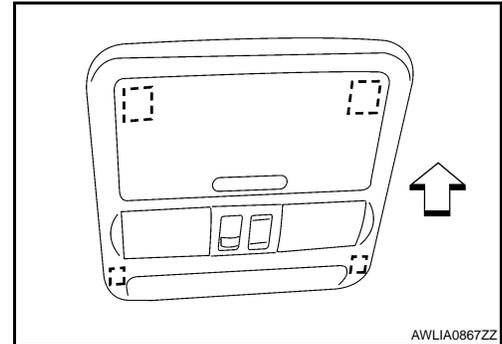
Removal and Installation

INFOID:000000003229855

MAP LAMP

Removal

The map lamp is replaced as part of the overhead console assembly.
Refer to [INT-23. "Removal and Installation"](#).



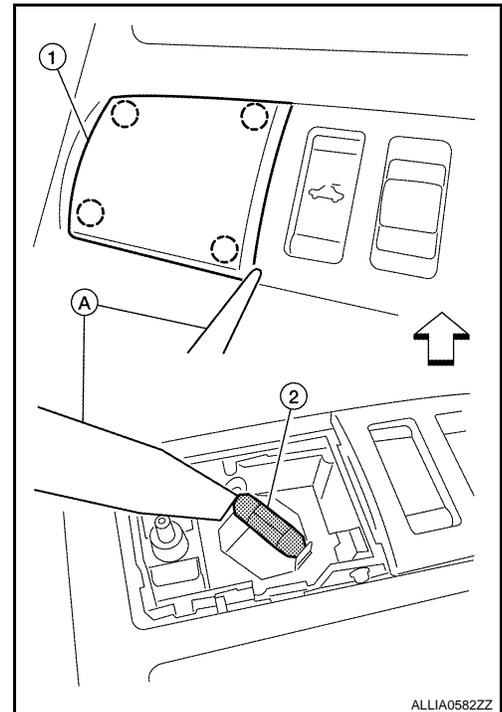
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Disconnect the negative battery terminal.
2. Using a suitable tool (A), remove map lamp lens (1).
←: Vehicle front
CAUTION:
Wrap a cloth around tool to protect the housing and lens.
3. Release one side of the bulb (2) from the tab, then pull straight downward to remove.

Map lamp bulb : 12V - 8W



VANITY MIRROR LAMP

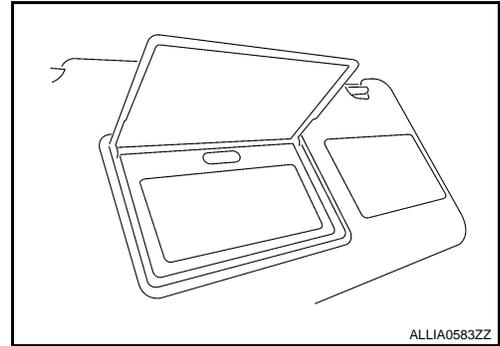
Removal

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITH POWER DOOR LOCKS]

The vanity mirror lamp is replaced as part of the sunvisor assembly. Refer to [INT-23, "Removal and Installation"](#).



Installation

Installation is in the reverse order of removal.

Bulb Replacement

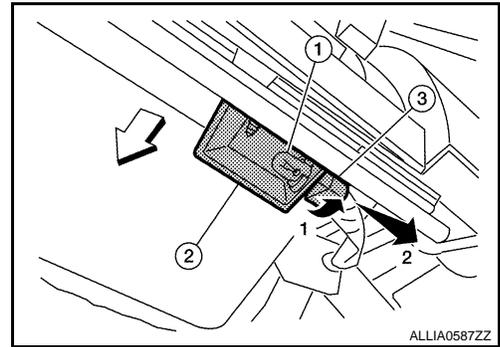
The vanity mirror lamp bulb is replaced as part of the sunvisor assembly. Refer to [INT-23, "Removal and Installation"](#).

GLOVE BOX LAMP

Removal

1. Remove lower instrument panel RH and glove box. Refer to [IP-10, "Removal and Installation"](#).
2. Rotate glove box lamp socket (3) with bulb (1) counterclockwise, then pull away from lamp shield (2) on steering member to remove.

⇐: Vehicle front



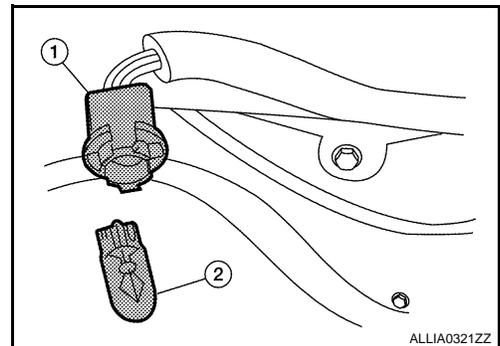
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Disconnect the negative battery terminal.
2. Remove glove box lamp.
3. Pull bulb (2) straight out from glove box lamp socket (1) to remove.

Glove box lamp bulb : 12V - 3.4W



ROOM LAMP

Removal

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

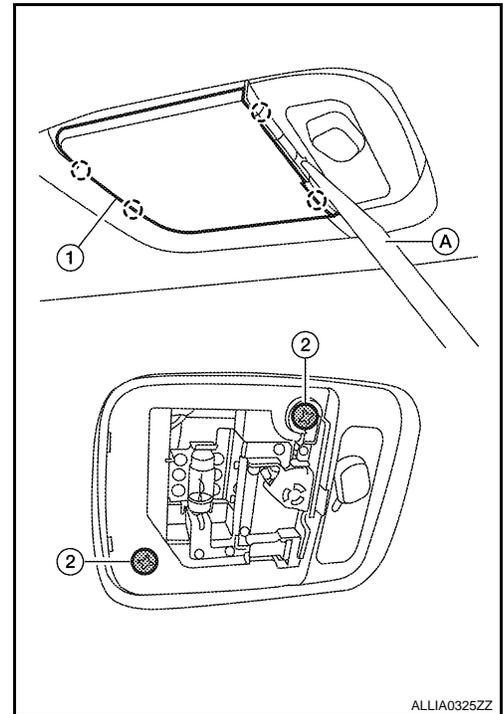
INL

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITH POWER DOOR LOCKS]

1. Disconnect the negative battery terminal.
2. Using a suitable tool (A), release the pawls and remove the room lamp lens (1).
- CAUTION:**
Wrap a cloth around tool to protect the housing and lens.
3. Remove room lamp screws (2).
4. Disconnect the connector, then remove room lamp.



Installation

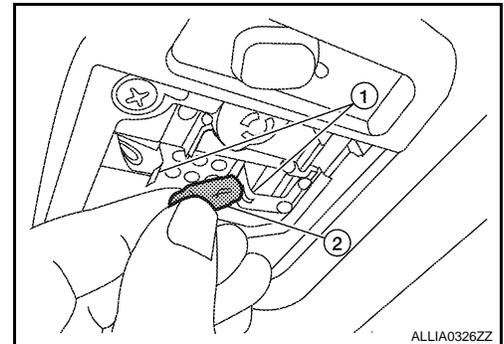
Installation is in the reverse order of removal.

Bulb Replacement

1. Disconnect the negative battery terminal.
2. Using a suitable tool, release the pawls and remove the room lamp lens.
3. Release the room lamp bulb retainers (1), then pull bulb (2) straight out to remove.

Room lamp bulb

: 12V - 8W



ILLUMINATION

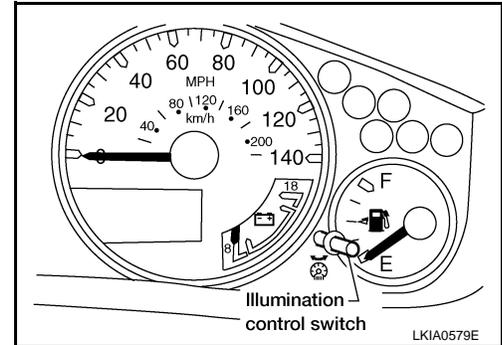
Removal and Installation

INFOID:000000003229856

ILLUMINATION CONTROL SWITCH

Removal

The illumination control switch (1) is replaced as a part of the combination meter assembly. Refer to [MWI-91, "Removal and Installation"](#).



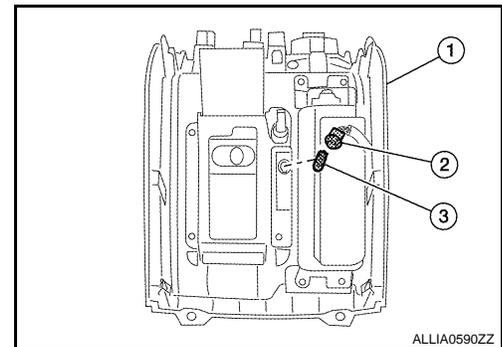
Installation

Installation is in the reverse order of removal.

A/T FINISHER LAMP

Removal

1. Remove A/T finisher from center console. Refer to [IP-16, "Exploded View"](#).
2. Rotate A/T finisher lamp socket (2) with bulb (3) counterclockwise, then pull away from finisher (1).



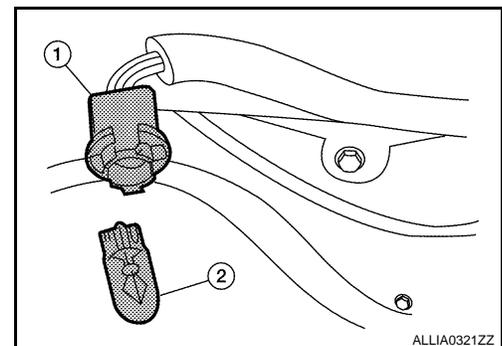
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Remove A/T finisher from center console. Refer to [IP-16, "Exploded View"](#).
2. Remove A/T finisher lamp socket (1), then pull bulb (2) straight out away from socket.

AT finisher lamp bulb : 12V - 3W



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

INL

BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

[WITH POWER DOOR LOCKS]

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Interior Lamp/Illumination

INFOID:000000003229857

Item	Wattage (W)*
Map lamp	8
Vanity lamp	*
Glove box lamp	3.4
Room lamp	8
A/T finisher lamp	3

*: Always check with the Parts Department for the latest parts information.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT POWER DOOR LOCKS]

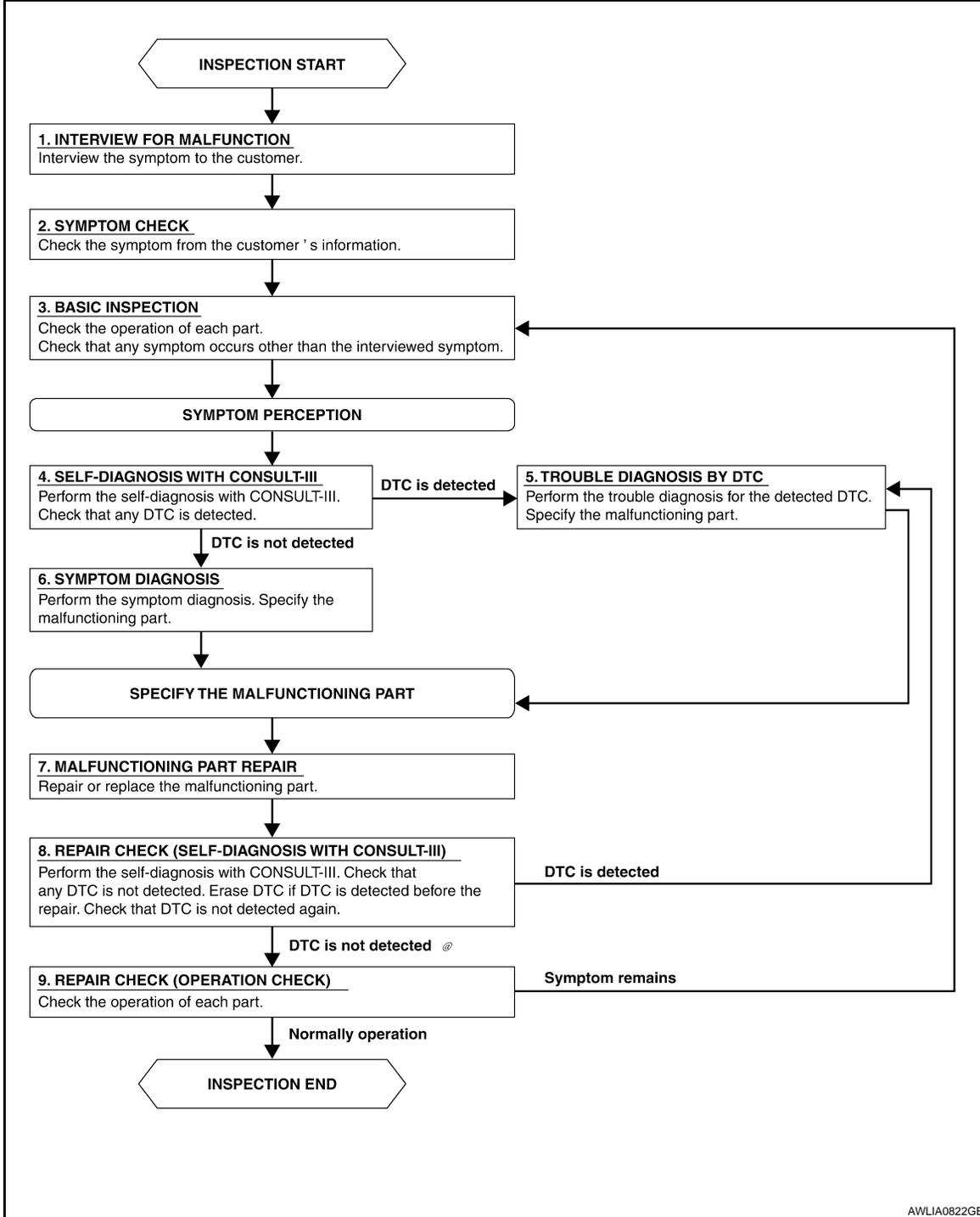
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003303045

OVERALL SEQUENCE



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

INL

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT POWER DOOR LOCKS]

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2

2. SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

Check the operation of each part. Check that any concerns occur other than those mentioned in the customer interview.

>> 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 7

6. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 7

7. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 8

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

Perform the self-diagnosis with CONSULT-III. Verify that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 9

9. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

YES >> Inspection End

NO >> GO TO 3

INTERIOR ROOM LAMP

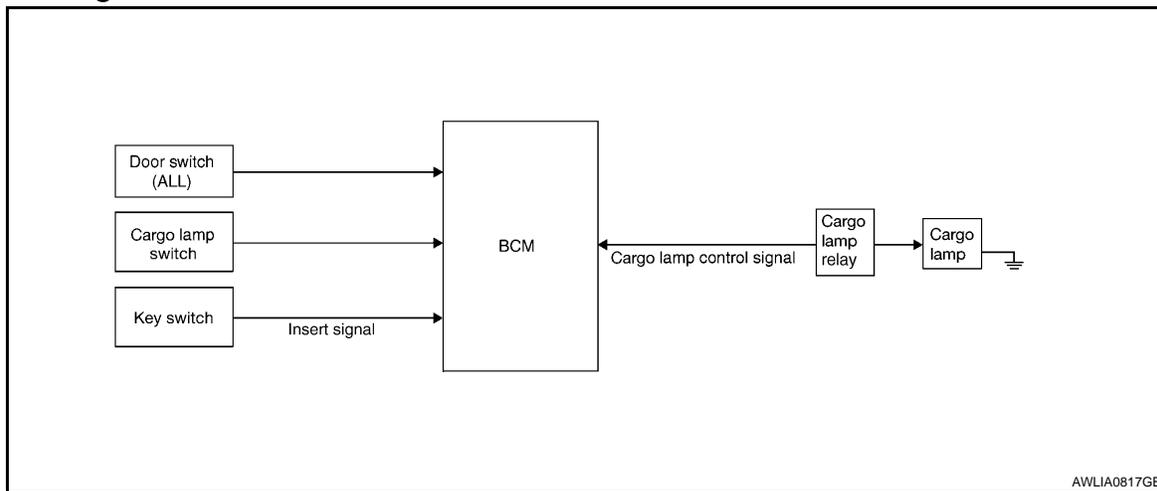
< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP

System Diagram



System Description

INFOID:0000000003243262

OUTLINE

- Front room/map lamp (if equipped) and room lamp 2nd row are powered by fuse block (J/B) fuse number 18 (10A). When the lamps are set to the DOOR position, ground is provided through the door switches.
- Cargo lamp is controlled by the cargo lamp control function of the BCM.

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

INL

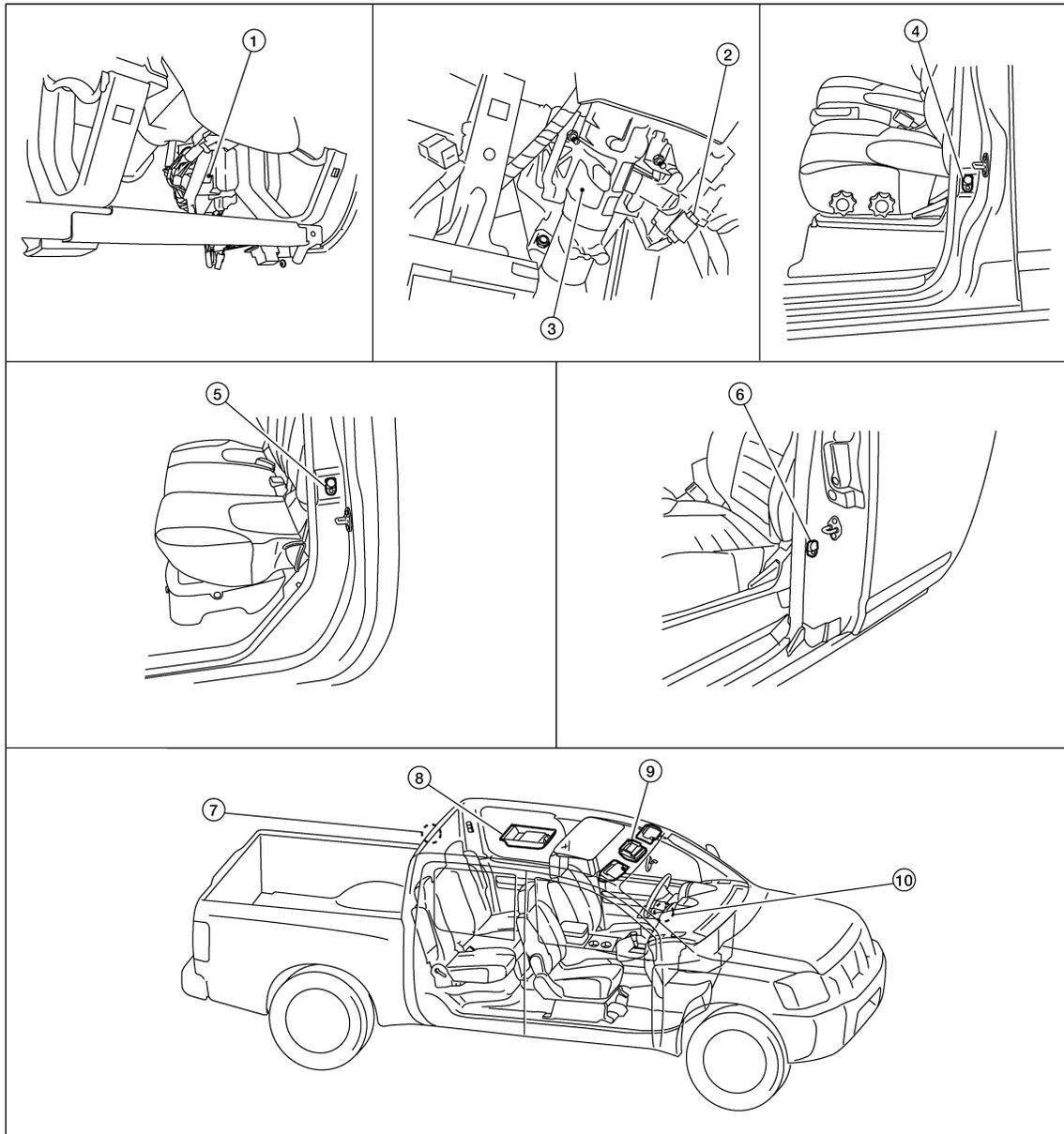
INTERIOR ROOM LAMP

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Component Parts Location

INFOID:000000003243263



AWLIA0820ZZ

- | | | |
|---|--|---|
| 1. BCM M18, M19, M20 (view with lower instrument panel LH removed) | 2. Key switch M27 | 3. Steering column assembly |
| 4. Front door switch LH B8 (crew cab)
Front door switch RH B108 (crew cab) | 5. Rear door switch LH B18 (crew cab)
Rear door switch RH B116 (crew cab) | 6. Front door switch LH D213 (king cab)
Front door switch RH D314 (king cab) |
| 7. Cargo lamp B161 | 8. Room lamp 2nd row R10 | 9. Front room/map lamp assembly (with front map lamps) R9 |
| 10. Ignition keyhole illumination M150 | | |

Component Description

INFOID:000000003243264

Part name	Description
BCM	Provides ground for the cargo lamp relay.
Key switch	Provides key in ignition status to the BCM.
Door switches	Provides door OPEN/CLOSED status to the BCM.

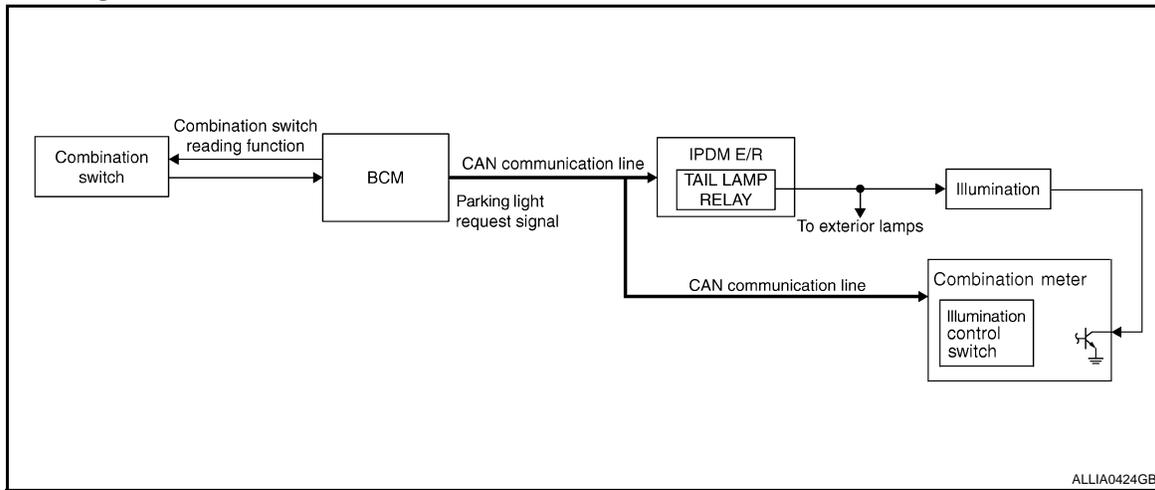
ILLUMINATION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

ILLUMINATION CONTROL SYSTEM

System Diagram



System Description

INFOID:000000003243266

The illumination lamps operation is dependent upon the position of the lighting switch (combination switch). When the lighting switch is placed in the 1ST or 2ND position the BCM (body control module) receives input requesting the parking lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) via the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the tail lamp relay coil. When energized, this relay directs power to the parking and illumination lamps, which then illuminate.

BATTERY SAVER CONTROL

When the lighting switch (combination switch) is in the 1ST or 2ND position and the ignition switch is turned from ON or ACC to OFF, the battery saver control feature is activated. Under this condition, the illumination lamps remain illuminated for 30 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the illumination lamps are turned off after a 30 second delay. When the lighting switch is turned from OFF to 1ST or 2ND position after illumination lamps have been turned off by the battery saver control, the illumination lamps illuminate again.

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

INL

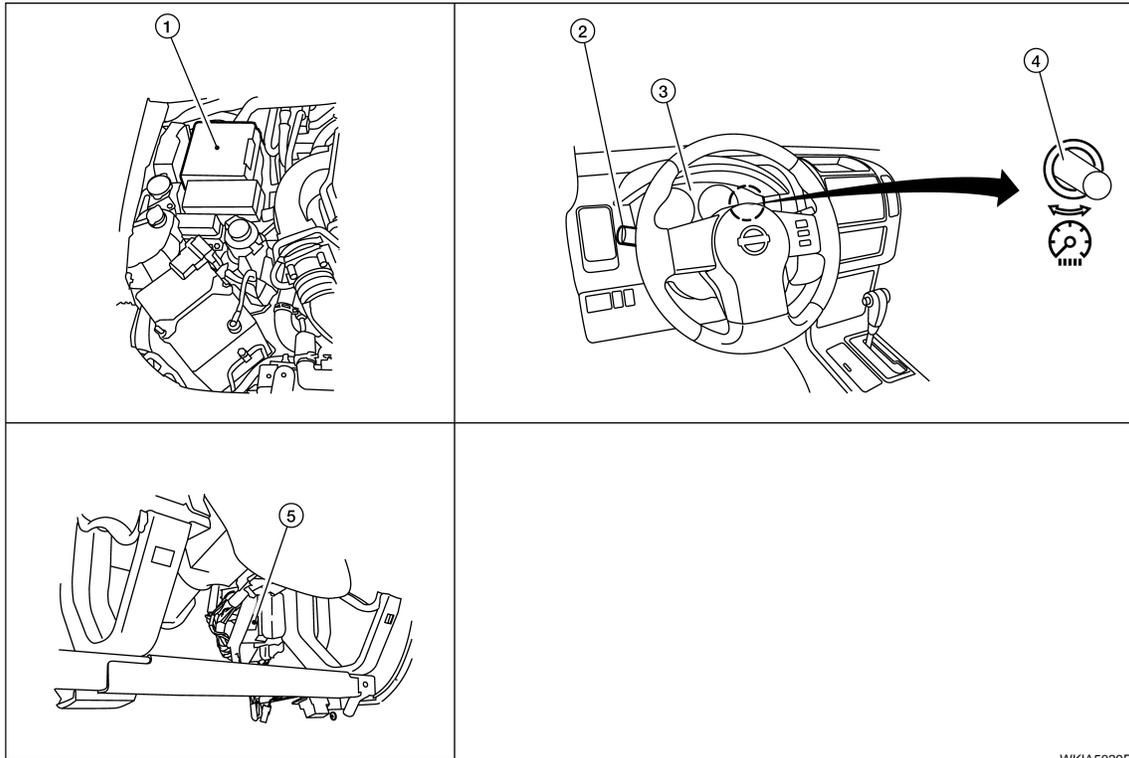
ILLUMINATION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Component Parts Location

INFOID:000000003243267



WKIA5029E

1. IPDM E/R E122, E124
2. Combination switch M28
3. Combination meter M24
4. Illumination control switch (built into combination meter)
5. BCM M18, M20 (view with instrument lower panel LH removed)

Component Description

INFOID:000000003243268

Part name	Description
BCM	The BCM monitors the lighting switch position with the combination switch reading function. The BCM requests, via CAN communication, that the IPDM E/R activate the tail lamp relay.
IPDM E/R	The IPDM E/R activates the tail lamp relay based on inputs received from the BCM via the CAN communication network.
Combination meter (illumination control switch)	The illumination control switch is a part of the combination meter. The combination meter controls illumination intensity by varying ground to the illumination lamps based on the illumination control switch position.
Combination switch	The combination switch provides input to the BCM about the lighting switch position.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function

INFOID:000000003243269

CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

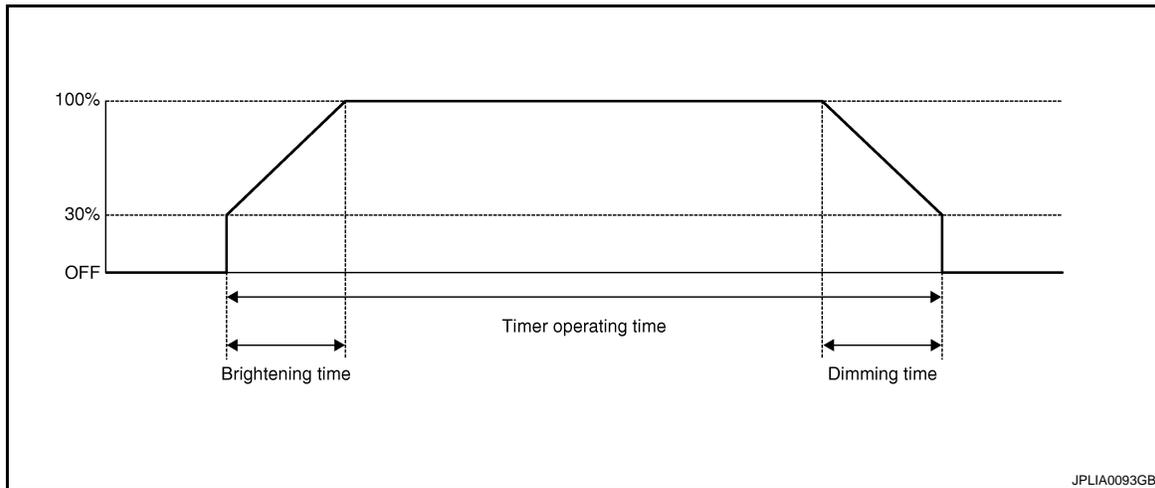
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR	Displays BCM input/output data in real time.
	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.
	SELF-DIAG RESULTS	Displays BCM self-diagnosis results.
	CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
	ECU PART NUMBER	BCM part number can be read.
	CONFIGURATION	Performs BCM configuration read/write functions.

INT LAMP

INT LAMP : CONSULT-III Function

INFOID:000000003243270

WORK SUPPORT



JPLIA0093GB

Service item	Setting item	Setting	
SET I/L D-UNLCK INTCON	ON	This item is not used for this model	
	OFF		
ROOM LAMP ON TIME SET	MODE 1	0.5 sec.	
	MODE 2	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	This item is not used for this model
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Service item	Setting item	Setting	
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.	This item is not used for this model
	MODE 2	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	The switch status input from ignition switch
KEY ON SW [ON/OFF]	Key switch status input from key slot
DOOR SW-DR [ON/OFF]	The switch status input from front door switch LH
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
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]	This item is not used for this model
KEY CYL LK-SW [ON/OFF]	This item is not used for this model
KEY CYL UN-SW [ON/OFF]	This item is not used for this model
CDL LOCK SW [ON/OFF]	This item is not used for this model
CDL UNLOCK SW [ON/OFF]	This item is not used for this model
KEYLESS LOCK [ON/OFF]	This item is not used for this model
KEYLESS UNLOCK [ON/OFF]	This item is not used for this model

ACTIVE TEST

Test item	Operation	Description
INT LAMP	ON	This item is not used for this model
	OFF	
IGN ILLUM	ON	This item is not used for this model
	OFF	
LUGGAGE LAMP TEST	ON	This item is not used for this model
	OFF	

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

COMPONENT DIAGNOSIS

INTERIOR ROOM LAMP

Diagnosis Procedure

INFOID:000000003243278

CAUTION:

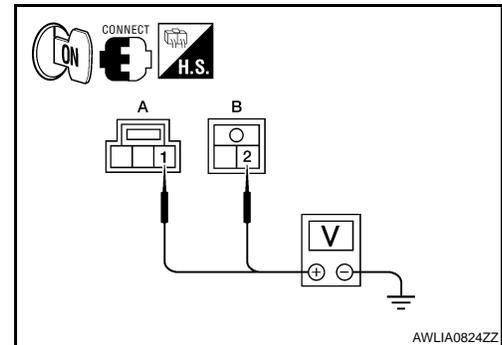
Before performing the diagnosis, check that the following is normal.

- Fuse
- Interior room lamp bulbs

1. CHECK INTERIOR ROOM LAMP POWER SUPPLY

Check voltage between interior room lamp connectors and ground.

Component	(+)		(-)	Voltage
	Connector	Terminal		
Front room/map lamp (if equipped)	R9 (A)	1	Ground	Battery voltage
Room lamp 2nd row	R10 (B)	2		



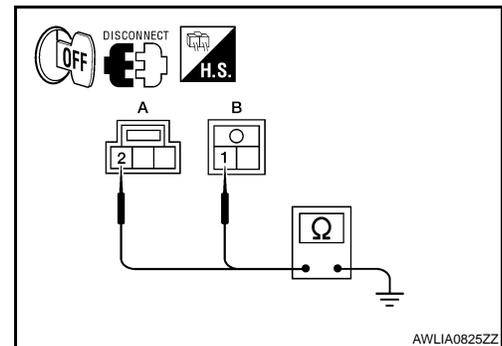
Is the inspection result normal?

- YES >> GO TO 2
 NO >> Repair the harnesses or connectors.

2. CHECK INTERIOR ROOM LAMP GROUND

1. Disconnect interior room lamp connectors.
2. Check continuity between interior room lamp connectors and ground while operating the door switches.

Component	(+)		(-)	Door switches	Continuity
	Connector	Terminal			
Front room/map lamp (if equipped)	R9 (A)	2	Ground	Open	Yes
				Closed	No
Room lamp 2nd row	R10 (B)	1		Open	Yes
				Closed	No



Is the inspection result normal?

- YES >> Replace the interior room lamp. Refer to [INL-117, "Removal and Installation"](#).
 NO >> GO TO 3

3. CHECK DOOR SWITCHES

Check the door switches. Refer to [INL-76, "Component Inspection \(Door Switch\)"](#).

Is the inspection result normal?

- YES >> • Crew cab models, repair the harnesses or connectors between the interior room lamp and the door switches.
 • King cab models, GO TO 4
 NO >> Replace the door switch.

4. CHECK DOOR SWITCH GROUND (KING CAB)

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

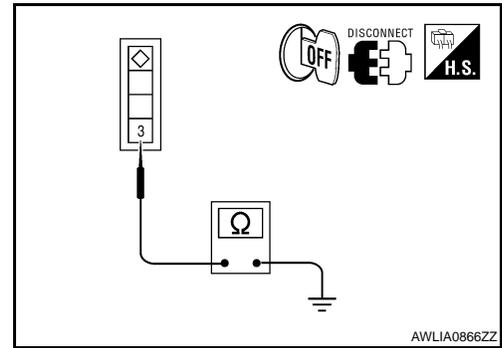
[WITHOUT POWER DOOR LOCKS]

Check continuity between door switch connectors and ground.

Component	(+) Terminal		(-)	Continuity
	Connector	Terminal		
Front door switch LH	D213	3	Ground	Yes
Front door switch RH	D314	3		

Is the inspection result normal?

- YES >> Repair the harnesses or connectors between the interior room lamp and the door switches.
- NO >> Repair the harnesses or connectors between the door switch and ground.



Component Inspection (Door Switch)

INFOID:000000003303044

CREW CAB

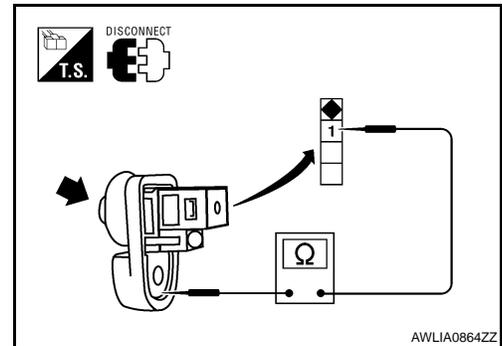
1. CHECK DOOR SWITCHES

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

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Inspection End
- NO >> Replace door switch.



KING CAB

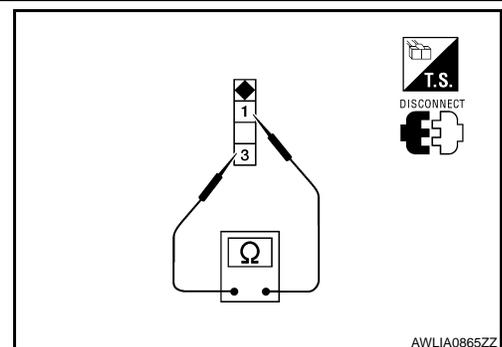
1. CHECK DOOR SWITCHES

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

Item	Terminal	Condition	Continuity
Door switches	1 – 3	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Inspection End
- NO >> Replace door switch.



CARGO LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

CARGO LAMP CONTROL CIRCUIT

Description

INFOID:000000003302859

Controls the cargo lamp relay coil (ground side) to turn the cargo lamp ON and OFF.

Diagnosis Procedure

INFOID:000000003302861

CAUTION:

Before performing the diagnosis, check that the following is normal.

- Fuse
- Cargo lamp bulbs

1. CHECK CARGO LAMP OPERATION

Check the cargo lamp operation from the cargo lamp switch and the door switches.

Is the cargo lamp inoperative from all of the above switches?

YES >> GO TO 4

NO >> • Inoperative from cargo lamp switch only, GO TO 2

- Inoperative from door switches only, refer to [DLK-21, "KING CAB : Description"](#) (king cab), [DLK-23, "CREW CAB : Description"](#) (crew cab).

2. CHECK CARGO LAMP SWITCH

Check the cargo lamp switch. Refer to [INL-79, "Component Inspection"](#).

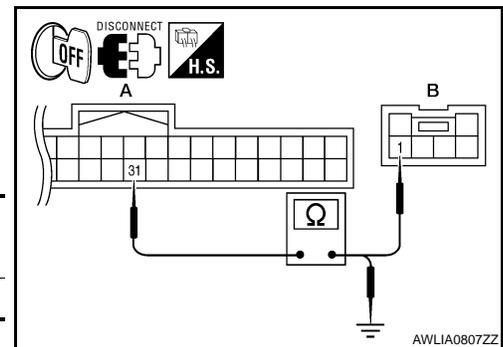
Is the inspection result normal?

YES >> GO TO 3

NO >> Replace the cargo lamp switch.

3. CHECK CARGO LAMP SWITCH CIRCUIT

1. Disconnect BCM connector M18 and cargo lamp switch connector.
2. Check continuity between BCM harness connector M18 (A) terminal 31 and cargo lamp switch harness connector M71 (B) terminal 1.



BCM		Cargo lamp switch		Continuity
Connector	Terminal	Connector	Terminal	
M18 (A)	31	M71 (B)	1	Yes

3. Check continuity between BCM harness connector M18 terminal 31 and ground.

Connector	Terminal	—	Continuity
M18 (A)	31	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-49, "Removal and Installation"](#).

NO >> Repair harnesses or connectors.

4. CHECK CARGO LAMP RELAY

Check the cargo lamp relay. Refer to [INL-79, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace the cargo lamp relay.

5. CHECK CARGO LAMP RELAY CONTROL

CARGO LAMP CONTROL CIRCUIT

[WITHOUT POWER DOOR LOCKS]

< COMPONENT DIAGNOSIS >

While operating the cargo lamp switch, check voltage between BCM harness connector M19 terminal 50 and ground.

Connector	Terminal	—	Cargo lamp switch	Voltage
M19	50	Ground	ON	0V
			OFF	Battery voltage

Is the inspection result normal?

YES >> GO TO 6

NO >> GO TO 8

6.CHECK CARGO LAMP VOLTAGE

1. Disconnect the cargo lamp harness connector.
2. While operating the cargo lamp switch, check voltage between cargo lamp harness connector B161 terminal 3 and ground.

Connector	Terminal	—	Cargo lamp switch	Voltage
B161	3	Ground	ON	Battery voltage

Is the inspection result normal?

YES >> Replace cargo lamp.

NO >> GO TO 7

7.CHECK CARGO LAMP RELAY VOLTAGE PART 1

Check voltage between cargo lamp relay harness connector M165 terminal 5 and ground.

Cargo lamp relay		Ground	Voltage
Connector	Terminal		Battery voltage
M165	5		

Is the inspection result normal?

YES >> Repair harness or connectors between cargo lamp relay and cargo lamp.

NO >> Repair harness or connector between splice and cargo lamp relay.

8.CHECK CARGO LAMP RELAY VOLTAGE PART 2

Check voltage between cargo lamp relay harness connector M165 terminal 2 and ground.

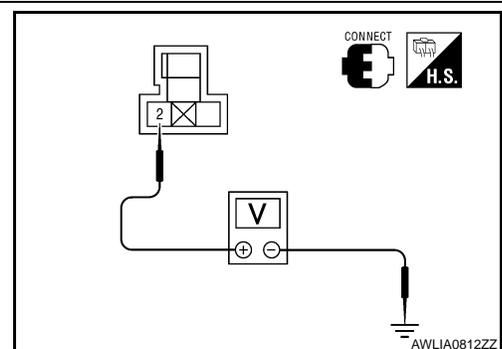
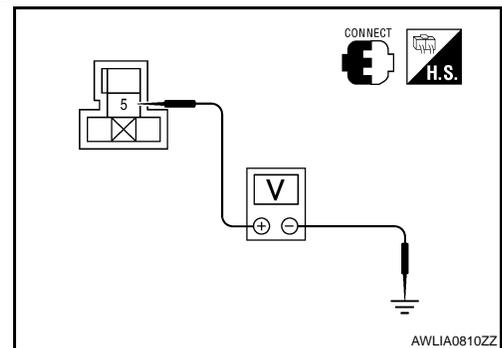
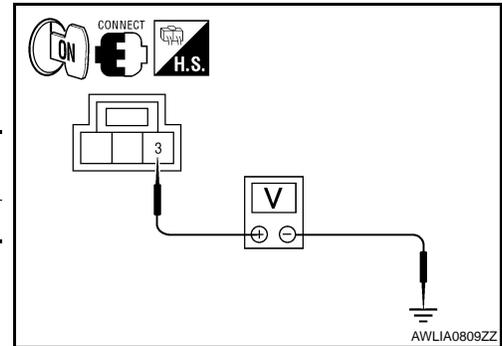
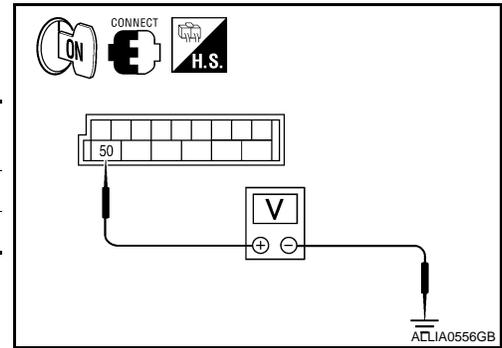
Cargo lamp relay		Ground	Voltage
Connector	Terminal		Battery voltage
M165	2		

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harnesses or connectors.

9.CHECK CARGO LAMP RELAY CONTROL CIRCUIT

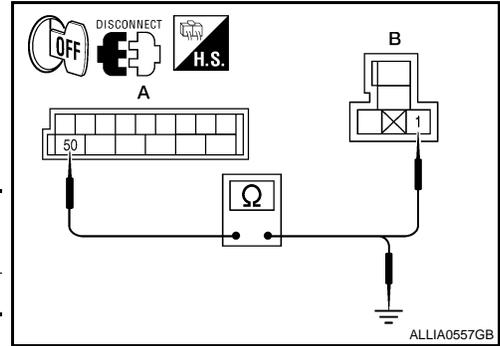


CARGO LAMP CONTROL CIRCUIT

[WITHOUT POWER DOOR LOCKS]

< COMPONENT DIAGNOSIS >

1. Disconnect BCM connector M19 and cargo lamp relay connector.
2. Check continuity between BCM harness connector M19 (A) terminal 50 and cargo lamp relay harness connector B161 (B) terminal 1.



BCM		Cargo lamp relay		Continuity
Connector	Terminal	Connector	Terminal	
M19 (A)	50	B161 (B)	1	Yes

3. Check continuity between BCM harness connector M19 terminal 50 and ground.

Connector	Terminal	—	Continuity
M19 (A)	50	Ground	No

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-49. "Removal and Installation"](#).
 NO >> Repair harnesses or connectors.

Component Inspection

INFOID:000000003302862

CARGO LAMP SWITCH

INSPECTION PROCEDURE

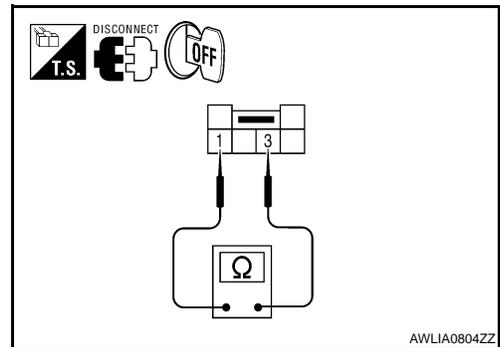
1. CHECK CARGO LAMP SWITCH

1. Turn ignition switch OFF.
2. Disconnect cargo lamp switch harness connector.
3. Check continuity between cargo lamp switch terminals.

Cargo lamp switch	Condition	Continuity
Terminal		
1 - 3	ON	Yes
	OFF	No

Is the inspection result normal?

- YES >> Inspection End
 NO >> Replace cargo lamp switch.



CARGO LAMP RELAY

INSPECTION PROCEDURE

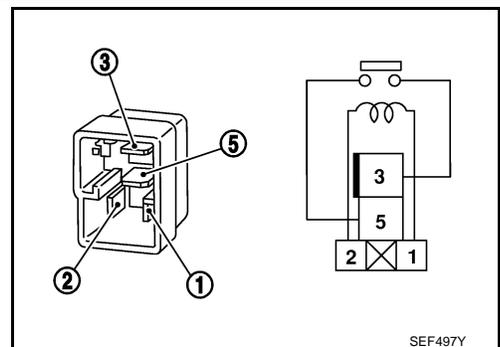
1. CHECK CARGO LAMP RELAY

1. Turn ignition switch OFF.
2. Disconnect cargo lamp relay harness connector.
3. Supply power to terminal 2 and ground to terminal 1 of the cargo lamp relay.
4. Check continuity between cargo lamp relay terminals 3 and 5.

Terminal	Condition	Continuity
3 5		
	No power and ground supplied	No

Is the inspection result normal?

- YES >> Inspection End
 NO >> Replace cargo lamp relay.



IGNITION KEYHOLE ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

IGNITION KEYHOLE ILLUMINATION

Diagnosis Procedure

INFOID:000000003303046

CAUTION:

Before performing the diagnosis, check that the following is normal.

- Fuse
- Ignition keyhole illumination bulb

1. CHECK IGNITION KEYHOLE ILLUMINATION POWER SUPPLY

Check voltage between ignition keyhole illumination connector and ground.

Component	(+)		(-)	Voltage
	Connector	Terminal		
Ignition keyhole illumination	M150	1	Ground	Battery voltage

Is the inspection result normal?

- YES >> GO TO 2
 NO >> Repair the harness or connector.

2. CHECK IGNITION KEYHOLE ILLUMINATION GROUND

1. Disconnect ignition keyhole illumination connector.
2. Check continuity between ignition keyhole illumination connector and ground while operating the door switches.

Component	(+)		(-)	Door switches	Continuity
	Connector	Terminal			
Ignition keyhole illumination	M150	2	Ground	Open	Yes
				Closed	No

Is the inspection result normal?

- YES >> Replace the ignition keyhole illumination.
 NO >> GO TO 3

3. CHECK DOOR SWITCHES

Check the door switches. Refer to [INL-76, "Component Inspection \(Door Switch\)"](#).

Is the inspection result normal?

- YES >> • Crew cab models, repair the harnesses or connectors between the interior room lamp and the door switches.
 • King cab models, GO TO 4
 NO >> Replace the door switch.

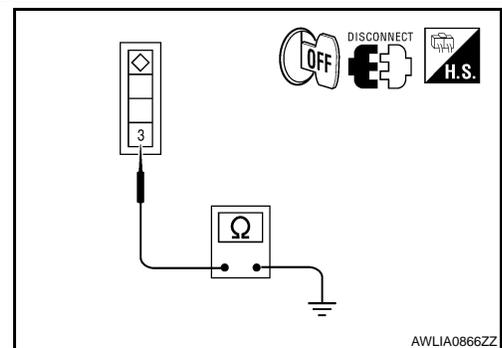
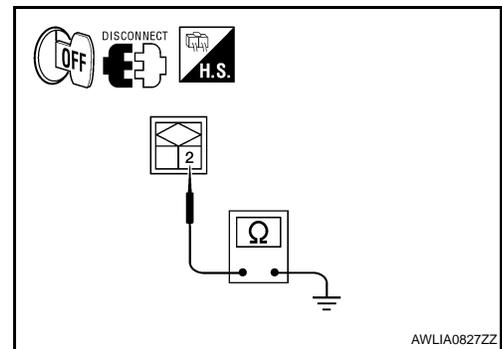
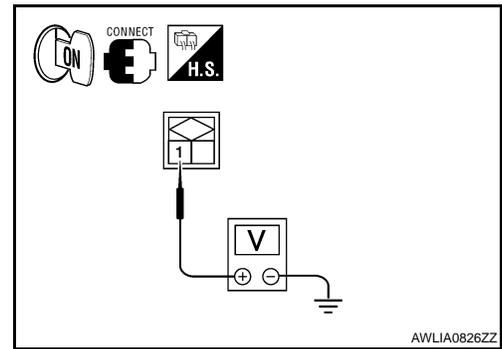
4. CHECK DOOR SWITCH GROUND (KING CAB)

Check continuity between door switch connectors and ground.

Component	(+)		(-)	Continuity
	Connector	Terminal		
Front door switch LH	D213	3	Ground	Yes
Front door switch RH	D314	3		

Is the inspection result normal?

- YES >> Repair the harnesses or connectors between the interior room lamp and the door switches.
 NO >> Repair the harnesses or connectors between the door switch and ground.



IGNITION KEYHOLE ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Component Inspection (Door Switch)

INFOID:000000003303047

CREW CAB

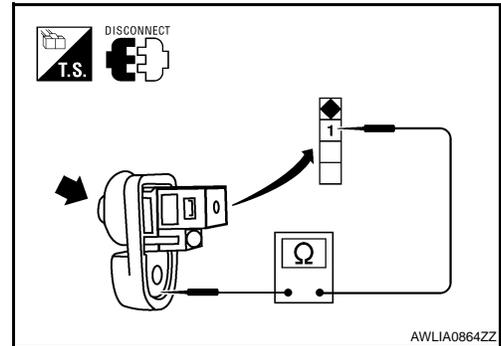
1. CHECK DOOR SWITCHES

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

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Inspection End
 NO >> Replace door switch.



KING CAB

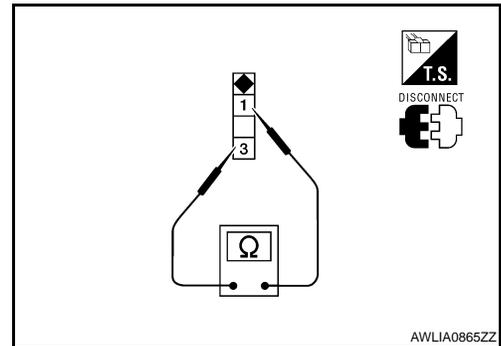
1. CHECK DOOR SWITCHES

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

Item	Terminal	Condition	Continuity
Door switches	1 – 3	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Inspection End
 NO >> Replace door switch.



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

INL

INTERIOR ROOM LAMP

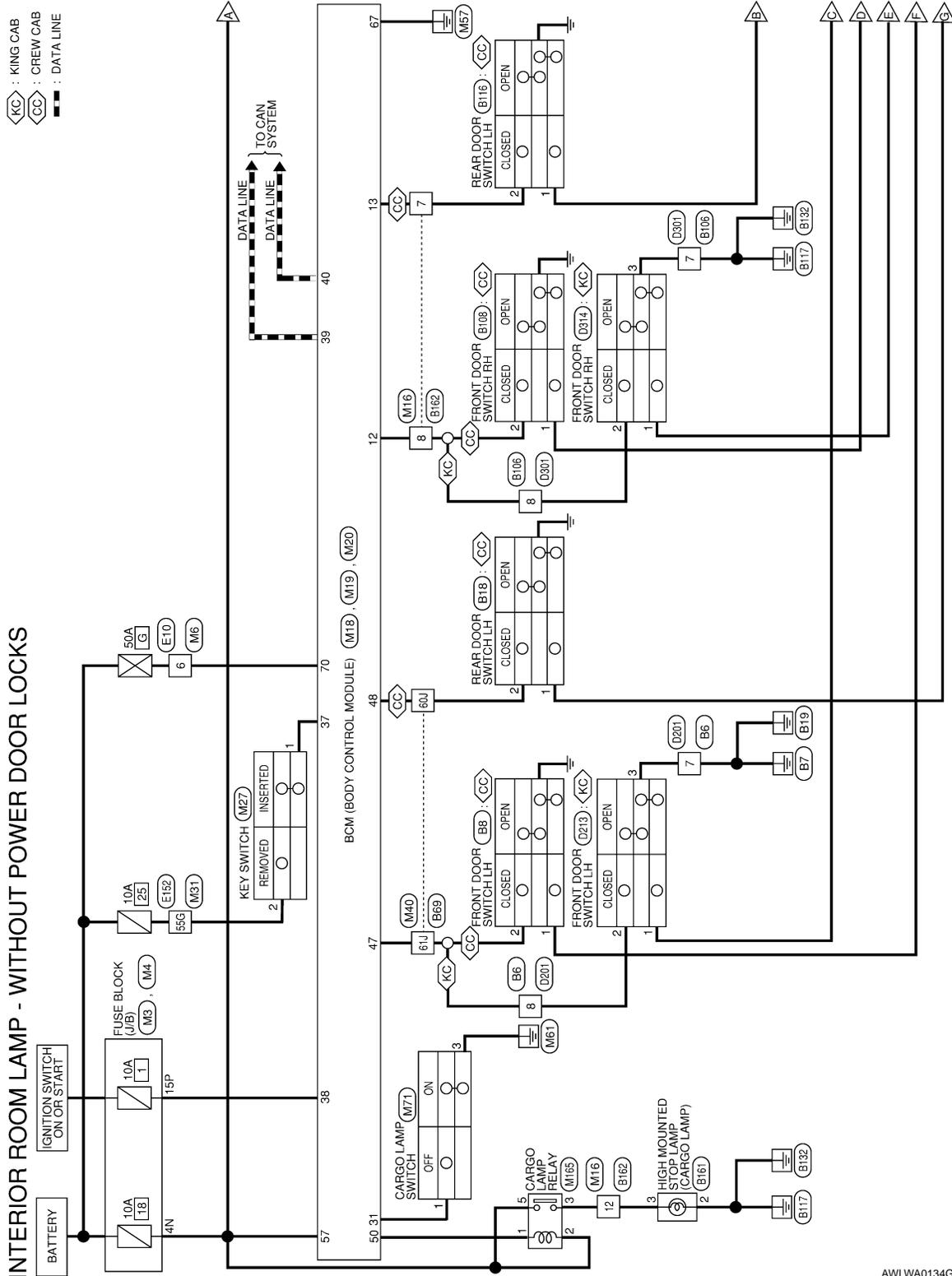
< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

INTERIOR ROOM LAMP

Wiring Diagram

INFOID:000000003243285



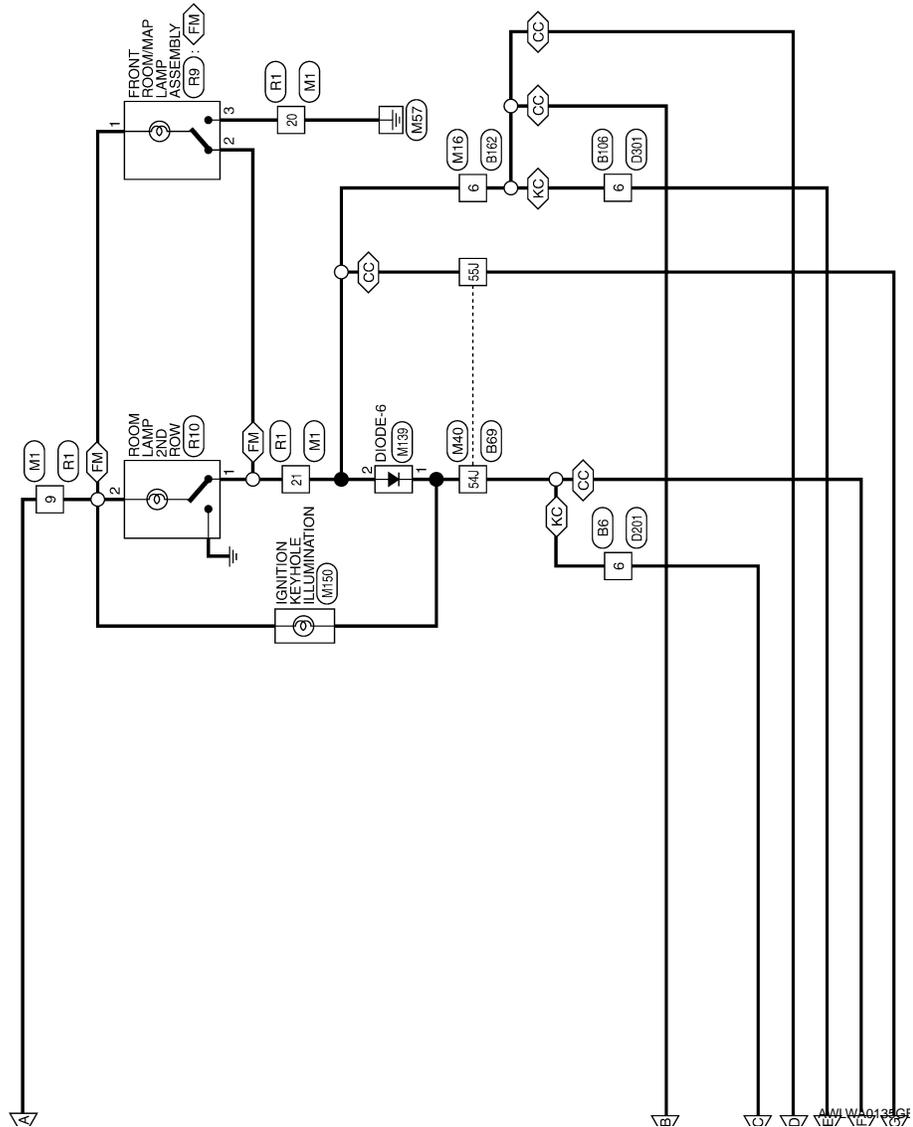
AWLWA0134GE

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

◀ FM : WITH FRONT
 MAP LAMPS
 ◀ CC : CREW CAB
 ◀ KC : KING CAB



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

INL

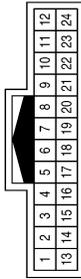
INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

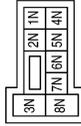
INTERIOR ROOM LAMP CONNECTORS - WITHOUT POWER DOOR LOCKS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	R/Y	-
20	B	-
21	BR	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4N	R/Y	-

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



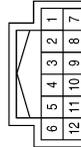
Terminal No.	Color of Wire	Signal Name
15P	W/R	-

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



Terminal No.	Color of Wire	Signal Name
6	W	-

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



Terminal No.	Color of Wire	Signal Name
6	R	-
7	L	-
8	LG	-
12	G	-

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



Terminal No.	Color of Wire	Signal Name
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
31	GR	CARGO LAMP SW
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

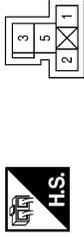
AWLIA0449GB

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Connector No.	M165
Connector Name	CARGO LAMP RELAY
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	R/Y	-
3	G	-
5	R/Y	-

Connector No.	M150
Connector Name	IGNITION KEYHOLE ILLUMINATION
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R/Y	-
2	BR	-

Connector No.	M139
Connector Name	DIODE-6
Connector Color	BLACK



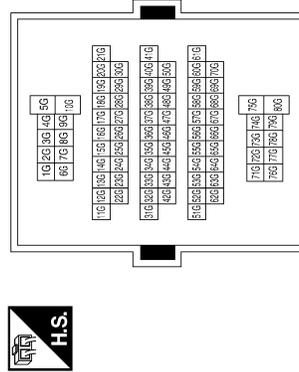
Terminal No.	Color of Wire	Signal Name
1	V	-
2	BR	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



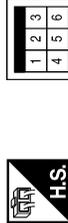
Terminal No.	Color of Wire	Signal Name
6	V	-
7	B	-
8	GR	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
55G	Y	-

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



Terminal No.	Color of Wire	Signal Name
6	W	-

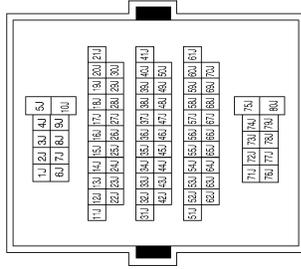
AWLIA0451GB

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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



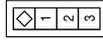
Terminal No.	Color of Wire	Signal Name
54J	V	-
55J	R	-
60J	P	-
61J	GR	-

Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



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

Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



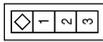
Terminal No.	Color of Wire	Signal Name
1	R	-
2	P	-

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



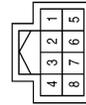
Terminal No.	Color of Wire	Signal Name
1	R	-
2	LG	-

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



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

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

AWLIA0452GB

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

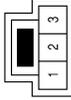
INL

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

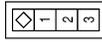
[WITHOUT POWER DOOR LOCKS]

Connector No.	B161
Connector Name	HIGH MOUNTED STOP LAMP(CARGO LAMP)
Connector Color	WHITE



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

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



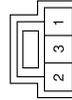
Terminal No.	Color of Wire	Signal Name
2	LG	-
3	B	-

Connector No.	D313
Connector Name	REAR DOOR SWITCH LOWER RH
Connector Color	BLACK



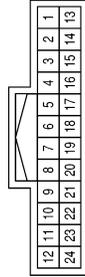
Terminal No.	Color of Wire	Signal Name
1	L	-
2	B	-

Connector No.	R9
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	WHITE



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

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	R/Y	-
20	B	-
21	BR	-

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



Terminal No.	Color of Wire	Signal Name
6	R	-
7	L	-
8	LG	-
12	G	-

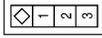
AWLIA0453GB

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

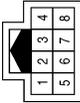
[WITHOUT POWER DOOR LOCKS]

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



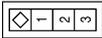
Terminal No.	Color of Wire	Signal Name
1	R	-
2	LG	-

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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



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

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

AWLIA0454GB

ILLUMINATION

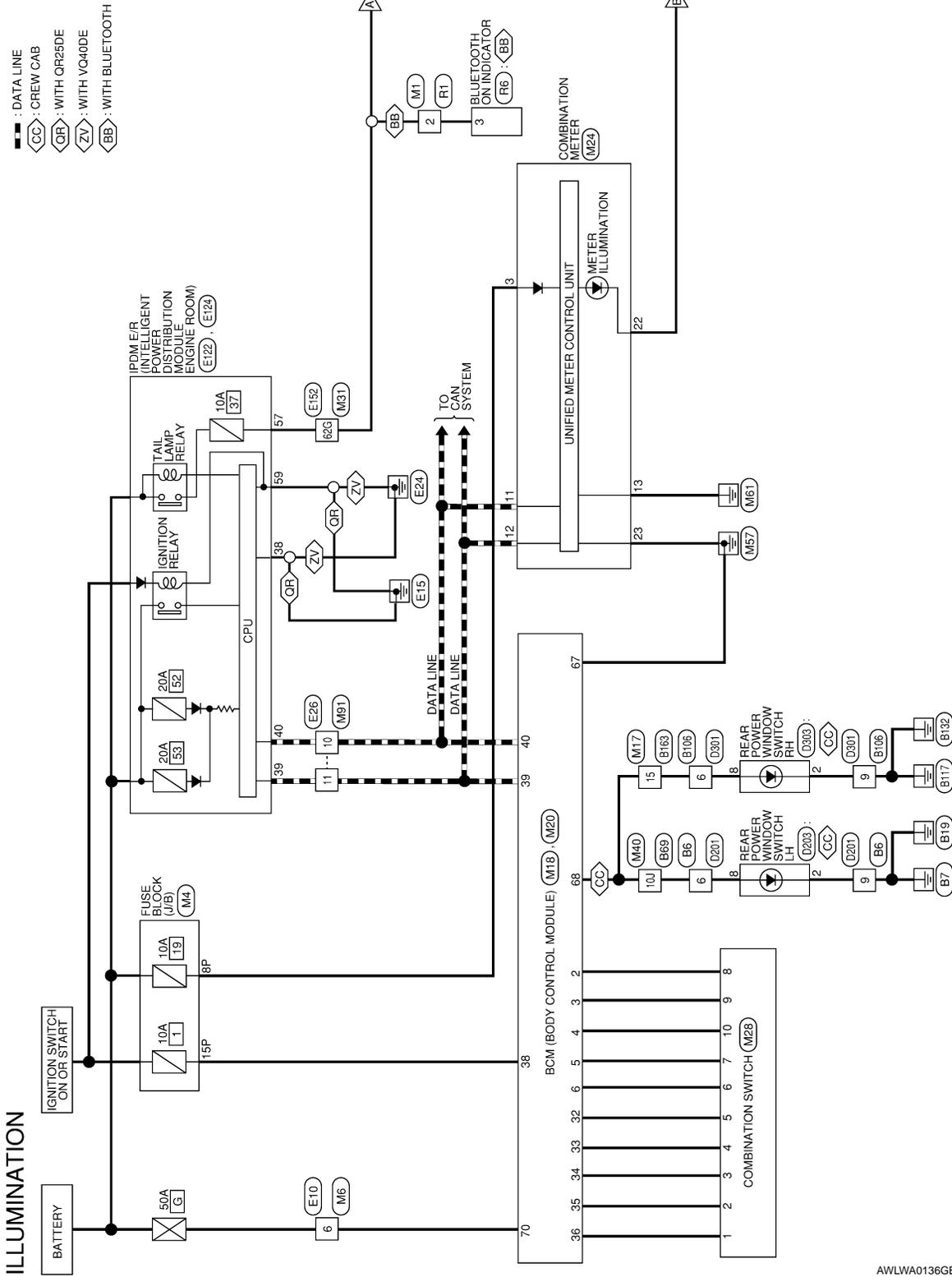
< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

ILLUMINATION

Wiring Diagram

INFOID:000000003302863



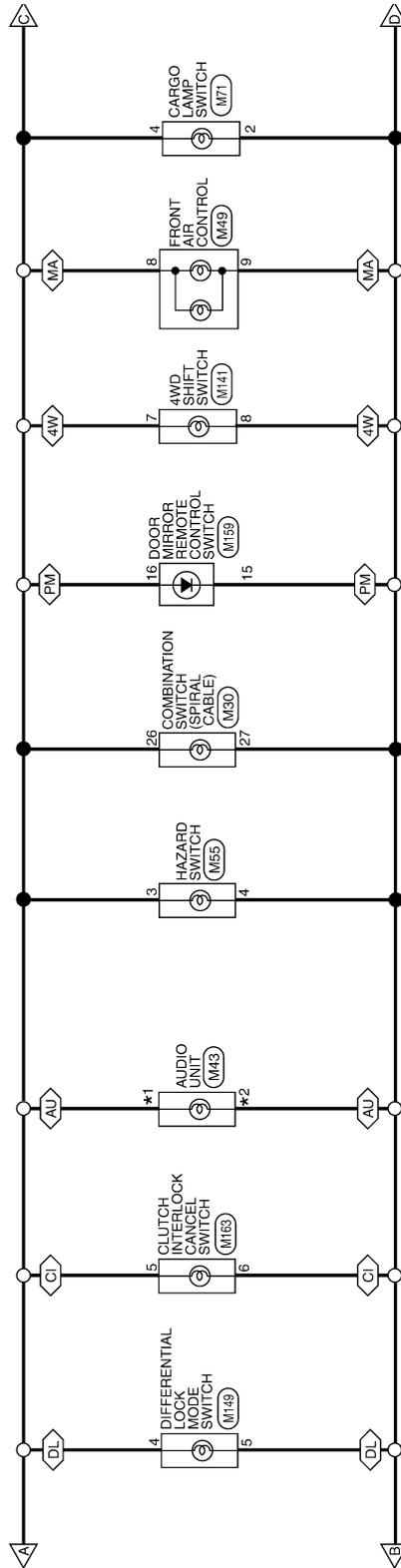
AWLWA0136GE

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

- <CI> : WITH CLUTCH INTERLOCK CANCEL SWITCH
 - <PM> : WITH POWER OUTSIDE MIRRORS
 - <MA> : WITH MANUAL A/C
 - <EB> : EXCEPT BASE AUDIO SYSTEM
 - <BA> : WITH BASE AUDIO SYSTEM
 - <AU> : WITH AUDIO UNIT
 - <4W> : WITH 4 WHEEL DRIVE
- *1 <EB> : 8
 - <BA> : 9
 - *2 <EB> : 7
 - <BA> : 8



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

AWLWA0137GE

ILLUMINATION

< COMPONENT DIAGNOSIS >

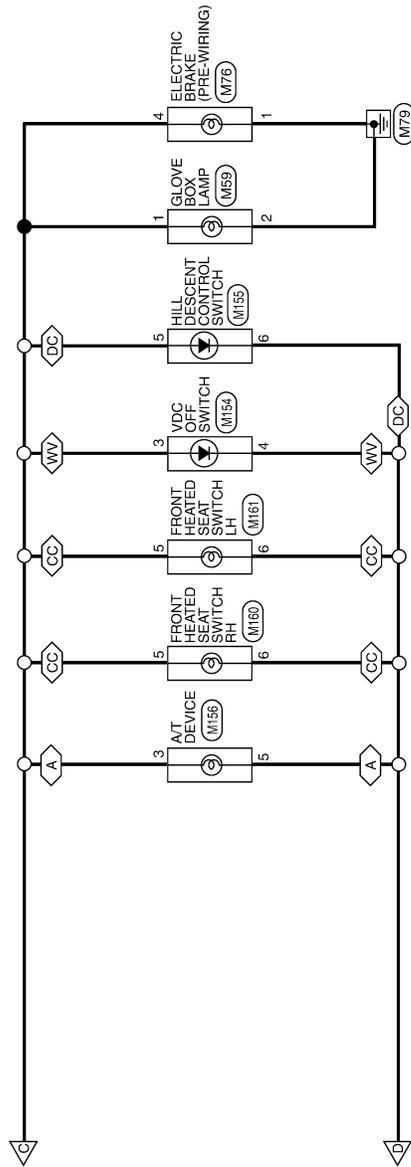
[WITHOUT POWER DOOR LOCKS]

◇DC : WITH HILL DESCENT CONTROL AND HILL START ASSIST

◇A : WITH A/T

◇CC : CREW CAB

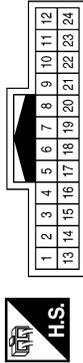
◇WV : WITH VDC



AWLWA0138Gf

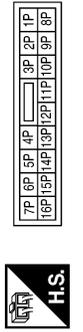
ILLUMINATION CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	2	Color of Wire	R	Signal Name	-
--------------	---	---------------	---	-------------	---

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



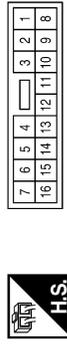
Terminal No.	8P 15P	Color of Wire	R/Y W/R	Signal Name	- -
--------------	-----------	---------------	------------	-------------	--------

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



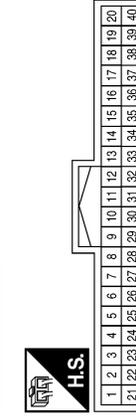
Terminal No.	6	Color of Wire	W	Signal Name	-
--------------	---	---------------	---	-------------	---

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



Terminal No.	15	Color of Wire	W	Signal Name	-
--------------	----	---------------	---	-------------	---

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



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

Terminal No.	32	Color of Wire	O	Signal Name	COMBI SW OUTPUT 5 (PULL UP SIDE)
33	GR	COMBI SW OUTPUT 4 (PULL UP SIDE)			
34	G	COMBI SW OUTPUT 3 (PULL UP SIDE)			
35	BR	COMBI SW OUTPUT 2 (PULL UP SIDE)			
36	LG	COMBI SW OUTPUT 1 (PULL UP SIDE)			
38	W/R	IGN SW			
39	L	CAN-H			
40	P	CAN-L			

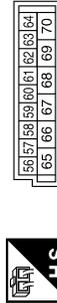
AWLIA0457GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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



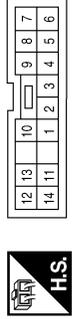
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
68	O	POWER WINDOW POWER SUPPLY OUT (LINKED TO RAP)
70	W	BAT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



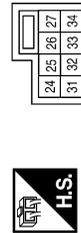
Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
11	P	CAN-L
12	L	CAN-H
13	GR	GROUND
22	BR	ILLUMINATION CONTROL
23	B	GND (POWER)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



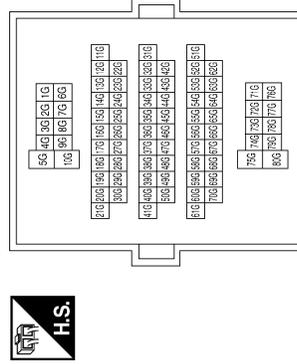
Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUTPUT1
7	L	OUTPUT2
8	P	OUTPUT5
9	SB	OUTPUT4
10	V	OUTPUT3

Connector No.	M30
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY



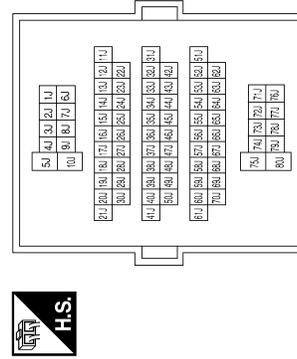
Terminal No.	Color of Wire	Signal Name
26	R	ILL+
27	G	ILL-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	62G	Color of Wire	R	Signal Name	-
--------------	-----	---------------	---	-------------	---

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



Terminal No.	10J	Color of Wire	W	Signal Name	-
--------------	-----	---------------	---	-------------	---

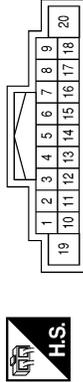
AWLIA0458GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

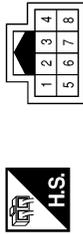
[WITHOUT POWER DOOR LOCKS]

Connector No.	M43
Connector Name	AUDIO UNIT (BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	GR	ILL CONT
9	R	LIGHT SW

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	R10
Connector Name	ROOM LAMP 2ND ROW
Connector Color	WHITE



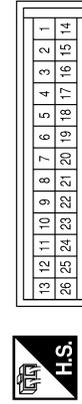
Terminal No.	Color of Wire	Signal Name
1	BR	-
2	R/Y	-

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE



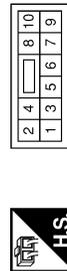
Terminal No.	Color of Wire	Signal Name
3	R	-
4	BR	-

Connector No.	M49
Connector Name	FRONT AIR CONTROL
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	G	-
9	BR	-

Connector No.	M43
Connector Name	AUDIO UNIT (EXCEPT BASE AUDIO SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	G	LIGHT SW

AWLIA0459GB

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

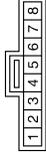
INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

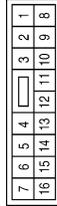
[WITHOUT POWER DOOR LOCKS]

Connector No.	M141
Connector Name	4WD SHIFT SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
7	R	LIGHT_SW
8	BR	GND

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

Connector No.	M76
Connector Name	ELECTRIC BRAKE(PRE-WIRING)
Connector Color	WHITE



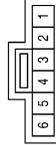
Terminal No.	Color of Wire	Signal Name
1	B	GROUND
4	R	ILL (TAIL)

Connector No.	M155
Connector Name	HILL DESCENT CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	BR	-

Connector No.	M154
Connector Name	VDC OFF SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	R	-
4	BR	-

Connector No.	M149
Connector Name	DIFFERENTIAL LOCK MODE SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R	-
5	BR	-

AWLIA0460GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

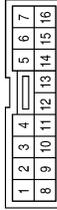
[WITHOUT POWER DOOR LOCKS]

Connector No.	M160
Connector Name	FRONT HEATED SEAT SWITCH RH
Connector Color	BROWN



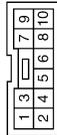
Terminal No.	Color of Wire	Signal Name
5	SB	-
6	O	-

Connector No.	M159
Connector Name	DOOR MIRROR REMOTE CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15	BR	-
16	R	-

Connector No.	M156
Connector Name	A/T DEVICE (SHIFT LOCK)
Connector Color	WHITE



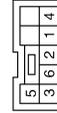
Terminal No.	Color of Wire	Signal Name
3	R	-
5	BR	-

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



Terminal No.	Color of Wire	Signal Name
6	W	-

Connector No.	M163
Connector Name	CLUTCH INTERLOCK CANCEL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	BR	-

Connector No.	M161
Connector Name	FRONT HEATED SEAT SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	-
6	BR	-

AWLIA0461GB

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

INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



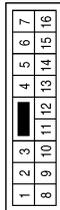
Terminal No.	Color of Wire	Signal Name
57	GR	TAIL LAMP
59	B	GND (POWER)

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



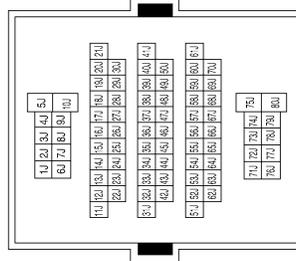
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE



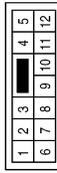
Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

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



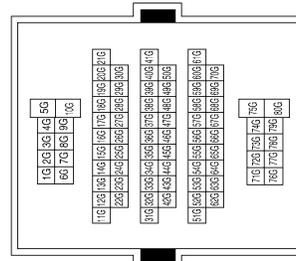
Terminal No.	Color of Wire	Signal Name
10J	W	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
62G	R	-

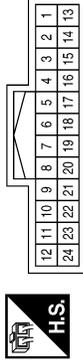
AWLIA0462GB

ILLUMINATION

< COMPONENT DIAGNOSIS >

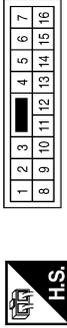
[WITHOUT POWER DOOR LOCKS]

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



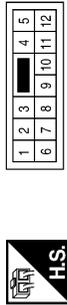
Terminal No.	Color of Wire	Signal Name
2	R	-

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



Terminal No.	Color of Wire	Signal Name
15	W	-

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



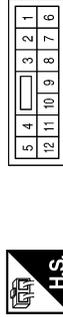
Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

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



Terminal No.	Color of Wire	Signal Name
2	B	-
8	W	-

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

Connector No.	R6
Connector Name	BLUETOOTH ON INDICATOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R	DAY/NIGHT_ILL_SIG

AWLIA0463GB

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

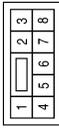
INL

ILLUMINATION

< COMPONENT DIAGNOSIS >

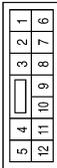
[WITHOUT POWER DOOR LOCKS]

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



Terminal No.	Color of Wire	Signal Name
2	B	-
8	W	-

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	W	-
9	B	-

AWLIA0464GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003302864

VALUES ON THE DIAGNOSIS TOOL

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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

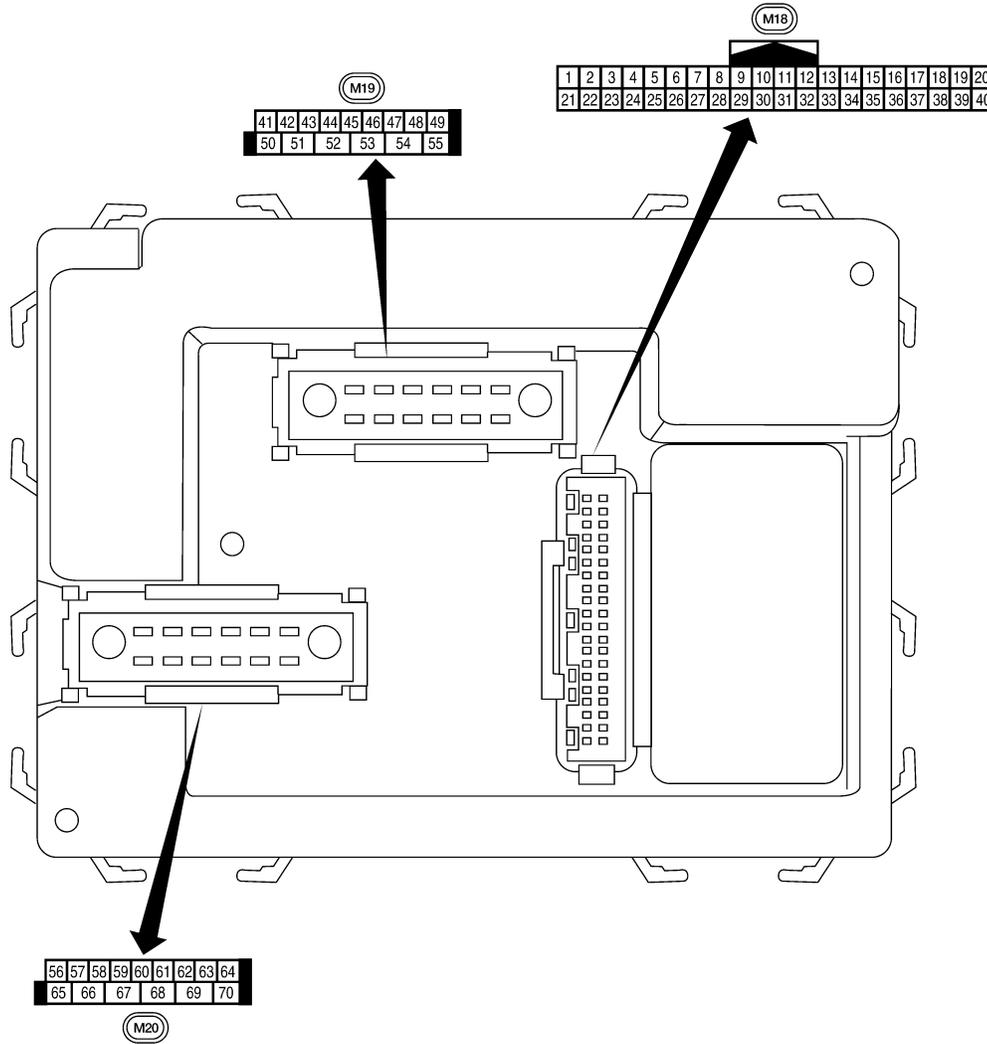
BCM (BODY CONTROL MODULE)

[WITHOUT POWER DOOR LOCKS]

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000003302865



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

INL

Physical Values

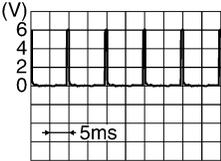
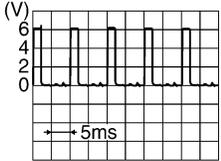
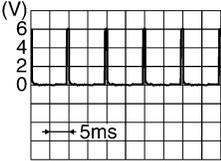
LIA2443E

INFOID:000000003302866

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

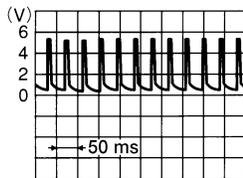
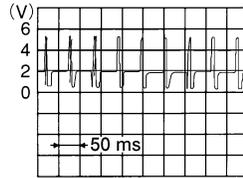
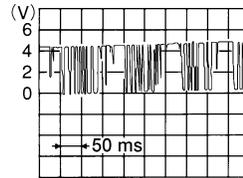
[WITHOUT POWER DOOR LOCKS]

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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

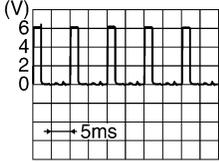
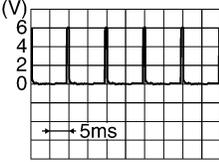
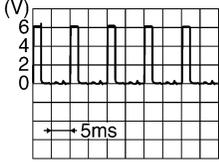
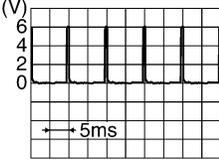
A
B
C
D
E
F
G
H
I
J
K
M
N
O
P

INL

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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

A

B

C

D

E

F

G

H

I

J

K

INL

M

N

O

P

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

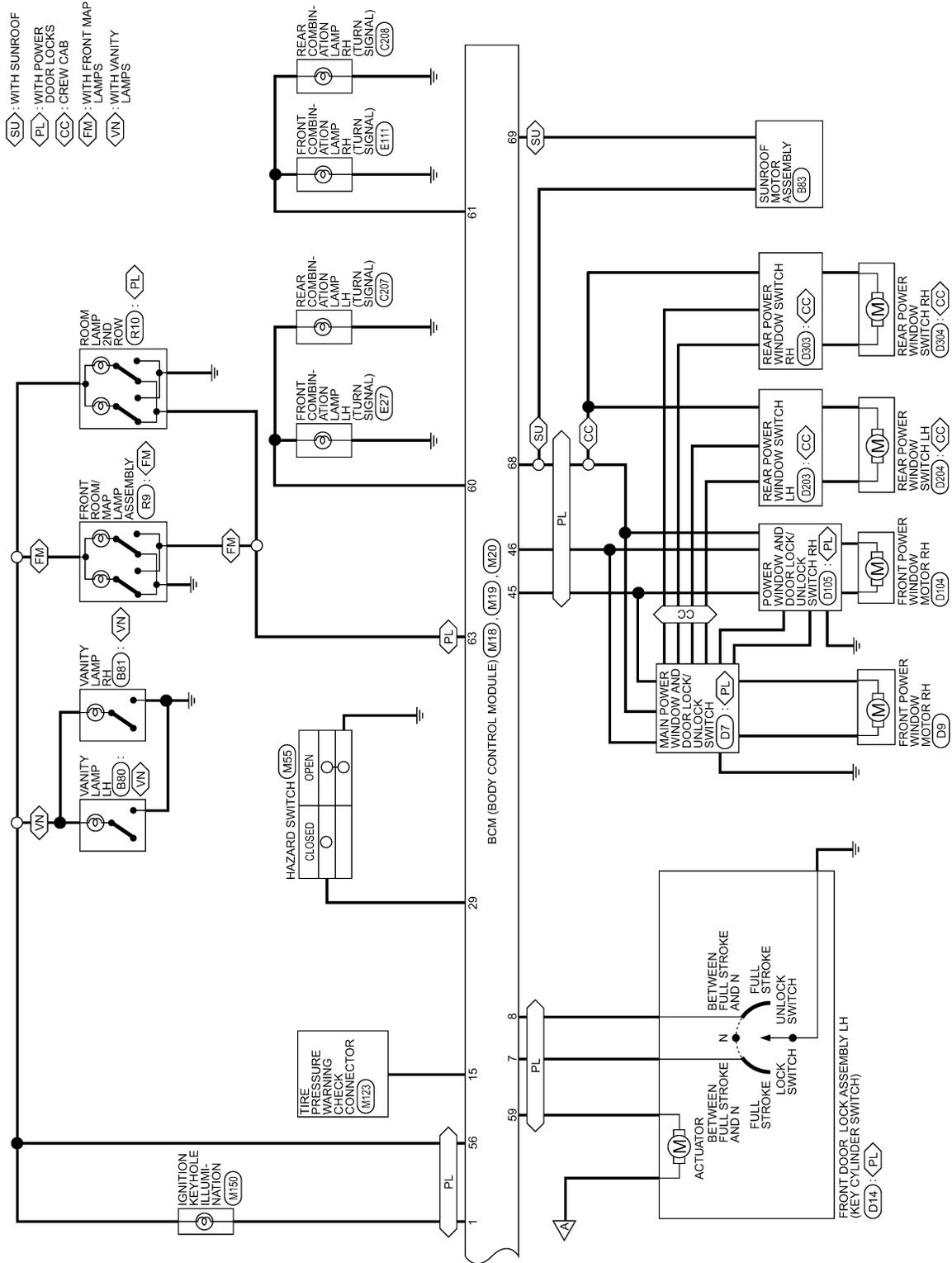
[WITHOUT POWER DOOR LOCKS]

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

BCM (BODY CONTROL MODULE)

[WITHOUT POWER DOOR LOCKS]

< ECU DIAGNOSIS >



AWMWA0179G

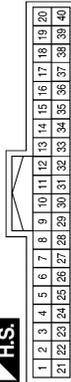
BCM (BODY CONTROL MODULE)

[WITHOUT POWER DOOR LOCKS]

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE) CONNECTORS

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



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

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

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

AWMIA0382GB

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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

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

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



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

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

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

55	57	58	59	60	61	62	63	64
----	----	----	----	----	----	----	----	----



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

AWMIA0383GB

INFOID:000000003302968

DTC Inspection Priority Chart

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Priority	DTC	
1	<ul style="list-style-type: none"> • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN) 	A
2	<ul style="list-style-type: none"> • B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM 	B
3	<ul style="list-style-type: none"> • C1729: VHCL SPEED SIG ERR 	C
4	<ul style="list-style-type: none"> • 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 • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL 	D E F G H I

DTC Index

INFOID:000000003302869

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	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 CIRCUIT	—	—	—	BCS-25
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-26
B2190: NATS ANTENNA AMP	—	—	—	SEC-17
B2191: DIFFERENCE OF KEY	—	—	—	SEC-20
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-21
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-23
C1708: [NO DATA] FL	—	—	—	WT-13
C1709: [NO DATA] FR	—	—	—	WT-13

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1710: [NO DATA] RR	—	—	—	WT-13
C1711: [NO DATA] RL	—	—	—	WT-13
C1712: [CHECKSUM ERR] FL	—	—	—	WT-15
C1713: [CHECKSUM ERR] FR	—	—	—	WT-15
C1714: [CHECKSUM ERR] RR	—	—	—	WT-15
C1715: [CHECKSUM ERR] RL	—	—	—	WT-15
C1716: [PRESSDATA ERR] FL	—	—	—	WT-17
C1717: [PRESSDATA ERR] FR	—	—	—	WT-17
C1718: [PRESSDATA ERR] RR	—	—	—	WT-17
C1719: [PRESSDATA ERR] RL	—	—	—	WT-17
C1720: [CODE ERR] FL	—	—	—	WT-15
C1721: [CODE ERR] FR	—	—	—	WT-15
C1722: [CODE ERR] RR	—	—	—	WT-15
C1723: [CODE ERR] RL	—	—	—	WT-15
C1724: [BATT VOLT LOW] FL	—	—	—	WT-15
C1725: [BATT VOLT LOW] FR	—	—	—	WT-15
C1726: [BATT VOLT LOW] RR	—	—	—	WT-15
C1727: [BATT VOLT LOW] RL	—	—	—	WT-15
C1729: VHCL SPEED SIG ERR	—	—	—	WT-18

INTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:000000003243288

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
interior room lamps do not turn ON/OFF <ul style="list-style-type: none">• Front room/map lamp assembly (if equipped)• Room lamp 2nd row	<ul style="list-style-type: none">• Harness between fuse block (J/B) and each interior room lamp• Harness between each interior room lamp and door switches• Door switches	Interior room lamp Refer to INL-75 .
Cargo lamp does not turn ON/OFF	<ul style="list-style-type: none">• Harness between fuse block (J/B) and cargo lamp relay• Harness between cargo lamp relay and cargo lamp• Harness between BCM and cargo lamp relay• BCM	Cargo lamp control circuit Refer to INL-77 .
Ignition keyhole illumination does not turn ON/OFF	<ul style="list-style-type: none">• Harness between fuse block (J/B) and ignition keyhole illumination• Harness between ignition keyhole illumination and door switches• Door switches	Ignition keyhole illumination Refer to INL-80

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

INL

PRECAUTION

PRECAUTIONS

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

INFOID:000000003243289

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

WARNING:

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

General precautions for service operations

INFOID:000000003243290

- When removing or disassembling any part, be careful not to damage or deform it. Protect parts which may get in the way with cloth.
- When removing parts with a screw driver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If a non-reuseable part is removed, replace it with a new one.
- After re-assembly has been completed, make sure each part functions correctly.
- Never work with wet hands.
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps or remove sealant residue.

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITHOUT POWER DOOR LOCKS]

ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

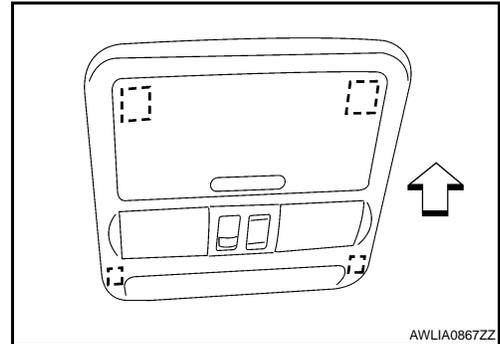
Removal and Installation

INFOID:000000003243291

MAP LAMP

Removal

The map lamp is replaced as part of the overhead console assembly.
Refer to [INT-23. "Removal and Installation"](#).



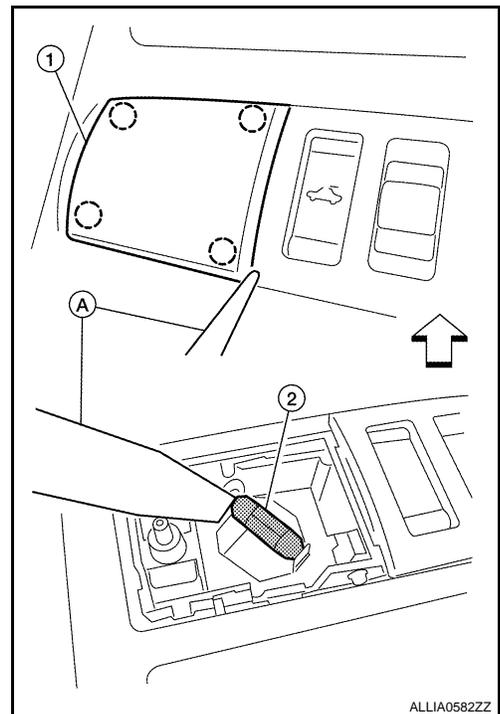
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Disconnect the negative battery terminal.
2. Using a suitable tool (A), remove map lamp lens (1).
←: Vehicle front
CAUTION:
Wrap a cloth around tool to protect the housing and lens.
3. Release one side of the bulb (2) from the tab, then pull straight downward to remove.

Map lamp bulb : 12V - 8W



VANITY MIRROR LAMP

Removal

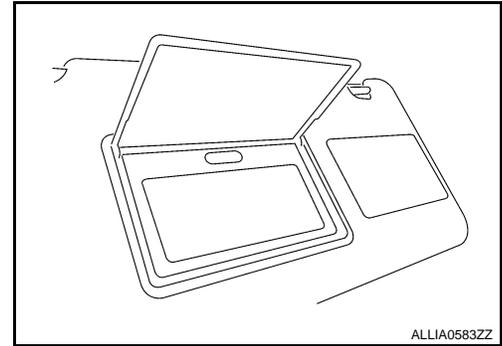
A
B
C
D
E
F
G
H
I
J
K
INL
M
N
O
P

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITHOUT POWER DOOR LOCKS]

The vanity mirror lamp is replaced as part of the sunvisor assembly. Refer to [INT-23, "Removal and Installation"](#).



Installation

Installation is in the reverse order of removal.

Bulb Replacement

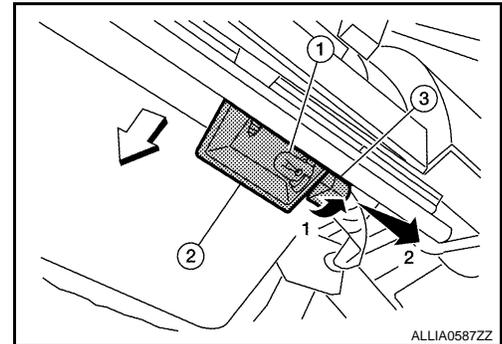
The vanity mirror lamp bulb is replaced as part of the sunvisor assembly. Refer to [INT-23, "Removal and Installation"](#).

GLOVE BOX LAMP

Removal

1. Remove lower instrument panel RH and glove box. Refer to [IP-10, "Removal and Installation"](#).
2. Rotate glove box lamp socket (3) with bulb (1) counterclockwise, then pull away from lamp shield (2) on steering member to remove.

⇐: Vehicle front



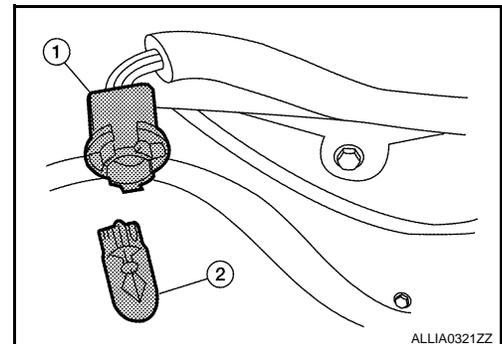
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Disconnect the negative battery terminal.
2. Remove glove box lamp.
3. Pull bulb (2) straight out from glove box lamp socket (1) to remove.

Glove box lamp bulb : 12V - 3.4W



ROOM LAMP

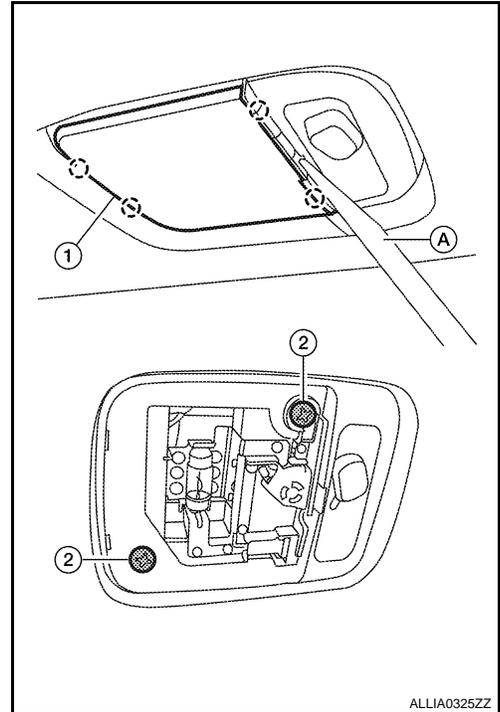
Removal

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITHOUT POWER DOOR LOCKS]

1. Disconnect the negative battery terminal.
2. Using a suitable tool (A), release the pawls and remove the room lamp lens (1).
- CAUTION:**
Wrap a cloth around tool to protect the housing and lens.
3. Remove room lamp screws (2).
4. Disconnect the connector, then remove room lamp.



Installation

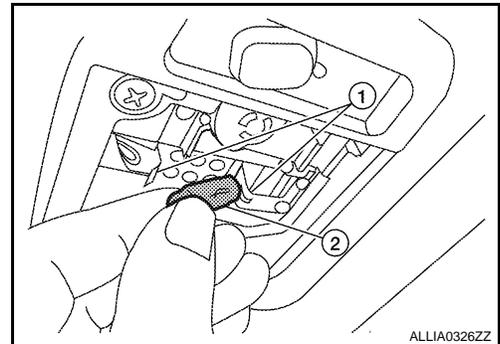
Installation is in the reverse order of removal.

Bulb Replacement

1. Disconnect the negative battery terminal.
2. Using a suitable tool, release the pawls and remove the room lamp lens.
3. Release the room lamp bulb retainers (1), then pull bulb (2) straight out to remove.

Room lamp bulb

: 12V - 8W



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

ILLUMINATION

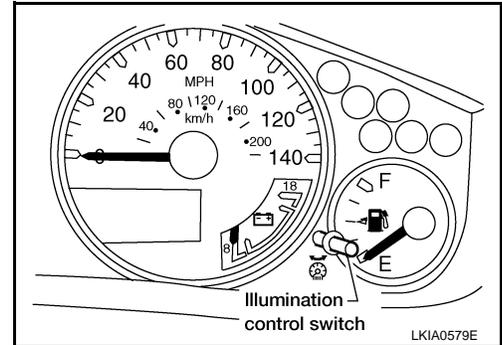
Removal and Installation

INFOID:000000003243292

ILLUMINATION CONTROL SWITCH

Removal

The illumination control switch (1) is replaced as a part of the combination meter assembly. Refer to [MWI-91, "Removal and Installation"](#).



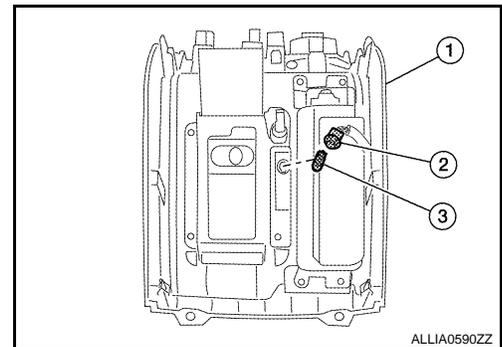
Installation

Installation is in the reverse order of removal.

A/T FINISHER LAMP

Removal

1. Remove A/T finisher from center console. Refer to [TM-353, "Exploded view"](#).
2. Rotate A/T finisher lamp socket (2) with bulb (3) counterclockwise, then pull away from finisher (1).



Installation

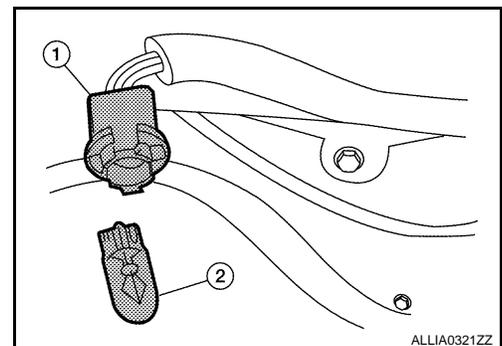
Installation is in the reverse order of removal.

Bulb Replacement

1. Remove A/T finisher from center console. Refer to [TM-353, "Exploded view"](#).
2. Remove A/T finisher lamp socket (1), then pull bulb (2) straight out away from socket.

AT finisher lamp bulb

: 12V - 3W



BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

[WITHOUT POWER DOOR LOCKS]

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Interior Lamp/Illumination

INFOID:000000003243293

Item	Wattage (W)*
Map lamp	8
Vanity lamp	*
Glove box lamp	3.4
Room lamp	8
A/T finisher lamp	3

*: Always check with the Parts Department for the latest parts information.

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

INL