SECTION INL
INTERIOR LIGHTING SYSTEM

CONTENTS

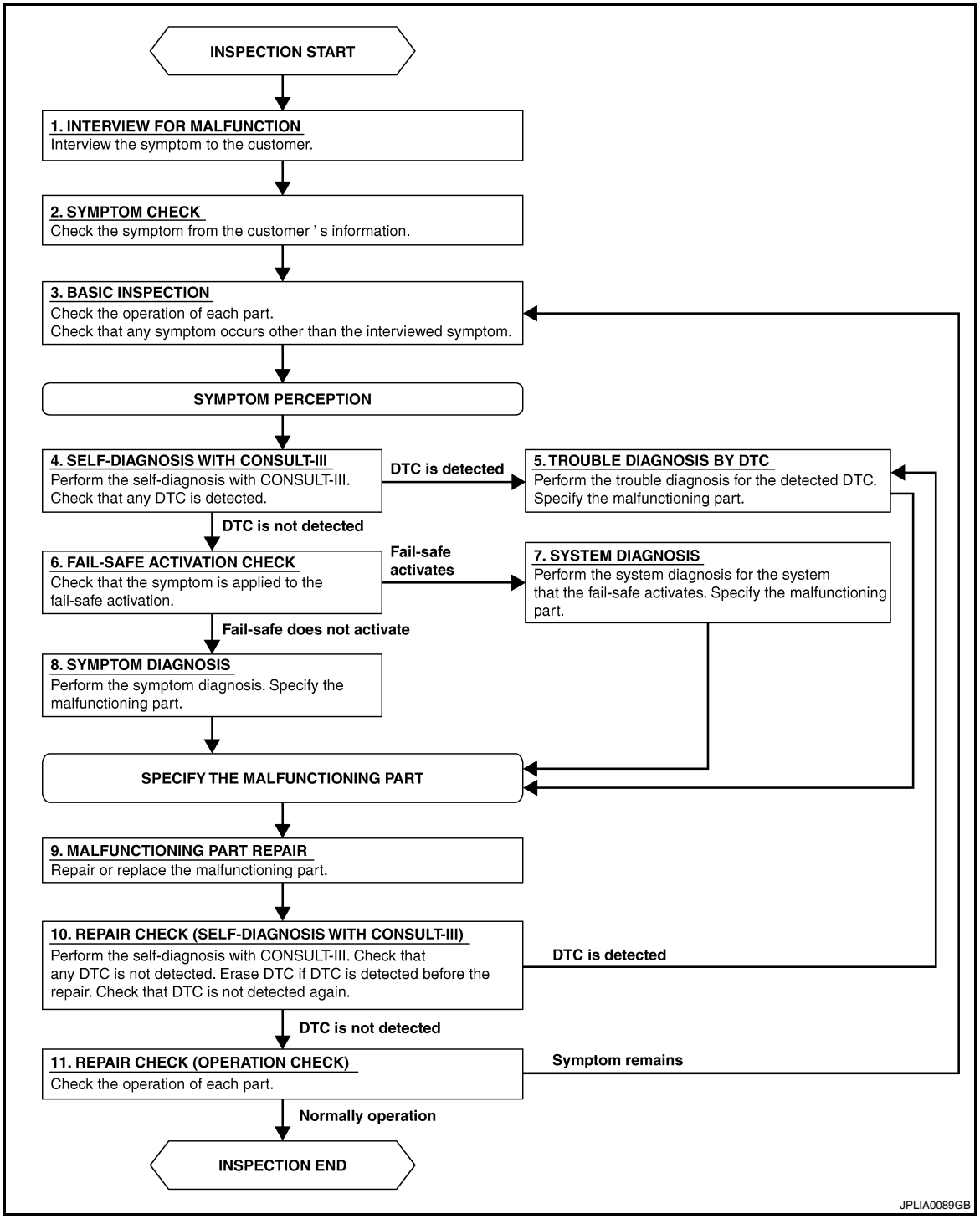
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000003776238

OVERALL SEQUENCE



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 9

6.FAIL-SAFE ACTIVATION CHECK

Determine if the customer's concern is related to fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7
NO >> GO TO 8

7.SYSTEM DIAGNOSIS

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

>> GO TO 9

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9.MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

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

Perform the self-diagnosis with CONSULT-III. Verified 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 11

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

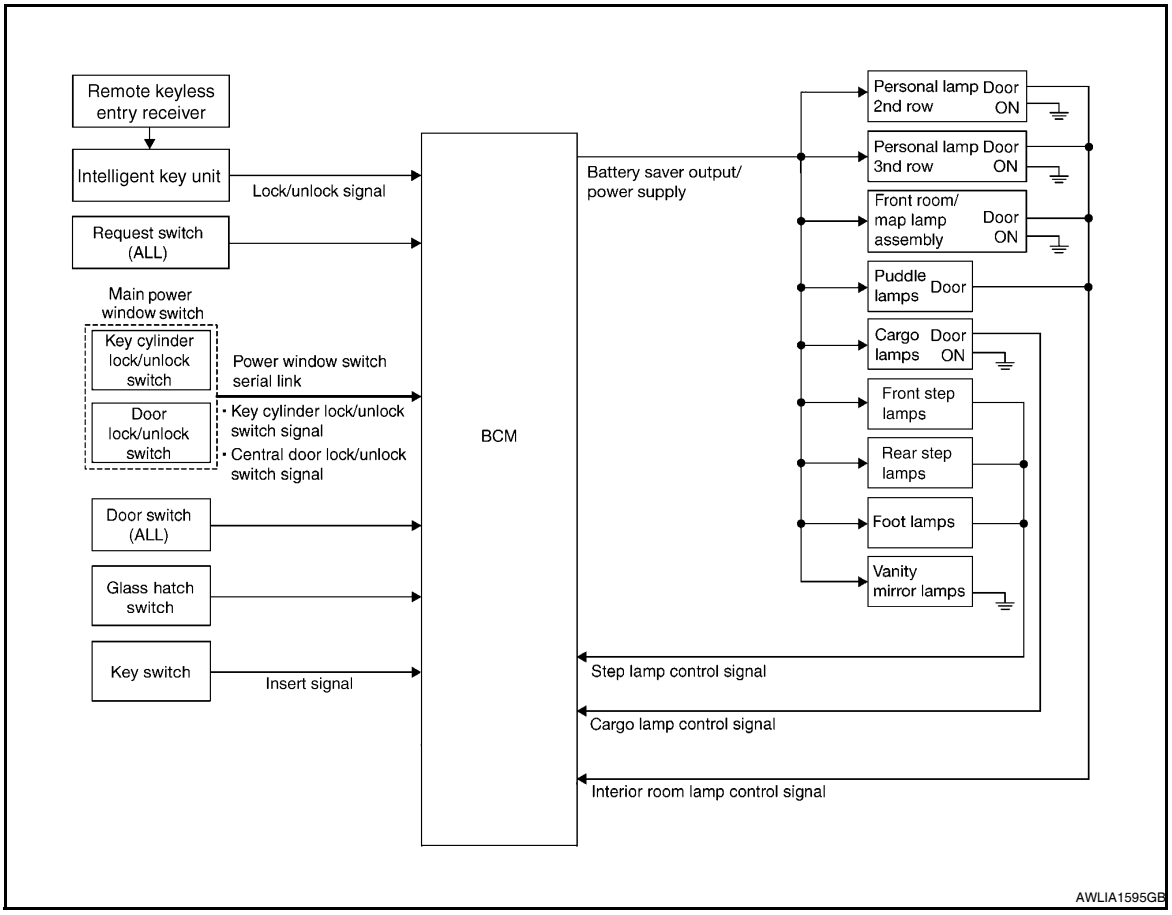
YES >> Inspection End
NO >> GO TO 3

FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram

INFOID:0000000003776239



System Description

INFOID:0000000003776240

OUTLINE

- Interior room lamps* are controlled by the interior room lamp timer control function of the BCM.
  *Front room/map lamps, personal lamp 2nd row, personal lamp 3rd row (when lamp switch is in DOOR position) and puddle lamps.
- Cargo lamp is controlled by the cargo lamp control function of the BCM.
- Step lamps* are controlled by the step lamp control function of the BCM.
  *Front step lamps, rear step lamps and foot lamps.

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 or the key switch and ignition knob switch.

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 Intelligent Key, main power window and door lock/unlock switch, or front door lock assembly (key cylinder switch)].
- When a door opens → closes and the Intelligent Key is not inserted in the ignition switch.

Timer control is cancelled under the following conditions.

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

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

INTERIOR LAMP BATTERY SAVER CONTROL

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 an Intelligent Key or 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 Intelligent Key is removed from or inserted into the ignition switch.

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

Component Parts Location

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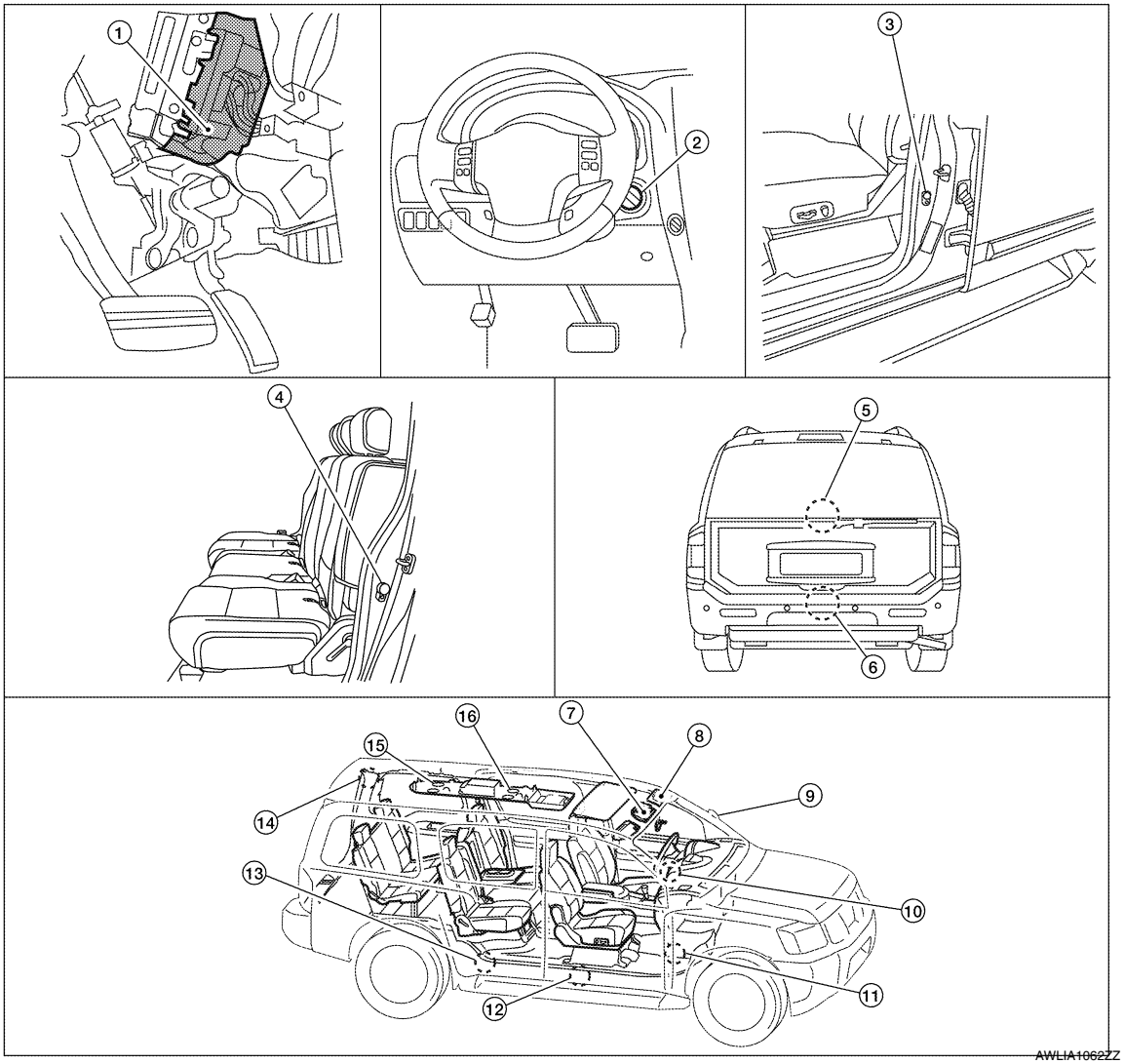


1. BCM M18, M19, M20 (view with instrument lower panel LH removed)	2. Key switch and ignition knob switch M12	3. Front door switch LH B8 Front door switch RH B108
4. Rear door switch LH B18 Rear door switch RH B116	5. Glass hatch ajar switch D707	6. Back door latch (door ajar switch) D503
7. Front room/map lamp assembly R102	8. Vanity lamp LH R3 Vanity lamp RH R8	9. Door mirror (puddle lamp) LH D4 Door mirror (puddle lamp) RH D107
10. Ignition keyhole illumination M150	11. Foot lamp LH M99 Foot lamp RH M100	12. Front step lamp LH D11 Front step lamp RH D109

13. Rear step lamp LH D206
    Rear step lamp RH D306
14. Cargo lamp B153
15. Personal lamp 3rd row R205
16. Personal lamp 2nd row R203

Component Description

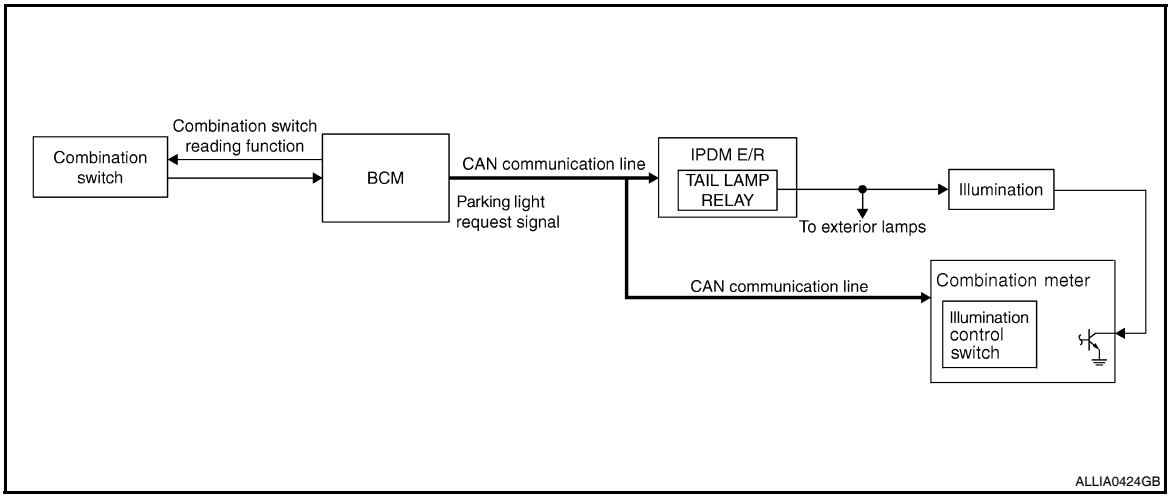
INFOID:0000000003776242

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

ILLUMINATION CONTROL SYSTEM

System Diagram

INFOID:0000000003776243



System Description

INFOID:0000000003776244

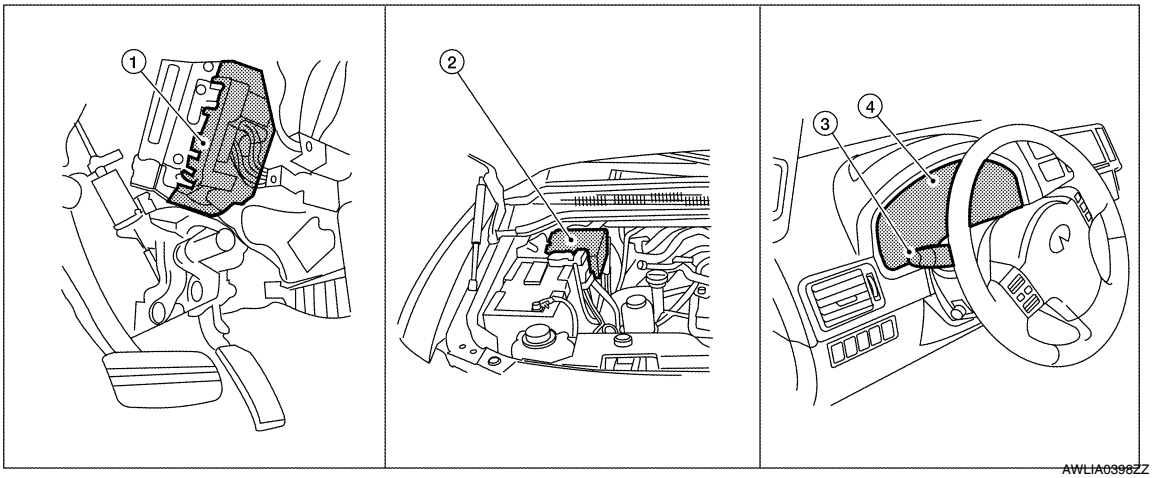
The illumination lamps operation is dependent upon the position of the lighting switch (combination switch). When the lighting switch is placed in the 1ST or 2ND position (or if the auto light system is activated) the BCM (body control module) receives input requesting the parking lamps to illuminate. 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 (or if auto light system is activated) after illumination lamps have been turned off by the battery saver control, the illumination lamps illuminate again.

Component Parts Location

INFOID:0000000003776245



1. BCM M18, M20 (view with instrument lower panel LH removed)
2. IPDM E/R E122, E123, E124
3. Combination switch M28
4. Combination meter (illumination control switch) M23, M24

Component Description

INFOID:0000000003776246

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)

COMMON ITEM

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

INFOID:0000000004109547

APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-51, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	• Enables to read and save the vehicle specification. • Enables to write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

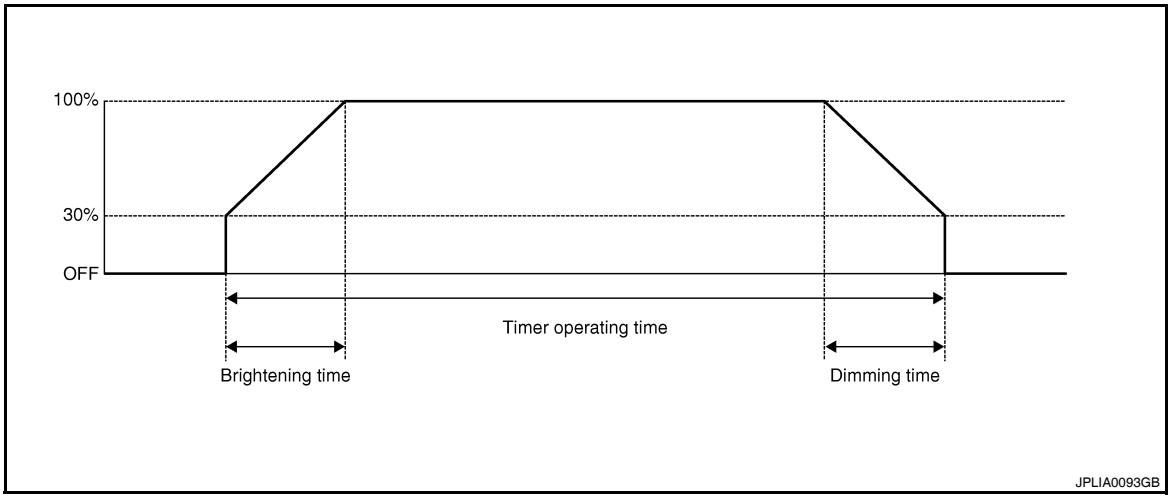
System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
RAP (retained accessory power)	RETAINED PWR	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
TPMS (tire pressure monitoring system)	AIR PRESSURE MONITOR	×	×	×
Vehicle security system	PANIC ALARM			×

INT LAMP

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

INFOID:0000000004109548

WORK SUPPORT



Work 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.	Sets the interior room lamp gradual brightening time.
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	0 sec.	
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual dimming time.
	MODE 2	1 sec.	
	MODE 3	2 sec.	
	MODE 4*	3 sec.	
	MODE 5	0 sec.	

* : Initial setting

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)
KEY ON SW [ON/OFF]	The switch status input from key switch
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]	The switch status input from back door switch
KEY CYL LK-SW [ON/OFF]	Lock switch status input from door lock and unlock switch
KEY CYL UN-SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
I-KEY LOCK [ON/OFF]	Lock signal status received from Intelligent Key unit by CAN communication
I-KEY UNLOCK [ON/OFF]	Unlock signal status received from Intelligent Key unit by CAN communication

ACTIVE TEST

Test Item	Operation	Description
INT LAMP	ON	Outputs the interior room lamp control signal to turn the interior room lamps ON.
	OFF	Stops the interior room lamp control signal to turn the interior room lamps OFF.
IGN ILLUM	ON	Outputs the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp ON.
	OFF	Stops the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp OFF.
STEP LAMP TEST	ON	Outputs the step lamp control signal to turn the step lamps ON.
	OFF	Stops the step lamp control signal to turn the step lamps OFF.
LUGGAGE LAMP TEST	ON	Outputs the luggage lamp control signal to turn the luggage lamp ON.
	OFF	Stops the luggage lamp control signal to turn the luggage lamp OFF.

BATTERY SAVER

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

INFOID:0000000004109549

WORK SUPPORT

Work Item	Setting Item	Setting	
ROOM LAMP TIMER SET	MODE 1*	15 min.	Sets the interior room lamp battery saver timer operating time.
	MODE 2	30 min.	

*: Initial setting

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)
KEY ON SW [ON/OFF]	The switch status input from key switch
DOOR SW-DR [ON/OFF]	The switch status input from front door switch (driver side)
DOOR SW-AS [ON/OFF]	The switch status input from front door switch (passenger side)
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH
DOOR SW- RL [ON/OFF]	The switch status input from rear door switch LH
BACK DOOR SW [ON/OFF]	The switch status input from back door switch
KEY CYL LK-SW [ON/OFF]	Lock switch status input from door key cylinder switch
KEY CYL UN-SW [ON/OFF]	Unlock switch status input from door key cylinder switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
I-KEY LOCK [ON/OFF]	Lock signal status received from Intelligent Key unit by CAN communication
I-KEY UNLOCK [ON/OFF]	Unlock signal status received from Intelligent Key unit by CAN communication

ACTIVE TEST

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

*: Each lamp switch is in ON position.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000004109550

1. CHECK FUSES AND FUSIBLE LINK

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

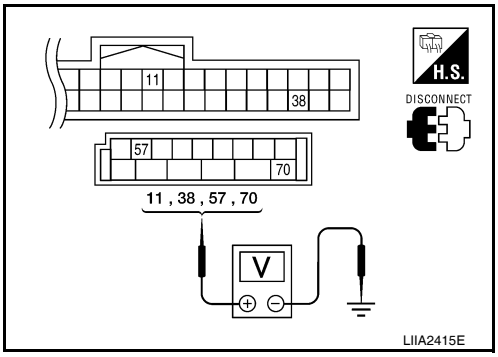
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (10A)

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

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



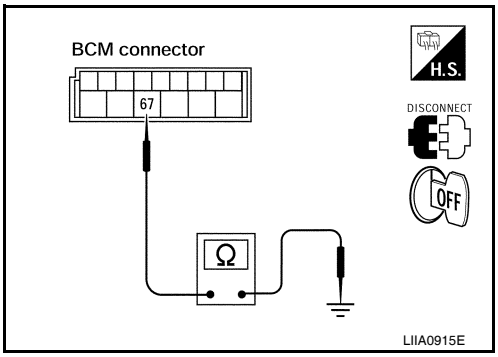
Connector	Terminals (+)	Terminals (-)	Power source	Condition	Voltage (V) (Approx.)
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage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

Description

INFOID:0000000003776251

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:0000000003776252

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
- Vanity lamps
- Personal lamp 2nd row
- Personal lamp 3rd row
- Cargo lamp
3. Open the driver door to turn ON the step lamps, foot lamps and puddle lamps.
- Front step lamps
- Rear step lamps
- Foot lamps
- Puddle lamps
- Ignition keyhole Illumination
4. Select “BATTERY SAVER” of BCM (BATTERY SAVER) active test item.
5. While operating the test item, check that each interior room lamp turns ON/OFF.

OFF : Interior room lamps OFF
ON : Interior room lamps ON

Is the inspection result normal?

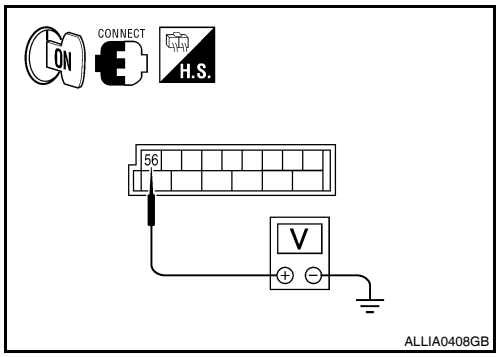
YES >> Battery saver output/power supply circuit is normal.
NO >> Refer to INL-15, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003776253

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. While operating the test item, check voltage between BCM 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-56, "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 keyhole illumination

- Front step lamp LH
- Front step lamp RH
- Door mirror LH
- Door mirror RH
- Rear step lamp LH
- Rear step lamp RH
- Foot lamp LH
- Foot lamp RH
- Front room/map lamp assembly
- Vanity lamp LH
- Vanity lamp RH
- Cargo lamp
- Personal lamp 2nd row
- Personal lamp 3rd row

3. Check continuity between BCM connector M20 terminal 56 and each interior room lamp connector.

BCM		Interior room lamp			Continuity
Connector	Terminal	Connector		Terminal	
M20	56	Ignition keyhole illumination	M150	1	Yes
		Front step lamp LH	D11	1	
		Front step lamp RH	D109	1	
		Door mirror LH	D4	12	
		Door mirror RH	D107	12	
		Rear step lamp LH	D206	1	
		Rear step lamp RH	D306	1	
		Foot lamp LH	M99	1	
		Foot lamp RH	M100	1	
		Front room/map lamp assembly	R102	6	
		Vanity lamp LH	R3	1	
		Vanity lamp RH	R8	1	
		Cargo lamp	B153	2	
		Personal lamp 2nd row	R203	3	
		Personal lamp 3rd row	R205	3	

Is the inspection result normal?

YES >> GO TO 3
NO >> Repair the harness or connectors.

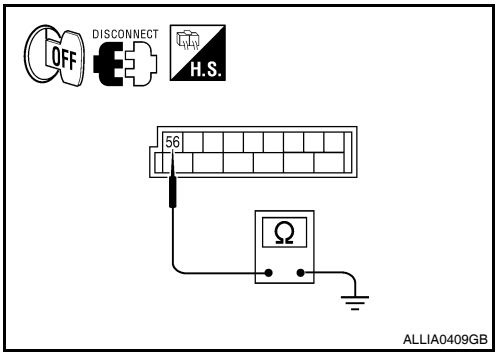
3. CHECK BATTERY SAVER OUTPUT/POWER SUPPLY SHORT CIRCUIT

Check continuity between BCM connector M20 terminal 56 and ground.

Connector	Terminal	—	Continuity
M20	56	Ground	No

Is the inspection result normal?

YES >> Check that each interior room lamp has no internal short circuit.
NO >> Repair the harness or connectors.



INTERIOR ROOM LAMP CONTROL CIRCUIT

Description

INFOID:0000000003776254

Controls the following interior room lamps (ground side) by PWM signal
- Puddle lamps
- Front room/map lamp assembly
- Personal lamp 2nd row
- Personal lamp 3rd row

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

Component Function Check

INFOID:0000000003776255

CAUTION:
Before performing the diagnosis, check that the following is normal.
- **Battery saver output/power supply**
- **Front room/map lamp bulbs**
- **Personal lamp bulbs**
- **Puddle lamp bulbs**

1.CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

CONSULT-III
1. Switch the front room/map lamp assembly switch to DOOR.
2. Turn ignition switch ON.
3. Select “INT LAMP” of BCM (INT LAMP) active test item.
4. While operating the test item, 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?

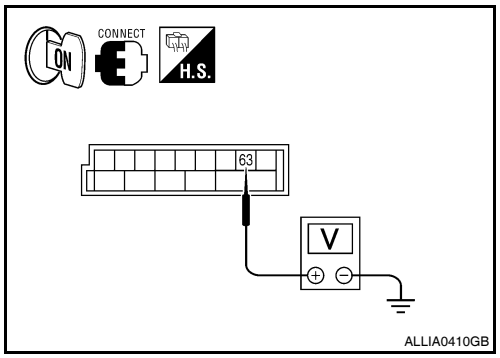
YES >> Interior room lamp control circuit is normal.
NO >> Refer to INL-17, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003776256

1.CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

CONSULT-III
1. Switch the front room/map lamp assembly switch to DOOR.
2. Turn ignition switch ON.
3. Select “INT LAMP” of BCM (INT LAMP) active test item.
4. While operating the test item, check voltage between BCM connector M20 terminal 63 and ground.



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

Is the inspection result normal?

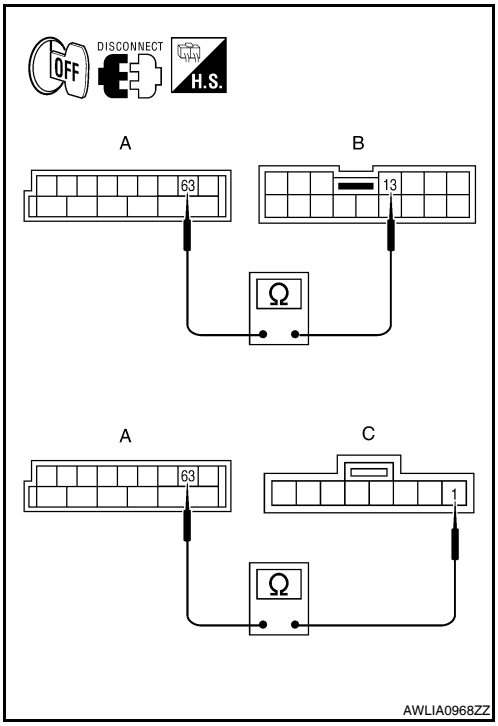
YES >> Interior room lamp control circuit is operating normally.
Fixed ON>>GO TO 3
Fixed OFF>>GO TO 2

2.CHECK INTERIOR ROOM LAMP CONTROL OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M20, door mirror connectors and front room/map lamp assembly connector.
3. Check continuity between BCM connector M20 (A) terminal 63 and the door mirror connectors (B) and front room/map lamp assembly connector (C).

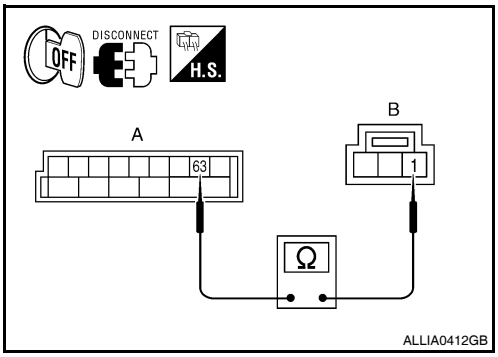
BCM		Interior room lamp			Continuity
Connector	Terminal	Component	Connector	Terminal	
M20 (A)	63	Door mirror LH	D4 (B)	13	Yes
		Door mirror RH	D107 (B)	13	
		Front room/map lamp assembly	R102 (C)	1	

4. Reconnect the front room/map lamp assembly connector.



5. Check continuity between BCM connector M20 (A) terminal 63 and the 2nd and 3rd row personal lamp connectors (B) terminal 1.

BCM		Interior room lamp			Continuity
Connector	Terminal	Component	Connector	Terminal	
M20 (A)	63	Personal lamp 2nd row	R203 (B)	1	Yes
		Personal lamp 3rd row	R205 (B)	1	



Is the inspection result normal?

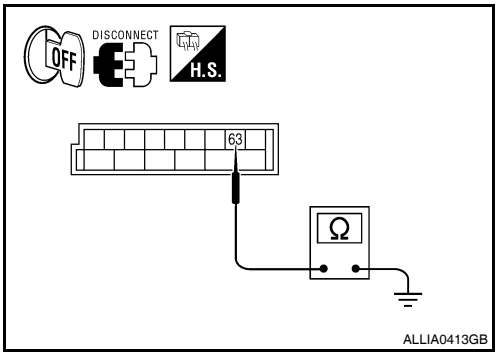
YES >> Check interior room lamps for an open. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace interior room lamp. Refer to INL-73, "Removal and Installation".

NO >> Repair the harness or connectors.

3. CHECK INTERIOR ROOM LAMP CONTROL SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M20, door mirror connectors and 2nd and 3rd row personal lamp connectors.
3. Switch the front room/map lamp assembly switch to ON position.
4. Check continuity between BCM connector M20 terminal 63 and ground.

Connector	Terminal	—	Continuity
M20	63	Ground	No



Is the inspection result normal?

YES >> Check interior room lamps for a short circuit. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace interior room lamp. Refer to INL-73, "Removal and Installation".

NO >> Repair the harness or connectors.

STEP LAMP CIRCUIT

Description

INFOID:0000000003776257

Controls the front and rear step lamps and the foot lamps (ground side) to turn the lamps ON and OFF.

Component Function Check

INFOID:0000000003776258

CAUTION:
Before performing the diagnosis, check that the following is normal.
- **Battery saver output/power supply**
- **Front step lamp bulbs**
- **Rear step lamp bulbs**
- **Foot lamp bulbs**

1.CHECK STEP LAMP OPERATION

CONSULT-III
1. Turn ignition switch ON.
2. Select “STEP LAMP TEST” of BCM (INT LAMP) active test item.
3. While operating the test item, check that the front/rear step lamps and foot lamps turn ON/OFF.

ON : Step lamp ON
OFF : Step lamp OFF

Is the inspection result normal?

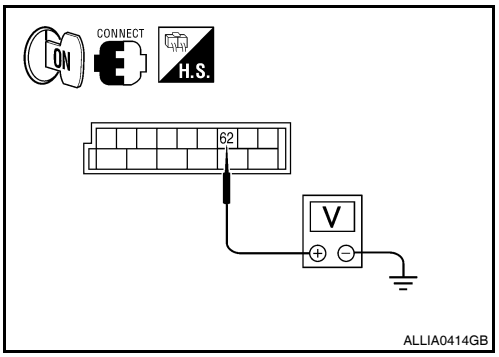
YES >> Step lamp circuit is normal.
NO >> Refer to INL-19, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003776259

1.CHECK STEP LAMP OUTPUT

CONSULT-III
1. Turn ignition switch ON.
2. Select “STEP LAMP TEST” of BCM (INT LAMP) active test item.
3. While operating the test item, check voltage between BCM harness connector M20 terminal 62 and ground.



Connector	Terminal	—	STEP LAMP TEST	Voltage
M20	62	Ground	ON	0V
			OFF	Battery voltage

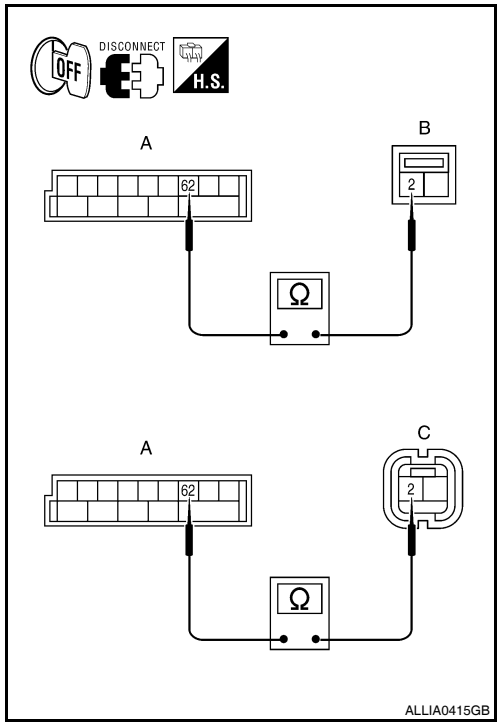
Is the inspection result normal?

YES >> Step lamp circuit is operating normally.
Fixed ON>>GO TO 3
Fixed OFF>>GO TO 2

2.CHECK STEP LAMP OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M20, front step lamp, rear step lamp and foot lamp connectors.
3. Check continuity between BCM connector M20 (A) terminal 62 and step lamp connectors (B) and foot lamp connectors (C).

Connector	Terminal	Connector		Terminal	Continuity
M20 (A)	62	Front step lamp LH	D11 (B)	2	Yes
		Front step lamp RH	D109 (B)	2	
		Rear step lamp LH	D206 (B)	2	
		Rear step lamp RH	D306 (B)	2	
		Foot lamp LH	M99 (C)	2	
		Foot lamp RH	M100 (C)	2	



Is the inspection result normal?

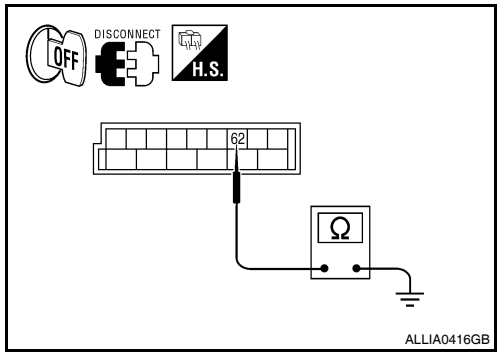
YES >> Check step lamp or foot lamp for an open. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace step lamp or foot lamp. Refer to INL-73, "Removal and Installation".

NO >> Repair harness or connectors.

3. CHECK STEP LAMP SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M20, front and rear step lamp connectors and foot lamp connectors.
3. Check continuity between BCM connector M20 terminal 62 and ground.

Connector	Terminal	—	Continuity
M20	62	Ground	No



Is the inspection result normal?

YES >> Check step lamp or foot lamp for a short circuit. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace step lamp or foot lamp. Refer to INL-73, "Removal and Installation".

NO >> Repair the harness or connectors.

CARGO LAMP CONTROL CIRCUIT

Description

INFOID:0000000003776260

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

Component Function Check

INFOID:0000000003776261

CAUTION:
Before performing the diagnosis, check that the following is normal.
- **Battery saver output/power supply**
- **Cargo lamp bulb**

1.CHECK CARGO LAMP OPERATION

CONSULT-III
1. Turn ignition switch ON.
2. Select “LUGGAGE LAMP TEST” of BCM (INT LAMP) active test item.
3. While operating the test item, check that cargo lamp turns ON/OFF.

ON : Cargo lamp ON
OFF : Cargo lamp OFF

Is the inspection result normal?

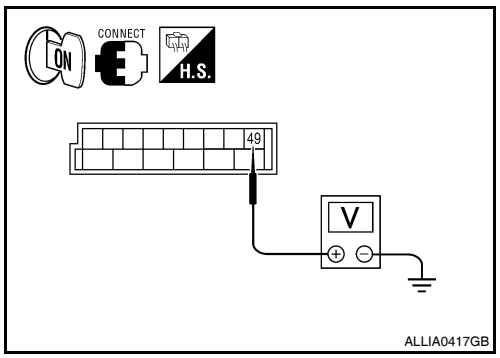
YES >> Cargo lamp circuit is normal.
NO >> Refer to INL-19, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003776262

1.CHECK CARGO LAMP OUTPUT

CONSULT-III
1. Turn ignition switch ON.
2. Select “LUGGAGE LAMP TEST” of BCM (INT LAMP) active test item.
3. While operating the test item, check voltage between BCM connector M19 terminal 49 and ground.



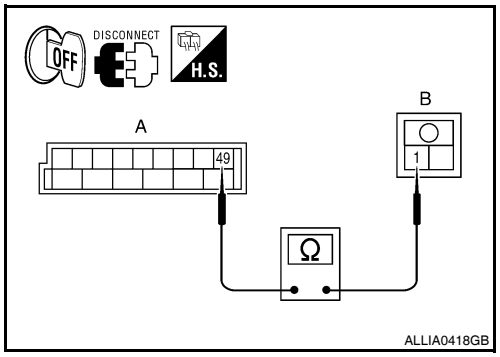
Connector	Terminal	—	LUGGAGE LAMP TEST	Voltage
M19	49	Ground	ON	0V
			OFF	Battery voltage

Is the inspection result normal?

YES >> Cargo lamp control circuit is operating normally.
Fixed ON>>GO TO 3
Fixed OFF>>GO TO 2

2.CHECK CARGO LAMP OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19 and cargo lamp connector.
3. Check continuity between BCM connector M19 (A) terminal 49 and cargo lamp connector B153 (B) terminal 1.



BCM		Cargo lamp		Continuity
Connector	Terminal	Connector	Terminal	
M19 (A)	49	B153 (B)	1	Yes

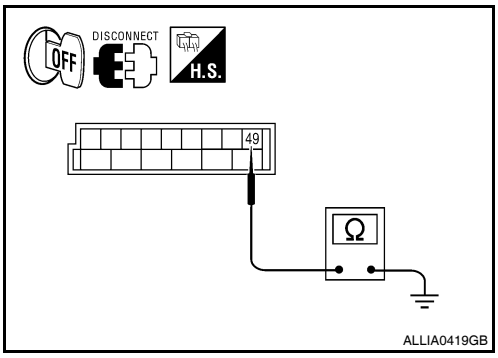
Is the inspection result normal?

YES >> Check cargo lamp for an open. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace cargo lamp. Refer to INL-77, "Removal and Installation".

NO >> Repair harness or connectors.

3. CHECK CARGO LAMP SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19 and cargo lamp connector.
3. Check continuity between BCM connector M19 terminal 49 and ground.



Connector	Terminal	—	Continuity
M19	49	Ground	No

Is the inspection result normal?

YES >> Check cargo lamp for a short circuit. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace cargo lamp. Refer to INL-77, "Removal and Installation".

NO >> Repair harness or connectors.

IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

Description

INFOID:0000000003776263

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

Component Function Check

INFOID:0000000003776264

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 item, check that the ignition keyhole illumination turns ON/OFF

ON : Ignition keyhole illumination ON
OFF : Ignition keyhole illumination OFF

Is the inspection result normal?

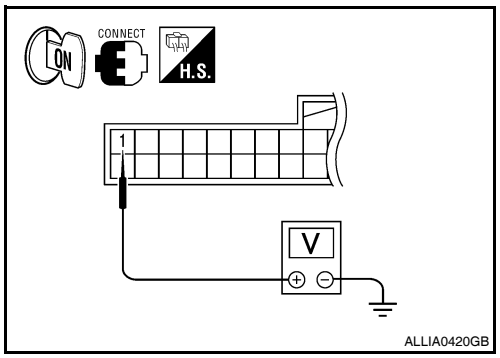
YES >> Ignition keyhole illumination circuit is normal.
NO >> Refer to INL-23, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003776265

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 connector M18 terminal 1 and ground.



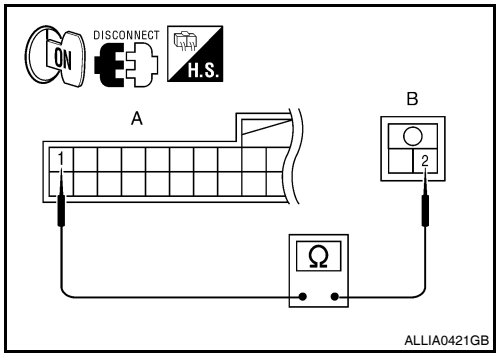
Connector	Terminal	—	IGN ILLUM	Voltage
M18	1	Ground	ON	0V
			OFF	Battery voltage

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



BCM		Ignition keyhole illumination		Continuity
Connector	Terminal	Connector	Terminal	
M18 (A)	1	M150 (B)	2	Yes

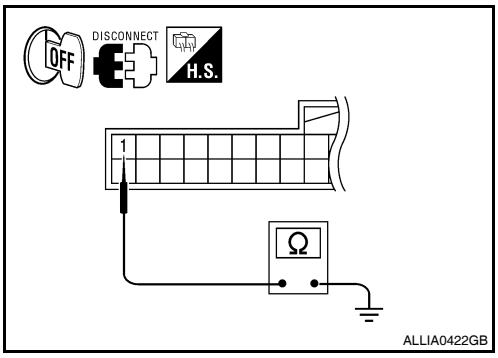
Is the inspection result normal?

YES >> Check ignition keyhole illumination for an open. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace ignition keyhole illumination.

NO >> Repair harness or connectors.

3. CHECK IGNITION KEYHOLE ILLUMINATION SHORT CIRCUIT

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



Connector	Terminal	—	Continuity
M18	1	Ground	No

Is the inspection result normal?

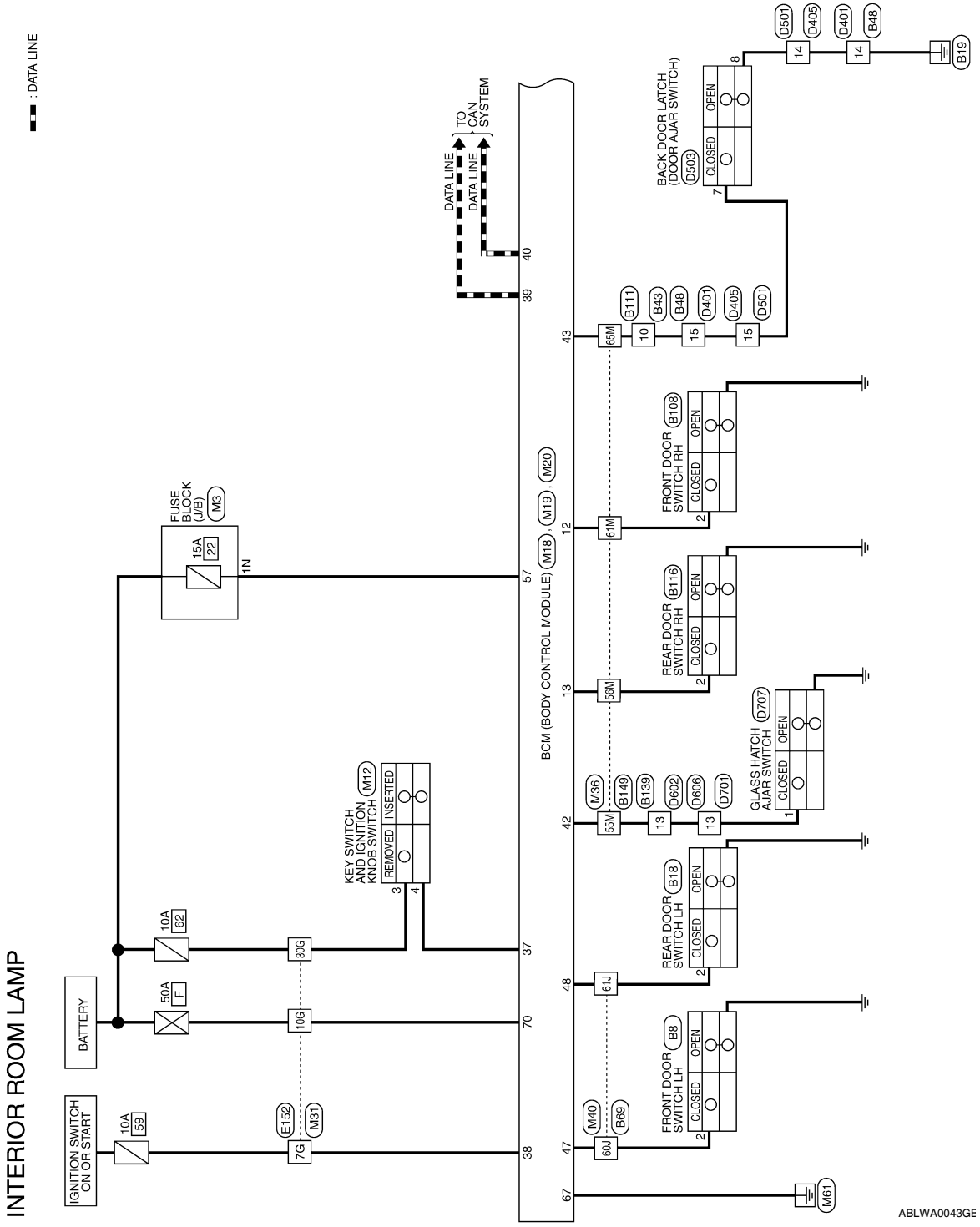
YES >> Check ignition keyhole illumination for a short circuit. If OK, replace BCM. Refer to BCS-56, "Removal and Installation". If NG, replace ignition keyhole illumination.

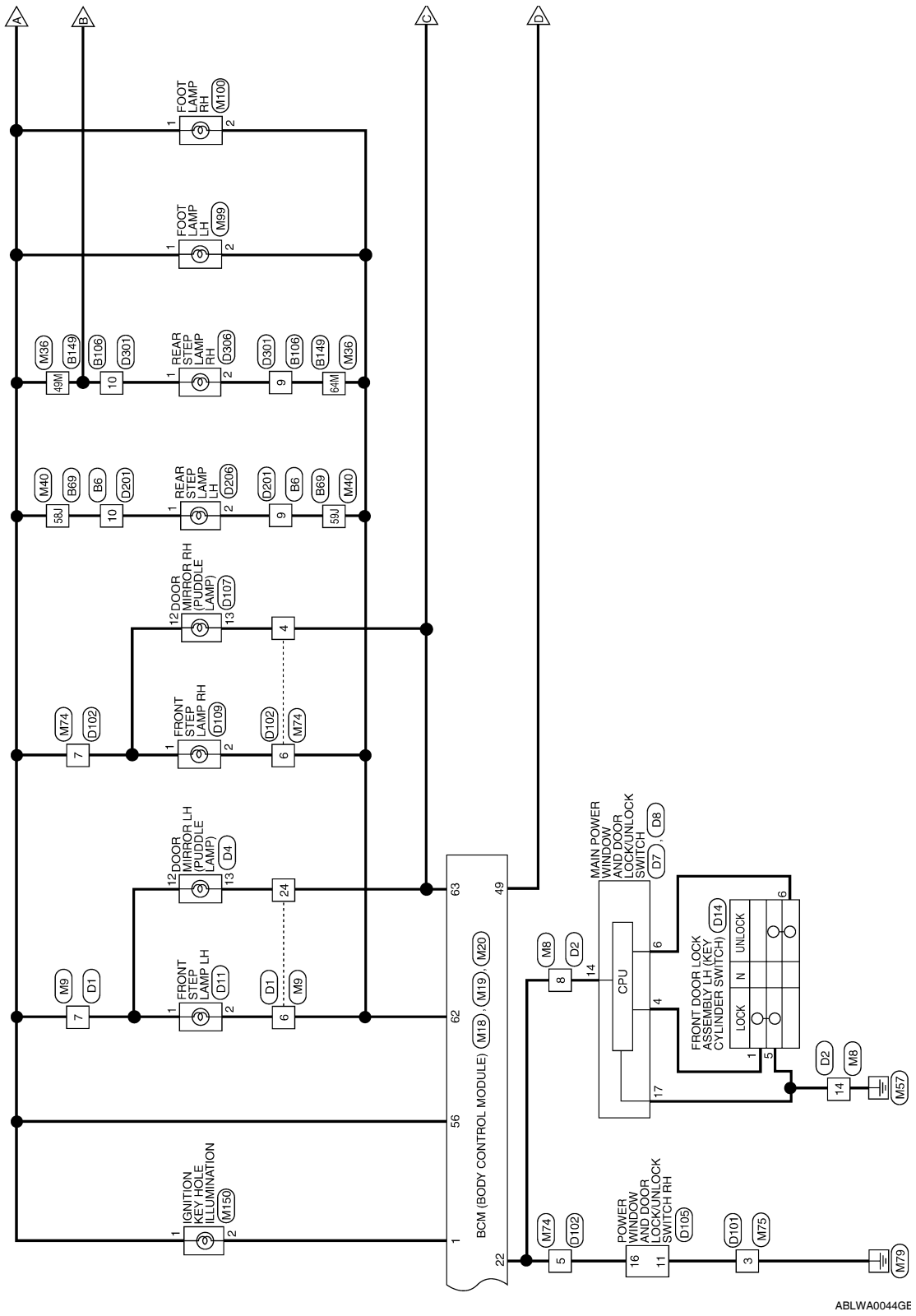
NO >> Repair harness or connectors.

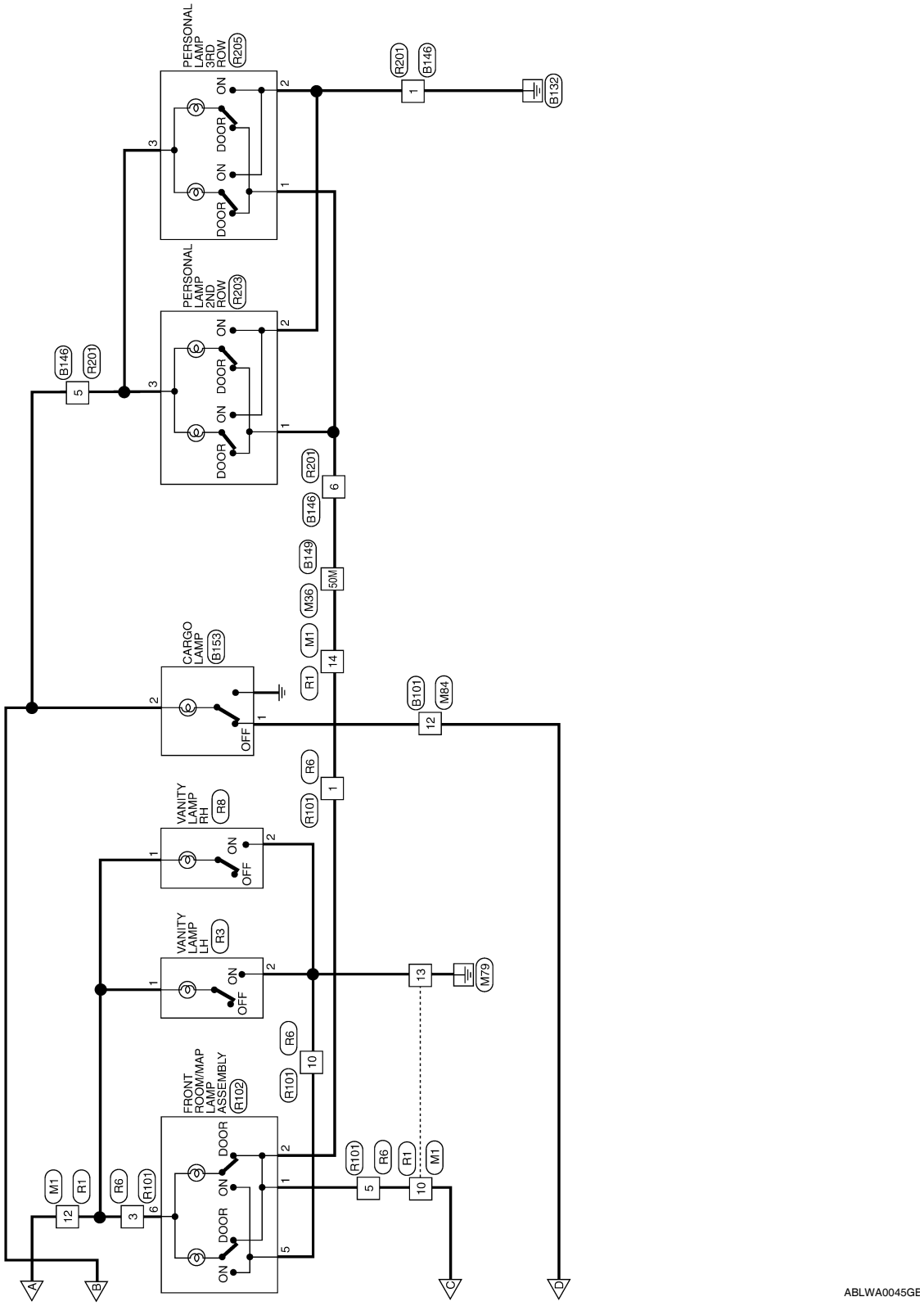
INTERIOR ROOM LAMP CONTROL SYSTEM

Wiring Diagram

INFOID:0000000003776266

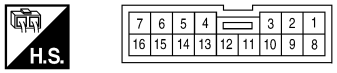



A
B
C
D
FOOT LAMP RH
M100
FOOT LAMP LH
M99
REAR STEP LAMP RH
D306
REAR STEP LAMP LH
D206
DOOR MIRROR RH (PUDDLE LAMP)
D107
FRONT STEP LAMP RH
D109
DOOR MIRROR LH (PUDDLE LAMP)
D4
FRONT STEP LAMP LH
D11
IGNITION KEY HOLE ILLUMINATION
M150
BCM (BODY CONTROL MODULE)
M18, M19, M20
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
D7, D8
CPU
FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)
D14
LOCK
N
UNLOCK
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
D105
M57
M79
ABLWA0044GE


PERSONAL LAMP 3RD ROW
R205
PERSONAL LAMP 2ND ROW
R203
CARGO LAMP
B153
VANITY LAMP RH
R8
VANITY LAMP LH
R3
FRONT ROOM/MAP LAMP ASSEMBLY
R102
DOOR
ON
OFF
B146
R201
B132
B149
M36
M1
50M
R1
14
B101
M84
12
R6
R101
1
10
13
M79
5
3
6
A
B
C
D
ABLWA0045GE

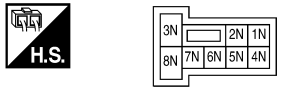
INTERIOR ROOM LAMP CONNECTORS

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



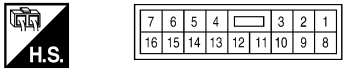
Terminal No.	Color of Wire	Signal Name
10	L	–
12	R/G	–
13	B	–
14	R	–

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



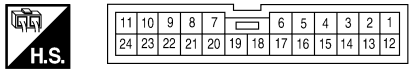
Terminal No.	Color of Wire	Signal Name
1N	Y/R	–

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



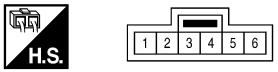
Terminal No.	Color of Wire	Signal Name
8	W/V	–
14	B	–

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



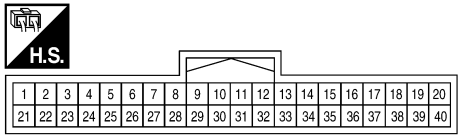
Terminal No.	Color of Wire	Signal Name
6	R/W	–
7	R/G	–
24	L	–

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	Y	–
4	B/R	–

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



Terminal No.	Color of Wire	Signal Name
1	BR/W	KEY RING OUTPUT
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

ABLIA0136GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
42	GR	GLASS HATCH SW
43	R/B	BACK DOOR SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
49	R	LUGGAGE LAMP OUTPUT

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

H.S.

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

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

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

H.S.

5G	4G	3G	2G	1G
10G	9G	8G	7G	6G

21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
30G	29G	28G	27G	26G	25G	24G	23G	22G

41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
50G	49G	48G	47G	46G	45G	44G	43G	42G

61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
70G	69G	68G	67G	66G	65G	64G	63G	62G

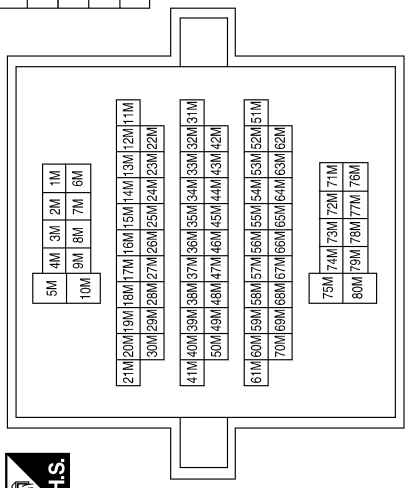
75G	74G	73G	72G	71G
80G	79G	78G	77G	76G

Terminal No.	Color of Wire	Signal Name
7G	W/L	–
10G	W/B	–
30G	Y	–

ABLIA0137GB

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE

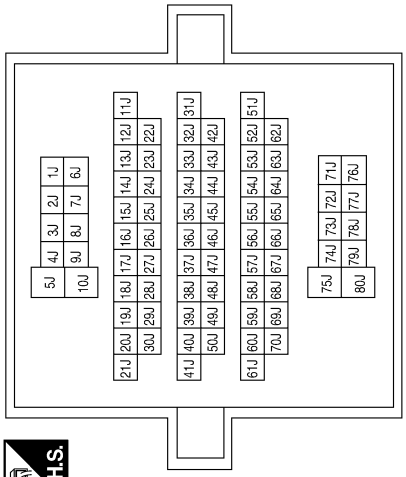
H.S.



Terminal No.	Color of Wire	Signal Name
49M	R/G	–
50M	R	–
55M	GR	–
56M	GR	–
61M	R/L	–
64M	R/W	–
65M	R/B	–

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

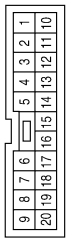
H.S.



Terminal No.	Color of Wire	Signal Name
58J	R/G	–
59J	R/W	–
60J	SB	–
61J	R/Y	–

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

H.S.

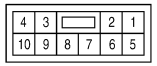


Terminal No.	Color of Wire	Signal Name
4	L	–
5	W/V	–
6	R/W	–
7	R/G	–

ABLIA0138GB

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

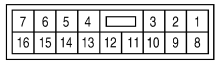
H.S.



Terminal No.	Color of Wire	Signal Name
3	B	–

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
12	R	–

Connector No.	M99
Connector Name	FOOT LAMP LH
Connector Color	BROWN

H.S.

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

Connector No.	M100
Connector Name	FOOT LAMP RH
Connector Color	BROWN

H.S.

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

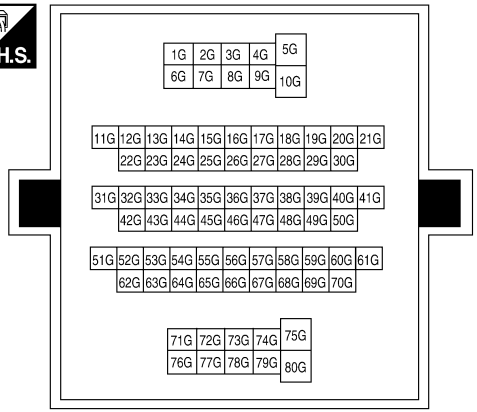
Connector No.	M150
Connector Name	IGNITION KEY HOLE ILLUMINATION
Connector Color	WHITE

H.S.

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

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

H.S.

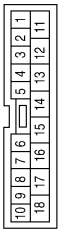


Terminal No.	Color of Wire	Signal Name
7G	L/W	–
10G	W/B	–
30G	Y	–

ABLIA0139GB

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

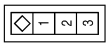
H.S.



Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	R/G	–

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

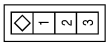
H.S.



Terminal No.	Color of Wire	Signal Name
2	SB	–

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

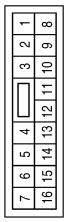
H.S.



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

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE

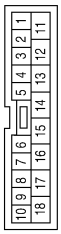
H.S.



Terminal No.	Color of Wire	Signal Name
10	R/W	–

Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Color	WHITE

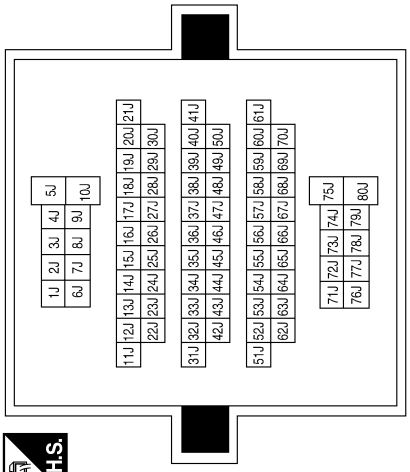
H.S.



Terminal No.	Color of Wire	Signal Name
14	B	–
15	R/W	–

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

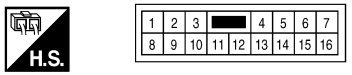
H.S.



Terminal No.	Color of Wire	Signal Name
58J	R/G	–
59J	R/W	–
60J	SB	–
61J	R/Y	–

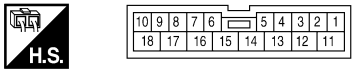
ABLIA0140GB

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
12	R	–

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

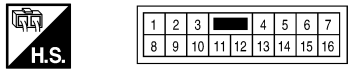


Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	R/G	–

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

Terminal No.	Color of Wire	Signal Name
2	R/L	–

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE

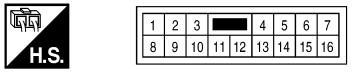


Terminal No.	Color of Wire	Signal Name
10	R/W	–

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

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

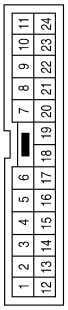


Terminal No.	Color of Wire	Signal Name
13	GR	–

ABLIA0141GB

Connector No.	B146
Connector Name	WIRE TO WIRE
Connector Color	BROWN

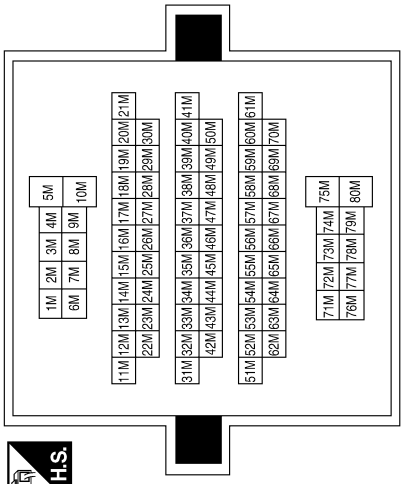
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
5	R/G	–
6	R	–

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
49M	R/G	–
50M	R	–
55M	GR	–
56M	GR	–
61M	R/L	–
64M	R/W	–
65M	R/W	–

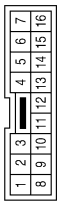
Connector No.	B153
Connector Name	CARGO LAMP
Connector Color	WHITE

H.S.

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

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

H.S.



Terminal No.	Color of Wire	Signal Name
10	L	–
12	R/G	–
13	B	–
14	R	–

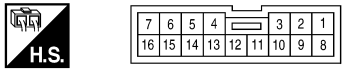
Connector No.	R3
Connector Name	VANITY LAMP LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/G	–
2	B	–

ABLIA0142GB

Connector No.	R6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

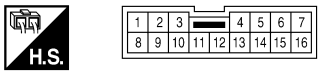


Terminal No.	Color of Wire	Signal Name
1	R	–
3	R/G	–
5	L	–
10	B	–

Connector No.	R8
Connector Name	VANITY LAMP RH
Connector Color	WHITE

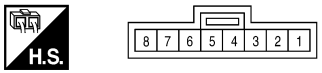
Terminal No.	Color of Wire	Signal Name
1	R/G	–
2	B	–

Connector No.	R101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



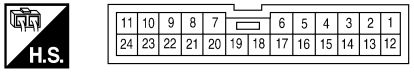
Terminal No.	Color of Wire	Signal Name
1	R	–
3	R/G	–
5	L	–
10	B	–

Connector No.	R102
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	L	DOOR BATT
2	R	GND_THRU_SW
3	–	–
4	–	–
5	B	GND
6	R/G	BAT
7	–	–
8	–	–

Connector No.	R201
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	B	–
5	R/G	–
6	R	–

Connector No.	R203
Connector Name	PERSONAL LAMP 2ND ROW
Connector Color	WHITE

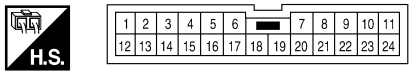
Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–
3	R/G	–

ABLIA0143GB

Connector No.	R205
Connector Name	PERSONAL LAMP 3RD ROW
Connector Color	WHITE

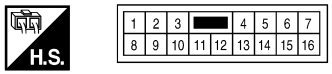
Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–
3	R/G	–

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



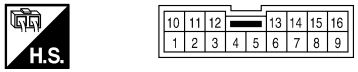
Terminal No.	Color of Wire	Signal Name
6	R/W	–
7	R/G	–
24	L	–

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



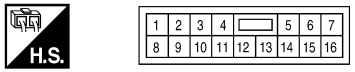
Terminal No.	Color of Wire	Signal Name
8	LG/W	–
14	B	–

Connector No.	D4
Connector Name	DOOR MIRROR LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
12	R/G	–
13	L	–

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



Terminal No.	Color of Wire	Signal Name
4	L	LOCK
6	R	UNLOCK
14	LG/W	ANTI PINCH SERIAL LINK

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

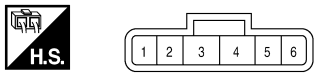
Terminal No.	Color of Wire	Signal Name
17	B	GND

ABLIA0144GB

Connector No.	D11
Connector Name	FRONT STEP LAMP LH
Connector Color	WHITE

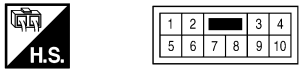
Terminal No.	Color of Wire	Signal Name
1	R/G	–
2	R/W	–

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	BLACK



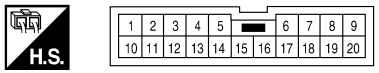
Terminal No.	Color of Wire	Signal Name
1	L	LOCK
5	B	GND
6	R	UNLOCK

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



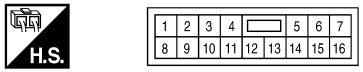
Terminal No.	Color of Wire	Signal Name
3	B	–

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



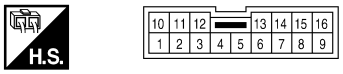
Terminal No.	Color of Wire	Signal Name
4	L	–
5	LG/W	–
6	R/W	–
7	R/G	–

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



Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	ANTI PINCH SERIAL LINK

Connector No.	D107
Connector Name	DOOR MIRROR RH (WITH AUTOMATIC DRIVE POSITIONER)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
12	R/G	–
13	L	–

ABLIA0145GB

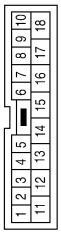
Connector No.	D109
Connector Name	FRONT STEP LAMP RH
Connector Color	WHITE

H.S.

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

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

H.S.



Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	R/G	–

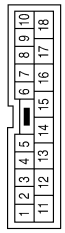
Connector No.	D206
Connector Name	REAR STEP LAMP LH
Connector Color	WHITE

H.S.

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

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

H.S.



Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	R/G	–

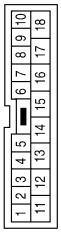
Connector No.	D306
Connector Name	REAR STEP LAMP RH
Connector Color	WHITE

H.S.

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

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE

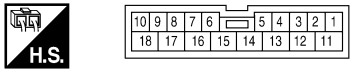
H.S.



Terminal No.	Color of Wire	Signal Name
14	B	–
15	R/W	–

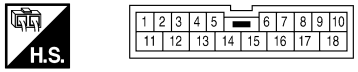
ABLIA0146GB

Connector No.	D405
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	–
15	R/W	–

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE

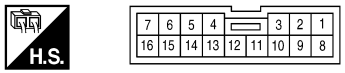


Terminal No.	Color of Wire	Signal Name
14	B	–
15	R/W	–

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE

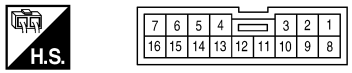
Terminal No.	Color of Wire	Signal Name
7	R/W	–
8	B	–

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



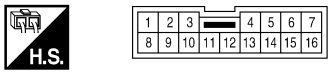
Terminal No.	Color of Wire	Signal Name
13	GR	–

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	GR	–

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	GR	–

ABLIA0147GB

Connector No.	D707
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK

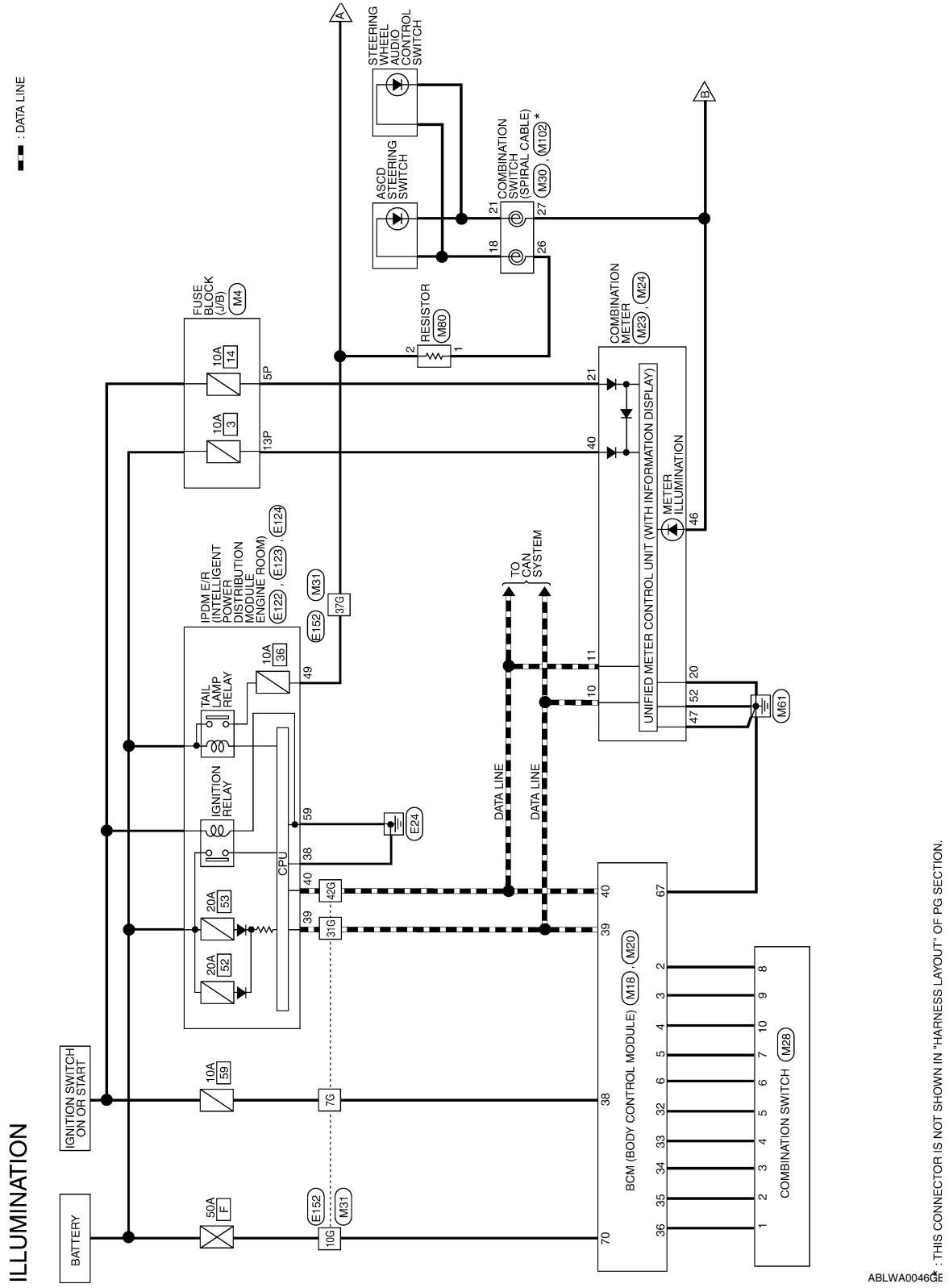
Terminal No.	Color of Wire	Signal Name
1	GR	–

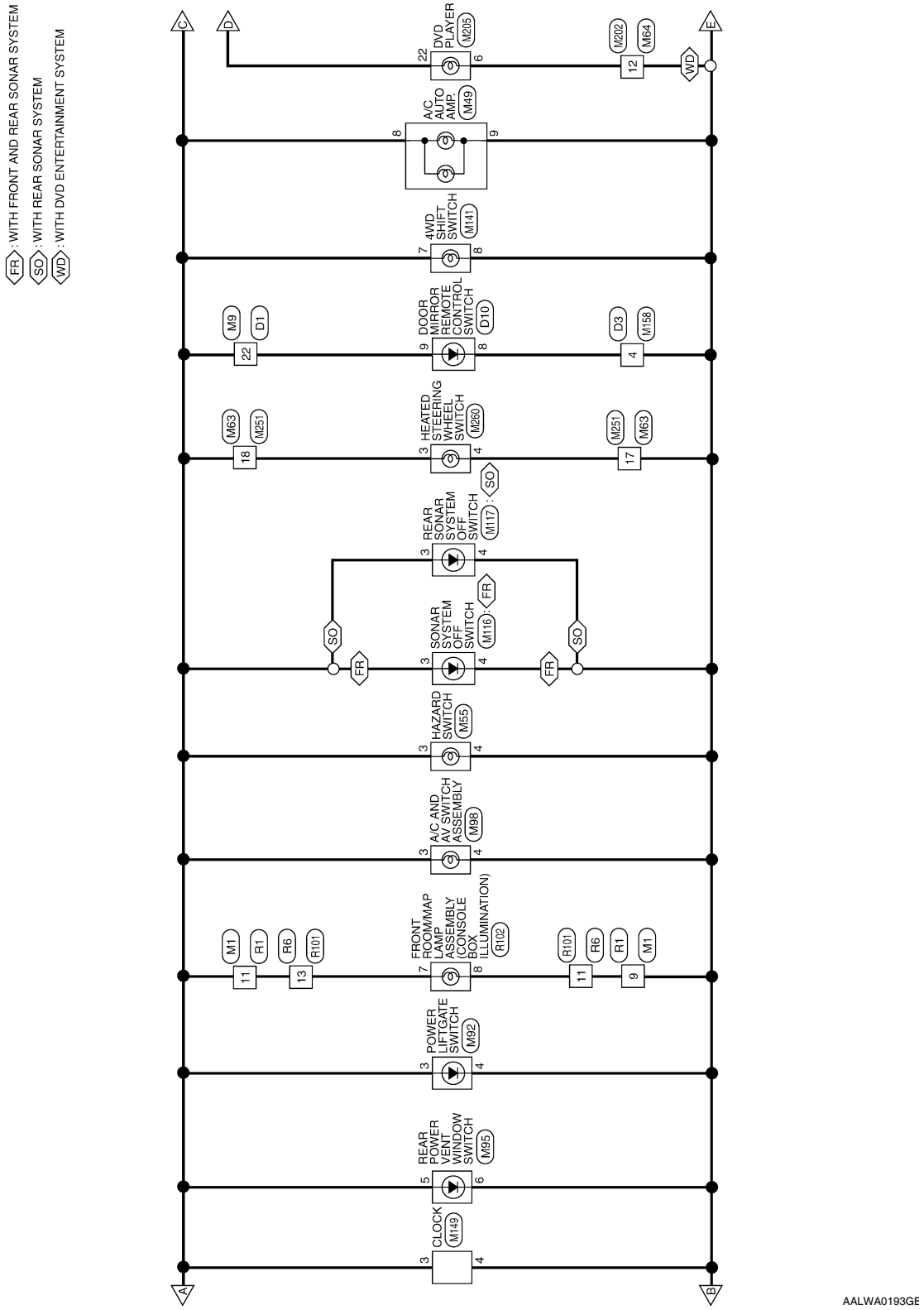
ABLIA0148GB

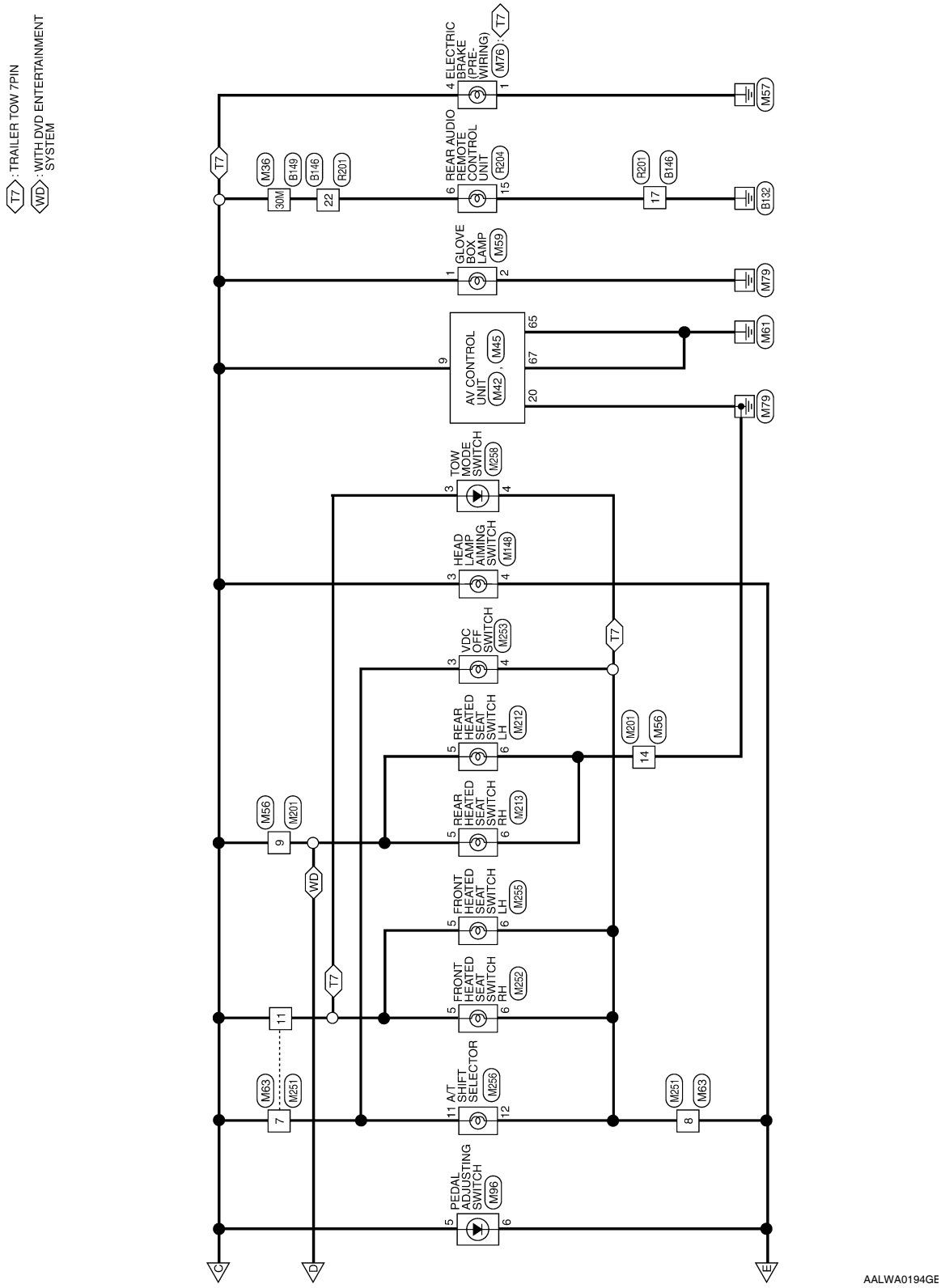
ILLUMINATION

Wiring Diagram

INFOID:0000000003776267

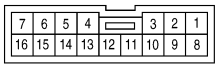



FR : WITH FRONT AND REAR SONAR SYSTEM
SO : WITH REAR SONAR SYSTEM
WD : WITH DVD ENTERTAINMENT SYSTEM
CLOCK (M149)
REAR POWER VENT WINDOW SWITCH (M95)
POWER LIFTGATE SWITCH (M92)
FRONT ROOM/MAP LAMP ASSEMBLY (CONSOLE BOX ILLUMINATION) (R102)
A/C AND A/V SWITCH ASSEMBLY (M98)
HAZARD SWITCH (M55)
SONAR SYSTEM OFF SWITCH (M116)
REAR SONAR SYSTEM OFF SWITCH (M117)
HEATED STEERING WHEEL SWITCH (M260)
DOOR MIRROR REMOTE CONTROL SWITCH (D10)
4WD SHIFT SWITCH (M141)
A/C AUTO AMP. (M49)
DVD PLAYER (M205)
M1 R1 R6 R101 11 13
M9 D1 22
M63 M251 18
D3 M158 4
M251 M63 17
R101 R6 R1 M1 11 9
M202 M64 12
WD
A B C D E
AALWA0193GE


T7 : TRAILER TOW 7PIN
WD : WITH DVD ENTERTAINMENT SYSTEM
4 ELECTRIC BRAKE (PRE-WIRING) M76
T7
M57
6 REAR AUDIO REMOTE CONTROL UNIT R204
M36 B149 B146 R201
30M
22
15
R201 B146
17
B132
1 GLOVE BOX LAMP M59
2
M79
9 AV CONTROL UNIT M42, M45
65
67
20
M61
M79
3 TOW MODE SWITCH M258
4
3 HEAD LAMP AIMING SWITCH M148
4
3 VDC OFF SWITCH M253
4
5 REAR HEATED SEAT SWITCH LH M212
6
M201 M56
14
5 REAR HEATED SEAT SWITCH RH M213
6
M56 M201
9
WD
5 FRONT HEATED SEAT SWITCH LH M255
6
5 FRONT HEATED SEAT SWITCH RH M252
6
11
M63 M251
7
11 A/T SHIFT SELECTOR M256
12
M251 M63
8
5 PEDAL ADJUSTING SWITCH M96
6
C
D
E
AALWA0194GE

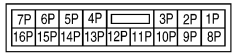
ILLUMINATION CONNECTORS

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



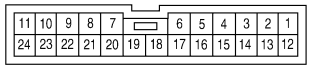
Terminal No.	Color of Wire	Signal Name
9	BR	–
11	R/L	–

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



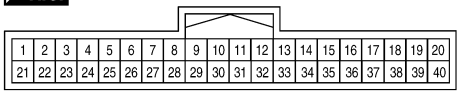
Terminal No.	Color of Wire	Signal Name
5P	O/L	–
13P	P	–

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



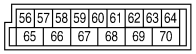
Terminal No.	Color of Wire	Signal Name
22	R/L	–

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



Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (F/L)

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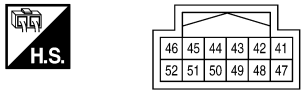
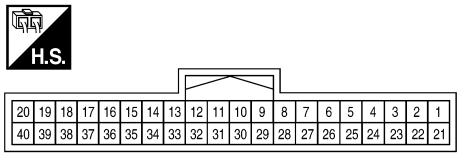
Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



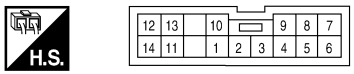
Terminal No.	Color of Wire	Signal Name
46	BR	ILL OUTPUT
47	B	POWER GND
52	B	POWER GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



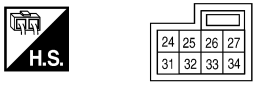
Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	GND
21	O/L	RUN/START
40	Y/R	BATTERY (TYPE A*)
40	P	BATTERY (TYPE B*)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



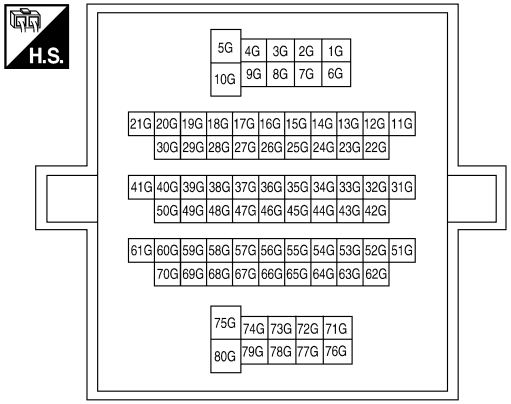
Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

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



Terminal No.	Color of Wire	Signal Name
26	Y	–
27	BR	–

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



Terminal No.	Color of Wire	Signal Name
7G	W/L	–
10G	W/B	–
31G	L	–
37G	R/L	–
42G	P	–

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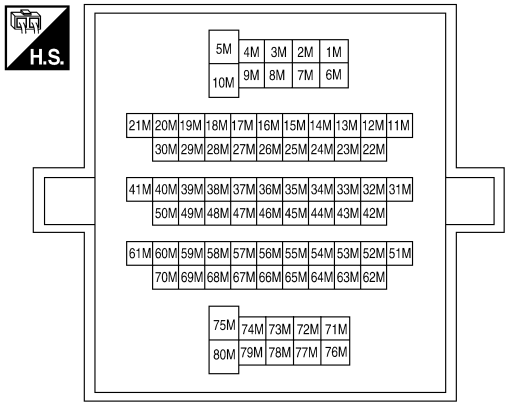
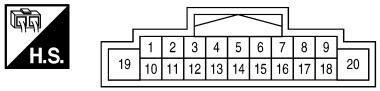
* : REFER TO HARNESS LAYOUT OF PG SECTION FOR DEFINITION OF TYPE A AND TYPE B.

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



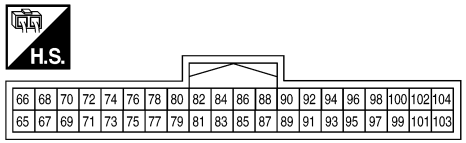
Terminal No.	Color of Wire	Signal Name
30M	R/L	–

Connector No.	M42
Connector Name	AV CONTROL UNIT
Connector Color	WHITE



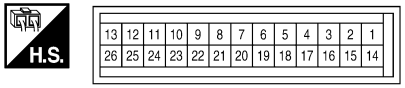
Terminal No.	Color of Wire	Signal Name
9	R/L	ILL
20	B	GND

Connector No.	M45
Connector Name	AV CONTROL UNIT
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
65	B	GND
67	B	GND

Connector No.	M49
Connector Name	A/C AUTO AMP.
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	R/L	ILL+
9	BR	ILL-

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

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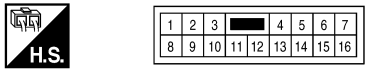
Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE

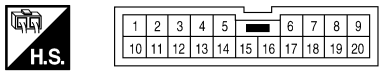


Terminal No.	Color of Wire	Signal Name
9	R/L	–
14	B	–

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

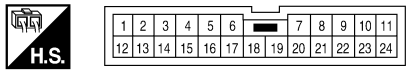
Terminal No.	Color of Wire	Signal Name
1	R/L	–
2	B	–

Connector No.	M63
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
7	R/L	–
8	BR	–
11	R/L	–
17	BR	–
18	R/L	–

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
12	BR	–

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

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

Connector No.	M80
Connector Name	RESISTOR
Connector Color	BLACK

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

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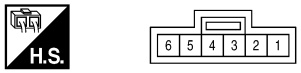
Connector No.	M92
Connector Name	POWER LIFTGATE SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
3	R/L	ILL
4	BR	ILL_CONT_GND

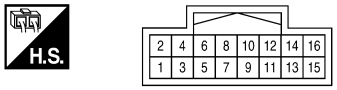
Connector No.	M95
Connector Name	REAR POWER VENT WINDOW SWITCH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
5	R/L	–
6	BR	–

Connector No.	M96
Connector Name	PEDAL ADJUSTING SWITCH
Connector Color	BROWN

Terminal No.	Color of Wire	Signal Name
5	R/L	–
6	BR	–

Connector No.	M98
Connector Name	A/C AND AV SWITCH ASSEMBLY
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	R/L	ILL
4	BR	ILL CONT GND

Connector No.	M102
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
18	O	–
21	L	–

Connector No.	M116
Connector Name	SONAR SYSTEM OFF SWITCH
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

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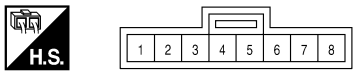
Connector No.	M117
Connector Name	REAR SONAR SYSTEM OFF SWITCH
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

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



Terminal No.	Color of Wire	Signal Name
7	R/L	–
8	BR	–

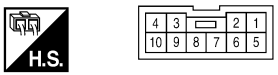
Connector No.	M148
Connector Name	HEADLAMP AIMING SWITCH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

Connector No.	M149
Connector Name	CLOCK
Connector Color	WHITE

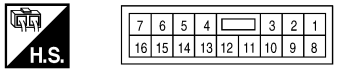
Terminal No.	Color of Wire	Signal Name
3	R/L	ILL+
4	BR	ILL-

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	BR	–

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	R/L	–
14	B	–

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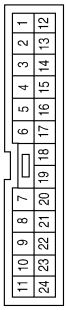
Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	BROWN

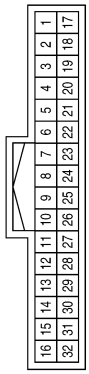
H.S.



Terminal No.	Color of Wire	Signal Name
12	BR	–

Connector No.	M205
Connector Name	DVD PLAYER
Connector Color	WHITE

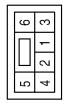
H.S.



Terminal No.	Color of Wire	Signal Name
6	BR	ILL+
22	R/L	LIGHTING SW

Connector No.	M212
Connector Name	REAR HEATED SEAT SWITCH LH
Connector Color	WHITE

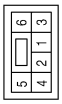
H.S.



Terminal No.	Color of Wire	Signal Name
5	R/L	–
6	B	–

Connector No.	M213
Connector Name	REAR HEATED SEAT SWITCH RH
Connector Color	BROWN

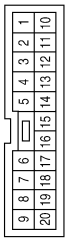
H.S.



Terminal No.	Color of Wire	Signal Name
5	R/L	–
6	B	–

Connector No.	M251
Connector Name	WIRE TO WIRE
Connector Color	BROWN

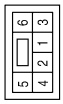
H.S.



Terminal No.	Color of Wire	Signal Name
7	R/L	–
8	BR	–
11	R/L	–
17	BR	–
18	R/L	–

Connector No.	M252
Connector Name	FRONT HEATED SEAT SWITCH RH
Connector Color	BROWN

H.S.



Terminal No.	Color of Wire	Signal Name
5	R/L	–
6	BR	–

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Connector No.	M253
Connector Name	VDC OFF SWITCH
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

Connector No.	M255
Connector Name	FRONT HEATED SEAT SWITCH LH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
5	R/L	–
6	BR	–

Connector No.	M256
Connector Name	A/T SHIFT SELECTOR
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
11	R/L	–
12	BR	–

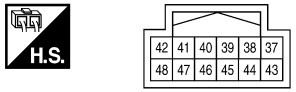
Connector No.	M258
Connector Name	TOW MODE SWITCH
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

Connector No.	M260
Connector Name	HEATED STEERING WHEEL SWITCH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
3	R/L	–
4	BR	–

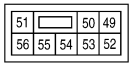
Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



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

AALIA0329GB

Connector No.	E123
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

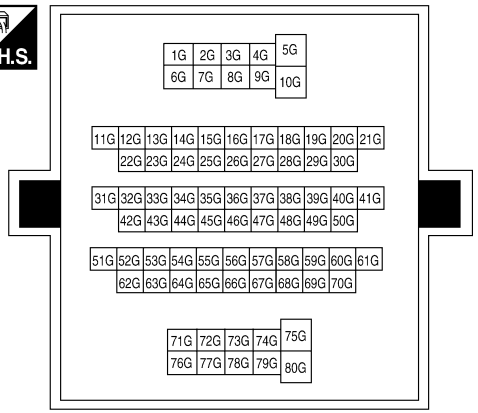


Terminal No.	Color of Wire	Signal Name
49	R/L	HEAD_L_HI_RH

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

Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)

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



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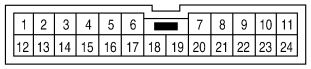
Terminal No.	Color of Wire	Signal Name
7G	L/W	–
10G	W/B	–
31G	L	–
37G	R/L	–
42G	P	–

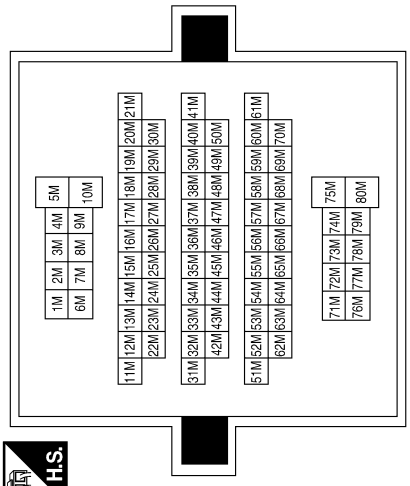
Connector No.	B146
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
17	B	–
22	R/L	–

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE

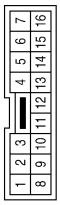
H.S.



Terminal No.	Color of Wire	Signal Name
30M	R/L	–

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

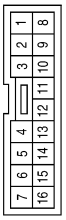
H.S.



Terminal No.	Color of Wire	Signal Name
9	BR	–
11	R/L	–

Connector No.	R6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

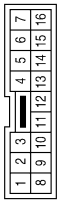
H.S.



Terminal No.	Color of Wire	Signal Name
11	BR	–
13	R/L	–

Connector No.	R101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

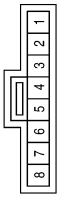
H.S.



Terminal No.	Color of Wire	Signal Name
11	BR	–
13	R/L	–

Connector No.	R102
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	GRAY

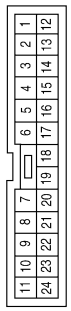
H.S.



Terminal No.	Color of Wire	Signal Name
7	R/L	ILL+
8	BR	ILL-

Connector No.	R201
Connector Name	WIRE TO WIRE
Connector Color	BROWN

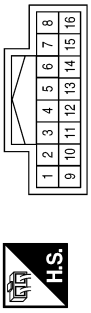
H.S.



Terminal No.	Color of Wire	Signal Name
17	B	–
22	R/L	–

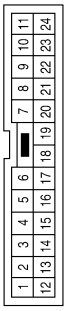
ABLIA0158GB

Connector No.	R204
Connector Name	REAR AUDIO REMOTE CONTROL UNIT
Connector Color	WHITE



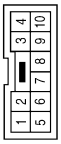
Terminal No.	Color of Wire	Signal Name
6	R/L	ILL+
15	B	GND

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



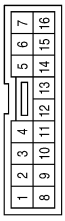
Terminal No.	Color of Wire	Signal Name
22	R/L	–

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	BR	–

Connector No.	D10
Connector Name	DOOR MIRROR REMOTE CONTROL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	BR	—
9	R/L	

ABLIA0159GB

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000004109551

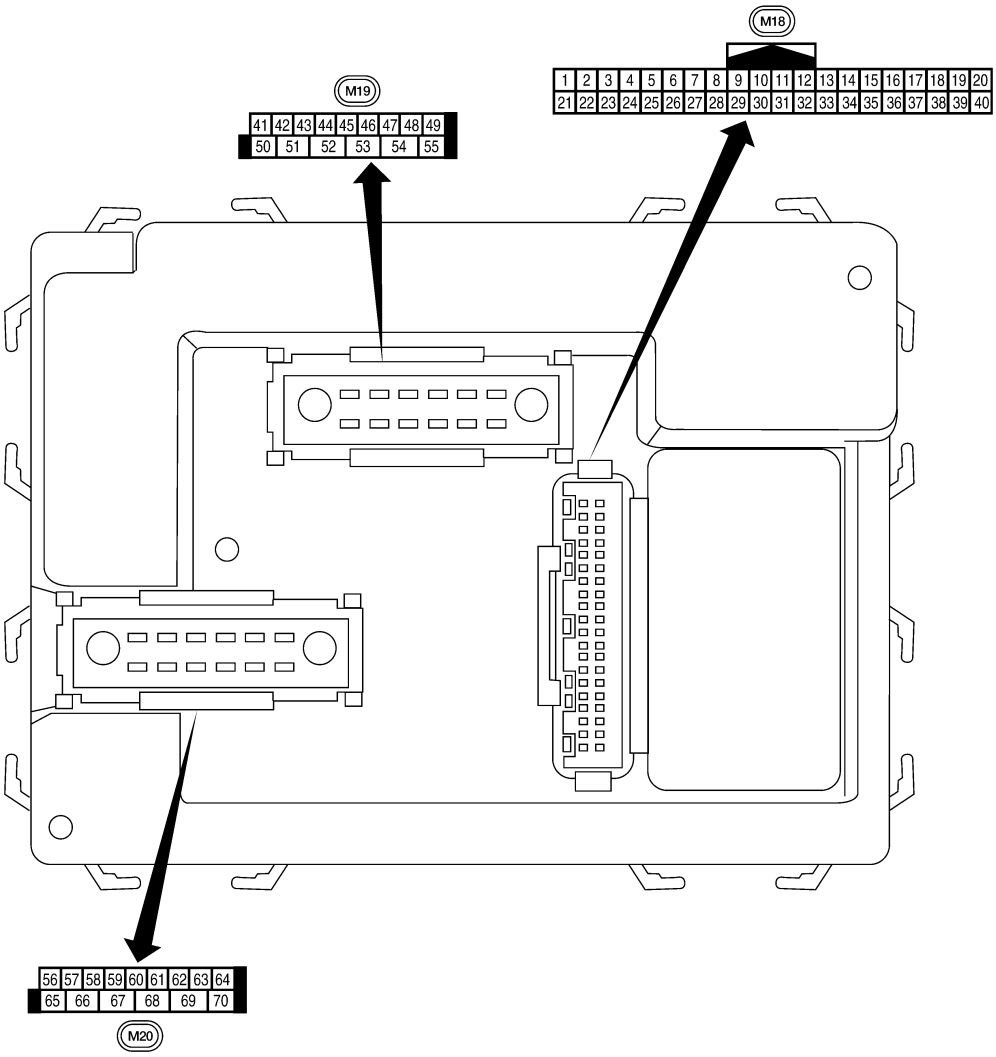
VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
	Outside of the room is bright	ON
AUTO LIGHT SW	Lighting switch OFF	OFF
	Lighting switch AUTO	ON
BACK DOOR SW	Back door closed	OFF
	Back door opened	ON
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

Monitor Item	Condition	Value/Status
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
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
I-KEY LOCK	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF
	UNLOCK button of Intelligent Key is pressed	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	OFF
	Ignition switch ON	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RKE LOCK AND UN-LOCK	**NOTE:** The item is indicated, but not monitored	OFF
		ON
RR WASHER SW	Rear washer switch OFF	OFF
	Rear washer switch ON	ON
RR WIPER INT	Rear wiper switch OFF	OFF
	Rear wiper switch INT	ON
RR WIPER ON	Rear wiper switch OFF	OFF
	Rear wiper switch ON	ON
RR WIPER STOP	Rear wiper stop position	OFF
	Other than rear wiper stop position	ON
TAIL LAMP SW	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	ON
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

Terminal Layout

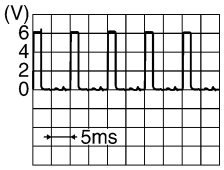
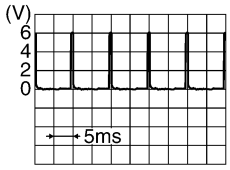
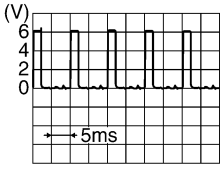
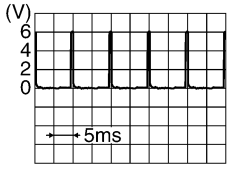
INFOID:0000000004109552

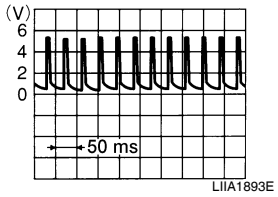
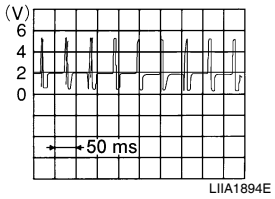
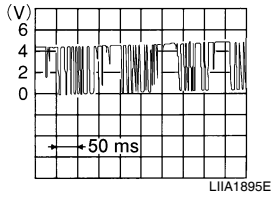
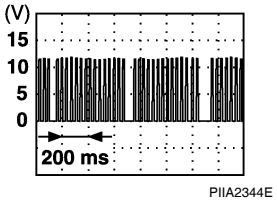


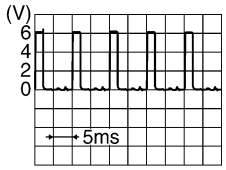
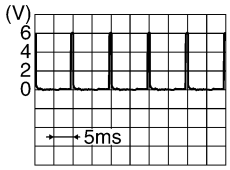
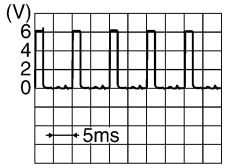
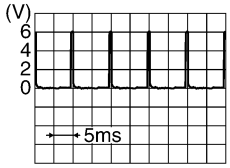
LIIA2443E

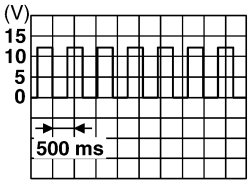
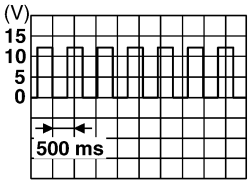
Physical Values

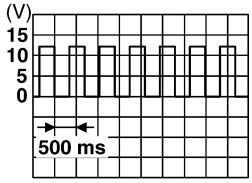
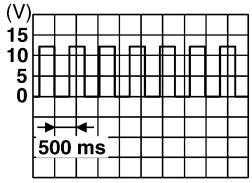
INFOID:0000000004109553

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR/W	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	V	Combination switch input 1				
9	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
					OFF (other than above)	Battery voltage
11	O	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	L/W	Tire pressure warning check connector	Input	OFF	—	5V
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	W/V	BUS	—	—	Ignition switch ON or power window timer operates	
23	G/O	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 for approx. 1 second, then return to battery voltage.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

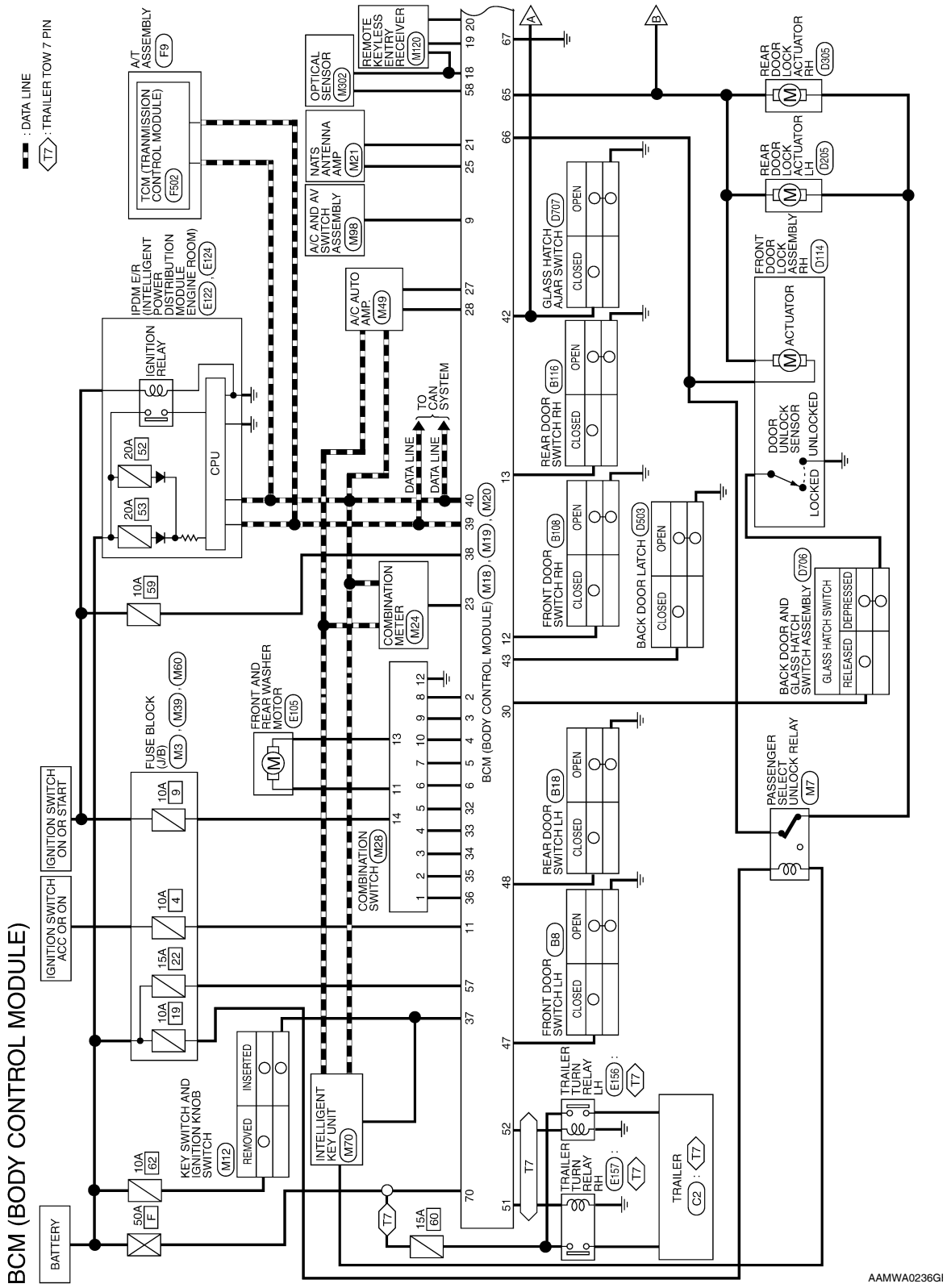
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	W/B	Hazard switch	Input	OFF	ON	0V
					OFF	5V
30	Y/BR	Glass hatch switch	Input	OFF	Glass hatch switch released	0
					Glass hatch switch pressed	Battery
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	R/W	Combination switch output 1				
37	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery
43	R/B	Back door latch (door ajar switch)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage

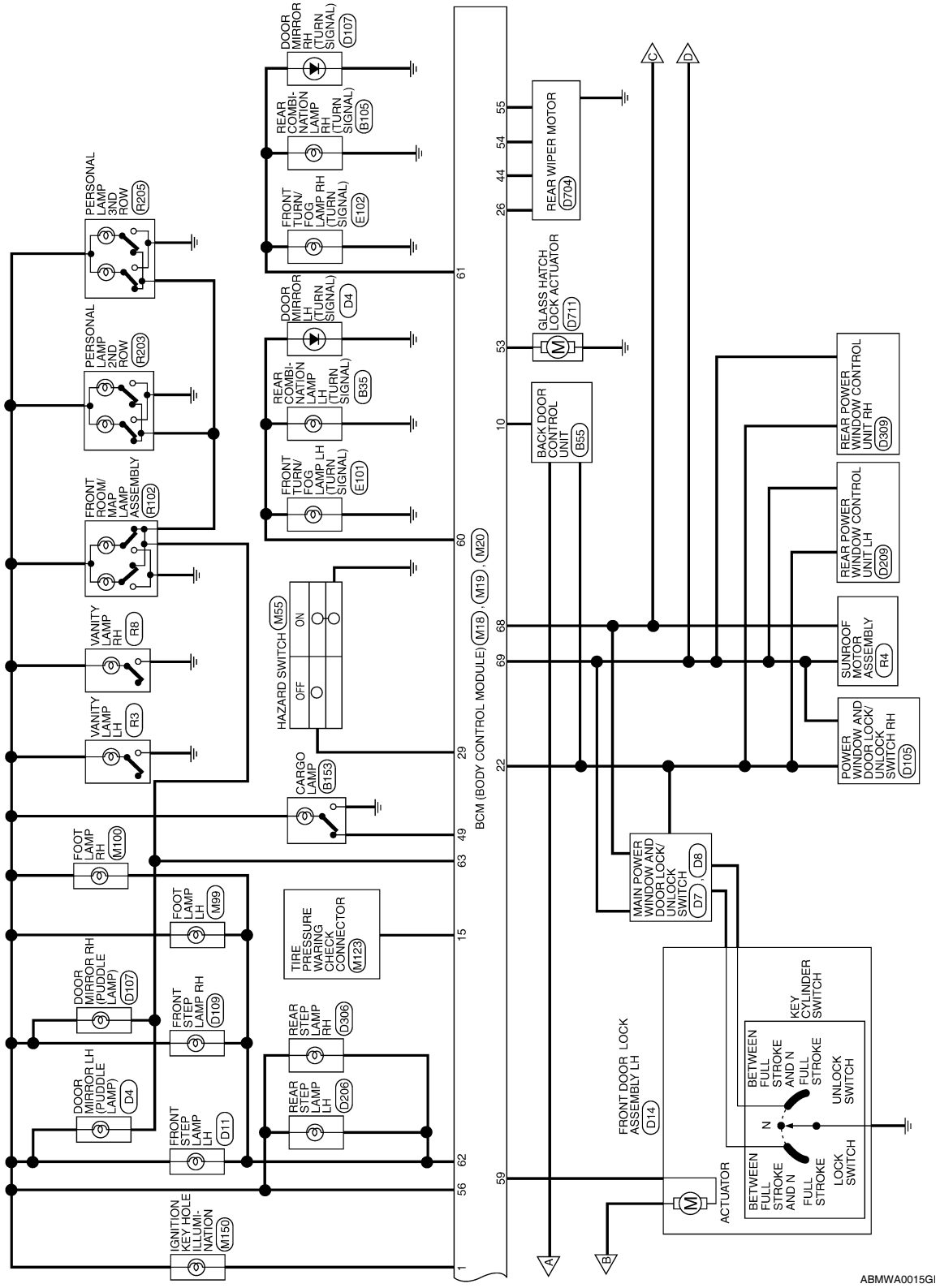
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	SB	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	R	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	G/Y	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
53	L/W	Glass hatch lock actuator	Output	OFF	Glass hatch switch released	0
					Glass hatch switch pressed	Battery
54	Y	Rear wiper output circuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	0V
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Battery voltage
55	SB	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/G	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage

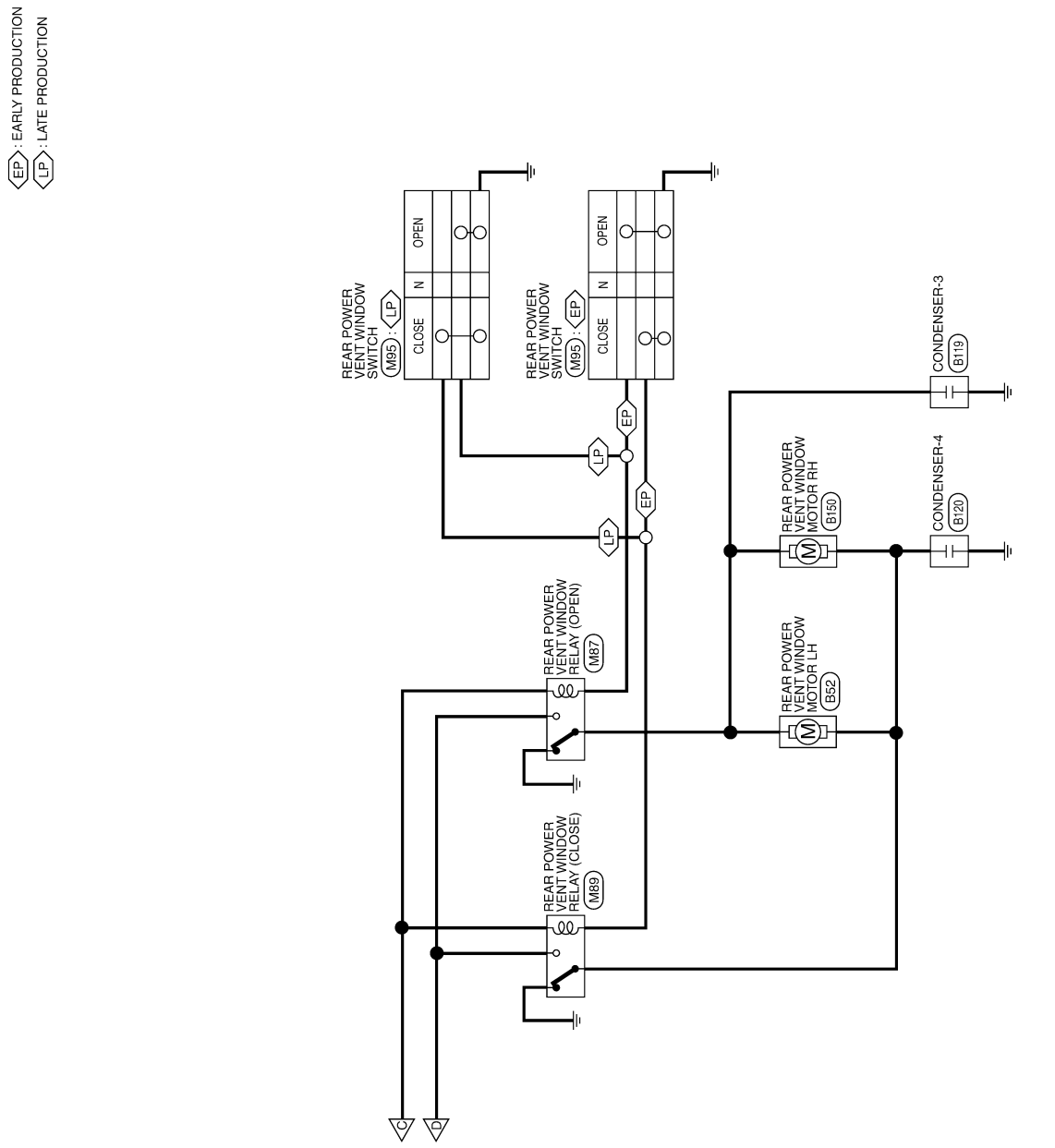
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value or waveform (Approx.)
				Ignition switch	Operation or condition		
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated		3.1V or more
					When optical sensor is not illuminated		0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)		0V
					ON (unlock)		Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON		 SKIA3009J
61	G/Y	Turn signal (right)	Output	ON	Turn right ON		 SKIA3009J
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)		0V
					OFF (all doors closed)		Battery voltage
63	L	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	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)		0V
					ON (unlock)		Battery voltage
67	B	Ground	Input	ON	—		0V
68	W/L	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	W/R	Power window power supply	Output	—	—		Battery voltage
70	W/B	Battery power supply	Input	OFF	—		Battery voltage

Wiring Diagram

INFOID:0000000004109554



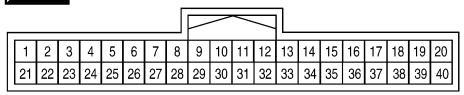

PERSONAL LAMP 3ND ROW R205
PERSONAL LAMP 2ND ROW R203
FRONT ROOM/ MAP LAMP ASSEMBLY R102
VANITY LAMP RH R8
VANITY LAMP LH R3
FOOT LAMP RH M100
DOOR MIRROR RH (PUDDLE LAMP) D107
DOOR MIRROR LH (PUDDLE LAMP) D4
IGNITION KEY HOLE ILLUMI-NATION M150
FOOT LAMP LH M99
FRONT STEP LAMP RH D109
FRONT STEP LAMP LH D11
DOOR MIRROR RH (TURN SIGNAL) D107
REAR COMBI-NATION LAMP RH (TURN SIGNAL) B105
FRONT TURN/ FOG LAMP RH (TURN SIGNAL) E102
DOOR MIRROR LH (TURN SIGNAL) D4
REAR COMBI-NATION LAMP LH (TURN SIGNAL) B35
FRONT TURN/ FOG LAMP LH (TURN SIGNAL) E101
HAZARD SWITCH M55
OFF
ON
CARGO LAMP B153
TIRE PRESSURE WARING CHECK CONNECTOR M123
REAR STEP LAMP RH D306
REAR STEP LAMP LH D206
BCM (BODY CONTROL MODULE) M18, M19, M20
REAR WIPER MOTOR D704
GLASS HATCH LOCK ACTUATOR D711
BACK DOOR CONTROL UNIT B55
REAR POWER WINDOW CONTROL UNIT RH D309
REAR POWER WINDOW CONTROL UNIT LH D209
SUNROOF MOTOR ASSEMBLY R4
POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH RH D105
MAIN POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH D7, D8
FRONT DOOR LOCK ASSEMBLY LH D14
ACTUATOR
BETWEEN FULL STROKE AND N
FULL STROKE
LOCK SWITCH
N
KEY CYLINDER SWITCH
UNLOCK SWITCH
A
B
C
D
ABMWA0015GI



AAMWA0237GI

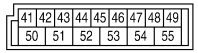
BCM (BODY CONTROL MODULE) CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1	BR/W	KEY RING OUTPUT
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
7	–	–
8	–	–
9	GR/R	REAR DEFOGGER SW
10	G	IVCS INPUT
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
14	–	–
15	L/W	TPMS (MODE TRIGGER SWITCH)
16	–	–
17	–	–
18	P	KEYLESS AND AUTO LIGHT SENSOR GND
19	V/W	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G/W	KEYLESS TUNER SIGNAL
21	G	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
23	G/W	SECURITY INDICATOR OUTPUT
24	–	–
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX,TX)
26	Y/L	REAR WIPER AUTO STOP SW2
27	W/R	AIR CON SW
28	L/R	BLOWER FAN SW
29	W/B	HAZARD SW
30	Y/BR	GLASS HATCH OPENER
31	–	–
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

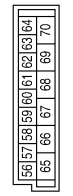
Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
41	–	–
42	GR	GLASS HATCH SW
43	R/B	BACK DOOR SW
44	O	REAR WIPER AUTO STOP SW1
45	–	–
46	–	–
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
49	R	LUGGAGE LAMP OUTPUT
50	–	–
51	G/Y	TREAILER FLASH OUTPUT (RIGHT)
52	G/B	TREAILER FLASH OUTPUT (LEFT)
53	L/W	GLASS ACTUATOR OUTPUT
54	Y	REAR WIPER MOTOR OUTPUT 2
55	SB	REAR WIPER MOTOR OUTPUT 1

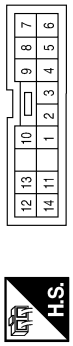
ABMIA0023GB

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



Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT (FUSE)
58	W/R	AUTO LIGHT SENSOR INPUT 2
59	G	DOOR UNLOCK OUTPUT (DR)
60	G/B	FLASHER OUTPUT (LEFT)
61	G/Y	FLASHER OUTPUT (RIGHT)
62	R/W	STEP LAMP OUTPUT
63	L	ROOM LAMP
64	–	–
65	V	OOR LOCK OUTPUT (ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
68	W/L	POWER WINDOW POWER SUPPLY (RAP)
69	W/R	POWER WINDOW POWER SUPPLY (BAT)
70	W/B	BATT (F/L)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3
11	V/W	WASHER MOTOR
12	B	GND
13	W/R	WASHER MOTOR
14	R/L	IGN

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Fail Safe

INFOID:0000000004109555

Fail-safe index

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

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.
U1010: CONTROL UNIT (CAN)	Inhibit engine cranking	When the BCM re-start communicating with the other modules.

DTC Inspection Priority Chart

INFOID:0000000004109556

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

Priority	DTC
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2013: STRG COMM 1 • B2552: INTELLIGENT KEY • B2590: NATS MALFUNCTION
3	• C1729: VHCL SPEED SIG ERR • C1735: IGNITION SIGNAL
4	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • 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:0000000004109557

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-30
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-31
B2190: NATS ANTENNA AMP	—	—	—	SEC-27
B2191: DIFFERENCE OF KEY	—	—	—	SEC-30
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-31
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-33
B2552: INTELLIGENT KEY	—	—	—	SEC-35
B2590: NATS MALFUNCTION	—	—	—	SEC-36
C1704: LOW PRESSURE FL	—	—	—	WT-26
C1705: LOW PRESSURE FR	—	—	—	WT-26
C1706: LOW PRESSURE RR	—	—	—	WT-26
C1707: LOW PRESSURE RL	—	—	—	WT-26
C1708: [NO DATA] FL	—	—	—	WT-14
C1709: [NO DATA] FR	—	—	—	WT-14
C1710: [NO DATA] RR	—	—	—	WT-14
C1711: [NO DATA] RL	—	—	—	WT-14
C1712: [CHECKSUM ERR] FL	—	—	—	WT-16
C1713: [CHECKSUM ERR] FR	—	—	—	WT-16
C1714: [CHECKSUM ERR] RR	—	—	—	WT-16
C1715: [CHECKSUM ERR] RL	—	—	—	WT-16
C1716: [PRESSDATA ERR] FL	—	—	—	WT-18
C1717: [PRESSDATA ERR] FR	—	—	—	WT-18
C1718: [PRESSDATA ERR] RR	—	—	—	WT-18
C1719: [PRESSDATA ERR] RL	—	—	—	WT-18
C1720: [CODE ERR] FL	—	—	—	WT-16
C1721: [CODE ERR] FR	—	—	—	WT-16
C1722: [CODE ERR] RR	—	—	—	WT-16
C1723: [CODE ERR] RL	—	—	—	WT-16
C1724: [BATT VOLT LOW] FL	—	—	—	WT-16
C1725: [BATT VOLT LOW] FR	—	—	—	WT-16
C1726: [BATT VOLT LOW] RR	—	—	—	WT-16
C1727: [BATT VOLT LOW] RL	—	—	—	WT-16
C1729: VHCL SPEED SIG ERR	—	—	—	WT-19
C1735: IGNITION SIGNAL	—	—	—	—

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000003776269

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 • Front room/map lamp assembly • Personal lamp 2nd and 3rd row • Cargo room lamp • Front and rear step lamps • Vanity mirror lamps • Ignition keyhole illumination • Puddle lamps • Foot lamps	• Harness between BCM and each interior room lamp • BCM	Battery saver output/power supply circuit Refer to INL-15.
Some or all of the following interior room lamps do not turn ON/OFF • Puddle lamps • Front room/map lamp assembly • Personal lamp 2nd row • Personal lamp 3rd row	• Harness between BCM and each door switch • Harness between BCM and each interior room lamp • BCM	Door switch circuit Refer to DLK-71.
		Interior room lamp control circuit Refer to INL-17.
Some or all of the following lamps do not turn ON/OFF • Front step lamps • Rear step lamps • Foot lamps	• Harness between BCM and step lamps and foot lamps • BCM	Step lamp circuit Refer to INL-19.
Cargo lamp does not turn ON/OFF	• Harness between BCM and cargo lamp • BCM	Cargo lamp control circuit Refer to INL-21.
Ignition keyhole illumination does not turn ON/OFF	• Harness between BCM and ignition keyhole illumination • BCM	Ignition keyhole illumination control circuit Refer to INL-23.
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-12.
Interior room lamp battery saver does not activate.	—	Check the interior room lamp battery saver setting. Refer to INL-13.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005867732

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.**

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

WARNING:

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

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000005867733

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT-III.

General precautions for service operations

INFOID:0000000003776271

- 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 an 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.

ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

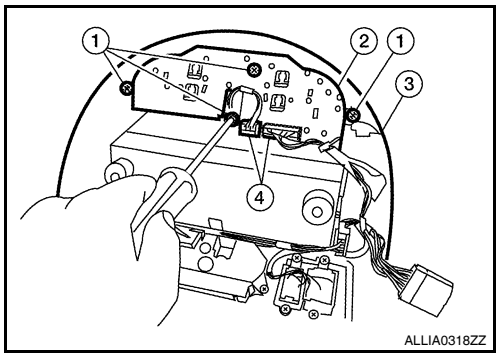
Removal and Installation

INFOID:0000000003776272

MAP LAMP

Removal

1. Remove overhead console (3). Refer to INT-17, "Removal and Installation".
2. Disconnect connectors (4) and remove the map lamp screws (1), then remove map lamp (2) from overhead console.



Installation

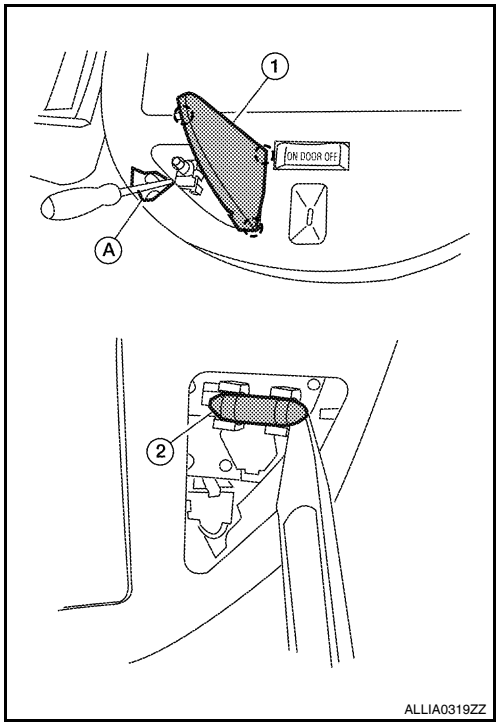
Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool (A), remove map lamp lens (1).
   ◌ Pawl
2. Release one side of the bulb (2) from the tab, then pull straight downward to remove.

Map lamp bulb : 12V - 8W

CAUTION:
Wrap a cloth around tool to protect the housing and lens.



VANITY MIRROR LAMP

Removal

The vanity mirror lamp is replaced as part of the sunvisor assembly. Refer to INT-17, "Removal and Installation".

Installation

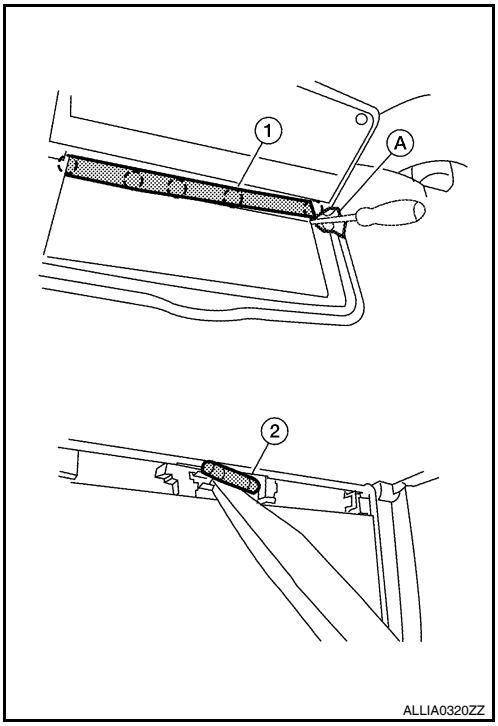
Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool (A), release the tabs and remove the vanity mirror lamp lens (1).
   ◌ Pawl
2. Release one side of the bulb (2) from the tab, then pull straight out to remove.

   Vanity mirror lamp bulb : 12V - 1.8W

   CAUTION:
   Wrap a cloth around tool to protect the housing and lens.



GLOVE BOX LAMP

Removal

1. Remove instrument lower panel RH and glove box. Refer to IP-17, "Removal and Installation".
2. Rotate glove box lamp socket and rotate counterclockwise to release from steering member.

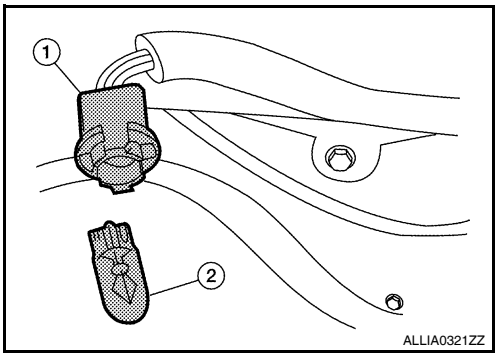
Installation

Installation is in the reverse order of removal.

Bulb Replacement

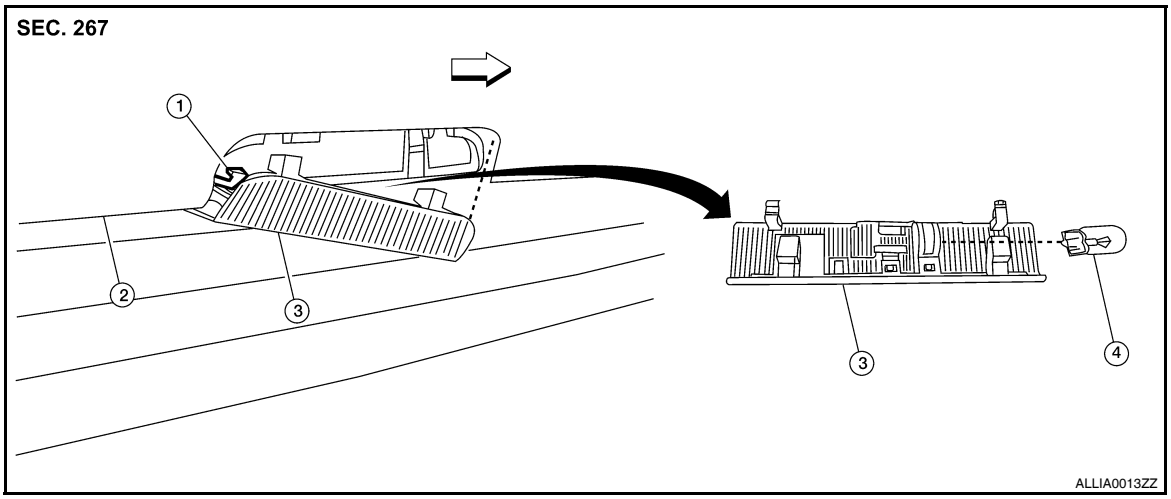
1. Remove instrument lower panel RH and glove box. Refer to IP-17, "Removal and Installation".
2. Pull bulb (2) straight out from glove box lamp socket (1) to remove.

   Glove box lamp bulb : 12V - 3.4W



STEP LAMP

Removal



1. Step lamp connector
2. Door finisher
3. Step lamp lens/socket
4. Step lamp bulb

⇦ Vehicle front

1. Insert a suitable tool between door finisher and step lamp lens/socket to release the pawls.
2. Disconnect the step lamp connector, then remove step lamp.

Installation

Installation is in the reverse order of removal.

Bulb Replacement

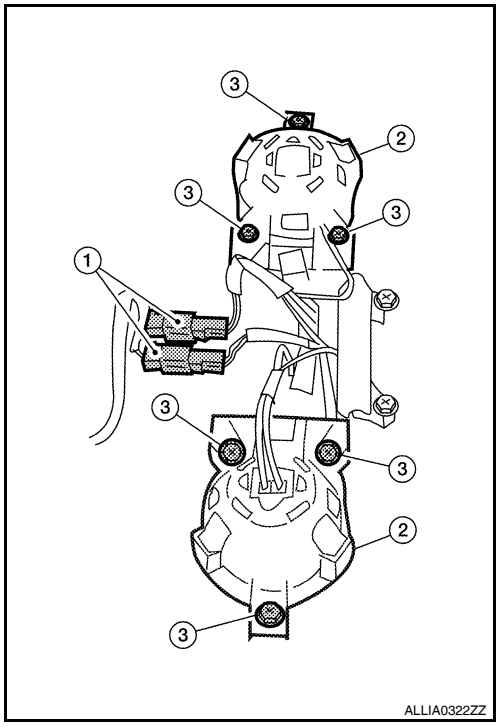
1. Remove the step lamp lens/socket.
2. Pull the bulb straight out to remove.

Step lamp bulb : 12V - 3.8W

PERSONAL LAMP

Removal

1. Remove overhead console. Refer to INT-17, "Removal and Installation".
2. Remove personal lamp screws (3).
3. Disconnect personal lamp electrical connectors (1), then remove personal lamps (2) from overhead console.



Installation

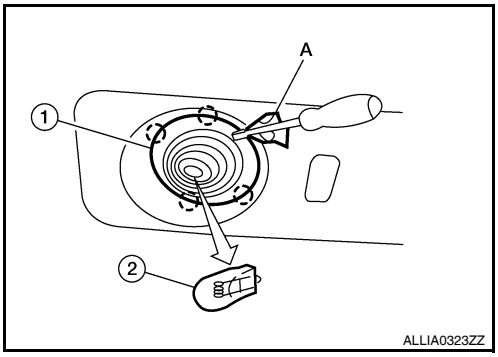
Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool (A), release the pawls and remove personal lamp lens (1).
   ◌ Pawl
2. Pull bulb (2) straight out to remove.

Personal lamp bulb : 12V - 6W

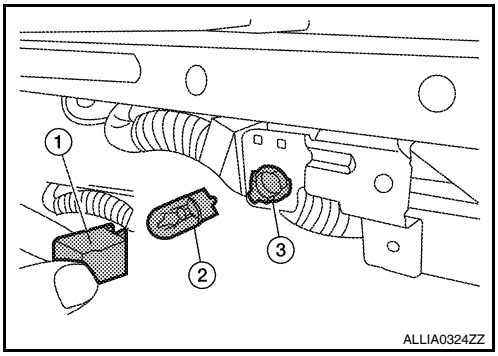
CAUTION:
Wrap a cloth around tool to protect the housing and lens.



FOOTWELL LAMP

Removal

1. Rotate footwell lamp socket (3) counterclockwise to remove from bracket.



Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Release the pawls and remove bulb shield (1) from bracket.
2. Pull bulb (2) straight out from footwell lamp socket (3) to remove.

Footwell lamp bulb : 12V - 3.4W

ILLUMINATION

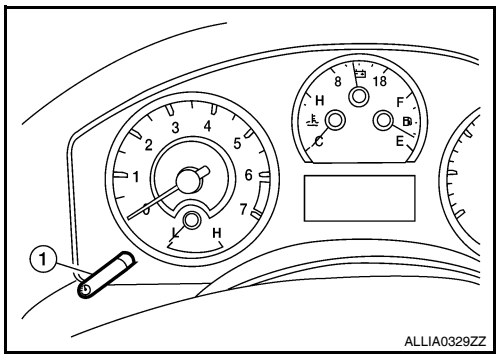
Removal and Installation

INFOID:0000000003776273

ILLUMINATION CONTROL SWITCH

Removal

The illumination control switch (1) is replaced as a part of the combination meter assembly. Refer to MWI-102, "Removal and Installation".



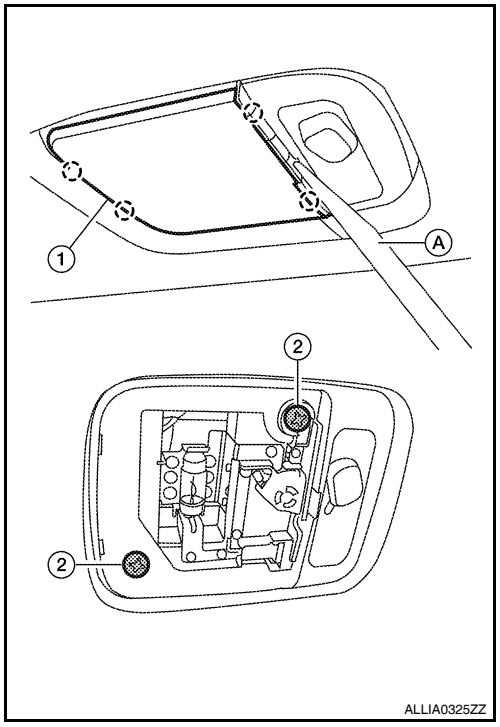
Installation

Installation is in the reverse order of removal.

CARGO LAMP

Removal

1. Using a suitable tool (A), release the pawls and remove the cargo lamp lens (1).
   Pawl
2. Remove cargo lamp screws (2).
3. Disconnect the connector, then remove cargo lamp.



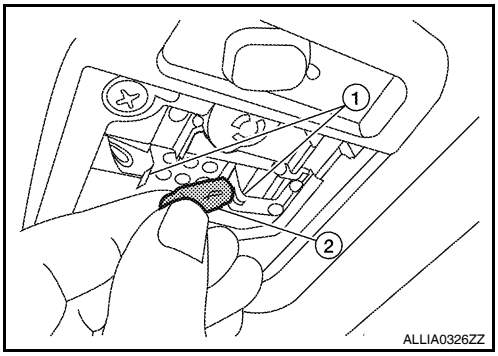
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool, release the pawls and remove the cargo lamp lens.
2. Release the cargo lamp bulb retainers (1), then pull bulb (2) straight out to remove.

Cargo lamp bulb : 12V - 8W



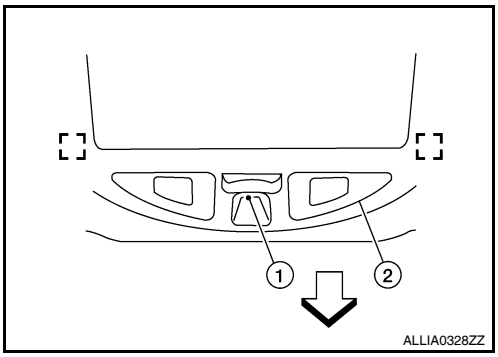
CONSOLE ILLUMINATION LAMP (if equipped)

Removal

The console illumination lamp (1) is replaced as part of the front roof console (2). Refer to INT-17, "Removal and Installation".

⇦: Vehicle front

⬚: metal clip

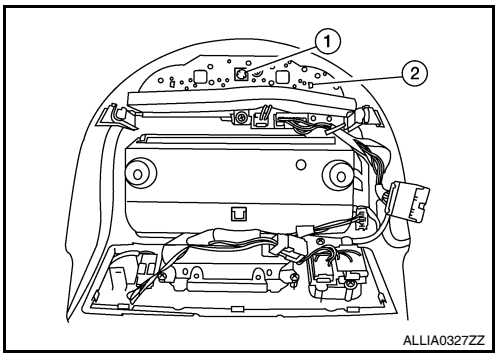


Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Remove front roof console. Refer to INT-17, "Removal and Installation".
2. Rotate console illumination lamp bulb (1) counterclockwise, then pull straight out away from map lamp assembly (2) to remove.



SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Interior Lamp/Illumination

INFOID:0000000003776274

Item	Wattage (W)*
Map Lamp	8
Vanity mirror lamp	1.32
Glove box lamp	3.4
Step lamp	3.8
Personal lamp	6
Footwell lamp	3.4
Cargo lamp	8
Console illumination lamp	-

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