SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

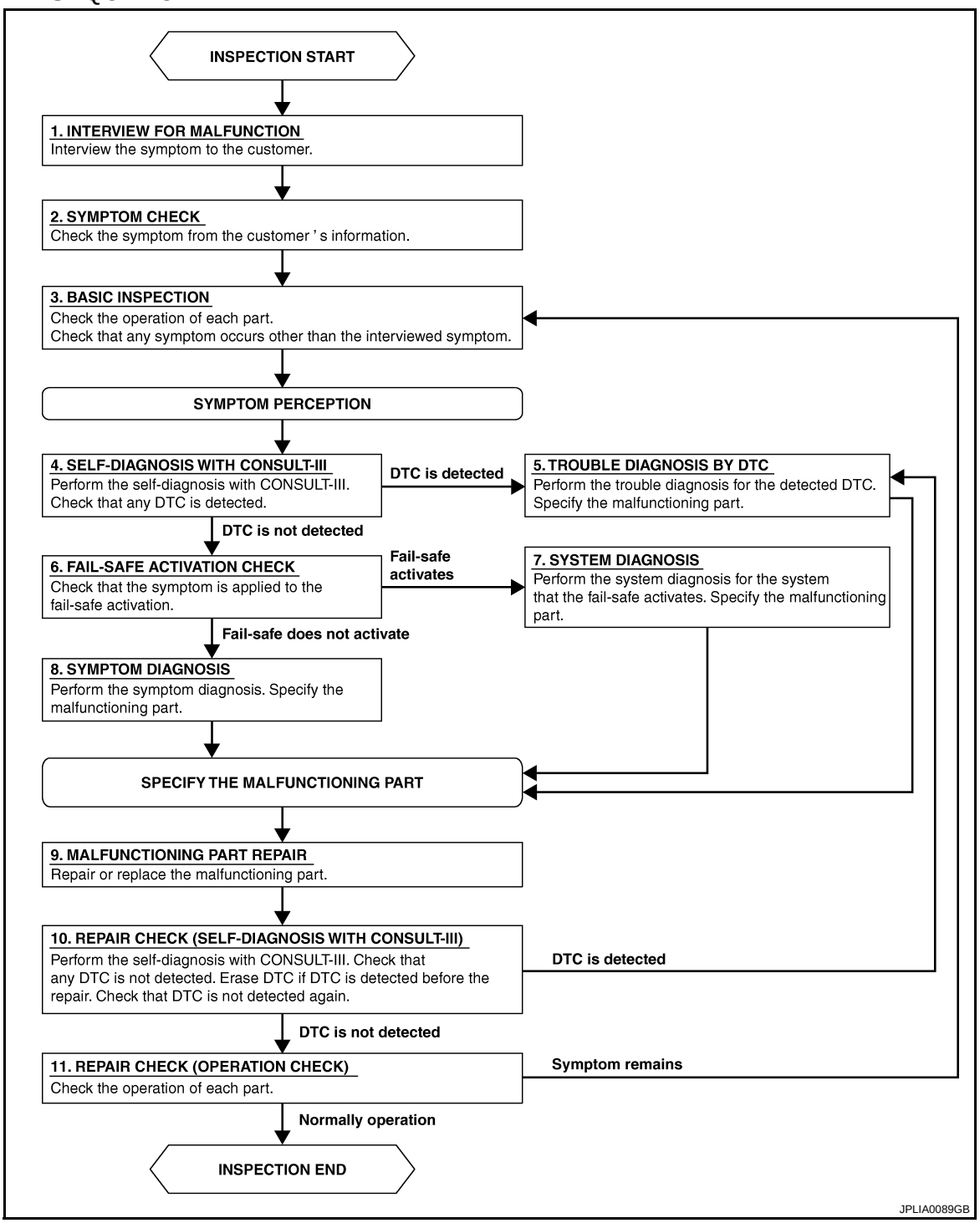
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000003071617

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 11

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

Perform the self diagnosis with CONSULT-III. Verfied 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?

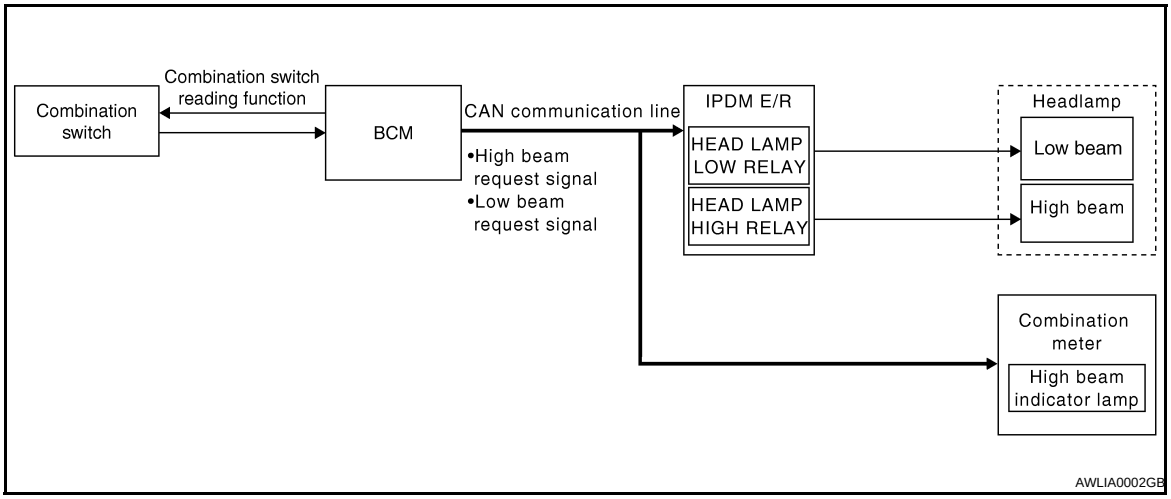
YES >> Inspection End.
NO >> GO TO 3

FUNCTION DIAGNOSIS

HEADLAMP (HALOGEN TYPE)

System Diagram

INFOID:0000000003071618



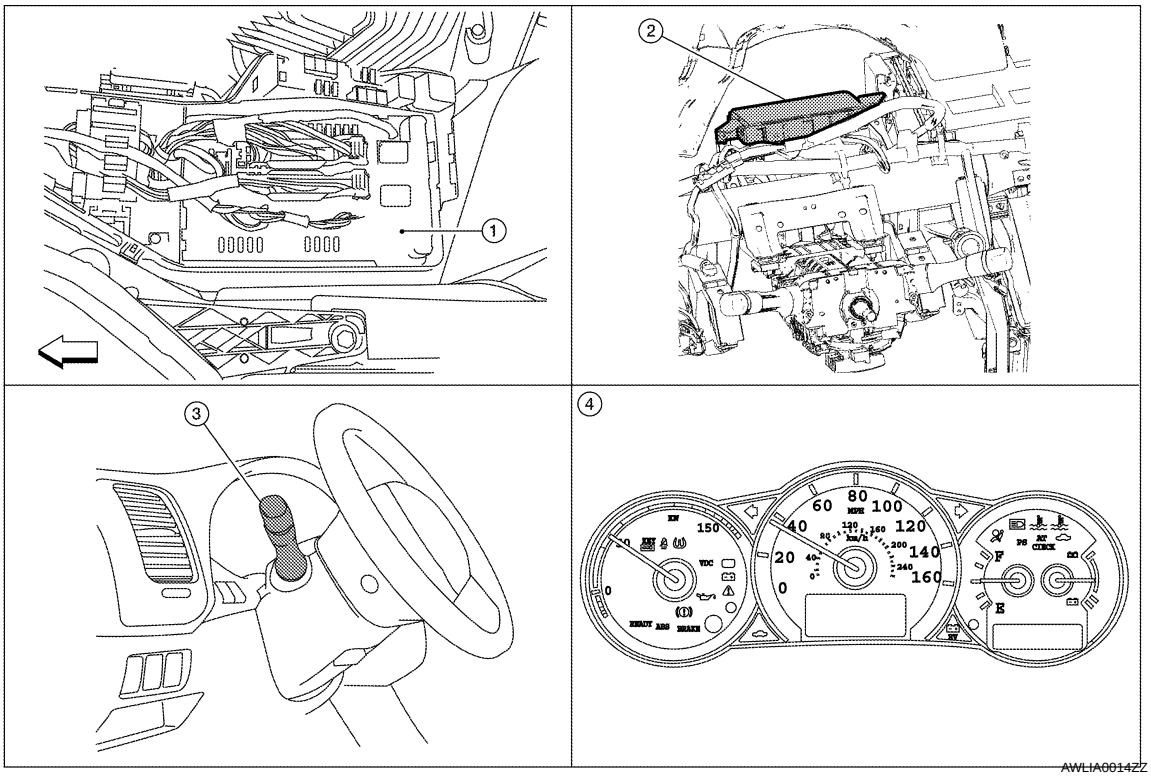
System Description

INFOID:0000000003071619

Control of the headlamp system operation is dependent upon the position of the lighting switch (combination switch). When the lighting switch is placed in the 2nd position, the BCM (body control module) receives input requesting the headlamps and park lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the headlamp high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

Component Parts Location

INFOID:0000000003071620



1. IPDM E/R E17, E18, E200
2. BCM M16, M17, M18, M19 (view with instrument panel removed)
3. Combination switch M28
4. Combination meter M24

Component Description

INFOID:0000000003071621

LOW BEAM OPERATION

When the lighting switch is in 2ND position, the BCM receives input requesting the headlamps to illuminate. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the headlamp low relay coil which supplies power to the low beam headlamps.

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the lighting switch in the 2ND position and placed in HIGH position, the BCM receives input requesting the headlamp high beams to illuminate. The flash to pass feature can be used any time and also sends a signal to the BCM. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the combination meter controls the ON/OFF status off the HIGH BEAM indicator. The CPU of the IPDM E/R controls the headlamp high relay coil which supplies power to the high beam headlamps.
The combination meter receives a high beam request signal (ON) through the CAN communication lines and turns the high beam indicator lamp ON.

COMBINATION SWITCH READING FUNCTION

Refer to BCS-8, "System Description".

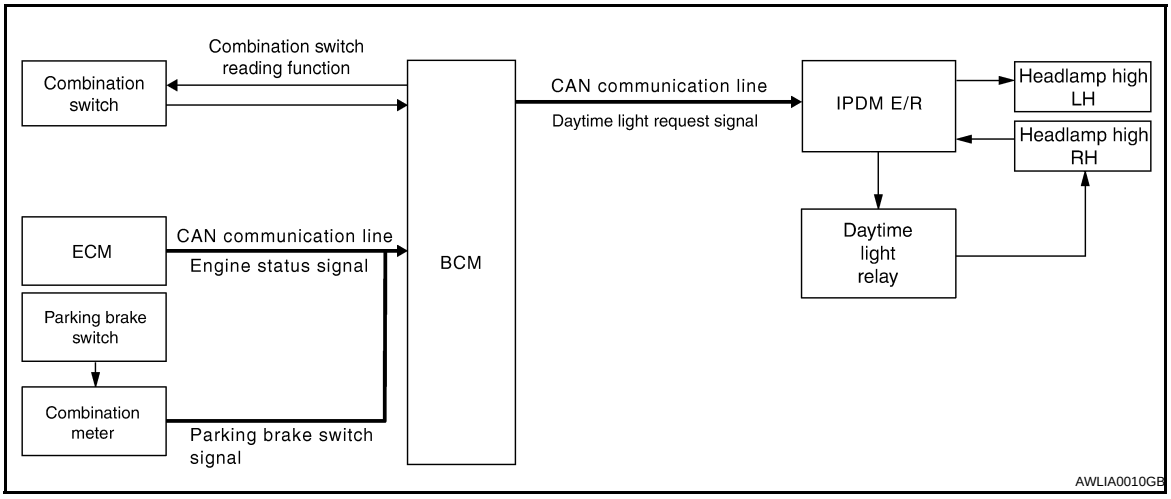
AUTO LIGHT OPERATION

Refer to EXL-12, "System Description".

DAYTIME RUNNING LIGHT SYSTEM

System Diagram

INFOID:0000000003071622



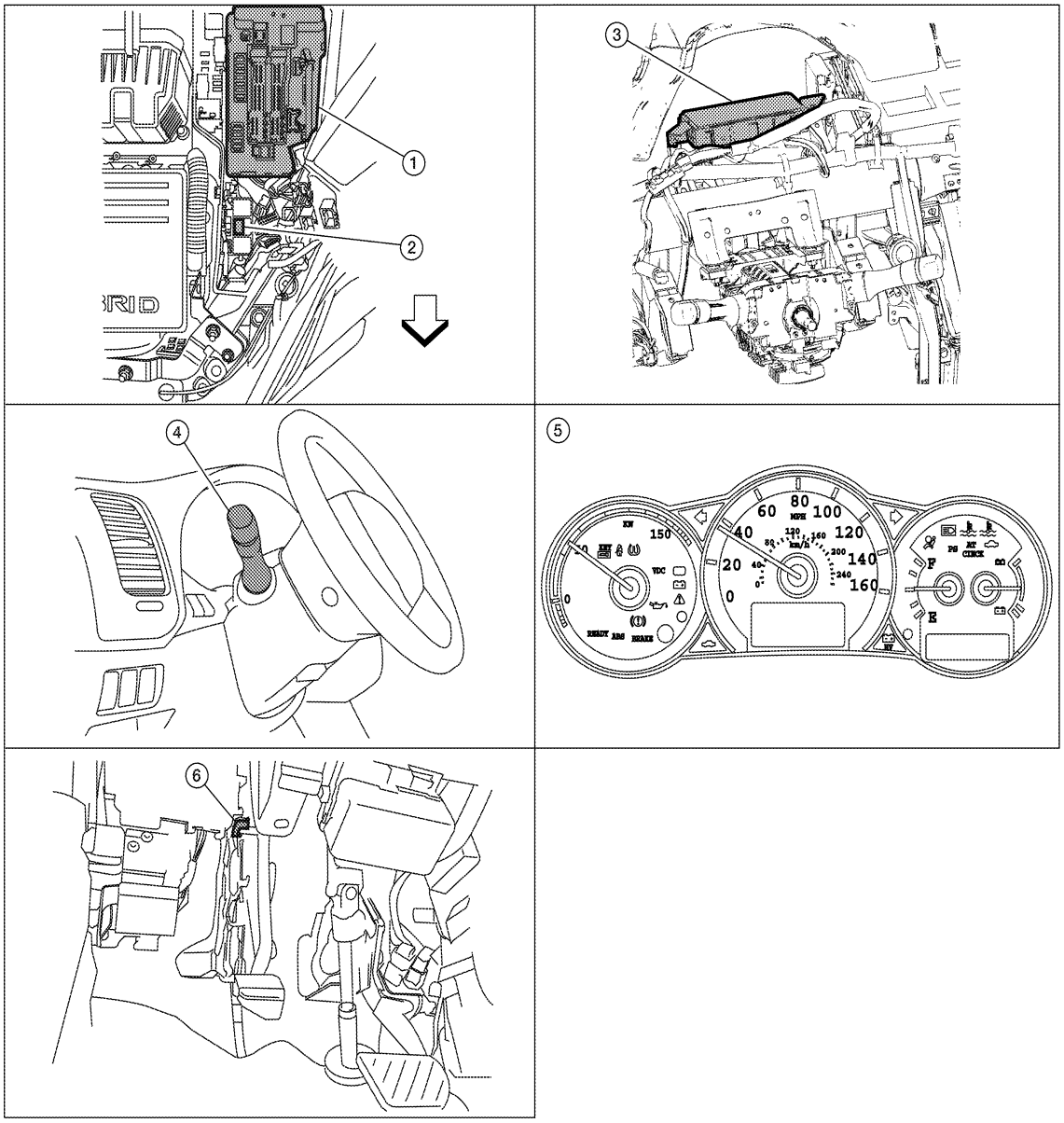
System Description

INFOID:0000000003071623

The headlamp system for Canada vehicles is equipped with a daytime light control unit that activates the high beam headlamps at approximately half illumination whenever the hybrid system is operating. If the parking brake is applied before the hybrid system is started the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is applied.

Component Parts Location

INFOID:0000000003071624



AWNIA0931ZZ

⇐Front

1. IPDM E/R E17, E18, E200
2. Daytime running light relay E228 (view with engine room in-line connectors disconnected and positioned aside)
3. Combination switch M28
4. Combination meter M24
5. BCM M16,M17, M18, M19 (view with instrument panel removed)
6. Parking brake switch M73

Component Description

INFOID:0000000003071625

After starting the hybrid system with the parking brake released and the lighting switch in the OFF or 1ST position, the headlamp high beam automatically turns on. With the lighting switch in the 2nd position or with autolamps ON, the headlamps function the same as conventional light systems.

OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay which in turn, provides power to the ground side of the RH high beam lamp. Power flows backward throught the RH high beam lamp to the IPDM E/R, through the high beam fuses, through the LH high beam lamp circuit to the LH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

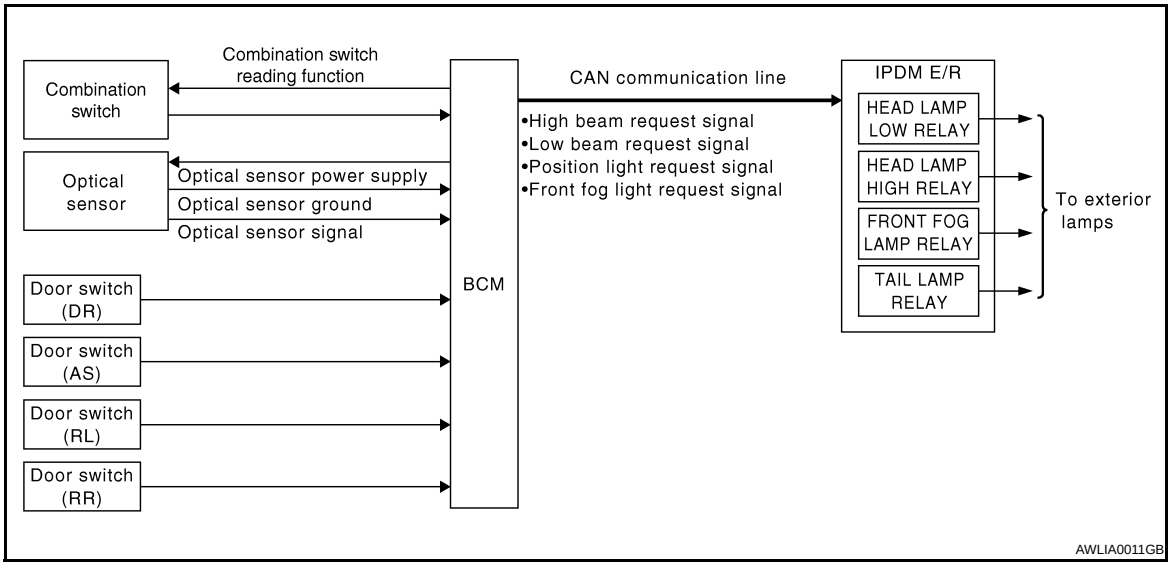
Engine		With engine stopped									With engine running								
Lighting switch		OFF			1ST			2ND			OFF			1ST			2ND		
		Hi	Lo	P	Hi	Lo	P	Hi	Lo	P	Hi	Lo	P	Hi	Lo	P	Hi	Lo	P
Headlamp	High beam	–	–	–	–	–	×	×	–	×	●*	●*	×	●*	●*	×	×	–	×
	Low beam	–	–	–	–	–	×	×	×	×	–	–	×	–	–	×	×	×	×
Tail lamp		–	–	–	×	×	×	×	×	×	–	–	–	×	×	×	×	×	×
License and instrument illumination lamp		–	–	–	×	×	×	×	×	×	–	–	–	×	×	×	×	×	×

- Hi: "HIGH BEAM" position
- Lo: "LOW BEAM" position
- P: "FLASH TO PASS" position
- ×: Lamp "ON"
- –: Lamp "OFF"
- ●: Lamp dims. (Added functions)
- *: When starting the engine with the parking brake released, the daytime lights will operate.
  When starting the engine with the parking brake pulled, the daytime lights will not operate.

AUTO LIGHT SYSTEM

System Diagram

INFOID:0000000003071626



System Description

INFOID:0000000003071627

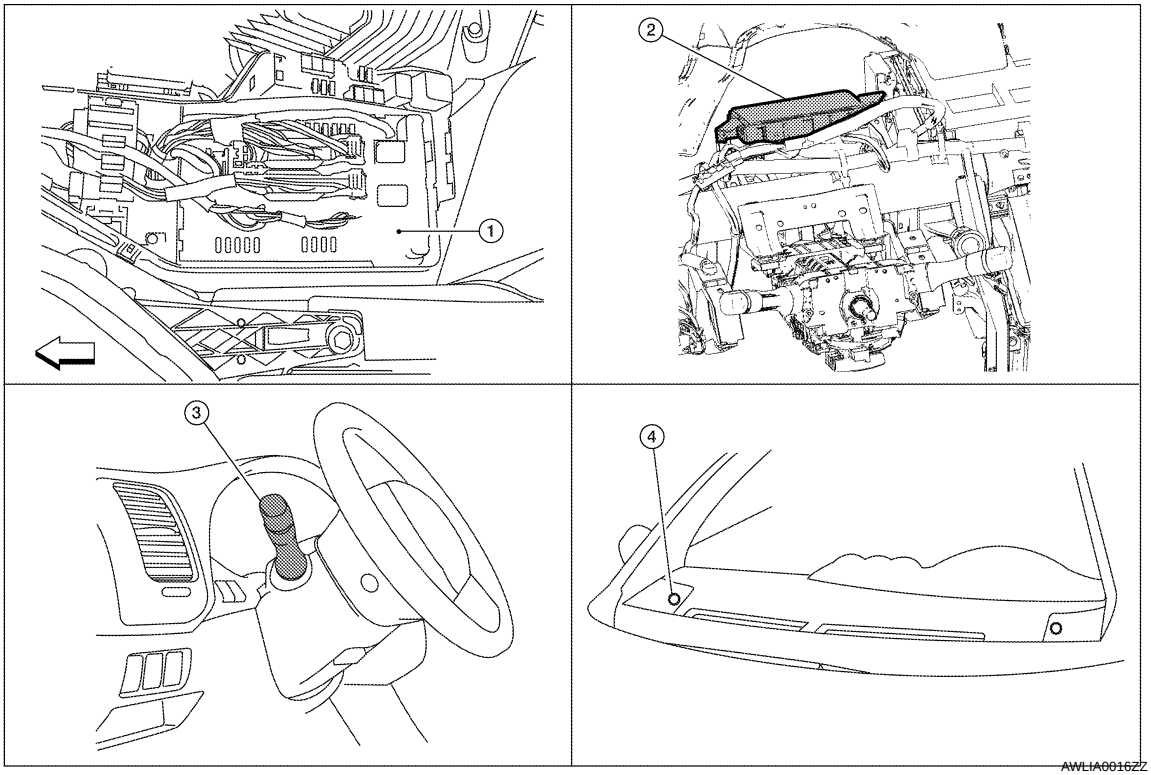
- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail, front fog lamps and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness of 800 to 2,500 lux. And optical sensor converts light (lux) to voltage, then sends the optical sensor signal to BCM.

OUTLINE

The auto light control system has an optical sensor that detects outside brightness.
When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, Refer to BCS-20, "HEADLAMP : CONSULT-III Function".

Component Parts Location

INFOID:0000000003071628



1. IPDM E/R E17, E18, E200
2. BCM M16, M17, M18, M19, M21 (view with instrument panel removed)
3. Combination switch M28
4. Optical sensor M66

Component Description

INFOID:0000000003071629

AUTO LIGHT OPERATION

Applicable lamps
- Low beam headlamp
- Parking, license plate and tail lamps
- High beam headlamp (with the lighting switch in HIGH BEAM position)
- Front fog lamp (with the lighting switch in front fog lamp ON position)

When the lighting switch is in AUTO position with the ignition switch in ON position, BCM detects the AUTO LIGHT (ON) by BCM combination switch reading function. BCM turns automatically ON/OFF the applicable lamps according to ambient brightness depending on the following condition.
- It turns ON applicable lamps in 3 seconds when ambient brightness is less than 1250 lux.
- The lighted lamps are turned OFF in 5 seconds when ambient brightness becomes 2500 lux or higher.

Releasing Function:
- Turn ignition switch to the OFF position, or
- Change lighting switch to the OFF, 1ST, 2ND position.

NOTE:
Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT-III. Refer to BCS-20, "HEADLAMP : CONSULT-III Function".

COMBINATION SWITCH READING FUNCTION

Refer to BCS-8, "System Description".

HEADLAMP LOW AND HIGH OPERATION

Refer to EXL-7, "System Description".

FRONT FOG LAMP OPERATION

Refer to EXL-15, "System Description".

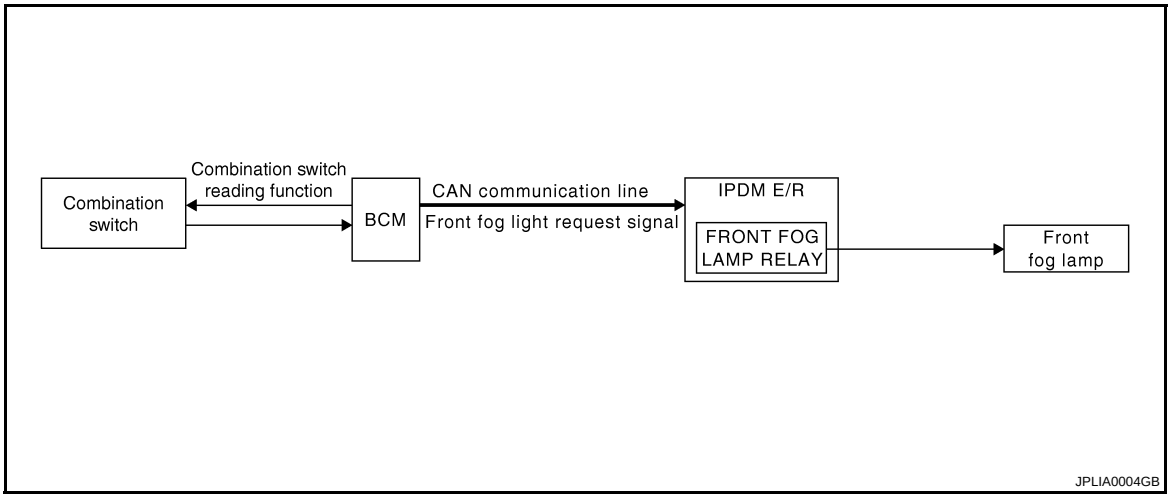
PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

Refer to EXL-19, "System Description".

FRONT FOG LAMP

System Diagram

INFOID:0000000003071630



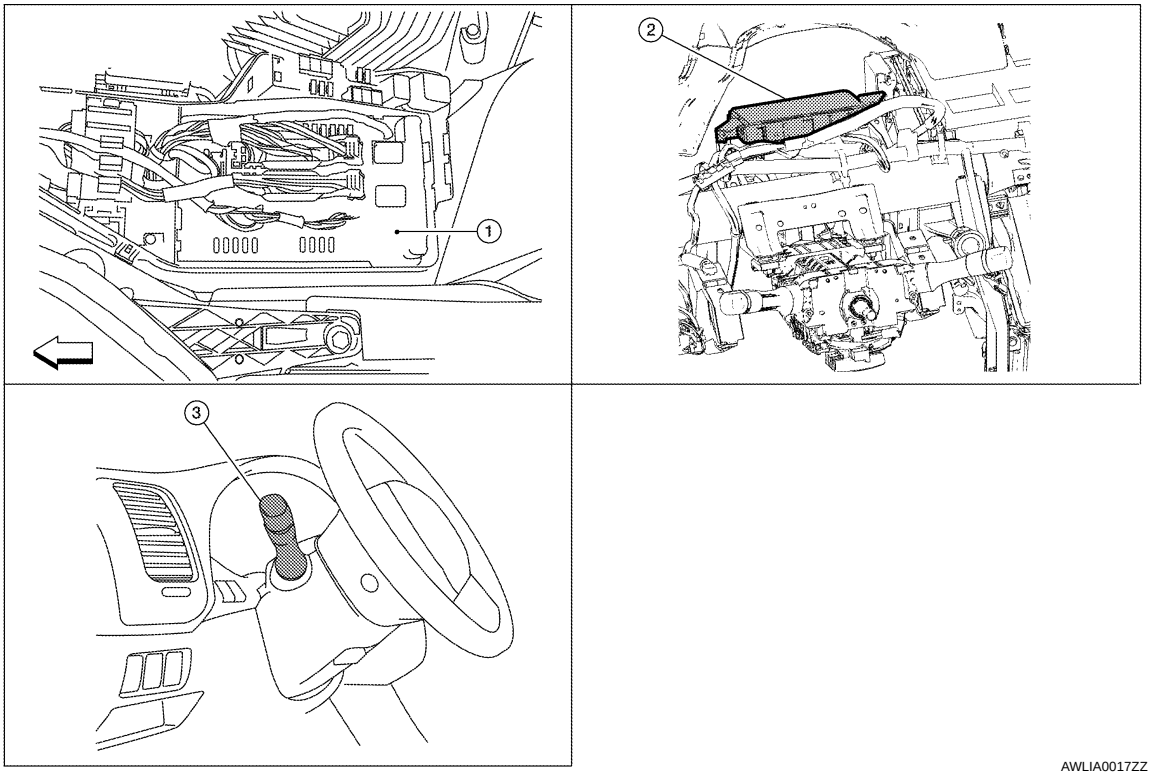
System Description

INFOID:0000000003071631

- BCM (Body Control Module) controls front fog lamp operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates front fog lamp according to CAN communication signals from BCM.
- Combination meter operates front fog lamp indicator according to inputs via the CAN communication lines.

Component Parts Location

INFOID:0000000003071632



1. IPDM E/R E17, E18, E200
2. BCM M16, M17, M18, M19 (view with instrument panel removed)
3. Combination switch M28

Component Description

INFOID:0000000003071633

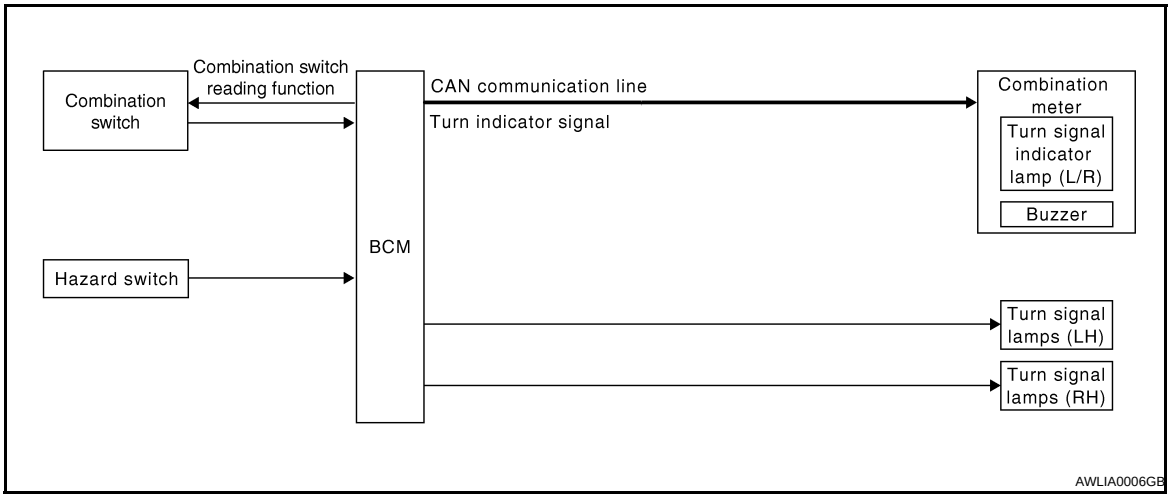
FRONT FOG LAMP OPERATION

When the lighting switch is in front fog lamp ON position and also in 1ST or 2ND position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal through the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.
The combination meter also receives a front fog lamp request ON signal through the CAN communication lines at which time it turns the front fog indicator ON.

TURN SIGNAL AND HAZARD WARNING LAMPS

System Diagram

INFOID:0000000003071634



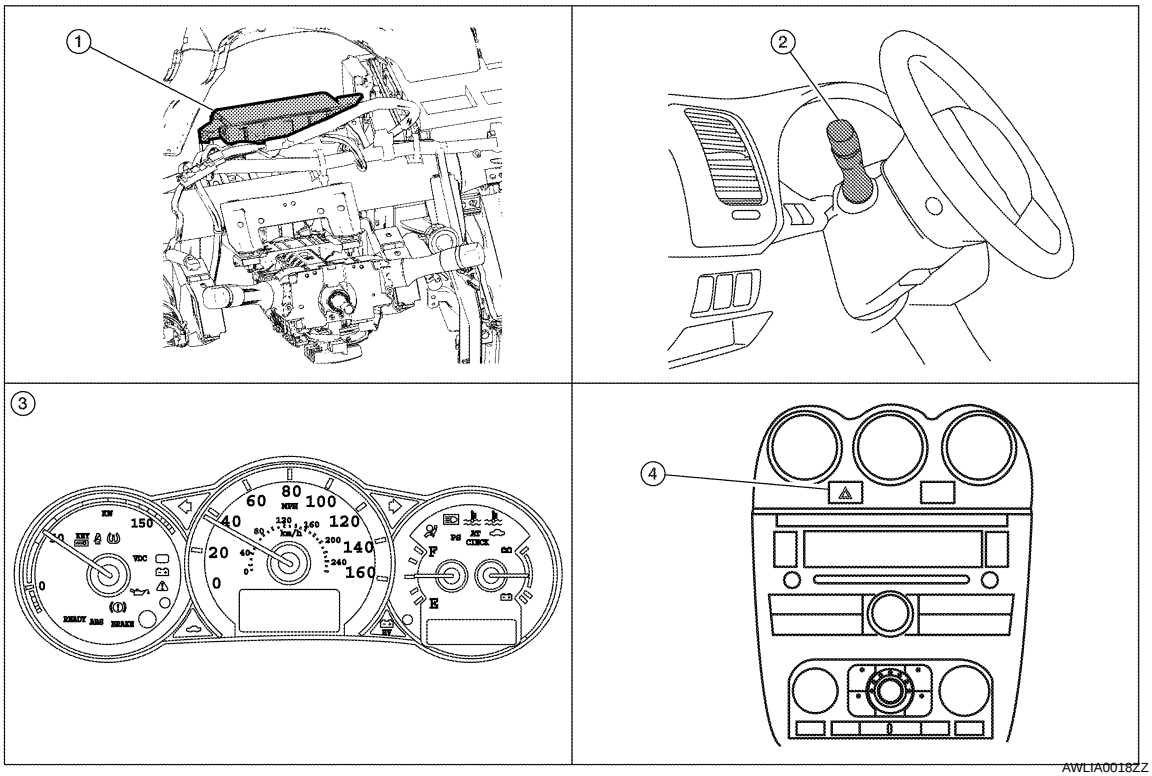
System Description

INFOID:0000000003071635

- BCM (Body Control Module) controls turn signal lamp (RH and LH) and hazard warning lamp operation.
- Combination meter operates turn (RH and LH) indicator according to CAN communication signals from BCM.

Component Parts Location

INFOID:0000000003071636



1. BCM M17, M18, M19, M21 (view with instrument panel removed)
2. Combination switch M25
3. Combination meter M24
4. Hazard switch

Component Description

INFOID:0000000003071637

TURN SIGNAL OPERATION

When the turn signal switch is in LH or RH position with the ignition switch in ON position, the BCM detects the TURN RH or TURN LH ON request. The BCM outputs the flasher output signal to the respective turn signal lamp. The BCM sends a turn indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

HAZARD LAMP OPERATION

When the hazard switch is in ON position, the BCM detects the hazard switch signal ON. The BCM outputs the flasher output signal (right and left). The BCM sends a hazard indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

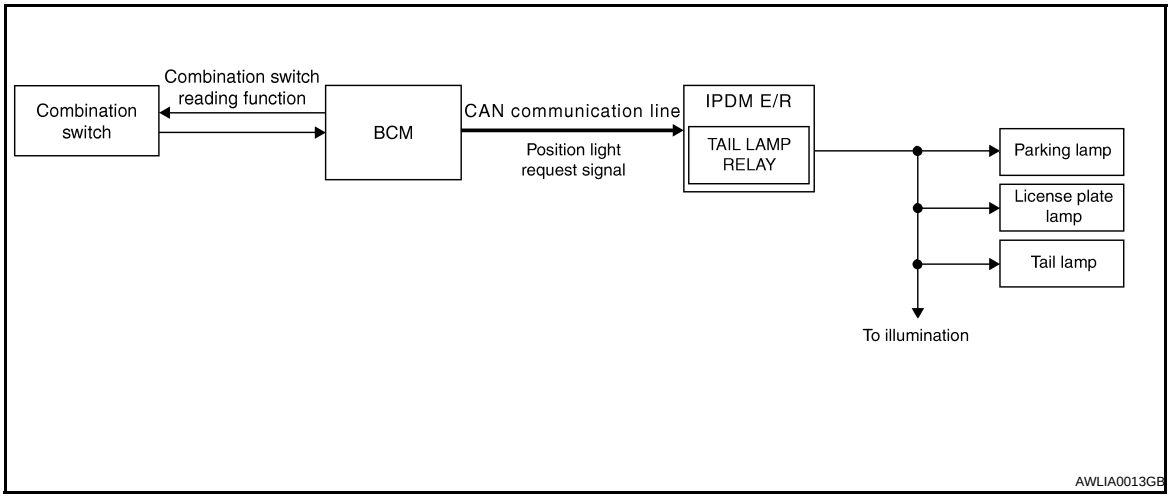
REMOTE KEYLSESS ENTRY OPERATION

The remote keyless entry receiver transmits Inteligent Key signal to BCM, then BCM controls hazard lamps. Refer to BCS-6, "System Description".

PARKING, LICENSE PLATE AND TAIL LAMPS

System Diagram

INFOID:0000000003071638



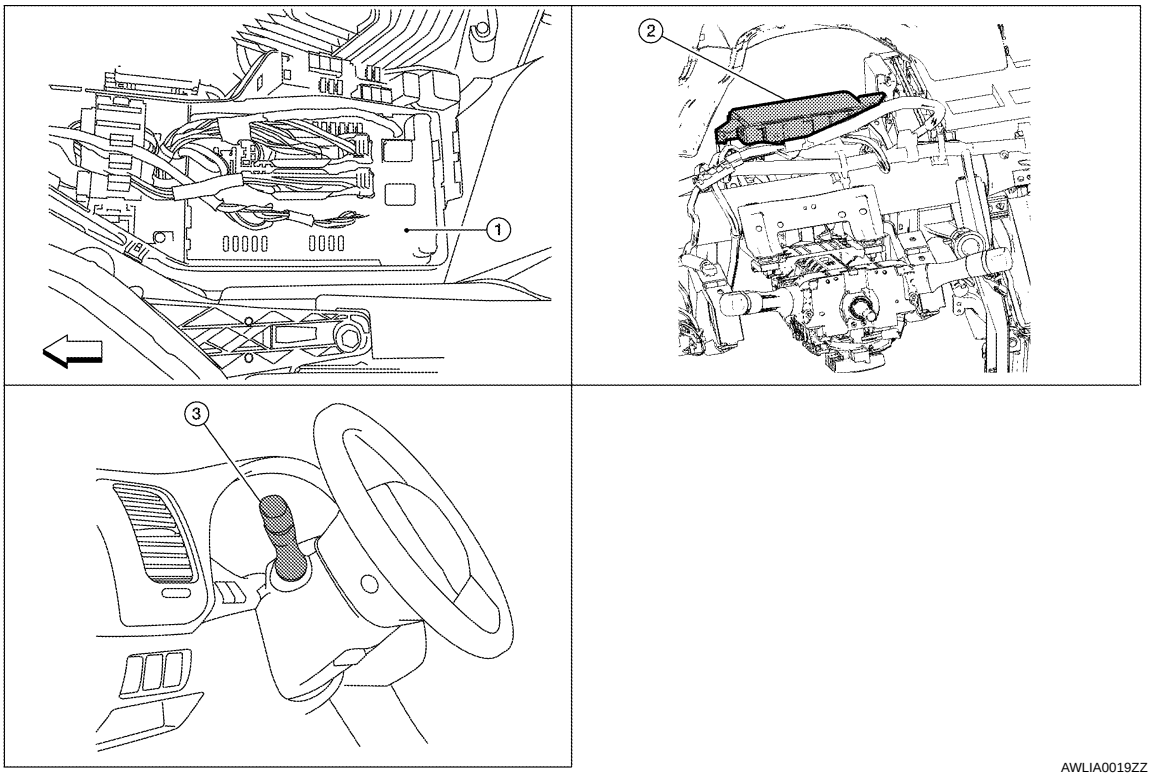
System Description

INFOID:0000000003071639

- BCM (Body Control Module) controls parking, license plate and tail lamps operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate and tail lamps according to CAN communication signals from BCM.

Component Parts Location

INFOID:0000000003071640



1. IPDM E/R E17, E18, E201
2. BCM M16, M17, M18, M19 (view with instrument panel removed)
3. Combination switch M28

Component Description

INFOID:0000000003071641

PARKING, LICENCE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1ST position, BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request through the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

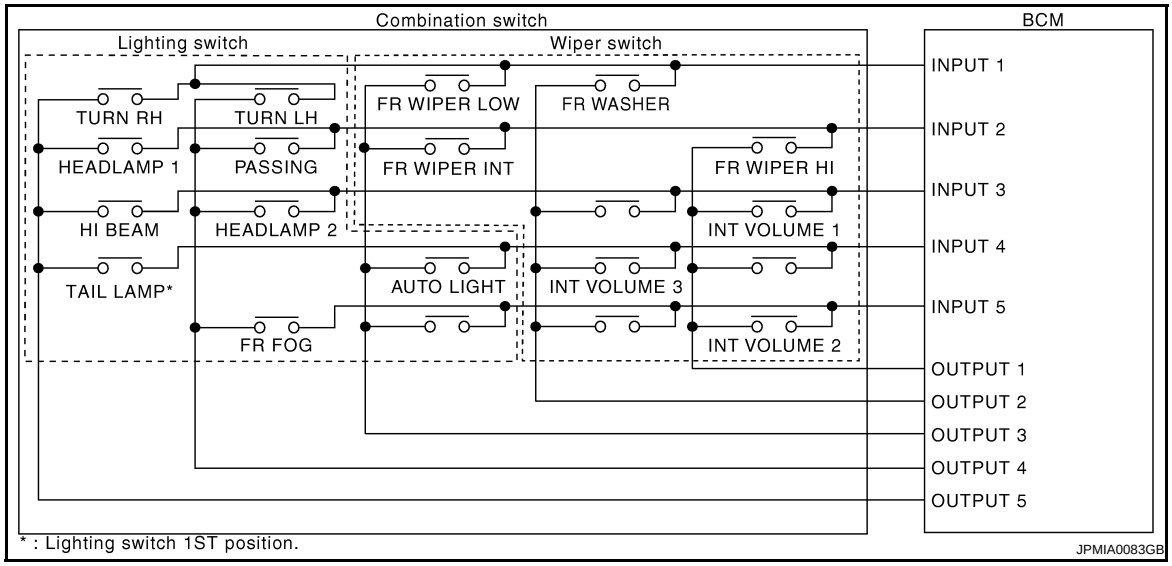
EXTERIOR LAMP BATTERY SAVER CONTROL

With the lighting switch (combination switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.
Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.
This setting can be changed by CONSULT-III. Refer to EXL-26, "EXTERNAL LAMP : CONSULT-III Function".

COMBINATION SWITCH

System Diagram

INFOID:0000000003302393



System Description

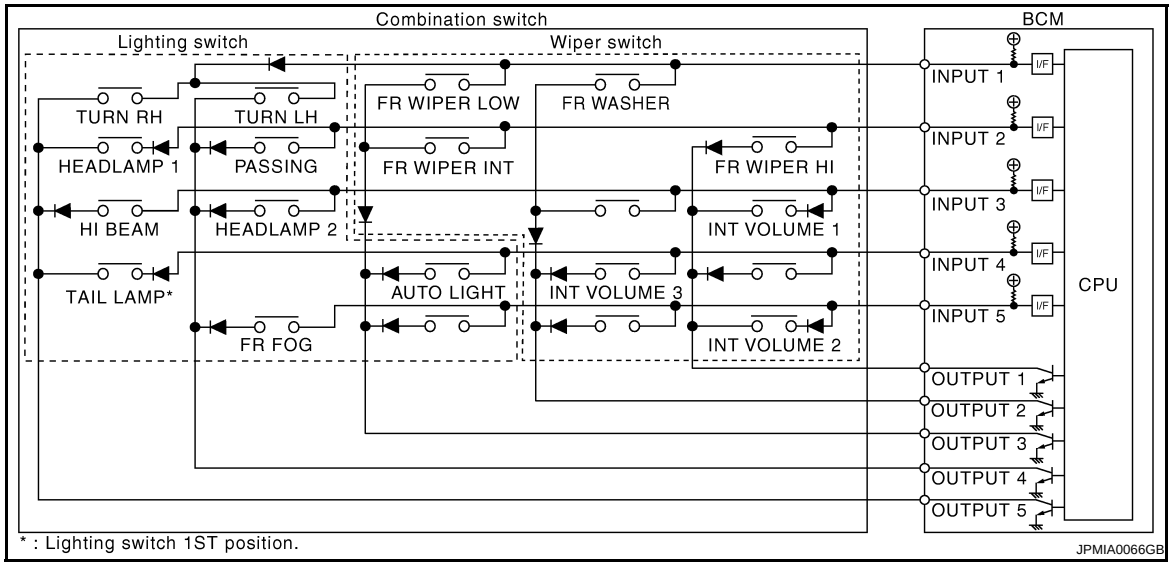
INFOID:0000000003302394

OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM is a combination of 5 output terminals (OUTPUT 1 - 5) and 5 input terminals (INPUT 1 - 5). It reads a maximum of 20 switch status.

COMBINATION SWITCH MATRIX

Combination switch circuit



Combination switch INPUT-OUTPUT system list

System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 1	—	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
INPUT 2	FR WIPER HI	—	FR WIPER INT	PASSING	HEADLAMP 1
INPUT 3	INT VOLUME 1	—	—	HEADLAMP 2	HI BEAM

System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 4	—	INT VOLUME 3	AUTO LIGHT	—	TAIL LAMP
INPUT 5	INT VOLUME 2	—	—	FR FOG	—

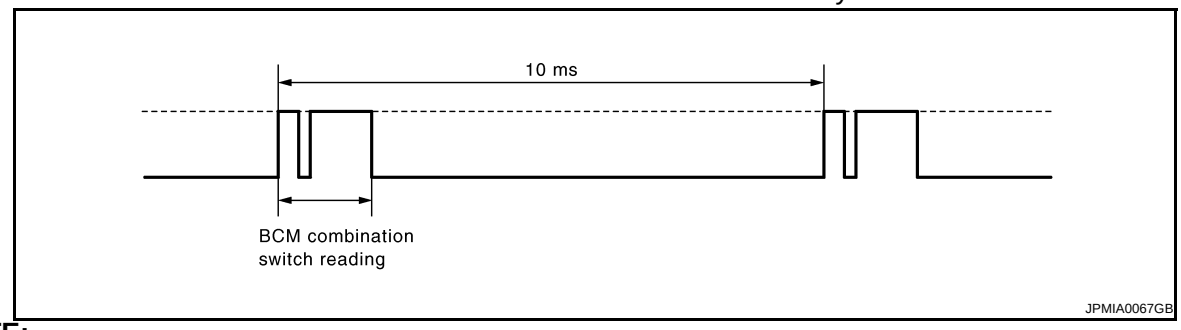
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description

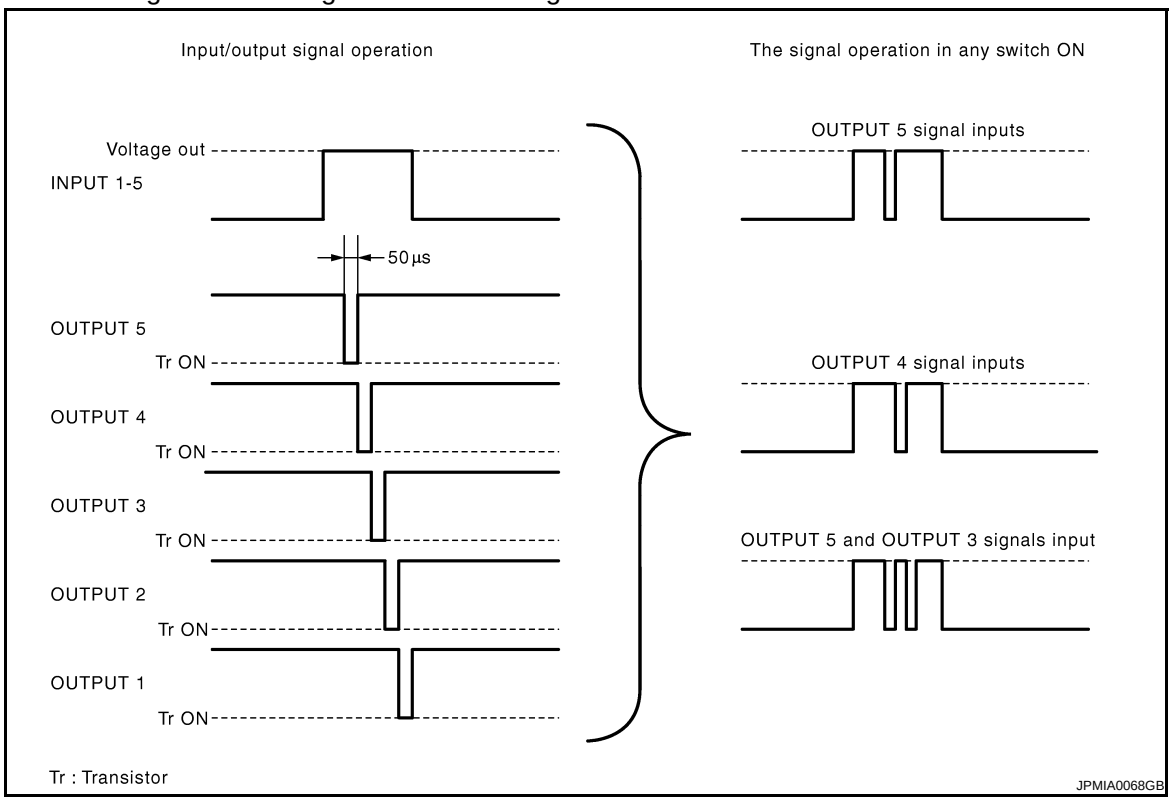
- BCM reads the status of the combination switch at 10ms interval normally.



NOTE:

BCM reads the status of the combination switch at 60ms interval when BCM is controlled at low power consumption mode.

- BCM operates as follows and judges the status of the combination switch.
- INPUT 1 - 5 outputs the voltage waveforms of 5 systems simultaneously.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 5→4→3→2→1.
- The voltage waveform of INPUT corresponding to the formed circuit changes according to the operation of the transistor on OUTPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.

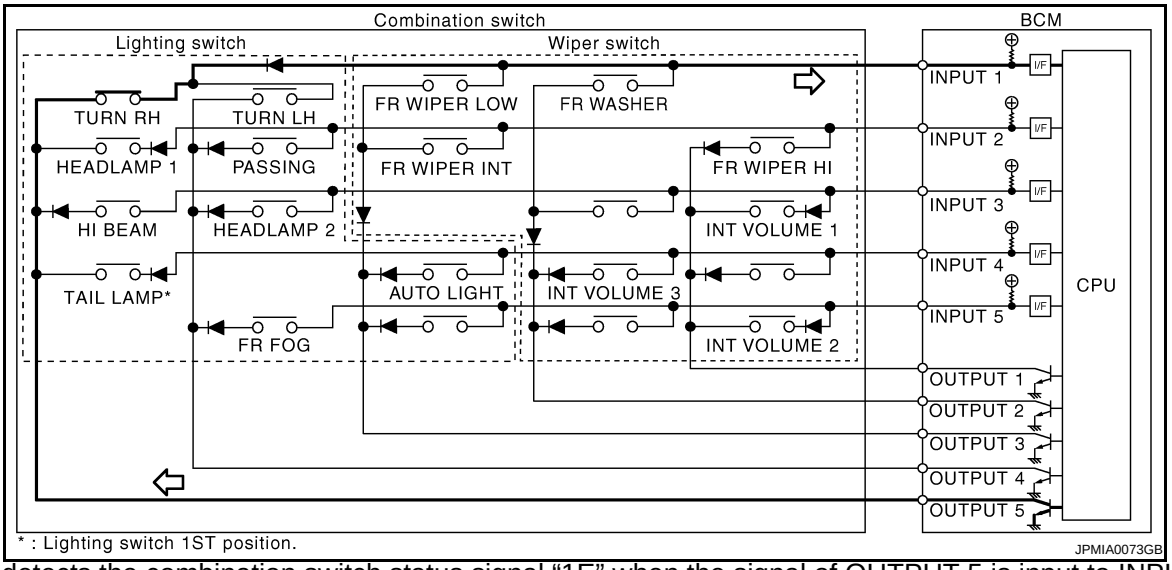


Operation Example

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to “1 - 5” and OUTPUT 1 - 5 to “A - E”.

Example 1: When a switch (TURN RH switch) is turned ON

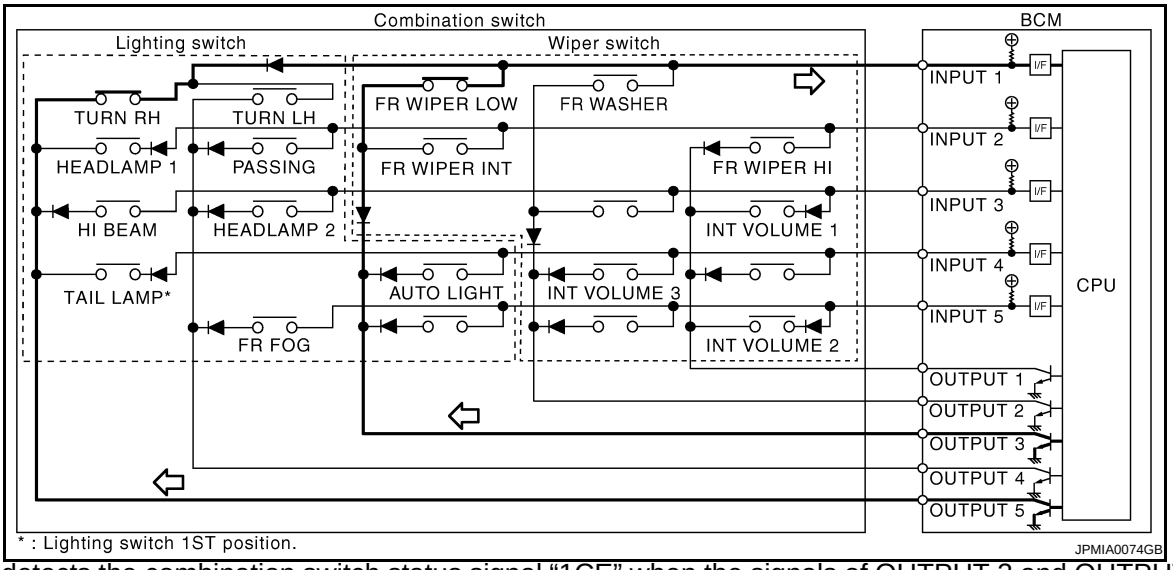
- The circuit between INPUT 1 and OUTPUT 5 is formed when the TURN RH switch is turned ON.



- BCM detects the combination switch status signal “1E” when the signal of OUTPUT 5 is input to INPUT 1.
- BCM judges that the TURN RH switch is ON when the signal “1E” is detected.

Example 2: When some switches (TURN RH switch, FR WIPER LOW switch) are turned ON

- The circuits between INPUT 1 and OUTPUT 5 and between INPUT 1 and OUTPUT 3 are formed when the TURN RH switch and FR WIPER LOW switch are turned ON.



- BCM detects the combination switch status signal “1CE” when the signals of OUTPUT 3 and OUTPUT 5 are input to INPUT 1.
- BCM judges that the TURN RH switch and FR WIPER LOW switch are ON when the signal “1CE” is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION)

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

Wiper intermittent dial position	Intermittent operation delay interval	INT VOLUME switch ON/OFF status		
		INT VOLUME 1 switch	INT VOLUME 2 switch	INT VOLUME 3 switch
1	Short ↑ ↓ Long	ON	ON	ON
2		ON	ON	OFF
3		ON	OFF	OFF
4		OFF	OFF	OFF
5		OFF	OFF	ON
6		OFF	ON	ON
7		OFF	ON	OFF

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : Diagnosis Description

INFOID:0000000003071643

BCM CONSULT-III FUNCTION
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.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

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

COMMON ITEM : CONSULT-III Function

INFOID:0000000003071644

ECU IDENTIFICATION
Displays the BCM part No.

SELF-DIAG RESULT
Refer to BCS-81, "DTC Index".

EXTERNAL LAMP

EXTERNAL LAMP : CONSULT-III Function

INFOID:0000000003071645

WORK SUPPORT

Service item	Setting item	Setting	
BATTERY SAVER SET	ON[1]	With the exterior lamp battery saver function	
	OFF	Without the exterior lamp battery saver function	
ILL DELAY SET[2]	MODE 1[1]	45 sec.	Sets delay timer function timer operation time (All doors closed)
	MODE 2	Without the function	
	MODE 3	30 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	
CUSTOM A/LIGHT SETTING[2]	MODE 1[1]	Normal	
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)	
	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)	
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)	

1 : Initial setting

*2 : With auto light system

DATA MONITOR

Monitor item [Unit]	Description
PUSH SW [ON/OFF]	The switch status input from push-button ignition switch
ENGINE STATE [STOP/STALL/CRANK/RUN]	The engine status received from ECM with CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter with CAN communication
KEY SW-SLOT [ON/OFF]	Key switch status input from key slot

Monitor item [Unit]	Description
TURN SIGNAL R [ON/OFF]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
TAIL LAMP SW [ON/OFF]	
HI BEAM SW [ON/OFF]	
HEAD LAMP SW1 [ON/OFF]	
HEAD LAMP SW2 [ON/OFF]	
PASSING SW [ON/OFF]	
AUTO LIGHT SW [ON/OFF]	
FR FOG SW [ON/OFF]	
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
DOOR SW-BK[1] [ON/OFF]	—
OPTICAL (LIGHT) SENSOR [V][2]	The value of exterior brightness voltage input from the optical sensor

*1: The item is indicated, not monitored

*2: With auto light system

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	ON	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	OFF	Stops the tail lamp request signal transmission.
HEAD LAMP	HI	Transmits the high beam request signal with CAN communication to turn the headlamp (HI)
	LO	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	OFF	Stops the high & low beam request signal transmission.
FR FOG LAMP	ON	Transmits the front fog lamp light request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	OFF	Stops the front fog lamp request signal transmission.
DAYTIME RUNNING LIGHT[1]	ON	Transmits the daytime running light system request signal to IPDM E/R
	OFF	Stops the daytime running light request signal transmission

Test item	Operation	Description
CORNERING LAMP[2]	RH	—
	LH	
	OFF	
ILL DIM SIGNAL[2]	ON	—
	OFF	
RR FOG LAMP[2]	ON	—
	OFF	

1: With daytime running light system.

2: The item is indicated, not monitored.

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:0000000003071646

WORK SUPPORT

Service item	Setting item	Setting	
HAZARD ANSWER BACK	LOCK ONLY*	With locking only	Sets the hazard warning lamp answer back function when the door is lock/unlock with the request switch or the keyfob.
	UNLK ONLY	With unlocking only	
	LOCK/UNLK	With locking/unlocking	
	OFF	Without the function	

*: Initial setting

DATA MONITOR

Monitor item [Unit]	Description
TURN SIGNAL R [ON/OFF]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
HAZARD SW [ON/OFF]	The switch status input from the hazard warning switch
RKE LOCK [ON/OFF]	The lock signal status received from the keyless receiver
RKE UNLOCK [ON/OFF]	The unock signal status received from the keyless receiver
RKE PANIC [ON/OFF]	The panic alarm signal status received from the keyless receiver

ACTIVE TEST

Test item	Operation	Description
FLASHER	RH	Blinks right turn signal lamp.
	LH	Blinks left turn signal lamp.
	OFF	Turns turn signal lamps (right and left) OFF.

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT - III Function (IPDM E/R)

INFOID:0000000003071647

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with IPDM E/R.

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIGNALS	Description
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
DTRL REQ [Off]		**NOTE:** The item is indicated, but not monitored.

ACTIVE TEST

Test item

Test item	Operation	Description
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	Operates the front fog lamp relay.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000003302411

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

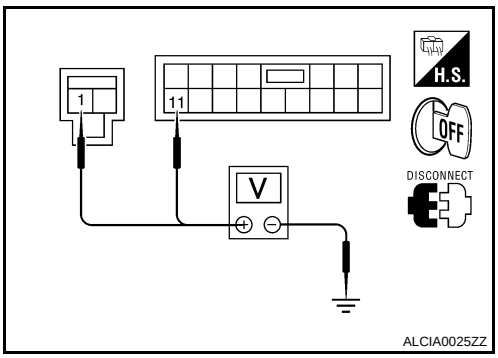
Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	J
11		10

Is the fuse or fusible link 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.



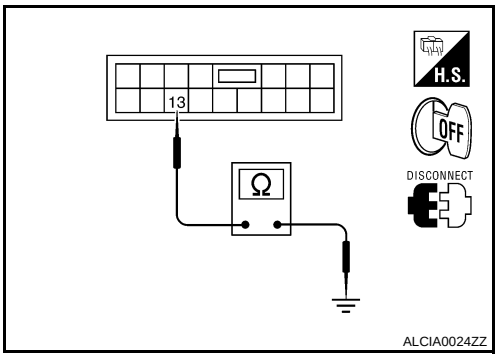
Terminals			Voltage (Approx.)
(+)		(–)	
BCM		Ground	
Connector	Terminal		
M16	1		Battery voltage
M17	11		

Is the measurement 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		
M17	13		Yes

Does continuity exist?

YES >> Inspection End.
NO >> Repair or replace harness.

BCM (BODY CONTROL MODULE) : Special Repair Requirement

INFOID:0000000003302412

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to CONSULT-III operation manual.

>> Work end.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:0000000003302413

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

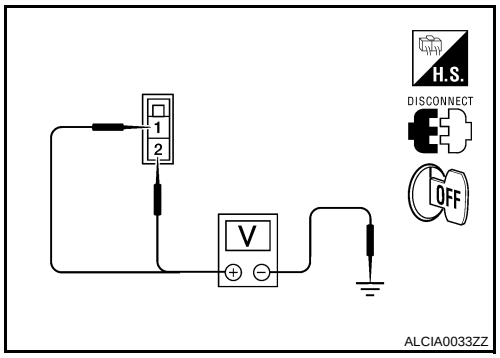
Terminal No.	Signal name	Fuses and fusible link No.
1, 2	Battery power supply	B, E, F
—		42
		43

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 IPDM E/R.
3. Check voltage between IPDM E/R harness connector and ground.



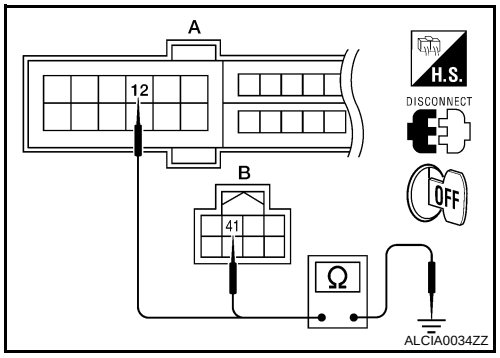
Terminals			Voltage (V) (Approx.)
(+)		(–)	
IPDM E/R			
Connector	Terminal	Ground	
E16	1		Battery voltage
	2		

Is the measurement value normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between IPDM E/R harness connectors and ground.



IPDM E/R		Ground	Continuity
Connector	Terminal		
E18 (A)	12		Yes
E17 (B)	41		

Does continuity exist?

YES >> Inspection End.
NO >> Repair or replace harness.

HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000003071652

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 48 and 49, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

Component Function Check

INFOID:0000000003071653

1.CHECK HEADLAMP (HI) OPERATION

WITHOUT CONTULT-III

1. Start IPDM E/R auto active test. Refer to PCS-10, "Diagnosis Description".
2. Check that the headlamp switches to the high beam.

NOTE:

HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT-III

1. Select "EXTERNAL LAMP" of IPDM E/R active test item.
2. With operating the test items, check that the headlamp switches to the high beam.

HI : Headlamp switches to the high beam.

OFF : Headlamp OFF

Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-32, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003071654

1.CHECK HEADLAMP (HI) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

Unit	Location	Fuse	Capacity
Headlamp HI (LH)	IPDM E/R	48	10A
Headlamp HI (RH)	IPDM E/R	49	10A

Is the fuse open?

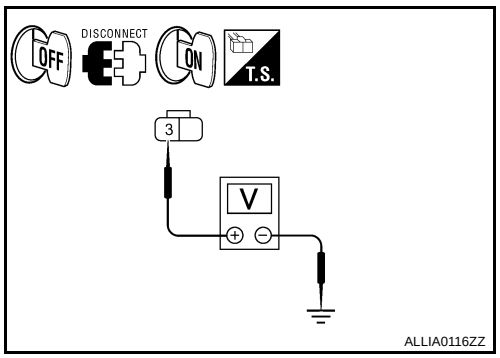
YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

CONSULT-III ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMP" of IPDM E/R active test item.

5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.



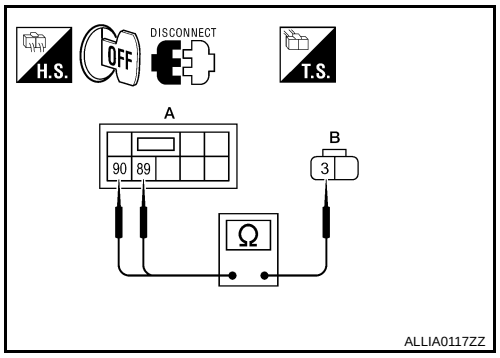
Terminals			Condition	Voltage
(+)		(–)		
Combination lamp		Ground	External lamp	
Connector	Terminal			
RH	E222	3	HI	Battery voltage
LH	E213	3	OFF	0V

Is the measurement value normal?

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

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector.



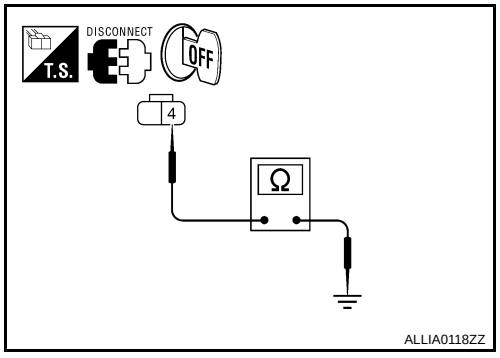
A			B		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	89	E222	3	Yes
LH		90	E213	3	

Does continuity exist?

YES >> GO TO 4
NO >> Repair the harnesses or connectors.

4.CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

1. Disconnect the front combination lamp connector.
2. Check continuity between the front combination lamp harness connector terminal and ground.



Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E222	4		Yes
LH	E213	4		

Does continuity exist?

YES >> Inspect the headlamp bulb.
NO >> Repair the harness.

HEADLAMP (LO) CIRCUIT

Description

INFOID:0000000003071655

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 51 and 52, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

Component Function Check

INFOID:0000000003071656

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT-III
1. Start IPDM E/R auto active test. Refer to PCS-10, "Diagnosis Description".
2. Check that the headlamp is turned ON.
   NOTE:
   HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT-III
1. Select "EXTERNAL LAMP" of IPDM E/R active test item.
2. With operating the test items, check that the headlamp is turned ON.

LO : Headlamp ON
OFF : Headlamp OFF

Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-34, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003071657

1.CHECK HEADLAMP (LO) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

Unit	Location	Fuse	Capacity
Headlamp LO (LH)	IPDM E/R	51	15A
Headlamp LO (RH)	IPDM E/R	52	15A

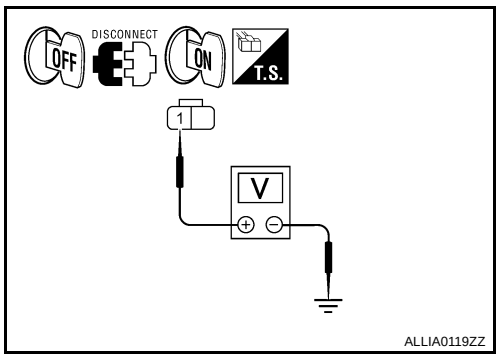
Is the fuse open?

YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

CONSULT-III
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMP" of IPDM E/R active test item.

5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.



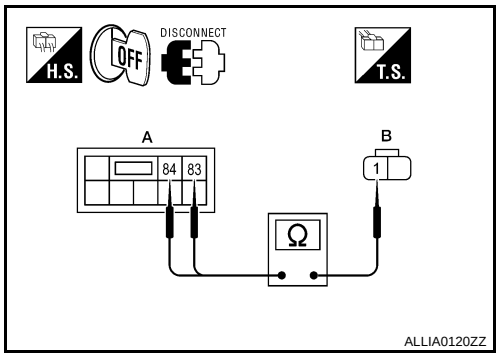
Terminals				Condition	Voltage
(+)			(–)		
Combination lamp			Ground	External lamp	
Connector		Terminal			
RH	E223	1		LO	Battery voltage
LH	E212	1		OFF	0V

Is the measurement value normal?

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

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector.



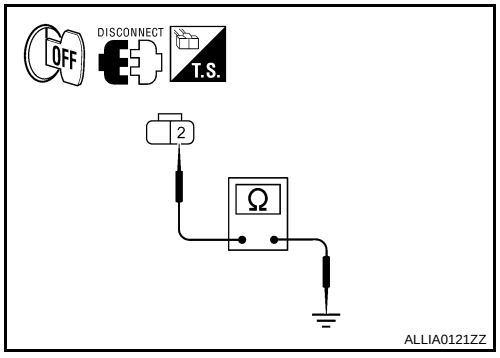
A			B		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	83	E223	1	Yes
LH		84	E212	1	

Does continuity exist?

YES >> GO TO 4
NO >> Repair the harnesses or connectors.

4.CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

1. Disconnect the front combination lamp connector.
2. Check continuity between the front combination lamp harness connector terminal and ground.



Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E223	2		Yes
LH	E212	2		

Does continuity exist?

YES >> Inspect the headlamp bulb.
NO >> Repair the harness.

FRONT FOG LAMP CIRCUIT

Description

INFOID:0000000003071658

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM over the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay in the IPDM E/R to the front fog lamps.

Component Function Check

INFOID:0000000003071659

1.CHECK FRONT FOG LAMP OPERATION

WITHOUT CONSULT-III
1. Activate IPDM E/R auto active test. Refer to PCS-10, "Diagnosis Description".
2. Check that the front fog lamp is turned ON.

CONSULT-III
1. Select "EXTERNAL LAMP" of IPDM E/R active test item.
2. With operating the test items, Check that the front fog lamp is turned ON.

FOG : Front fog lamp ON
OFF : Front fog lamp OFF

Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.
NO >> Refer to EXL-36, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003071660

1.CHECK FRONT FOG LAMP FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

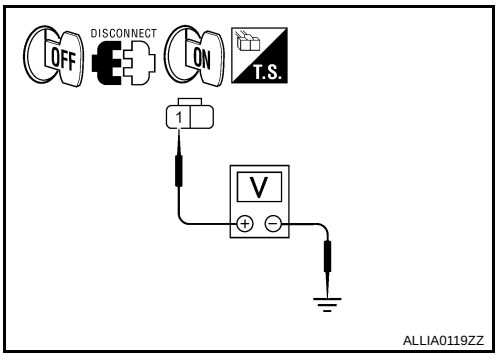
Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	53	15A

Is the fuse open?

YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT-III
1. Turn the ignition switch OFF.
2. Disconnect the front fog lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMP" of IPDM E/R active test item.
5. With EXTERNAL LAMP ON, check the voltage between the fog lamp connector and ground.



Terminals				Condition	Voltage
(+)			(–)		
Front fog lamp			Ground	Front fog lamp	
Connector		Terminal			
LH	E214	1		FOG	Battery voltage
RH	E227	1		OFF	0V

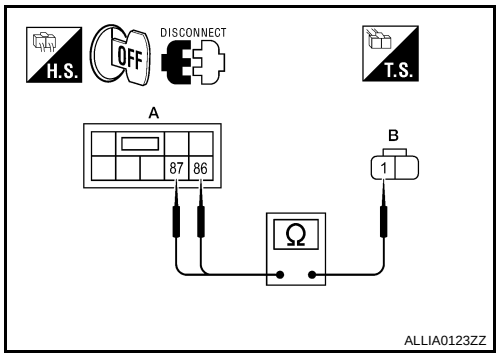
Is the measurement value normal?

YES >> GO TO 4

NO >> GO TO 3

3. CHECK FRONT FOG LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector and the front fog lamp harness connector.



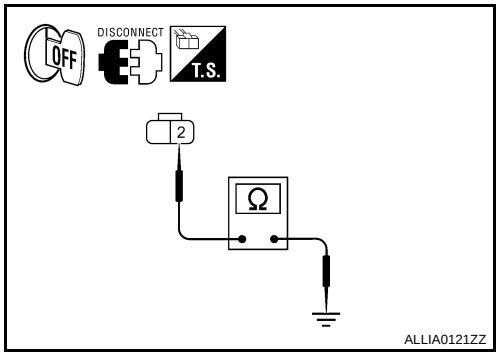
A			B		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	86	E227	1	Yes
LH		87	E214	1	

Does continuity exist?

YES >> GO TO 4
NO >> Repair the harnesses or connectors.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

1. Disconnect the front fog lamp connector.
2. Check continuity between the front fog lamp harness connector terminal and ground.



Front fog lamp			Ground	Continuity
Connector		Terminal		
RH	E227	2		Yes
LH	E214	2		

Does continuity exist?

YES >> Inspect the fog lamp bulb.
NO >> Repair the harness.

PARKING LAMP CIRCUIT

Description

INFOID:0000000003071661

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM over the CAN communication lines. When the tail lamp relay is energized, power flows through fuses 46 and 47, located in the IPDM E/R. Power then flows to the front and rear combination lamps.

Component Function Check

INFOID:0000000003071662

1.CHECK PARKING LAMP OPERATION

WITHOUT CONSULT-III
1. Activate IPDM E/R auto active test. Refer to PCS-10, "Diagnosis Description".
2. Check that the parking lamp is turned ON.

CONSULT-III
1. Select "EXTERNAL LAMP" of IPDM E/R active test item.
2. With operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.
NO >> Refer to EXL-38, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003071663

1.CHECK PARKING LAMP FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not open.

Unit	Location	Fuse	Capacity
Parking lamps (front)	IPDM E/R	46	10A
Parking lamps (rear)	IPDM E/R	47	10A

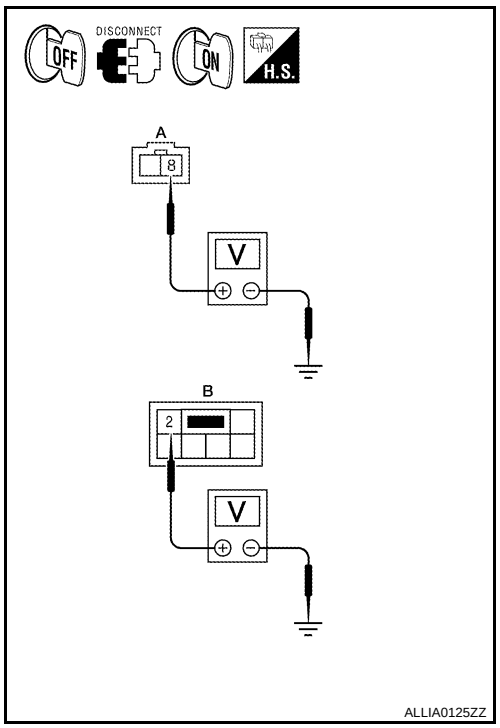
Is the fuse open?

YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

CONSULT-III

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Select "EXTERNAL LAMP" of IPDM E/R active test item.
5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.



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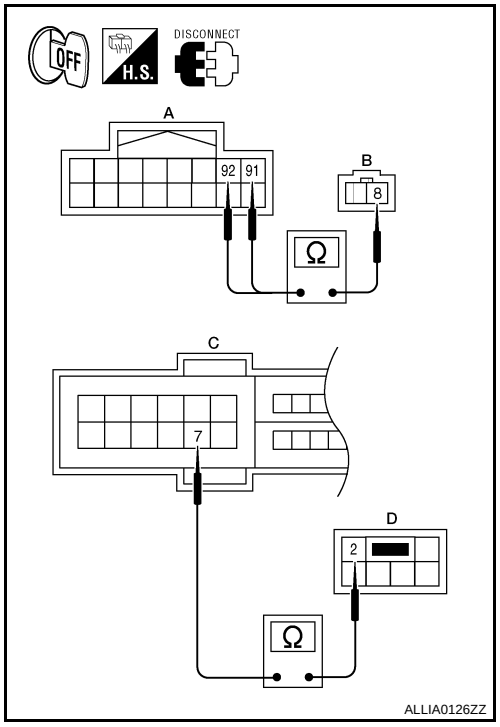
Terminals				Condition	Voltage
(+)			(–)		
Combination lamp			Ground	External lamp	
Connector		Terminal			
Front	A: E218, E225	8		LO	Battery voltage
Rear	B: B30, B45	2		OFF	0V

Is the measurement value normal?

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

3. CHECK PARKING LAMP CIRCUIT (OPEN)

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector and the combination lamp harness connector.



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IPDM E/R			Combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
Front	A: E201	91, 92	B: E218, E225	8	Yes
Rear	C: E18	7	D: B30, B45	2	

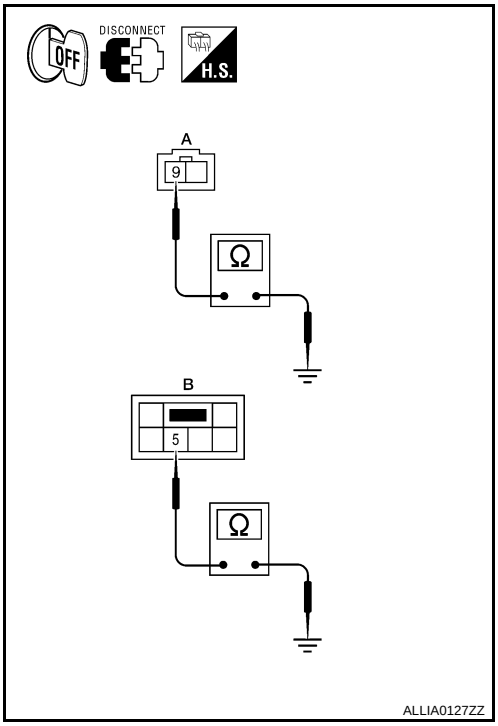
Does continuity exist?

YES >> GO TO 4
NO >> Repair the harnesses or connectors.

4. CHECK PARKING LAMP GROUND CIRCUIT

1. Disconnect the combination lamp connector.
2. Check continuity between the combination lamp harness connector terminal and ground.

Combination lamp			Ground	Continuity
Connector		Terminal		
Front	A: E218, E225	9		Yes
Rear	B: B30, B45	5		



Does continuity exist?

YES >> Inspect the parking lamp bulb.
NO >> Repair the harness.

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:0000000003071664

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.
The BCM performs the fast flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.
NOTE:
Turn signal lamp blinks at normal speed when using the hazard warning lamp.

Component Function Check

INFOID:0000000003071665

1.CHECK TURN SIGNAL LAMP

CONSULT-III
1. Select "FLASHER" of BCM (FLASHER) active test item.
2. With operating the test items, check that the turn signal lamp blinks.

LH : Turn signal lamp LH blinking
RH : Turn signal lamp RH blinking
OFF : The turn signal lamp OFF

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-41, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003071666

1.CHECK TURN SIGNAL LAMP BULB

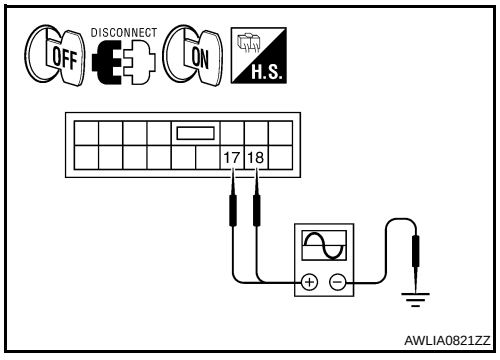
Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

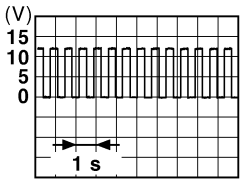
Is the bulb OK?

YES >> GO TO 2
NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector or the rear combination lamp connector.
3. Turn the ignition switch ON.
4. With operating the turn signal switch, check the voltage between the BCM harness connector and the ground.



Terminals				Test item	Voltage
(+)			(–)		
BCM				FLASHER	
Connector		Terminal			
RH	M17	17	Ground	LH or RH	 PKID0926E
LH	M17	18		OFF	0V

Is the measurement value normal?

YES >> GO TO 3
NO >> Replace BCM.

3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect BCM connector.
3. Check the continuity between the BCM harness connector and the front combination lamp, the rear combination lamp harness connector or the door mirror connector (if equipped with turn signals in mirrors).

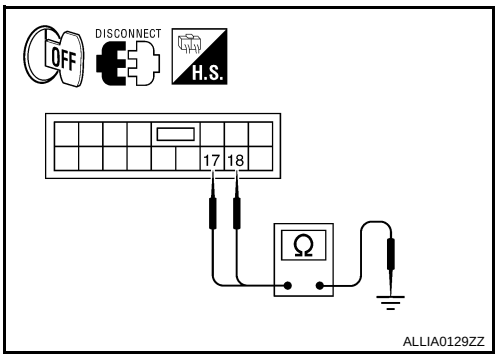
BCM			Front combination lamp Rear combination lamp Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
Rear LH	M17	18	B30	3	Yes
Front LH			E217	5	
Door mirror LH			D4	7	
Rear RH	M17	17	B45	3	
Front RH			E224	5	
Door mirror RH			D107	7	

Does continuity exist?

YES >> GO TO 4
NO >> Repair the harnesses or connectors.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and the ground.



BCM			Ground	Continuity
Connector		Terminal		
LH	M17	18		No
RH		17		

Does continuity exist?

YES >> Repair the harnesses or connectors.
NO >> GO TO 5

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

Check continuity between the front combination lamp, the rear combination lamp or the door mirror and ground (if equipped with turn signals in mirrors).

Front combination lamp Rear combination lamp Door mirror			Ground	Continuity
Connector		Terminal		
Front RH	E224	7	Ground	Yes
Front LH	E217	7		
Rear RH	B45	5		
Rear LH	B30	5		
Door mirror RH	D107	8		
Door mirror LH	D4	8		

Does continuity exist?

YES >> Replace the front combination lamp or the rear combination lamp.

NO >> Repair the harnesses or connectors.

OPTICAL SENSOR

Description

INFOID:0000000003071667

The optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to the BCM.

Component Function Check

INFOID:0000000003071668

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT-III

CONSULT-III
1. Turn the ignition switch ON.
2. Select "OPTICAL SENSOR" of BCM (HEAD LAMP) DATA MONITOR item.
3. Turn the lighting switch to AUTO.
4. With the optical sensor illuminating, check the monitor status.

Monitor item	Condition	Voltage
OPTICAL SENSOR	When illuminating	3.1 V or more *
	When shutting off light	0.6 V or less

*: Illuminates the optical sensor. The value may be less than the standard value if brightness is weak.

Is the item status normal?

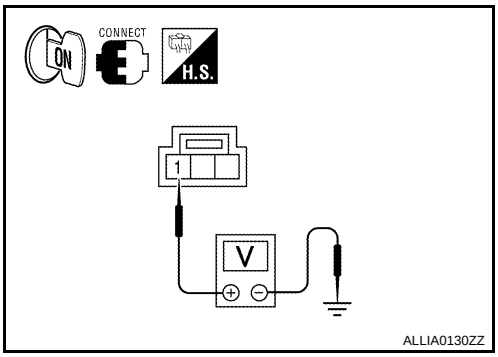
YES >> Optical sensor is normal.
NO >> Refer to EXL-44, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003071669

1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn the ignition switch ON.
2. Turn the lighting switch to AUTO.
3. Check the voltage between the optical sensor harness connector and ground.



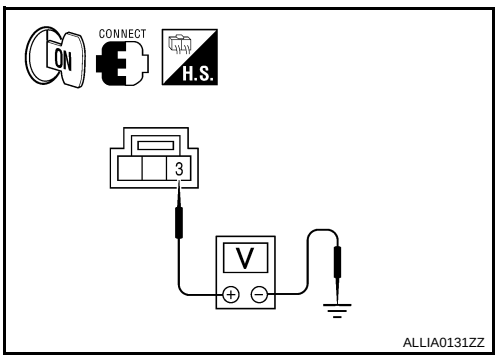
Terminals			Voltage
(+)		(–)	
Optical sensor		Ground	
Connector	Terminal		
M66	1		5V

Is the measurement value normal?

YES >> GO TO 2
NO >> GO TO 4

2.CHECK OPTICAL SENSOR GROUND INPUT

Check the voltage between the optical sensor harness connector and ground.



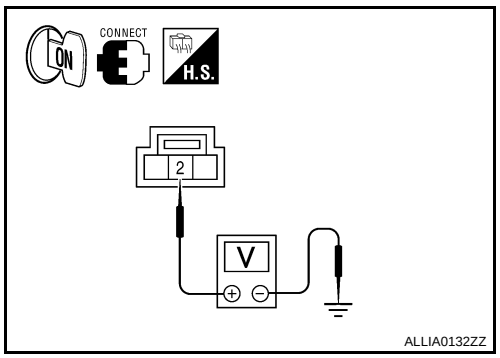
Terminals			Voltage
(+)		(–)	
Optical sensor		Ground	
Connector	Terminal		
M66	3		Less than 0.2V

Is the measurement value normal?

YES >> GO TO 3
NO >> GO TO 6

3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

With the optical sensor illuminating, check voltage between the optical sensor harness connector and ground.



Terminals			Condition	Voltage
(+)		(–)		
Optical sensor		Ground	Optical sensor	
Connector	Terminal			
M66	2		When illuminating	3.1V or more *
			When shutting off light	0.6V or less

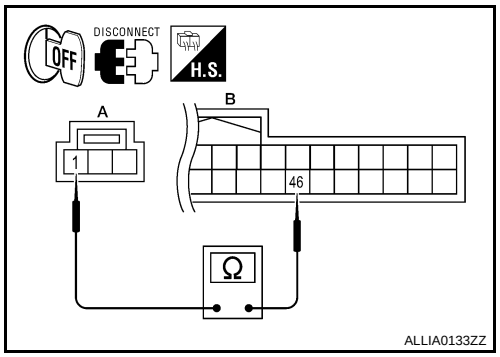
*: Illuminate the optical sensor. The value may be less than the standard if brightness is weak.

Is the measurement value normal?

YES >> GO TO 7
NO >> Replace the optical sensor.

4.CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector.
3. Check continuity between the optical sensor harness connector and the BCM harness connector.



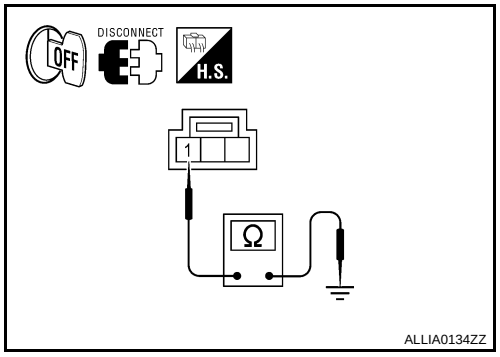
A		B		Continuity
Connector	Terminal	Connector	Terminal	
M66	1	M18	46	Yes

Does continuity exist?

YES >> GO TO 5
NO >> Repair the harnesses or connectors.

5.CHECK OPTICAL SENSOR POWER SUPPLY FOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.



Optical sensor		Ground	Continuity
Connector	Terminal		
M66	1		No

Does continuity exist?

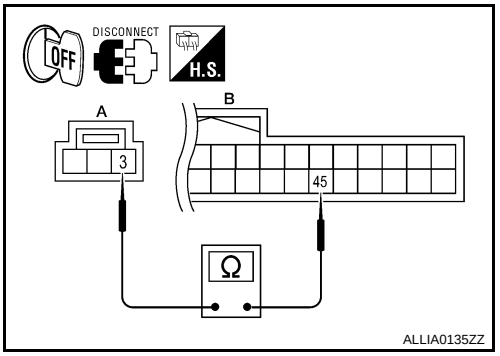
YES >> Repair the harnesses or connectors.
NO >> Replace BCM. Refer to BCS-85, "Removal and Installation" .

6.CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector.

3. Check continuity between the optical sensor harness connector and the BCM harness connector.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M66	3	M18	45	Yes



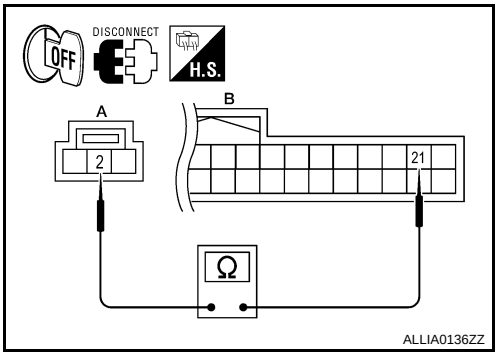
Does continuity exist?

YES >> Replace BCM. Refer to BCS-85, "Removal and Installation" .
NO >> Repair the harnesses or connectors.

7. CHECK OPTICAL SENSOR SIGNAL FOR OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector.
3. Check continuity between the optical sensor harness connector and the BCM harness connector.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M66	2	M18	21	Yes



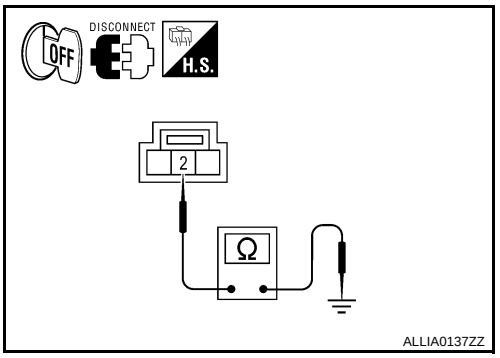
Does continuity exist?

YES >> GO TO 8
NO >> Repair the harnesses or connectors.

8. CHECK OPTICAL SENSOR SIGNAL FOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M66	2		No



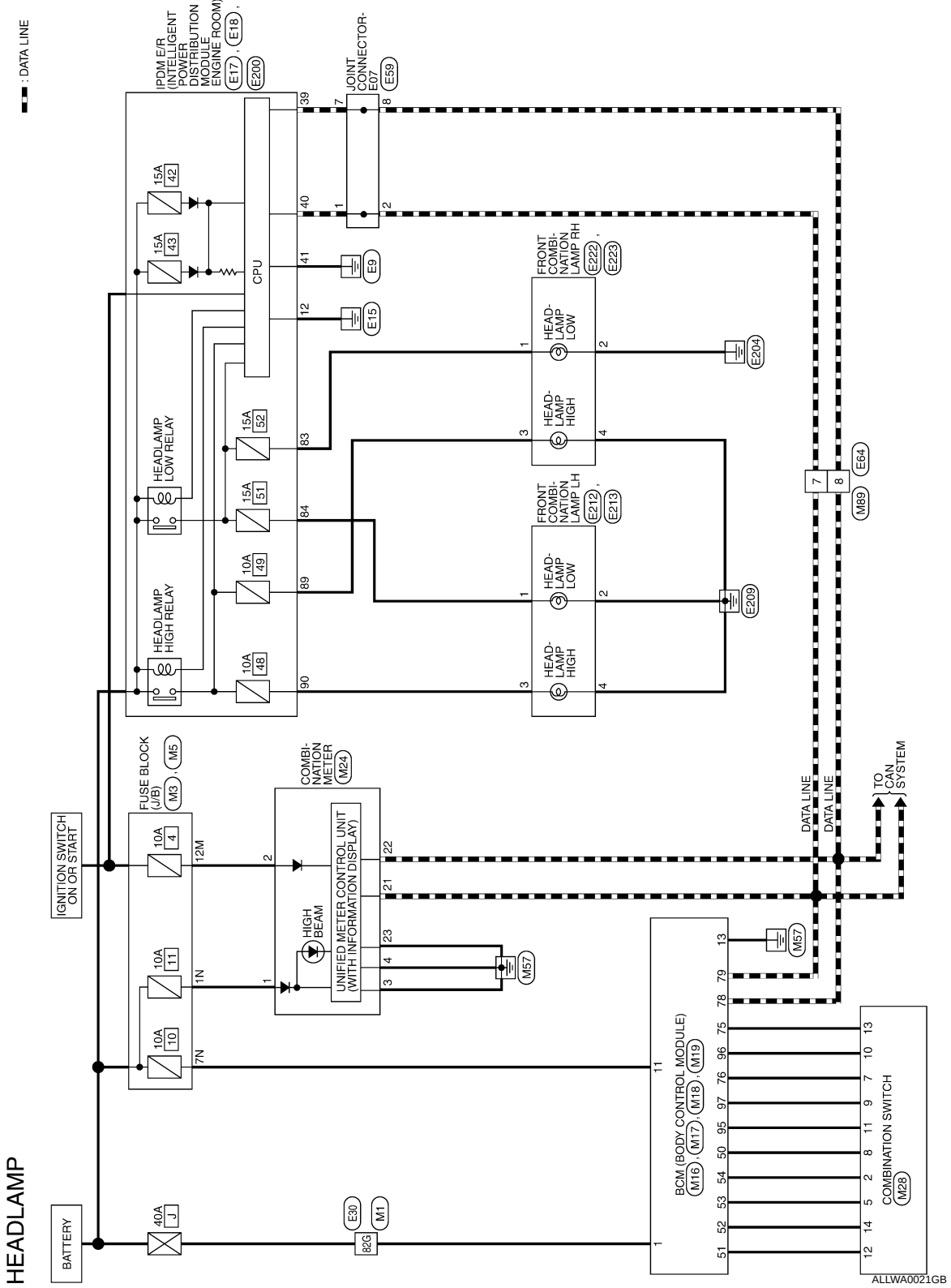
Does continuity exist?

YES >> Repair the harnesses or connectors.
NO >> Replace BCM. Refer to BCS-85, "Removal and Installation" .

HEADLAMP

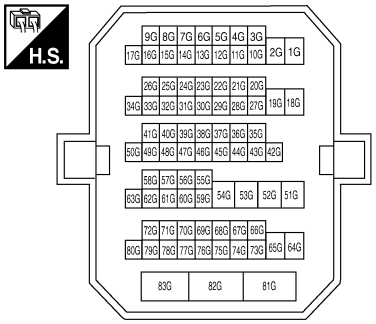
Wiring Diagram

INFOID:0000000003071670



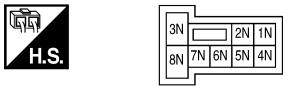
HEADLAMP CONNECTORS

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



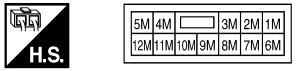
Terminal No.	Color of Wire	Signal Name
82G	W/B	—

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



Terminal No.	Color of Wire	Signal Name
1N	W/L	—
7N	Y/R	—

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

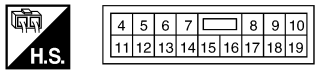


Terminal No.	Color of Wire	Signal Name
12M	O	—

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

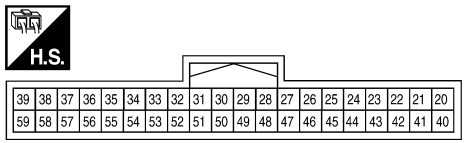
Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1

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



Terminal No.	Color of Wire	Signal Name
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4

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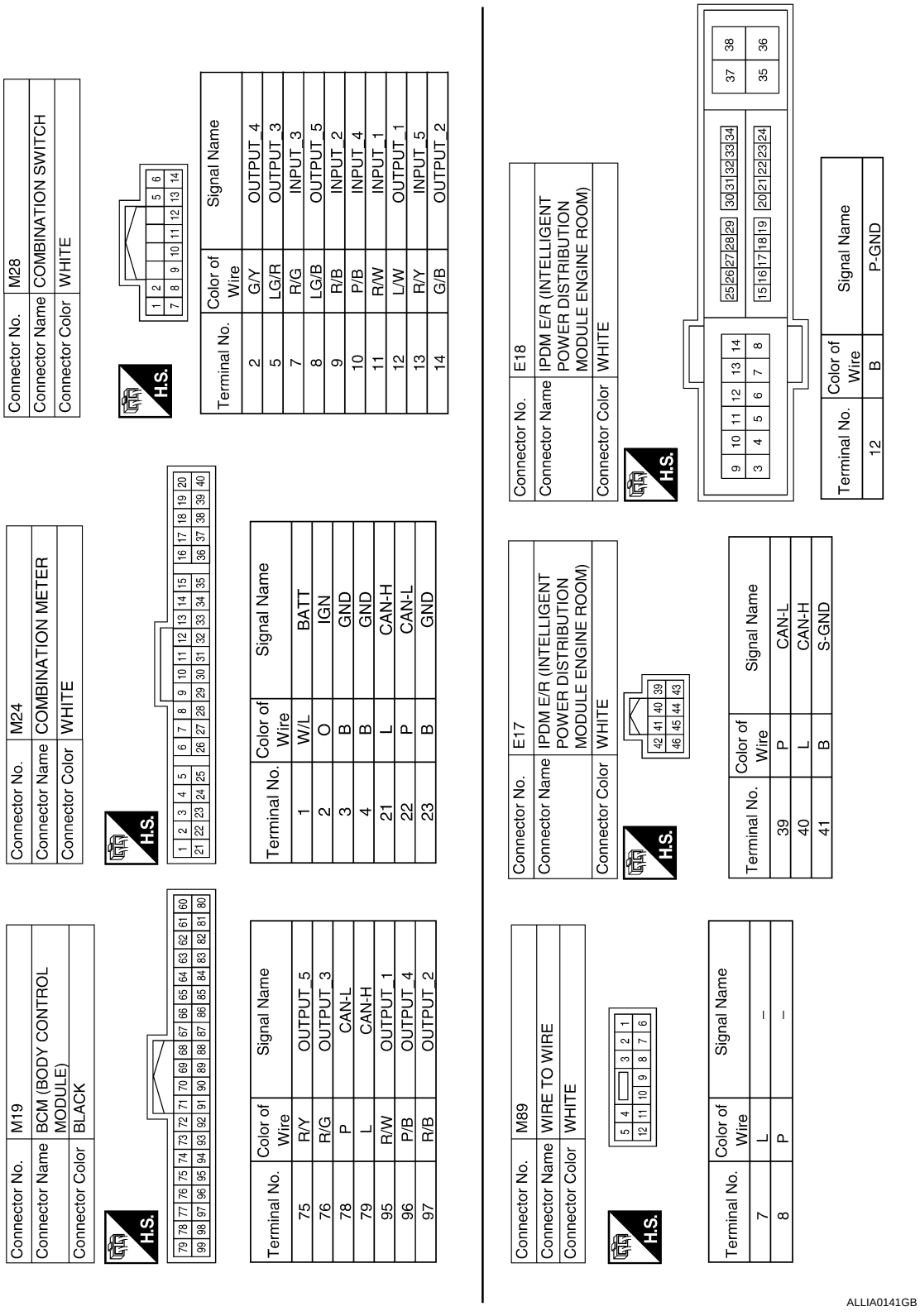

Connector No. M28
Connector Name COMBINATION SWITCH
Connector Color WHITE
H.S.
1 2 3 4 5 6
7 8 9 10 11 12 13 14
Terminal No. Color of Wire Signal Name
2 G/Y OUTPUT_4
5 LG/R OUTPUT_3
7 R/G INPUT_3
8 LG/B OUTPUT_5
9 R/B INPUT_2
10 P/B INPUT_4
11 R/W INPUT_1
12 L/W OUTPUT_1
13 R/Y INPUT_5
14 G/B OUTPUT_2
Connector No. M24
Connector Name COMBINATION METER
Connector Color WHITE
H.S.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
Terminal No. Color of Wire Signal Name
1 W/L BATT
2 O IGN
3 B GND
4 B GND
21 L CAN-H
22 P CAN-L
23 B GND
Connector No. M19
Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK
H.S.
79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60
99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80
Terminal No. Color of Wire Signal Name
75 R/Y OUTPUT_5
76 R/G OUTPUT_3
78 P CAN-L
79 L CAN-H
95 R/W OUTPUT_1
96 P/B OUTPUT_4
97 R/B OUTPUT_2
Connector No. E18
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
9 10 11 12 13 14
3 4 5 6 7 8
25 26 27 28 29 30 31 32 33 34
15 16 17 18 19 20 21 22 23 24
37 38
35 36
Terminal No. Color of Wire Signal Name
12 B P-GND
Connector No. E17
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
42 41 40 39
46 45 44 43
Terminal No. Color of Wire Signal Name
39 P CAN-L
40 L CAN-H
41 B S-GND
Connector No. M89
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5 4 3 2 1
12 11 10 9 8 7 6
Terminal No. Color of Wire Signal Name
7 L –
8 P –
ALLIA0141GB

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	W/B	—

Connector No.	E59
Connector Name	JOINT CONNECTOR-E07
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
7	P	—
8	P	—

Connector No.	E64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	L	—
8	P	—

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

85		84	83
90	89	88	87	86

Terminal No.	Color of Wire	Signal Name
83	R/Y	HEADLAMP_LO_RH
84	L	HEADLAMP_LO_LH
89	L/W	HEADLAMP_HI_RH
90	G	HEADLAMP_HI_LH

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	L	H/L_LH_LO
2	B	GND

Connector No.	E213
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

4	3

Terminal No.	Color of Wire	Signal Name
3	G	H/L_LH_HI
4	B	GND

ALLIA0142GB

Connector No.	E222
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
3	L/W	H/L_RH_HI
4	B	GND

Connector No.	E223
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

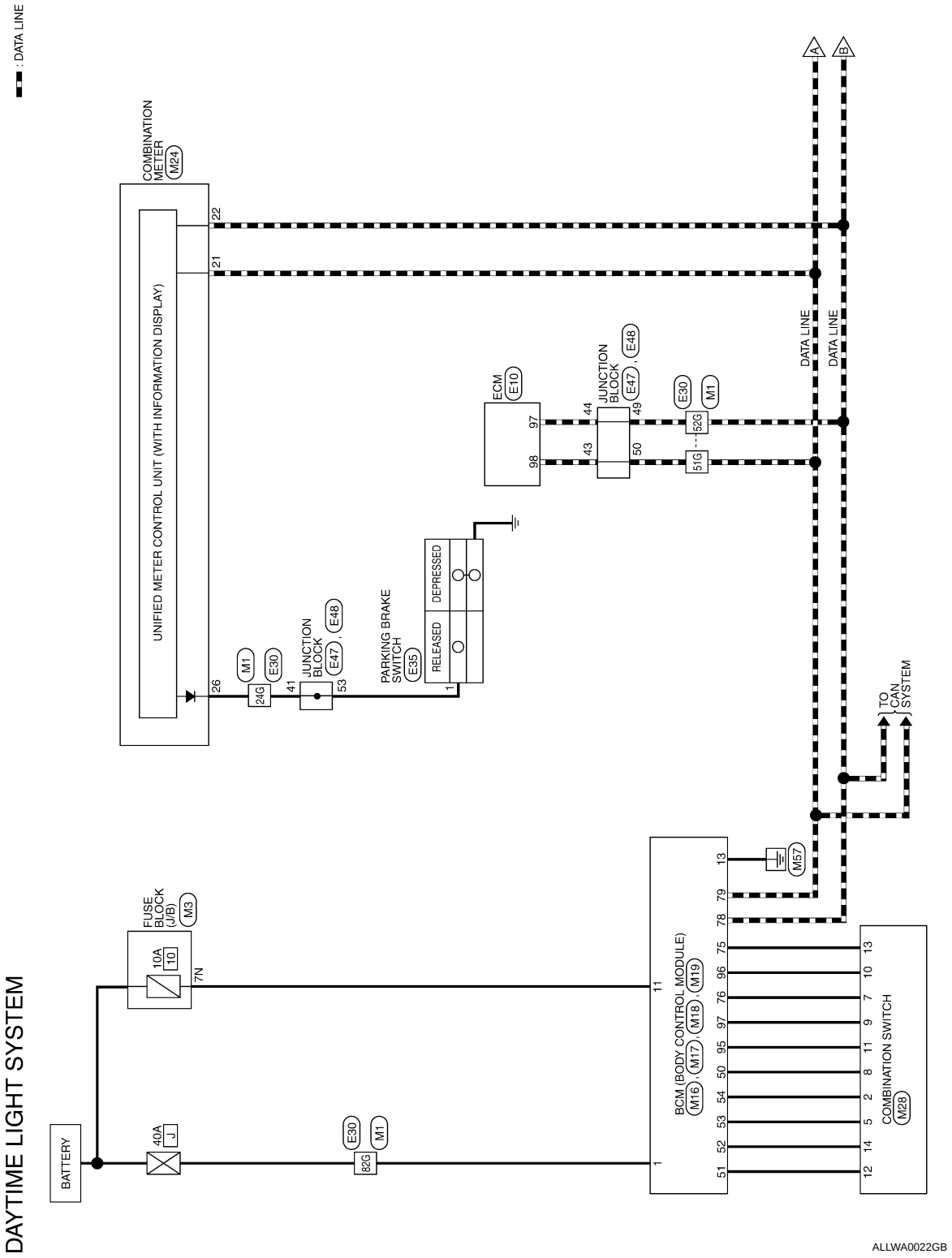
Terminal No.	Color of Wire	Signal Name
1	R/Y	H/L_RH_LO
2	B	GND

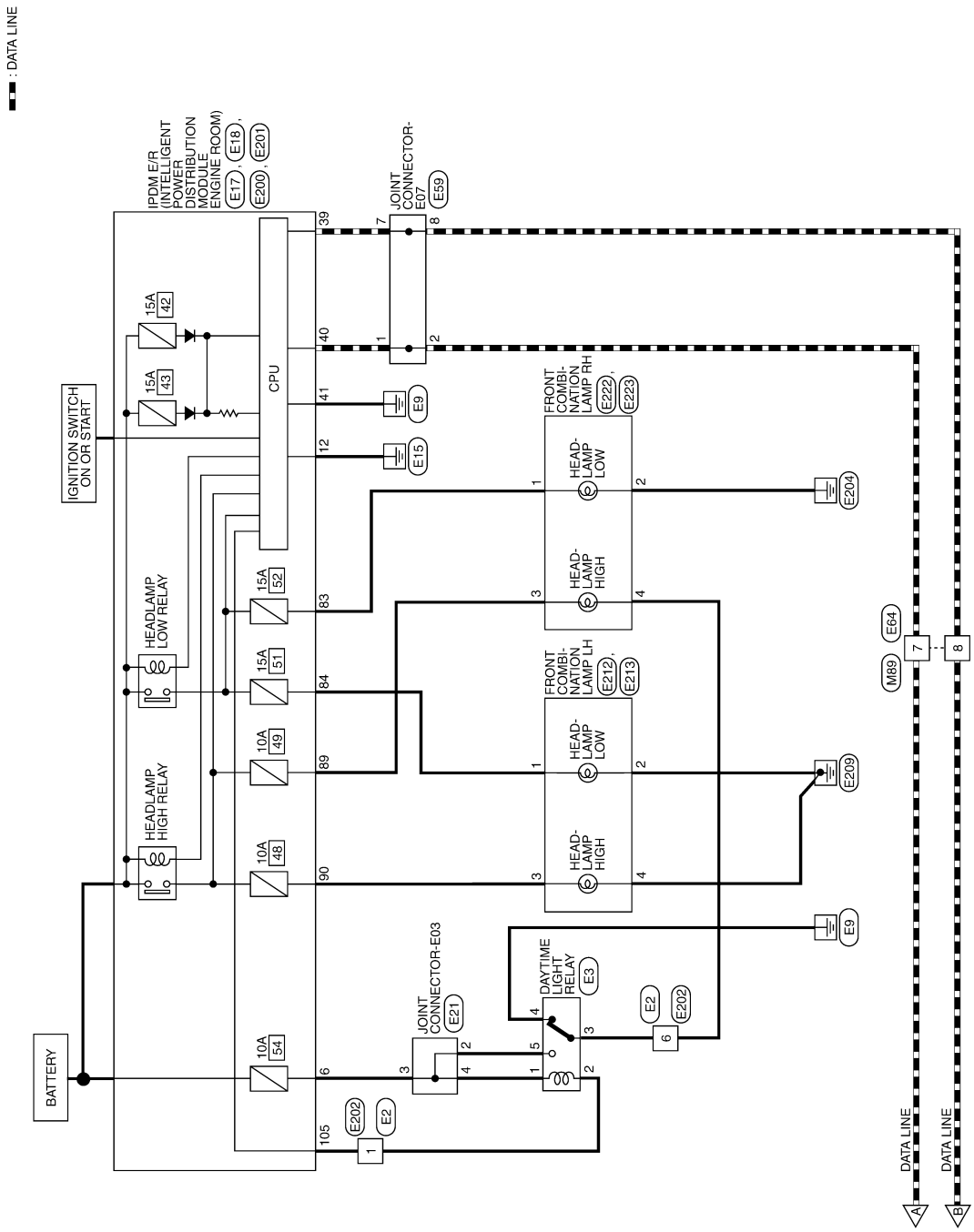
ALLIA0143GB

DAYTIME RUNNING LIGHT SYSTEM
HEADLAMP

HEADLAMP : Wiring Diagram

INFOID:0000000003071671

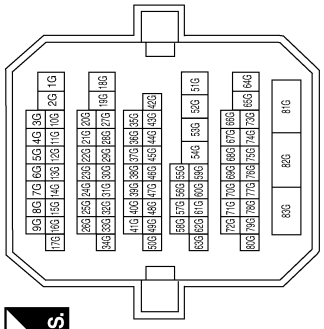



: DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E17, E18, E200, E201
JOINT CONNECTOR-E07 E59
CPU
IGNITION SWITCH ON OR START
15A 42
15A 43
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
15A 52
15A 51
10A 49
10A 48
10A 54
BATTERY
E9
E15
E204
E209
FRONT COMBINATION LAMP RH E229, E223
FRONT COMBINATION LAMP LH E212, E213
HEAD-LAMP LOW
HEAD-LAMP HIGH
JOINT CONNECTOR-E03 E21
DAYTIME LIGHT RELAY E3
E2
E202
E64
M89
DATA LINE
ALLWA0023GB

DAYTIME LIGHT SYSTEM CONNECTORS

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

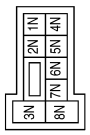
H.S.



Terminal No.	Color of Wire	Signal Name
24G	G/R	—
51G	L	—
52G	P	—
82G	W/B	—

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

H.S.



Terminal No.	Color of Wire	Signal Name
7N	Y/R	—

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L

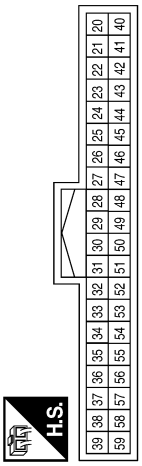
Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1

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

H.S.



Terminal No.	Color of Wire	Signal Name
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4

ALLIA0144GB

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

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
75	R/Y	OUTPUT_5
76	R/G	OUTPUT_3
78	P	CAN-L
79	L	CAN-H
95	R/W	OUTPUT_1
96	P/B	OUTPUT_4
97	R/B	OUTPUT_2

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
21	L	CAN-H
22	P	CAN-L
26	G/R	PKB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	G/Y	OUTPUT_4
5	LG/R	OUTPUT_3
7	R/G	INPUT_3
8	LG/B	OUTPUT_5
9	R/B	INPUT_2
10	P/B	INPUT_4
11	R/W	INPUT_1
12	L/W	OUTPUT_1
13	R/Y	INPUT_5
14	G/B	OUTPUT_2

Connector No.	M89
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	L	–
8	P	–

Connector No.	E2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
1	V	—
6	GR/R	—

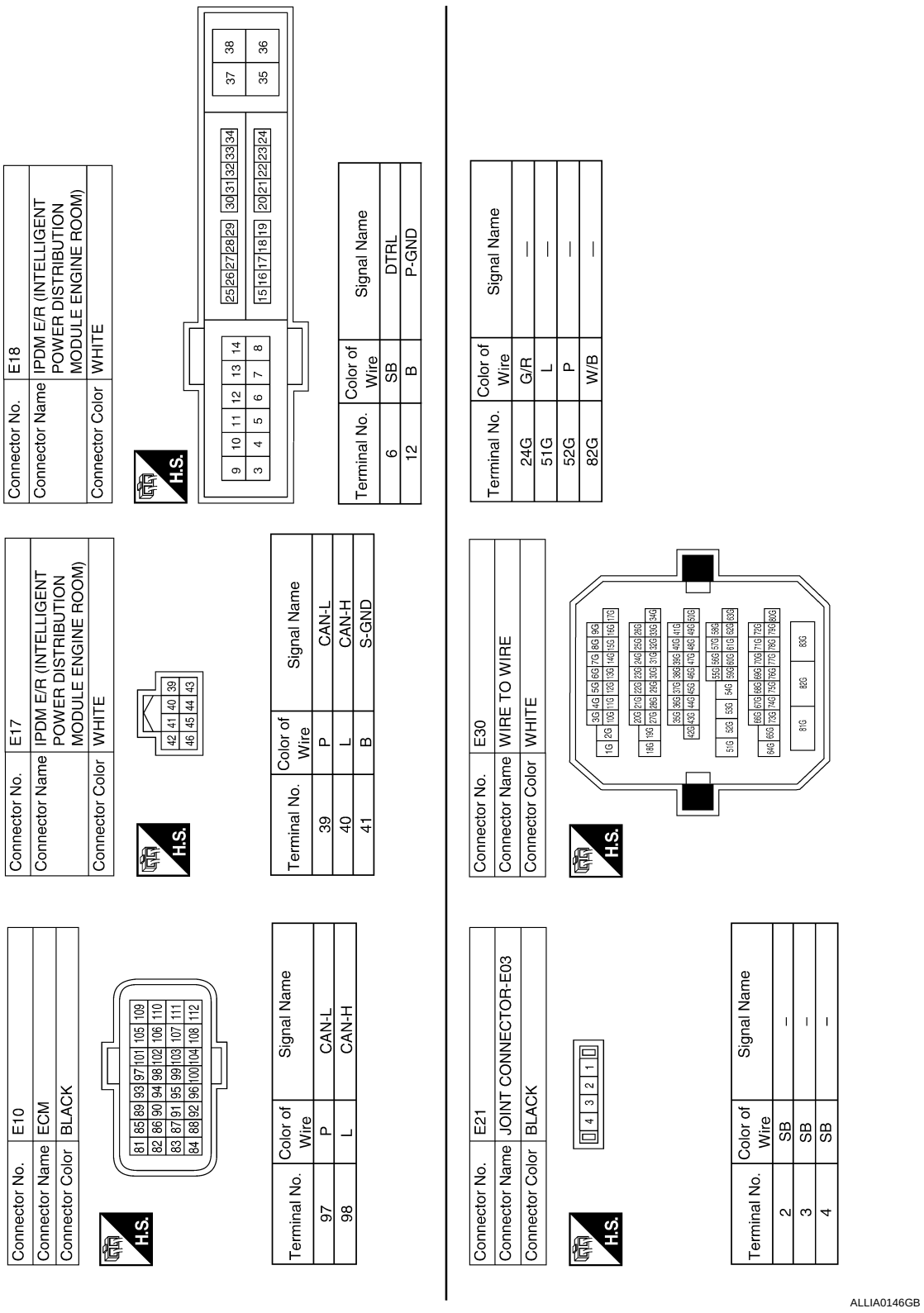
Connector No.	E3
Connector Name	DAYTIME LIGHT RELAY
Connector Color	BLACK

H.S.

3	
5	
2	4	1

Terminal No.	Color of Wire	Signal Name
1	SB	—
2	V	—
3	GR/R	—
4	B	—
5	SB	—

ALLIA0145GB


Connector No. E10
Connector Name ECM
Connector Color BLACK
H.S.
81 85 89 93 97 101 105 109
82 86 90 94 98 102 106 110
83 87 91 95 99 103 107 111
84 88 92 96 100 104 108 112
Terminal No. Color of Wire Signal Name
97 P CAN-L
98 L CAN-H
Connector No. E17
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
42 41 40 39
46 45 44 43
Terminal No. Color of Wire Signal Name
39 P CAN-L
40 L CAN-H
41 B S-GND
Connector No. E18
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
9 10 11 12 13 14
3 4 5 6 7 8
25 26 27 28 29 30 31 32 33 34
15 16 17 18 19 20 21 22 23 24
37 38
35 36
Terminal No. Color of Wire Signal Name
6 SB DTRL
12 B P-GND
Connector No. E21
Connector Name JOINT CONNECTOR-E03
Connector Color BLACK
H.S.
4 3 2 1
Terminal No. Color of Wire Signal Name
2 SB —
3 SB —
4 SB —
Connector No. E30
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
24G G/R —
51G L —
52G P —
82G W/B —
ALLIA0146GB

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

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

Connector No.	E47
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
41	G/R	—
43	L	—
44	P	—

Connector No.	E48
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
49	P	—
50	L	—
53	G/R	—

Connector No.	E59
Connector Name	JOINT CONNECTOR-E07
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
7	P	—
8	P	—

Connector No.	E64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	L	—
8	P	—

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
83	R/Y	HEADLAMP_LO_RH
84	L	HEADLAMP_LO_LH
89	L/W	HEADLAMP_HI_RH
90	G	HEADLAMP_HI_LH

ALLIA0147GB

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
105	V	DTRL_RLY

Connector No.	E202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	V	—
6	GR/R	—

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	H/L_LH_LO
2	B	GND

Connector No.	E213
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
3	G	H/L_LH_HI
4	B	GND

Connector No.	E222
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
3	L/W	H/L_RH_HI
4	GR/R	GND

Connector No.	E223
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

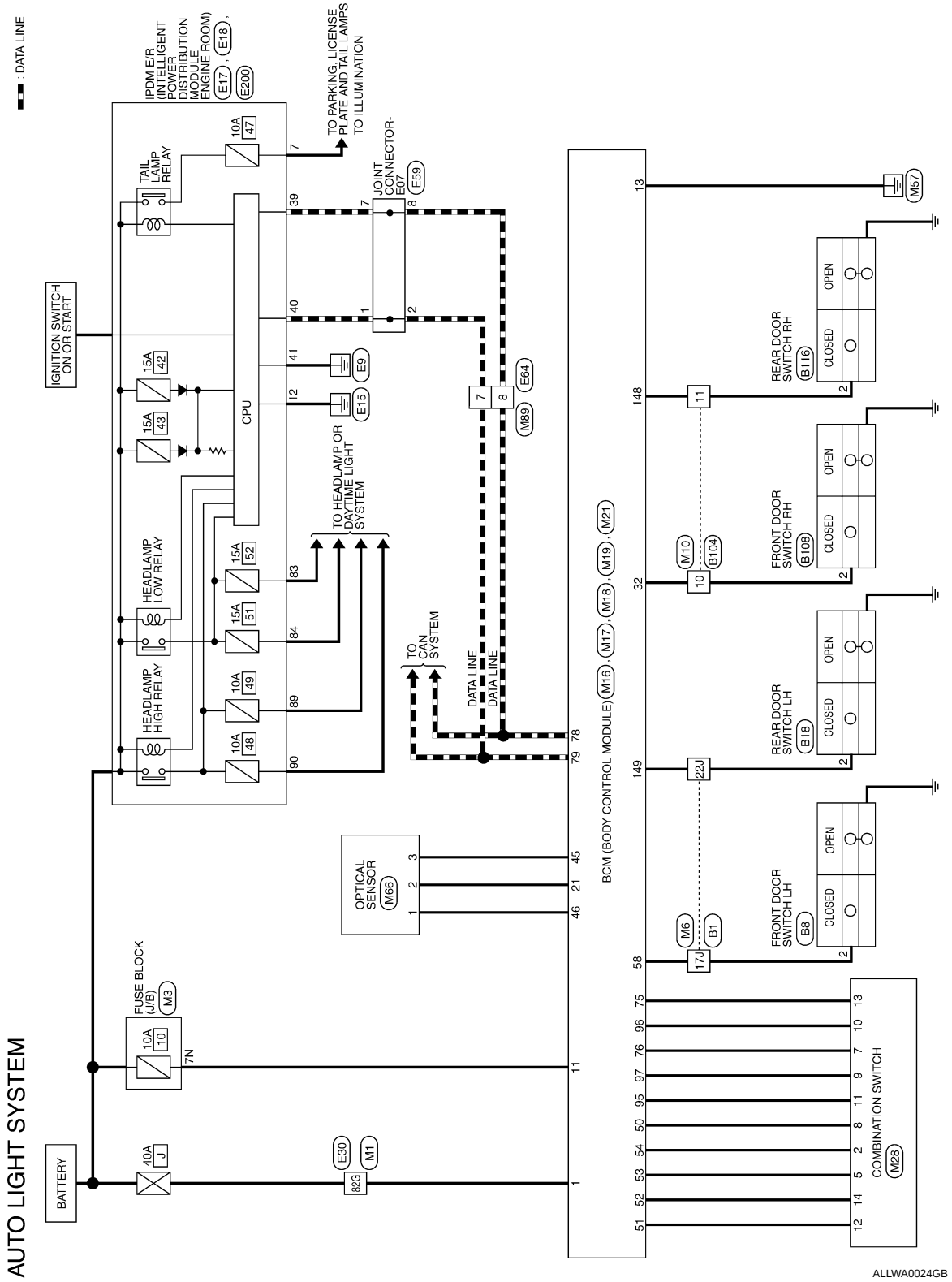
Terminal No.	Color of Wire	Signal Name
1	R/Y	H/L_RH_LO
2	B	GND

AWLIA0701GB

AUTO LIGHT SYSTEM

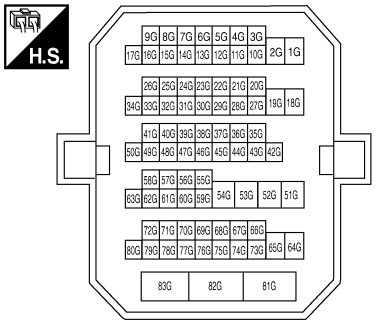
Wiring Diagram

INFOID:0000000003071672



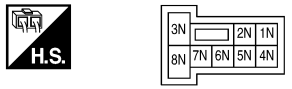
AUTO LIGHT SYSTEM CONNECTORS

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



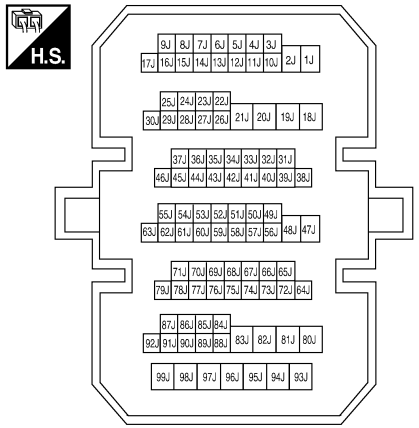
Terminal No.	Color of Wire	Signal Name
82G	W/B	—

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



Terminal No.	Color of Wire	Signal Name
7N	Y/R	—

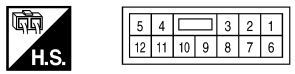
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



ALLIA0149GB

Terminal No.	Color of Wire	Signal Name
17J	SB	—
22J	R/B	—

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
10	R/B	—
11	R/W	—

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

4	5	6	7		8	9	10
11	12	13	14	15	16	17	18	19

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1

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

H.S.

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
21	P/B	AUTO_LIGHT_SENSOR_INPUT1
32	R/B	AS_DOOR_SW
45	P	GND_RF2_A/L
46	V/W	A/L_SENS_KEYLESS_TUNER_POWER_SUPPLY
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4
58	SB	DR_DOOR_SW

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

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
75	R/Y	OUTPUT_5
76	R/G	OUTPUT_3
78	P	CAN-L
79	L	CAN-H
95	R/W	OUTPUT_1
96	P/B	OUTPUT_4
97	R/B	OUTPUT_2

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132

Terminal No.	Color of Wire	Signal Name
148	R/W	RR_DOOR_SW
149	R/B	RL_DOOR_SW

ALLIA0150GB

Connector No.	M66
Connector Name	OPTICAL SENSOR
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	V/W	POWER
2	P/B	OUTPUT
3	P	GND

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	G/Y	OUTPUT_4
5	LG/R	OUTPUT_3
7	R/G	INPUT_3
8	LG/B	OUTPUT_5
9	R/B	INPUT_2
10	P/B	INPUT_4
11	R/W	INPUT_1
12	L/W	OUTPUT_1
13	R/Y	INPUT_5
14	G/B	OUTPUT_2

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	R/L	TAIL/ILLUMI
12	B	P-GND

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	S-GND

Connector No.	M89
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	L	–
8	P	–

ALLIA0151GB

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	W/B	—

Connector No.	E59
Connector Name	JOINT CONNECTOR-E07
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
7	P	—
8	P	—

Connector No.	E64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	L	—
8	P	—

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

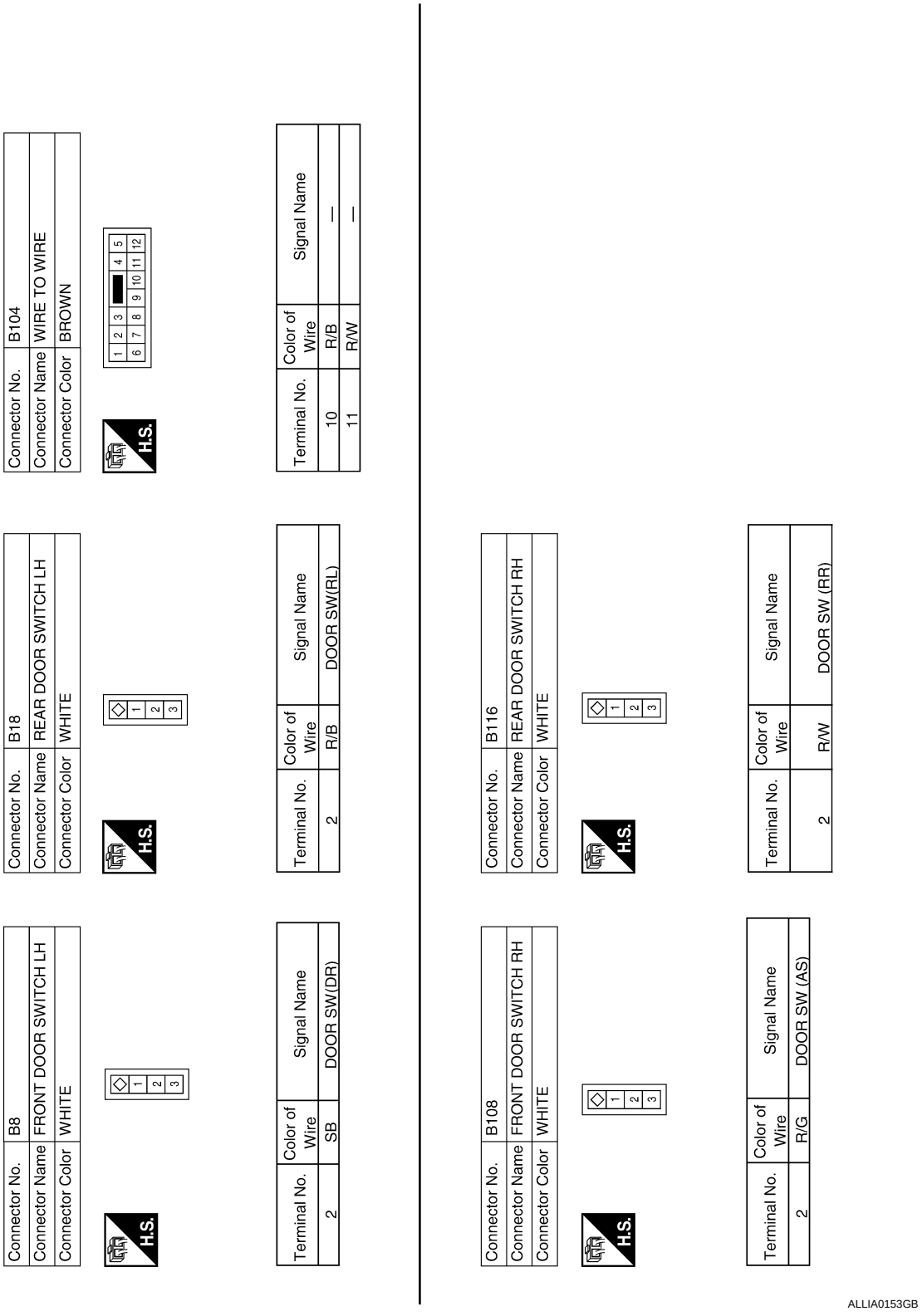
Terminal No.	Color of Wire	Signal Name
17J	SB	—
22J	R/B	—

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
83	R/Y	HEADLAMP_LO_RH
84	L	HEADLAMP_LO_LH
89	L/W	HEADLAMP_HI_RH
90	G	HEADLAMP_HI_LH

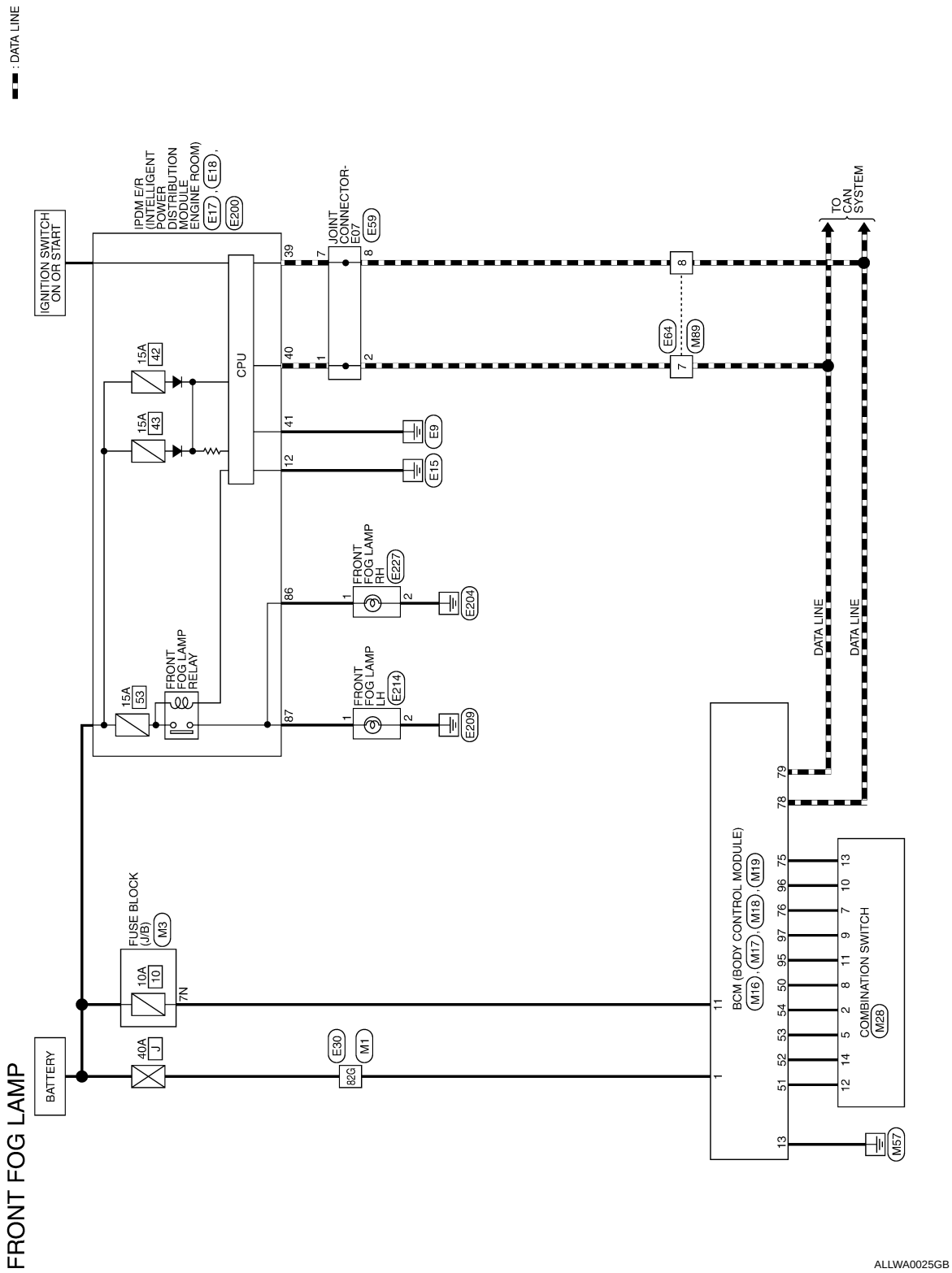
ALLIA0152GB


Connector No. B104
Connector Name WIRE TO WIRE
Connector Color BROWN
H.S.
1 2 3 4 5
6 7 8 9 10 11 12
Terminal No. Color of Wire Signal Name
10 R/B —
11 R/W —
Connector No. B18
Connector Name REAR DOOR SWITCH LH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 R/B DOOR SW(RL)
Connector No. B8
Connector Name FRONT DOOR SWITCH LH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 SB DOOR SW(DR)
Connector No. B116
Connector Name REAR DOOR SWITCH RH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 R/W DOOR SW (RR)
Connector No. B108
Connector Name FRONT DOOR SWITCH RH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 R/G DOOR SW (AS)
ALLIA0153GB

FRONT FOG LAMP SYSTEM

Wiring Diagram

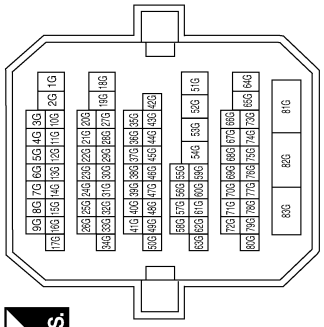
INFOID:0000000003071673



FRONT FOG LAMP CONNECTORS

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

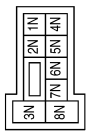
H.S.



Terminal No.	Color of Wire	Signal Name
82G	W/B	—

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

H.S.



Terminal No.	Color of Wire	Signal Name
7N	Y/R	—

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L

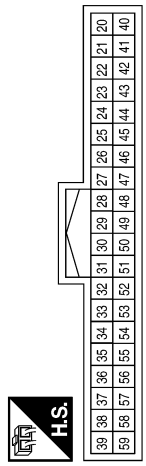
Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1

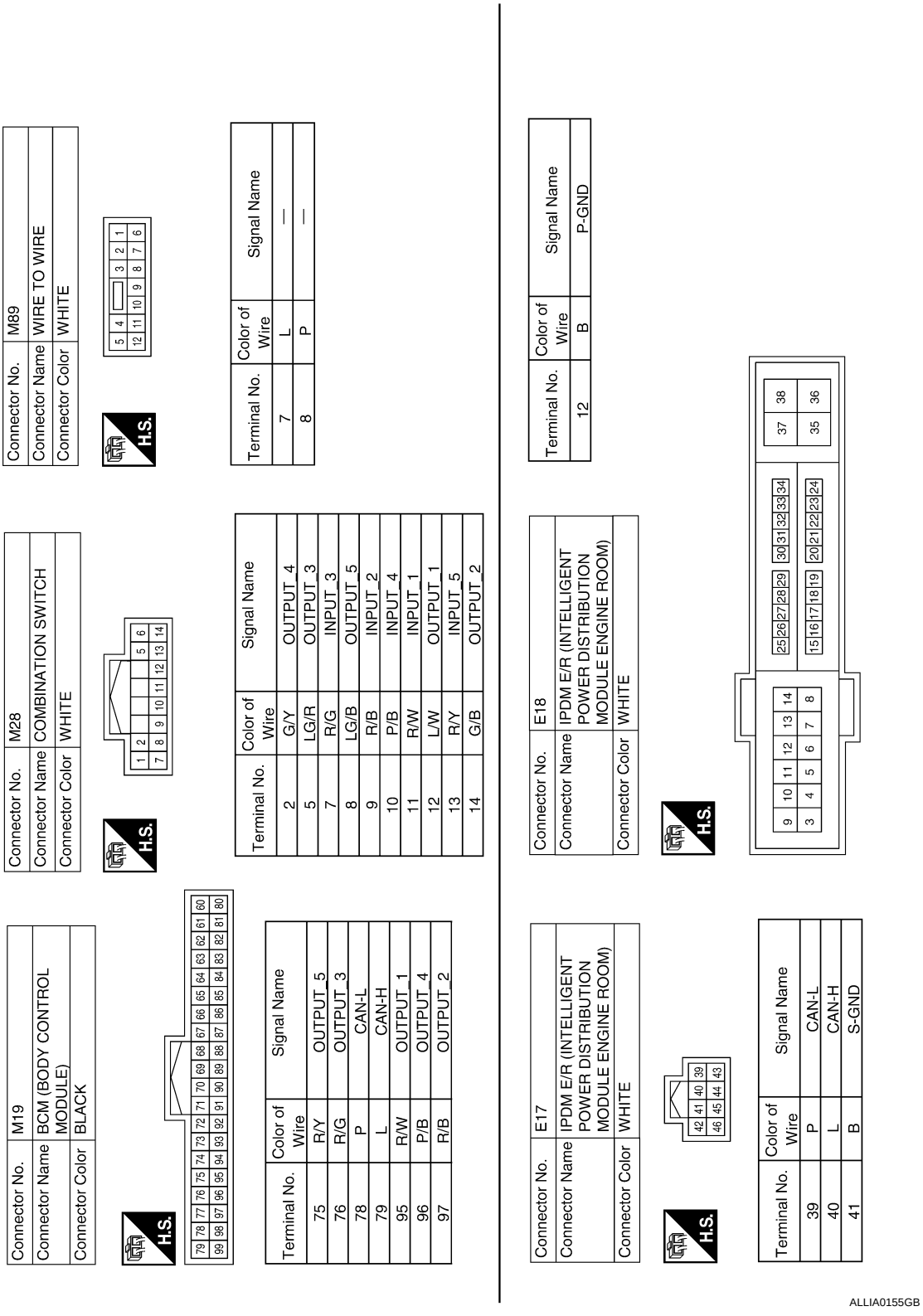
Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

H.S.



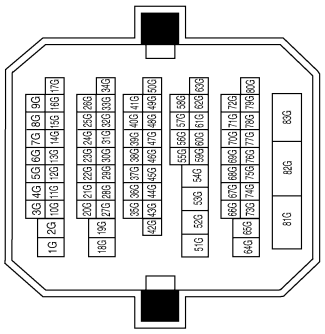
Terminal No.	Color of Wire	Signal Name
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4

ALLIA0154GB


Connector No. M19
Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK
H.S.
79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60
99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80
Terminal No. Color of Wire Signal Name
75 R/Y OUTPUT_5
76 R/G OUTPUT_3
78 P CAN-L
79 L CAN-H
95 R/W OUTPUT_1
96 P/B OUTPUT_4
97 R/B OUTPUT_2
Connector No. M28
Connector Name COMBINATION SWITCH
Connector Color WHITE
H.S.
1 2 3 4 5 6
7 8 9 10 11 12 13 14
Terminal No. Color of Wire Signal Name
2 G/Y OUTPUT_4
5 LG/R OUTPUT_3
7 R/G INPUT_3
8 LG/B OUTPUT_5
9 R/B INPUT_2
10 P/B INPUT_4
11 R/W INPUT_1
12 L/W OUTPUT_1
13 R/Y INPUT_5
14 G/B OUTPUT_2
Connector No. M89
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5 4 3 2 1
12 11 10 9 8 7 6
Terminal No. Color of Wire Signal Name
7 L —
8 P —
Connector No. E17
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
42 41 40 39
46 45 44 43
Terminal No. Color of Wire Signal Name
39 P CAN-L
40 L CAN-H
41 B S-GND
Connector No. E18
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
9 10 11 12 13 14
3 4 5 6 7 8
25 26 27 28 29 30 31 32 33 34
15 16 17 18 19 20 21 22 23 24
37 38
35 36
Terminal No. Color of Wire Signal Name
12 B P-GND
ALLIA0155GB

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

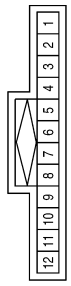
H.S.



Terminal No.	Color of Wire	Signal Name
82G	W/B	—

Connector No.	E59
Connector Name	JOINT CONNECTOR-E07
Connector Color	BLUE

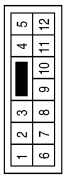
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
7	P	—
8	P	—

Connector No.	E64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
7	L	—
8	P	—

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
86	W/R	FR_FOG_LAMP_RH
87	L/Y	FR_FOG_LAMP_LH

Connector No.	E214
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L/Y	FR_FOG_RLY
2	B	GND

Connector No.	E227
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

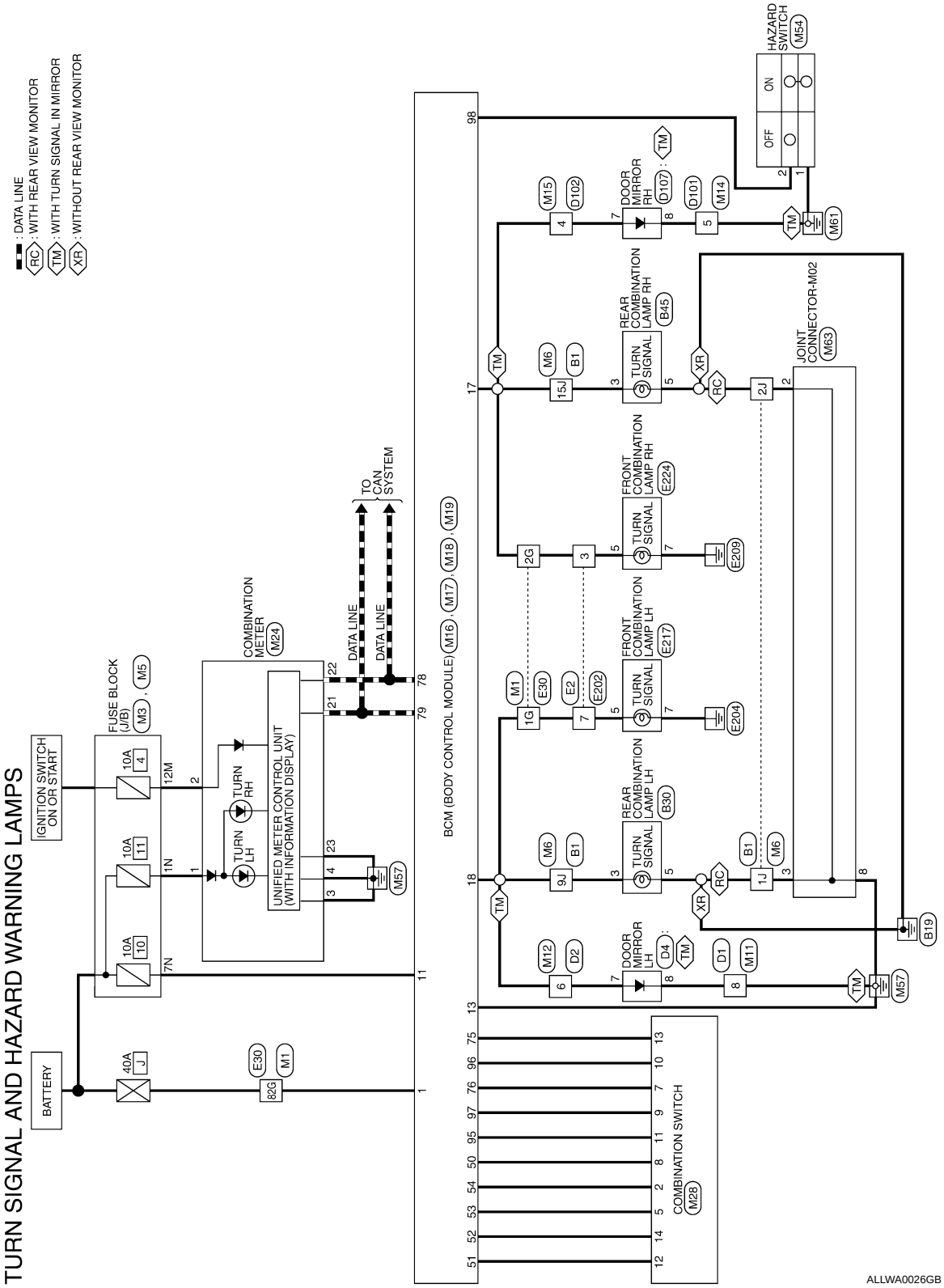
Terminal No.	Color of Wire	Signal Name
1	W/R	FR_FOG_RLY
2	B	GND

ALLIA0156GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

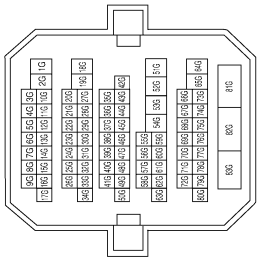
INFOID:0000000003071674



TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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

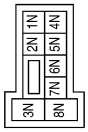
H.S.



Terminal No.	Color of Wire	Signal Name
1G	G/Y	—
2G	G/B	—
82G	W/B	—

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

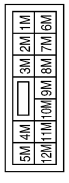
H.S.



Terminal No.	Color of Wire	Signal Name
1N	W/L	—
7N	Y/R	—

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

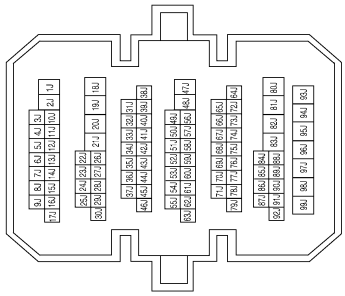
H.S.



Terminal No.	Color of Wire	Signal Name
12M	P	—

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

H.S.



Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B	—
9J	G/Y	—
15J	G/B	—

AWLIA0702GB

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	B	—

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	G/Y	—

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
5	B	—

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
4	G/B	—

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

1	3
2	

Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L

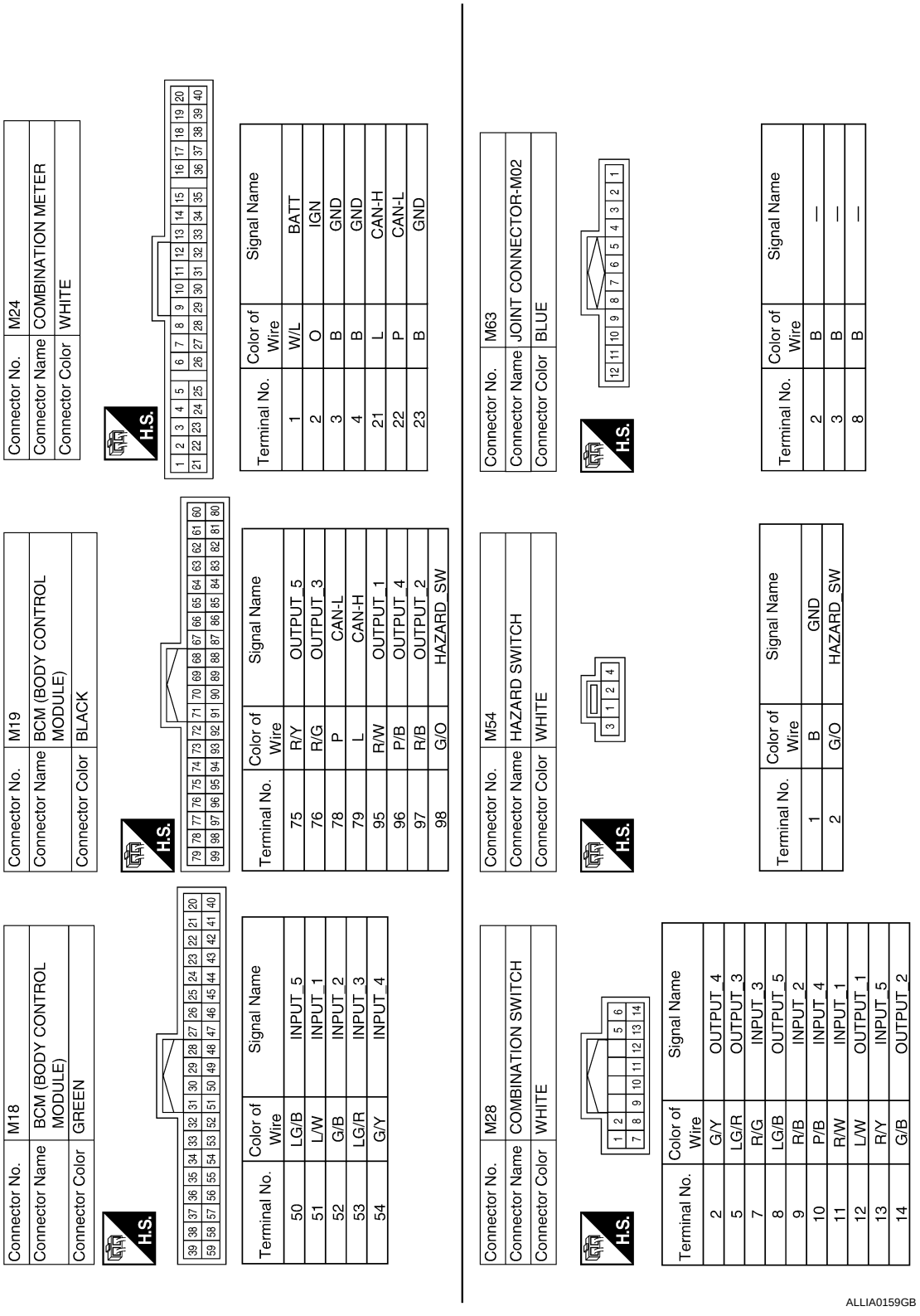
Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

4	5	6	7		8	9	10
11	12	13	14	15	16	17	18	19

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1
17	G/B	FR_FLASHER
18	G/Y	FL_FLASHER

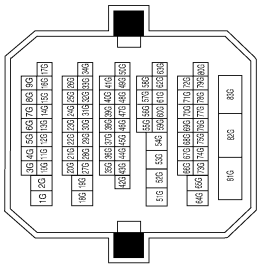
ALLIA0158GB


Connector No. M18
Connector Name BCM (BODY CONTROL MODULE)
Connector Color GREEN
H.S.
39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20
59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40
Terminal No. Color of Wire Signal Name
50 LG/B INPUT_5
51 L/W INPUT_1
52 G/B INPUT_2
53 LG/R INPUT_3
54 G/Y INPUT_4
Connector No. M19
Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK
H.S.
79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60
99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80
Terminal No. Color of Wire Signal Name
75 R/Y OUTPUT_5
76 R/G OUTPUT_3
78 P CAN-L
79 L CAN-H
95 R/W OUTPUT_1
96 P/B OUTPUT_4
97 R/B OUTPUT_2
98 G/O HAZARD_SW
Connector No. M24
Connector Name COMBINATION METER
Connector Color WHITE
H.S.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
Terminal No. Color of Wire Signal Name
1 W/L BATT
2 O IGN
3 B GND
4 B GND
21 L CAN-H
22 P CAN-L
23 B GND
Connector No. M28
Connector Name COMBINATION SWITCH
Connector Color WHITE
H.S.
1 2 5 6
7 8 9 10 11 12 13 14
Terminal No. Color of Wire Signal Name
2 G/Y OUTPUT_4
5 LG/R OUTPUT_3
7 R/G INPUT_3
8 LG/B OUTPUT_5
9 R/B INPUT_2
10 P/B INPUT_4
11 R/W INPUT_1
12 L/W OUTPUT_1
13 R/Y INPUT_5
14 G/B OUTPUT_2
Connector No. M54
Connector Name HAZARD SWITCH
Connector Color WHITE
H.S.
3 1 2 4
Terminal No. Color of Wire Signal Name
1 B GND
2 G/O HAZARD_SW
Connector No. M63
Connector Name JOINT CONNECTOR-M02
Connector Color BLUE
H.S.
12 11 10 9 8 7 6 5 4 3 2 1
Terminal No. Color of Wire Signal Name
2 B —
3 B —
8 B —
ALLIA0159GB

Terminal No.	Color of Wire	Signal Name
1G	G/Y	—
2G	G/B	—
82G	W/B	—

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



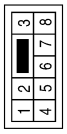
Connector No.	E224
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
5	G/B	FLASHER_OUT_PUT (RIGHT)
7	B	GND

Connector No.	E2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
3	G/B	—
7	G/Y	—

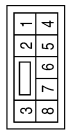
Connector No.	E217
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
5	G/Y	FLASHER_OUT_PUT (LEFT)
7	B	GND

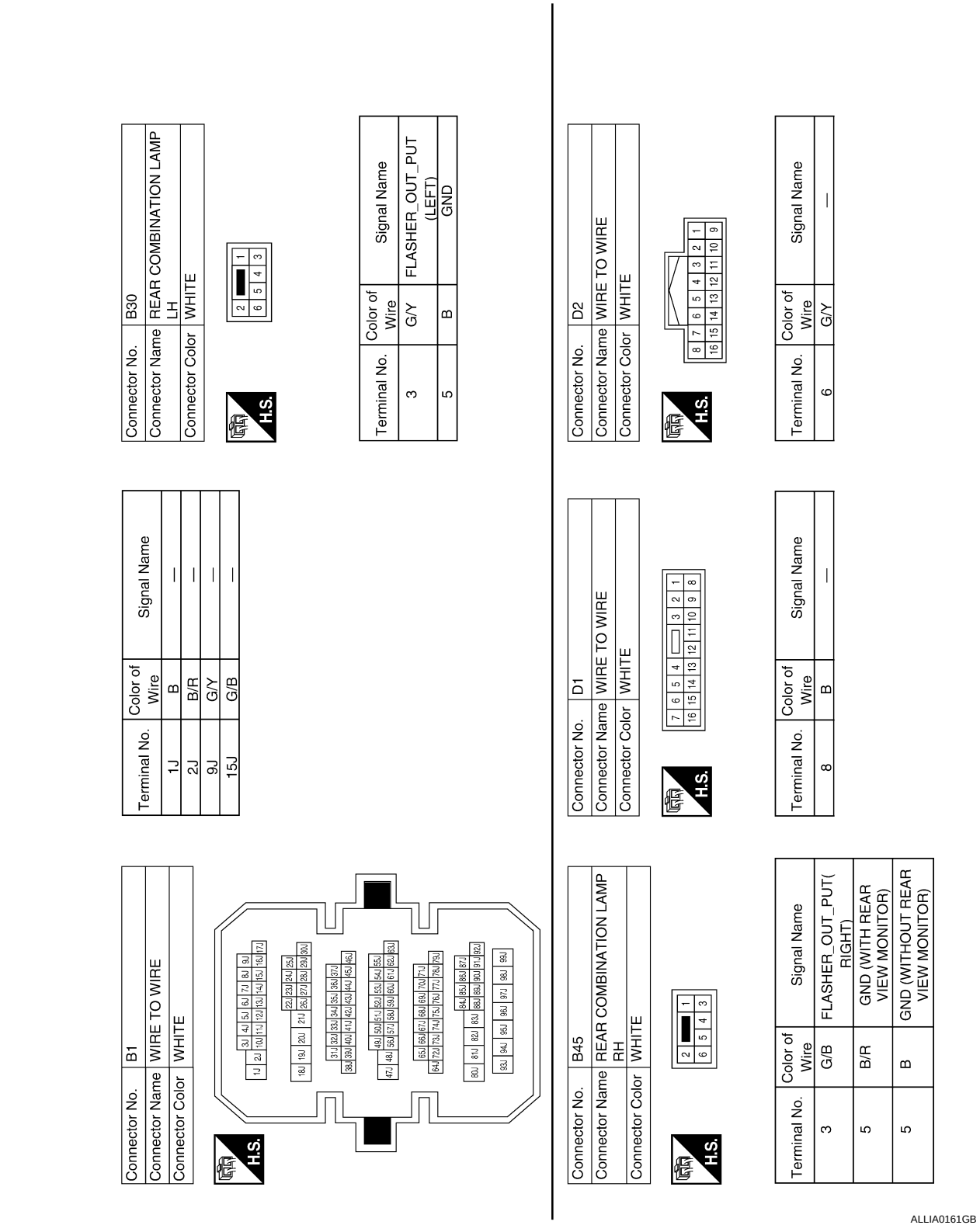
Connector No.	E202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



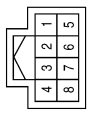
Terminal No.	Color of Wire	Signal Name
3	G/B	—
7	G/Y	—

AWLIA0703GB


Connector No. B1
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
1J B —
2J B/R —
9J G/Y —
15J G/B —
Connector No. B30
Connector Name REAR COMBINATION LAMP LH
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
3 G/Y FLASHER_OUT_PUT (LEFT)
5 B GND
Connector No. D1
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
8 B —
Connector No. D2
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
6 G/Y —
Connector No. B45
Connector Name REAR COMBINATION LAMP RH
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
3 G/B FLASHER_OUT_PUT(RIGHT)
5 B/R GND (WITH REAR VIEW MONITOR)
5 B GND (WITHOUT REAR VIEW MONITOR)
ALLIA0161GB

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

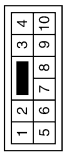
H.S.



Terminal No.	Color of Wire	Signal Name
7	G/Y	TURN(+)
8	B	TURN(-)

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

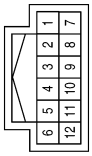
H.S.



Terminal No.	Color of Wire	Signal Name
5	B	—

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

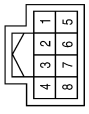
H.S.



Terminal No.	Color of Wire	Signal Name
4	G/B	—

Connector No.	D107
Connector Name	DOOR MIRROR RH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
7	G/B	TURN(+)
8	B	TURN(-)

ALLIA0162GB

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram

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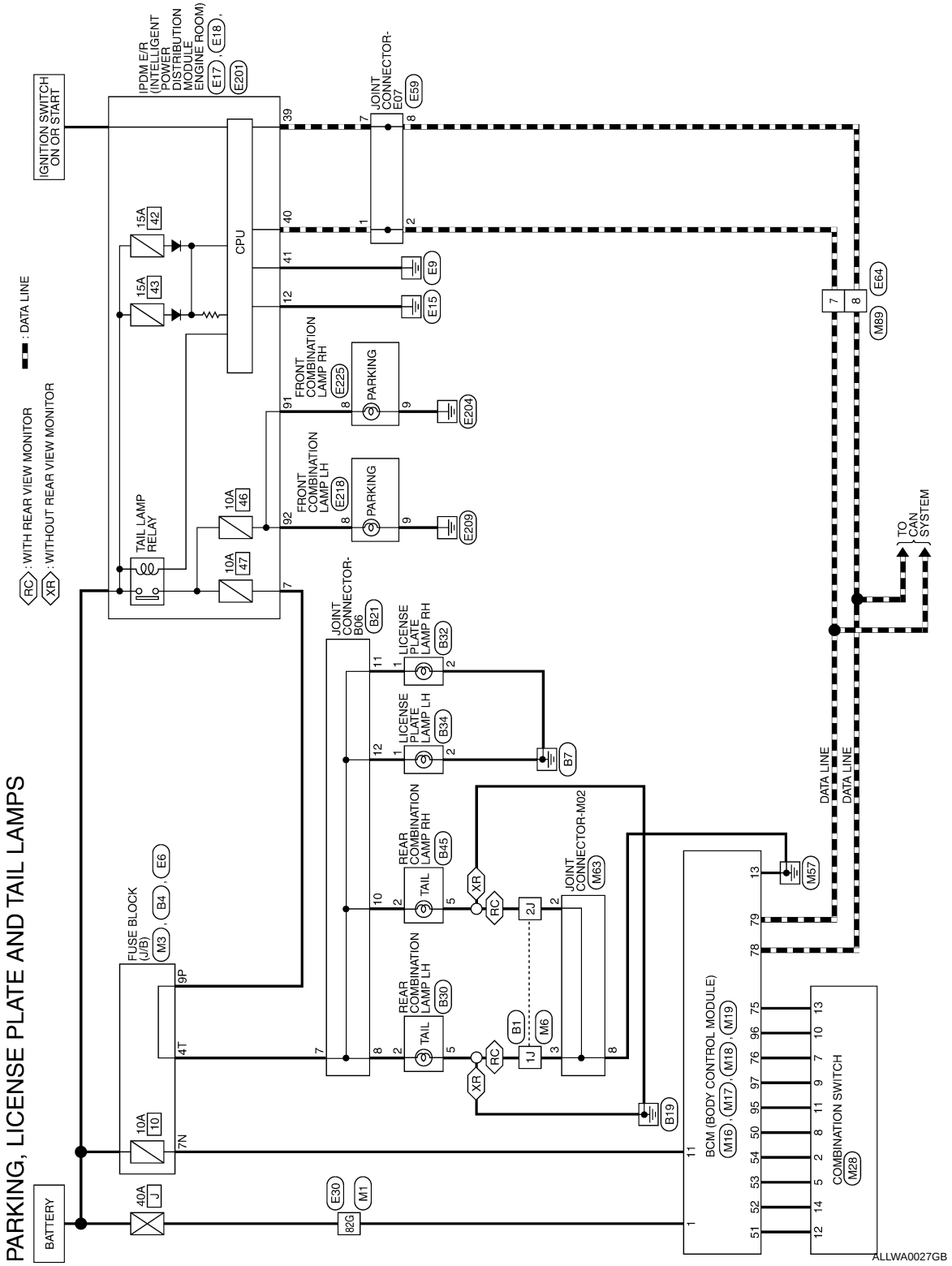


PARKING, LICENSE PLATE AND TAIL LAMP CONNECTORS

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

H.S.

Terminal No.	Color of Wire	Signal Name
82G	W/B	—

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

H.S.

Terminal No.	Color of Wire	Signal Name
7N	Y/R	—

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

H.S.

Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B	—

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1

ALLIA0163GB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	G/Y	OUTPUT_4
5	LG/R	OUTPUT_3
7	R/G	INPUT_3
8	LG/B	OUTPUT_5
9	R/B	INPUT_2
10	P/B	INPUT_4
11	R/W	INPUT_1
12	L/W	OUTPUT_1
13	R/Y	INPUT_5
14	G/B	OUTPUT_2

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

H.S.

79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
75	R/Y	OUTPUT_5
76	R/G	OUTPUT_3
78	P	CAN-L
79	L	CAN-H
95	R/W	OUTPUT_1
96	P/B	OUTPUT_4
97	R/B	OUTPUT_2

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

H.S.

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4

Connector No.	E6
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

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

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

Connector No.	M89
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	L	—
8	P	—

Connector No.	M63
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	B	—
3	B	—
8	B	—

ALLIA0164GB

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
82G	W/B	—

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
91	LG/R	CLEARANCE_RH
92	LG/B	CLEARANCE_LH

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	SB	DTRL
12	B	P-GND

Connector No.	E64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	L	—
8	P	—

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	S-GND

Connector No.	E59
Connector Name	JOINT CONNECTOR-E07
Connector Color	BLUE

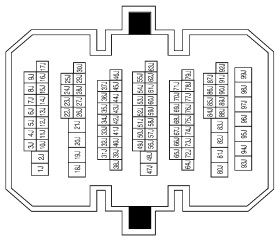
H.S.

Terminal No.	Color of Wire	Signal Name
1	L	—
2	L	—
7	P	—
8	P	—

ALLIA0165GB

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B/R	—

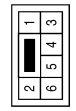
Connector No.	E225
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
8	LG/R	CLEARANCE
9	B	GND

Connector No.	B30
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
2	L/R	TAIL_LAMP
5	BR	GND

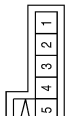
Connector No.	E218
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
8	LG/B	CLEARANCE
9	B	GND

Connector No.	B21
Connector Name	JOINT CONNECTOR-B06
Connector Color	BLUE

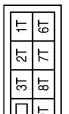
H.S.



Terminal No.	Color of Wire	Signal Name
7	L/R	—
8	L/R	—
10	L/R	—
11	L/R	—
12	L/R	—

Connector No.	B4
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

H.S.



Terminal No.	Color of Wire	Signal Name
4T	L/R	—

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Connector No.	B45
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
2	L/R	TAIL_LAMP
5	B/R	GND (WITH REAR VIEW MONITOR)
5	B	GND (WITHOUT REAR VIEW MONITOR)

Connector No.	B34
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

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

Connector No.	B32
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

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

ALLIA0167GB

STOP LAMP

Wiring Diagram

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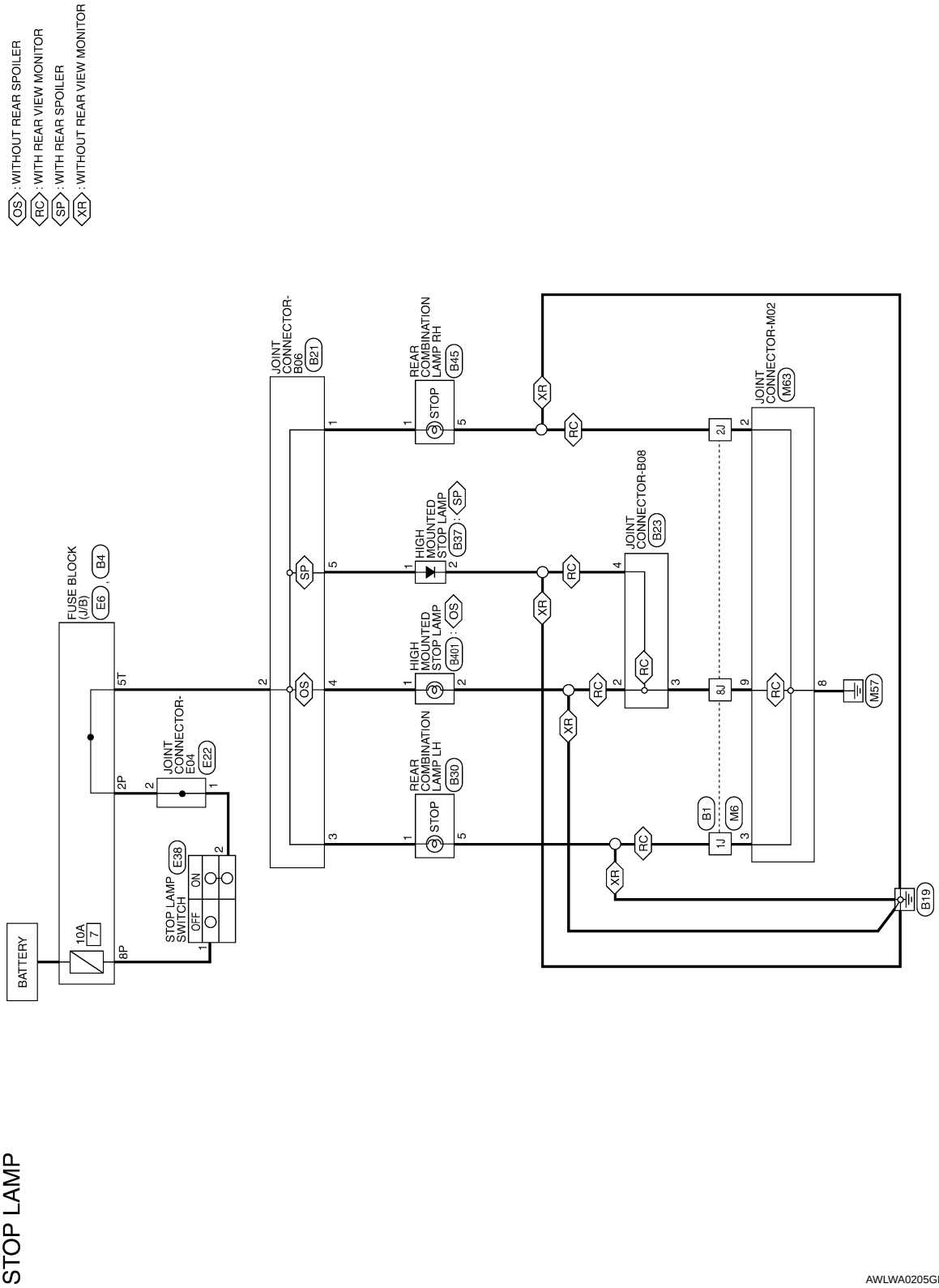
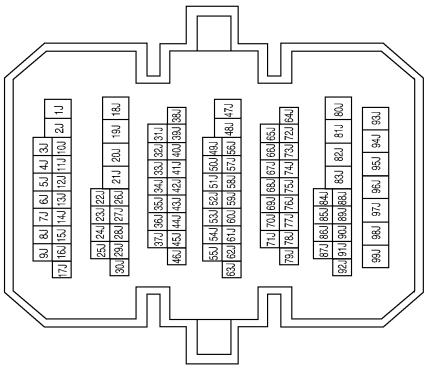


STOP LAMP CONNECTOR

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

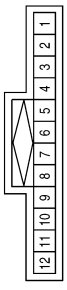
H.S.



Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B	—
8J	B	—

Connector No.	M63
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
2	B	—
3	B	—
8	B	—
9	B	—

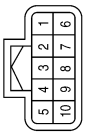
Connector No.	E6
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2P	R/G	—
8P	Y/R	—

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	BLACK

H.S.



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

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

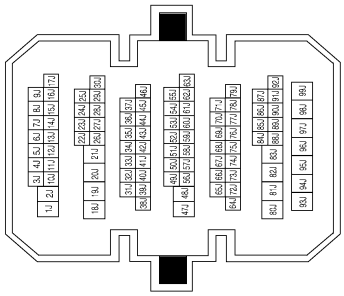
H.S.

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

ALLIA0168GB

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

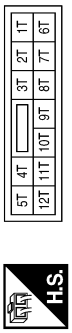
H.S.



Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B/R	—
8J	B	—

Connector No.	B4
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN

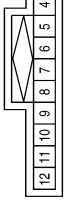
H.S.



Terminal No.	Color of Wire	Signal Name
5T	O	—

Connector No.	B21
Connector Name	JOINT CONNECTOR-B06
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
1	O	—
2	O	—
3	O	—
4	O	—
5	O	—

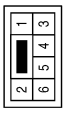
Connector No.	B23
Connector Name	JOINT CONNECTOR-B08
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	B	—
3	B	—
4	B	—

Connector No.	B30
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	O	STOP_LAMP
5	BR	GND

AWLIA0704GB

Connector No.	B37
Connector Name	HIGH MOUNTED STOP LAMP (WITH REAR SPOILER)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	O	STOP-LAMP
2	B	GND

Connector No.	B37
Connector Name	HIGH MOUNTED STOP LAMP (WITHOUT REAR SPOILER)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	O	STOP_LAMP
2	B	GND

Connector No.	B45
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

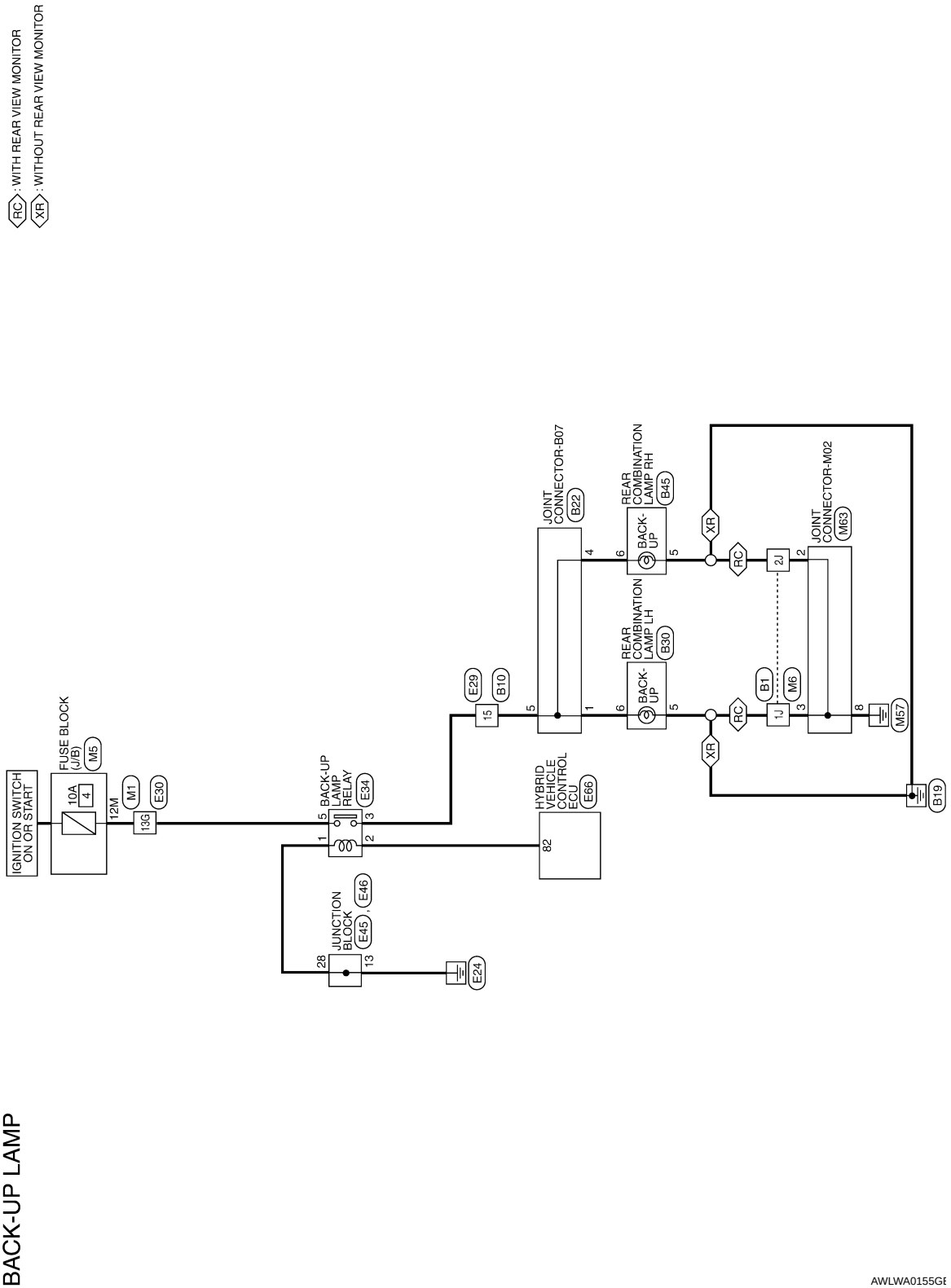
Terminal No.	Color of Wire	Signal Name
1	O	STOP_LAMP
5	B/R	GND (WITH REAR VIEW MONITOR)
5	B	GND (WITHOUT REAR VIEW MONITOR)

AWLIA0705GB

BACK-UP LAMP

Wiring Diagram

INFOID:0000000003071677



BACK-UP LAMP

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

H.S.

Terminal No.	Color of Wire	Signal Name
13G	O	—

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
12M	P	—

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

H.S.

Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B	—

Connector No.	M63
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
2	B	—
3	B	—
8	B	—

Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE

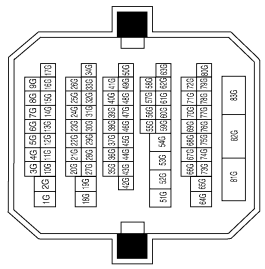
H.S.

Terminal No.	Color of Wire	Signal Name
15	P/B	—

ALLIA0171GB

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
13G	O	—

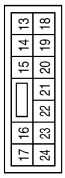
Connector No.	E34
Connector Name	BACK-UP LAMP RELAY
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	O/B	—
2	Y	—
3	P/B	—
5	O	—

Connector No.	E45
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
13	GR	—

Connector No.	E46
Connector Name	JUNCTION BLOCK
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
28	O/B	—

Connector No.	E66
Connector Name	HYBRID VEHICLE CONTROL ECU
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
82	G/B	BL

AWLIA0706GB

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1J	B	—
2J	B/R	—

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	P/B	—

Connector No.	B22
Connector Name	JOINT CONNECTOR - B07
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	P/B	—
4	P/B	—
5	P/B	—

Connector No.	B30
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	GND
6	P/B	REV_LAMP

Connector No.	B45
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	B/R	GND (WITH REAR VIEW MONITOR)
5	B	GND (WITHOUT REAR VIEW MONITOR)
6	P/B	REV_LAMP

ALLIA0173GB

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000003302395

VALUES ON THE DIAGNOSIS TOOL

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

Monitor Item	Condition	Value/Status
DOOR SW-BK	**NOTE:** This item is displayed, but cannot be monitored.	OFF
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Door lock/unlock switch LOCK	ON
CDL UNLOCK SW	Other than door lock/unlock switch UNLOCK	OFF
	Door lock/unlock switch UNLOCK	ON
KEY CYL LK-SW	Other than front door LH key cylinder LOCK position	OFF
	Front door LH key cylinder LOCK position	ON
KEY CYL UN-SW	Other than front door LH key cylinder UNLOCK position	OFF
	Front door LH key cylinder UNLOCK position	ON
KEY CYL SW-TR	**NOTE:** This item is displayed, but cannot be monitored.	OFF
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
FAN ON SIG	When AUTO switch or fan switch is pressed	ON
AIR COND SW	When A/C switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL (LIGHT) SENSOR	When outside of the vehicle is bright	Close to 5 V
	When outside of the vehicle is dark	Close to 0 V
REQ SW-DR	When front door LH request switch is not pressed	OFF
	When front door LH request switch is pressed	ON
REQ SW-AS	When front door RH request switch is not pressed	OFF
	When front door RH request switch is pressed	ON
REQ SW-BD/TR	When trunk request switch is not pressed	OFF
	When trunk request switch is pressed	ON

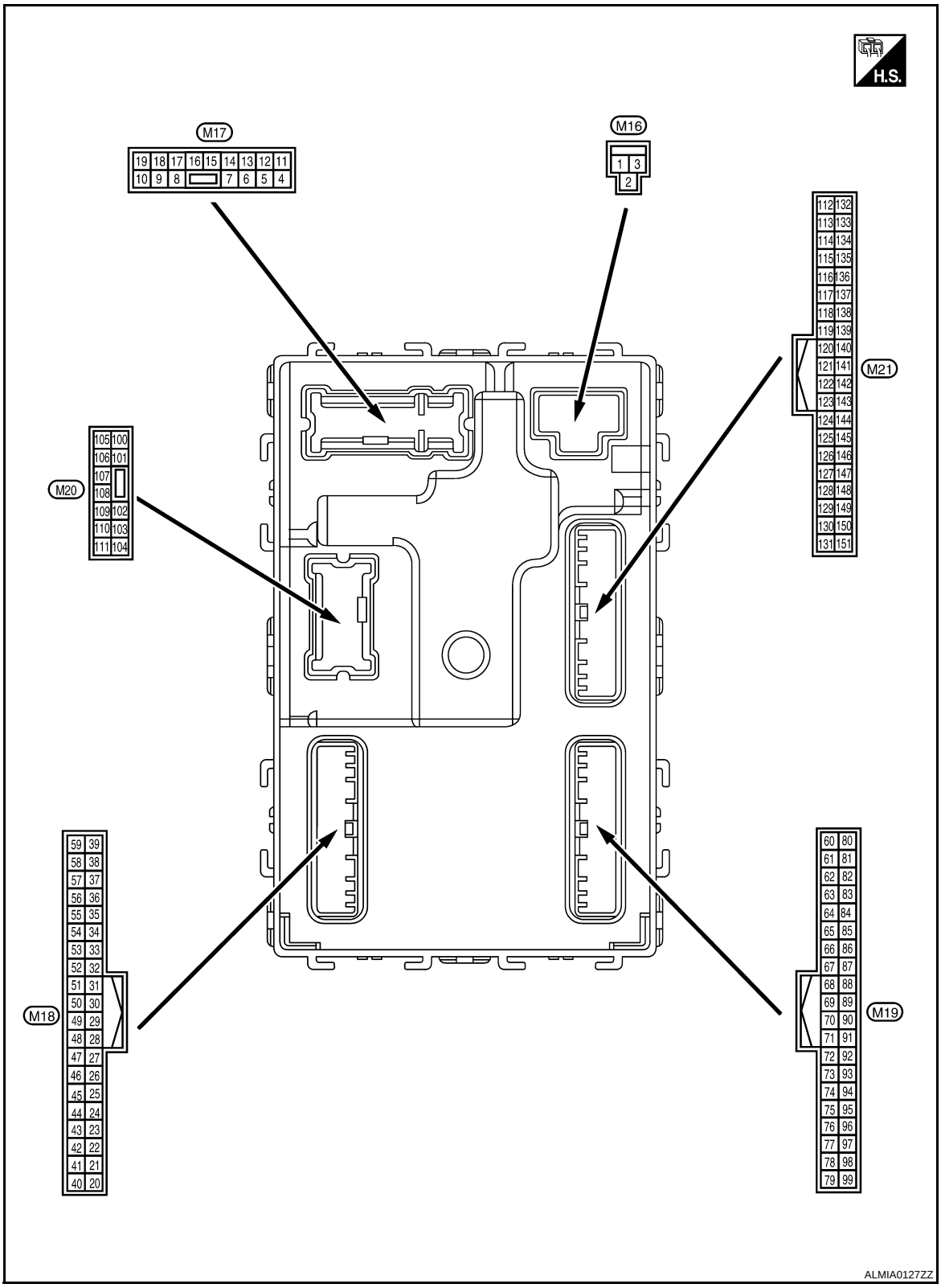
Monitor Item	Condition	Value/Status
PUSH SW	When push-button ignition switch is not pressed	OFF
	When push-button ignition switch is pressed	ON
IGN RLY -F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
ACC RLY -F/B	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
	When selector lever is in any position other than P	ON
SFT PN/N SW	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
S/L -LOCK	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
S/L -UNLOCK	Electronic steering column lock UNLOCK status	OFF
	Electronic steering column lock LOCK status	ON
S/L RELAY-F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
UNLK SEN-DR	Front door LH UNLOCK status	OFF
	Front door LH LOCK status	ON
PUSH SW -IPDM	When push-button ignition switch is not pressed (IPDM E/R sends via CAN)	OFF
	When push-button ignition switch is pressed (IPDM E/R sends via CAN)	ON
IGN RLY1 F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
DETE SW -IPDM	When selector lever is in P position (IPDM E/R sends via CAN)	OFF
	When selector lever is in any position other than P (IPDM E/R sends via CAN)	ON
SFT PN -IPDM	When selector lever is in any position other than P or N (IPDM E/R sends via CAN)	OFF
	When selector lever is in P or N position (IPDM E/R sends via CAN)	ON
SFT P -MET	When selector lever is in any position other than P (combination meter sends via CAN)	OFF
	When selector lever is in P position (combination meter sends via CAN)	ON
SFT N -MET	When selector lever is in any position other than N (combination meter sends via CAN)	OFF
	When selector lever is in N position (combination meter sends via CAN)	ON
ENGINE STATE	Engine stopped	STOP
	While the engine stalls	STALL
	At engine cranking	CRANK
	Engine running	RUN
S/L LOCK-IPDM	Electronic steering column lock LOCK status (IPDM E/R sends via CAN)	OFF
	Electronic steering column lock UNLOCK status (IPDM E/R sends via CAN)	ON

Monitor Item	Condition	Value/Status
S/L UNLCK-IPDM	Electronic steering column lock UNLOCK status (IPDM E/R sends via CAN)	OFF
	Electronic steering column lock LOCK status (IPDM E/R sends via CAN)	ON
S/L RELAY-REQ	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DR DOOR STATE	Front door LH LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Front door LH UNLOCK status	UNLK
AS DOOR STATE	Front door RH LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Front door RH UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STAT	When the hybrid system start is prohibited	RESET
	When the hybrid system start is permitted	SET
PRMT RKE STAT	**NOTE:** This item is displayed, but cannot be monitored.	RESET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	**NOTE:** This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	When ID of front LH tire transmitter is registered (refer to WT-6, "ID Registration Procedure")	DONE
	When ID of front LH tire transmitter is not registered (refer to WT-6, "ID Registration Procedure")	YET
ID REGST FR1	When ID of front RH tire transmitter is registered (refer to WT-6, "ID Registration Procedure")	DONE
	When ID of front RH tire transmitter is not registered (refer to WT-6, "ID Registration Procedure")	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered (refer to WT-6, "ID Registration Procedure")	DONE
	When ID of rear RH tire transmitter is not registered (refer to WT-6, "ID Registration Procedure")	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered (refer to WT-6, "ID Registration Procedure")	DONE
	When ID of rear LH tire transmitter is not registered (refer to WT-6, "ID Registration Procedure")	YET

Monitor Item	Condition	Value/Status
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON

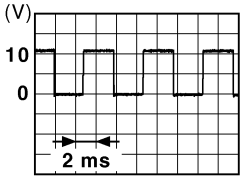
Terminal Layout

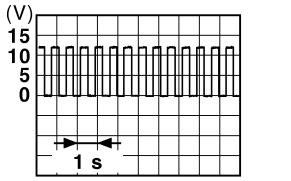
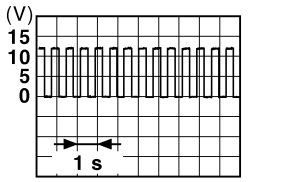
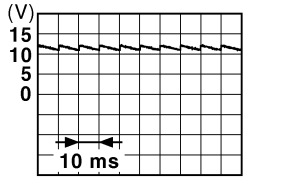
INFOID:0000000003302396

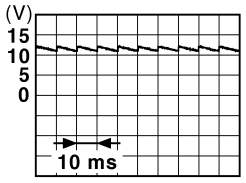
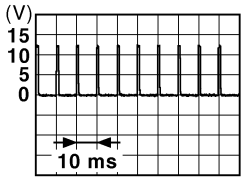
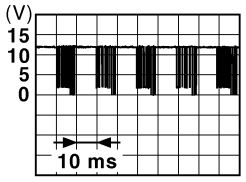


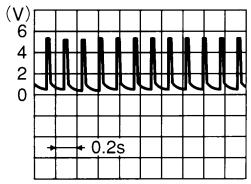
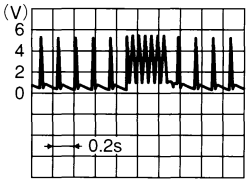
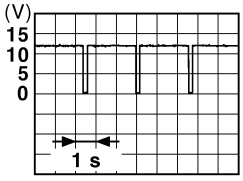
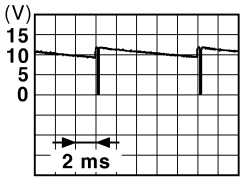
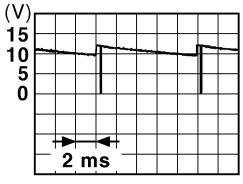
Physical Values

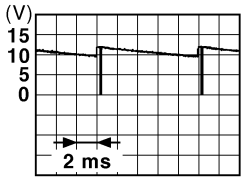
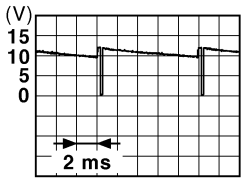
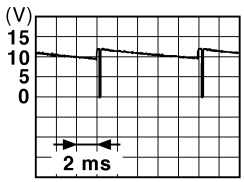
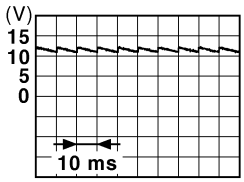
INFOID:0000000003302397

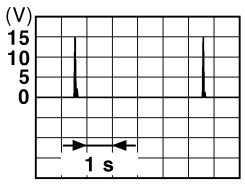
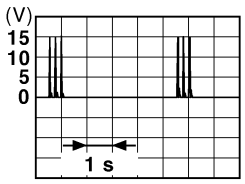
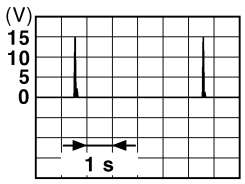
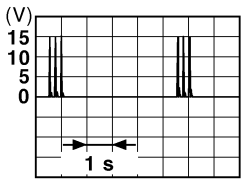
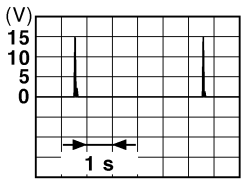
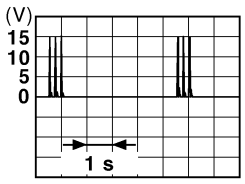
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (G/Y)	Ground	Front door RH UNLOCK	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
7 (R/W)	Ground	Step lamp	Output	Room lamp timer	ON	Battery voltage
					OFF	0V
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
					Other than LOCK (actuator is not activated)	0V
9 (G)	Ground	Front door LH UNLOCK	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
10 (G/Y)	Ground	Rear door RH and rear door LH UNLOCK	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0V
14 (R/Y)	Ground	Push-button ignition switch illumination ground	Input	Tail lamp	OFF	0V
					ON	**NOTE:** When the illumination brightening/dimming level is in the neutral position  JSNIA0010GB
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC	0V

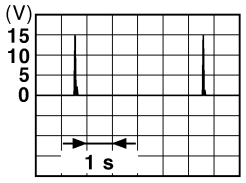
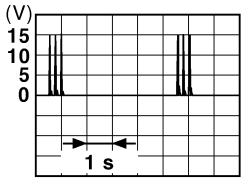
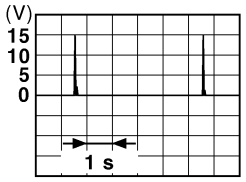
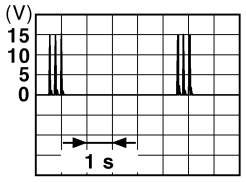
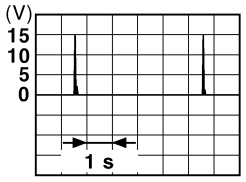
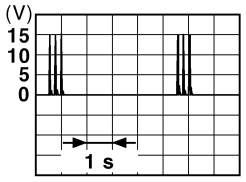
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 PKID0926E 6.5V
18 (G/O)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 PKID0926E 6.5V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	Lamps fully OFF	Battery voltage
					Lamps fully ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehicle is bright	Close to 5V
					When outside of the vehicle is dark	Close to 0V
24 (R/W)	Ground	Stop lamp switch 1	Input	—		Battery voltage
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not depressed)	0V
					ON (brake pedal is depressed)	Battery voltage
				ICC brake hold relay (with ICC)	OFF	0V
					ON	Battery voltage
27 (G/W)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	 JPMIA0011GB 11.8V
					UNLOCK status	0V
29 (Y)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
				When Intelligent Key is not inserted into key slot		0V
30 (V/Y)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
					ACC or ON	Battery voltage
31 (G)	Ground	Ignition relay-2 feedback signal	Input	Ignition switch	OFF	0V
					ON	Battery voltage

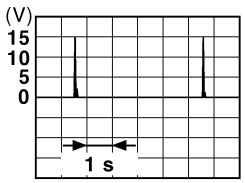
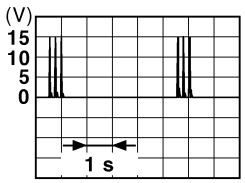
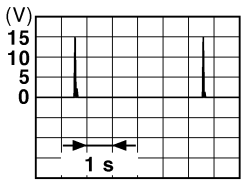
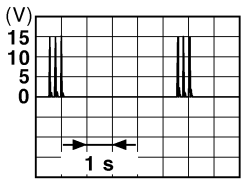
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	 JPMIA0011GB 11.8V
					ON (when front door RH opens)	0V
33 (SB)	Ground	Compressor ON signal	Input	A/C switch	OFF	Battery voltage
					ON	0V
34* (L/R)	Ground	Front door lock assembly LH (key cylinder switch) (unlock)	Input	Front door lock assembly LH (key cylinder switch)	OFF (neutral)	Battery voltage
					ON (unlock)	0V
36* (GR)	Ground	Lock switch signal	Input	Door lock/unlock switch	Lock	Battery Voltage
					Unlock	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 JPMIA0012GB 1.1V
					ON	0V
38 (GR/ W)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	Battery Voltage V
					ON	0V
39* (GR/ R)	Ground	Unlock switch signal	Input	Door lock/unlock switch	Unlock	Battery Voltage
					Lock	0V
40* (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		 JPMIA0013GB 10.2V
				Ignition switch OFF or ACC		0V
41 (W)	Ground	Push-button ignition switch illumination	Output	Engine switch (push switch) illumination	ON	5.5V
					OFF	0V
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0V
					OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		0V

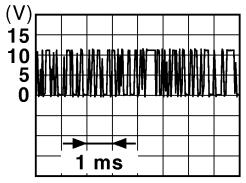
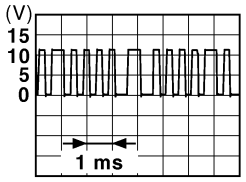
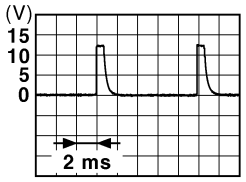
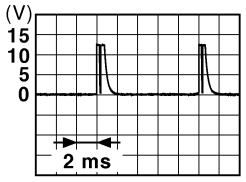
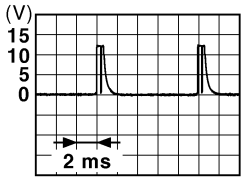
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF	0V
					ACC or ON	5.0V
47 (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
					When receiving the signal from the transmitter	 OCC3880D
48 (R/B)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position	12.0V
					Except P and N positions	0V
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	ON	0V
					Blinking	 JPMIA0014GB 11.3V
					OFF	Battery voltage
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Lighting switch 1ST	 JPMIA0031GB 10.7V
					Lighting switch high-beam	
					Lighting switch 2ND	
					Turn signal switch RH	
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	

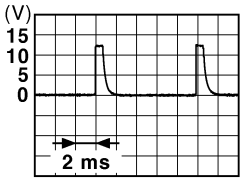
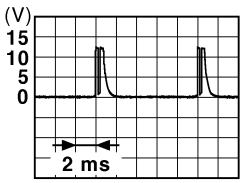
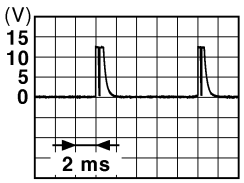
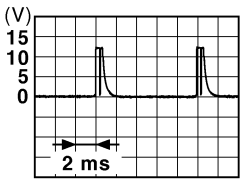
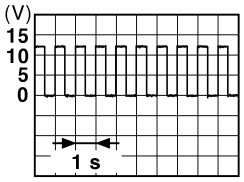
Terminal No. (Wire color) (+)	Terminal No. (Wire color) (-)	Description Signal name	Description Input/ Output	Condition		Value (Approx.)
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • WIper intermittent dial 5 • Wiper intermittent dial 6	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front wiper switch INT	 JPMIA0034GB 10.7V
					Front wiper switch LO	
					Lighting switch AUTO	
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	0V
					Front fog lamp switch ON	 JPMIA0035GB 10.7V
					Lighting switch 2ND	
					Lighting switch flash-to-pass	
					Turn signal switch LH	
55 (BR/ W)	Ground	Front blower monitor	Input	Front blower motor switch	ON	Battery voltage
					OFF	0V
56 (L/B)	Ground	Front door lock assembly LH (key cylinder switch) (lock)	Input	Front door lock assembly LH (key cylinder switch)	OFF (neutral)	Battery voltage
					ON (lock)	0V
57 (W)	Ground	Tire pressure warning check switch	Input	—		Battery voltage
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 JPMIA0011GB 11.8V
					ON (front door LH OPEN)	0V
59 (G/R)	Ground	Rear window defogger relay	Output	Rear window defogger	Active	Battery voltage
					Not activated	0V

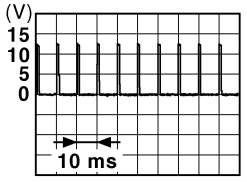
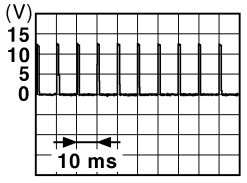
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
62 (B/Y)	Ground	Front outside handle RH antenna (-)	Output	When the front door RH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

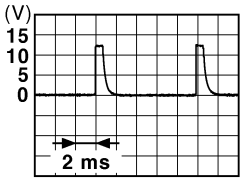
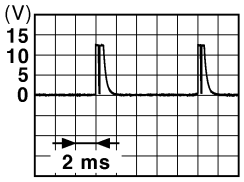
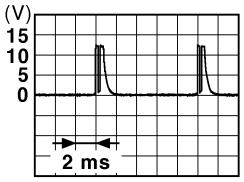
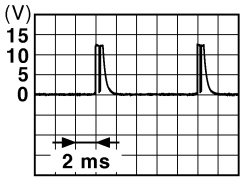
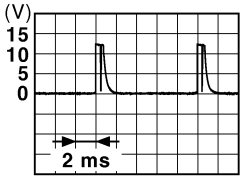
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
63 (LG)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

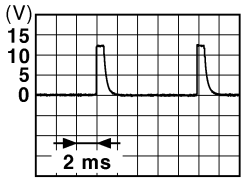
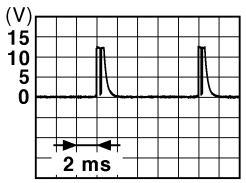
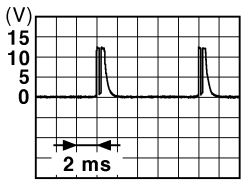
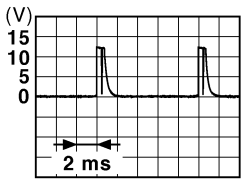
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
66 (R)	Ground	Instrument panel antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
67 (G)	Ground	Instrument panel antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage

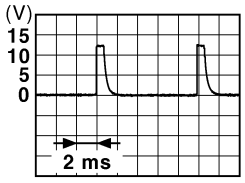
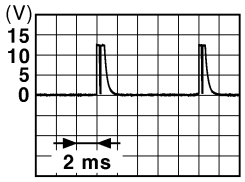
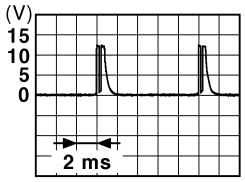
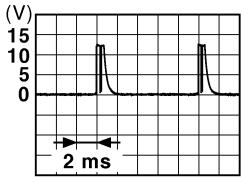
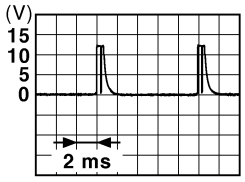
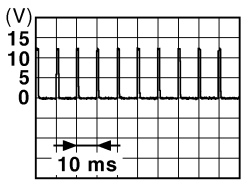
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
71 (L/O)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		 JMKIA0064GB
				When operating either button on Intelligent Key		 JMKIA0065GB
75 (R/Y)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 JPMIA0040GB 1.3V

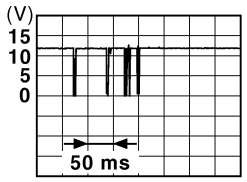
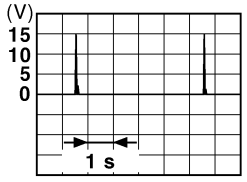
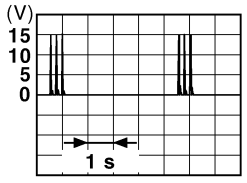
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch high-beam (Wiper intermittent dial 4)	 JPMIA0036GB 1.3V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3V
77 (BR)	Ground	Push-button ignition switch	Input	Engine switch (push switch)	Pressed	0V
					Not pressed	Battery voltage
78 (P)	Ground	CAN-L	Input/ Output	—		—
79 (L)	Ground	CAN-H	Input/ Output	—		—
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	0V
					Blinking	 JPMIA0015GB 6.5V
					ON	Battery voltage

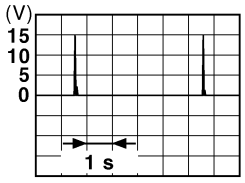
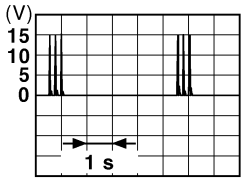
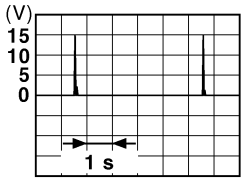
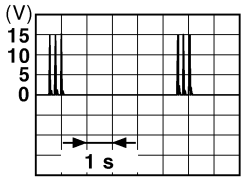
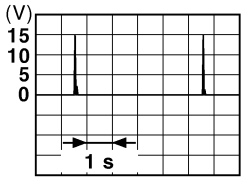
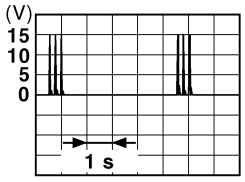
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
83 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0V
					ACC or ON	Battery voltage
84 (Y/R)	Ground	ECTV device (detent switch)	Output	—		Battery voltage
85 (L/O)	Ground	Electronic steering column lock condition No. 1	Input	Electronic steering column lock	Lock status	0V
					Unlock status	Battery voltage
86 (G/R)	Ground	Electronic steering column lock condition No. 2	Input	Electronic steering column lock	Lock status	Battery voltage
					Unlock status	0V
87 (G/B)	Ground	ECTV device (detent switch)	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
88 (P/L)	Ground	Front door RH request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
89 (B/W)	Ground	Front door LH request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
90 (Y)	Ground	Front blower motor relay control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
94 (G/Y)	Ground	Electronic steering column lock CPU power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V

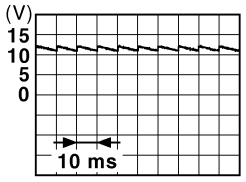
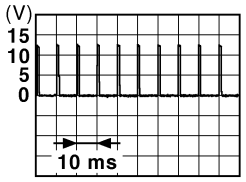
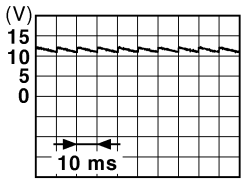
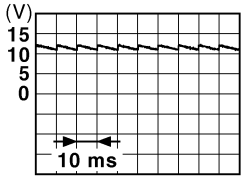
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Turn signal switch LH	 JPMIA0037GB 1.3V
					Turn signal switch RH	 JPMIA0036GB 1.3V
					Front wiper switch LO	 JPMIA0038GB 1.3V
					Front washer switch ON	 JPMIA0039GB 1.3V

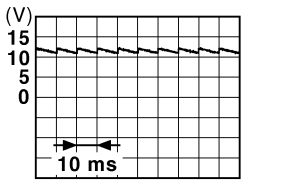
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
96 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4V
					Lighting switch AUTO (Wiper intermittent dial 4)	 JPMIA0038GB 1.3V
					Lighting switch 1ST (Wiper intermittent dial 4)	 JPMIA0036GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 JPMIA0039GB 1.3V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 JPMIA0041GB 1.4V
					Lighting switch flash-to-pass	 JPMIA0037GB 1.3V
					Lighting switch 2ND	 JPMIA0036GB 1.3V
					Front wiper switch INT	 JPMIA0038GB 1.3V
					Front wiper switch HI	 JPMIA0040GB 1.3V
98 (G/R)	Ground	Hazard switch	Input	Hazard switch	Pressed	0 V
					Not pressed	 JPMIA0012GB 1.1V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
99 (L/Y)	Ground	Electronic steering column lock CPU communication	Input/ Output	Electronic steering column lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 JMKIA0066GB
					For 15 seconds after UNLOCK	Battery voltage
					15 seconds or later after UNLOCK	0V
103 (V)	Ground	Trunk lid opening	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
					Close (trunk lid opener actuator is not activated)	0V
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
115 (W)	Ground	Trunk room antenna 1 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
118 (L/O)	Ground	Rear bumper antenna (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
119 (BR/ W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detection area	 JMKIA0063GB

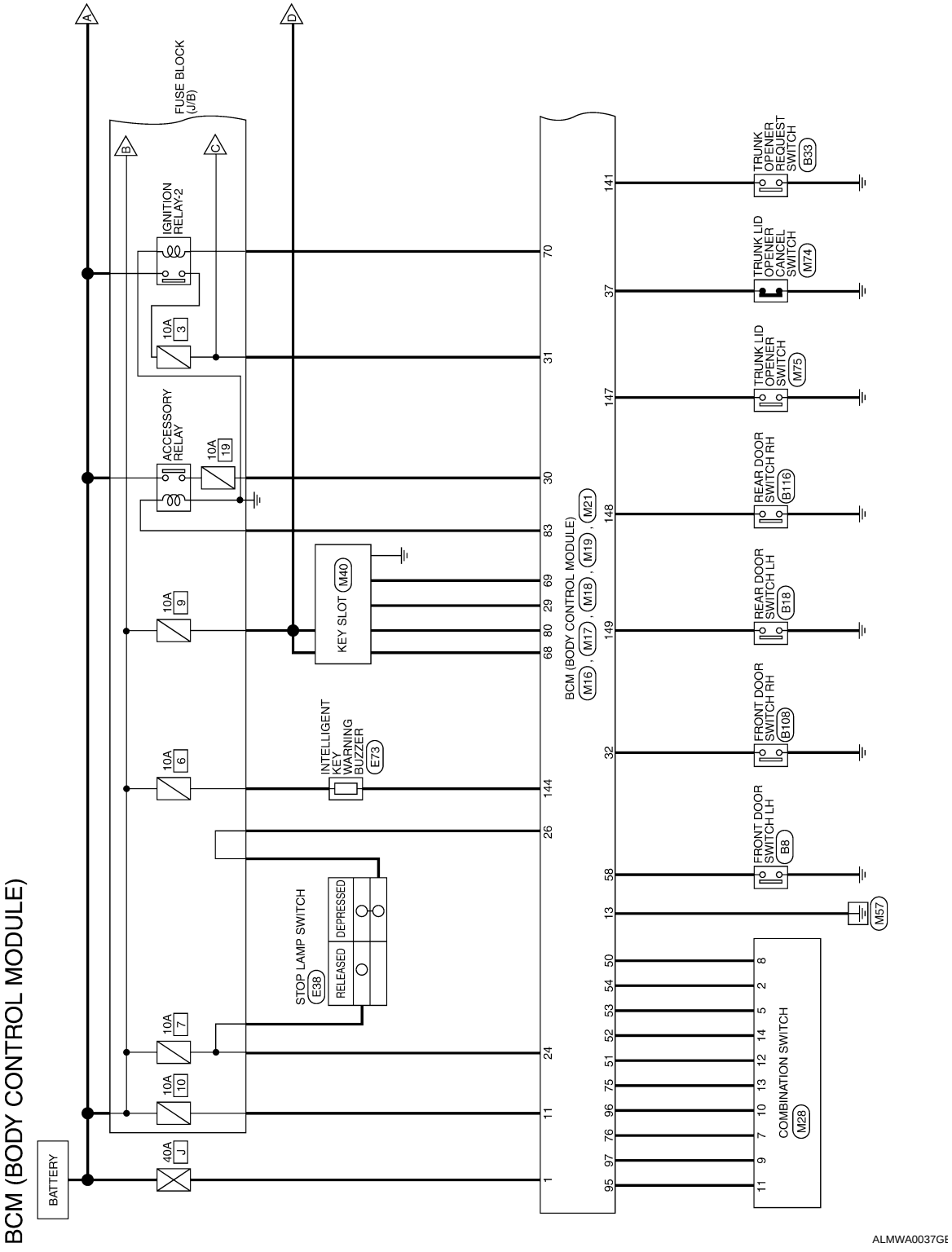
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	 JPMIA0011GB 11.8V
					ON (trunk is open)	0V
132 (R)	Ground	Start signal	Output	Ignition switch ON	When selector lever is in P or N position and the brake peddle is not depressed	0V
					When selector lever is in P or N position and the brake peddle is depressed	Battery voltage
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	ON (pressed)	0V
					OFF (not pressed)	 JPMIA0016GB 1.0V
144 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0V
					Not sounding	Battery voltage
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0V
					Not pressed	 JPMIA0011GB 11.8V
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	 JPMIA0011GB 11.8V
					ON (when rear door RH opens)	0V

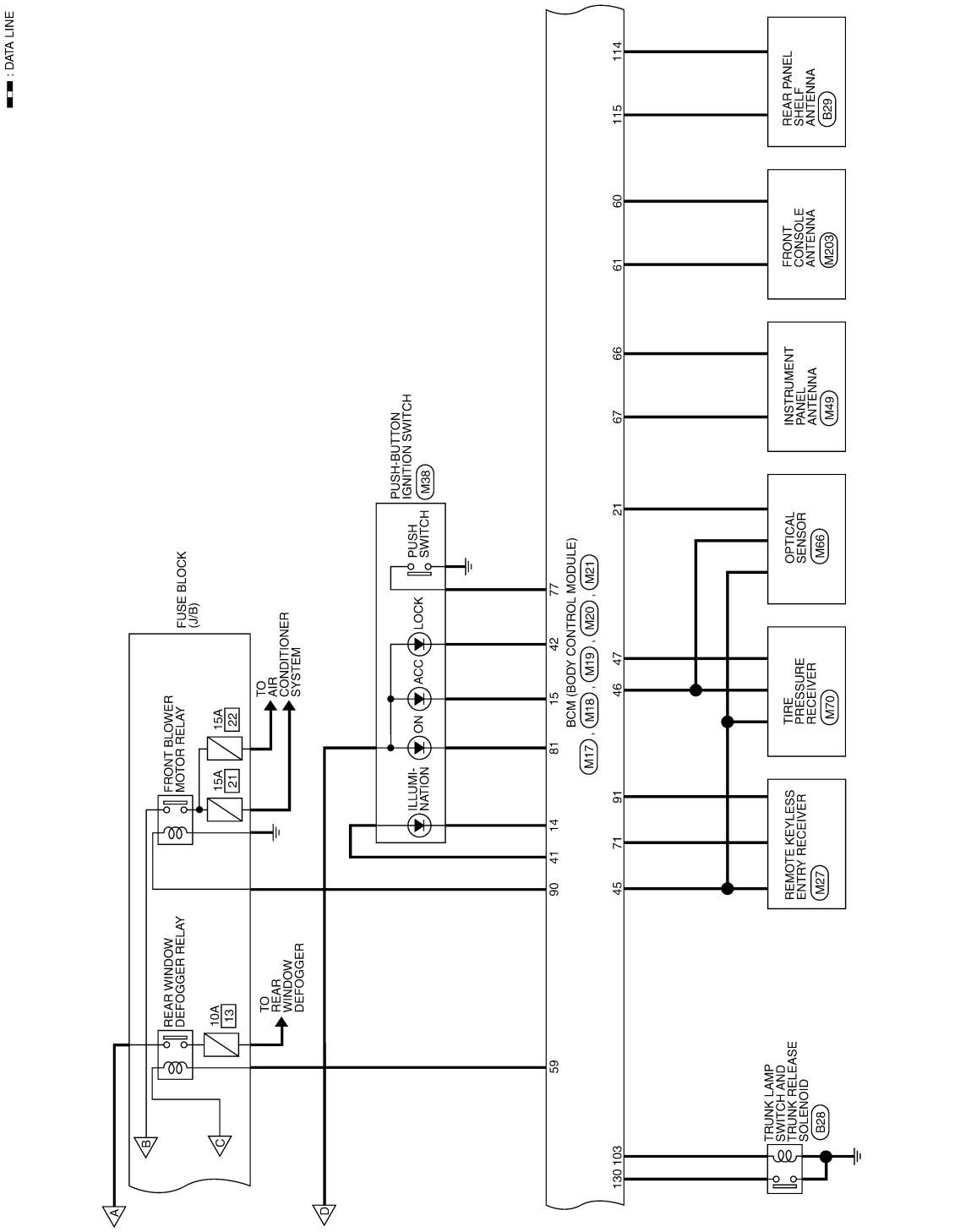
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	 JPMIA0011GB 11.8V
					ON (when rear door LH opens)	0V

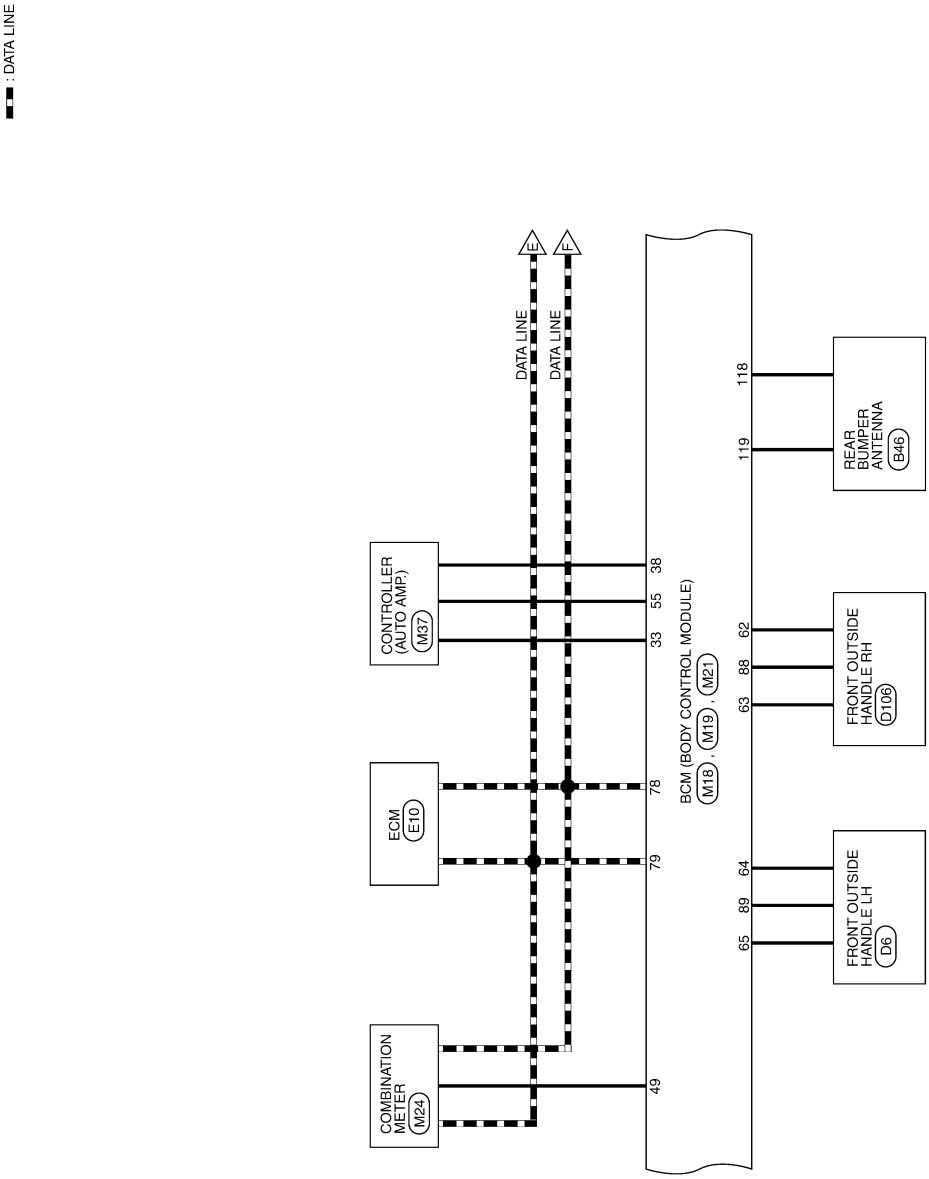
*: With LH and RH front window anti-pinch system

Wiring Diagram

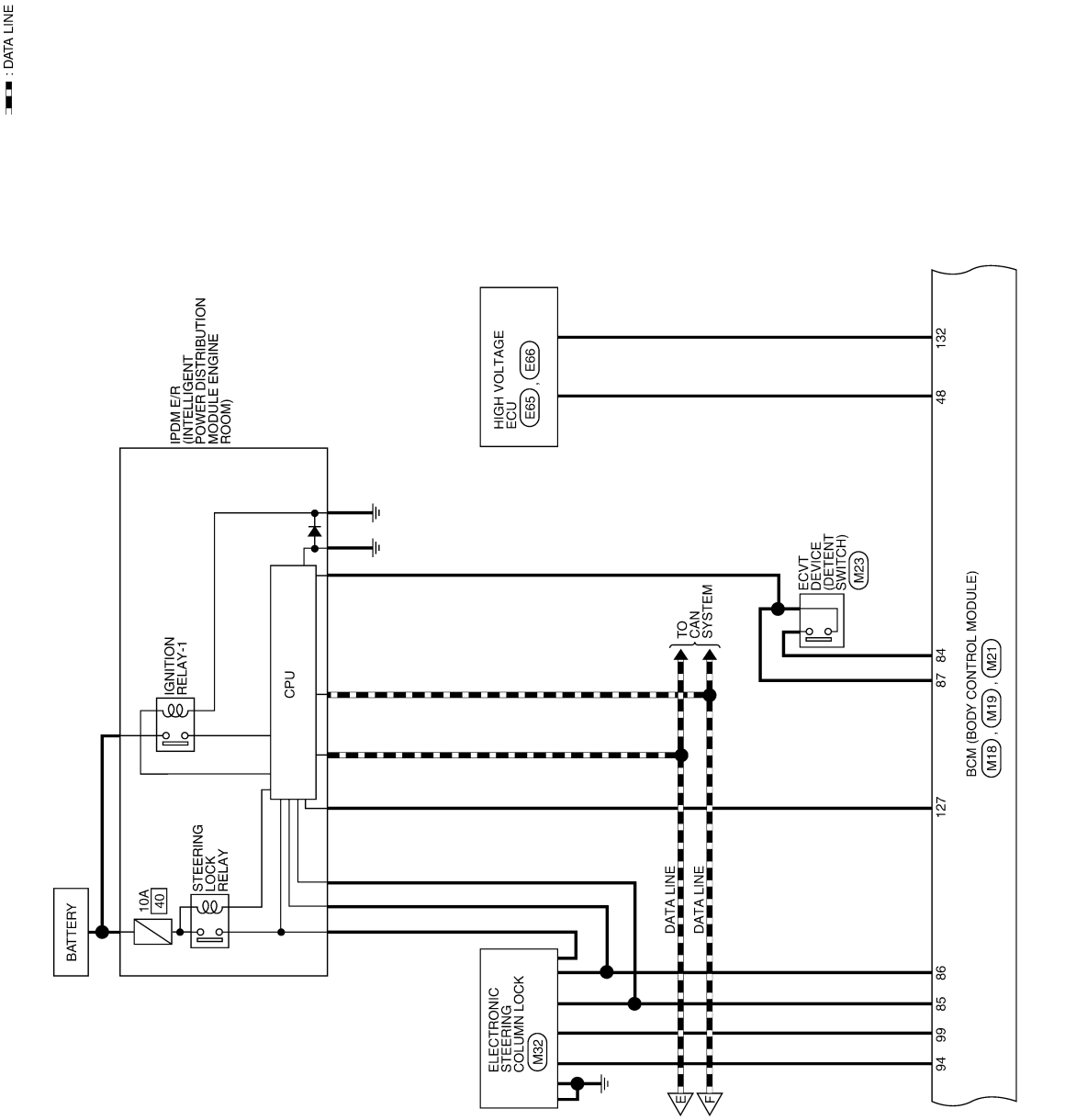
INFOID:0000000003302398

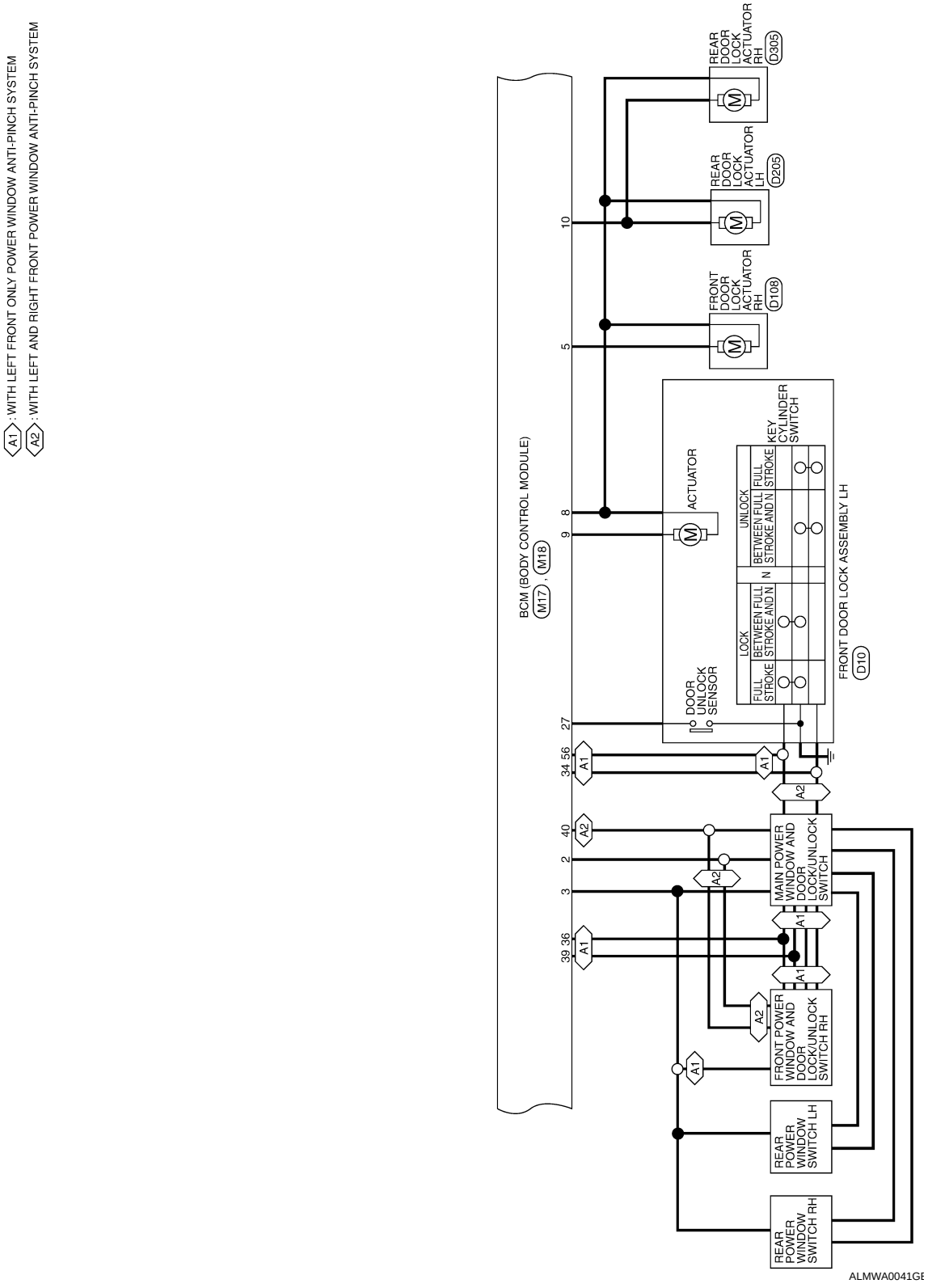


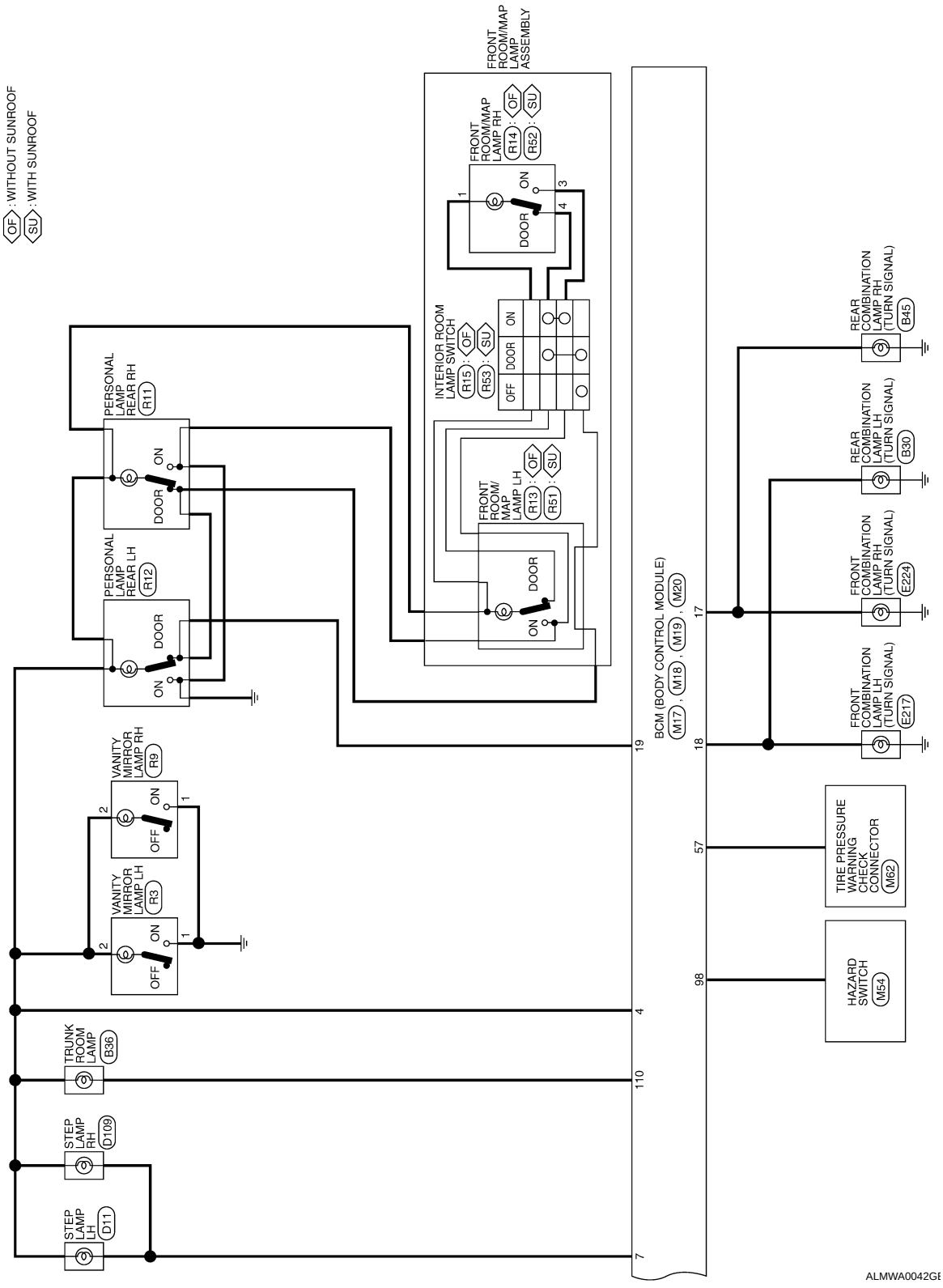

: DATA LINE
FUSE BLOCK (J/B)
FRONT BLOWER MOTOR RELAY
15A 22
15A 21
TO AIR CONDITIONER SYSTEM
REAR WINDOW DEFOGGER RELAY
10A 13
TO REAR WINDOW DEFOGGER
PUSH-BUTTON IGNITION SWITCH (M38)
PUSH SWITCH
LOCK
ACC
ON
ILLUMI-NATION
BCM (BODY CONTROL MODULE) (M17), (M18), (M19), (M20), (M21)
REAR PANEL SHELF ANTENNA (B29)
FRONT CONSOLE ANTENNA (M203)
INSTRUMENT PANEL ANTENNA (M49)
OPTICAL SENSOR (M66)
TIRE PRESSURE RECEIVER (M70)
REMOTE KEYLESS ENTRY RECEIVER (M27)
TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID (B28)
A
B
C
D
ALMWA0038GB



ALMWA0039GE


: DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
IGNITION RELAY-1
CPU
STEERING LOCK RELAY
10A 40
BATTERY
HIGH VOLTAGE ECU (E65), (E66)
ECVT DEVICE (DETENT SWITCH) (M23)
TO CAN SYSTEM
DATA LINE
DATA LINE
ELECTRONIC STEERING COLUMN LOCK (M32)
BCM (BODY CONTROL MODULE) (M18), (M19), (M21)
132
48
84
87
127
86
85
99
94
E
F
ALMWA0040GB


A1 : WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM
A2 : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
BCM (BODY CONTROL MODULE)
(M17) , (M18)
REAR DOOR LOCK ACTUATOR RH
D305
REAR DOOR LOCK ACTUATOR LH
D205
FRONT DOOR LOCK ACTUATOR RH
D108
FRONT DOOR LOCK ASSEMBLY LH
D10
ACTUATOR
KEY CYLINDER SWITCH
UNLOCK
BETWEEN FULL STROKE AND N
FULL STROKE
N
LOCK
DOOR UNLOCK SENSOR
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
FRONT POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
REAR POWER WINDOW SWITCH LH
REAR POWER WINDOW SWITCH RH
10
5
8
9
27
34 56
40
2
3
39 36
ALMWA0041GE


OF : WITHOUT SUNROOF
SU : WITH SUNROOF
FRONT ROOM/MAP LAMP ASSEMBLY
FRONT ROOM/MAP LAMP RH
R14 : OF
R52 : SU
INTERIOR ROOM LAMP SWITCH
R15 : OF
R53 : SU
FRONT ROOM/ MAP LAMP LH
R13 : OF
R51 : SU
PERSONAL LAMP REAR RH
R11
PERSONAL LAMP REAR LH
R12
VANITY MIRROR LAMP RH
R9
VANITY MIRROR LAMP LH
R3
TRUNK ROOM LAMP
B36
STEP LAMP RH
D109
STEP LAMP LH
D11
BCM (BODY CONTROL MODULE)
M17 , M18 , M19 , M20
REAR COMBINATION LAMP RH (TURN SIGNAL)
B45
REAR COMBINATION LAMP LH (TURN SIGNAL)
B30
FRONT COMBINATION LAMP RH (TURN SIGNAL)
E224
FRONT COMBINATION LAMP LH (TURN SIGNAL)
E217
TIRE PRESSURE WARNING CHECK CONNECTOR
M62
HAZARD SWITCH
M54
ALMWA0042GB

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L
2	R/Y	P/W_POWER_SUPPLY_PERM
3	L/W	POWER_WINDOW_POWER_SUPPLY (RAP)

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	P/W	ROOM_LAMP_BAT_SAVER
5	G/Y	CDL_AS
6	–	–
7	R/W	STEP_LAMP_OUTPUT
8	V	CDL_COMMON

Terminal No.	Color of Wire	Signal Name
9	G	CDL_DR/FL
10	G/Y	CDL_RR_RL_BACK
11	Y/R	BAT_BCM_FUSE
12	–	–
13	B	GND1
14	R/Y	LOW_SIDE_PUSH_LED_OUTPUT
15	Y/L	ACC_LED
16	–	–
17	G/B	FR_FLASHER
18	G/O	FL_FLASHER
19	Y	ROOM_LAMP_OUTPUT

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

H.S.

Terminal No.	Color of Wire	Signal Name
20	–	–
21	P/B	AUTO_LIGHT_SENSOR_INPUT1
22	–	–
23	–	–
24	R/W	STOP_LAMP_LOW_SW
25	–	–
26	O/L	STOP_LAMP_HIGH_SW

Terminal No.	Color of Wire	Signal Name
27	G/W	DOOR_LOCK_STATUS
28	–	–
29	Y	FOB_IN_SW_1
30	V/Y	ACC_F/B
31	G	IGN_F/B
32	R/B	AS_DOOR_SW
33	SB	AIRCON_SW
34	L/R	DOOR_KEY/C_UNLOCK_SW
35	–	–
36	GR	CENTRAL_LOCK_SW
37	O	TRUNK_CANCEL_SW
38	GR/W	REAR_DEFOGGER_SW
39	GR/R	CENTRAL_UNLOCK_SW
40	Y/G	PW_K-LINE
41	W	PUSH_LED
42	R	S/L_LOCK_LED
43	–	–
44	–	–
45	P	GND_RF2_A/L
46	V/W	A/L_SENS_KEYLESS_TUNER_POWER_SUPPLY

Terminal No.	Color of Wire	Signal Name
47	G/O	KEYLESS_TUNER_SI
48	R/B	SHIFT_N/P
49	L/O	IMMO_LED
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4
55	BR/W	BLOWER_FAN_SW/
56	L/B	DOOR_KEY/C_LOCK_SW
57	W	TPMS_MODE_TRIGGER_SW
58	SB	DR_DOOR_SW
59	G/R	REAR_DEFOGGER_RLY

ALMIA0083GB

Terminal No.	Color of Wire	Signal Name
82	–	–
83	L	ACC_CONT
84	Y/R	AT_DEVICE_OUT
85	L/O	S/L_CONDITION_1
86	G/R	S/L_CONDITION_2
87	G/B	SHIFT_P
88	P/L	AS_REQUEST SWITCH
89	B/W	DR_REQUEST SWITCH
90	Y	IGN2_CONT
91	L/R	RF1_POWER_SUPPLY
92	–	–
93	–	–
94	G/Y	S/L_POWER_SUPPLY_ 12V
95	R/W	OUTPUT_1
96	P/B	OUTPUT_4
97	R/B	OUTPUT_2
98	G/R	HAZARD_SW
99	L/Y	S/L_K-LINE

Terminal No.	Color of Wire	Signal Name
62	B/Y	AS_DOOR_ANT_B
63	LG	AS_DOOR_ANT_A
64	V	DR_DOOR_ANT_B
65	P	DR_DOOR_ANT_A
66	R	ROOM_ANT_1_B
67	G	ROOM_ANT_1_A
68	G/O	FOB_READER_CLOCK
69	O	FOB_READER_DATA
70	R/B	IGN_ELEC_CONT
71	L/O	RF1_TUNER_SIGNAL
72	–	–
73	–	–
75	R/Y	OUTPUT_5
76	R/G	OUTPUT_3
77	BR	ENG_START_SW
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB_SLOT_ ILLUMINATION
81	LG	IGN_ON_LED

Terminal No.	Color of Wire	Signal Name
100	–	–
101	–	–
102	–	–
103	V	CDL_BACK_TRUNK
104	–	–
105	–	–
106	–	–
107	–	–
108	–	–
109	–	–
110	V/W	TRUNK_LAMP_OUTPUT
111	–	–

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

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM_ANT_2_B
61	W/R	ROOM_ANT_2_A

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

ALMIA0084GB

Terminal No.	Color of Wire	Signal Name
119	BR/W	BACK_DOOR_ANT_A
120	–	–
121	–	–
122	–	–
123	–	–
124	–	–
125	–	–
126	–	–
127	BR/W	IGN_USM_CONT1
128	–	–
129	–	–
130	Y/G	TRUNK_SW
131	–	–
132	R	ST_CONT_USM
133	–	–
134	–	–
135	–	–
136	–	–
137	–	–
138	–	–
139	–	–
140	–	–
141	G/R	TRUNK_REQUEST_SW
142	–	–
143	–	–
144	GR	BUZZER
145	–	–
146	–	–
147	L/R	BACK_TRUNK_OPENER
148	R/W	RR_DOOR_SW
149	R/B	RL_DOOR_SW
150	–	–
151	–	–

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY

H.S.

131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112
151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132

Terminal No.	Color of Wire	Signal Name
112	–	–
113	–	–
114	B	TRUNK_ANT_1_B
115	W	TRUNK_ANT_1_A
116	–	–
117	–	–
118	L/O	BACK_DOOR_ANT_B

ALMIA0085GB

Fail Safe

INFOID:0000000003302399

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit hybrid system cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit hybrid system cranking	Erase DTC

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit hybrid system cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit hybrid system cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit hybrid system cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit hybrid system cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit hybrid system cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from brake ECU actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit hybrid system cranking	500 ms after the following CAN signal communication status has become consistent • Starter control relay signal • Starter relay status signal
B2562: LOW VOLTAGE	• Inhibit hybrid system cranking • Inhibit electronic steering column lock	100 ms after the power supply voltage increases to more than 8.8 V
B2563: HI VOLTAGE	• Inhibit hybrid system cranking • Inhibit electronic steering column lock	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	500 ms after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled • Status 1 - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF

Display contents of CONSULT	Fail-safe	Cancellation
B2605: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit hybrid system cranking	500 ms after the following CAN signal communication status has become consistent • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit hybrid system cranking	500 ms after the following CAN signal communication status has become consistent • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit hybrid system cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	• Inhibit hybrid system cranking • Inhibit electronic steering column lock	When the following electronic steering column lock conditions agree • BCM electronic steering column lock control status • Electronic steering column lock condition No. 1 signal status • Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit hybrid system cranking	500 ms after the following conditions are fulfilled • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled • Power position changes to ACC • Receives hybrid system status signal (CAN)
B2612: S/L STATUS	• Inhibit hybrid system cranking • Inhibit electronic steering column lock	When any of the following conditions is fulfilled • Electronic steering column lock unit status signal (CAN) is received normally • The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit hybrid system cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit hybrid system cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit hybrid system cranking	1 second after the electronic steering column lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit hybrid system cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit hybrid system cranking	When any of the following conditions is fulfilled • Power position changes to ACC • Receives hybrid system status signal (CAN)

DTC Inspection Priority Chart

INFOID:0000000003302400

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

Priority	DTC
1	• B2562: LOW VOLTAGE • B2563: HI VOLTAGE • B261E: VEHICLE TYPE
2	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM
4	• B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2611: ACC RELAY • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B26E1: ENG STATE NO RECIV • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG

Priority	DTC
5	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • 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 • C1734: CONTROL UNIT
6	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:0000000003302401

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	—	—	—	PCS-45
U1010: CONTROL UNIT (CAN)	—	—	—	PCS-46
U0415: VEHICLE SPEED SIG	—	—	—	BCS-38
B2013: ID DISCORD BCM-S/L	×	—	—	SEC-35
B2014: CHAIN OF S/L-BCM	×	—	—	SEC-36
B2190: NATS ANTENNA AMP	×	—	—	SEC-28
B2191: DIFFERENCE OF KEY	×	—	—	SEC-32
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-33
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-34
B2553: IGNITION RELAY	—	—	—	PCS-47
B2555: STOP LAMP	—	—	—	SEC-40

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2556: PUSH-BTN IGN SW	—	×	—	SEC-43
B2557: VEHICLE SPEED	×	×	—	SEC-45
B2560: STARTER CONT RELAY	×	×	—	SEC-46
B2562: LOW VOLTAGE	—	—	—	BCS-39
B2563: HI VOLTAGE	×	×	—	BCS-40
B2601: SHIFT POSITION	×	×	—	SEC-47
B2602: SHIFT POSITION	×	×	—	SEC-51
B2603: SHIFT POSI STATUS	×	×	—	SEC-54
B2604: PNP SW	×	×	—	SEC-58
B2607: S/L RELAY	×	×	—	SEC-60
B2608: STARTER RELAY	×	×	—	SEC-62
B2609: S/L STATUS	×	×	—	SEC-64
B260A: IGNITION RELAY	×	×	—	PCS-49
B260B: STEERING LOCK UNIT	—	×	—	SEC-69
B260C: STEERING LOCK UNIT	—	×	—	SEC-70
B260D: STEERING LOCK UNIT	—	×	—	SEC-71
B260F: ENG STATE SIG LOST	×	×	—	SEC-72
B2611: ACC RELAY	—	—	—	PCS-50
B2612: S/L STATUS	×	×	—	SEC-73
B2614: ACC RELAY CIRC	—	×	—	PCS-52
B2615: BLOWER RELAY CIRC	—	×	—	PCS-55
B2616: IGN RELAY CIRC	—	×	—	PCS-58
B2617: STARTER RELAY CIRC	×	×	—	SEC-78
B2618: BCM	×	×	—	PCS-61
B2619: BCM	×	×	—	SEC-80
B261A: PUSH-BTN IGN SW	—	×	—	SEC-81
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	—	SEC-84
B2621: INSIDE ANTENNA	—	—	—	DLK-42
B2622: INSIDE ANTENNA	—	—	—	DLK-45
B2623: INSIDE ANTENNA	—	—	—	DLK-48
C1704: LOW PRESSURE FL	—	—	×	WT-8
C1705: LOW PRESSURE FR	—	—	×	WT-8
C1706: LOW PRESSURE RR	—	—	×	WT-8
C1707: LOW PRESSURE RL	—	—	×	WT-8
C1708: [NO DATA] FL	—	—	×	WT-13
C1709: [NO DATA] FR	—	—	×	WT-13
C1710: [NO DATA] RR	—	—	×	WT-13
C1711: [NO DATA] RL	—	—	×	WT-13
C1712: [CHECKSUM ERR] FL	—	—	×	WT-14
C1713: [CHECKSUM ERR] FR	—	—	×	WT-14
C1714: [CHECKSUM ERR] RR	—	—	×	WT-14
C1715: [CHECKSUM ERR] RL	—	—	×	WT-14

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	—	—	×	WT-15
C1717: [PRESSDATA ERR] FR	—	—	×	WT-15
C1718: [PRESSDATA ERR] RR	—	—	×	WT-15
C1719: [PRESSDATA ERR] RL	—	—	×	WT-15
C1720: [CODE ERR] FL	—	—	×	WT-14
C1721: [CODE ERR] FR	—	—	×	WT-14
C1722: [CODE ERR] RR	—	—	×	WT-14
C1723: [CODE ERR] RL	—	—	×	WT-14
C1724: [BATT VOLT LOW] FL	—	—	×	WT-14
C1725: [BATT VOLT LOW] FR	—	—	×	WT-14
C1726: [BATT VOLT LOW] RR	—	—	×	WT-14
C1727: [BATT VOLT LOW] RL	—	—	×	WT-14
C1729: VHCL SPEED SIG ERR	—	—	×	WT-16

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:0000000003302402

VALUES ON THE DIAGNOSIS TOOL

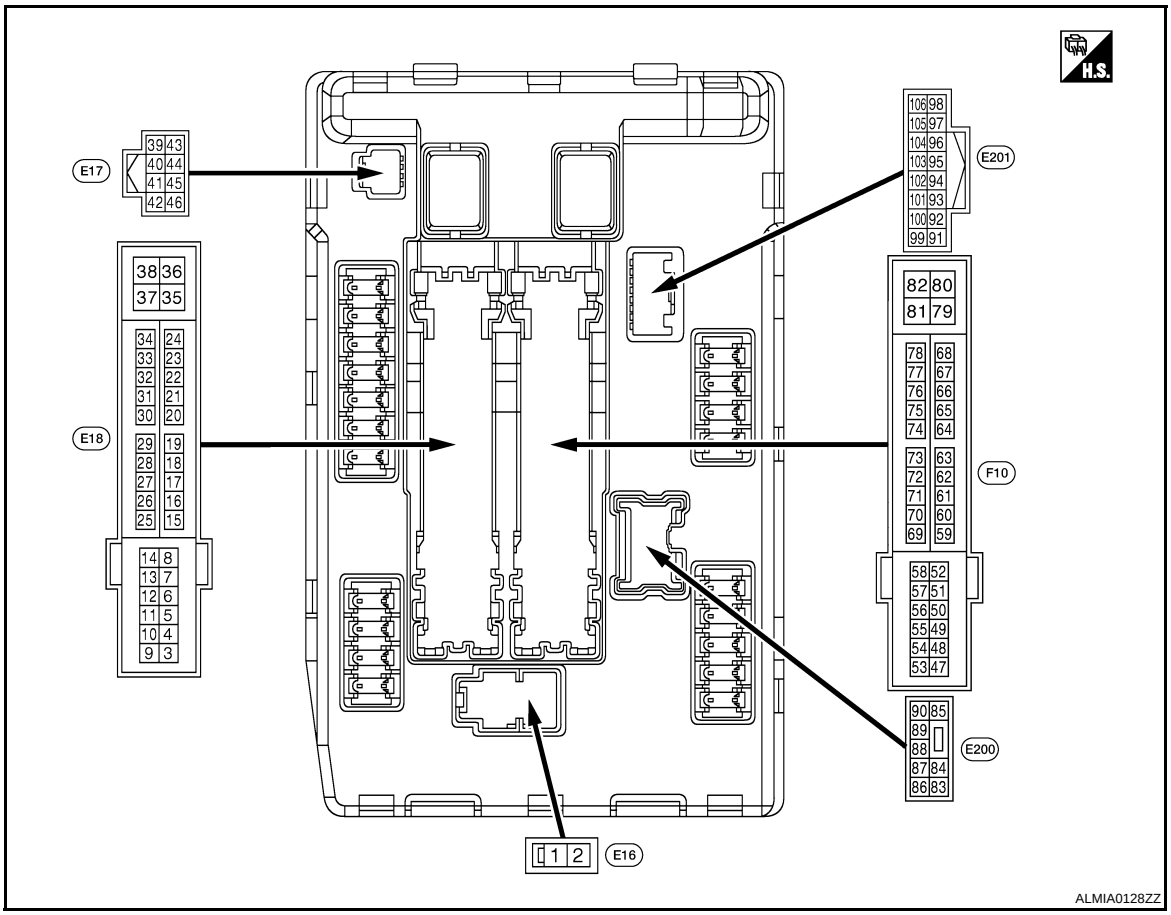
Monitor Item	Condition		Value/Status
RADFAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %
TAIL&CLR REQ	Lighting switch OFF		OFF
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		ON
HL LO REQ	Lighting switch OFF		OFF
	Lighting switch 2ND HI or AUTO (Light is illuminated)		ON
HL HI REQ	Lighting switch OFF		OFF
	Lighting switch HI		ON
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	Front fog lamp switch OFF	OFF
		• Front fog lamp switch ON • Daytime light activated (Canada only)	ON
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	STOP
		Front wiper switch INT	1LOW
		Front wiper switch LO	LOW
		Front wiper switch HI	HI
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	OFF
		Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		OFF
	Ignition switch ON		ON
IGN RLY	Ignition switch OFF or ACC		OFF
	Ignition switch ON		ON
PUSH SW	Release the push-button ignition switch		OFF
	Press the push-button ignition switch		ON
DETENT SW	Ignition switch ON	• Press the selector button with CVT selector lever in P position • CVT selector lever in any position other than P	OFF
	Release the CVT selector button with CVT selector lever in P position		ON
S/L RLY -REQ	None of the conditions below are present		OFF
	• Open the front door LH after the ignition switch is turned OFF (for a few seconds) • Press the push-button ignition switch when the steering lock is activated		ON

Monitor Item	Condition	Value/Status
S/L STATE	Steering lock is activated	LOCK
	Steering lock is deactivated	UNLK
	[DTC B210A] is detected	UNKWN
DTRL REQ	**NOTE:** This item is displayed, but cannot be monitored.	OFF
OIL P SW	Ignition switch OFF, ACC or engine running	OPEN
	Ignition switch ON	CLOSE
THFT HRN REQ	Not operated	OFF
	• Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM	ON
HORN CHIRP	Not operated	OFF
	Door locking with Intelligent Key (horn chirp mode)	ON
CRNRNG LMP REQ	**NOTE:** This item is displayed, but cannot be monitored.	OFF

Terminal Layout

INFOID:0000000003302403

TERMINAL LAYOUT



Physical Values

INFOID:0000000003302404

PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (B/Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (L/R)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF	0V
					Front wiper switch LO	Battery voltage
5 (L/B)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0V
					Front wiper switch HI	Battery voltage
6 (SB)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition switch OFF		Battery voltage
7 (R/L)	Ground	Tail, license plate lamps & interior lamps	Output	Ignition switch ON	Lighting switch OFF	0V
					Lighting switch 1ST	Battery voltage
10 (R/B)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
11 (P/L)	Ground	Steering lock unit power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0V
12 (B)	Ground	Ground	—	Ignition switch ON		0V
13 (W)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0V
				• Approximately 1 second after turning the ignition switch ON • Engine running		Battery voltage
15 (BR)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
16 (L/Y)	Ground	Front wiper auto stop	Input	Ignition switch ON	Front wiper stop position	0V
					Any position other than front wiper stop position	Battery voltage
19 (L/Y)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
20 (B/Y)	Ground	Ambient sensor ground	—	Ignition switch ON		0V
21 (O/B)	Ground	Ambient sensor	—	Ignition switch ON		5V
22 (W/R)	Ground	Refrigerent pressure sensor ground	—	Ignition switch ON		0V

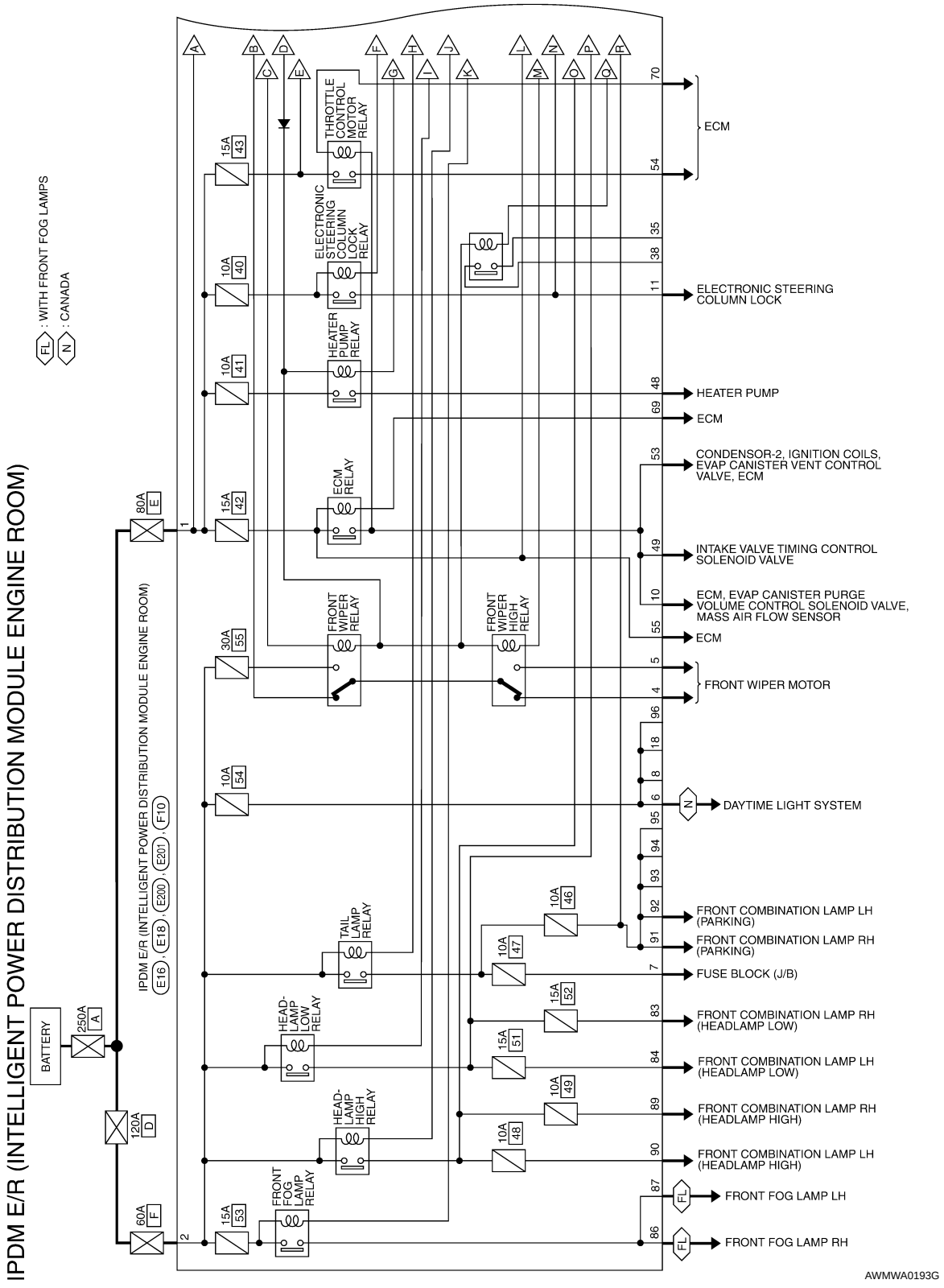
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
23 (B/R)	Ground	Refrigerent pressure sensor	—	• Ignition switch ON (READY) • Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
24 (BR/ W)	Ground	Refrigerent pressure sensor power supply	—	Ignition switch ON		5V
25 (G/R)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
27 (BR/ W)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0V
28 (BR)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0V
				Release the push-button ignition switch		Battery voltage
31 (G/W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
32 (LG)	Ground	Electronic steering column lock unit condition-1	Input	Electronic steering column lock is activated		0V
				Electronic steering column lock is deactivated		Battery voltage
33 (W)	Ground	Electronic steering column lock unit condition-2	Input	Electronic steering column lock is activated		Battery voltage
				Electronic steering column lock is deactivated		0V
39 (P)	—	CAN-L	Input/ Output	—		—
40 (L)	—	CAN-H	Input/ Output	—		—
41 (B)	Ground	Ground	—	Ignition switch ON		0V
42 (SB)	Ground	Cooling fan relay-1 control	Input	Ignition switch OFF or ACC		0V
				Ignition switch ON		0.7V
43 (G/B)	Ground	ECVT device (Detention switch)	Input	Ignition switch ON	Press the ECVT selector button (ECVT selector lever P)	Battery voltage
					• ECVT selector lever in any position other than P • Release the ECVT selector button (ECVT selector lever P)	0V
44 (G/W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0V
45 (L/O)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0V
48 (R)	Ground	Heater pump relay power supply	Output	Engine running	Heater pump OFF	0V
					Heater pump ON (Heater pump is operating)	Battery voltage

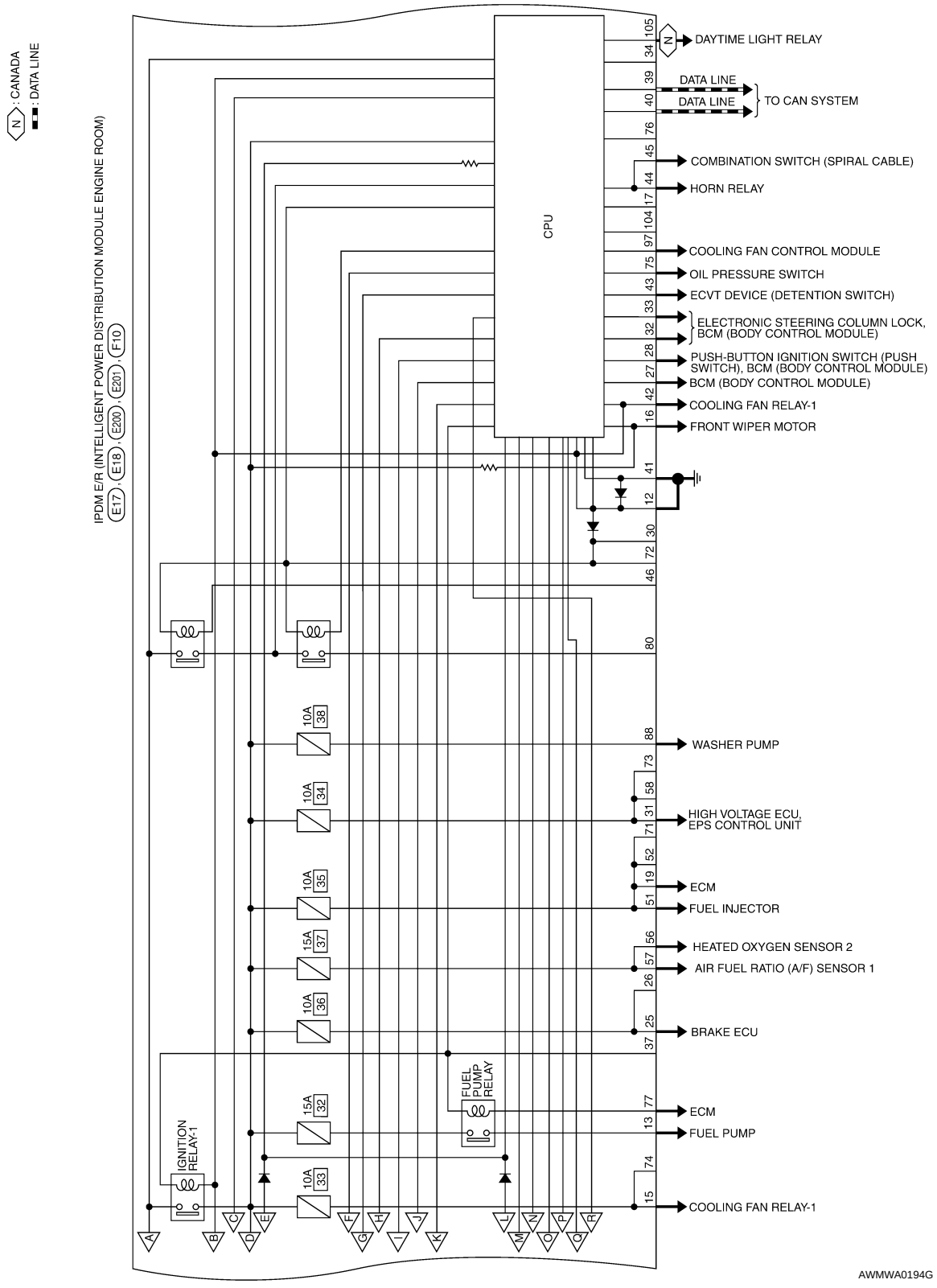
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
49 (B/R)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
51 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
53 (R/W)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
54 (G/W)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0V
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (R/Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
57 (O)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0V
				Ignition switch ON		Battery voltage
69 (W/B)	Ground	ECM relay control	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
				• Ignition switch ON • Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 - 1.5V
70 (O)	Ground	Throttle control motor relay control	Output	Ignition switch ON → OFF		0 -1.0V ↓ Battery voltage ↓ 0V
				Ignition switch ON		0 - 1.0V
75 (P/L)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0V
					Engine running	Battery voltage
77 (B/R)	Ground	Fuel pump relay control	Output	• Approximately 1 second after turning the ignition switch ON • Engine running		0 - 1.0V
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage
83 (R/Y)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0V
					Lighting switch 2ND	Battery voltage

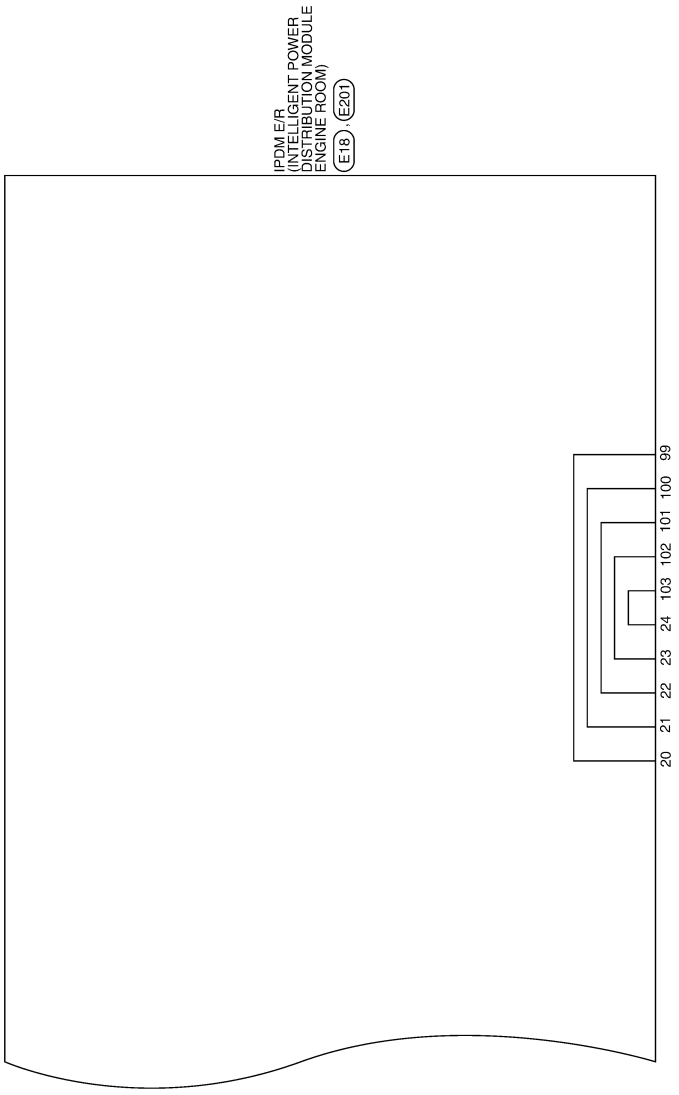
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
84 (L)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0V
					Lighting switch 2ND	Battery voltage
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime light activated (Canada only)	Battery voltage
					Front fog lamp switch OFF	0V
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	• Front fog lamp switch ON • Daytime light activated (Canada only)	Battery voltage
					Front fog lamp switch OFF	0V
88 (R/W)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0V
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0V
91 (LG/ R)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0V
92 (LG/ B)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0V
97 (V)	Ground	Cooling fan control	Output	Engine idling		0-5V
99 (BR/ W)	Ground	Ambient sensor ground	—	Ignition switch ON		0V
100 (SB)	Ground	Ambient sensor	—	Ignition switch ON		5V
101 (W)	Ground	Refrigerent pressure sensor ground	—	Ignition switch ON		0V
102 (R)	Ground	Refrigerent pressure sensor	—	• Ignition switch ON (READY) • Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
103 (P)	Ground	Refrigerent pressure sensor power supply	—	Ignition switch ON		5V
105 (V)	Ground	Daytime light relay control (Canada only)	Output	Ignition switch ON	Daytime light system active	Battery voltage
				Ignition switch ON	Daytime light system inactive	0V

Wiring Diagram

INFOID:0000000003302405




: CANADA
: DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E17, E18, E200, E201, F10
CPU
DAYTIME LIGHT RELAY
DATA LINE
DATA LINE
TO CAN SYSTEM
COMBINATION SWITCH (SPIRAL CABLE)
HORN RELAY
COOLING FAN CONTROL MODULE
OIL PRESSURE SWITCH
ECVT DEVICE (DETENTION SWITCH)
ELECTRONIC STEERING COLUMN LOCK, BCM (BODY CONTROL MODULE)
PUSH-BUTTON IGNITION SWITCH (PUSH SWITCH), BCM (BODY CONTROL MODULE)
BCM (BODY CONTROL MODULE)
COOLING FAN RELAY-1
FRONT WIPER MOTOR
WASHER PUMP
HIGH VOLTAGE ECU, EPS CONTROL UNIT
ECM
FUEL INJECTOR
HEATED OXYGEN SENSOR 2
AIR FUEL RATIO (A/F) SENSOR 1
BRAKE ECU
ECM
FUEL PUMP
COOLING FAN RELAY-1
IGNITION RELAY-1
FUEL PUMP RELAY
10A 38
10A 34
10A 35
15A 37
10A 36
15A 32
10A 33
AWMWA0194G



ALMWA0033GB

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) CONNECTORS

Connector No.	E16
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	F/L_MAIN
2	B/Y	F/L_USM

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	S-GND
42	SB	MOTOR_FAN_RLY_MID
43	G/B	DETENT_SW
44	G/W	HORN_RLY
45	L/O	HORN_SW
46	–	–

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	–	–
4	L/R	FR_WIPER_LO
5	L/B	FR_WIPER_HI
6	SB	DTRL
7	R/L	TAIL/ILLUMI
8	–	–
9	–	–
10	R/B	ECM_VB
11	P/L	ESCL
12	B	P-GND
13	W	FUEL_PUMP
14	–	–
15	BR	START_IG-E/R
16	L/Y	WIPER_AUTOSTOP
17	–	–
18	–	–
19	L/Y	BCM_IGNSW
20	B/Y	AMB_SENS_GND-E/R
21	O/B	AMB_SENS_SIG-E/R
22	W/R	PD_SENS_GND-E/R
23	B/R	PD_SENS_SIG-E/R
24	BR/W	PD_SENS PWR-E/R
25	G/R	ABS_ECU
26	–	–
27	BR/W	IGN_SIGNAL
28	BR	PUSH_START_SW
29	–	–
30	–	–
31	G/W	REV_RLY
32	LG	SL_CONDITION_1
33	W	SL_CONDITION _2
34	–	–
35	–	–
36	–	–
37	–	–
38	–	–

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Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
83	R/Y	HEADLAMP_LO_RH
84	L	HEADLAMP_LO_LH
85	–	–
86	W/R	FR_FOG_LAMP_RH
87	L/Y	FR_FOG_LAMP_LH
88	R/W	WASHER_MTR
89	L/W	HEADLAMP_HI_RH
90	G	HEADLAMP_HI_LH

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
91	LG/R	CLEARANCE_RH
92	LG/B	CLEARANCE_LH
93	–	–
94	–	–
95	–	–
96	–	–
97	V	MOTOR_FAN_PWM
98	–	–
99	BR/W	AMB_SENS_GND-FEM
100	SB	AMB_SENS_SIG-FEM
101	W	PD_SENS_GND-FEM
102	R	PD_SENS_SIG-FEM
103	P	PD_SENS_PWR-FEM
104	–	–
105	V	DTRL_RLY
106	–	–

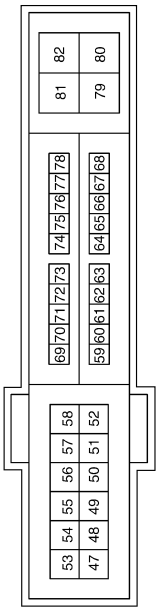
ALMIA0077GB

Terminal No.	Color of Wire	Signal Name
64	–	–
65	–	–
66	–	–
67	–	–
68	–	–
69	W/B	SSOF
70	O	MOTRLY
71	–	–
72	–	–
73	–	–
74	–	–
75	P/L	OIL_PRESSURE_SW
76	–	–
77	B/R	FPR
78	–	–
79	–	–
80	–	–
81	–	–
82	–	–

Terminal No.	Color of Wire	Signal Name
47	–	–
48	R	ENG_SOL
49	B/R	ENG_SOL
50	–	–
51	LG	INJECTOR_#1
52	–	–
53	R/W	IGN_COIL
54	G/W	ETC
55	W/L	ECM_BAT
56	R/Y	O2_SENS_#1
57	O	O2_SENS_#2
58	–	–
59	–	–
60	–	–
61	–	–
62	–	–
63	–	–

Connector No.	F10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.



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Fail Safe

INFOID:0000000003302406

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation
Cooling fan	• Signals cooling fans ON when the ignition switch is turned ON • Signals cooling fans OFF when the ignition switch is turned OFF
Heater pump	Heater pump relay OFF

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	• Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF
• Parking lamps • License plate lamps • Illuminations • Tail lamps	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	• The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Electronic steering column lock unit	Electronic steering column lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
—	ON	ON	—
—	OFF	OFF	—
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	—

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.
When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

INFOID:0000000003302407

CONSULT-III display	Fail-safe	TIME[NOTE]		Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-15
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-16
B2099: IGN RELAY OFF	—	CRNT	1 – 39	PCS-17
B2108: STRG LCK RELAY ON	—	CRNT	1 – 39	SEC-85
B2109: STRG LCK RELAY OFF	—	CRNT	1 – 39	SEC-86
B210A: STRG LCK STATE SW	—	CRNT	1 – 39	SEC-87

NOTE:
The details of TIME display are as follows.
- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ··· 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000003071680

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
Headlamp does not switch to the high beam.	One side	• Fuse • Harness between IPDM E/R and the front combination lamp • Front combination lamp (High beam relay) • IPDM E/R	Headlamp (HI) circuit Refer to EXL-32.
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-145.	
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		• Combination meter • BCM	• Combination meter. Data monitor "HI-BEAM IND" • BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	Front combination lamp (Low beam relay)	—
	Both sides	• Combination switch • Harness between the combination switch and BCM • BCM	Combination switch Refer to BCS-44.
		High beam request signal • BCM • IPDM E/R	IPDM E/R Data monitor "HL HI REQ"
		IPDM E/R	—
Headlamp does not turn ON.	One side	• Fuse • Bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R	Headlamp (LO) circuit Refer to EXL-34.
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-146, "Description".	
Headlamp does not turn OFF.	When the ignition switch is turned ON	• BCM • Combination switch	Combination switch Refer to BCS-44, "Diagnosis Procedure".
	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	—
Headlamp is not turned ON/OFF with the lighting switch AUTO.		• Combination switch • Harness between the combination switch and BCM • BCM	Combination switch Refer to BCS-44.
		• Optical sensor • Harness between the optical sensor and BCM • BCM	Optical sensor Refer to EXL-44.

Symptom		Possible cause	Inspection item
Daytime light system does not activate.		• Either high beam bulb • Parking brake switch • Combination switch • BCM • IPDM E/R • Daytime light relay • Harness between IPDM E/R and daytime light relay.	Daytime light system description. Refer to EXL-9, "System Description".
Front fog lamp is not turned ON.	One side	• Front fog lamp bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R	Front fog lamp circuit Refer to EXL-36.
	Both side	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-148.	
Parking lamp is not turned ON.	One side	• Fuse • Parking lamp bulb • Harness between IPDM E/R and the front/rear combination lamp • Front/rear combination lamp • IPDM E/R	Parking lamp circuit Refer to EXL-38.
	Both sides	**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-147.	
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	• Harness between BCM and each turn signal lamp • Turn signal lamp bulb • Door mirror (if equipped with turn signals in the door mirrors)	Turn signal lamp circuit Refer to EXL-41.
Turn signal indicator lamp does not blink.	One side	Combination meter	—
	Both sides (Always)	• Turn signal indicator lamp signal • Combination meter • BCM	• Combination meter. Data monitor "TURN IND" • BCM (FLASHER) Active test "FLASHER"
	Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)	• The combination meter power supply and the ground circuit • Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-40, "COMBINATION METER : Diagnosis Procedure".

NORMAL OPERATING CONDITION

Description

INFOID:0000000003071681

AUTO LIGHT SYSTEM

The auto light system may not turn the headlamp ON/OFF immediately after passing a dark area or a bright area (short tunnel, sky bridge, shadowed area etc.). This is normal.

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:0000000003071682

The headlamps (both sides) do not switch to high beam when the lighting switch is in the HI or PASS setting.

Diagnosis Procedure

INFOID:0000000003071683

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to EXL-145, "Diagnosis Procedure".

Is the combination switch normal?

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

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

CONSULT-III DATA MONITOR

1. Select "HL HI REQ" of IPDM E/R DATA MONITOR item.
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL HI REQ	Lighting switch (2ND)	HI or PASS	ON
		Except for HI or PASS	OFF

Is the item status normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-85, "Removal and Installation" .

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-32, "Description".

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation" .
NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000003071684

The headlamps (both sides) do not turn ON in any lighting switch setting.

Diagnosis Procedure

INFOID:0000000003071685

1.CHECK COMBINATION SWITCH

Check the combination switch. Refer to BCS-8, "System Description".

Is the combination switch normal?

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

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

CONSULT-III DATA MONITOR
1. Select "HL LO REQ" of IPDM E/R DATA MONITOR item.
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2ND	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-85, "Removal and Installation" .

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-34, "Description".

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation" .
NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000003071686

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

Diagnosis Procedure

INFOID:0000000003071687

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-8, "System Description".

Is the combination switch normal?

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

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

CONSULT-III DATA MONITOR

1. Select "TAIL & CLR REQ" of IPDM E/R DATA MONITOR item.
2. With operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1ST	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-38, "Description".

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000003071688

The front fog lamps do not turn ON in any setting.

Diagnosis Procedure

INFOID:0000000003071689

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-8, "System Description".

Is the combination switch normal?

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

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

CONSULT-III DATA MONITOR

1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.
2. With operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch (Lighting switch 2ND)	ON	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-85, "Removal and Installation".

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-36, "Description".

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000003071690

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 For High-Voltage System

INFOID:0000000003071691

Refer to HBB-92, "Precautions For High-Voltage System".

General precautions for service operations

INFOID:0000000003071692

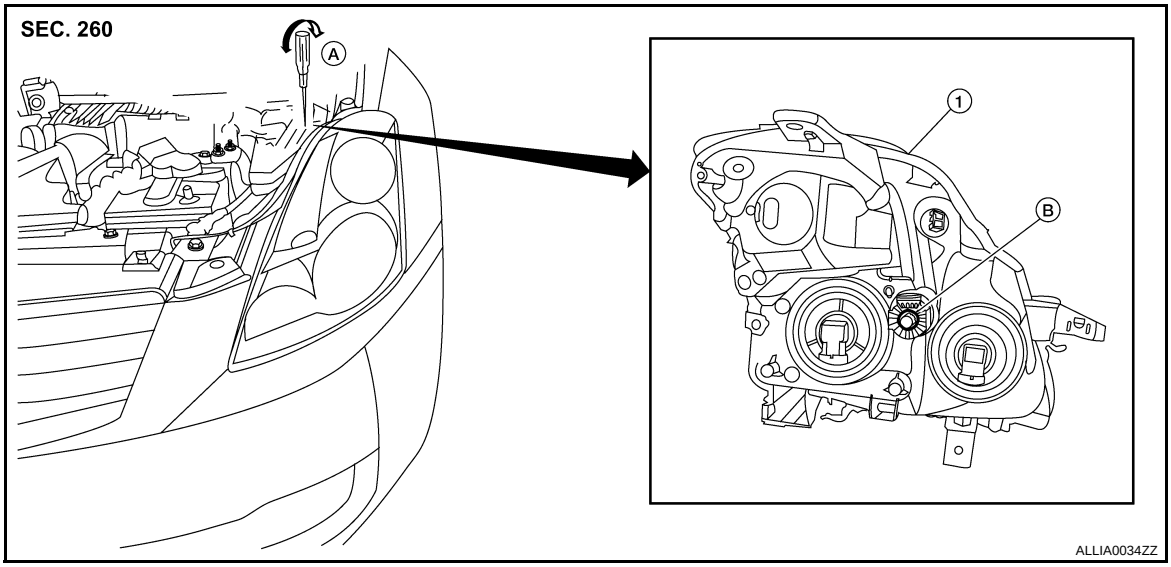
- Never work with wet hands.
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.
- Do not touch the headlamp bulb glass surface with bare hands or allow oil or grease to get on it. Do not touch the headlamp bulb just after the headlamp is turned off, because it is very hot.
- When the bulb has burned out, wrap it in a thick vinyl bag and discard. Do not break the bulb.
- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. (If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.)
- Do not use organic solvent (paint thinner or gasoline) to clean lamps and to remove old sealant.

ON-VEHICLE MAINTENANCE

HEADLAMP

Aiming Adjustment

INFOID:0000000003071693



For details, refer to the regulations in your area.

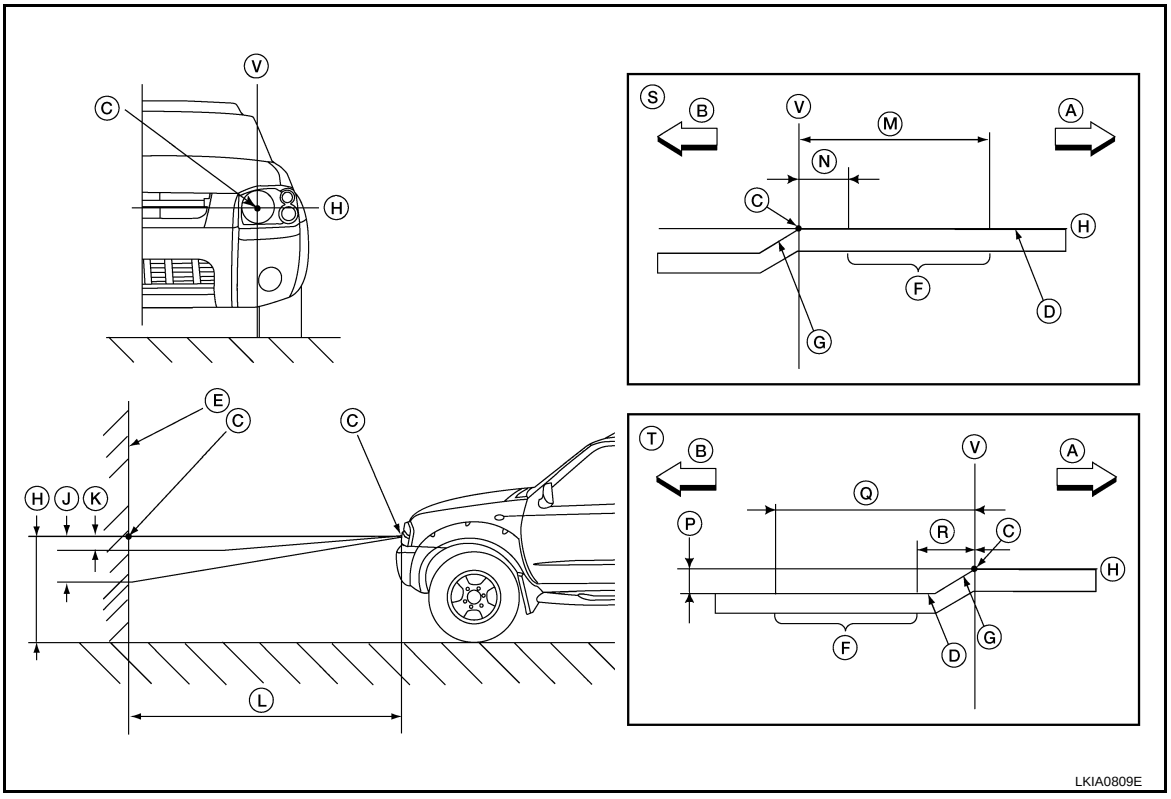
Headlamp Aiming

NOTE:

- If the vehicle front body has been repaired and/or the headlamp assembly has been replaced, check headlamp aiming.
- Before performing headlamp aiming adjustment, check the following:

- Confirm which type of headlamp is in vehicle.
- Ensure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Ensure engine coolant and engine oil are filled to correct level and fuel tank is full.
- Confirm spare tire, jack and tools are properly stowed.

AIMING ADJUSTMENT



A.	Right	B.	Left	C.	Center of headlamp bulb (H-V point)
D.	Cutoff line	E.	Screen	F.	Aim evaluation segment
G.	Step	H.	Horizontal center line of headlamp	J.	RH: 53.2 mm (2.09 in) LH: 93.1 mm (3.67 in)
K.	RH: -13.3 mm (-0.52 in) LH: 13.3 mm (0.52 in)	L.	7.62 m (25 ft)	M.	399 mm (15.71 in)
N.	133 mm (5.24 in)	P.	53.2 mm (2.09 in)	Q.	466 mm (18.35 in)
R.	200 mm (7.87 in)	S.	RH headlamp aimihg screen	T.	LH headlamp aiming screen

- **Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.**
- **First loosen the adjusting screw all the way and then make adjustment by tightening the screw.**

1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.

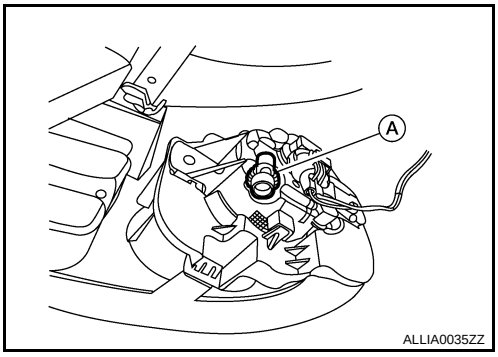
FRONT FOG LAMP

Aiming Adjustment

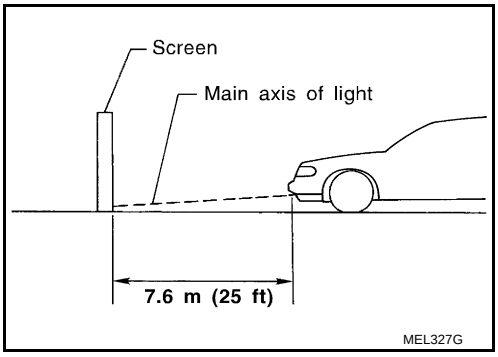
INFOID:0000000003071694

The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. Before performing aiming adjustment, make sure of the following.

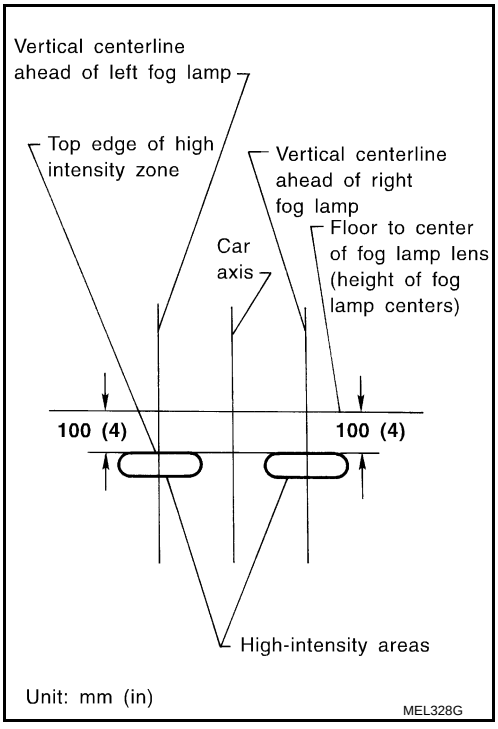
- Keep all tires inflated to correct pressure.
- Place vehicle on level ground.
- See that vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in driver seat.
  Adjust aiming in the vertical direction by turning the adjusting screw (A).



1. Set the distance between the screen and the center of the fog lamp lens as shown.
2. Turn front fog lamps ON.



3. Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone is 100 mm (4 in) below the height of the fog lamp centers as shown.
   - When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.



ON-VEHICLE REPAIR

HEADLAMP

Bulb Replacement

INFOID:0000000003071695

HEADLAMP

CAUTION:

Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from bulb. Do not touch bulb by hand while it is lit or right after being turned off, burning may result.
Do not leave bulb out of fog lamp reflector for a long time, dust, moisture, and smoke may affect performance of fog lamp.

Removal

1. Disconnect 12-volt battery negative terminal.
2. Position the fender protector aside. Refer to EXT-18, "Removal and Installation".
3. Turn the headlamp bulb sockets counterclockwise to unlock and remove them.
4. Turn the high beam lamp bulb socket counterclockwise to unlock and remove it.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing a headlamp bulb, be sure to install the bulb socket securely to ensure watertightness.

FRONT TURN SIGNAL LAMP

Removal

1. Turn the bulb socket counterclockwise to unlock it.
2. Pull the bulb to remove it.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing a headlamp bulb, be sure to install the bulb socket securely to ensure watertightness.

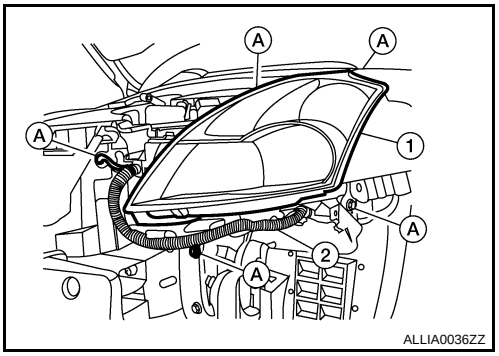
Removal and Installation

INFOID:0000000003071696

COMBINATION LAMP

Removal

1. Disconnect 12-volt battery negative terminal.
2. Remove the front bumper fascia. Refer to EXT-12, "Removal and Installation".
3. Ensure lighting switch is OFF.
4. Remove the headlamp bolts (A).
5. Pull the headlamp assembly (1) toward the front of the vehicle, detach the headlamp harness (2) from the headlamp assembly (1), disconnect the bulb connectors and remove.



Installation

Installation is in the reverse order of removal.

NOTE:

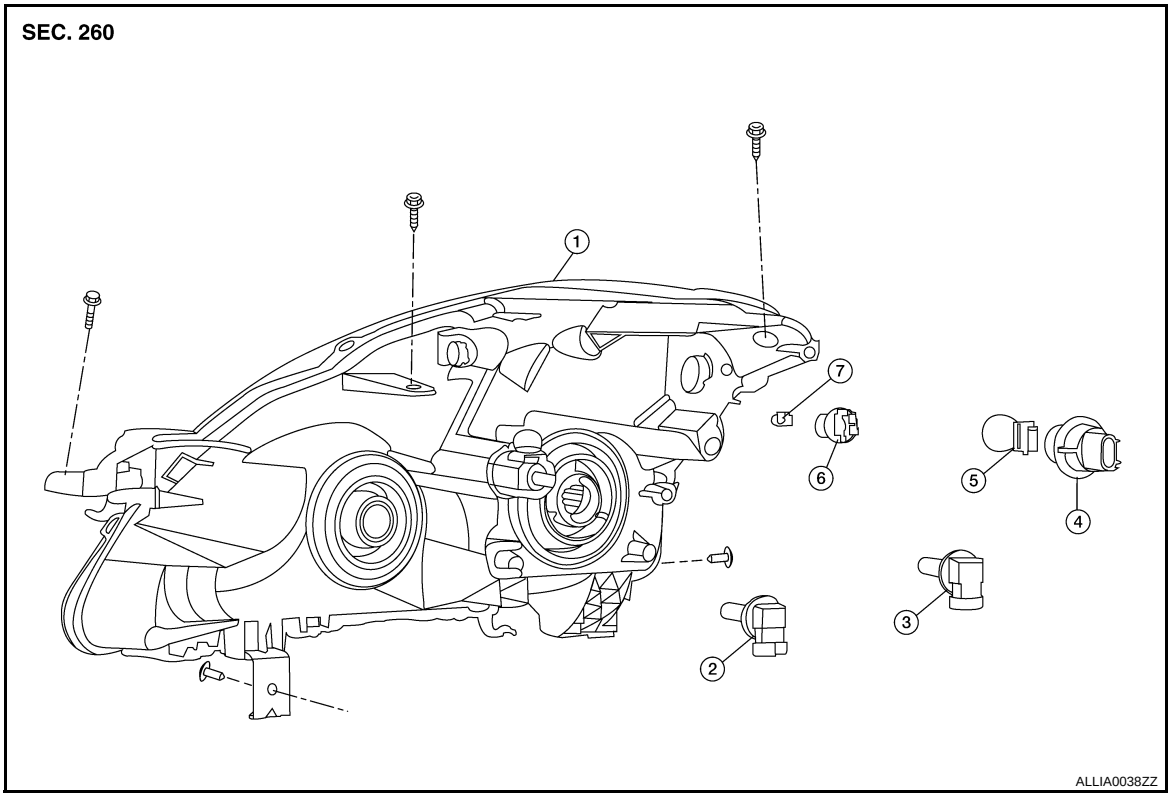
Confirm headlamp aiming adjustment. Refer to EXL-150, "Aiming Adjustment".

Disassembly and Assembly

INFOID:0000000003071697

COMBINATION LAMP

Halogen Type



1. Headlamp assembly
2. Halogen lamp bulb (high beam)
3. Halogen lamp bulb (low beam)
4. Front turn signal lamp bulb socket
5. Front turn signal lamp bulb
6. Park/side marker lamp bulb socket
7. Park/side marker lamp bulb

Disassembly

CAUTION:

- **Do not touch the glass of the bulb directly by hand. Keep grease and other oily substances away from bulb. Do not touch bulb while it is lit or right after being turned off, burning may result.**
- **Do not leave bulb out of fog lamp reflector for a long time, dust, moisture, and smoke may affect performance of fog lamp.**

1. Turn the halogen lamp bulb (low beam) counterclockwise to unlock and remove it.
2. Turn the halogen lamp bulb (high beam) socket counterclockwise to unlock and remove it.
3. Turn the front turn signal lamp bulb socket counterclockwise to unlock and remove it.
4. Pull the front turn signal lamp bulb from its socket.
5. Turn the park/side marker lamp bulb socket counterclockwise to unlock and remove it.
6. Pull the park/side marker lamp bulb from its socket.

Assembly

Assembly is in the reverse order of disassembly.

FRONT FOG LAMP

Bulb Replacement

INFOID:0000000003071700

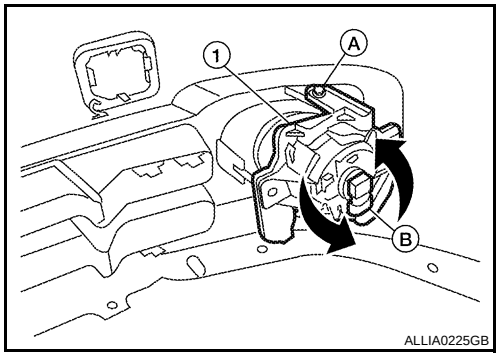
REMOVAL

The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

CAUTION:

- **Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it. Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.**
- **Do not leave bulb out of fog lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of fog lamp. When replacing bulb, be sure to replace it with new one.**

1. Position the front fender protector aside. Refer to EXT-18, "Removal and Installation".
2. Disconnect the fog lamp electrical connector.
3. Turn the fog lamp bulb (B) counterclockwise to remove it.
   - Fog lamp assembly (1)
   - Fog lamp bolt (A)



INSTALLATION

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000003071701

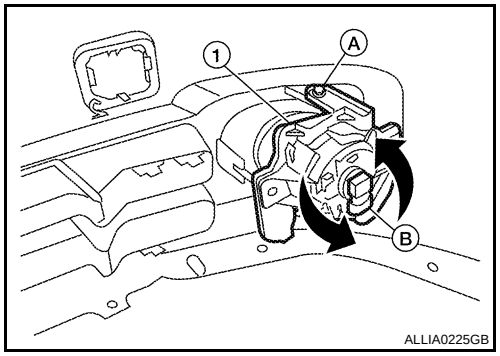
REMOVAL

The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

CAUTION:

- **Do not leave fog lamp assembly without bulb for a long period of time. Dust, moisture, smoke, etc. entering the fog lamp body may affect the performance. Remove the bulb from the headlamp assembly just before replacement bulb is installed.**
- **Grasp only the plastic base when handling the bulb. Never touch the glass envelope. Touching the glass could significantly affect the bulb life and/or fog lamp performance.**

1. Remove inner splash shield.
2. Position the fender protector aside. Refer to EXT-18, "Removal and Installation".
3. Disconnect the fog lamp electrical connector.
4. Remove bolt (A) from top of the fog lamp (1).
5. Remove the fog lamp (1).
   - Fog lamp bulb (B)



INSTALLATION

Installation is in the reverse order of removal.

Check fog lamp aiming adjustment. Refer to EXL-152, "Aiming Adjustment".

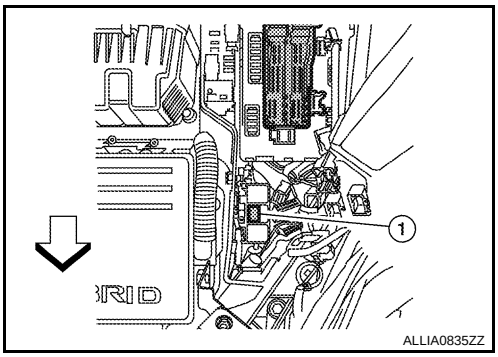
DAYTIME RUNNING LIGHT SYSTEM

Removal and Installation

INFOID:0000000003304420

REMOVAL

1. Disconnect the IPDM E/R. Refer to PCS-34, "Removal and Installation".
2. Disconnect the harness junction block to position it aside.
3. Remove the DTRL relay (1).



INSTALLATION

Installation is in the reverse order of removal.

STOP LAMP

Bulb Replacement

INFOID:0000000003071704

HIGH MOUNTED STOP LAMP

With Rear Air Spoiler

When this vehicle is equipped with a rear air spoiler, the high-mounted stop lamp uses an LED circuit board instead of a bulb. The LED circuit board is not serviceable and the high-mounted stop lamp must be replaced as an assembly.

Without Rear Air Spoiler

1. Remove high-mounted stop lamp assembly. Refer to EXL-157, "Removal and Installation".
2. Turn bulb socket counterclockwise to unlock and remove from lamp assembly.
3. Pull bulb from socket to remove.
4. Installation is in the reverse order of removal.

STOP LAMP

Removal

1. Remove rear combination lamp. Refer to EXL-157, "Removal and Installation".
2. Turn bulb socket counterclockwise to unlock and remove from combination lamp assembly.
3. Turn bulb counterclockwise to remove from bulb socket.

Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000003071705

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

Removal

1. Remove the rear air spoiler. Refer to EXL-157, "Removal and Installation".
2. Remove the two screws and remove high mounted stop lamp from the rear air spoiler.

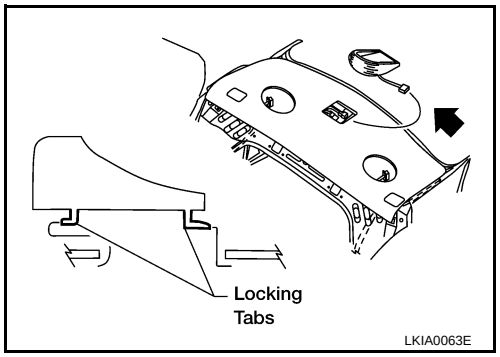
Installation

Installation is in the reverse order of removal.

HIGH-MOUNTED STOP LAMP - WITHOUT REAR AIR SPOILER

Removal

1. Slide high-mounted stop lamp assembly rearward on parcel shelf to give clearance to front tabs.
2. Lift front of lamp assembly up and bring forward to give clearance to rear tabs.
3. Disconnect the high-mounted connector and remove.



Installation

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Removal

1. Remove the trunk side finisher. Refer to INT-22, "Removal and Installation".
2. From trunk, remove the rear combination lamp assembly nuts.

3. Disconnect connectors and remove rear combination lamp assembly.

Installation

Installation is in the reverse order of removal.

LICENSE PLATE LAMP

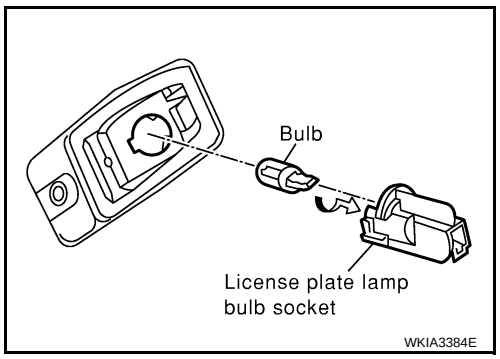
Bulb Replacement

INFOID:0000000003071708

LICENSE PLATE LAMP

Removal

1. Position trunk lid finisher aside.
2. Turn license plate lamp bulb socket counterclockwise to unlock and remove.
3. Pull license plate lamp bulb to remove from socket.



Installation

Installation is in the reverse order of removal.

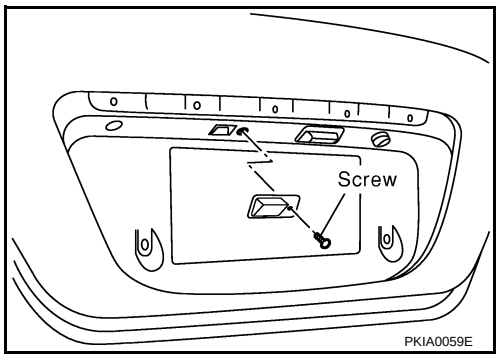
Removal and Installation

INFOID:0000000003071709

LICENSE PLATE LAMP

Removal

1. Remove the license plate finisher. Refer to EXL-159, "Removal and Installation".
2. Disconnect the license plate lamp connector.
3. Remove the license plate lamp screw and remove the license plate lamp.



Installation

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Bulb Replacement

INFOID:0000000003071710

REAR TURN SIGNAL LAMP

1. Remove the rear combination lamp. Refer to EXL-160, "Removal and Installation".
2. Turn the rear turn signal lamp bulb socket counterclockwise and remove it.
3. Remove the rear turn signal lamp bulb.
4. Installation is in the reverse order of removal.

STOP/TAIL LAMP

1. Remove the rear combination lamp. Refer to EXL-160, "Removal and Installation".
2. Turn the stop/tail lamp bulb socket counterclockwise and remove it.
3. Remove the stop/tail lamp bulb.
4. Installation is in the reverse order of removal.

BACK-UP LAMP

1. Remove the rear combination lamp. Refer to EXL-160, "Removal and Installation".
2. Turn the back-up lamp bulb socket counterclockwise and remove it.
3. Remove the back-up lamp bulb.
4. Installation is in the reverse order of removal.

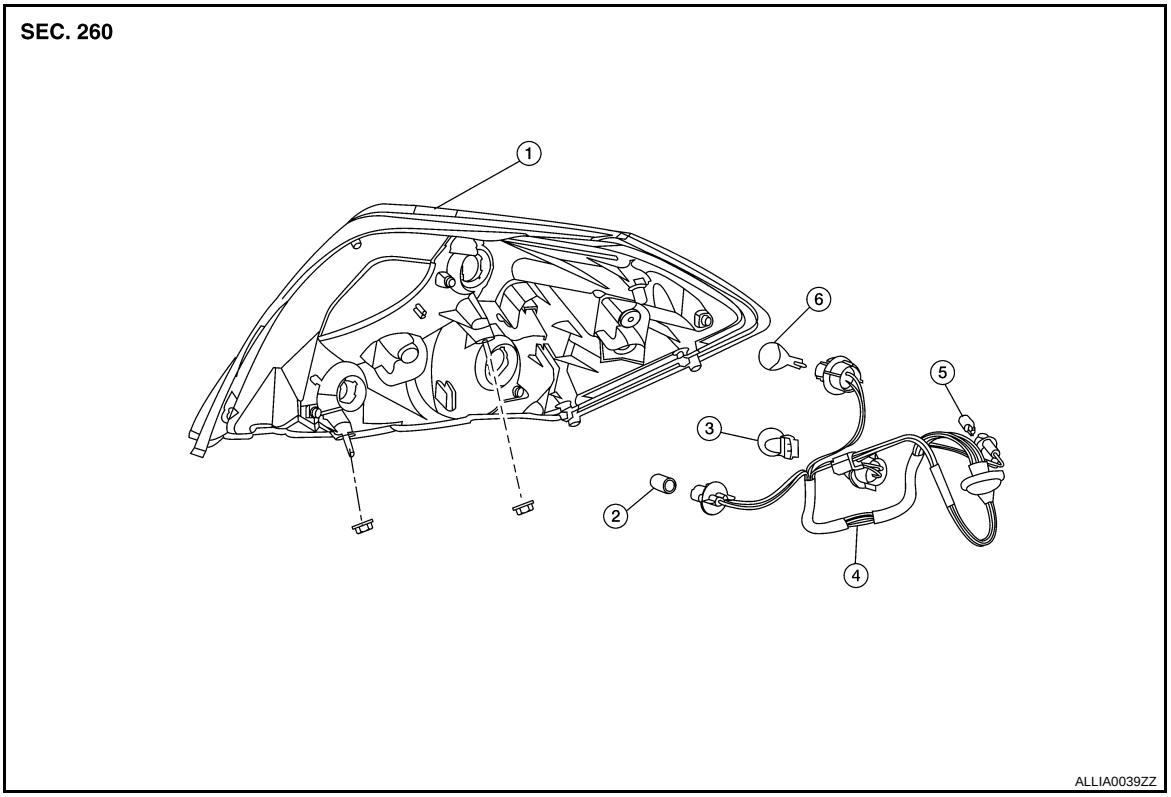
SIDE MARKER LAMP

1. Remove the rear combination lamp. Refer to EXL-160, "Removal and Installation".
2. Turn the side marker lamp bulb socket counterclockwise and remove it.
3. Remove the side marker lamp bulb.
4. Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000003071711

COMPONENTS



1. Rear combination lamp assembly
2. Back-up lamp bulb
3. Stop/Tail lamp bulb
4. Rear combination lamp harness
5. Side marker lamp bulb
6. Rear turn signal lamp bulb

REMOVAL

1. Remove trunk side finisher. Refer to INT-22, "Removal and Installation".
2. Remove the rear combination lamp nuts.
3. Pull the rear combination lamp assembly toward rear of the vehicle and remove.

INSTALLATION

Installation is the reverse order of removal.

LIGHTING AND TURN SIGNAL SWITCH

Removal and Installation

INFOID:0000000003071712

Removal

1. Remove the spiral cable. Refer to SRS-6, "Removal and Installation".
2. Disconnect the lighting and turn signal switch connector and remove the lighting and turn signal switch.

Installation

Installation is in the reverse order of removal.

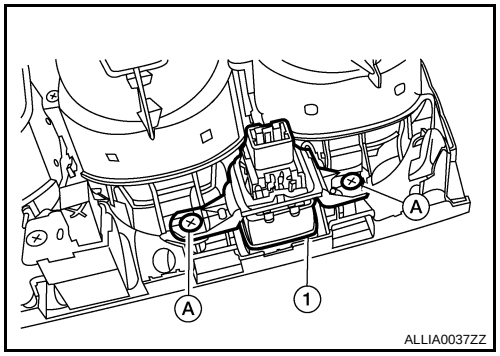
HAZARD SWITCH

Removal and Installation

INFOID:0000000003071714

Removal

1. Remove the center ventilator grilles. Refer to VTL-24, "CENTER VENTILATOR GRILLES : Removal and Installation".
2. Remove CVT finisher. Refer to IP-11, "Removal and Installation".
3. Remove the hazard switch screws (A) and remove the hazard switch (1).



Installation

Installation is in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Headlamp

INFOID:0000000003071717

Item	Wattage (W)*
Low	55 (H1)
High	60 (HB3)

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

Exterior Lamp

INFOID:0000000003071718

Item		Wattage (W)*
Front combination lamp	Turn signal lamp lamp	27 (amber)
	Park/side marker lamp	8
Rear combination lamp	Stop/Tail lamp	27/8
	Turn signal lamp	27
	Back-up lamp	13
	Side marker lamp	5
Fog lamp		55 (H11)
License plate lamp		5
High-mounted stop lamp (parcel shelf mount)		18
High-mounted stop lamp (rear air spoiler mount)		LED

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