SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

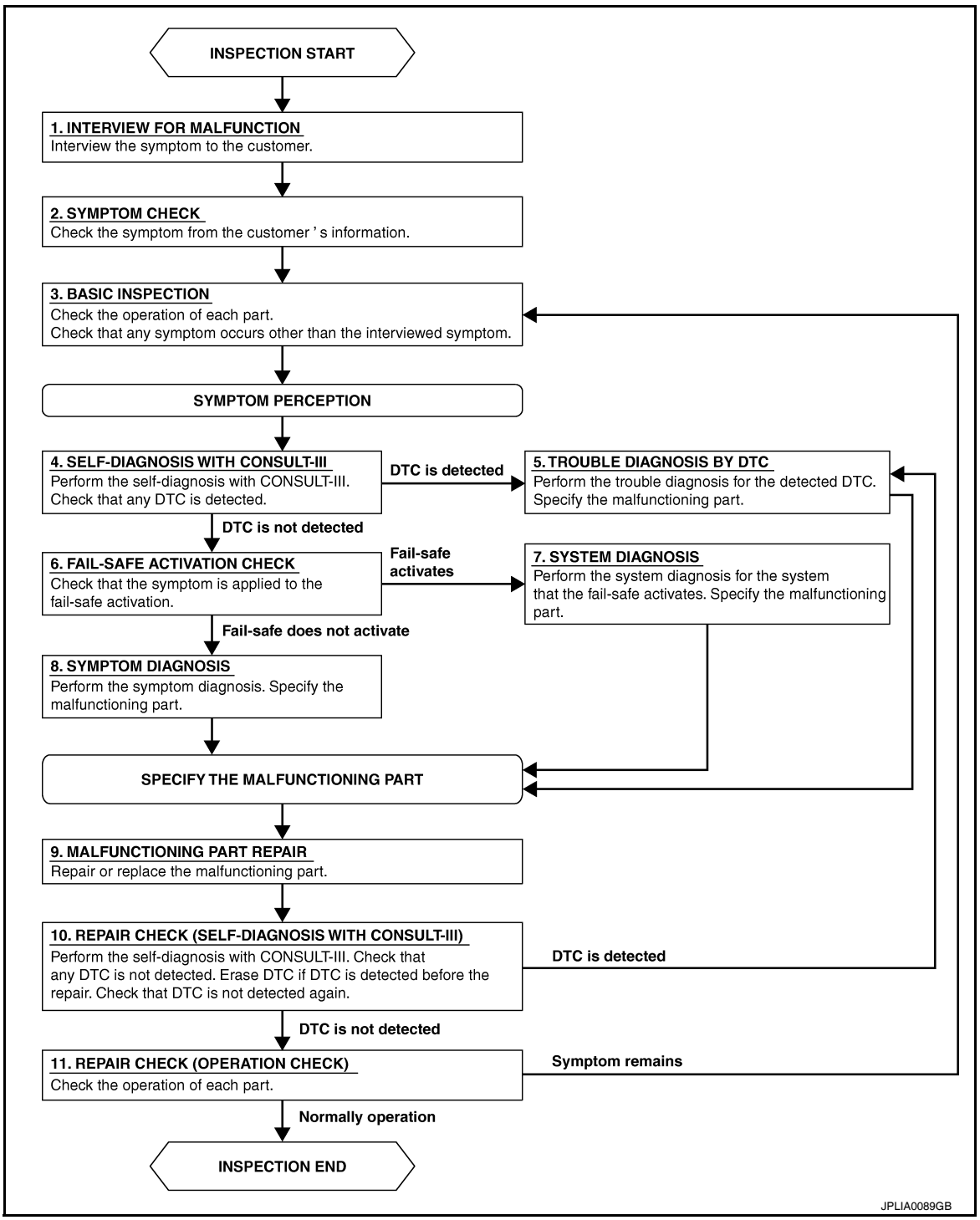
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000001547093

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?

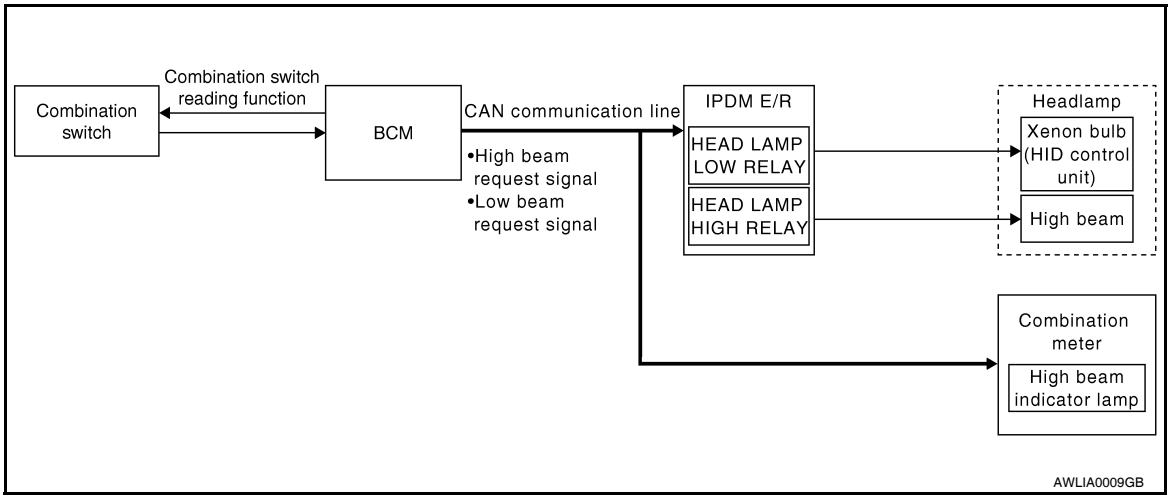
YES >> INSPECTION END
NO >> GO TO 3

FUNCTION DIAGNOSIS

HEADLAMP

System Diagram

INFOID:0000000001547094



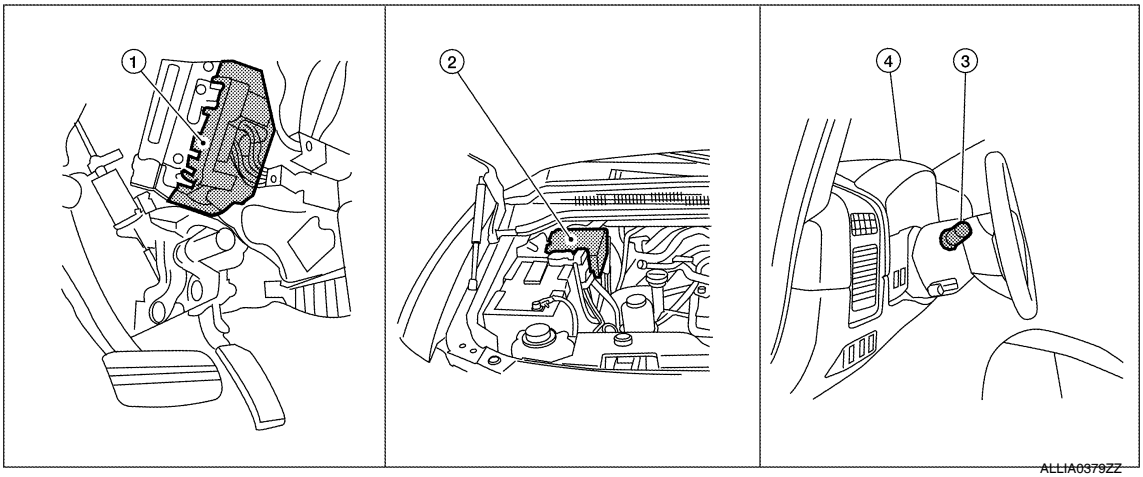
System Description

INFOID:0000000001547095

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) via 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:0000000001547096



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

Component Description

INFOID:0000000001547097

XENON HEADLAMP

A Xenon type headlamp is adapted to the low beam headlamps. Xenon bulbs do not use a filament. Instead,they produce light when a high voltage current is passed between two tungsten electrodes through a

mixtureof xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic controlof the power supply gives the headlamps stable quality and tone color.Following are some of the many advantages of the xenon type headlamp.

- The light produced by the headlamps is a white color comparable to sunlight that is easy on the eyes.
- Light output is nearly double that of halogen headlamps, affording increased area of illumination.
- The light features a high relative spectral distribution at wavelengths to which the human eye is most sensitive. This means that even in the rain, more light is reflected back from the road surface toward the vehicle,for added visibility.
- Power consumption is approximately 25 percent less than halogen headlamps, reducing battery load..

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 via 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) via the CAN communication lines and turns the high beam indicator lamp ON.

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

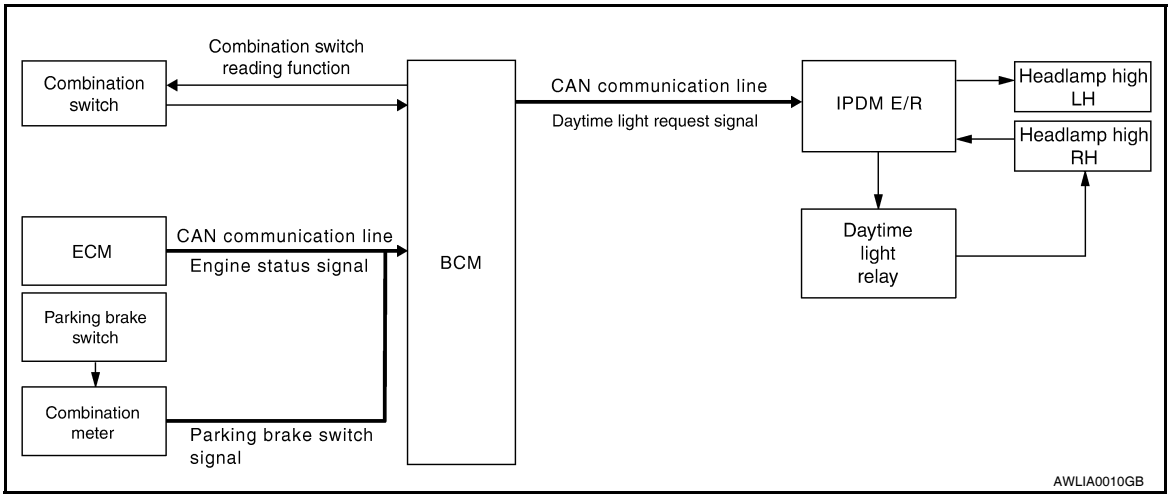
AUTO LIGHT OPERATION

Refer to EXL-11, "System Description".

DAYTIME LIGHT SYSTEM

System Diagram

INFOID:0000000001547098



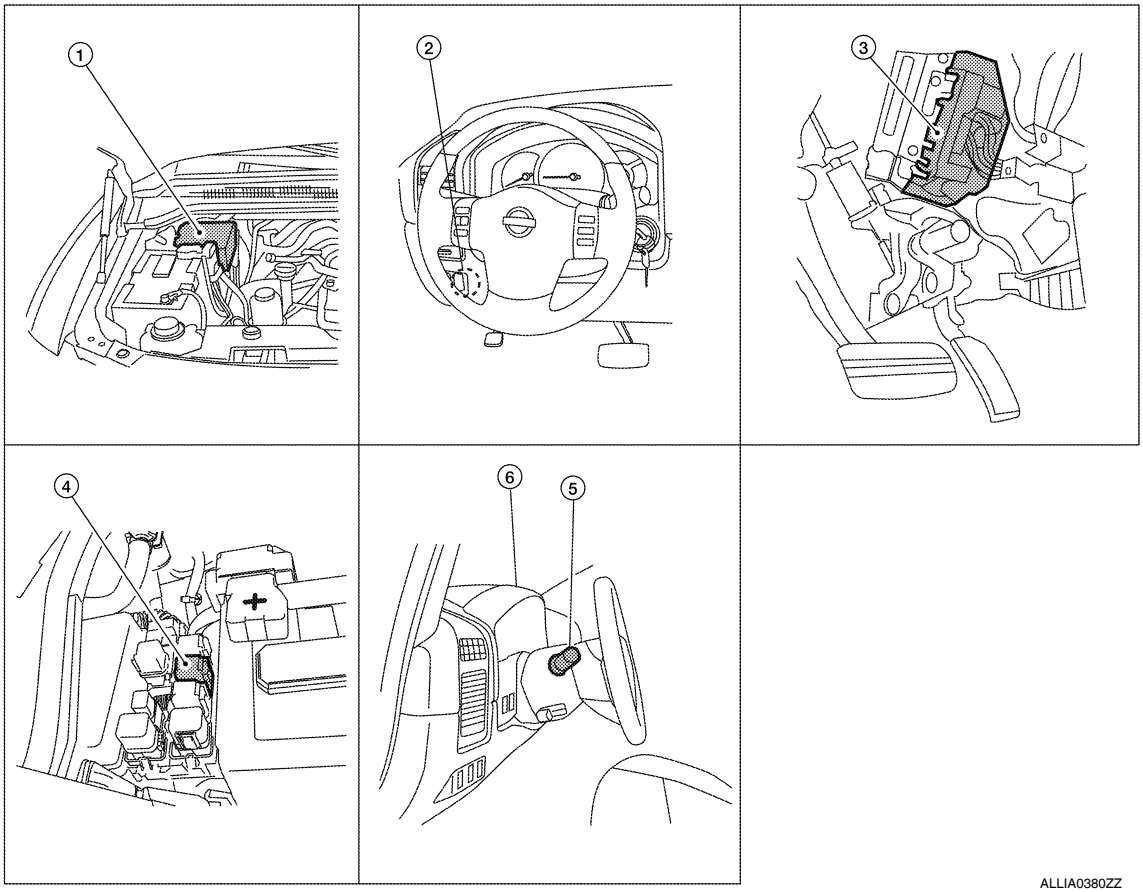
System Description

INFOID:0000000001547099

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 engine is operating. If the parking brake is applied before the engine 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:0000000001547100



1. IPDM E/R E119, E122, E123, E124
2. Parking brake switch M11
3. BCM M18, M20 (view with instrument panel removed)
4. Daytime running light relay E103
5. Combination switch M28
6. Combination meter M24

Component Description

INFOID:0000000001547101

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

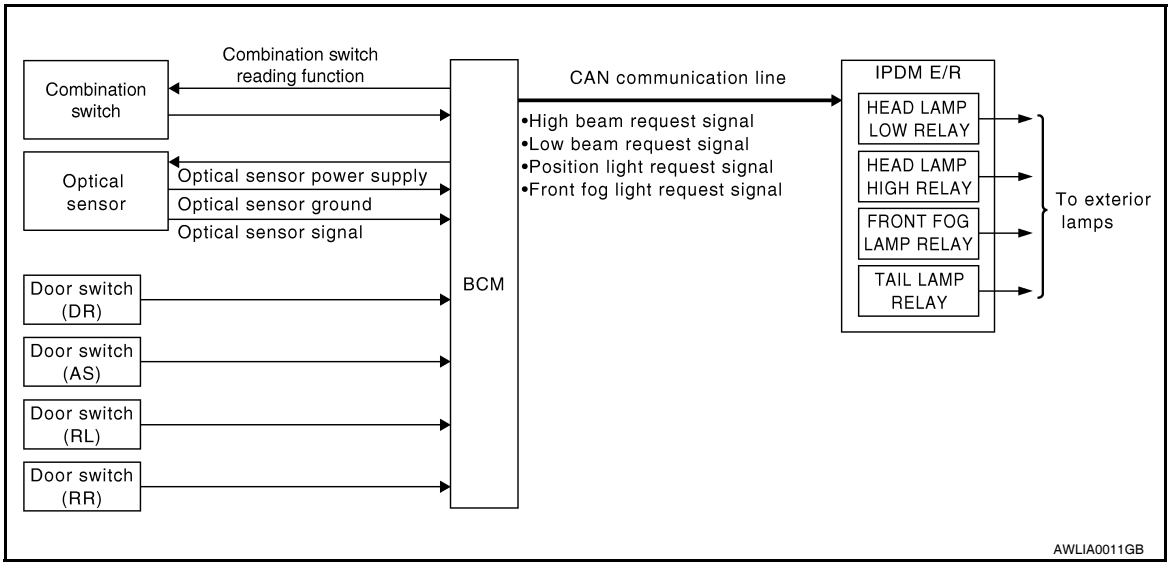
OPERATION

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 LH high beam lamp. Power flows backward through the LH high beam lamp to the IPDM E/R, through the high beam fuses, through the RH high beam lamp circuit to the RH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

AUTO LIGHT SYSTEM

System Diagram

INFOID:0000000001547102



System Description

INFOID:0000000001547103

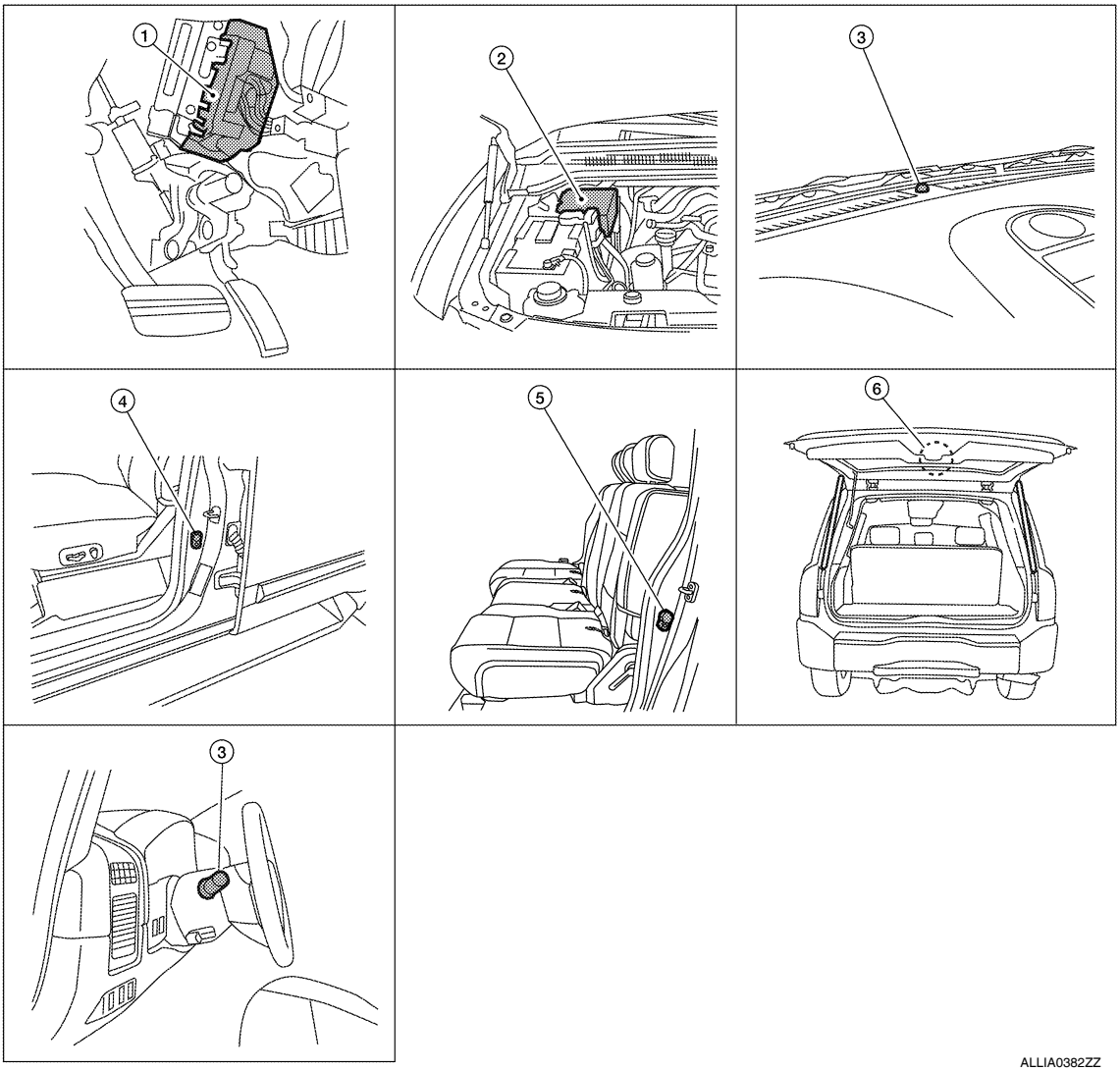
- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness and 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 and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, Refer to EXL-23, "EXTERNAL LAMP : CONSULT-III Function".

Component Parts Location

INFOID:0000000001547104



ALLIA0382ZZ

1. BCM M18, M19, M20 (view with instrument panel removed)
2. IPDM E/R E122, E123, E124
3. Optical sensor M302
4. Front door switch
   LH B8
   RH B108
5. Rear door switch
   LH B18
   RH B116
6. Back door switch
   D502
7. Combination switch M28

Component Description

INFOID:0000000001547105

AUTO LIGHT OPERATION

The auto light system operates the low beam and high beam headlamps, parking lamps, tail lamps and license plate lamps. The BCM monitors the lighting switch (combination switch) position as a part of the BCM combination switch reading function. When the lighting switch is in the AUTO position, the BCM automatically turns the lamps ON/OFF according to ambient light brightness.

NOTE:

Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT-III. Refer to EXL-23, "EXTERNAL LAMP : CONSULT-III Function".

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

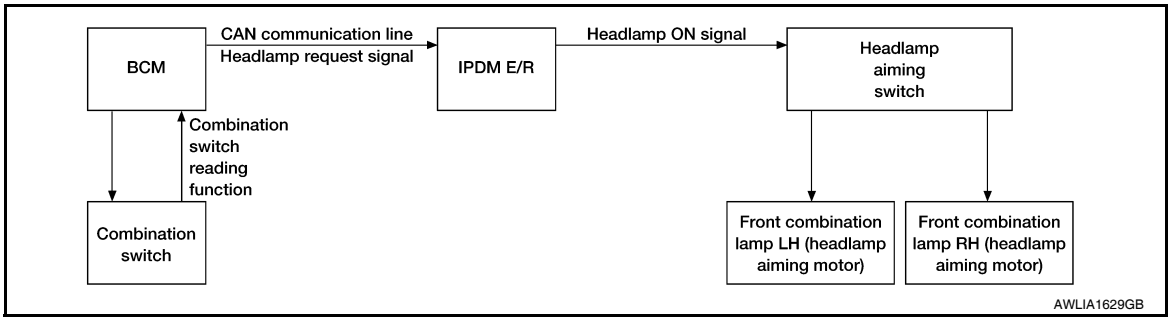
PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

Refer to EXL-18, "System Description".

HEADLAMP AIMING SYSTEM (MANUAL)

System Diagram

INFOID:0000000001806201



System Description

INFOID:0000000001806202

The headlamp aiming system (manual) controls the headlamp light axis height according to input from the headlamp aiming switch. The variable internal resistance of the headlamp aiming switch controls the signal ground of the headlamp aiming motors located on the front combination lamp LH and RH.

Component Description

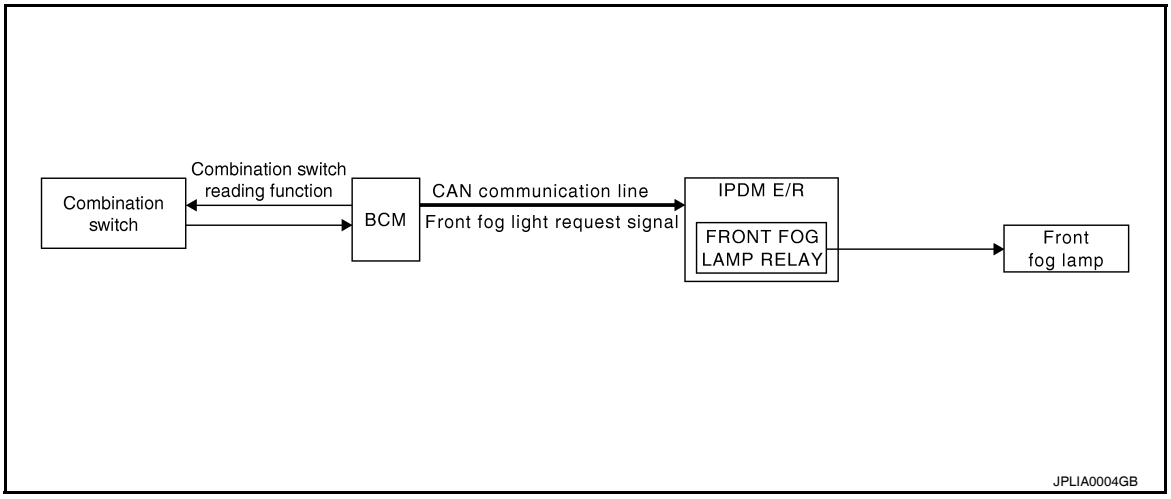
INFOID:0000000001806204

Part	Description
Headlamp aiming motor	Moves the headlamp up/down based on input from the headlamp aiming switch.
Headlamp aiming switch	Controls variable ground to the headlamp aiming motor signal to move the headlamp aiming motor up/down.

FRONT FOG LAMP

System Diagram

INFOID:0000000001547106



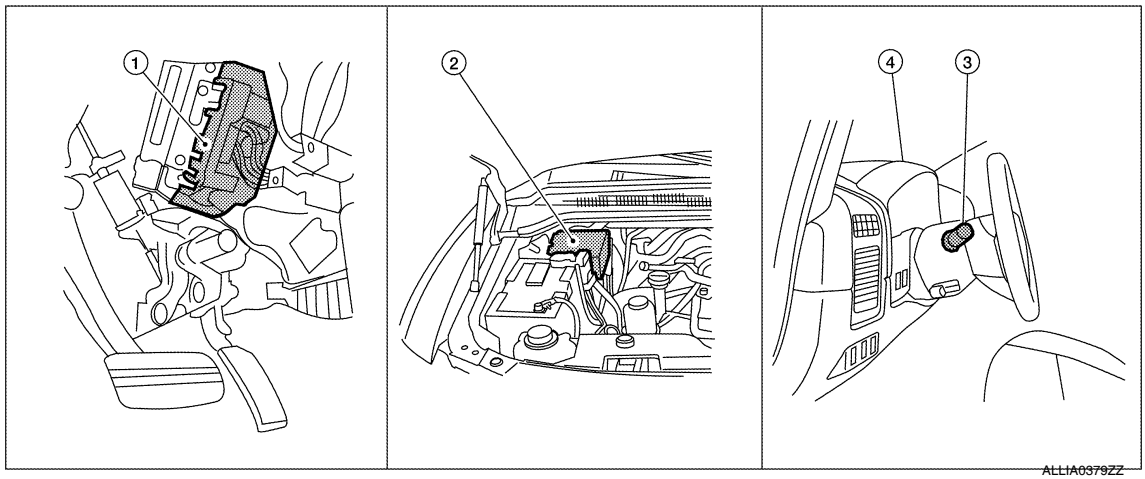
System Description

INFOID:0000000001547107

The front fog lamps are activated with the lighting switch (combination switch). The lighting switch signal to the BCM is monitored with the BCM combination switch reading function. When the fog lamps are turned ON with the lighting switch, the BCM sends a front fog lamp request signal via CAN communication lines to the IPDM E/R. The IPDM E/R grounds the front fog lamp relay coil to activate the front fog lamps.

Component Parts Location

INFOID:0000000001547108



1. BCM M18, M20 (view with instrument panel removed)
2. IPDM E/R E122, E123, E124
3. Combination switch M28

Component Description

INFOID:0000000001547109

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 via 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.

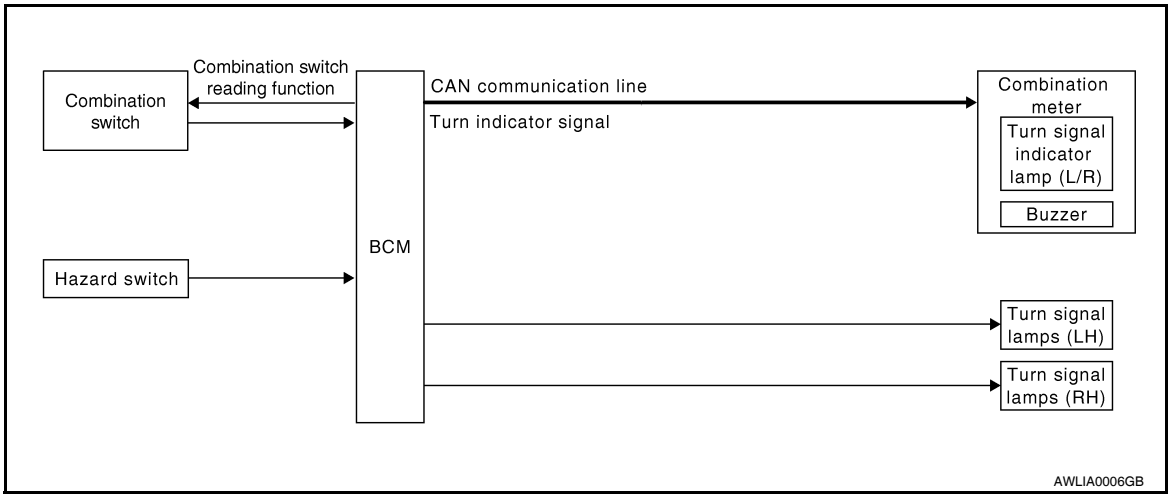
COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

TURN SIGNAL AND HAZARD WARNING LAMPS

System Diagram

INFOID:0000000001547110



System Description

INFOID:0000000001547111

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 signal to the respective turn signal lamp. The BCM also sends a turn indicator signal ON request via 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 signal (right and left). The BCM sends a hazard indicator signal ON request via the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

REMOTE KEYLESS ENTRY OPERATION

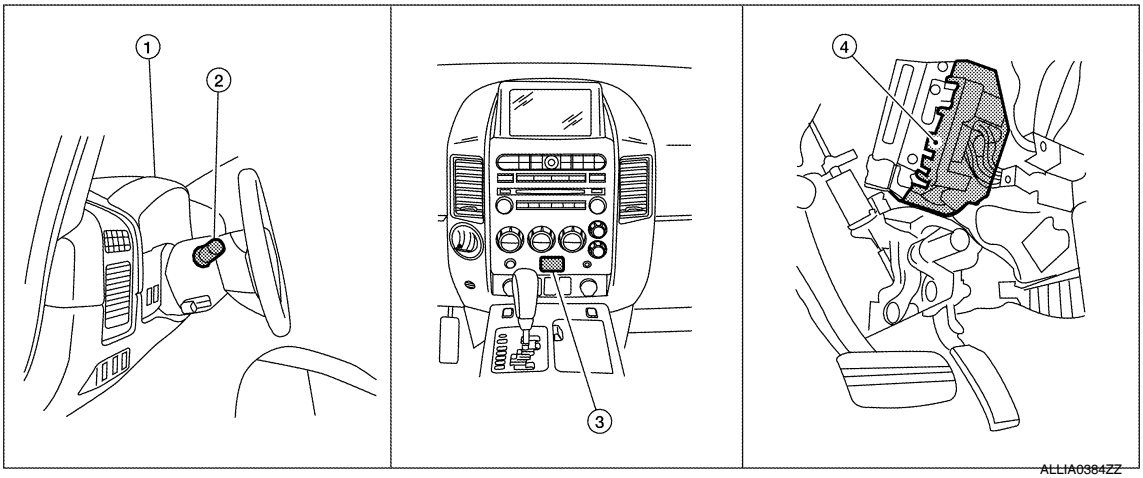
The remote keyless entry receiver transmits a hazard request signal to the BCM, then BCM controls hazard lamps.
Refer to SEC-9, "System Description".

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

Component Parts Location

INFOID:0000000001547112



1. Combination meter M24
2. Combination switch M28
3. Hazard switch M55
4. BCM M18, M20 (view with instrument panel removed)

Component Description

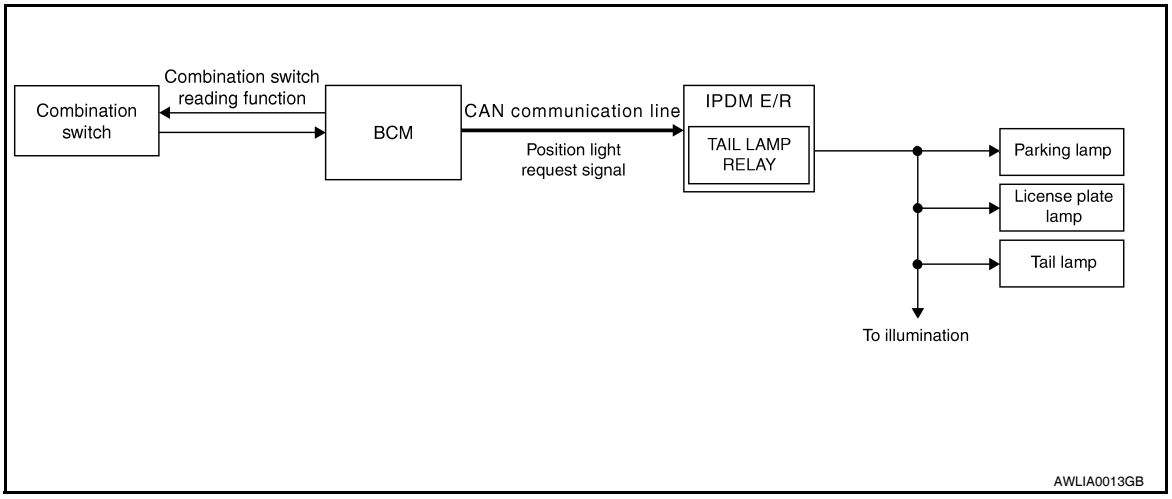
INFOID:0000000001547113

Part name	Description
BCM	Controls turn signal and hazard flasher operation.
Combination switch	Lighting and turn signal switch requests are output to the BCM.
Hazard switch	Hazard flasher request signal is output to the BCM.
Combination meter	Outputs turn and hazard indicator as requested by the BCM.

PARKING, LICENSE PLATE AND TAIL LAMPS

System Diagram

INFOID:0000000001547114



System Description

INFOID:0000000001547115

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 via 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

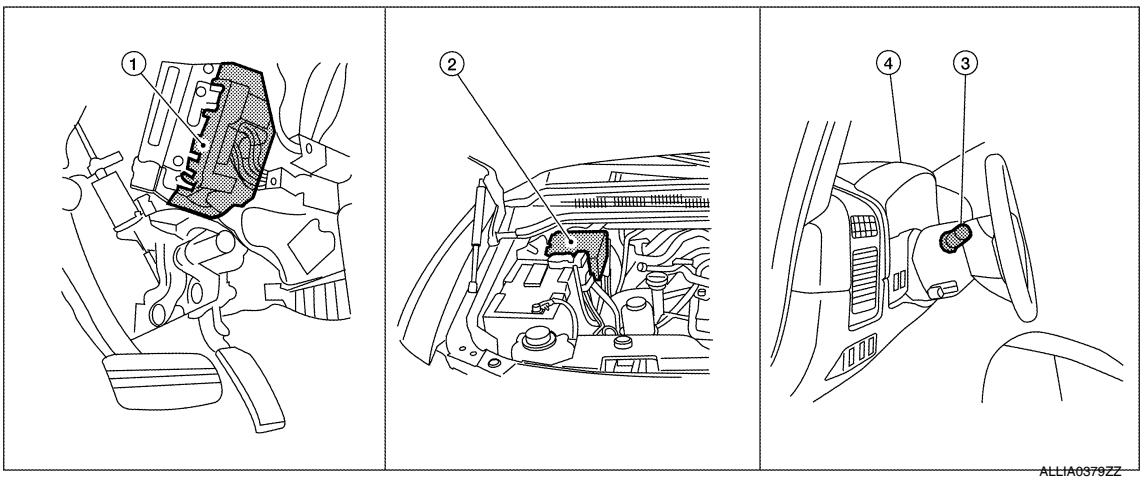
With the lighting switch (combination switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.
Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.
This setting can be changed by CONSULT-III. Refer to EXL-23, "EXTERNAL LAMP : CONSULT-III Function".

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

Component Parts Location

INFOID:0000000001547116



1. BCM M18, M20 (view with instrument panel removed)
2. IPDM E/R E122, E124
3. Combination switch M28

Component Description

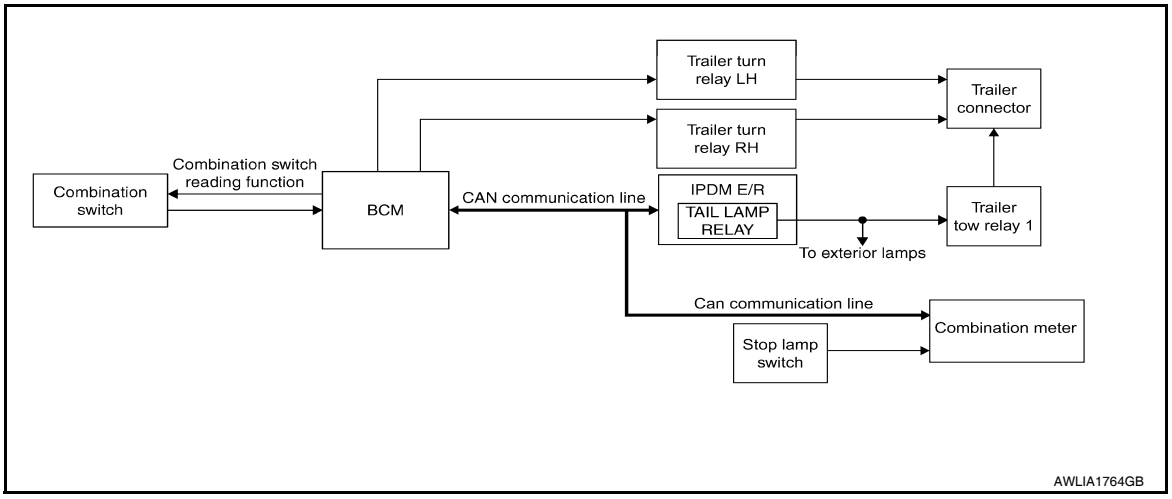
INFOID:0000000001547117

Part name	Description
BCM	• Recieves lighting switch requests via BCM combination switch reading function. • Sends parking light request signal to the IPDM E/R.
IPDM E/R	Activates the tail lamp relay upon request of the BCM.
Combination switch (lighting switch)	Outputs lighting requests to the BCM.

TRAILER TOW

System Diagram

INFOID:0000000006095108



System Description

INFOID:0000000006095109

TRAILER TAIL LAMP OPERATION

The trailer tail lamps are controlled by the trailer tow relay 1 located behind the left side of the instrument panel (IP). With the combination switch in the 1st position, the BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request via the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which activates the trailer tow relay 1 and sends power to the trailer connector.

TRAILER TURN SIGNAL LAMP OPERATION

The trailer turn signal lamps are controlled by the BCM. When the turn signal switch is in the LH or RH position with the ignition switch ON, the combination switch sends a signal to the BCM. The BCM detects the TURN RH or TURN LH ON request. The BCM sends a control signal to the respective trailer turn relay which sends power to the trailer connector.

TRAILER HAZARD LAMP OPERATION

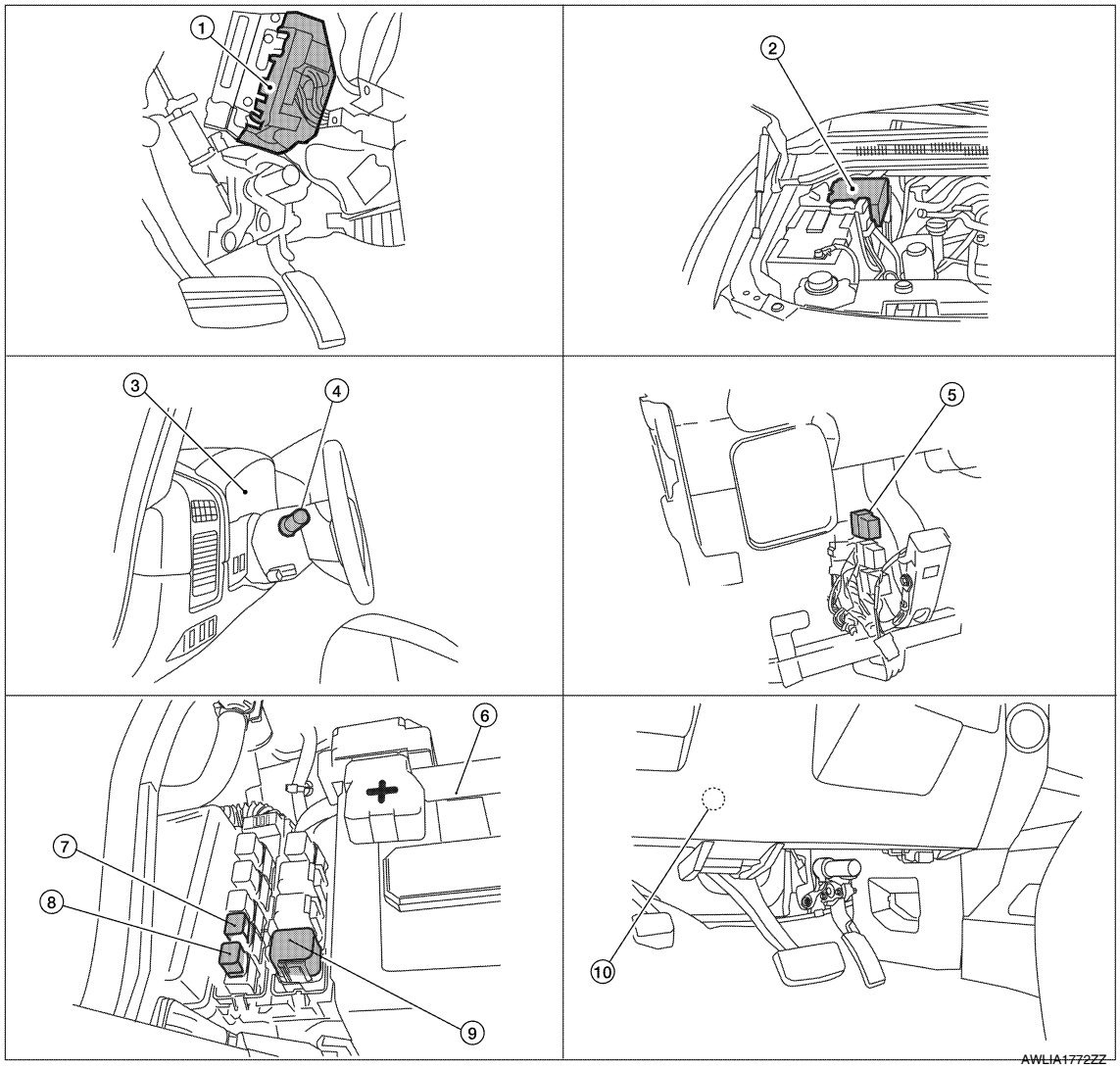
The trailer hazard lamps are controlled by the BCM. When the hazard switch is pressed, the BCM detects the the hazard ON request. The BCM then sends a control signal to both trailer turn relays which sends power to the trailer connector.

TRAILER BRAKE LAMP OPERATION

The trailer brake lamps are controlled by the BCM. When the brake pedal is depressed, the combination meter receives a stop lamp switch signal from the stop lamp switch. The combination meter then sends the brake signal to the BCM via the CAN communication lines. The BCM then sends a control signal to both trailer turn relays which sends power to the trailer connector.

Component Parts Location

INFOID:0000000006095110



1. BCM M18, M19, M20 (view with instrument panel removed)
2. IPDM E/R E119, E122, E123, E124
3. Combination meter M23, M24
4. Combination switch M28
5. Trailer tow relay 1 M51 (view with steering member removed)
6. Battery
7. Trailer turn relay LH E156
8. Trailer turn relay RH E157
9. Trailer tow relay 2 E140
10. Stop lamp switch E38

Component Description

INFOID:0000000006095111

Part name	Description
BCM	• Receives lighting and turn signal requests from combination switch. • Receives stop lamp signal requests from combination meter via CAN communication. • Sends lighting signal request to the IPDM E/R to control the tail lamp relay via CAN communication. • Sends turn/hazard/brake control signal to the trailer turn relays.
IPDM E/R	Activates the tail lamp relay upon request from the BCM via CAN communication.

Combination meter	• Receives stop lamp switch signal from stop lamp switch. • Sends stop lamp signal request to the BCM via CAN communication.
Combination switch	Outputs lighting and turn signal requests to the BCM.

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : Diagnosis Description

INFOID:0000000001547118

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.

COMMON ITEM : CONSULT-III Function

INFOID:0000000001547119

ECU IDENTIFICATION

Displays the BCM part No.

SELF-DIAG RESULT

Refer to BCS-50, "DTC Index".

EXTERNAL LAMP

EXTERNAL LAMP : CONSULT-III Function

INFOID:0000000001547120

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	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	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

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	The switch status input from ignition switch
ACC ON SW [ON/OFF]	The switch status input from ignition switch
TURN SIGNAL R [ON/OFF]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
HI BEAM SW [ON/OFF]	
HEAD LAMP SW1 [ON/OFF]	
HEAD LAMP SW2 [ON/OFF]	
LIGHT SW 1ST [ON/OFF]	
AUTO LIGHT SW [ON/OFF]	
PASSING SW [ON/OFF]	
FR FOG SW [ON/OFF]	
CARGO LAMP SW [ON/OFF]	
RR FOG SW[1] [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 [ON/OFF]	The switch status input from the back door switch
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor

1: The item is indicated, not monitored

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	ON	Transmits the position light request signal to IPDM E/R via 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 via CAN communication to turn the headlamp (HI)
	LO	Transmits the low beam request signal via CAN communication to turn the headlamp (LO).
	OFF	Stops the high & low beam request signal transmission.

Test item	Operation	Description
FR FOG LAMP	ON	Transmits the front fog lamp light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON.
	OFF	Stops the front fog lamp request signal transmission.
CORNERING LAMP[1]	RH	—
	LH	
	OFF	
CARGO LAMP	ON	Tramsmits the cargo lamp request signal to the IPDM E/R via CAN communication to turn on the cargo lamp.
	OFF	Stops the cargo lamp request signal transmission.

1: The item is indicated, not monitored.

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:0000000001547121

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	The switch status input from the ignition switch
HAZARD SW [ON/OFF]	The switch status input from the hazard warning switch
TURN SIGNAL R [ON/OFF]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
BRAKE SW [ON/OFF]	The switch status input from the brake switch

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:0000000001547122

APPLICATION ITEM

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

Diagnosis mode	Description
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
TAIL & CLR REQ [Off/On]	×	Displays the status of the tail and clearance lamp request signal received from BCM via CAN communication.
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.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by the IPDM E/R-.
DTRL REQ [Off]	×	Displays the status of the daytime light request signal received from the BCM via CAN communication.

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:0000000001547123

For BCM power supply and ground circuit information, refer to BCS-32, "Diagnosis Procedure".

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

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

INFOID:0000000001547124

For IPDM E/R power supply and ground circuit information, refer to PCS-18, "Diagnosis Procedure" .

HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000001547125

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM via the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 34 and 35, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

Component Function Check

INFOID:0000000001547126

1.CHECK HEADLAMP (HI) OPERATION

WITHOUT CONTULT-III
1. Start IPDM E/R auto active test. Refer to PCS-12, "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 the test item operating, check that the headlamp switches to high beam.

HI : Headlamp switches to the high beam.
OFF : Headlamp OFF

Does the headlamp switch to high beam?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-28, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547127

1.CHECK HEADLAMP (HI) FUSES

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

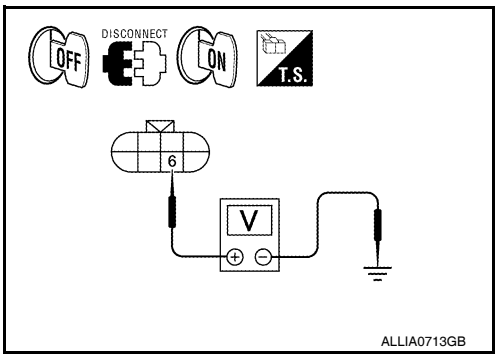
Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	34	10A
Headlamp HI (RH)	IPDM E/R	35	10A

Is the fuse open?

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector E11 or E107.
3. Turn the ignition switch ON.
4. Turn the high beam headlamps ON.
5. With the high beam headlamps ON, check the voltage between the combination lamp connector and ground.



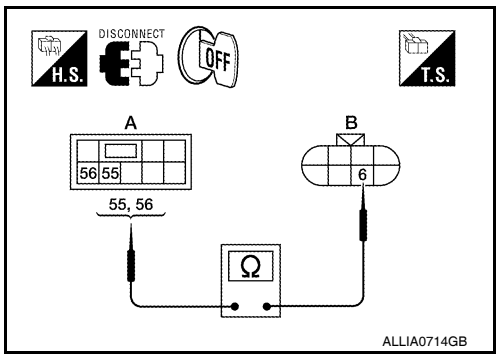
(+)			(−)	Voltage
Connector		Terminal		
LH	E11	6	Ground	Battery voltage
RH	E107	6		

Are the voltage readings as specified?

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 E123.
3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).



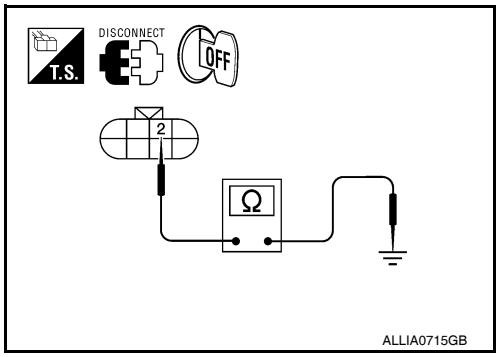
A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E123	55	E11	6	Yes
RH		56	E107	6	

Does continuity exist?

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

4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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



Connector		Terminal	—	Continuity
LH	E11	2	Ground	Yes
RH	E107	2		

Does continuity exist?

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

HEADLAMP (LO) CIRCUIT

Description

INFOID:0000000001547128

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM via the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 40 and 41, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

Component Function Check

INFOID:0000000001547129

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT-III
1. Start IPDM E/R auto active test. Refer to PCS-12, "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 the test items operating, 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-30, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547130

1.CHECK HEADLAMP (LO) FUSES

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

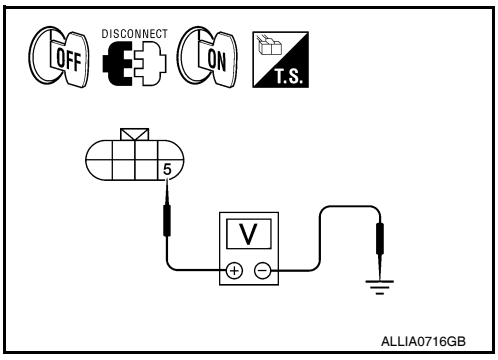
Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	40	15A
Headlamp LO (RH)	IPDM E/R	41	15A

Is the fuse open?

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector.
3. Turn the ignition switch ON.
4. Turn the low beam headlamps ON.
5. With the low beam headlamps ON, check the voltage between the combination lamp connector and ground.



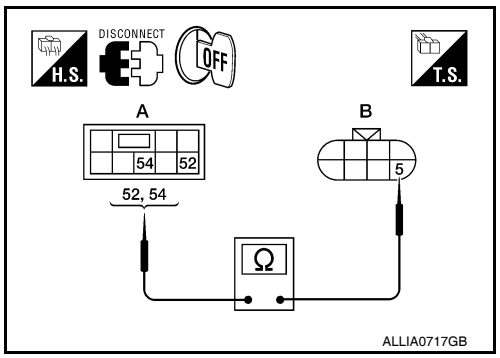
(+)			(−)	Voltage
Connector		Terminal		
LH	E11	5	Ground	Battery voltage
RH	E107	5		

Is voltage reading as specified?

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.



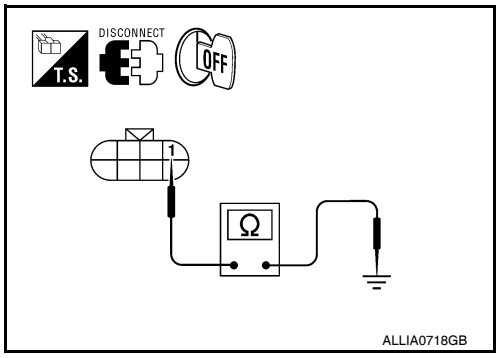
A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E123	52	E11	5	Yes
RH		54	E107	5	

Does continuity exist?

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

4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

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



Connector		Terminal	—	Continuity
LH	E11	1	Ground	Yes
RH	E107	1		

Does continuity exist?

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

FRONT FOG LAMP CIRCUIT

Description

INFOID:0000000001547131

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM via 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:0000000001547132

1.CHECK FRONT FOG LAMP OPERATION

WITHOUT CONSULT-III
1. Activate IPDM E/R auto active test. Refer to PCS-12, "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-32, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547133

1.CHECK FRONT FOG LAMP FUSE

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

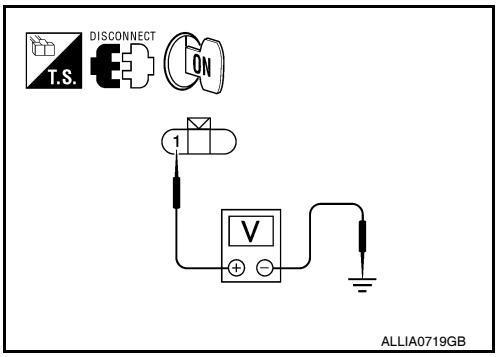
Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	56	20A

Is the fuse open?

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

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front fog/turn lamp connector.
3. Turn the ignition switch ON.
4. Turn the front fog lamps ON.
5. Check the voltage between the fog/turn lamp connector and ground.



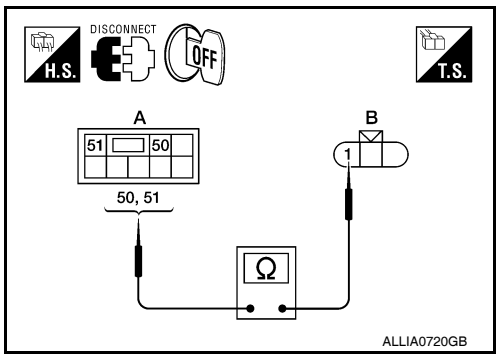
(+)			(–)	Voltage
Connector		Terminal		
LH	E101	1	Ground	Battery voltage
RH	E102	1		

Are the voltage readings as specified?

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/turn lamp harness connector.



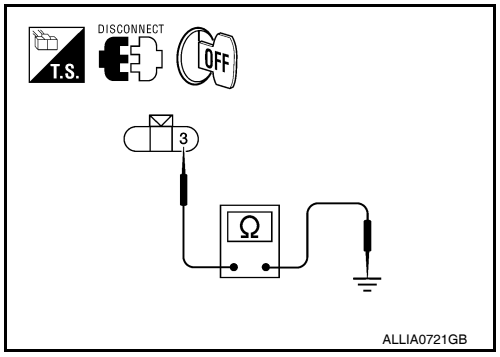
A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E123	50	E101	1	Yes
RH		51	E102	1	

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/turn lamp harness connector terminal and ground.



Connector		Terminal	—	Continuity
LH	E101	3	Ground	Yes
RH	E102	3		

Does continuity exist?

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

PARKING LAMP CIRCUIT

Description

INFOID:0000000001547134

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM via the CAN communication lines. When the tail lamp relay is energized, power flows through fuse 37, located in the IPDM E/R. Power then flows to the front and rear combination lamps.

Component Function Check

INFOID:0000000001547135

1.CHECK PARKING LAMP OPERATION

WITHOUT CONSULT-III
1. Activate IPDM E/R auto active test. Refer to PCS-12, "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-34, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547136

1.CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Parking lamps	IPDM E/R	37	10A

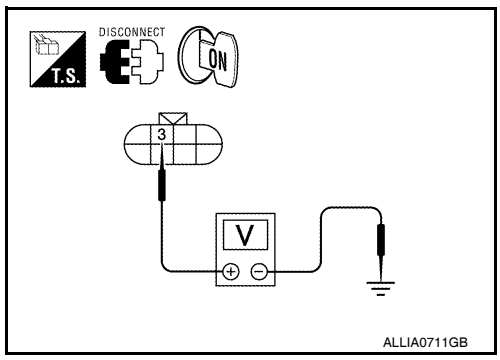
Is the fuse open?

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

2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

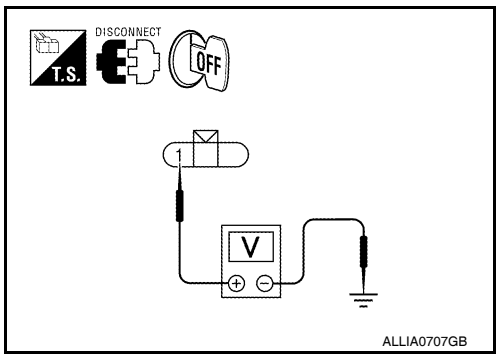
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector, rear combination lamp connector and license plate lamp connector.
3. Turn the ignition switch ON.
4. Turn the parking lamps ON.
5. With the parking lamps ON, check voltage between the front combination lamp connectors and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	E11	3	Ground	Battery voltage
RH	E107			



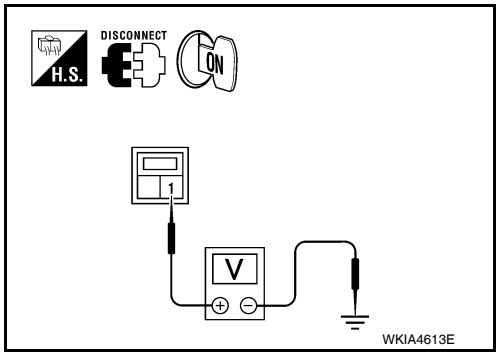
6. With the parking lamps ON, check voltage between the rear combination lamp connectors and ground.

(+)		(–)	Voltage
Connector	Terminal		
LH	B70	1	Ground	Battery voltage
RH	B130			



7. With the parking lamps ON, check voltage between the license plate lamp connector and ground

(+)		(–)	Voltage
Connector	Terminal		
D703	1	Ground	Battery voltage



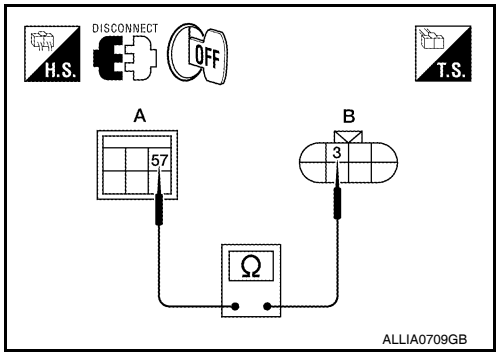
Are voltage readings as specified?

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

3. CHECK PARKING, LICENSE PLATE AND TAIL LAMP CIRCUIT (OPEN)

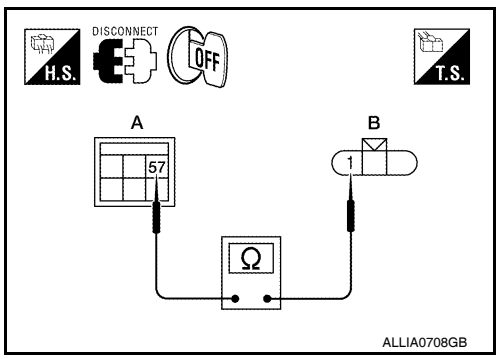
1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E124	57	E11	3	Yes
RH			E107		

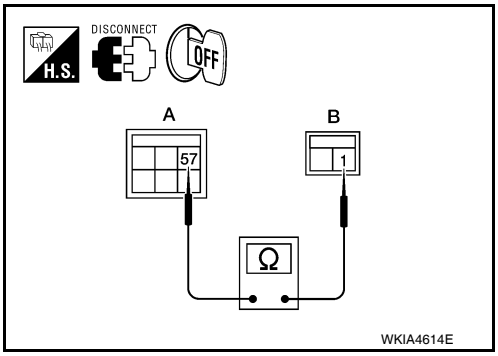


4. Check continuity between the IPDM E/R harness connector (A) and the rear combination lamp harness connector (B).

A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E124	57	B70	1	Yes
RH			B130		



5. Check continuity between the IPDM E/R harness connector (A) and license plate lamp connector (B).



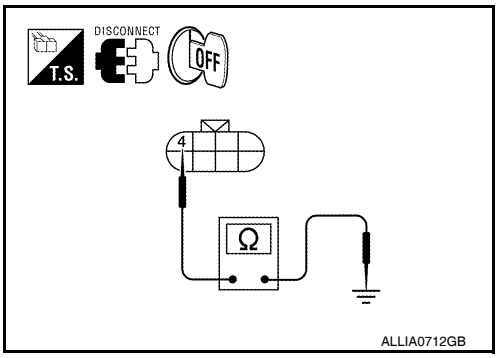
A		B		Continuity
Connector	Terminal	Connector	Terminal	
E124	57	D703	1	Yes

Are continuity test results as specified?

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

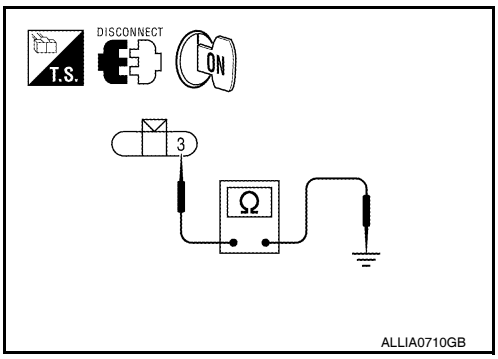
4. CHECK PARKING, LICENSE AND TAIL LAMP GROUND CIRCUITS

1. Check continuity between the front combination lamp harness connectors E11 and E107 terminal 4 and ground.



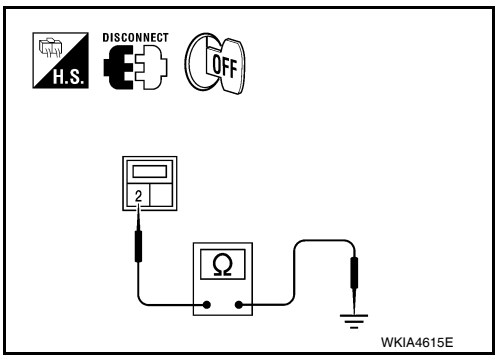
Connector		Terminal	—	Continuity
LH	E11	4	Ground	Yes
RH	E107			

2. Check continuity between the rear combination lamp harness connectors B70 and B130 terminal 3 and ground.



Connector		Terminal	—	Continuity
LH	B70	3	Ground	Yes
RH	B130			

3. Check continuity between the license plate lamp harness connectors and ground.



Connector	Terminal	—	Continuity
D703	2	Ground	Yes

Does continuity exist?

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

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:0000000001547137

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:0000000001547138

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-37, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547139

1.CHECK TURN SIGNAL LAMP BULB

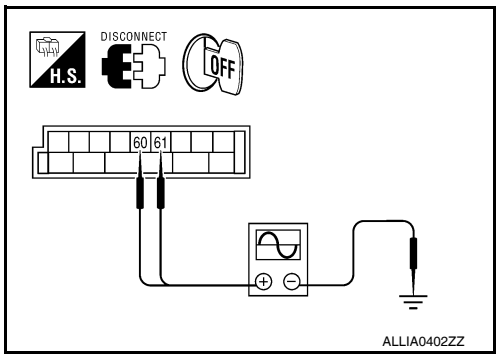
Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

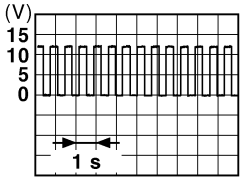
Is the bulb OK?

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 turn/fog lamp connector or the rear combination lamp connector.
3. Turn the ignition switch ON.
4. With turn signal switch operating, check the voltage between the BCM harness connector M20 and ground.



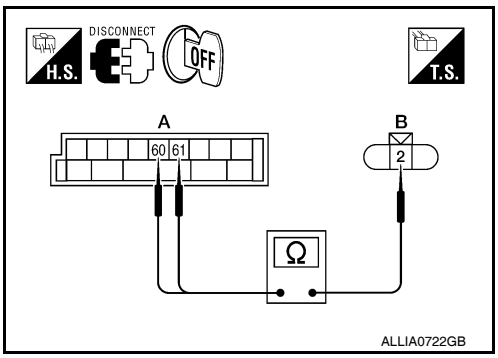
(+)			(−)	Voltage
Connector		Terminal		
M20	LH	60	Ground	
	RH	61		

Is voltage reading as specified?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-55, "Removal and Installation".

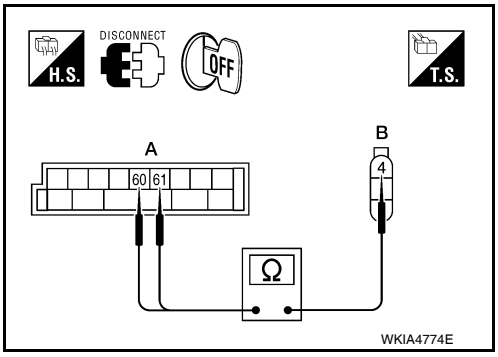
3.CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect BCM connector M20.
3. Check continuity between the BCM harness connector M20 and the front turn/fog lamps.



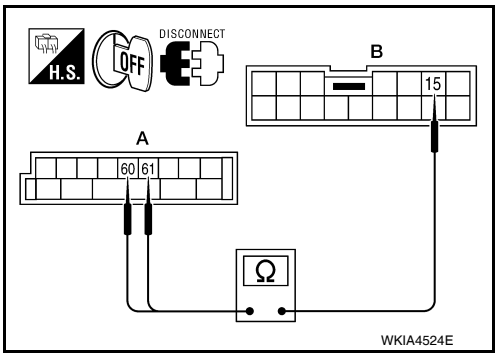
A			B		Continuity
Connector		Terminal	Connector	Terminal	
Front LH	M20	60	E101	2	Yes
Front RH		61	E102		

4. Check continuity between the BCM harness connector M20 and the rear combination lamp connectors.



A			B		Continuity
Connector		Terminal	Connector	Terminal	
Rear LH	M20	60	B35	4	Yes
Rear RH		61	B105	4	

5. Check continuity between the BCM harness connector M20 and the door mirror connectors.



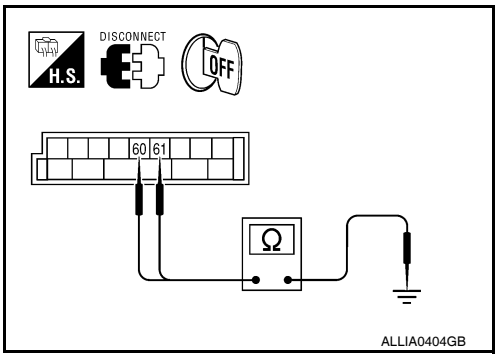
A			B		Continuity
Connector		Terminal	Connector	Terminal	
Door mirror LH	M20	60	D4	15	Yes
Door mirror RH		61	D107	15	

Are continuity test results as specified?

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

4.CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector M20 and ground.



Connector		Terminal	—	Continuity
LH	M20	60	Ground	No
RH		61		

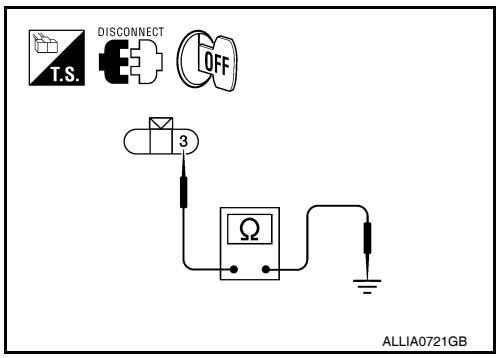
Does continuity exist?

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

5.CHECK TURN SIGNAL LAMP GROUND CIRCUIT

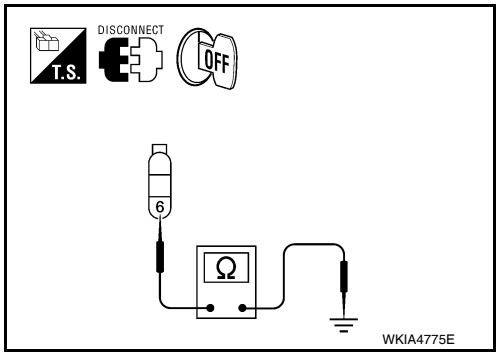
1. Check continuity between the front turn/fog lamp harness connectors and ground.

Connector		Terminal	—	Continuity
Front LH	E11	3	Ground	Yes
Front RH	E107			



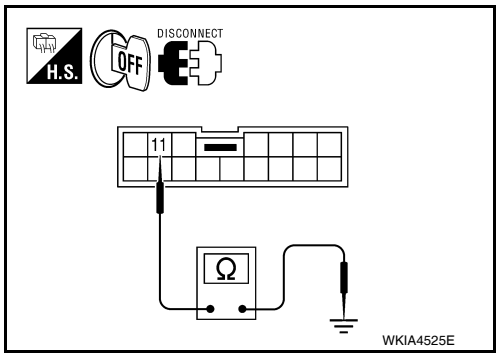
2. Check continuity between the rear combination lamp harnness connectors and ground.

Connector		Terminal	—	Continuity
Rear LH	B35	6	Ground	Yes
Rear RH	B105			



3. Check continuity between the door mirrors and ground.

Connector		Terminal	—	Continuity
Door mirror RH	D107	11	Ground	Yes
Door mirror LH	D4			



Are continuity test results as specified?

YES >> Replace the malfunctioning lamp.
NO >> Repair the harnesses or connectors.

OPTICAL SENSOR

Description

INFOID:0000000001547140

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

Component Function Check

INFOID:0000000001547141

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	3.1V or more *
	When shutting off light	0.6V or less

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

Is the item status normal?

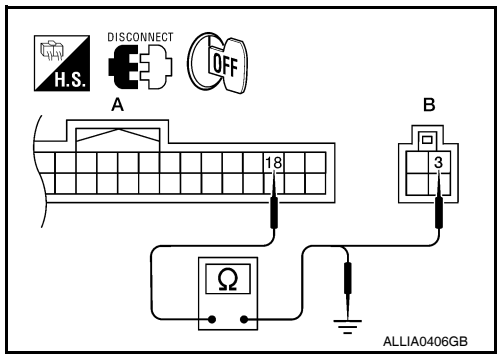
YES >> Optical sensor is normal.
NO >> Refer to EXL-40, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547142

1.CHECK OPTICAL SENSOR GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM connector M18 and optical sensor connector M302.
3. Check continuity between BCM harness connector M18 (A) terminal 18 and optical sensor harness connector M302 (B) terminal 3.



A		B		
Connector	Terminal	Connector	Terminal	Continuity
M18	18	M302	3	Yes

4. Check continuity between BCM harness connector M18 (A) terminal 18 and ground.

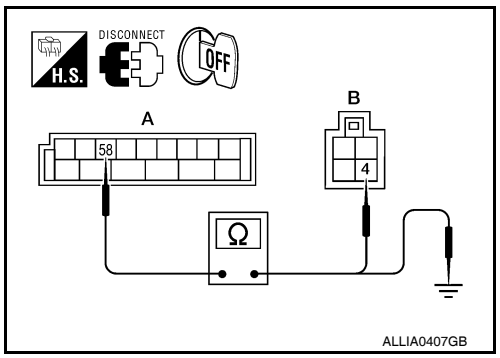
A		—	Continuity
Connector	Terminal		
M18	18	Ground	No

Are continuity test results as specified?

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

2.CHECK OPTICAL SENSOR SIGNAL CIRCUIT

1. Check continuity between BCM harness connector M20 (A) terminal 58 and optical sensor harness connector M302 (B) terminal 4.



A		B		
Connector	Terminal	Connector	Terminal	Continuity
M20	58	M302	4	Yes

2. Check continuity between BCM harness connector M20 (A) terminal 58 and ground.

A		—	Continuity
Connector	Terminal		
M20	58	Ground	No

Are the continuity test results as specified?

YES >> Replace the optical sensor. Refer to EXL-116, "Removal and Installation".
NO >> Repair harness or connector.

HEADLAMP AIMING SWITCH

Description

INFOID:0000000001806205

The manual headlamp aiming system uses a headlamp aiming switch to adjust the axis of the headlamp aiming motor. The headlamp aiming switch has four settings, each with a different resistance value. The headlamp aiming motor adjusts to the proper axis based off the position of the headlamp aiming switch.

Diagnosis Procedure

INFOID:0000000001806206

1.CHECK HEADLAMP AIMING SWITCH SIGNAL FOR OPEN OR SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect headlamp aiming switch connector M148, headlamp aiming motor LH connector E11 and headlamp aiming motor RH connector E107.
3. Check continuity between the headlamp aiming switch connector M148 terminal 1 and headlamp aiming motor LH E11 and RH E107 terminal 7.

Connector	Terminal	Connector	Terminal	Continuity
M148	1	E11	7	Yes
		E107		

4. Check continuity between the headlamp aiming switch connector M148 terminal 1 and ground.

Connector	Terminal	—	Continuity
M148	1	Ground	No

Are the continuity test results as specified?

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

2.CHECK HEADLAMP AIMING SWITCH

1. Check continuity between the headlamp aiming switch terminals 1 and 2 in each switch position.

Component	Terminal		Switch Position	Continuity
Headlamp aiming switch	1	2	0	604 ohms
			1	324 ohms
			2	191 ohms
			3	130 ohms

Are the continuity check results as specified?

YES >> GO TO 3
NO >> Replace the headlamp aiming switch.

3.CHECK HEADLAMP AIMING SWITCH GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect headlamp aiming switch connector M148.
3. Check continuity between headlamp aiming switch connector M148 terminal 2 and ground.

Connector	Terminal	—	Continuity
M148	2	Ground	Yes

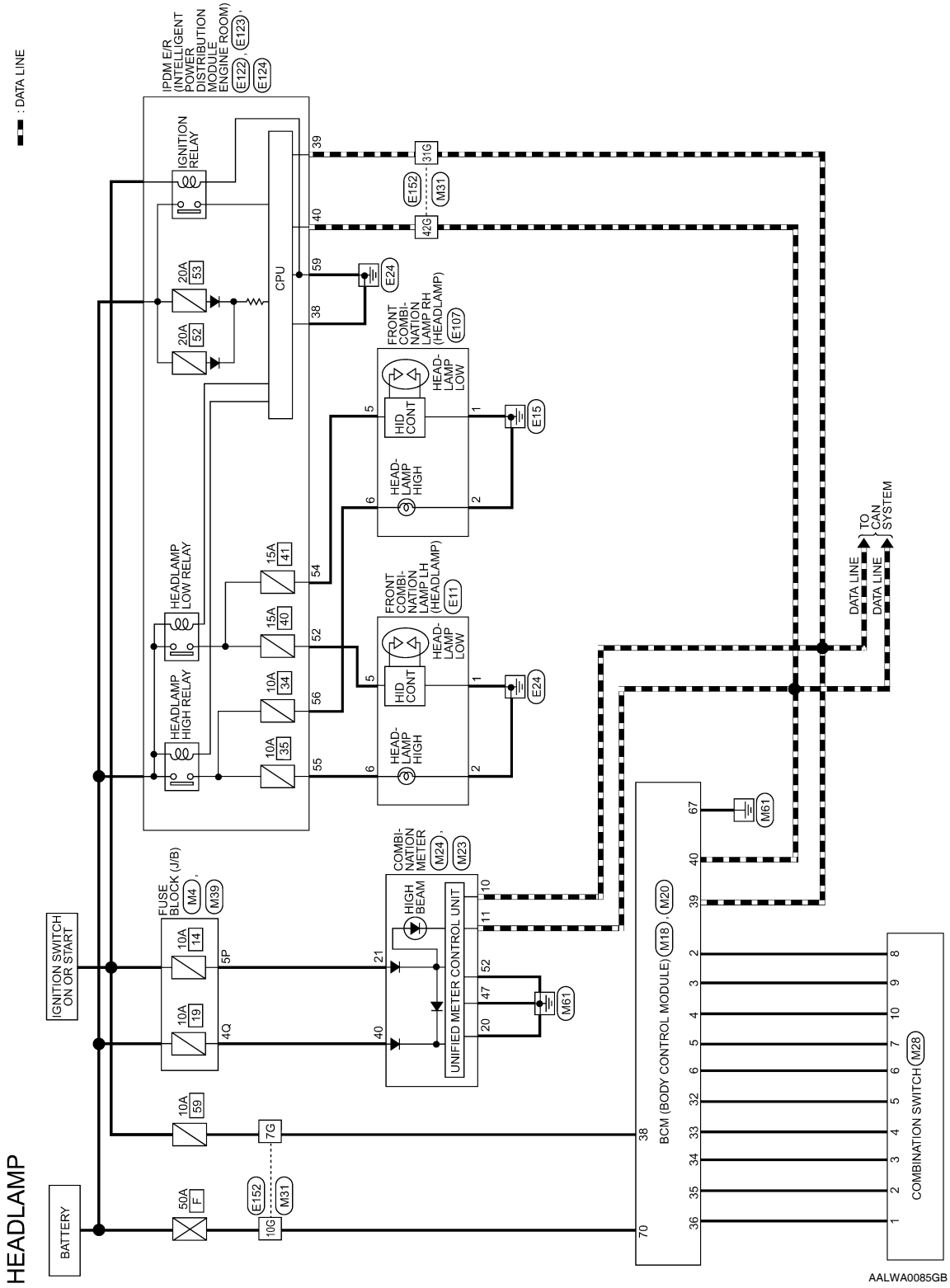
Is continuity as specified?

YES >> Inspect headlamp aiming motors.
NO >> Repair harness or connector.

HEADLAMP

Wiring Diagram

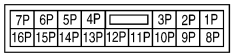
INFOID:0000000001547143



HEADLAMP CONNECTORS

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

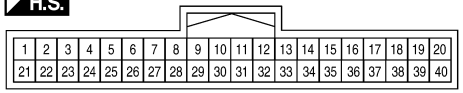
H.S.



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

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

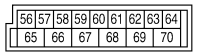
H.S.



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

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

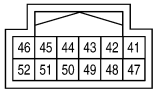
H.S.



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

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE

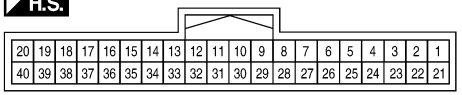
H.S.



Terminal No.	Color of Wire	Signal Name
47	B	GND
52	B	GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
10	L	–
11	P	–
20	B	GND
21	O/L	–
40	Y/R	–

AWLIA0153GB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

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

H.S.

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

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK

H.S.

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

Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH (WITHOUT DAYTIME RUNNING LIGHTS)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–
5	L	–
6	G	–

Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT DAYTIME RUNNING LAMPS)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	B	–
5	R/Y	–
6	L/W	–

AALIA0182GB

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

H.S.

42	41	40	39	38	37
48	47	46	45	44	43

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

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

H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
52	L	HEAD_LAMP_LH_LO
54	R/Y	HEAD_LAMP_RH_LO
55	G	HEAD_LAMP_LH_HI
56	Y	HEAD_LAMP_RH_HI

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

H.S.

59	58	57
62	61	60

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

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

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

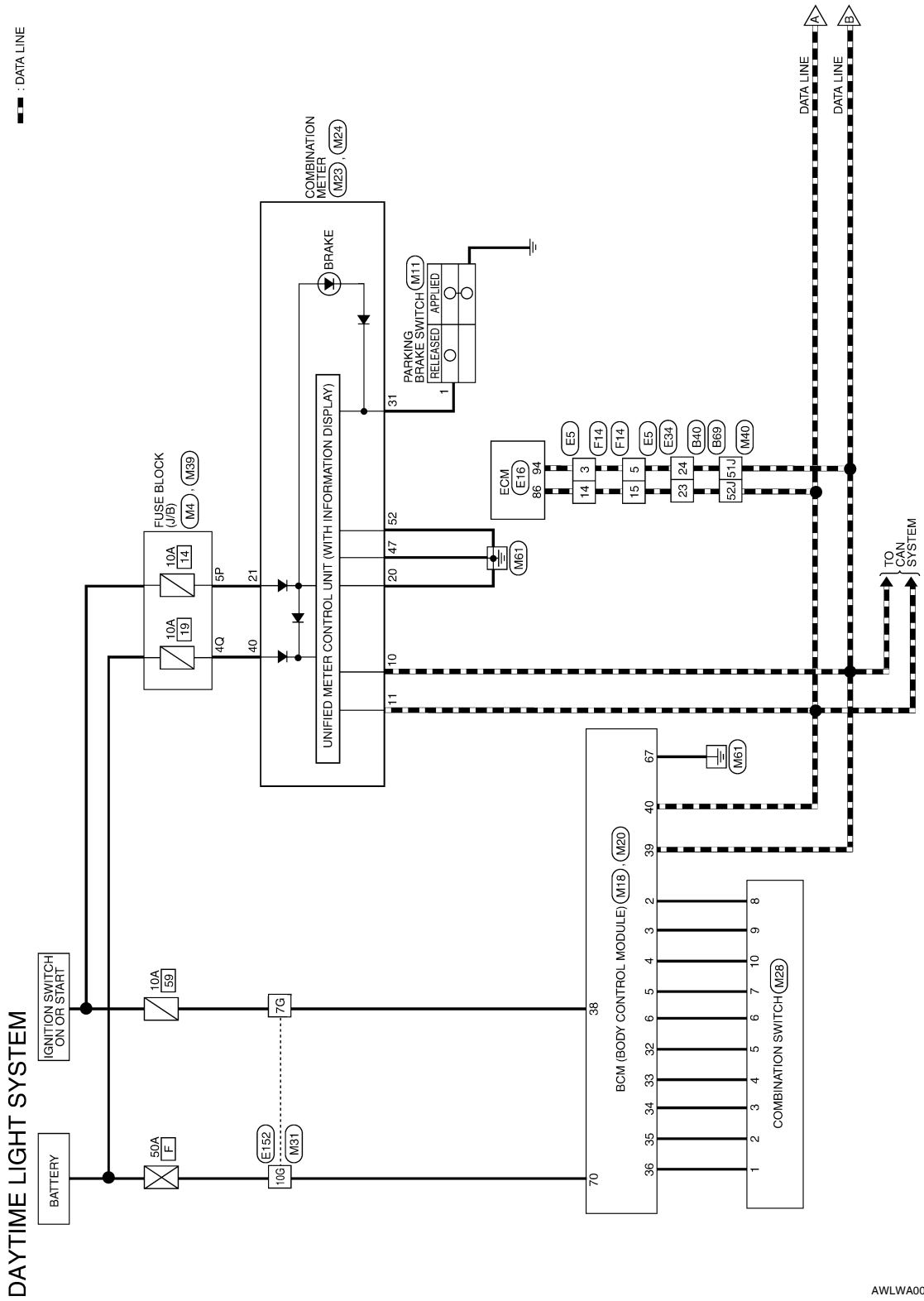
H.S.

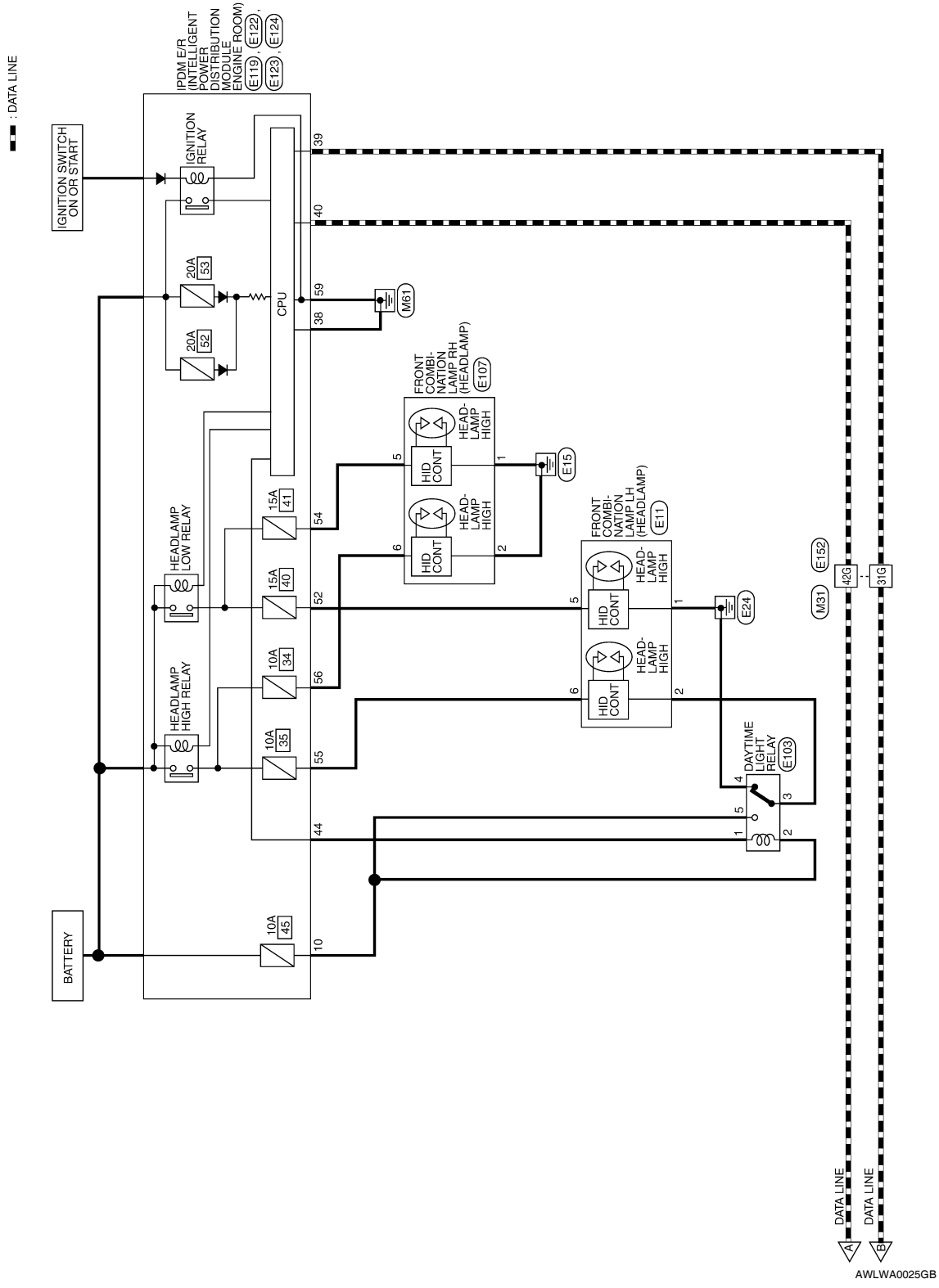
AALIA0183GB

DAYTIME LIGHT SYSTEM

Wiring Diagram

INFOID:0000000001547144




: DATA LINE
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E119, E122, E123, E124
IGNITION SWITCH ON OR START
IGNITION RELAY
20A 53
20A 52
CPU
39
40
59
38
M61
FRONT COMBINATION LAMP RH (HEADLAMP) E107
HEAD-LAMP HIGH
HID CONT
E15
FRONT COMBINATION LAMP LH (HEADLAMP) E11
E24
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
15A 41
15A 40
10A 34
10A 35
54
52
56
55
DAYTIME LIGHT RELAY E103
44
BATTERY
10A 45
10
E152
M31
42G
31G
DATA LINE
A
B
AWLWA0025GB

DAYTIME LIGHT SYSTEM CONNECTORS

Connector No.	M4
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
5P	O/L	–

Connector No.	M11
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	G	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
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
2	SB	INPUT-5
3	G/Y	INPUT-4
4	Y	INPUT-3
5	G/B	INPUT-2
6	V	INPUT-1
32	R/G	OUTPUT-5
33	R/Y	OUTPUT-4
34	L	OUTPUT-3
35	O/B	OUTPUT-2
36	R/W	OUTPUT-1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

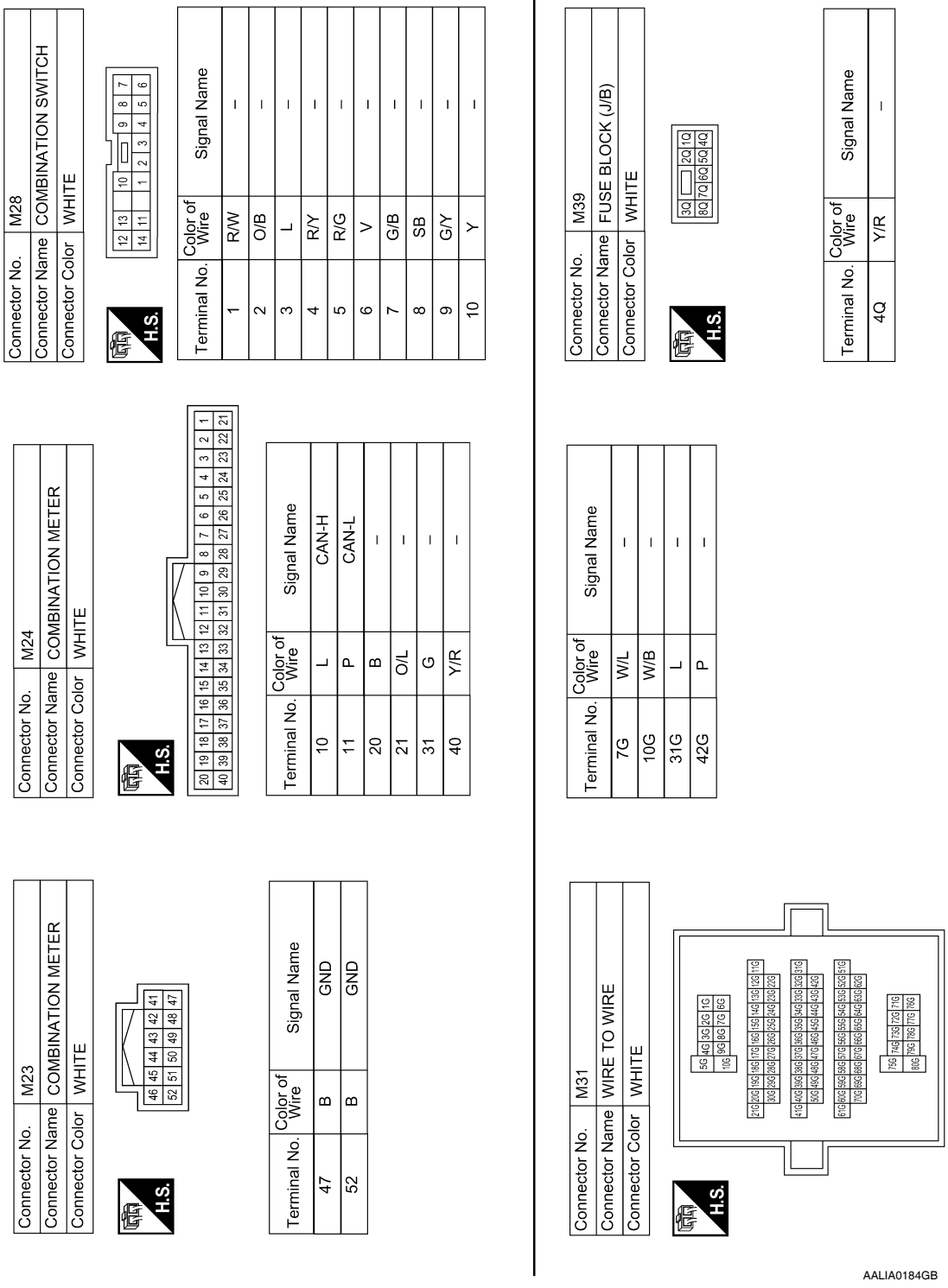
Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

H.S.

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

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

ALLIA0505GB


Connector No. M23
Connector Name COMBINATION METER
Connector Color WHITE
H.S.
46 45 44 43 42 41 47
52 51 50 49 48
Terminal No. Color of Wire Signal Name
47 B GND
52 B GND
Connector No. M24
Connector Name COMBINATION METER
Connector Color WHITE
H.S.
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
Terminal No. Color of Wire Signal Name
10 L CAN-H
11 P CAN-L
20 B –
21 O/L –
31 G –
40 Y/R –
Connector No. M28
Connector Name COMBINATION SWITCH
Connector Color WHITE
H.S.
12 13 10 9 8 7
14 11 1 2 3 4 5 6
Terminal No. Color of Wire Signal Name
1 R/W –
2 O/B –
3 L –
4 R/Y –
5 R/G –
6 V –
7 G/B –
8 SB –
9 G/Y –
10 Y –
Connector No. M31
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5G 4G 3G 2G 1G
9G 8G 7G 6G
10G
Terminal No. Color of Wire Signal Name
7G W/L –
10G W/B –
31G L –
42G P –
Connector No. M39
Connector Name FUSE BLOCK (J/B)
Connector Color WHITE
H.S.
3Q 2Q 1Q
8Q 7Q 6Q 5Q 4Q
Terminal No. Color of Wire Signal Name
4Q Y/R –
AALIA0184GB

Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH (WITH DAYTIME RUNNING LIGHTS)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–
2	Y/G	–
5	L	–
6	G	–

Connector No.	E103
Connector Name	DAYTIME LIGHT RELAY
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	BR	–
2	G	–
3	Y/G	–
4	B	–
5	G	–

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	L	–
5	L	–
14	P	–
15	P	–

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
23	P	–
24	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
51J	L	–
52J	P	–

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
86	P	CAN-L
94	L	CAN-H

AWLIA0156GB

Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH (WITH DAYTIME RUNNING LAMPS)
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

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

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	G	DTRL

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

H.S.

42	41	40	39	38	37
48	47	46	45	44	43

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

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

H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
52	L	HEAD_LAMP_LH_LO
54	R/Y	HEAD_L_HI_RH
55	G	HEAD_LAMP_LH_HI
56	Y	HEAD_LAMP_RH_HI

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

H.S.

59	58	57
62	61	60

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

AWLIA0157GB

Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	L	–
5	L	–
14	P	–
15	P	–

Terminal No.	Color of Wire	Signal Name
51J	L	–
52J	P	–

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

H.S.

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

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

H.S.

Connector No.	B40
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	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
23	P	–
24	L	–

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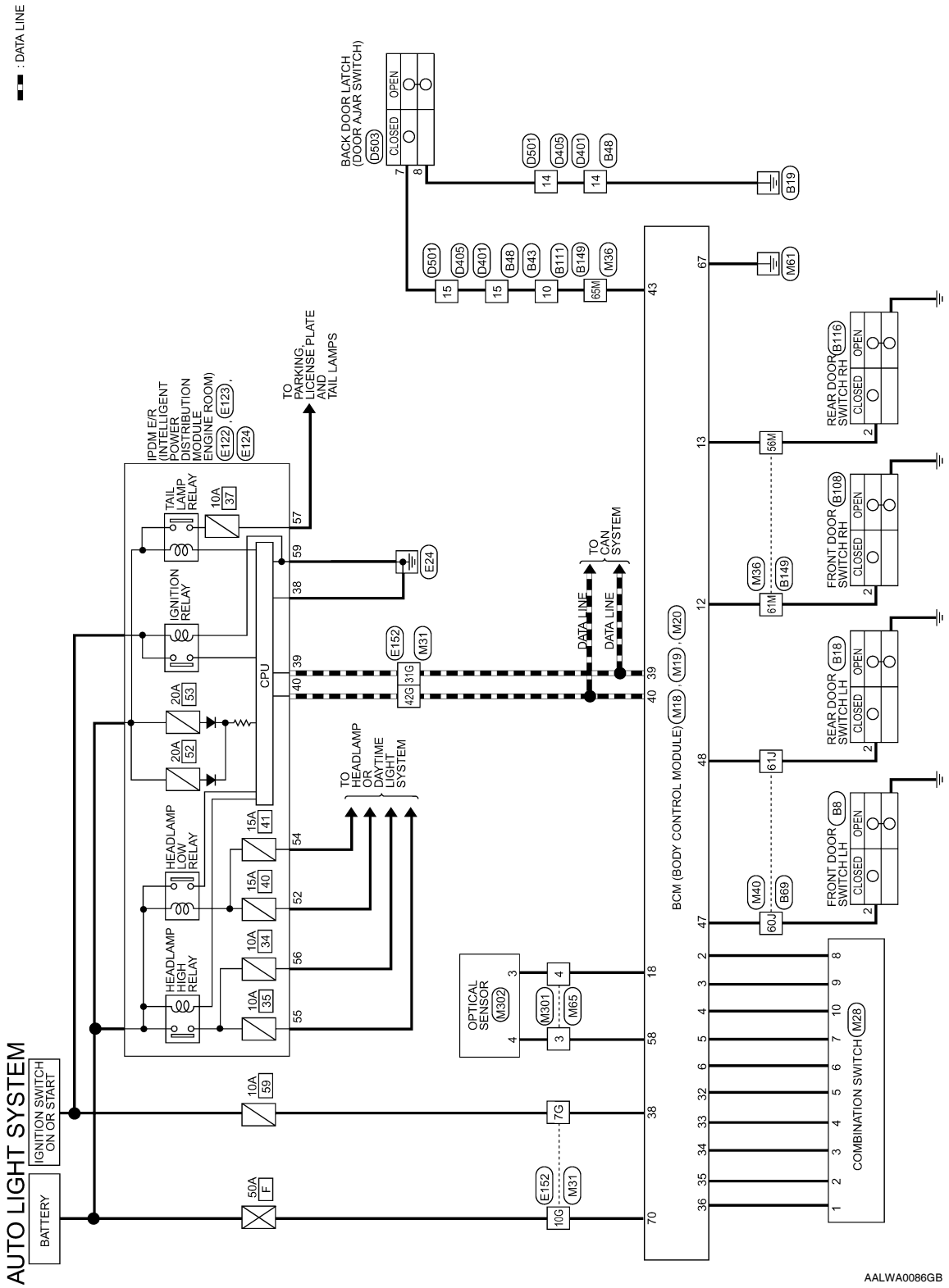
AUTO LIGHT SYSTEM

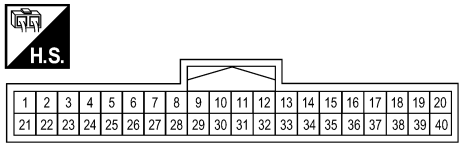
Wiring Diagram

INFOID:0000000001547145



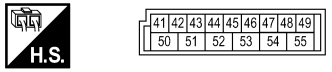
AUTO LIGHT SYSTEM CONNECTORS

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



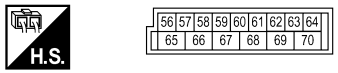
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT-5
3	G/Y	INPUT-4
4	Y	INPUT-3
5	G/B	INPUT-2
6	V	INPUT-1
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
18	P	SIG GND
32	R/G	OUTPUT-5
33	R/Y	OUTPUT-4
34	L	OUTPUT-3
35	O/B	OUTPUT-2
36	R/W	OUTPUT-1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



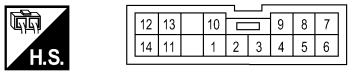
Terminal No.	Color of Wire	Signal Name
43	R/B	BACK DOOR SW/FUEL LID OPEN SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

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



Terminal No.	Color of Wire	Signal Name
58	W/R	AUTO_L_INPUT
67	B	GND (POWER)
70	W/B	BATT (FL)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

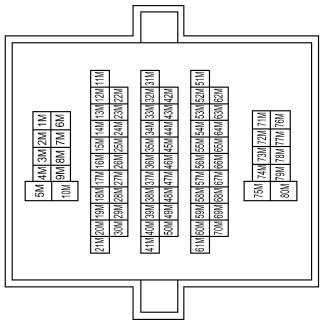


Terminal No.	Color of Wire	Signal Name
1	R/W	–
2	O/B	–
3	L	–
4	R/Y	–
5	R/G	–
6	V	–
7	G/B	–
8	SB	–
9	G/Y	–
10	Y	–

AALIA0185GB

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

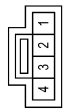
H.S.



Terminal No.	Color of Wire	Signal Name
56M	GR	–
61M	R/L	–
65M	R/B	–

Connector No.	M65
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



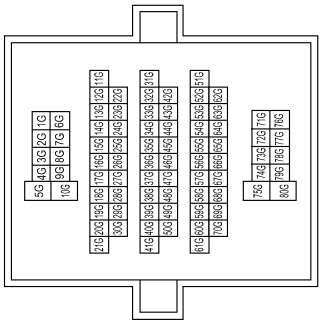
Terminal No.	Color of Wire	Signal Name
3	W/R	–
4	P	–

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

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

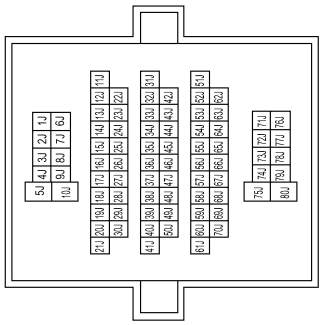
Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



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

H.S.



AALIA0186GB

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

H.S.

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

Connector No.	M302
Connector Name	OPTICAL SENSOR
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
3	P	–
4	W/R	–

Connector No.	M301
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	W/R	–
4	P	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
57	R/L	TAIL_LAMP
59	B	GND (PWR)

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

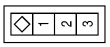
H.S.

Terminal No.	Color of Wire	Signal Name
52	L	HEAD_LAMP_LH_LO
54	R/Y	HEAD_LAMP_RH_LO
55	G	HEAD_LAMP_LH_HI
56	Y	HEAD_LAMP_RH_HI

AALIA0187GB

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

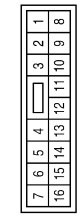
H.S.



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

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

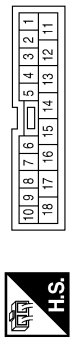
H.S.



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

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

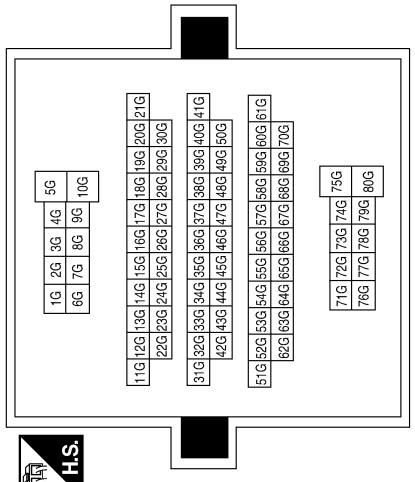
H.S.



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

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

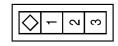
H.S.



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

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

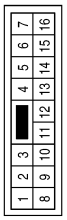
H.S.



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

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

H.S.



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

ALLIA0514GB

Terminal No.	Color of Wire	Signal Name
56M	GR	–
61M	R/L	–
65M	R/W	–

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

H.S.

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	GR	–

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

H.S.

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

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

H.S.

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

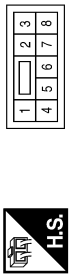
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

ABLIA2480GB

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



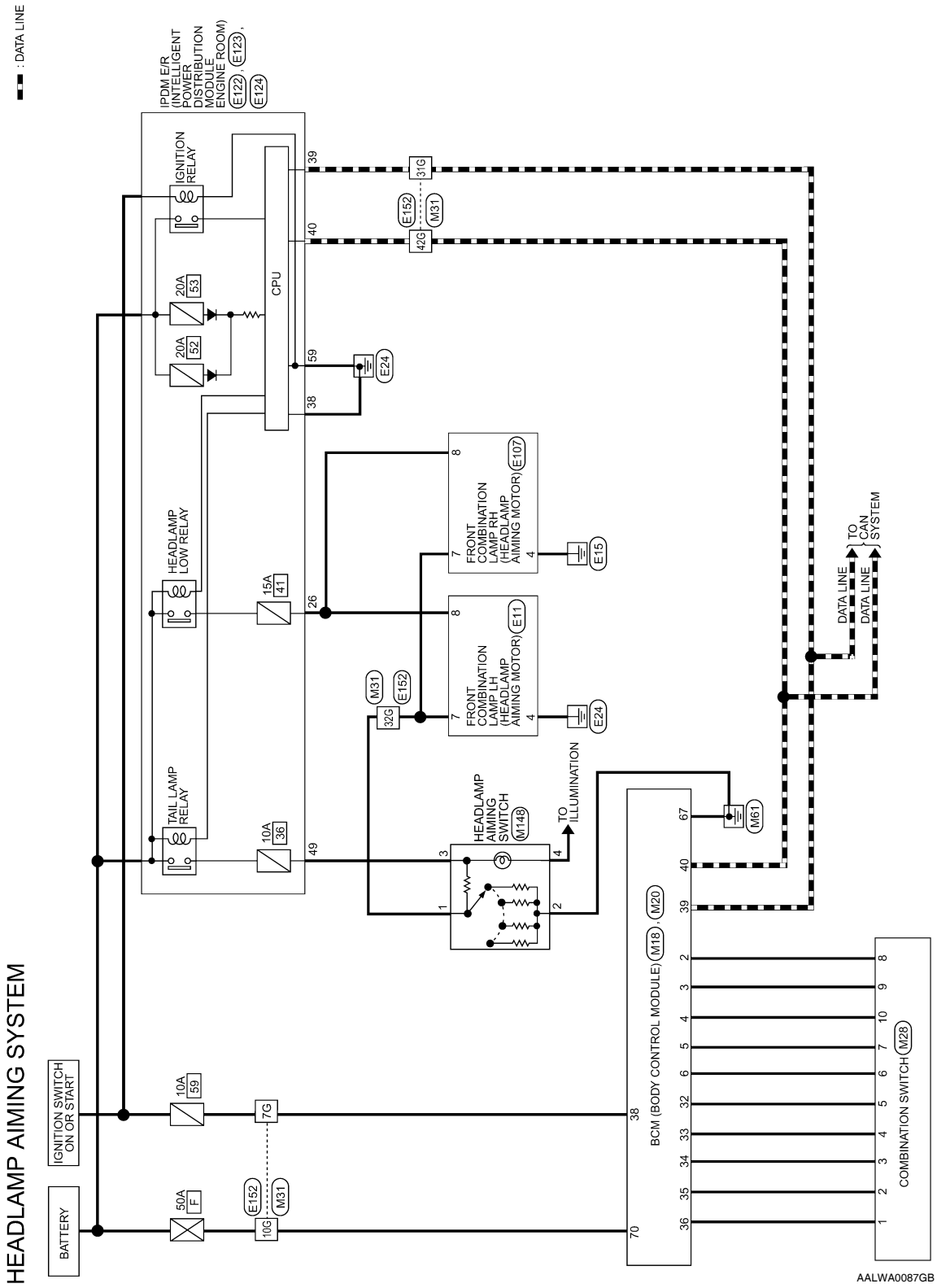
Terminal No.	Color of Wire	Signal Name
7	R/W	DOOR AJAR SW
8	B	GND

ABLIA2481GB

HEADLAMP AIMING SYSTEM (MANUAL)

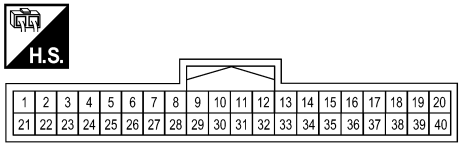
Wiring Diagram

INFOID:0000000001806207



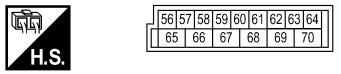
HEADLAMP AIMING SYSTEM CONNECTORS

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



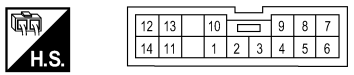
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT-5
3	G/Y	INPUT-4
4	Y	INPUT-3
5	G/B	INPUT-2
6	V	INPUT-1
32	R/G	OUTPUT-5
33	R/Y	OUTPUT-4
34	L	OUTPUT-3
35	O/B	OUTPUT-2
36	R/W	OUTPUT-1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



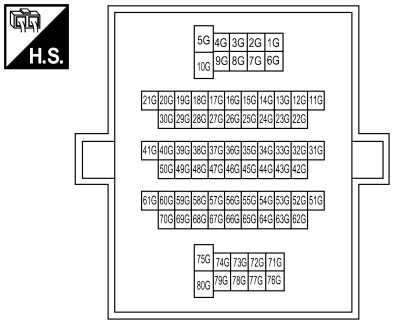
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (FL)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
7G	W/L	–
10G	W/B	–
31G	L	–
32G	B/R	–
42G	P	–

AALIA0188GB

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

H.S.

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

Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
4	B	–
7	B/R	–
8	P/L	–

Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
4	B	–
7	B/R	–
8	P/L	–

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
26	P/L	–

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

H.S.

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

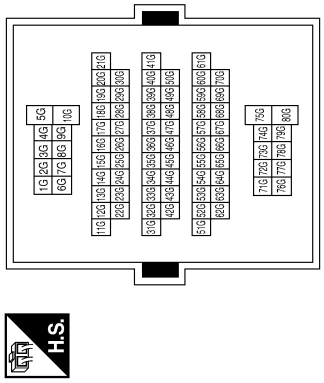
Connector No.	E123
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

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

AWLIA0190GB

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



Terminal No.	Color of Wire	Signal Name
7G	L/W	–
10G	W/B	–
31G	L	–
32G	B/R	–
42G	P	–

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

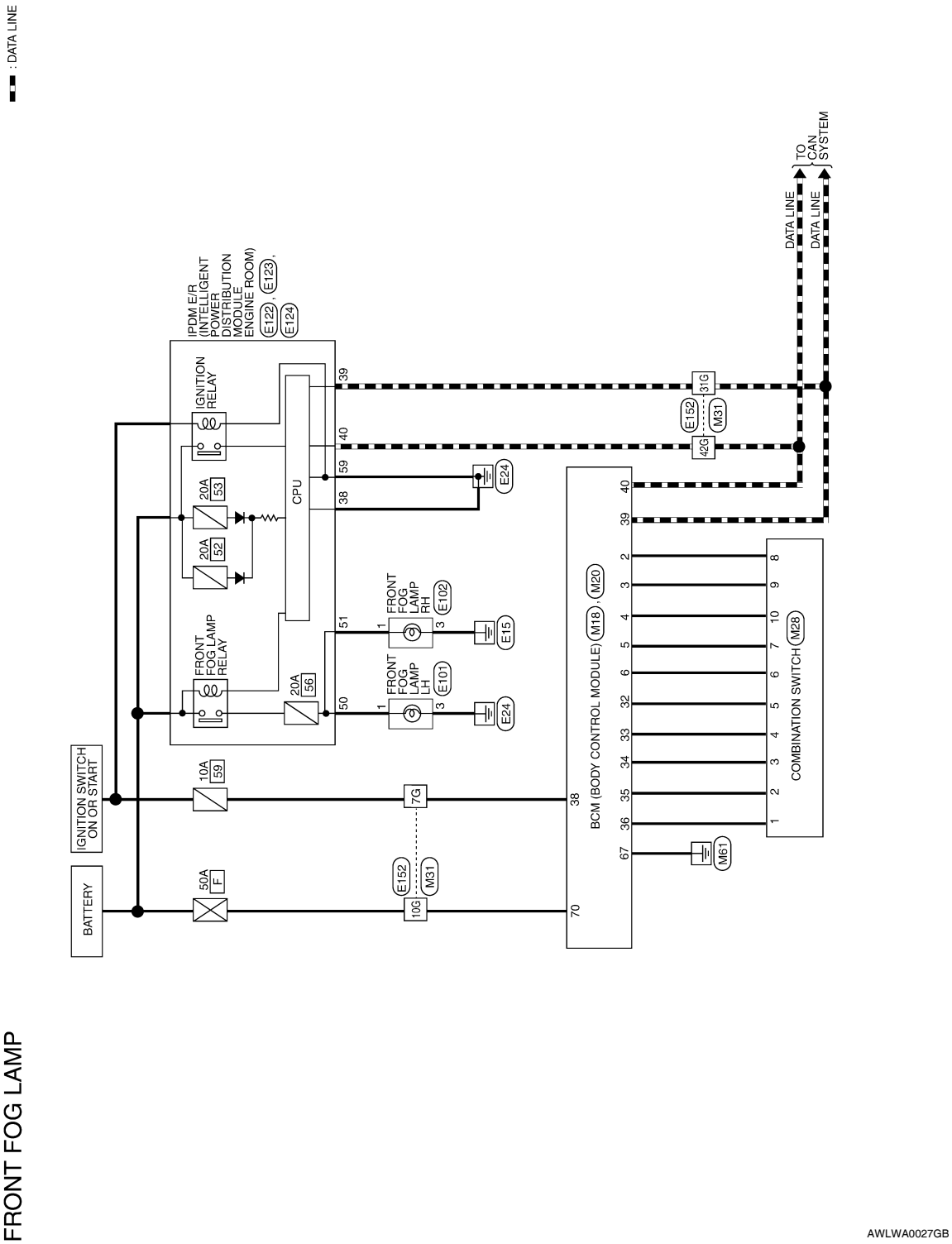
Terminal No.	Color of Wire	Signal Name
59	B	GND (PWR)

AWLIA0191GB

FRONT FOG LAMP SYSTEM

Wiring Diagram

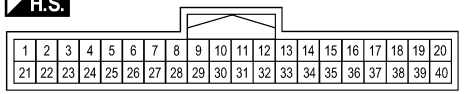
INFOID:0000000001547146



FRONT FOG LAMP CONNECTORS

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

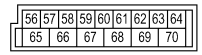
H.S.



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

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

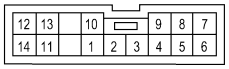
H.S.



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

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

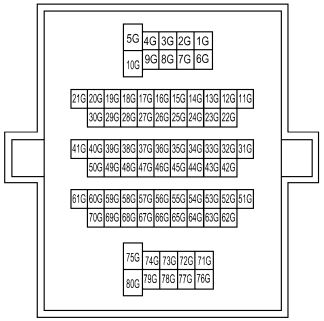
H.S.



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

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

H.S.



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

AALIA0189GB

Connector No.	E101
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E102
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
50	W/R	FR FOG LAMP LH
51	W/R	FR FOG LAMP RH

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

H.S.

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

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

H.S.

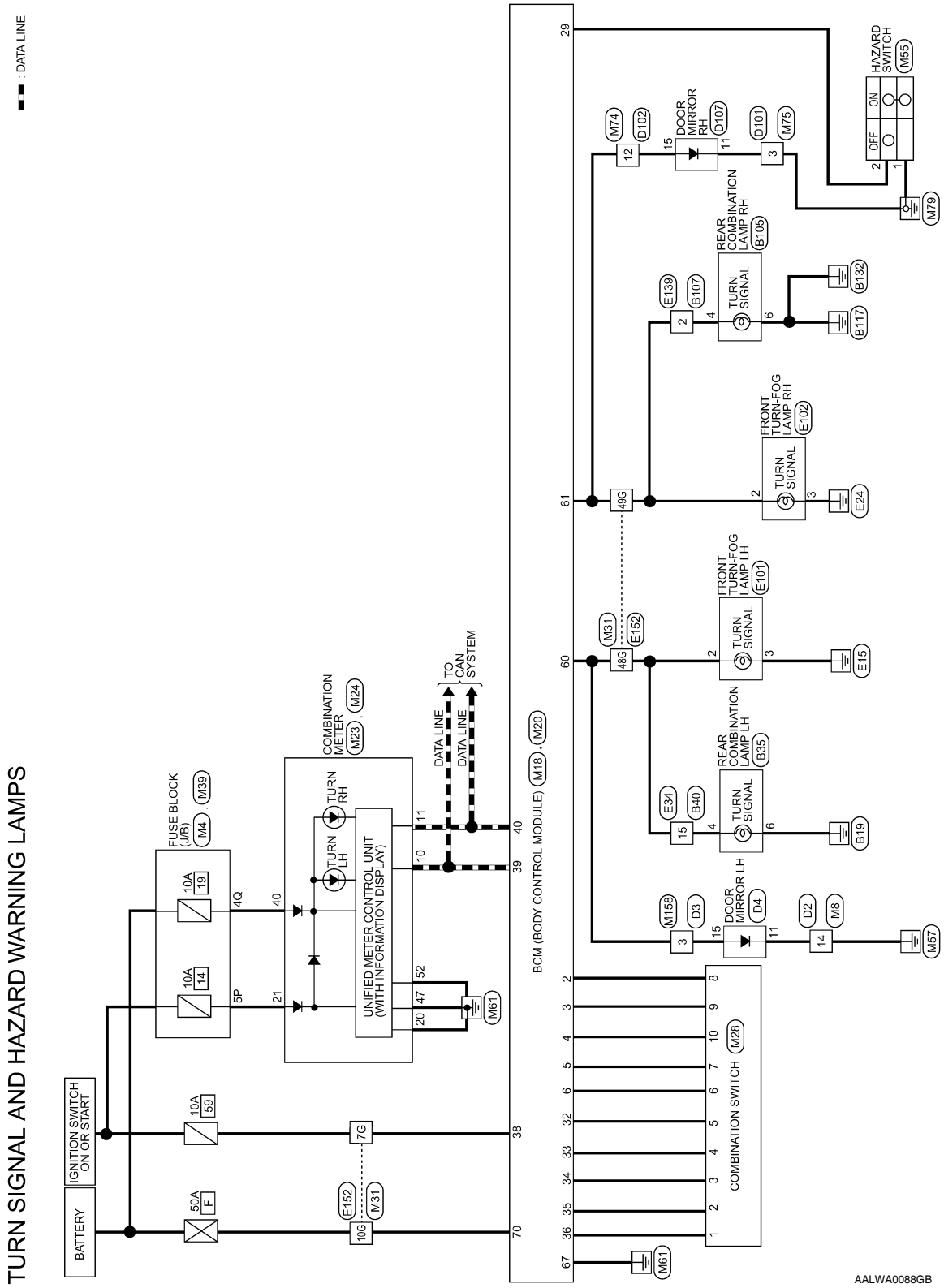
Terminal No.	Color of Wire	Signal Name
7G	L/W	–
10G	W/B	–
31G	L	–
42G	P	–

AWLIA0159GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

INFOID:0000000001547147



TURN SIGNAL AND HAZARD WARNING LAMP CONNECTORS

Connector No.	M4
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
5P	O/L	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
14	B	–

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

ALLIA0519GB

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
60	G/B	FLASHER OUTPUT (LEFT)
61	G/Y	FLASHER OUTPUT (RIGHT)
67	B	GND (POWER)
70	W/B	BATT (FL)

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
47	B	GND
52	B	GND

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	L	–
11	P	–
20	B	GND
21	O/L	–
40	Y/R	–

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

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

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

H.S.

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	BLACK

H.S.

3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

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

Terminal No.	Color of Wire	Signal Name
7G	W/L	–
10G	W/B	–
48G	G/B	–
49G	G/Y	–

AALIA0190GB

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
12	G/Y	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.

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

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	G/B	–

Connector No.	E101
Connector Name	FRONT TURN-FOG LAMP LH
Connector Color	BLACK

H.S.

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

AALIA0191GB

Connector No.	E102
Connector Name	FRONT TURN-FOG LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
7G	L/W	–
10G	W/B	–
48G	G/B	–
49G	G/Y	–

Connector No.	B35
Connector Name	REAR COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
15	G/B	–

Connector No.	B105
Connector Name	REAR COMBINATION LAMP RH
Connector Color	BLACK

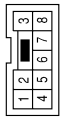
H.S.

Terminal No.	Color of Wire	Signal Name
4	G/Y	–
6	B	–

AALIA0192GB

Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE

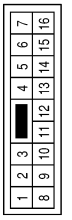
H.S.



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

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

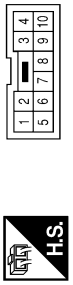
H.S.



Terminal No.	Color of Wire	Signal Name
14	B	–

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

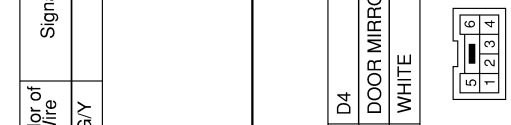
H.S.



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

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

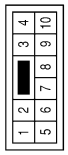
H.S.



Terminal No.	Color of Wire	Signal Name
11	B	–
15	G/B	–

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

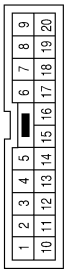
H.S.



Terminal No.	Color of Wire	Signal Name
3	B	–

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

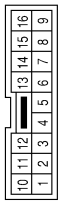
H.S.



Terminal No.	Color of Wire	Signal Name
12	G/Y	–

AWLIA0163GB

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



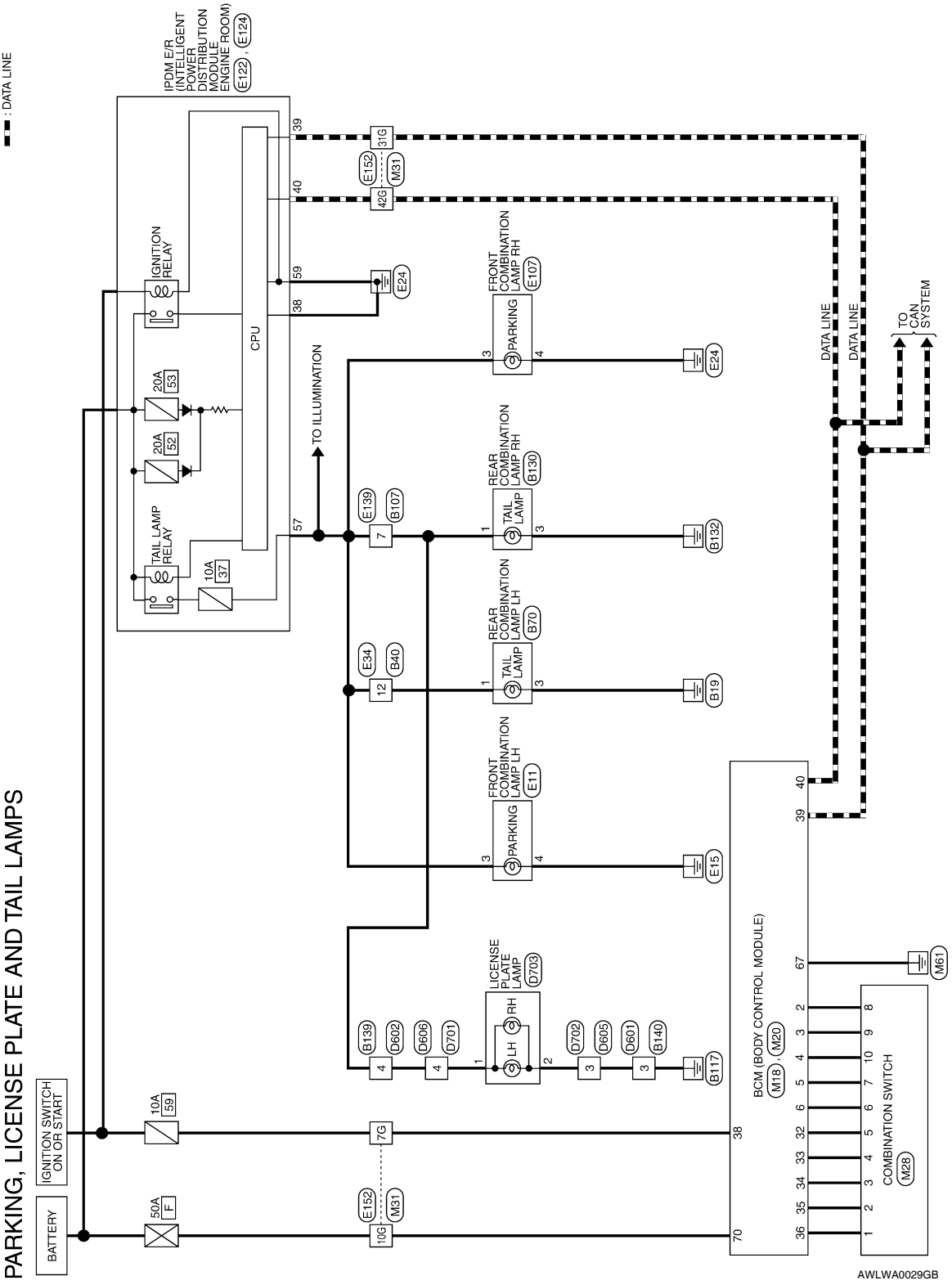
Terminal No.	Color of Wire	Signal Name
11	G/Y	–
15	B	–

AWLIA0222GB

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

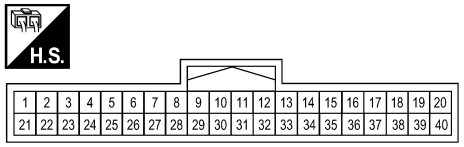
Wiring Diagram

INFOID:0000000001547148



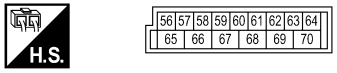
PARKING, LICENSE PLATE AND TAIL LAMP CONNECTORS

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



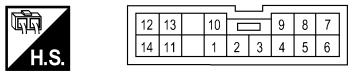
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT-5
3	G/Y	INPUT-4
4	Y	INPUT-3
5	G/B	INPUT-2
6	V	INPUT-1
32	R/G	OUTPUT-5
33	R/Y	OUTPUT-4
34	L	OUTPUT-3
35	O/B	OUTPUT-2
36	R/W	OUTPUT-1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



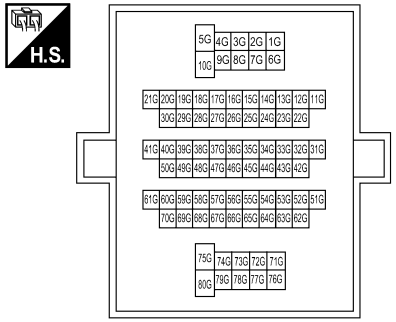
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (FL)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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



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

AALIA0193GB

Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
57	R/L	TAIL LAMP
59	B	GND (PWR)

Connector No.	E139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

AWLIA0164GB

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

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

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

H.S.

Connector No.	B130
Connector Name	REAR COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	B70
Connector Name	REAR COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

AWLIA0165GB

Connector No.	B139
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
4	R/L	–

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
3	B	–

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

2	1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.

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

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

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

2	1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.

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

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

AALIA0194GB

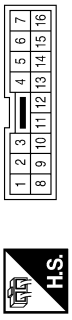
Connector No.	D703
Connector Name	LICENSE PLATE LAMPS
Connector Color	WHITE

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

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
3	B	–

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



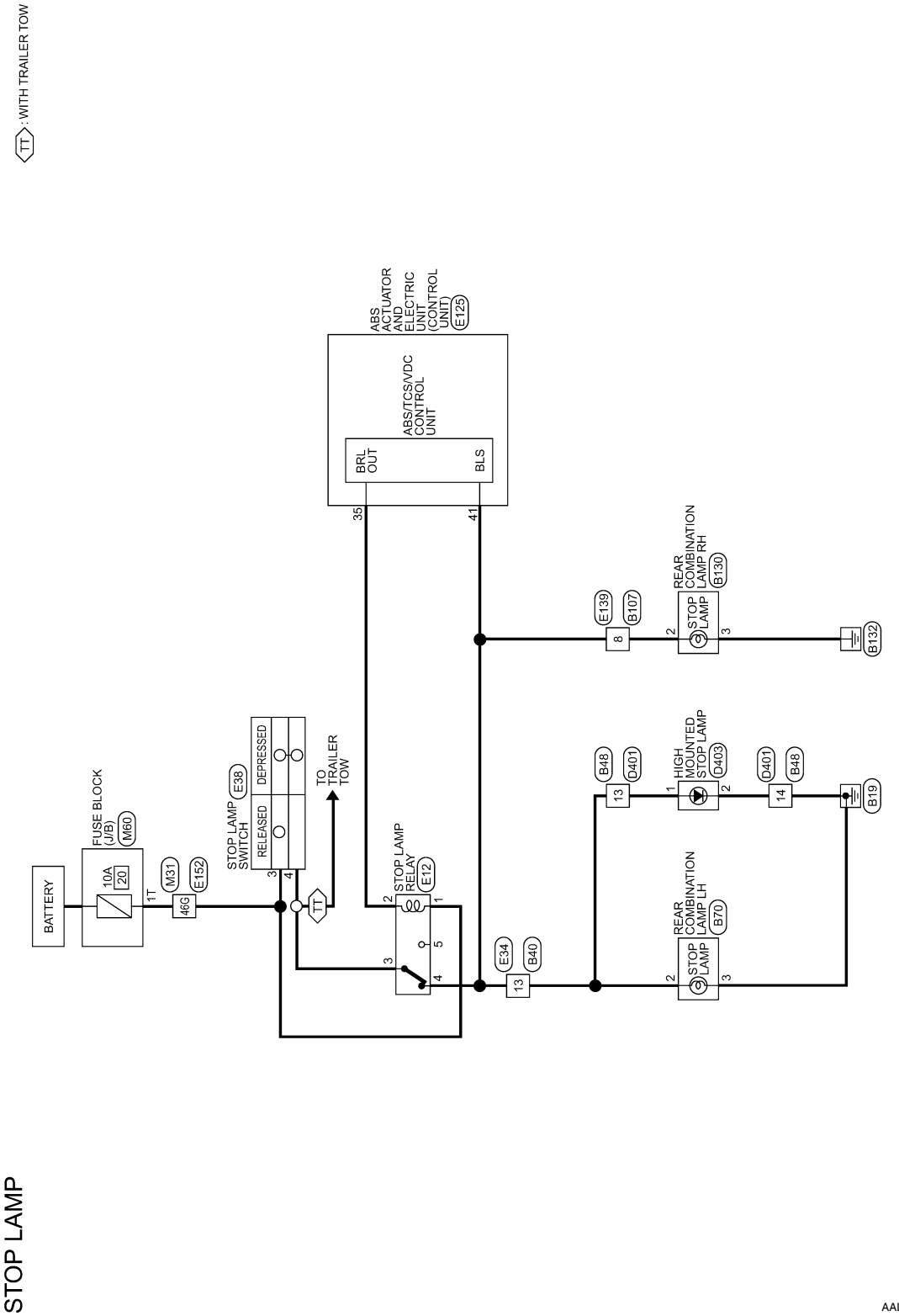
Terminal No.	Color of Wire	Signal Name
4	R/L	–

AWLIA0223GB

STOP LAMP

Wiring Diagram

INFOID:0000000001547149

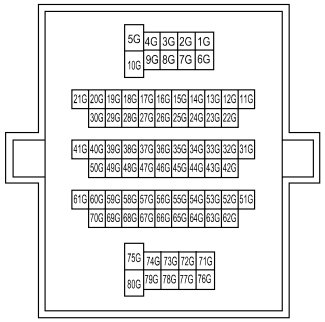


STOP LAMP

STOP LAMP CONNECTORS

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

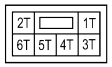
H.S.



Terminal No.	Color of Wire	Signal Name
46G	R/Y	–

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.



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

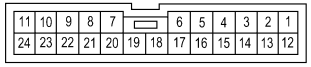
Connector No.	E12
Connector Name	STOP LAMP RELAY
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
2	L/W	–
3	R/G	–
4	R/B	–
5	–	–

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
13	R/B	–

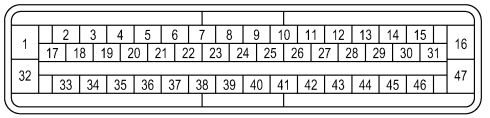
Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
35	L/W	BRL_OUT
41	R/B	BLS

AALIA0195GB

Connector No.	E139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
46G	R/Y	–

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
13	R/B	–

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

H.S.

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

Connector No.	B70
Connector Name	REAR COMBINATION LAMP LH
Connector Color	GRAY

H.S.

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

Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

AALIA0196GB

Connector No.	B130
Connector Name	REAR COMBINATION LAMP RH
Connector Color	GRAY

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

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

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

Connector No.	D403
Connector Name	HIGH MOUNTED STOP LAMP
Connector Color	GRAY

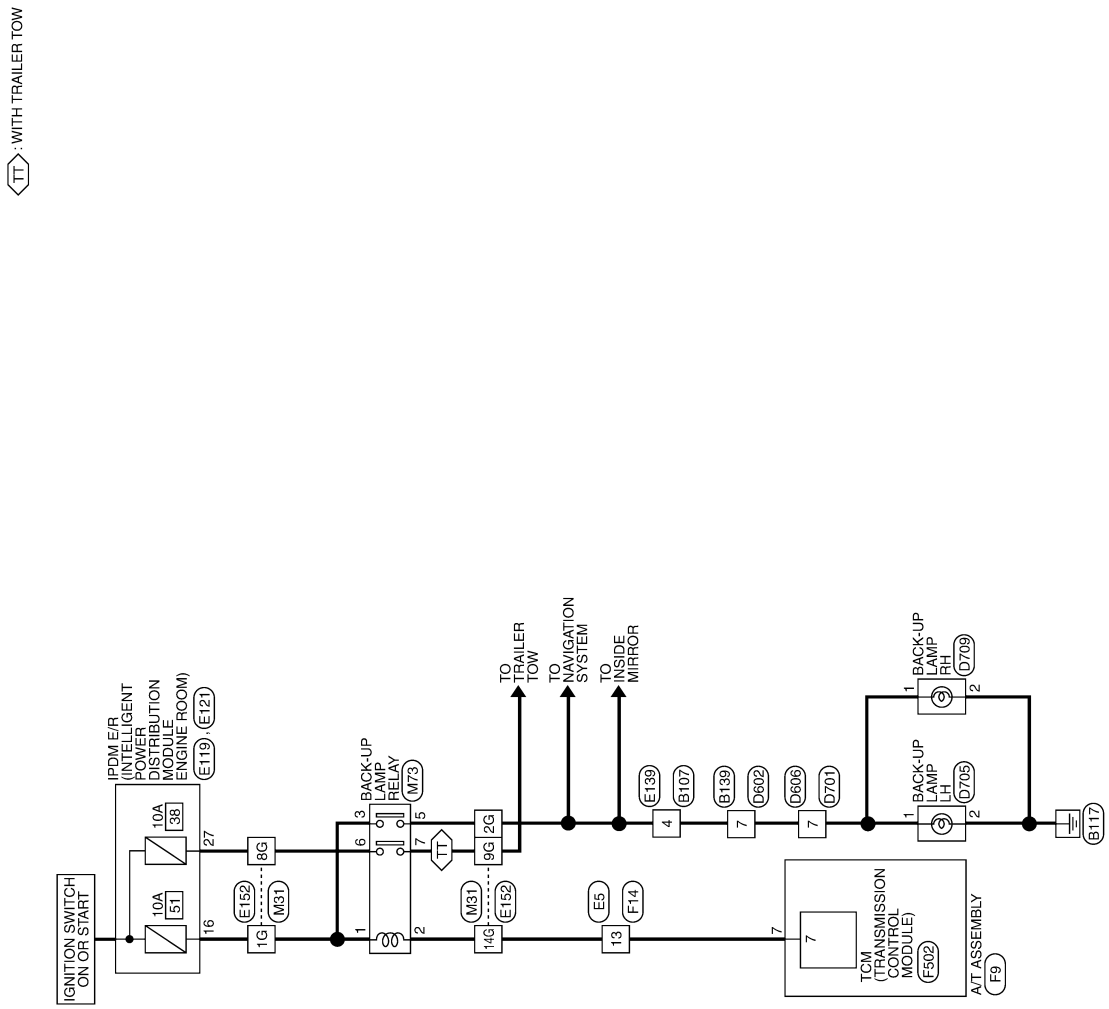
Terminal No.	Color of Wire	Signal Name
1	R/B	–
2	B	–

AALIA0197GB

BACK-UP LAMP

Wiring Diagram

INFOID:0000000001547150



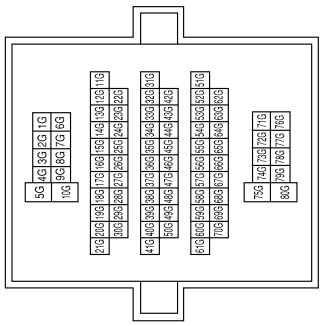
AWLWA0031GB

BACK-UP LAMP

BACK-UP LAMP CONNECTORS

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

H.S.



Terminal No.	Color of Wire	Signal Name
1G	G	–
2G	G/W	–
8G	W/B	–
9G	Y/R	–
14G	R	–

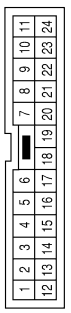
Connector No.	M73
Connector Name	BACK-UP LAMP RELAY
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	R	–
3	G	–
5	G/W	–
6	W/B	–
7	Y/R	–

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

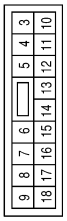
H.S.



Terminal No.	Color of Wire	Signal Name
13	R	–

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
16	G	REV_LAMP

AWLIA0169GB

Connector No.	E121
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
27	W/B	T TOW REV LAMP

Connector No.	E139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	G/W	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1G	G	–
2G	G/W	–
8G	W/B	–
9G	Y/R	–
14G	R	–

Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN

H.S.

Terminal No.	Color of Wire	Signal Name
7	R	–

Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
13	R	–

AALIA0198GB

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY

H.S.

10	9	8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
7	R	REV LAMP RLY

Connector No.	B107
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
4	G/W	–

Connector No.	B139
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
7	G/W	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	G/W	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	G/W	–

Connector No.	D701
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
7	G/W	–

AALIA0199GB

Connector No.	D709
Connector Name	BACK-UP LAMP RH
Connector Color	GRAY

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

Connector No.	D705
Connector Name	BACK-UP LAMP LH
Connector Color	GRAY

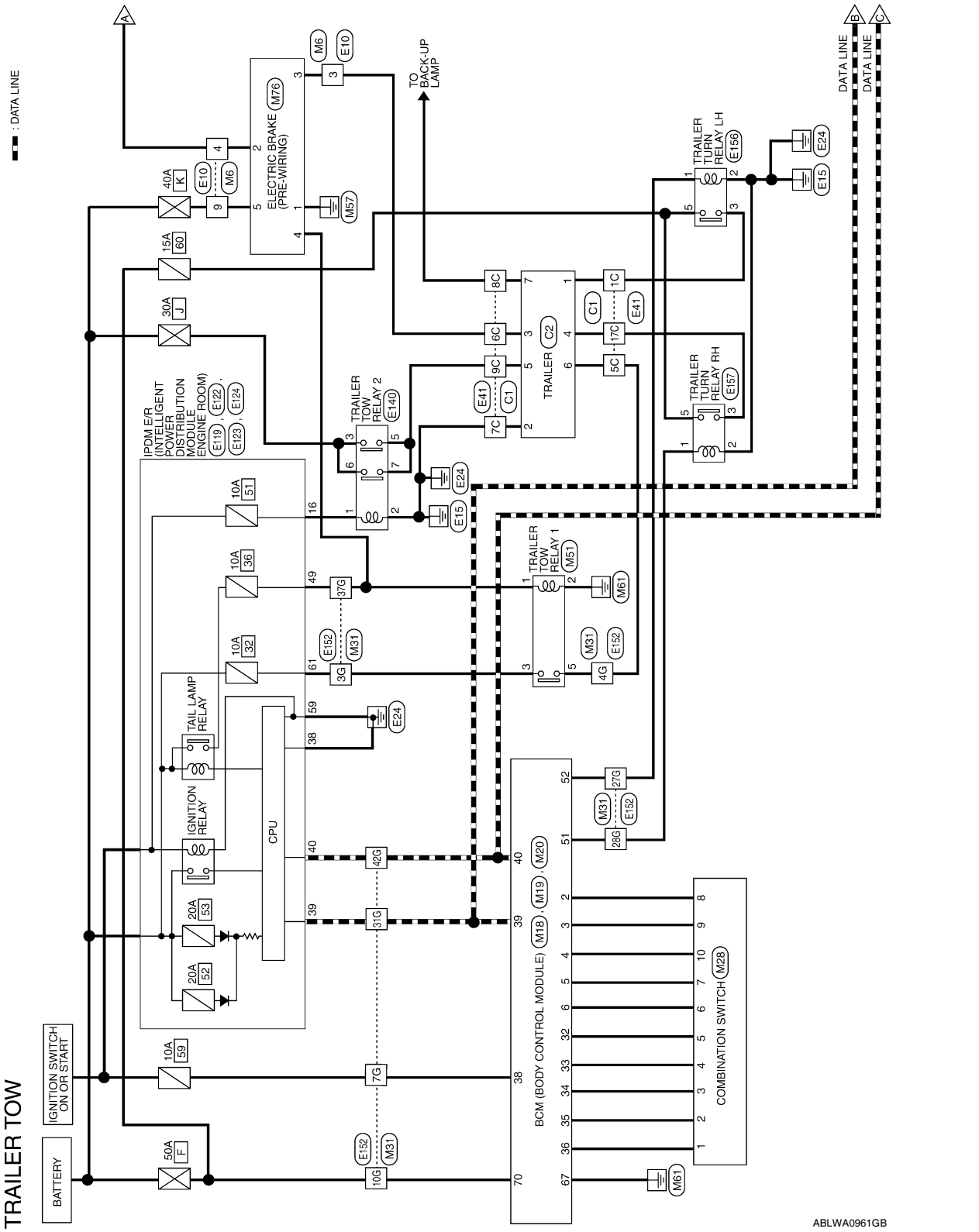
Terminal No.	Color of Wire	Signal Name
1	G/W	–
2	B	–

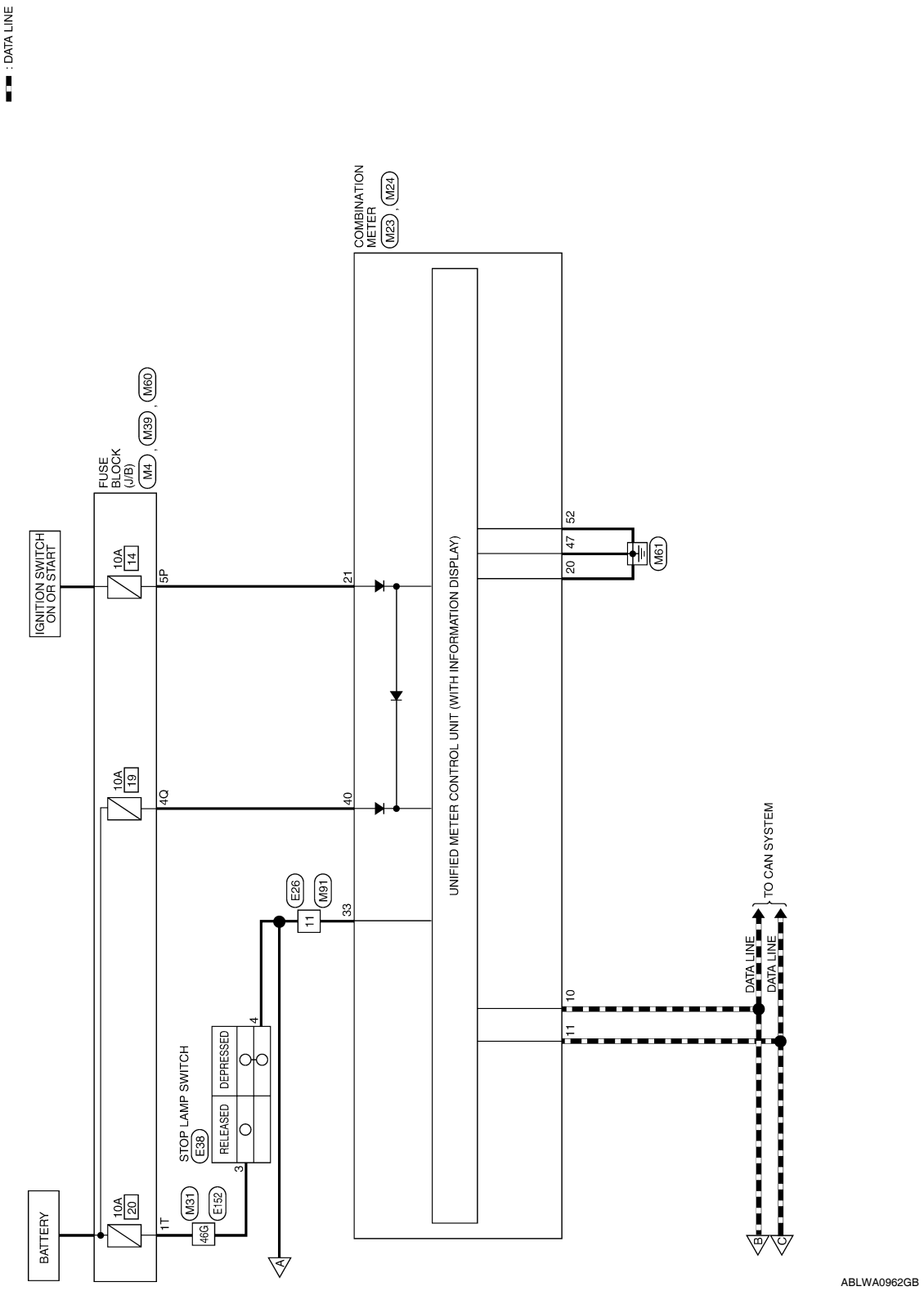
AWLIA0224GB

TRAILER TOW

Wiring Diagram

INFOID:0000000001744740




: DATA LINE
COMBINATION METER
M23, M24
FUSE BLOCK (J/B)
M4, M39, M60
IGNITION SWITCH ON OR START
10A 14
10A 19
10A 20
BATTERY
5P
4Q
1T
21
40
33
52
47
20
M61
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
10
11
DATA LINE
DATA LINE
TO CAN SYSTEM
B
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E26
M91
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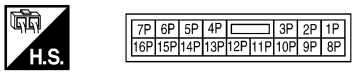
STOP LAMP SWITCH
E38
DEPRESSED
RELEASED
4
3
M31
E152
46G
A
ABLWA0962GB

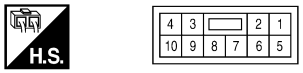
TRAILER TOW CONNECTORS

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



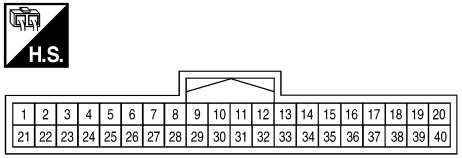
Terminal No.	Color of Wire	Signal Name
5P	O/L	–

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



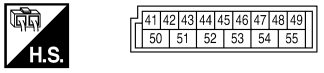
Terminal No.	Color of Wire	Signal Name
3	BR/W	–
4	R/G	–
9	R	–

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



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

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



Terminal No.	Color of Wire	Signal Name
51	G/Y	TRAILER_RH_FLASH
52	G/B	TRAILER_LH_FLASH

ABLIA2473GB

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	–
21	O/L	–
33	R/G	–
40	Y/R	–

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
47	B	–
52	B	–

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

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

H.S.

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

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

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

ABLIA2474GB

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

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

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

H.S.

2		6
1	3	4	5

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	R/G	STOP
3	BR/W	–
4	R/L	ILL (TAIL)
5	R	B+

Terminal No.	Color of Wire	Signal Name
3G	BR	–
4G	R	–
7G	W/L	–
10G	W/B	–
27G	G/B	–
28G	Y/B	–
31G	L	–
37G	R/L	–
42G	P	–
46G	R/Y	–

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

2T		1T
6T	5T	4T	3T

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

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

H.S.

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

21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
30G	29G	28G	27G	26G	25G	24G	23G	22G		
41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
50G	49G	48G	47G	46G	45G	44G	43G	42G		
61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
70G	69G	68G	67G	66G	65G	64G	63G	62G		
75G	74G	73G	72G	71G						
80G	79G	78G	77G	76G						

Connector No.	M51
Connector Name	TRAILER TOW RELAY 1
Connector Color	BLUE

H.S.

3	
5	
2	1

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

ABLIA2475GB

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

H.S.

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

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

Connector No.	E10
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
3	BR/W	–
4	R/G	–
9	R	–

Connector No.	E26
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
11	R/G	–

Connector No.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

1C	2C	3C	4C		5C
6C	7C	8C		9C	10C	11C
12C	13C	14C	15C	16C	17C	18C	19C	20C	21C
22C	23C	24C	25C	26C	27C	28C	29C	30C	31C
32C	33C	34C	35C	36C	37C	38C	39C	40C	41C
42C	43C	44C		45C	46C	47C
48C			49C	50C	51C	52C

Terminal No.	Color of Wire	Signal Name
1C	G/B	–
5C	R	–
6C	BR/W	–
7C	B	–
8C	Y/R	–
9C	W/L	–
17C	Y/B	–

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

H.S.

3	4
1	2

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

ABLIA2476GB

Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
16	G	REVERSE LAMP

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

H.S.

42	41	40	39	38	37
48	47	46	45	44	43

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

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

H.S.

51		50	49
56	55	54	53	52

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

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

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
59	B	GND (PWR)
61	BR	TRAIL RLY SUPPLY

Connector No.	E140
Connector Name	TRAILER TOW RELAY-2
Connector Color	BROWN

H.S.

2		1
7	5	
6		3

Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	–
3	Y	–
5	W/L	–
6	Y	–
7	W/L	–

ABLIA2477GB

Connector No.	E156
Connector Name	TRAILER TURN RELAY LH
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1C	G/B	–
5C	R	–
6C	BR/W	–
7C	B	–
8C	Y/R	–
9C	W/L	–
17C	Y/B	–

Connector No.	C1
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

Connector No.	E157
Connector Name	TRAILER TURN RELAY RH
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	Y/B	–
2	B	–
3	L	–
5	Y/B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
3G	BR	–
4G	R	–
7G	L/W	–
10G	W/B	–
27G	G/B	–
28G	Y/B	–
31G	L	–
37G	R/L	–
42G	P	–
46G	R/Y	–

ABLIA2478GB

Connector No.	C2
Connector Name	TRAILER
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	G/B	–
2	B	–
3	BR/W	–
4	Y/B	–
5	W/L	–
6	R	–
7	Y/B	–

ABLIA2479GB

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Description

INFOID:0000000001547151

REFERENCE VALUES FOR BCM
For BCM reference values, refer to BCS-38, "Reference Value".

TERMINAL LAYOUT FOR BCM
For the terminal layout for the BCM, refer to BCS-40, "Terminal Layout".

PHYSICAL VALUES FOR BCM
For physical values for the BCM, refer to BCS-40, "Physical Values".

WIRING DIAGRAM - BCM
For the BCM wiring diagram, refer to BCS-46, "Wiring Diagram".

DTC INSPECTION PRIORITY CHART - BCM
For the BCM DTC inspection priority chart, refer to BCS-50, "DTC Inspection Priority Chart".

DTC INDEX - BCM
For the BCM DTC index, refer to BCS-50, "DTC Index".

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

Description

INFOID:0000000001547152

REFERENCE VALUES FOR IPDM E/R

For IPDM E/R reference values, refer to PCS-19, "Reference Value".

TERMINAL LAYOUT FOR IPDM E/R

For the terminal layout for the IPDM E/R, refer to PCS-21, "Terminal Layout".

PHYSICAL VALUES FOR IPDM E/R

For physical values for the IPDM E/R, refer to PCS-21, "Physical Values".

WIRING DIAGRAM - IPDM E/R

For the IPDM E/R wiring diagram, refer to PCS-26, "Wiring Diagram".

FAIL SAFE - IPDM E/R

For IPDM E/R fail safe information, refer to PCS-29, "Fail Safe".

DTC INDEX - IPDM E/R

For the IPDM E/R DTC index, refer to PCS-31, "DTC Index".

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000001547153

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-28.
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-104.	
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-36.
		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-30.
	Both sides	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-105, "Description".	
Headlamp does not turn OFF.	When the ignition switch is turned ON	• BCM • Combination switch	Combination switch Refer to BCS-36.
	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-36.
		• Optical sensor • Harness between the optical sensor and BCM • BCM	Optical sensor Refer to EXL-40.

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-32.
	Both sides	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-107.	
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-34.
	Both sides	**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-106.	
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	Turn signal lamp circuit Refer to EXL-37.
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-30.

NORMAL OPERATING CONDITION

Description

INFOID:0000000001547154

XENON HEADLAMPS

The brightness and color of the light may vary slightly immediately after turning the headlamp ON. This conditionwill remain until the xenon bulb becomes stable. This is normal.

- Illumination time lag may occur between right and left. This is normal.

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:0000000001547155

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

Diagnosis Procedure

INFOID:0000000001547156

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-36, "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-55, "Removal and Installation" .

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-28, "Description".

Is the headlamp (HI) circuit normal?

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

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000001547157

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

Diagnosis Procedure

INFOID:0000000001547158

1.CHECK COMBINATION SWITCH

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

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-55, "Removal and Installation" .

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-30, "Description".

Is the headlamp (LO) circuit normal?

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

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000001547159

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

Diagnosis Procedure

INFOID:0000000001547160

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

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-55, "Removal and Installation".

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-34, "Description".

Is the tail lamp circuit normal?

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

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000001547161

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

Diagnosis Procedure

INFOID:0000000001547162

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

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-55, "Removal and Installation".

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-32, "Description".

Is the front fog lamp circuit normal?

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

PRECAUTION

PRECAUTIONS

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

INFOID:0000000004913877

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

WARNING:

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

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

WARNING:

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

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000006218447

NOTE:

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

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

OPERATION PROCEDURE

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

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

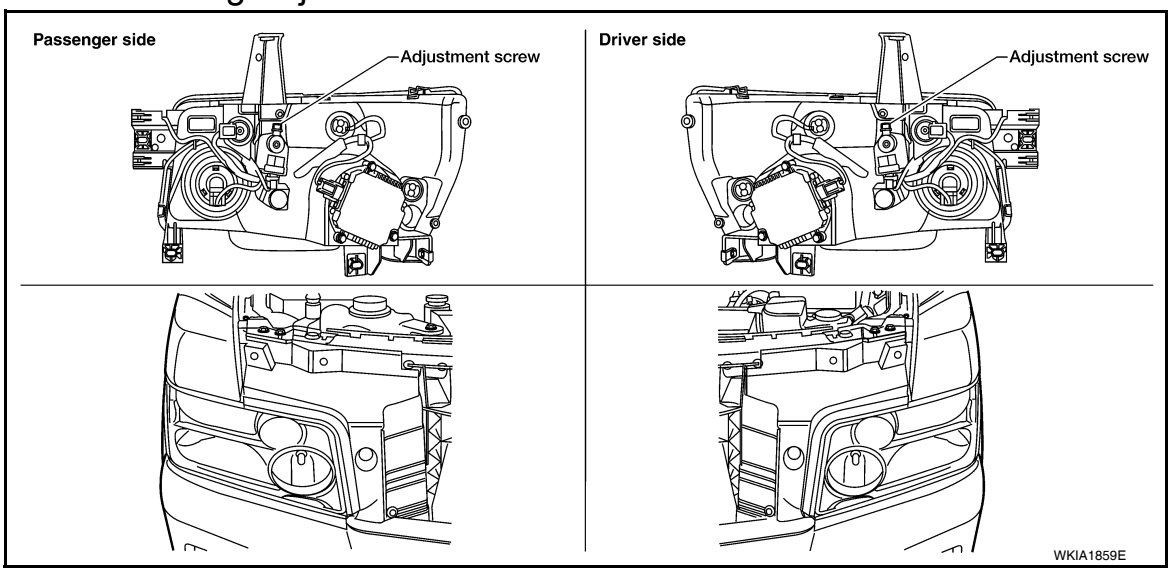
ON-VEHICLE REPAIR

ADJUSTMENT AND INSPECTION

HEADLAMP

HEADLAMP : Aiming Adjustment

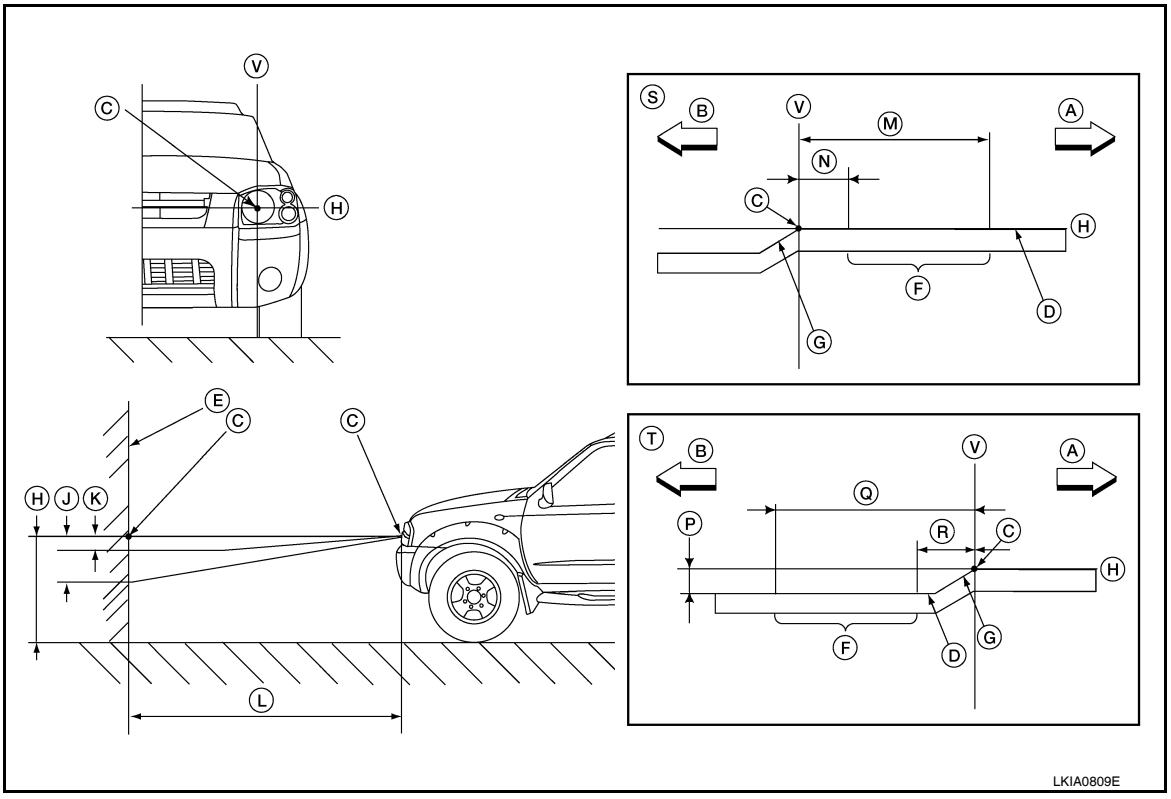
INFOID:0000000001547282



NOTE:
- For details, refer to the regulations in your area.
- If vehicle front body has been repaired and /or the headlamp assembly has been replaced, check headlamp aiming.

HEADLAMP AIMING

NOTE:
- Before performing aiming adjustment, check the following:
- 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). Coolant and engine oil filled to correct level, and fuel tank full.
- Confirm spare tire, jack and tools are properly stowed.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.
- Use adjusting screw to perform 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.	103 mm (4.06 in.)
K.	37 mm (1.46 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 aiming screen	T.	LH headlamp aiming screen

NOTE:
Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.

LOW BEAM AND HIGH BEAM

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

FRONT FOG LAMP

FRONT FOG LAMP : Aiming Adjustment

INFOID:0000000001547284

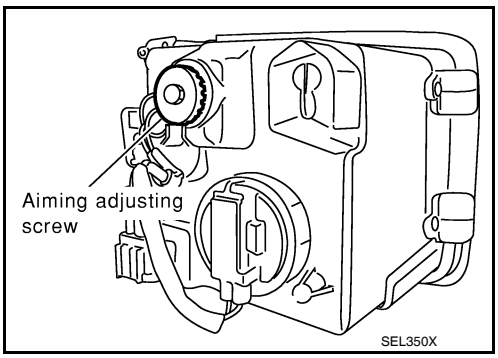
The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. Before performing aiming adjustment, make sure of the following.
- Keep all tires inflated to correct pressure.
- Place vehicle on level ground.

• 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.

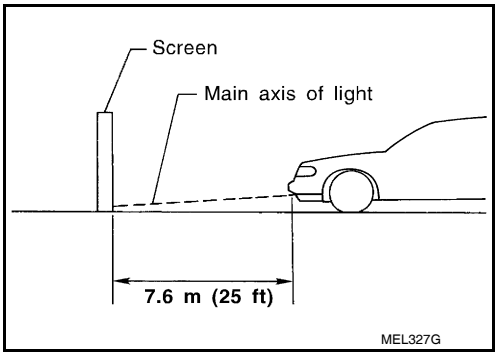
Adjust aiming in the vertical direction by turning the adjustment screw.

NOTE:

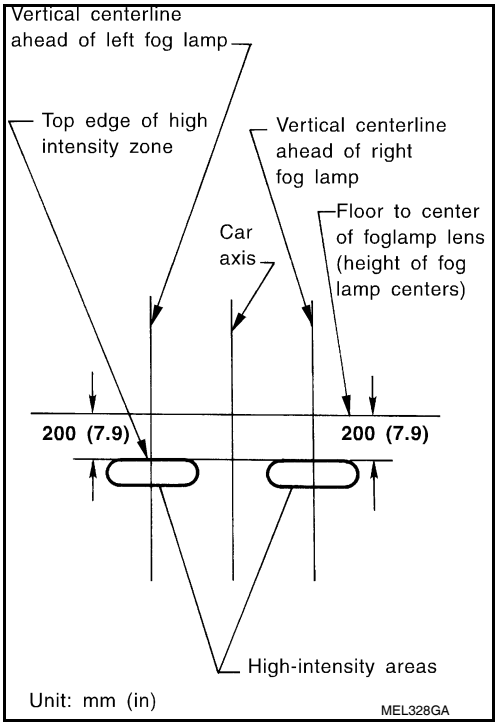
Access adjustment screw from underneath front bumper. Turn screw clockwise to raise pattern and counterclockwise to lower pattern.



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 200 mm (7.9 in) below the height of the fog lamp centers as shown.
   • When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.



REMOVAL AND INSTALLATION

HEADLAMP

Bulb Replacement

INFOID:0000000001551508

CAUTION:

- **Disconnect battery negative terminal before touching xenon bulb or headlamp wiring harness assembly.**
- **Turn headlamp switch OFF before disconnecting headlamp harness connector.**
- **Do not touch bulb by hand right after being turned off. Burning may result.**
- **Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it.**
- **Do not turn xenon bulb ON when xenon bulb is removed from front combination lamp assembly.**
- **After installing the bulb, be sure to install the bulb socket securely to ensure watertightness.**
- **Do not leave bulb out of front combination lamp assembly for a long time because dust, moisture, smoke, etc. may affect the performance of the lamp. When replacing bulb, be sure to replace it with a new one.**

HEADLAMP (OUTER SIDE), FOR LOW BEAM

Removal

1. Position fender protector aside.
2. Turn headlamp switch OFF.
3. Disconnect battery negative terminal.
4. Remove ballast.
5. Disconnect headlamp electrical connector.
6. Release bulb retaining spring and pull bulb straight out.

Installation

Installation is in the reverse order of removal.

HEADLAMP (INNER SIDE), FOR HIGH BEAM

Removal

1. Turn headlamp switch OFF.
2. Disconnect headlamp electrical connector.
3. Turn the bulb counterclockwise to remove it.

Installation

Installation is in the reverse order of removal.

FRONT PARKING LAMP (INNER OR OUTER)

Removal

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

Installation

Installation is in the reverse order of removal.

SIDE MARKER LAMP (FRONT)

Removal

1. Position fender protector aside.
2. Turn the side marker lamp (front) bulb socket counterclockwise and remove side marker lamp (front) bulb socket.
3. Pull to remove side marker lamp (front) from the side marker lamp (front) bulb socket.

Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000001551509

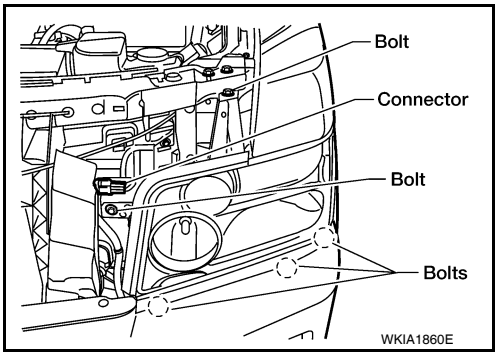
FRONT COMBINATION LAMP ASSEMBLY

CAUTION:

- **Disconnect battery negative terminal before touching xenon bulb or headlamp wiring harness assembly.**
- **Turn headlamp switch OFF before disconnecting headlamp harness connector.**
- **Do not touch bulb by hand right after being turned off. Burning may result.**
- **Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it.**
- **Do not turn xenon bulb ON when xenon bulb is removed from front combination lamp assembly.**
- **After installing the bulb, be sure to install the bulb socket securely to ensure watertightness.**
- **Do not leave bulb out of front combination lamp assembly for a long time because dust, moisture, smoke, etc. may affect the performance of the lamp. When replacing bulb, be sure to replace it with a new one.**

Removal

1. Disconnect battery negative terminal.
2. Disconnect front combination lamp assembly.
3. Remove front fascia. Refer to EXT-13, "Removal and Installation".
4. Remove front combination lamp assembly bolts.
5. Remove front combination lamp assembly.



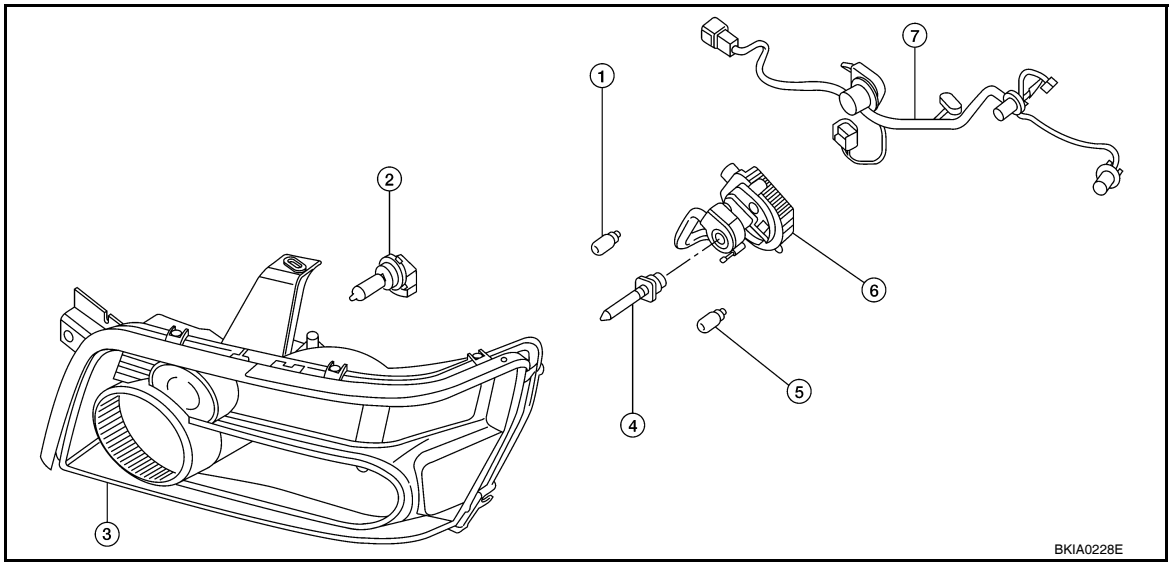
Installation

Installation is in the reverse order of removal.

Disassembly and Assembly

INFOID:0000000001551510

FRONT COMBINATION LAMP ASSEMBLY



1. Parking lamp bulb (outer)
2. Headlamp bulb (high beam)
3. Headlamp assembly

4. Xenon bulb (low beam)
5. Side marker lamp (front) bulb
6. Ballast
7. Wiring harness assembly

Disassembly

1. Remove ballast.
2. Release xenon bulb retaining spring and remove xenon bulb.
3. Turn high beam bulb counterclockwise to unlock and remove high beam bulb.
4. Turn parking lamp bulb (inner) socket counterclockwise to unlock and remove parking lamp bulb.
5. Turn parking lamp bulb (outer) socket counterclockwise to unlock and remove parking lamp bulb.
6. Turn side marker lamp (front) bulb socket counterclockwise to unlock and remove side marker lamp (front) bulb.

Assembly

Assembly is in the reverse order of disassembly.

AUTO LIGHT SYSTEM

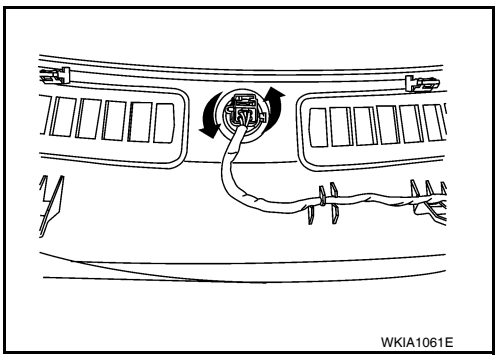
Removal and Installation

INFOID:0000000001547169

OPTICAL SENSOR

Removal

1. Remove defroster grille. Refer to IP-11, "Exploded View".
2. Disconnect the optical sensor connector.
3. Turn the optical sensor counterclockwise to remove it from defroster grille.



Installation

Installation is in the reverse order of removal.

FRONT FOG LAMP

Bulb Replacement

INFOID:0000000001553094

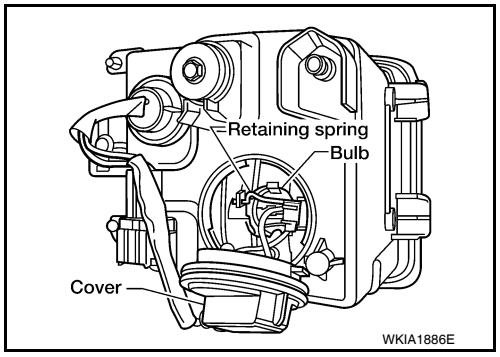
FRONT FOG LAMP

Removal

1. Remove the front turn/fog lamp assembly. Refer to EXL-117, "Removal and Installation".
2. Turn the bulb cover counterclockwise to remove it.
3. Unlatch retaining spring.
4. Remove bulb and disconnect the connector.

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.**



Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000001553095

FRONT FOG LAMP

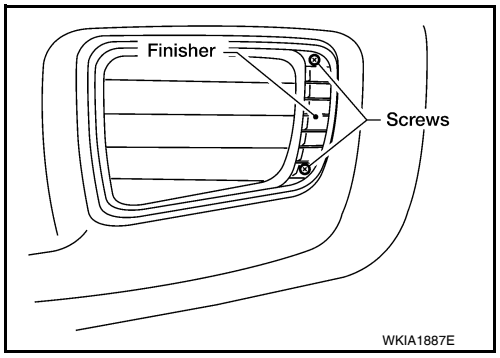
The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

CAUTION:

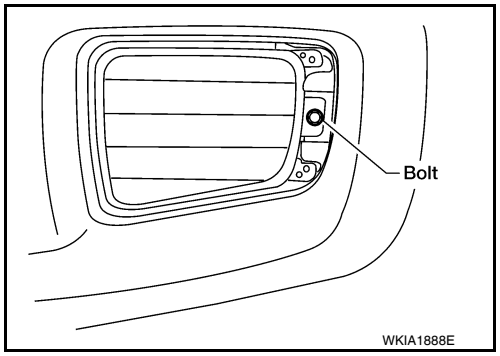
- **Do not leave fog lamp assembly without bulb for a long period of time. Dust, moisture, smoke, etc. entering the fog lamp body may affect the performance. Remove the bulb from the headlamp assembly just before replacement bulb is installed.**
- **Grasp only the plastic base when handling the bulb.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

Removal

1. Remove the front turn/fog lamp finisher.



2. Remove bolt and pull fog lamp out of front fascia.
3. Disconnect electrical connector.



Installation

Installation is in the reverse order of removal.

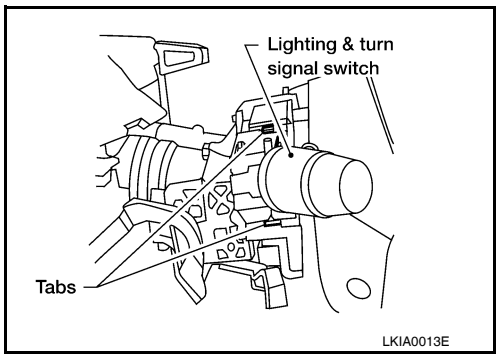
LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:0000000001547172

REMOVAL

1. Remove steering column cover.
2. While pressing tabs, pull lighting and turn signal switch toward driver door and disconnect from the base.



INSTALLATION

Installation is in the reverse order of removal.

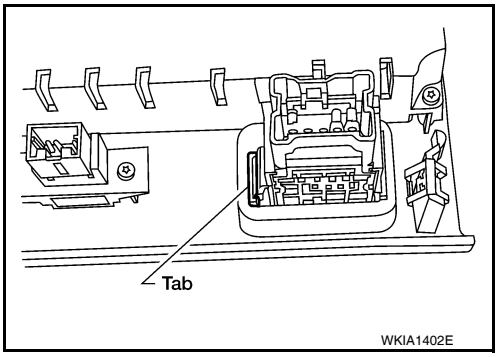
HAZARD SWITCH

Removal and Installation

INFOID:0000000001547173

REMOVAL

1. Remove cluster lid C. Refer to IP-15, "Removal and Installation".
2. While pressing the tab, push out the hazard switch.



INSTALLATION

Installation is in the reverse order of removal.

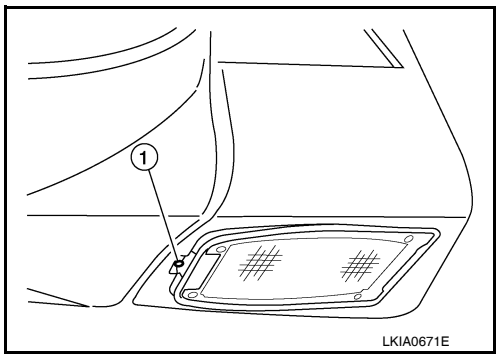
PUDDLE LAMP

Removal and Installation

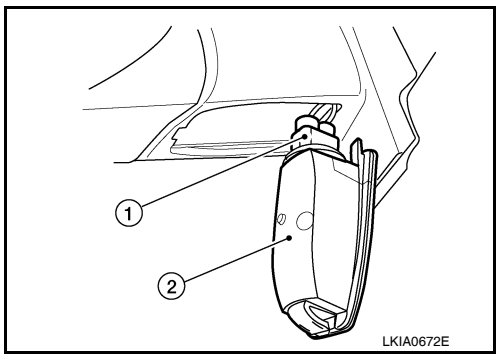
INFOID:0000000004915016

REMOVAL

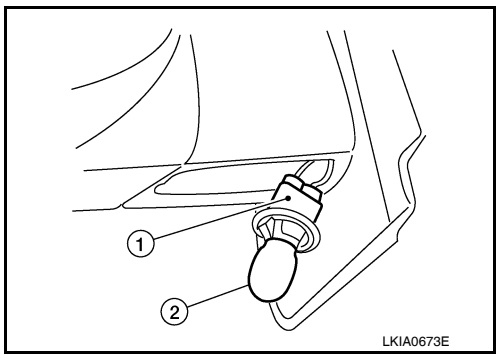
1. Depress tab (1) on outer edge of puddle lamp housing.



2. Lower outer edge and slide puddle lamp housing out of door mirror.
3. Twist and pull to remove puddle lamp socket (1) from puddle lamp housing (2).



4. Pull to remove puddle lamp bulb (2) from puddle lamp socket (1).



INSTALLATION

Installation is in the reverse order of removal.

LICENSE PLATE LAMP

Bulb Replacement

INFOID:0000000001679761

LICENSE PLATE LAMP

Removal

1. Remove back door lower finisher. Refer to EXT-24, "Removal and Installation".
2. Turn bulb socket counterclockwise to remove it.
3. Pull bulb from socket.

Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000001679762

LICENSE PLATE LAMP

Removal

1. Remove back door lower finisher. Refer to INT-21, "Removal and Installation".
2. Remove license plate lamp screws.
3. Remove license plate lamp.

Installation

Installation is in the reverse order of removal.

STOP LAMP

Bulb Replacement

INFOID:0000000001547174

HIGH-MOUNTED STOP LAMP

NOTE:
High-mounted stop lamp bulbs are not serviceable.

STOP LAMP

Refer to EXL-123, "Removal and Installation".

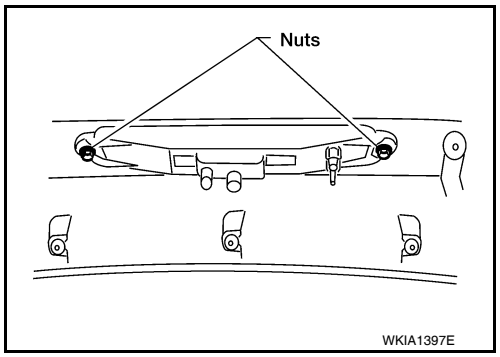
Removal and Installation

INFOID:0000000001547175

HIGH-MOUNTED STOP LAMP

Removal

1. Remove back door upper finisher. Refer to INT-21, "Removal and Installation".
2. Remove 2 nuts and remove high-mounted stop lamp.



Installation

Installation is in the reverse order of removal.

STOP LAMP

Refer to EXL-124, "Removal and Installation".

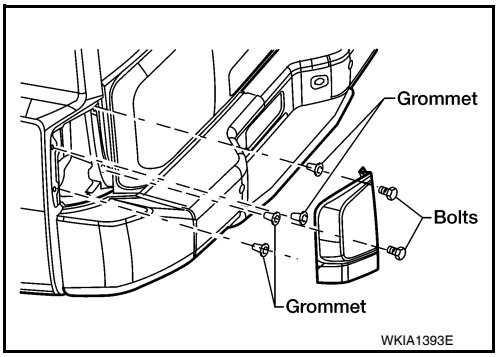
REAR COMBINATION LAMP

Bulb Replacement

INFOID:0000000001547176

REMOVAL

1. Remove rear combination lamp bolts.



2. Pull rear combination lamp to remove.
3. Turn bulb socket counterclockwise and unlock it.
4. Remove bulb.

INSTALLATION

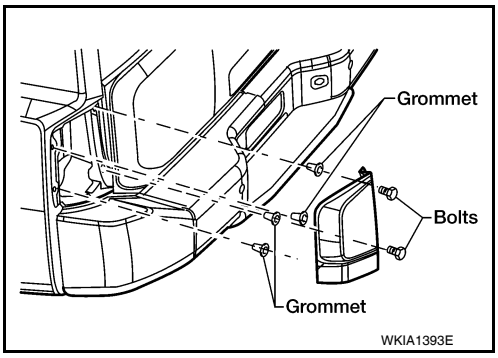
Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000001547177

REMOVAL

1. Remove rear combination lamp bolts.
2. Pull rear combination lamp to remove.
3. Disconnect rear combination lamp connector.



INSTALLATION

Installation is in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Headlamp

INFOID:0000000001547324

Item	Wattage (W)*
Low	35
High	60/65

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

Exterior Lamp

INFOID:0000000001547325

Item		Wattage (W)*
Front combination lamp	Parking lamp (inner)	7
	Parking lamp (outer)	7
	Side marker lamp (front)	7
Rear combination lamp	Stop/Tail lamp	LED*
	Side marker lamp (rear)	*
	Turn signal lamp	27
Back-up lamp		*
Turn/fog lamp	Fog	55
	Turn	21
Puddle lamp		8
License plate lamp		*
High-mounted stop lamp		LED*

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