

SECTION **EXL**

EXTERIOR LIGHTING SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

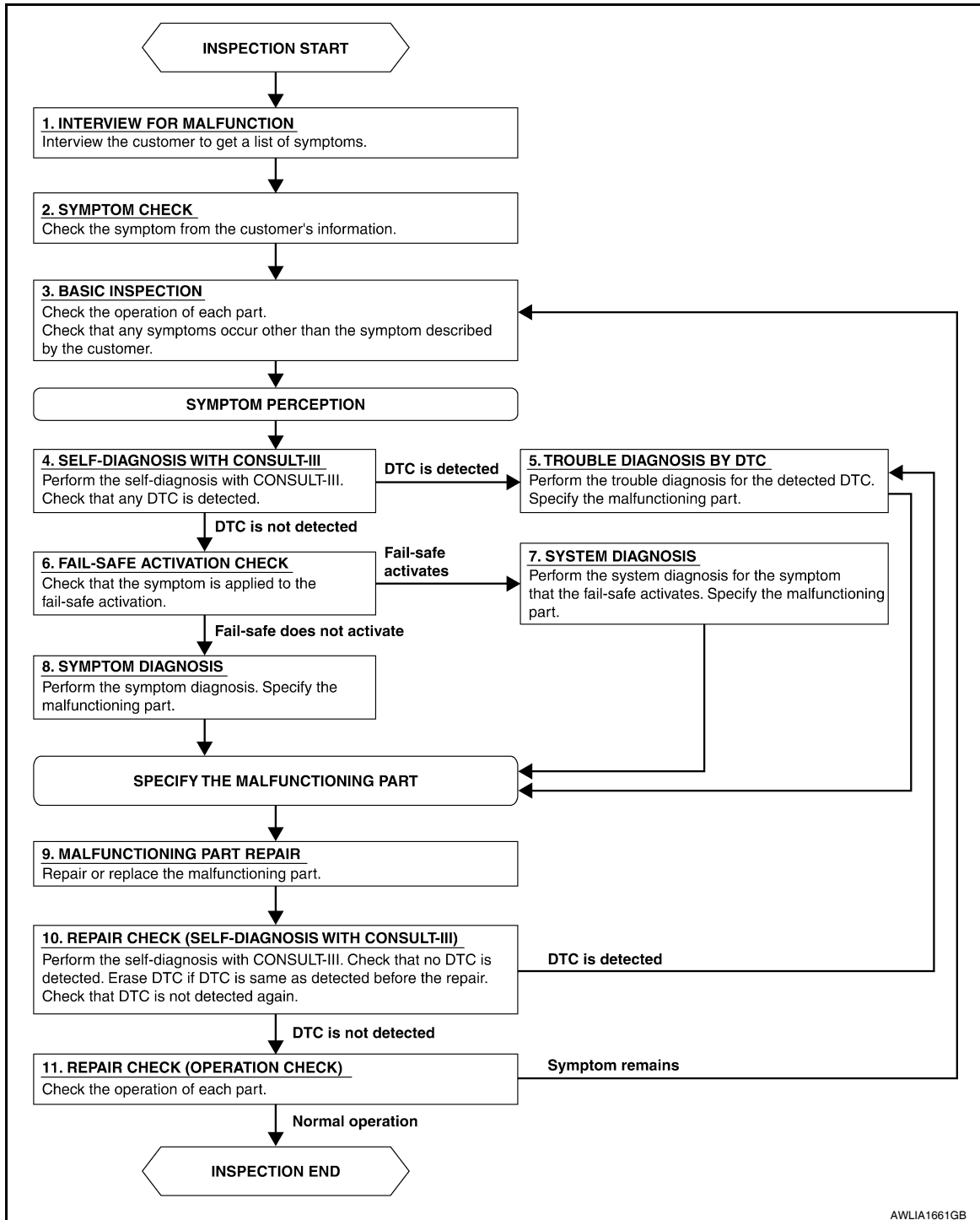
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000005146603

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2.

2. SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3.

3. BASIC INSPECTION

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

>> GO TO 4.

4. SELF-DIAGNOSIS WITH CONSULT-III

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

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

5. TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6. FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7.

NO >> GO TO 8.

7. SYSTEM DIAGNOSIS

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

>> GO TO 9.

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

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

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

Is any DTC detected?

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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.

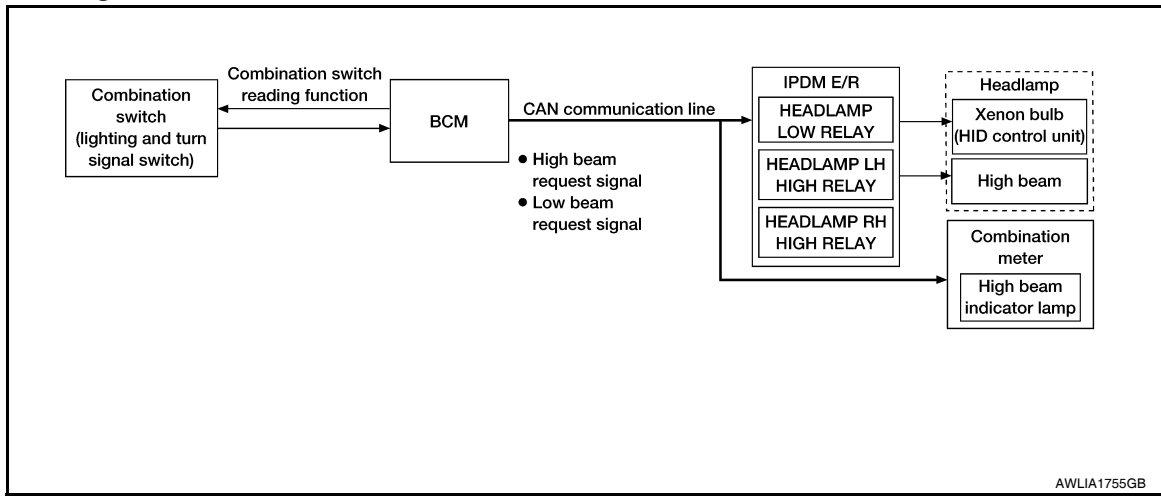
HEADLAMP

< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS

HEADLAMP

System Diagram



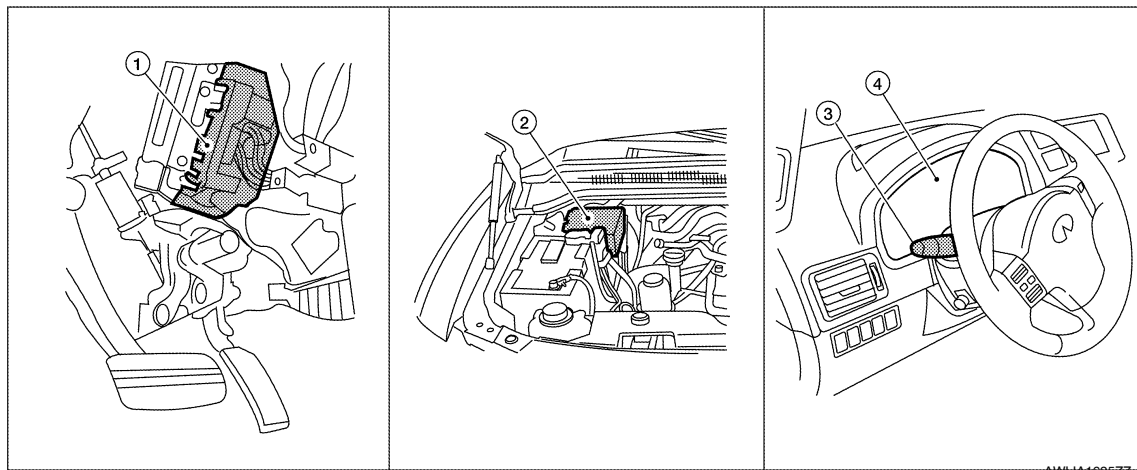
System Description

INFOID:000000005369868

Control of the headlamp system operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the combination switch (lighting and turn signal 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 LH high, headlamp RH high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

Component Parts Location

INFOID:000000005146606



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

Component Description

INFOID:000000005146607

XENON HEADLAMP

HEADLAMP

< FUNCTION DIAGNOSIS >

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 mixture of Xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic control of the power supply gives the headlamps stable quality and tone color. Following are some of the 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 combination switch (lighting and turn signal 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.

EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal 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.

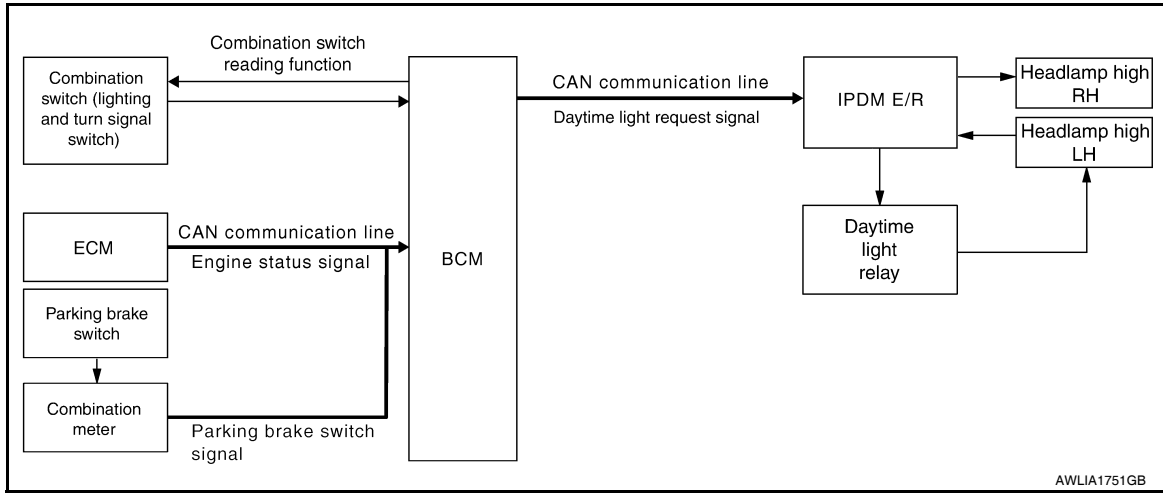
This setting can be changed by CONSULT-III. Refer to [BCS-22, "HEADLAMP : CONSULT-III Function \(BCM - HEAD LAMP\)"](#).

DAYTIME LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

DAYTIME LIGHT SYSTEM

System Diagram



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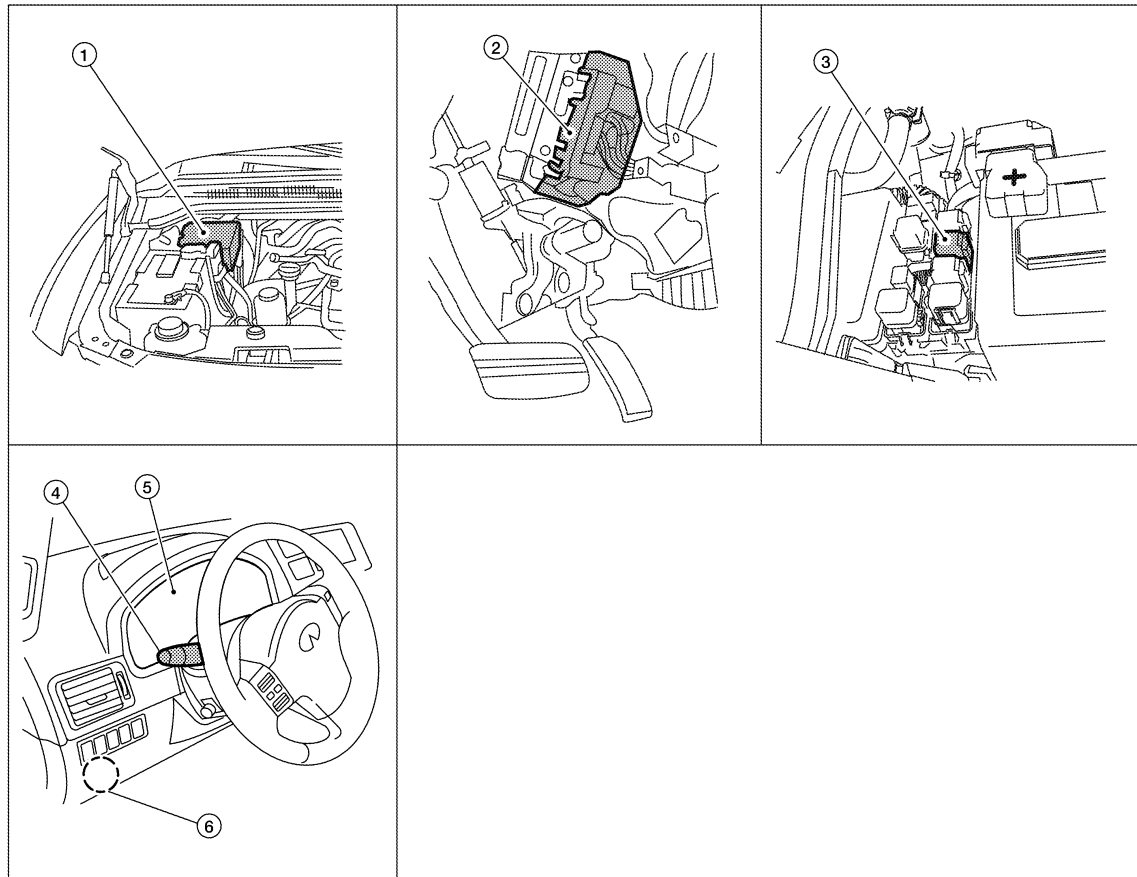
System Description

INFOID:000000005146609

The headlamp system for Canada vehicles is equipped with a daytime light relay 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

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DAYTIME LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

- | | | |
|---|--|-----------------------------|
| 1. IPDM E/R E119, E122, E123, E124 | 2. BCM M18, M20 (view with instrument panel removed) | 3. Daytime light relay E103 |
| 4. Combination switch (lighting and turn signal switch) M28 | 5. Combination meter M23, M24 | 6. Parking brake switch M11 |

Component Description

INFOID:000000005369870

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

OPERATION

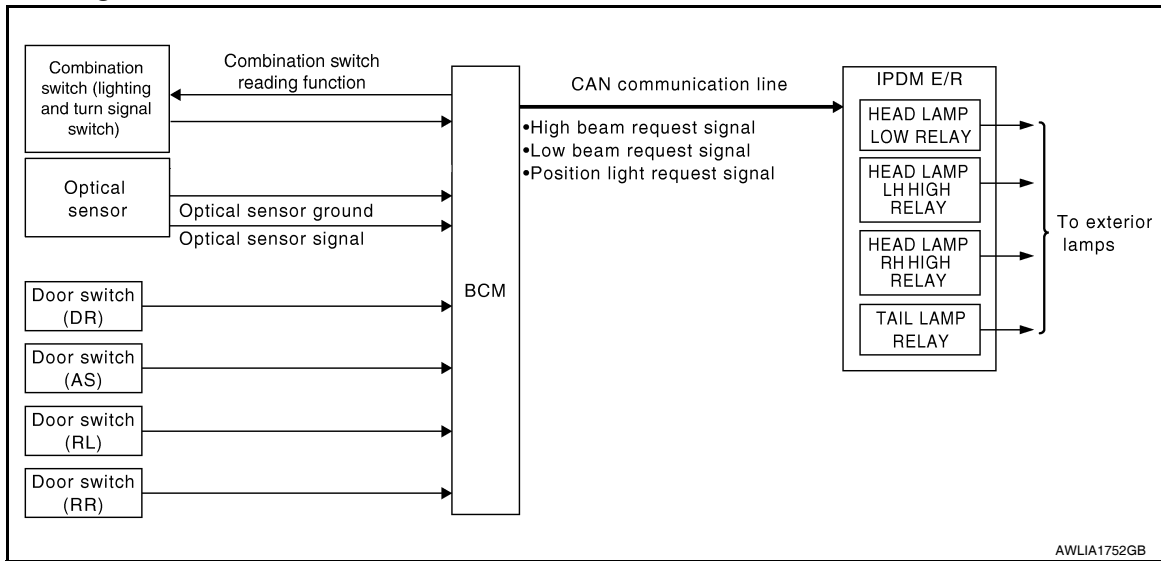
The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay 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

< FUNCTION DIAGNOSIS >

AUTO LIGHT SYSTEM

System Diagram



System Description

INFOID:000000005146613

- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, combination switch (lighting and turn signal 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 combination switch (lighting and turn signal 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 [BCS-22, "HEADLAMP : CONSULT-III Function \(BCM - HEAD LAMP\)"](#).

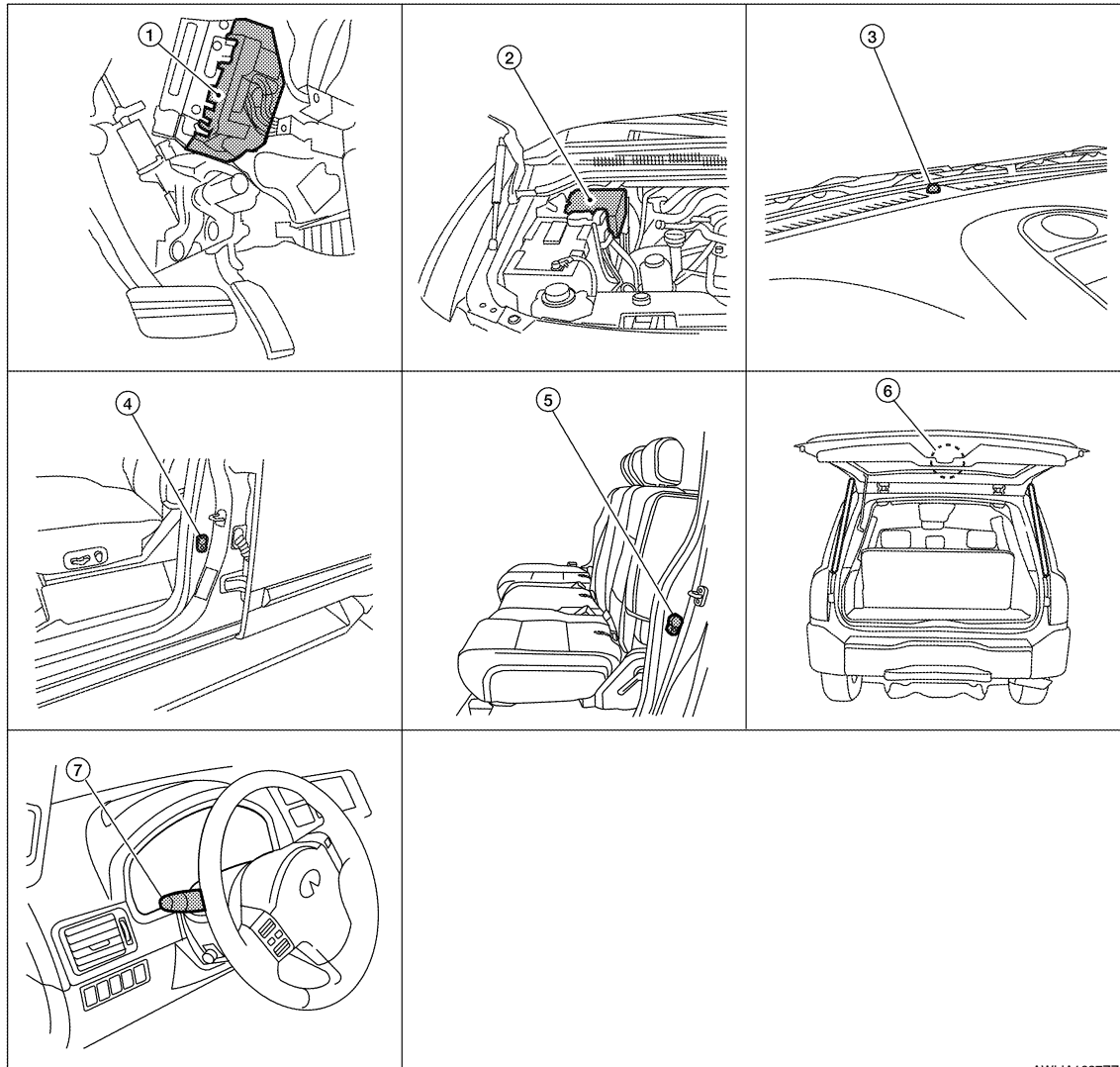
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AUTO LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000005146614



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- | | | |
|---|--|---|
| 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 latch (door ajar switch)
D503 |
| 7. Combination switch (lighting and turn signal switch) M28 | | |

Component Description

INFOID:000000005146615

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 combination switch (lighting and turn signal switch) position as a part of the BCM combination switch (lighting and turn signal switch) reading function. When the combination switch (lighting and turn signal switch) is in the AUTO position, the BCM automatically turns the lamps ON/OFF according to ambient light brightness.

NOTE:

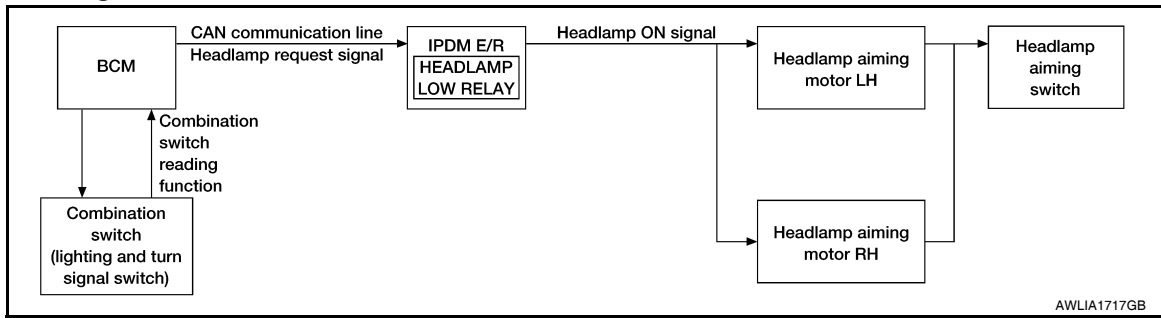
Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT-III. Refer to [BCS-22, "HEADLAMP : CONSULT-III Function \(BCM - HEAD LAMP\)"](#).

HEADLAMP AIMING SYSTEM (MANUAL)

< FUNCTION DIAGNOSIS >

HEADLAMP AIMING SYSTEM (MANUAL)

System Diagram



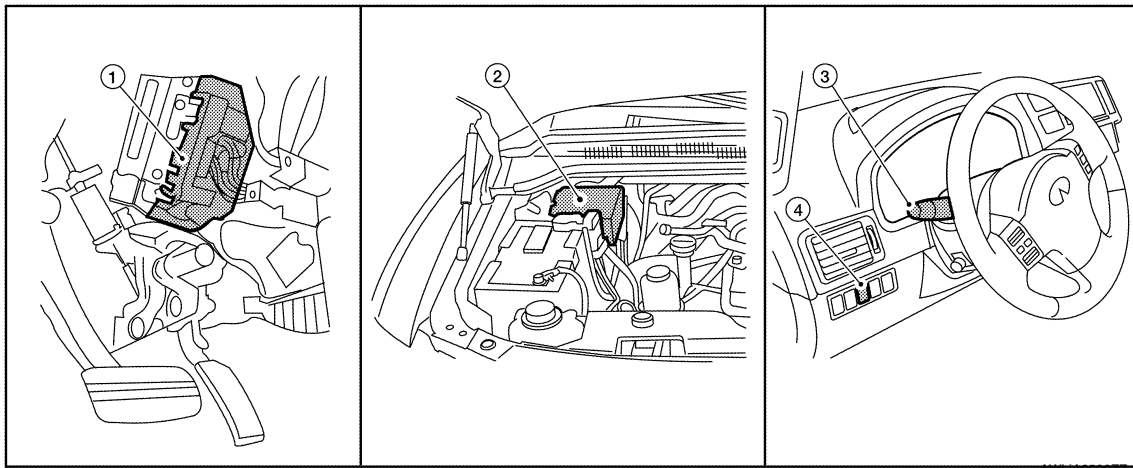
System Description

INFOID:000000005146617

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 Parts Location

INFOID:000000005146618



1. BCM M18, M20 (view with instrument panel removed)
2. IPDM E/R E121, E122, E123, E124
3. Combination switch (lighting and turn signal switch) M28
4. Headlamp aiming switch M148

Component Description

INFOID:000000005146619

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.

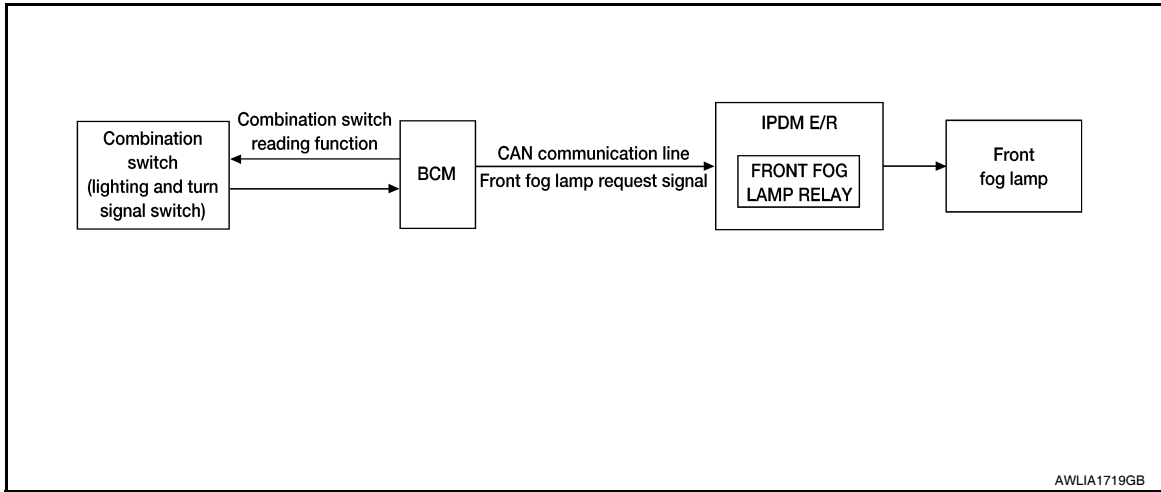
FRONT FOG LAMP

< FUNCTION DIAGNOSIS >

FRONT FOG LAMP

System Diagram

INFOID:000000005369879



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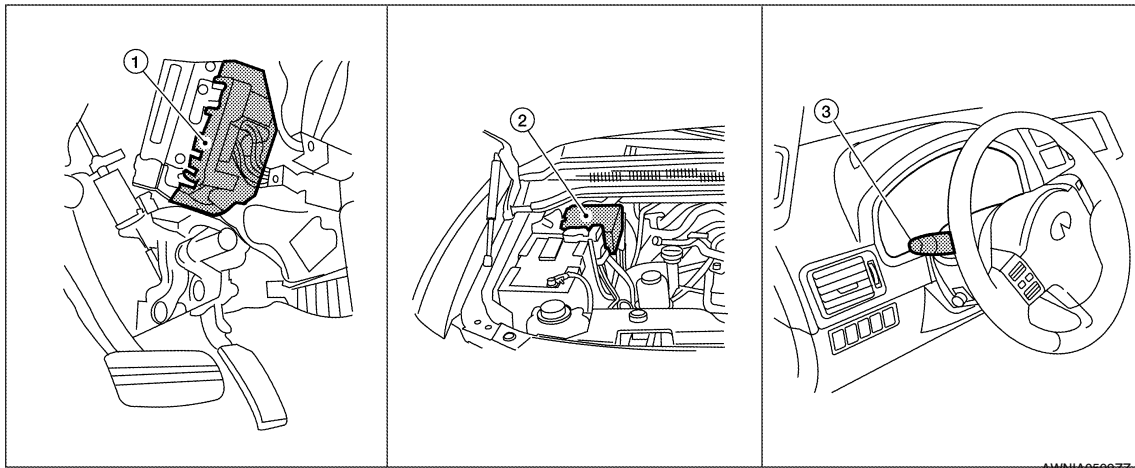
System Description

INFOID:000000005369880

The front fog lamps are activated with the combination switch (lighting and turn signal switch). The combination switch (lighting and turn signal switch) signal to the BCM is monitored with the BCM combination switch reading function. When the fog lamps are turned ON with the combination switch (lighting and turn signal 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:000000005146622



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

Component Description

INFOID:000000005369881

FRONT FOG LAMP OPERATION

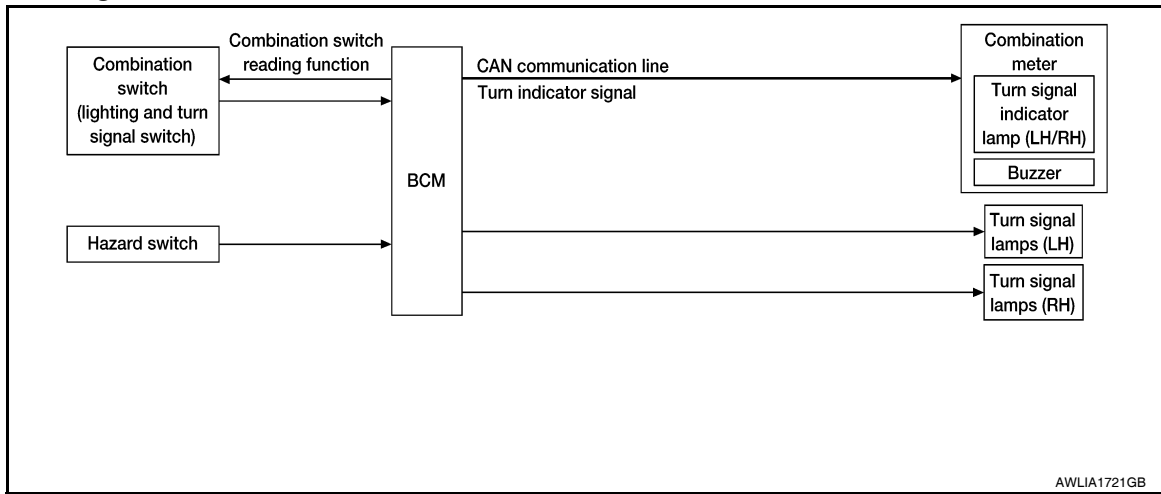
When the combination switch (lighting and turn signal switch) is in front fog lamp ON position and also in 1ST or 2ND position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal via the CAN communication 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.

TURN SIGNAL AND HAZARD WARNING LAMPS

< FUNCTION DIAGNOSIS >

TURN SIGNAL AND HAZARD WARNING LAMPS

System Diagram



System Description

INFOID:000000005146625

TURN SIGNAL OPERATION

When the combination switch (lighting and 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.

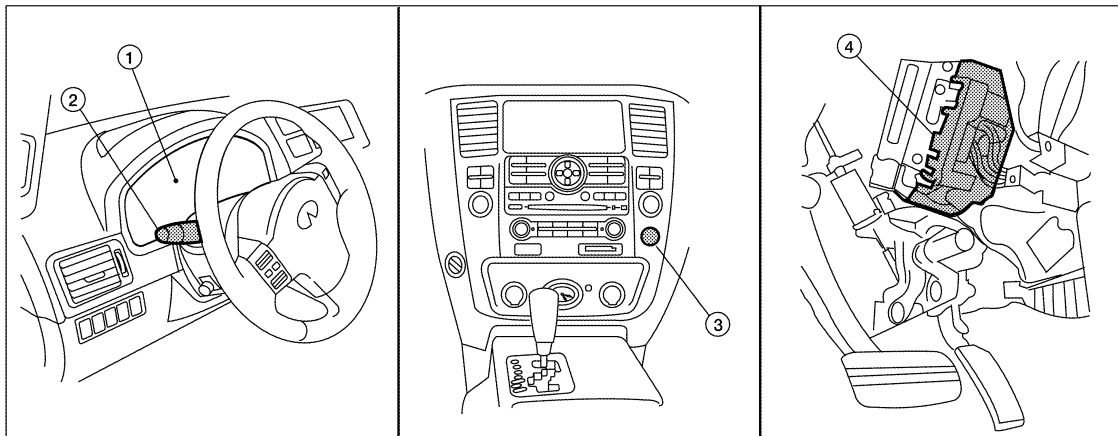
REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits a hazard request signal to the BCM, then BCM controls hazard lamps.

Refer to [SEC-10, "System Description"](#).

Component Parts Location

INFOID:000000005146626



TURN SIGNAL AND HAZARD WARNING LAMPS

< FUNCTION DIAGNOSIS >

1. Combination meter M23, M24
2. Combination switch (lighting and turn signal switch) M28
3. Hazard switch M55
4. BCM M18, M20 (view with instrument panel removed)

Component Description

INFOID:000000005146627

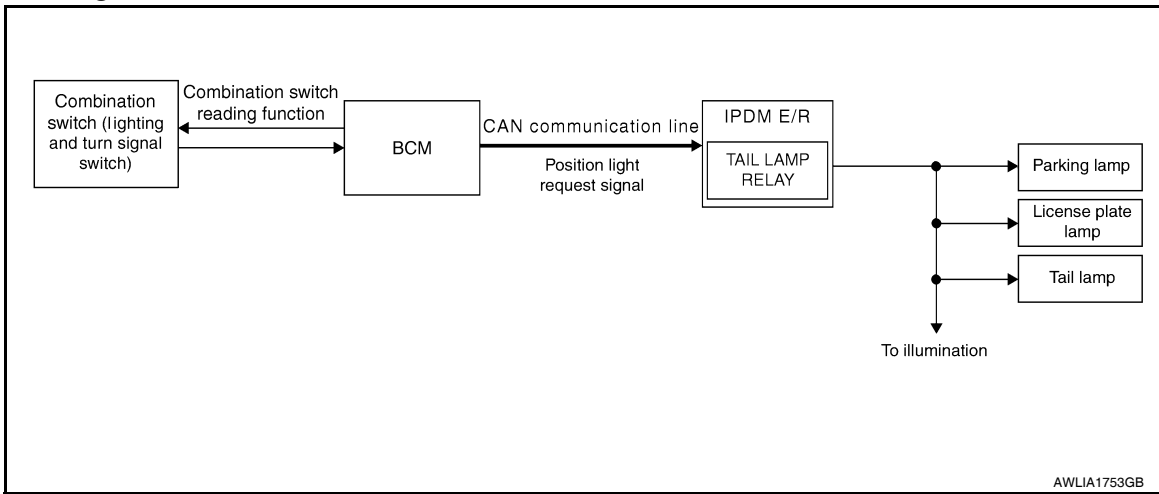
Part name	Description
BCM	Controls turn signal and hazard flasher operation.
Combination switch (lighting and turn signal switch)	Lighting and turn signal switch requests are output to the BCM.
Hazard switch	Hazard flasher request signal is output to the BCM.
Combination meter	Outputs turn and hazard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

PARKING, LICENSE PLATE AND TAIL LAMPS

< FUNCTION DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS

System Diagram



System Description

INFOID:000000005146629

PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the combination switch (lighting and turn signal 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

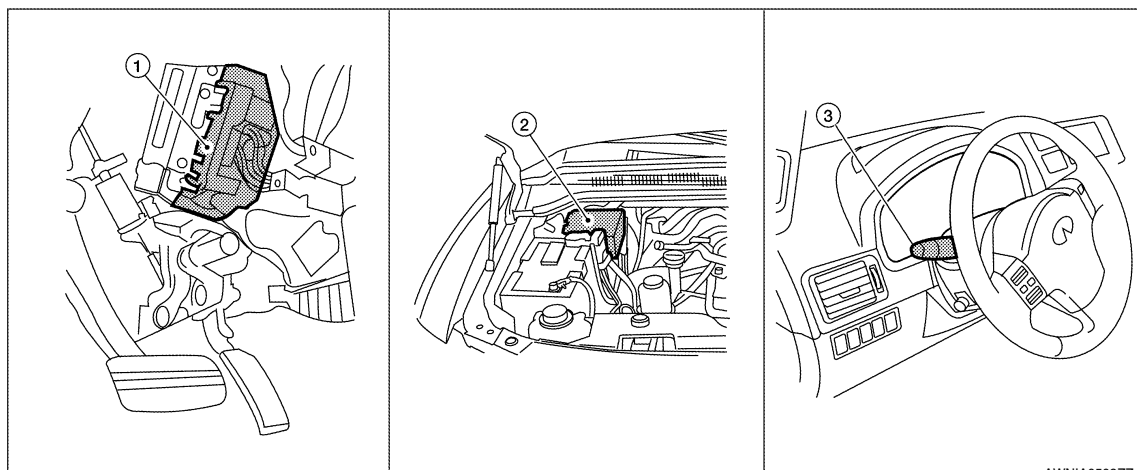
With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the combination switch (lighting and turn signal switch) position is changed. If the combination switch (lighting and turn signal switch) position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT-III. Refer to [BCS-26. "BATTERY SAVER : CONSULT-III Function \(BCM - BATTERY SAVER\)"](#).

Component Parts Location

INFOID:000000005146630



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

3. Combination switch (lighting and turn signal switch) M28

PARKING, LICENSE PLATE AND TAIL LAMPS

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000005146631

Part name	Description
BCM	<ul style="list-style-type: none">• 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 and turn signal switch)	Outputs lighting requests to the BCM.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

HEADLAMP

HEADLAMP : CONSULT-III Function (BCM - HEAD LAMP)

INFOID:000000005369883

WORK SUPPORT

Work Item	Setting item	Setting	
BATTERY SAVER SET	ON*	With the exterior lamp battery saver function	
	OFF	Without the exterior lamp battery saver function	
CUSTOM A/LIGHT SETTING	MODE1*	Normal	
	MODE2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)	
	MODE3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)	
	MODE4	Less sensitive setting than normal setting (Turns ON later than normal operation.)	
ILL DELAY SET	MODE1*	45 sec.	Sets delay timer function timer operation time (All doors closed)
	MODE2	Without the function	
	MODE3	30 sec.	
	MODE4	60 sec.	
	MODE5	90 sec.	
	MODE6	120 sec.	
	MODE7	150 sec.	
	MODE8	180 sec.	

*: Initial setting

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judged from IGN signal (ignition power supply)
ACC ON SW [ON/OFF]	Ignition switch (ACC) status judged from ACC signal (accessory power supply)
HI BEAM SW [ON/OFF]	Each switch status that BCM judges from the combination switch reading function
HEAD LAMP SW 1 [ON/OFF]	
HEAD LAMP SW 2 [ON/OFF]	
LIGHT SW 1ST [ON/OFF]	
AUTO LIGHT SW [ON/OFF]	
PASSING SW [ON/OFF]	
FR FOG SW [ON/OFF]	
TURN SIGNAL R [ON/OFF]	
TURN SIGNAL L [ON/OFF]	
DOOR SW-DR [ON/OFF]	
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH
DOOR SW-RL [ON/OFF]	The switch status input from rear door switch LH
BACK DOOR SW [ON/OFF]	The switch status input from back door switch
CARGO LAMP SW [ON/OFF]	Cargo lamp status that BCM judges from the vehicle condition
OPTICAL SENSOR [ON/OFF]	The value of exterior brightness voltage input from the optical sensor

ACTIVE TEST

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P

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Test Item	Operation	Description
TAIL LAMP	ON	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	OFF	Stops the tail lamp request signal transmission.
HEAD LAMP	HI	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
	LO	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	OFF	Stops the high & low beam request signal transmission.
FR FOG LAMP	ON	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	OFF	Stops the front fog lights request signal transmission.
CARGO LAMP	ON	Transmits the cargo lamp request signal with CAN communication to turn the lamp ON.
	OFF	Stops the cargo lamp request signal transmission.
CORNERING LAMP	LH	Transmits the LH cornering lamp request signal with CAN communication to turn the lamp ON.
	RH	Transmits the RH cornering lamp request signal with CAN communication to turn the lamp ON.
	OFF	Stops the day time running light request signal transmission.

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:000000005369884

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judged from IGN signal (ignition power supply)
HAZARD SW [ON/OFF]	The switch status input from the hazard 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	Outputs the voltage to turn the right side turn signal lamps ON.
	LH	Outputs the voltage to turn the left side turn signal lamps ON.
	OFF	Stops the voltage to turn the turn signal lamps OFF.

COMB SW

COMB SW : CONSULT-III Function (BCM - COMB SW)

INFOID:000000005369885

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor Item [Unit]	Description	A
TURN SIGNAL R [OFF/ON]	Displays the status of the TURN RH switch in combination switch judged by BCM with the combination switch reading function	A
TURN SIGNAL L [OFF/ON]	Displays the status of the TURN LH switch in combination switch judged by BCM with the combination switch reading function	B
HI BEAM SW [OFF/ON]	Displays the status of the HI BEAM switch in combination switch judged by BCM with the combination switch reading function	C
HEAD LAMP SW1 [OFF/ON]	Displays the status of the HEADLAMP switch in combination switch judged by BCM with the combination switch reading function	D
HEAD LAMP SW2 [OFF/ON]	Displays the status of the HEADLAMP switch in combination switch judged by BCM with the combination switch reading function	D
LIGHT SW 1ST [OFF/ON]	Displays the status of the HEADLAMP switch in combination switch judged by BCM with the combination switch reading function	E
PASSING SW [OFF/ON]	Displays the status of the PASSING switch in combination switch judged by BCM with the combination switch reading function	F
AUTO LIGHT SW [OFF/ON]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function	F
FR FOG SW [OFF/ON]	Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function	G
FR WIPER HI [OFF/ON]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function	H
FR WIPER LOW [OFF/ON]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function	H
FR WIPER INT [OFF/ON]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function	I
FR WASHER SW [OFF/ON]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function	I
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by BCM with the combination switch reading function	J
RR WIPER ON [OFF/ON]	Displays the status of the RR WIPER switch in combination switch judged by BCM with the combination switch reading function	K
RR WIPER INT [OFF/ON]	Displays the status of the RR WIPER INT switch in combination switch judged by BCM with the combination switch reading function	K
RR WASHER SW [OFF/ON]	Displays the status of the RR WASHER switch in combination switch judged by BCM with the combination switch reading function	EXL

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:000000005369886

AUTO ACTIVE TEST

Description

In auto active test mode, the IPDM E/R sends a drive signal to the following systems to check their operation.

- Oil pressure low/coolant pressure high warning indicator
- Oil pressure gauge
- Rear window defogger
- Front wipers
- Tail, license and parking lamps
- Front fog lamps
- Headlamps (Hi, Lo)
- A/C compressor (magnetic clutch)
- Cooling fan

Operation Procedure

1. Close the hood and front door RH, and lift the wiper arms from the windshield (to prevent windshield damage due to wiper operation).
NOTE:
When auto active test is performed with hood opened, sprinkle water on windshield before hand.
2. Turn ignition switch OFF.
3. Turn the ignition switch ON and, within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
5. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

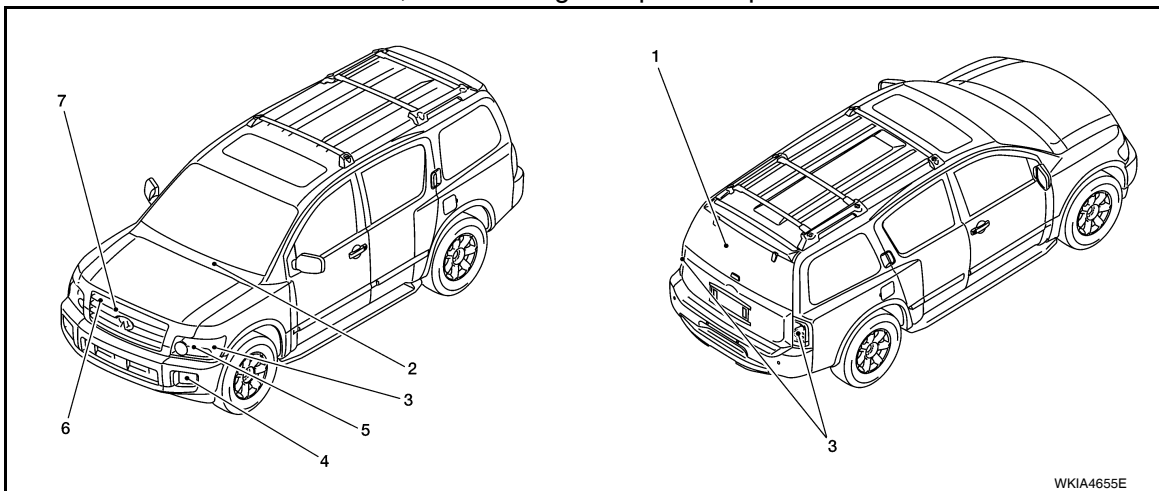
When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

CAUTION:

- If auto active test mode cannot be actuated, check door switch system. Refer to [DLK-71, "Description"](#).
- Do not start the engine.

Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 7 steps are repeated 3 times.



WKIA4655E

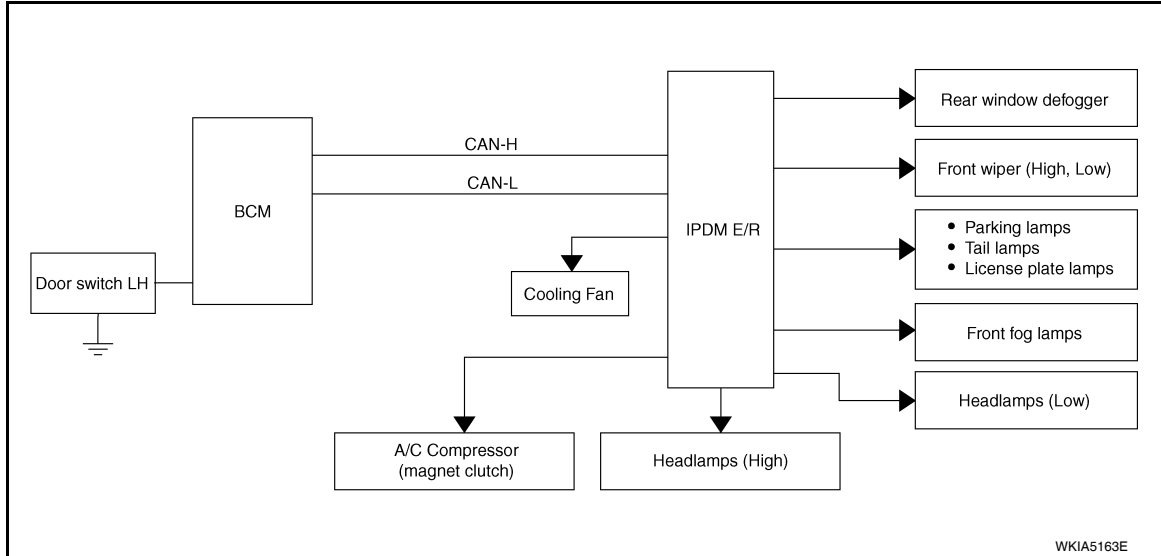
Operation sequence	Inspection Location	Operation
1	Rear window defogger	10 seconds
2	Front wipers	LO for 5 seconds → HI for 5 seconds

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

Operation sequence	Inspection Location	Operation
3	Tail, license and parking lamps	10 seconds
4	Front fog lamps	10 seconds
5	Headlamps	LO for 10 seconds → HI on-off for 5 seconds
6	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
7	Cooling fan	10 seconds

Concept of auto active test



- IPDM E/R starts the auto active test with the door switch signals transmitted by BCM via CAN communication. Therefore, the CAN communication line between IPDM E/R and BCM is considered normal if the auto active test starts successfully.
- The auto active test facilitates troubleshooting if any systems controlled by IPDM E/R cannot be operated.

Diagnosis chart in auto active test mode

Symptom	Inspection contents	Possible cause	
Oil pressure low warning indicator does not operate	Perform auto active test. Does the oil pressure low warning indicator operate?	YES	<ul style="list-style-type: none"> • IPDM E/R signal input circuit • ECM signal input circuit • CAN communication signal between ECM and combination meter
		NO	<ul style="list-style-type: none"> • CAN communication signal between IPDM E/R, BCM and combination meter
Oil pressure gauge does not operate	Perform auto active test. Does the oil pressure gauge operate?	YES	IPDM E/R signal input circuit
		NO	<ul style="list-style-type: none"> • CAN communication signal between IPDM E/R, BCM and combination meter
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	YES	BCM signal input circuit
		NO	<ul style="list-style-type: none"> • Harness or connector between A/C and AV switch assembly and AV control unit • CAN communication signal between BCM and IPDM E/R

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

Symptom	Inspection contents	Possible cause	
Any of the following components do not operate <ul style="list-style-type: none"> • Front wipers • Tail lamps • License plate lamps • Parking lamps • Front fog lamps • Headlamps (Hi, Lo) 	Perform auto active test. Does the applicable system operate?	YES	BCM signal input system
		NO	<ul style="list-style-type: none"> • Lamp or front wiper motor malfunction • Lamp or front wiper motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R (integrated relay malfunction)
A/C compressor does not operate	Perform auto active test. Does the A/C compressor operate?	YES	<ul style="list-style-type: none"> • BCM signal input circuit • CAN communication signal between BCM and ECM • CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> • Magnetic clutch malfunction • Harness or connector between IPDM E/R and magnetic clutch • IPDM E/R (integrated relay malfunction)
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	<ul style="list-style-type: none"> • ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	<ul style="list-style-type: none"> • Cooling fan motor malfunction • Harness or connector between IPDM E/R and cooling fan • IPDM E/R (integrated relay malfunction)

CONSULT - III Function (IPDM E/R)

INFOID:000000005369887

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.

SELF DIAGNOSTIC

Refer to [PCS-32. "DTC Index"](#).

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIGNALS	Description
MOTOR FAN REQ [1/2/3/4]	×	Displays the status of the cooling fan speed request signal received from ECM via CAN communication.
A/C COMP REQ [OFF/ON]	×	Displays the status of the A/C request signal received from AV control unit via CAN communication.

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

Monitor Item [Unit]	MAIN SIG- NALS	Description
TAIL&CLR REQ [OFF/ON]	×	Displays the status of the position light 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 lamp request signal received from BCM via CAN communication.
FR WIP REQ [STOP/1LOW/LOW/HI]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [OFF/Block]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
ST RLY REQ [OFF/ON]		Displays the status of the starter request signal received from ECM via CAN communication.
IGN RLY [OFF/ON]	×	Displays the status of the ignition relay judged by IPDM E/R.
RR DEF REQ [OFF/ON]	×	Displays the status of the rear defogger request signal received from AV control unit via CAN communication.
OIL P SW [OPEN/CLOSE]		Displays the status of the oil pressure switch judged by IPDM E/R.
DTRL REQ [OFF]		Displays the status of the daytime light request signal received from BCM via CAN communication.
HOOD SW [OPEN/CLOSE]		Displays the status of the hood switch judged by IPDM E/R.
THFT HRN REQ [OFF/ON]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [OFF/ON]		Displays the status of the horn reminder signal received from BCM via CAN communication.

ACTIVE TEST

Test item

Test item	Operation	Description
REAR DEFOGGER	OFF	OFF
	ON	Operates rear window defogger relay.
FRONT WIPER	OFF	OFF
	LO	Operates the front wiper relay.
	HI	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	OFF
	3	Operates the cooling fan relay.
	4	Operates the cooling fan relay.

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

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 the headlamp high LH/RH relays at 1 second intervals.
	FOG	Operates the front fog lamp relay
HORN	ON	Operates horn relay for 20 ms.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000005369888

Regarding Wiring Diagram information, refer to [BCS-49, "Wiring Diagram"](#).

1. CHECK FUSES AND FUSIBLE LINK

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

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

Is the fuse blown?

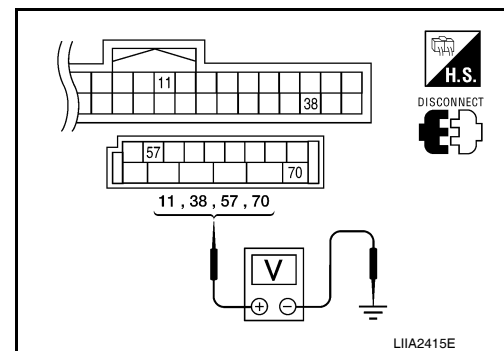
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

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



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

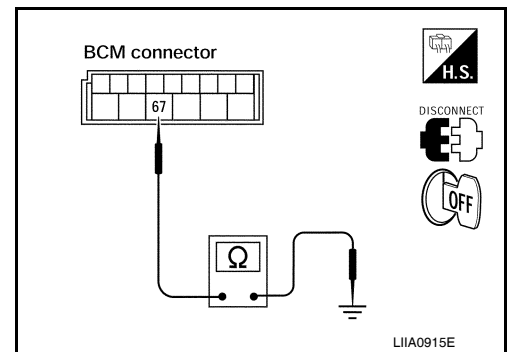
< COMPONENT DIAGNOSIS >

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

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



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

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

INFOID:000000005369889

Regarding Wiring Diagram information, refer to [PCS-27. "Wiring Diagram"](#).

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
1	Battery	A, D
2	Battery	C
12	Ignition switch ON or START	59

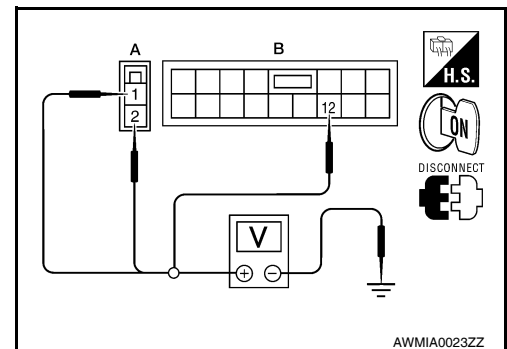
Is the fuse blown?

- YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
 NO >> GO TO 2

2. CHECK BATTERY POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect IPDM E/R.
- Check voltage between IPDM E/R harness connectors and ground.

Terminals		(-)	Ignition switch position		
(+)			OFF	ON	START
Connector	Terminal				
E118 (A)	1	Ground	Battery voltage	Battery voltage	Battery voltage
	2		Battery voltage	Battery voltage	Battery voltage
E119 (B)	12		0V	Battery voltage	Battery voltage



Is the measurement value normal?

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

3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.

POWER SUPPLY AND GROUND CIRCUIT

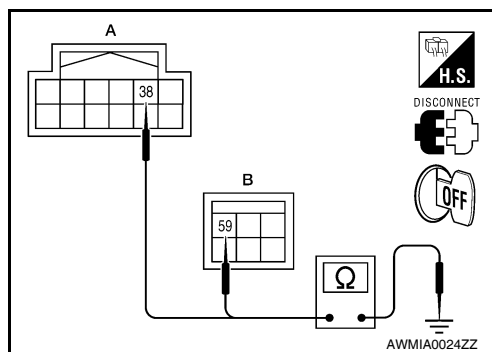
< COMPONENT DIAGNOSIS >

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E122 (A)	38		Yes
E124 (B)	59		

Does continuity exist?

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



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HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (HI) CIRCUIT

Description

INFOID:000000005370270

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp LH high and headlamp RH high relays based on inputs from the BCM via the CAN communication lines. When the headlamp LH high and headlamp RH high relays are 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:000000005146640

1. CHECK HEADLAMP (HI) OPERATION

⊗ WITHOUT CONSULT-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 LAMPS" 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-30, "Diagnosis Procedure - Without Daytime Light System"](#), [EXL-31, "Diagnosis Procedure - With Daytime Light System"](#).

Diagnosis Procedure - Without Daytime Light System

INFOID:000000005146641

Regarding Wiring Diagram information, refer to [EXL-52, "Wiring Diagram"](#).

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	35	10A
Headlamp HI (RH)	IPDM E/R	34	10A

Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

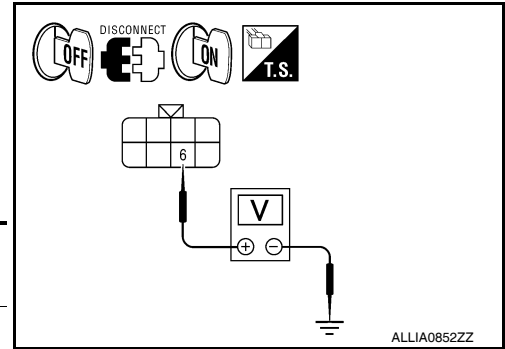
2. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

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		



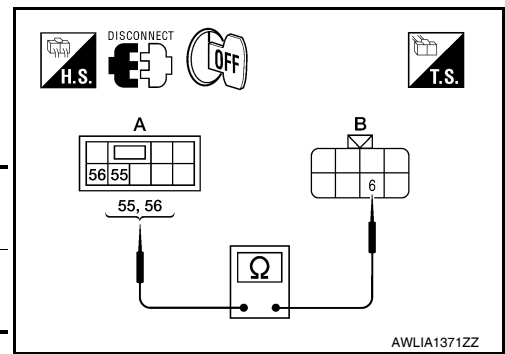
Are the voltage readings as specified?

- 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	



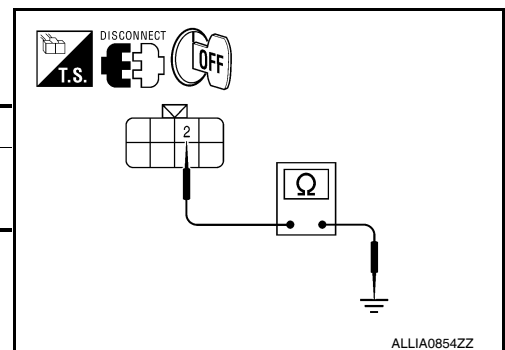
Does continuity exist?

- 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.

Diagnosis Procedure - With Daytime Light System

INFOID:000000005146642

Regarding Wiring Diagram information, refer to [EXL-56. "Wiring Diagram"](#).

1. CHECK HEADLAMP (HI) FUSES

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

HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

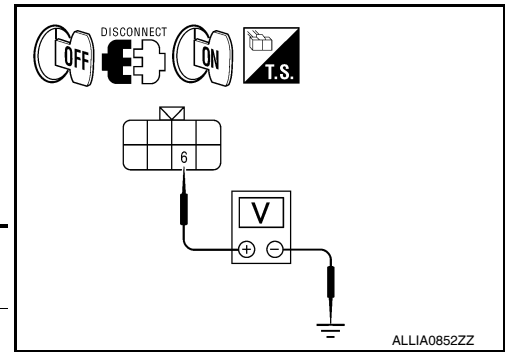
Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	35	10A
Headlamp HI (RH)	IPDM E/R	34	10A

Is the fuse open?

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- Disconnect the front combination lamp connector E6 or E108.
- Turn the ignition switch ON.
- Turn the high beam headlamps ON.
- With the high beam headlamps ON, check the voltage between the combination lamp connector and ground.



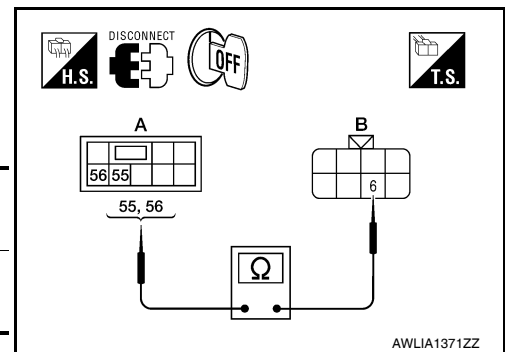
		(+)	(-)	Voltage
	Connector	Terminal		
LH	E6	6	Ground	Battery voltage
RH	E108	6		

Are the voltage readings as specified?

- YES >> GO TO 4.
 NO >> GO TO 3.

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E123.
- 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	E6	6	Yes	
RH		56	E108	6		

Does continuity exist?

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

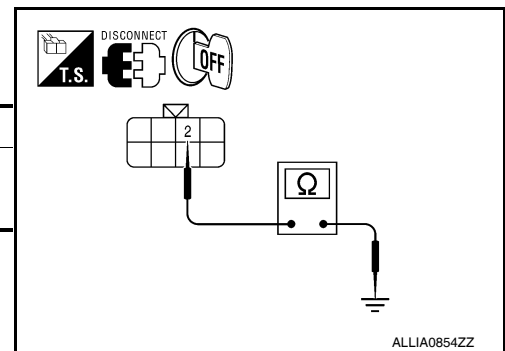
4.CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

		Connector	Terminal	—	Continuity
LH	E6		2	Ground	Yes
RH	E108		2		

Does continuity exist?

- YES >> Inspect the headlamp bulb.
 NO - RH >> Repair the harness.
 NO - LH >> Inspect daytime light relay. If OK, repair harness. If NG, replace the daytime light relay.



HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (LO) CIRCUIT

Description

INFOID:000000005146643

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:000000005146644

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 LAMPS" 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-33, "Diagnosis Procedure - Without Daytime Light System"](#), [EXL-34, "Diagnosis Procedure - With Daytime Light System"](#).

Diagnosis Procedure - Without Daytime Light System

INFOID:000000005146645

Regarding Wiring Diagram information, refer to [EXL-52, "Wiring Diagram"](#).

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.

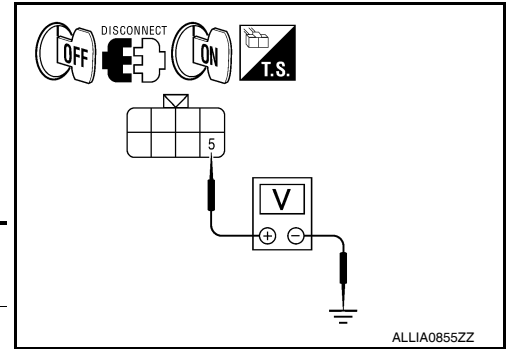
2. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

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		



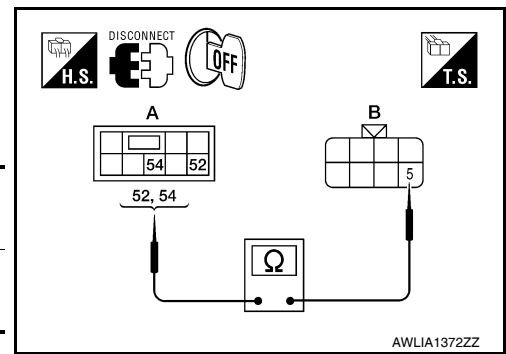
Is voltage reading as specified?

- 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.

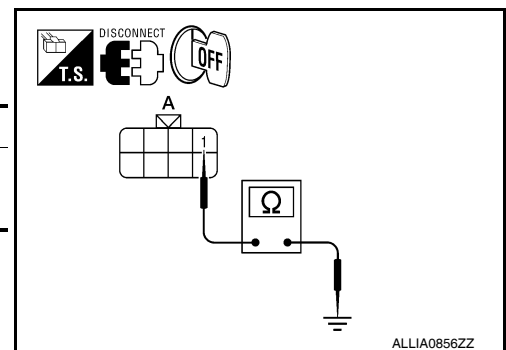
4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

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.



Diagnosis Procedure - With Daytime Light System

INFOID:000000005146646

Regarding Wiring Diagram information, refer to [EXL-56. "Wiring Diagram"](#).

1. CHECK HEADLAMP (LO) FUSES

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

HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

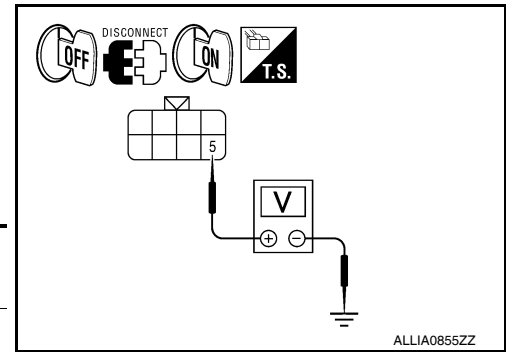
Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	40	15A
Headlamp LO (RH)	IPDM E/R	41	15A

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.



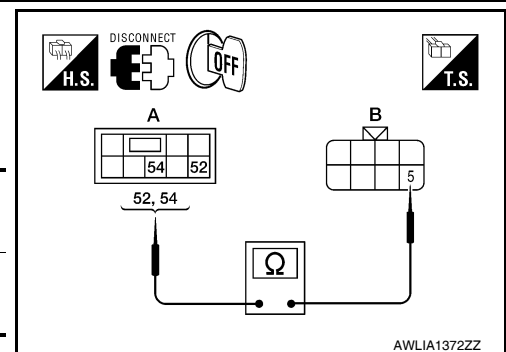
(+)		Terminal	(-)	Voltage
Connector	Terminal			
LH	E6	5	Ground	Battery voltage
RH	E108	5		

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	E6	52	Yes
RH			54	
		E108	5	

Does continuity exist?

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

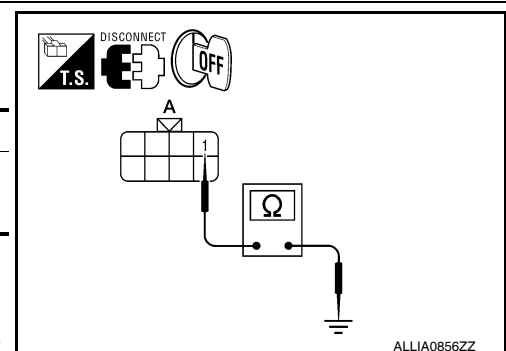
4.CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

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

Connector	Terminal	—	Continuity
LH	E6	Ground	Yes
RH	E108		

Does continuity exist?

- YES >> Inspect the headlamp bulb.
 NO - RH >> Repair the harness.
 NO - LH >> Inspect the daytime light relay. If OK, repair harness. If NG, replace the daytime light relay.



FRONT FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

FRONT FOG LAMP CIRCUIT

Description

INFOID:000000005146647

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:000000005146648

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 LAMPS" of IPDM E/R active test item.
2. With operating the test items, Check that the front fog lamp is turned ON.

Fog : Front fog lamp ON
Off : Front fog lamp OFF

Is the front fog lamp turned ON?

- YES >> Front fog lamp circuit is normal.
 NO >> Refer to [EXL-36, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000005146649

Regarding Wiring Diagram information, refer to [EXL-73, "Wiring Diagram"](#).

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

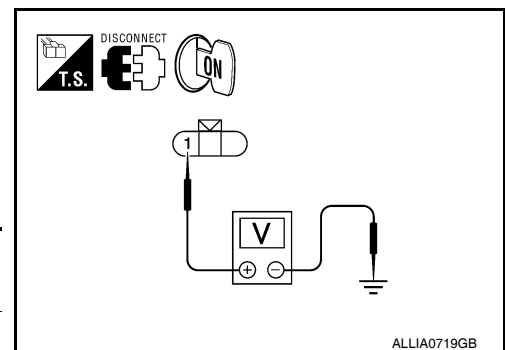
Is the fuse open?

- 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	Ground	Battery voltage
RH	E102		



Are the voltage readings as specified?

- YES >> GO TO 4.
 NO >> GO TO 3.

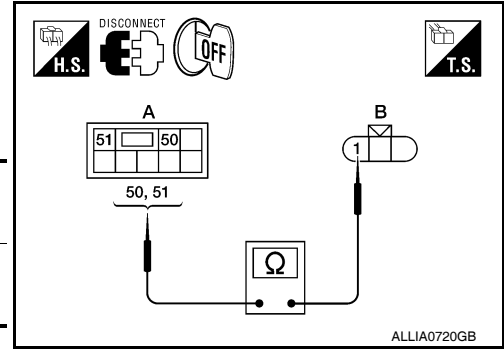
FRONT FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

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	Yes
RH		51	E102	



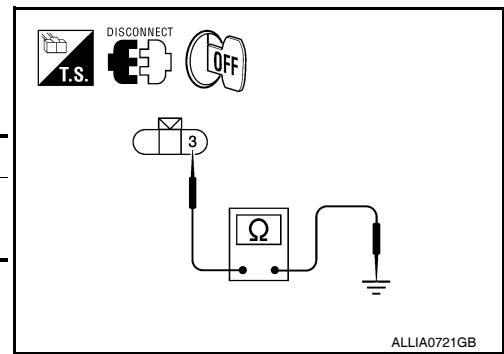
Does continuity exist?

- 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	Ground	Yes
RH	E102		



Does continuity exist?

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

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EXL

PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING LAMP CIRCUIT

Description

INFOID:000000005146650

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:000000005146651

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 LAMPS" of IPDM E/R active test item.
2. With operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON
Off : Parking lamp OFF

Is the parking lamp turned ON?

- YES >> Parking lamp circuit is normal.
NO >> Refer to [EXL-38, "Diagnosis Procedure - Without Daytime Light System"](#), [EXL-41, "Diagnosis Procedure - With Daytime Light System"](#).

Diagnosis Procedure - Without Daytime Light System

INFOID:000000005146652

Regarding Wiring Diagram information, refer to [EXL-84, "Wiring Diagram"](#).

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)

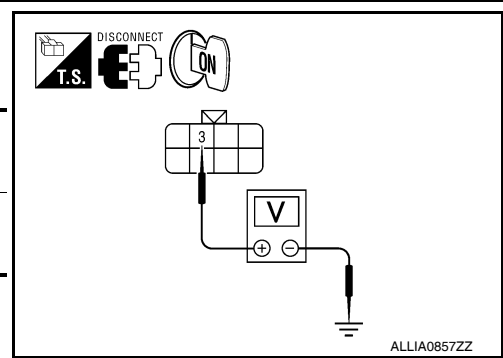
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector, rear combination lamp connector and license plate lamp connector.
3. Turn the ignition switch ON.
4. Turn the parking lamps ON.

PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

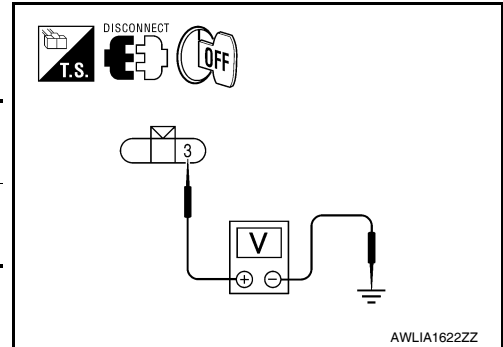
5. With the parking lamps ON, check voltage between the front combination lamp connectors and ground.

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



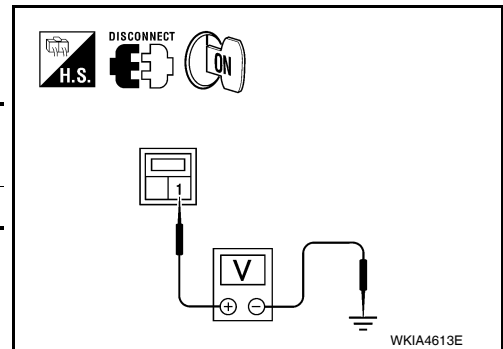
6. With the parking lamps ON, check voltage between the rear combination lamp connectors and ground.

(+)		Terminal	(-)	Voltage
Connector				
LH	B70	3	Ground	Battery voltage
RH	B130			



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

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



Are voltage readings as specified?

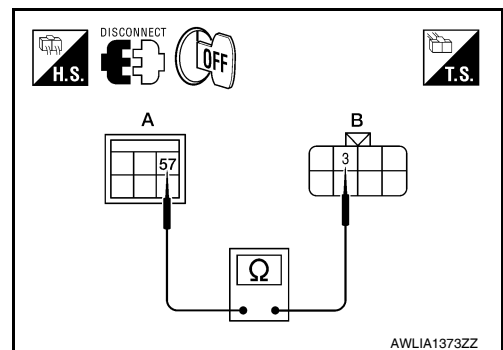
YES >> GO TO 4.

NO >> GO TO 3.

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

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector.
- 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	E11	3	Yes
RH		57		



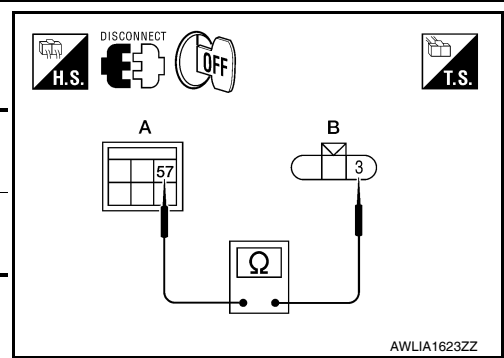
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PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

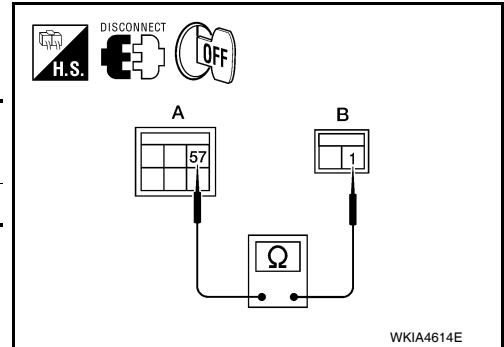
4. Check continuity between the IPDM E/R harness connector (A) and the rear combination lamp harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E124	57	B70	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?

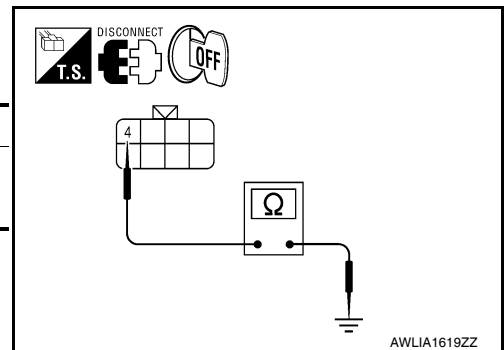
YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK PARKING, LICENSE AND TAIL LAMP GROUND CIRCUITS

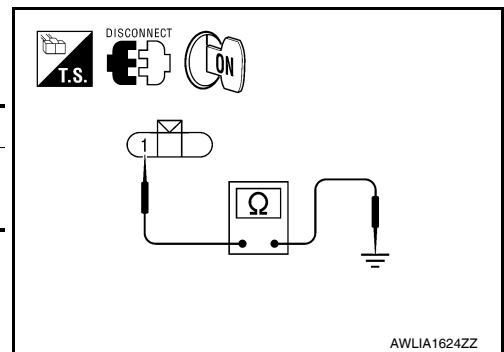
1. Check continuity between the front combination lamp harness connectors E11 and E107 terminal 4 and ground.

Connector		Terminal	—	Continuity
LH	E11	4	Ground	Yes
RH	E107			



2. Check continuity between the rear combination lamp harness connectors B70 and B130 terminal 1 and ground.

Connector		Terminal	—	Continuity
LH	B70	1	Ground	Yes
RH	B130			



PARKING LAMP CIRCUIT

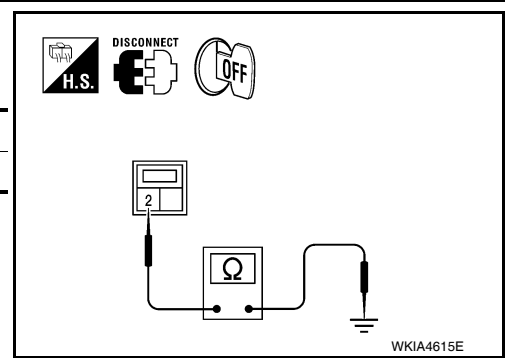
< COMPONENT DIAGNOSIS >

- 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.



Diagnosis Procedure - With Daytime Light System

INFOID:000000005146653

Regarding Wiring Diagram information, refer to [EXL-84. "Wiring Diagram"](#).

1. CHECK PARKING LAMP FUSES

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

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

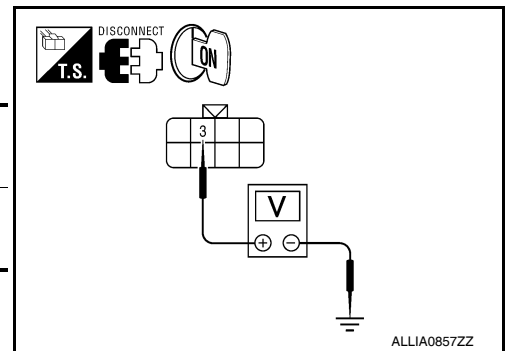
Is the fuse open?

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

2. CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

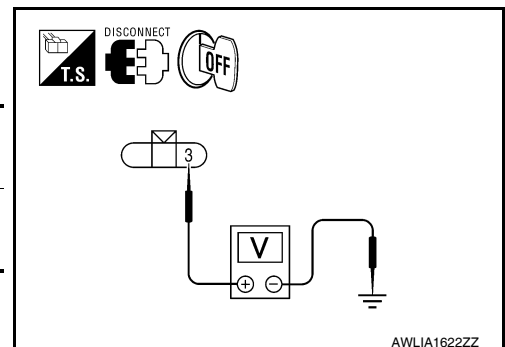
- Turn the ignition switch OFF.
- Disconnect the front combination lamp connector, rear combination lamp connector and license plate lamp connector.
- Turn the ignition switch ON.
- Turn the parking lamps ON.
- With the parking lamps ON, check voltage between the front combination lamp connectors and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

(+)		Terminal	(-)	Voltage
Connector	Terminal			
LH	E6	3	Ground	Battery voltage
RH	E108			



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

(+)		Terminal	(-)	Voltage
Connector	Terminal			
LH	B70	3	Ground	Battery voltage
RH	B130			



PARKING LAMP CIRCUIT

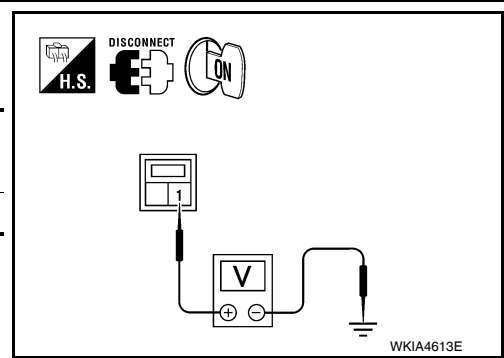
< COMPONENT DIAGNOSIS >

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?

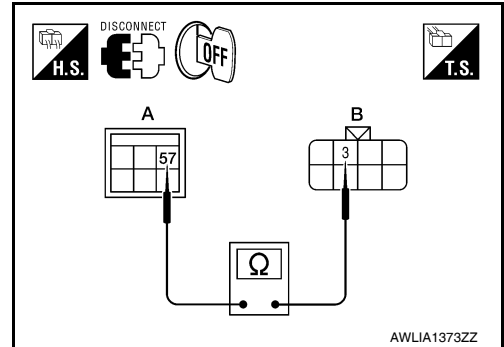
- YES >> GO TO 4.
NO >> GO TO 3.



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

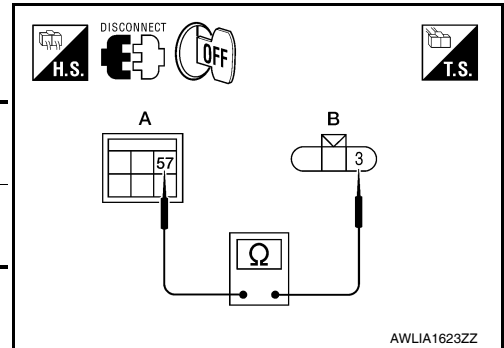
- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E124	E6	3	Yes
RH		E108		



- 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	B70	3	Yes
RH		B130		

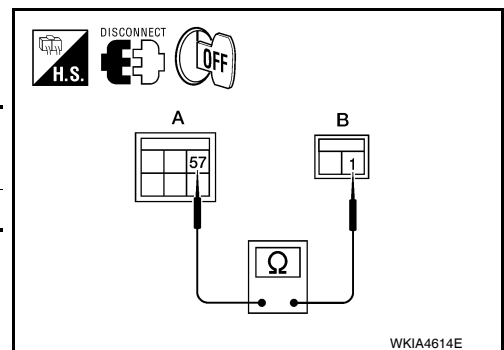


- Check continuity between the IPDM E/R harness connector (A) and license plate lamp connector (B).

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.



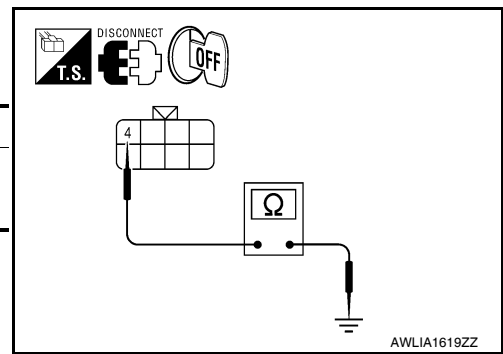
4. CHECK PARKING, LICENSE AND TAIL LAMP GROUND CIRCUITS

PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

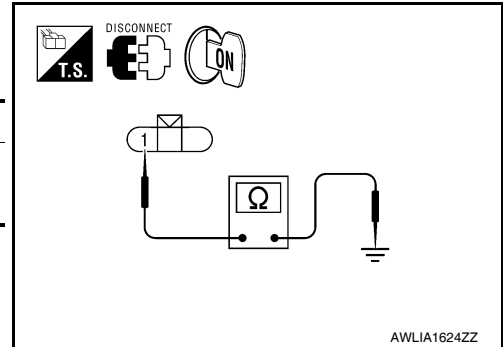
1. Check continuity between the front combination lamp harness connectors E6 and E108 terminal 4 and ground.

Connector		Terminal	—	Continuity
LH	E6	4	Ground	Yes
RH	E108			



2. Check continuity between the rear combination lamp harness connectors B70 and B130 terminal 1 and ground.

Connector		Terminal	—	Continuity
LH	B70	1	Ground	Yes
RH	B130			

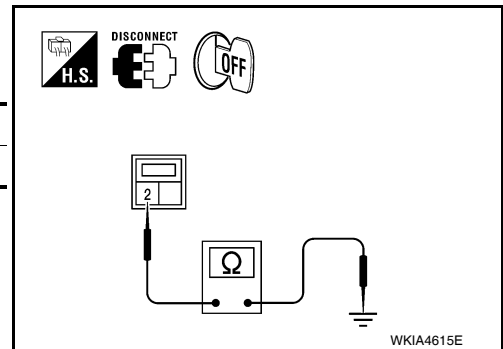


3. Check continuity between the license plate lamp harness connectors and ground.

Connector		Terminal	—	Continuity
D703		2	Ground	Yes

Does continuity exist?

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



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TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:000000005146654

The BCM monitors inputs from the combination switch (lighting and turn signal 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:000000005146655

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-44, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000005146656

Regarding Wiring Diagram information, refer to [EXL-77, "Wiring Diagram"](#).

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.

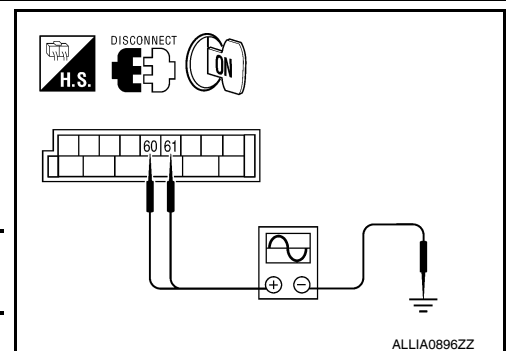
Is the bulb OK?

- 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.

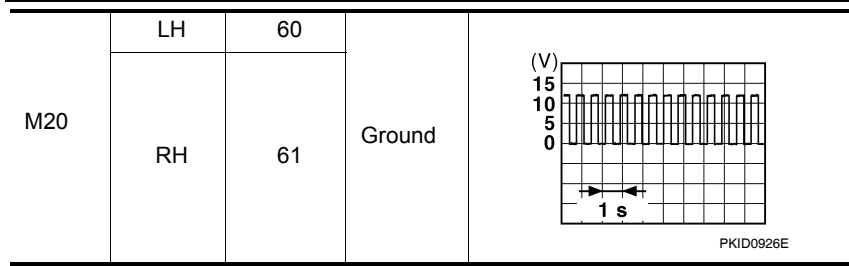
(+)		(-)	Voltage
Connector	Terminal		



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TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >



Is voltage reading as specified?

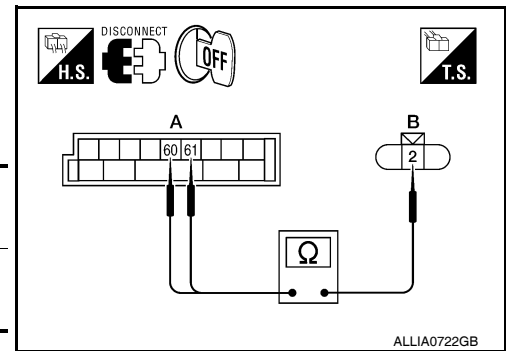
YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-59. "Removal and Installation"](#).

3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

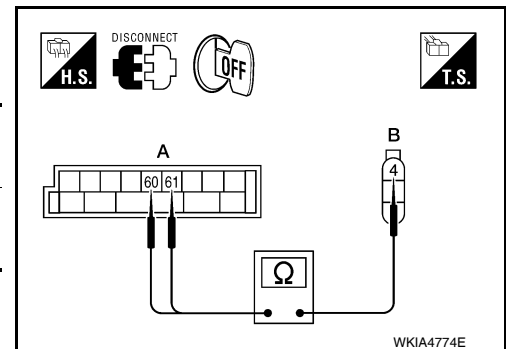
1. Turn the ignition switch OFF.
2. Disconnect BCM connector M20.
3. Check continuity between the BCM harness connector M20 and the front turn/fog lamps.

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



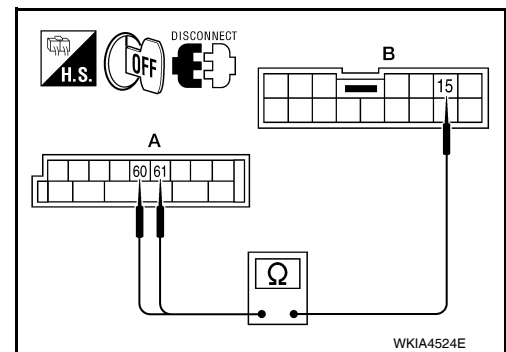
4. Check continuity between the BCM harness connector M20 and the rear combination lamp connectors.

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



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	Yes
Door mirror RH		61	D107	



Are continuity test results as specified?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

TURN SIGNAL LAMP CIRCUIT

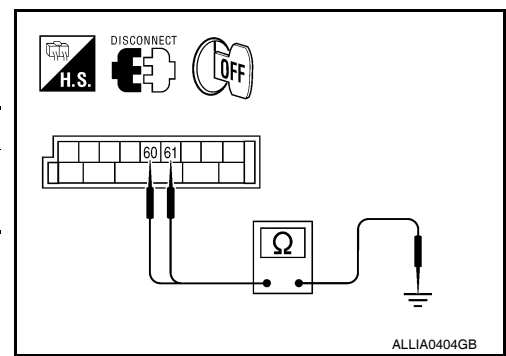
< COMPONENT DIAGNOSIS >

Check continuity between the BCM harness connector M20 and ground.

Connector		Terminal	—	Continuity
LH	M20	60	Ground	No
RH		61		

Does continuity exist?

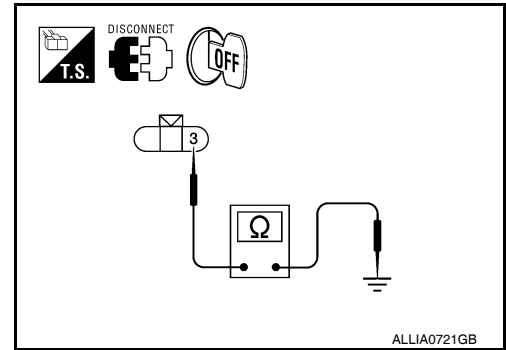
- YES >> Repair the harnesses or connectors.
 NO >> GO TO 5.



5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

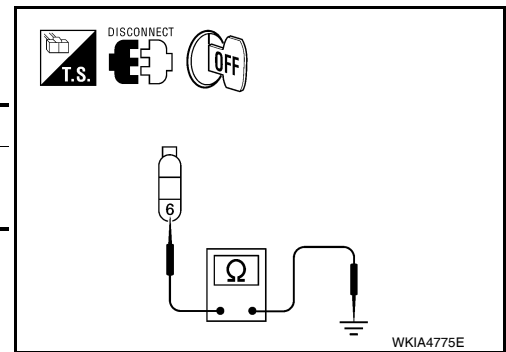
1. Check continuity between the front turn/fog lamp harness connectors and ground.

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



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

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

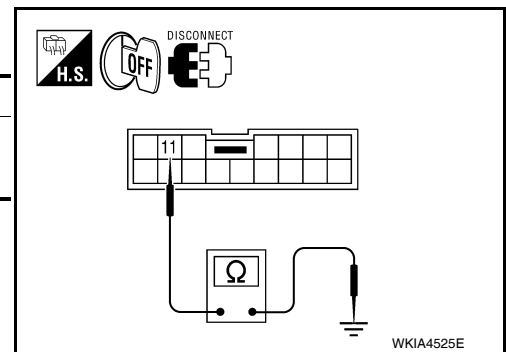


3. Check continuity between the door mirrors and ground.

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

< COMPONENT DIAGNOSIS >

OPTICAL SENSOR

Description

INFOID:000000005146657

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

Component Function Check

INFOID:000000005146658

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-47, "Diagnosis Procedure"](#).

Diagnosis Procedure

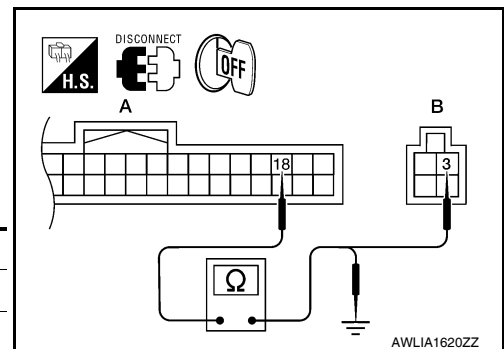
INFOID:000000005146659

Regarding Wiring Diagram information, refer to [EXL-62, "Wiring Diagram"](#).

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		Continuity
Connector	Terminal	Connector	Terminal	
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

OPTICAL SENSOR

< COMPONENT DIAGNOSIS >

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

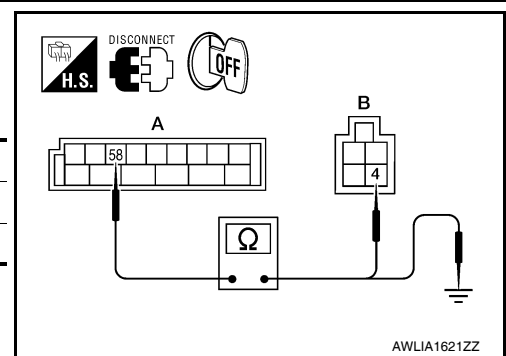
A		B		Continuity
Connector	Terminal	Connector	Terminal	
M20	58	M302	4	Yes

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-151, "Removal and Installation"](#).
 NO >> Repair harness or connector.



HEADLAMP AIMING SWITCH

< COMPONENT DIAGNOSIS >

HEADLAMP AIMING SWITCH

Description

INFOID:000000005146660

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 - Without Daytime Light System

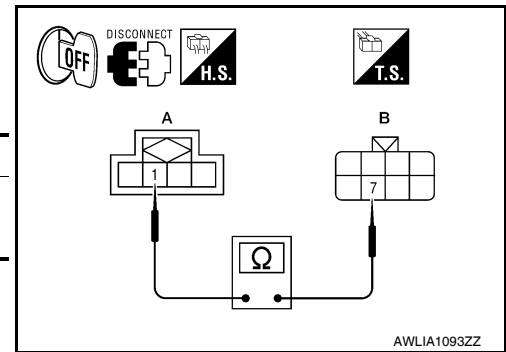
INFOID:000000005146661

Regarding Wiring Diagram information, refer to [EXL-69. "Wiring Diagram"](#).

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

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

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

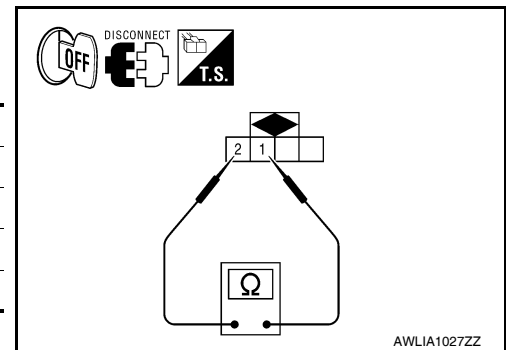
Are the continuity test results as specified?

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

2. CHECK HEADLAMP AIMING SWITCH

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

Component	Terminal	Switch Position	Resistance	
Headlamp aiming switch	1	2	0	604 Ω
			1	324 Ω
			2	191 Ω
			3	130 Ω



Are the resistance check results as specified?

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

3. CHECK HEADLAMP AIMING SWITCH GROUND CIRCUIT

HEADLAMP AIMING SWITCH

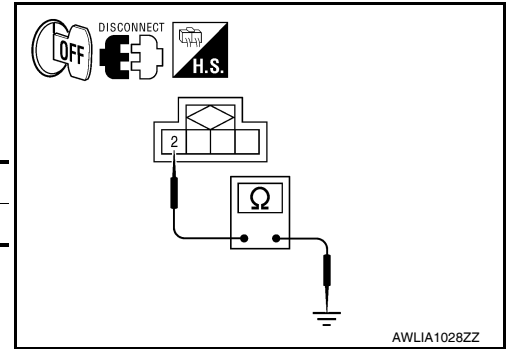
< COMPONENT DIAGNOSIS >

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.



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INFOID:000000005146662

Diagnosis Procedure - With Daytime Light System

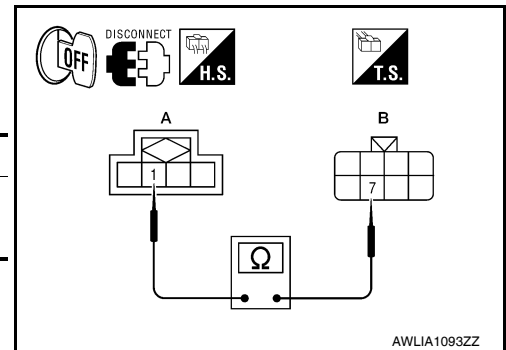
Regarding Wiring Diagram information, refer to [EXL-69. "Wiring Diagram"](#).

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

1. Turn ignition switch OFF.
2. Disconnect headlamp aiming switch connector M148 (A), headlamp aiming motor LH connector E6 and headlamp aiming motor RH connector E108 (B).
3. Check continuity between the headlamp aiming switch connector M148 terminal 1 (A) and headlamp aiming motor LH E6 and RH E108 terminal 7 (B).

Connector	Terminal	Connector	Terminal	Continuity
M148	1	E6	7	Yes
		E108		

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



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Connector	Terminal	—	Continuity
M148	1	Ground	No

Are the continuity test results as specified?

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

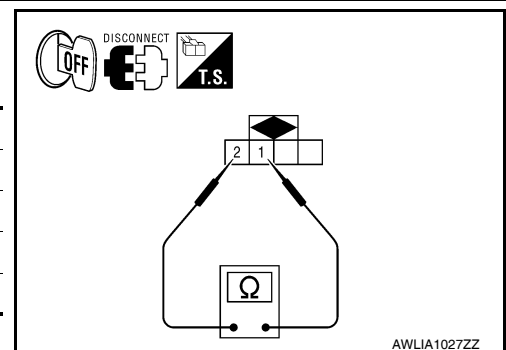
2. CHECK HEADLAMP AIMING SWITCH

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

Component	Terminal		Switch Position	Resistance
Headlamp aiming switch	1	2	0	604 Ω
			1	324 Ω
			2	191 Ω
			3	130 Ω

Are the resistance check results as specified?

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



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3. CHECK HEADLAMP AIMING SWITCH GROUND CIRCUIT

HEADLAMP AIMING SWITCH

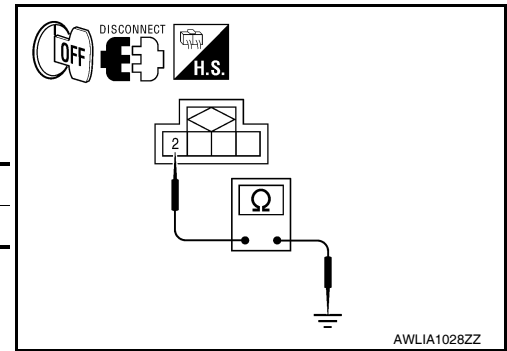
< COMPONENT DIAGNOSIS >

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.



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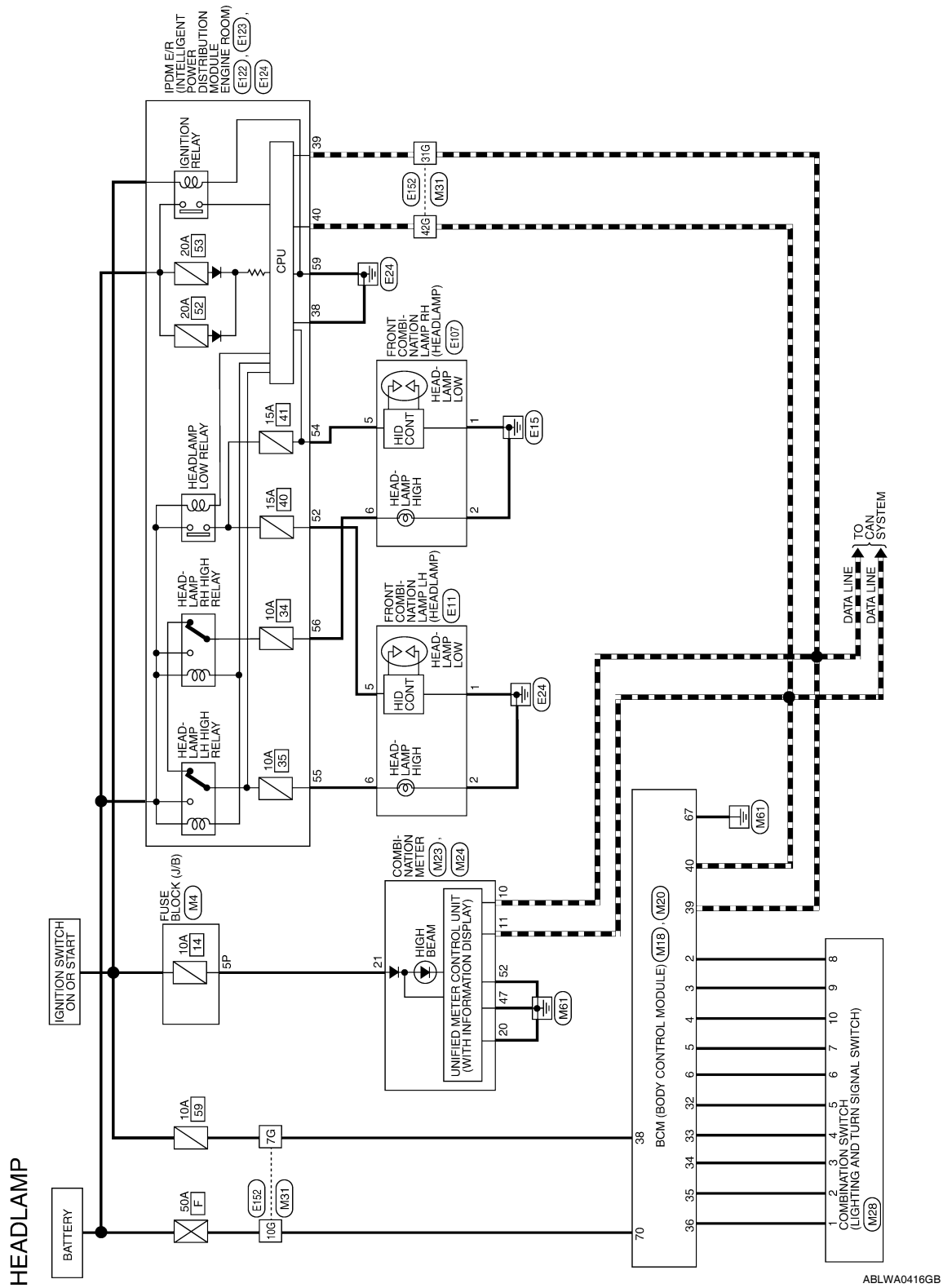
HEADLAMP

< COMPONENT DIAGNOSIS >

HEADLAMP

Wiring Diagram

INFOID:000000005146663



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HEADLAMP

< COMPONENT DIAGNOSIS >

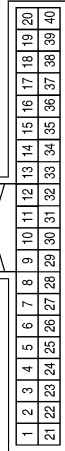
HEADLAMP CONNECTORS

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



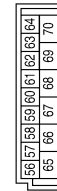
Terminal No.	Color of Wire	Signal Name
5P	O/L	-

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



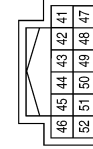
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



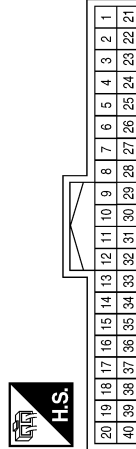
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BAT (F/L)

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



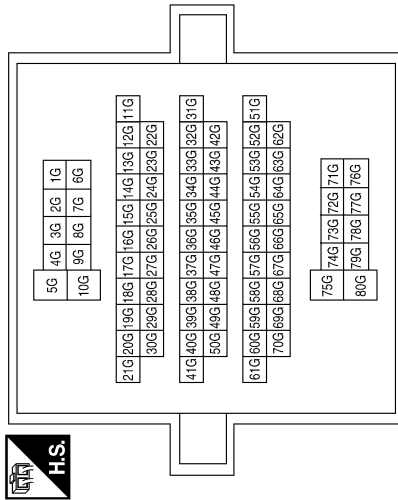
Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	GROUND
21	O/L	RUN/START

HEADLAMP

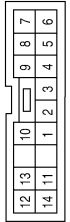
< COMPONENT DIAGNOSIS >

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

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

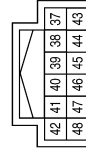


Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

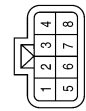


Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

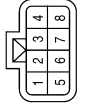
Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH (WITHOUT DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



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

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

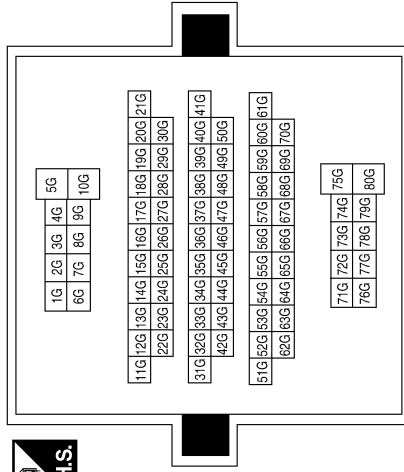
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
5	L	-
6	G	-

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HEADLAMP

< COMPONENT DIAGNOSIS >

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



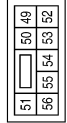
Terminal No.	Color of Wire	Signal Name
7G	L/W	-
10G	W/B	-
31G	L	-
42G	P	-

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 (POWER)

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



Terminal No.	Color of Wire	Signal Name
52	L	H/LAMP LO LH
54	R/Y	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L/W	H/LAMP HI RH

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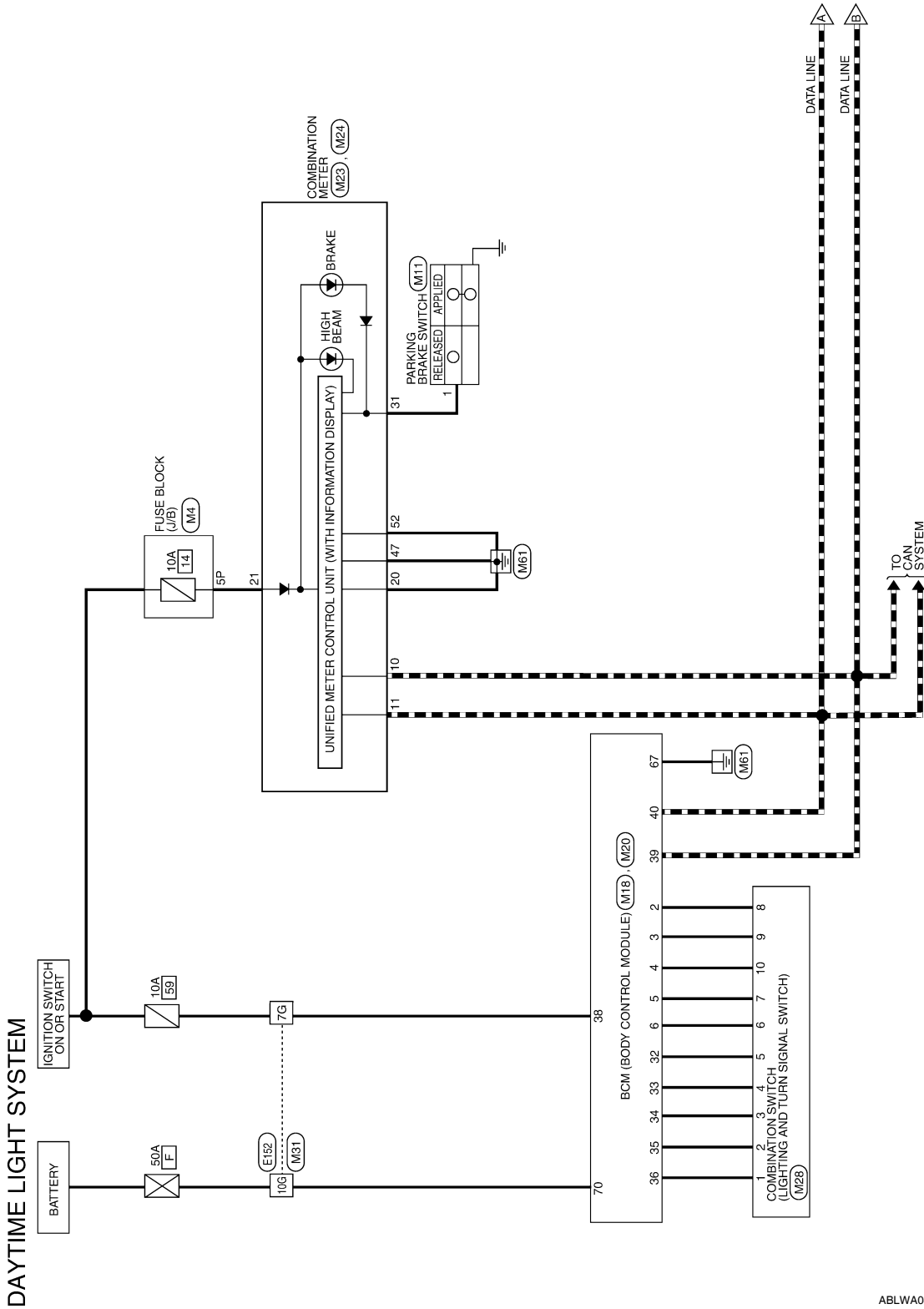
DAYTIME LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

DAYTIME LIGHT SYSTEM

Wiring Diagram

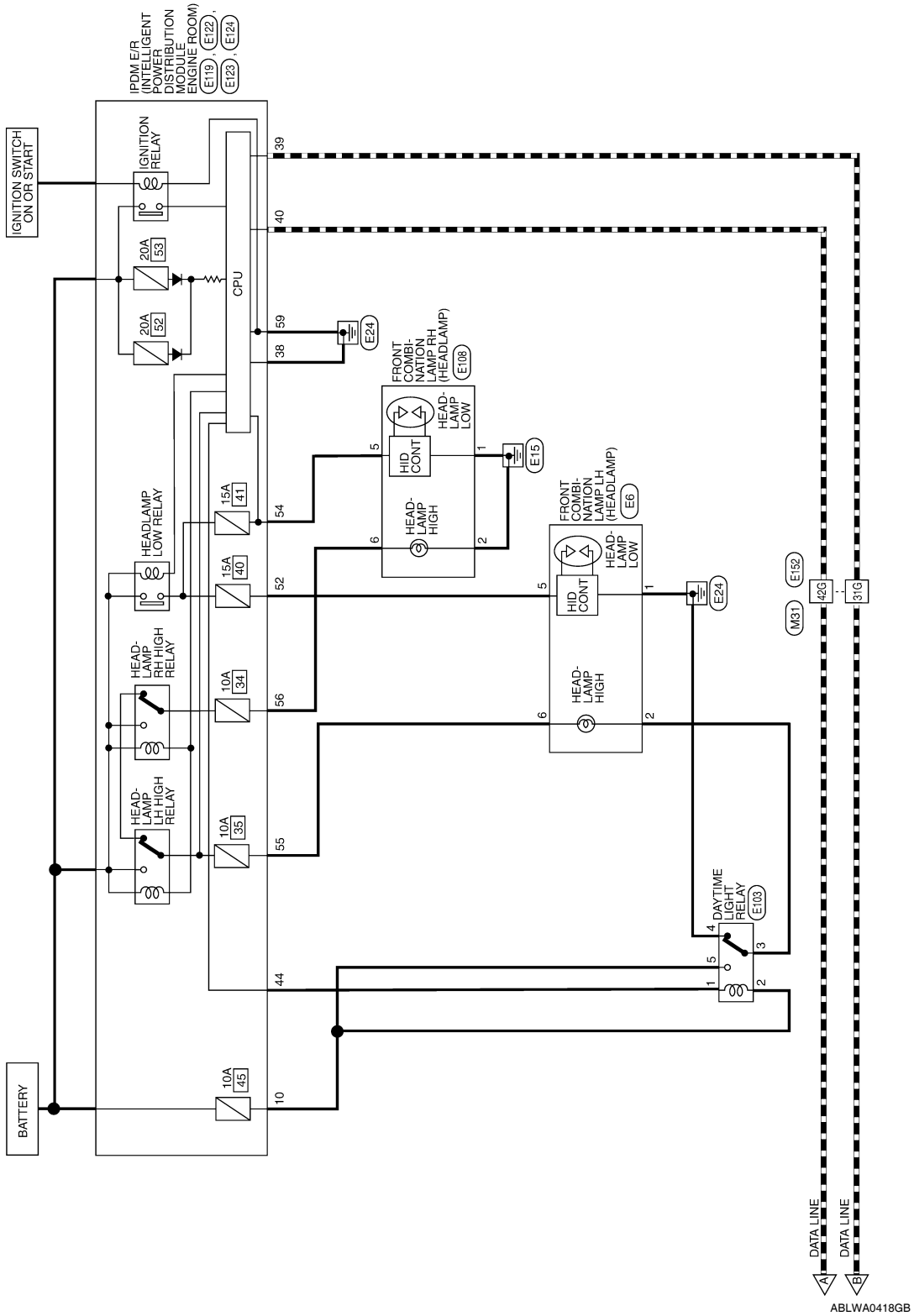
INFOID:000000005146664



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DAYTIME LIGHT SYSTEM

< COMPONENT DIAGNOSIS >



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DAYTIME LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

DAYTIME LIGHT SYSTEM CONNECTORS

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



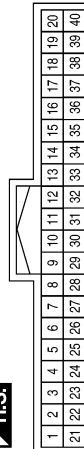
Terminal No.	5P	Color of Wire	O/L	Signal Name	-
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Connector No.	M11
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



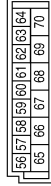
Terminal No.	1	Color of Wire	G	Signal Name	-
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Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



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

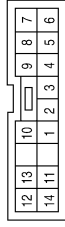


Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BAT (F/L)

DAYTIME LIGHT SYSTEM

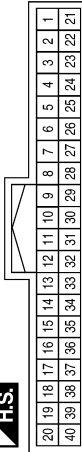
< COMPONENT DIAGNOSIS >

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



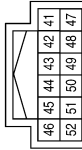
Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	GROUND
21	O/L	RUN/START
31	G	PARK BRAKE

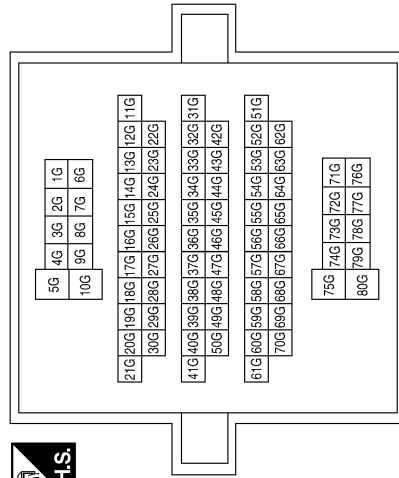
Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



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

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

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



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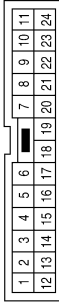
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DAYTIME LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

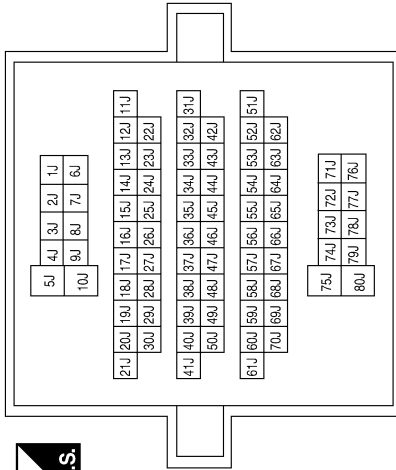
Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE



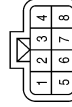
Terminal No.	Color of Wire	Signal Name
3	L	-
5	L	-
14	P	-
15	P	-

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

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



Connector No.	E108
Connector Name	FRONT COMBINATION LAMP RH (WITH DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



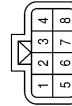
Terminal No.	Color of Wire	Signal Name
1	B	-
2	B	-
5	R/Y	-
6	Y	-

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



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

Connector No.	E6
Connector Name	FRONT COMBINATION LAMP LH (WITH DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



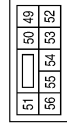
Terminal No.	Color of Wire	Signal Name
1	B	-
2	Y/G	-
5	L	-
6	G	-

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DAYTIME LIGHT SYSTEM

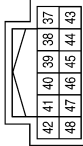
< COMPONENT DIAGNOSIS >

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



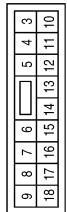
Terminal No.	Color of Wire	Signal Name
52	L	H/LAMP LO LH
54	R/Y	H/LAMP LO RH
55	G	H/LAMP HI LH
56	Y	H/LAMP HI RH

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



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

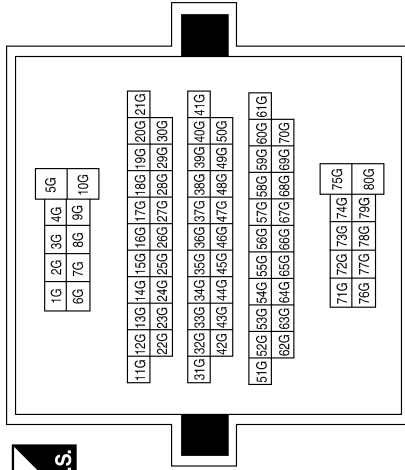
Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	G	DTRL RLY SUPPLY

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

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



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



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

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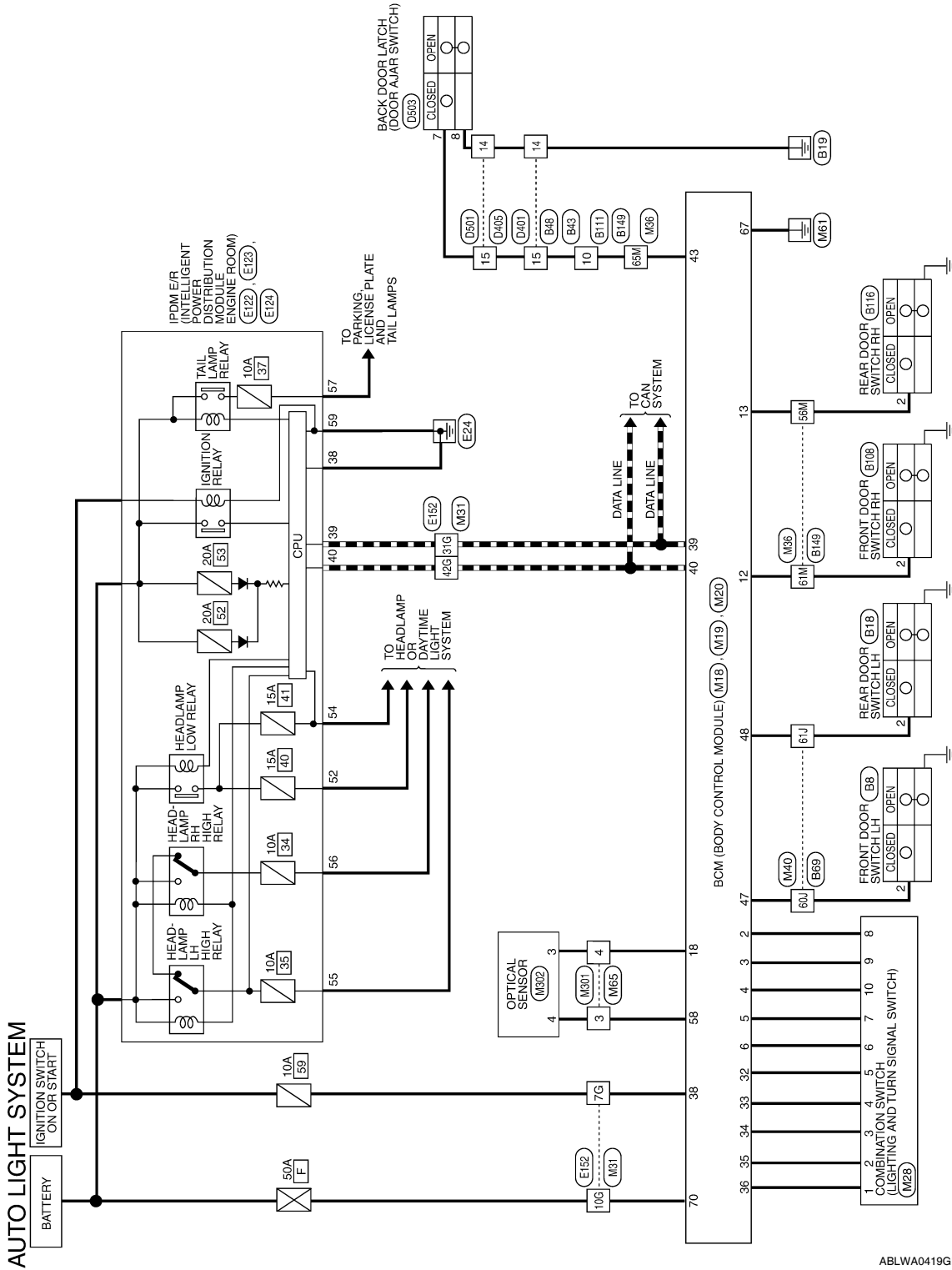
AUTO LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:000000005146665



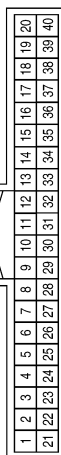
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AUTO LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

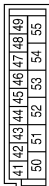
AUTO LIGHT SYSTEM CONNECTORS

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



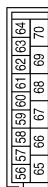
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RF)
18	P	KEYLESS AND AUTO LIGHT SENSOR GND
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



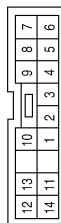
Terminal No.	Color of Wire	Signal Name
43	R/B	BACK DOOR SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (FL)

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



Terminal No.	Color of Wire	Signal Name
58	W/R	AUTO LIGHT SENSOR INPUT 2
67	B	GND (POWER)
70	W/B	BAT (F/L)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



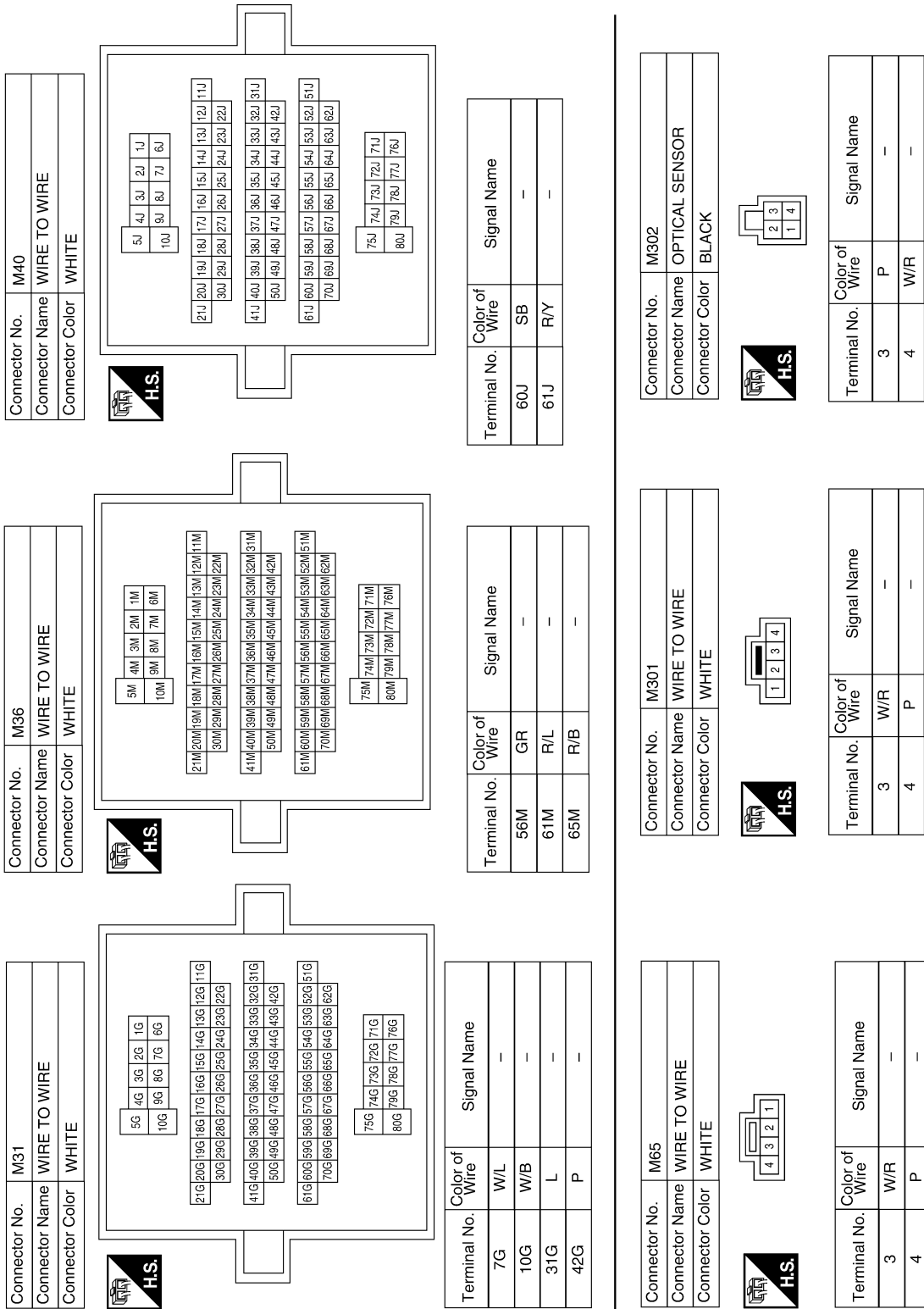
Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

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

AUTO LIGHT SYSTEM

< COMPONENT DIAGNOSIS >



AUTO LIGHT SYSTEM

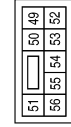
< COMPONENT DIAGNOSIS >

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



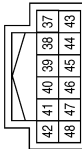
Terminal No.	Color of Wire	Signal Name
57	R/L	TAIL LAMP
59	B	GND (POWER)

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



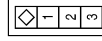
Terminal No.	Color of Wire	Signal Name
52	L	H/LAMP LO LH
54	R/Y	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L/W	H/LAMP HI RH

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



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

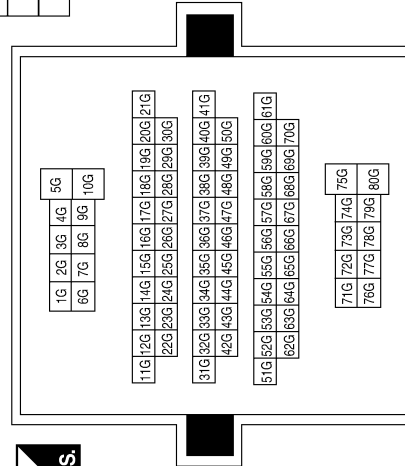
Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SB	-

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



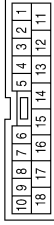
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AUTO LIGHT SYSTEM

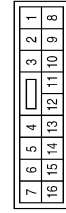
< COMPONENT DIAGNOSIS >

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



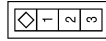
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



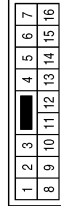
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



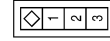
Terminal No.	Color of Wire	Signal Name
2	R/Y	-

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



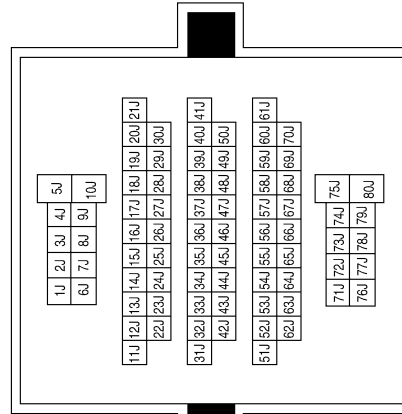
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



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

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



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

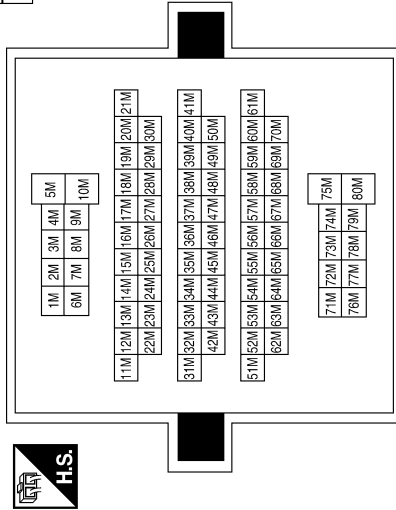
ABLIA1532GB

AUTO LIGHT SYSTEM

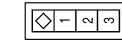
< COMPONENT DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
58M	GR	-
61M	R/L	-
65M	R/W	-

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

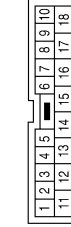


Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

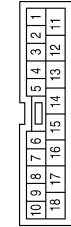


Terminal No.	Color of Wire	Signal Name
2	GR	-

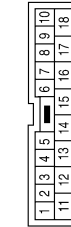
Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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



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



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

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

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

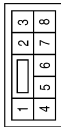
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AUTO LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

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



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

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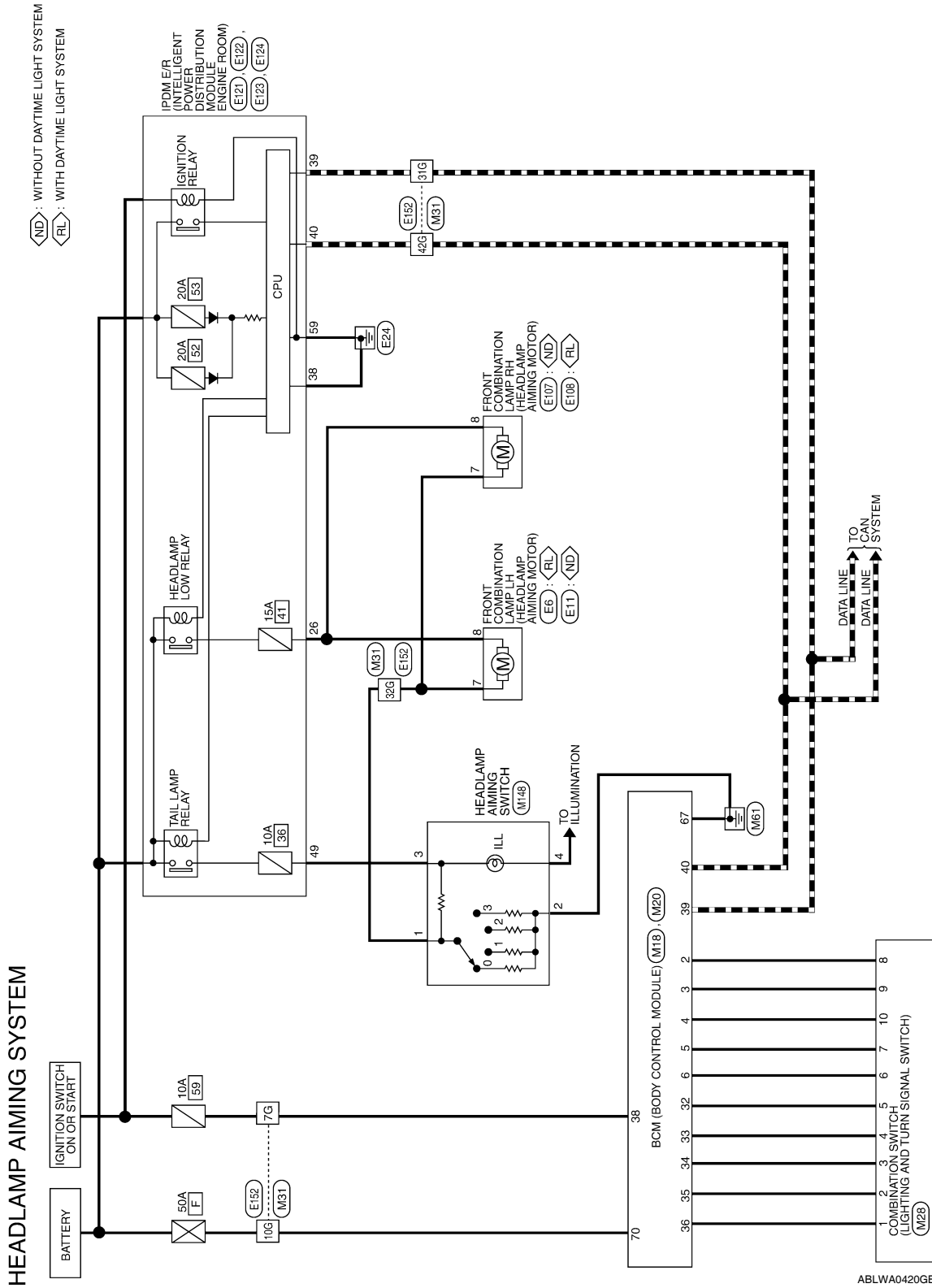
HEADLAMP AIMING SYSTEM (MANUAL)

< COMPONENT DIAGNOSIS >

HEADLAMP AIMING SYSTEM (MANUAL)

Wiring Diagram

INFOID:000000005146666



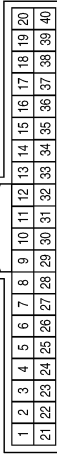
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HEADLAMP AIMING SYSTEM (MANUAL)

< COMPONENT DIAGNOSIS >

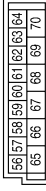
HEADLAMP AIMING SYSTEM CONNECTORS

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



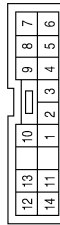
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



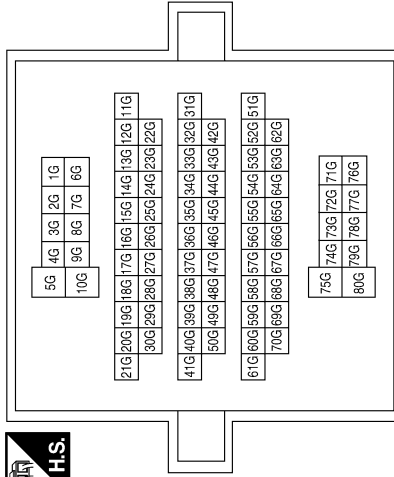
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BAT (F/L)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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

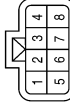


Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
31G	L	-
32G	B/R	-
42G	P	-

HEADLAMP AIMING SYSTEM (MANUAL)

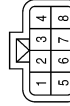
< COMPONENT DIAGNOSIS >

Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH (WITHOUT DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



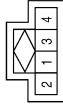
Terminal No.	Color of Wire	Signal Name
7	B/R	-
8	P/L	-

Connector No.	E6
Connector Name	FRONT COMBINATION LAMP LH (WITH DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



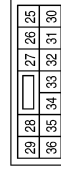
Terminal No.	Color of Wire	Signal Name
7	B/R	-
8	P/L	-

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



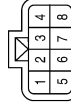
Terminal No.	Color of Wire	Signal Name
1	B/R	-
2	B	-
3	R/L	-
4	BR	-

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



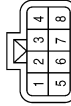
Terminal No.	Color of Wire	Signal Name
26	P/L	H/L LEVELIZER

Connector No.	E108
Connector Name	FRONT COMBINATION LAMP RH (WITH DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



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

Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



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

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HEADLAMP AIMING SYSTEM (MANUAL)

< COMPONENT DIAGNOSIS >

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



59	58	57
62	61	60

Terminal No.	59	Color of Wire	B	Signal Name	GND (POWER)
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Connector No.	E123
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN



51	50	49
56	55	54
53	52	

Terminal No.	49	Color of Wire	R/L	Signal Name	ILLUMINATION
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Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

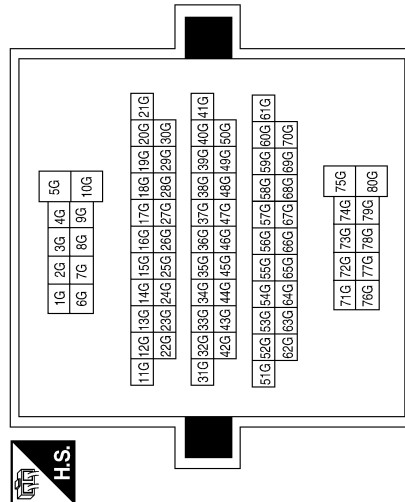


42	41	40	39	38	37
48	47	46	45	44	43

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

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

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



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FRONT FOG LAMP SYSTEM

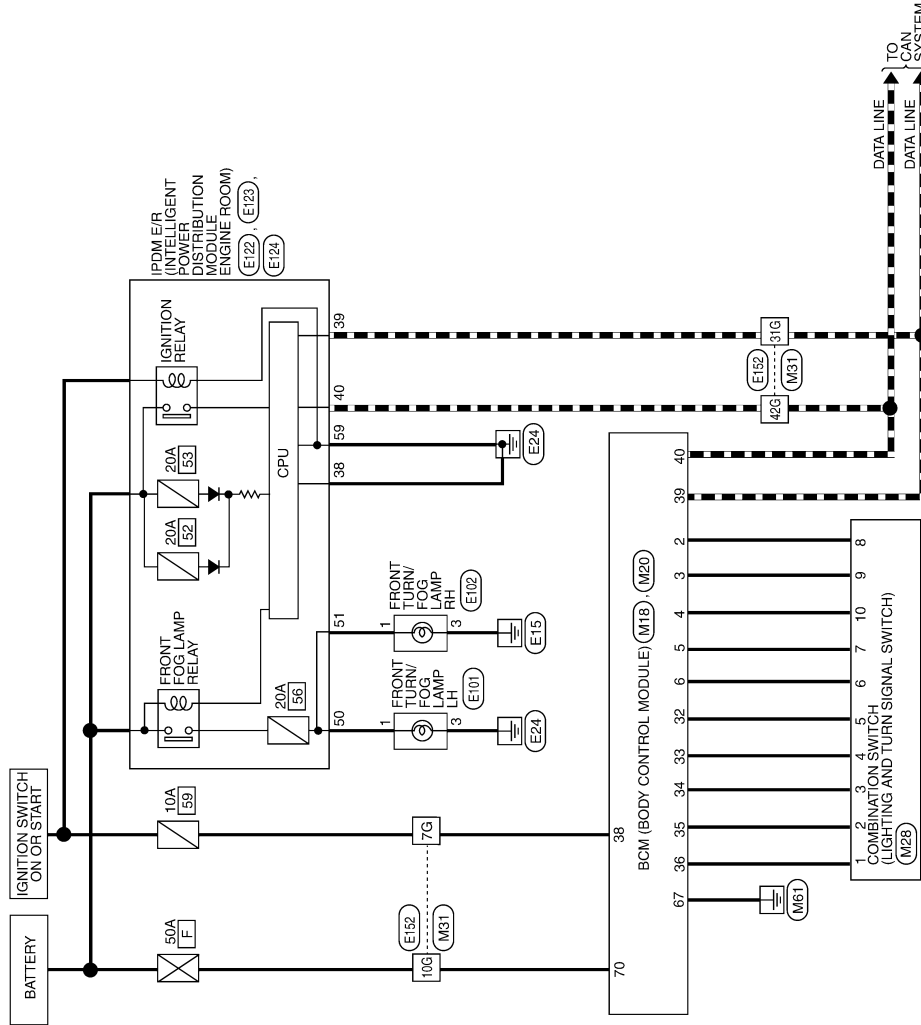
< COMPONENT DIAGNOSIS >

FRONT FOG LAMP SYSTEM

Wiring Diagram

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FRONT FOG LAMP



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FRONT FOG LAMP SYSTEM

< COMPONENT DIAGNOSIS >

FRONT FOG LAMP CONNECTORS

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



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

Terminal No.	Color of Wire	Signal Name
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



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	BAT (F/L)

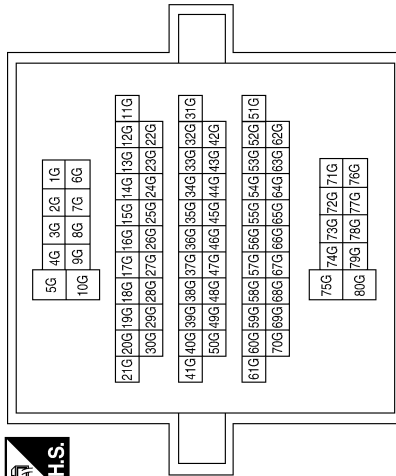
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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

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

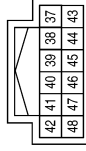


Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
31G	L	-
42G	P	-

FRONT FOG LAMP SYSTEM

< COMPONENT DIAGNOSIS >

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



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

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



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

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



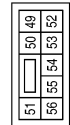
Terminal No.	Color of Wire	Signal Name
1	W/R	-
3	B	-

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



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

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



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

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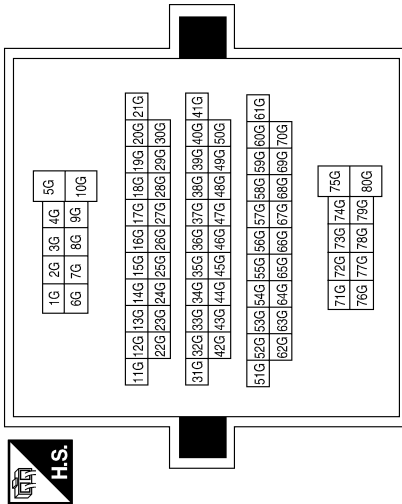
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FRONT FOG LAMP SYSTEM

< COMPONENT DIAGNOSIS >

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



ABLIA0094GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

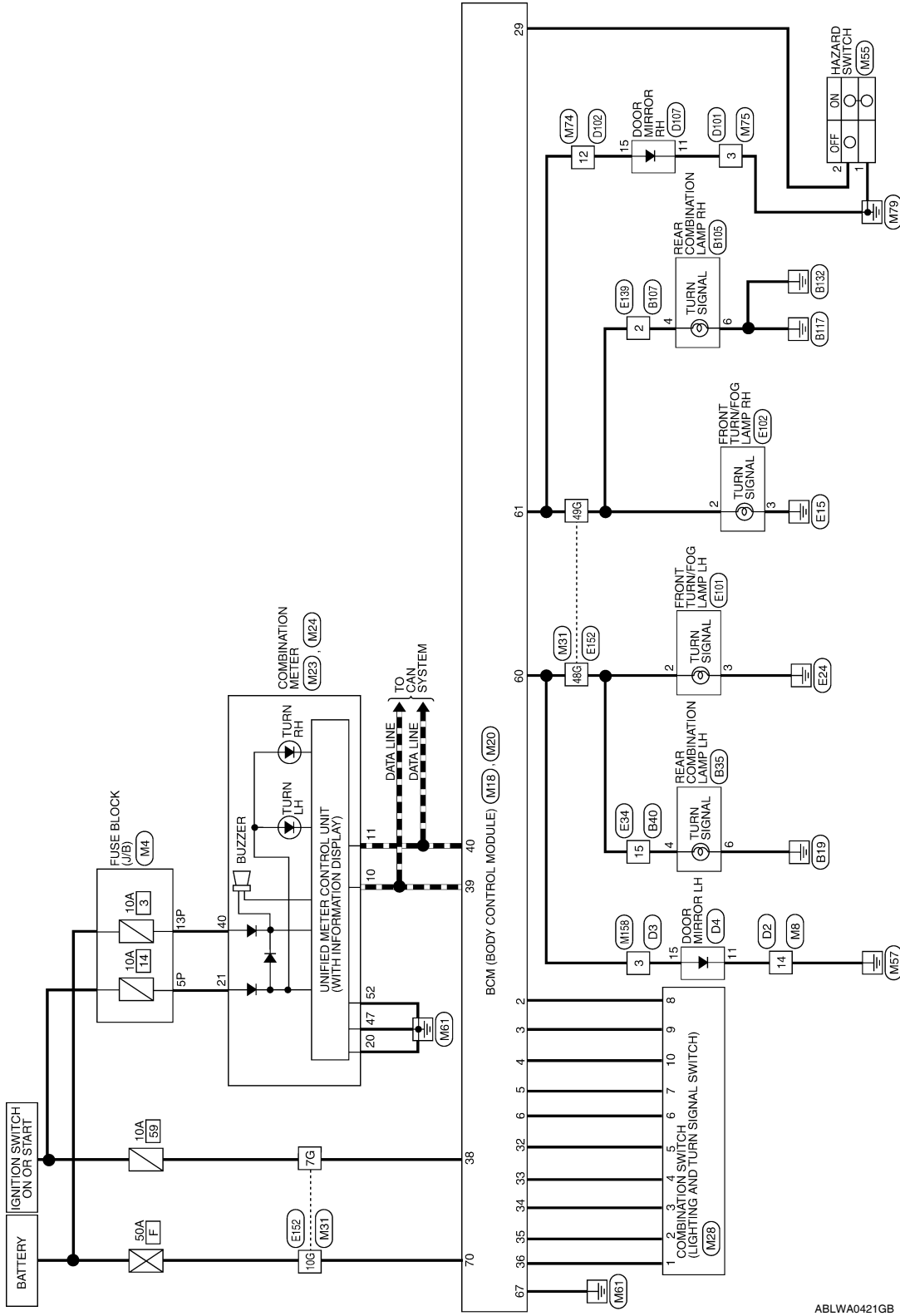
< COMPONENT DIAGNOSIS >

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

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TURN SIGNAL AND HAZARD WARNING LAMPS



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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< COMPONENT DIAGNOSIS >

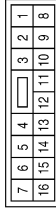
TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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



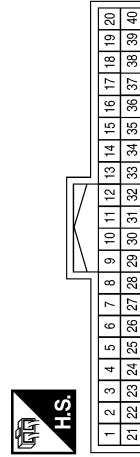
Terminal No.	Color of Wire	Signal Name
5P	O/L	-
13P	P	-

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



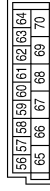
Terminal No.	Color of Wire	Signal Name
14	B	-

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
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

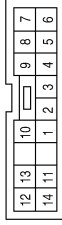


Terminal No.	Color of Wire	Signal Name
60	G/B	FLASHER OUTPUT (LEFT)
61	G/Y	FLASHER OUTPUT (RIGHT)
67	B	GND (POWER)
70	W/B	BAT (F/L)

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

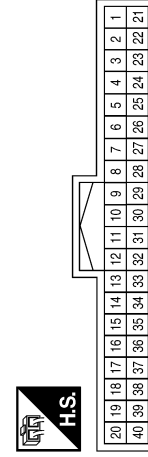
< COMPONENT DIAGNOSIS >

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



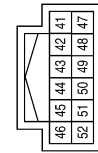
Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



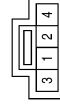
Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	GROUND
21	O/L	RUN/START
40	P	BATTERY

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



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

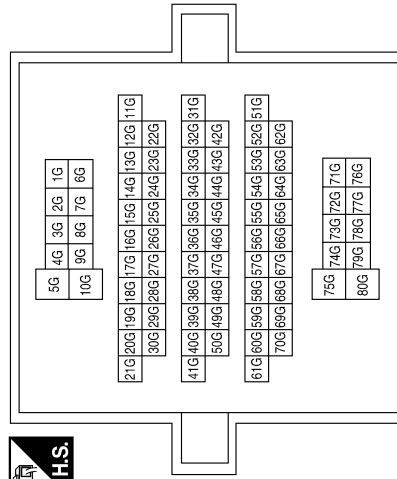
Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE



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

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

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



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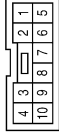
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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

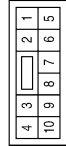
< COMPONENT DIAGNOSIS >

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



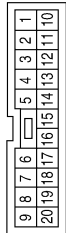
Terminal No.	3	Color of Wire	G/B	Signal Name	-
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Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN



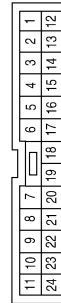
Terminal No.	12	Color of Wire	G/Y	Signal Name	-
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Connector No.	E101
Connector Name	FRONT TURN/FOG LAMP LH
Connector Color	BLACK



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

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



Terminal No.	15	Color of Wire	G/B	Signal Name	-
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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

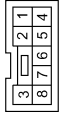
< COMPONENT DIAGNOSIS >

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



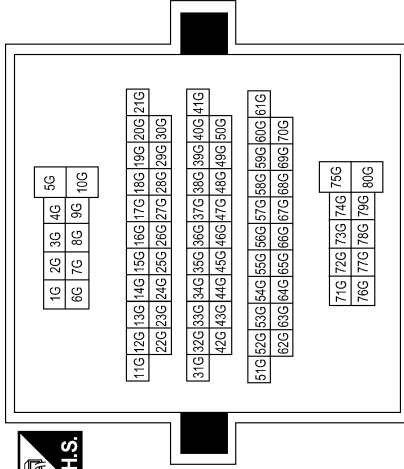
Terminal No.	Color of Wire	Signal Name
2	G/Y	-
3	B	-

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



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

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



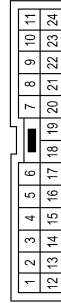
Terminal No.	Color of Wire	Signal Name
7G	L/W	-
10G	W/B	-
48G	G/B	-
49G	G/Y	-

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



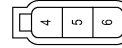
Terminal No.	Color of Wire	Signal Name
4	G/B	-
6	B	-

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



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

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



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

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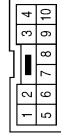
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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

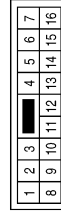
< COMPONENT DIAGNOSIS >

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



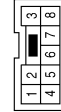
Terminal No.	3	Color of Wire	G/B	Signal Name	-
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Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



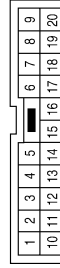
Terminal No.	14	Color of Wire	B	Signal Name	-
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Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE



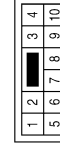
Terminal No.	2	Color of Wire	G/Y	Signal Name	-
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Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	12	Color of Wire	G/Y	Signal Name	-
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Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	D4
Connector Name	DOOR MIRROR LH
Connector Color	WHITE



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

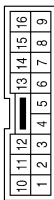
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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< COMPONENT DIAGNOSIS >

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



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

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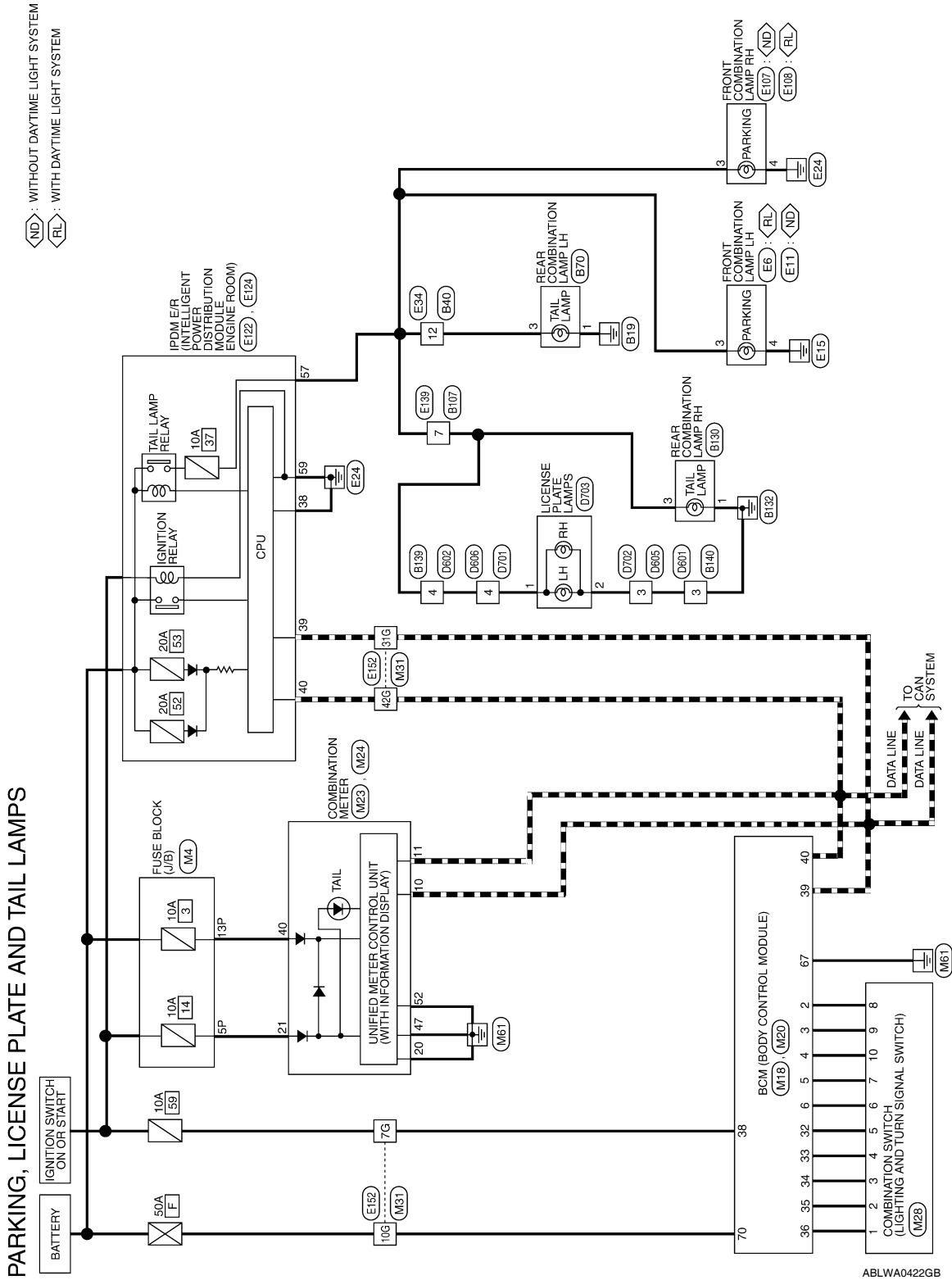
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< COMPONENT DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram

INFOID:000000005146669



PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< COMPONENT DIAGNOSIS >

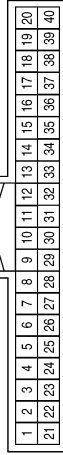
PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

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



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

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



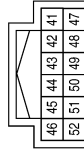
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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	BAT (F/L)

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	GROUND
21	O/L	RUN/START
40	P	BATTERY

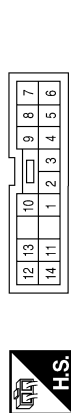
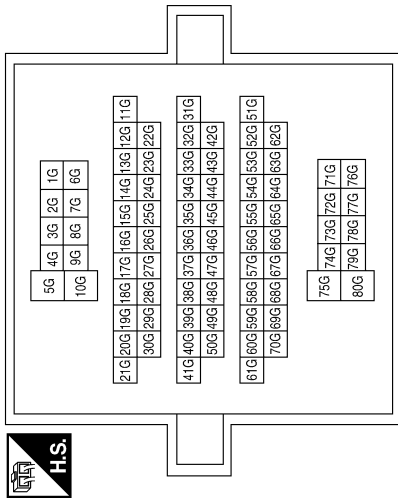
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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< COMPONENT DIAGNOSIS >

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

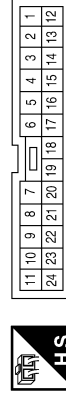
Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



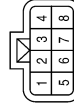
Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

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

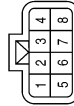


Connector No.	E11
Connector Name	FRONT COMBINATION LAMP LH (WITHOUT DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



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

Connector No.	E6
Connector Name	FRONT COMBINATION LAMP LH (WITH DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



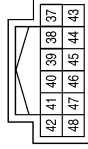
Terminal No.	Color of Wire	Signal Name
3	R/L	-
4	B	-

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

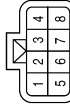
< COMPONENT DIAGNOSIS >

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



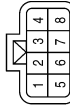
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L

Connector No.	E108
Connector Name	FRONT COMBINATION LAMP RH (WITH DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



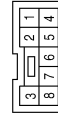
Terminal No.	Color of Wire	Signal Name
3	R/L	-
4	B	-

Connector No.	E107
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT DAYTIME LIGHT SYSTEM)
Connector Color	BLACK



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

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



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

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



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

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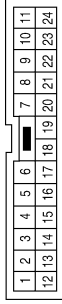
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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< COMPONENT DIAGNOSIS >

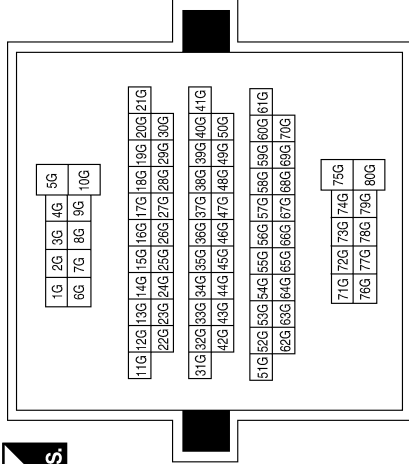
Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

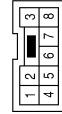


Connector No.	B130
Connector Name	REAR COMBINATION LAMP RH
Connector Color	GRAY



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

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



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

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



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

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

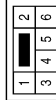
< COMPONENT DIAGNOSIS >

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



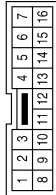
Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



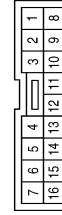
Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	4	Color of Wire	R/L	Signal Name	-
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Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



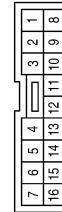
Terminal No.	4	Color of Wire	R/L	Signal Name	-
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Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	4	Color of Wire	R/L	Signal Name	-
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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

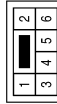
< COMPONENT DIAGNOSIS >

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



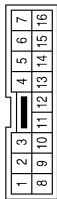
Terminal No.	Color of Wire	Signal Name
1	R/L	-
2	B	-

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	-

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STOP LAMP

< COMPONENT DIAGNOSIS >

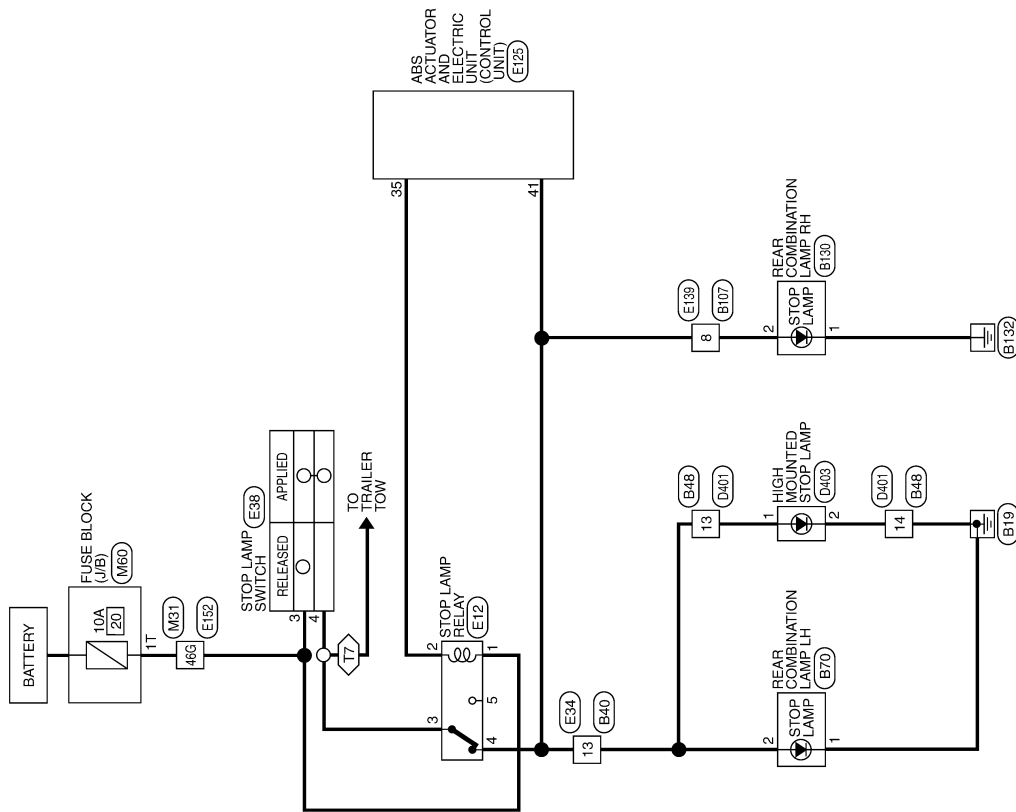
STOP LAMP

Wiring Diagram

INFOID:000000005146670

TRAILER TOW 7 PIN

STOP LAMP



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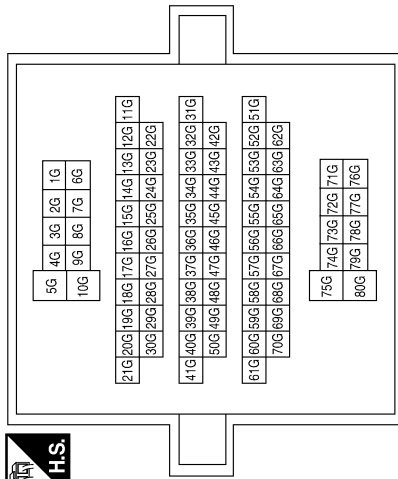
ABLWA0447GB

STOP LAMP

< COMPONENT DIAGNOSIS >

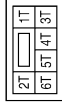
STOP LAMP CONNECTORS

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



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

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



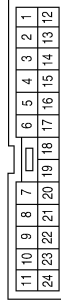
Terminal No.	Color of Wire	Signal Name
1T	R/Y	-

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



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



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

STOP LAMP

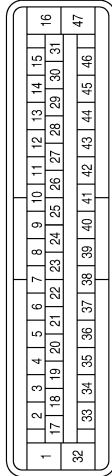
< COMPONENT DIAGNOSIS >

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



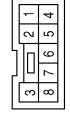
Terminal No.	Color of Wire	Signal Name
3	R/Y	-
4	R/G	-

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



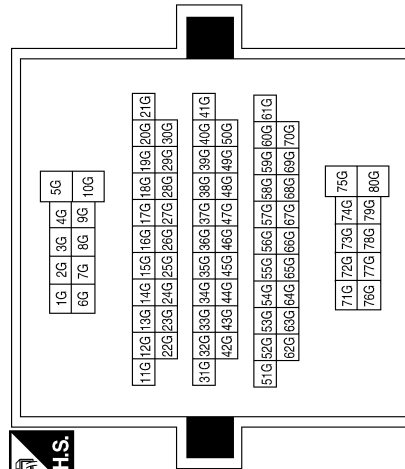
Terminal No.	Color of Wire	Signal Name
35	L/W	BRL OUT
41	R/B	BLS

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



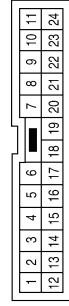
Terminal No.	Color of Wire	Signal Name
8	R/B	-

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



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

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



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

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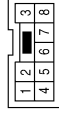
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STOP LAMP

< COMPONENT DIAGNOSIS >

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



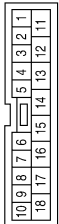
Terminal No.	8	Color of Wire	R/B	Signal Name	-
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Connector No.	B70
Connector Name	REAR COMBINATION LAMP LH
Connector Color	GRAY



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

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



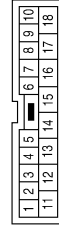
Terminal No.	13	Color of Wire	R/B	Signal Name	-
14	B	-	-		

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



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

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



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

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



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

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BACK-UP LAMP

< COMPONENT DIAGNOSIS >

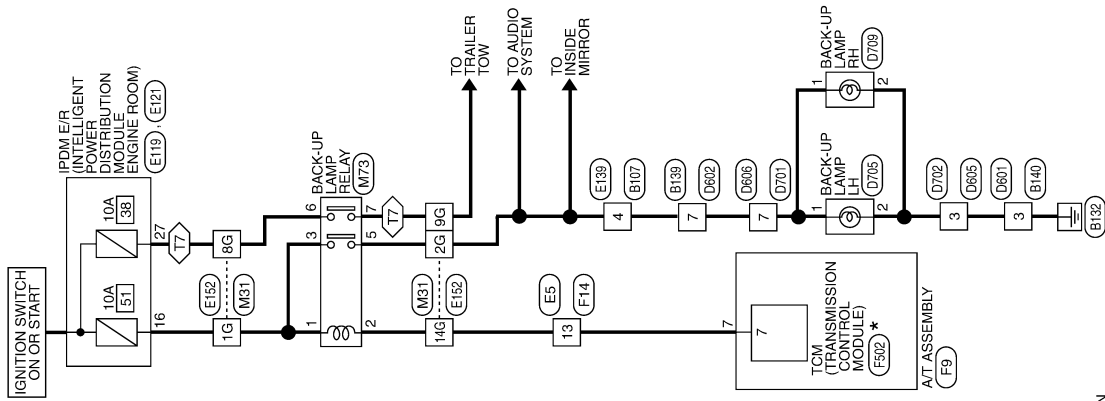
BACK-UP LAMP

Wiring Diagram

INFOID:000000005146671

T7 : TRAILER TOW 7 PIN

BACK-UP LAMP



*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF PG SECTION.

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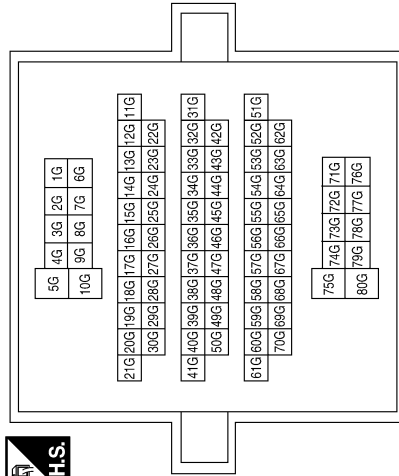
EXL

BACK-UP LAMP

< COMPONENT DIAGNOSIS >

BACK-UP LAMP CONNECTORS

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



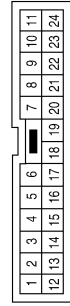
Terminal No.	Color of Wire	Signal Name
1G	G	-
2G	G/W	-
3G	W/B	-
4G	Y/R	-
5G	R	-

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



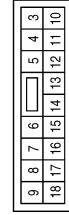
Terminal No.	Color of Wire	Signal Name
1	G	-
2	R	-
3	G	-
5	G/W	-
6	W/B	-
7	Y/R	-

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



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

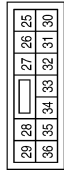


Terminal No.	Color of Wire	Signal Name
16	G	REVERSE LAMP

BACK-UP LAMP

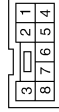
< COMPONENT DIAGNOSIS >

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



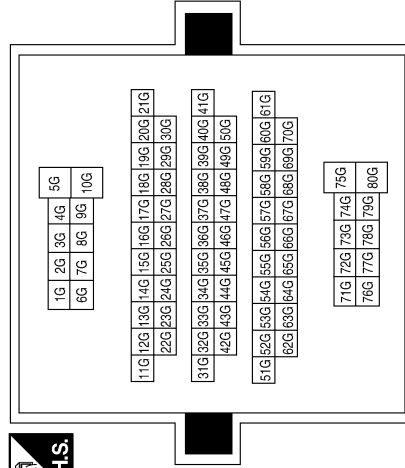
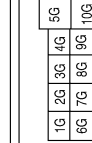
Terminal No.	27	W/B	T TOW REV LAMP
Color of Wire	W/B		
Signal Name			

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



Terminal No.	4	G/W	-
Color of Wire	G/W		
Signal Name			

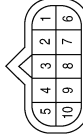
Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

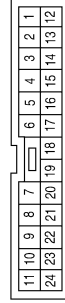
ABLIA1453GB

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



Terminal No.	7	R	-
Color of Wire	R		
Signal Name			

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



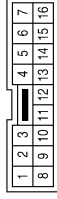
Terminal No.	13	R	-
Color of Wire	R		
Signal Name			

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BACK-UP LAMP

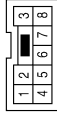
< COMPONENT DIAGNOSIS >

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



Terminal No.	7	Color of Wire	G/W	Signal Name	-
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Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE



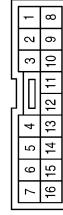
Terminal No.	4	Color of Wire	G/W	Signal Name	-
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Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY



Terminal No.	7	Color of Wire	R	Signal Name	REV LAMP RLY
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Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



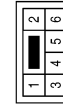
Terminal No.	7	Color of Wire	G/W	Signal Name	-
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Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



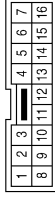
Terminal No.	3	Color of Wire	B	Signal Name	-
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BACK-UP LAMP

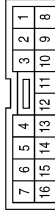
< COMPONENT DIAGNOSIS >

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



Terminal No.	7	Color of Wire	G/W	Signal Name	-
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Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	7	Color of Wire	G/W	Signal Name	-
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Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	3	Color of Wire	B	Signal Name	-
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Connector No.	D709
Connector Name	BACK-UP LAMP RH
Connector Color	GRAY



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

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



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

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



Terminal No.	3	Color of Wire	B	Signal Name	-
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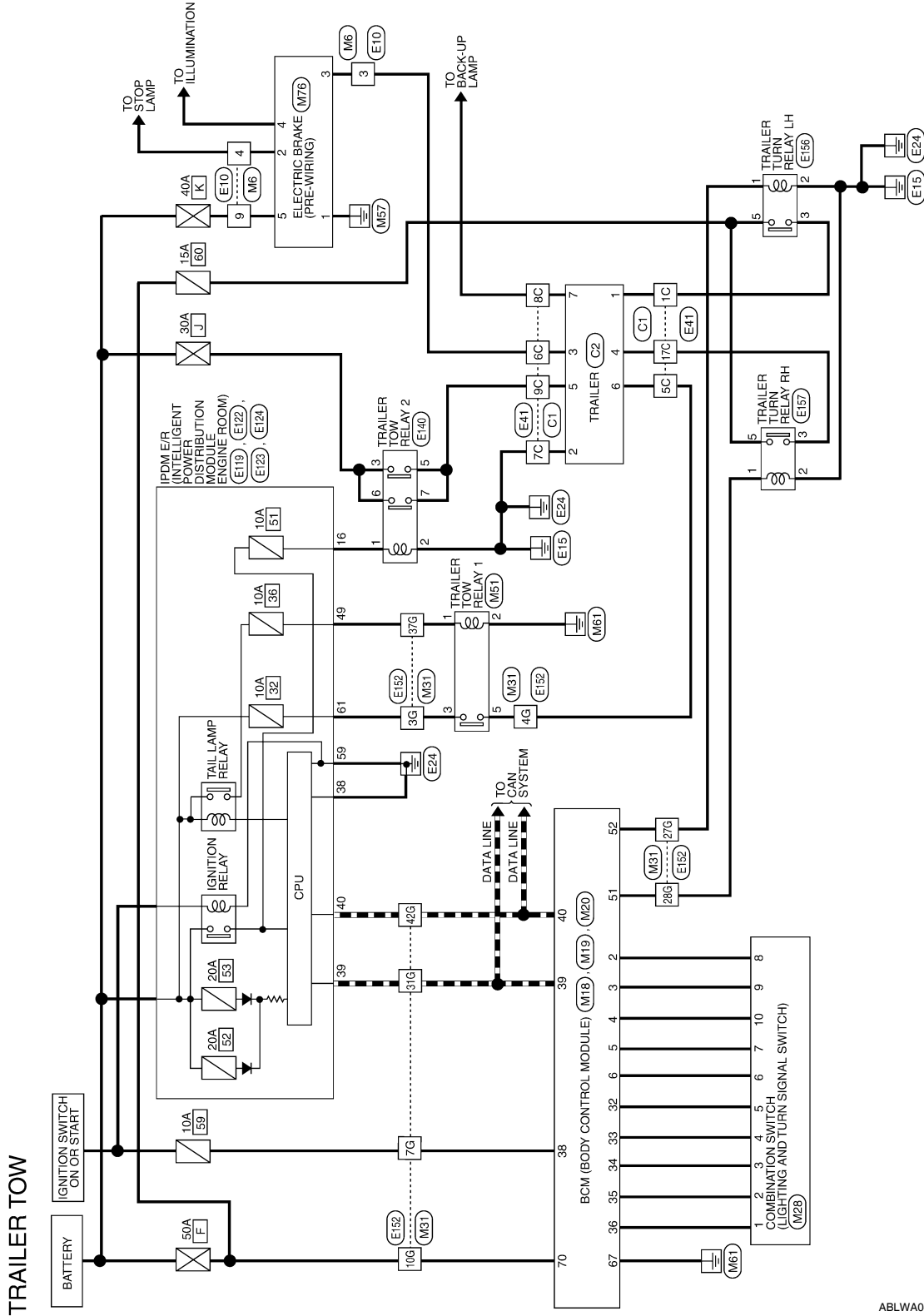
TRAILER TOW

< COMPONENT DIAGNOSIS >

TRAILER TOW

Wiring Diagram

INFOID:000000005146672



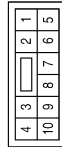
ABLWA0449GB

TRAILER TOW

< COMPONENT DIAGNOSIS >

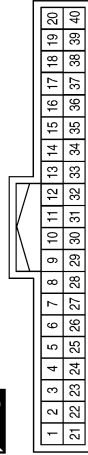
TRAILER TOW CONNECTORS

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



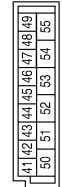
Terminal No.	Color of Wire	Signal Name
3	BR/W	-
4	R/G	-
9	R	-

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



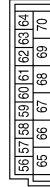
Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



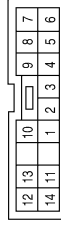
Terminal No.	Color of Wire	Signal Name
51	G/Y	TRAILER FLASHER OUTPUT (RIGHT)
52	G/B	TRAILER FLASHER OUTPUT (LEFT)

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	BAT (FL)

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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TRAILER TOW

< COMPONENT DIAGNOSIS >

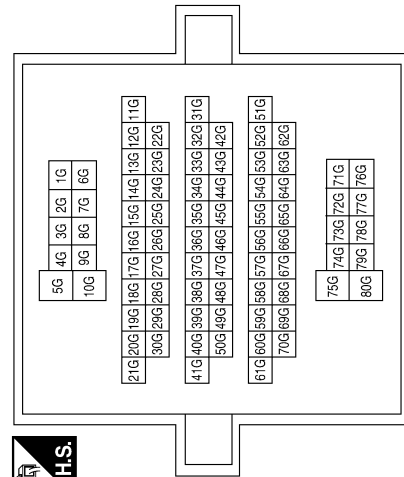
Connector No.	M51
Connector Name	TRAILER TOW RELAY 1
Connector Color	BLUE



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

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

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



Connector No.	E10
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.	M76
Connector Name	ELECTRIC BRAKE (PRE-WIRING)
Connector Color	WHITE



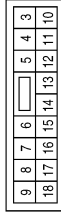
Terminal No.	Color of Wire	Signal Name
1	B	GND
2	R/G	STOP
3	BR/W	-
4	R/L	ILL (TAIL)
5	R	B+

ABLIA1461GB

TRAILER TOW

< COMPONENT DIAGNOSIS >

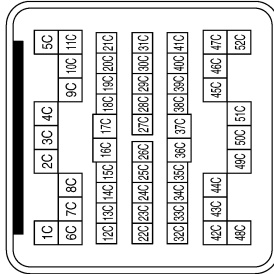
Connector No.	E119
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	16	Color of Wire	G	Signal Name	REVERSE LAMP
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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.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY

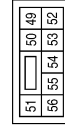


Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



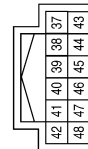
Terminal No.	59	Color of Wire	B	Signal Name	GND (POWER)
	61	Color of Wire	BR	Signal Name	TRAILER RLY SUPPLY

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



Terminal No.	49	Color of Wire	R/L	Signal Name	ILLUMINATION
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Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



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

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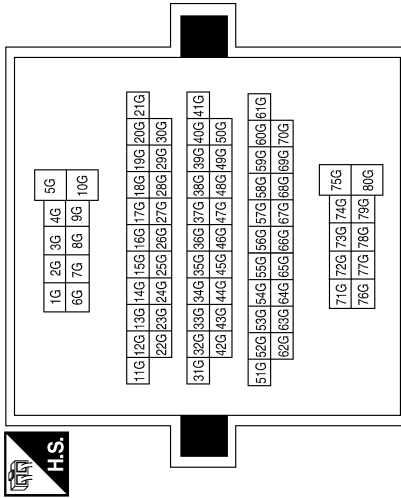
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TRAILER TOW

< COMPONENT DIAGNOSIS >

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	-

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



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



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

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



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



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

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

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TRAILER TOW

< COMPONENT DIAGNOSIS >

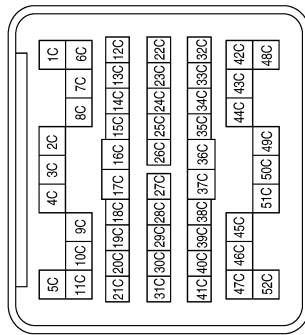
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Connector No.	C2
Connector Name	TRAILER
Connector Color	BLACK



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/R	-

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



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	-

ABLIA1455GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000005369890

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
	Outside of the room is bright	ON
AUTO LIGHT SW	Lighting switch OFF	OFF
	Lighting switch AUTO	ON
BACK DOOR SW	Back door closed	OFF
	Back door opened	ON
CARGO LAMP SW	Cargo lamp switch OFF	OFF
	Cargo lamp switch ON	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the LOCK side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the UNLOCK side	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
LIGHT SW 1ST	Lighting switch OFF	OFF	A
	Lighting switch 1st	ON	
HEAD LAMP SW1	Headlamp switch OFF	OFF	B
	Headlamp switch 1st	ON	
HEAD LAMP SW2	Headlamp switch OFF	OFF	C
	Headlamp switch 1st	ON	
HI BEAM SW	High beam switch OFF	OFF	D
	High beam switch HI	ON	
IGN ON SW	Ignition switch OFF or ACC	OFF	E
	Ignition switch ON	ON	
IGN SW CAN	Ignition switch OFF or ACC	OFF	F
	Ignition switch ON	ON	
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7	F
I-KEY LOCK	LOCK button of Intelligent Key is not pressed	OFF	G
	LOCK button of Intelligent Key is pressed	ON	
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF	H
	UNLOCK button of Intelligent Key is pressed	ON	
KEY CYL LK-SW	Door key cylinder LOCK position	ON	I
	Door key cylinder other than LOCK position	OF	
KEY CYL UN-SW	Door key cylinder UNLOCK position	ON	J
	Door key cylinder other than UNLOCK position	ON	
KEY ON SW	Mechanical key is removed from key cylinder	OFF	K
	Mechanical key is inserted to key cylinder	ON	
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	OFF	EXL
	Ignition switch ON	ON	
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5V	M
	Dark outside of the vehicle	Close to 0V	
PASSING SW	Other than lighting switch PASS	OFF	N
	Lighting switch PASS	ON	
PUSH SW	Return to ignition switch to LOCK position	OFF	O
	Press ignition switch	ON	
REAR DEF SW	Rear window defogger switch OFF	OFF	P
	Rear window defogger switch ON	ON	
RR WASHER SW	Rear washer switch OFF	OFF	O
	Rear washer switch ON	ON	
RR WIPER INT	Rear wiper switch OFF	OFF	P
	Rear wiper switch INT	ON	
RR WIPER ON	Rear wiper switch OFF	OFF	P
	Rear wiper switch ON	ON	
RR WIPER STOP	Rear wiper stop position	OFF	P
	Other than rear wiper stop position	ON	
RR WIPER STP2	Rear wiper stop position	OFF	P
	Other than rear wiper stop position	ON	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

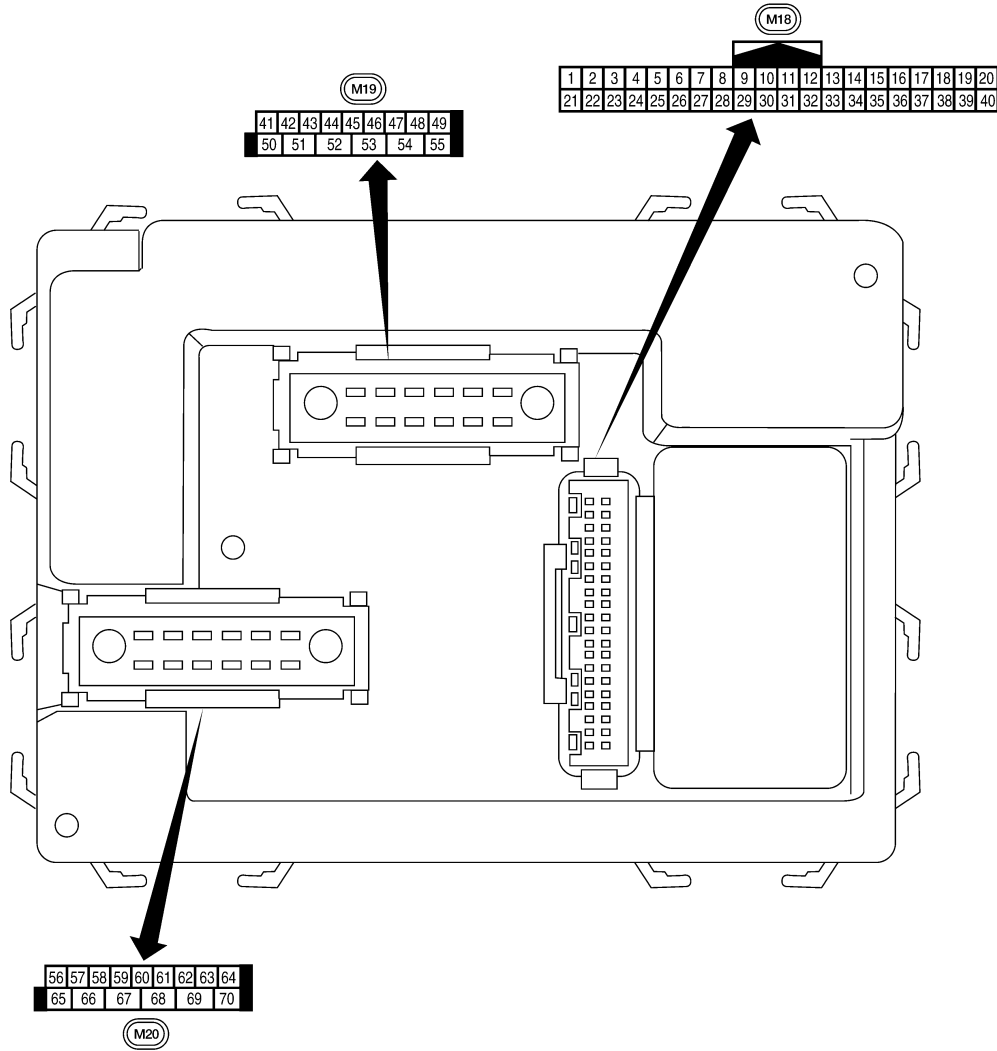
Monitor Item	Condition	Value/Status
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	ON
TURN SIGNAL L	Turn signal switch OFF	OFF
	Turn signal switch LH	ON
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000005369891



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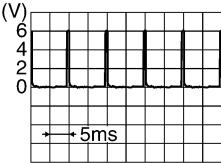

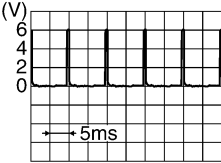
Physical Values

LIA2443E

INFOID:000000005369892

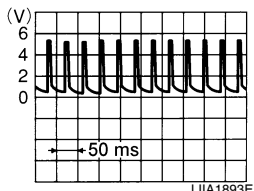
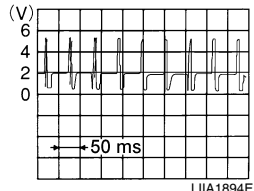
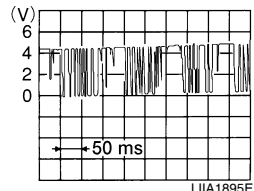
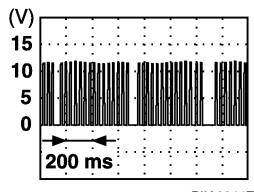
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

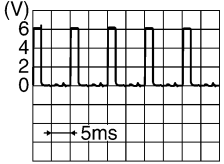
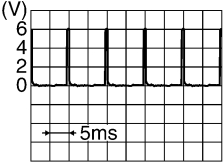
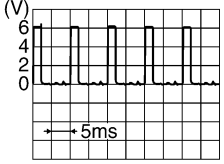
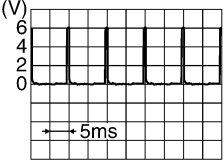
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 <p style="text-align: right; font-size: small;">LIIA1893E</p>
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 <p style="text-align: right; font-size: small;">LIIA1894E</p>
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 <p style="text-align: right; font-size: small;">LIIA1895E</p>
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	W/V	BUS	—	—	Ignition switch ON or power window timer operates	 <p style="text-align: right; font-size: small;">PIIA2344E</p>
23	G/O	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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

BCM (BODY CONTROL MODULE)

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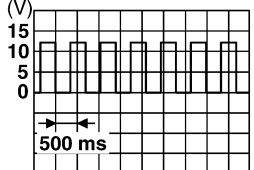
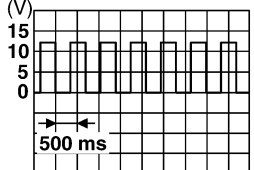
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery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

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BCM (BODY CONTROL MODULE)

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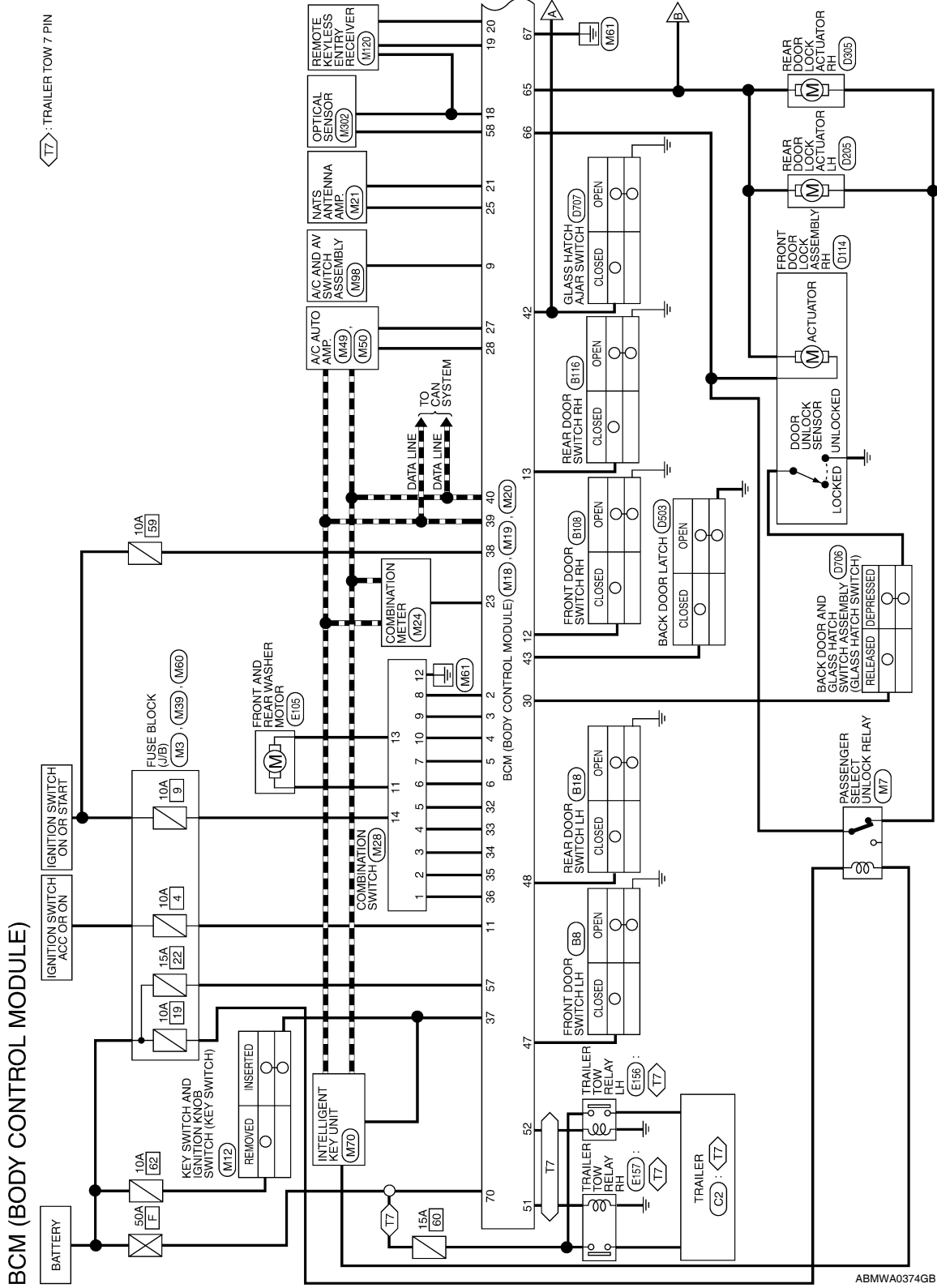
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch ON (open)	0V
					OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram

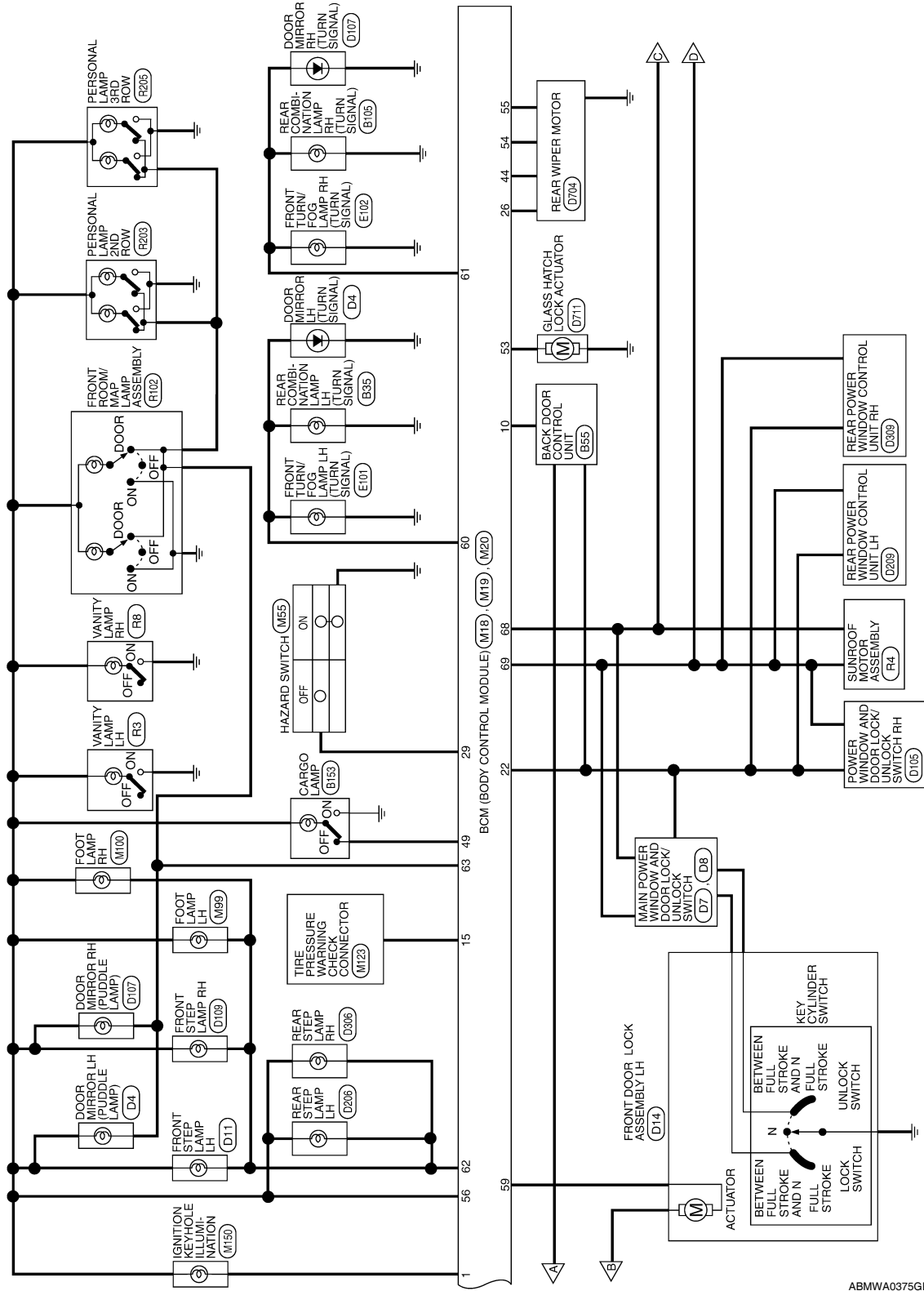
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BCM (BODY CONTROL MODULE)

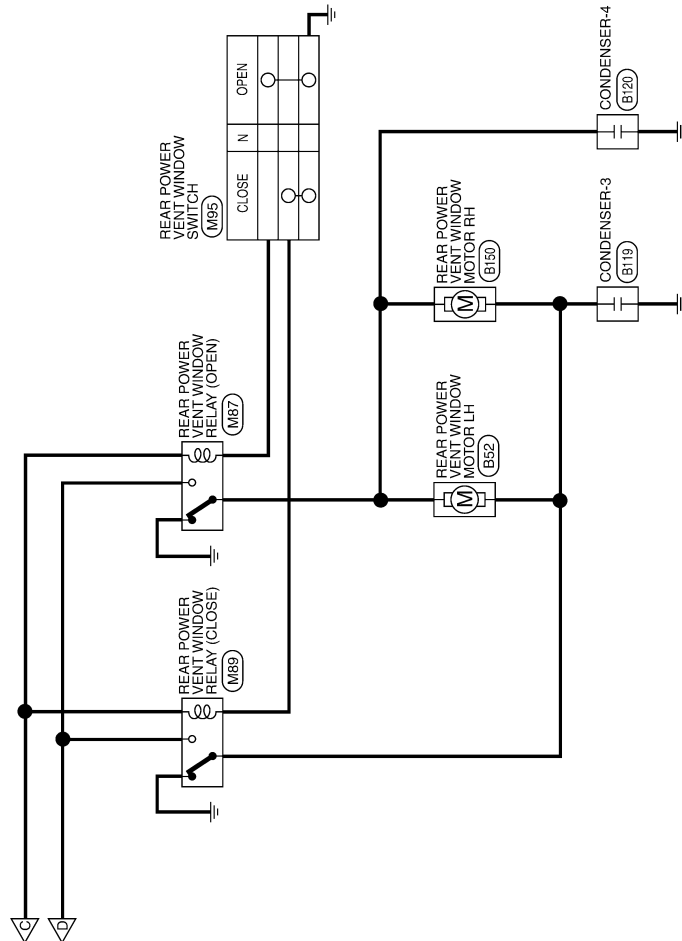
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BCM (BODY CONTROL MODULE)

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE) CONNECTORS

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



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

Terminal No.	Color of Wire	Signal Name
1	BR/W	KEY RING OUTPUT
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
7	-	-
8	-	-
9	GR/R	REAR DEFOGGER SW
10	G	IVCS INPUT
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
14	-	-
15	L/W	TPMS (MODE TRIGGER SWITCH)

Terminal No.	Color of Wire	Signal Name
16	-	-
17	-	-
18	P	KEYLESS AND AUTO LIGHT SENSOR GND
19	V/W	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G/W	KEYLESS TUNER SIGNAL
21	G	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
23	G/O	SECURITY INDICATOR OUTPUT
24	-	-
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX, TX)
26	Y/L	REAR WIPER AUTO STOP SW2
27	W/R	AIRCON SW
28	L/R	BLOWER FAN SW
29	W/B	HAZARD SW
30	Y/BR	GLASS HATCH OPENER
31	-	-
32	R/G	OUTPUT 5
33	R/Y	OUTPUT 4
34	L	OUTPUT 3
35	O/B	OUTPUT 2
36	R/W	OUTPUT 1
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



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

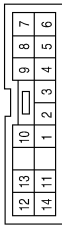
Terminal No.	Color of Wire	Signal Name
41	-	-
42	GR	GLASS HATCH SW
43	R/B	BACK DOOR SW
44	O	REAR WIPER AUTO STOP SW1
45	-	-
46	-	-
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
49	R	LUGGAGE LAMP OUTPUT
50	-	-
51	G/Y	TRAILER FLASH OUTPUT (RIGHT)
52	G/B	TRAILER FLASH OUTPUT (LEFT)
53	L/W	GLASS HATCH OPENER OUTPUT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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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



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

ABMIA1060GB

INFOID:000000005369894

Fail Safe

Fail-safe index

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

EXL

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.

DTC Inspection Priority Chart

INFOID:000000005369895

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

Priority	DTC
1	<ul style="list-style-type: none"> U1000: CAN COMM CIRCUIT
2	<ul style="list-style-type: none"> B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2013: STRG COMM 1 B2552: INTELLIGENT KEY B2590: NATS MALFUNCTION
3	<ul style="list-style-type: none"> C1729: VHCL SPEED SIG ERR C1735: IGNITION SIGNAL
4	<ul style="list-style-type: none"> C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RL C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL

DTC Index

INFOID:000000005369896

NOTE:

- Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-32
B2190: NATS ANTENNA AMP	—	—	—	SEC-31

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
B2191: DIFFERENCE OF KEY	—	—	—	SEC-34	A
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-35	B
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-37	
B2552: INTELLIGENT KEY	—	—	—	SEC-39	C
B2590: NATS MALFUNCTION	—	—	—	SEC-40	
C1708: [NO DATA] FL	—	—	—	WT-14	
C1709: [NO DATA] FR	—	—	—	WT-14	D
C1710: [NO DATA] RR	—	—	—	WT-14	
C1711: [NO DATA] RL	—	—	—	WT-14	
C1712: [CHECKSUM ERR] FL	—	—	—	WT-16	E
C1713: [CHECKSUM ERR] FR	—	—	—	WT-16	
C1714: [CHECKSUM ERR] RR	—	—	—	WT-16	F
C1715: [CHECKSUM ERR] RL	—	—	—	WT-16	
C1716: [PRESSDATA ERR] FL	—	—	—	WT-18	
C1717: [PRESSDATA ERR] FR	—	—	—	WT-18	G
C1718: [PRESSDATA ERR] RR	—	—	—	WT-18	
C1719: [PRESSDATA ERR] RL	—	—	—	WT-18	H
C1720: [CODE ERR] FL	—	—	—	WT-16	
C1721: [CODE ERR] FR	—	—	—	WT-16	
C1722: [CODE ERR] RR	—	—	—	WT-16	I
C1723: [CODE ERR] RL	—	—	—	WT-16	
C1724: [BATT VOLT LOW] FL	—	—	—	WT-16	J
C1725: [BATT VOLT LOW] FR	—	—	—	WT-16	
C1726: [BATT VOLT LOW] RR	—	—	—	WT-16	
C1727: [BATT VOLT LOW] RL	—	—	—	WT-16	K
C1729: VHCL SPEED SIG ERR	—	—	—	WT-19	
C1735: IGNITION SIGNAL	—	—	—	WT-20	EXL

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

< ECU DIAGNOSIS >

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

Reference Value

INFOID:000000005369897

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %
A/C COMP REQ	A/C switch OFF		OFF
	A/C switch ON		ON
TAIL&CLR REQ	Lighting switch OFF		OFF
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		ON
HL LO REQ	Lighting switch OFF		OFF
	Lighting switch 2ND HI or AUTO (Light is illuminated)		ON
HL HI REQ	Lighting switch OFF		OFF
	Lighting switch HI		ON
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	Front fog lamp switch OFF	OFF
		<ul style="list-style-type: none"> • Front fog lamp switch ON • Daytime light activated (Canada only) 	ON
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	STOP
		Front wiper switch INT	1LOW
		Front wiper switch LO	LOW
		Front wiper switch HI	HI
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	OFF
		Front wiper stops at fail-safe operation	BLOCK
ST RLY REQ	Ignition switch OFF or ACC		OFF
	Ignition switch START		ON
IGN RLY	Ignition switch OFF or ACC		OFF
	Ignition switch ON		ON
RR DEF REQ	Rear defogger switch OFF		OFF
	Rear defogger switch ON		ON
OIL P SW	Ignition switch OFF, ACC or engine running		OPEN
	Ignition switch ON		CLOSE
DTRL REQ	Daytime light system requested OFF with CONSULT-III.		OFF
	Daytime light system requested ON with CONSULT-III.		ON
HOOD SW	Hood closed.		OFF
	Hood open.		ON

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

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
THFT HRN REQ	Not operated	OFF
	<ul style="list-style-type: none">• Panic alarm is activated• Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM	ON
HORN CHIRP	Not operated	OFF
	Door locking with Intelligent Key (horn chirp mode)	ON

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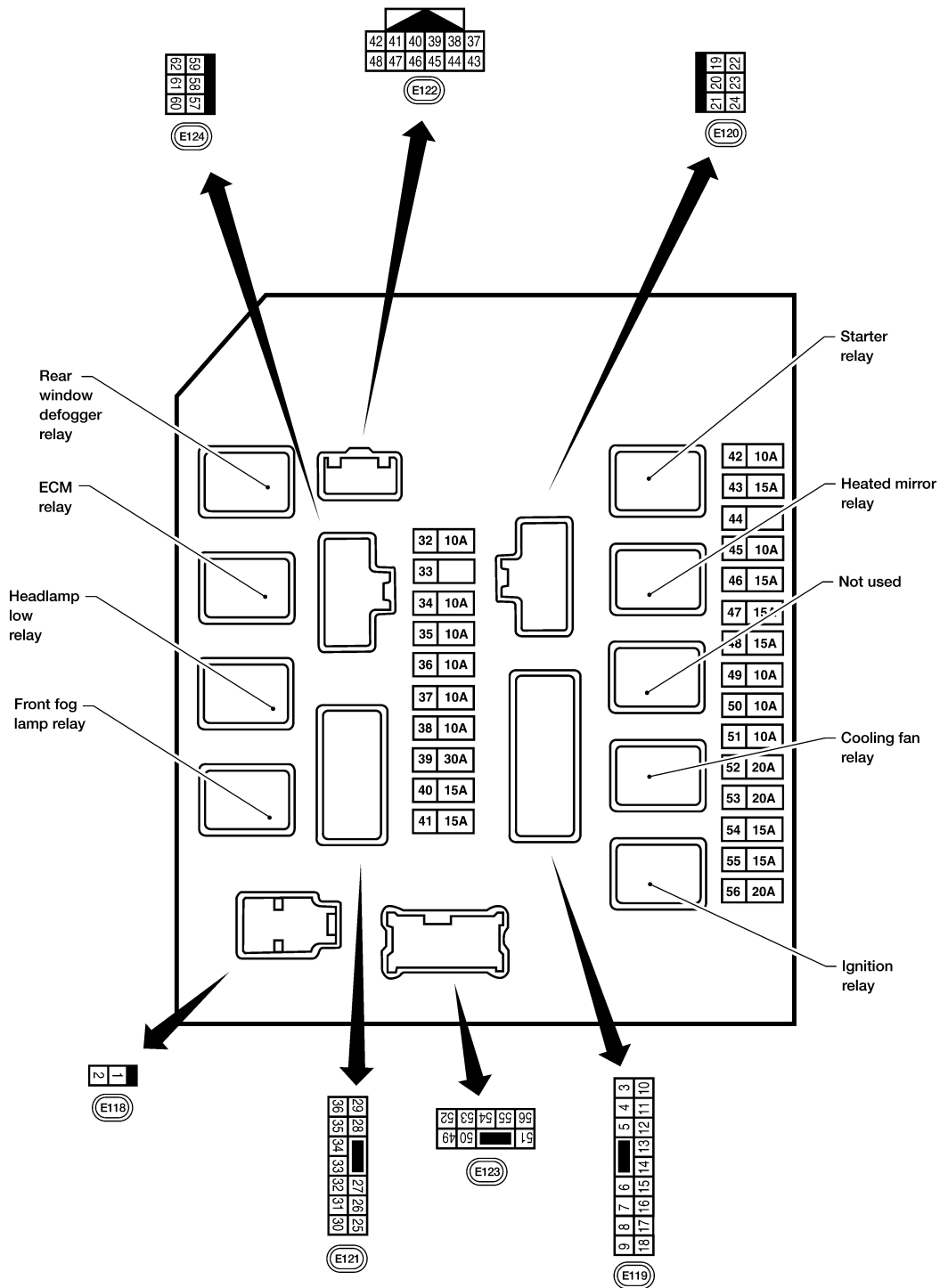
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000005369898

TERMINAL LAYOUT —TYPE A

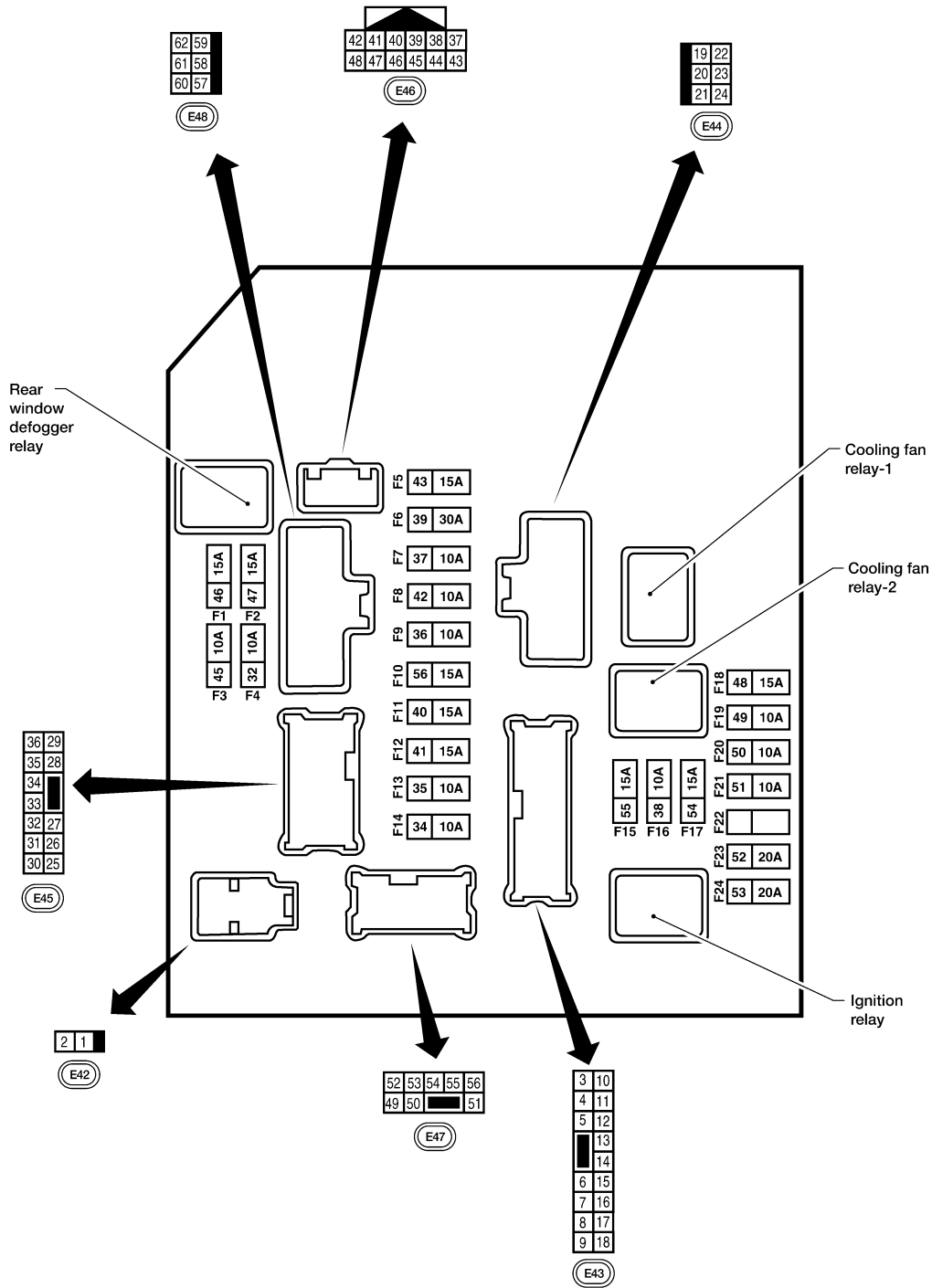


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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

TERMINAL LAYOUT —TYPE B



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Physical Values

PHYSICAL VALUES

AAMIA0364GB

INFOID:000000005369899

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

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value (Approx.)
				Ignition switch	Operation or condition	
1	B/Y	Battery power supply	Input	OFF	—	Battery voltage
2	R	Battery power supply	Input	OFF	—	Battery voltage
3	BR	ECM relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
4	W/L	ECM relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
6	L	Throttle control motor relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
7	W/B	ECM relay control	Input	—	Ignition switch ON or START	0V
					Ignition switch OFF or ACC	Battery voltage
8	R/B	Fuse 54	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
10	G	Fuse 45 (Canada only)	Output	ON	Daytime light system active	0V
					Daytime light system inactive	Battery voltage
11	Y/B	A/C compressor	Output	ON or START	A/C switch ON or defrost A/C switch	Battery voltage
					A/C switch OFF or defrost A/C switch	0V
12	L/W	Ignition switch supplied power	Input	—	OFF or ACC	0V
					ON or START	Battery voltage
13	B/Y	Fuel pump relay	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
14	Y/R	Fuse 49	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
15	LG/B	Fuse 50	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
16	G	Fuse 51	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
17	W	Fuse 55	Output	—	Ignition switch ON or START	Battery voltage
					Ignition switch OFF or ACC	0V
19	W/R	Starter motor	Output	START	—	Battery voltage
21	BR	Ignition switch supplied power	Input	—	OFF or ACC	0V
					START	Battery voltage
22	G	Battery power supply	Output	OFF	—	Battery voltage
23	GR/W	Door mirror defogger output signal	Output	—	When rear defogger switch is ON	Battery voltage
					When raker defogger switch is OFF	0V
24	L	Cooling fan relay	Output	—	Conditions correct for cooling fan operation	Battery voltage
					Conditions not correct for cooling fan operation	0V

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

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value (Approx.)			
				Ignition switch	Operation or condition				
26	P/L	Headlamp aiming motors	Output	—	Lighting switch 2nd position or AUTO, headlamp aiming switch in position	OFF	0V		
					ON	Battery voltage			
27	W/B	Fuse 38 (With trailer tow)	Output	—	Ignition switch ON or START		Battery voltage		
					Ignition switch OFF or ACC		0V		
30	W	Fuse 53	Output	—	Ignition switch ON or START		Battery voltage		
					Ignition switch OFF or ACC		0V		
32	L	Wiper low speed signal	Output	ON or START	Wiper switch	OFF	Battery voltage		
						LO or INT	0V		
35	L/B	Wiper high speed signal	Output	ON or START	Wiper switch	OFF, LO, INT	Battery voltage		
						HI	0V		
37	Y	Power generation command signal	Output	—	Ignition switch ON	<p>JPMIA0001GB</p>	6.3 V		
							40% is set on "Active test," "ALTERNATOR DUTY" of "ENGINE"	<p>JPMIA0002GB</p>	3.8 V
									40% is set on "Active test," "ALTERNATOR DUTY" of "ENGINE"
38	B	Ground	Input	—	—	0V			
39	L	CAN-H	—	ON	—	—			
40	P	CAN-L	—	ON	—	—			
41	Y/B	Hood switch	Input	—	Hood closed	OFF	0V		
					Hood open	ON	Battery voltage		
42	GR	Oil pressure switch	Input	—	Engine running		Battery voltage		
					Engine stopped		0V		

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

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition			Reference value (Approx.)
				Ignition switch	Operation or condition		
43	L/Y	Wiper auto stop signal	Input		ON or START	Wiper switch	OFF, LO, INT
44	BR	Daytime light relay control (Canada only)	Input	ON	Daytime light system active		0V
					Daytime light system inactive		Battery voltage
45	G/W	Horn relay control	Input	ON	When door locks are operated using Intelligent Key (OFF → ON)*		Battery voltage → 0V
46	GR	Fuel pump relay control	Input	—	Ignition switch ON or START		0V
					Ignition switch OFF or ACC		Battery voltage
47	O	Throttle control motor relay control	Input	—	Ignition switch ON or START		0V
					Ignition switch OFF or ACC		Battery voltage
48	B/R	Starter relay (inhibit switch)	Input	ON or START	Selector lever in "P" or "N"		0V
					Selector lever any other position		Battery voltage
49	R/L	Trailer tow relay (With trailer tow) Illumination (Without trailer tow)	Output	ON	Lighting switch must be in the 1st position	OFF	0V
						ON	Battery voltage
50	W/R	Front fog lamp (LH)	Output	ON or START	Lighting switch must be in the 2nd position (LOW beam is ON) and the front fog lamp switch	OFF	0V
						ON	Battery voltage
51	W/R	Front fog lamp (RH)	Output	ON or START	Lighting switch must be in the 2nd position (LOW beam is ON) and the front fog lamp switch	OFF	0V
						ON	Battery voltage
52	L	LH low beam head-lamp	Output	—	Lighting switch in 2nd position		Battery voltage
54	R/Y	RH low beam head-lamp	Output	—	Lighting switch in 2nd position		Battery voltage
55	G	LH high beam head-lamp	Output	—	Lighting switch in 2nd position and placed in HIGH or PASS position		Battery voltage
56	Y (With DTRL) L/W (Without DTRL)	RH high beam head-lamp	Output	—	Lighting switch in 2nd position and placed in HIGH or PASS position		Battery voltage
57	R/L	Parking, license, and tail lamp	Output	ON	Lighting switch 1st position	OFF	0V
						ON	Battery voltage
59	B	Ground	Input	—	—		0V

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

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value (Approx.)
				Ignition switch	Operation or condition	
60	B/W	Rear window defogger relay	Output	ON or START	Rear defogger switch ON	Battery voltage
					Rear defogger switch OFF	0V
61	BR	Fuse 32 (With trailer tow)	Output	OFF	—	Battery voltage

*: When horn reminder is ON

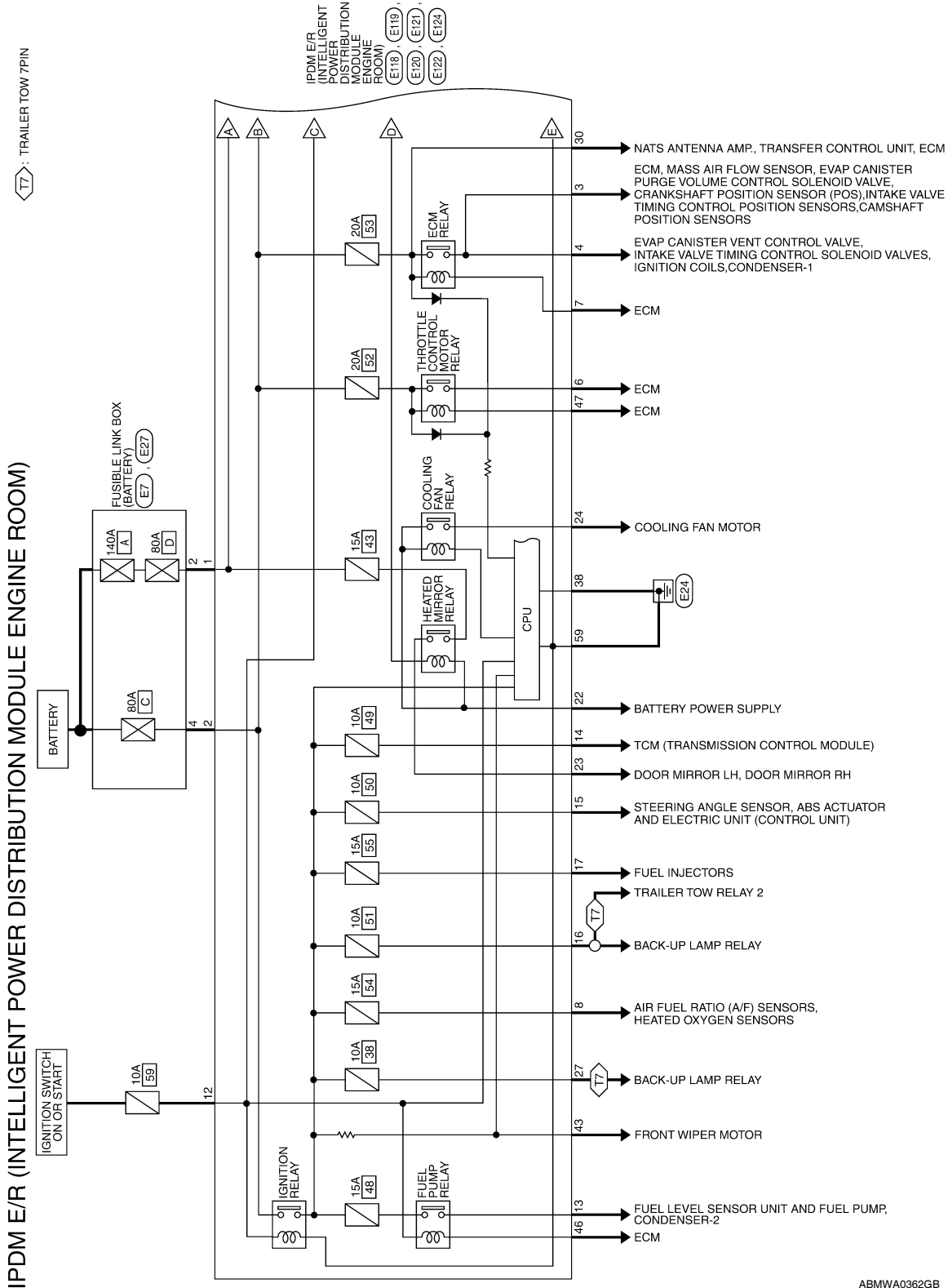
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Wiring Diagram

INFOID:000000005369900



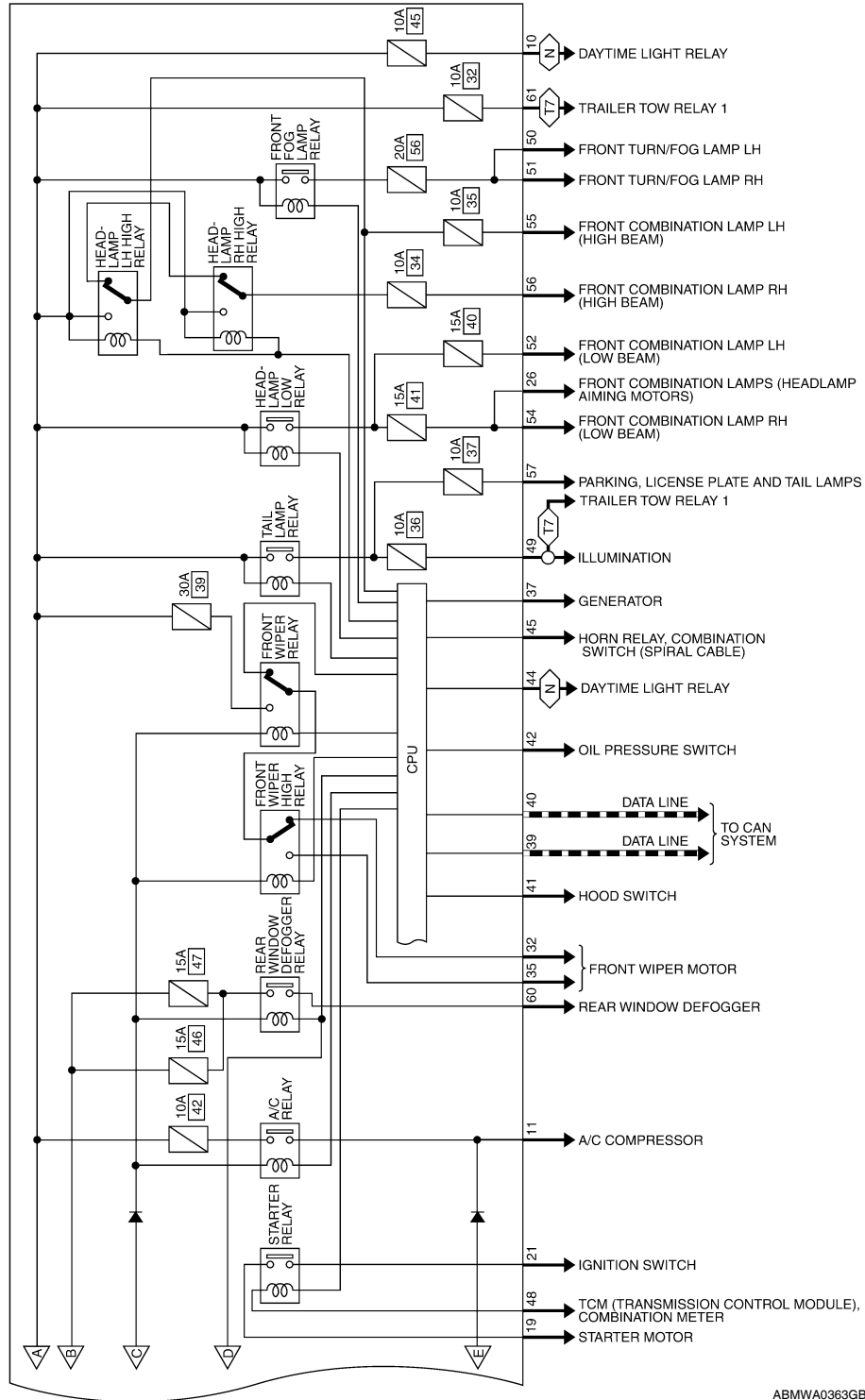
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

N : FOR CANADA
 T7 : TRAILER TOW 7PIN

IPDM E/R
 (INTELLIGENT
 POWER
 DISTRIBUTION
 MODULE
 ENGINE
 ROOM)
 (E119), (E120),
 (E121), (E122),
 (E123), (E124)



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

< ECU DIAGNOSIS >

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

Connector No.	E7
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
4	R	-

Connector No.	E27
Connector Name	FUSIBLE LINK BOX (BATTERY)
Connector Color	BROWN



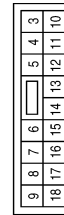
Terminal No.	Color of Wire	Signal Name
2	B/Y	-

Connector No.	E118
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	B/Y	F/L USM
2	R	F/L MAIN

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



Terminal No.	Color of Wire	Signal Name
3	BR	IGN COIL
4	W/L	ECM
5	-	-
6	L	ETC
7	W/B	ECM RLY CONT

Terminal No.	Color of Wire	Signal Name
8	R/B	O2 SENSOR
9	-	-
10	G	DTRL RLY SUPPLY
11	Y/B	A/C COMPRESSOR
12	L/W	IGN SW (IG)
13	B/Y	FUEL PUMP
14	Y/R	A/T CU IGN SUPPLY
15	LG/B	ABS IGN SUPPLY
16	G	REVERSE LAMP
17	W	INJECTOR
18	-	-

Connector No.	E120
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

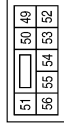


Terminal No.	Color of Wire	Signal Name
19	W/R	STARTER MTR
20	-	-
21	BR	IGN SW (ST)
22	G	F/L MOTOR FAN
23	GR/W	HEATED MIRROR
24	L	MOTOR FAN 2

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

< ECU DIAGNOSIS >

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



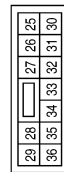
Terminal No.	Color of Wire	Signal Name
49	R/L	ILLUMINATION
50	W/R	FR FOG LAMP LH
51	W/R	FR FOG LAMP RH
52	L	H/LAMP LO LH
53	-	-
54	R/Y	H/LAMP LO RH
55	G	H/LAMP HI LH
56	L/W	H/LAMP HI RH (WITHOUT DAYTIME LIGHT)
56	Y	H/LAMP HI RH (WITH DAYTIME LIGHT)

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



Terminal No.	Color of Wire	Signal Name
37	Y	ALT-C CONT
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
41	Y/B	HOOD SW
42	GR	OIL PRESSURE SW
43	L/Y	AUTO STOP SW
44	BR	DTRL RLY CONT
45	G/W	ANT THEFT HORN
46	GR	FUEL PUMP RLY CONT
47	O	ETC RLY CONT
48	B/R	INHIBIT SW

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



Terminal No.	Color of Wire	Signal Name
25	-	-
26	P/L	H/L LEVELIZE
27	W/B	TTOW REV LAMP
28	-	-
29	-	-
30	W	ECM BAT
31	-	-
32	L	FR WIPER LO
33	-	-
34	-	-
35	L/B	FR WIPER HI
36	-	-

Terminal No.	Color of Wire	Signal Name
57	R/L	TAIL LAMP
58	-	-
59	B	GND (POWER)
60	B/W	RR DEF
61	BR	TRAIL RLY SUPPLY
62	-	-

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



ABMIA1043GB

INFOID:000000005369901

Fail Safe

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

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

< ECU DIAGNOSIS >

Control part	Fail-safe in operation
Cooling fan	<ul style="list-style-type: none"> • Turns ON the cooling fan relay when the ignition switch is turned ON • Turns OFF the cooling fan relay when the ignition switch is turned OFF

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	<ul style="list-style-type: none"> • Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high LH/RH relays OFF
<ul style="list-style-type: none"> • Parking lamps • License plate lamps • Tail lamps 	<ul style="list-style-type: none"> • Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	<ul style="list-style-type: none"> • The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Rear window defogger	Rear window defogger relay OFF
A/C compressor	A/C relay OFF
Front fog lamps	Front fog lamp relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

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

Ignition switch	Ignition relay	Tail lamp relay
ON	ON	—
OFF	OFF	—

NOTE:

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

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

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

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

NOTE:

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

STARTER MOTOR PROTECTION FUNCTION

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

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

< ECU DIAGNOSIS >

DTC Index

INFOID:000000005369902

CONSULT-III display	Fail-safe	TIME ^{NOTE}		Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-17

NOTE:

The details of TIME display are as follows.

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

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:000000005146886

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	<ul style="list-style-type: none"> • 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-30, "Description" .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-139 .	
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		<ul style="list-style-type: none"> • Combination meter • BCM 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Combination switch (lighting and turn signal switch) • Harness between the combination switch and BCM • BCM 	Combination switch Refer to BCS-38 .
		<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Fuse • Bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R 	Headlamp (LO) circuit Refer to EXL-33 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-140, "Description" .	
Headlamp does not turn OFF.	When the ignition switch is turned ON	<ul style="list-style-type: none"> • BCM • Combination switch (lighting and turn signal switch) 	Combination switch (lighting and turn signal switch) Refer to BCS-38 .
Headlamp is not turned ON/OFF with the lighting switch AUTO.	<ul style="list-style-type: none"> • Combination switch (lighting and turn signal switch) • Harness between the combination switch and BCM • BCM 		Combination switch (lighting and turn signal switch) Refer to BCS-38 .
	<ul style="list-style-type: none"> • Optical sensor • Harness between the optical sensor and BCM • BCM 		Optical sensor Refer to EXL-47 .

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom	Possible cause	Inspection item	
Daytime light system does not activate.	<ul style="list-style-type: none"> • Either high beam bulb • Parking brake switch • Combination switch (lighting and turn signal 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	<ul style="list-style-type: none"> • Front fog lamp bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R 	Front fog lamp circuit Refer to EXL-36 .
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-142 .	
Parking lamp is not turned ON.	One side	<ul style="list-style-type: none"> • Fuse • Parking lamp bulb • Harness between IPDM E/R and the front/rear combination lamp • Front/rear combination lamp • IPDM E/R 	Parking lamp circuit Refer to EXL-38 .
	Both sides	Symptom diagnosis "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-141 .	
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	<ul style="list-style-type: none"> • Harness between BCM and each turn signal lamp • Turn signal lamp bulb • Door mirror 	Turn signal lamp circuit Refer to EXL-44 .
Turn signal indicator lamp does not blink.	One side	Combination meter	—
	Both sides (Always)	<ul style="list-style-type: none"> • Turn signal indicator lamp signal • Combination meter • BCM 	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • The combination meter power supply and the ground circuit • Combination meter 	Combination meter Power supply and the ground circuit Refer to MWI-28 .

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

INFOID:000000005146687

XENON HEADLAMPS

The brightness and color of the light may vary slightly immediately after turning the headlamp ON. This condition will 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

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:000000005146688

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

Diagnosis Procedure

INFOID:000000005146689

1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [BCS-38. "Diagnosis Procedure"](#).

Is the combination switch (lighting and turn signal 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 combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition	Monitor status	
HL HI REQ	Combination switch (lighting and turn signal 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-59. "Removal and Installation"](#).

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to [EXL-30. "Description"](#).

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35. "Removal and Installation of IPDM E/R"](#).

NO >> Repair or replace the malfunctioning part.

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:000000005146690

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

Diagnosis Procedure

INFOID:000000005146691

1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [BCS-38, "Diagnosis Procedure"](#).

Is the combination switch (lighting and turn signal 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 combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition	Monitor status	
HL LO REQ	Combination switch (lighting and turn signal switch)	2ND	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-59, "Removal and Installation"](#).

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to [EXL-33, "Description"](#).

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation of IPDM E/R"](#).

NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:000000005146692

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

Diagnosis Procedure

INFOID:000000005146693

1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [BCS-38. "Diagnosis Procedure"](#).

Is the combination switch (lighting and turn signal 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 combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition	Monitor status
TAIL & CLR REQ	combination switch (lighting and turn signal switch)	1ST ON
		OFF OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to [BCS-59. "Removal and Installation"](#).

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to [EXL-38. "Description"](#).

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to [PCS-35. "Removal and Installation of IPDM E/R"](#).

NO >> Repair or replace the malfunctioning part.

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BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:000000005146694

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

Diagnosis Procedure

INFOID:000000005146695

1.COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to [BCS-38, "Diagnosis Procedure"](#).

Is the combination switch (lighting and turn signal 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 (combination switch (lighting and turn signal switch) 2ND)	ON	ON
		OFF	OFF

Is the item status normal?

- YES >> GO TO 3.
- NO >> Replace BCM. Refer to [BCS-59, "Removal and Installation"](#).

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to [EXL-36, "Description"](#).

Is the front fog lamp circuit normal?

- YES >> Replace IPDM E/R. Refer to [PCS-35, "Removal and Installation of IPDM E/R"](#).
- NO >> Repair or replace the malfunctioning part.

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000005369809

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:000000005369810

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, 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. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.

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PRECAUTIONS

< PRECAUTION >

5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

General precautions for service operations

INFOID:000000005369811

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

ADJUSTMENT AND INSPECTION

< ON-VEHICLE REPAIR >

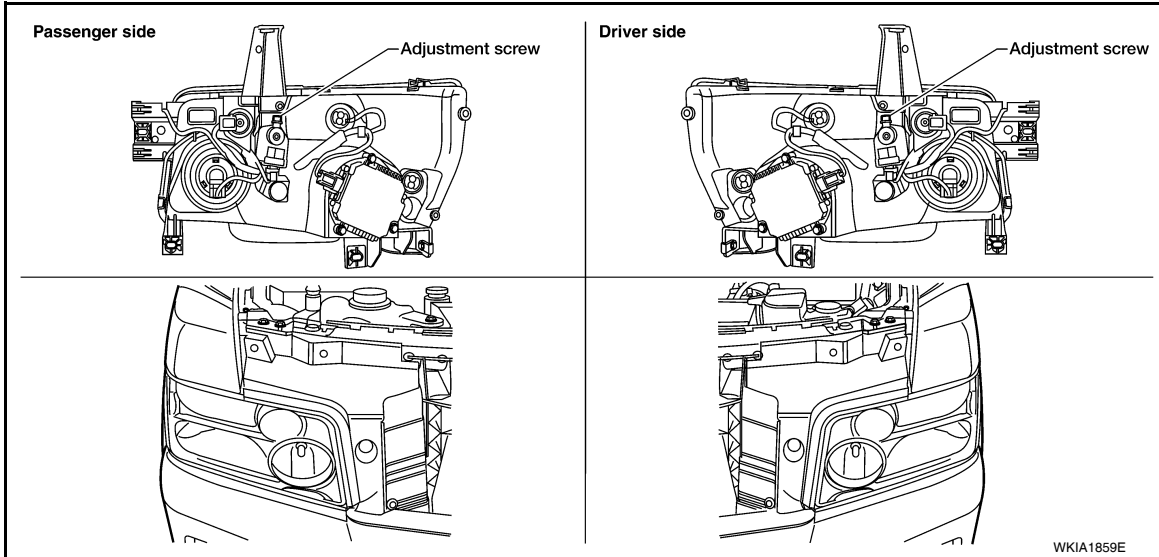
ON-VEHICLE REPAIR

ADJUSTMENT AND INSPECTION

HEADLAMP

HEADLAMP : Aiming Adjustment

INFOID:000000005146696



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:

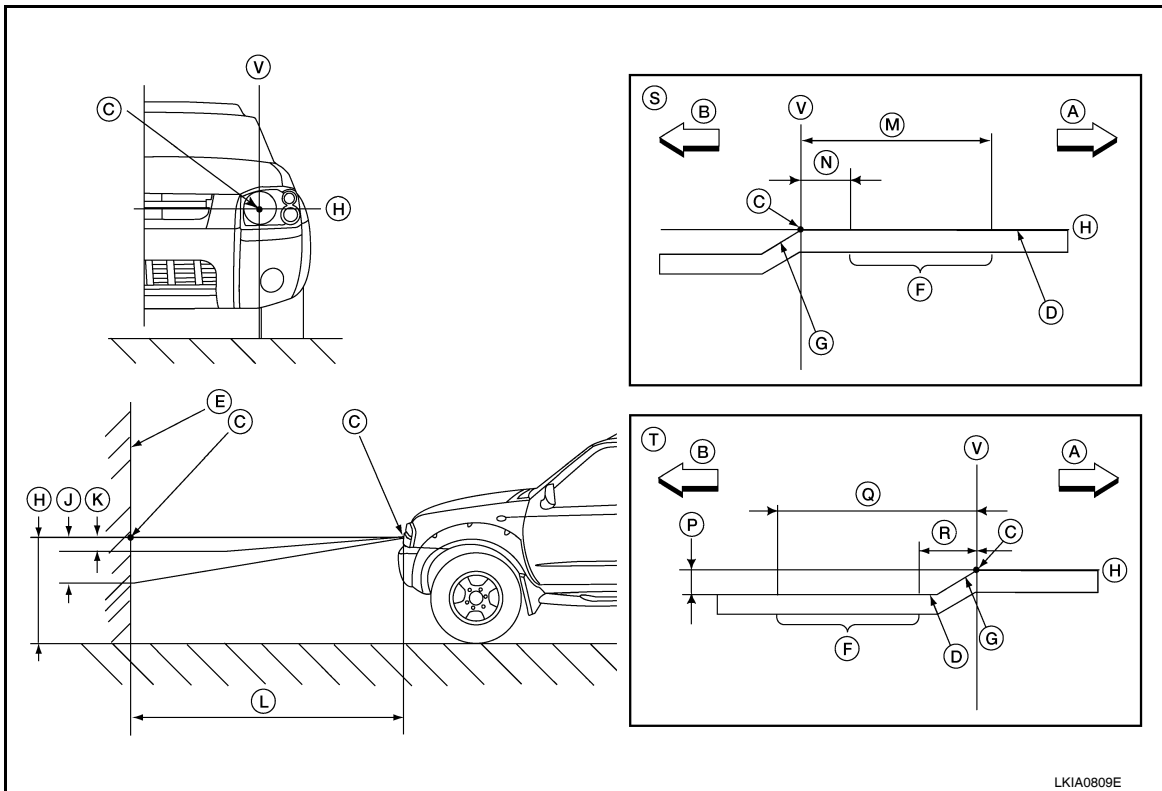
- Before performing aiming adjustment, check the following:
 - Ensure all tires are inflated to correct pressure.
 - Place vehicle and screen on level surface.
 - Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position). Coolant and engine oil filled 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

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ADJUSTMENT AND INSPECTION

< ON-VEHICLE REPAIR >



- | | | |
|-------------------------|---------------------------------------|--|
| 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 |
| V. Vertical center line | | |

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:000000005146697

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.

ADJUSTMENT AND INSPECTION

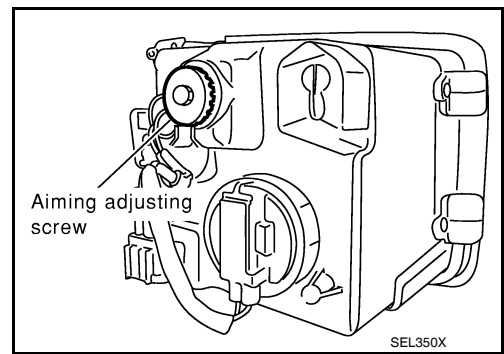
< ON-VEHICLE REPAIR >

- 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.

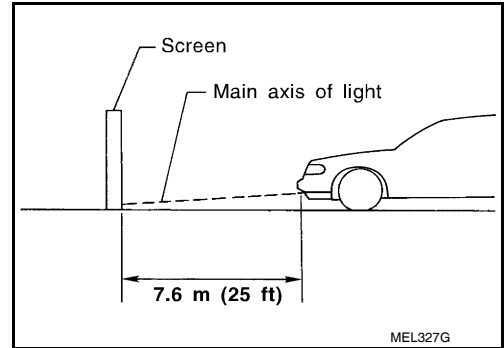
Adjust aiming in the vertical direction by turning the adjustment screw.

NOTE:

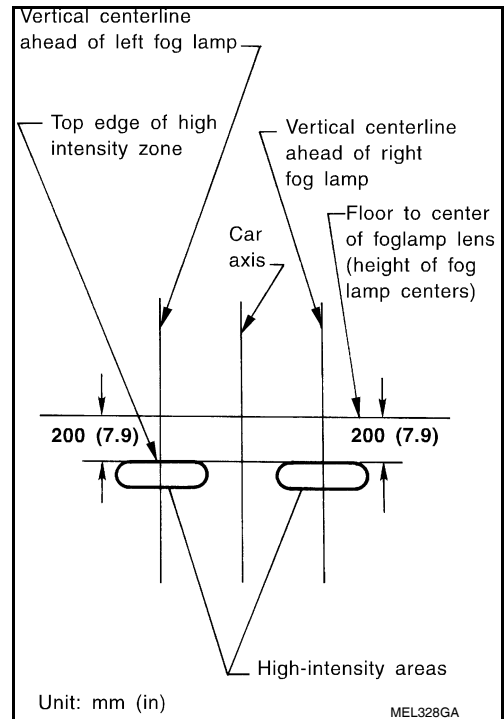
Access adjustment screw from underneath front bumper. Turn screw clockwise to raise pattern and counterclockwise to lower pattern.



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.



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HEADLAMP

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

HEADLAMP

Bulb Replacement

INFOID:000000005146698

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.

HEADLAMP

< REMOVAL AND INSTALLATION >

Removal and Installation

INFOID:000000005146699

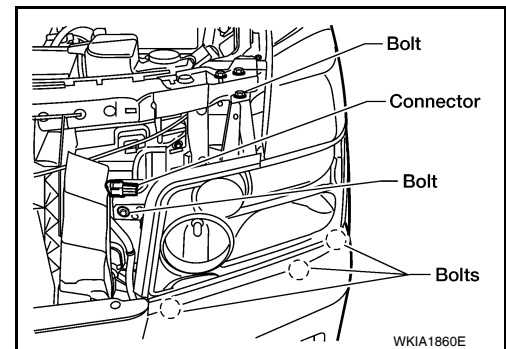
FRONT COMBINATION LAMP ASSEMBLY

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.



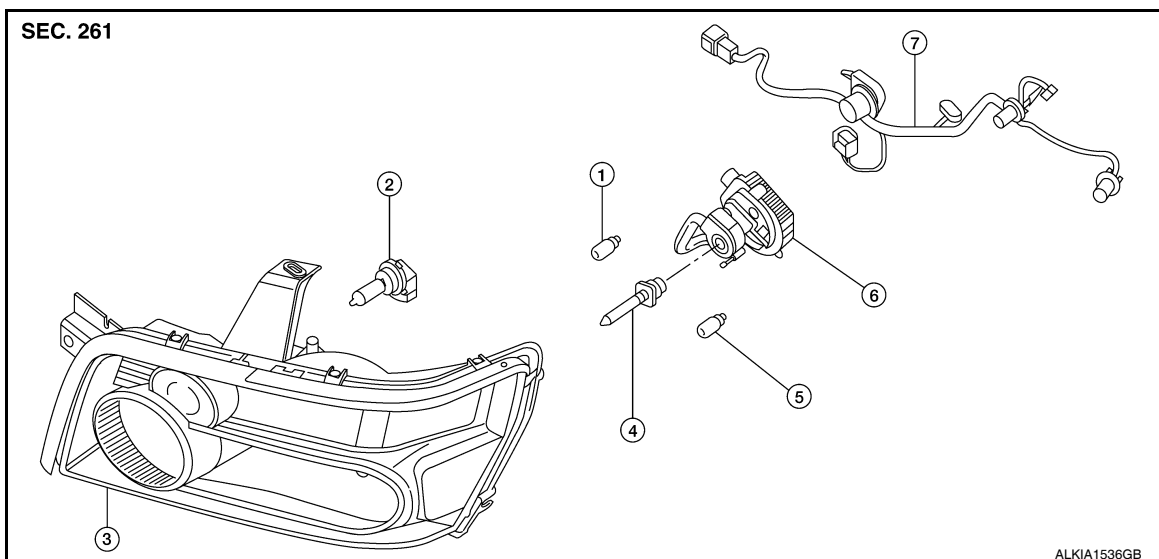
Installation

Installation is in the reverse order of removal.

Disassembly and Assembly

INFOID:000000005146700

FRONT COMBINATION LAMP ASSEMBLY



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

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HEADLAMP

< REMOVAL AND INSTALLATION >

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 >

AUTO LIGHT SYSTEM

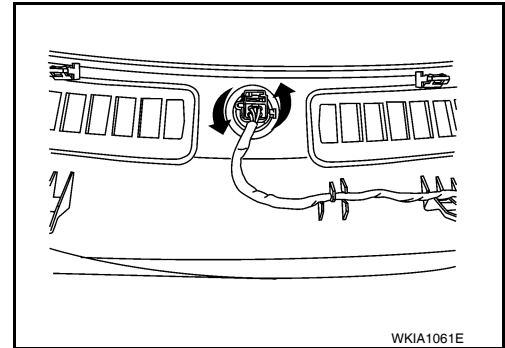
Removal and Installation

INFOID:000000005146701

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.

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FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

FRONT FOG LAMP

Bulb Replacement

INFOID:000000005146702

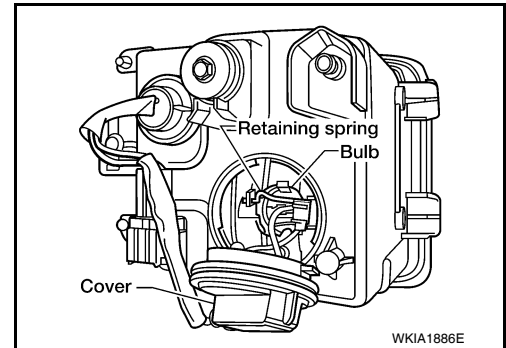
FRONT FOG LAMP

Removal

1. Remove the front turn/fog lamp assembly. Refer to [EXL-152, "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:000000005146703

FRONT FOG LAMP

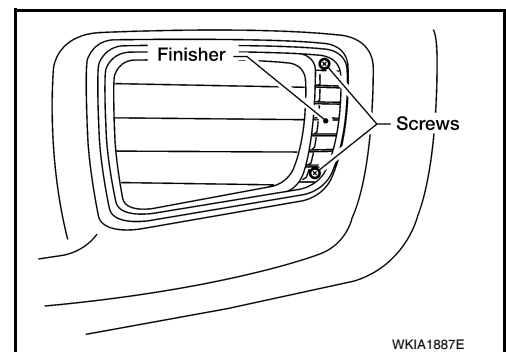
The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

CAUTION:

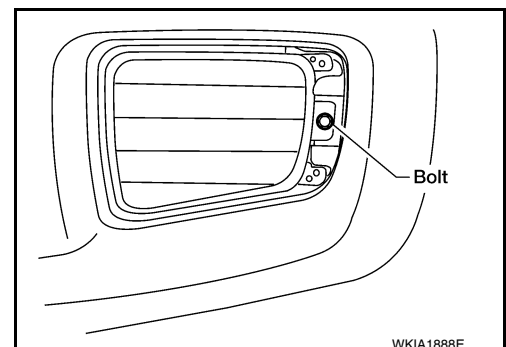
- Do not leave fog lamp assembly without bulb for a long period of time. Dust, moisture, smoke, etc. entering the fog lamp body may affect the performance. Remove the bulb from the headlamp assembly just before replacement bulb is installed.
- Grasp only the plastic base when handling the bulb. Never 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.



FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

Installation

Installation is in the reverse order of removal.

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LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

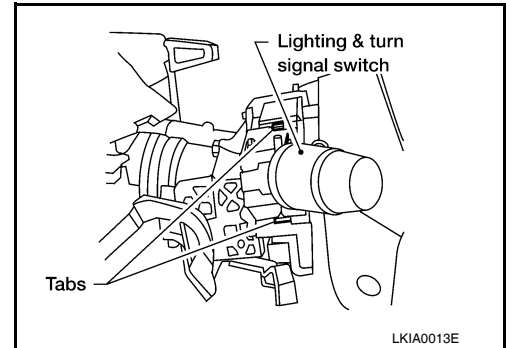
LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:000000005146704

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 >

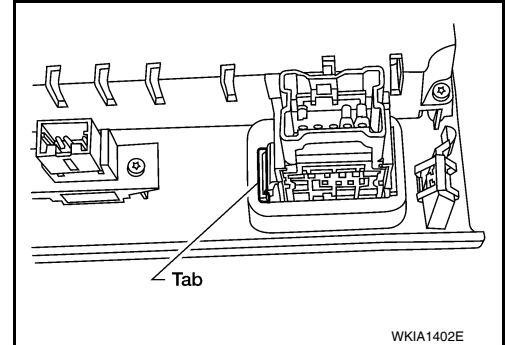
HAZARD SWITCH

Removal and Installation

INFOID:000000005146705

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.

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LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

LICENSE PLATE LAMP

Bulb Replacement

INFOID:000000005146706

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:000000005146707

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

< REMOVAL AND INSTALLATION >

STOP LAMP

Bulb Replacement

INFOID:000000005146708

HIGH-MOUNTED STOP LAMP

NOTE:

High-mounted stop lamp bulbs are not serviceable.

STOP LAMP

Refer to [EXL-157. "Removal and Installation"](#).

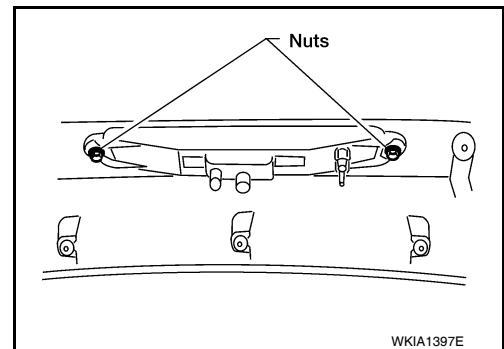
Removal and Installation

INFOID:000000005146709

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-158. "Removal and Installation"](#).

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REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

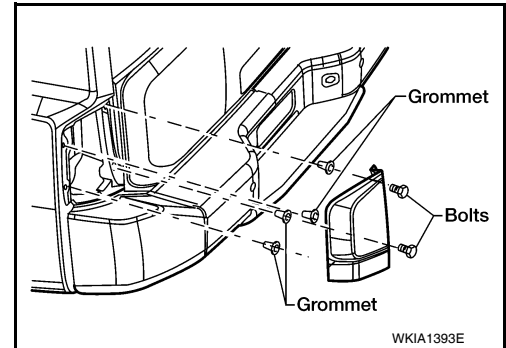
REAR COMBINATION LAMP

Bulb Replacement

INFOID:000000005146710

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

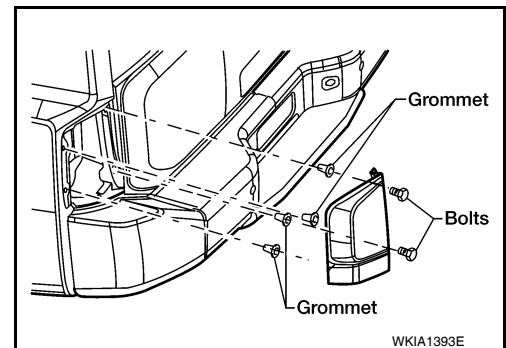
Installation is in the reverse order of removal.

Removal and Installation

INFOID:000000005146711

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.

BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Headlamp

INFOID:000000005146712

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

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

Exterior Lamp

INFOID:000000005146713

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.

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