

LT
SECTION
LIGHTING SYSTEM

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PRECAUTIONS

PRECAUTIONS

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Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

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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 SRS and SB section of this Service Manual.

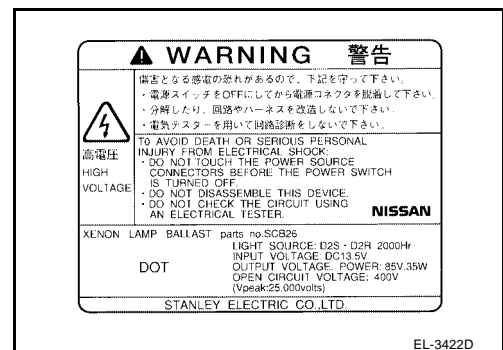
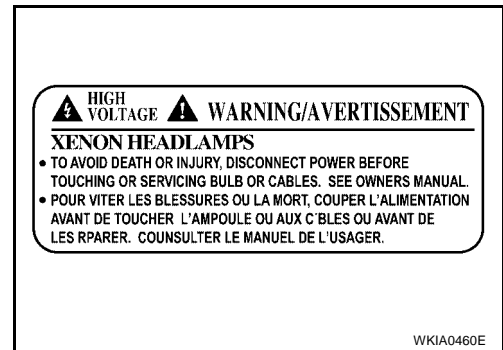
WARNING:

- 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 SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

General precautions for service operations

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- Never work with wet hands.
- Xenon headlamp includes high voltage generating part. Be sure to disconnect battery negative cable (negative terminal) or power fuse before removing, installing, or touching the xenon headlamp (including lamp bulb).
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When turning the xenon headlamp on and while it is illuminated, never touch the harness, bulb, and socket of the headlamp.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.
- Do not touch the headlamp bulb glass surface with bare hands or allow oil or grease to get on it. Do not touch the headlamp bulb just after the headlamp is turned off, because it is very hot.
- Install the xenon headlamp bulb socket correctly. If it is installed improperly, high-voltage leak or corona discharge may occur that can melt the bulb, connector, and housing. Do not illuminate the xenon headlamp bulb out of the headlamp housing. Doing so can cause fire and harm your eyes.
- When the bulb has burned out, wrap it in a thick vinyl bag and discard. Do not break the bulb.
- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps and to remove old sealant.



PRECAUTIONS

Wiring Diagrams and Trouble Diagnosis

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When you read wiring diagrams, refer to the following:

- Refer to [GI-13, "How to Read Wiring Diagrams"](#) in GI section.
- Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) for power distribution in PG section.

When you perform trouble diagnosis, refer to the following:

- Refer to [GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#) in GI section.
- Refer to [GI-25, "How to Perform Efficient Diagnosis for an Electrical Incident"](#) in GI section.

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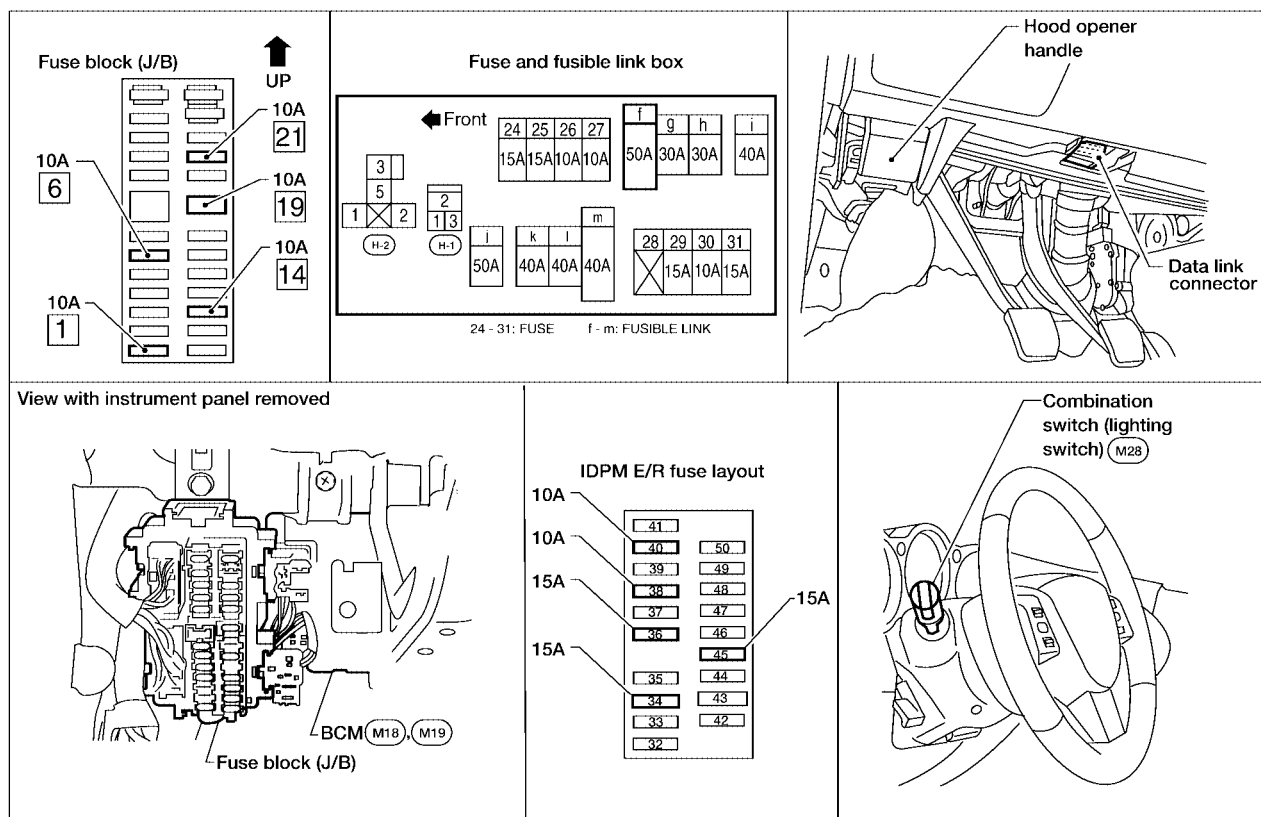
HEADLAMP (FOR USA)

HEADLAMP (FOR USA)

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Component Parts and Harness Connector Location

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System Description

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

If voltage is applied to a high beam solenoid, the bulb shade will move and a high beam and a low beam are changed.

OUTLINE

Power is supplied at all times

- to ignition relay, located in the IPDM E/R, and
- to headlamp high relay, located in the IPDM E/R, and
- to headlamp low relay, located in the IPDM E/R, and
- through 15A fuse (No. 34, located in the IPDM E/R)
- to CPU of the IPDM E/R, and
- through 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42, and
- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to combination meter terminal 24.

With the ignition switch in the ON or START position, power is supplied

- to ignition relay, located in the IPDM E/R, and

HEADLAMP (FOR USA)

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38, and
- through 10A fuse [No. 14, located in the fuse block (J/B)]
- to combination meter terminal 23.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 6, located in the fuse block (J/B)]
- to BCM terminal 11

Ground is supplied

- to BCM terminal 52
- to combination meter terminals 10, 11 and 12
- through grounds M57, M61 and M79, and
- to IPDM E/R terminals 38 and 60
- through grounds E15 and E24.

Low Beam Operation

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

- through 15A fuse (No. 36, located in the IPDM E/R)
- to IPDM E/R terminal 20
- to headlamp RH terminal 3, and
- through 15A fuse (No. 45, located in the IPDM E/R)
- to IPDM E/R terminal 30
- to headlamp LH terminal 3.

Ground is supplied

- to headlamp LH and RH terminal 4
- through grounds E15 and E24.

With power and ground supplied, low beam headlamps illuminate.

High Beam Operation/Flash-to-Pass Operation

With the lighting switch in 2ND position and placed in HIGH or PASS position, the BCM receives input signal requesting the headlamp high beams to illuminate. This input signal is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the headlamp high relay coil and low relay coil, which when energized, directs power

- through 15A fuse (No. 36, located in the IPDM E/R)
- to IPDM E/R terminal 20
- to headlamp RH terminal 3, and
- through 15A fuse (No. 45, located in the IPDM E/R)
- to IPDM E/R terminal 30
- to headlamp LH terminal 3, and
- through 10A fuse (No. 40, located in the IPDM E/R)
- to IPDM E/R terminal 27
- to headlamp RH terminal 7, and
- through 10A fuse (No. 38, located in the IPDM E/R)
- to IPDM E/R terminal 28
- to headlamp LH terminal 7.

Ground is supplied

- to headlamp LH and RH terminals 4 and 8
- through grounds E15 and E24.

With power and ground supplied, the high beam headlamps illuminate.

If voltage is applied to a high beam solenoid, the bulb shade will move and a high beam and a low beam are changed.

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HEADLAMP (FOR USA)

The unified meter and A/C amp that received the high beam request signal by BCM across the CAN communication makes the high beam indicator lamp turn on in combination meter.

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#) .

EXTERIOR LAMP BATTERY SAVER CONTROL

When the combination switch (lighting switch) is in the 2ND position (ON) and the ignition switch is turned from ON or ACC to OFF, the battery saver control function is activated.

Under this condition, the headlamps remain illuminated for 5 minutes, then the headlamps are turned off. Exterior lamp battery saver control mode can be changed by the function setting of CONSULT-II.

AUTO LIGHT OPERATION

Refer to [LT-60, "System Description"](#) in AUTO LIGHT SYSTEM.

VEHICLE SECURITY SYSTEM

The vehicle security system will flash the high beams if the system is triggered. Refer to [BL-79, "VEHICLE SECURITY \(THEFT WARNING\) SYSTEM"](#) .

XENON HEADLAMP (IF EQUIPPED)

Xenon type headlamp is adopted to the low and high 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 many advantages of the xenon type headlamp.

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

CAN Communication System Description

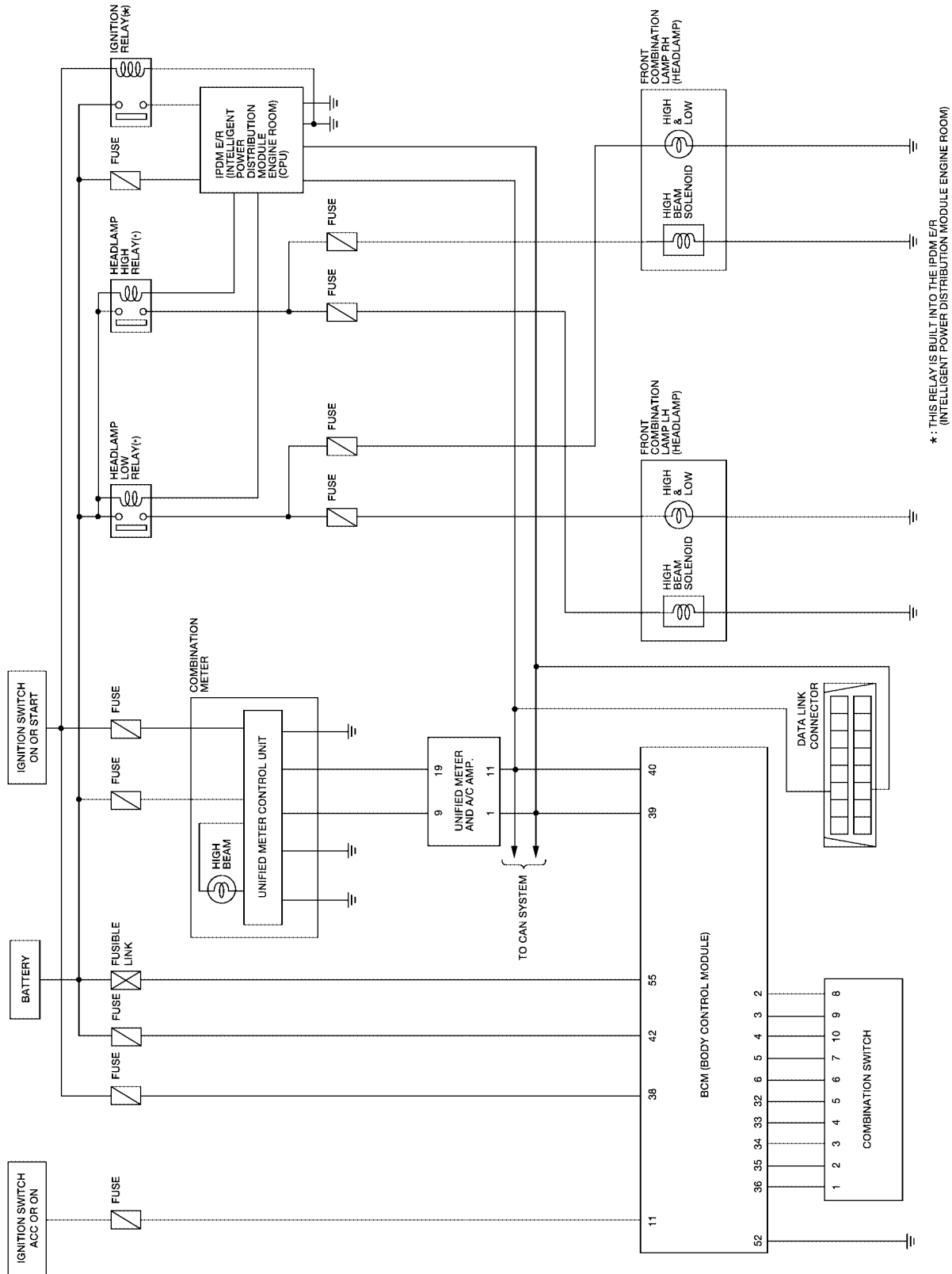
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Refer to [LAN-7, "CAN COMMUNICATION"](#) .

HEADLAMP (FOR USA)

Schematic HALOGEN TYPE

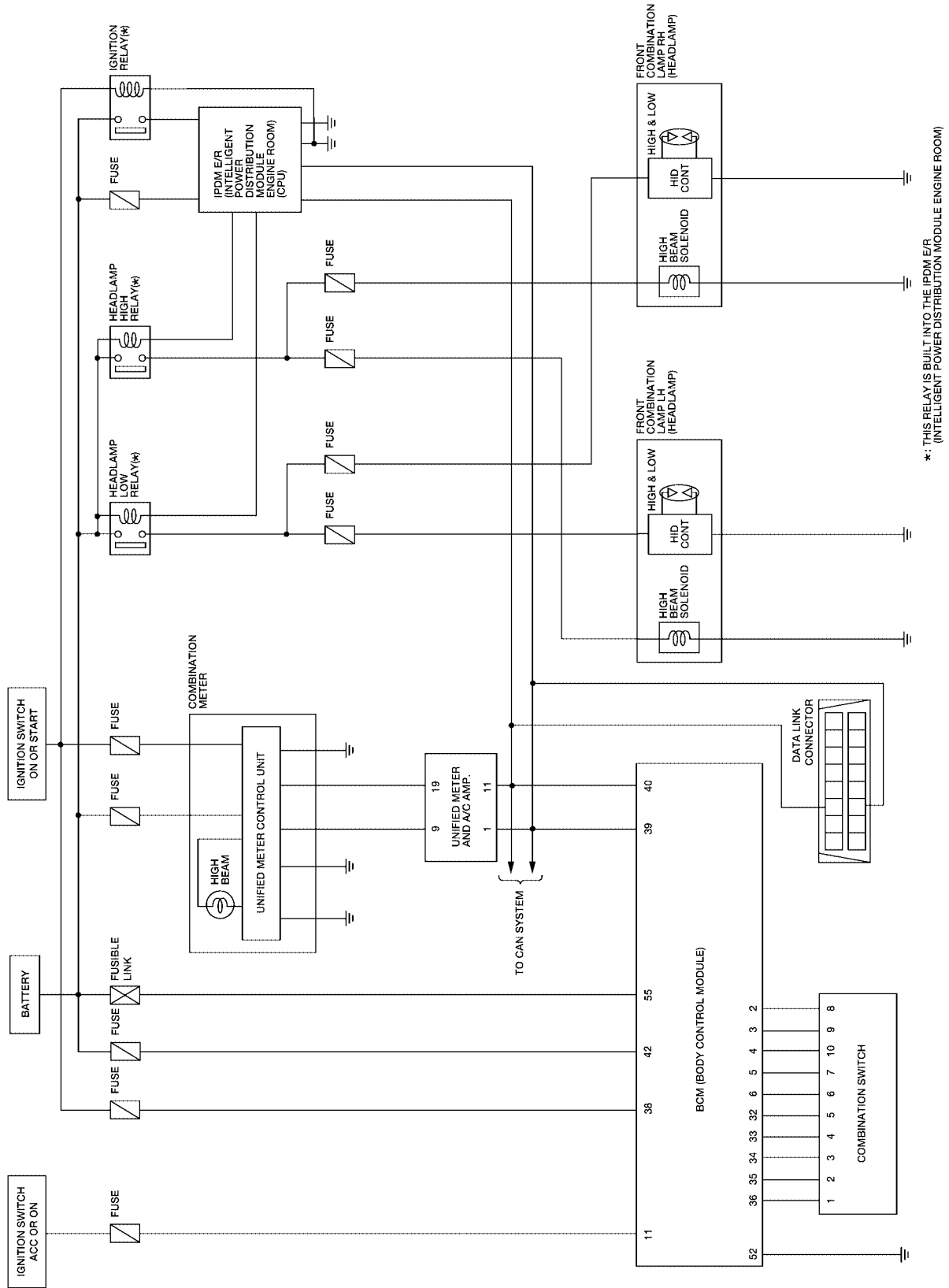
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HEADLAMP (FOR USA)

XENON TYPE



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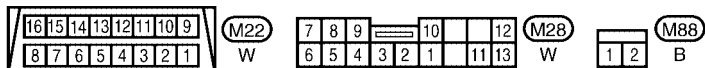
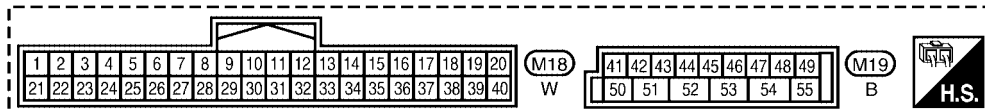
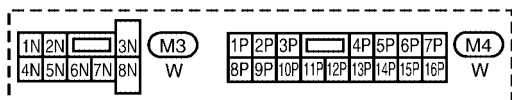
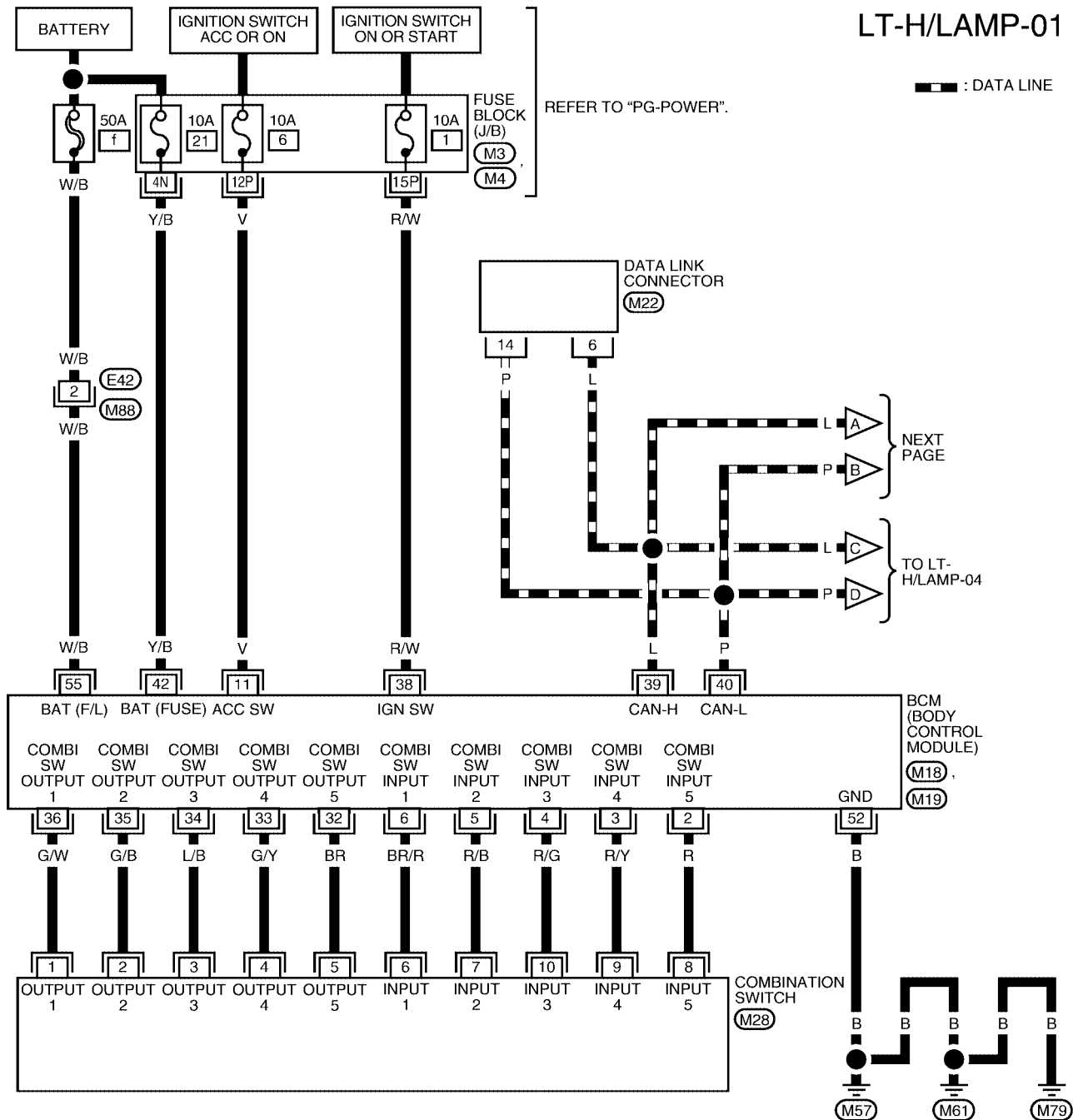
HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP — HALOGEN TYPE

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LT-H/LAMP-01

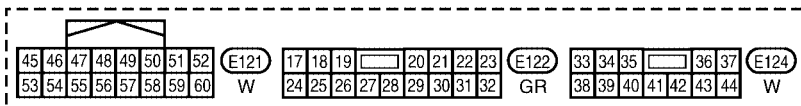
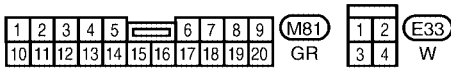
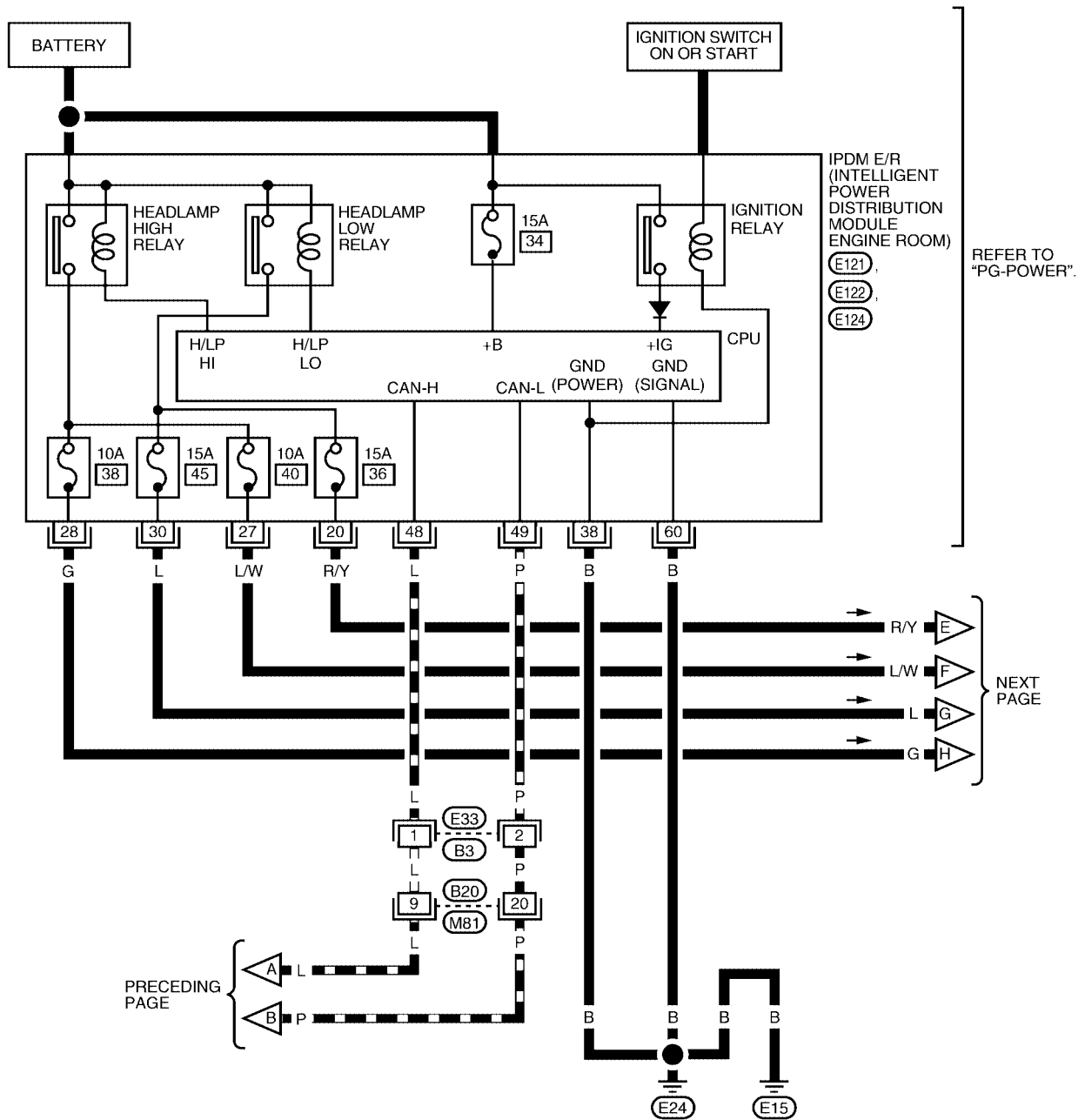
— : DATA LINE



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HEADLAMP (FOR USA)

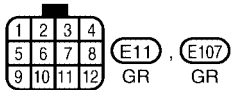
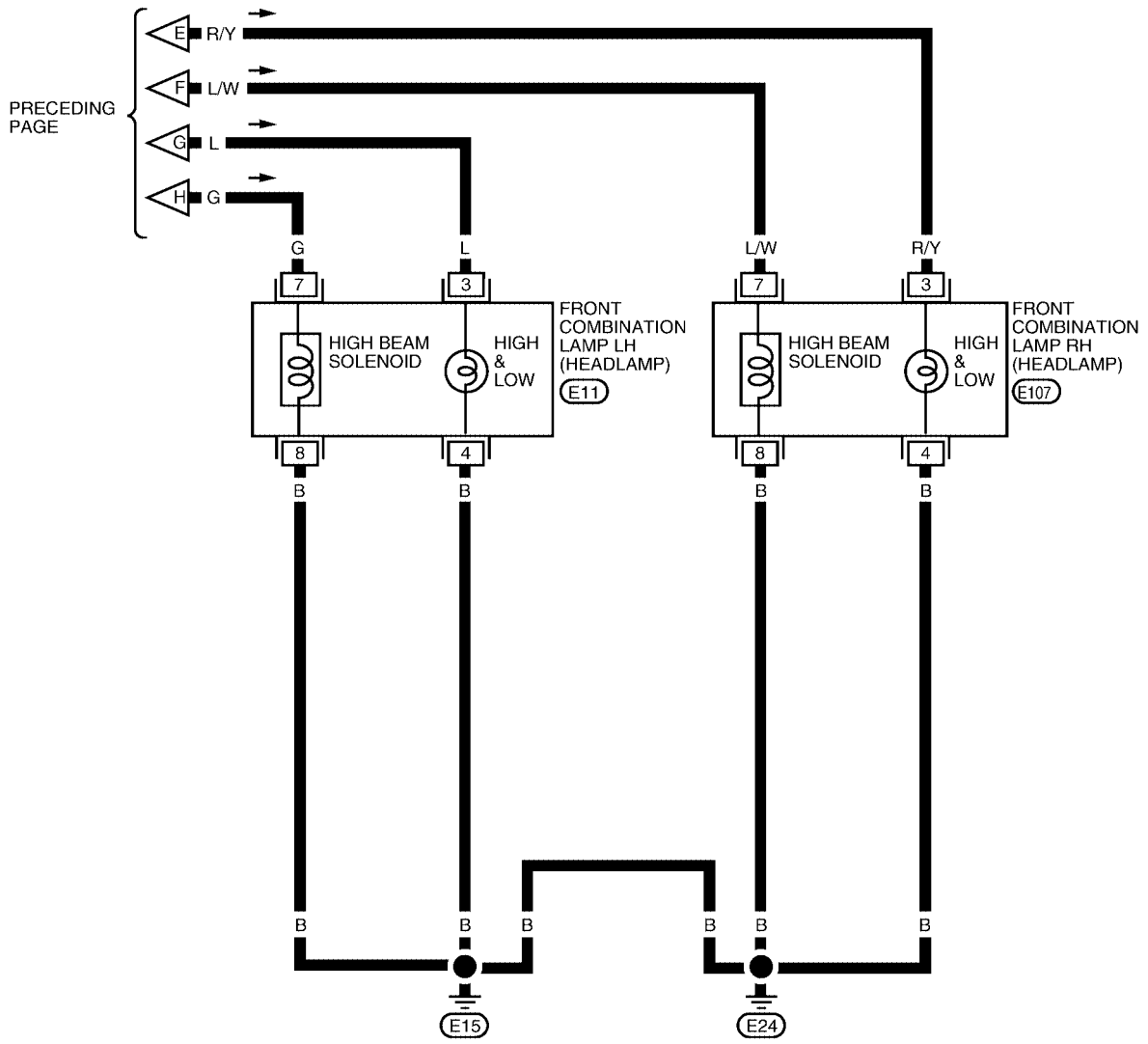
LT-H/LAMP-02



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HEADLAMP (FOR USA)

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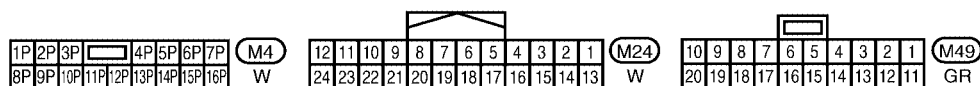
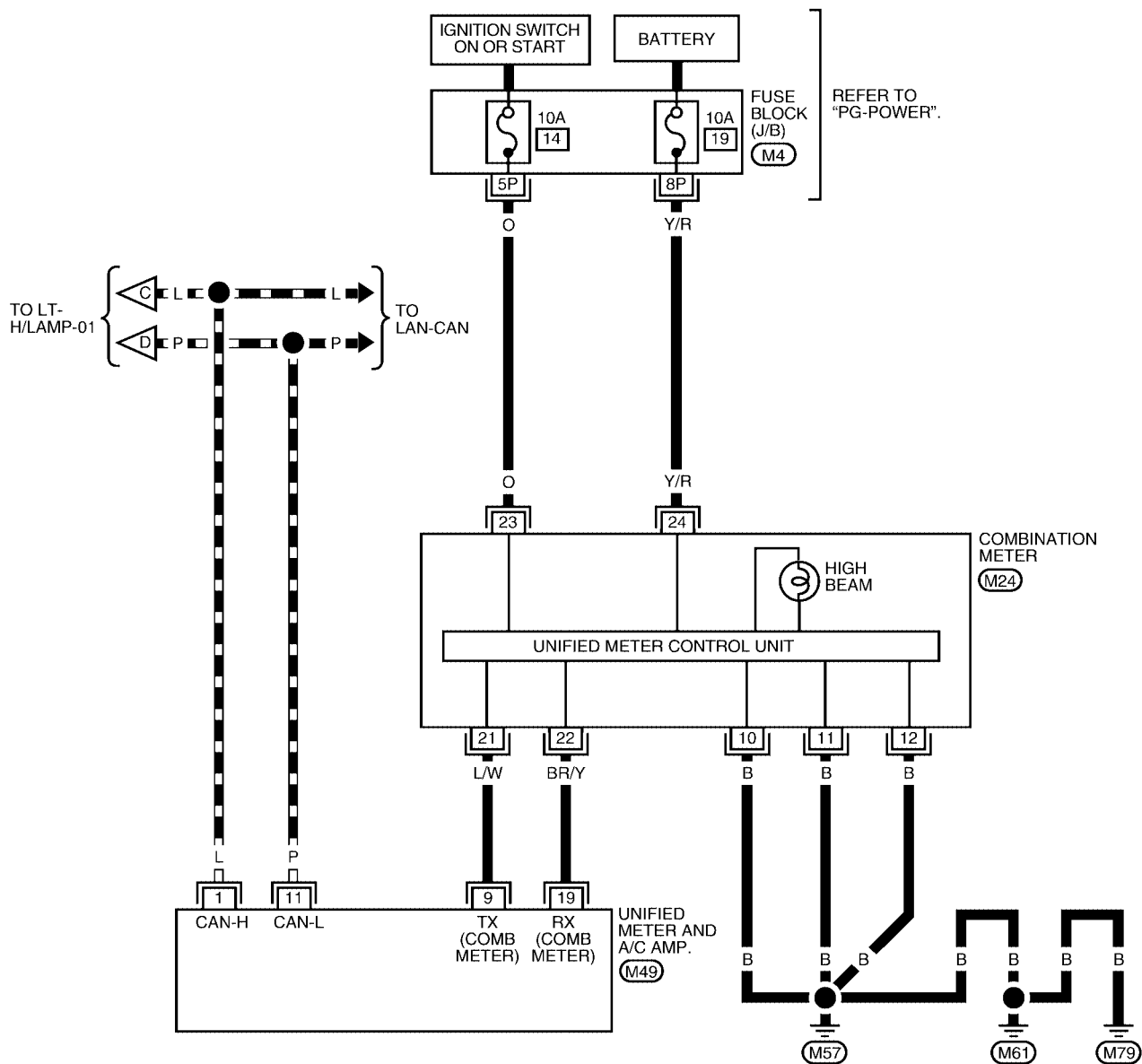


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HEADLAMP (FOR USA)

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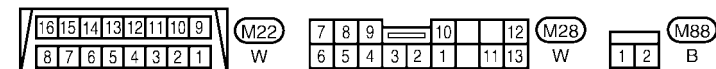
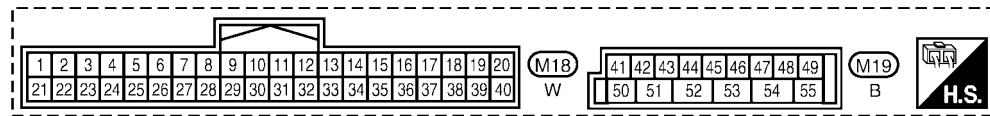
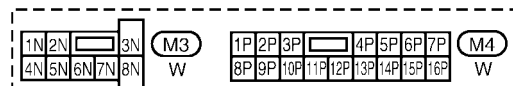
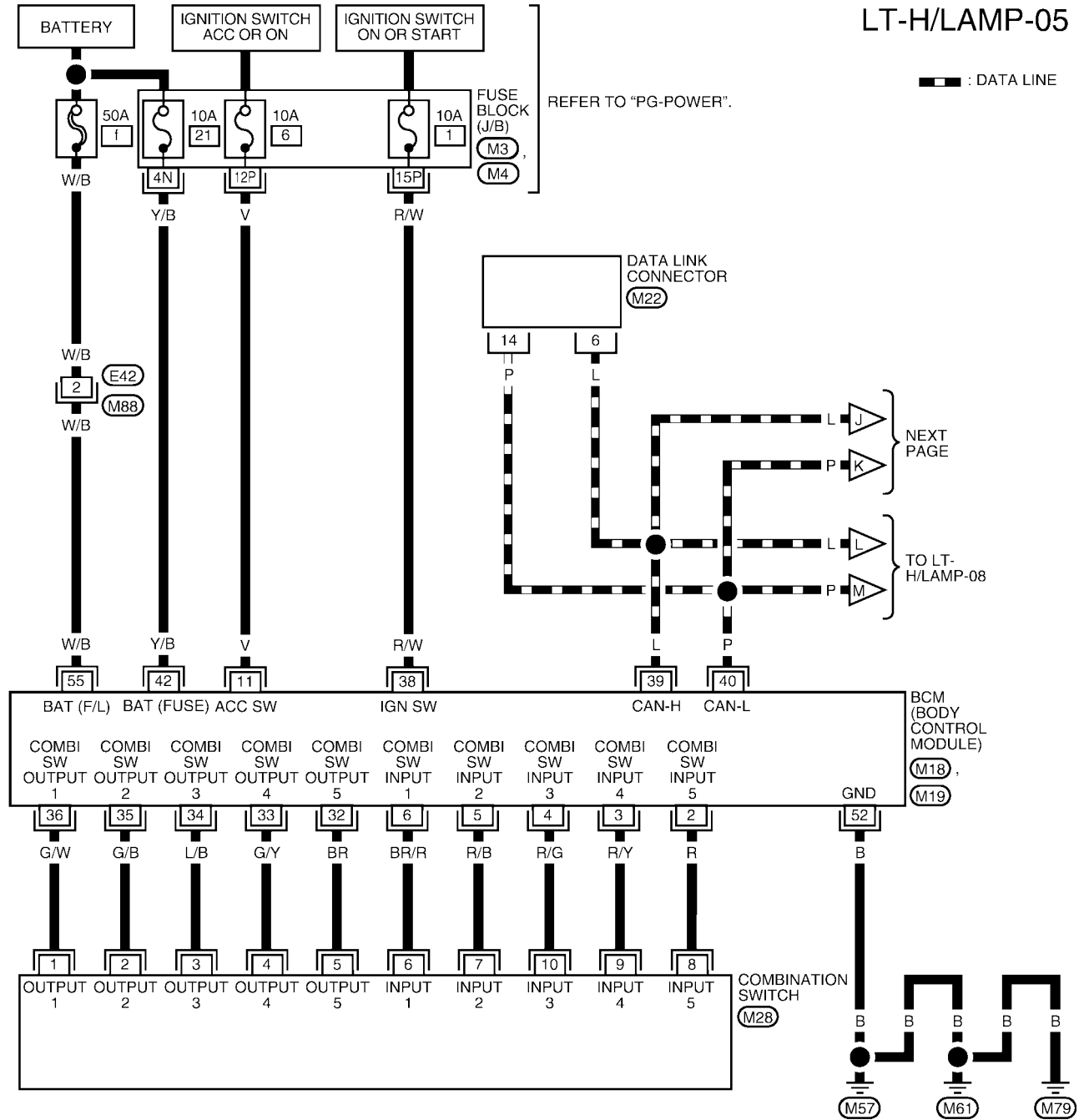


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HEADLAMP (FOR USA)

XENON TYPE

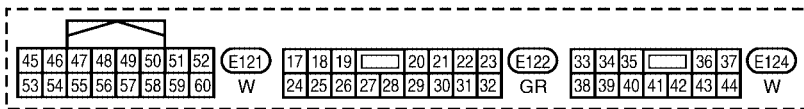
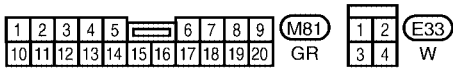
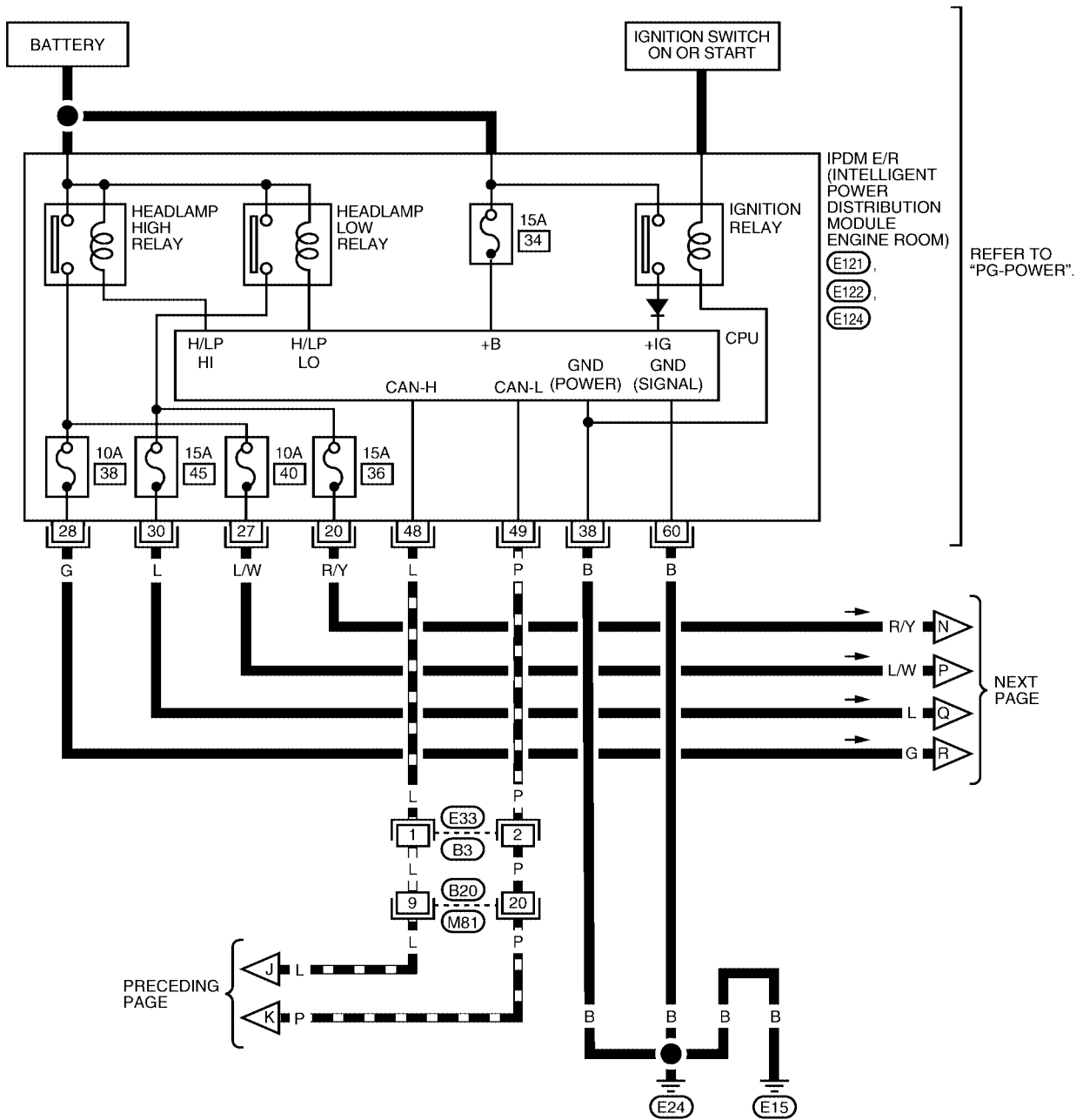
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HEADLAMP (FOR USA)

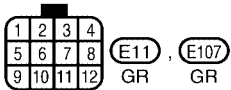
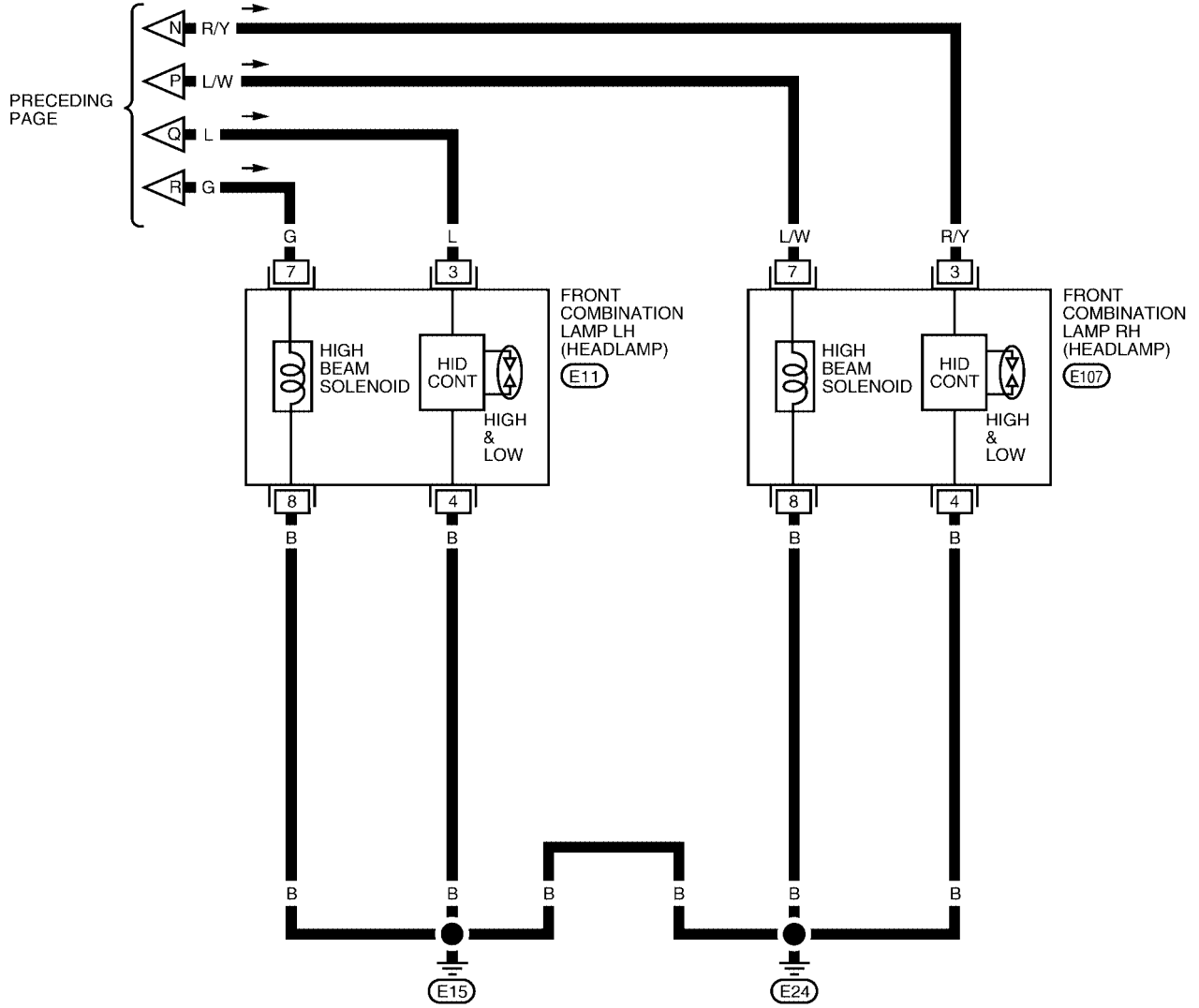
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HEADLAMP (FOR USA)

LT-H/LAMP-07

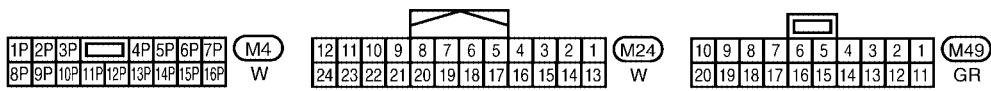
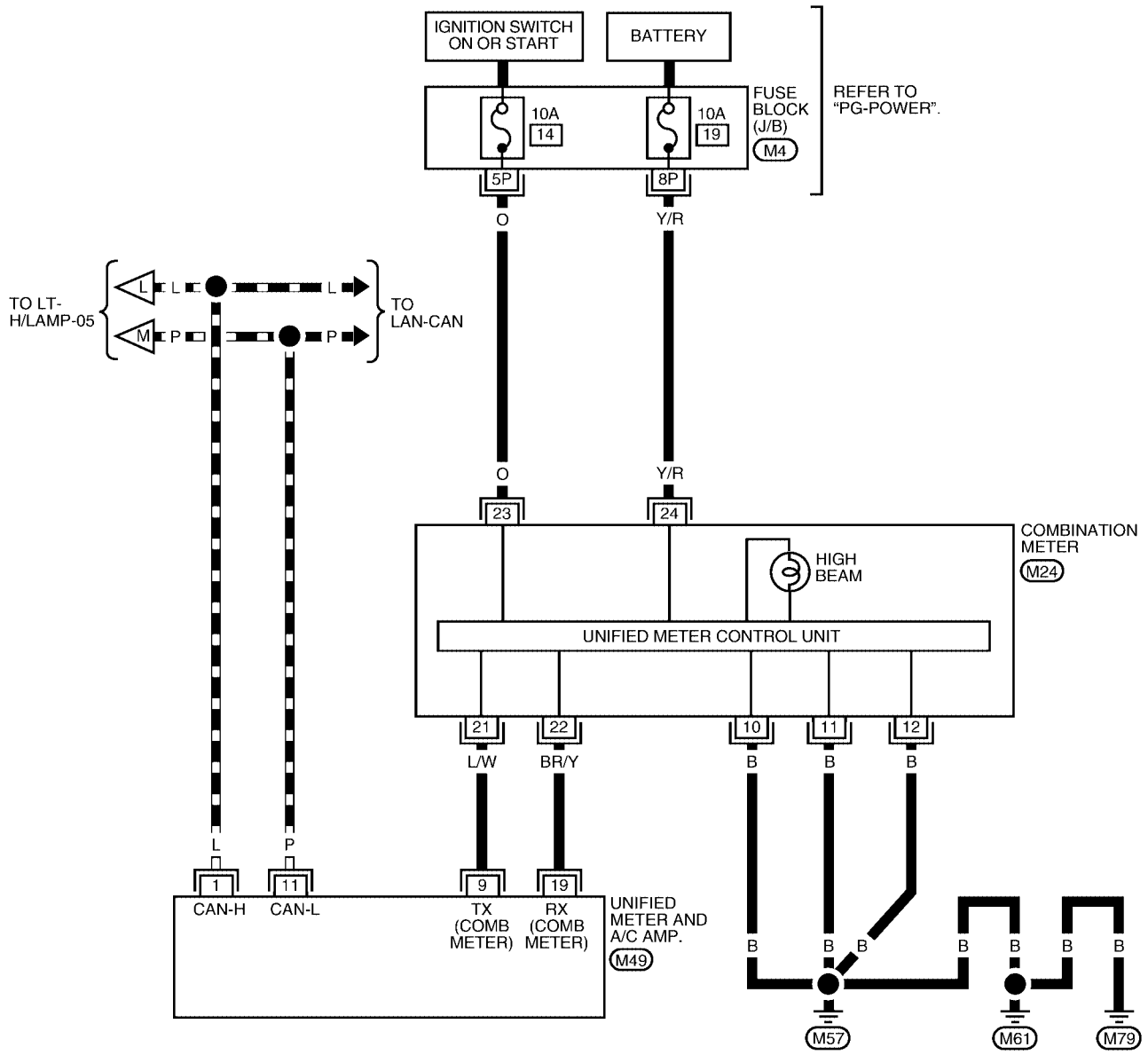


WKWA1722E

HEADLAMP (FOR USA)

LT-H/LAMP-08

▬ : DATA LINE



WKWA1723E

HEADLAMP (FOR USA)

Terminals and Reference Values for BCM

EKS008YO

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5291E</p>
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5292E</p>
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5291E</p>
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5292E</p>
6	BR/R	Combination switch input 1			
11	V	Ignition switch (ACC)	ACC	—	Battery voltage
32	BR	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5291E</p>
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5292E</p>
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	<p style="text-align: right;">SKIA5291E</p>

A
B
C
D
E
F
G
H
I
J
LT
L
M

HEADLAMP (FOR USA)

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	
36	G/W	Combination switch output 1			
38	R/W	Ignition switch (ON)	ON	—	Battery voltage
39	L	CAN-H	—	—	—
40	P	CAN-L	—	—	—
42	Y/B	Battery power supply	OFF	—	Battery voltage
52	B	Ground	ON	—	0V
55	W/B	Battery power supply (fusible link)	OFF	—	Battery voltage

Terminals and Reference Values for IPDM E/R

EKS008YP

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
20	R/Y	Headlamp low (RH)	ON	Lighting switch 2ND position	OFF	0V
					ON	Battery voltage
27	L/W	Headlamp high (RH)	ON	Lighting switch HIGH or PASS position	OFF	0V
					ON	Battery voltage
28	G	Headlamp high (LH)	ON	Lighting switch HIGH or PASS position	OFF	0V
					ON	Battery voltage
30	L	Headlamp low (LH)	ON	Lighting switch 2ND position	OFF	0V
					ON	Battery voltage
38	B	Ground	ON	—	0V	
48	L	CAN-H	—	—	—	
49	P	CAN-L	—	—	—	
60	B	Ground	ON	—	0V	

How to Proceed With Trouble Diagnosis

EKS008YQ

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-6, "System Description"](#).
3. Perform the Preliminary Check. Refer to [LT-21, "Preliminary Check"](#).
4. Check symptom and repair or replace the cause of malfunction.
5. Does the headlamp operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

HEADLAMP (FOR USA)

EKS008YR

Preliminary Check CHECK POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
	Ignition switch ACC or ON position	6
IPDM E/R	Battery	34
		36
		38
		40
		45

Refer to [LT-11, "Wiring Diagram — H/LAMP —"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

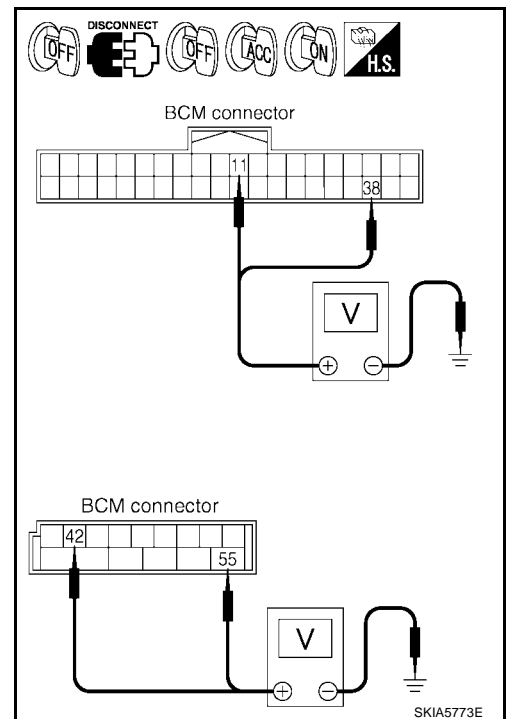
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM (+)		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	11 (V)	Ground	0V	Battery voltage	Battery voltage
	38 (R/W)		0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



HEADLAMP (FOR USA)

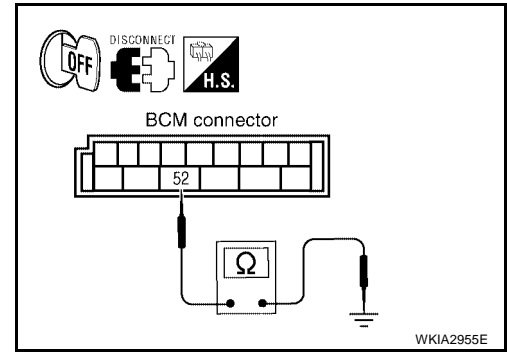
3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal (wire color)		
M19	52 (B)	Ground	Yes

OK or NG

- OK >> Inspection End.
- NG >> Check ground circuit harness.



HEADLAMP (FOR USA)

EKS008YS

CONSULT-II Function (BCM)

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

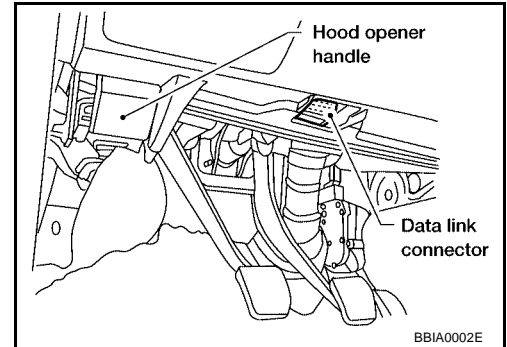
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR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

CONSULT-II OPERATION

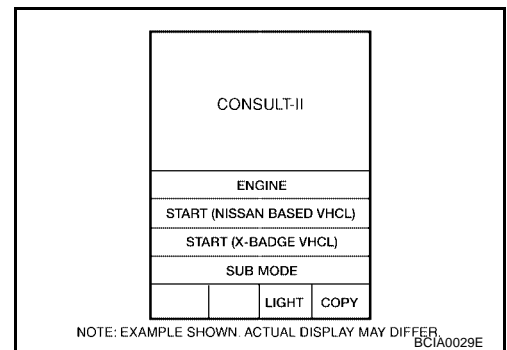
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

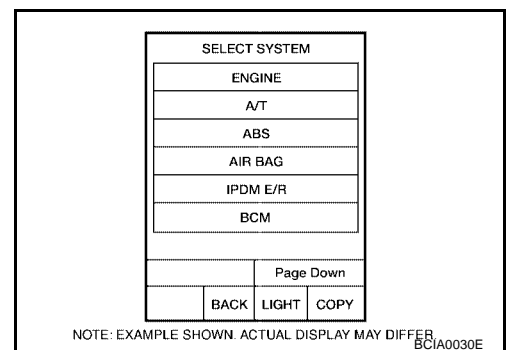
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".



3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



HEADLAMP (FOR USA)

4. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.

SELECT TEST ITEM			
HEAD LAMP			
WIPER			
FLASHER			
AIR CONDITIONER			
COMB SW			
BCM			
Scroll Up		Page Down	
BACK	LIGHT	COPY	
LKIA0183E			

WORK SUPPORT

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch item on "SELECT WORK ITEM" screen.
4. Touch "START".
5. Touch "CHANGE SETT".
6. The setting will be changed and "CUSTOMIZING COMPLETED" will be displayed.
7. Touch "END".

Display Item List

Item	Description	CONSULT-II	Factory setting
BATTERY SAVER SET	Exterior lamp battery saver control mode can be changed in this mode. Selects exterior lamp battery saver control mode between ON/OFF.	ON	×
		OFF	—

DATA MONITOR

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors individual signal.

4. Touch "START".
5. When "SELECTION FROM MENU" is selected, touch individual items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored.
6. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

Display Item List

Monitor item	Contents
IGN ON SW "ON/OFF"	Displays "IGN position (ON)/OFF, ACC position (OFF)" judged from the ignition switch signal.
ACC ON SW "ON/OFF"	Displays "ACC (ON)/OFF, Ignition OFF (OFF)" status judged from ignition switch signal.
HI BEAM SW "ON/OFF"	Displays status (high beam switch: ON/Others: OFF) of high beam switch judged from lighting switch signal.
HEAD LAMP SW 1 "ON/OFF"	Displays status (headlamp switch 1: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.
HEAD LAMP SW 2 "ON/OFF"	Displays status (headlamp switch 2: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.

HEADLAMP (FOR USA)

Monitor item		Contents
LIGHT SW 1ST	"ON/OFF"	Displays status (lighting switch 1st position: ON/Others: OFF) of lighting switch judged from lighting switch signal.
AUTO LIGHT SW	"ON/OFF"	Displays status of the lighting switch as judged from the lighting switch signal. (AUTO position: ON/Other than AUTO position: OFF)
PASSING SW	"ON/OFF"	Displays status (flash-to-pass switch: ON/Others: OFF) of flash-to-pass switch judged from lighting switch signal.
FR FOG SW	"ON/OFF"	Displays status (front fog lamp switch: ON/Others: OFF) of front fog lamp switch judged from lighting switch signal.
DOOR SW - DR	"ON/OFF"	Displays status of the front door LH as judged from the front door switch LH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW - AS	"ON/OFF"	Displays status of the front door RH as judged from the front door switch RH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW - RR	"ON/OFF"	Displays status of the rear door as judged from the rear door switch (RH) signal. (Door is open: ON/Door is closed: OFF)
DOOR SW - RL	"ON/OFF"	Displays status of the rear door as judged from the rear door switch (LH) signal. (Door is open: ON/Door is closed: OFF)
BACK DOOR SW	"ON/OFF"	Displays status of the back door as judged from the back door switch signal. (Door is open: ON/Door is closed: OFF)
TURN SIGNAL R	"ON/OFF"	Displays status (Turn right: ON/Others: OFF) as judged from lighting switch signal.
TURN SIGNAL L	"ON/OFF"	Displays status (Turn left: ON/Others: OFF) as judged from lighting switch signal.
ENGINE RUN ^{Note 1}	"ON/OFF"	Displays status (Engine running: ON/Others: OFF) as judged from engine status signal.
PKB SW ^{Note 1}	"ON/OFF"	Displays status (Parking brake switch: ON/Others: OFF) as judged from parking brake switch signal.
OPTICAL SENSOR	[0 - 5V]	Displays "ambient light (close to 5V when light/close to 0V when dark)" judged from optical sensor signal.

NOTE:

1. Vehicles without daytime light system may display this item, but cannot monitor it.

ACTIVE TEST

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Touch item to be tested and check operation of the selected item.
4. During the operation check, touching "BACK" deactivates the operation.

Display Item List

Test item	Description
TAIL LAMP	Allows tail lamp relay to operate by switching ON-OFF.
HEAD LAMP	Allows headlamp relay (HI, LO) to operate by switching ON-OFF.
FR FOG LAMP	Allows fog lamp relay to operate by switching ON-OFF.
CORNERING LAMP	Allows cornering lamp relay (RH, LH) to operate by switching ON-OFF.

SELF-DIAGNOSTIC RESULTS

Operation Procedure

1. Touch "BCM" on "SELECT TEST ITEM" screen.
2. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
3. Self-diagnostic results are displayed.

HEADLAMP (FOR USA)

Display Item List

Monitored item	CONSULT-II display	Description
CAN communication	CAN communication [U1000]	Malfunction is detected in CAN communication.
CAN communication system	CAN communication system 1 to 6 [U1000]	Malfunction is detected in CAN system.

CONSULT-II Function (IPDM E/R)

EKS008YT

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

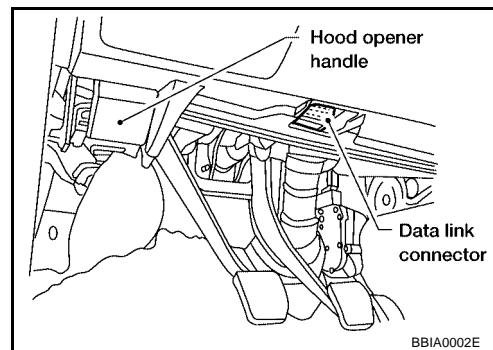
IPDM E/R diagnostic Mode	Description
SELF-DIAG RESULTS	Displays IPDM E/R self-diagnosis results.
DATA MONITOR	Displays IPDM E/R input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II OPERATION

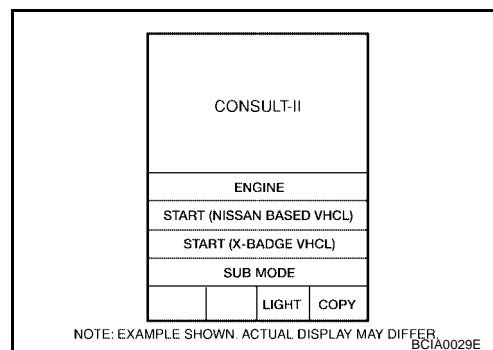
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

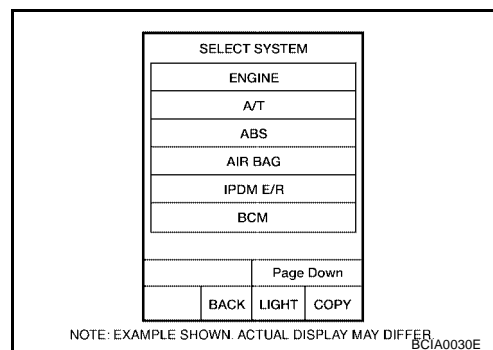
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".

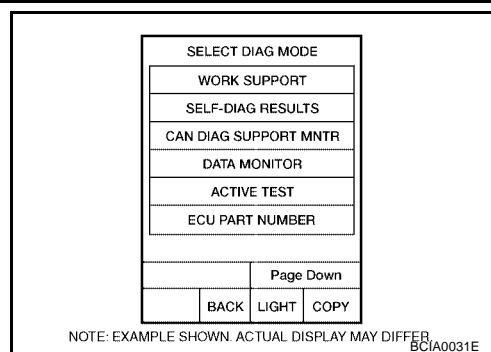


3. Touch "IPDM E/R" on "SELECT SYSTEM" screen. If "IPDM E/R" is not displayed, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



HEADLAMP (FOR USA)

- Select the desired part to be diagnosed on the "SELECT DIAG MODE" screen.



DATA MONITOR

Operation Procedure

- Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
- Touch "ALL SIGNALS", "MAIN SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

ALL SIGNALS	All items will be monitored.
MAIN SIGNALS	Monitor the predetermined item.
SELECTION FROM MENU	Select any item for monitoring.

- Touch "START".
- Touch the required monitoring item on "SELECTION FROM MENU". In "ALL SIGNALS", all items are monitored. In "MAIN SIGNALS", predetermined items are monitored.
- Touch "RECORD" while monitoring to record the status of the item being monitored. To stop recording, touch "STOP".

All Items, Main Items, Select Item Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
Parking, license plate and tail lamps request	TAIL&CLR REQ	ON/OFF	×	×	×	Signal status input from BCM
Headlamp low beam request	HL LO REQ	ON/OFF	×	×	×	Signal status input from BCM
Headlamp high beam request	HL HI REQ	ON/OFF	×	×	×	Signal status input from BCM
Cornering lamp	CRNRNG LMP REQ	ON/OFF	×	–	×	Signal status input from BCM
Front fog lamps request	FR FOG REQ	ON/OFF	×	×	×	Signal status input from BCM

NOTE:

Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is at ACC, the display may not be correct.

ACTIVE TEST

Operation Procedure

- Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
- Touch item to be tested, and check operation.
- Touch "START".
- Touch "STOP" while testing to stop the operation.

HEADLAMP (FOR USA)

Test item	CONSULT-II screen display	Description
Tail lamp relay output	TAIL LAMP	Allows tail lamp relay to operate by switching operation ON-OFF at your option
Headlamp relay (HI, LO) output	LAMPS	Allows headlamp relay (HI, LO) to operate by switching operation (OFF, HI, LO) at your option (Head lamp high beam repeats ON-OFF every 1 second).
Front fog lamp relay (FOG) output		Allows fog lamp relay (FOG) to operate by switching operation ON-OFF at your option
Cornering lamp relay (RH, LH) output	CORNERING LAMP	Allows cornering lamp relay (RH, LH) to operate by switching operation ON-OFF at your option

Headlamp Does Not Change To High Beam (Both Sides)

EKS008YU

1. CHECK COMBINATION SWITCH INPUT SIGNAL

④ With CONSULT-II

Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "HI BEAM SW" turns ON-OFF linked with operation of lighting switch.

**When lighting switch is in : HI BEAM SW ON
HIGH position**

⊗ Without CONSULT-II

Refer to [LT-126, "Combination Switch Inspection"](#).

OK or NG

OK >> GO TO 2.

NG >> Check lighting switch. Refer to [LT-126, "Combination Switch Inspection"](#).

DATA MONITOR	
MONITOR	
HI BEAM SW	ON

SKIA4193E

2. HEADLAMP ACTIVE TEST

④ With CONSULT-II

1. Select "BCM" on CONSULT-II, and select "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Select "HEAD LAMP" on "SELECT TEST ITEM" screen.
4. Touch "HI" on "ACTIVE TEST" screen.
5. Make sure headlamp high beam operates.

**Headlamp high beam should operate
(Headlamp high beam stay on steady).**

⊗ Without CONSULT-II

1. Start auto active test. Refer to [PG-21, "Auto Active Test"](#).
2. Make sure headlamp high beam operates.

Headlamp high beam should operate.

OK or NG

OK >> GO TO 3.

NG >> GO TO 4.

ACTIVE TEST			
LAMPS		OFF	
		HI	
	LO		FOG
MODE	BACK	LIGHT	COPY

SKIA5774E

HEADLAMP (FOR USA)

3. CHECK IPDM E/R

1. Select "IPDM E/R" on CONSULT-II, and select "DATA MONITOR" on "SELECT DIAG MODE" screen.
2. Make sure "HL LO REQ" and "HL HI REQ" turns ON when lighting switch is in HIGH position.

When lighting switch is in HIGH position : HL LO REQ ON
 : HL HI REQ ON

OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
- NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).

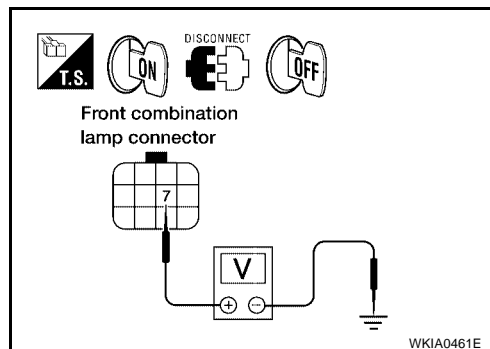
DATA MONITOR			
MONITOR			
HL LO REQ		ON	
HL HI REQ		ON	
		Page Down	
		RECORD	
MODE	BACK	LIGHT	COPY

SKIA5775E

4. CHECK HEADLAMP INPUT SIGNAL

Ⓜ With CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH and LH connectors.
3. Turn ignition switch ON.
4. Select "BCM" on CONSULT-II, and select "HEAD LAMP" on "SELECT TEST ITEM" screen.
5. Select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
6. Select "HEAD LAMP" on "SELECT TEST ITEM" screen.
7. Touch "HI" on "ACTIVE TEST" screen.
8. When headlamp high beam is operating, check voltage between front combination lamp RH and LH harness connectors and ground (headlamp high beam stays ON steady).



ⓧ Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH and LH connectors.
3. Start auto active test. Refer to [PG-21, "Auto Active Test"](#).
4. When headlamp high beam is operating, check voltage between front combination lamp RH and LH harness connectors and ground.

Front combination lamp			(-)	Voltage
(+)				
Connector		Terminal (wire color)	Ground	Battery voltage
RH	E107	7 (L/W)		
LH	E11	7 (G)		

OK or NG

- OK >> GO TO 6.
- NG >> GO TO 5.

HEADLAMP (FOR USA)

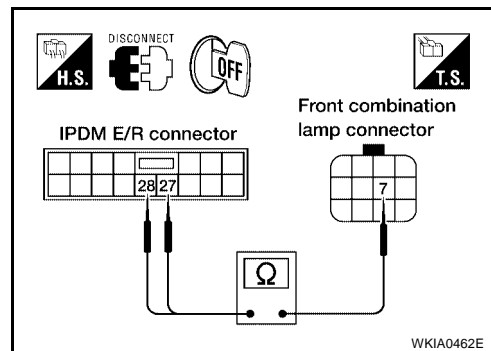
5. CHECK HEADLAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector E122 terminal 27 (L/W) and front combination lamp RH harness connector E107 terminal 7 (L/W).

27 (L/W) - 7 (L/W) : Continuity should exist.

4. Check continuity between IPDM E/R harness connector E122 terminal 28 (G) and front combination lamp LH harness connector E11 terminal 7 (G).

28 (G) - 7 (G) : Continuity should exist.



OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

NG >> Repair harness or connector.

6. CHECK HEADLAMP GROUND

1. Check continuity between front combination lamp RH harness connector E107 terminal 8 (B) and ground.

8 (B) - Ground : Continuity should exist.

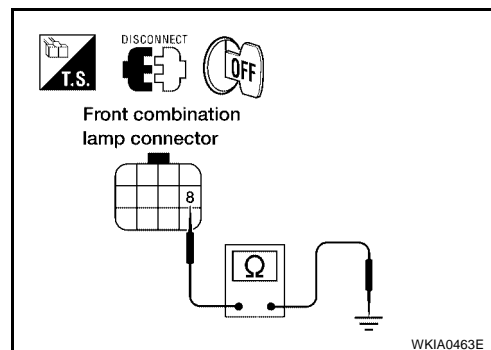
2. Check continuity between front combination lamp LH harness connector E11 terminal 8 (B) and ground.

8 (B) - Ground : Continuity should exist.

OK or NG

OK >> Replace headlamp assembly. Refer to [LT-41, "Combination Lamp Removal and Installation"](#).

NG >> Repair harness or connector.



Headlamp Does Not Change To High Beam (One Side)

EKS008YV

1. CHECK HEADLAMP INPUT SIGNAL

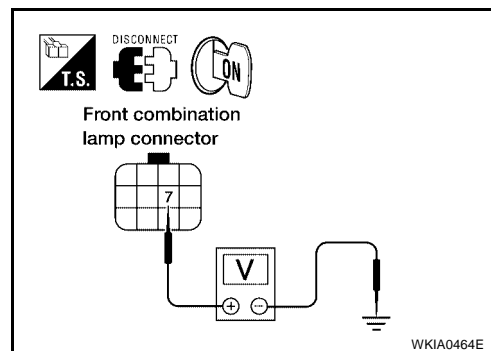
1. Disconnect front combination lamp RH or LH connector.
2. Turn ignition switch ON.
3. Lighting switch is turned to HIGH position.
4. Check voltage between front combination lamp RH or LH harness connector and ground.

Front combination lamp			(-)	Voltage
(+)				
Connector		Terminal (wire color)		
RH	E107	7 (L/W)	Ground	Battery voltage
LH	E11	7 (G)		

OK or NG

OK >> GO TO 3.

NG >> GO TO 2.



HEADLAMP (FOR USA)

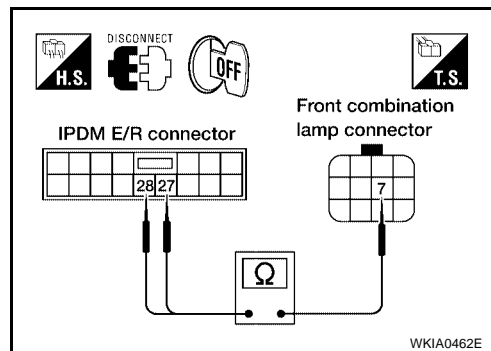
2. CHECK HEADLAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector E122 terminal 27 (L/W) and front combination lamp RH harness connector E107 terminal 7 (L/W).

27 (L/W) - 7 (L/W) : Continuity should exist.

4. Check continuity between IPDM E/R harness connector E122 terminal 28 (G) and front combination lamp LH harness connector E11 terminal 7 (G).

28 (G) - 7 (G) : Continuity should exist.



OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#) .
 NG >> Repair harness or connector.

3. CHECK HEADLAMP GROUND

1. Check continuity between front combination lamp RH harness connector E107 terminal 8 (B) and ground.

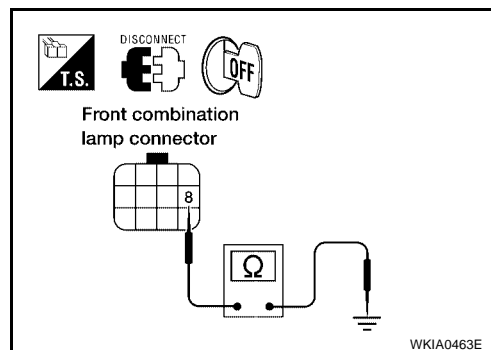
8 (B) - Ground : Continuity should exist.

2. Check continuity between front combination lamp LH harness connector E11 terminal 8 (B) and ground.

8 (B) - Ground : Continuity should exist.

OK or NG

- OK >> Replace headlamp assembly. Refer to [LT-41, "Combination Lamp Removal and Installation"](#) .
 NG >> Repair harness or connector.



High Beam Indicator Lamp Does Not Illuminate

EKS008YW

1. CHECK BULB

Check bulb of high beam indicator lamp.

OK or NG

- OK >> Replace combination meter. Refer to [DI-29, "Removal and Installation of Combination Meter"](#) .
 NG >> Replace indicator bulb.

Headlamp Low Beam Does Not Illuminate (Both Sides)

EKS008YX

1. CHECK COMBINATION SWITCH INPUT SIGNAL

Ⓜ With CONSULT-II

Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "HEAD LAMP SW 1" and "HEAD LAMP SW 2" turns ON-OFF linked with operation of lighting switch.

**When lighting switch is in 2ND position : HEAD LAMP SW 1 ON
 : HEAD LAMP SW 2 ON**

ⓧ Without CONSULT-II

Refer to [LT-126, "Combination Switch Inspection"](#) .

OK or NG

- OK >> GO TO 2.
 NG >> Check lighting switch. Refer to [LT-126, "Combination Switch Inspection"](#) .

DATA MONITOR	
MONITOR	
HEAD LAMP SW 1	ON
HEAD LAMP SW 2	ON
Page Down	
RECORD	
MODE	BACK LIGHT COPY

WKIA4262E

HEADLAMP (FOR USA)

2. HEADLAMP ACTIVE TEST

④ With CONSULT-II

1. Select "IPDM E/R" on CONSULT-II, and select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
2. Select "LAMPS" on "SELECT TEST ITEM" screen.
3. Touch "LO" on "ACTIVE TEST" screen.
4. Make sure headlamp low beam operates.

Headlamp low beam should operate.

⊗ Without CONSULT-II

1. Start auto active test. Refer to [PG-21, "Auto Active Test"](#).
2. Make sure headlamp low beam operates.

Headlamp low beam should operate.

ACTIVE TEST			
LAMPS		OFF	
		HI	
LO		FOG	
MODE	BACK	LIGHT	COPY

SKIA5774E

OK or NG

- OK >> GO TO 3.
NG >> GO TO 4.

3. CHECK IPDM E/R

1. Select "IPDM E/R" on CONSULT-II, and select "DATA MONITOR" on "SELECT DIAG MODE" screen.
2. Make sure "HL LO REQ" turns ON when lighting switch is in 2ND position.

When lighting switch is in 2ND position : HL LO REQ ON

OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
- NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).

DATA MONITOR			
MONITOR			
HL LO REQ		ON	
		Page Down	
RECORD			
MODE	BACK	LIGHT	COPY

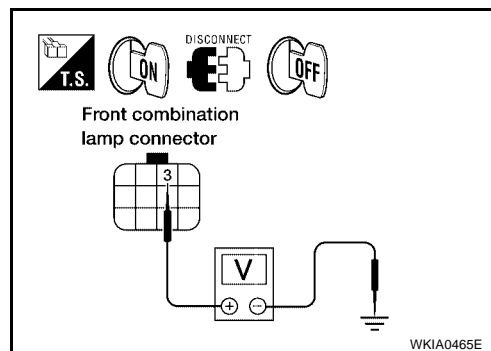
SKIA5780E

HEADLAMP (FOR USA)

4. CHECK HEADLAMP INPUT SIGNAL

Ⓜ With CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH and LH connectors.
3. Turn ignition switch ON.
4. Select "IPDM E/R" on CONSULT-II, and select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
5. Select "LAMPS" on "SELECT TEST ITEM" screen.
6. Touch "LO" on "ACTIVE TEST" screen.
7. When headlamp low beam is operating, check voltage between front combination lamp RH and LH harness connectors and ground.



ⓧ Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH and LH connectors.
3. Start auto active test. Refer to [PG-21, "Auto Active Test"](#).
4. When headlamp low beam is operating, check voltage between front combination lamp RH and LH harness connectors and ground.

Front combination lamp (+)			(-)	Voltage
Connector	Terminal (wire color)			
RH	E107	3 (R/Y)	Ground	Battery voltage
LH	E11	3 (L)		

OK or NG

- OK >> GO TO 6.
 NG >> GO TO 5.

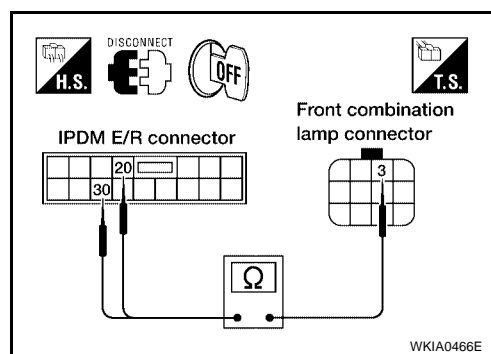
5. CHECK HEADLAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector E122 terminal 20 (R/Y) and front combination lamp RH harness connector E107 terminal 3 (R/Y).

20 (R/Y) - 3 (R/Y) : Continuity should exist.

4. Check continuity between IPDM E/R harness connector E122 terminal 30 (L) and front combination lamp LH harness connector E11 terminal 3 (L).

30 (L) - 3 (L) : Continuity should exist.



OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
 NG >> Repair harness or connector.

HEADLAMP (FOR USA)

6. CHECK HEADLAMP GROUND

1. Turn ignition switch OFF.
2. Check continuity between front combination lamp RH harness connector E107 terminal 4 (B) and ground.

4 (B) - Ground : Continuity should exist.

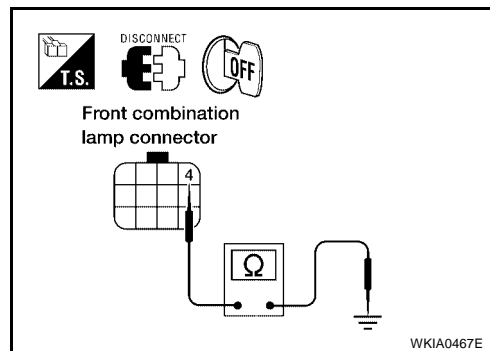
3. Check continuity between front combination lamp LH harness connector E11 terminal 4 (B) and ground.

4 (B) - Ground : Continuity should exist.

OK or NG

OK >> Check headlamp harness and connectors, ballasts (HID control unit), and xenon bulbs. Refer to [LT-38, "Xenon Headlamp Trouble Diagnosis"](#) .

NG >> Repair harness or connector.



Headlamp Low Beam Does Not Illuminate (One Side)

EKS008YY

1. CHECK BULB

Check ballasts (HID control unit) and xenon bulb of lamp which does not illuminate. Refer to [LT-38, "Xenon Headlamp Trouble Diagnosis"](#) .

OK or NG

OK >> GO TO 2.

NG >> Repair malfunctioning part.

2. CHECK HEADLAMP CIRCUIT

1. Disconnect IPDM E/R connector and front combination lamp RH or LH connector.

2. Check continuity between IPDM E/R harness connector E122 terminal 20 (R/Y) and front combination lamp RH harness connector E107 terminal 3 (R/Y).

20 (R/Y) - 3 (R/Y) : Continuity should exist.

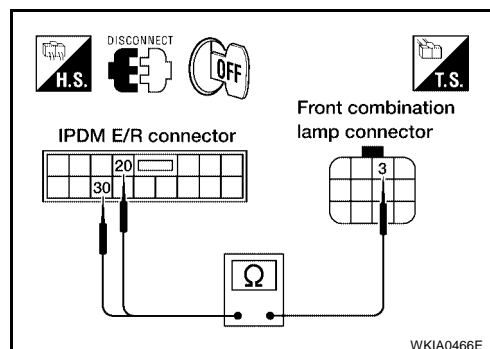
3. Check continuity between IPDM E/R harness connector E122 terminal 30 (L) and front combination lamp LH harness connector E11 terminal 3 (L).

30 (L) - 3 (L) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.



3. CHECK HEADLAMP GROUND

1. Check continuity between front combination lamp RH harness connector E107 terminal 4 (B) and ground.

4 (B) - Ground : Continuity should exist.

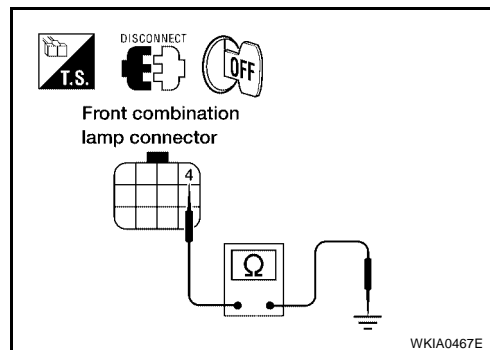
2. Check continuity between front combination lamp LH harness connector E11 terminal 4 (B) and ground.

4 (B) - Ground : Continuity should exist.

OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#) .

NG >> Repair harness or connector.



HEADLAMP (FOR USA)

EKS008YZ

Headlamp RH Low Beam and High Beam Does Not Illuminate

1. CHECK BULB

Inspect ballasts (HID control unit) and xenon bulb of lamp which does not illuminate. Refer to [LT-38, "Xenon Headlamp Trouble Diagnosis"](#).

OK or NG

- OK >> GO TO 2.
- NG >> Repair malfunctioning part.

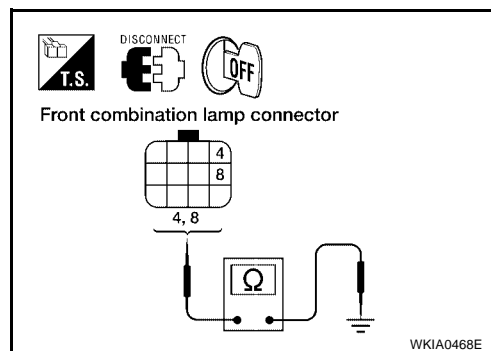
2. CHECK HEADLAMP GROUNDS

1. Disconnect front combination lamp RH connector.
2. Check continuity between front combination lamp RH harness connector E107 terminal 4 (B), 8 (B) and ground.

4 (B), 8 (B) - Ground : Continuity should exist.

OK or NG

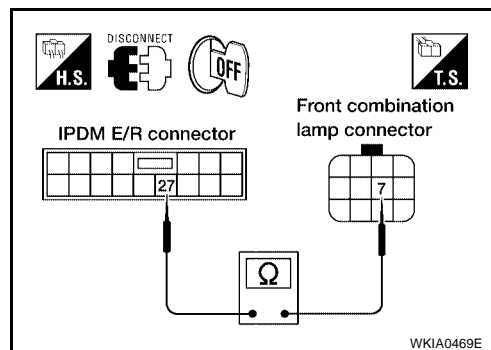
- OK >> GO TO 3.
- NG >> Repair harness or connector.



3. CHECK HEADLAMP CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E122 terminal 27 (L/W) and front combination lamp RH harness connector E107 terminal 7 (L/W).

27 (L/W) - 7 (L/W) : Continuity should exist.

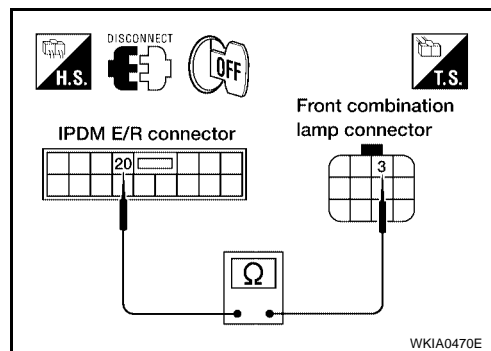


3. Check continuity between IPDM E/R harness connector E122 terminal 20 (R/Y) and front combination lamp RH harness connector E107 terminal 3 (R/Y).

20 (R/Y) - 3 (R/Y) : Continuity should exist.

OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
- NG >> Repair harness or connector.



Headlamp LH Low Beam and High Beam Does Not Illuminate

EKS008Z0

1. CHECK BULB

Inspect ballasts (HID control unit) and xenon bulb of lamp which does not illuminate. Refer to [LT-38, "Xenon Headlamp Trouble Diagnosis"](#).

OK or NG

- OK >> GO TO 2.
- NG >> Repair malfunctioning part.

HEADLAMP (FOR USA)

2. CHECK HEADLAMP GROUND

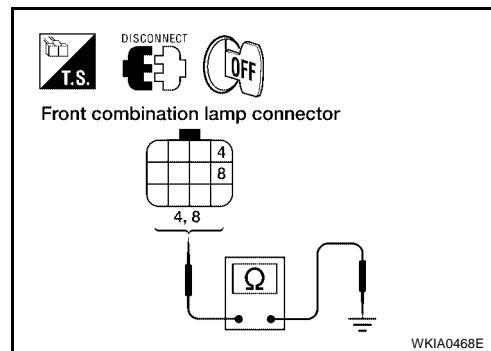
1. Disconnect front combination lamp LH connector.
2. Check continuity between front combination lamp LH harness connector E11 terminal 4 (B), 8 (B) and ground.

4 (B), 8 (B) - Ground : Continuity should exist.

OK or NG

OK >> GO TO 3.

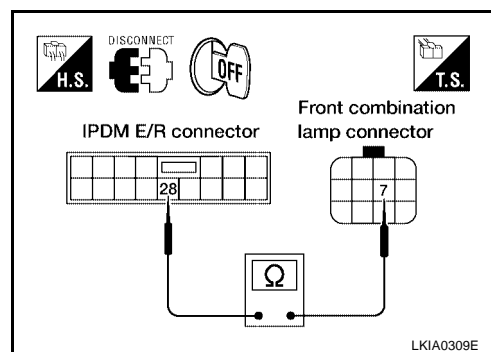
NG >> Repair harness or connector.



3. CHECK HEADLAMP CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector E122 terminal 28 (G) and front combination lamp LH harness connector E11 terminal 7 (G).

28 (G) - 7 (G) : Continuity should exist.



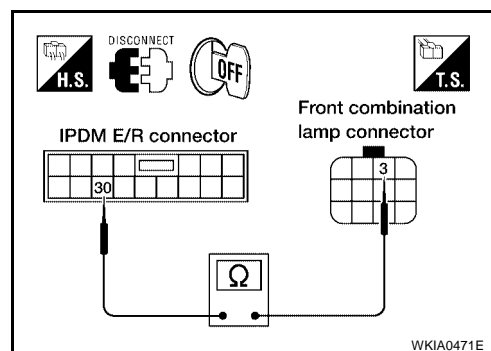
3. Check continuity between IPDM E/R harness connector E122 terminal 30 (L) and front combination lamp LH harness connector E11 terminal 3 (L).

30 (L) - 3 (L) : Continuity should exist.

OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

NG >> Repair harness or connector.



Headlamps Do Not Turn OFF

1. CHECK HEADLAMP TURN OFF

Make sure that lighting switch is OFF. And make sure is headlamp turns off when ignition switch is turned OFF.

OK or NG

OK >> GO TO 3.

NG >> GO TO 2.

HEADLAMP (FOR USA)

2. CHECK COMBINATION SWITCH INPUT SIGNAL

Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "HEAD LAMP SW 1" and "HEAD LAMP SW 2" turns ON-OFF linked with operation of lighting switch.

**When lighting switch is in OFF position : HEAD LAMP SW 1 OFF
: HEAD LAMP SW 2 OFF**

OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

NG >> Check lighting switch. Refer to [LT-126, "Combination Switch Inspection"](#).

DATA MONITOR	
MONITOR	
HEAD LAMP SW 1	OFF
HEAD LAMP SW 2	OFF

SKIA5200E

3. CHECKING CAN COMMUNICATIONS BETWEEN BCM AND IPDM E/R

Select "BCM" on CONSULT-II and perform self-diagnosis for BCM.

Display of self-diagnosis results

NO DTC>> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

CAN COMM CIRCUIT>> Refer to [BCS-13, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#).

SELF-DIAG RESULTS			
DTC RESULTS		TIME	
CAN COMM CIRCUIT [U1000]		PAST	
ERASE		PRINT	
MODE	BACK	LIGHT	COPY

SKIA1039E

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HEADLAMP (FOR USA)

CAUTION:

EKS008Z2

- Installation or removal of the connector must be done with the lighting switch OFF.
- When the lamp is illuminated (when the lighting switch is ON), do not touch the harness, HID control unit, inside of the lamp, or the lamp metal parts.
- To check illumination, temporarily install lamp in the vehicle. Be sure to connect power at the vehicle-side connector.
- If the error can be traced directly to the electrical system, first check for items such as blown fuses and fusible links, broken wires or loose connectors, pulled-out terminals, and improper connections.
- Do not work with wet hands.
- Using a tester for HID control unit circuit trouble diagnosis is prohibited.
- Disassembling the HID control unit or harnesses (bulb socket harness, ballast harness) is prohibited.
- Immediately after illumination, the light intensity and color will fluctuate, but there is nothing wrong.
- When the bulb has reached the end of its lifetime, the brightness may drop significantly, it may flash repeatedly, or the light may turn a reddish color.

Xenon Headlamp Trouble Diagnosis

EKS008Z3

1. CHECK 1: XENON HEADLAMP LIGHTING

Install normal xenon bulb to corresponding xenon bulb headlamp and check if lamp lights up.

OK or NG

- OK >> Replace xenon bulb. Refer to [LT-41, "HEADLAMP"](#).
- NG >> GO TO 2.

2. CHECK 2: XENON HEADLAMP LIGHTING

Install normal HID control unit to corresponding xenon headlamp and check if lamp lights up.

OK or NG

- OK >> Replace HID control unit.
- NG >> GO TO 3.

3. CHECK 3: XENON HEADLAMP LIGHTING

Install normal xenon lamp housing assembly to corresponding xenon headlamp and check if lamp lights up.

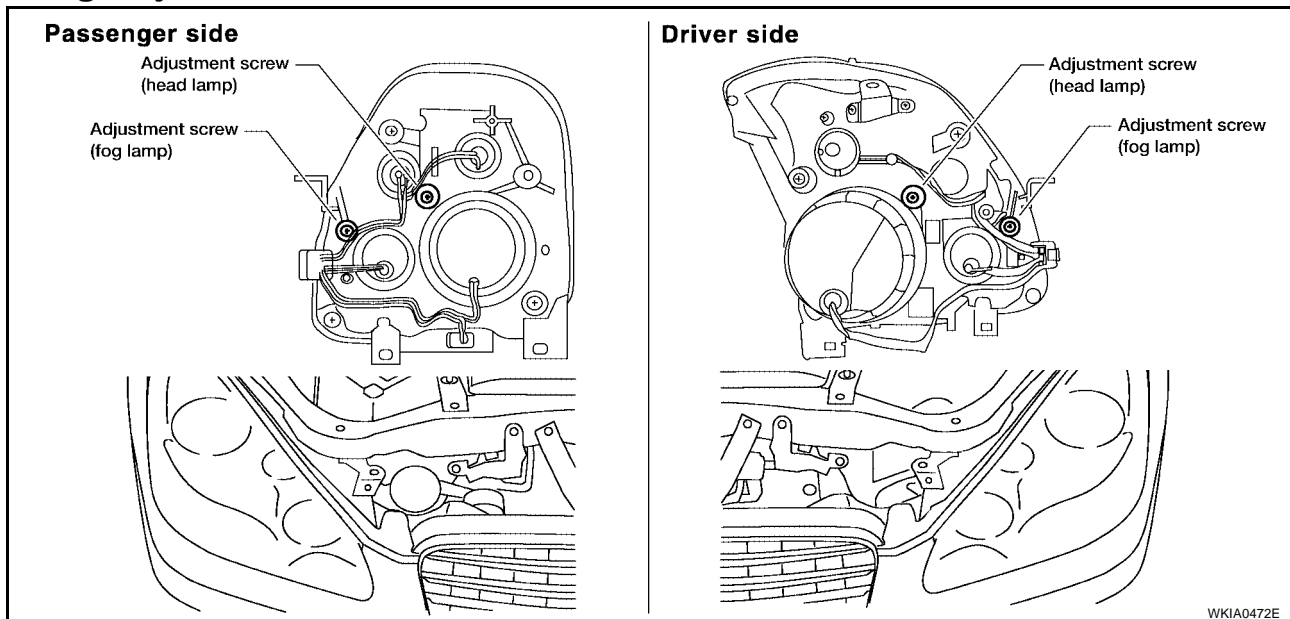
OK or NG

- OK >> Malfunction in starter (boosting circuit) in xenon headlamp housing. (Replace xenon headlamp housing assembly.)
- NG >> Inspection End.

HEADLAMP (FOR USA)

Aiming Adjustment

EKS008Z4



WKIA0472E

For details, refer to the regulations in your area.

Before performing aiming adjustment, check the following.

1. Ensure all tires are inflated to correct pressure.
2. Place vehicle and screen on level surface.
3. 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.
4. Confirm spare tire, jack and tools are properly stowed.

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HEADLAMP (FOR USA)

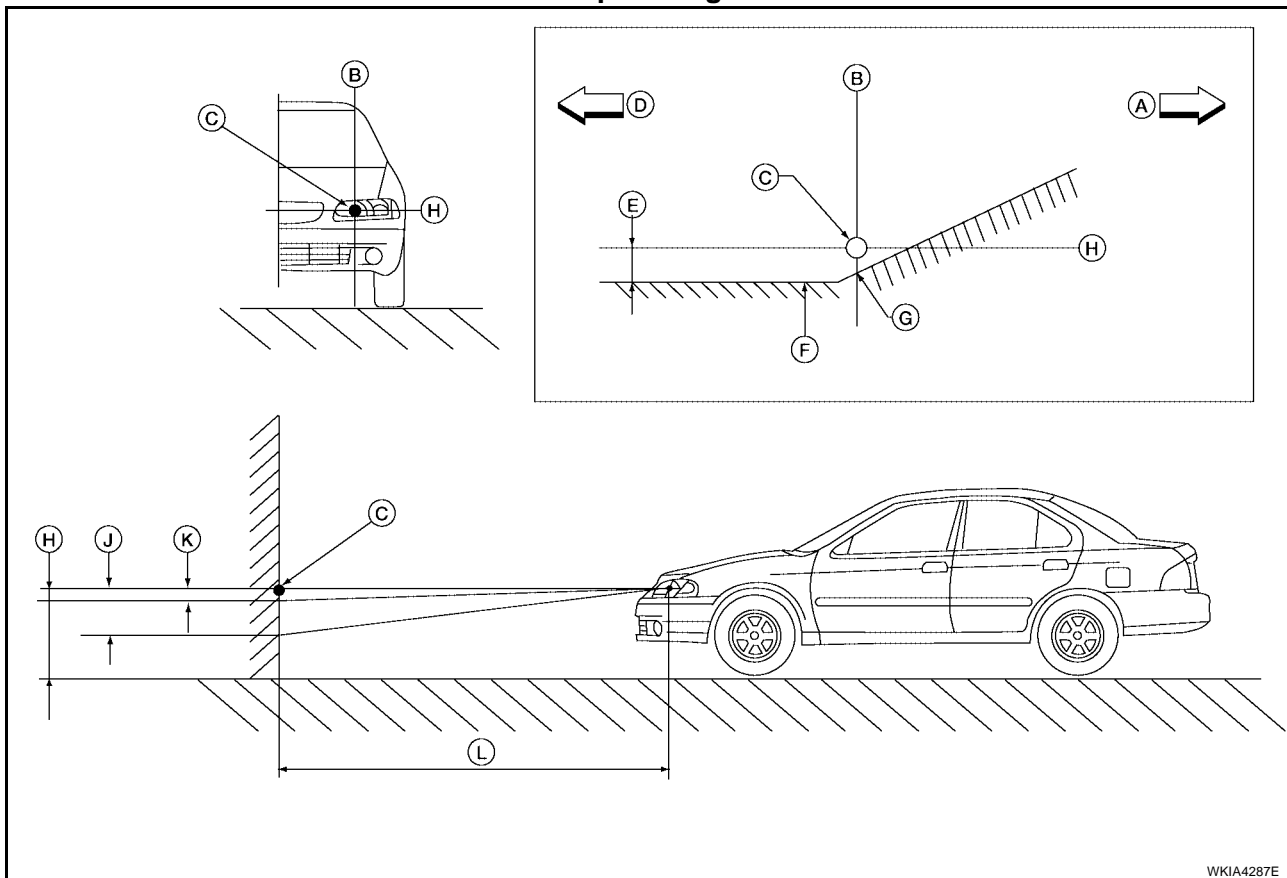
LOW BEAM AND HIGH BEAM

NOTE:

Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

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

Headlamp Aiming Screen



WKIA4287E

- | | | |
|--|--|--|
| A. Right | B. Vertical center line of headlamp | C. Horizontal aiming center line of headlamp |
| D. Left | E. Vertical aiming cutoff point (refer to aiming specifications table) | F. Cutoff line for vertical aiming evaluation |
| G. Acceptable vertical cutoff setting at horizontal aiming point | H. Horizontal center line of headlamp | J. Maximum acceptable vertical aiming point (refer to aiming specifications table) |
| K. Minimum acceptable vertical aiming point (refer to aiming specifications table) | L. Aiming distance from center of headlamp to aiming screen | |

Aiming Specifications for Halogen and Xenon Headlamps

Description	Halogen Headlamp	Xenon Headlamp
Vertical aiming cutoff point (E)	53.2 mm (2.094 in.)	60 mm (2.362 in.)
Minimum acceptable vertical aiming point (K)	39.9 mm (1.571 in.)	53.2 mm (2.094 in.)
Maximum acceptable vertical aiming point (J)	66.5 mm (1.571 in.)	66.5 mm (1.571 in.)

If the vehicle front body has been repaired and/or the combination lamp assembly has been replaced, check aiming. Use the aiming chart shown in the figure.

- **Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust combination lamps accordingly.**

HEADLAMP (FOR USA)

EKS008Z5

Bulb Replacement HEADLAMP

1. Disconnect negative battery cable.
2. Turn the headlamp bulb plastic cap counterclockwise to unlock and remove it.
3. Turn the bulb socket counterclockwise to unlock and remove it (xenon).
4. Disconnect the electrical connectors from the bulb terminals (halogen).
5. Unlock the retaining springs and remove the bulb.
6. Release the ignitor and remove from the plastic cap (xenon).
7. Turn the high beam lamp socket counterclockwise to unlock and remove it.
8. Turn the front park/turn signal lamp bulb socket counterclockwise and unlock it.

Installation is in the reverse order of removal.

CAUTION:

After installing the bulb, be sure to install the plastic cap securely to ensure watertightness.

FRONT TURN SIGNAL LAMP

1. Remove the combination lamp. Refer to [LT-41, "Combination Lamp Removal and Installation"](#).
2. Turn the bulb socket counterclockwise to unlock it.
3. Push and turn the bulb counterclockwise to remove it.

Installation is in the reverse order of removal.

CAUTION:

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


Combination Lamp Removal and Installation

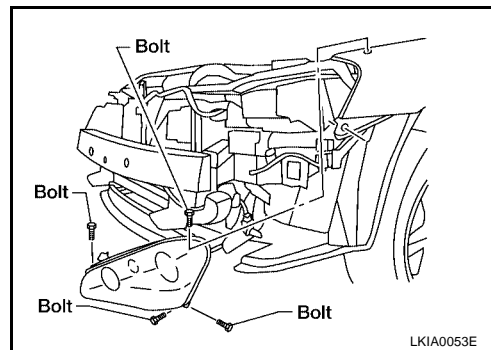
EKS008Z6

1. Remove the front fascia. Refer to [EI-14, "Removal and Installation"](#).
2. Ensure lighting switch is OFF.
3. Disconnect the negative battery cable.
4. Remove the combination lamp mounting bolts.
5. Pull the combination lamp up and toward the front of the vehicle, disconnect connector and remove from vehicle.

Installation is in the reverse order of removal.

Combination lamp mounting bolts

: 4.4 - 6.4 N·m (0.45 - 0.65 kg·m, 39 - 56 in·lb)



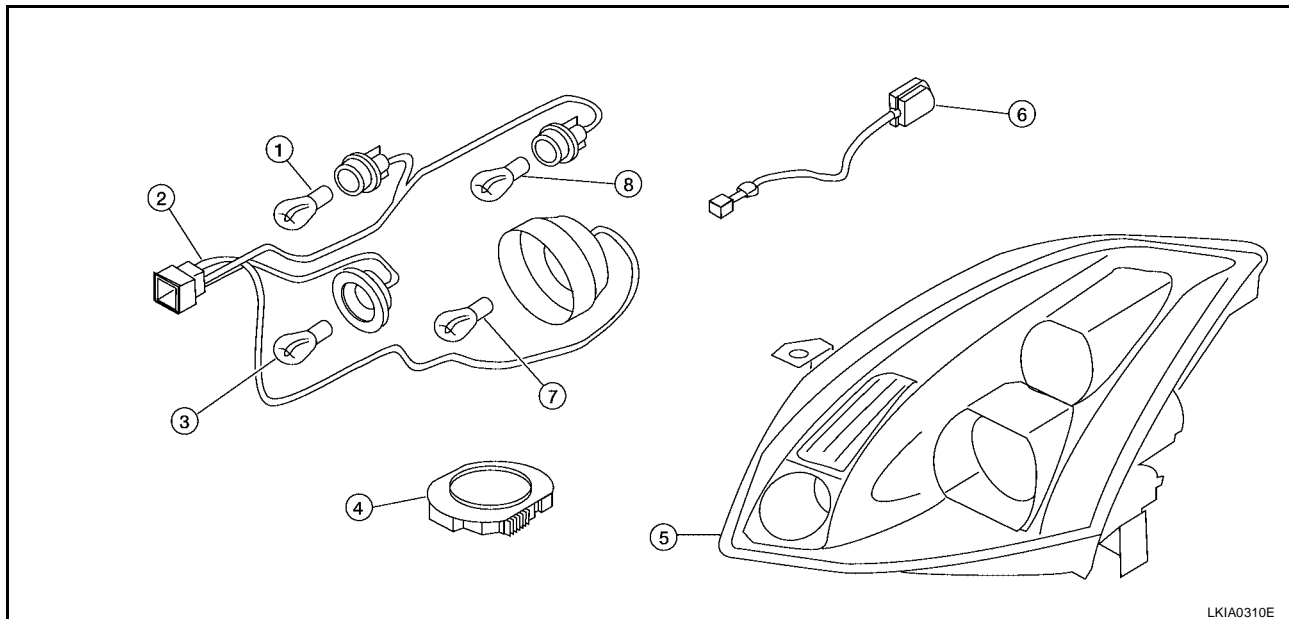
HEADLAMP (FOR USA)

Disassembly and Assembly

EKS008Z7

DISASSEMBLY

Xenon Type



LKIA0310E

1. Daytime light bulb (Canada only)

2. Wiring harness

3. Front fog lamp bulb

4. Ballast

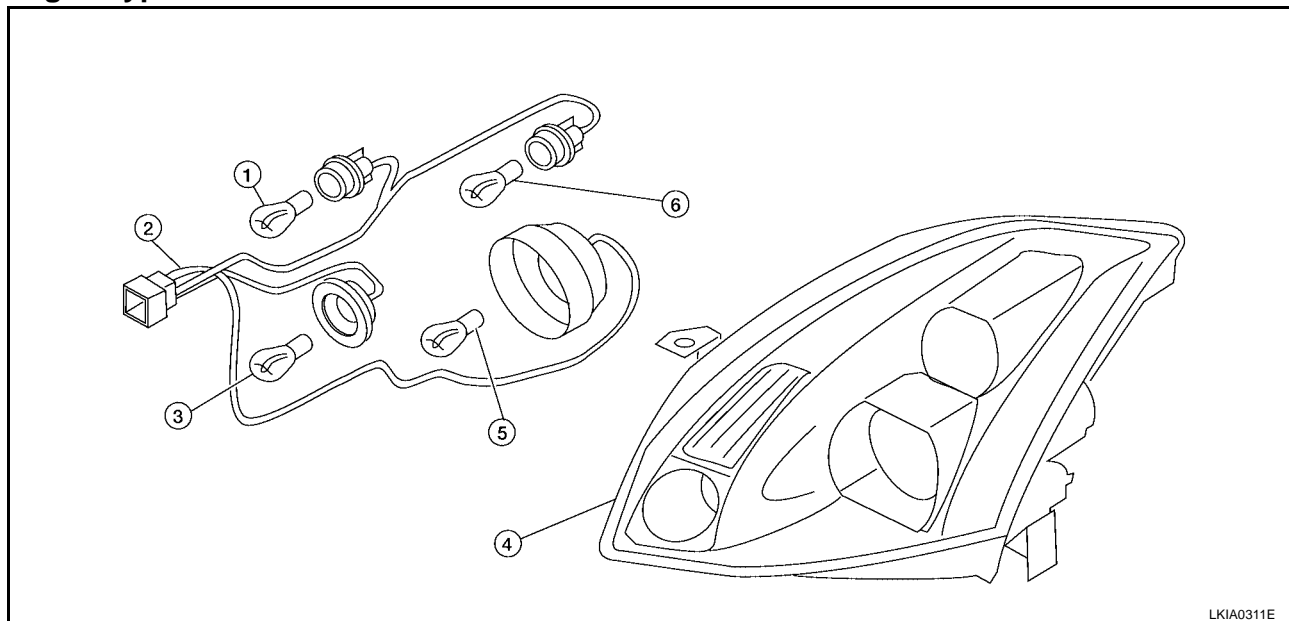
5. Combination lamp

6. Ignitor

7. Xenon bulb

8. Front park/turn signal lamp bulb

Halogen Type



LKIA0311E

1. Daytime light bulb (Canada only)

2. Wiring harness

3. Front fog lamp bulb

4. Combination lamp

5. Halogen bulb

6. Front park/turn signal lamp bulb

1. Turn the headlamp bulb plastic cap counterclockwise to unlock and remove it.
2. Turn the bulb socket counterclockwise to unlock and remove it (xenon).
3. Disconnect the electrical connectors from the bulb terminals (halogen).
4. Unlock the retaining springs and remove the bulb.
5. Release the ignitor and remove from the plastic cap (xenon).
6. Turn the high beam lamp socket counterclockwise to unlock and remove it.

HEADLAMP (FOR USA)

7. Turn the front park/turn signal lamp bulb socket counterclockwise and unlock it.
8. Remove the front park/turn signal lamp bulb from its socket.
9. Turn the front fog lamp bulb socket counterclockwise and unlock it.
10. Remove the front fog lamp bulb from its socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

- After installing the xenon bulb, be sure to install the bulb socket and plastic cap securely to ensure watertightness.

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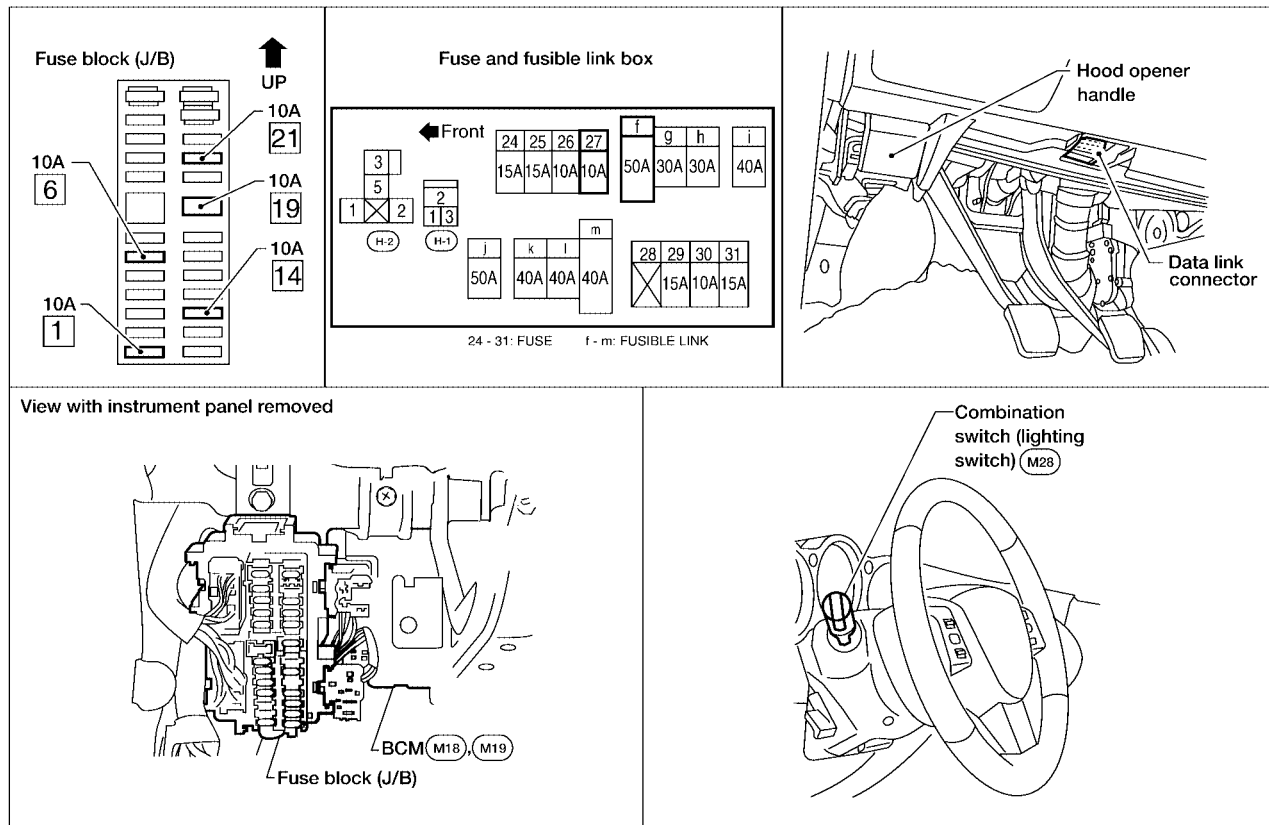
HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

PFP:26010

Component Parts and Harness Connector Location

EKS008Z8



WKIA2956E

System Description

EKS008Z9

Daytime light system turns on daytime light lamps while driving. Daytime light lamps are not turned on if engine is activated with parking brake on. Take off parking brake to turn on daytime light lamps. The lamps turn off when lighting switch is in the 2ND position or AUTO position (Headlamp is "ON") and when lighting switch is in the PASSING position. (Daytime light lamps are not turned off only by parking brake itself.) A parking brake signal and engine run or stop signal are sent to BCM (body control module) by CAN communication line.

OUTLINE

Power is supplied at all times

- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to combination meter terminal 24, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42, and
- through 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse (No. 27, located in the fuse and fusible link box)
- to daytime light relay terminals 2 and 3.

When the ignition switch is in ON or START position, power is supplied

- through 10A fuse [No. 14, located in the fuse block (J/B)]
- to combination meter terminal 23, and
- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38.

Ground is supplied

- to combination meter terminals 10, 11 and 12

Revision: July 2005

LT-44

2005 Maxima

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

- to BCM terminal 52
- through grounds M57, M61 and M79.

A

DAYTIME LIGHT OPERATION

With the engine running, the lighting switch in the OFF or 1ST position and parking brake released, power is supplied

B

- through daytime light relay terminal 1
- to combination meter terminal 19
- through daytime light relay terminal 5
- to front combination lamp LH and RH terminal 9.

C

Ground is supplied

D

- to combination meter terminals 10, 11 and 12
- through grounds M57, M61 and M79, and
- to front combination lamp RH and LH terminal 10
- through grounds E15 and E24.

E

With power and ground supplied, the daytime lights illuminate.

F

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#) .

G

AUTO LIGHT OPERATION

For auto light operation, refer to [LT-60, "System Description"](#) in AUTO LIGHT SYSTEM.

CAN Communication System Description

EKS008ZA

H

Refer to [LAN-7, "CAN COMMUNICATION"](#) .

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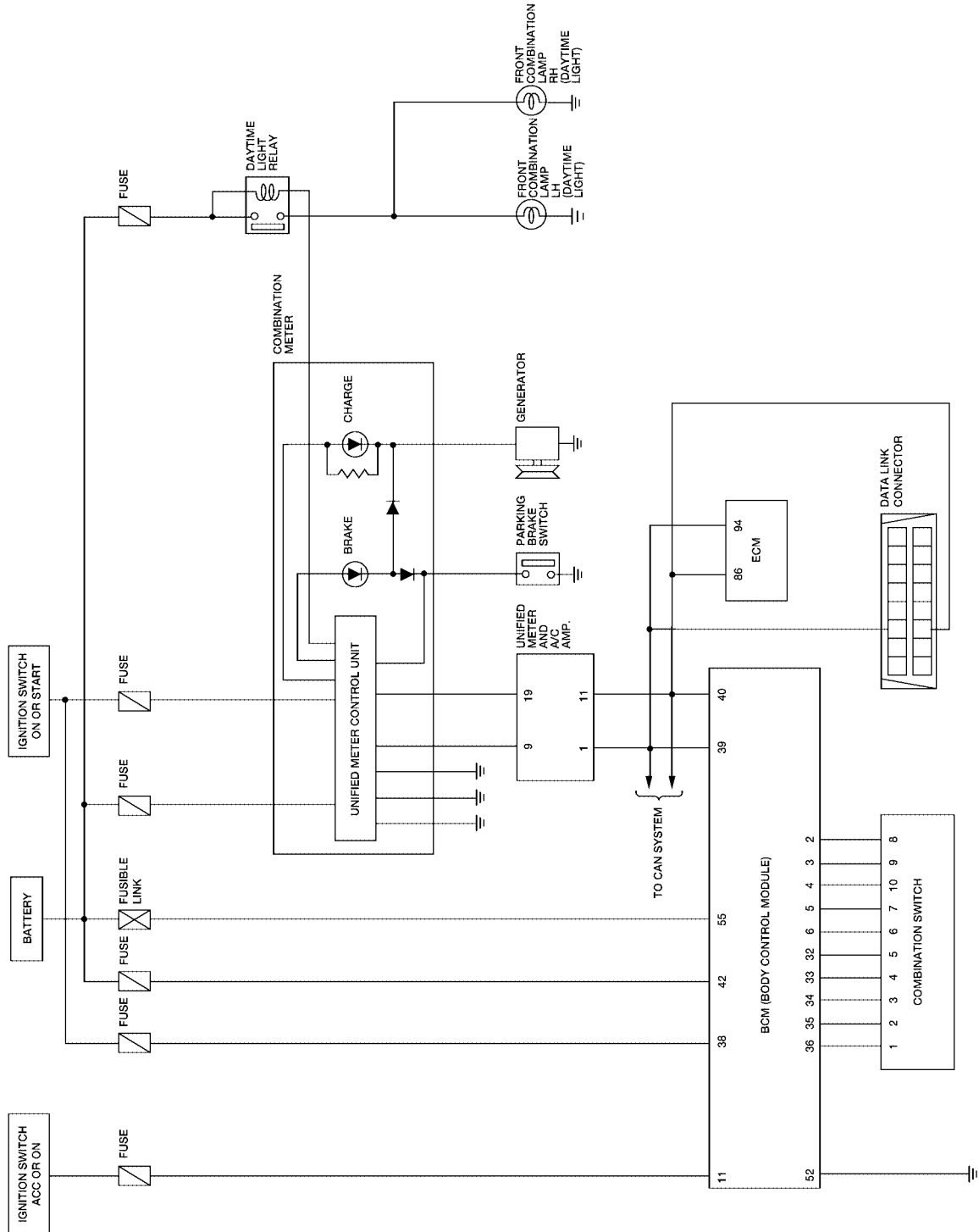
L

M

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Schematic

EKS0082B



WKWA1724E

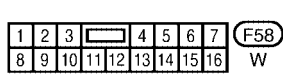
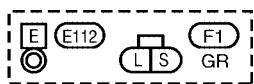
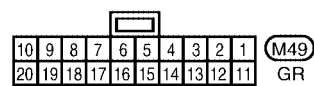
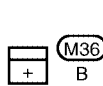
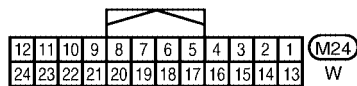
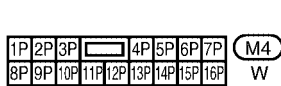
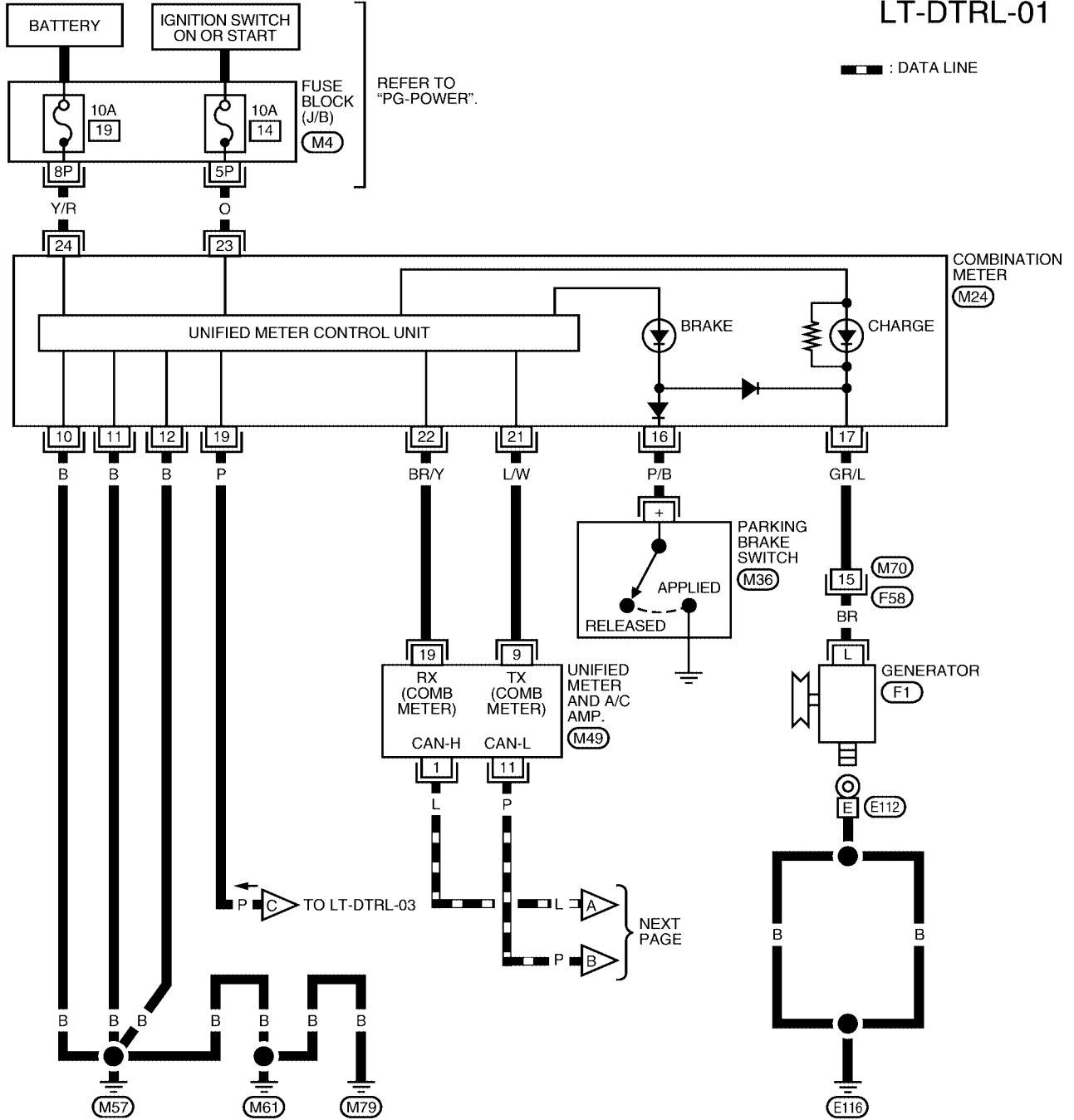
HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

EKS008ZC

Wiring Diagram — DTRL —

LT-DTRL-01

▬ : DATA LINE

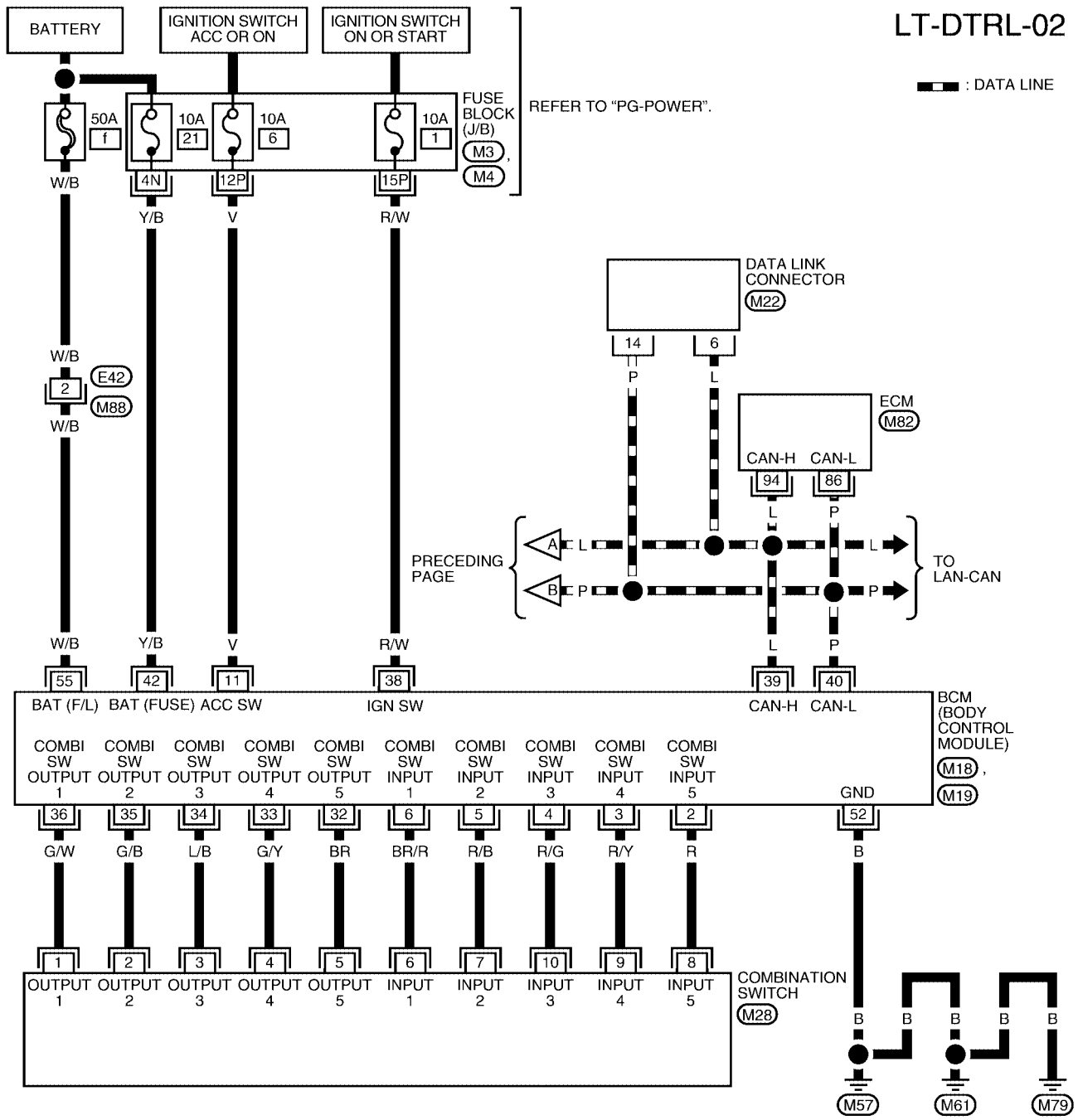


WKWA1725E

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-02

— : DATA LINE

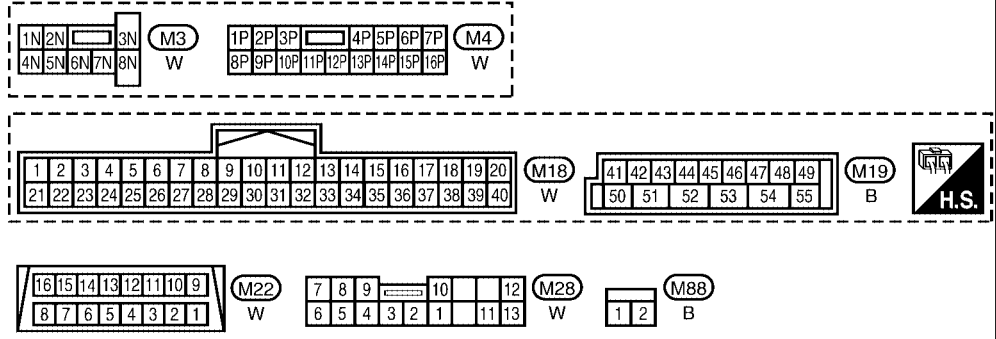


REFER TO "PG-POWER".

PRECEDING PAGE

TO LAN-CAN

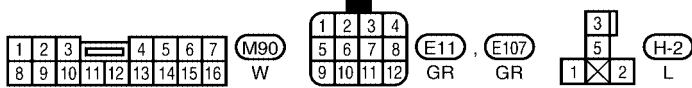
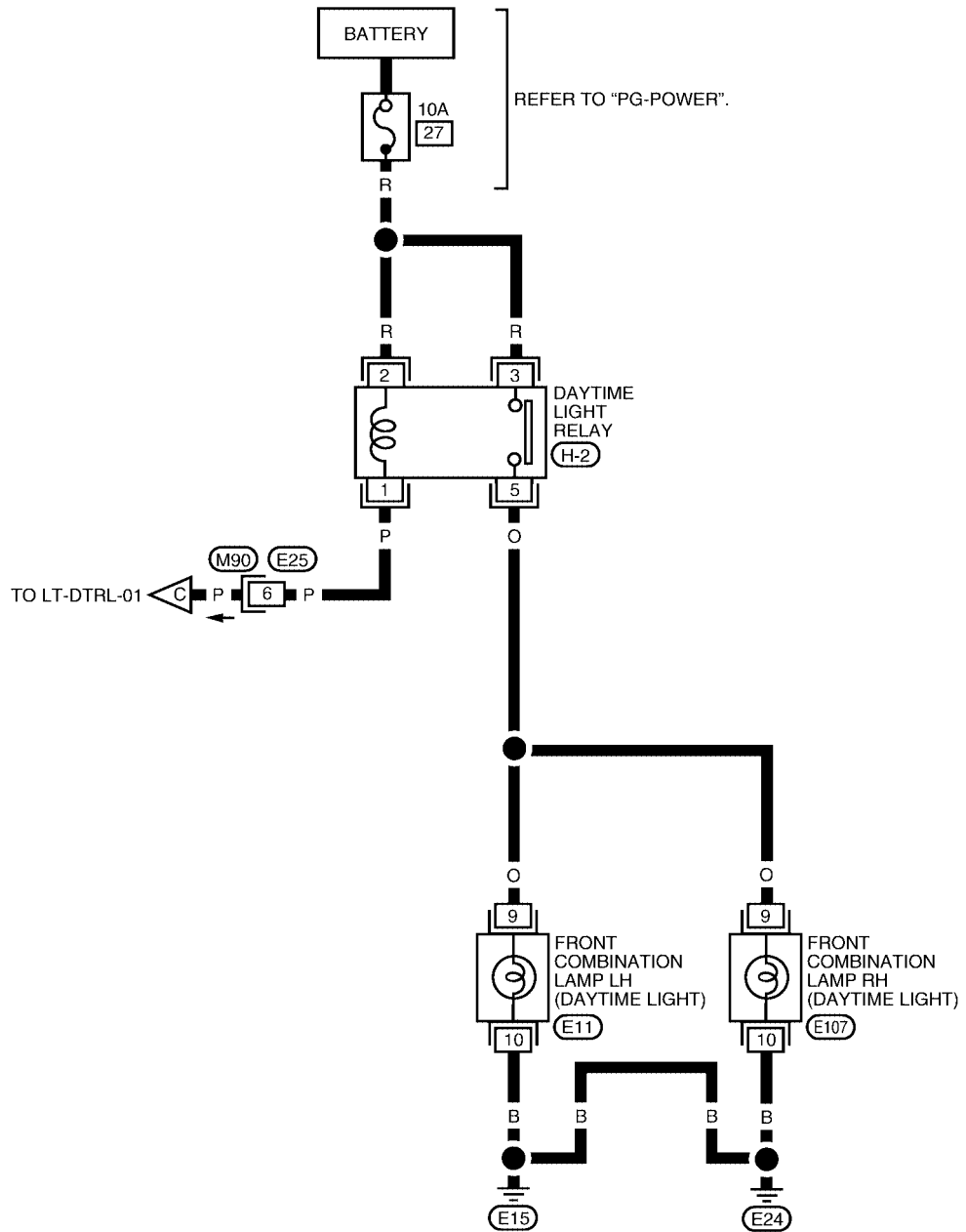
REFER TO THE FOLLOWING.
 (M82) - ELECTRICAL UNITS



WKWA1727E

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-03

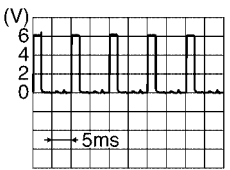
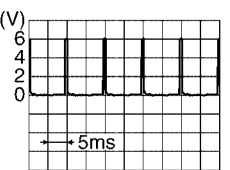
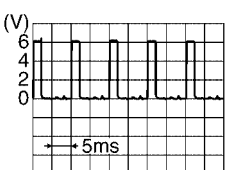



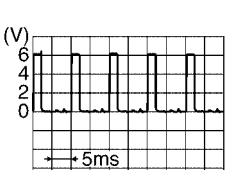


WKWA1728E

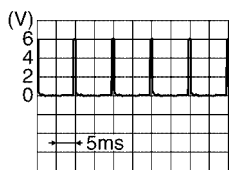
HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Terminals and Reference Values for BCM

EKS008ZD

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
6	BR/R	Combination switch input 1			
11	V	Ignition switch (ACC)	ACC	—	Battery voltage
32	BR	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	
36	G/W	Combination switch output 1			
38	R/W	Ignition switch (ON)	ON	—	Battery voltage
39	L	CAN-H	—	—	—
40	P	CAN-L	—	—	—
42	Y/B	Battery power supply	OFF	—	Battery voltage
52	B	Ground	ON	—	0V
55	W/B	Battery power supply (fusible link)	OFF	—	Battery voltage

How to Proceed With Trouble Diagnosis

EKS008ZE

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-44, "System Description"](#).
3. Perform the Preliminary Check. Refer to [LT-51, "Preliminary Check"](#).
4. Check symptom and repair or replace the cause of malfunction.
5. Does the headlamp operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

Preliminary Check

EKS008ZF

CHECK BCM CONFIGURATION

1. CHECK BCM CONFIGURATION

Confirm BCM configuration for "DTRL" is set to "WITH". Refer to [BCS-13, "READ CONFIGURATION PROCEDURE"](#).

OK or NG

OK >> Continue preliminary check. Refer to [LT-51, "INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT"](#).

NG >> Change BCM configuration for "DTRL" to "WITH". Refer to [BCS-16, "WRITE CONFIGURATION PROCEDURE"](#).

INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
Daytime light relay	Battery	27

Refer to [LT-47, "Wiring Diagram — DTRL —"](#).

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#).

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

2. CHECK POWER SUPPLY CIRCUIT

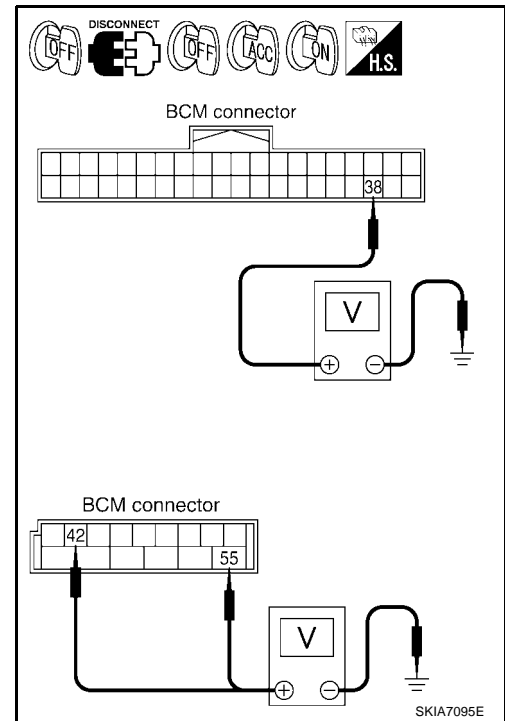
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM (+)		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	38 (R/W)	Ground	0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



3. CHECK GROUND CIRCUIT

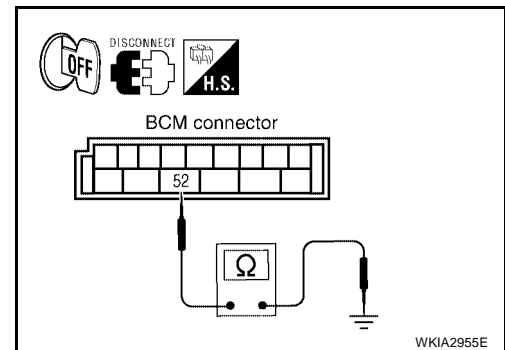
Check continuity between BCM harness connector and ground.

BCM		Continuity
Connector	Terminal (wire color)	
M19	52 (B)	Ground Yes

OK or NG

OK >> Inspection End.

NG >> Check ground circuit harness.



INSPECTION PARKING BRAKE SWITCH CIRCUIT

1. CHECK BRAKE INDICATOR

1. Turn ignition switch ON.
2. Apply parking brake.
3. Release parking brake.

Brake indicator in combination meter should illuminate when parking brake is applied and turn OFF when released.

OK or NG

OK >> Inspection End.

NG >> GO TO 2.

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

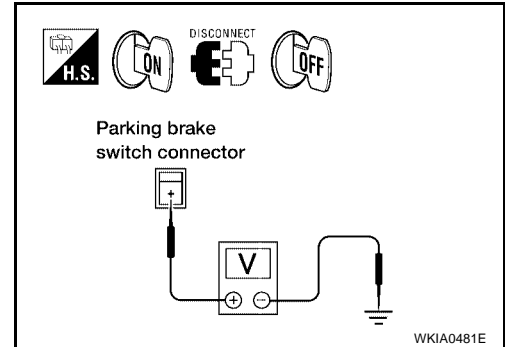
2. CHECK PARKING BRAKE SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect parking brake switch connector.
3. Turn ignition switch ON.
4. Check voltage between parking brake switch harness connector M36 terminal + (P/B) and ground.

+ (P/B) - Ground : Battery voltage should exist.

OK or NG

- OK >> Replace parking brake switch.
- NG >> GO TO 3.



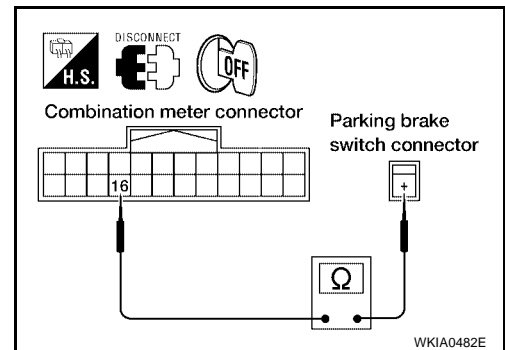
3. CHECK PARKING BRAKE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector M24 terminal 16 (P/B) and parking brake switch harness connector M36 terminal + (P/B).

+ (P/B) - 16 (P/B) : Continuity should exist.

OK or NG

- OK >> Replace combination meter. Refer to [DI-29, "Removal and Installation of Combination Meter"](#).
- NG >> Repair harness or connector.



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HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

CONSULT-II Function (BCM)

EKS006ZG

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

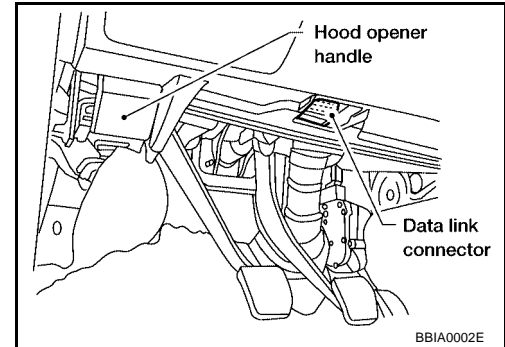
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR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

CONSULT-II OPERATION

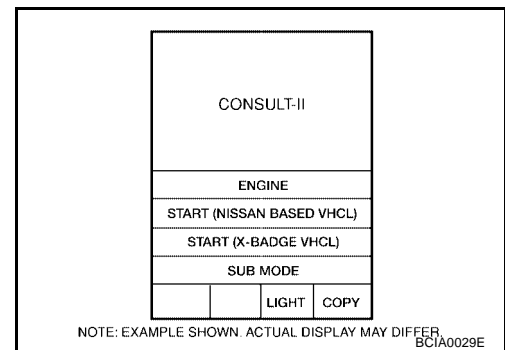
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

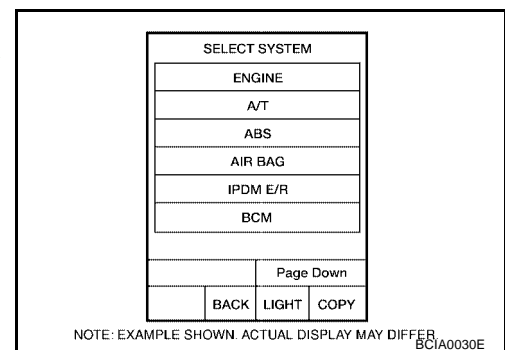
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".

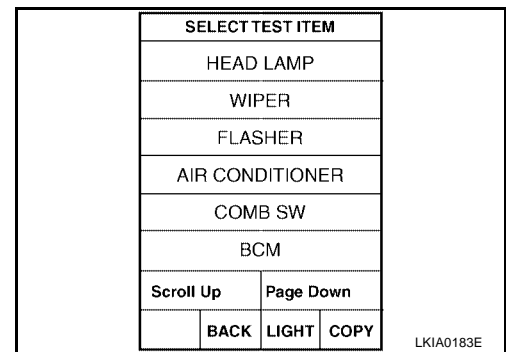


3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

4. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.



DATA MONITOR

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors individual signal.

4. Touch "START".
5. When "SELECTION FROM MENU" is selected, touch individual items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored.
6. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

Display Item List

Monitor item		Contents
IGN ON SW	"ON/OFF"	Displays "IGN position (ON)/OFF, ACC position (OFF)" judged from the ignition switch signal.
ACC ON SW	"ON/OFF"	Displays "ACC (ON)/OFF, Ignition OFF (OFF)" status judged from ignition switch signal.
HI BEAM SW	"ON/OFF"	Displays status (high beam switch: ON/Others: OFF) of high beam switch judged from lighting switch signal.
HEAD LAMP SW 1	"ON/OFF"	Displays status (headlamp switch 1: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.
HEAD LAMP SW 2	"ON/OFF"	Displays status (headlamp switch 2: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.
LIGHT SW 1ST	"ON/OFF"	Displays status (lighting switch 1st position: ON/Others: OFF) of lighting switch judged from lighting switch signal.
AUTO LIGHT SW	"ON/OFF"	Displays status of the lighting switch as judged from the lighting switch signal. (AUTO position: ON/Other than AUTO position: OFF)
PASSING SW	"ON/OFF"	Displays status (flash-to-pass switch: ON/Others: OFF) of flash-to-pass switch judged from lighting switch signal.
FR FOG SW	"ON/OFF"	Displays status (front fog lamp switch: ON/Others: OFF) of front fog lamp switch judged from lighting switch signal.
DOOR SW-DR	"ON/OFF"	Displays status of the front door LH as judged from the front door switch LH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-AS	"ON/OFF"	Displays status of the front door RH as judged from the front door switch RH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-RR	"ON/OFF"	Displays status of the rear door as judged from the rear door switch (RH) signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-RL	"ON/OFF"	Displays status of the rear door as judged from the rear door switch (LH) signal. (Door is open: ON/Door is closed: OFF)

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Monitor item	Contents
BACK DOOR SW "ON/OFF"	Displays status of the back door as judged from the back door switch signal. (Door is open: ON/Door is closed: OFF)
TURN SIGNAL R "ON/OFF"	Displays status (Turn right: ON/Others: OFF) as judged from lighting switch signal.
TURN SIGNAL L "ON/OFF"	Displays status (Turn left: ON/Others: OFF) as judged from lighting switch signal.
ENGINE RUN "ON/OFF"	Displays status (Engine running: ON/Others: OFF) as judged from engine status signal.
PKB SW "ON/OFF"	Displays status (Parking brake switch: ON/Others: OFF) as judged from parking brake switch signal.
OPTICAL SENSOR [0 - 5V]	Displays "ambient light (close to 5V when light/close to 0V when dark)" judged from optical sensor signal.

ACTIVE TEST

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Touch item to be tested and check operation of the selected item.
4. During the operation check, touching "BACK" deactivates the operation.

Display Item List

Test item	Description
TAIL LAMP	Allows tail lamp relay to operate by switching ON-OFF.
HEAD LAMP	Allows headlamp relay (HI, LO) to operate by switching ON-OFF.
FR FOG LAMP	Allows fog lamp relay to operate by switching ON-OFF.
DTRL	Allow day time light lamp operate by switching ON-OFF.
CORNERING LAMP	Allows cornering lamp relay (RH, LH) to operate by switching ON-OFF.

SELF-DIAGNOSTIC RESULTS

Operation Procedure

1. Touch "BCM" on "SELECT TEST ITEM" screen.
2. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
3. Self-diagnostic results are displayed.

Display Item List

Monitored item	CONSULT-II display	Description
CAN communication	CAN communication [U1000]	Malfunction is detected in CAN communication.
CAN communication system	CAN communication system 1 to 6 [U1000]	Malfunction is detected in CAN system.
Combination switch	Diagnosis 1 - 5 systems open circuit	Malfunction is detected in combination switch system.

Daytime Light Control Does Not Operate Properly

EKS008ZH

1. CHECK DAYTIME LIGHT RELAY POWER SUPPLY CIRCUIT

1. Remove daytime light relay.
2. Check voltage between daytime light relay harness connector H2 terminal 2 (R) and ground.

2 (R) - Ground : Battery voltage should exist.

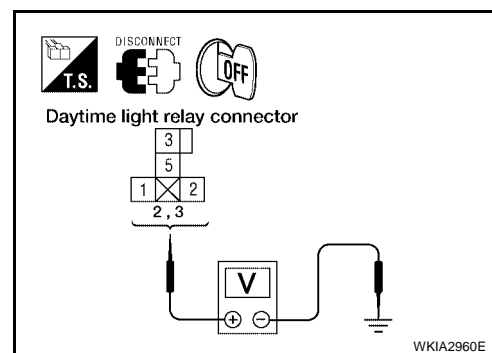
3. Check voltage between daytime light relay harness connector H2 terminal 3 (R) and ground.

3 (R) - Ground : Battery voltage should exist.

OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.



HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

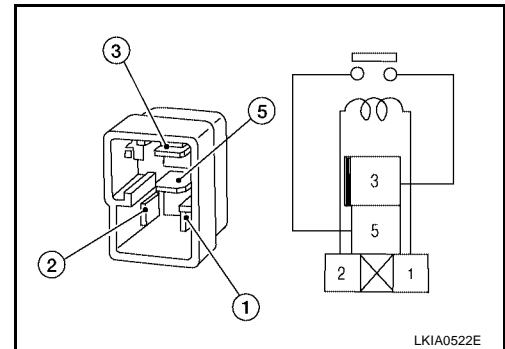
2. CHECK DAYTIME LIGHT RELAY

1. Apply battery voltage to daytime light relay terminal 2 and ground terminal 1.
2. Check continuity between terminals 3 and 5.

3 - 5 : Continuity should exist.

OK or NG

- OK >> GO TO 3.
NG >> Replace daytime light relay.



3. CHECK DAYTIME LIGHT RELAY CIRCUIT

1. Disconnect front combination lamp RH and LH connectors.
2. Check continuity between daytime light relay connector H2 terminal 5 (O) and front combination lamp RH harness connector E107 terminal 9 (O).

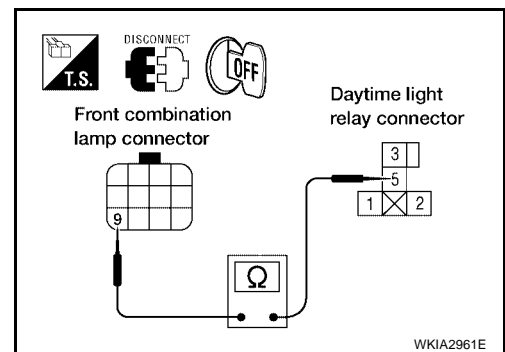
5 (O) - 9 (O) : Continuity should exist.

3. Check continuity between daytime light relay connector H2 terminal 5 (O) and front combination lamp LH harness connector E11 terminal 9 (O).

5 (O) - 9 (O) : Continuity should exist.

OK or NG

- OK >> GO TO 4.
NG >> Repair harness or connector.



4. CHECK GROUND

1. Check continuity between front combination lamp RH harness connector E107 terminal 10 (B) and ground.

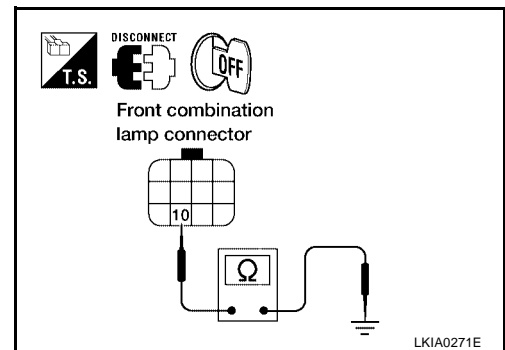
10 (B) - Ground : Continuity should exist.

2. Check continuity between front combination lamp LH harness connector E11 terminal 10 (B) and ground.

10 (B) - Ground : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> Repair harness or connector.



5. CHECK BULB

Inspect bulb of lamp which does not illuminate.

OK or NG

- OK >> GO TO 6.
NG >> Replace bulb. Refer to [LT-41, "HEADLAMP"](#).

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

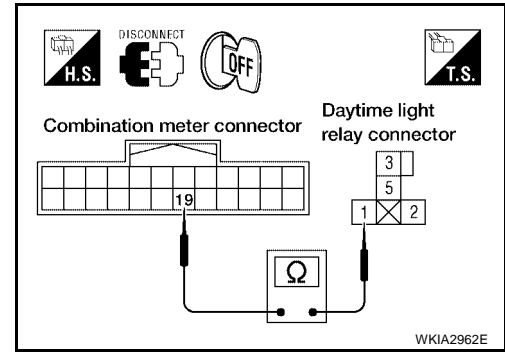
6. CHECK DAYTIME LIGHT RELAY CIRCUIT

1. Disconnect combination meter connector.
2. Check continuity between daytime light relay harness connector H2 terminal 1 (P) and combination meter harness connector M24 terminal 19 (P).

1 (P) - 19 (P) : Continuity should exist.

OK or NG

- OK >> GO TO 7.
- NG >> Repair harness or connector.



7. CHECK INPUT SIGNAL

1. Connect combination meter connector.
2. Start engine.
3. Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "ENGINE RUN" turns ON-OFF linked with operation of engine running or stop.

Engine running : ENGINE RUN ON
Engine stop : ENGINE RUN OFF

4. Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "PKB SW" turns ON-OFF linked with operation of parking brake switch.

Parking brake ON : PKR SW ON
Parking brake OFF : PKR SW OFF

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
- NG >> GO TO 8.

DATA MONITOR	
MONITOR	
ENGINE RUN	ON
PKB SW	ON

SKIA5883E

8. CHECKING CAN COMMUNICATIONS

Select "BCM" on CONSULT-II and perform self-diagnosis for BCM.

Displayed self-diagnosis results

NO DTC>>Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .

CAN COMM CIRCUIT>> Check BCM CAN communication system. Refer to [BCS-13, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#) .

SELF-DIAG RESULTS			
DTC RESULTS		TIME	
CAN COMM CIRCUIT [U1000]		PAST	
ERASE		PRINT	
MODE	BACK	LIGHT	COPY

SKIA1039E

HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Aiming Adjustment

EKS008ZI

Refer to [LT-39, "Aiming Adjustment"](#) .

A

Bulb Replacement

EKS008ZJ

Refer to [LT-41, "Bulb Replacement"](#) .

B

Removal and Installation

EKS008ZK

Refer to [LT-41, "Combination Lamp Removal and Installation"](#) .

C

Disassembly and Assembly

EKS008ZL

Refer to [LT-42, "Disassembly and Assembly"](#) .

D

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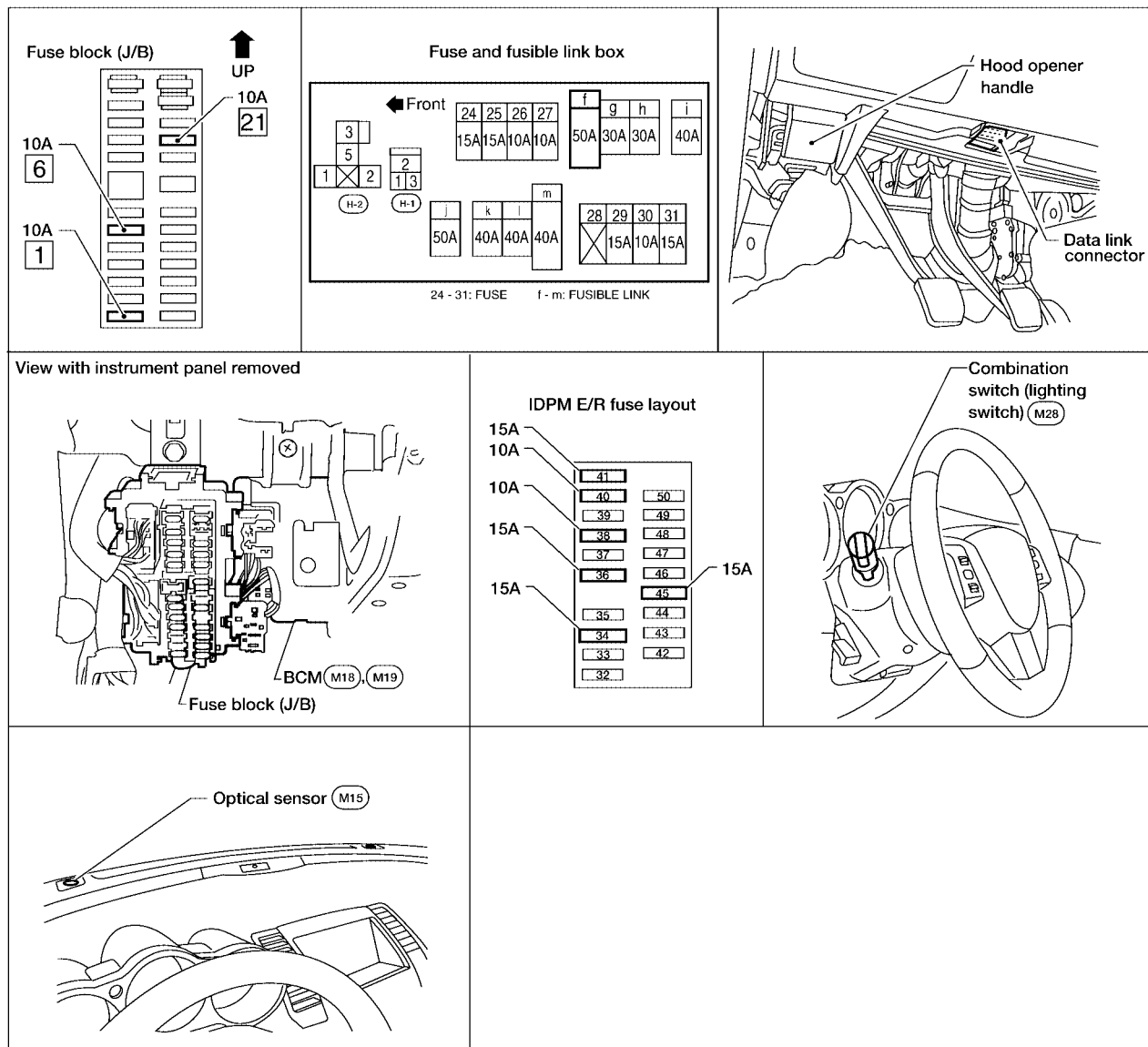
AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM

PF2:28491

Component Parts and Harness Connector Location

EKS008ZM



WKIA2957E

System Description

EKS008ZN

Automatically turns on/off the parking lamps and the headlamps in accordance with ambient light. Timing for when the lamps turn on/off can be selected using four modes.

OUTLINE

The auto light control system uses an optical sensor that detects outside brightness. When the lighting switch is in "AUTO" position, it automatically turns on/off the parking lamps and the headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, refer to [LT-68, "SETTING CHANGE FUNCTIONS"](#).

Optical sensor, power is supplied

- through BCM (body control module) terminal 17
- to optical sensor terminal 1.

Optical sensor, ground is supplied

- through BCM terminal 18
- to optical sensor terminal 3.

AUTO LIGHT SYSTEM

When ignition switch is turned to "ON" position and when outside brightness is darker than prescribed level, input is supplied

- to BCM terminal 14
- through optical sensor terminal 2.

The headlamps will then illuminate. For a description of headlamp operation, refer to [LT-6, "System Description"](#).

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#).

EXTERIOR LAMP BATTERY SAVER CONTROL

When the combination switch (lighting switch) is in the AUTO position, the ignition switch is turned from ON or ACC to OFF, and one of the front doors is opened, the battery saver control feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes, then the headlamp are turned off. Exterior lamp battery saver control mode can be changed by the function setting of CONSULT-II.

DELAY TIMER FUNCTION

When the ignition switch is ON and auto light switch is ON, the BCM turns on/off the headlamps. In delay timer function, ignition is OFF, auto light sensor power source is OFF and the headlamps are not turned on/off by the BCM. On condition that:

- when the state of ignition switch ON or ACC is ON and output judgment by auto light function is headlamp ON changes to ignition switch and ACC are OFF and any door switch is ON, output judgment by BCM should be headlamp ON for 5 minutes by timer. After time out, output judgment by BCM should be headlamp OFF.
- when the state of any door switch is turned to ON from OFF while 45 second or 5 minute timer is counting, timer stops, and restarts counting for 5 minutes, then BCM judges output as headlamp ON. After time out, BCM judges output as headlamp OFF.
- when the state of front door switch (driver side), front door switch (passenger side), rear door switch LH, rear door switch RH or back door latch (door ajar switch) is ON turns to all door switches are OFF while 45 second or 5 minute timer is counting, timer stops, and restarts counting for 45 seconds, then BCM judges output as headlamp ON. After timer out, BCM judges output as headlamp OFF.
- when the state is ignition switch ON or ACC is ON or auto light switch OFF while timer is counting, timer stops counting and BCM turns on/off lamps according to headlamp function, front fog lamp function, auto light function and headlamp battery save function.

Delay timer control mode can be changed by the function setting of CONSULT-II.

CAN Communication System Description

EKS008ZO

Refer to [LAN-7, "CAN COMMUNICATION"](#).

Major Components and Functions

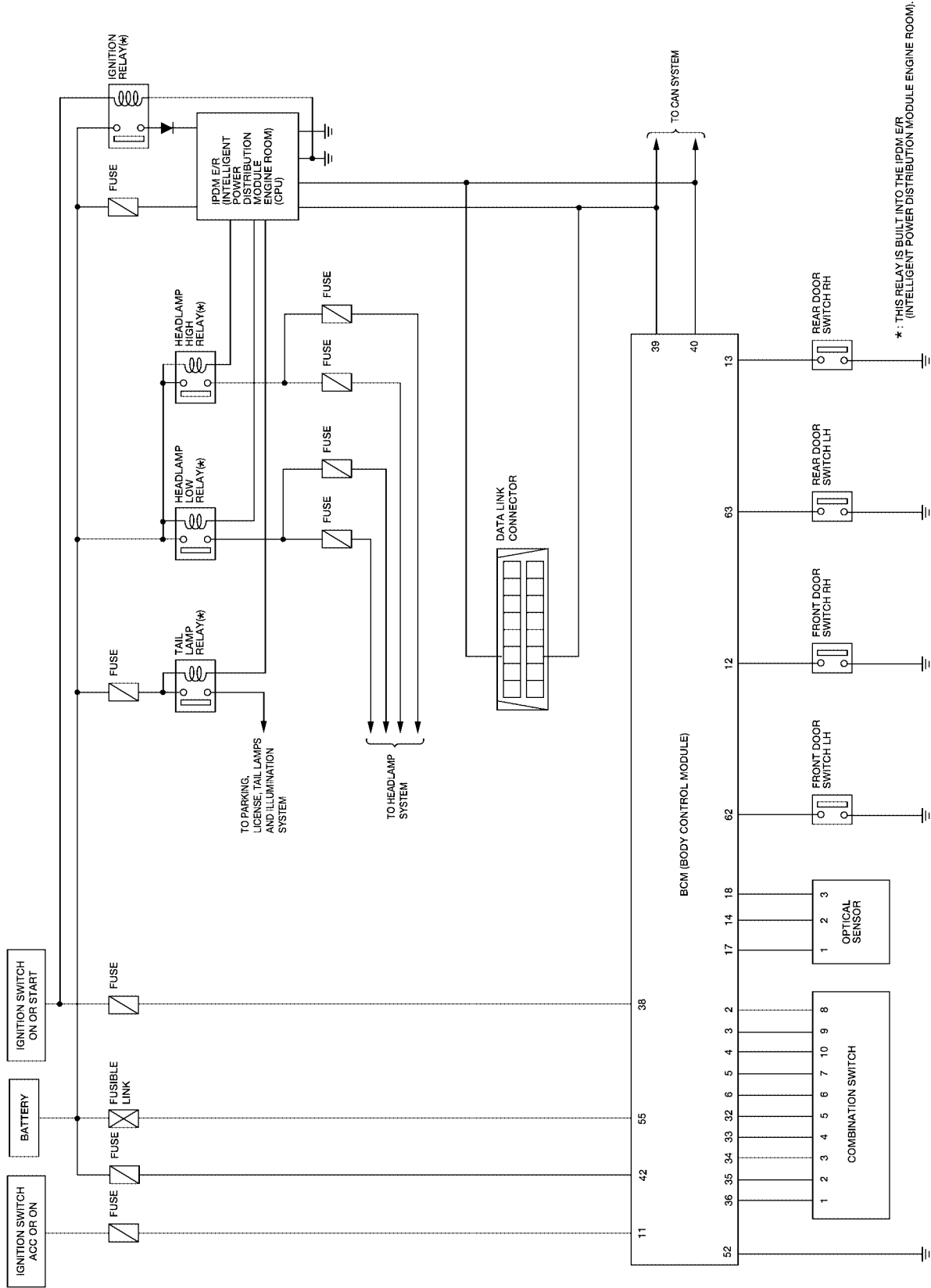
EKS008ZP

Components	Functions
BCM	● Turns on/off circuits of tail light and headlamp according to signals from light sensor, lighting switch (AUTO), front door switch LH, front door switch RH, rear door switch, and ignition switch (ON, OFF).
Optical sensor	● Converts ambient light (lux) to voltage and sends it to BCM. (Detects lightness of 50 to 1,300 lux)

AUTO LIGHT SYSTEM

Schematic

EKS008ZQ



* : THIS RELAY IS BUILT INTO THE IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM).

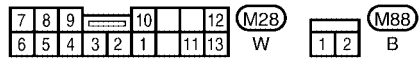
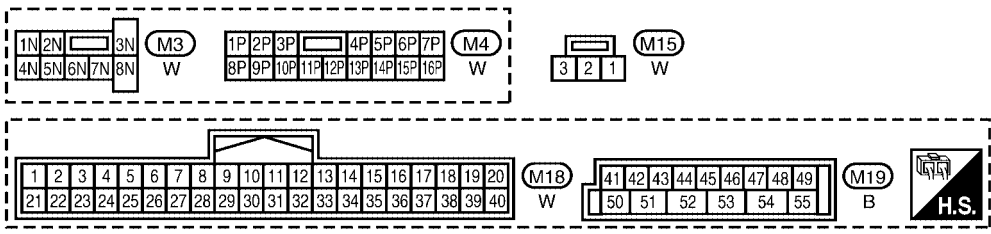
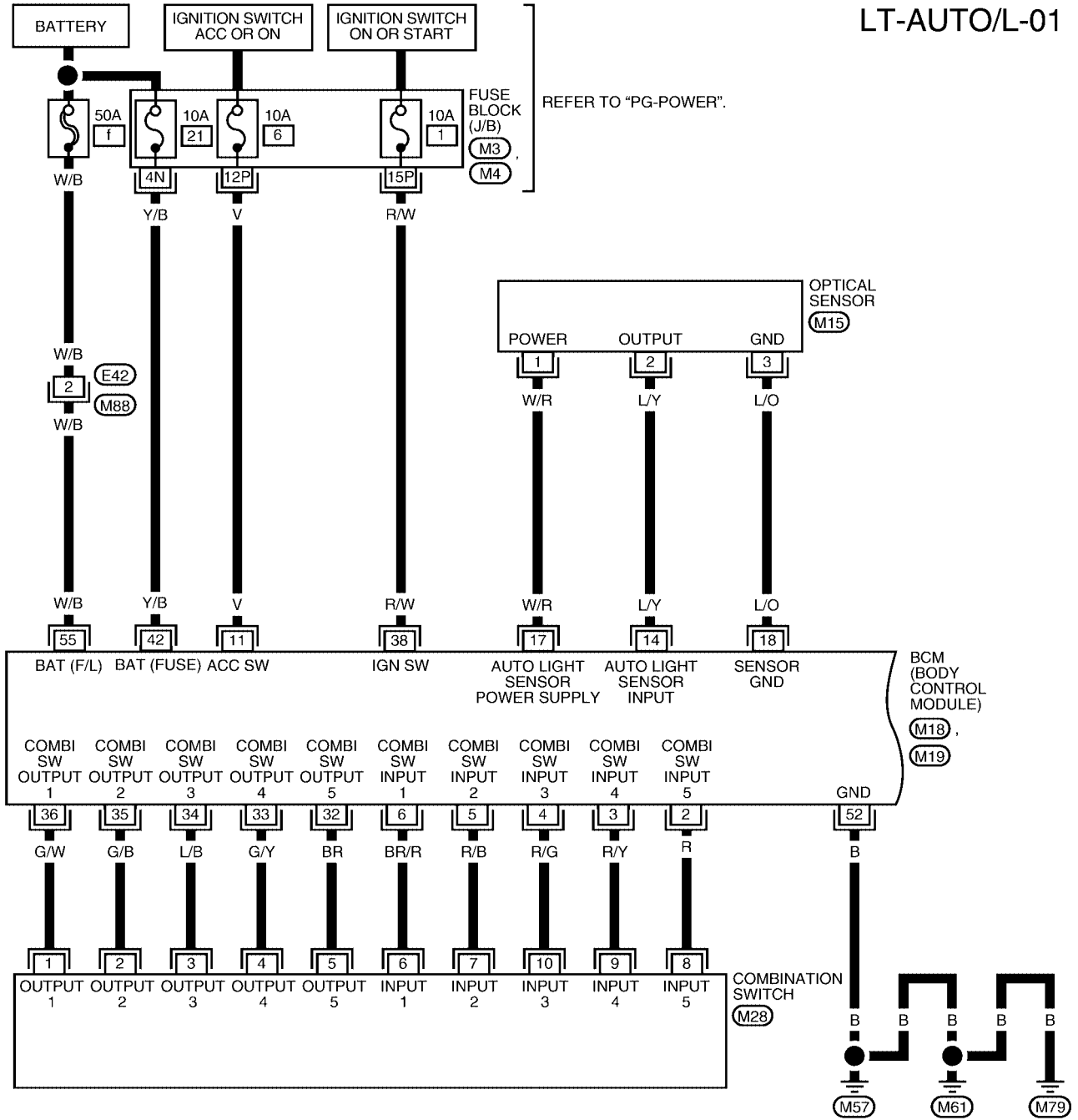
WKWA1729E

AUTO LIGHT SYSTEM

Wiring Diagram — AUTO/L —

EKS008ZR

LT-AUTO/L-01

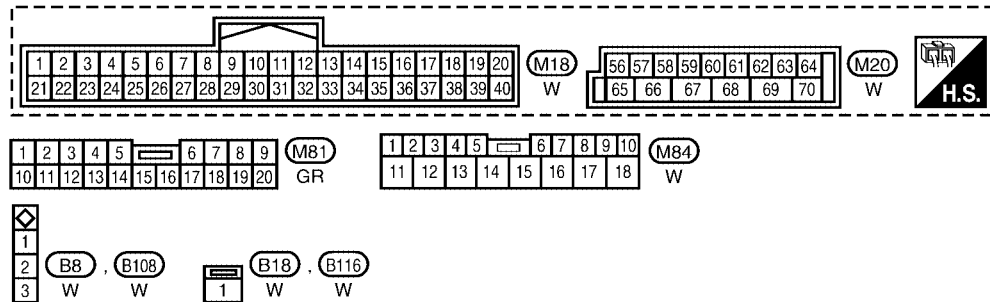
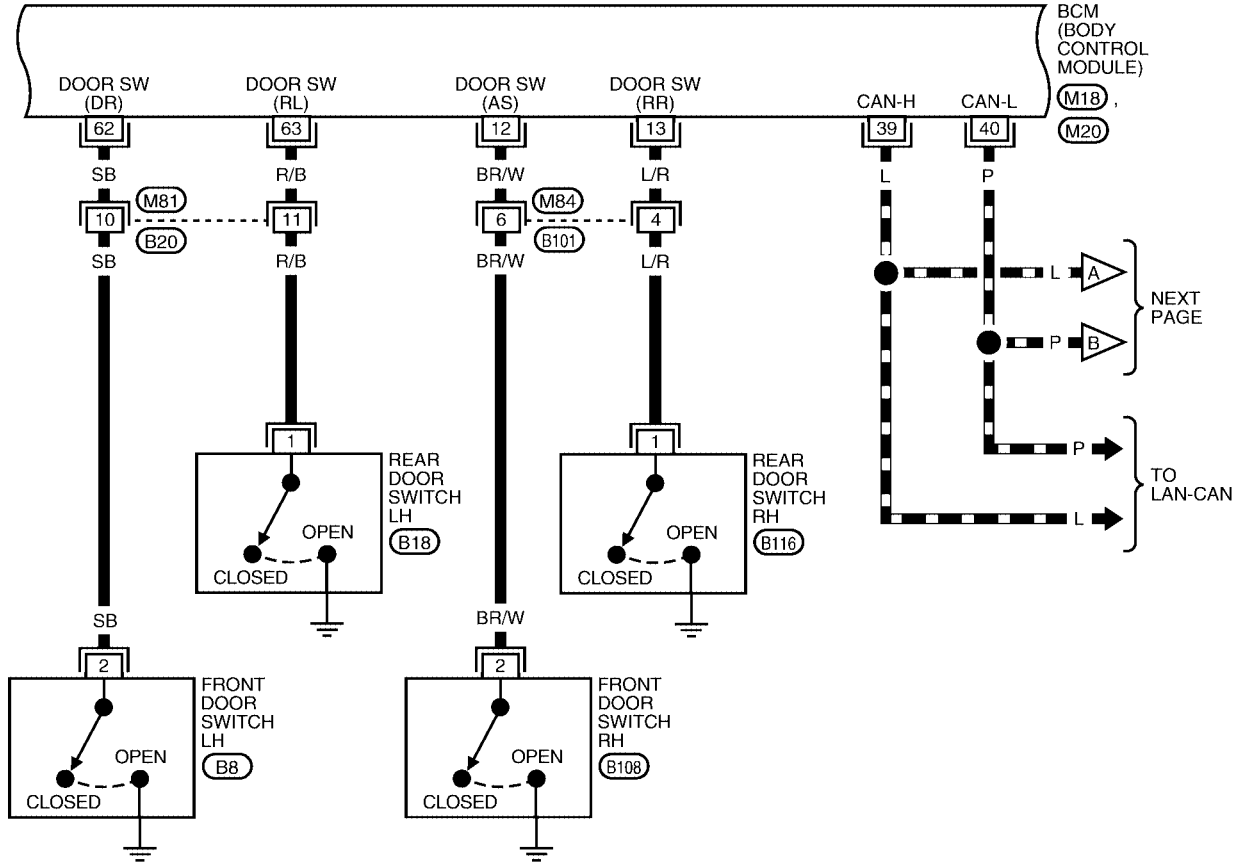


WKWA1730E

AUTO LIGHT SYSTEM

LT-AUTO/L-02

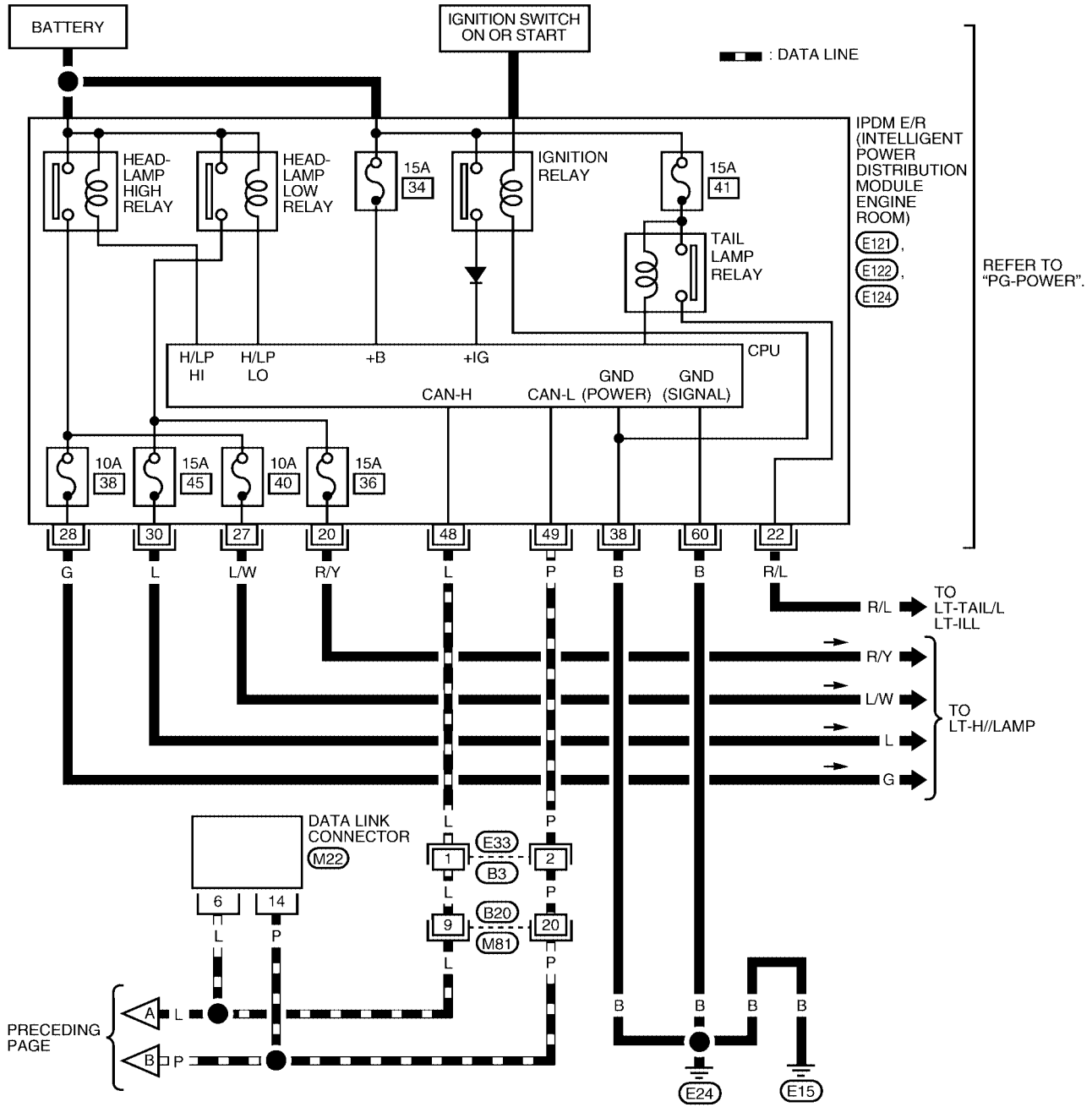
▬ : DATA LINE



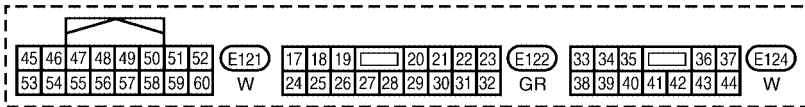
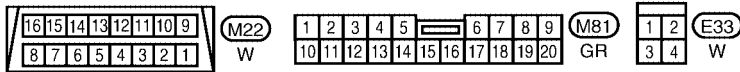
WKWA1731E

AUTO LIGHT SYSTEM

LT-AUTO/L-03





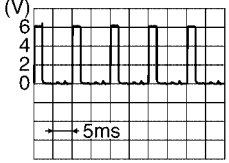
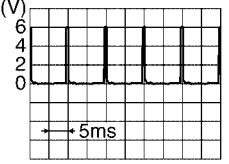
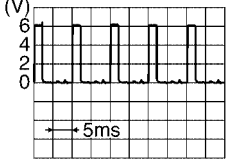
PRECEDING PAGE



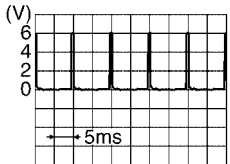
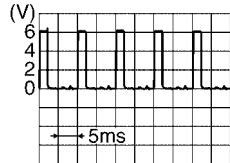
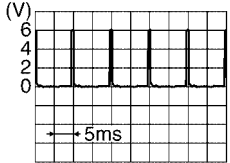
AUTO LIGHT SYSTEM

Terminals and Reference Values for BCM

EKS008ZS

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>	
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>	
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>	
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>	
6	BR/R	Combination switch input 1				
11	V	Ignition switch (ACC)	ACC	—	Battery voltage	
12	BR/W	Front door switch RH signal	OFF	Front door switch RH	ON (open)	0V
					OFF (closed)	Battery voltage
13	L/R	Rear door switch RH signal	OFF	Rear door switch RH	ON (open)	0V
					OFF (closed)	Battery voltage
14	L/Y	Optical sensor signal	ON	When optical sensor is illuminated	3.1 V or more ^{Note}	
					When optical sensor is not illuminated	0.6 V or less
17	W/R	Optical sensor power supply	ON	—	5V	
18	L/O	Sensor ground	ON	—	0V	
32	BR	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>	

AUTO LIGHT SYSTEM

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E	
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E	
36	G/W	Combination switch output 1				
38	R/W	Ignition switch (ON)	ON	—	Battery voltage	
39	L	CAN-H	—	—	—	
40	P	CAN-L	—	—	—	
42	Y/B	Battery power supply	OFF	—	Battery voltage	
52	B	Ground	ON	—	0V	
55	W/B	Battery power supply	OFF	—	Battery voltage	
62	SB	Front door switch LH signal	OFF	Front door switch LH	ON (open)	0V
					OFF (closed)	Battery voltage
63	R/B	Rear door switch LH signal	OFF	Rear door switch LH	ON (open)	0V
					OFF (closed)	Battery voltage

NOTE:

Optical sensor must be completely subjected to work lamp light. If the optical sensor is insufficiently illuminated, the measured value may not satisfy standard.

Terminals and Reference Values for IPDM E/R

EKS008ZT

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
20	R/Y	Headlamp low (RH)	ON	Lighting switch 2ND position	OFF	0V
					ON	Battery voltage
22	R/L	Parking, license, and tail lamp	ON	Lighting switch 1ST position	OFF	0V
						ON
27	L/W	Headlamp high (RH)	ON	Lighting switch HIGH or PASS position	OFF	0V
						ON
28	G	Headlamp high (LH)	ON	Lighting switch HIGH or PASS position	OFF	0V
						ON

AUTO LIGHT SYSTEM

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
30	L	Headlamp low (LH)	ON	Lighting switch 2ND position	OFF	0V
					ON	Battery voltage
38	B	Ground	ON	—	0V	
48	L	CAN-H	—	—	—	
49	P	CAN-L	—	—	—	
60	B	Ground	ON	—	0V	

How to Proceed With Trouble Diagnosis

EKS008ZU

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-60, "System Description"](#) .
3. Carry out the Preliminary Check. Refer to [LT-68, "Preliminary Check"](#) .
4. Check symptom and repair or replace the cause of malfunction. Refer to [LT-75, "Trouble Diagnosis Chart by Symptom"](#) .
5. Does the auto light system operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

Preliminary Check

EKS008ZV

SETTING CHANGE FUNCTIONS

- Sensitivity of auto light system can be adjusted using CONSULT-II. Refer to [LT-71, "WORK SUPPORT"](#) .

CHECK POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
	Ignition switch ACC or ON position	6
IPDM E/R	Battery	34
		36
		38
		40
		41
		45

Refer to [LT-63, "Wiring Diagram — AUTO/L —"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

AUTO LIGHT SYSTEM

2. CHECK POWER SUPPLY CIRCUIT

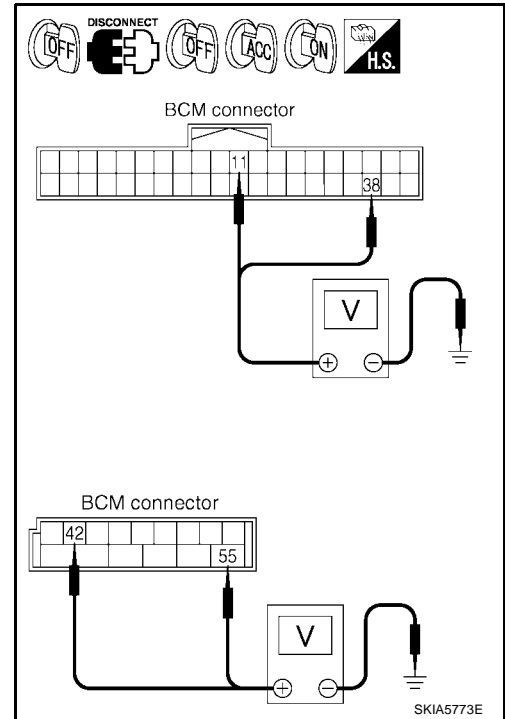
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	11 (V)	Ground	0V	Battery voltage	Battery voltage
	38 (R/W)		0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



3. CHECK GROUND CIRCUIT

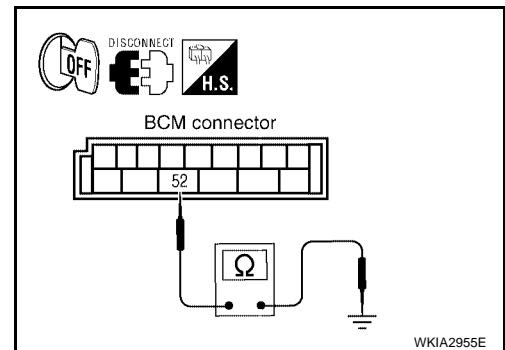
Check continuity between BCM harness connector and ground.

BCM		Continuity
Connector	Terminal (wire color)	
M19	52 (B)	Ground Yes

OK or NG

OK >> Inspection End.

NG >> Check ground circuit harness.



AUTO LIGHT SYSTEM

CONSULT-II Function (BCM)

EKS006ZW

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

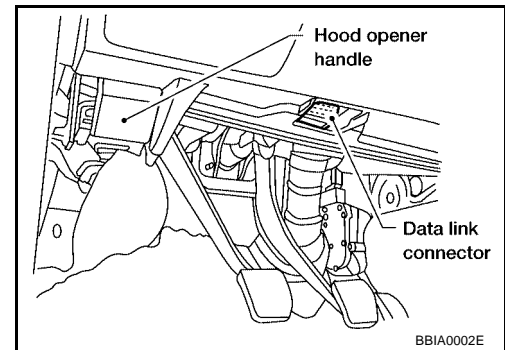
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR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

CONSULT-II OPERATION

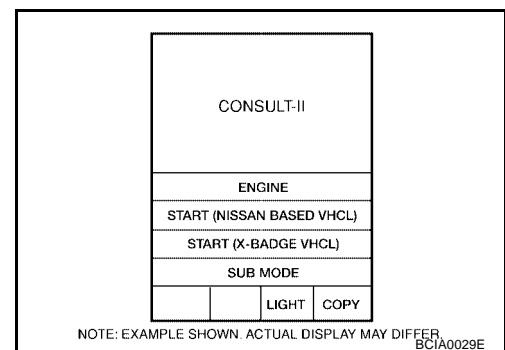
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

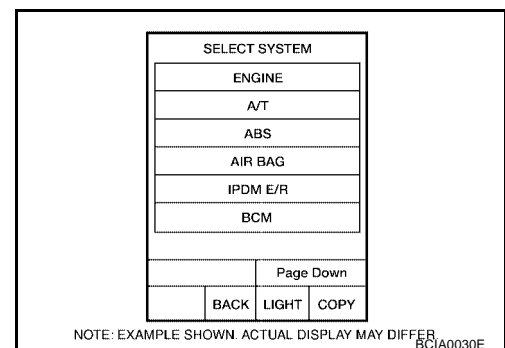
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".



3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



AUTO LIGHT SYSTEM

4. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.

SELECT TEST ITEM			
HEAD LAMP			
WIPER			
FLASHER			
AIR CONDITIONER			
COMB SW			
BCM			
Scroll Up		Page Down	
BACK	LIGHT	COPY	

LKIA0183E

A
B
C
D

WORK SUPPORT

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch "CUSTOM A/LIGHT SETTING" or "ILL DELAY SET" on "SELECT WORK ITEM" screen.
4. Touch "START".
5. Touch "MODE 1-4" of setting to be changed (CUSTOM A/LIGHT SETTING). Touch "MODE1-8" of setting to be changed (ILL DELAY SET).
6. Touch "CHANGE SETT".
7. The setting will be changed and "CUSTOMIZING COMPLETED" will be displayed.
8. Touch "END".

E
F
G
H

Work Support Setting Item

- Sensitivity of auto light can be selected and set from four modes.

Work item	Description
CUSTOM A/LIGHT SETTING	Auto light sensitivity can be changed in this mode. Sensitivity can be adjusted in four modes. ● MODE 1 (Normal)/ MODE 2 (Sensitive)/MODE 3 (Desensitized)/MODE4 (Insensitive)
ILL DELAY SET	Auto light delay off timer period can be changed in this mode. Selects auto light delay off timer period among eight modes. ● MODE 1 (45 sec.)/MODE 2 (OFF)/MODE 3 (30 sec.)/MODE 4 (60 sec.)/MODE 5 (90 sec.)/MODE 6 (120 sec.)/MODE 7 (150 sec.)/MODE 8 (180 sec.)

I
J
LT

DATA MONITOR

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors individual signal.

L
M

4. Touch "START".
5. When "SELECTION FROM MENU" is selected, touch individual items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored.
6. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

Display Item List

Monitor item	Contents
IGN ON SW "ON/OFF"	Displays "IGN position (ON)/OFF, ACC position (OFF)" judged from the ignition switch signal.
ACC ON SW "ON/OFF"	Displays "ACC (ON)/OFF, Ignition OFF (OFF)" status judged from ignition switch signal.

AUTO LIGHT SYSTEM

Monitor item	Contents
HI BEAM SW "ON/OFF"	Displays status (high beam switch: ON/Others: OFF) of high beam switch judged from lighting switch signal.
HEAD LAMP SW 1 "ON/OFF"	Displays status (headlamp switch 1: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.
HEAD LAMP SW 2 "ON/OFF"	Displays status (headlamp switch 2: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.
LIGHT SW 1ST "ON/OFF"	Displays status (lighting switch 1st position: ON/Others: OFF) of lighting switch judged from lighting switch signal.
AUTO LIGHT SW "ON/OFF"	Displays status of the lighting switch as judged from the lighting switch signal. (AUTO position: ON/Other than AUTO position: OFF)
PASSING SW "ON/OFF"	Displays status (flash-to-pass switch: ON/Others: OFF) of flash-to-pass switch judged from lighting switch signal.
FR FOG SW "ON/OFF"	Displays status (front fog lamp switch: ON/Others: OFF) of front fog lamp switch judged from lighting switch signal.
DOOR SW-DR "ON/OFF"	Displays status of the front door LH as judged from the front door switch LH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-AS "ON/OFF"	Displays status of the front door RH as judged from the front door switch RH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-RR "ON/OFF"	Displays status of the rear door as judged from the rear door switch (RH) signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-RL "ON/OFF"	Displays status of the rear door as judged from the rear door switch (LH) signal. (Door is open: ON/Door is closed: OFF)
BACK DOOR SW "ON/OFF"	Displays status of the back door as judged from the back door switch signal. (Door is open: ON/Door is closed: OFF)
TURN SIGNAL R "ON/OFF"	Displays status (Turn right: ON/Others: OFF) as judged from lighting switch signal.
TURN SIGNAL L "ON/OFF"	Displays status (Turn left: ON/Others: OFF) as judged from lighting switch signal.
ENGINE RUN ^{Note 1} "ON/OFF"	Displays status (Engine running: ON/Others: OFF) as judged from engine status signal.
PKB SW ^{Note 1} "ON/OFF"	Displays status (Parking brake switch: ON/Others: OFF) as judged from parking brake switch signal.
OPTICAL SENSOR [0 - 5V]	Displays "ambient light (close to 5V when light/close to 0V when dark)" judged from optical sensor signal.

NOTE:

1. Vehicles without daytime light system may display this item, but cannot monitor it.

ACTIVE TEST

Operation Procedure

1. Touch "HEAD LAMP" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Touch item to be tested and check operation of the selected item.
4. During the operation check, touching "BACK" deactivates the operation.

Display Item List

Test item	Description
TAIL LAMP	Allows tail lamp relay to operate by switching ON-OFF.
HEAD LAMP	Allows headlamp relay (HI, LO) to operate by switching ON-OFF.
FR FOG LAMP	Allows fog lamp relay to operate by switching ON-OFF.
DTRL ^{Note 1}	Allow daytime light lamp operate by switching ON-OFF.
CORNERING LAMP	Allows cornering lamp relay (RH, LH) to operate by switching ON-OFF.

NOTE:

1. Vehicles without daytime light lamp system may display this item, but cannot monitor it.

AUTO LIGHT SYSTEM

SELF-DIAGNOSTIC RESULTS

Operation Procedure

1. Touch "BCM" on "SELECT TEST ITEM" screen.
2. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
3. Self-diagnostic results are displayed.

Display Item List

Monitored item	CONSULT-II display	Description
CAN communication	CAN communication [U1000]	Malfunction is detected in CAN communication.
CAN communication system	CAN communication system 1 to 6 [U1000]	Malfunction is detected in CAN system.

CONSULT-II Function (IPDM E/R)

EKS008ZX

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

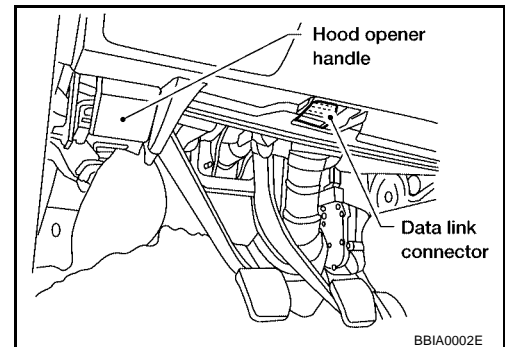
IPDM E/R diagnostic Mode	Description
SELF-DIAG RESULTS	Displays IPDM E/R self-diagnosis results.
DATA MONITOR	Displays IPDM E/R input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II OPERATION

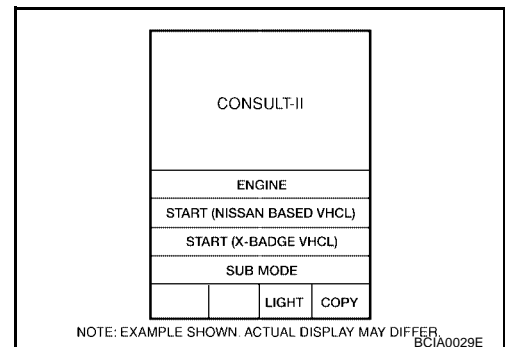
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn the ignition switch ON.

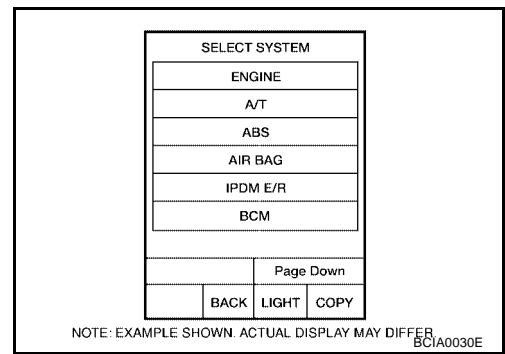


2. Touch "START (NISSAN BASED VHCL)".

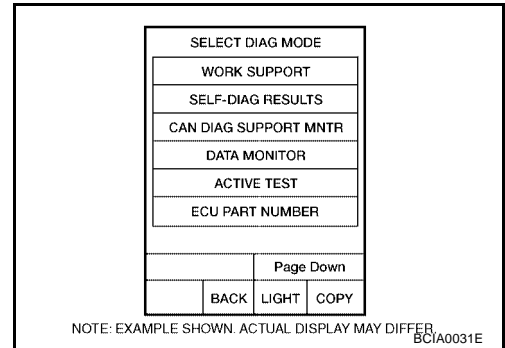


AUTO LIGHT SYSTEM

- Touch "IPDM E/R" on "SELECT SYSTEM" screen.
If "IPDM E/R" is not displayed, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



- Select the desired part to be diagnosed on the "SELECT DIAG MODE" screen.



DATA MONITOR

Operation Procedure

- Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
- Touch "ALL SIGNALS", "MAIN SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

ALL SIGNALS	All items will be monitored.
MAIN SIGNALS	Monitor the predetermined item.
SELECTION FROM MENU	Select any item for monitoring.

- Touch "START".
- Touch the required monitoring item on "SELECTION FROM MENU". In "ALL SIGNALS", all items are monitored. In "MAIN SIGNALS", predetermined items are monitored.
- Touch "RECORD" while monitoring to record the status of the item being monitored. To stop recording, touch "STOP".

All Items, Main Items, Select Item Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
Parking, license plate and tail lamps request	TAIL&CLR REQ	ON/OFF	×	×	×	Signal status input from BCM
Headlamp low beam request	HL LO REQ	ON/OFF	×	×	×	Signal status input from BCM
Headlamp high beam request	HL HI REQ	ON/OFF	×	×	×	Signal status input from BCM
Cornering lamp	CRNRNG LMP REQ	ON/OFF	×	-	×	Signal status input from BCM
Front fog lamps request	FR FOG REQ	ON/OFF	×	×	×	Signal status input from BCM

NOTE:

Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is at ACC, the display may not be correct.

AUTO LIGHT SYSTEM

ACTIVE TEST

Operation Procedure

1. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
2. Touch item to be tested, and check operation.
3. Touch "START".
4. Touch "STOP" while testing to stop the operation.

Test item	CONSULT-II screen display	Description
Tail lamp relay output	TAIL LAMP	Allows tail lamp relay to operate by switching operation ON-OFF at your option.
Headlamp relay (HI, LO) output	LAMPS	Allows headlamp relay (HI, LO) to operate by switching operation (OFF, HI, LO) at your option (Headlamp high beam repeats ON-OFF every 1 second).
Front fog lamp relay output		Allows fog lamp relay to operate by switching operation ON-OFF at your option.
Cornering lamp relay (RH, LH) output	CORNERING LAMP	Allows cornering lamp relay (RH, LH) to operate by switching operation ON-OFF at your option.

Trouble Diagnosis Chart by Symptom

EKS008ZY

Trouble phenomenon	Malfunction system and reference
<ul style="list-style-type: none"> ● Parking lamps and headlamps will not illuminate when outside of the vehicle becomes dark. (Lighting switch 1st position and 2nd position operate normally.) ● Parking lamps and headlamp will not go out when outside of the vehicle becomes light. (Lighting switch 1st position and 2nd position operate normally.) ● Headlamps go out when outside of the vehicle becomes light, but parking lamps stay on. 	<ul style="list-style-type: none"> ● Refer to LT-71, "WORK SUPPORT" . ● Refer to LT-76, "Lighting Switch Inspection" . ● Refer to LT-76, "Optical Sensor System Inspection" . <p>If above systems are normal, replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .</p>
<p>Parking lamps illuminate when outside of the vehicle becomes dark, but headlamps stay off. (Lighting switch 1st position and 2nd position operate normally.)</p>	<ul style="list-style-type: none"> ● Refer to LT-71, "WORK SUPPORT" . ● Refer to LT-76, "Optical Sensor System Inspection" . <p>If above systems are normal, replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .</p>
<p>Auto light adjustment system will not operate. (Lighting switch AUTO, 1st position and 2nd position operate normally.)</p>	<ul style="list-style-type: none"> ● Refer to LT-76, "Optical Sensor System Inspection" . <p>If above system is normal, replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .</p>
<p>Auto light adjustment system of combination meter will not operate.</p>	<ul style="list-style-type: none"> ● CAN communication line inspection between BCM and combination meter. Refer to BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" .
<p>Shut off delay feature will not operate.</p>	<ul style="list-style-type: none"> ● CAN communication line inspection between BCM and combination meter. Refer to BCS-13, "CAN Communication Inspection Using CONSULT-II (Self-Diagnosis)" . ● Refer to BL-29, "Door Switch Check" . <p>If above system is normal, replace BCM. Refer to BCS-20, "Removal and Installation of BCM" .</p>

AUTO LIGHT SYSTEM

EKS008ZZ

Lighting Switch Inspection

1. CHECK LIGHTING SWITCH INPUT SIGNAL

④ With CONSULT-II

Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "AUTO LIGHT SW" turns ON-OFF linked with operation of lighting switch.

When lighting switch is in AUTO position : AUTO LIGHT SW ON

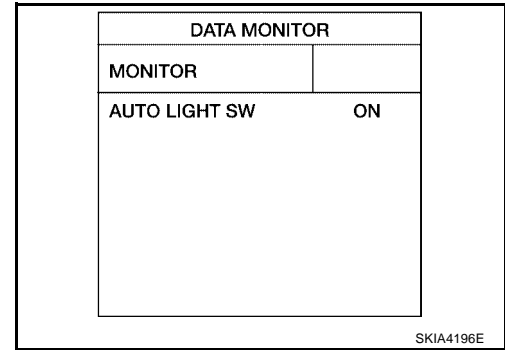
⊗ Without CONSULT-II

Refer to [LT-126, "Combination Switch Inspection"](#).

OK or NG

OK >> Inspection End.

NG >> Check lighting switch. Refer to [LT-126, "Combination Switch Inspection"](#).



Optical Sensor System Inspection

EKS00900

1. CHECK OPTICAL SENSOR INPUT SIGNAL

④ With CONSULT-II

Select "BCM" on CONSULT-II. With "OPTICAL SENSOR" data monitor, make sure "OPTICAL SENSOR", check difference in the voltage when the optical sensor is illuminated and not illuminated.

Illuminated

OPTICAL SENSOR : 3.1V or more

Not illuminated

OPTICAL SENSOR : 0.6V or less

CAUTION:

Optical sensor must be completely subjected to work lamp light. If the optical sensor is insufficiently illuminated, the measured value may not satisfy the standard.

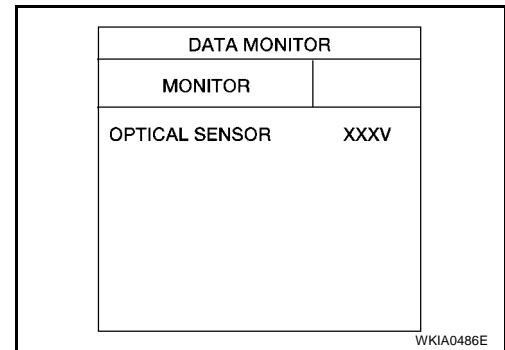
⊗ Without CONSULT-II

GO TO 2.

OK or NG

OK >> Inspection End.

NG >> GO TO 2.



2. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and optical sensor connector.
3. Check continuity (open circuit) between BCM harness connector M18 terminal 17 (W/R) and optical sensor harness connector M15 terminal 1 (W/R).

17 (W/R) - 1 (W/R) : Continuity should exist.

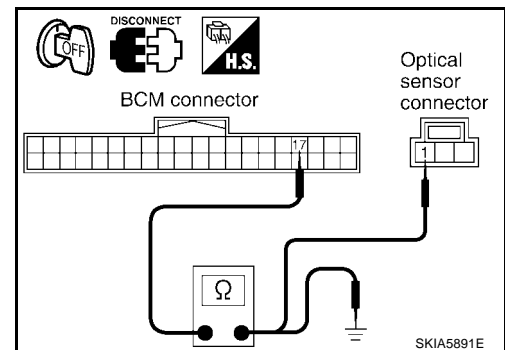
4. Check continuity (short circuit) between BCM harness connector M18 terminal 17 (W/R) and ground.

17 (W/R) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.



AUTO LIGHT SYSTEM

3. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT

1. Check continuity (open circuit) between BCM harness connector M18 terminal 14 (L/Y) and optical sensor harness connector M15 terminal 2 (L/Y).

14 (L/Y) - 2 (L/Y) : Continuity should exist.

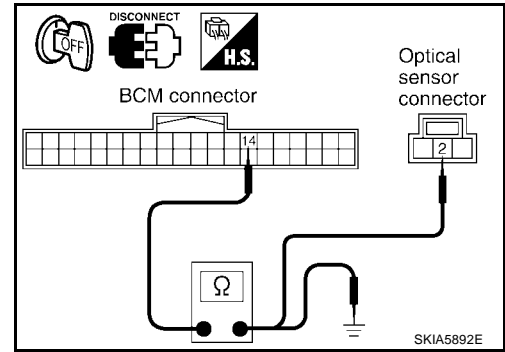
2. Check continuity (short circuit) between BCM harness connector M18 terminal 14 (L/Y) and ground.

14 (L/Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.



4. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT

1. Check continuity (open circuit) between BCM harness connector M18 terminal 18 (L/O) and optical sensor harness connector M15 terminal 3 (L/O).

18 (L/O) - 3 (L/O) : Continuity should exist.

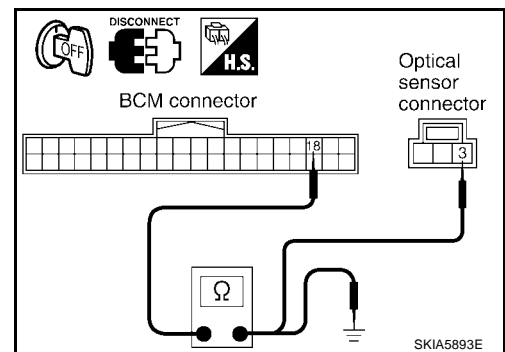
2. Check continuity (short circuit) between BCM harness connector M18 terminal 18 (L/O) and ground.

18 (L/O) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.



5. CHECK OPTICAL SENSOR VOLTAGE

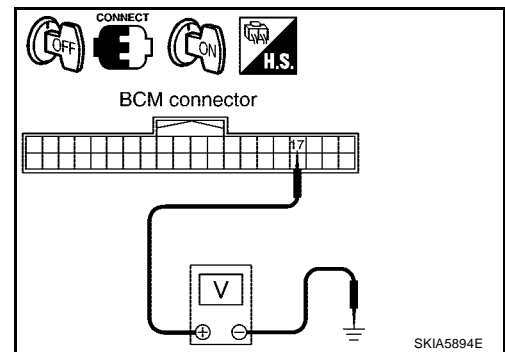
1. Connect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM harness connector M18 terminal 17 (W/R) and ground.

17 (W/R) - Ground : Approx. 5V should exist.

OK or NG

OK >> Replace the optical sensor. Refer to [LT-78, "Removal and Installation of Optical Sensor"](#) .

NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .



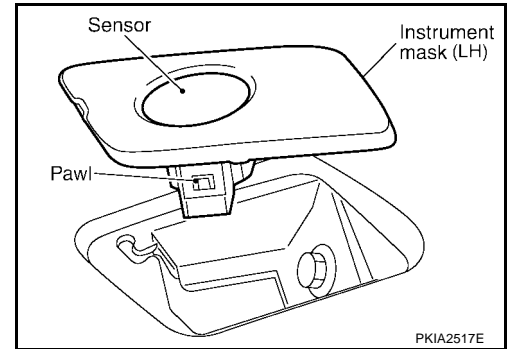
AUTO LIGHT SYSTEM

Removal and Installation of Optical Sensor

EKS00901

1. Remove instrument mask LH. Refer to [IP-18, "M/T Finisher"](#) .
2. While pressing pawl, remove the sensor unit from instrument mask.

Installation is in the reverse order of removal.



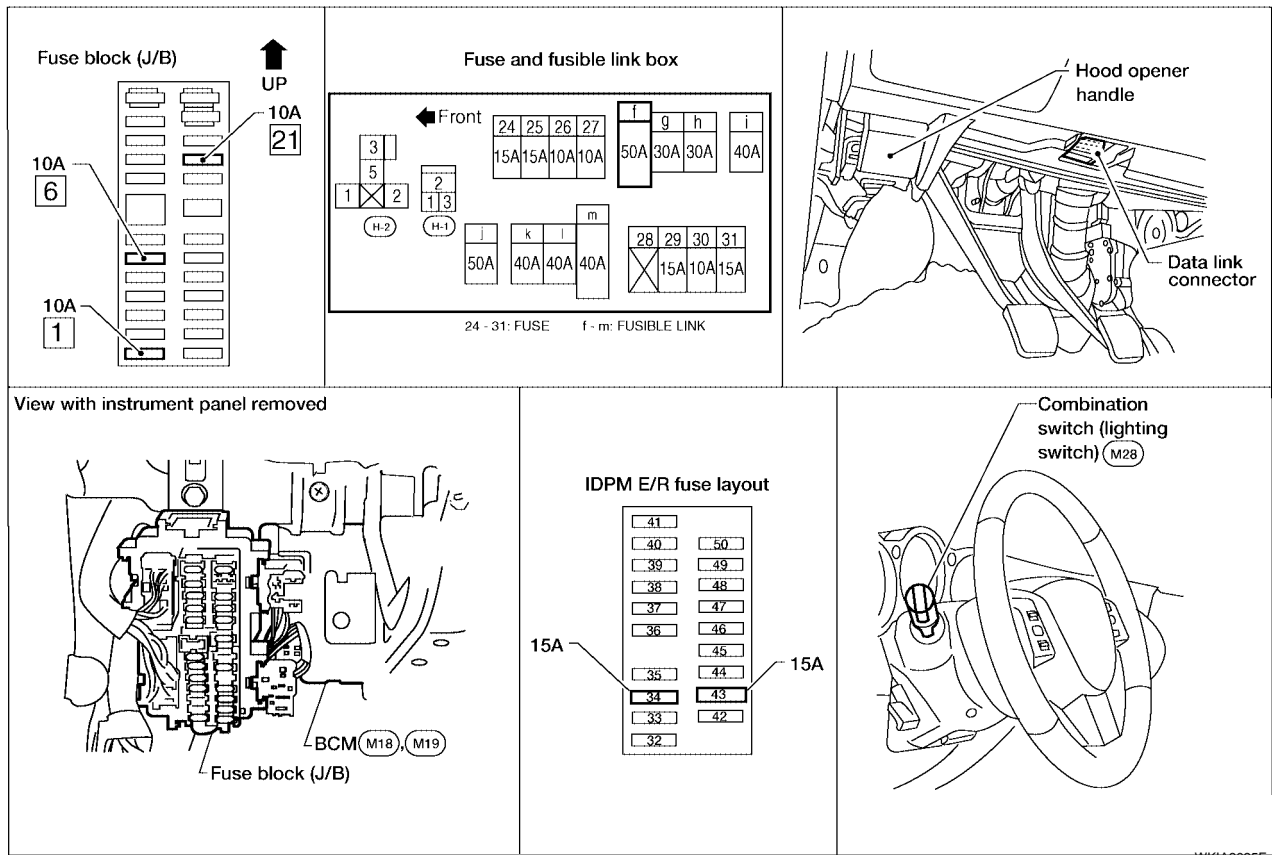
FRONT FOG LAMP

PF26150

EKS00902

FRONT FOG LAMP

Component Parts and Harness Connector Location



System Description

EKS00903

Control of the fog lamps is dependent upon the position of the combination switch (lighting switch). The lighting switch must be in the 2ND position or AUTO position (LOW beam is ON) for front fog lamp operation. When the lighting switch is placed in the fog lamp position, the BCM (body control module) receives input signal requesting the fog lamps to illuminate. When the headlamps are illuminated, this input signal is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the front fog lamp relay coil. When activated, this relay directs power to the front fog lamps.

OUTLINE

Power is supplied at all times

- to ignition relay, located in the IPDM E/R, and
- through 15A fuse (No. 43, located in the IPDM E/R)
- to front fog lamp relay, located in the IPDM E/R, and
- through 15A fuse (No. 34, located in the IPDM E/R)
- to CPU of the IPDM E/R, and
- through 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42.

When the ignition switch is in ON or START position, power is supplied

- to ignition relay, located in the IPDM E/R, and
- through 10A fuse [No. 1 located in the fuse block (J/B)]
- to BCM terminal 38.

When the ignition switch is in ACC or ON position, power is supplied

FRONT FOG LAMP

- through 10A fuse [No. 6, located in the fuse block (J/B)]
- to BCM terminal 11.

Ground is supplied

- to BCM terminal 52
- through grounds M57, M61 and M79, and
- to IPDM E/R terminals 38 and 60
- through grounds E15 and E24.

FOG LAMP OPERATION

The fog lamp switch is built into the combination switch. The lighting switch must be in the 2ND position or AUTO position (LOW beam is ON) and the fog lamp switch must be ON for fog lamp operation.

With the fog lamp switch in the ON position, the CPU of the IPDM E/R grounds the coil side of the fog lamp relay. The fog lamp relay then directs power

- through IPDM E/R terminal 37
- to front combination lamp LH terminal 11, and
- through IPDM E/R terminal 36
- to front combination lamp RH terminal 11.

Ground is supplied

- to combination lamp LH and RH terminal 12
- through grounds E15 and E24.

With power and ground supplied, the front fog lamps illuminate.

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#) .

EXTERIOR LAMP BATTERY SAVER CONTROL

When the combination switch (lighting switch) is in the 2ND position (ON), the fog lamp switch is ON, and the ignition switch is turned from ON or ACC to OFF, the battery saver control feature is activated.

Under this condition, the fog lamps (and headlamps) remain illuminated for 5 minutes, then the fog lamps (and headlamps) are turned off.

Exterior lamp battery saver control mode can be changed by the function setting of CONSULT-II.

CAN Communication System Description

Refer to [LAN-7, "CAN COMMUNICATION"](#) .

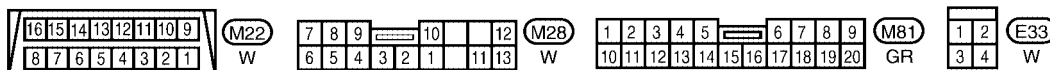
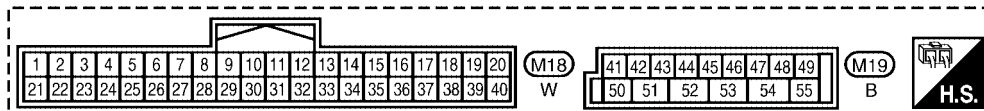
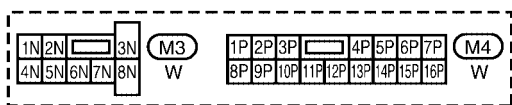
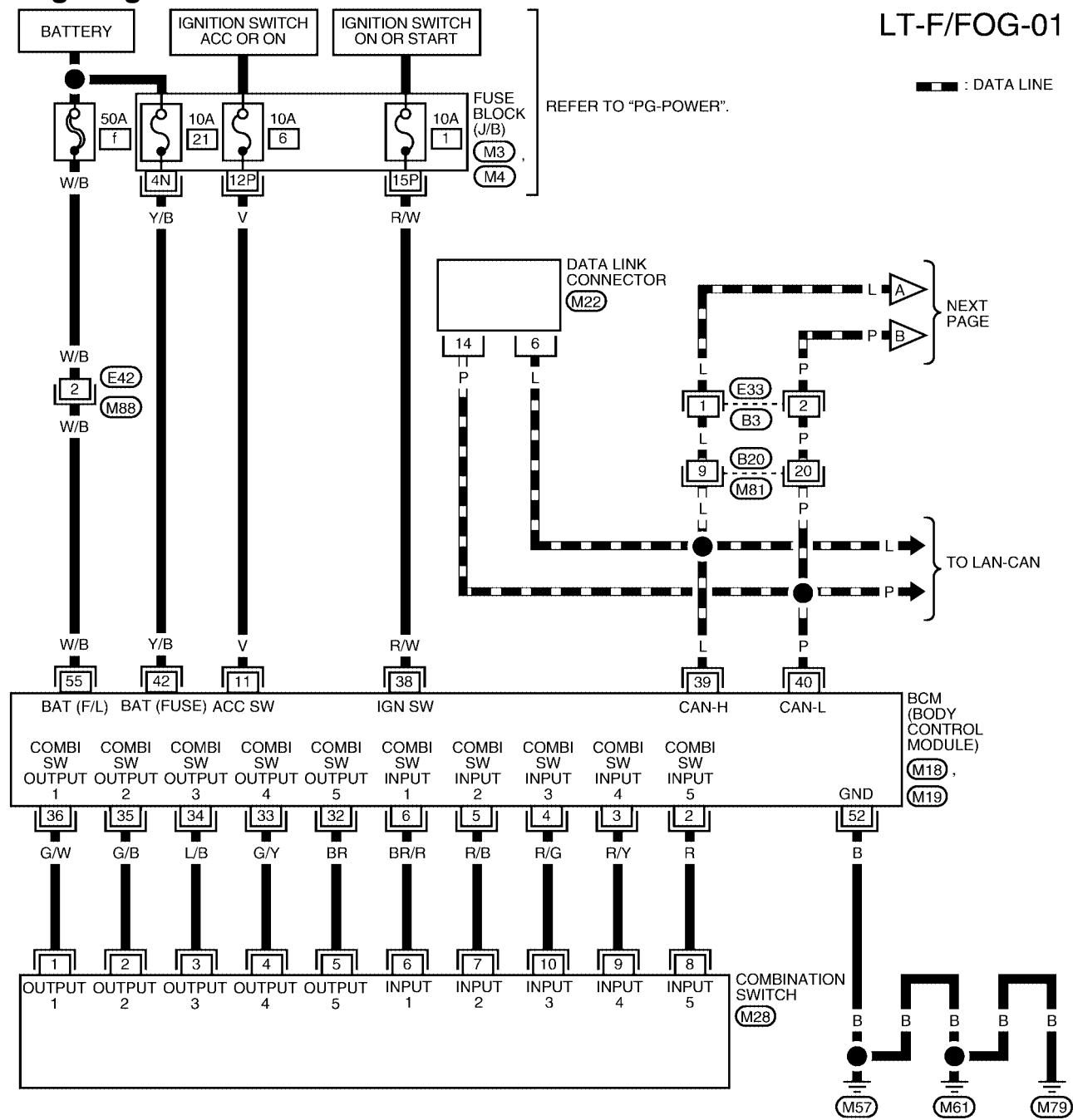
EKS00904

FRONT FOG LAMP

Wiring Diagram — F/FOG —

EKS00905

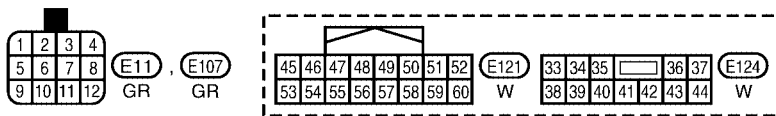
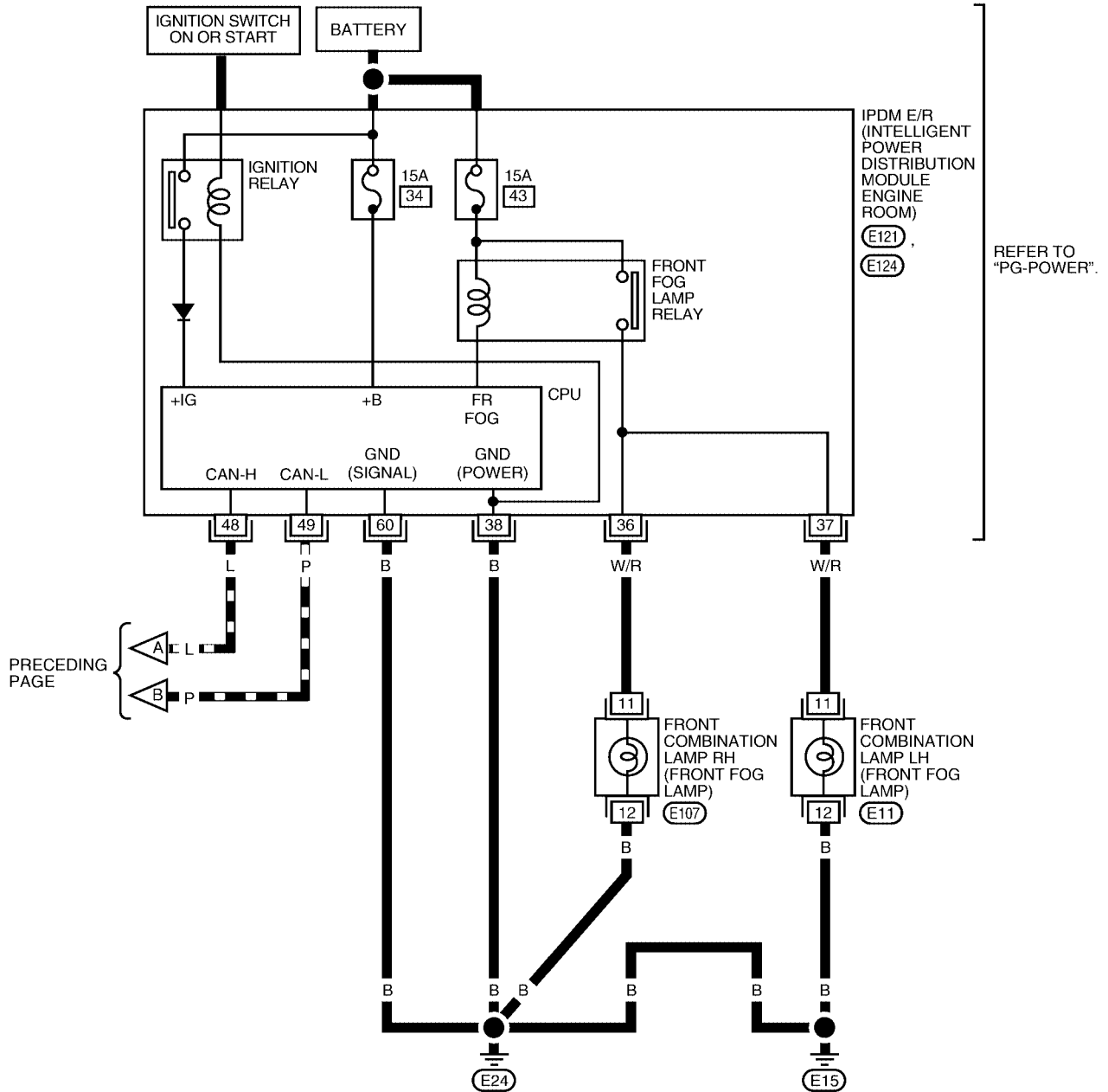
LT-F/FOG-01



WKWA1733E

FRONT FOG LAMP

LT-F/FOG-02

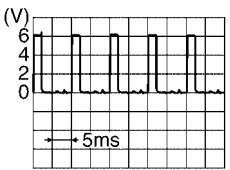
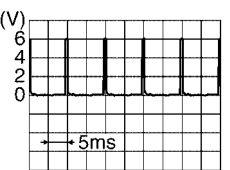
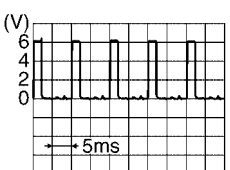

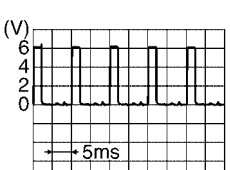




WKWA1734E

FRONT FOG LAMP

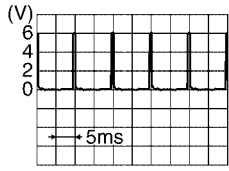
Terminals and Reference Values for BCM

EKS00906

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
6	BR/R	Combination switch input 1			
11	V	Ignition switch (ACC)	ACC	—	Battery voltage
32	G/O	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>

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FRONT FOG LAMP

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	
36	G/W	Combination switch output 1			
38	R/W	Ignition switch (ON)	ON	—	Battery voltage
39	L	CAN-H	—	—	—
40	P	CAN-L	—	—	—
42	Y/B	Battery power supply	OFF	—	Battery voltage
52	B	Ground	ON	—	0V
55	W/B	Battery power supply (fusible link)	OFF	—	Battery voltage

Terminals and Reference Values for IPDM E/R

EKS00907

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
36	W/R	Front fog lamp (RH)	ON	Lighting switch must be in the 2ND position or AUTO position (LOW beam is ON) and the front fog lamp switch must be ON	OFF 0V
				ON Battery voltage	
37	W/R	Front fog lamp (LH)	ON	Lighting switch must be in the 2ND position or AUTO position (LOW beam is ON) and the front fog lamp switch must be ON	OFF 0V
				ON Battery voltage	
38	B	Ground	ON	—	0V
48	L	CAN-H	—	—	—
49	P	CAN-L	—	—	—
60	B	Ground	ON	—	0V

How to Proceed With Trouble Diagnosis

EKS00908

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-79, "System Description"](#) .
3. Perform the Preliminary Check. Refer to [LT-84, "Preliminary Check"](#) .
4. Check symptom and repair or replace the cause of malfunction.
5. Does the front fog lamp operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

Preliminary Check

EKS00909

CHECK POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
	Ignition switch ACC or ON position	6
IPDM E/R	Battery	43

FRONT FOG LAMP

Refer to [LT-81, "Wiring Diagram — F/FOG —"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

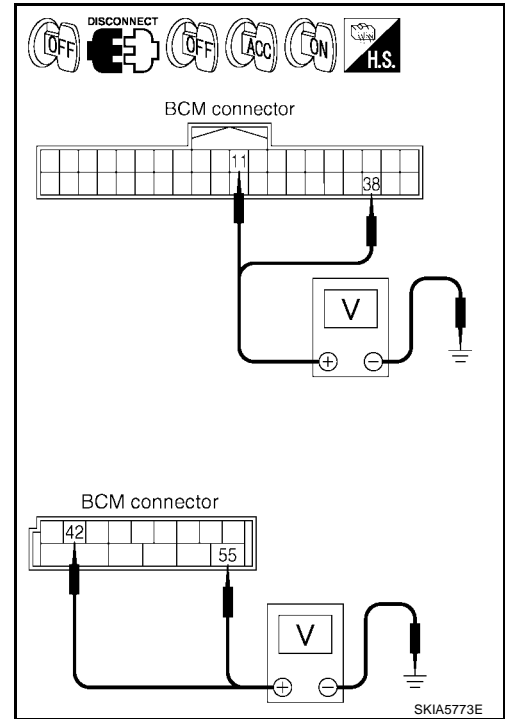
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM (+)		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	11 (V)	Ground	0V	Battery voltage	Battery voltage
	38 (R/W)		0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



3. CHECK GROUND CIRCUIT

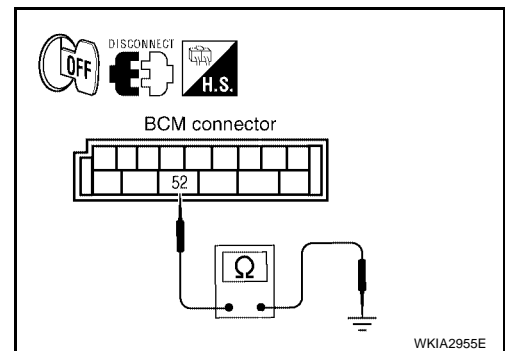
Check continuity between BCM harness connector and ground.

BCM		Continuity
Connector	Terminal (wire color)	
M19	52 (B)	Ground Yes

OK or NG

OK >> Inspection End.

NG >> Check ground circuit harness.



CONSULT-II Functions

Refer to [LT-23, "CONSULT-II Function \(BCM\)"](#) in HEADLAMP (FOR USA).

Refer to [LT-26, "CONSULT-II Function \(IPDM E/R\)"](#) in HEADLAMP (FOR USA).

FRONT FOG LAMP

EKS0090B

Front Fog Lamps Do Not Illuminate (Both Sides)

1. CHECK COMBINATION SWITCH INPUT SIGNAL

④ With CONSULT-II

Select "BCM" on CONSULT-II. With "HEAD LAMP" data monitor, make sure "FR FOG SW" turns ON-OFF linked with operation of lighting switch.

When lighting switch is in FOG position : FR FOG SW ON

⊗ Without CONSULT-II

Refer to [LT-126, "Combination Switch Inspection"](#) .

OK or NG

OK >> GO TO 2.

NG >> Check lighting switch. Refer to [LT-126, "Combination Switch Inspection"](#) .

DATA MONITOR	
MONITOR	
FR FOG SW	ON

SKIA5897E

2. FOG LAMP ACTIVE TEST

④ With CONSULT-II

1. Select "IPDM E/R" on CONSULT-II, and select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
2. Select "LAMPS" on "SELECT TEST ITEM" screen.
3. Touch "FOG" on "ACTIVE TEST" screen.
4. Make sure fog lamps operate.

Fog lamp should operate.

⊗ Without CONSULT-II

1. Start auto active test. Refer to [PG-21, "Auto Active Test"](#) .
2. Make sure fog lamps operate.

Fog lamp should operate.

OK or NG

OK >> GO TO 3.

NG >> GO TO 4.

ACTIVE TEST			
LAMPS		OFF	
		HI	
LO		FOG	
MODE	BACK	LIGHT	COPY

SKIA5774E

3. CHECK IPDM E/R

1. Select "IPDM E/R" on CONSULT-II, and select "DATA MONITOR" on "SELECT DIAG MODE" screen.
2. Make sure "FR FOG REQ" turns ON when lighting switch is in FOG position.

When lighting switch is in FOG position : FR FOG REQ ON

OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#) .

NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .

DATA MONITOR			
MONITOR			
FR FOG REQ		ON	
		Page Down	
		RECORD	
MODE	BACK	LIGHT	COPY

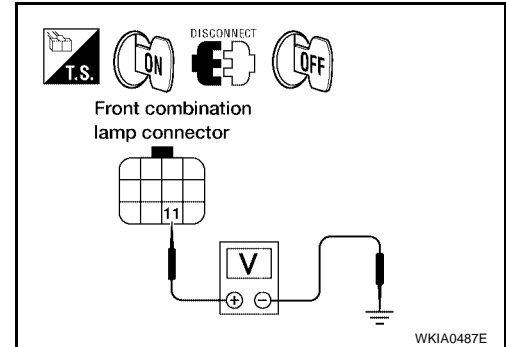
SKIA5898E

FRONT FOG LAMP

4. CHECK FOG LAMP INPUT SIGNAL

Ⓜ With CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH and LH connectors.
3. Turn ignition switch ON.
4. Select "IPDM E/R" on CONSULT-II, and select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
5. Select "LAMPS" on "SELECT TEST ITEM" screen.
6. Touch "FOG" on "ACTIVE TEST" screen.
7. When fog lamp is operating, check voltage between front combination lamp RH and LH harness connectors and ground.



ⓧ Without CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp RH and LH connectors.
3. Start auto active test. Refer to [PG-21, "Auto Active Test"](#).
4. When fog lamp is operating, check voltage between front combination lamp RH and LH harness connectors and ground.

Front combination lamp (+)		Terminal (wire color)	(-)	Voltage
Connector				
RH	E107	11 (W/R)	Ground	Battery voltage
LH	E11			

OK or NG

- OK >> GO TO 6.
 NG >> GO TO 5.

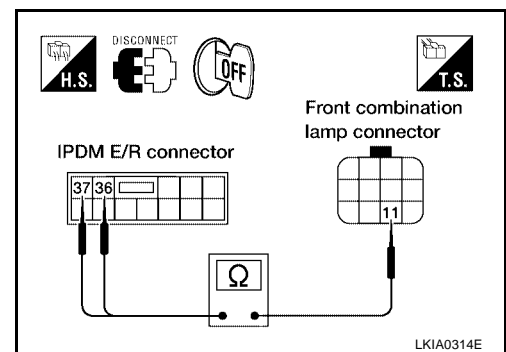
5. CHECK FOG LAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector E124 terminal 36 (W/R) and front combination lamp RH harness connector E107 terminal 11 (W/R).

36 (W/R) - 11 (W/R) : Continuity should exist.

4. Check continuity between IPDM E/R harness connector E124 terminal 37 (W/R) and front combination lamp LH harness connector E11 terminal 11 (W/R).

37 (W/R) - 11 (W/R) : Continuity should exist.



OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
 NG >> Repair harness or connector.

FRONT FOG LAMP

6. CHECK FOG LAMP GROUND

1. Turn ignition switch OFF.
2. Check continuity between front combination lamp RH harness connector E107 terminal 12 (B) and ground.

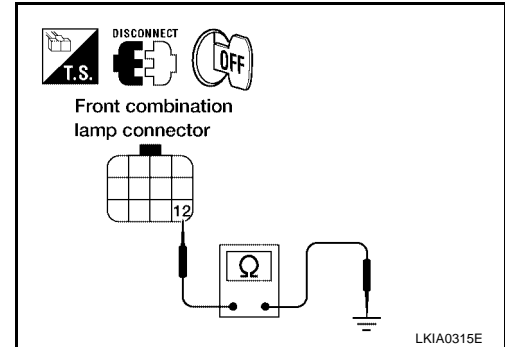
12 (B) - Ground : Continuity should exist.

3. Check continuity between front combination lamp LH harness connector E11 terminal 12 (B) and ground.

12 (B) - Ground : Continuity should exist.

OK or NG

- OK >> Check front fog lamp bulbs.
NG >> Repair harness or connector.



Front Fog Lamp Does Not Illuminate (One Side)

EKS0090C

1. CHECK BULB

Check bulb of lamp which does not illuminate.

OK or NG

- OK >> GO TO 2.
NG >> Replace front fog lamp bulb. Refer to [LT-90, "Bulb Replacement"](#).

2. CHECK FOG LAMP CIRCUIT

1. Disconnect IPDM E/R connector and front combination lamp RH or LH connector.
2. Check continuity between IPDM E/R harness connector E124 terminal 36 (W/R) and front combination lamp RH harness connector E107 terminal 11 (W/R).

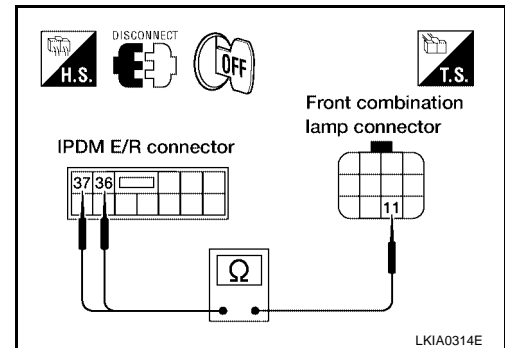
36 (W/R) - 11 (W/R) : Continuity should exist.

3. Check continuity between IPDM E/R harness connector E124 terminal 37 (W/R) and front combination lamp LH harness connector E11 terminal 11 (W/R).

37 (W/R) - 11 (W/R) : Continuity should exist.

OK or NG

- OK >> GOTO 3.
NG >> Repair harness or connector.



3. CHECK FOG LAMP GROUND

1. Check continuity between front combination lamp RH harness connector E107 terminal 12 (B) and ground.

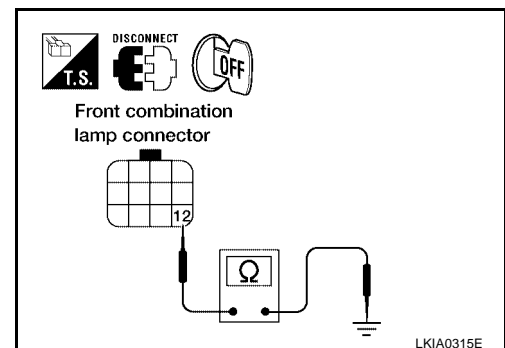
12 (B) - Ground : Continuity should exist.

2. Check continuity between front combination lamp LH harness connector E11 terminal 12 (B) and ground.

12 (B) - Ground : Continuity should exist.

OK or NG

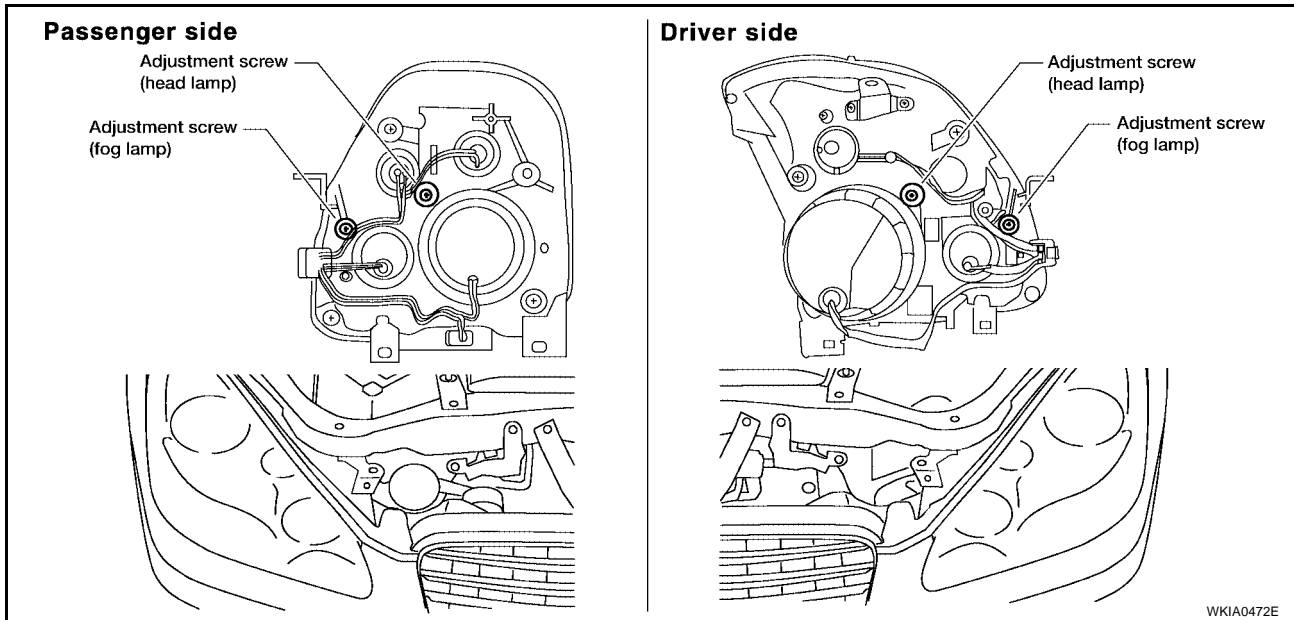
- OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
NG >> Repair harness or connector.



FRONT FOG LAMP

Aiming Adjustment

EKS0090D

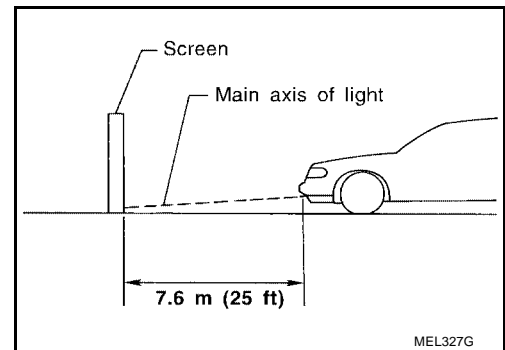


The fog lamp uses a replaceable halogen bulb. Before performing aiming adjustment, make sure of the following.

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

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

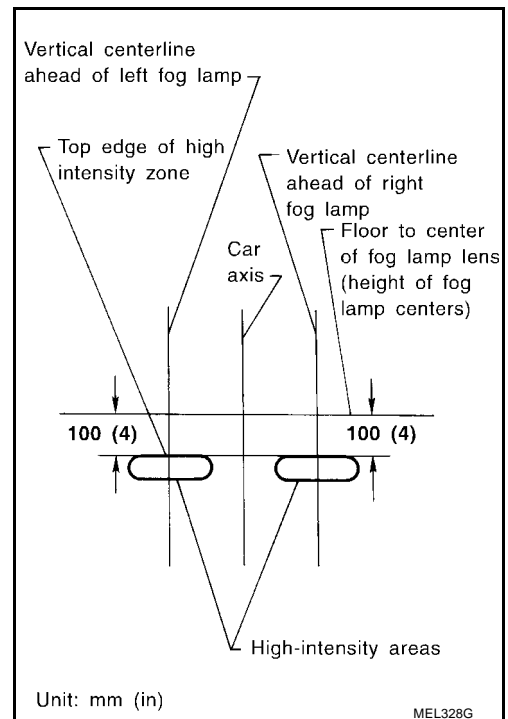
1. Set the distance between the screen and the center of the fog lamp lens as shown.
2. Turn front fog lamps ON.



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FRONT FOG LAMP

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



Bulb Replacement

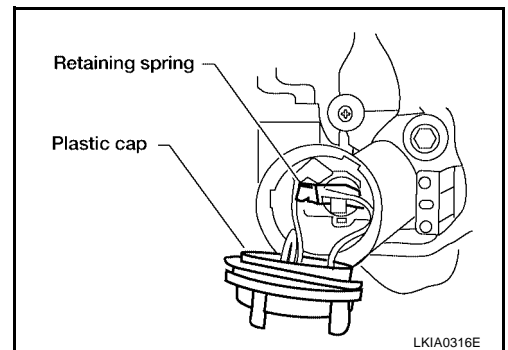
EKS0090E

- For LH side, remove air cleaner case. Refer to [EM-16, "Removal and Installation"](#). For RH side, position IPDM E/R aside and remove washer tank inlet. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).
- Turn the plastic cap counterclockwise to unlock it from the combination lamp.
- Disconnect fog lamp bulb connector.
- Unlock the retaining spring and remove the bulb.

CAUTION:

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

Installation is in the reverse order of removal.



Removal and Installation

EKS0090F

Refer to [LT-41, "Combination Lamp Removal and Installation"](#).

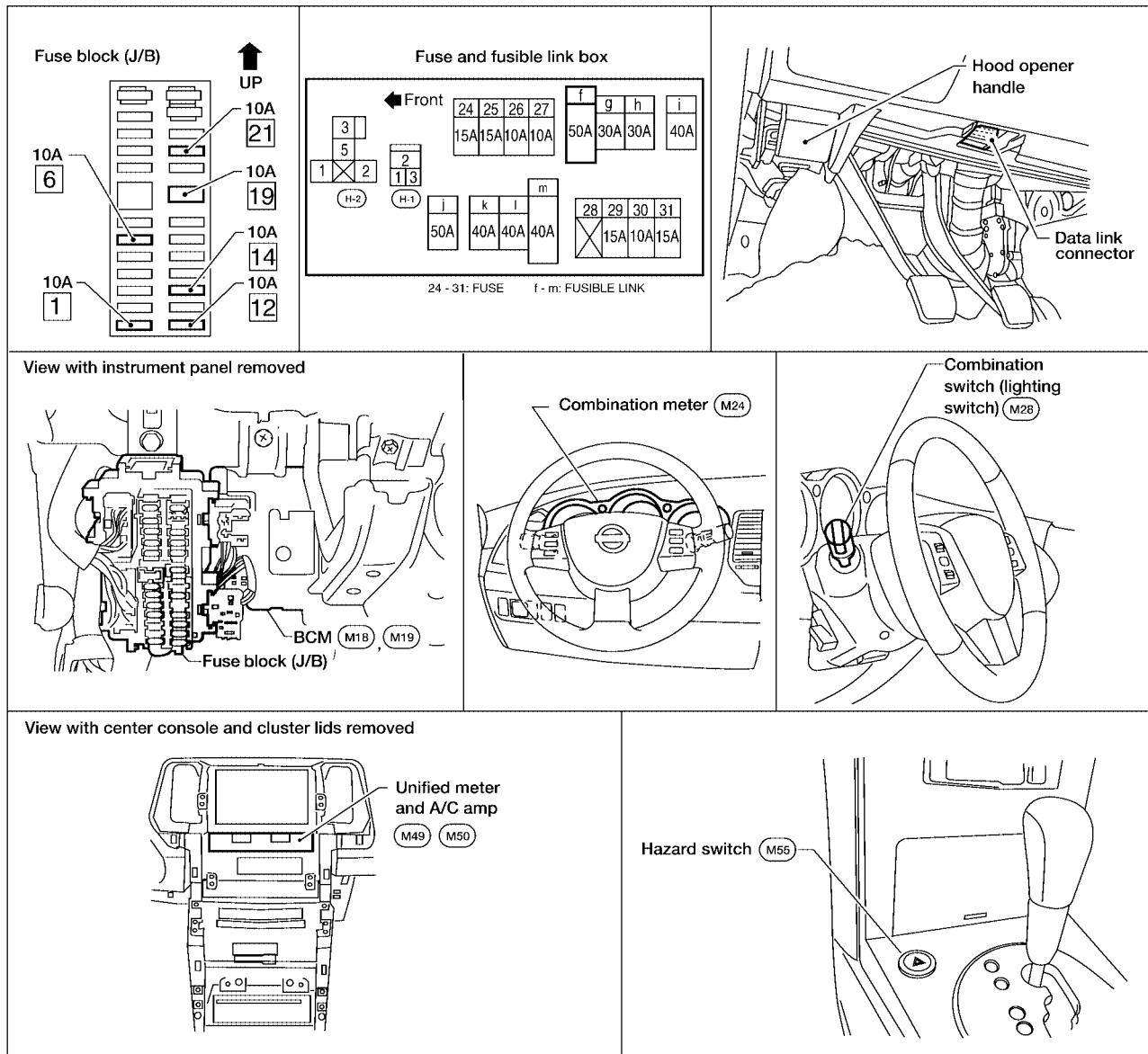
TURN SIGNAL AND HAZARD WARNING LAMPS

PF26120

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TURN SIGNAL AND HAZARD WARNING LAMPS

Component Parts and Harness Connector Location



WKIA2958E

EKS0090H

System Description OUTLINE

Power is supplied at all times

- through 50A fusible link (letter f , located in the fuse and fusible link box)
- to BCM (body control module) terminal 55, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42, and
- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to unified meter and A/C amp. terminal 21
- to combination meter terminal 24.

TURN SIGNAL OPERATION

When the ignition switch is in the ON or START position, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38, and

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TURN SIGNAL AND HAZARD WARNING LAMPS

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to unified meter and A/C amp. terminal 22, and
- through 10A fuse [No. 14, located in the fuse block (J/B)]
- to combination meter terminal 23.

Ground is supplied

- to BCM terminal 52
- to unified meter and A/C amp. terminals 29 and 30
- to combination meter terminals 10, 11 and 12
- through grounds M57, M61 and M79.

LH Turn

When the turn signal switch is moved to the left position, the BCM, interpreting it as turn signal is ON, outputs turn signal from BCM terminal 45.

The BCM supplies power

- through BCM terminal 45
- to front combination lamp LH terminal 5
- through front combination lamp LH terminal 10
- to grounds E15 and E24, and
- to rear combination lamp LH terminal 3
- through rear combination lamp LH terminal 5
- to grounds B7 and B19.

BCM sends signal to unified meter and A/C amp through CAN communication lines and turns on turn signal indicator lamp within combination meter.

RH Turn

When the turn signal switch is moved to the right position, the BCM, interpreting it as turn signal is ON, outputs turn signal from BCM terminal 46.

The BCM supplies power

- through BCM terminal 46
- to front combination lamp RH terminal 5
- through front combination lamp RH terminal 10
- to grounds E15 and E24, and
- to rear combination lamp RH terminal 3
- through rear combination lamp RH terminal 5
- to grounds B7 and B19.

BCM sends signal to unified meter and A/C amp through CAN communication lines and turns on turn signal indicator lamp within combination meter.

HAZARD LAMP OPERATION

Power is supplied at all times

- through 50A fusible link (letter **f** , located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to combination meter terminal 24
- to unified meter and A/C amp. terminal 21.

Ground is supplied

- to BCM terminal 52
- to combination meter terminals 10, 11 and 12
- to unified meter and A/C amp. terminals 29 and 30
- through grounds M57, M61 and M79.

When the hazard switch is depressed, ground is supplied

- to BCM terminal 29

TURN SIGNAL AND HAZARD WARNING LAMPS

- to hazard switch terminal 2
- to hazard switch terminal 1
- through grounds M57, M61 and M79.

When the hazard switch is depressed, the BCM, interpreting it as hazard warning lamps are ON, outputs turn signal from BCM terminals 45 and 46.

The BCM supplies power

- through BCM terminals 45 and 46
- to front combination lamp LH and RH terminal 5
- through front combination lamp LH and RH terminal 10
- to grounds E15 and E24, and
- to rear combination lamp LH and RH terminal 3
- through rear combination lamp LH and RH terminal 5
- to grounds B7 and B19.

BCM sends signal to unified meter and A/C amp through CAN communication lines and turns on turn signal indicator lamp within combination meter.

REMOTE KEYLESS ENTRY SYSTEM OPERATION

Power is supplied at all times

- through 50A fusible link (letter f , located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42, and
- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to unified meter and A/C amp. terminal 21
- to combination meter terminal 24.

Ground is supplied

- to BCM terminal 52
- to combination meter terminals 10, 11 and 12
- to unified meter and A/C amp. terminals 29 and 30
- through grounds M57, M61 and M79.

When the remote keyless entry system is triggered by input from the keyfob, the BCM, interpreting it as turn signal is ON, outputs turn signal from BCM terminals 45 and 46.

The BCM supplies power

- through BCM terminals 45 and 46
- to front combination lamp LH and RH terminal 5
- through front combination lamp LH and RH terminal 10
- to grounds E15 and E24, and
- to rear combination lamp LH and RH terminal 3
- through rear combination lamp LH and RH terminal 5
- to grounds B7 and B19.

BCM sends signal to unified meter and A/C amp. through CAN communication lines and turns on turn signal indicator lamp with combination meter.

With power and input supplied, the BCM controls the flashing of the hazard warning lamps when keyfob is used to activate the remote keyless entry system.

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#) .

CAN Communication System Description

Refer to [LAN-7, "CAN COMMUNICATION"](#) .

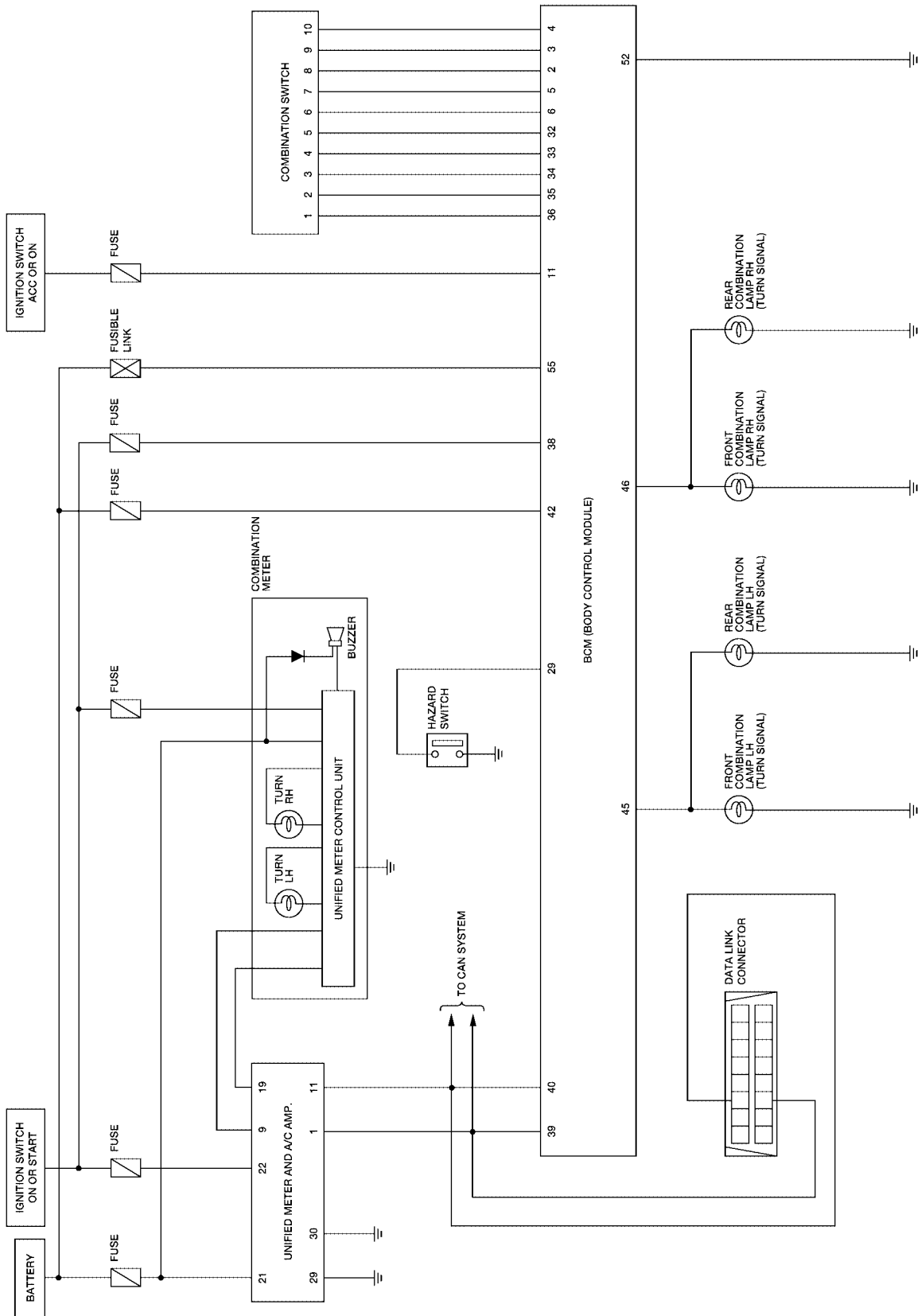
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EKS00901

TURN SIGNAL AND HAZARD WARNING LAMPS

Schematic

EKS0090J



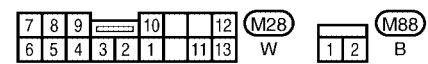
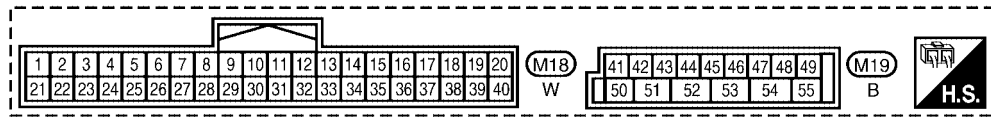
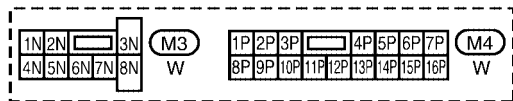
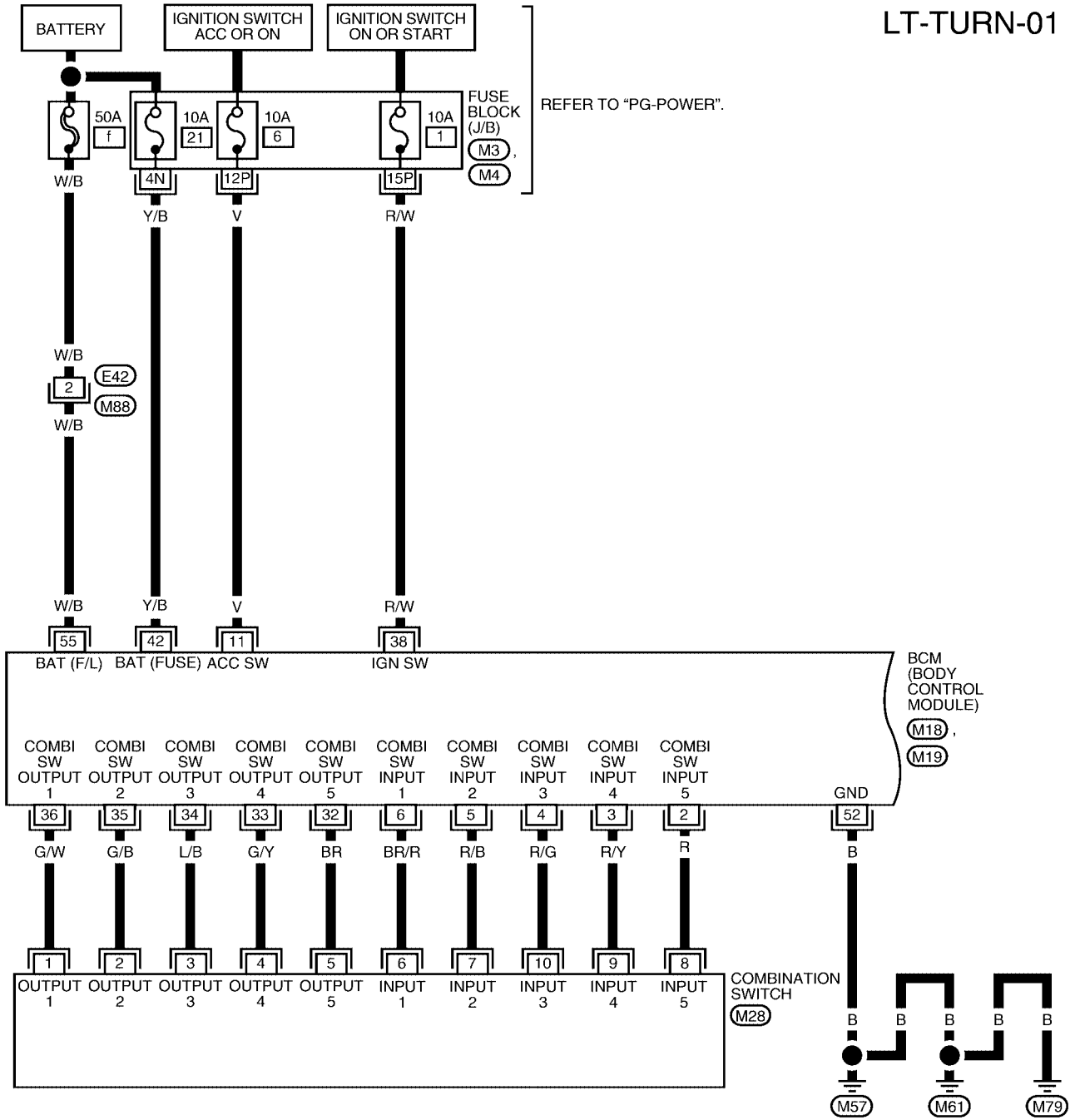
WKWA1735E

TURN SIGNAL AND HAZARD WARNING LAMPS

EKS0090K

Wiring Diagram — TURN —

LT-TURN-01

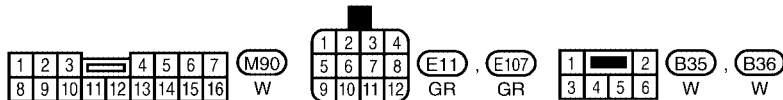
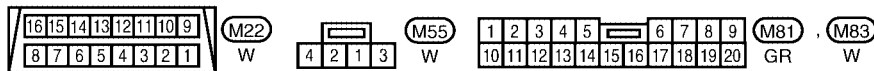
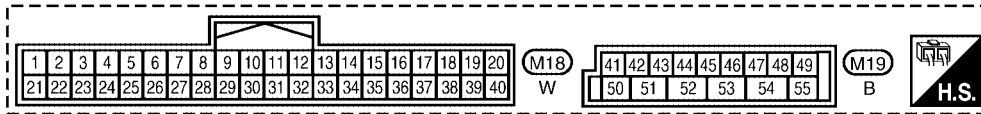
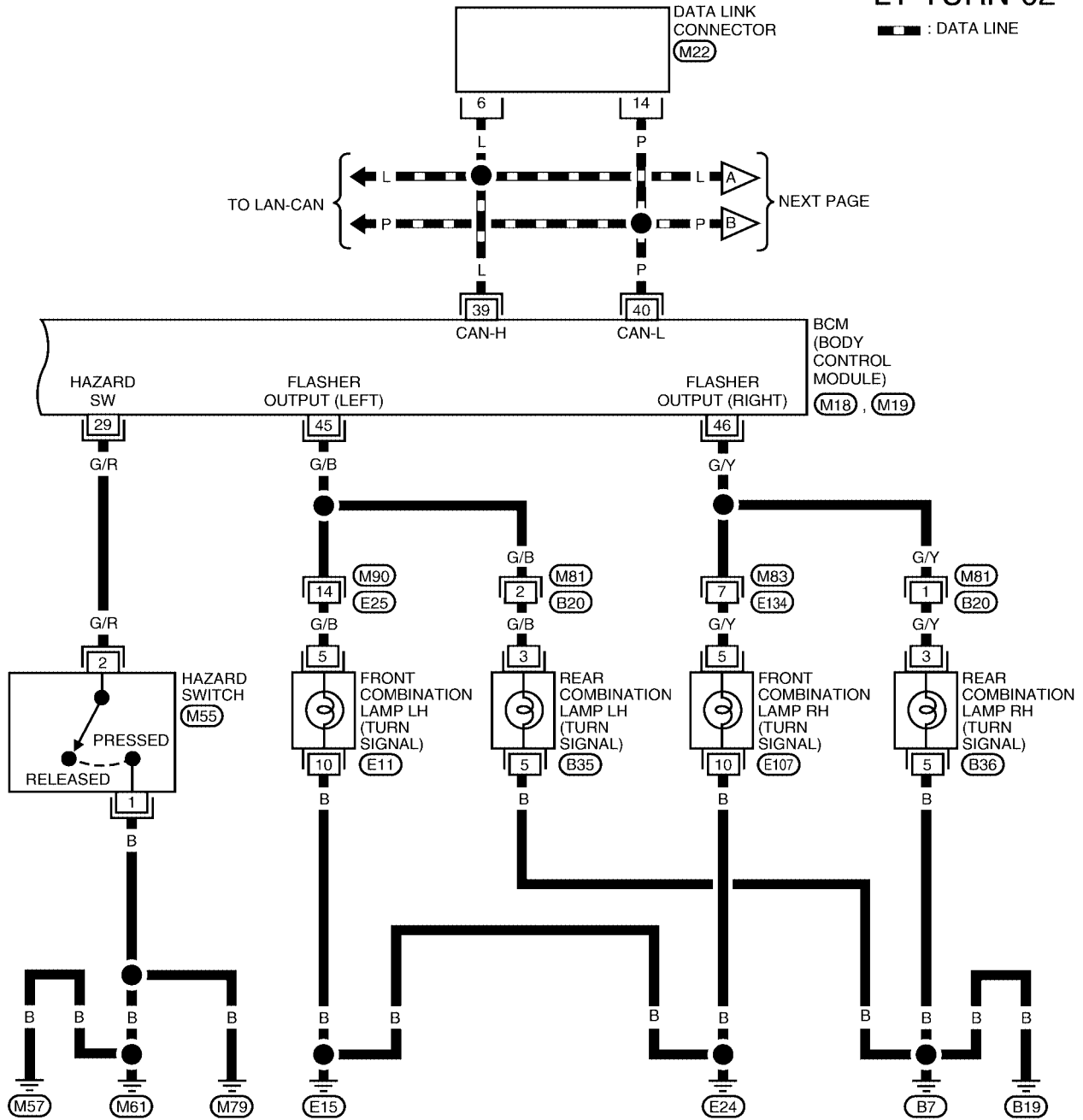


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TURN SIGNAL AND HAZARD WARNING LAMPS

LT-TURN-02

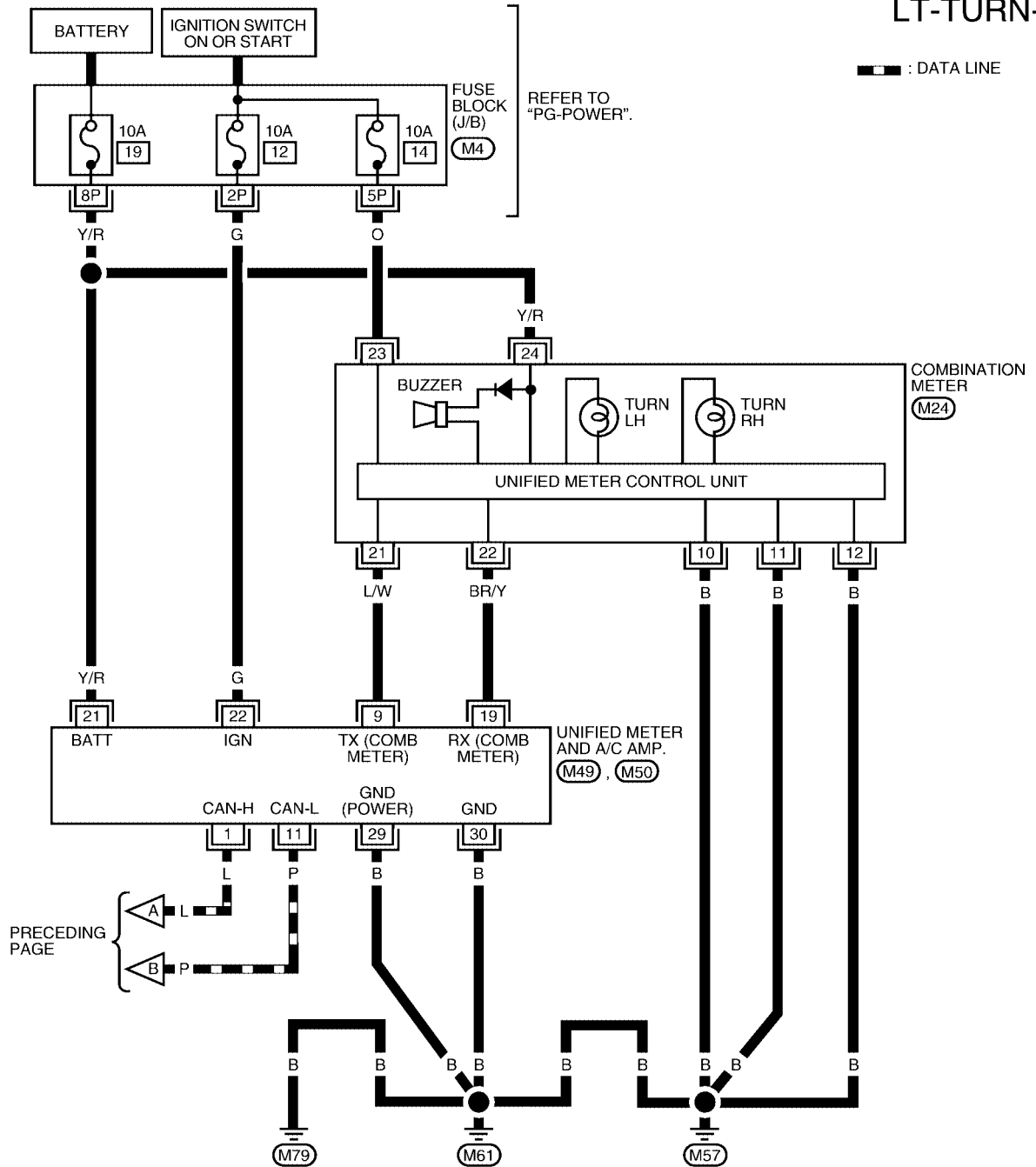
— : DATA LINE



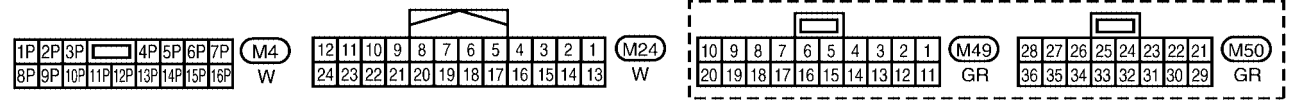
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TURN SIGNAL AND HAZARD WARNING LAMPS

LT-TURN-03



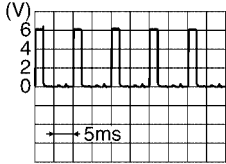
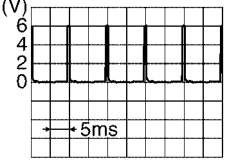
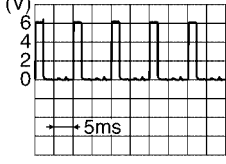

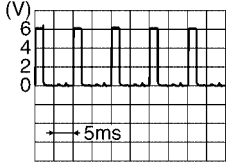
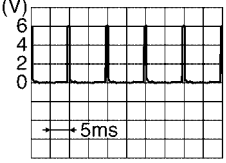
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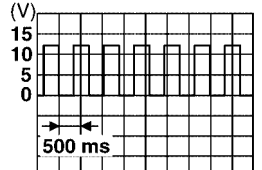
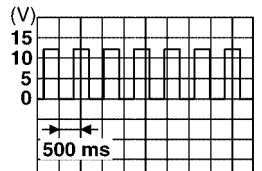
TURN SIGNAL AND HAZARD WARNING LAMPS

EKS0090L

Terminals and Reference Values for BCM

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>	
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>	
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>	
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>	
6	BR/R	Combination switch input 1				
11	V	Ignition switch (ACC)	ACC	—	Battery voltage	
29	G/R	Hazard switch signal	OFF	Hazard switch	ON	0V
					OFF	5V
32	BR	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>	
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>	

TURN SIGNAL AND HAZARD WARNING LAMPS

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)	
			Ignition switch	Operation or condition		
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E	
36	G	Combination switch output 1				
38	R/W	Ignition switch (ON)	ON	—	Battery voltage	
39	L	CAN-H	—	—	—	
40	P	CAN-L	—	—	—	
42	Y/B	Battery power supply	OFF	—	Battery voltage	
45	G/B	Turn signal (left)	ON	Combina- tion switch	Turn left ON	 SKIA3009J
46	G/Y	Turn signal (right)	ON	Combina- tion switch	Turn right ON	 SKIA3009J
52	B	Ground	ON	—	0V	
55	W/B	Battery power supply	OFF	—	Battery voltage	

How to Proceed With Trouble Diagnosis

EKS0090M

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-91, "System Description"](#).
3. Perform preliminary check. Refer to [LT-100, "Preliminary Check"](#).
4. Check symptom and repair or replace the cause of malfunction.
5. Do turn signal and hazard warning lamps operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

TURN SIGNAL AND HAZARD WARNING LAMPS

EKS0090N

Preliminary Check CHECK POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
	Ignition switch ACC or ON position	6

Refer to [LT-95, "Wiring Diagram — TURN —"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

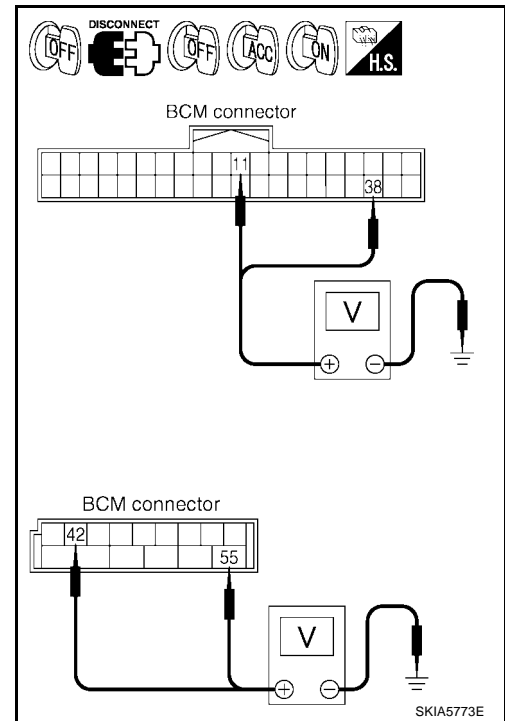
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM (+)		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	11 (V)	Ground	0V	Battery voltage	Battery voltage
	38 (R/W)		0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



3. CHECK GROUND CIRCUIT

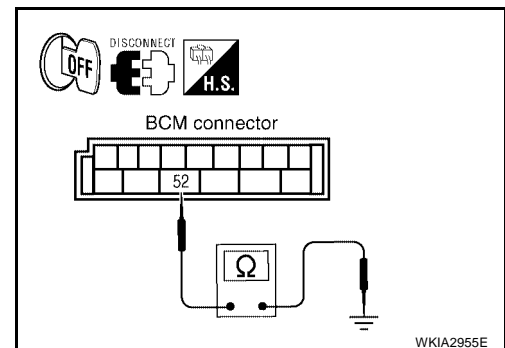
Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal (wire color)		
M19	52 (B)	Ground	Yes

OK or NG

OK >> Inspection End.

NG >> Check ground circuit harness.



TURN SIGNAL AND HAZARD WARNING LAMPS

CONSULT-II Function (BCM)

EKS00900

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

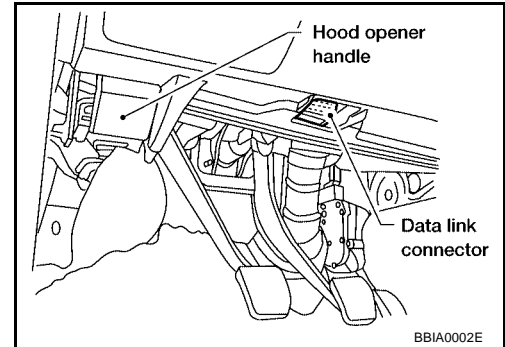
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR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

CONSULT-II OPERATION

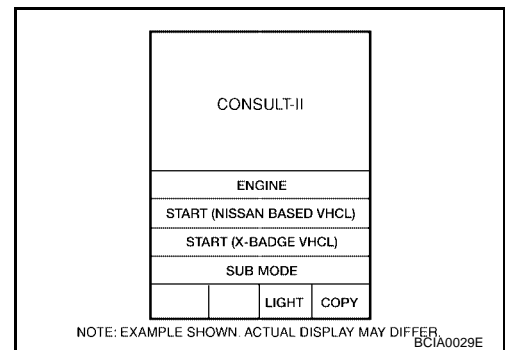
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

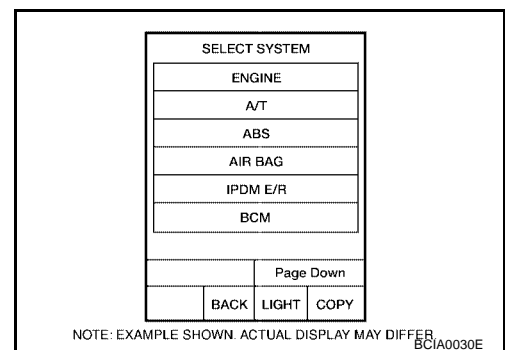
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".



3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



TURN SIGNAL AND HAZARD WARNING LAMPS

4. Touch "FLASHER" on "SELECT TEST ITEM" screen.

SELECT TEST ITEM			
HEAD LAMP			
WIPER			
FLASHER			
AIR CONDITIONER			
COMB SW			
BCM			
Scroll Up		Page Down	
BACK	LIGHT	COPY	

LKIA0183E

DATA MONITOR

Operation Procedure

1. Touch "FLASHER" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors the individual signal.

4. Touch "START".
5. When "SELECTION FROM MENU" is selected, touch items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored.
6. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

Display Item List

Monitor item	Contents	Contents
IGN ON SW	"ON/OFF"	Displays "IGN position (ON)/OFF, ACC position (OFF)" judged from the ignition switch signal.
HAZARD SW	"ON/OFF"	Displays "Hazard ON (ON)/Hazard OFF (OFF)" status, determined from hazard switch signal.
TURN SIGNAL R	"ON/OFF"	Displays "Turn right (ON)/Other (OFF)" status, determined from lighting switch signal.
TURN SIGNAL L	"ON/OFF"	Displays "Turn left (ON)/Other (OFF)" status, determined from lighting switch signal.
BRAKE SW ^{Note}	"OFF"	—

NOTE:

This item is displayed, but cannot monitor it.

ACTIVE TEST

Operation Procedure

1. Touch "FLASHER" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Touch item to be tested and check operation of the selected item.
4. During the operation check, touching "BACK" deactivates the operation.

Display Item List

Test item	Description
FLASHER (RH)	Turn signal lamp (RH) can be operated by any ON-OFF operations.
FLASHER (LH)	Turn signal lamp (LH) can be operated by any ON-OFF operations.

TURN SIGNAL AND HAZARD WARNING LAMPS

EKS0090P

Turn Signal Lamp Does Not Operate

1. CHECK COMBINATION SWITCH INPUT SIGNAL

Ⓜ With CONSULT-II

Select "BCM" on CONSULT-II. With "FLASHER" data monitor, make sure "TURN SIGNAL R" and "TURN SIGNAL L" turns ON-OFF linked with operation of lighting switch.

**When lighting switch is in : TURN SIGNAL R ON
TURN RH position**

**When lighting switch is in : TURN SIGNAL L ON
TURN LH position**

ⓧ Without CONSULT-II

Refer to [LT-126, "Combination Switch Inspection"](#).

OK or NG

OK >> GO TO 2.

NG >> Check lighting switch. Refer to [LT-126, "Combination Switch Inspection"](#).

DATA MONITOR	
MONITOR	
TURN SIGNAL R	ON
TURN SIGNAL L	ON

SKIA4499E

2. ACTIVE TEST

Ⓜ With CONSULT-II

1. Select "FLASHER" during active test. Refer to [LT-102, "ACTIVE TEST"](#).

2. Make sure "FLASHER :RH" and "FLASHER :LH" operate.

ⓧ Without CONSULT-II

GO TO 3.

OK or NG

OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).

NG >> GO TO 3.

ACTIVE TEST	
FLASHER	OFF
RH	LH
MODE	BACK
LIGHT	COPY

SKIA6190E

3. CHECK TURN SIGNAL LAMPS CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM connector and front combination lamp LH and RH connectors.

3. Check continuity between BCM harness connector M19 terminal 45 (G/B) and front combination lamp LH harness connector E11 terminal 5 (G/B).

45 (G/B) - 5 (G/B) : Continuity should exist.

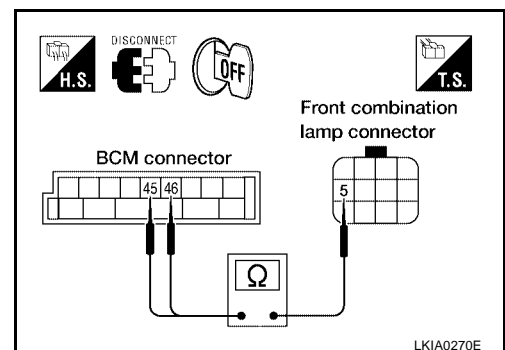
4. Check continuity between BCM harness connector M19 terminal 46 (G/Y) and front combination lamp RH harness connector E107 terminal 5 (G/Y).

46 (G/Y) - 5 (G/Y) : Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.



TURN SIGNAL AND HAZARD WARNING LAMPS

4. CHECK GROUND

1. Check continuity between front combination lamp LH harness connector E11 terminal 10 (B) and ground.

10 (B) - Ground : Continuity should exist.

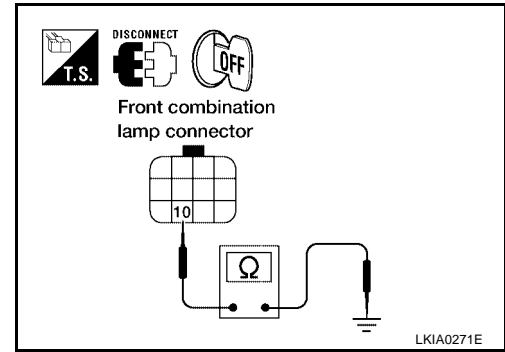
2. Check continuity between front combination lamp RH harness connector E107 terminal 10 (B) and ground.

10 (B) - Ground : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.



5. CHECK TURN SIGNAL LAMPS SHORT CIRCUIT

1. Disconnect rear combination lamp connectors.
2. Check continuity (short circuit) between front combination lamp LH harness connector E11 terminal 5 (G/B) and ground.

5 (G/B) - Ground : Continuity should not exist.

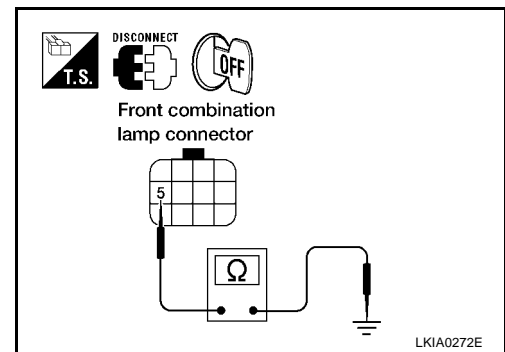
3. Check continuity (short circuit) between front combination lamp RH harness connector E107 terminal 5 (G/Y) and ground.

5 (G/Y) - Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness or connector.



6. CHECK BULB

Check bulb standard of each turn signal lamp is correct. Refer to [LT-189, "Exterior Lamp"](#) .

OK or NG

OK >> Replace BCM if turn signal lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#) .

NG >> Replace turn signal lamp bulb. Refer to [LT-41, "FRONT TURN SIGNAL LAMP"](#) .

Rear Turn Signal Lamp Does Not Operate

EKS0090Q

1. CHECK TAIL LAMPS AND STOP LAMPS

Check bulb standard of each turn signal lamp is correct. Refer to [LT-189, "Exterior Lamp"](#) .

OK or NG

OK >> GO TO 2.

NG >> Replace turn signal lamp bulb. Refer to [LT-148, "Bulb Replacement"](#) .

TURN SIGNAL AND HAZARD WARNING LAMPS

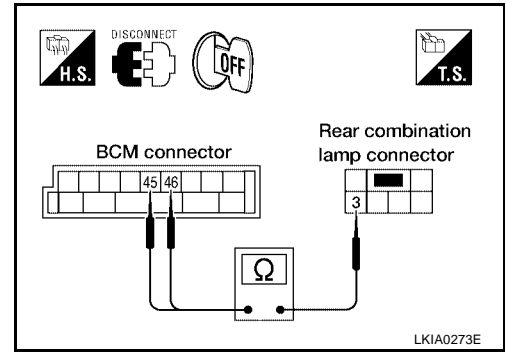
2. CHECK TURN SIGNAL LAMPS CIRCUIT

1. Disconnect BCM connector and rear combination lamp connector.
2. Check continuity between BCM harness connector M19 terminal 46 (G/Y) and rear combination lamp RH harness connector B36 terminal 3 (G/Y).

46 (G/Y) - 3 (G/Y) : Continuity should exist.

3. Check continuity between BCM harness connector M19 terminal 45 (G/B) and rear combination lamp LH harness connector B35 terminal 3 (G/B).

45 (G/B) - 3 (G/B) : Continuity should exist.



OK or NG

- OK >> GO TO 3.
- NG >> Repair harness or connector.

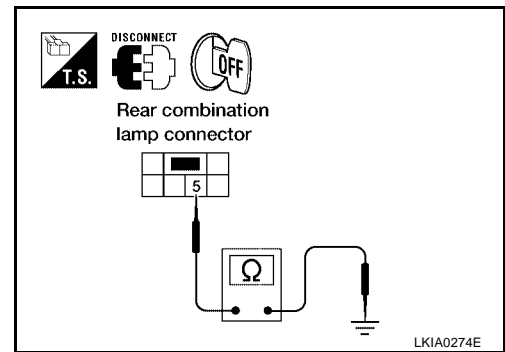
3. CHECK GROUND CIRCUIT

Check continuity between rear combination lamp harness connector B35 LH and B36 RH terminal 5 (B) and ground.

5 (B) - Ground : Continuity should exist.

OK or NG

- OK >> Check rear combination lamp connector for proper connection. Repair as necessary.
- NG >> Repair harness or connector.



Hazard Warning Lamp Does Not Operate But Turn Signal Lamps Operate

EKS0090R

1. CHECK BULB

Make sure bulb standard of each turn signal lamp is correct. Refer to [LT-189, "Exterior Lamp"](#).

OK or NG

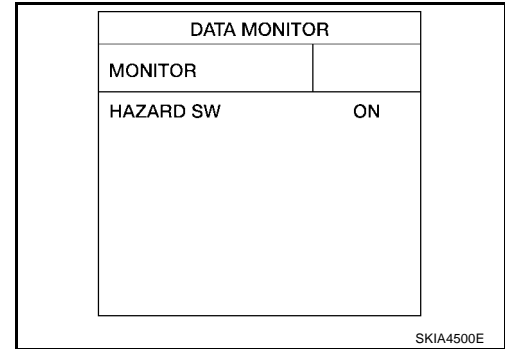
- OK >> GO TO 2.
- NG >> Replace turn signal lamp bulb. Refer to [LT-41, "FRONT TURN SIGNAL LAMP"](#) for front turn signal bulb. Refer to [LT-148, "Bulb Replacement"](#) for rear turn signal bulb.

TURN SIGNAL AND HAZARD WARNING LAMPS

2. CHECK HAZARD SWITCH INPUT SIGNAL

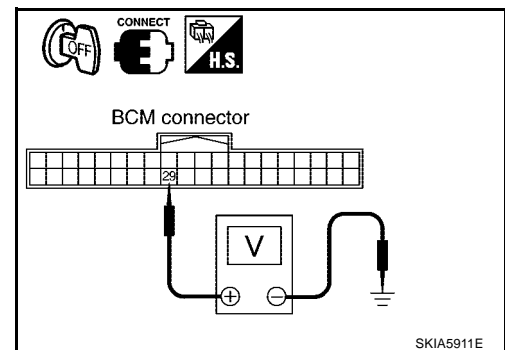
Ⓟ With CONSULT-II
 Select "BCM" on CONSULT-II. With "FLASHER" data monitor, make sure "HAZARD SW" turns ON-OFF linked with operation of hazard switch.

When hazard switch is in ON position : HAZARD SW ON



ⓧ Without CONSULT-II
 Check voltage between BCM harness connector M18 terminal 29 (G/R) and ground.

BCM (+)		(-)	Condition	Voltage (Approx.)
Connector	Terminal (wire color)			
M18	29 (G/R)	Ground	Hazard switch is ON	0V
			Hazard switch is OFF	5V



OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> GO TO 3.

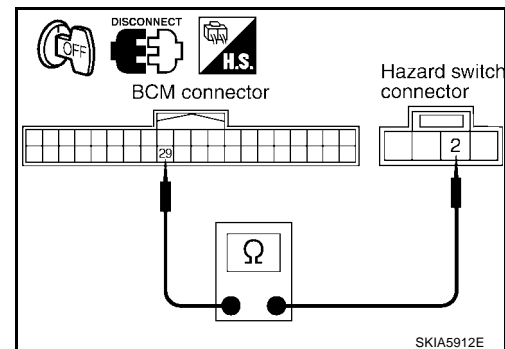
3. CHECK HAZARD SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and hazard switch connector.
3. Check continuity between BCM harness connector M18 terminal 29 (G/R) and hazard switch harness connector M55 terminal 2 (G/R).

29 (G/R) - 2 (G/R) : Continuity should exist.

OK or NG

- OK >> GO TO 4.
- NG >> Repair harness or connector.



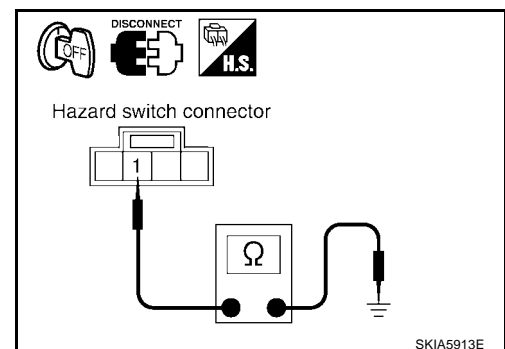
4. CHECK GROUND

Check continuity between hazard switch harness connector M55 terminal 1 (B) and ground.

1 (B) - Ground : Continuity should exist.

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness or connector.



TURN SIGNAL AND HAZARD WARNING LAMPS

5. CHECK HAZARD SWITCH

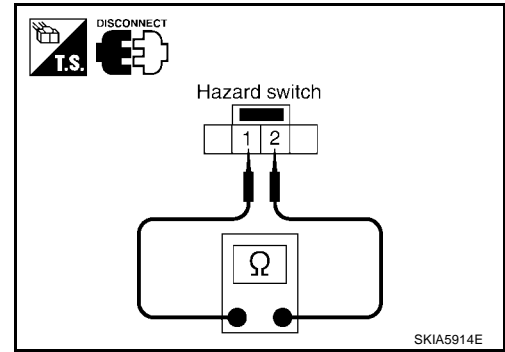
1. Disconnect hazard switch connector.
2. Check continuity of hazard switch.

Hazard switch		Condition	Continuity
Terminal			
1	2	Hazard switch is ON	Yes
		Hazard switch is OFF	No

OK or NG

OK >> Replace BCM if hazard warning lamps do not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#) .

NG >> Replace hazard switch. Refer to [LT-122, "Removal and Installation"](#) .



Turn Signal Indicator Lamp Does Not Operate

EKS0090S

1. CHECK BULB

Check CAN communication. Refer to [LAN-7, "CAN COMMUNICATION"](#) .

OK or NG

OK >> Replace combination meter. Refer to [DI-29, "Removal and Installation of Combination Meter"](#) .

NG >> Repair as necessary.

Bulb Replacement (Front Turn Signal Lamp)

EKS0090T

Refer to [LT-41, "FRONT TURN SIGNAL LAMP"](#) .

Bulb Replacement (Rear Turn Signal Lamp)

EKS0090U

Refer to [LT-148, "Bulb Replacement"](#) in REAR COMBINATION LAMP.

Removal and Installation of Front Turn Signal Lamp

EKS0090V

Refer to [LT-41, "Combination Lamp Removal and Installation"](#) .

Removal and Installation of Rear Turn Signal Lamp

EKS0090W

Refer to [LT-148, "Removal and Installation"](#) in REAR COMBINATION LAMP.

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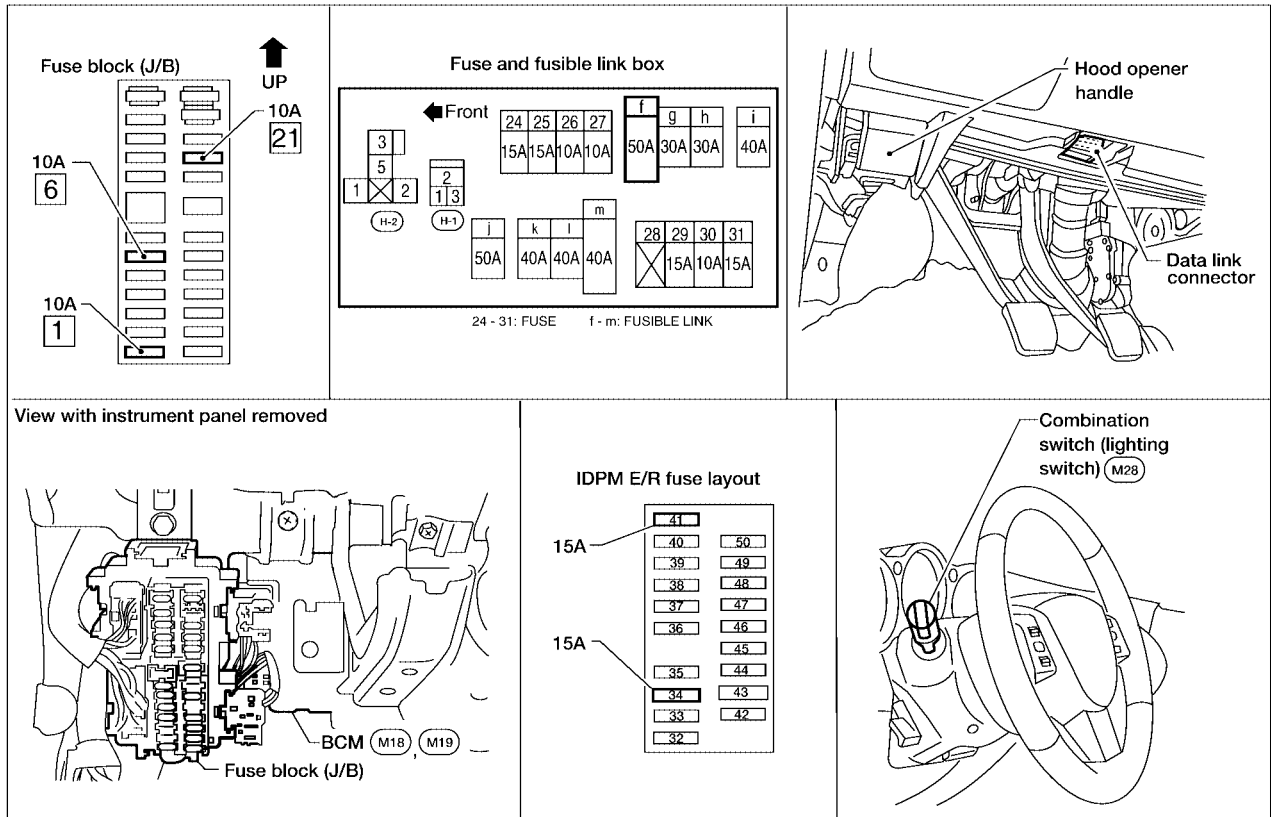
CORNERING LAMP

PF:26100

CORNERING LAMP

Component Parts and Harness Connector Location

EKS0090X



WKIA3036E

System Description OUTLINE

EKS0090Y

Power is supplied at all times

- to ignition relay, located in the IPDM E/R (intelligent power distribution module engine room), and
- through 50A fusible link (letter **f**, located in the fuse and fusible link box)
- to BCM (body control module) terminal 55, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42, and
- through 15A fuse (No. 34, located in the IPDM E/R)
- to CPU (central processing unit) of the IPDM E/R, and
- through 15A fuse (No. 41, located in the IPDM E/R)
- to cornering lamp relay LH and RH.

CORNERING LAMP OPERATION

When the ignition switch is in the ON or START position, power is supplied

- to ignition relay, located in the IPDM E/R, and
- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38.

Ground is supplied

- to BCM terminal 52
- through grounds M57, M61 and M79, and
- to IPDM E/R terminals 38 and 60
- through grounds E15 and E24.

CORNERING LAMP

LH Turn

When the lighting switch is in the 2nd position or in the AUTO position (headlamp ON) and turn signal switch is moved to the left position, BCM sends signal through CAN communication lines to IPDM E/R. IPDM E/R then operates cornering lamp relay LH. It sends power from IPDM E/R terminal 34 to cornering lamp LH terminal +. Cornering lamp turns on

- through cornering lamp terminal –
- to grounds E15 and E24.

RH Turn

When the lighting switch is in the 2nd position or in the AUTO position (headlamp ON) and turn signal switch is moved to the right position, BCM sends signal through CAN communication lines to IPDM E/R. IPDM E/R then operates cornering lamp relay RH. It sends power from IPDM E/R terminal 23 to cornering lamp RH terminal +.

Cornering lamp turns on

- through cornering lamp terminal –
- to grounds E15 and E24.

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#) .

CAN Communication System Description

Refer to [LAN-7, "CAN COMMUNICATION"](#) .

EKS0090Z

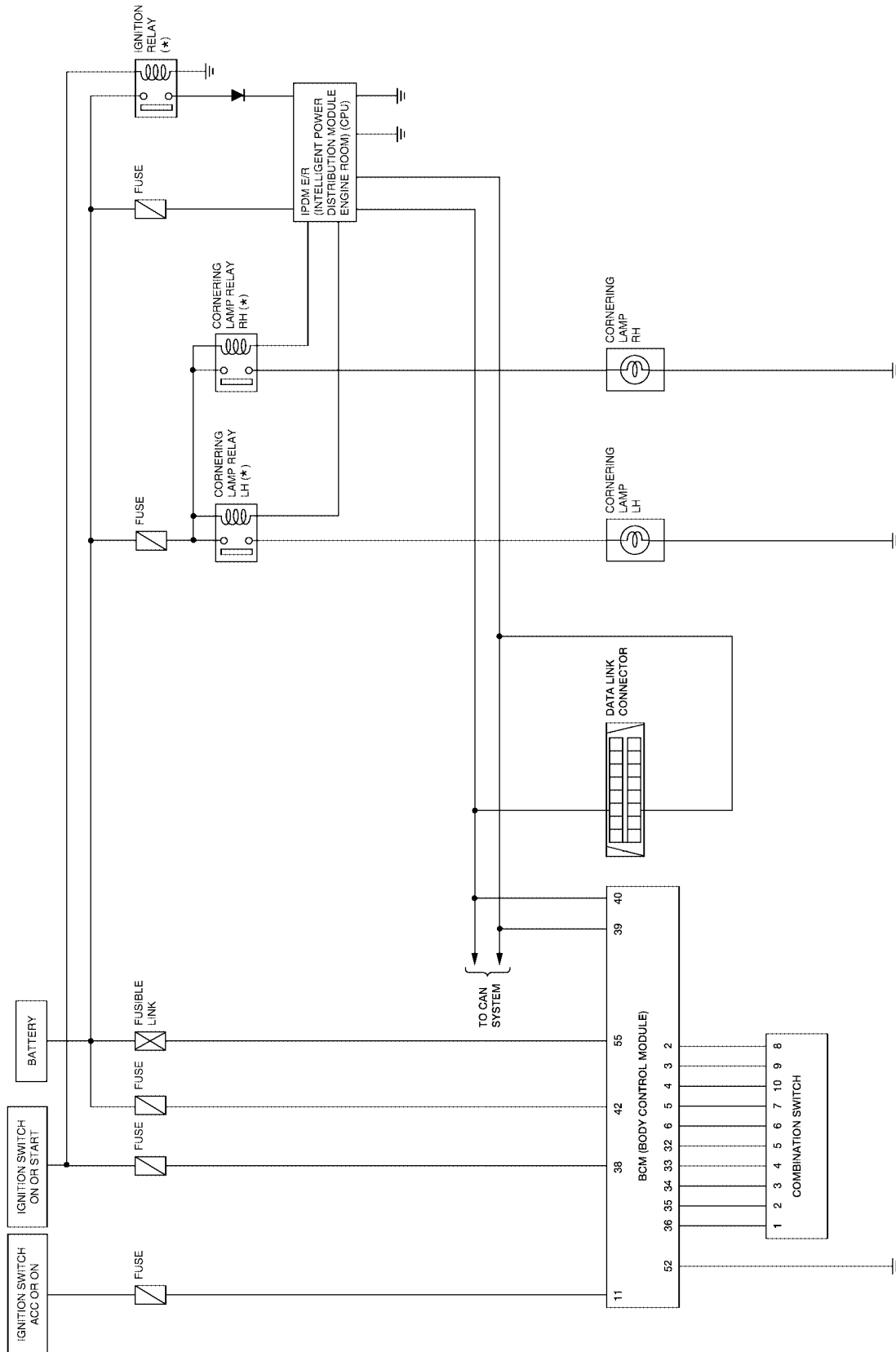
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CORNERING LAMP

Schematic

EKS00910



* : THIS RELAY IS BUILT INTO THE IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

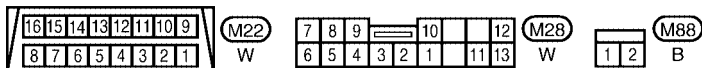
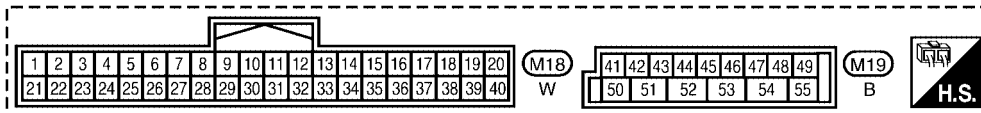
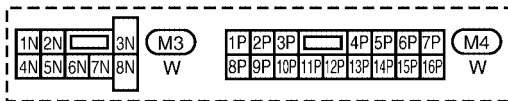
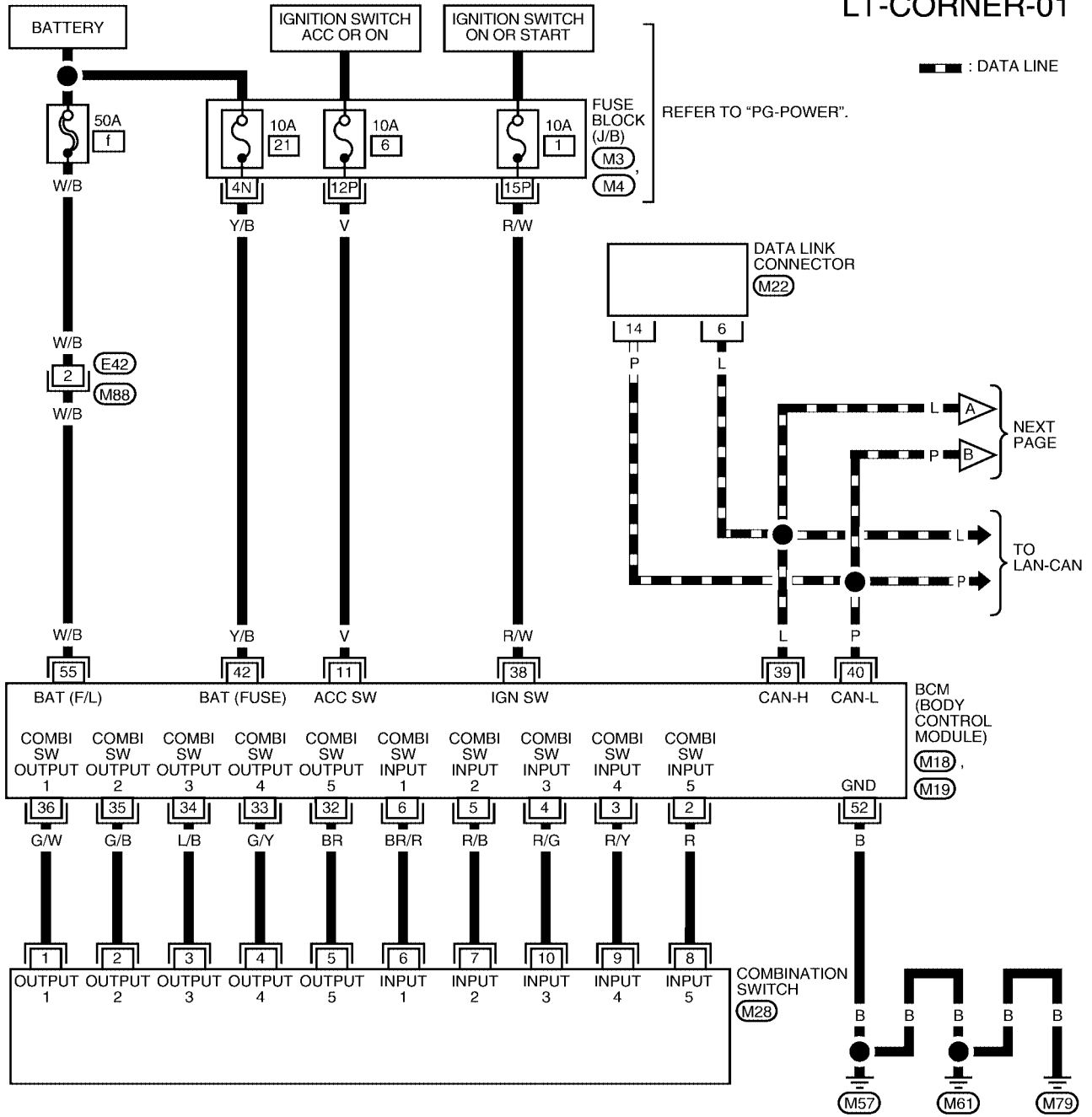
WKWA1739E

CORNERING LAMP

Wiring Diagram — CORNER —

EKS00911

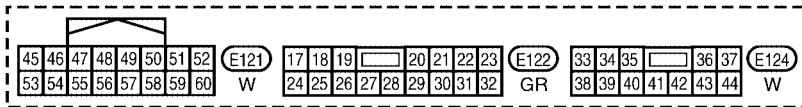
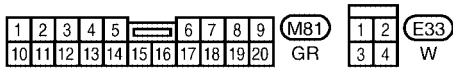
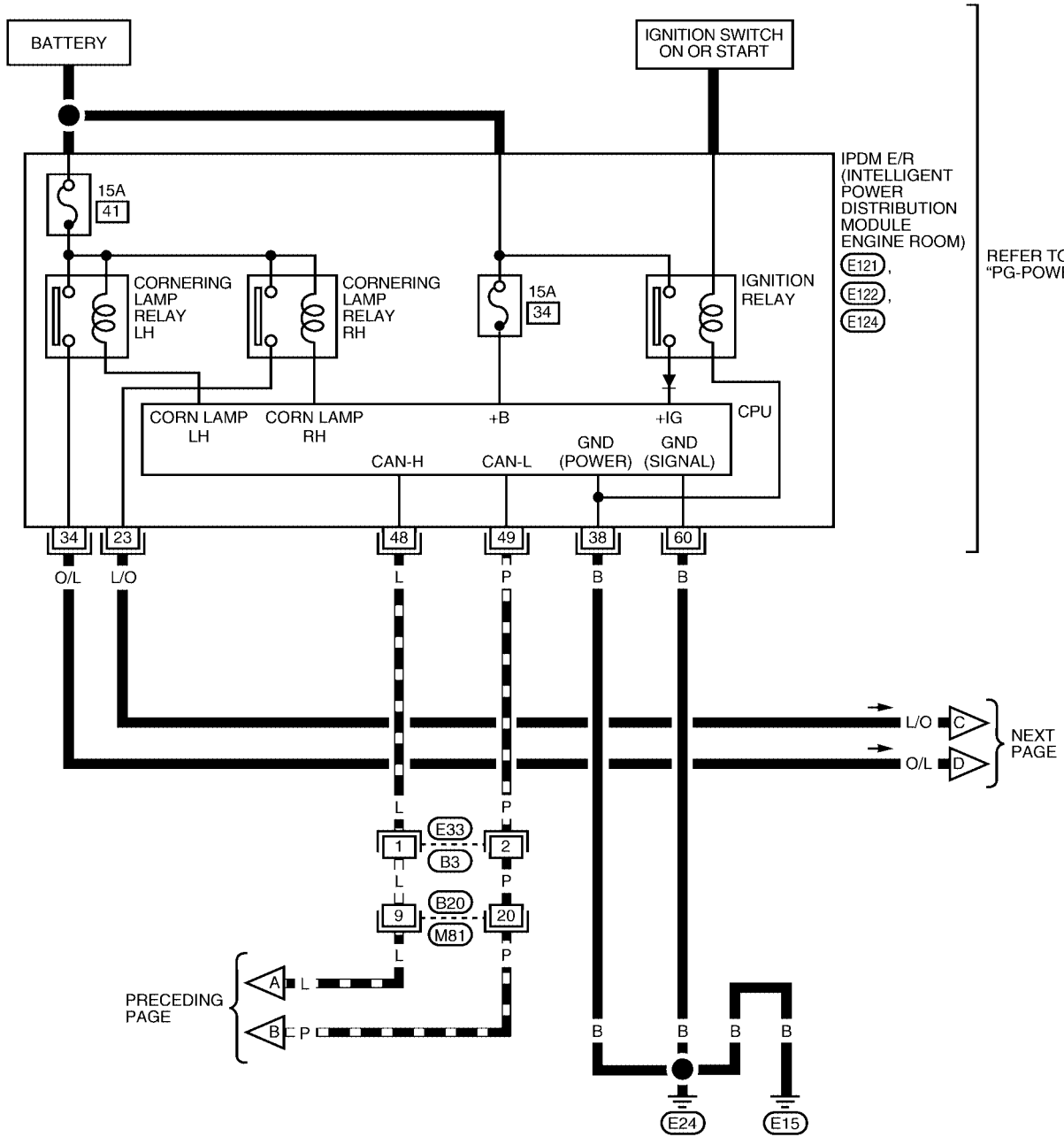
LT-CORNER-01



WKWA1740E

CORNERING LAMP

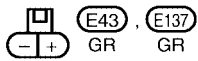
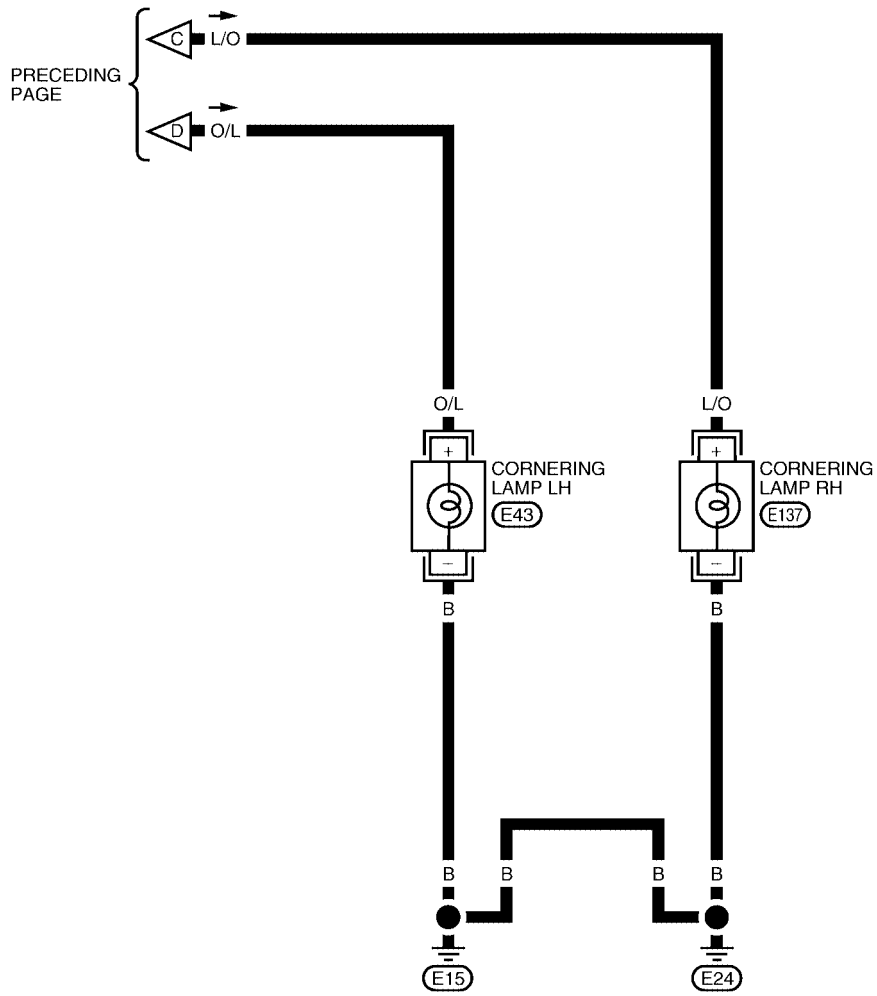
LT-CORNER-02



WKWA1741E

CORNERING LAMP

LT-CORNER-03



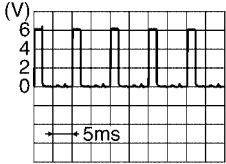
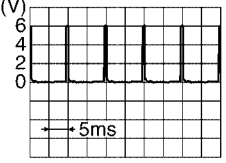
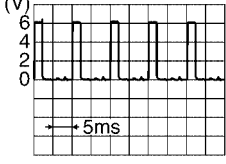
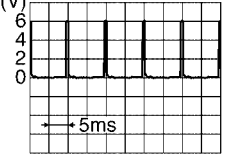
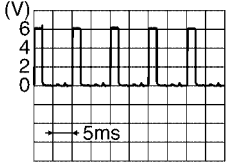
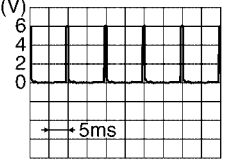
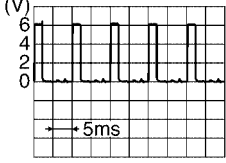
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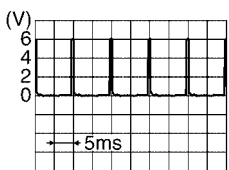
CORNERING LAMP

Terminals and Reference Values for BCM

EKS00912

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
6	BR/R	Combination switch input 1			
11	V	Ignition switch (ACC)	ACC	—	Battery voltage
32	BR	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>

CORNERING LAMP

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	
36	G/W	Combination switch output 1			
38	R/W	Ignition switch (ON)	ON	—	Battery voltage
39	L	CAN-H	—	—	—
40	P	CAN-L	—	—	—
42	Y/B	Battery power supply	OFF	—	Battery voltage
52	B	Ground	ON	—	0V
55	W/B	Battery power supply (fusible link)	OFF	—	Battery voltage

Terminals and Reference Values for IPDM E/R

EKS00913

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
23	L/O	Cornering lamp RH	ON	Lighting switch in RH position	OFF 0V
					ON Battery voltage
34	O/L	Cornering lamp LH	ON	Lighting switch in LH position	OFF 0V
					ON Battery voltage
38	B	Ground	ON	—	0V
48	L	CAN-H	—	—	—
49	Y	CAN-L	—	—	—
60	B	Ground	ON	—	0V

How to Proceed With Trouble Diagnosis

EKS00914

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-108, "System Description"](#).
3. Perform preliminary check. Refer to [LT-115, "Preliminary Check"](#).
4. Check symptom and repair or replace the cause of malfunction.
5. Do cornering lamps operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

Preliminary Check

EKS00915

CHECK POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
	Ignition switch ACC or ON position	6
IPDM E/R	Battery	41

CORNERING LAMP

Refer to [LT-111, "Wiring Diagram — CORNER —"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

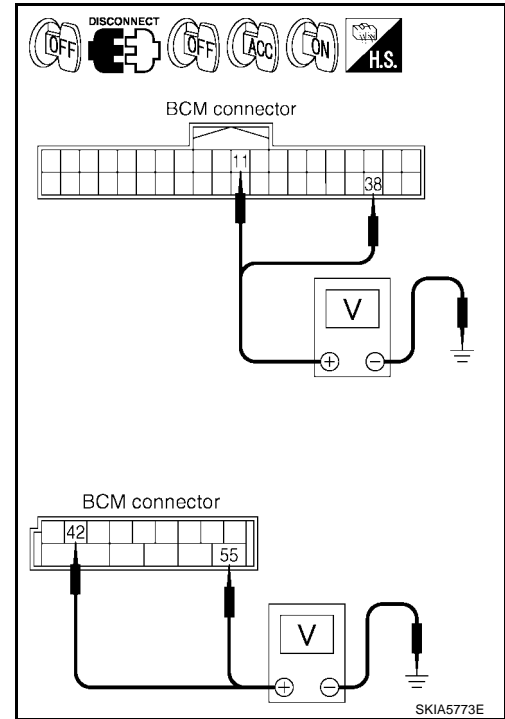
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM (+)		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	11 (V)	Ground	0V	Battery voltage	Battery voltage
	38 (R/W)		0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



3. CHECK GROUND CIRCUIT

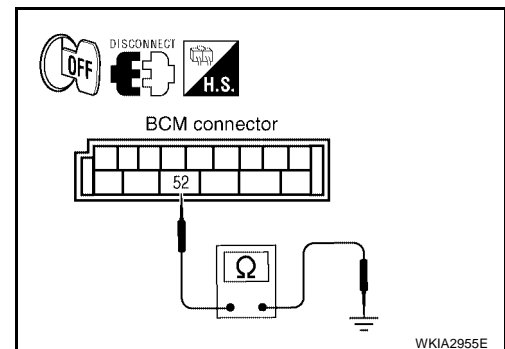
Check continuity between BCM harness connector and ground.

BCM		Continuity
Connector	Terminal (wire color)	
M19	52 (B)	Ground Yes

OK or NG

OK >> Inspection End.

NG >> Check ground circuit harness.



CORNERING LAMP

CONSULT-II Function (IPDM E/R)

EKS00916

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

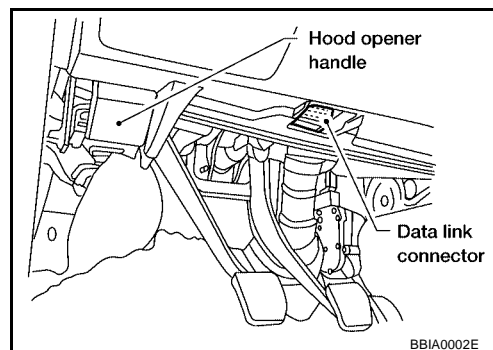
IPDM E/R diagnostic Mode	Description
SELF-DIAG RESULTS	Displays IPDM E/R self-diagnosis results.
DATA MONITOR	Displays IPDM E/R input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.
ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.

CONSULT-II OPERATION

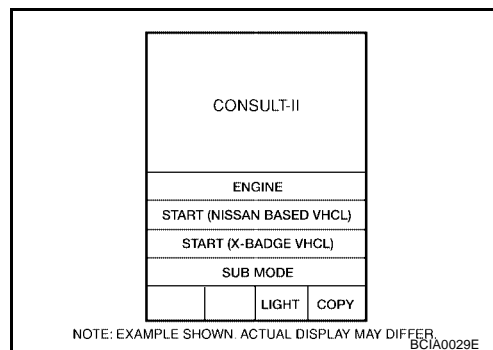
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

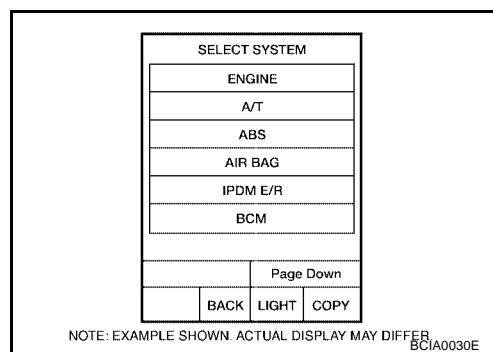
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".



3. Touch "IPDM E/R" on "SELECT SYSTEM" screen.
 If "IPDM E/R" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



4. Touch appropriate item, "DATA MONITOR" or "ACTIVE TEST" on "SELECT DIAG MODE" screen.

DATA MONITOR

Operation Procedure

1. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
2. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on the "SELECT MONITOR ITEM" screen.

CORNERING LAMP

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors the individual signal.

3. Touch "START".
4. When "SELECTION FROM MENU" is selected, touch items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored.
5. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

All Items, Main Items, Select Item Menu

Item name	CONSULT-II screen display	Display or unit	Monitor item selection			Description
			ALL SIGNALS	MAIN SIGNALS	SELECTION FROM MENU	
Cornering lamp	CRNRNG LMP REQ	ON/OFF	×	-	×	Signal status input from BCM

NOTE:

Perform monitoring of IPDM E/R data with the ignition switch ON. When the ignition switch is at ACC, the display may not be correct.

ACTIVE TEST

Operation Procedure

1. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
2. Touch "CORNERING LAMP" on "SELECT TEST ITEM" screen.
3. Touch "RH" or "LH" item to be tested and check operation of the selected item.
4. During the operation check, touching "BACK" deactivates the operation.

Display Item List

Test item	Description
CORNERING LAMP (RH)	Cornering lamp (RH) can be operated by any ON-OFF operations.
CORNERING LAMP (LH)	Cornering lamp (LH) can be operated by any ON-OFF operations.

Cornering Lamp Does Not Operate

EKS00917

1. ACTIVE TEST

Ⓟ With CONSULT-II

1. Select "IPDM E/R" on CONSULT-II, and select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
2. Select "CORNERING LAMP" on "SELECT TEST ITEM" screen.
3. Select "RH", then "LH" on "ACTIVE TEST" screen.
4. Make sure cornering lamp RH and cornering lamp LH operate.

ⓧ Without CONSULT-II

GO TO 3.

OK or NG

- OK >> GO TO 2.
 NG >> GO TO 3.

ACTIVE TEST			
CORNERING LAMP		OFF	
RH		LH	
MODE	BACK	LIGHT	COPY

LKIA0278E

CORNERING LAMP

2. CHECK COMBINATION SWITCH INPUT SIGNAL

Select "IPDM E/R" on CONSULT-II, and select "DATA MONITOR" on "SELECT DIAG MODE" screen. Make sure "CRNRNG LMP REQ" turns ON-OFF linked with operation of lighting switch.

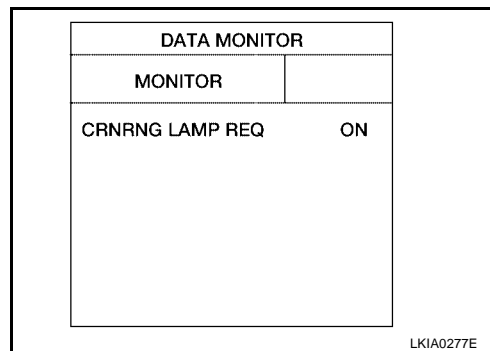
**When lighting switch is in : CRNRNG LMP REQ ON
TURN RH position**

**When lighting switch is in : CRNRNG LMP REQ ON
TURN LH position**

OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).



3. CHECK BULB

Check bulb standard of each cornering lamp is correct. Refer to [LT-189, "Exterior Lamp"](#).

OK or NG

OK >> GO TO 4.

NG >> Replace cornering lamp bulb.

4. CHECK CORNERING LAMPS CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connectors and cornering lamp LH and RH connectors.
3. Check continuity between IPDM E/R harness connector E122 terminal 23 (L/O) and cornering lamp RH harness connector E137 terminal + (L/O).

+ (L/O) - 23 (L/O) : Continuity should exist.

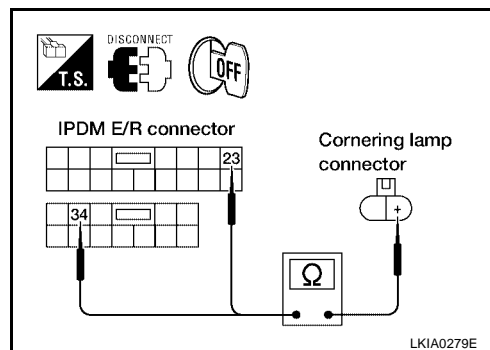
4. Check continuity between IPDM E/R harness connector E124 terminal 34 (O/L) and front cornering lamp LH harness connector E43 terminal + (O/L).

+ (O/L) - 34 (O/L) : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.



5. CHECK GROUND

1. Check continuity between cornering lamp LH harness connector E43 terminal – (B) and ground.

– (B) - Ground : Continuity should exist.

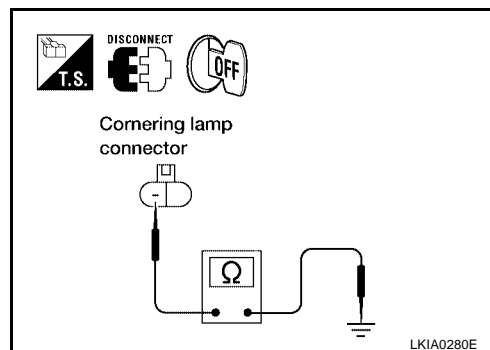
2. Check continuity between cornering lamp RH harness connector E137 terminal – (B) and ground.

– (B) - Ground : Continuity should exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness or connector.



CORNERING LAMP

6. CHECK CORNERING LAMPS SHORT CIRCUIT

1. Check continuity (short circuit) between cornering lamp LH harness connector E43 terminal + (O/L) and ground.

+ (O/L) - Ground : Continuity should not exist.

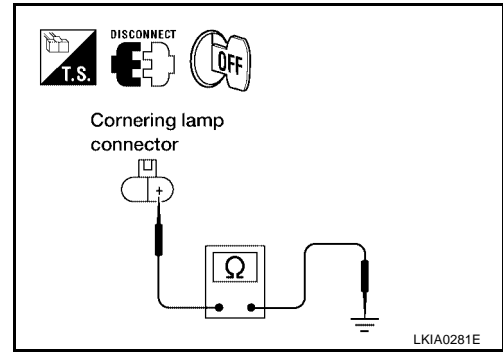
2. Check continuity (short circuit) between cornering lamp RH harness connector E137 terminal + (L/O) and ground.

+ (L/O) - Ground : Continuity should not exist.

OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

NG >> Repair harness or connector.

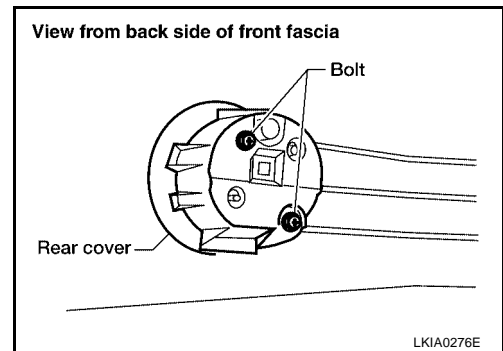


Removal and Installation of Cornering Lamp

1. Disconnect connector.
2. Remove bolts.
3. Remove rear cover.
4. Pull lamp forward out of fascia.

Installation is in the reverse order of removal.

EKS00918



LIGHTING AND TURN SIGNAL SWITCH

LIGHTING AND TURN SIGNAL SWITCH

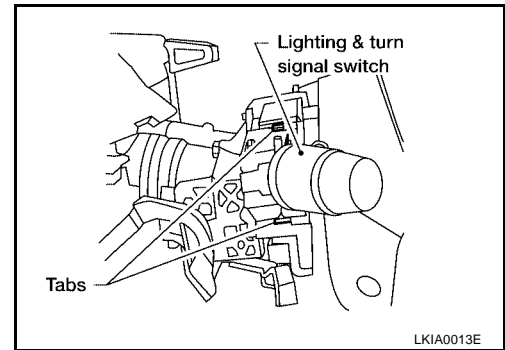
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Removal and Installation

EKS00919

1. Remove steering column cover. Refer to [IP-10, "Instrument Panel"](#) .
2. While pressing tabs, pull lighting and turn signal switch toward driver door and disconnect from the base.

Installation is in the reverse order of removal.



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HAZARD SWITCH

HAZARD SWITCH

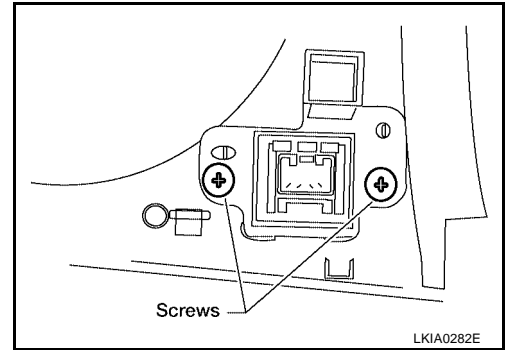
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Removal and Installation

EKS0091A

1. Remove console finisher. Refer to [JP-18, "M/T Finisher"](#) [IP-18, "A/T Finisher"](#) (with M/T) or (with A/T).
2. Remove screws from console finisher and remove the hazard switch.

Installation is in the reverse order of removal.



COMBINATION SWITCH

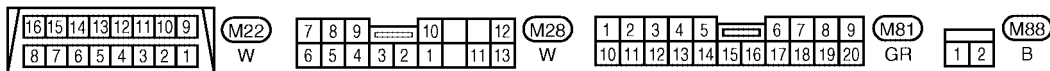
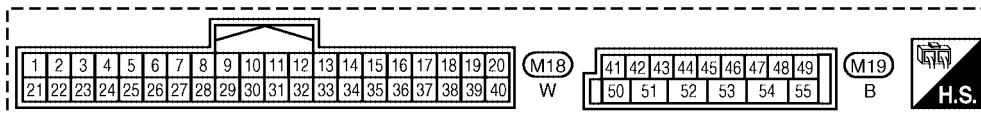
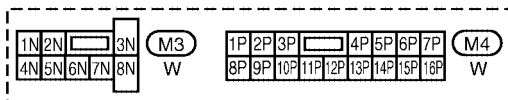
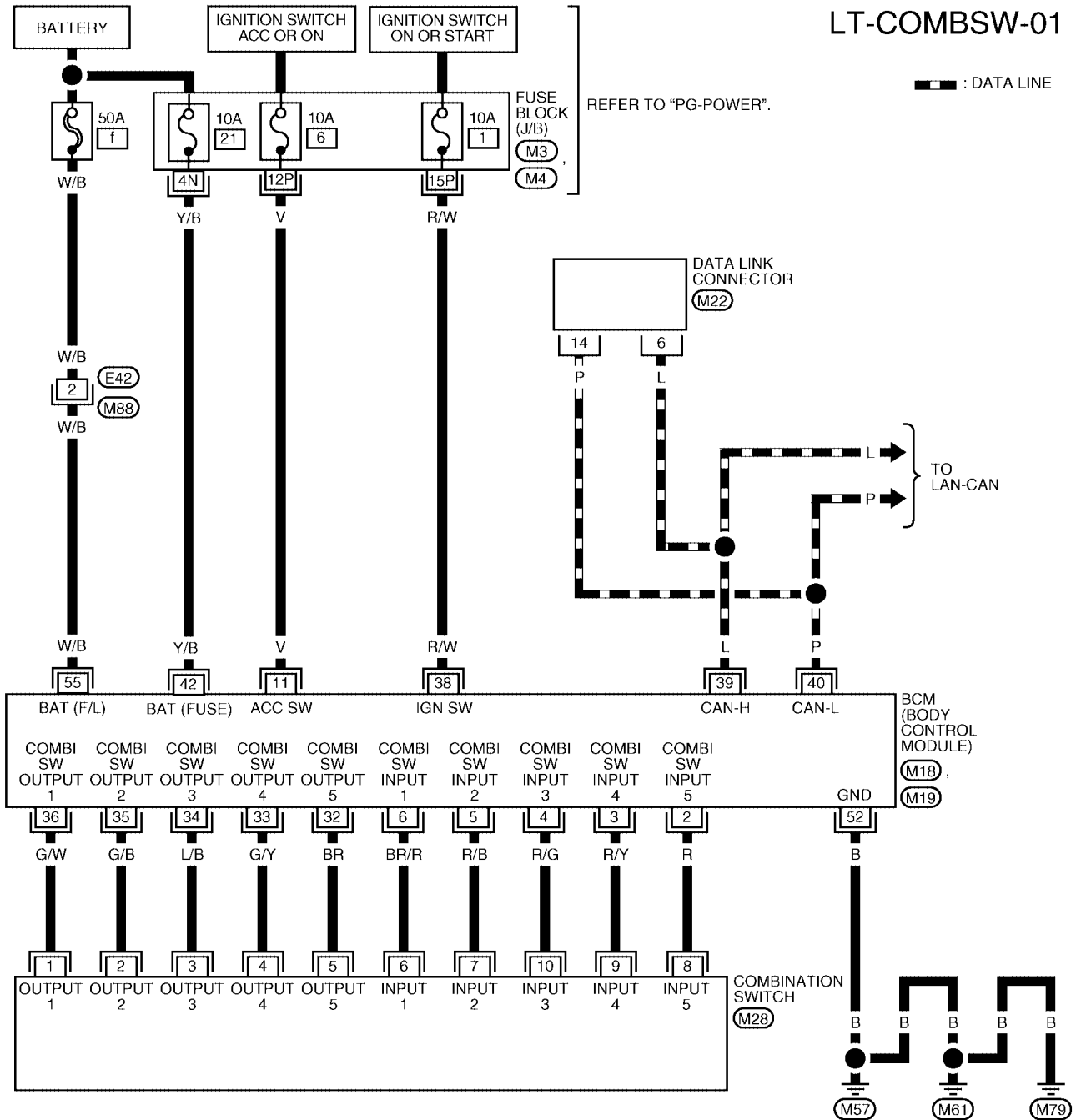
PF25567

EKS0091B

COMBINATION SWITCH

Wiring Diagram — COMBSW —

LT-COMBSW-01



WKWA1743E

COMBINATION SWITCH

Combination Switch Reading Function

EKS0091C

For details, refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#).

CONSULT-II Function (BCM)

EKS0091D

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

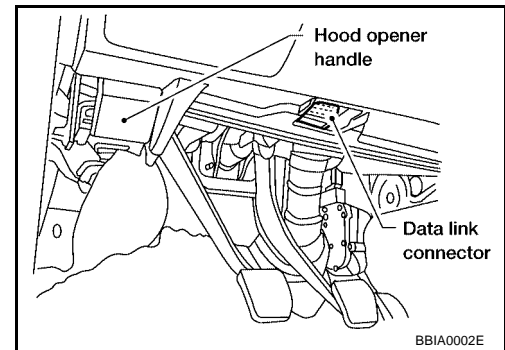
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR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

CONSULT-II OPERATION

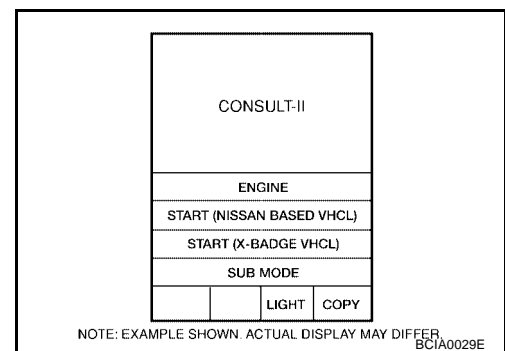
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

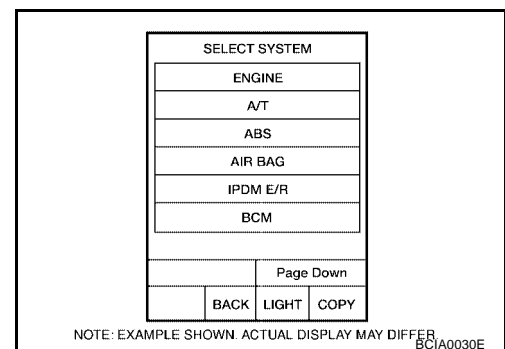
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".

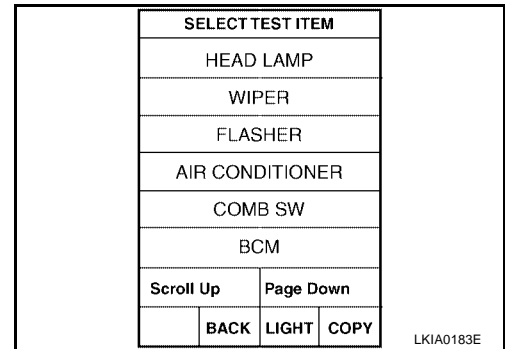


3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



COMBINATION SWITCH

4. Touch "COMB SW" on "SELECT TEST ITEM" screen.



DATA MONITOR

Operation Procedure

1. Touch "COMB SW" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on "SELECT MONITOR ITEM" screen.

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors individual signal.

4. Touch "START".
5. When "SELECTION FROM MENU" is selected, touch items to be monitored. When "ALL SIGNALS" is selected, all the signals will be monitored.
6. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

Display Item List

Monitor item name "OPERATION OR UNIT"	Contents
TURN SIGNAL R "ON/OFF"	Displays "Turn Right (ON)/Other (OFF)" status, determined from lighting switch signal.
TURN SIGNAL L "ON/OFF"	Displays "Turn Left (ON)/Other (OFF)" status, determined from lighting switch signal.
HI BEAM SW "ON/OFF"	Displays status (high beam switch: ON/Others: OFF) of high beam switch judged from lighting switch signal.
HEAD LAMP SW 1 "ON/OFF"	Displays "Headlamp switch 1 (ON)/Other (OFF)" status, determined from lighting switch signal.
HEAD LAMP SW 2 "ON/OFF"	Displays status (headlamp switch 2: ON/Others: OFF) of headlamp switch 2 judged from lighting switch signal.
LIGHT SW 1ST "ON/OFF"	Displays status (lighting switch 1st position: ON/Others: OFF) of lighting switch judged from lighting switch signal.
PASSING SW "ON/OFF"	Displays status (flash-to-pass switch: ON/Others: OFF) of flash-to-pass switch judged from lighting switch signal.
AUTO LIGHT SW "ON/OFF"	Displays "Auto light switch (ON)/Other (OFF)" status, determined from lighting switch signal.
FR FOG SW "ON/OFF"	Displays "Front fog lamp switch (ON)/Other (OFF)" status, determined from lighting switch signal.
FR WIPER HI "ON/OFF"	Displays "Front Wiper HI (ON)/Other (OFF)" status, determined from wiper switch signal.
FR WIPER LOW "ON/OFF"	Displays "Front Wiper LOW (ON)/Other (OFF)" status, determined from wiper switch signal.
FR WIPER INT "ON/OFF"	Displays "Front Wiper INT (ON)/Other (OFF)" status, determined from wiper switch signal.
FR WASHER SW "ON/OFF"	Displays "Front Washer Switch (ON)/Other (OFF)" status, determined from wiper switch signal.
INT VOLUME [1 - 7]	Displays intermittent operation knob setting (1 - 7), determined from wiper switch signal.

COMBINATION SWITCH

EKS0091E

Combination Switch Inspection

1. SYSTEM CHECK

1. Referring to table below, check to which system the malfunctioning switch belongs.

System 1	System 2	System 3	System 4	System 5
—	FR WASHER	FR WIPER LO	TURN LH	TURN RH
FR WIPER HI	—	FR WIPER INT	PASSING	HEAD LAMP1
INT VOLUME 1	—	—	HEAD LAMP2	HI BEAM
—	INT VOLUME 3	AUTO LIGHT	—	TAIL LAMP
INT VOLUME 2	—	—	FR FOG	—

>> GO TO 2.

2. SYSTEM CHECK

 With CONSULT-II

CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

1. Connect CONSULT-II and select "COMB SW" on "SELECT TEST ITEM" screen.
2. Select "DATA MONITOR".
3. Select "START" and confirm that other switches in malfunctioning system operate normally.

Example: When auto light switch is malfunctioning, confirm that "FRONT WIPER LOW" and "FRONT WIPER INT" in System 3, to which the auto light switch belongs, turn ON-OFF normally.

DATA MONITOR	
MONITOR	
TURN SIGNAL R	OFF
TURN SIGNAL L	OFF
HIBEAM SW	OFF
HEAD LAMP SW1	OFF
HEAD LAMP SW2	OFF
LIGHT SW 1ST	OFF
PASSING SW	OFF
AUTO LIGHT SW	OFF
FR FOG SW	OFF
	Page Down
	RECORD
MODE	BACK
LIGHT	COPY

SKIA7075E

 Without CONSULT-II

Operate combination switch and confirm that other switches in malfunctioning system operate normally.

Example: When auto light switch is malfunctioning, confirm that "FRONT WIPER LOW" and "FRONT WIPER INT" in System 3, to which the auto light switch belongs, operate normally.

Check results

Other switches in malfunctioning system operate normally.>>Replace lighting switch or wiper switch.

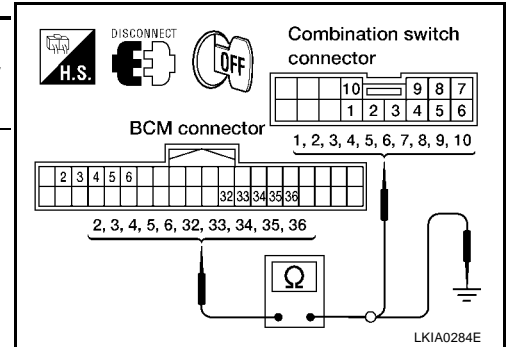
Other switches in malfunctioning system do not operate normally.>>GO TO 3.

COMBINATION SWITCH

3. HARNESS INSPECTION

1. Turn ignition switch OFF.
2. Disconnect BCM and combination switch connectors.
3. Check for continuity between BCM harness connector of the suspect system and the corresponding combination switch connector terminals.

Suspect system	BCM		Combination switch		Continuity
	Connector	Terminal (wire color)	Connector	Terminal (wire color)	
1	M18	Input 1	6 (BR/R)	M28	6 (BR/R)
		Output 1	36 (G/W)		1 (G/W)
2		Input 2	5 (R/B)		7 (R/B)
		Output 2	35 (G/B)		2 (G/B)
3		Input 3	4 (R/G)		10 (R/G)
		Output 3	34 (L/B)		3 (L/B)
4		Input 4	3 (R/Y)		9 (R/Y)
		Output 4	33 (G/Y)		4 (G/Y)
5		Input 5	2 (R)		8 (R)
		Output 5	32 (BR)		5 (BR)



4. Check for continuity between each terminal of BCM harness connector in suspect malfunctioning system and ground.

Suspect system	BCM		Continuity		
	Connector	Terminal (wire color)			
1	M18	Input 1	6 (BR/R)	Ground	No
		Output 1	36 (G/W)		
2		Input 2	5 (R/B)		
		Output 2	35 (G/B)		
3		Input 3	4 (R/G)		
		Output 3	34 (L/B)		
4		Input 4	3 (R/Y)		
		Output 4	33 (G/Y)		
5		Input 5	2 (R)		
		Output 5	32 (BR)		

OK or NG

OK >> GO TO 4.

NG >> Check harness between BCM and combination switch for open or short circuit.

COMBINATION SWITCH

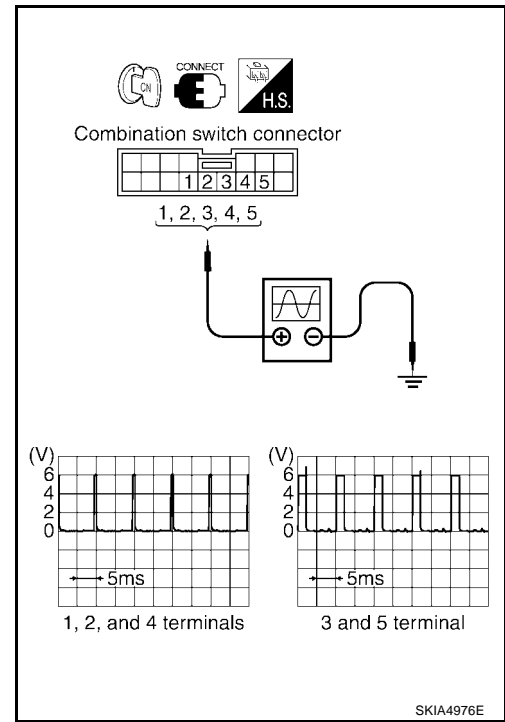
4. BCM OUTPUT TERMINAL INSPECTION

1. Turn lighting switch and wiper switch to OFF.
2. Set wiper dial to position 4.
3. Connect BCM and combination switch connectors.
4. Turn ignition switch ON, and check combination switch input (BCM output) terminal voltage waveform of suspect malfunctioning system.

Suspect system	Combination switch		
	(+)		
	Connector	Terminal (wire color)	
1	M28	Input 1	1 (G/W)
2		Input 2	2 (G/B)
3		Input 3	3 (L/B)
4		Input 4	4 (G/Y)
5		Input 5	5 (BR)

OK or NG

- OK >> Open circuit in combination switch, GO TO 5.
 NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).



5. COMBINATION SWITCH INSPECTION

Referring to table below, perform combination switch inspection.

Procedure									
1	2		3	4		5	6		7
Replace lighting switch.	Confirm check results.	OK	INSPECTION END	Confirm check results.	OK	INSPECTION END	Confirm check results.	OK	INSPECTION END
		NG	Replace wiper switch.		NG	Replace switch base.		NG	Confirm symptom again.

>> Inspection End.

Removal and Installation

For details, refer to [LT-121, "Removal and Installation"](#).

Switch Circuit Inspection

For details, refer to [LT-126, "Combination Switch Inspection"](#).

EKS0091F

EKS0091G

STOP LAMP

STOP LAMP

PFP:26550

System Description

EKS0091H

Power is supplied at all times

- through 10A fuse [No. 20, located in fuse block (J/B)]
- to stop lamp switch terminal 1.

When the brake pedal is pressed, the stop lamp switch is closed and power is supplied

- through stop lamp switch terminal 2
- to rear combination lamp LH and RH terminal 1 and
- to high-mounted stop lamp terminal +.

Ground is supplied

- to rear combination lamp LH and RH terminal 5
- through grounds B7 and B19, and
- to high-mounted stop lamp terminal –
- through grounds B117 and B132.

With power and ground supplied, the stop lamps illuminate.

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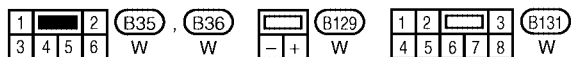
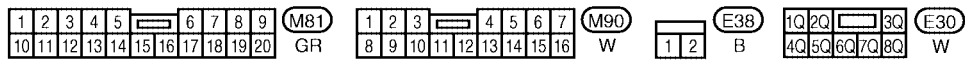
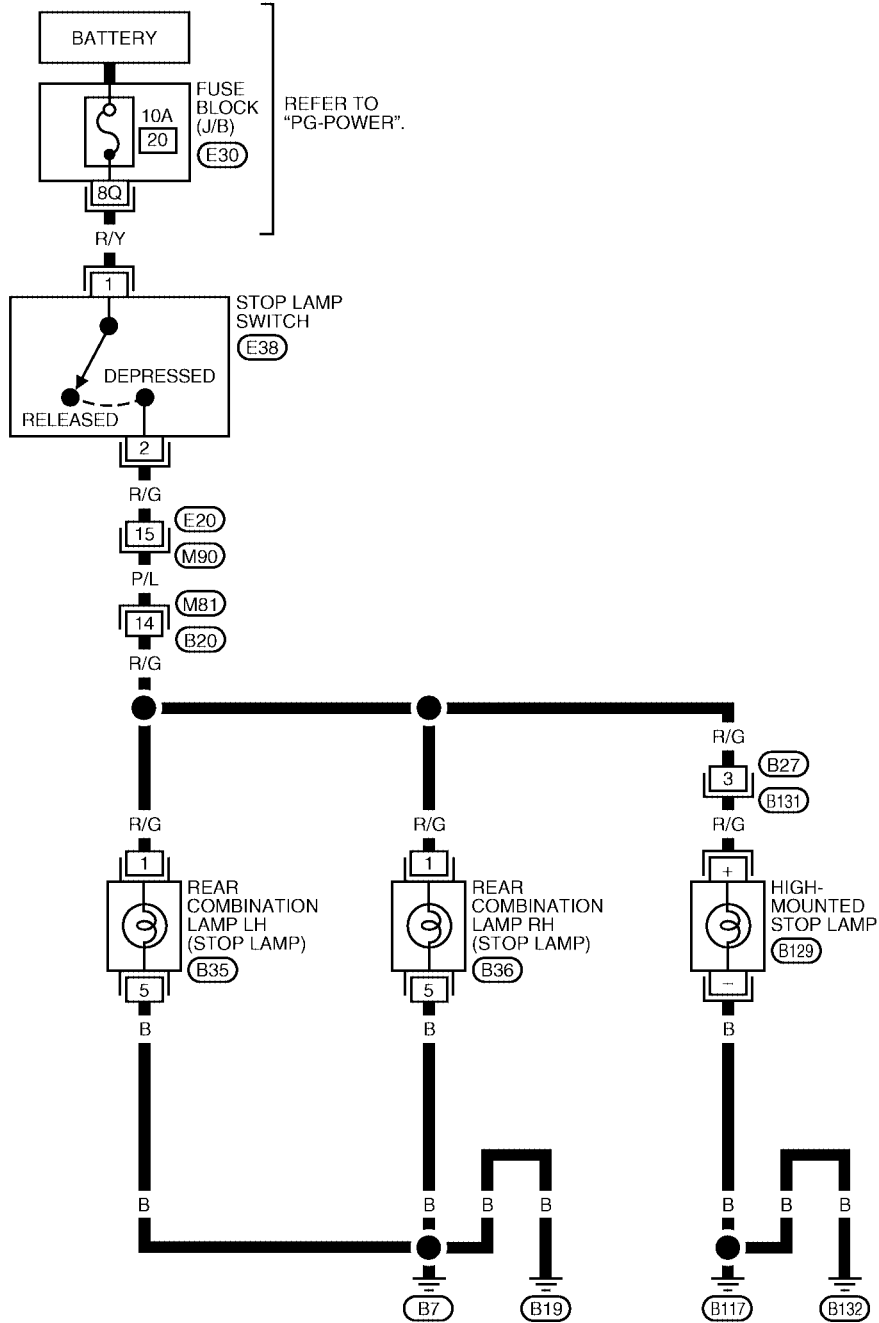
M

STOP LAMP

Wiring Diagram — STOP/L —

EKS00911

LT-STOP/L-01



WKWA1744E

STOP LAMP

High-Mounted Stop Lamp

EKS0091J

BULB REPLACEMENT, REMOVAL AND INSTALLATION

A

Refer to [EI-35, "Removal and Installation"](#) .

Stop Lamp

EKS0091K

BULB REPLACEMENT

B

Refer to [LT-148, "Bulb Replacement"](#) in REAR COMBINATION LAMP.

REMOVAL AND INSTALLATION

C

Refer to [LT-148, "Removal and Installation"](#) in REAR COMBINATION LAMP.

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BACK-UP LAMP

PFP:26550

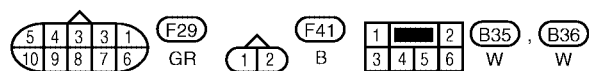
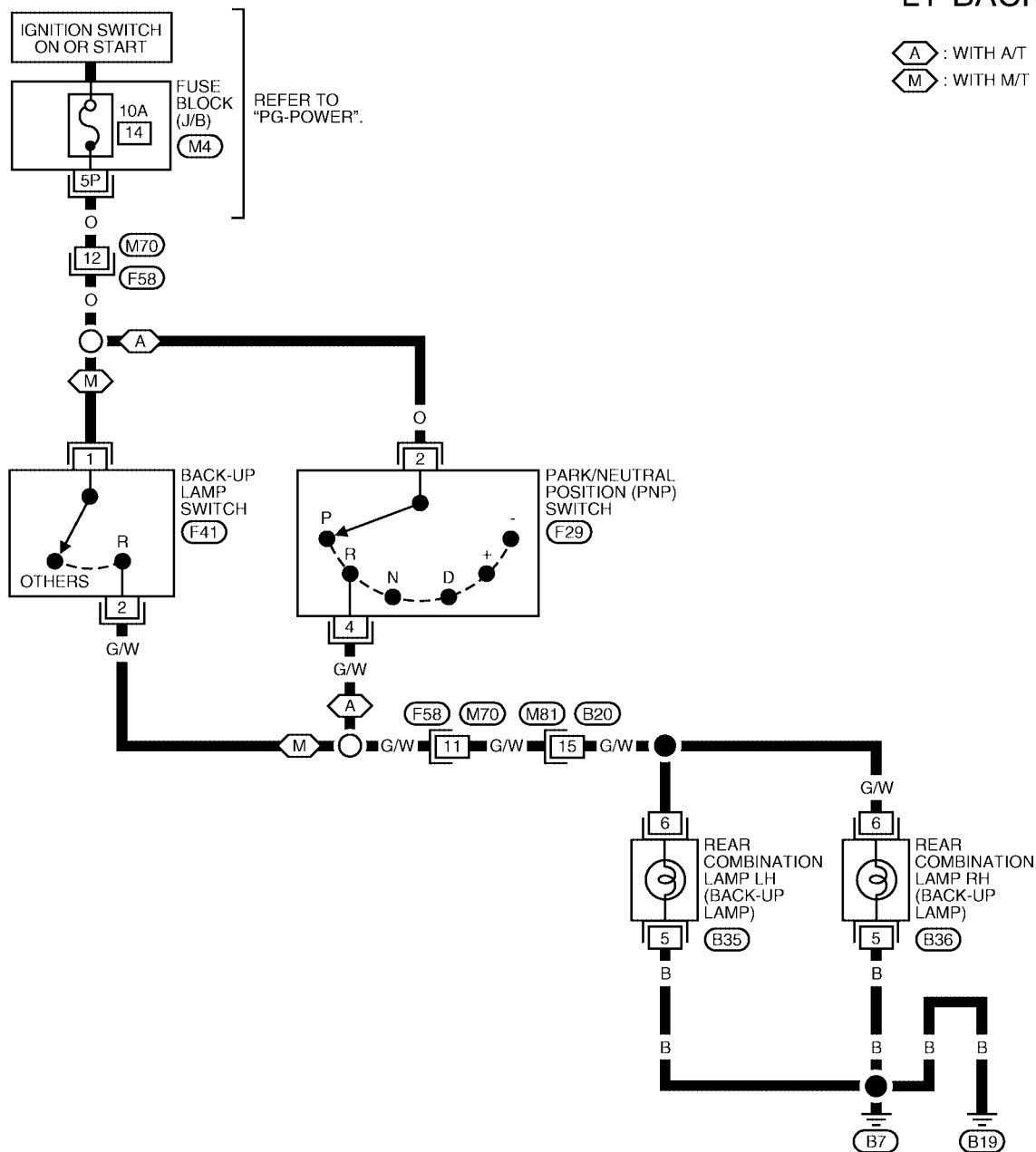
BACK-UP LAMP

Wiring Diagram — BACK/L —

EKS0091L

LT-BACK/L-01

⬡ : WITH A/T
 ⬢ : WITH M/T



WKWA1745E

BACK-UP LAMP

Bulb Replacement

EKS0091M

Refer to [LT-148, "Bulb Replacement"](#) in REAR COMBINATION LAMP.

A

Removal and Installation

EKS0091N

Refer to [LT-148, "Removal and Installation"](#) in REAR COMBINATION LAMP.

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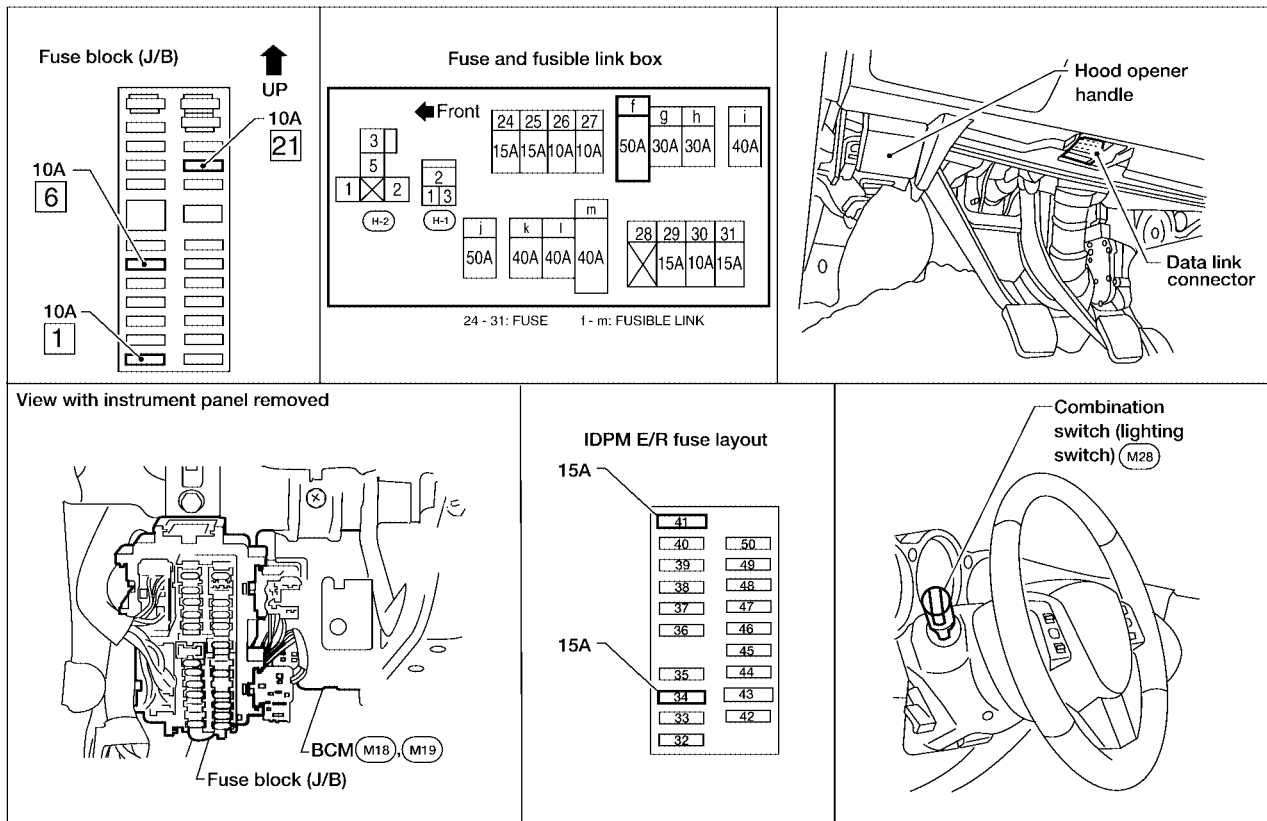
M

PARKING, LICENSE PLATE AND TAIL LAMPS

PF2:26550

Component Parts and Harness Connector Location

EKS00910



WKIA3037E

System Description

EKS0091P

Control of the parking, license plate, and tail lamp operation is dependent upon the position of the lighting switch (combination switch). When the lighting switch is placed in the 1ST position, the BCM (body control module) receives input signal requesting the parking, license plate, side marker and tail lamps to illuminate. This input signal is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the tail lamp relay. This relay, when energized, directs power to the parking, license plate, rear side marker and tail lamps, which then illuminate.

Power is supplied at all times

- to ignition relay, located in the IPDM E/R, and
- through 15A fuse (No. 41, located in the IPDM E/R)
- to tail lamp relay, located in the IPDM E/R, and
- through 15A fuse (No. 34 located in the IPDM E/R)
- to CPU of the IPDM E/R, and
- through 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to BCM terminal 42.

With the ignition switch in the ON or START position, power is supplied

- to ignition relay, located in the IPDM E/R, and
- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 6, located in the fuse block (J/B)]

PARKING, LICENSE PLATE AND TAIL LAMPS

- to BCM terminal 11.

Ground is supplied

- to BCM terminal 52
- through grounds M57, M61 and M79, and
- to IPDM E/R terminals 38 and 60
- through grounds E15 and E24.

OPERATION BY LIGHTING SWITCH

With the lighting switch in the 1ST or 2ND position (or if the auto light system is activated), the BCM receives input signal requesting the parking, license plate, side marker and tail lamps to illuminate. This input signal is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the tail lamp relay coil, which when energized, directs power

- through IPDM E/R terminal 22
- to front combination lamp LH and RH terminal 6
- to license plate lamp LH and RH terminal +
- to rear combination lamp LH and RH terminal 2.

Ground is supplied

- to front combination lamp LH and RH terminal 10
- through grounds E15 and E24, and
- to license plate lamp LH and RH terminal –
- to rear combination lamp LH and RH terminal 5
- through grounds B7 and B19

With power and ground supplied, the parking, license plate, rear side marker and tail lamps illuminate.

COMBINATION SWITCH READING FUNCTION

Refer to [BCS-3, "COMBINATION SWITCH READING FUNCTION"](#) .

EXTERIOR LAMP BATTERY SAVER CONTROL

When the combination switch (lighting switch) is in the 1ST (or 2ND) position and the ignition switch is turned from ON or ACC to OFF, the battery saver control feature is activated.

Under this condition, the parking, license, side marker and tail lamps remain illuminated for 5 minutes, then the parking, license plate, side marker and tail lamps are turned off.

Exterior lamp battery saver control mode can be changed by the function setting of CONSULT-II.

CAN Communication System Description

Refer to [LAN-7, "CAN COMMUNICATION"](#) .

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EKS0091Q

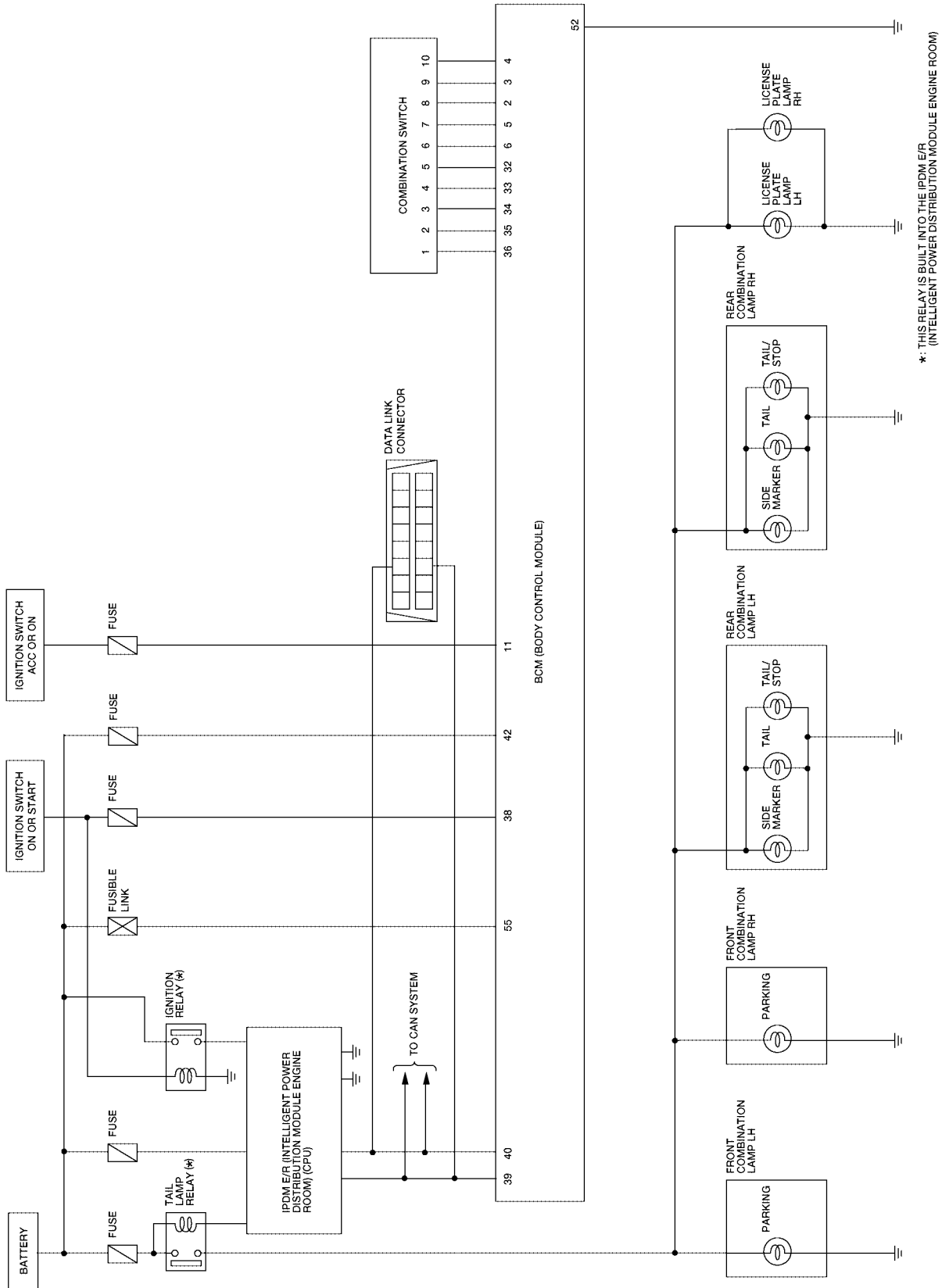
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PARKING, LICENSE PLATE AND TAIL LAMPS

Schematic

EKS0091R



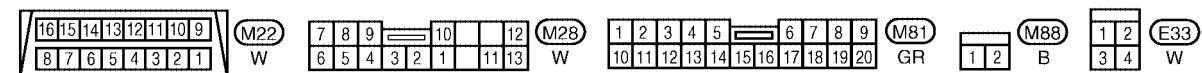
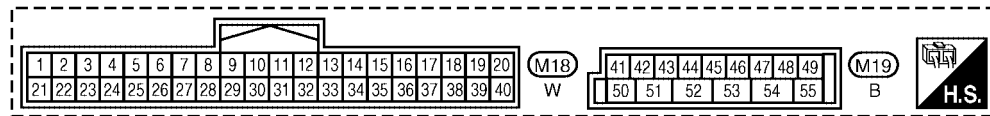
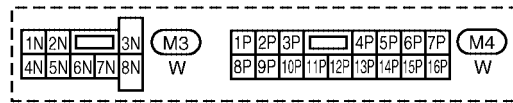
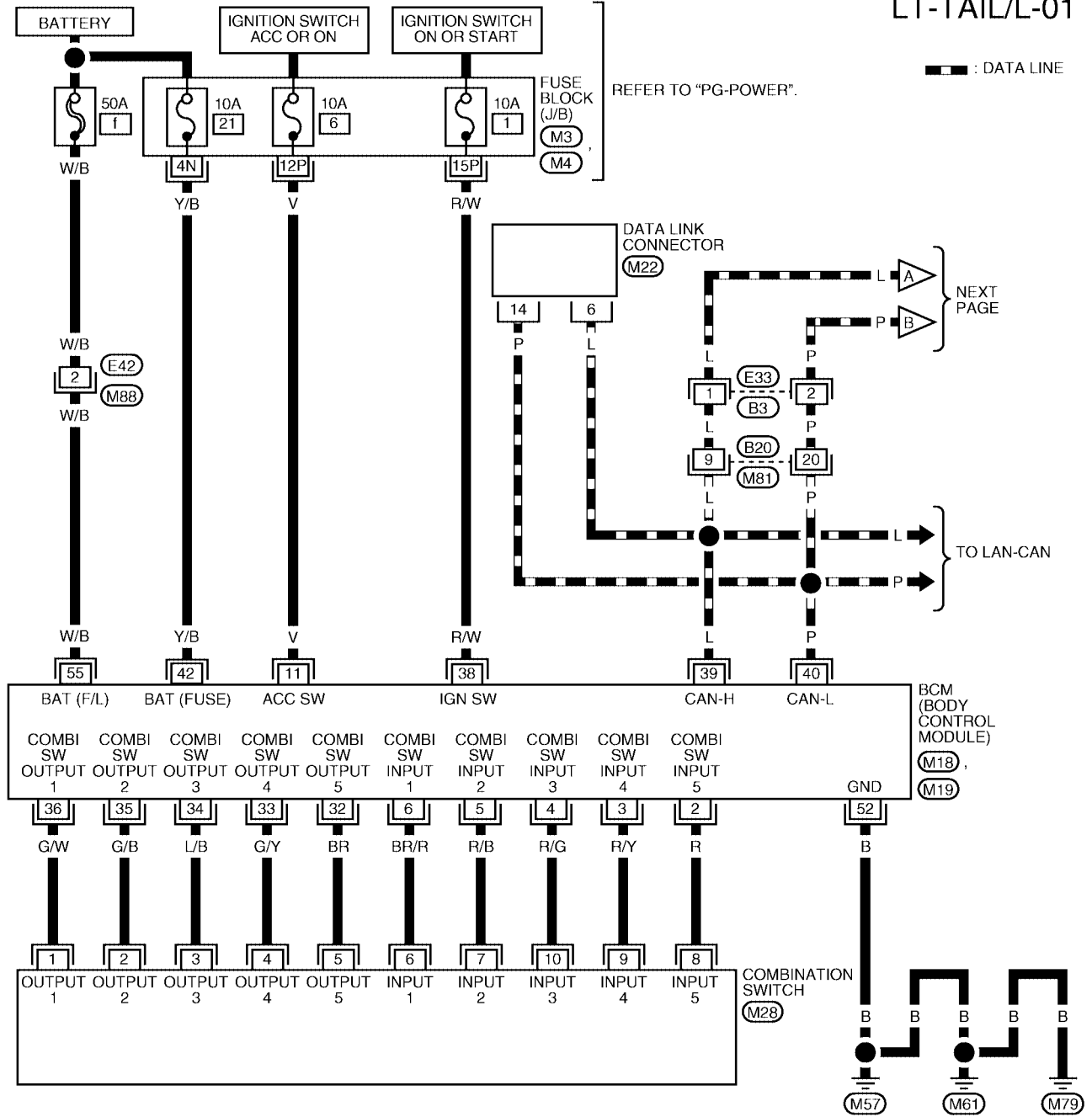
WKWA1746E

PARKING, LICENSE PLATE AND TAIL LAMPS

EKS0091S

Wiring Diagram — TAIL/L —

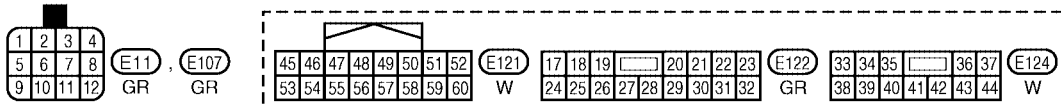
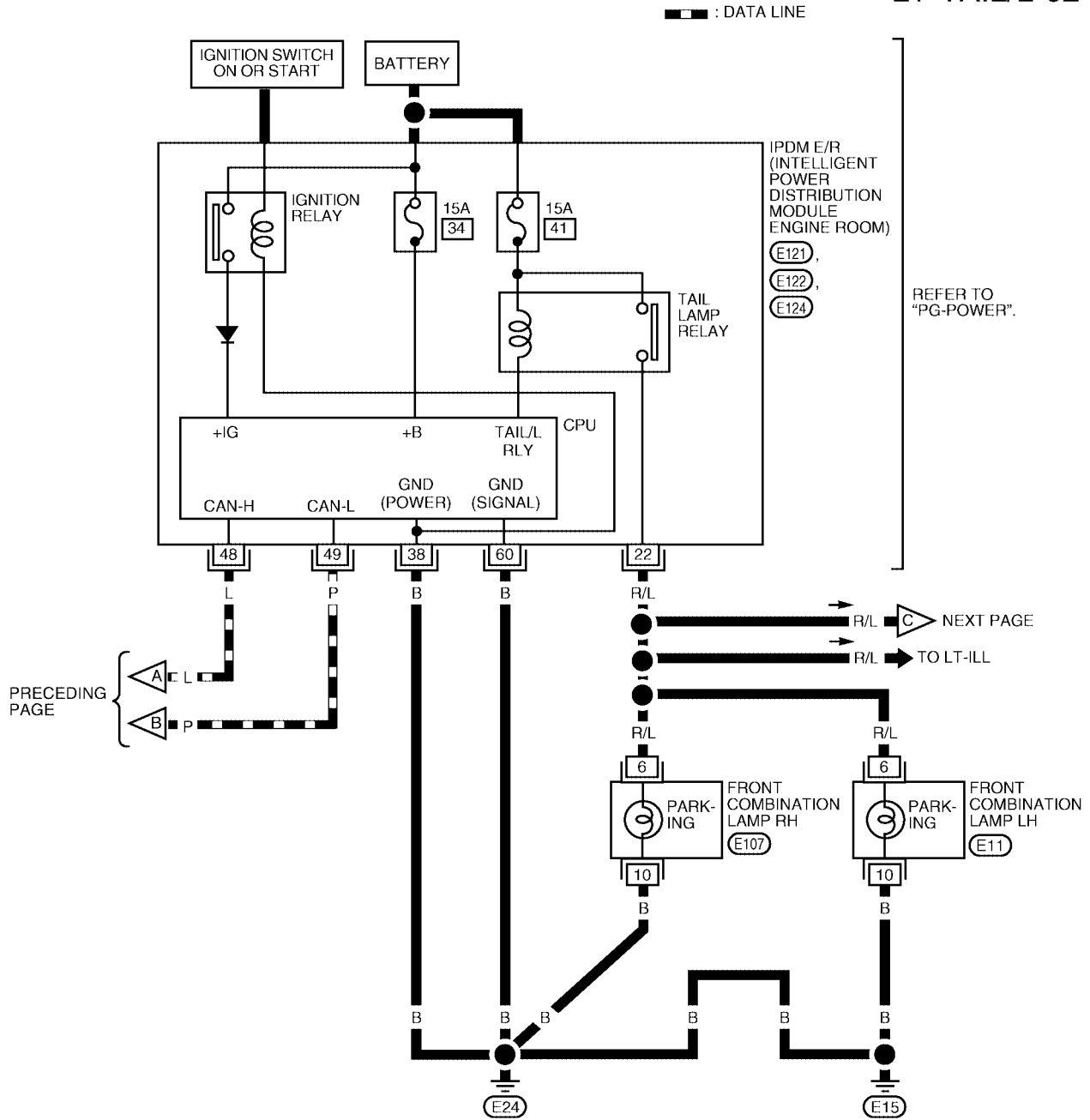
LT-TAIL/L-01



WKWA1747E

PARKING, LICENSE PLATE AND TAIL LAMPS

LT-TAIL/L-02

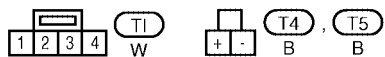
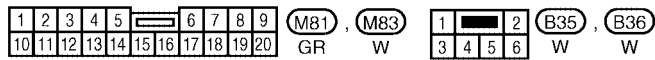
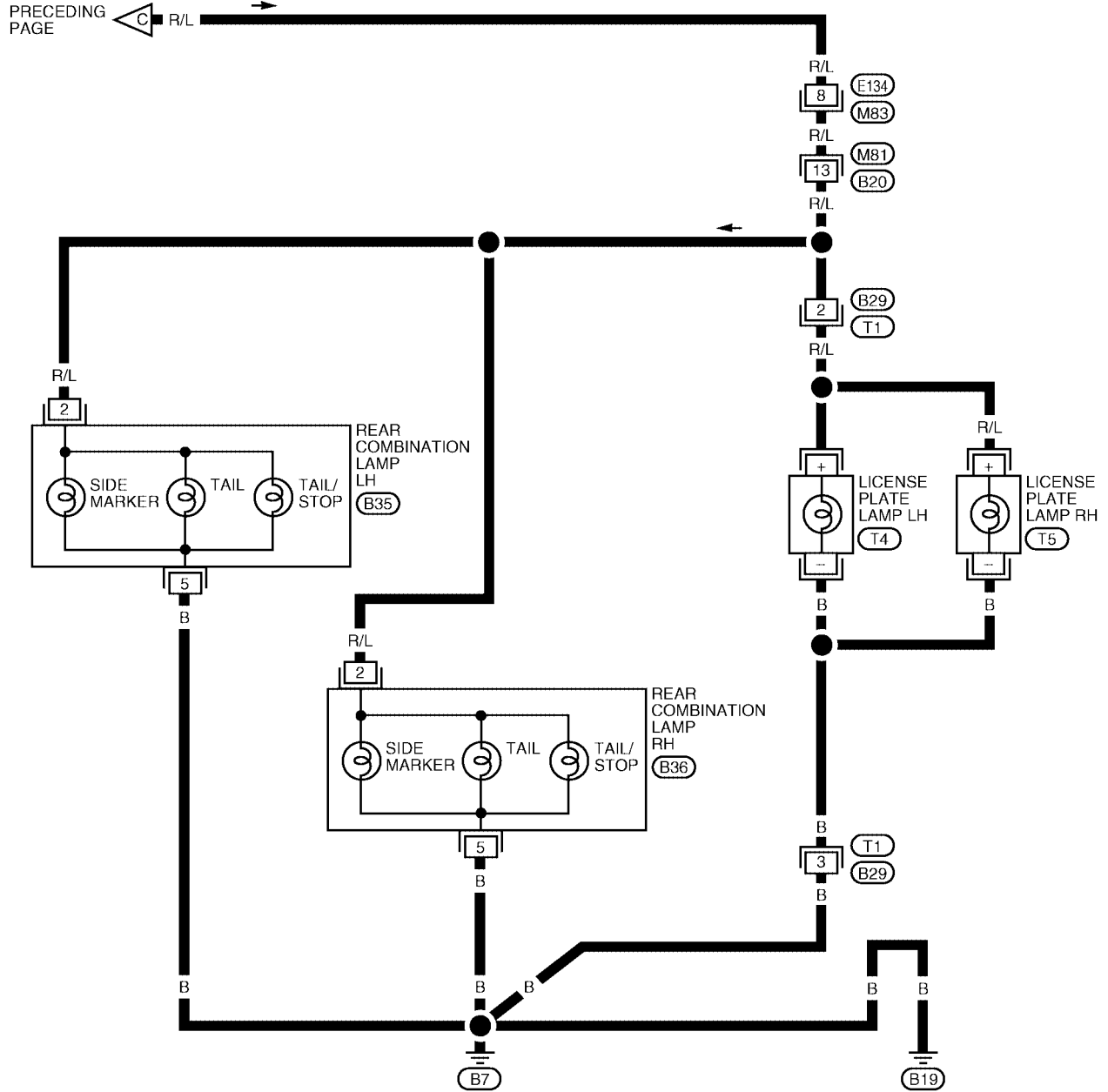


WKWA1748E

PARKING, LICENSE PLATE AND TAIL LAMPS

LT-TAIL/L-03

▬ : DATA LINE

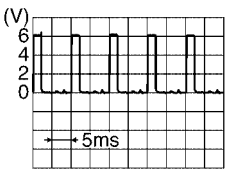
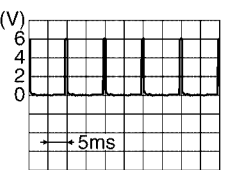
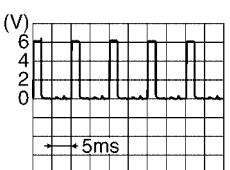



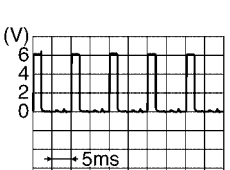


WKWA1749E

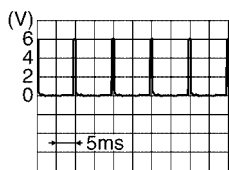
PARKING, LICENSE PLATE AND TAIL LAMPS

Terminals and Reference Values for BCM

EKS0091T

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
2	R	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5291E</p>
3	R/Y	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5292E</p>
4	R/G	Combination switch input 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5291E</p>
5	R/B	Combination switch input 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5292E</p>
6	BR/R	Combination switch input 1			
11	V	Ignition switch (ACC)	ACC	—	Battery voltage
32	BR	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5291E</p>
33	G/Y	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5292E</p>
34	L/B	Combination switch output 3	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">SKIA5291E</p>

PARKING, LICENSE PLATE AND TAIL LAMPS

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
35	G/B	Combination switch output 2	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	G/W	Combination switch output 1			
38	R/W	Ignition switch (ON)	ON	—	Battery voltage
39	L	CAN-H	—	—	—
40	P	CAN-L	—	—	—
42	Y/B	Battery power supply	OFF	—	Battery voltage
52	B	Ground	ON	—	0V
55	W/B	Battery power supply (fusible link)	OFF	—	Battery voltage

Terminals and Reference Values for IPDM E/R

EKS0091U

Terminal No.	Wire color	Signal name	Measuring condition		Reference value (Approx.)
			Ignition switch	Operation or condition	
22	R/L	Parking, license, and tail lamp	ON	Lighting switch 1ST position	OFF 0V
					ON Battery voltage
38	B	Ground	ON	—	0V
48	L	CAN-H	—	—	—
49	P	CAN-L	—	—	—
60	B	Ground	ON	—	0V

How to Proceed With Trouble Diagnosis

EKS0091V

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-134, "System Description"](#).
3. Carry out the Preliminary Check. Refer to [LT-141, "Preliminary Check"](#).
4. Check symptom and repair or replace the cause of malfunction.
5. Do the parking, license and tail lamps operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

Preliminary Check

EKS0091W

CHECK POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1
	Ignition switch ACC or ON position	6
IPDM E/R	Battery	34
		41

PARKING, LICENSE PLATE AND TAIL LAMPS

Refer to [LT-137, "Wiring Diagram — TAIL/L —"](#) .

OK or NG

OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#) .

2. CHECK POWER SUPPLY CIRCUIT

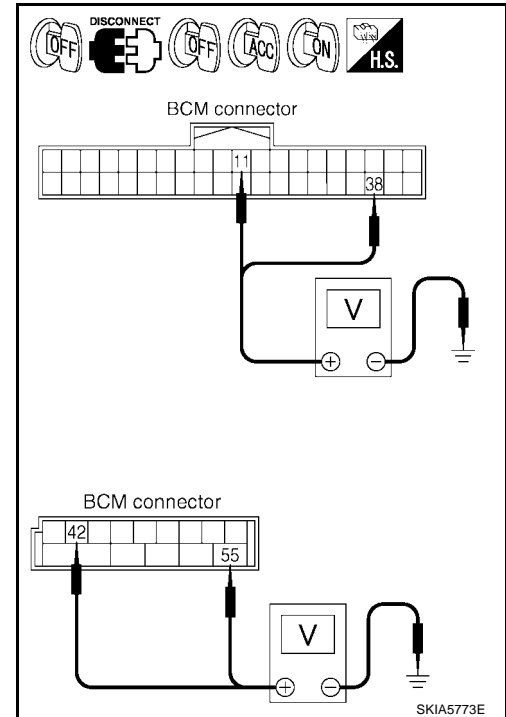
1. Disconnect BCM connectors.
2. Check voltage between BCM harness connector and ground.

BCM (+)		(-)	Ignition switch position		
Connector	Terminal (wire color)		OFF	ACC	ON
M18	11 (V)	Ground	0V	Battery voltage	Battery voltage
	38 (R/W)		0V	0V	Battery voltage
M19	42 (Y/B)		Battery voltage	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.



3. CHECK GROUND CIRCUIT

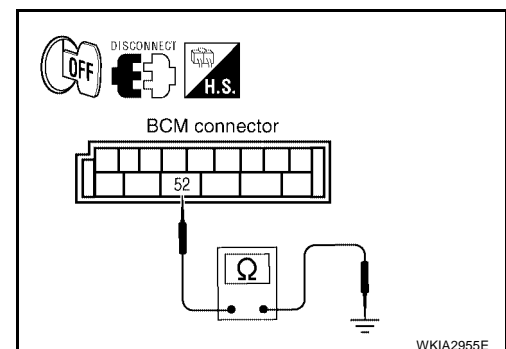
Check continuity between BCM harness connector and ground.

BCM		Continuity
Connector	Terminal (wire color)	
M19	52 (B)	Ground Yes

OK or NG

OK >> Inspection End.

NG >> Check ground circuit harness.



CONSULT-II Functions

EKS0091X

Refer to [LT-23, "CONSULT-II Function \(BCM\)"](#) in HEADLAMP (FOR USA).

Refer to [LT-26, "CONSULT-II Function \(IPDM E/R\)"](#) in HEADLAMP (FOR USA).

PARKING, LICENSE PLATE AND TAIL LAMPS

4. CHECK INPUT SIGNAL

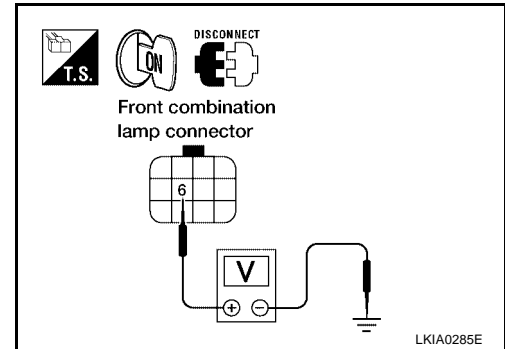
Ⓟ With CONSULT-II

1. Turn ignition switch OFF.
2. Disconnect front combination lamp, license plate lamp and rear combination lamp connectors.
3. Turn ignition switch ON.
4. Select "IPDM E/R" on CONSULT-II, and select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
5. Select "TAIL LAMP" on "SELECT TEST ITEM" screen.
6. Touch "ON" on "ACTIVE TEST" screen.
7. When tail lamp is operating, check voltage between front combination lamp, license plate lamp, rear combination lamp harness connector and ground.

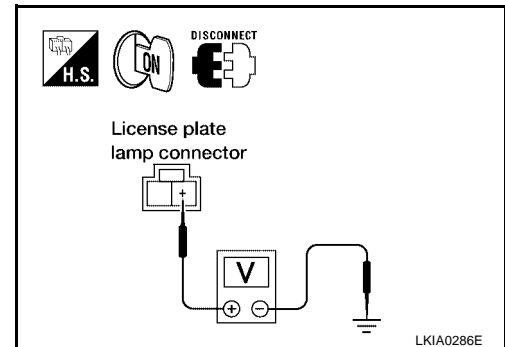
ⓧ Without CONSULT-II

1. Turn ignition switch OFF.
2. Start auto active test. Refer to [PG-21, "Auto Active Test"](#).
3. When tail lamp is operating, check voltage between front combination lamp, license plate lamp, rear combination lamp harness connector and ground.

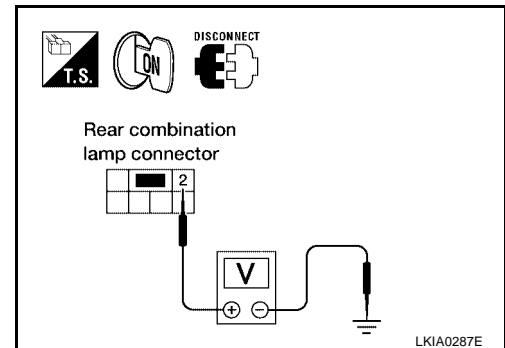
Front combination lamp		Terminal (wire color)	(-)	Voltage
(+)				
Connector				
RH	E107	6 (R/L)	Ground	Battery voltage
LH	E11			



License plate lamp		Terminal (wire color)	(-)	Voltage
(+)				
Connector				
RH	T5	+ (R/L)	Ground	Battery voltage
LH	T4			



Rear combination lamp (tail and side marker)		Terminal (wire color)	(-)	Voltage
(+)				
Connector				
RH	B36	2 (R/L)	Ground	Battery voltage
LH	B35			



OK or NG

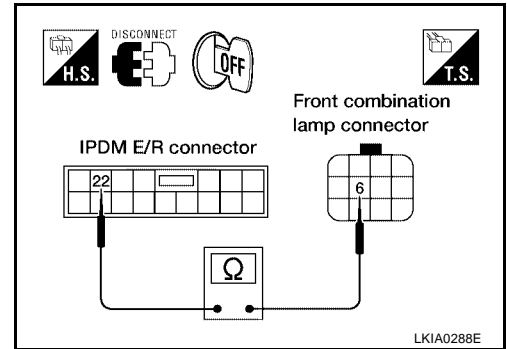
- OK >> GO TO 6.
 NG >> GO TO 5.

PARKING, LICENSE PLATE AND TAIL LAMPS

5. CHECK PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP CIRCUIT

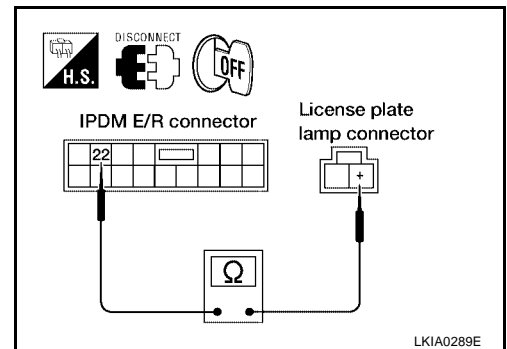
1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check continuity between IPDM E/R harness connector and front side marker lamp harness connector.

IPDM E/R		Front combination lamp		Continuity	
Connector	Terminal (wire color)	Connector	Terminal (wire color)		
E122	22 (R/L)	RH	E107	6 (R/L)	Yes
		LH	E11		



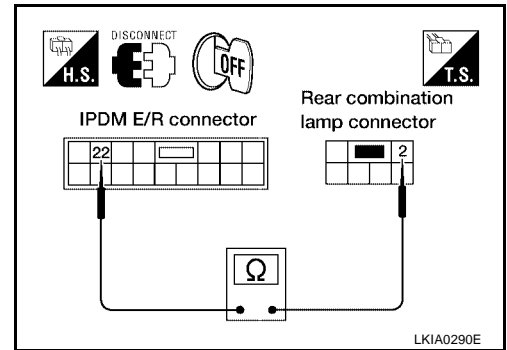
4. Check continuity between IPDM E/R harness connector and license plate lamp harness connector.

IPDM E/R		License plate lamp		Continuity	
Connector	Terminal (wire color)	Connector	Terminal (wire color)		
E122	22 (R/L)	RH	T5	+ (R/L)	Yes
		LH	T4		



5. Check continuity between IPDM E/R harness connector and rear combination lamp harness connector.

IPDM E/R		Rear combination lamp		Continuity	
Connector	Terminal (wire color)	Connector	Terminal (wire color)		
E122	22 (R/L)	RH	B36	2 (R/L)	Yes
		LH	B35		



OK or NG

OK >> Replace IPDM E/R. Refer to [PG-27, "Removal and Installation of IPDM E/R"](#).

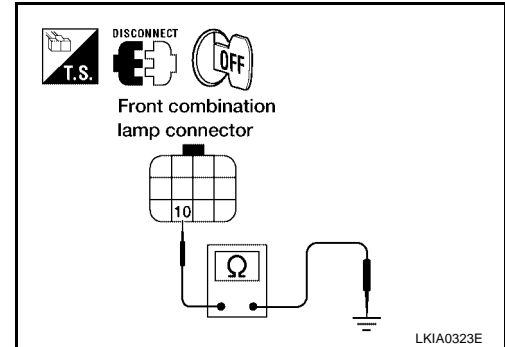
NG >> Repair harness or connector.

PARKING, LICENSE PLATE AND TAIL LAMPS

6. CHECK GROUND

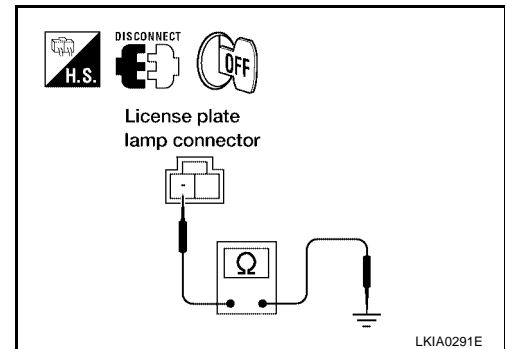
1. Turn ignition switch OFF.
2. Check continuity between front combination lamp harness connector and ground.

Front combination lamp		Terminal (wire color)	Ground	Continuity
Connector				
RH	E107	10 (B/W)	Ground	Yes
LH	E11			



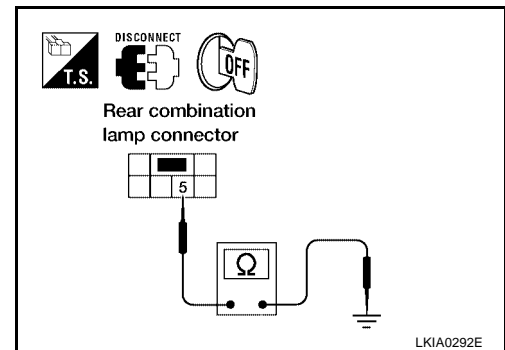
3. Check continuity between license lamp plate harness connector and ground.

License plate lamp		Terminal (wire color)	Ground	Continuity
Connector				
RH	T5	- (B)	Ground	Yes
LH	T4			



4. Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp (tail and side marker)		Terminal (wire color)	Ground	Continuity
Connector				
RH	B36	5 (B)	Ground	Yes
LH	B35			



OK or NG

- OK >> Check bulbs.
- NG >> Repair harness or connector.

Parking, License Plate and Tail Lamps Do Not Turn OFF (After Approx. 10 Minutes)

EKS0091Z

1. CHECK IPDM E/R

1. Turn ignition switch ON. Turn the combination switch (lighting switch) to the OFF position. Turn ignition switch OFF.
2. Verify that the parking, license plate, and tail lamps turn on and off after approximately 10 minutes.

OK or NG

- OK >> Ignition relay malfunction. Refer to [PG-16, "Function of Detecting Ignition Relay Malfunction"](#).
- NG >> Inspection End.

PARKING, LICENSE PLATE AND TAIL LAMPS

Front Parking Lamp BULB REPLACEMENT

EKS00920

A

For bulb replacement, refer to [LT-41, "Bulb Replacement"](#) .

Tail Lamp BULB REPLACEMENT

EKS00921

B

For bulb replacement, refer to [LT-148, "Bulb Replacement"](#) .

Rear Side Marker Lamp BULB REPLACEMENT

EKS00922

C

For bulb replacement, refer to [LT-148, "Bulb Replacement"](#) .

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REAR COMBINATION LAMP

REAR COMBINATION LAMP

PF2:26554

Bulb Replacement

EKS00923

1. Remove rear combination lamp. Refer to [LT-148, "Removal and Installation"](#) .
2. Turn bulb socket counterclockwise and unlock it.
3. Remove bulb.

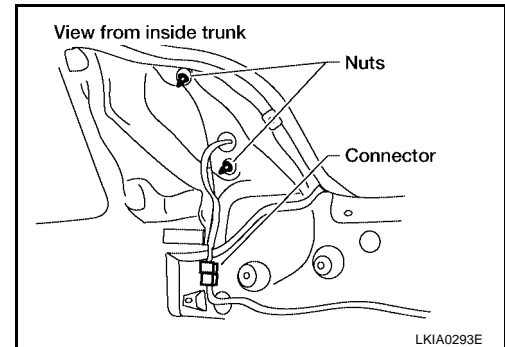
Installation is in the reverse order of removal.

Removal and Installation

EKS00924

1. Position trunk room trim aside. Refer to [EI-44, "Removal and Installation"](#) .
2. Disconnect rear combination lamp connector.
3. Remove rear combination lamp mounting nuts.
4. Pull rear combination lamp to remove from the vehicle.

Installation is in the reverse order of removal.



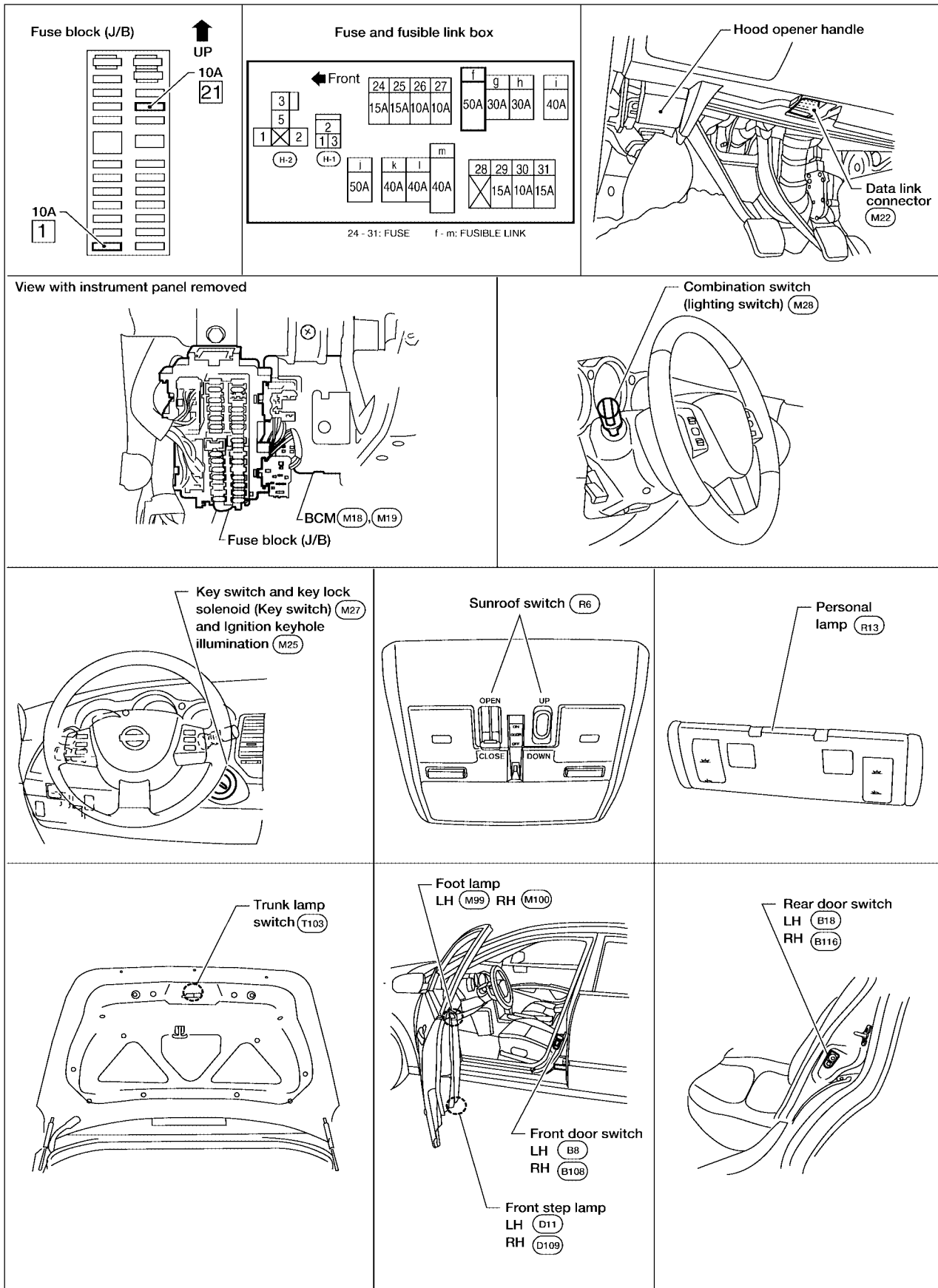
INTERIOR ROOM LAMP

PF2:26410

EKS00925

INTERIOR ROOM LAMP

Component Parts and Harness Connector Location



WKIA3038E

INTERIOR ROOM LAMP

EKS00926

System Description

When room lamp and personal lamp switch is in AUTO position, room lamp and personal lamp ON/OFF is controlled by timer according to signals from switches including key switch, front door switch LH, unlock signal from keyfob, door lock and unlock switch, key cylinder lock and unlock switch, ignition switch.

When room lamp and personal lamp turns ON, there is a gradual brightening over 1 second. When room lamp and personal lamp turns OFF, there is a gradual dimming over 1 second.

The room lamp and personal lamp timer is controlled by the BCM (body control module).

Room lamp and personal lamp timer control settings can be changed with CONSULT-II.

Ignition keyhole illumination turns ON when front door LH is opened (door switch ON) or key is removed from key cylinder. Illumination turns OFF when front door LH is closed (door switch OFF).

Step and foot lamp turns ON when front or rear doors are opened (door switch ON). Lamp turns OFF when front and rear doors are closed (all door switches OFF).

POWER SUPPLY AND GROUND

Power is supplied at all times

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to key switch terminal 3
- to BCM terminal 42
- to trunk room lamp terminal +, and
- through 50A fusible link (letter f , located in the fuse and fusible link box)
- to BCM terminal 55.

When the key is inserted in key switch, power is supplied

- through the key switch terminal 4
- to BCM terminal 37.

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38.

When the BCM receives input to supply power to terminal 41, power is supplied

- to step lamp terminals +
- to rear console lamp terminal 2
- to ignition keyhole illumination terminal +
- to foot lamp terminals +
- to vanity mirror lamp terminals 1
- to personal lamp terminal 2
- to interior room lamp terminal 7.

Ground is supplied

- to BCM terminals 49 and 52
- through grounds M57, M61 and M79.

When the front door LH is opened, ground is supplied

- through case ground of front door switch LH
- to BCM terminal 62.

When the front door RH is opened, ground is supplied

- to BCM terminal 12
- through case ground of front door switch RH.

When the rear door LH is opened, ground is supplied

- to BCM terminal 63
- through case ground of rear door switch LH.

When the rear door RH is opened, ground is supplied

- to BCM terminal 13
- through case ground of rear door switch RH.

When the front door LH is unlocked by the door lock and unlock switch, BCM receives a ground signal

INTERIOR ROOM LAMP

- to BCM terminal 22
- to main power window and door lock/unlock switch terminal 14 or front power window and door lock/unlock switch terminal 16
- to main power window and door lock/unlock switch terminal 17 or front power window and door lock/unlock switch terminal 11
- through grounds M57, M61 and M79.

When the front door LH is unlocked by the front door lock assembly LH (key cylinder switch), BCM receives a ground signal

- to BCM terminal 22
- from main power window and door lock/unlock switch terminal 14
- to main power window and door lock/unlock switch terminal 4
- from front door lock assembly LH (key cylinder switch) terminal 1
- to front door lock assembly LH (key cylinder switch) terminal 5
- through grounds M57, M61 and M79.

When a signal or combination of signals is received by BCM, ground is supplied

- to personal lamp terminals 4 and 6
- through interior room lamp (room/map lamps) terminal 5
- to interior room lamp (room/map lamps) when interior room lamp switch is in AUTO
- to interior room lamp (room/map lamps) terminal 6
- to foot lamp LH and RH terminal –
- through BCM terminal 48.

With power and ground supplied, the interior lamp illuminates.

SWITCH OPERATION

When front door switch LH is ON (door is opened), ground is supplied

- to ignition keyhole illumination terminal –
- through BCM terminal 1.

And power is supplied

- through BCM terminal 41
- to ignition keyhole illumination terminal +.

When any door switch is ON (door is opened), ground is supplied

- to front step lamp LH and RH, rear step lamp LH and RH terminal –
- through BCM terminal 47.

And power is supplied

- through BCM terminal 41
- to every step lamp terminal + and personal lamp LH and RH terminal 2.

When map lamp switch is ON, ground is supplied

- to map lamp terminal 4
- through grounds M57, M61 and M79.

And power is supplied

- through BCM terminal 41
- to map lamp terminal 7.

When vanity mirror lamp (LH or RH) is ON, ground is supplied

- to vanity mirror lamp (LH or RH) terminal 2
- through grounds M57, M61 and M79.

And power is supplied

- through BCM terminal 41
- to vanity mirror lamp (LH or RH) terminal 1.

When rear console lamp switch is ON, ground is supplied

- to rear console lamp terminal 4

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INTERIOR ROOM LAMP

- through grounds B117 and B132.

And power is supplied

- through BCM terminal 41
- to rear console lamp terminal 2.

When trunk room lamp is ON, ground is supplied

- to trunk lamp switch and trunk release solenoid (trunk lamp switch) terminal 2
- to trunk room lamp terminal –
- to BCM terminal 57
- through grounds B7 and B19.

And power is supplied

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to trunk room lamp terminal +.

ROOM LAMP TIMER OPERATION

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

In addition, when map turns ON or OFF there is gradual brightening or dimming over 1 second.

Power is supplied

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to key switch terminal 3.

Key is removed from ignition key cylinder (key switch OFF), power will not be supplied to BCM terminal 37.

Ground is supplied

- to BCM terminal 22
- through main power window and door lock/unlock switch terminal 14.

At the time that front door LH are opened, BCM detects that front door LH is unlocked. It determines that interior room lamp and map lamp timer operation conditions are met and turns the interior room lamp and map lamp ON for 30 seconds.

Key is in ignition key cylinder (key switch ON), power is supplied

- through key switch terminal 4
- to BCM terminal 37.

When key is removed from key switch (key switch OFF), power supply to BCM terminal 37 is terminated. BCM detects that key has been removed, determines that interior room lamp and map lamp timer conditions are met, and turns the interior room lamp and map lamp ON for 30 seconds.

When front door LH opens → closes and the key is not inserted in the key switch (key switch OFF), BCM terminal 62 changes between 0V (door open) → 12V (door closed). The BCM determines that conditions for interior room lamp and map lamp operation are met and turns the interior room lamp ON for 30 seconds.

Timer control is canceled under the following conditions.

- Front door LH is locked (when locked by keyfob, main power window and door lock/unlock switch, or front door lock assembly LH (key cylinder switch))
- Front door LH is opened (front door switch LH turns ON)
- Ignition switch ON.

INTERIOR LAMP BATTERY SAVER CONTROL

If interior lamp is left "ON", it will not be turned out even when door is closed.

BCM turns off interior lamp automatically to save battery 30 minutes after ignition switch is turned off.

BCM controls interior lamps listed below:

- Vanity mirror lamp
- Interior room lamp (room/map lamps)
- Personal lamp
- Step lamp
- Foot lamp
- Ignition keyhole illumination
- Rear console lamp

INTERIOR ROOM LAMP

After lamps turn OFF by the battery saver system, the lamps illuminate again when

- signal received from keyfob, or main power window and door lock/unlock switch or front door lock assembly LH (key cylinder switch) is locked or unlocked
- door is opened or closed
- key is removed from or inserted in ignition key cylinder.

Interior lamp battery saver control period can be changed by the function setting of CONSULT-II.

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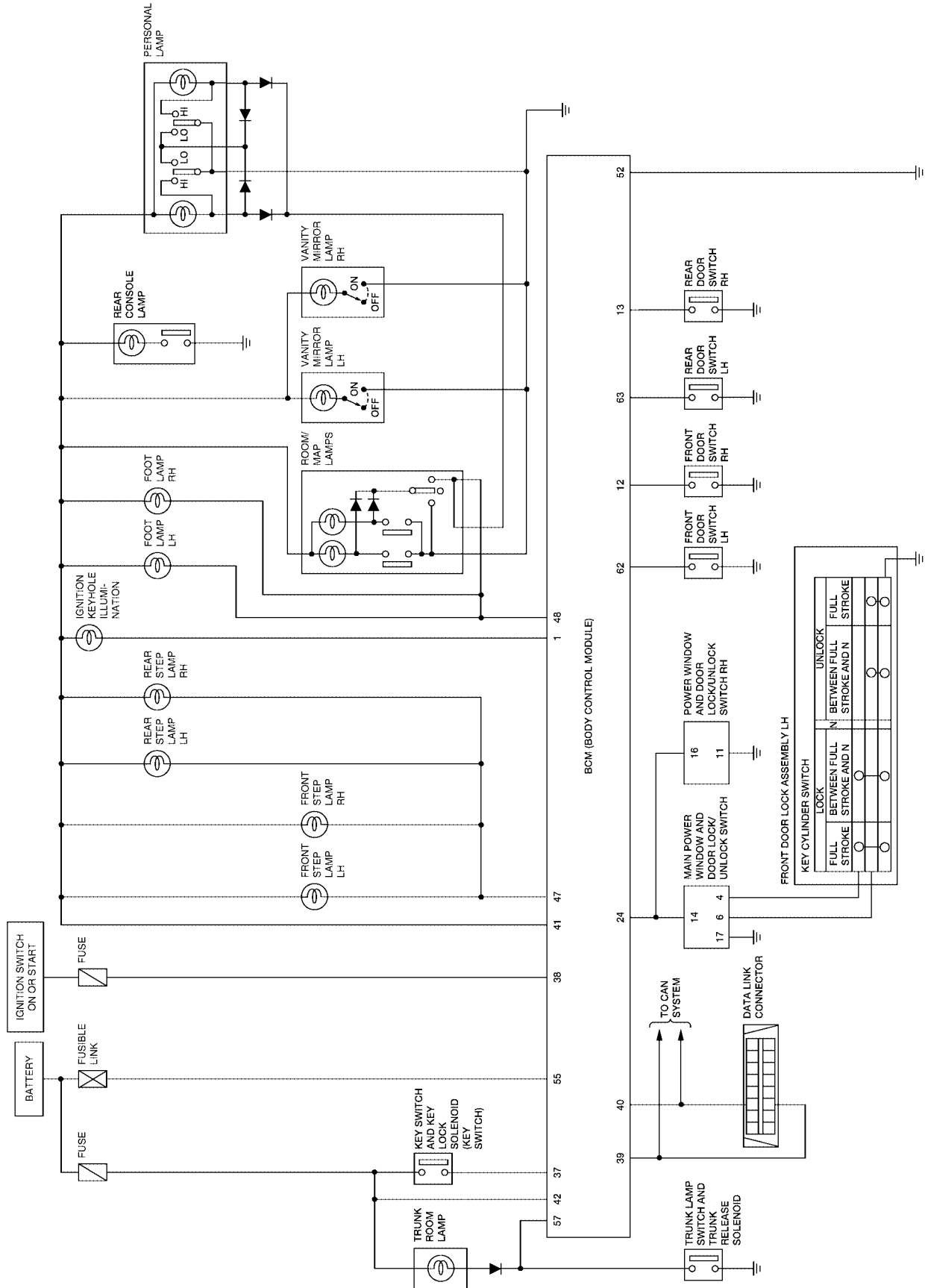
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INTERIOR ROOM LAMP

Schematic

EKS00927

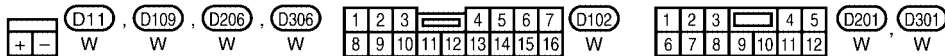
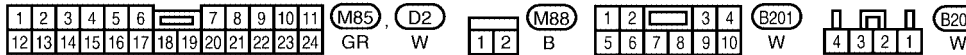
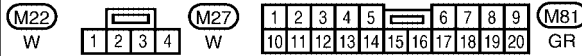
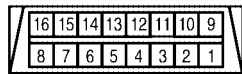
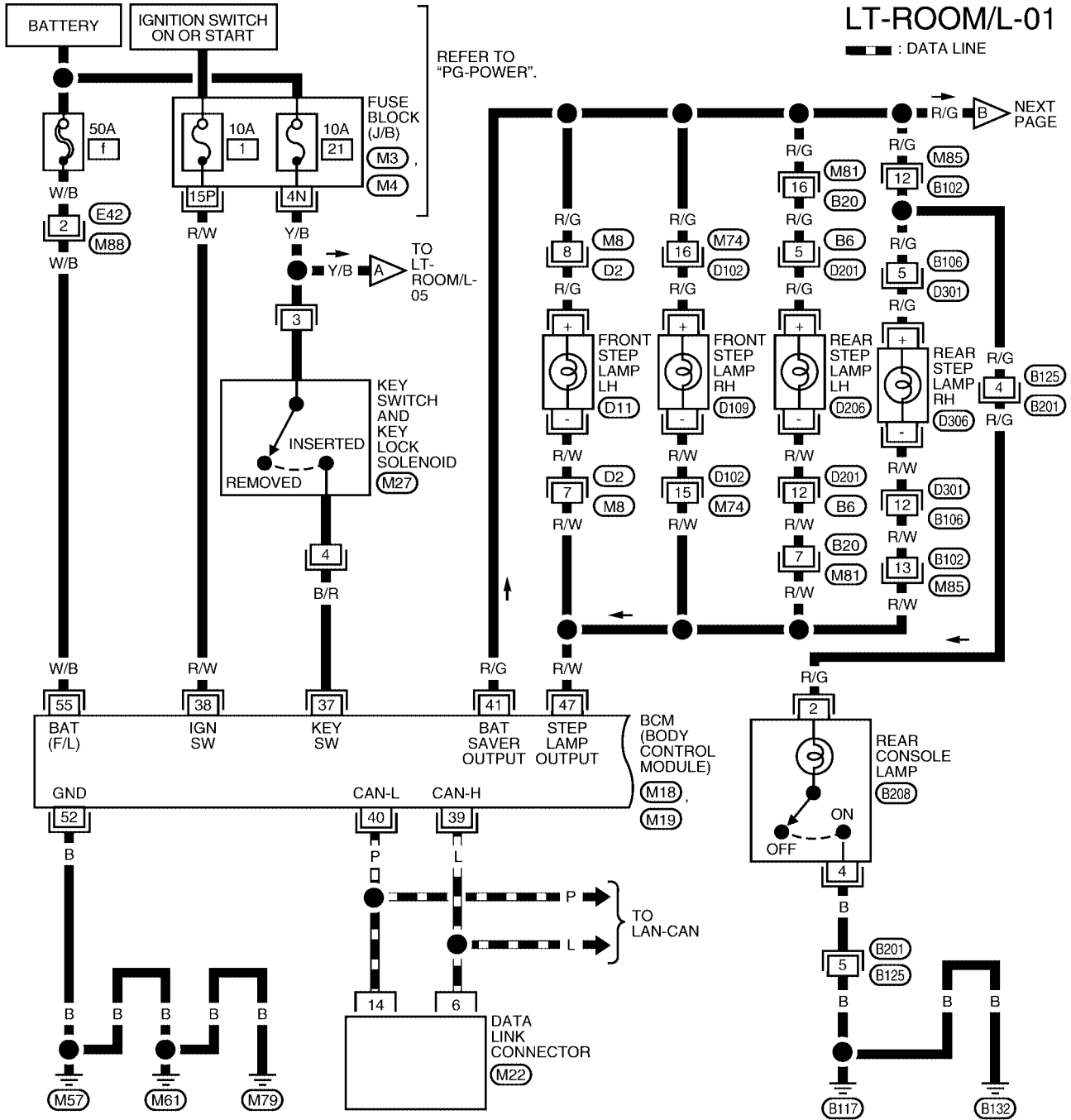


WKWA1750E

INTERIOR ROOM LAMP

EKS00928

Wiring Diagram — ROOM/L —

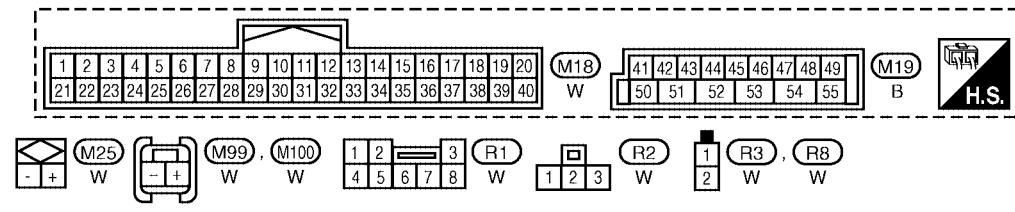
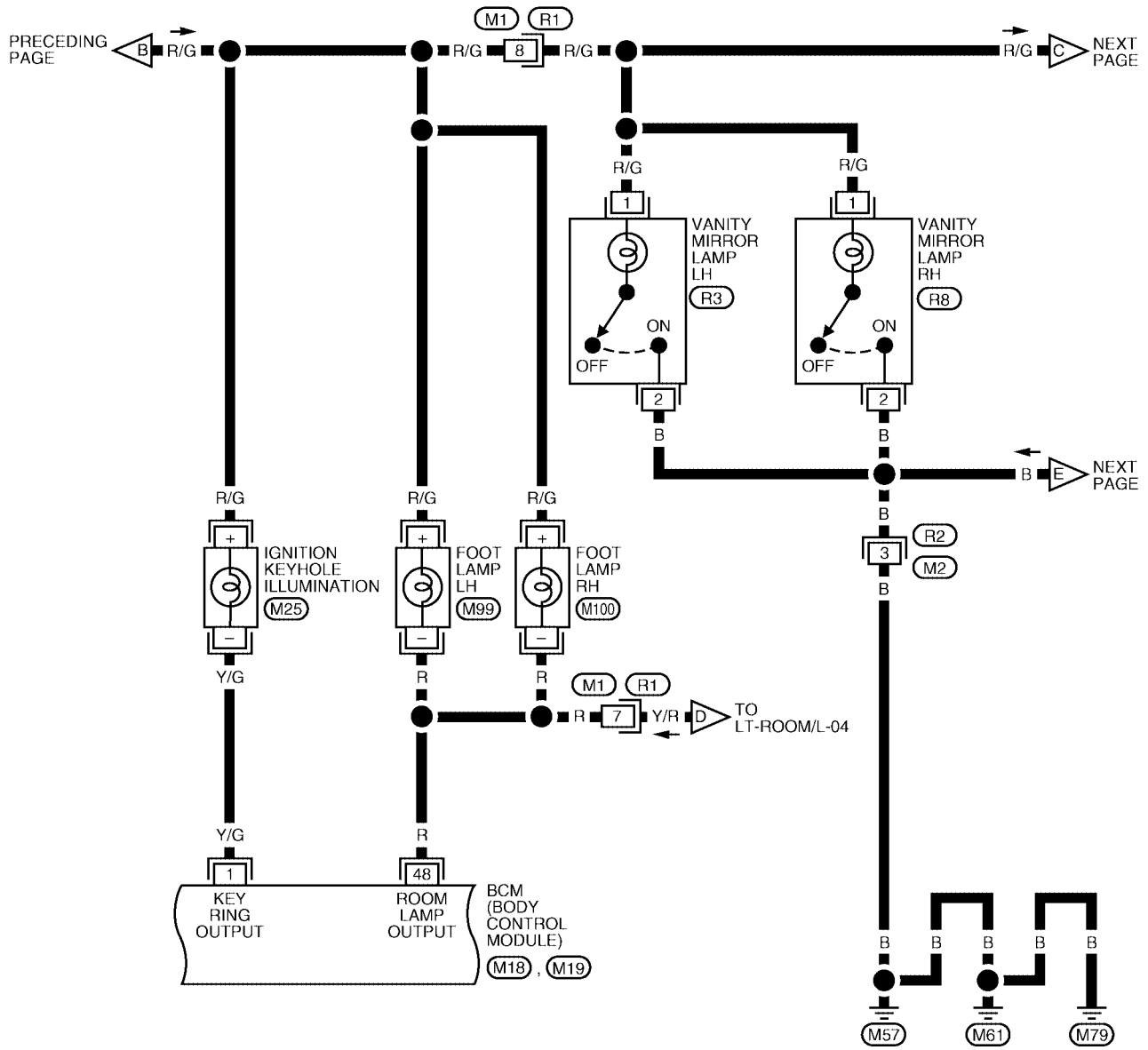


REFER TO THE FOLLOWING.
 (M3), (M4) - FUSE BLOCK - JUNCTION BOX (J/B)
 (M18), (M19) - ELECTRICAL UNITS

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INTERIOR ROOM LAMP

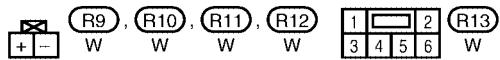
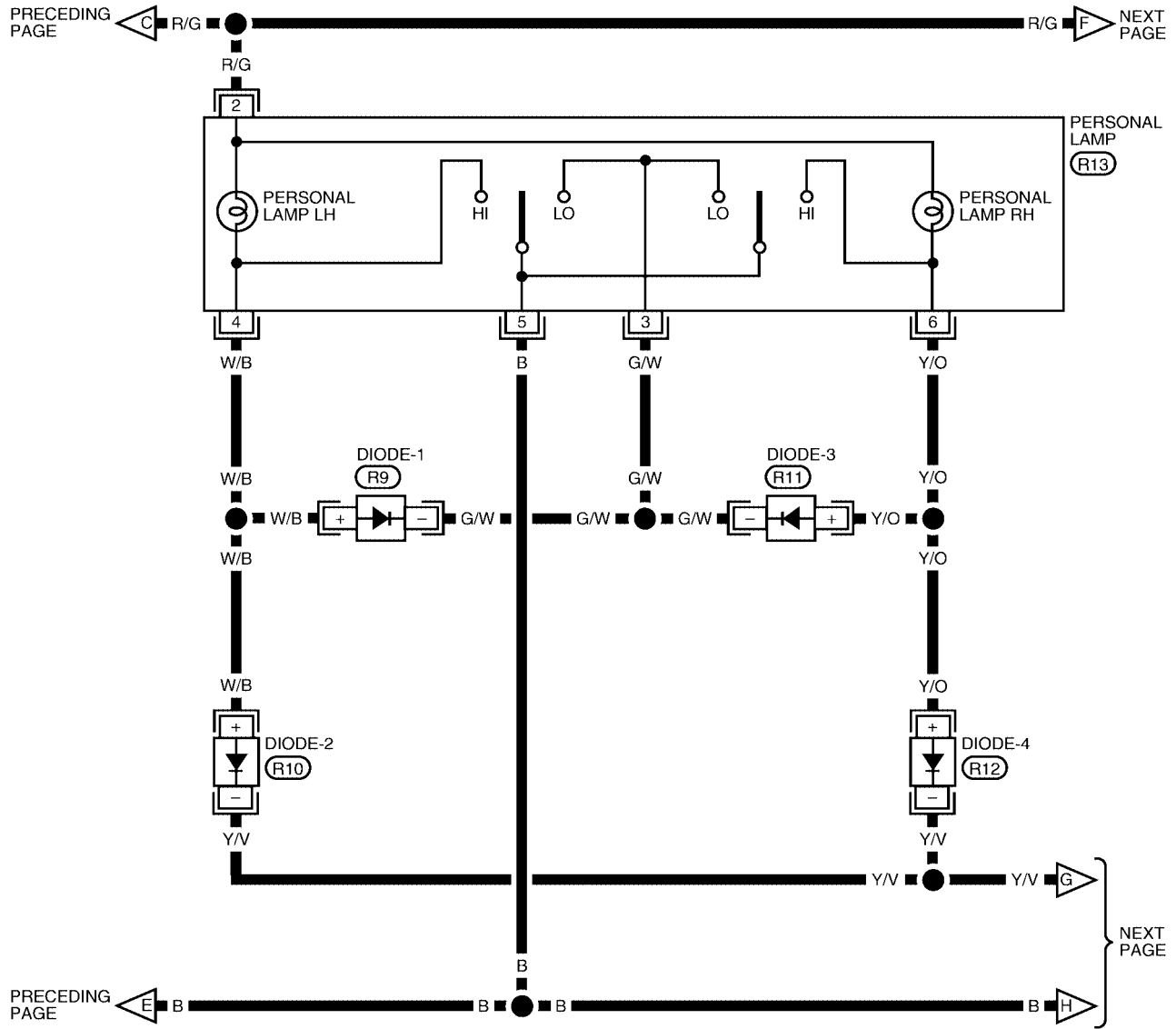
LT-ROOM/L-02



WKWA1752E

INTERIOR ROOM LAMP

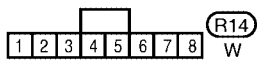
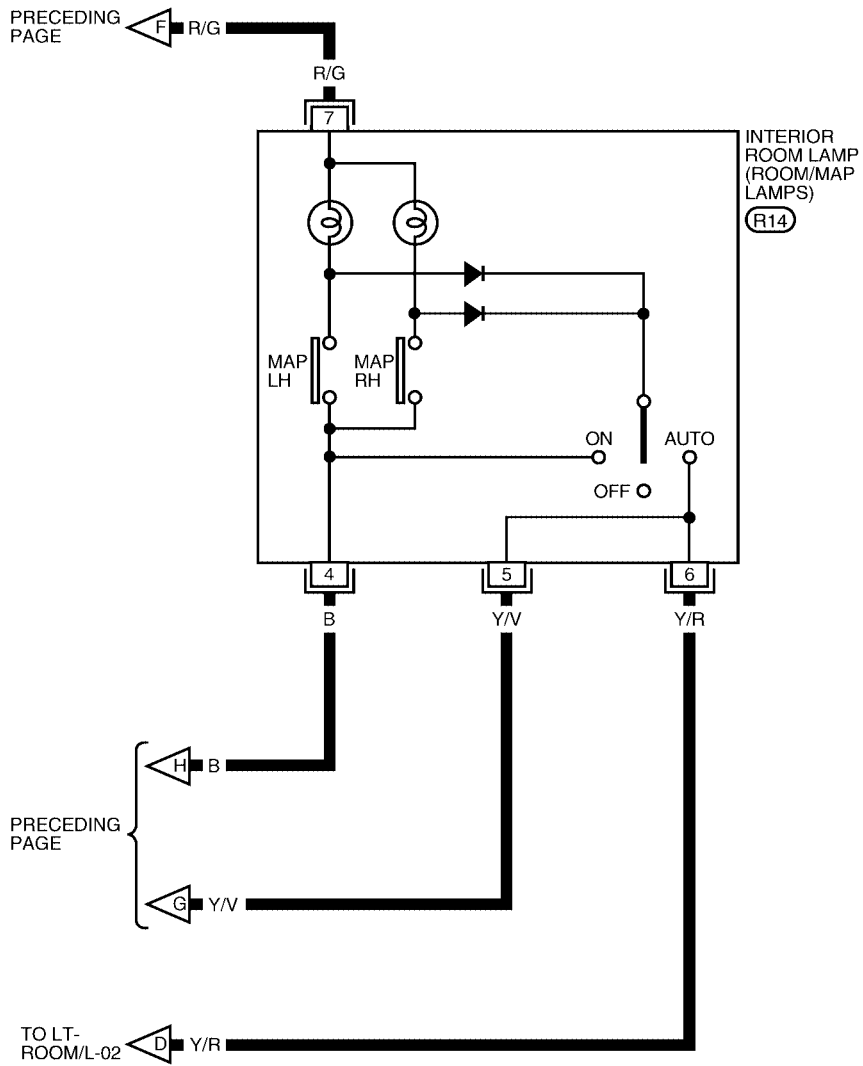
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INTERIOR ROOM LAMP

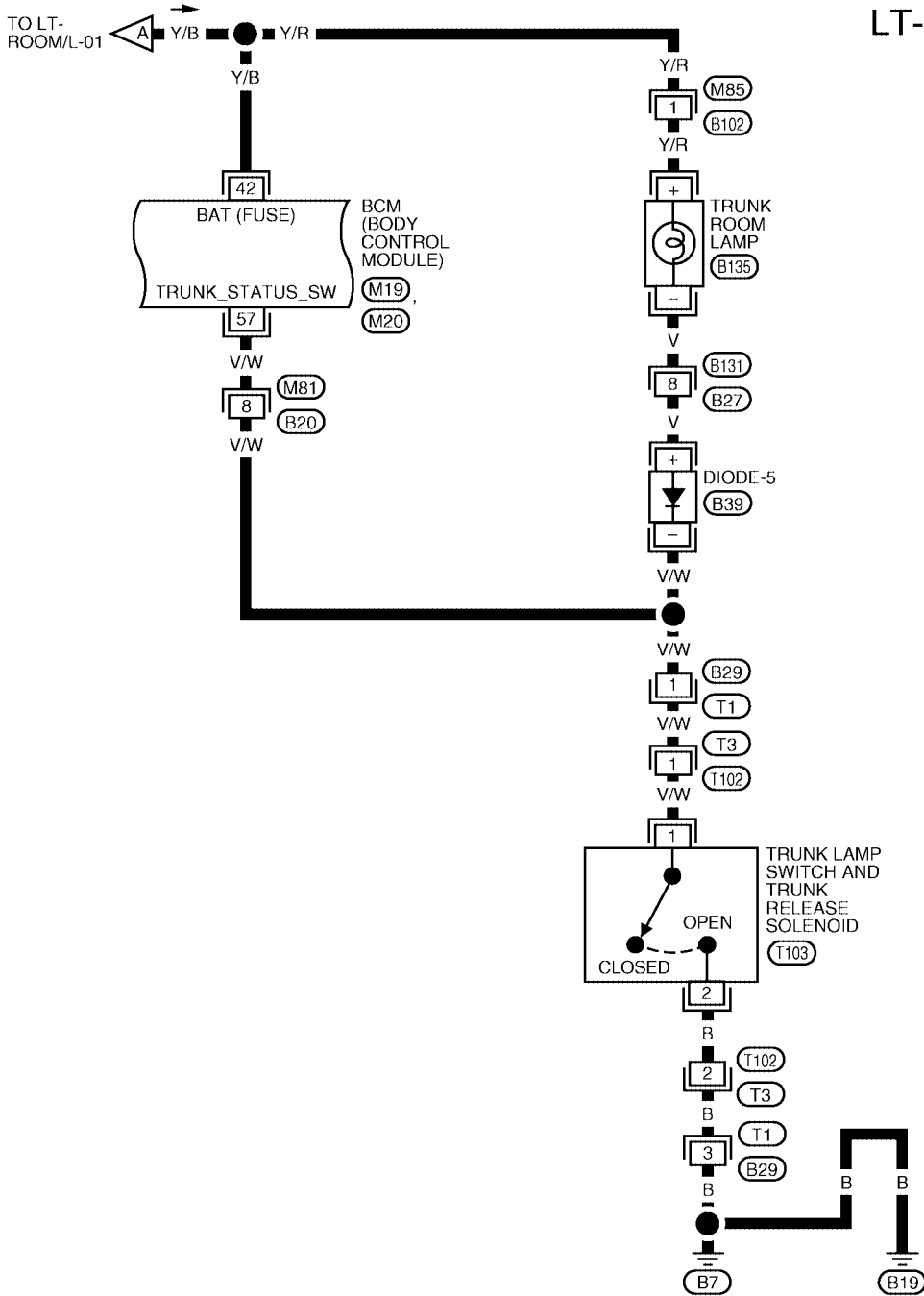
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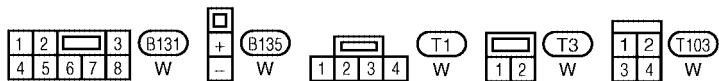
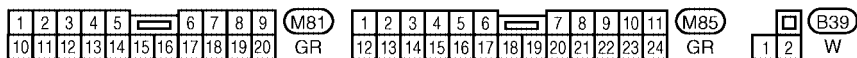
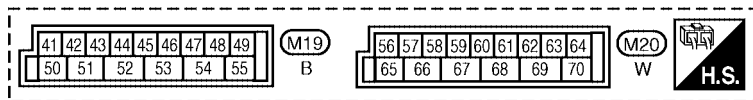
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INTERIOR ROOM LAMP

LT-ROOM/L-05



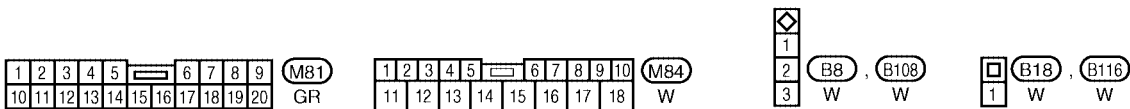
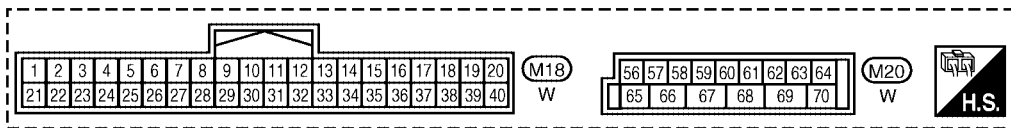
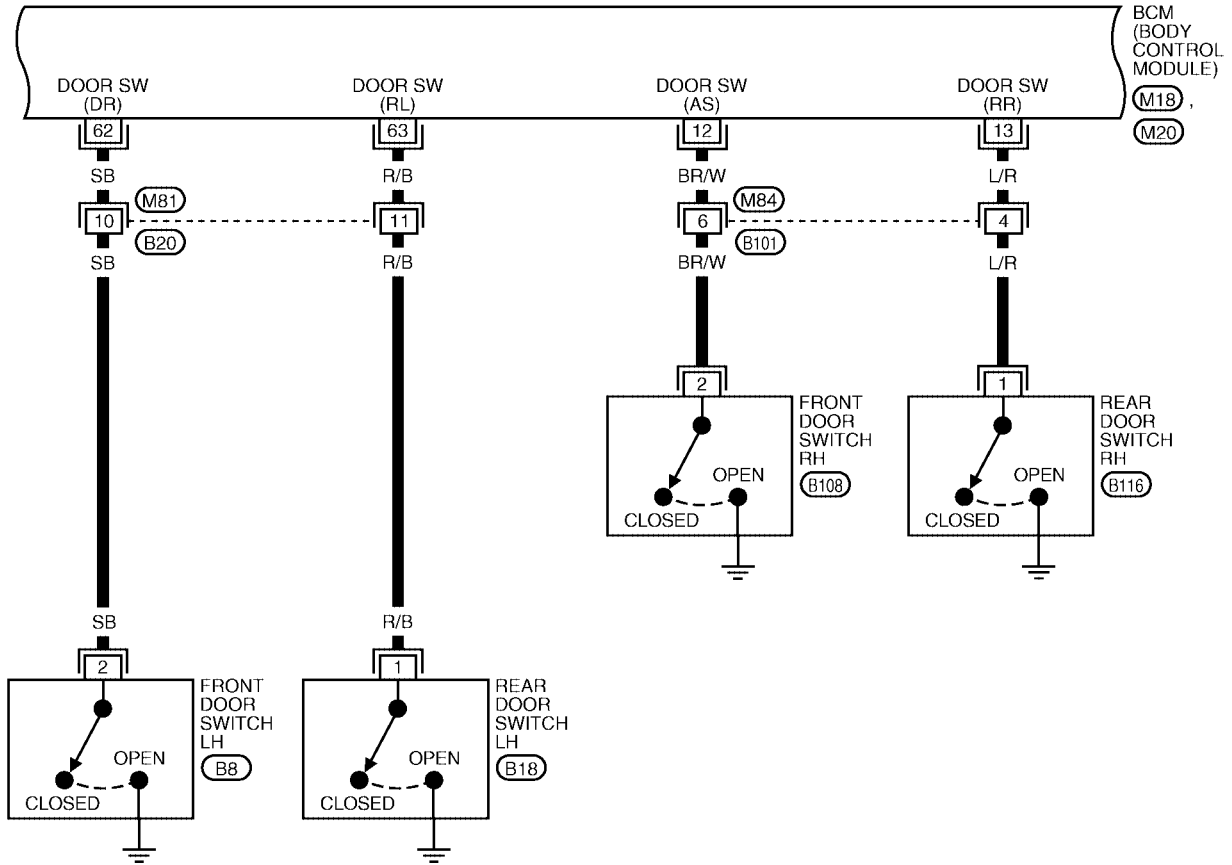
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INTERIOR ROOM LAMP

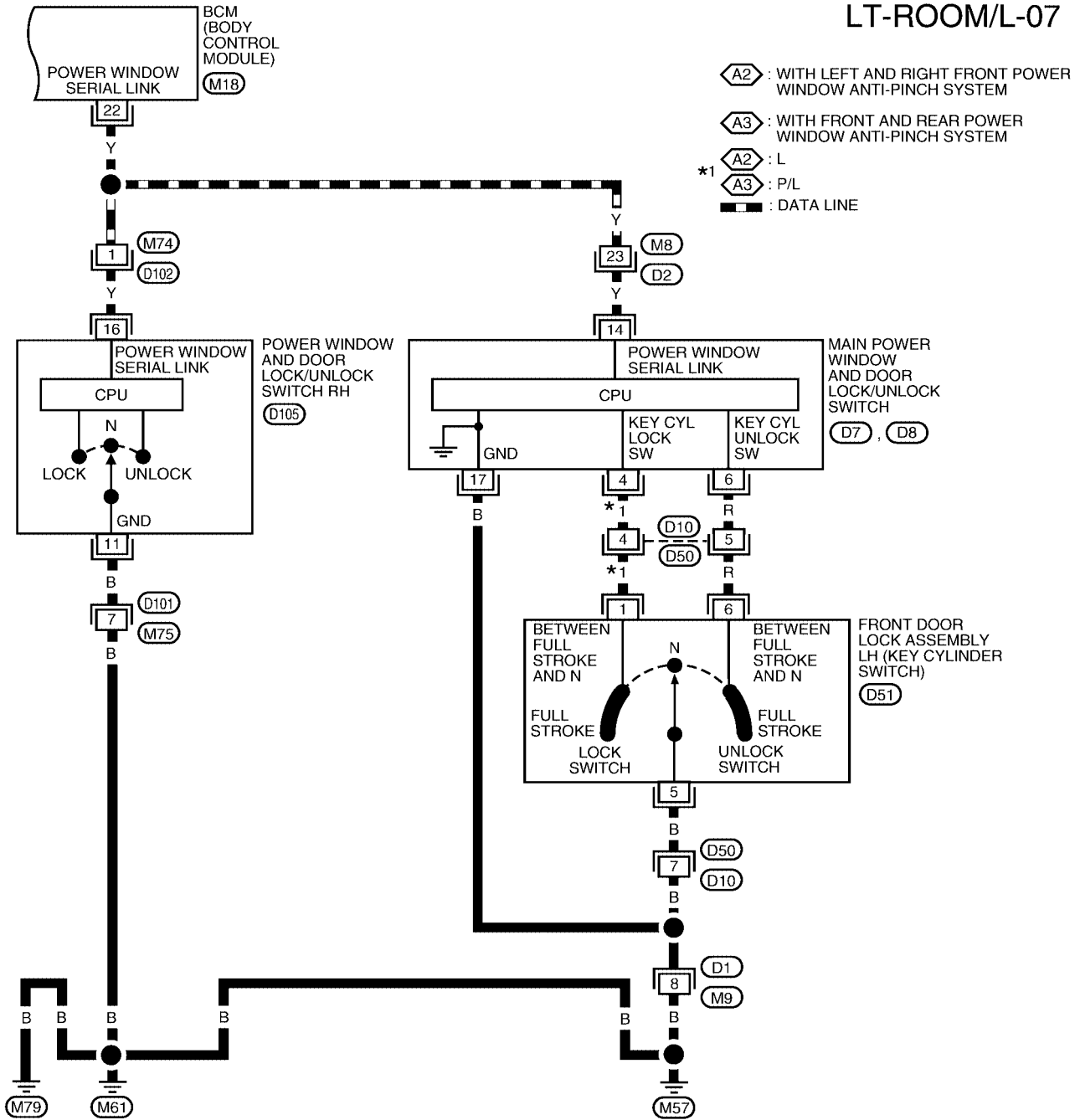
LT-ROOM/L-06



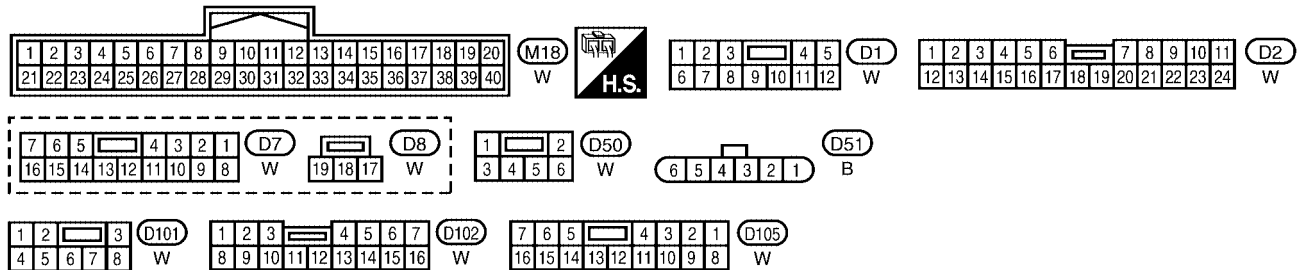
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INTERIOR ROOM LAMP

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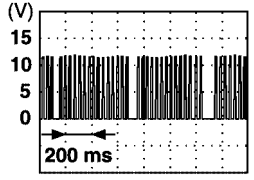


WKWA1755E

INTERIOR ROOM LAMP

Terminals and Reference Values for BCM

EKS00929

Terminal No.	Wire color	Signal name	Measuring condition			Reference value (Approx.)
			Ignition switch	Operation or condition		
1	Y/G	Ignition keyhole illumination signal	OFF	Door is locked. (SW OFF)		Battery voltage
				Door is unlocked. (SW ON)		0V
12	BR/W	Front door switch RH signal	OFF	Front door switch RH	ON (open)	0V
					OFF (closed)	Battery voltage
13	L/R	Rear door switch RH signal	OFF	Rear door switch RH	ON (open)	0V
					OFF (closed)	Battery voltage
22	Y	Power window switch serial link	—	—		
37	B/R	Key-in switch detection signal	OFF	Vehicle key is removed.		0V
				Vehicle key is inserted.		Battery voltage
38	R/W	Ignition power supply	ON	—		Battery voltage
39	L	CAN-H	—	—		—
40	P	CAN-L	—	—		—
41	R/G	Battery saver output signal	OFF	30 minutes after ignition switch is turned to OFF		0V
			ON	—		Battery voltage
42	Y/B	Battery power supply	OFF	—		Battery voltage
47	R/W	Step lamp signal	OFF	Any door is open (ON)		0V
				All doors are closed (OFF)		Battery voltage
48	R	Interior room lamp, map lamp and front door inside handle illumination output signal	OFF	Interior door switch: AUTO position	Any door switch ON (open)	0V
					Any door switch OFF (closed)	Battery voltage
52	B	Ground	ON	—		0V
55	W/B	Battery power supply	OFF	—		Battery voltage
62	SB	Front door switch LH signal	OFF	Front door switch LH	ON (open)	0V
					OFF (closed)	Battery voltage
63	R/B	Rear door switch LH signal	OFF	Rear door switch LH	ON (open)	0V
					OFF (closed)	Battery voltage

INTERIOR ROOM LAMP

EKS0092A

How to Proceed With Trouble Diagnosis

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [LT-150, "System Description"](#).
3. Carry out the Preliminary Check. Refer to [LT-163, "Preliminary Check"](#).
4. Check symptom and repair or replace the cause of malfunction.
5. Does the interior room lamp operate normally? If YES: GO TO 6. If NO: GO TO 4.
6. Inspection End.

Preliminary Check

EKS0092B

INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT

1. CHECK FUSES AND FUSIBLE LINK

Check for blown BCM fuses or fusible link.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	f
		21
	Ignition switch ON or START position	1

Refer to [LT-155, "Wiring Diagram — ROOM/L —"](#).

OK or NG

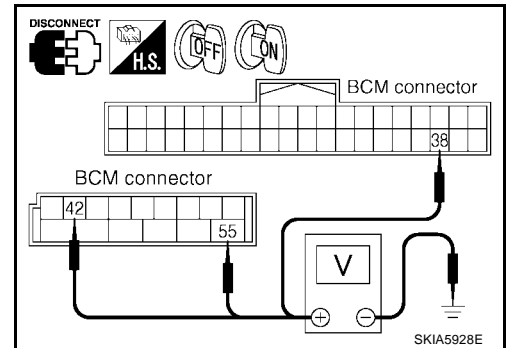
OK >> GO TO 2.

NG >> If fuse or fusible link is blown, be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-4, "POWER SUPPLY ROUTING CIRCUIT"](#).

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connectors.
2. Check voltage between BCM connector and ground.

BCM (+)		(-)	Ignition switch position	
Connector	Terminal (wire color)		OFF	ON
M19	42 (Y/B)	Ground	Battery voltage	Battery voltage
	55 (W/B)		Battery voltage	Battery voltage
M18	38 (R/W)		0V	Battery voltage



OK or NG

OK >> GO TO 3.

NG >> Check harness for open between BCM and fuse or fusible link.

3. CHECK GROUND CIRCUIT

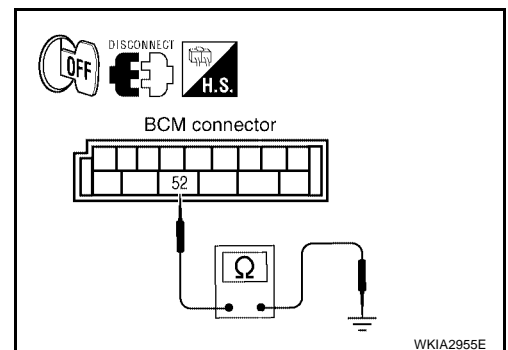
Check continuity between BCM and ground.

BCM		Continuity
Connector	Terminal (wire color)	
M19	52 (B)	Ground Yes

OK or NG

OK >> Inspection End.

NG >> Check harness ground circuit.



INTERIOR ROOM LAMP

EKS0092C

CONSULT-II Function (BCM)

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

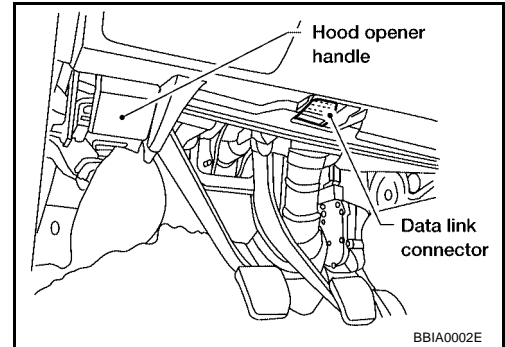
BCM diagnostic test item	Diagnostic mode	Description
Inspection by part	WORK SUPPORT	Supports inspections and adjustments. Commands are transmitted to the BCM for setting the status suitable for required operation, input/output signals are received from the BCM and received data is displayed.
	DATA MONITOR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

CONSULT-II OPERATION

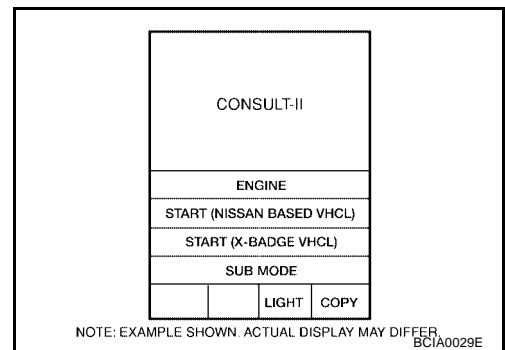
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

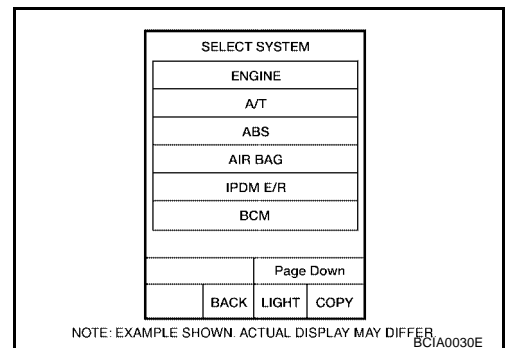
1. With the ignition switch OFF, connect CONSULT-II and CONSULT-II CONVERTER to the data link connector, then turn ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".

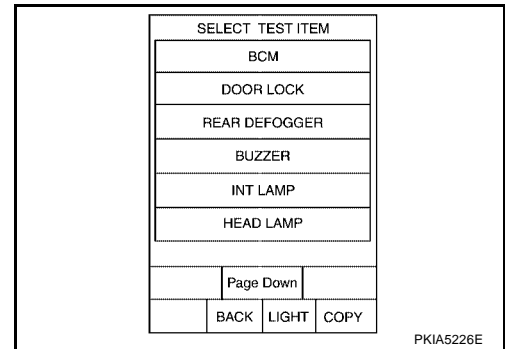


3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-37, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



INTERIOR ROOM LAMP

4. Touch "INT LAMP" on "SELECT TEST ITEM" screen.



WORK SUPPORT

Operation Procedure

1. Touch "INT LAMP" on "SELECT TEST ITEM" screen.
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch "SET I/L D-UNLCK INTCON" on "SELECT WORK ITEM" screen.
4. Touch "START".
5. Touch "CHANGE SETT".
6. The setting will be changed and "CUSTOMIZING COMPLETED" will be displayed.
7. Touch "END".

Display Item List

Item	Description	CONSULT-II
SET I/L D-UNLCK INTCON	The 30 seconds glowing function the interior room lamps and the ignition keyhole illumination can be selected when front door LH is released (unlocked).	ON/OFF
ROOM LAMP ON TIME SET	The time in order to escalate illumination can be adjusted when the interior room lamps and the ignition keyhole illumination is turned on.	MODE 1 - 7
ROOM LAMP OFF TIME SET	The time in order to diminish illumination can be adjusted when the interior room lamps and the ignition keyhole illumination is turned off.	MODE 1 - 7

Reference between "MODE" and "TIME" for "TURN ON/OFF".

MODE	1	2	3	4	5	6	7
Time (sec.)	0.5	1	2	3	4	5	0

DATA MONITOR

Operation Procedure

1. Touch "INT LAMP" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch either "ALL SIGNALS" or "SELECTION FROM MENU" on "SELECT MONITOR ITEM" screen.

ALL SIGNALS	Monitors all the signals.
SELECTION FROM MENU	Selects and monitors the individual signal.

4. When "SELECTION FROM MENU" is selected, touch items to be monitored. When "ALL SIGNALS" is selected, all the items will be monitored.
5. Touch "RECORD" while monitoring, then the status of the monitored item can be recorded. To stop recording, touch "STOP".

INTERIOR ROOM LAMP

Display Item List

Monitor item	Contents
IGN ON SW "ON/OFF"	Displays "IGN position (ON)/OFF, ACC position (OFF)" judged from the ignition switch signal.
KEY ON SW "ON/OFF"	Displays "Key inserted (ON)/key removed (OFF)" status judged from the key switch signal.
DOOR SW-DR "ON/OFF"	Displays status of the front door LH as judged from the front door switch LH signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-AS "ON/OFF"	Displays "Door open (ON)/Door closed (OFF)" status, determined from front door switch RH signal.
DOOR SW-RR "ON/OFF"	Displays "Door open (ON)/Door closed (OFF)" status, determined from rear door switch RH signal.
DOOR SW-RL "ON/OFF"	Displays "Door open (ON)/Door closed (OFF)" status, determined from rear door switch LH signal.
KEY CYL LK-SW "ON/OFF"	Displays "Door locked (ON)" status, determined from key cylinder lock switch in front door LH.
KEY CYL UN-SW "ON/OFF"	Displays "Door unlocked (OFF)" status, determined from key cylinder lock switch in front door LH.
CDL LOCK SW "ON/OFF"	Displays "Door locked (ON)/Door unlocked (OFF)" status, determined from locking detection switch in front door LH.
CDL UNLOCK SW "ON/OFF"	Displays "Door unlocked (OFF)" status, determined from locking detection switch in front door RH.
KEYLESS LOCK "ON/OFF"	Displays "Locked (ON)/Other (OFF)" status, determined from lock signal.
KEYLESS UNLOCK "ON/OFF"	Displays "Unlocked (ON)/Other (OFF)" status, determined from unlock signal.

ACTIVE TEST

Operation Procedure

1. Touch "INT LAMP" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Touch item to be tested and check operation of the selected item.
4. During the operation check, touching "BACK" deactivates the operation.

Display Item List

Test item	Description
INT LAMP	Interior room lamp can be operated by any ON-OFF operations.
IGN ILLUM	Ignition keyhole illumination can be operated by ON-OFF operation.

Interior Room Lamp Control Does Not Operate

EKS0092D

1. CHECK EACH SWITCH

Select "BCM" on CONSULT-II. With "INT LAMP" data monitor, make sure switches listed in display item list turn ON-OFF linked with switch operation. Refer to [LT-166, "Display Item List"](#) for switches and their functions.

OK or NG

- OK >> GO TO 2.
 NG >> Inspect malfunctioning switch system.

DATA MONITOR	
MONITOR	
IGN ON SW	ON
KEY ON SW	ON
DOOR SW-DR	ON
DOOR SW-AS	ON
DOOR SW-RR	OFF
DOOR SW-RL	OFF
KEY CYL LK-SW	OFF
KEY CYL UN-SW	OFF
CDL LOCK SW	OFF

WKIA3366E

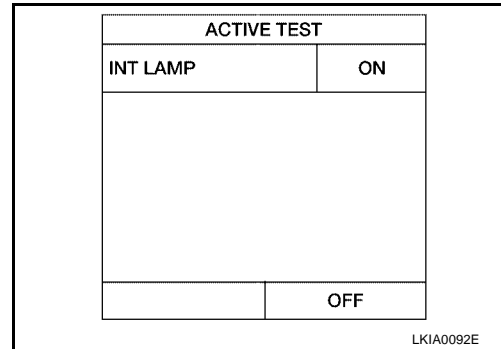
INTERIOR ROOM LAMP

2. ACTIVE TEST

1. With interior room lamp switch is in "AUTO" position, use active test to make sure interior room lamp operates.
2. Select "BCM" on CONSULT-II. Select "INT LAMP" on "SELECT TEST ITEM" screen.
3. Select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
4. Select "INT LAMP" on "SELECT TEST ITEM" screen.
5. Select "ON" on ACTIVE TEST" screen.

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> GO TO 3.



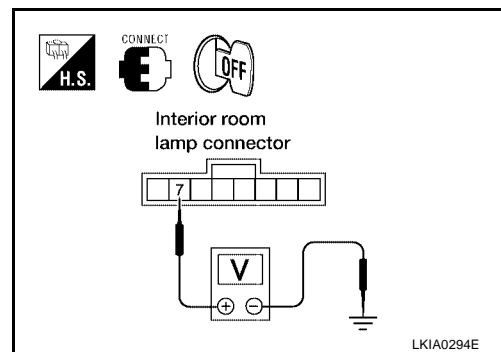
3. CHECK INTERIOR ROOM LAMP INPUT

1. Turn ignition switch OFF.
2. Check voltage between interior room lamp harness connector R14 terminal 7 (R/G) and ground.

7 (R/G) - Ground : Battery voltage should exist.

OK or NG

- OK >> GO TO 4.
- NG >> GO TO 6.



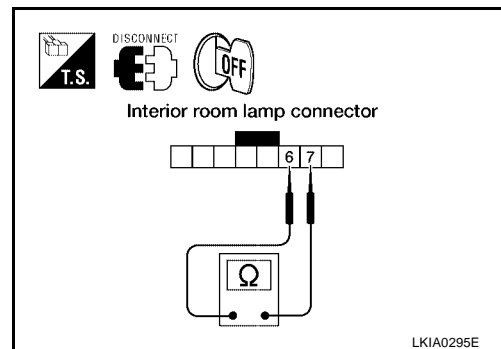
4. CHECK INTERIOR ROOM LAMP

1. Disconnect interior room lamp connector.
2. Check continuity between interior room lamp terminals.

Interior room lamp		Condition	Continuity
Terminal			
7	6	Interior room lamp switch is AUTO	Yes
		Interior room lamp switch is OFF	No

OK or NG

- OK >> GO TO 5.
- NG >> Replace interior room lamp.



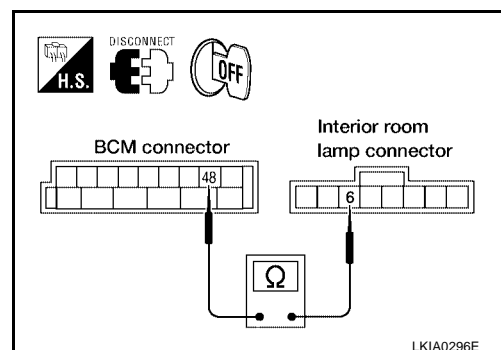
5. CHECK INTERIOR ROOM LAMP CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M19 terminal 48 (R) and interior room lamp harness connector R14 terminal 6 (Y/R).

48 (R) - 6 (Y/R) : Continuity should exist.

OK or NG

- OK >> Replace BCM if interior lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



INTERIOR ROOM LAMP

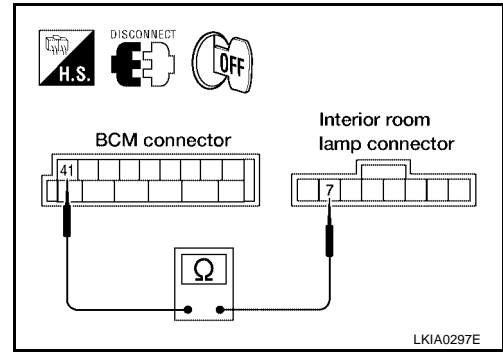
6. CHECK INTERIOR ROOM LAMP CIRCUIT

1. Disconnect BCM connector and interior room lamp connector.
2. Check continuity between BCM harness connector M19 terminal 41 (R/G) and interior room lamp harness connector R14 terminal 7 (R/G).

41 (R/G) - 7 (R/G) : Continuity should exist.

OK or NG

- OK >> Replace BCM if interior lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



EKS0092E

Map Lamp Control Does Not Operate

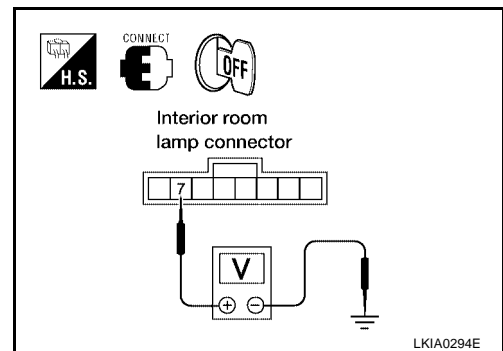
1. CHECK MAP LAMP INPUT

1. Turn ignition switch OFF.
2. Check voltage between map lamp harness connector R14 terminal 7 (R/G) and ground.

7 (R/G) - Ground : Battery voltage should exist.

OK or NG

- OK >> GO TO 2.
- NG >> GO TO 4.



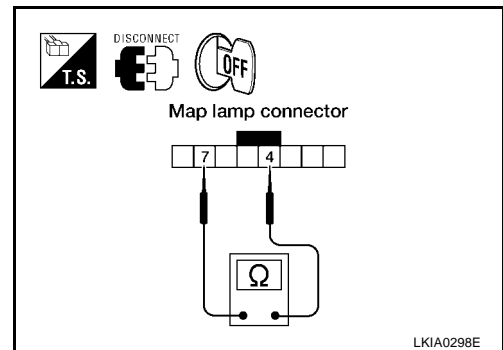
2. CHECK MAP LAMP

1. Disconnect map lamp connector.
2. Check continuity between map lamp terminals.

Map lamp Terminal		Condition	Continuity
4	7	Map lamp switch is ON	Yes
		Map lamp switch is OFF	No

OK or NG

- OK >> GO TO 3.
- NG >> Replace map lamp.



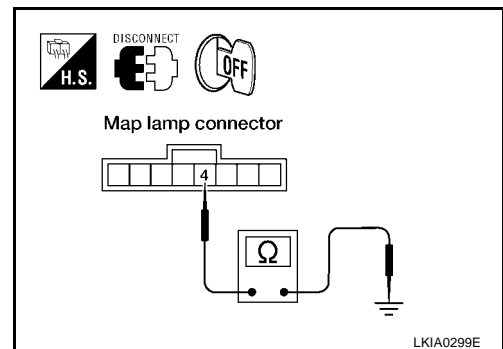
3. CHECK MAP LAMP CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between map lamp harness connector R14 terminal 4 (B) and ground.

4 (B) - Ground : Continuity should exist.

OK or NG

- OK >> Check connector for proper connection. Repair as necessary.
- NG >> Repair harness or connector.



INTERIOR ROOM LAMP

4. CHECK MAP LAMP CIRCUIT

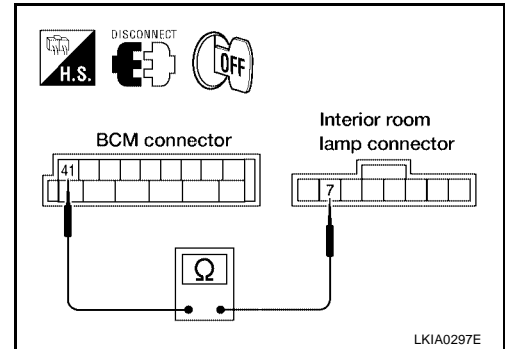
1. Disconnect BCM connector and map lamp connector.
2. Check continuity between BCM harness connector M19 terminal 41 (R/G) and map lamp harness connector R14 terminal 7 (R/G).

41 (R/G) - 7 (R/G) : Continuity should exist.

OK or NG

OK >> Replace BCM if map lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).

NG >> Repair harness or connector.



Personal Lamp Control Does Not Operate

EKS0092F

1. CHECK EACH DOOR SWITCH

Select "BCM" on CONSULT-II. With "INT LAMP" data monitor, make sure switches listed in display item list turn ON-OFF linked with switch operation. Refer to [LT-151, "SWITCH OPERATION"](#) for switches and their function.

OK or NG

OK >> GO TO 2.

NG >> Inspect malfunctioning door switch.

DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
DOOR SW-RR	OFF
DOOR SW-RL	OFF
	RECORD

SKIA0441E

2. CHECK PERSONAL LAMP INPUT

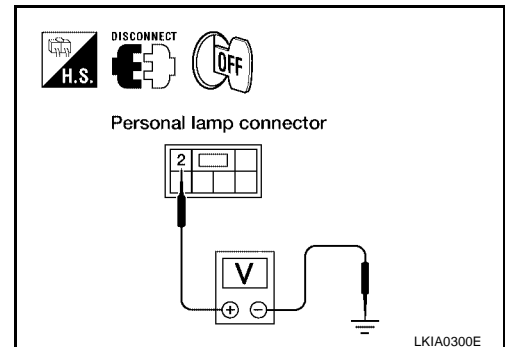
1. Turn ignition switch OFF.
2. Disconnect personal lamp connector.
3. Open the rear door.
4. Check voltage between personal lamp harness connector R13 terminal 2 (R/G) and ground.

2 (R/G) - Ground : Battery voltage should exist.

OK or NG

OK >> GO TO 4.

NG >> GO TO 3.



INTERIOR ROOM LAMP

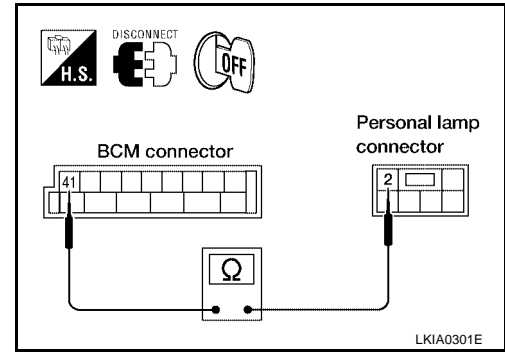
3. CHECK PERSONAL LAMP CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M19 terminal 41 (R/G) and personal lamp harness connector R13 terminal 2 (R/G).

41 (R/G) - 2 (R/G) : Continuity should exist.

OK or NG

- OK >> Replace BCM if personal lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



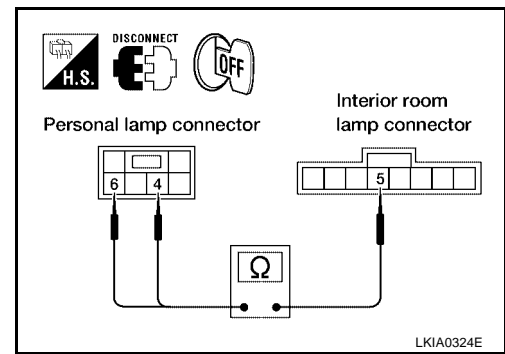
4. CHECK PERSONAL LAMP AND INTERIOR ROOM LAMP CIRCUIT

1. Disconnect interior room lamp connector.
2. Check continuity between personal lamp harness connector R13 terminals 4 (W/B) and 6 (Y/O) and interior room lamp harness connector R14 terminal 5 (Y/V).

4 (W/B), 6 (Y/O) - 5 (Y/V) : Continuity should exist.

OK or NG

- OK >> Replace personal lamp.
- NG >> Repair harness or connector.



Ignition Keyhole Illumination Control Does Not Operate

EKS0092G

1. CHECK EACH SWITCH

Select "BCM" on CONSULT-II. With "INT LAMP" data monitor, make sure switches listed in display item list turn ON-OFF linked with switch operation. Refer to [LT-166, "Display Item List"](#) for switches and their functions.

OK or NG

- OK >> GO TO 2.
- NG >> Inspect malfunctioning switch system.

DATA MONITOR	
MONITOR	
IGN ON SW	ON
KEY ON SW	ON
DOOR SW-DR	ON
DOOR SW-AS	ON
DOOR SW-RR	OFF
DOOR SW-RL	OFF
KEY CYL LK-SW	OFF
KEY CYL UN-SW	OFF
CDL LOCK SW	OFF

WKIA3366E

2. ACTIVE TEST

1. Select "BCM" on CONSULT-II. Select "INT LAMP" on "SELECT TEST ITEM" screen.
2. Select "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Select "IGN ILLUM" on "SELECT TEST ITEM" screen.
4. Select "ON" on "ACTIVE TEST" screen to make sure lamp operates.

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> GO TO 3.

ACTIVE TEST	
IGN ILLUM	ON
	OFF

SKIA3992E

INTERIOR ROOM LAMP

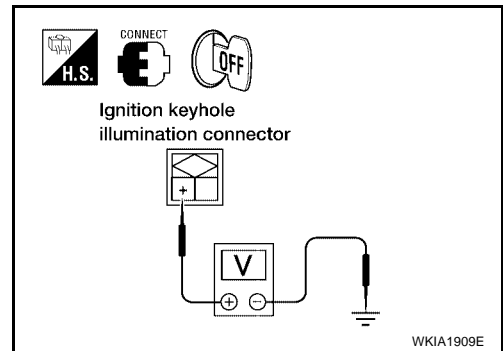
3. CHECK IGNITION KEYHOLE ILLUMINATION INPUT

1. Check voltage between ignition keyhole illumination harness connector M25 terminal + (R/G) and ground.

+ (R/G) - Ground : Battery voltage should exist.

OK or NG

- OK >> GO TO 4.
NG >> GO TO 6.



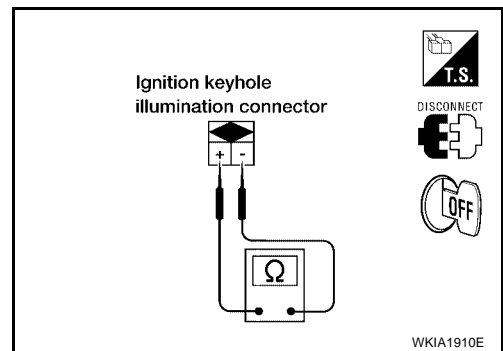
4. CHECK IGNITION KEYHOLE ILLUMINATION BULB

1. Disconnect ignition keyhole illumination connector.
2. Check continuity between ignition keyhole illumination terminals + and -.

+ - - : Continuity should exist.

OK or NG

- OK >> GO TO 5.
NG >> Replace ignition keyhole illumination.



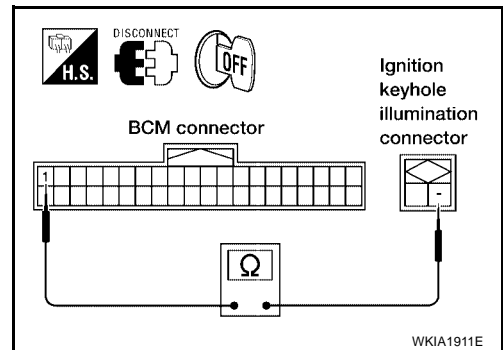
5. CHECK IGNITION KEYHOLE ILLUMINATION CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M18 terminal 1 (Y/G) and ignition keyhole illumination harness connector M25 terminal - (Y/G).

- (Y/G) - 1 (Y/G) : Continuity should exist.

OK or NG

- OK >> Replace BCM if ignition keyhole illumination does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



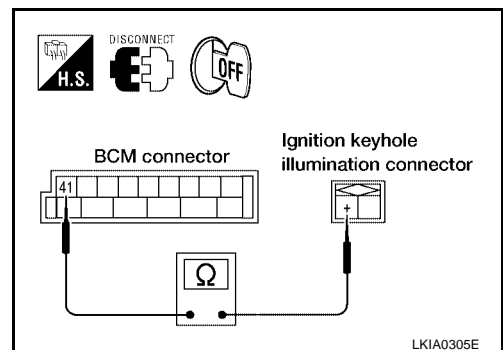
6. CHECK IGNITION KEYHOLE ILLUMINATION CIRCUIT

1. Disconnect BCM connector and ignition keyhole illumination connector.
2. Check continuity between BCM harness connector M19 terminal 41 (R/G) and ignition keyhole illumination harness connector M25 terminal + (R/G).

+ (R/G) - 41 (R/G) : Continuity should exist.

OK or NG

- OK >> Replace BCM if ignition keyhole illumination does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



INTERIOR ROOM LAMP

EKS0092H

All Step Lamps Do Not Operate

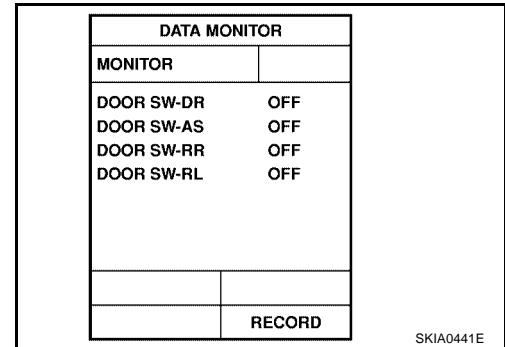
1. CHECK EACH DOOR SWITCH

Select "BCM" on CONSULT-II. With "INT LAMP" data monitor, make sure switches listed below turn ON-OFF linked with switch operation.

Switch name	CONSULT screen
Front door switch LH	DOOR SW-DR
Front door switch RH	DOOR SW-AS
Rear door switch RH	DOOR SW-RR
Rear door switch LH	DOOR SW-RL

OK or NG

- OK >> GO TO 2.
- NG >> Inspect malfunctioning switch system.



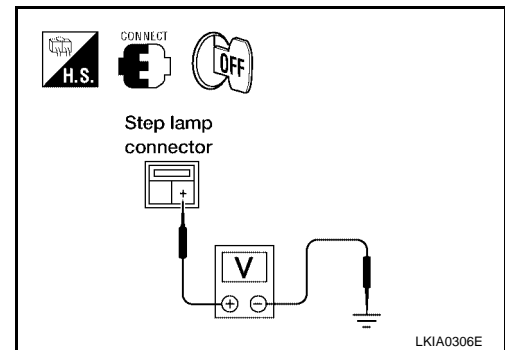
2. CHECK STEP LAMP INPUT

- Turn ignition switch OFF.
- Check voltage between front step lamp LH harness connector D11 terminal + (R/G) and ground.

+ (R/G) - Ground : Battery voltage should exist.

OK or NG

- OK >> GO TO 3.
- NG >> GO TO 4.



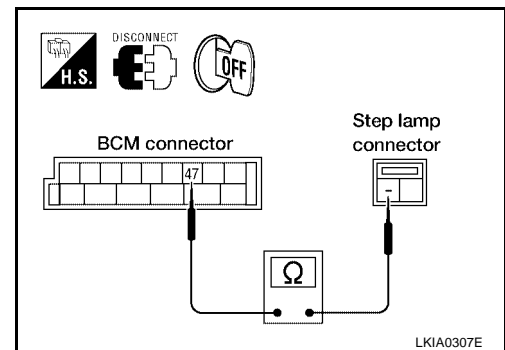
3. CHECK STEP LAMP CIRCUIT

- Disconnect BCM connector and front step lamp LH connector.
- Check continuity between BCM harness connector M19 terminal 47 (R/W) and front step lamp LH harness connector D11 terminal - (R/W).

- (R/W) - 47 (R/W) : Continuity should exist.

OK or NG

- OK >> Replace BCM if step lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



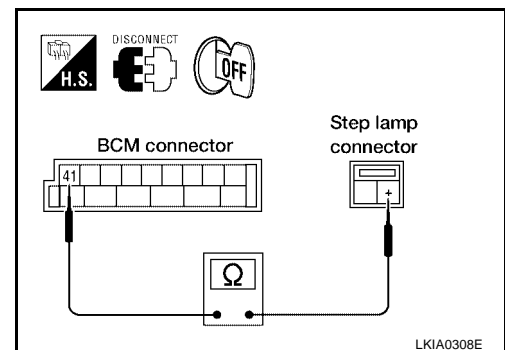
4. CHECK STEP LAMP CIRCUIT

- Disconnect BCM connector and step lamp LH connector.
- Check continuity between BCM harness connector M19 terminal 41 (R/G) and front step lamp LH harness connector D11 terminal + (R/G).

+ (R/G) - 41 (R/G) : Continuity should exist.

OK or NG

- OK >> Replace BCM if step lamp does not work after setting the connector again. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness or connector.



INTERIOR ROOM LAMP

EKS0092I

All Foot Lamps Do Not Operate

1. CHECK INTERIOR ROOM LAMP OPERATION

Check interior room lamp operation.

OK or NG

OK >> GO TO 2.

NG >> Inspect malfunction. Refer to [LT-173, "All Interior Room Lamps Do Not Operate"](#) .

2. CHECK FOOT LAMP POWER SUPPLY

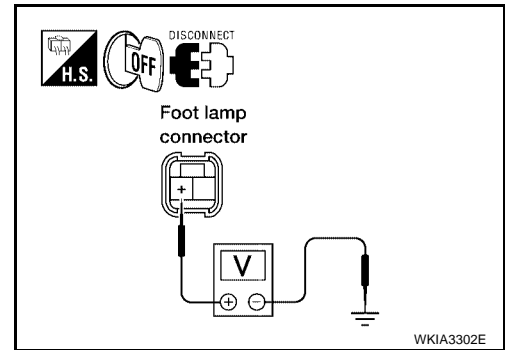
1. Turn ignition switch OFF.
2. Disconnect foot lamp connector.
3. Open door.
4. Check voltage between foot lamp harness connector M99 (LH) or M100 (RH) terminal + (R/G) and ground.

+ (R/G) - Ground : Battery voltage should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.



3. CHECK FOOT LAMP CIRCUIT

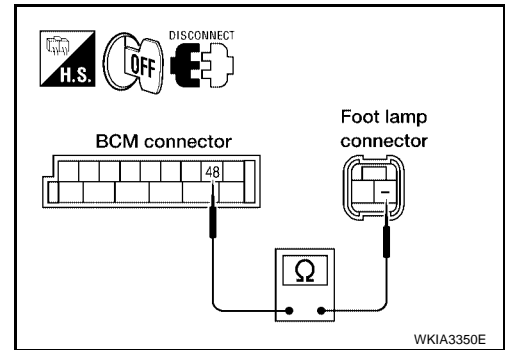
1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M19 terminal 48 (R) and foot lamp harness connector M99 (LH) and M100 (RH) terminal - (R).

- (R) - 48 (R) : Continuity should exist.

OK or NG

OK >> Replace foot lamp.

NG >> Repair harness or connector.



All Interior Room Lamps Do Not Operate

EKS0092J

1. CHECK POWER SUPPLY CIRCUIT

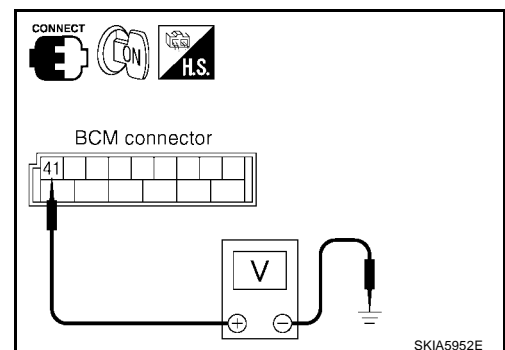
1. All interior room lamps switch are OFF.
2. Turn ignition switch ON.
3. Check voltage between BCM harness connector M19 terminal 41 (R/G) and ground.

41 (R/G) - Ground : Battery voltage should exist.

OK or NG

OK >> Repair harness or connector. In a case of making a short circuit, be sure to disconnect battery negative cable after repairing harness, and then reconnect.

NG >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .



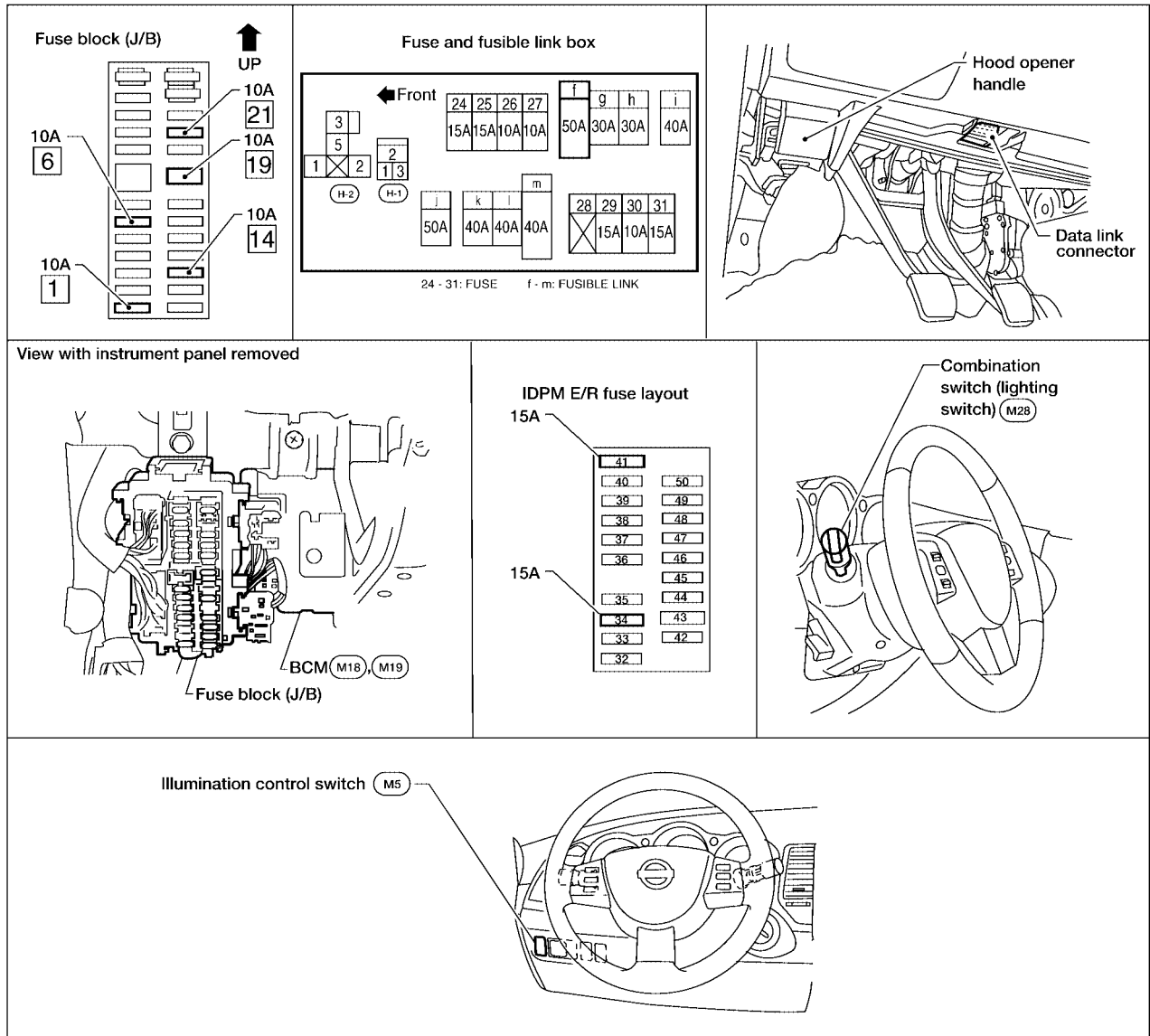
ILLUMINATION

PF2:27545

ILLUMINATION

Component Parts and Harness Connector Location

EKS0092K



WKIA2959E

System Description

EKS0092L

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

Power is supplied at all times

- to ignition relay, located in the IPDM E/R, and
- through 15A fuse (No. 41, located in the IPDM E/R)
- to tail lamp relay, located in the IPDM E/R, and
- through 50A fusible link (letter f, located in the fuse and fusible link box)
- to BCM terminal 55, and
- through 10A fuse [No.21, located in fuse block (J/B)]
- to BCM terminal 42, and

ILLUMINATION

- through 15A fuse (No. 34, located in the IPDM E/R)
- to CPU of the IPDM E/R, and
- through 10A fuse [No.19, located in fuse block (J/B)]
- to combination meter terminal 24, and
- through BCM terminal 54 (with front only power window anti-pinch system)
- to power window and door lock/unlock switch RH terminal 10, and
- through BCM terminal 54 (with front and rear power window anti-pinch system)
- to power window and door lock/unlock switch RH terminal 10
- to rear power window switch (LH and RH) terminal 10, and
- through BCM terminal 53 (with front only power window anti-pinch system)
- to main power window and door lock/unlock switch LH terminal 10
- to rear power window switch (LH and RH) terminal 6, and
- through BCM terminal 53 (with front and rear power window anti-pinch system)
- to main power window and door lock/unlock switch LH terminal 10.

With the ignition switch in the ON or START position, power is supplied

- to ignition relay, located in the IPDM E/R, and
- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38, and
- through 10A fuse [No. 14, located in the fuse block (J/B)]
- to combination meter terminal 23.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 6, located in the fuse block (J/B)]
- to BCM terminal 11.

Ground is supplied

- to BCM terminal 52
- to combination meter terminals 10, 11 and 12
- through grounds M57, M61, and M79, and
- to IPDM E/R terminals 38 and 60
- through grounds E15 and E24.

ILLUMINATION OPERATION BY LIGHTING SWITCH

With the lighting switch in the 1ST or 2ND position (or if the auto light system is activated), the BCM receives input signal requesting the illumination lamps to illuminate. This input signal is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the tail lamp relay which, when energized, directs power

- through IPDM E/R terminal 22
- to illumination control switch terminal 1
- to A/T device terminal + (with A/T)
- to TCS ON/OFF switch terminal 3 (with TCS)
- to VDC ON/OFF switch terminal 3 (with VDC)
- to AV switch terminal 3
- to hazard switch terminal 3
- to NAVI control unit terminal 25 (with NAVI)
- to audio unit terminal 8
- to front heated seat switch (LH and RH) terminal 5 (with front heated seats)
- to heated steering wheel switch terminal 3 (with heated steering wheel)
- to interior room lamp (console box illumination) terminal 2
- to glove box lamp terminal +
- to rear sunshade switch (front and rear) terminal 5 (with rear sunshade)
- to rear heated seat switch (LH and RH) terminal 5 (with rear sunshade)

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ILLUMINATION

- to display control unit terminal 14 (with NAVI)
- to display unit terminal 4 (without NAVI)
- to door mirror remote control switch terminal 10 (early production with memory) or terminal 16 (late production)
- to unified meter and A/C amp. terminal 23.

Illumination control

- through illumination control switch terminal 2
- to A/T device terminal – (with A/T)
- to TCS ON/OFF switch terminal 4 (with TCS)
- to VDC ON/OFF switch terminal 4 (with VDC)
- to AV switch terminal 4
- to hazard switch terminal 4
- to NAVI control unit terminal 30 (with NAVI)
- to audio unit terminal 7
- to front heated seat switch (LH and RH) terminal 6 (with front heated seats)
- to heated steering wheel switch terminal 4 (with heated steering wheel)
- to interior room lamp (console box illumination) terminal 3
- to rear sunshade switch (front and rear) terminal 6 (with rear sunshade)
- to rear heated seat switch (LH and RH) terminal 6 (with rear sunshade)
- to door mirror remote control switch terminal 11 (early production with memory) or terminal 15 (late production)
- to unified meter and A/C amp. terminal 31.

Ground is supplied

- to illumination control switch terminal 3
- to glove box lamp terminal –
- to main power window and door lock/unlock switch LH terminal 17
- to power window and door lock/unlock switch RH terminal 11
- through grounds M57, M61 and M79, and
- to rear power window switch LH terminal 7 (with front only power window anti-pinch system) or terminal 11 (with front and rear power window anti-pinch system)
- through grounds B7 and B19, and
- to rear power window switch RH terminal 7 (with front only power window anti-pinch system) or terminal 11 (with front and rear power window anti-pinch system)
- through grounds B117 and B132.

With power and ground supplied, illumination lamps illuminate.

EXTERIOR LAMP BATTERY SAVER CONTROL

When the combination switch (lighting switch) is in the 1ST or 2ND position (or if auto light system is activated) and the ignition switch is turned from ON or ACC to OFF, the battery saver control function is activated.

Under this condition, the illumination lamps remain illuminated for 5 minutes, then the illumination lamps are turned off.

When the lighting switch is turned from OFF to 1ST or 2ND position (or if auto light system is activated) after illumination lamps are turned off by the battery saver control, the illumination lamps illuminate again.

Exterior lamp battery saver control mode can be changed by the function setting of CONSULT-II.

CAN Communication System Description

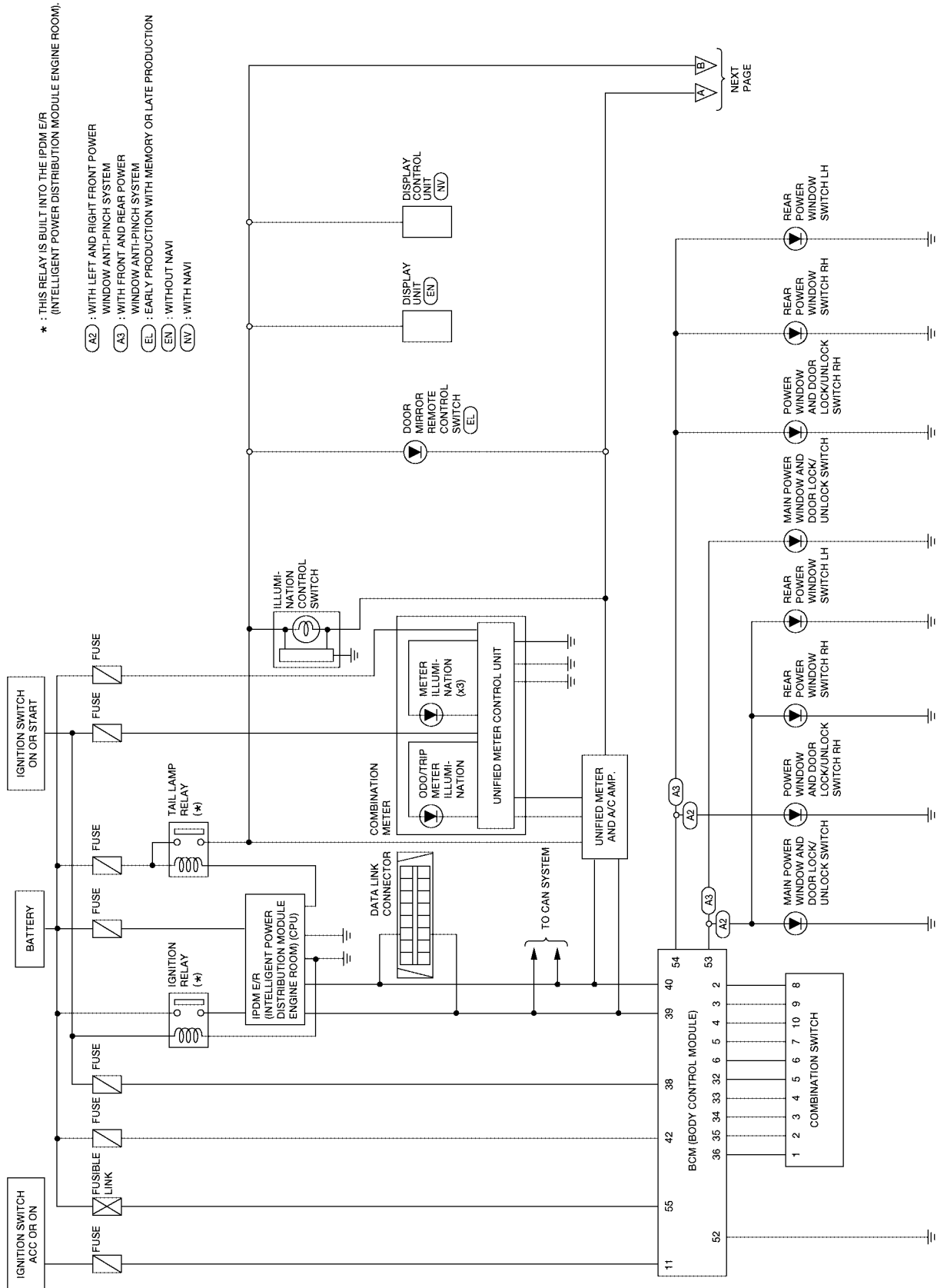
EKS0092M

Refer to [LAN-7, "CAN COMMUNICATION"](#) .

ILLUMINATION

EKS0092N

Schematic



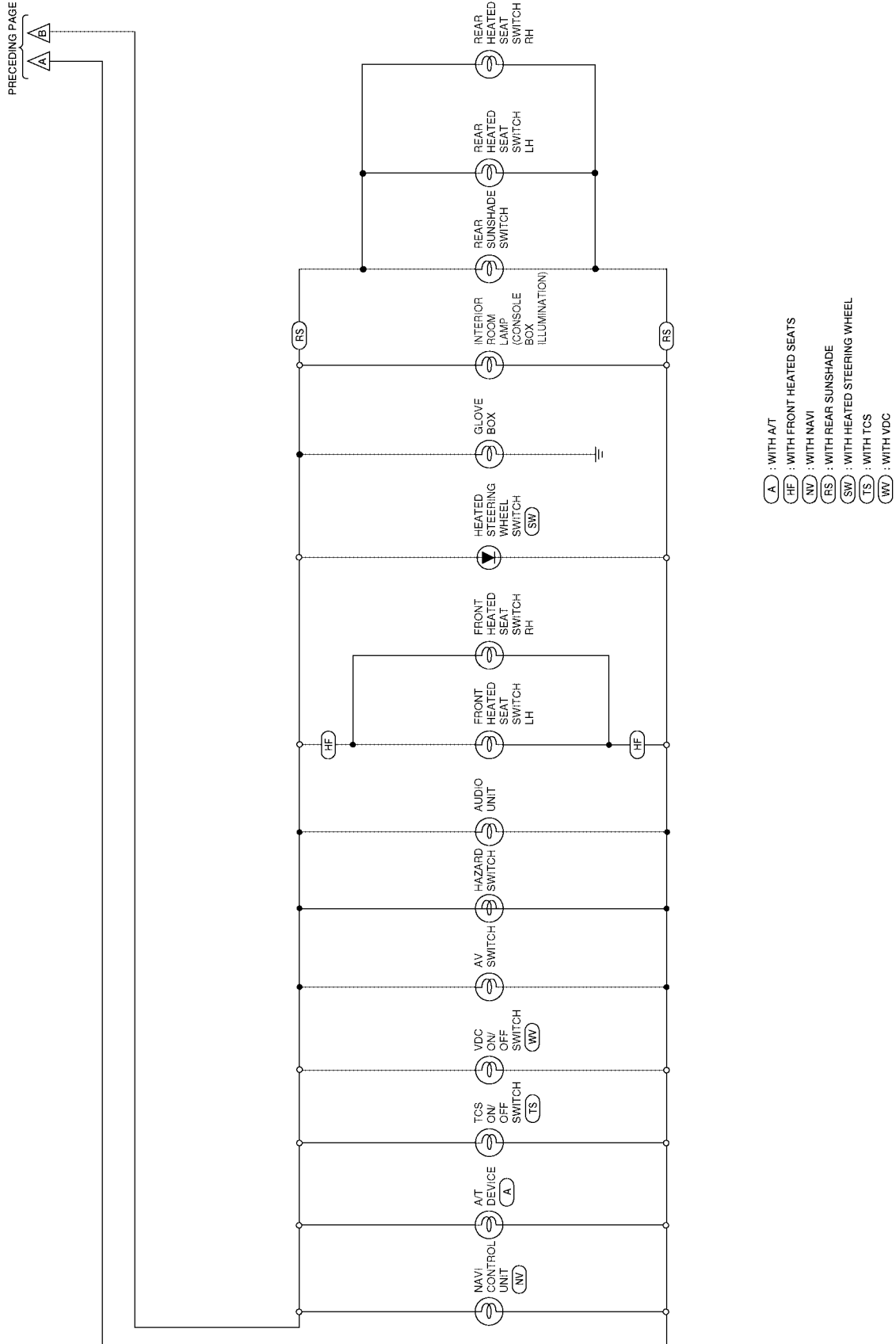
* : THIS RELAY IS BUILT INTO THE IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM).

- (A2) : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
- (A3) : WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM
- (EL) : EARLY PRODUCTION WITH MEMORY OR LATE PRODUCTION
- (EN) : WITHOUT NAVI
- (NV) : WITH NAVI

WKWA3241E

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ILLUMINATION



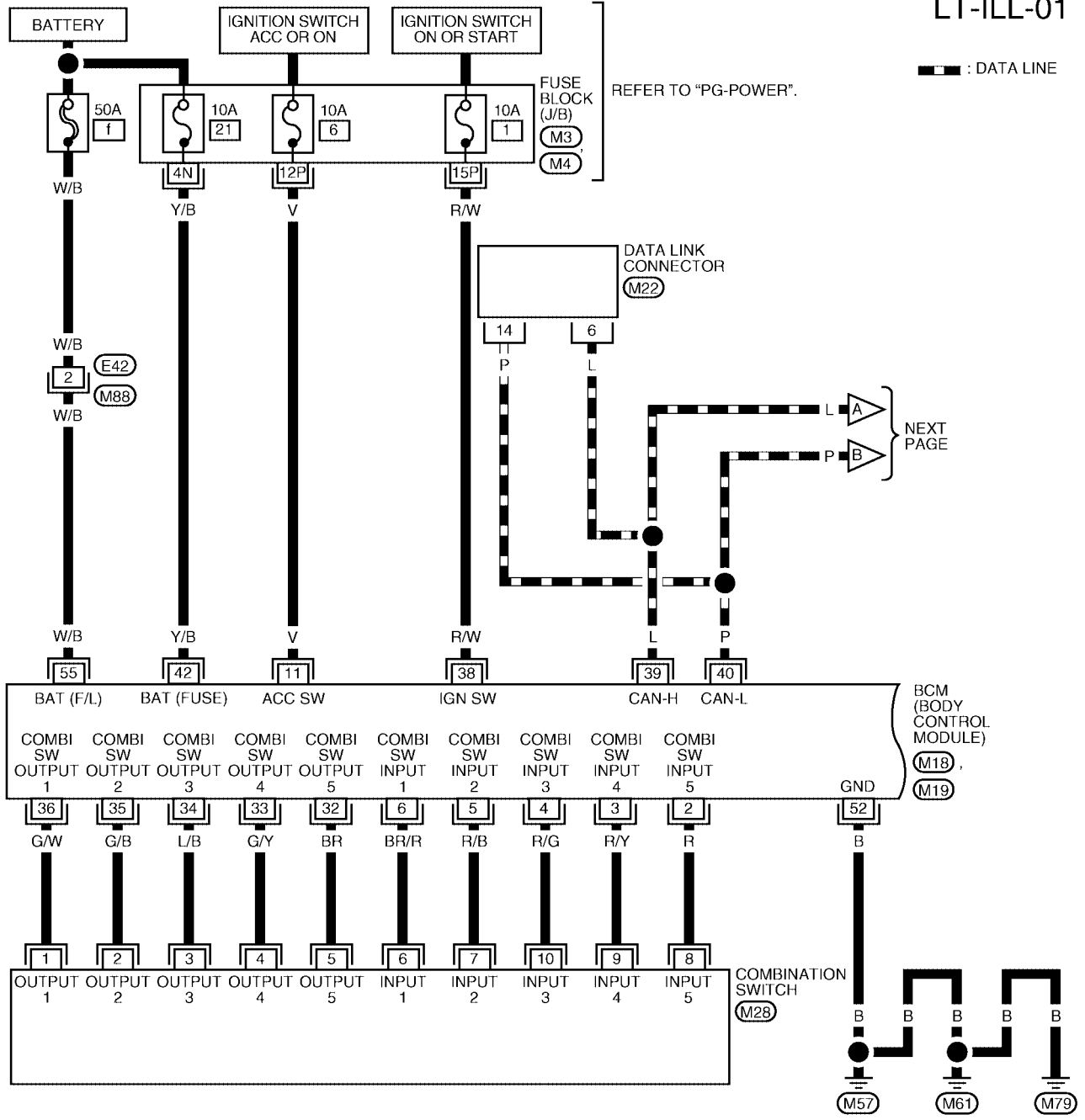
ILLUMINATION

Wiring Diagram — ILL —

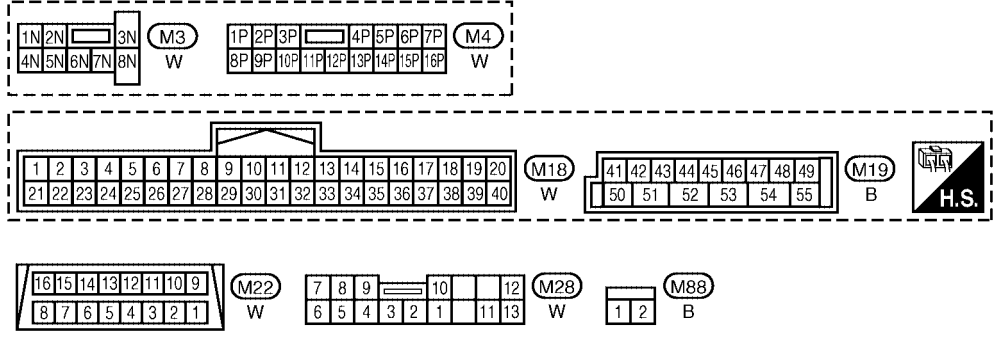
EKS00920

LT-ILL-01

— : DATA LINE



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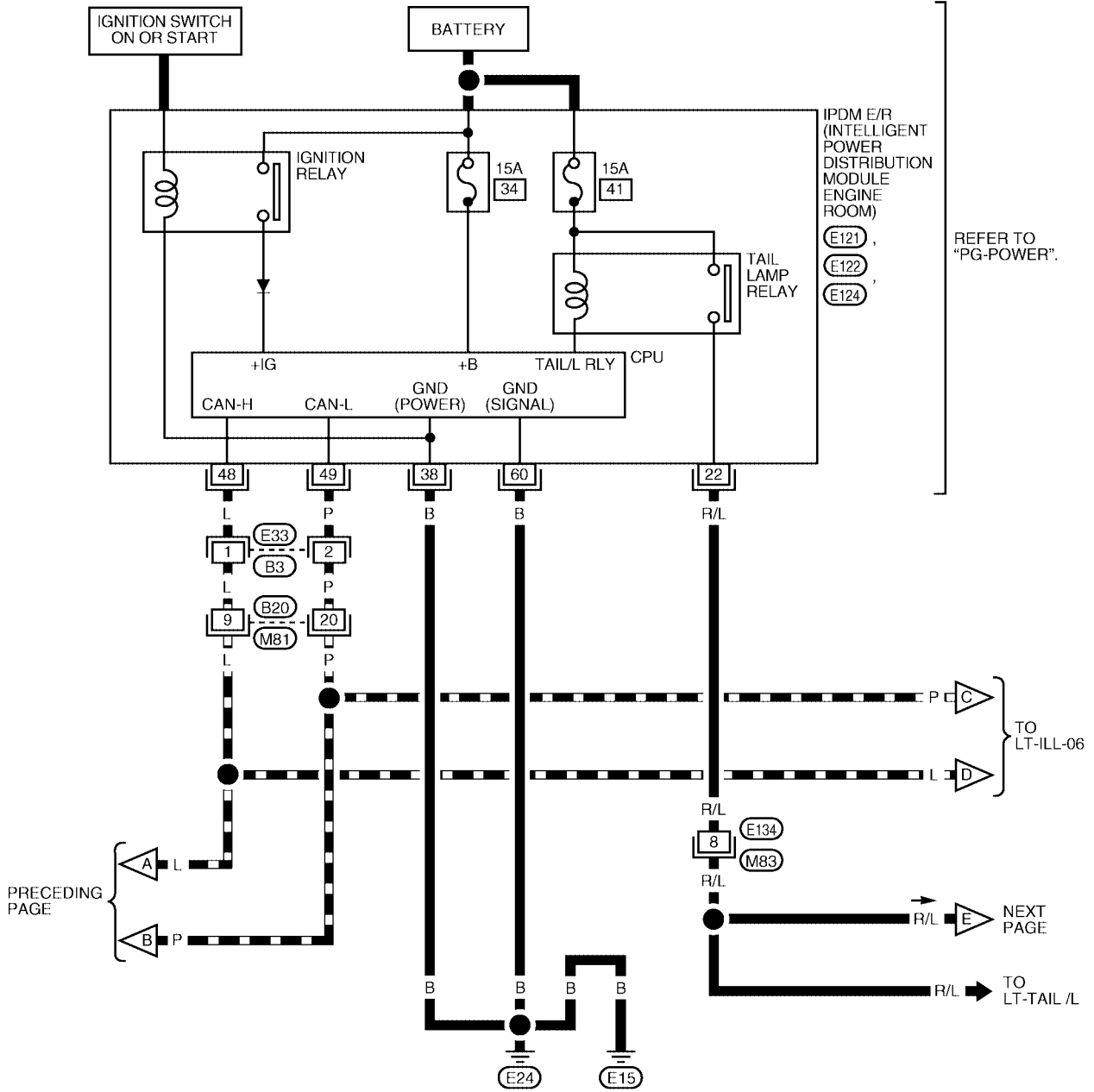


WKWA1757E

ILLUMINATION

LT-ILL-02

— : DATA LINE



1	2	3	4	5	6	7	8	9	M81	M83	1	2	E33		
10	11	12	13	14	15	16	17	18	19	20	GR	W	3	4	W

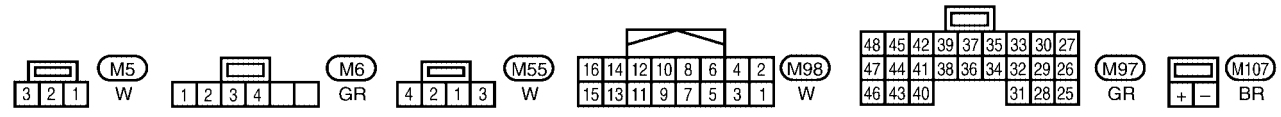
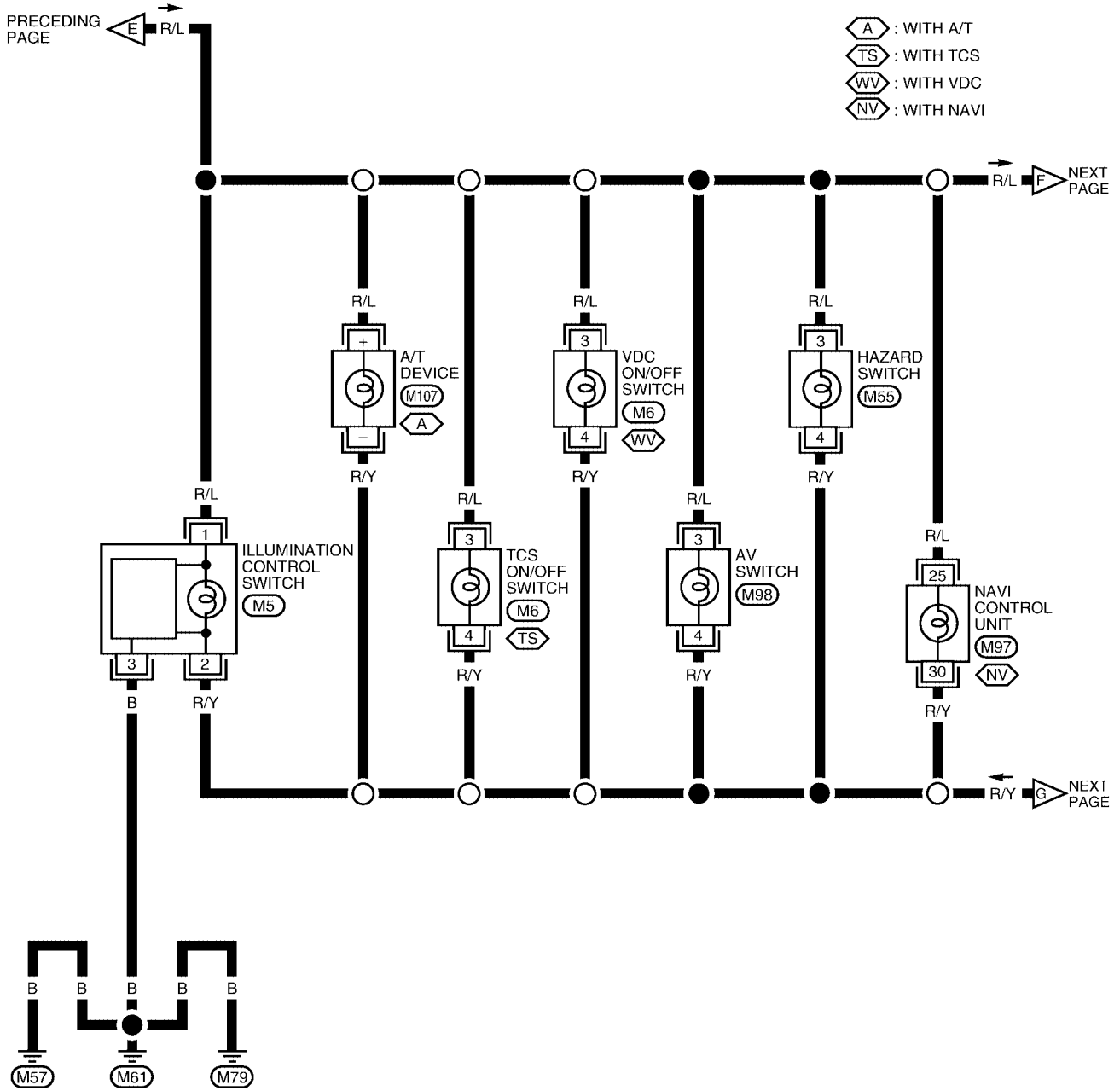
45	46	47	48	49	50	51	52	E121	17	18	19	20	21	22	23	E122	33	34	35	36	37	E124			
53	54	55	56	57	58	59	60	W	24	25	26	27	28	29	30	31	GR	38	39	40	41	42	43	44	W

WKWA1758E

ILLUMINATION

LT-ILL-03

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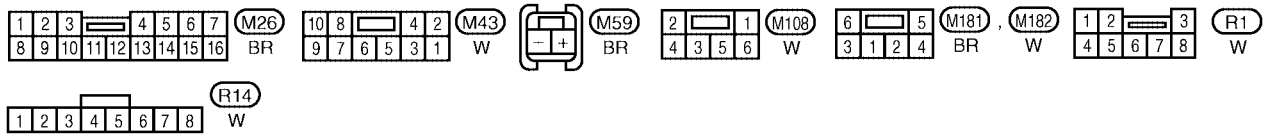
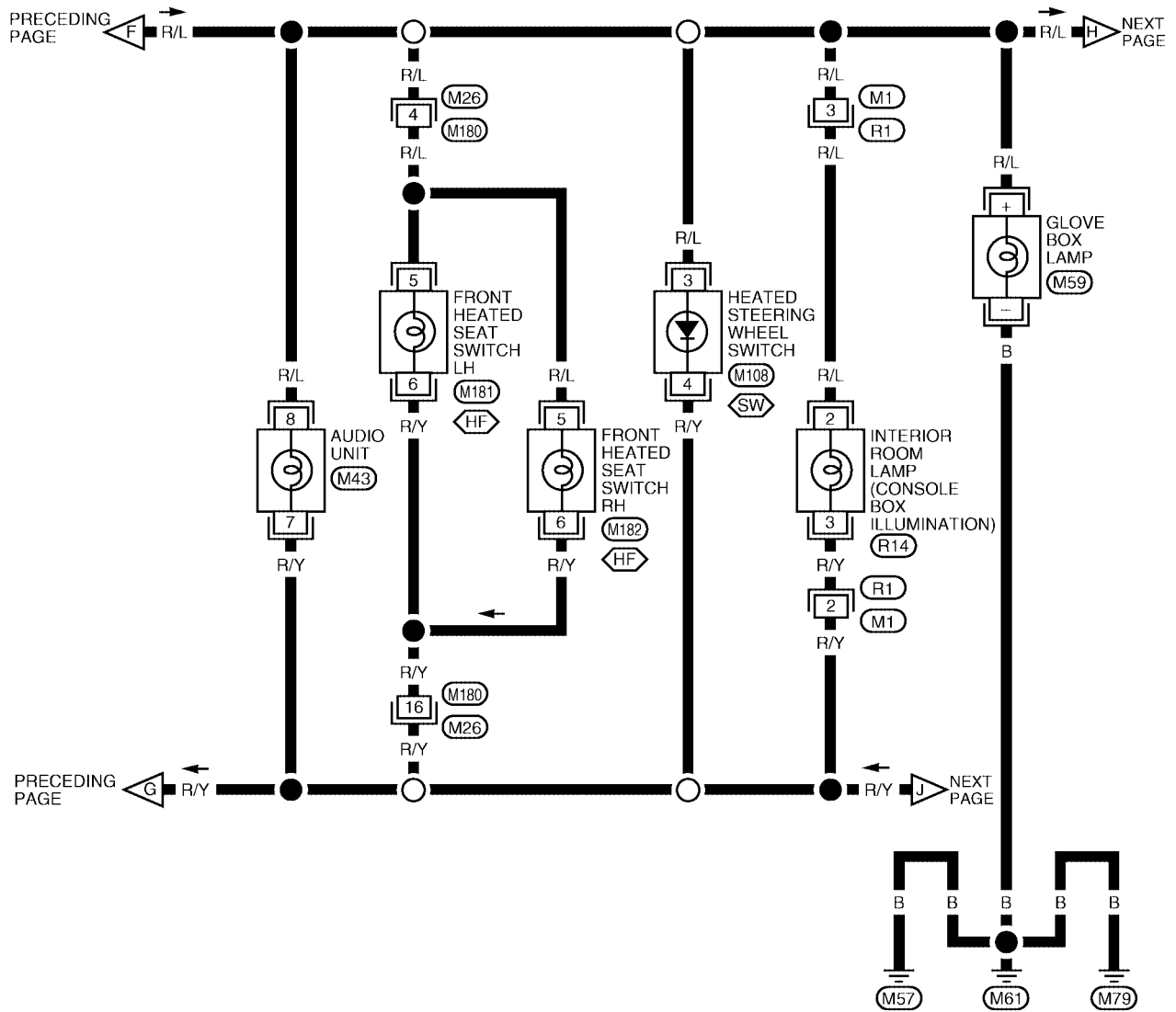


WKWA3242E

ILLUMINATION

LT-ILL-04

HF : WITH FRONT HEATED SEATS
 SW : WITH HEATED STEERING WHEEL

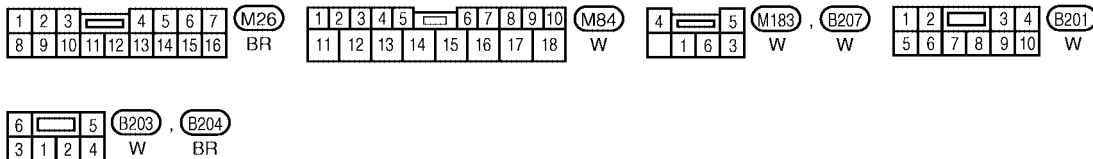
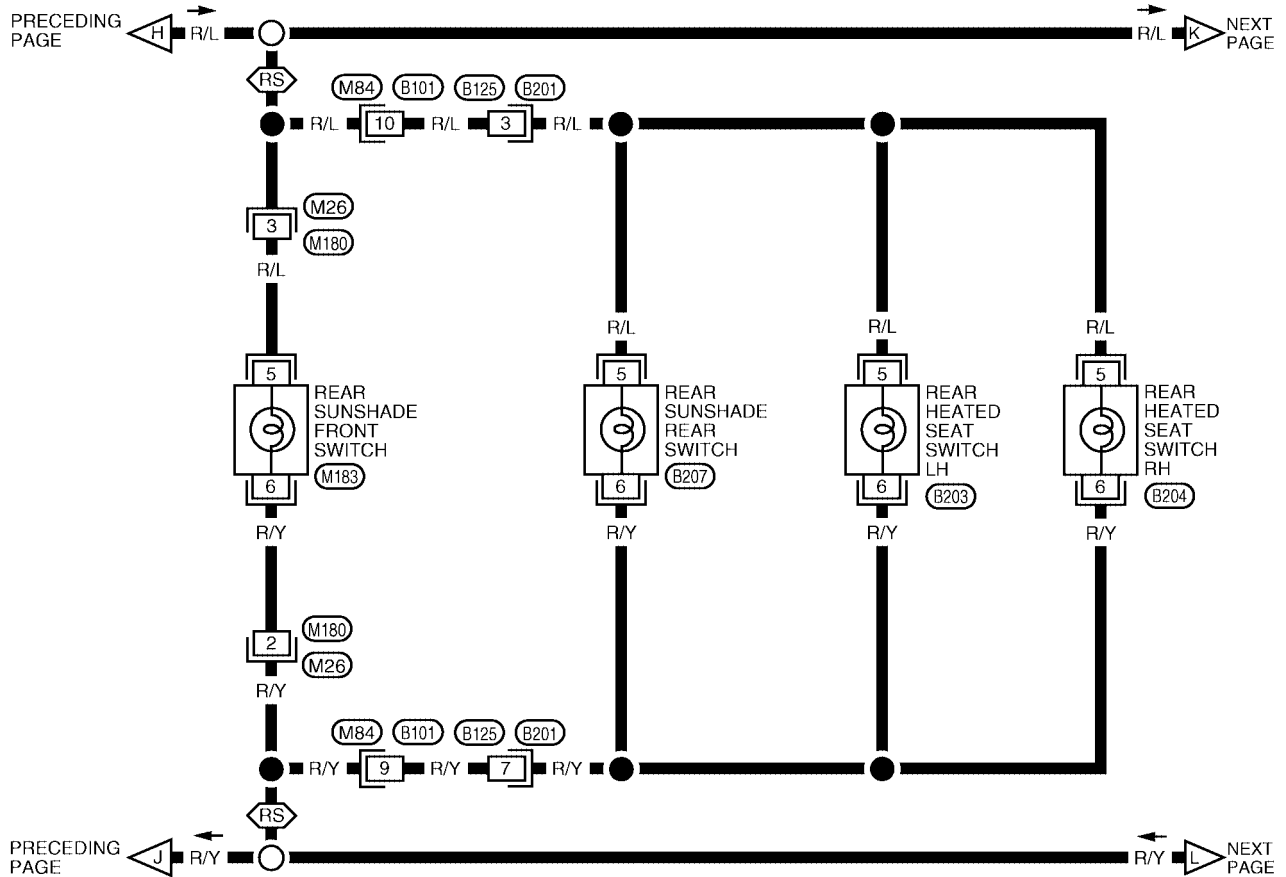


WKWA3243E

ILLUMINATION

LT-ILL-05

⬠RS⬠ : WITH REAR SUNSHADE

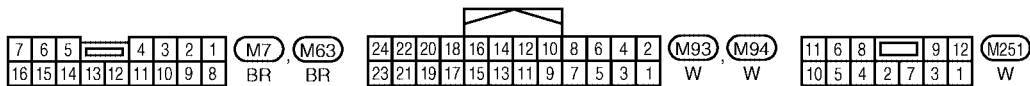
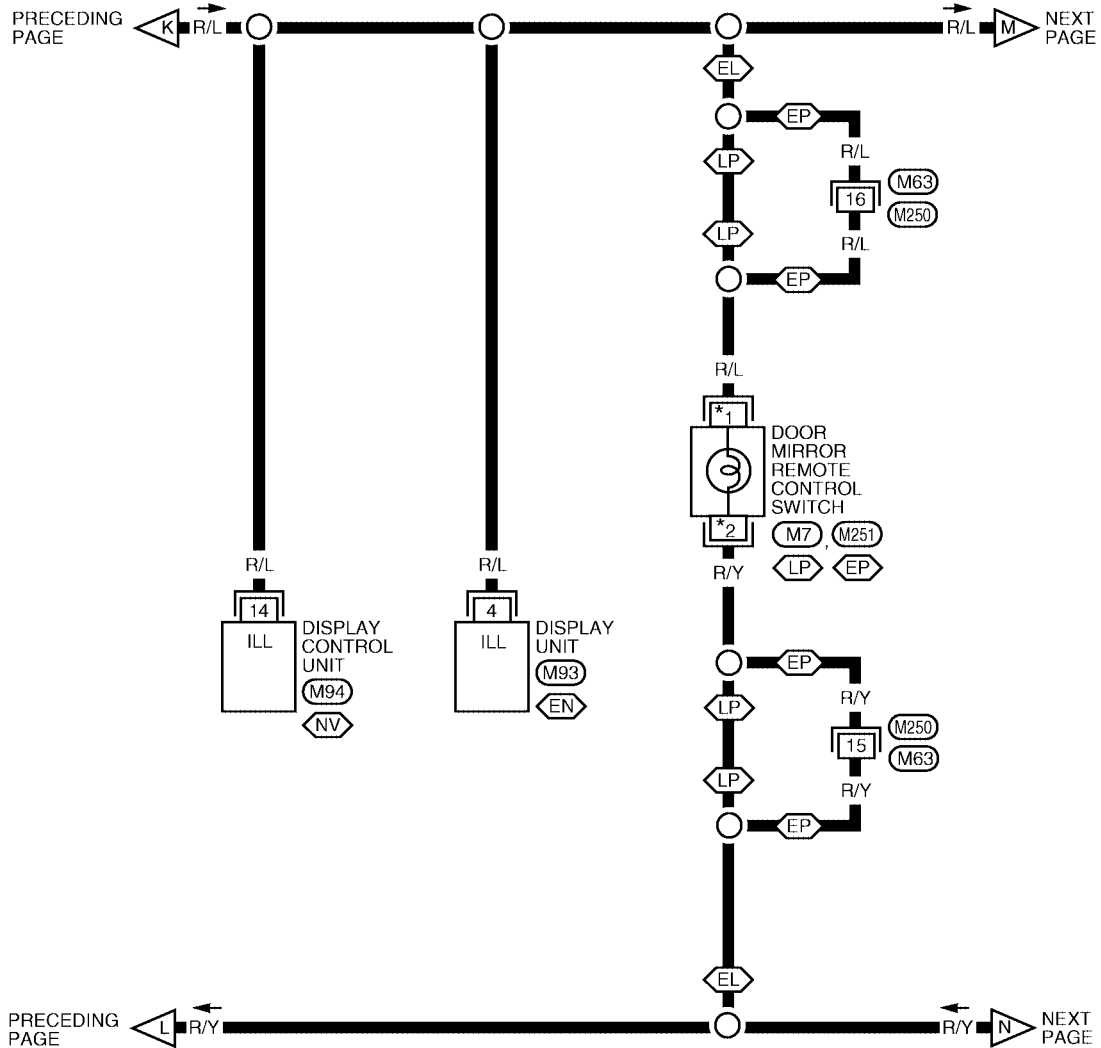


WKWA3244E

ILLUMINATION

LT-ILL-06

- ⬡ EL : EARLY PRODUCTION WITH MEMORY OR LATE PRODUCTION
- ⬡ EN : WITHOUT NAVI
- ⬡ EP : EARLY PRODUCTION
- ⬡ LP : LATE PRODUCTION
- ⬡ NV : WITH NAVI
- *₁ ⬡ EP : 10
- ⬡ LP : 16
- *₂ ⬡ EP : 11
- ⬡ LP : 15

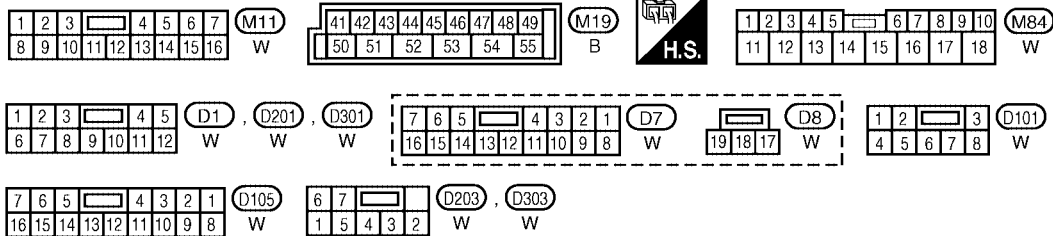
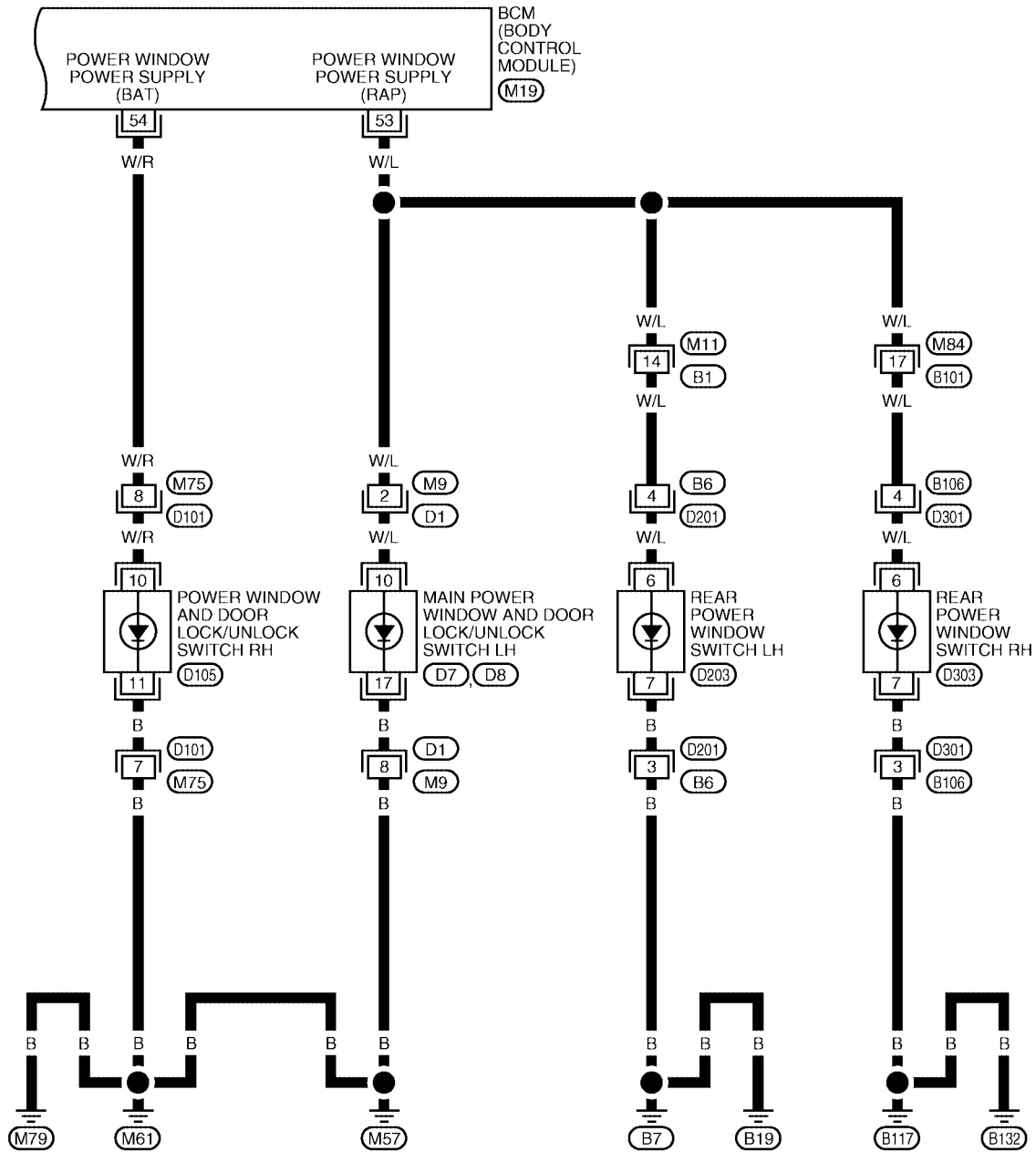


WKWA3256E

ILLUMINATION

WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM

LT-ILL-08

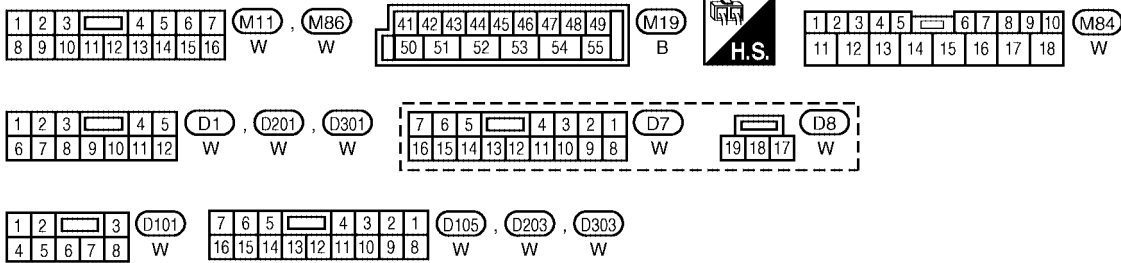
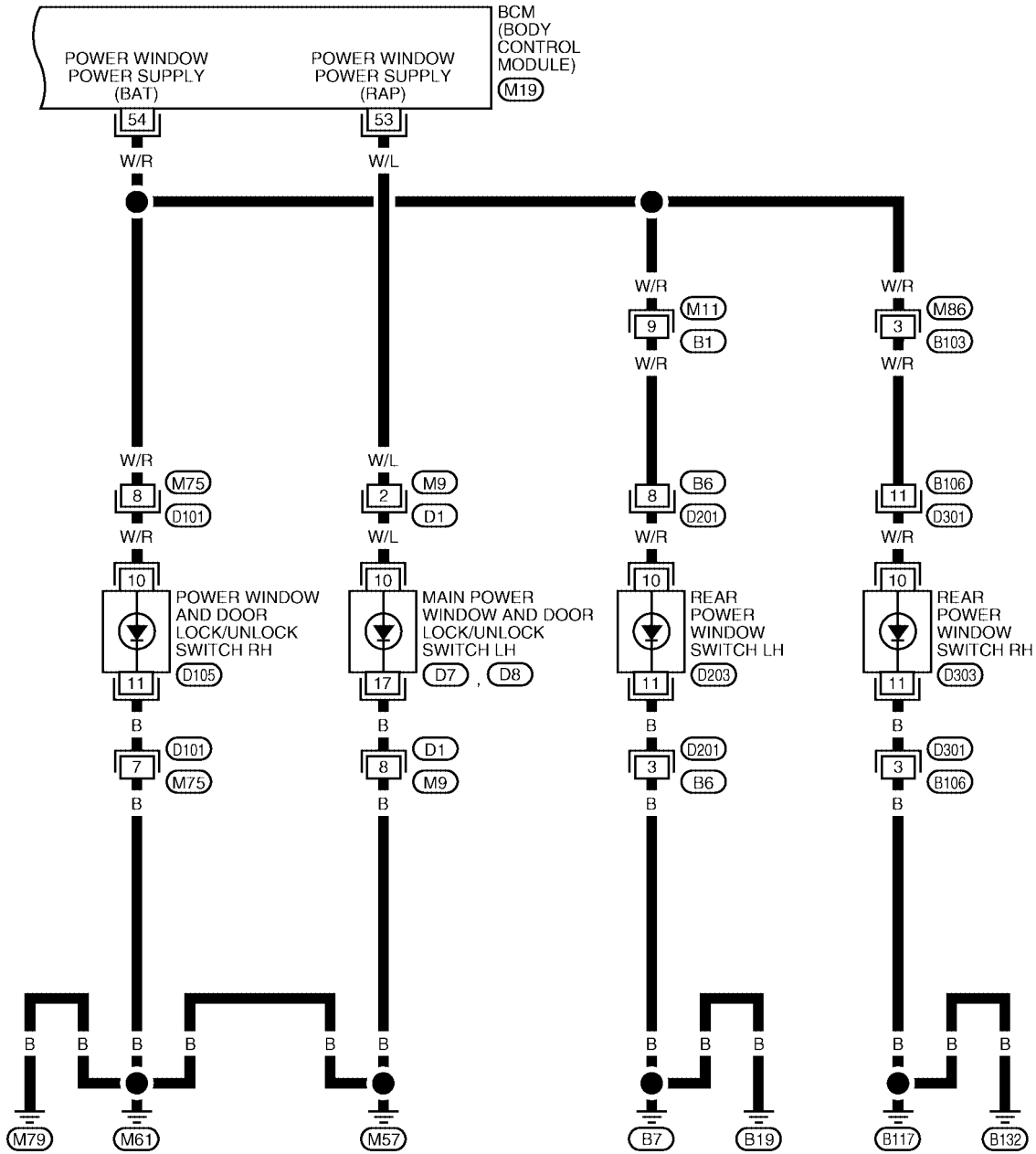


WKWA3258E

ILLUMINATION

WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM

LT-ILL-09



WKWA3259E

ILLUMINATION

Removal and Installation of Illumination Control Switch

EKS0092P

REMOVAL

1. Remove lower driver instrument panel. Refer to [IP-15, "Lower Driver Instrument Panel"](#) .
2. Press tabs and carefully push illumination control switch out of lower driver instrument panel.

INSTALLATION

Installation is in the reverse order of removal.

BULB SPECIFICATIONS

BULB SPECIFICATIONS

PF2:26297

Headlamp

EKS0092Q

Item	Wattage (W)*
High/Low (Halogen type)	55 (9012)
High/Low (Xenon type)	35 (D2S)

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

Exterior Lamp

EKS0092R

Item	Wattage (W)*	
Front combination lamp	Front Park/Turn signal lamp	27/8 (amber)
	Daytime light (for Canada)	27
	Front fog lamp	55
Rear combination lamp	Tail/Stop-Turn lamp	27/5
	Rear side marker lamp	5
Cornering lamp	27	
Back-up lamp	13	
License plate lamp	5	
High-mounted stop lamp	5	

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

Interior Lamp/Illumination

EKS0092S

Item	Wattage (W)*
Front personal/map lamp	3.4
Rear personal lamp	8
Trunk room lamp	3.4
Step lamp	3.8
Foot lamp	3.4
Glove box lamp	3.4
A/T device illumination lamp	3.4
Vanity mirror lamp	2.1
Ignition keyhole illumination	0.74
Console box illumination lamp	3.8
Rear console box lamp	5

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

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BULB SPECIFICATIONS
