

**SECTION** **LT**  
**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”

AKS004D3

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.

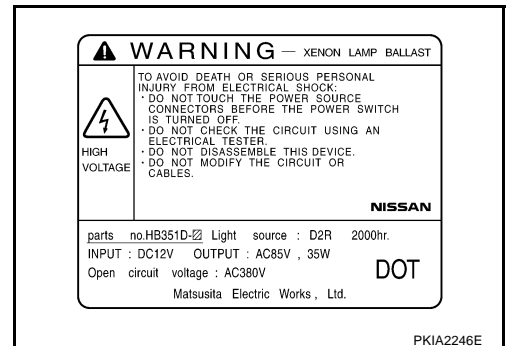
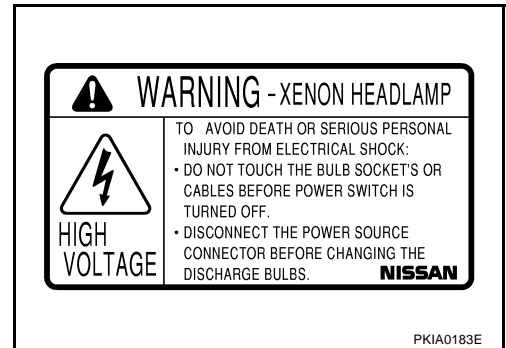
#### WARNING:

- 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

AKS002EU

- 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 long period of time can deteriorate performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjusting screw only in the tightening direction. (If it is necessary to turn the screw in loosening direction, first fully loosen the screw, and then turn it in tightening direction.)
- Do not use organic solvent (paint thinner or gasoline) to clean lamps and to remove old sealant.



# PRECAUTIONS

## Wiring Diagrams and Trouble Diagnosis

AKS002EV

When you read wiring diagrams, refer to the following:

- Refer to [GI-14, "How to Read Wiring Diagrams"](#) in GI section
- Refer to [PG-2, "POWER SUPPLY ROUTING"](#) for power distribution circuit in PG section

When you perform trouble diagnosis, refer to the following:

- Refer to [GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#) [GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#) in GI section
- Refer to [GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident"](#) in GI section

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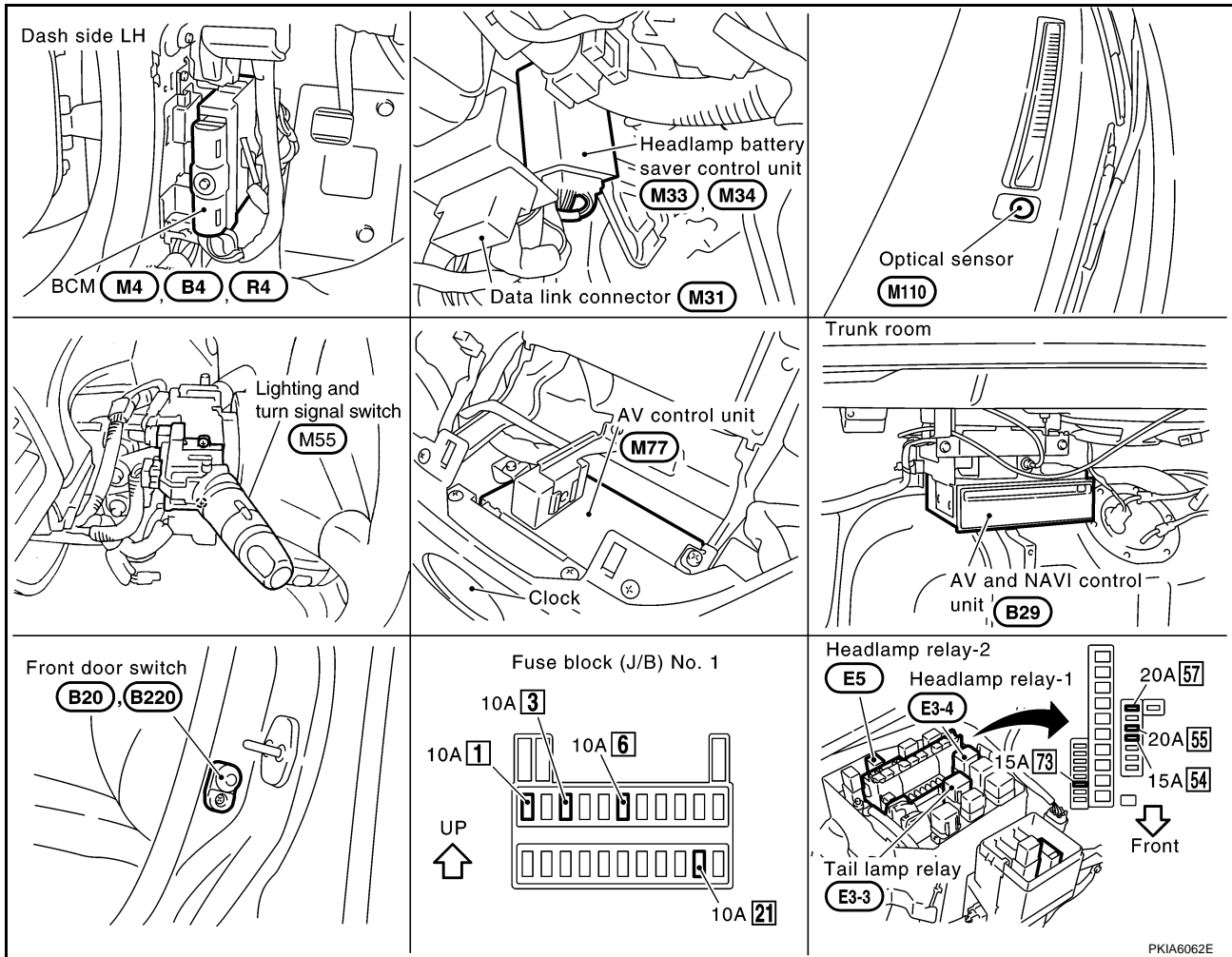
# HEADLAMP (FOR USA)

## HEADLAMP (FOR USA)

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### Component Parts and Harness Connector Location

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PKIA6062E

## System Description

AKS002EX

The headlamp operation is controlled by the lighting switch which is built into the spiral cable and headlamp battery saver control unit. And the headlamp battery saver system is controlled by the headlamp battery saver control unit and BCM.

## OUTLINE

Power is supplied at all times

- to headlamp relay-1 terminal 2,
- to headlamp relay-1 terminal 3
- through 20A fuse [No. 57, located in fuse, fusible link and relay block (J/B)],
- to headlamp relay-1 terminal 7
- through 20A fuse [No. 55, located in fuse, fusible link and relay block (J/B)],
- to headlamp relay-2 terminals 1 and 3
- through 15A fuse [No. 73, located in fuse, fusible link and relay block (J/B)],
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 6, located in fuse block (J/B) No. 1], and
- to BCM terminal 105
- through 10A fuse [No. 3, located in fuse block (J/B) No. 1].

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

- to headlamp battery saver control unit terminal 1

# HEADLAMP (FOR USA)

- to BCM terminal 68
- through 10A fuse [No. 1, located in fuse block (J/B) No. 1].

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

- to BCM terminal 60
- through 10A fuse [No. 21, located in fuse block (J/B) No. 1].

Ground is supplied

- to headlamp battery saver control unit terminals 4 and 11
- through grounds M25 and M115, and
- to BCM terminals 56 and 113
- through grounds M24 and M114.

## Power Supply to Low Beam and High Beam

When lighting switch is in 2ND or PASS position, ground is supplied

- to headlamp relay-1 terminal 1 and headlamp relay-2 terminal 2 from headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 3 and 9
- through lighting switch terminals 12 and 8
- through grounds M25 and M115.

Headlamp relays are energized and then power is supplied to headlamps.

## Low Beam Operation

When lighting switch is turned to the 2ND position and placed in LOW position, power is supplied

- from headlamp relay-1 terminals 5 and 6
- to headlamp LH and RH terminals 3.

Ground is supplied

- to headlamp LH and RH terminals 4
- through grounds E24 and E42.

With power and ground supplied, low beam headlamps illuminate.

## High Beam Operation/Flash-to-Pass Operation

When lighting switch is turned to the 2ND position and placed in HIGH position or PASS position, power is supplied

- from headlamp relay-2 terminal 5
- to headlamp LH and RH terminals 1
- to combination meter terminal 9 for the HIGH BEAM indicator.

Ground is supplied

- to headlamp LH terminal 2
- to combination meter terminal 10 for the HIGH BEAM indicator
- through lighting switch terminals 9 and 8
- through grounds M25 and M115,
- to headlamp RH terminal 2
- through lighting switch terminals 6 and 5
- through grounds M25 and M115.

With power and ground supplied, the high beams headlamps and the HIGH BEAM indicator illuminate.

### NOTE:

**The lamp will be force to turn off when the driver door is opened with the ignition switch in OFF or ACC position. (Except when lighting switch is "AUTO" position)**

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# HEADLAMP (FOR USA)

## BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from BCM terminal 135.

After counting 45 seconds by the RAP signal from the BCM to headlamp battery saver control unit, the ground supply to both terminal 1 of headlamp relay-1 and terminal 2 of headlamp relay-2 from headlamp battery saver control unit terminals 2 and 8 is terminated.

Then the headlamps are turned off.

The headlamps are turned off when front door (driver or passenger side) is opened even if 45 seconds have not passed after ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated.

When the lighting switch is turned from OFF to 2ND after headlamps are turned to OFF by the battery saver control,

ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11
- to headlamp relay-1 terminal 1 and headlamp relay-2 terminal 2 from headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 3 and 9, and
- through lighting switch terminal 12.

Then headlamps illuminate again.

## AUTO LIGHT OPERATION

The auto light control system has an optical sensor inside it that detects outside brightness.

When the lighting switch is in AUTO position, it automatically turns on/off the parking (clearance) 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-19, "SETTING CHANGE FUNCTION FOR AUTO LIGHT SYSTEM"](#).

When lighting switch is in "AUTO" position,

ground is supplied

- to BCM terminal 14
- from lighting switch terminal 42.

When ignition switch is turn to "ON" or "START" position and

Outside brightness is darker than prescribed level,

ground is supplied

- to headlamp relay-1 terminal 1
- to headlamp relay-2 terminal 2
- through headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 4, 11, and
- to tail lamp relay terminal 1
- through headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 4 and 11.

Then headlamp relay-1, 2 and tail lamp relay are energized, headlamps (low or high) and tail lamps are illuminate according to switch position.

## Shut Off Delay

When the lighting switch is in "AUTO" position and the ignition switch is turned from ON to OFF while the auto light system is activated and the headlamps are illuminated, the shut off delay feature is activated for 45 seconds. Headlamps lighting time can be adjusted from about 0 to 3 minutes. (This function is not applicable to the tail lamps.)

Auto light shut off delay timer can be adjusted in seven steps. For the details of the setting, refer to [LT-19, "SETTING CHANGE FUNCTION FOR AUTO LIGHT SYSTEM"](#).

## VEHICLE SECURITY SYSTEM

The vehicle security system will flash the high beams if the system is triggered. Refer to [BL-126, "VEHICLE SECURITY \(THEFT WARNING\) SYSTEM"](#).



# HEADLAMP (FOR USA)

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## XENON HEADLAMP

Xenon type headlamp is adopted to the low beam headlamps. Xenon bulbs do not use a filament. Instead, they produce light when a high voltage current is passed between two tungsten electrodes through a mixture of xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic control of the power supply gives the headlamps stable quality and tone color.

Followings are some of the many advantages of the xenon type headlamp.

- The light produced by the headlamps is white color approximating 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 the human eye is most sensitive, which 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.

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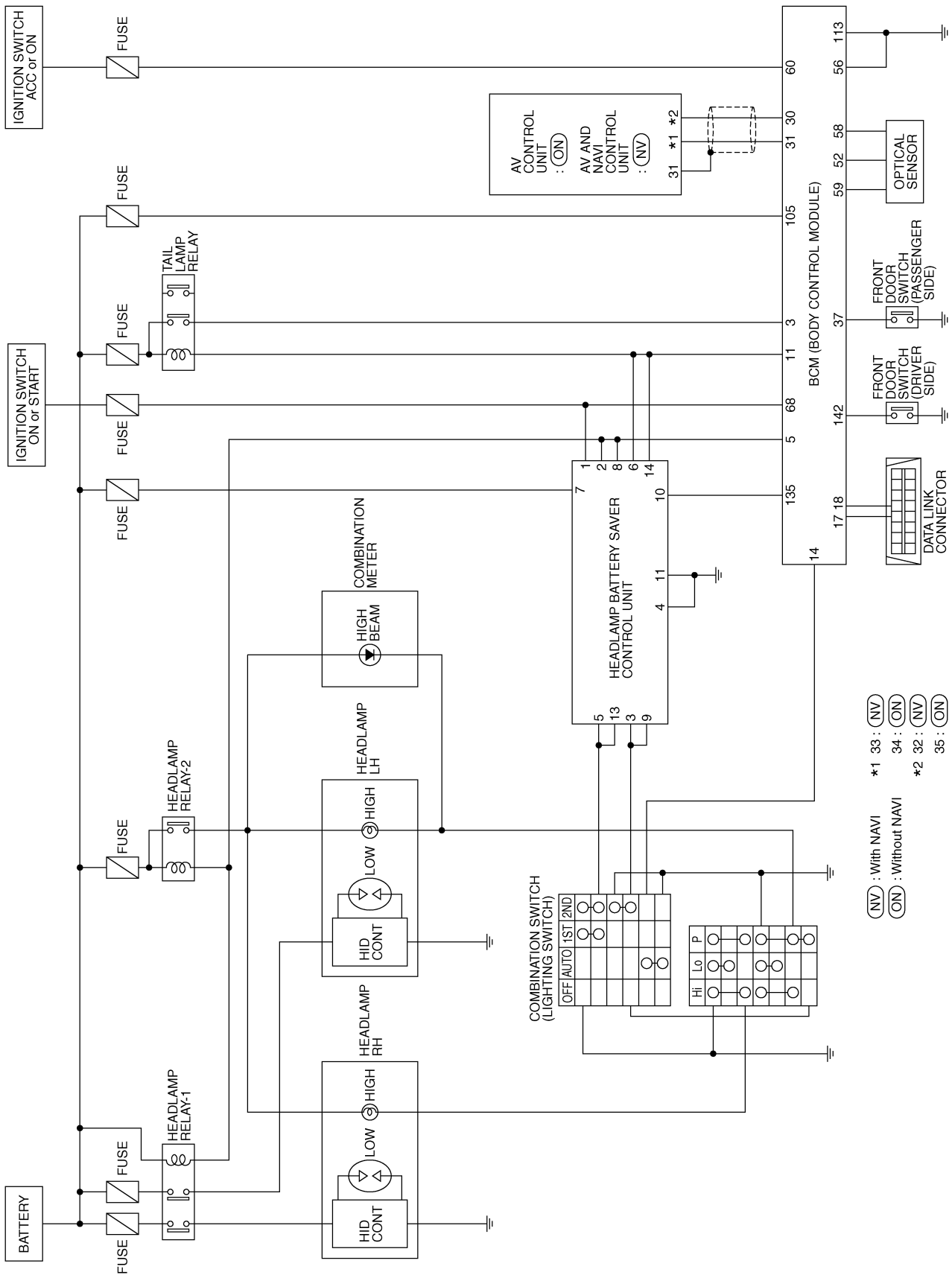
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# HEADLAMP (FOR USA)

## Schematic

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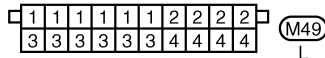
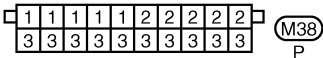
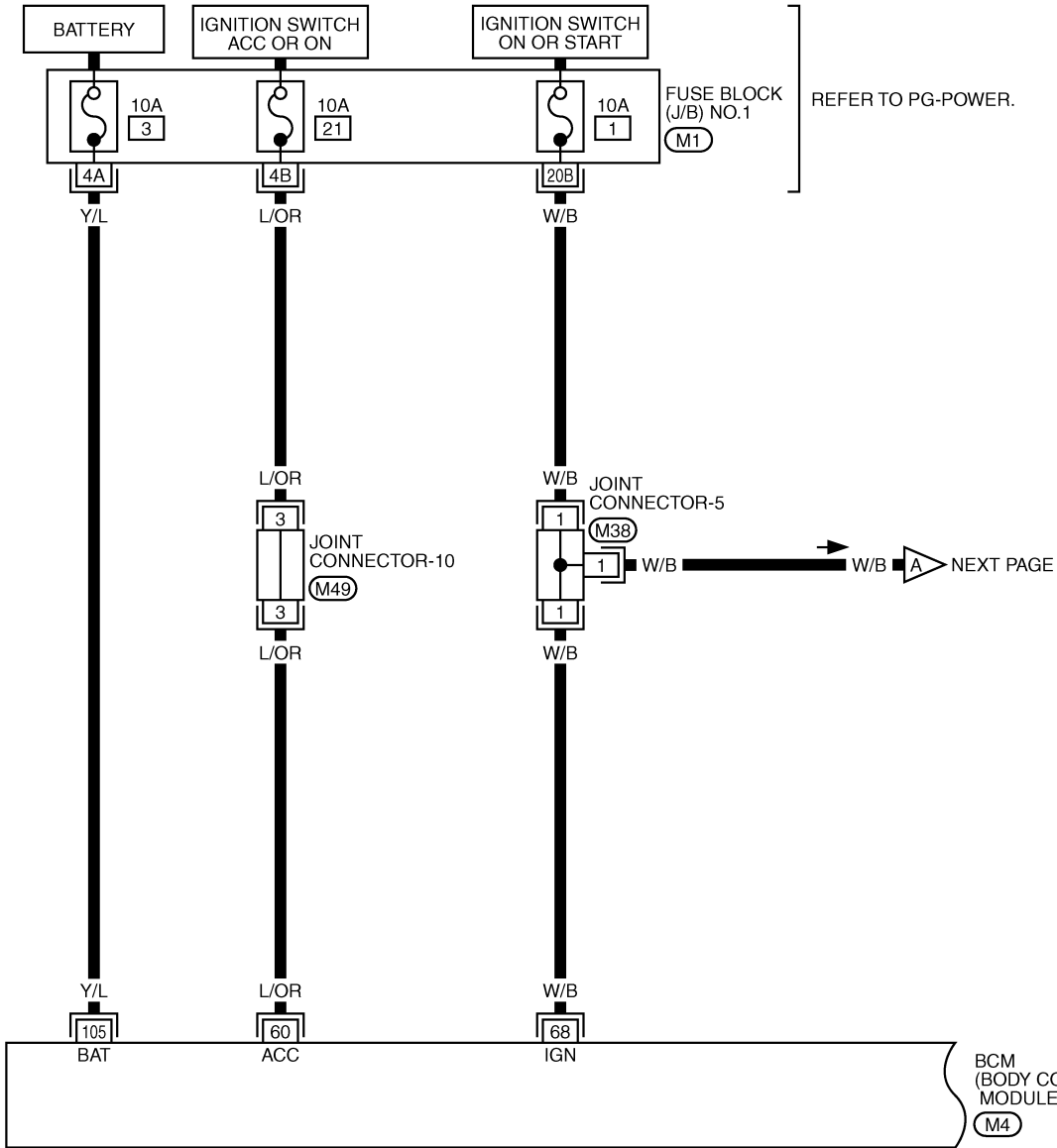
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# HEADLAMP (FOR USA)

## Wiring Diagram — H/LAMP —

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LT-H/LAMP-01



REFER TO THE FOLLOWING.

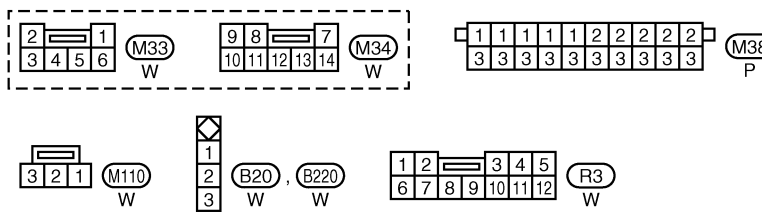
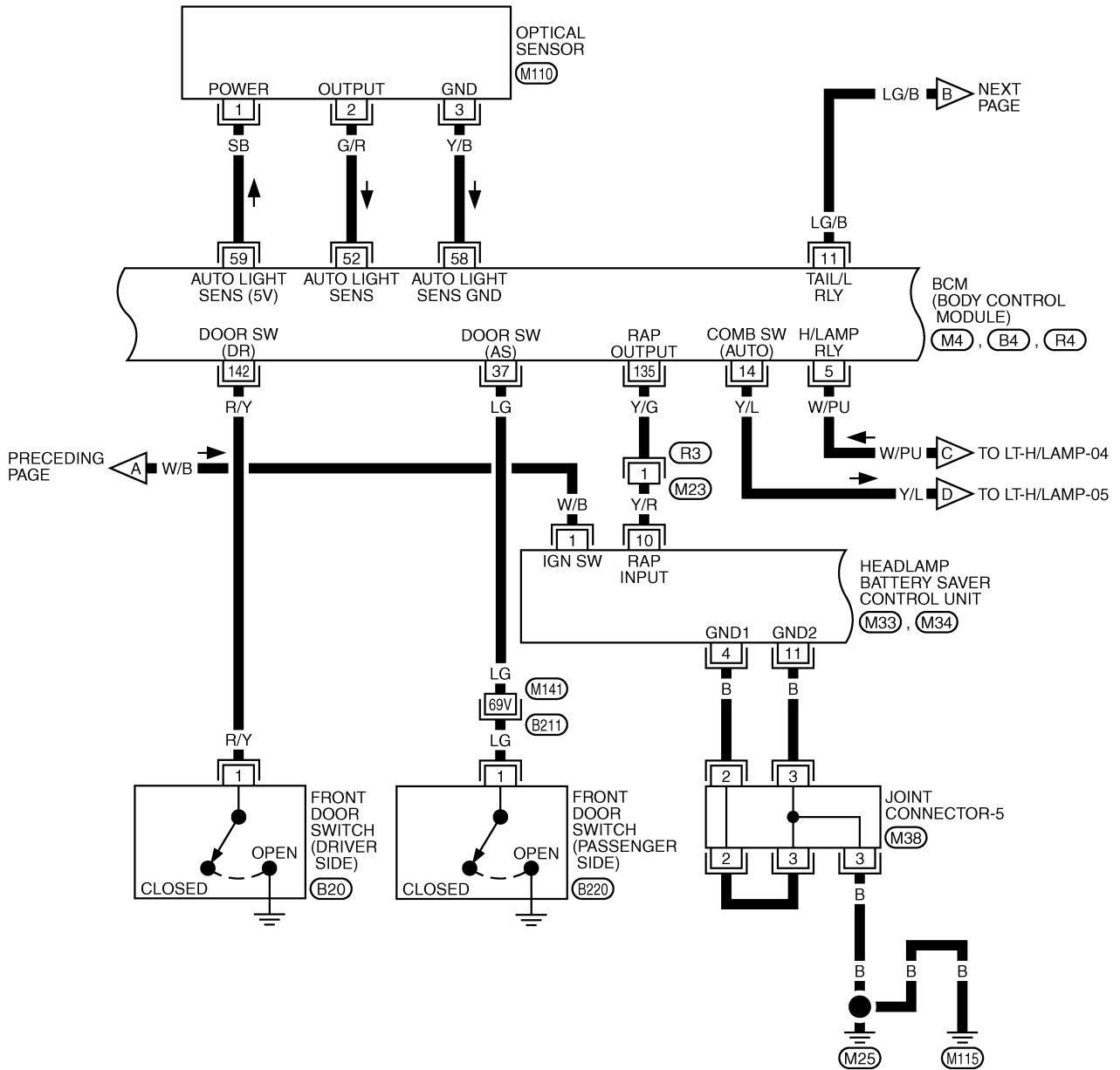
(M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(M4) - ELECTRICAL UNITS

TKWA0517E

# HEADLAMP (FOR USA)

LT-H/LAMP-02

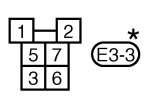
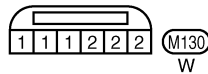
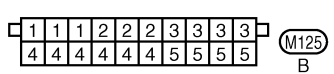
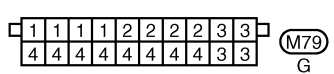
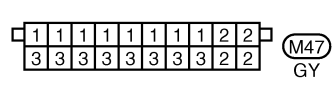
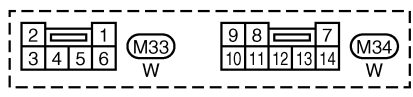
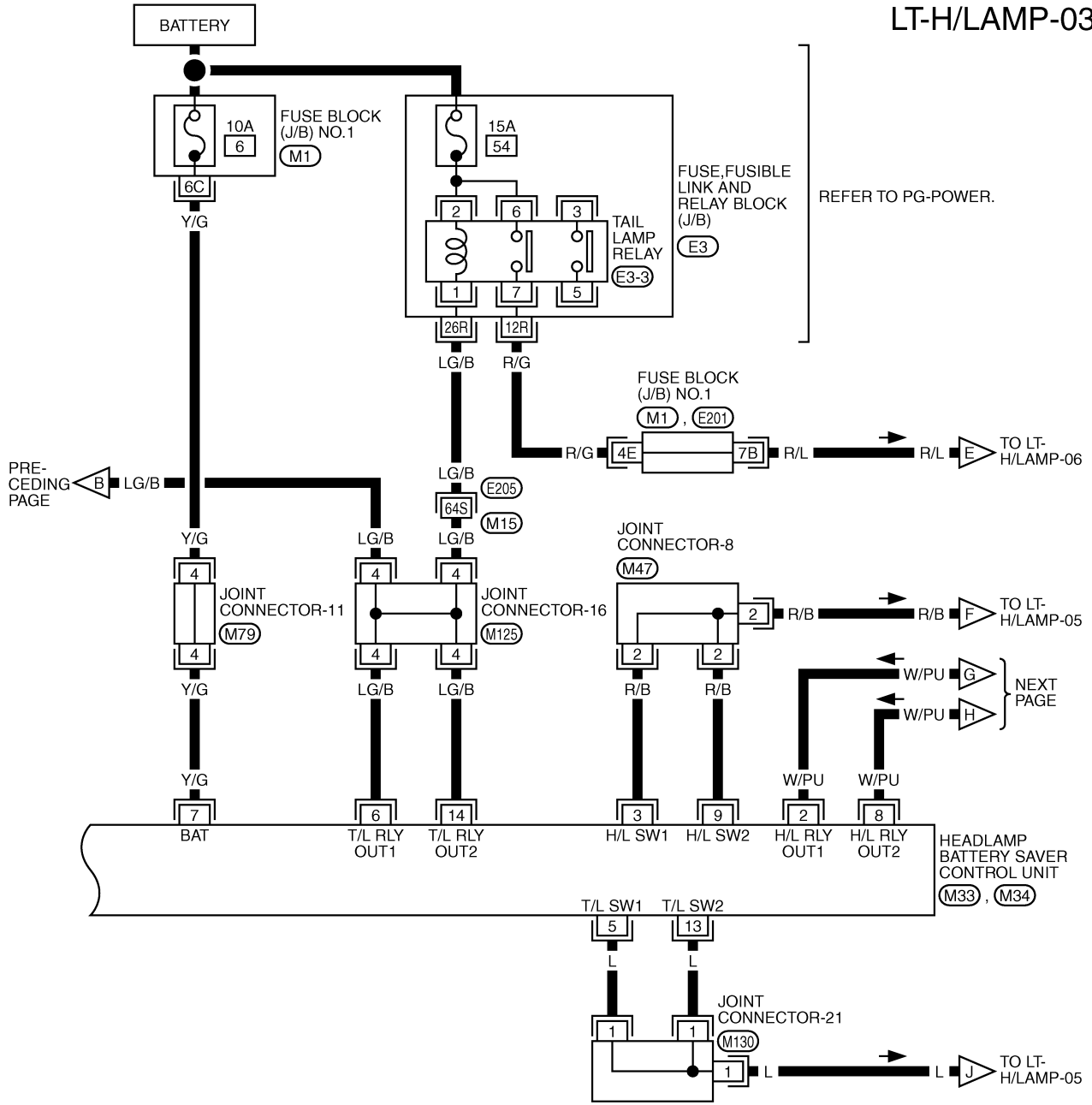


REFER TO THE FOLLOWING.  
 (B211) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M4), (B4), (R4)  
 -ELECTRICAL UNITS

TKWA0518E

# HEADLAMP (FOR USA)

LT-H/LAMP-03



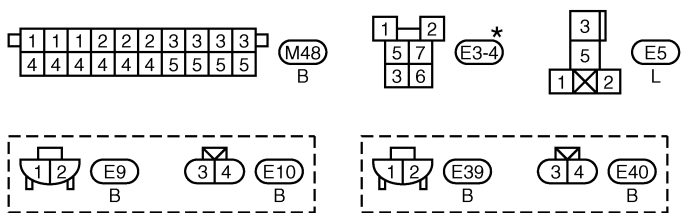
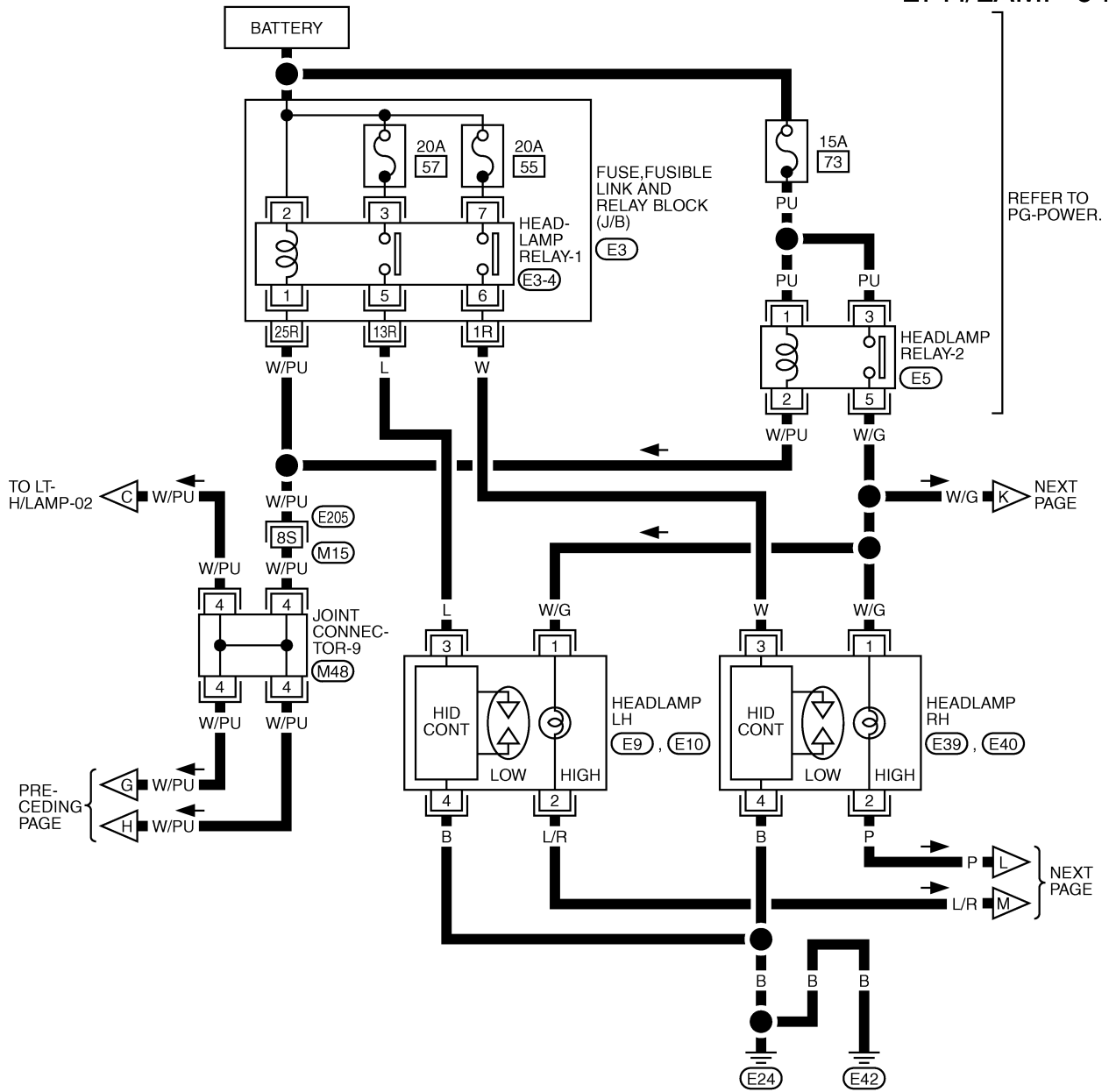
\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.  
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M1), (E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1  
 (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)

TKWA0519E

# HEADLAMP (FOR USA)

LT-H/LAMP-04



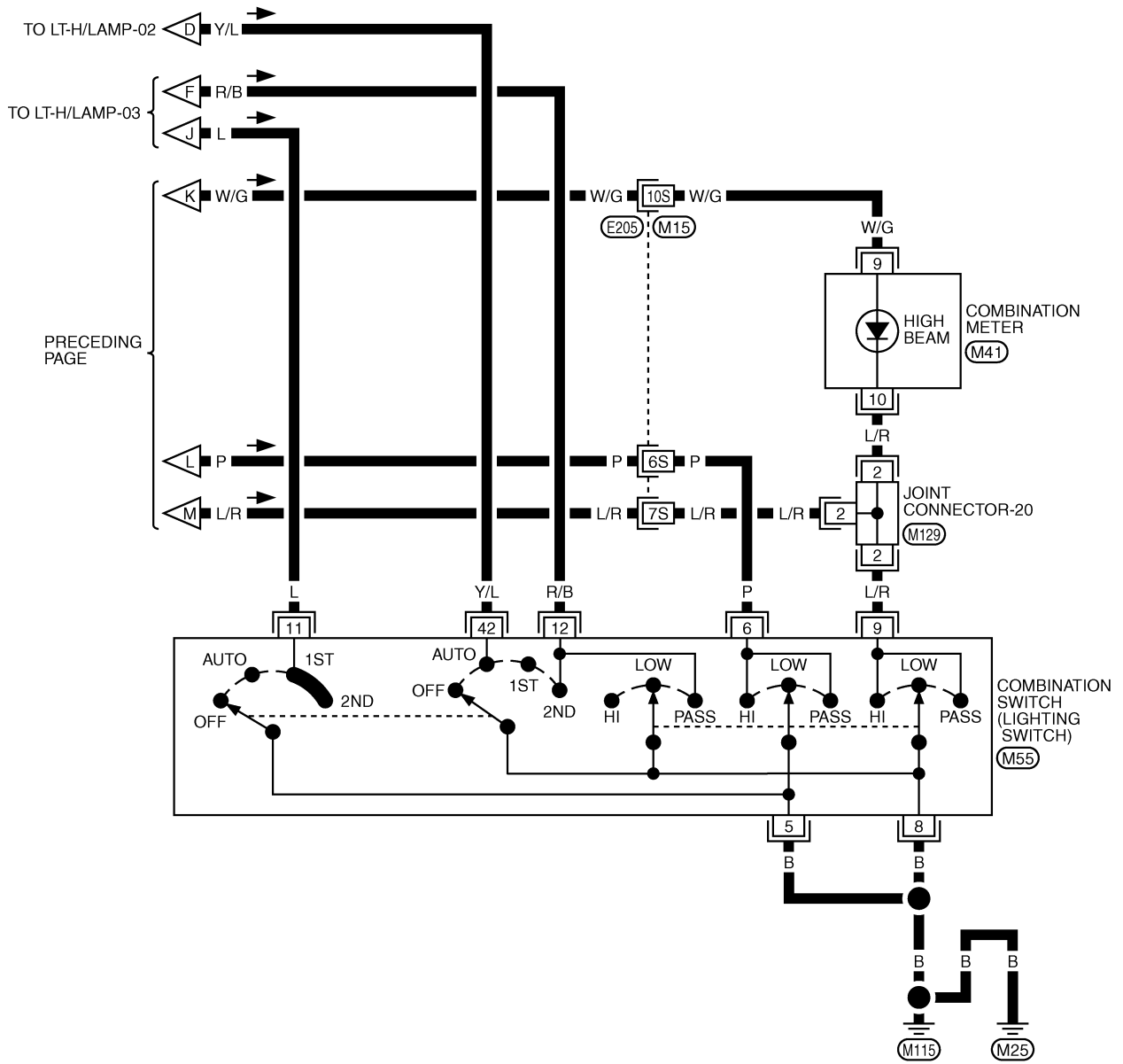
REFER TO THE FOLLOWING.  
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)  
 (E3) -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWA0520E

# HEADLAMP (FOR USA)

LT-H/LAMP-05



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

(M41) W

2	1	3	12	8		
7	6	5	9	10	11	42

(M55) W

1	1	1	1	2	2	2	2	3	3
4	4	4	4	4	4	4	4	3	3

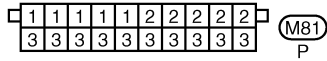
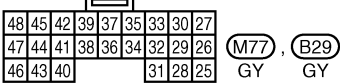
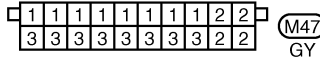
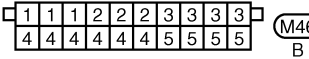
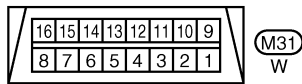
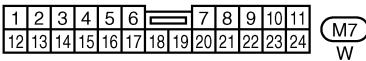
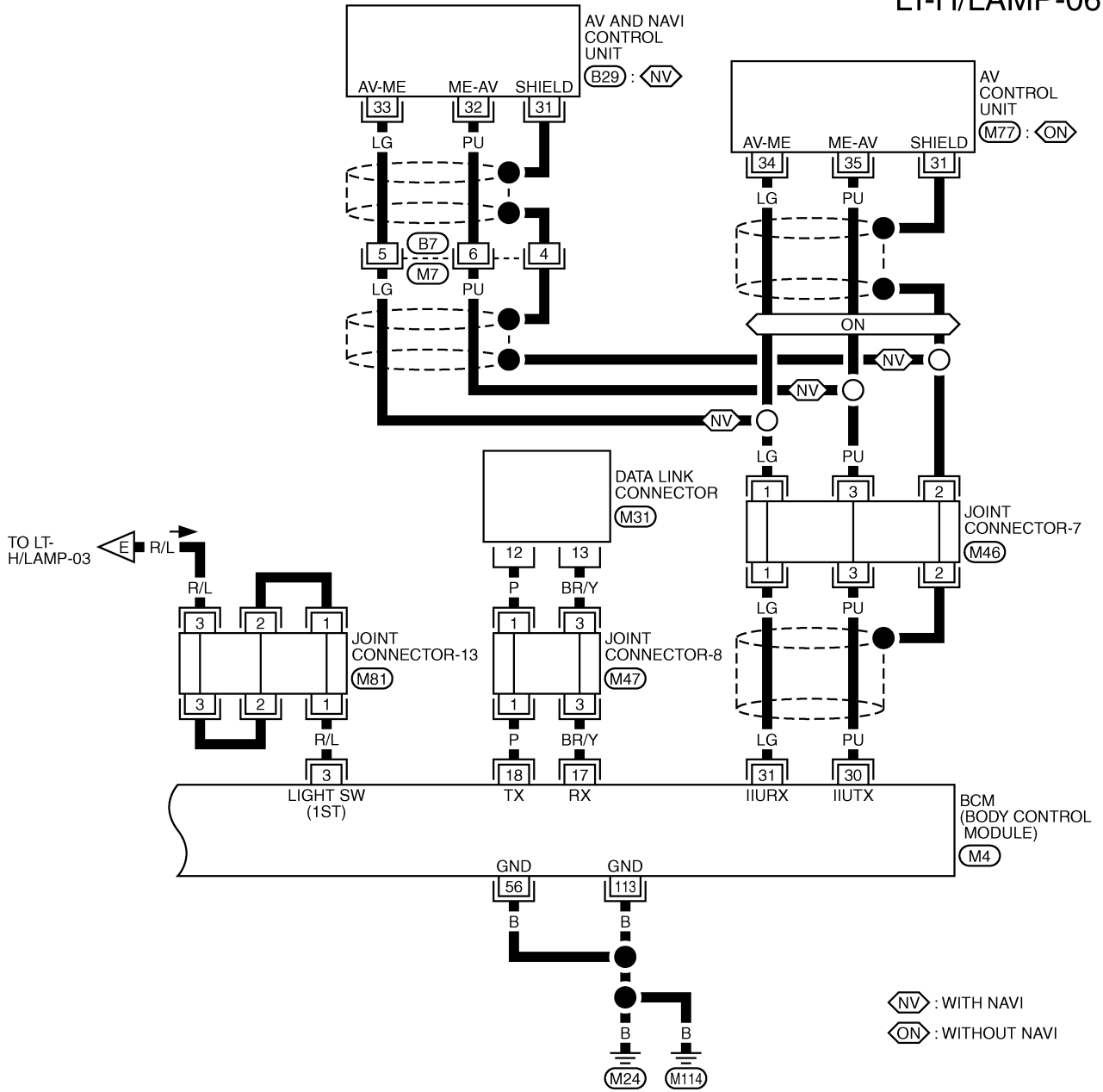
(M129) G

REFER TO THE FOLLOWING.  
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0521E

# HEADLAMP (FOR USA)

LT-H/LAMP-06



REFER TO THE FOLLOWING.  
(M4) -ELECTRICAL UNITS

TKWA0522E



# HEADLAMP (FOR USA)

## Terminals and Reference Value for Headlamp Battery Saver Control Unit

AKS002F0

Terminal No.	Wire color	Item	Operation or condition		Reference value	
1	W/B	Ignition switch ON or START	Ignition switch	OFF or ACC	Approx. 0V	
				ON or START	Battery voltage	
2	W/PU	Headlamp relay out 1	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				OFF or ACC	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	Approx. 0V	
			Headlamps illuminate by auto light control.			
3	R/B	Headlamp switch 1	Lighting switch	1ST	2.4V	
				PASS or 2ND	Approx. 0V	
			Headlamps illuminate by auto light control.			
4	B	Ground	—		Approx. 0V	
5	L	Tail lamp switch 1	Lighting switch	OFF	Battery voltage	
				1ST or 2ND	Approx. 0V	
6	LG/B	Tail lamp relay out 1	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				OFF or ACC	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	Approx. 0V	
			Headlamps illuminate by auto light control.			
7	Y/G	Battery power supply	—		Battery voltage	
8	W/PU	Headlamp relay out 2	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				OFF or ACC	With 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	Approx. 0V	
			Headlamps illuminate by auto light control.			
9	R/B	Headlamp switch 2	Lighting switch	1ST	2.4V	
				PASS or 2ND	Approx. 0V	
			Headlamps illuminate by auto light control.			
10	Y/R	RAP input signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Battery voltage	
				ON or START	Approx. 0V	
11	B	Ground	—		Approx. 0V	
13	L	Tail lamp switch 2	Lighting switch	OFF	Battery voltage	
				1ST or 2ND	Approx. 0V	
14	LG/B	Tail lamp relay out 2	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				OFF or ACC	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	Approx. 0V	
			Headlamps illuminate by auto light control.			

# HEADLAMP (FOR USA)

## Terminals and Reference Value for BCM

AKS002F1

Terminal No.	Wire color	Item	Measuring condition		Reference value	
			Ignition switch	Operation or condition		
3	R/L	Tail lamp signal	ON	Lighting switch: 1st	ON	Battery voltage
					OFF	Approx. 0V
5	W/PU	Headlamp relay control signal	ON	Lighting switch: AUTO	Light is applied to optical sensor.	Battery voltage
					Light is not applied to optical sensor.	Approx. 0V
11	LG/B	Tail lamp relay control signal	ON	Light switch: AUTO	Light is applied to optical sensor.	Battery voltage
					Light is not applied to optical sensor.	Approx. 0V
14	Y/L	Lighting switch AUTO signal	ON	Lighting switch	AUTO	Approx. 0V
					OFF	8V
17	BR/Y	Data link RX	—	—	—	
18	P	Data link TX	—	—	—	
30	PU	Communication signal TX (BCM-AV: Transmission)	—	—	—	
31	LG	Communication signal RX (AV-BCM: Receiving)	—	—	—	
37	LG	Front door switch (Passenger side) signal	OFF	Front door switch (Passenger side)	ON (open)	Approx. 0V
					OFF (close)	Battery voltage
52	G/R	Auto light sensor signal	ON	Light is applied to optical sensor.		3V or more
				Light is not applied to optical sensor.		Approx. 0V
56	B	Ground	—	—	Approx. 0V	
58	Y/B	Auto light sensor ground	ON	—	Approx. 0V	
59	SB	Auto light sensor power supply	ON	—	5V or more	
60	L/OR	Ignition switch ACC or ON	ACC	—	Battery voltage	
68	W/B	Ignition switch ON or START	ON	—	Battery voltage	
105	Y/L	Battery power supply	OFF	—	Battery voltage	
113	B	Ground	—	—	Approx. 0V	
135	Y/G	RAP output signal	OFF	When headlamp battery saver timer is operated	Approx. 0V	
142	R/Y	Front door switch (Driver side) signal	OFF	Front door switch (Driver side) signal	ON (open)	Approx. 0V
					OFF (close)	Battery voltage

## Work Flow

AKS002F2

1. Confirm the symptom or customer complaint.
2. Understand system description. Refer to [LT-6, "System Description"](#).
3. Perform the preliminary check. Refer to [LT-19, "Preliminary Check"](#).
4. Find the cause of malfunction following the symptom chart and repair or replace as necessary. Refer to [LT-24, "Symptom Chart 1"](#) (for headlamp system) or [LT-24, "Symptom Chart 2"](#) (for auto light system).
5. Does the headlamp system or the auto light system operate normally? If YES, GO TO 6. If NO, GO TO 4.
6. INSPECTION END

# HEADLAMP (FOR USA)

AKS002F3

## Preliminary Check SETTING CHANGE FUNCTION FOR AUTO LIGHT SYSTEM

- Setting for each operation can be changed using CONSULT-II and a display unit.

Setting mode change	Explanation	CONSULT-II (Work support)	Display Unit (Preset at each vehicle status)	Factory-preset data
AUTO LIGHT SENS ADJ (CONSULT-II) Sensitivity of Automatic Headlights (Display unit)	Auto light sensitivity is set at four grades.	Mode 1	Lower (Dull) ↑ ↓ Higher (Sensitive)	
		Mode 2		
		Normal		X
		Mode 3		
Automatic headlights off delay (Display unit)	Auto light time delay is set at seven grades.	-	OFF	
			20 sec.	
			45 sec.	X
			90 sec.	
			120 sec.	
			150 sec.	
			180 sec.	

Note: When setting is changed, even though the battery is removed, mode will be after setting mode.

SKIA3782E

## INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT

### 1. CHECK FUSE

Check if any of the following fuses in BCM are blown.

Unit	Power source	Fuse No.
BCM	Battery	3
	Ignition switch ACC or ON position	21
	Ignition switch ON or START position	1

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

#### OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-2, "POWER SUPPLY ROUTING"](#).

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

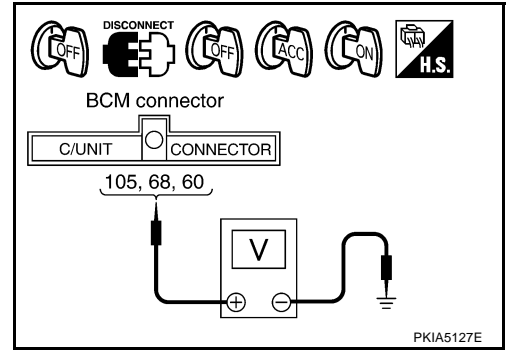
LT

# HEADLAMP (FOR USA)

## 2. CHECK BCM POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM harness connector M4 terminals and ground.

Terminals		Ignition switch position			
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)		OFF	ACC	ON
M4	105 (Y/L)	Ground	Battery voltage	Battery voltage	Battery voltage
	68 (W/B)		0V	0V	Battery voltage
	60 (L/OR)		0V	Battery voltage	Battery voltage



OK or NG

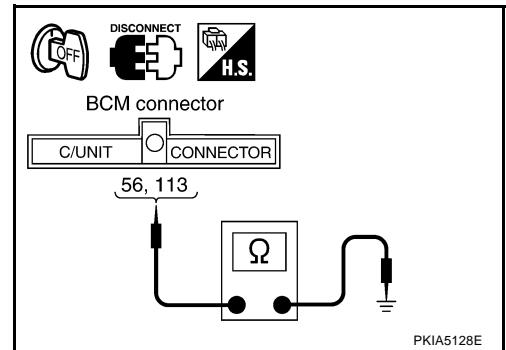
OK >> GO TO 3.

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

## 3. CHECK BCM GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between BCM harness connector M4 terminals 56 (B), 113 (B) and ground.

Terminals		Continuity
Connector	Terminal (Wire color)	
M4	56 (B)	Ground Yes
	113 (B)	



OK or NG

OK >> INSPECTION END

NG >> Repair harness.

## CONSULT-II Function for Auto Light System

AKS002F4

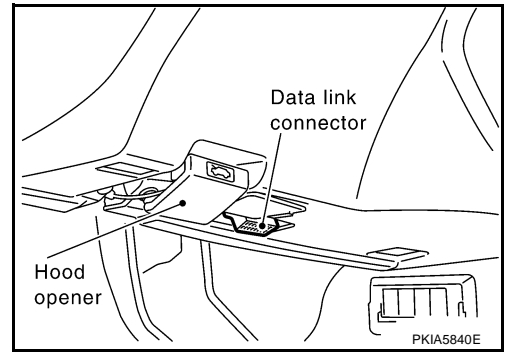
- CONSULT-II has the display function for the work support, data monitor and active test for each part by combining data receiving and sending via the communication line from the BCM.

IVMS diagnosis position	Diagnosis mode	Description
Auto light system	Work support	Changes setting of each function.
	Data monitor	Displays input data of the BCM and each LCU in real-time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
BCM part number		Displays BCM part No.

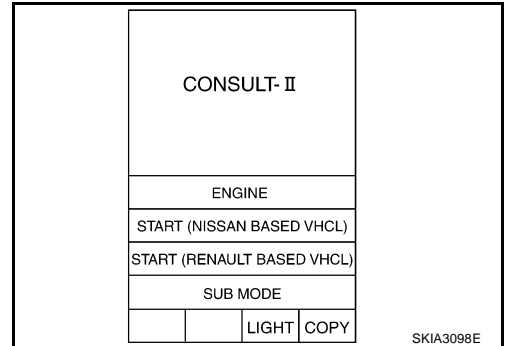
# HEADLAMP (FOR USA)

## CONSULT-II BASIC OPERATION PROCEDURE

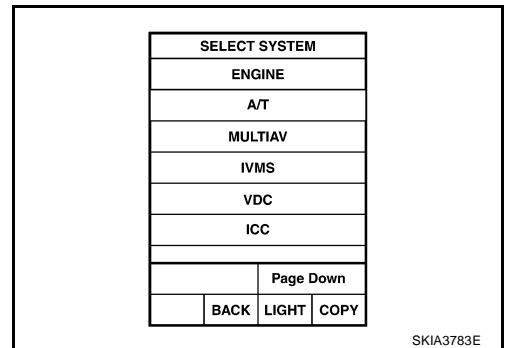
1. With ignition switch OFF, connect "CONSULT-II" and "CONSULT-II CONVERTER" to data link connector, then turn ignition switch ON.



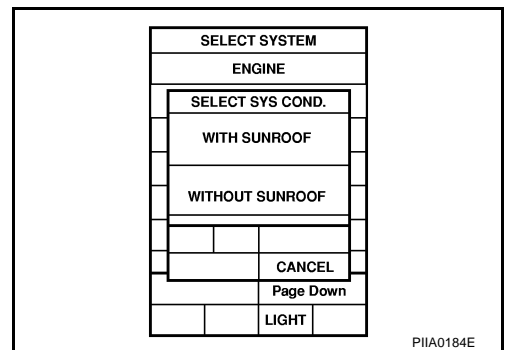
2. Touch "START(NISSAN BASED VHCL)".



3. Touch "IVMS" on "SELECT SYSTEM" screen. If "IVMS" is not indicated, refer to [GI-38, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".
6. Select the desired part to be diagnosed on "SELECT TEST ITEM" screen.



## WORK SUPPORT

### Operation Procedure

1. Touch "AUTO LIGHT SYSTEM" on "SELECT TEST ITEM" screen.
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch "AUTO LIGHT SENS ADJ" on "SELECT WORK ITEM" screen.
4. Touch "START".
5. Touch "NORMAL". "MODE 1 - 3" of which setting is to be changed.
6. Touch "CHANGE SETT".
7. The setting will be changed and "CURRENT SETTING STATUS" will be displayed.

# HEADLAMP (FOR USA)

8. Touch "END".

## Display Item List

Refer to [LT-19, "SETTING CHANGE FUNCTION FOR AUTO LIGHT SYSTEM"](#) .

## DATA MONITOR

### Operation Procedure

1. Touch "AUTO LIGHT SYSTEM" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch "ALL SIGNALS" or "SELECTION FROM MENU" on "SELECT MONITOR ITEM" screen.

MAIN SIGNALS	Monitors the main items.
SELECTION FROM MENU	Selects and monitors the items.

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

### Data Monitor Item

Monitored item ["OPERATION OR UNIT"]	Description
IGN ON SW [ON/OFF]	Displays status of the ignition switch as judged from the ignition switch signal. (Key is in ON position: ON/Key is in ACC or OFF position: OFF)
DOOR SW-DR [ON/OFF]	Displays status of the driver door as judged from the front door switch (driver side) signal. (Door is open: ON/Door is closed: OFF)
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)
HD/LMP 1ST SW [ON/OFF]	Displays status of the lighting switch as judged from the lighting switch signal. (OFF or AUTO position: OFF/Other than OFF and AUTO position: ON)
OPTICAL SEN [0-5V]	Displays "ambient light (close to 5V when light/close to 0V when dark)" as judged from the optical sensor signal.

## ACTIVE TEST

### Operation Procedure

1. Touch "AUTO LIGHT SYSTEM" 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. Touch "STOP" while testing and the operation will be stopped.

### Active Test Item

Test items	Display on CONSULT-II screen	Description
Headlamp relay output	HEAD LAMP RELAY	Headlamp relay can be operated by any on-off operation of the headlamp.
Tail lamp relay output	TAIL LAMP RELAY	Tail lamp relay can be operated by any on-off operation of the tail lamp.
Auto light adjustment output	ILL DIM SIGNAL	Night time dimming signal can be operated by any on-off operation.

## On Board Diagnosis

AKS002F5

BCM can check malfunction in each local control unit (LCU), switches, loads and communications using the self-diagnosis function.

## DIAGNOSIS ITEM

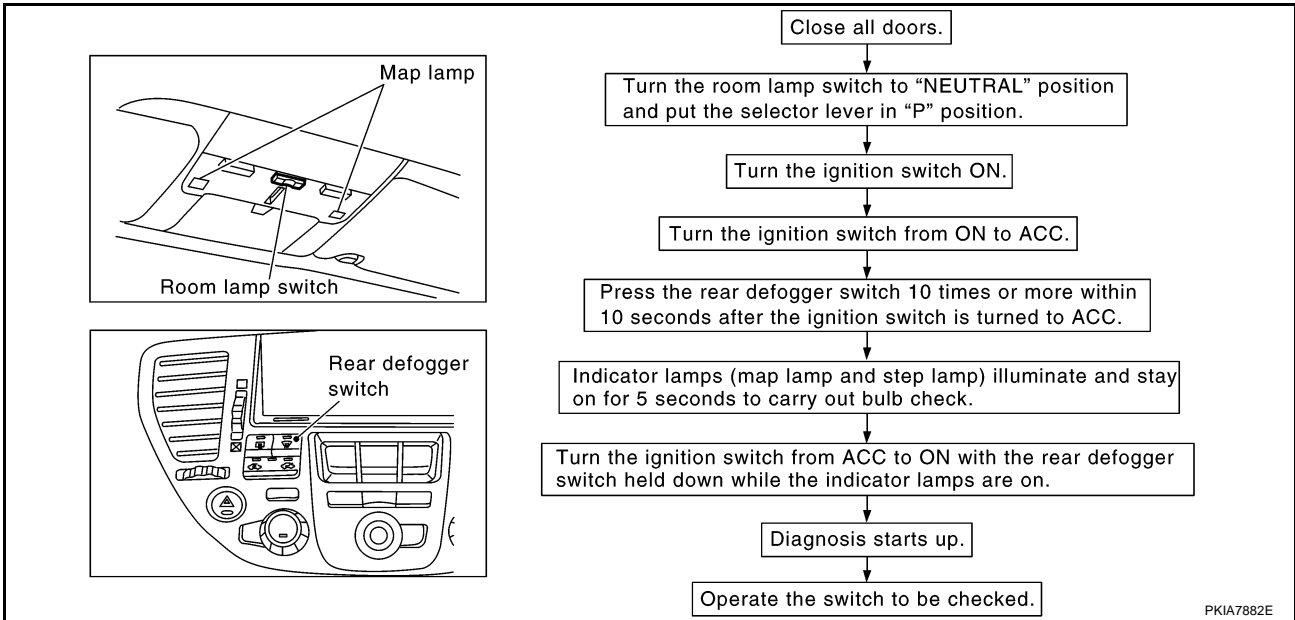
Diagnosis item	Description
Switch monitor	Checks for malfunction in switch systems that input to BCM and each LCU.

# HEADLAMP (FOR USA)

## SWITCH MONITOR

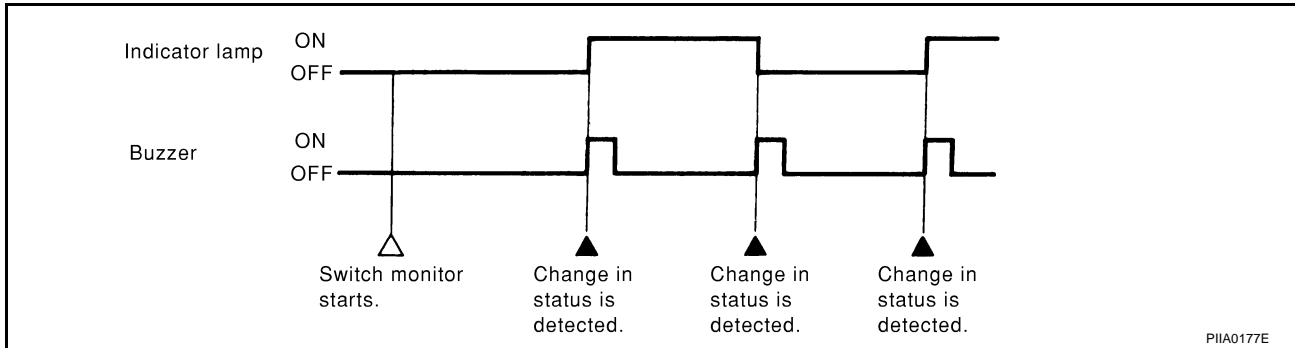
- Perform the diagnosis on the switch system to each control unit.

### How to Perform Switch Monitor



### Description

- In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the map lamps and front step lamps with buzzer.



### Switch Monitor Item

- The status of the switch (except the ignition switch, interior lamp ill switch, and map lamp switch) as input to each control unit can be monitored.

Control unit	Item
BCM	Lighting switch (AUTO, 1ST position)
	Front door switch (Driver side)
	Front door switch (Passenger side)

### Cancel of Switch Monitor

If the following conditions are satisfied, the communication diagnosis is cancelled.

- Turn ignition switch OFF.
- Drive the vehicle more than 7 km/h (4 MPH).

# HEADLAMP (FOR USA)

## Symptom Chart 1 HEADLAMP SYSTEM

AKS002F6

Symptom	Possible cause and reference
Neither headlamp operates.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-25, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-31, "Lighting Switch Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>
Headlamp (low beam) does not operate, but headlamp (high beam) does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-25, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-26, "Headlamp Relay-1 Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>
Headlamp (high beam) does not operate, but headlamp (low beam) does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-25, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-27, "Headlamp Relay-2 Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>
RH low beam does not operate, but LH low beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-25, "Power Supply and Ground Circuit Inspection"</a> .</li> </ul>
LH low beam does not operate, but RH low beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-26, "Headlamp Relay-1 Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-28, "Headlamp (Low) Circuit Inspection"</a> .</li> </ul>
RH high beam does not operate, but LH high beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-29, "Headlamp (High) Circuit Inspection"</a> .</li> </ul>
LH high beam does not operate, but RH high beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-31, "Lighting Switch Circuit Inspection"</a> .</li> </ul>
High beam indicator does not work.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-31, "High Beam Indicator Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the combination meter.</p>
Battery saver control does not operate properly.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-33, "Front Door Switch Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-34, "Headlamp Battery Saver Control Unit Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-31, "Lighting Switch Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>

## Symptom Chart 2 AUTO LIGHT SYSTEM

AKS0032N

Symptom	Possible cause and reference
<ul style="list-style-type: none"> <li>● Parking (clearance) lamps and headlamps will not illuminate when outside of the vehicle becomes dark. (Lighting switch 1st position and 2nd position operate normally.)</li> <li>● Parking (clearance) lamps and headlamp will not go out when outside of the vehicle becomes light. (Lighting switch 1st position and 2nd position operate normally.)</li> </ul>	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-35, "Lighting Switch (AUTO) System Inspection"</a> .</li> <li>● Refer to <a href="#">LT-36, "Optical Sensor System Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the BCM.</p>
Parking (clearance) lamps illuminate when outside of the vehicle becomes dark, but headlamp stay off. (Lighting switch 1st position and 2nd position operate normally.)	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-38, "Headlamp Relay System Inspection"</a> .</li> <li>● Refer to <a href="#">LT-36, "Optical Sensor System Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the BCM.</p>
<ul style="list-style-type: none"> <li>● Headlamps illuminate when outside of the vehicle becomes dark, but clearance lamps stay off. (Lighting switch 1st position and 2nd position operate normally.)</li> <li>● Headlamps go out when outside of the vehicle becomes light, but parking (clearance) lamps stay on.</li> </ul>	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-38, "Tail Lamp Relay System Inspection"</a> .</li> </ul> <p>If above system is normal, replace the BCM.</p>



# HEADLAMP (FOR USA)

AKS003RY

## Power Supply and Ground Circuit Inspection

### 1. CHECK FUSE

Check if the headlamp battery saver control unit, headlamp relay-1 and -2 fuses are blown.

Unit or relay	Power source	Fuse No.
Headlamp battery saver control unit	Battery	6
Headlamp relay-1	Battery	55
		57
Headlamp relay-2	Battery	73

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

#### OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK HEADLAMP BATTERY SAVER CONTROL UNIT POWER SUPPLY CIRCUIT

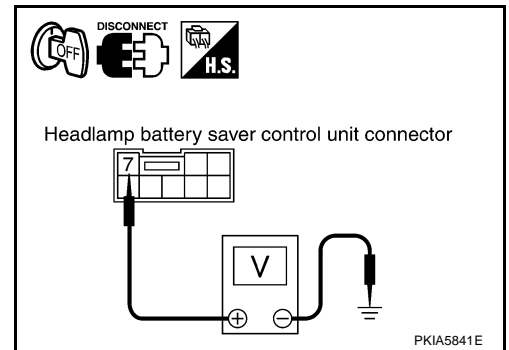
1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit connector.
3. Check voltage between headlamp battery saver control unit harness connector M34 terminal 7 (Y/G) and ground.

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

#### OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short between headlamp battery saver control unit and fuse.



### 3. CHECK HEADLAMP RELAY-1 POWER SUPPLY CIRCUIT

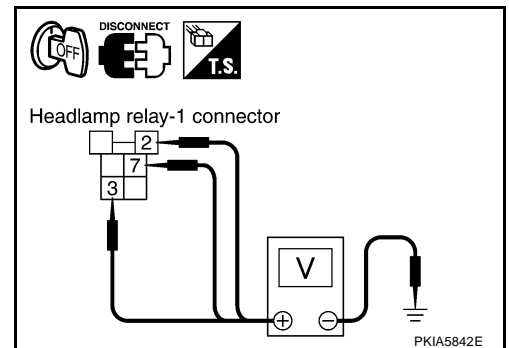
1. Remove headlamp relay-1.
2. Check voltage between headlamp relay-1 harness connector E3-4 terminals 2, 3 or 7 and ground.

Terminals		Ignition switch position
(+)	(-)	
Connector	Terminal	OFF
E3 - 4	2	Ground
	3	
	7	
		Battery voltage

#### OK or NG

OK >> GO TO 4.

NG >> Replace fuse, fusible link and relay block (J/B).



# HEADLAMP (FOR USA)

## 4. CHECK HEADLAMP RELAY-2 POWER SUPPLY CIRCUIT

1. Remove headlamp relay-2.
2. Check voltage between headlamp relay-2 harness connector E5 terminal 1 (PU) and ground.

**1 (PU) - Ground : Battery voltage should exist.**

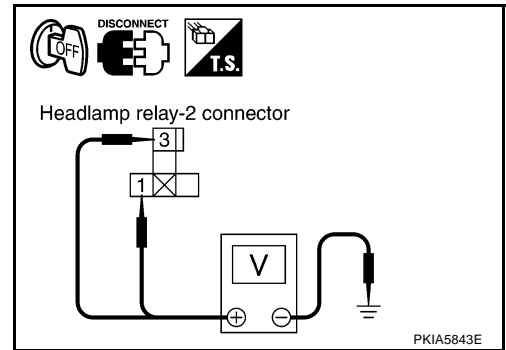
3. Check voltage between headlamp relay-2 harness connector E5 terminal 3 (PU) and ground.

**3 (PU) - Ground : Battery voltage should exist.**

OK or NG

OK >> GO TO 5.

NG >> Check harness for open or short between headlamp relay-2 and fuse.



## 5. CHECK HEADLAMP BATTERY SAVER CONTROL UNIT GROUND CIRCUIT

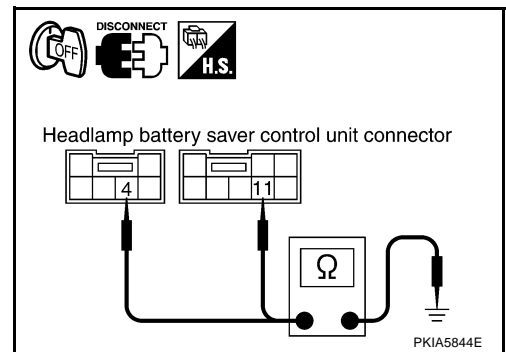
Check continuity between headlamp battery saver control unit harness connector terminals and ground.

Terminals		Continuity
Connector	Terminal (Wire color)	
M33	4 (B)	Ground Yes
M34	11 (B)	

OK or NG

OK >> INSPECTION END

NG >> Check harness.



## Headlamp Relay-1 Circuit Inspection

### 1. CHECK HEADLAMP RELAY-1

1. Turn ignition switch OFF.
2. Remove headlamp relay-1.
3. Apply 12V between headlamp relay-1 terminals 2 and 1, and check continuity between terminals 3 and 5 and between 6 and 7.

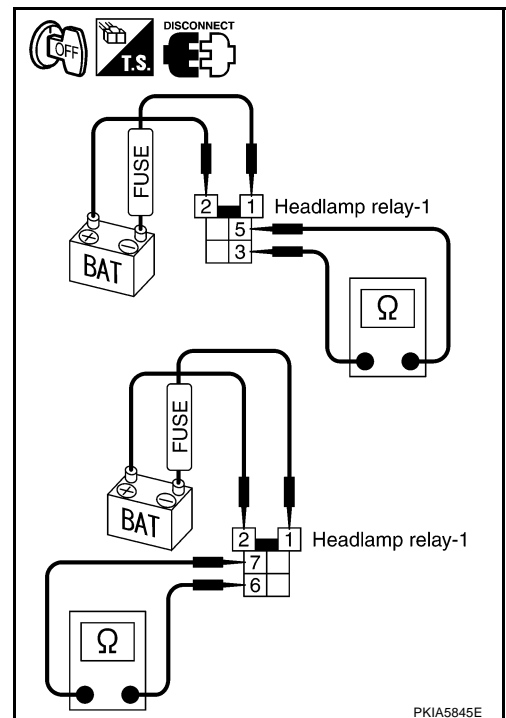
**3 - 5 : Continuity should exist.**

**6 - 7 : Continuity should exist.**

OK or NG

OK >> GO TO 2.

NG >> Replace headlamp relay-1.



# HEADLAMP (FOR USA)

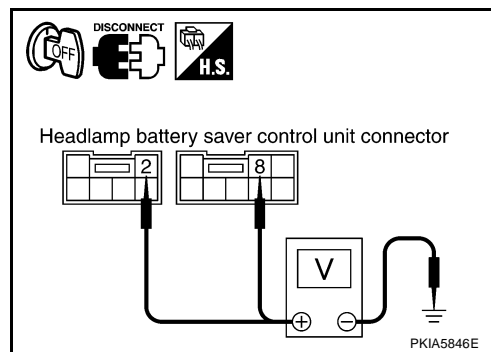
## 2. CHECK HEADLAMP RELAY-1 CONTROL SIGNAL

1. Install headlamp relay-1.
2. Remove headlamp relay-2 and disconnect headlamp battery saver control unit connectors.
3. Check voltage between headlamp battery saver control unit harness connector M33 terminal 2 (W/PU) and ground.

**2 (W/PU) - Ground : Battery voltage should exist.**

4. Check voltage between headlamp battery saver control unit harness connector M34 terminal 8 (W/PU) and ground.

**8 (W/PU) - Ground : Battery voltage should exist.**



OK or NG

OK >> INSPECTION END

NG >> Check harness for open or short between headlamp relay-1 and headlamp battery saver control unit.

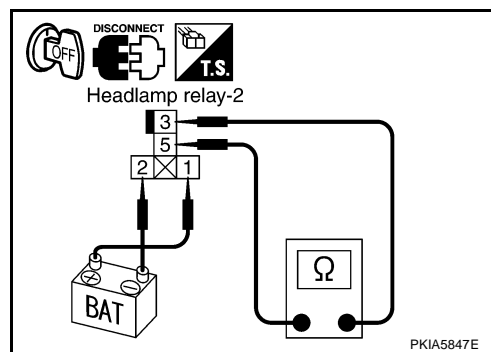
## Headlamp Relay-2 Circuit Inspection

AKS003S1

### 1. CHECK HEADLAMP RELAY-2

1. Turn ignition switch OFF.
2. Remove headlamp relay-2.
3. Apply 12V between headlamp relay-2 terminals 1 and 2, and check continuity between terminals 3 and 5.

**3 - 5 : Continuity should exist.**



OK or NG

OK >> GO TO 2.

NG >> Replace headlamp relay-2.

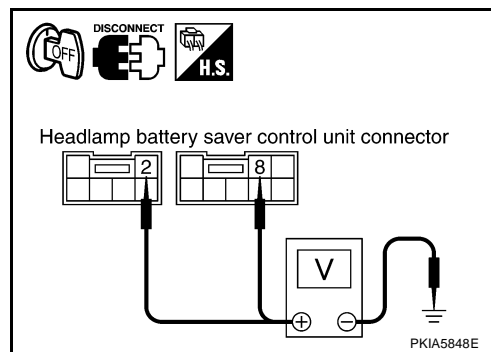
## 2. CHECK HEADLAMP RELAY-2 CONTROL SIGNAL

1. Install headlamp relay-2.
2. Remove headlamp relay-1 and disconnect headlamp battery saver control unit connectors.
3. Check voltage between headlamp battery saver control unit harness connector M33 terminal 2 (W/PU) and ground.

**2 (W/PU) - Ground : Battery voltage should exist.**

4. Check voltage between headlamp battery saver control unit harness connector M34 terminal 8 (W/PU) and ground.

**8 (W/PU) - Ground : Battery voltage should exist.**



OK or NG

OK >> INSPECTION END

NG >> Check harness for open or short between headlamp relay-2 and headlamp battery saver control unit.

# HEADLAMP (FOR USA)

AKS003S2

## Headlamp (Low) Circuit Inspection

### 1. CHECK XENON BULB

1. Replace xenon bulb with other side bulb or new one.
2. Check if headlamp illuminates correctly.

OK or NG

- OK >> Replace bulb.  
NG >> GO TO 2.

### 2. CHECK HEADLAMP LH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove headlamp relay-1 and disconnect headlamp LH connector.
3. Check continuity between headlamp LH harness connector E10 terminal 3 (L) and headlamp relay-1 harness connector E3-4 terminal 5 (L).

**3 (L) - 5 (L) : Continuity should exist.**

4. Check continuity between headlamp LH harness connector E10 terminal 3 (L) and ground.

**3 (L) - Ground : Continuity should not exist.**

#### NOTE:

If headlamp LH is normal, skip this procedure and go to 3.

OK or NG

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

### 3. CHECK HEADLAMP RH POWER SUPPLY CIRCUIT

1. Remove headlamp relay-1 and disconnect headlamp RH connector.
2. Check continuity between headlamp RH harness connector E40 terminal 3 (W) and headlamp relay-1 harness connector E3-4 terminal 6 (W).

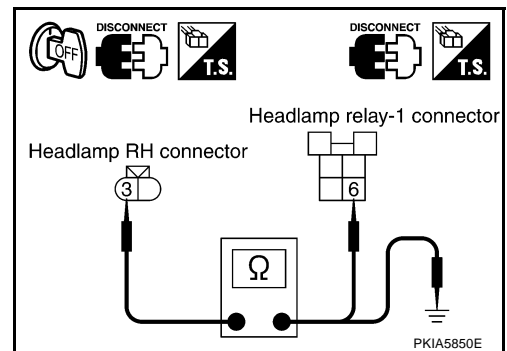
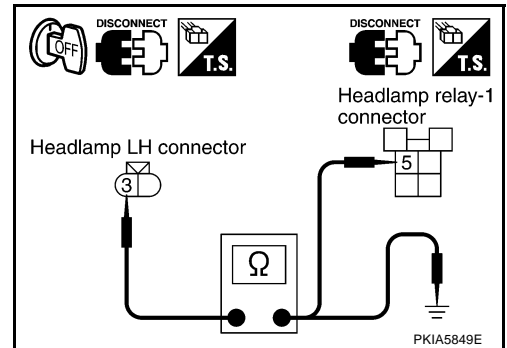
**3 (W) - 6 (W) : Continuity should exist.**

3. Check continuity between headlamp RH harness connector E40 terminal 3 (W) and ground.

**3 (W) - Ground : Continuity should not exist.**

OK or NG

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



# HEADLAMP (FOR USA)

## 4. CHECK HEADLAMP GROUND CIRCUIT

Check continuity between headlamp LH harness connector E10 terminal 4 (B) or headlamp RH harness connector E40 terminal 4 (B) and ground.

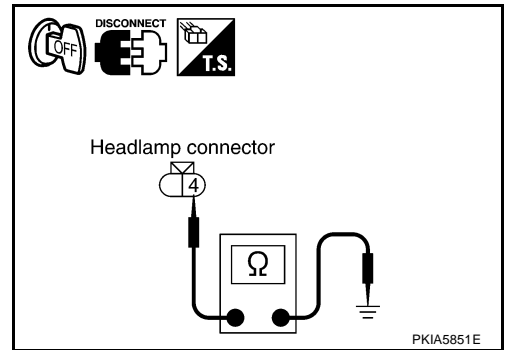
Unit	Terminals			Continuity
	Connector	Terminal (Wire color)	Ground	
Headlamp LH	E10	4 (B)	Ground	Yes
Headlamp RH	E40			

### NOTE:

Only the headlamp which does not turn on should be inspected.

### OK or NG

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



## 5. CHECK HID CONTROL UNIT

1. Install headlamp relay-1.
2. Replace HID control unit with other side control unit or new one.
3. Check if headlamp illuminates correctly.

### OK or NG

- OK >> Replace HID control unit.
- NG >> INSPECTION END

## Headlamp (High) Circuit Inspection

AKS003S3

### 1. CHECK BULB

1. Replace bulb with other side bulb or new one.
2. Check if headlamp illuminates correctly.

### OK or NG

- OK >> Replace bulb.
- NG >> GO TO 2.

## 2. CHECK HEADLAMP LH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Install headlamp relay-2 and disconnect headlamp LH connector.
3. Check continuity between headlamp LH harness connector E9 terminal 1 (W/G) and headlamp relay-2 harness connector E5 terminal 5 (W/G).

**1 (W/G) - 5 (W/G) : Continuity should exist.**

4. Check continuity between headlamp LH harness connector E9 terminal 1 (W/G) and ground.

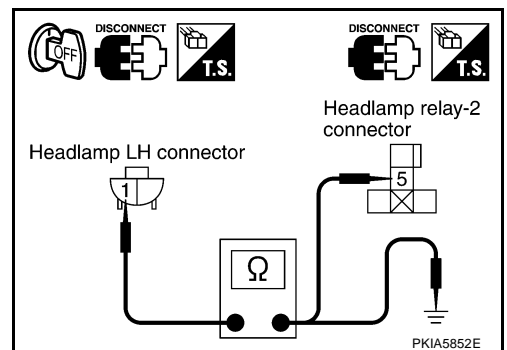
**1 (W/G) - Ground : Continuity should not exist.**

### NOTE:

If headlamp LH is normal, skip this procedure and go to 3.

### OK or NG

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



# HEADLAMP (FOR USA)

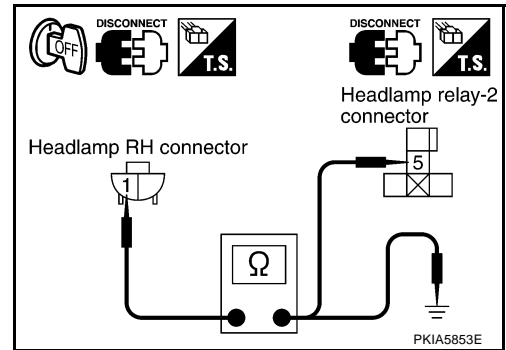
## 3. CHECK HEADLAMP RH POWER SUPPLY CIRCUIT

1. Remove headlamp relay-2 and disconnect headlamp RH connector.
2. Check continuity between headlamp RH harness connector E39 terminal 1 (W/G) and headlamp relay-2 harness connector E5 terminal 5 (W/G).

**1 (W/G) - 5 (W/G) : Continuity should exist.**

3. Check continuity between headlamp RH harness connector E39 terminal 1 (W/G) and ground.

**1 (W/G) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.

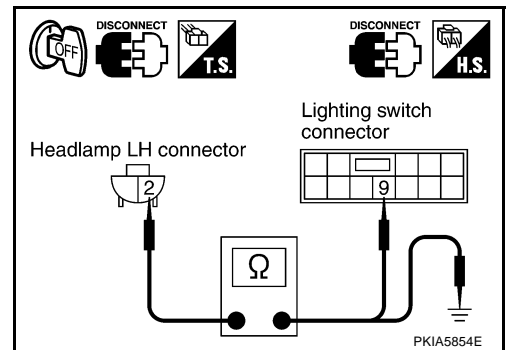
## 4. CHECK HEADLAMP LH GROUND CIRCUIT

1. Disconnect lighting switch connector.
2. Check continuity between headlamp LH harness connector E9 terminal 2 (L/R) and lighting switch harness connector M55 terminal 9 (L/R).

**2 (L/R) - 9 (L/R) : Continuity should exist.**

3. Check continuity between headlamp LH harness connector E9 terminal 2 (L/R) and ground.

**2 (L/R) - Ground : Continuity should not exist.**



OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.

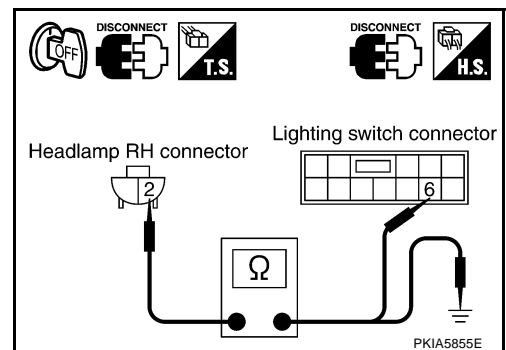
## 5. CHECK HEADLAMP RH GROUND CIRCUIT

1. Disconnect lighting switch connector.
2. Check continuity between headlamp RH harness connector E39 terminal 2 (P) and lighting switch harness connector M55 terminal 6 (P).

**2 (P) - 6 (P) : Continuity should exist.**

3. Check continuity between headlamp RH harness connector E39 terminal 2 (P) and ground.

**2 (P) - Ground : Continuity should not exist.**



OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.

# HEADLAMP (FOR USA)

AKS003SC

## High Beam Indicator Circuit Inspection

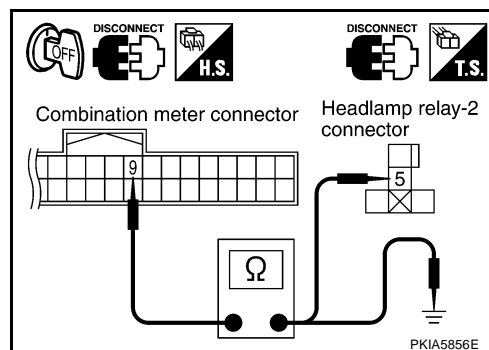
### 1. CHECK HIGH BEAM INDICATOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove headlamp relay-2 and disconnect combination meter connector.
3. Check continuity between combination meter harness connector M41 terminal 9 (W/G) and headlamp relay-2 harness connector E5 terminal 5 (W/G).

**9 (W/G) - 5 (W/G) : Continuity should exist.**

4. Check continuity between combination meter harness connector M41 terminal 9 (W/G) and ground.

**9 (W/G) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 2.

NG >> Repair harness or connector.

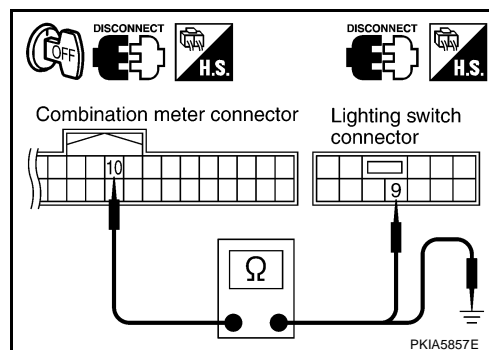
### 2. CHECK HIGH BEAM INDICATOR GROUND CIRCUIT

1. Disconnect lighting switch connector.
2. Check continuity between combination meter harness connector M41 terminal 10 (L/R) and lighting switch harness connector M55 terminal 9 (L/R).

**10 (L/R) - 9 (L/R) : Continuity should exist.**

3. Check continuity between combination meter harness connector M41 terminal 10 (L/R) and ground.

**10 (L/R) - Ground : Continuity should not exist.**



OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.

## Lighting Switch Circuit Inspection

AKS003S4

### 1. CHECK LIGHTING SWITCH

Check continuity of lighting switch. Refer to [LT-102, "Switch Circuit Inspection"](#) .

OK or NG

OK >> GO TO 2.

NG >> Replace lighting switch.

# HEADLAMP (FOR USA)

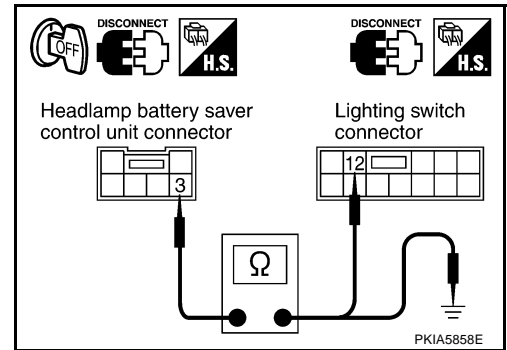
## 2. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit connector and lighting switch connector.
3. Check continuity between headlamp battery saver control unit harness connector M33 terminal 3 (R/B) and lighting switch harness connector M55 terminal 12 (R/B).

**3 (R/B) - 12 (R/B) : Continuity should exist.**

4. Check continuity between headlamp battery saver control unit harness connector M33 terminal 3 (R/B) and ground.

**3 (R/B) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

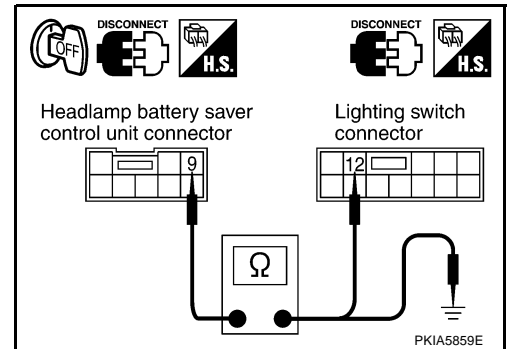
## 3. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 2

1. Check continuity between headlamp battery saver control unit harness connector M34 terminal 9 (R/B) and lighting switch harness connector M55 terminal 12 (R/B).

**9 (R/B) - 12 (R/B) : Continuity should exist.**

2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 9 (R/B) and ground.

**9 (R/B) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

## 4. CHECK LIGHTING SWITCH GROUND CIRCUIT

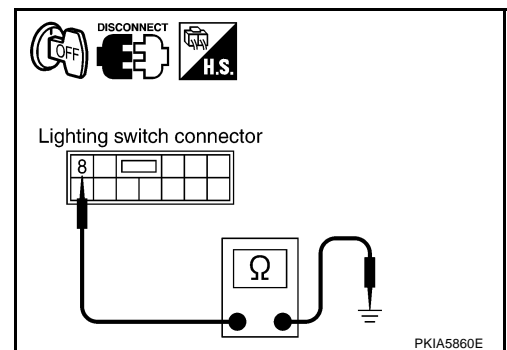
Check continuity between lighting switch harness connector M55 terminal 8 (B) and ground.

**8 (B) - Ground : Continuity should exist.**

OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.





# HEADLAMP (FOR USA)

AKS003S5

## Front Door Switch Circuit Inspection

### 1. CHECK DOOR SWITCH SIGNAL

① With CONSULT-II

1. Select "INTERIOR ILLUMINATION" of "IVMS" on "SELECT SYSTEM" screen.
2. Operate each door via "DOOR SW-DR" and "DOOR SW-AS" on "DATA MONITOR" screen and make sure that the switch turns on and off as commanded.

DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
RECORD	

SKIA3814E

② Without CONSULT-II

- Open and close the front door (driver side, passenger side) and make sure that the switch turns on and off by "switch monitor" in the self-diagnosis function.

OK or NG

OK >> INSPECTION END

- NG >> ● When front door switch (driver side) is malfunction, go to 2.  
● When front door switch (passenger side) is malfunction, go to 4.

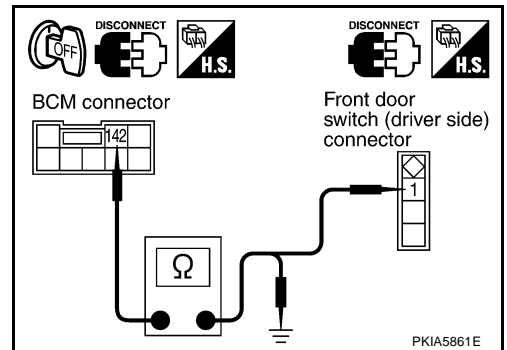
### 2. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door switch (driver side) connector.
3. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and front door switch (driver side) harness connector B20 terminal 1 (R/Y).

**142 (R/Y) - 1 (R/Y) : Continuity should exist.**

4. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and ground.

**142 (R/Y) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

### 3. CHECK FRONT DOOR SWITCH (DRIVER SIDE)

Check front door switch (driver side).

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

OK or NG

OK >> Replace BCM.

NG >> Replace front door switch (driver side).

# HEADLAMP (FOR USA)

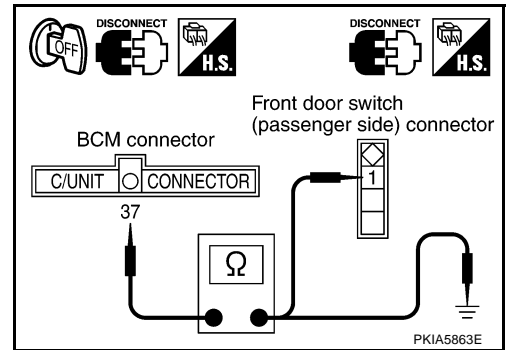
## 4. CHECK FRONT DOOR SWITCH (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door switch (passenger side) connector.
3. Check continuity between BCM harness connector M4 terminal 37 (LG) and front door switch (passenger side) harness connector B220 terminal 1 (LG).

**37 (LG) - 1 (LG) : Continuity should exist.**

4. Check continuity between BCM harness connector M4 terminal 37 (LG) and ground.

**37 (LG) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.

## 5. CHECK FRONT DOOR SWITCH (PASSENGER SIDE)

Check continuity front door switch (passenger side).

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

OK or NG

OK >> Replace BCM.

NG >> Replace front door switch (passenger side).

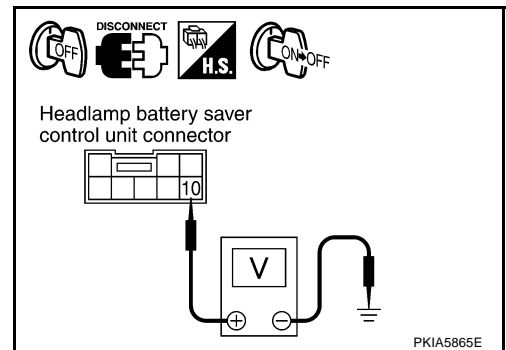
## Headlamp Battery Saver Control Unit Circuit Inspection

AKS003S6

### 1. CHECK RAP SIGNAL

1. Turn ignition switch OFF.
2. Disconnect battery saver control unit connector.
3. Turn ignition switch ON.
4. Check voltage between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and ground after turning off the ignition switch.

Connector	Terminal (Wire color)	Condition	Voltage
M34	10 (Y/R)	Within 45 seconds after ignition switch is turned off	Approx. 0V
		Front door is opened or more than 45 seconds after ignition switch is turned off	Battery voltage



OK or NG

OK >> INSPECTION END

NG >> GO TO 2.

# HEADLAMP (FOR USA)

## 2. CHECK HARNESS CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and BCM harness connector R4 terminal 135 (Y/G).

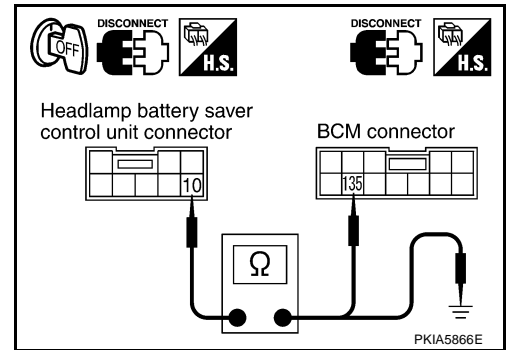
**10 (Y/R) - 135 (Y/G) : Continuity should exist.**

3. Check continuity between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and ground.

**10 (Y/R) - Ground : Continuity should not exist.**

OK or NG

- OK >> Replace BCM.
- NG >> Repair harness or connector.



## Lighting Switch (AUTO) System Inspection

AKS002F7

### 1. CHECK LIGHTING SWITCH (AUTO) SIGNAL

With CONSULT-II

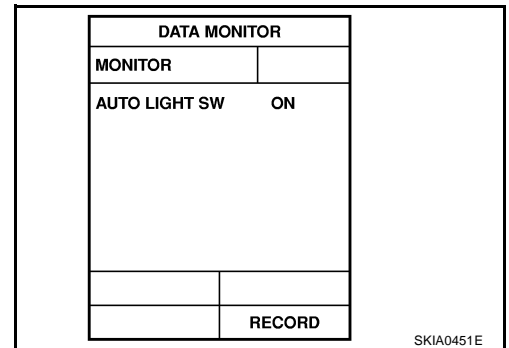
- Operate lighting switch via "AUTO LIGHT SWITCH" on "DATA MONITOR" screen and make sure that lamp turns on and off as commanded.

**Lighting switch AUTO : AUTO LIGHT SW ON**

**Lighting switch OFF : AUTO LIGHT SW OFF**

Without CONSULT-II

- Operate the lighting switch via "switch monitor" of self-diagnosis function make sure that the lamp turns on and off as commanded.



OK or NG

- OK >> INSPECTION END
- NG >> GO TO 2.

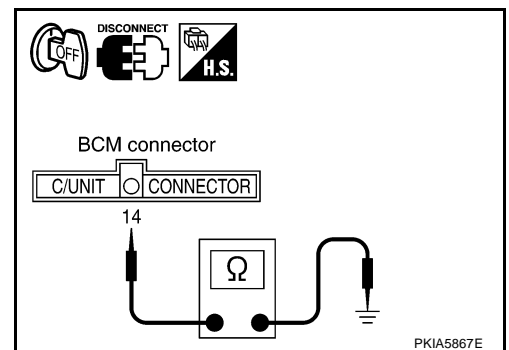
### 2. CHECK LIGHTING SWITCH (AUTO) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector M4 terminal 14 (Y/L) and ground while operating lighting switch in AUTO.

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

OK or NG

- OK >> INSPECTION END
- NG >> GO TO 3.



# HEADLAMP (FOR USA)

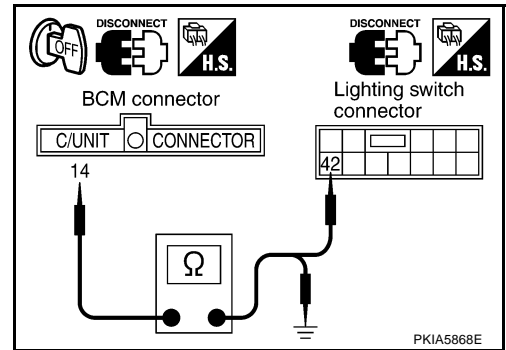
## 3. CHECK LIGHTING SWITCH (AUTO) CIRCUIT

1. Disconnect lighting switch connector.
2. Check continuity between BCM harness connector M4 terminal 14 (Y/L) and lighting switch harness connector M55 terminal 42 (Y/L).

**14 (Y/L) - 42 (Y/L) : Continuity should exist.**

3. Check continuity between BCM harness connector M4 terminal 14 (Y/L) and ground.

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



OK or NG

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

## 4. CHECK LIGHTING SWITCH

Check continuity of the lighting switch. Refer to [LT-102. "Switch Circuit Inspection"](#).

OK or NG

- OK >> Check harness ground circuit.
- NG >> Replace lighting switch.

## Optical Sensor System Inspection

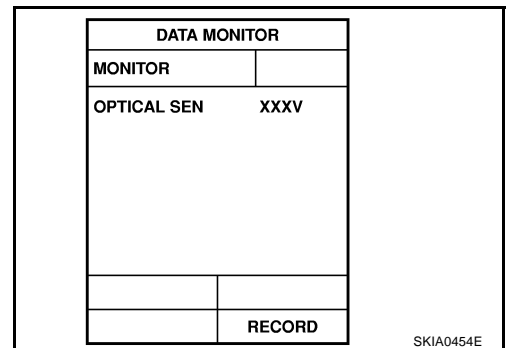
AKS002F8

### 1. CHECK OPTICAL SENSOR OUTPUT SIGNAL

Ⓟ With CONSULT-II

Using "OPTICAL SEN" on "DATA MONITOR" screen, check difference in the voltage when light is applied to optical sensor and light is not applied to optical sensor.

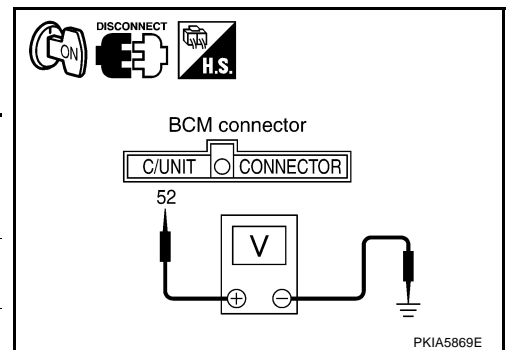
Condition	Reference value of data monitor
Light is applied to optical sensor.	More than 3 V
Light is not applied to optical sensor.	Approx. 0.5 V



ⓧ Without CONSULT-II

1. Turn ignition switch ON.
2. Check voltage between BCM harness connector M4 terminal 52 (G/R) and ground when light is applied to optical sensor and light is not applied to optical sensor.

Terminals		Condition	Voltage
(+)	(-)		
Connector	Terminal (Wire color)		
M4	52 (G/R)	Light is applied to optical sensor.	More than 3 V
		Light is not applied to optical sensor.	Approx. 0.5 V



OK or NG

- OK >> INSPECTION END
- NG >> GO TO 2.

# HEADLAMP (FOR USA)

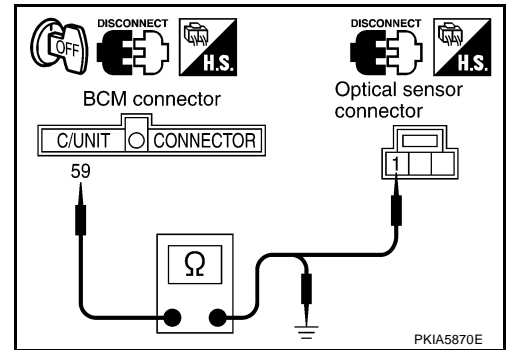
## 2. CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and optical sensor connector.
3. Check continuity between BCM harness connector M4 terminal 59 (SB) and optical sensor harness connector M110 terminal 1 (SB).

**59 (SB) - 1 (SB) : Continuity should exist.**

4. Check continuity between BCM harness connector M4 terminal 59 (SB) and ground.

**59 (SB) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

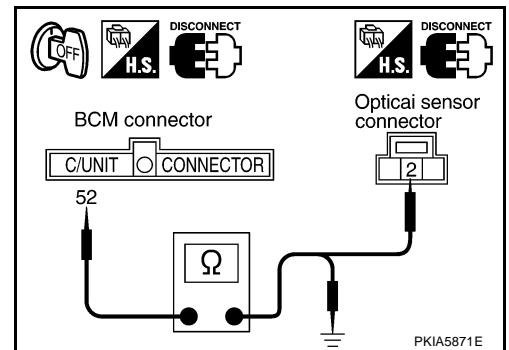
## 3. CHECK OPTICAL SENSOR SIGNAL CIRCUIT

1. Check continuity between BCM harness connector M4 terminal 52 (G/R) and optical sensor harness connector M110 terminal 2 (G/R).

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

2. Check continuity between BCM harness connector M4 terminal 52 (G/R) and ground.

**52 (G/R) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

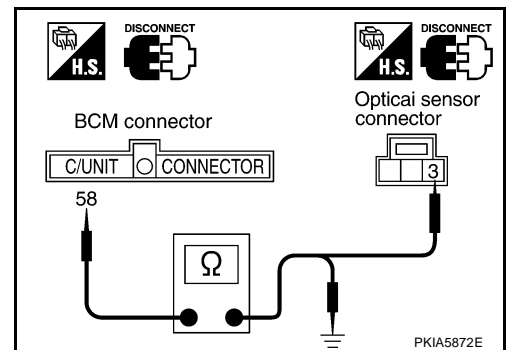
## 4. CHECK OPTICAL SENSOR GROUND CIRCUIT

1. Check continuity between BCM harness connector M4 terminal 58 (Y/B) and optical sensor harness connector M110 terminal 3 (Y/B).

**58 (Y/B) - 3 (Y/B) : Continuity should exist.**

2. Check continuity between BCM harness connector M4 terminal 58 (Y/B) and ground.

**58 (Y/B) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.

# HEADLAMP (FOR USA)

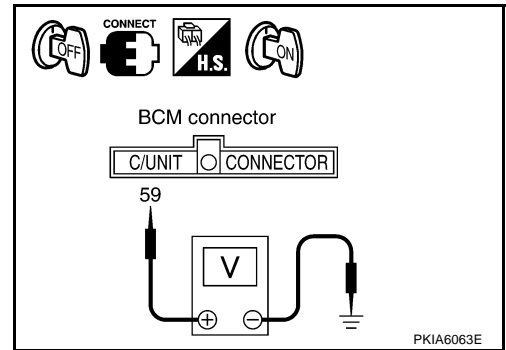
## 5. CHECK OPTICAL SENSOR POWER SUPPLY OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM harness connector M4 terminal 59 (SB) and ground.

**59 (SB) - Ground : Approx. 5V**

OK or NG

- OK >> Replace optical sensor.  
NG >> Replace BCM.



## Headlamp Relay System Inspection

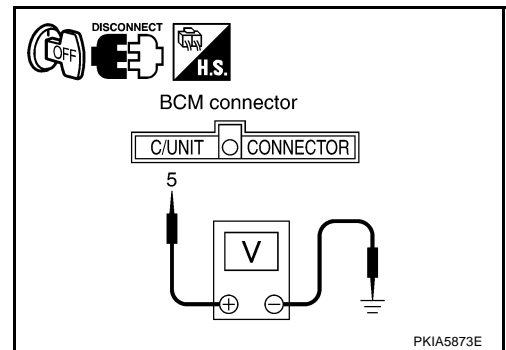
### 1. CHECK HEADLAMP RELAY CONTROL SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM harness connector M4 terminal 5 (W/PU) and ground while operating the lighting switch in OFF.

**5 (W/PU) - Ground : Battery voltage should exist.**

OK or NG

- OK >> INSPECTION END  
NG >> Check harness for open or short between BCM and headlamp relay-1, headlamp relay- 2.



## Tail Lamp Relay System Inspection

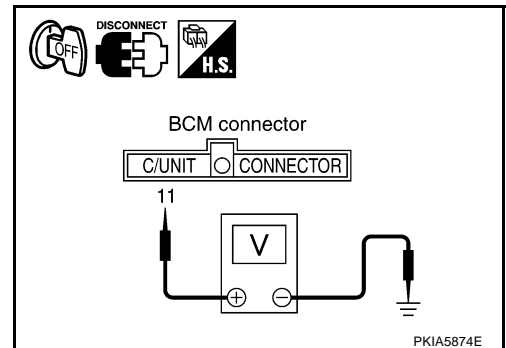
### 1. CHECK TAIL LAMP RELAY CONTROL SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM harness connector M4 terminal 11 (LG/B) and ground while operating the lighting switch in OFF.

**11 (LG/B) - Ground : Battery voltage should exist.**

OK or NG

- OK >> GO TO 2.  
NG >> Check harness for open or short between BCM and tail lamp relay.



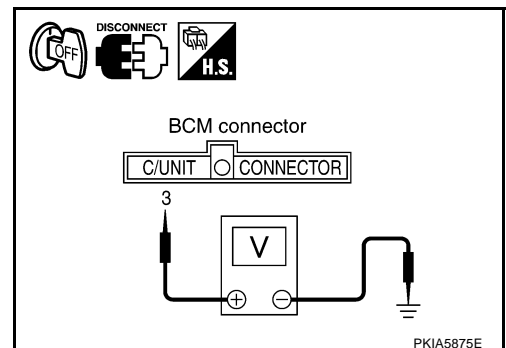
### 2. CHECK TAIL LAMP SIGNAL

Check voltage between BCM harness connector M4 terminal 3 (R/L) and ground while operating lighting switch in 1ST position.

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

OK or NG

- OK >> INSPECTION END  
NG >> GO TO 3.



# HEADLAMP (FOR USA)

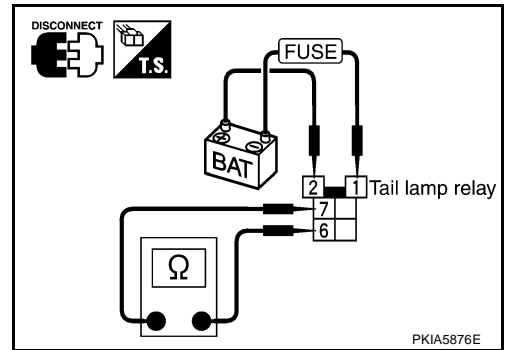
## 3. CHECK TAIL LAMP RELAY

1. Remove tail lamp relay.
2. Apply 12V between tail lamp relay terminals 2 and 1, and check continuity between terminals 6 and 7.

**6 - 7 : Continuity should exist.**

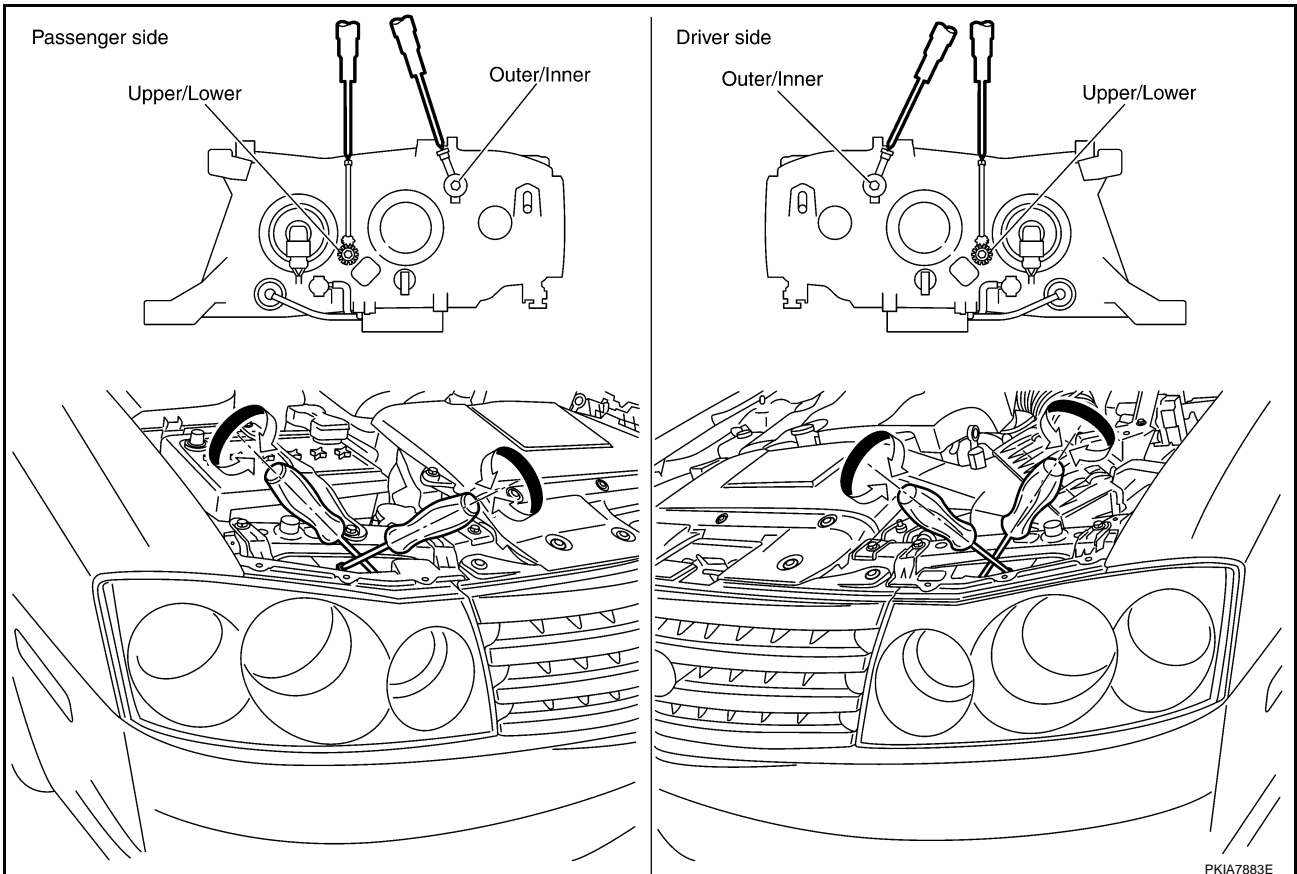
### OK or NG

- OK >> Check harness for open or short between BCM and tail lamp relay.  
NG >> Replace tail lamp relay.



## Aiming Adjustment

AKS002FC



**For details, refer to the regulations in your own country.**

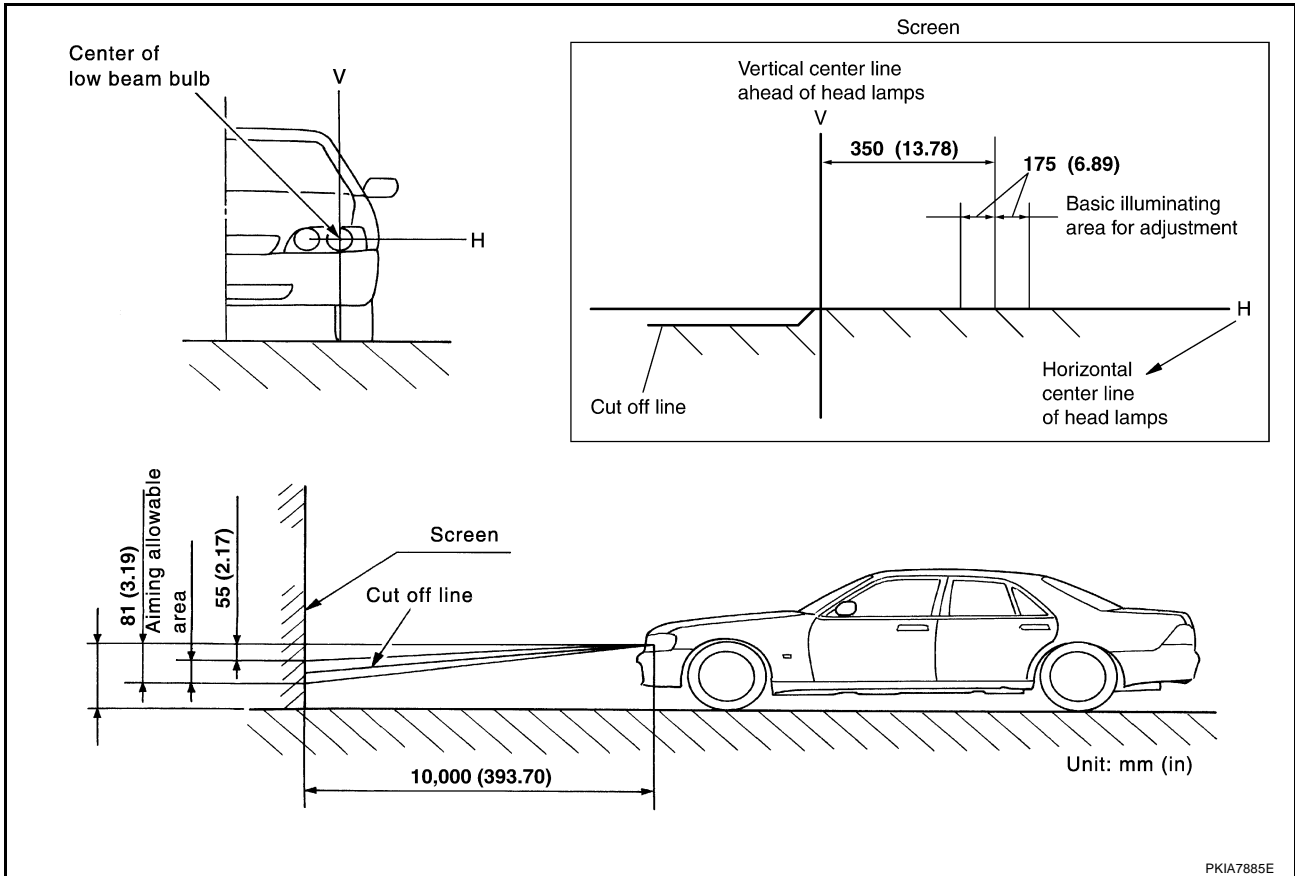
Before performing aiming adjustment, check the following.

1. Keep all tires inflated to correct pressures.
2. Place vehicle on flat surface.
3. See that there is no-load in vehicle other than the driver (or equivalent weight placed in driver's position). Coolant, engine oil filled up to correct level and full fuel tank.

# HEADLAMP (FOR USA)

## LOW BEAM AND HIGH BEAM

1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.
  - **First tighten the adjusting screw all the way and then make adjustment by loosening the screw.**

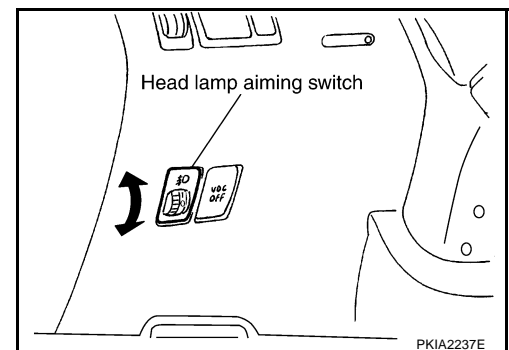


If the vehicle front body has been repaired and/or the headlamp assembly has been replaced, check aiming. Use the aiming chart shown in the figure.

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

### CAUTION:

Be sure aiming switch is set to "0" when performing aiming adjustment.





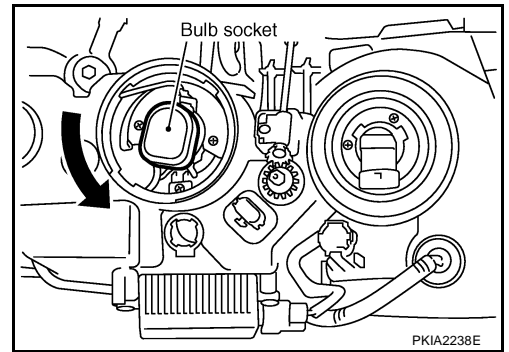
# HEADLAMP (FOR USA)

AKS002FD

## Bulb Replacement

### HEADLAMP (OUTER SIDE), FOR LOW BEAM

1. Remove headlamps. Refer to [LT-42, "Removal and Installation"](#).
2. Turn plastic cap counterclockwise and unlock it.
3. Turn bulb socket counterclockwise and unlock it.
4. Unlock retaining spring and remove bulb from headlamp.



### HEADLAMP (INNER SIDE), FOR HIGH BEAM

1. Turn lighting switch OFF.
2. Disconnect negative battery cable or remove power fuse.
3. Remove mass air flow sensor cover and air cleaner assembly (when replacing LH bulb). Refer to [EM-16, "AIR CLEANER AND AIR DUCT"](#) in "ENGINE MECHANICAL (EM)" section.
4. Remove battery cover and battery (when replacing RH bulb). Refer to [SC-8, "Removal and Installation"](#) in "STARTING AND CHARGING SYSTEM (SC)" section.
5. Disconnect headlamp connector.
6. Turn bulb socket counterclockwise and unlock it.
7. Remove bulb from headlamp.

### FRONT TURN SIGNAL AND PARKING (CLEARANCE) LAMP

1. Turn lighting switch OFF.
2. Remove mass air flow sensor cover and air cleaner assembly (when replacing LH bulb). Refer to [EM-16, "AIR CLEANER AND AIR DUCT"](#) in "ENGINE MECHANICAL (EM)" section.
3. Remove battery cover and battery (when replacing RH bulb). Refer to [SC-8, "Removal and Installation"](#) in "STARTING AND CHARGING SYSTEM (SC)" section.
4. Turn bulb socket counterclockwise and unlock it.
5. Remove bulb from its socket.

**Headlamp (outer side), for low beam** : 12V 35W (D2R)

**Headlamp (inner side), for high beam** : 12V 60W (HB3) (#9005)

**Front turn signal and parking lamp** : 12V 27/8W (amber)

### CAUTION:

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

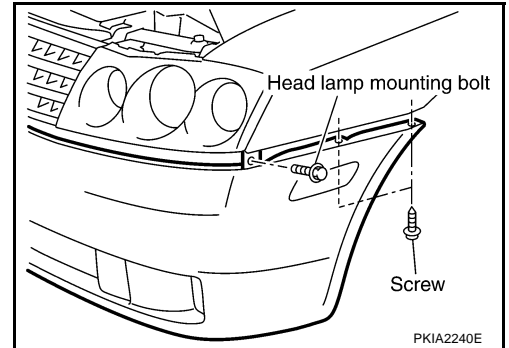
# HEADLAMP (FOR USA)

AKS002FE

## Removal and Installation

### REMOVAL

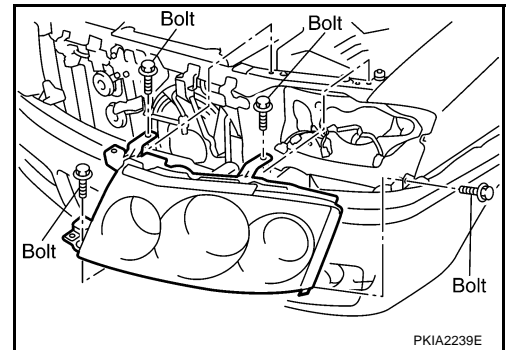
1. Disconnect negative battery cable or remove power fuse.
2. Remove front grille. Refer to [EI-19, "FRONT GRILLE"](#) in "EXTERIOR & INTERIOR (EI)" section.
3. Remove fender protector. Refer to [EI-21, "FENDER PROTECTOR"](#) in "EXTERIOR & INTERIOR (EI)" section.
4. Remove mounting screws on the side of front bumper. Refer to [EI-15, "FRONT BUMPER"](#) in "EXTERIOR & INTERIOR (EI)" section.
5. Pull the side of front bumper toward the front of the vehicle and remove headlamp mounting bolt appeared.



6. Remove headlamp mounting bolts inside headlamp.
7. Pull headlamp toward the front of the vehicle, disconnect connector, and remove from the vehicle.

### CAUTION:

When removing the headlamp, place a rag between the headlamp and the bumper to protect the bumper.



### INSTALLATION

Install in the reverse order of removal, taking care of the following points.

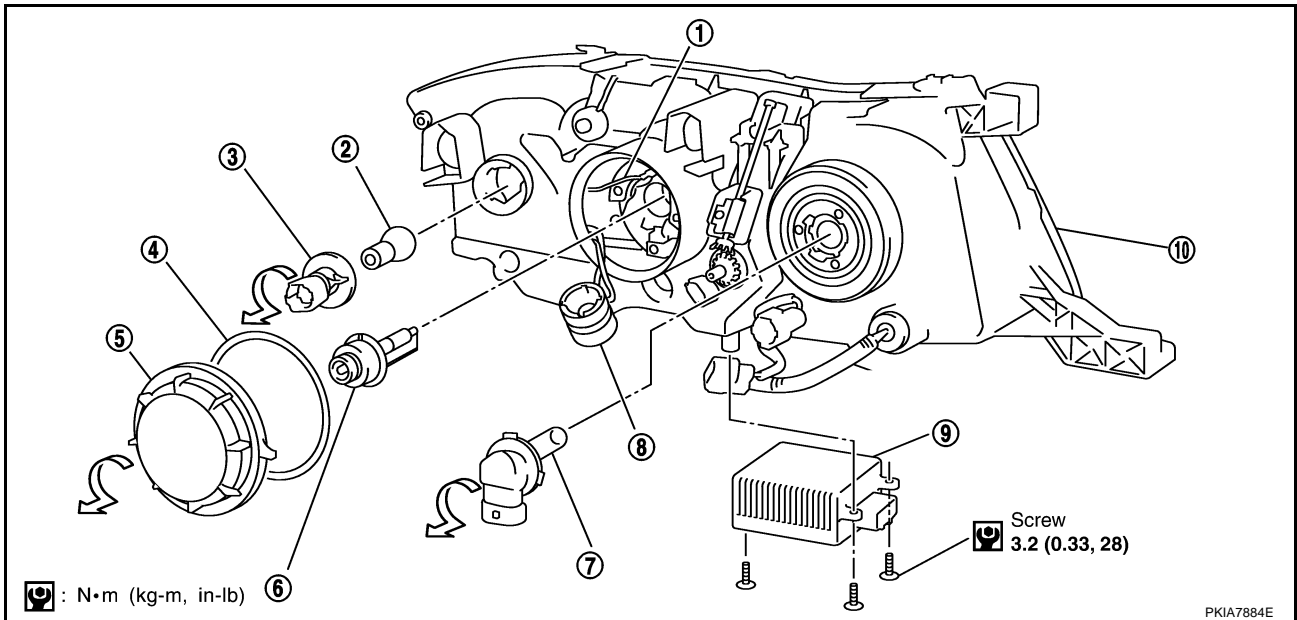
**Headlamp mounting bolt** : 5.5 N-m (0.56 kg-m, 49 in-lb)

# HEADLAMP (FOR USA)

## Disassembly and Assembly DISASSEMBLY

AKS002FF

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- |                             |  |   |
|-----------------------------|--|---|
| 1. Retaining springs        | 2. Front turn signal and parking lamp bulb | 3. Front turn signal and parking lamp bulb socket |
| 4. Seal rubber              | 5. Plastic cap (low)                       | 6. Xenon bulb                                     |
| 7. Halogen bulb             | 8. Xenon bulb socket                       | 9. HID control unit                               |
| 10. Xenon headlamp assembly |  |   |

1. Turn plastic cap (low) counterclockwise and unlock it.
2. Turn xenon bulb socket counterclockwise and unlock it.
3. Unlock retaining spring and remove xenon bulb (low).
4. Disconnect HID control unit connector and remove HID control unit mounting screws.
5. Turn halogen bulb socket counterclockwise and unlock it.
6. Remove halogen bulb from headlamp.
7. Turn front turn signal and parking lamp bulb socket counterclockwise and unlock it.
8. Remove front turn signal and parking lamp bulb from its socket.

## ASSEMBLY

Assemble in the reverse order of disassembly, taking care of the following points.

**HID control unit mounting screws** : 3.2 N-m (0.33 kg-m, 28 in-lb)

### CAUTION:

- When the HID control unit is removed, reinstall it securely and avoid any looseness.
- After installing the bulb, be sure to install the plastic cap and the bulb socket securely to ensure watertightness.

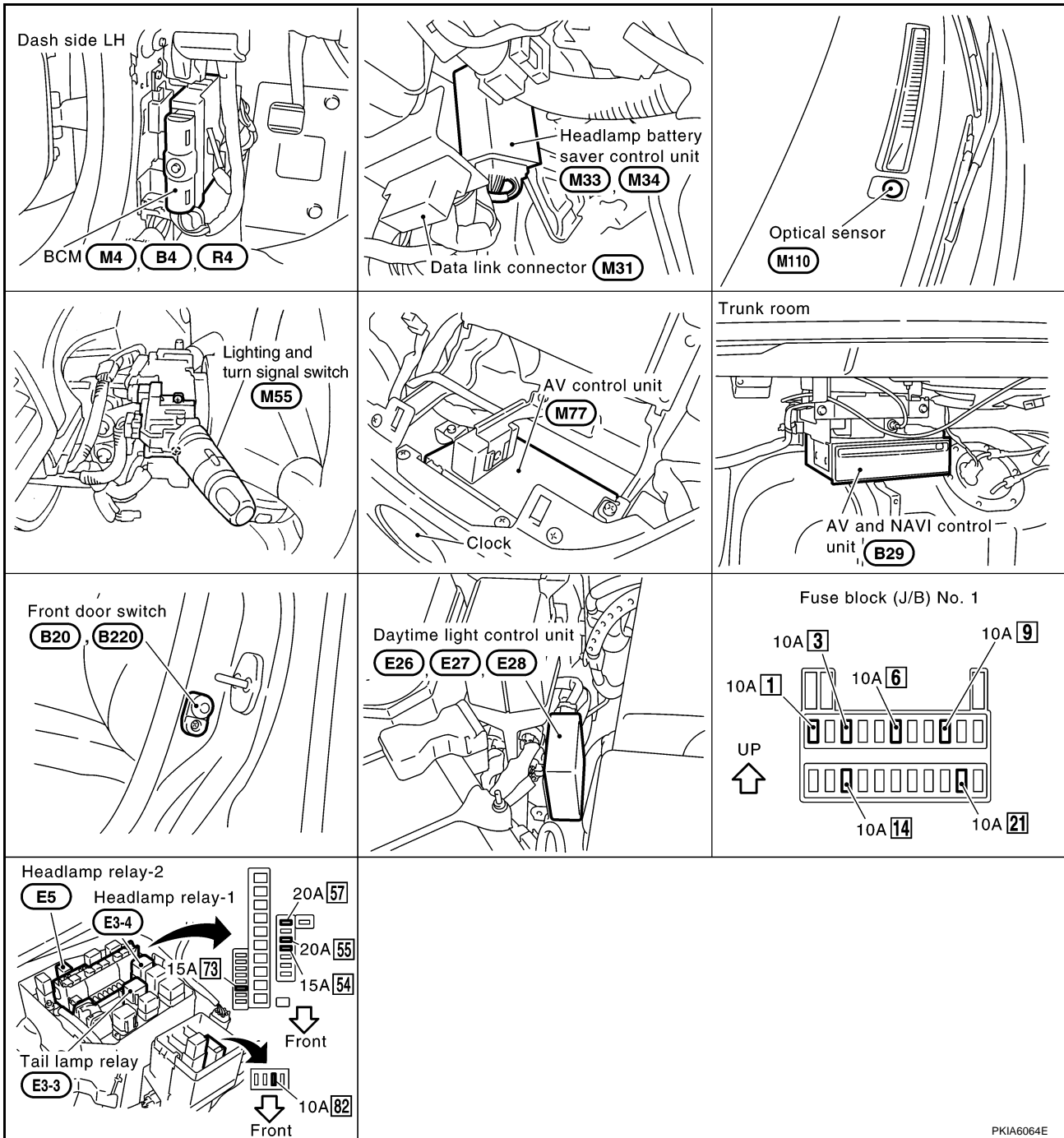
# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

PFP:26010

### Component Parts and Harness Connector Location

AKS002FG



PKIA6064E

## System Description

AKS002FH

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

And battery saver system is controlled by the headlamp battery saver control unit and BCM.

Power is supplied at all times

- to headlamp relay-1 terminal 2,
- to headlamp relay-1 terminal 3
- through 20A fuse [No. 57, located in fuse, fusible link and relay block (J/B)],

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

- to headlamp relay-1 terminal 7
- through 20A fuse [No. 55, located in fuse, fusible link and relay block (J/B)],
- to headlamp relay-2 terminals 1 and 3
- through 15A fuse (No. 73, located in fuse, fusible link and relay block),
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 6, located in fuse block (J/B) No. 1], and
- to BCM terminal 105
- through 10A fuse [No. 3, located in fuse block (J/B) No. 1].

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

- to daytime light control unit terminal 3
- through 10A fuse (No. 82, located in fuse, fusible link and relay block),
- to headlamp battery saver control unit terminal 1
- to BCM terminal 68
- through 10A fuse [No. 1, located in fuse block (J/B) No. 1].

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

- to BCM terminal 60
- through 10A fuse [No. 21, located in fuse block (J/B) No. 1].

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

- to daytime light control unit terminal 2
- through 10A fuse [No. 14, located in fuse block (J/B) No. 1].

Ground is supplied

- to daytime light control unit terminal 16
- through grounds E42 and E62,
- to headlamp battery saver control unit terminals 4 and 11
- through grounds M25 and M115, and
- to BCM terminals 56 and 113
- through grounds M24 and M114.

## HEADLAMP OPERATION

### Power Supply to Low Beam and High Beam

When lighting switch is in 2ND or PASS position, ground is supplied

- to headlamp relay-1 terminal 1
- to headlamp relay-2 terminal 2
- from headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 3 and 9
- through lighting switch terminals 12 and 8
- through grounds M25 and M115.

Headlamp relays are energized and then power is supplied to headlamps.

### Low Beam Operation

When the lighting switch is turned to 2ND position and placed in LOW positions, power is supplied

- from headlamp relay-1 terminals 5 and 6
- to headlamp LH and RH terminals 3.

Ground is supplied

- to headlamp LH and RH terminals 4
- through grounds E24 and E42.

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# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

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

## High Beam Operation/Flash-to-Pass Operation

When the lighting switch is turned to 2ND position and placed in HIGH position or PASS position, power is supplied

- from headlamp relay-2 terminal 5
- to daytime light control unit terminals 4 and 5
- to combination meter terminal 9 for the HIGH BEAM indicator.

Ground is supplied

- to headlamp LH terminal 2
- through daytime light control unit terminals 10 and 13,
- to combination meter terminal 10 for the HIGH BEAM indicator
- through lighting switch terminals 9 and 8
- through grounds M25 and M115,
- to headlamp RH terminal 2
- through daytime light control unit terminals 9 and 14
- through lighting switch terminals 6 and 5
- through grounds M25 and M115.

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

## BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from BCM terminal 135.

After counting 45 seconds by the RAP signal from the BCM to headlamp battery saver control unit, the ground supply to both terminal 1 of headlamp relay-1 and terminal 2 of headlamp relay-2 from headlamp battery saver control unit terminals 2 and 8 is terminated.

Then headlamps are turned off.

The headlamps are turned off when front door (driver or passenger side) is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated.

When the lighting switch is turned from OFF to 2ND after headlamps are turned to off by the battery saver control,

ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11
- to headlamp relay-1 terminal 1 and headlamp relay-2 terminal 2 from headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 3 and 9
- through lighting switch terminal 12.

Then headlamps illuminate again.

## AUTO LIGHT OPERATION

For auto light operation, refer to [LT-8, "AUTO LIGHT OPERATION"](#) in "HEADLAMP (USA)".

## DAYTIME LIGHT OPERATION

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

- through daytime light control unit terminal 7
- to headlamp RH terminal 1
- through headlamp RH terminal 2
- to daytime light control unit terminal 9
- through daytime light control unit terminal 6
- to headlamp LH terminal 1
- through headlamp LH terminal 2
- to daytime light control unit terminal 10.

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Ground is supplied

- to daytime light control unit terminal 16
- through grounds E42 and E62.

Because the high beam headlamps are now wired in series, they operate at half illumination.

## OPERATION

After starting the engine with the lighting switch in the "OFF" or "1ST" position, the headlamp high beam automatically turns on. Lighting switch operations other than the above are the same as conventional light systems.

Engine		With engine stopped									With engine running								
Lighting switch		OFF			1ST			2ND			OFF			1ST			2ND		
		Hi	Lo	P	Hi	Lo	P	Hi	Lo	P	Hi	Lo	P	Hi	Lo	P	Hi	Lo	P
Headlamp	High beam	-	-	-	-	-	×	×	-	×	●*	●*	×	●*	●*	×	×	-	×
	Low beam	-	-	-	-	-	×	×	×	×	-	-	×	-	-	×	×	×	×
Parking (clearance), side marker and tail lamp		-	-	-	×	×	×	×	×	×	-	-	-	×	×	×	×	×	×
License and instrument illumination lamp		-	-	-	×	×	×	×	×	×	-	-	-	×	×	×	×	×	×

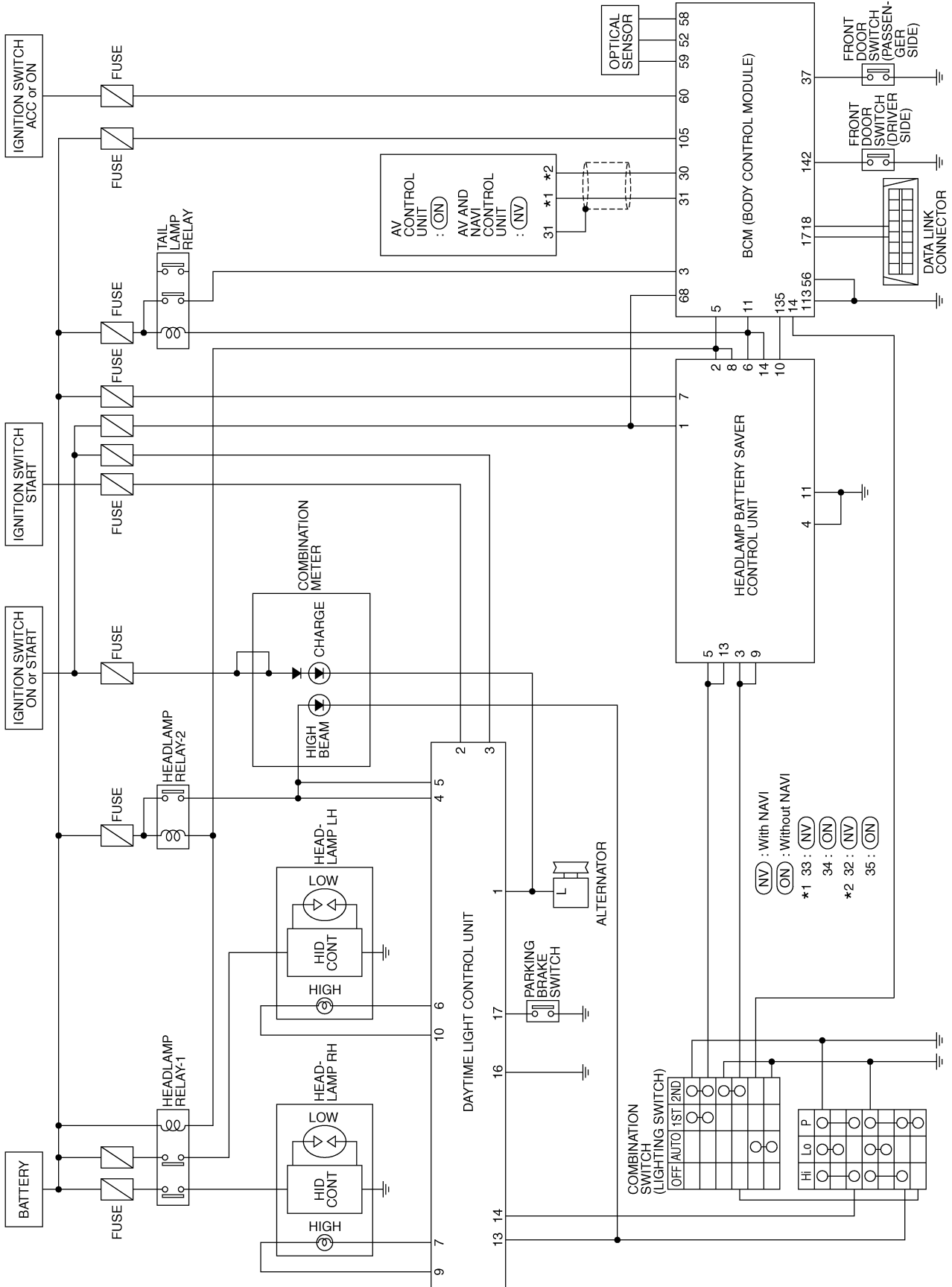
- Hi: "HIGH BEAM" position
- Lo: "LOW BEAM" position
- P: "FLASH TO PASS" position
- ×: Lamp "ON"
- -: Lamp "OFF"
- ●: Lamp dims. (Added functions)
- \*: When starting the engine with the parking brake released, the daytime light will come ON.  
When starting the engine with the parking brake pulled, the daytime light won't come ON.

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# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## Schematic

AKS002FI



TKWA0523E

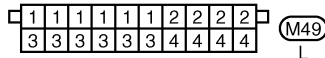
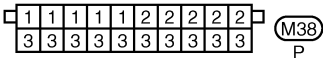
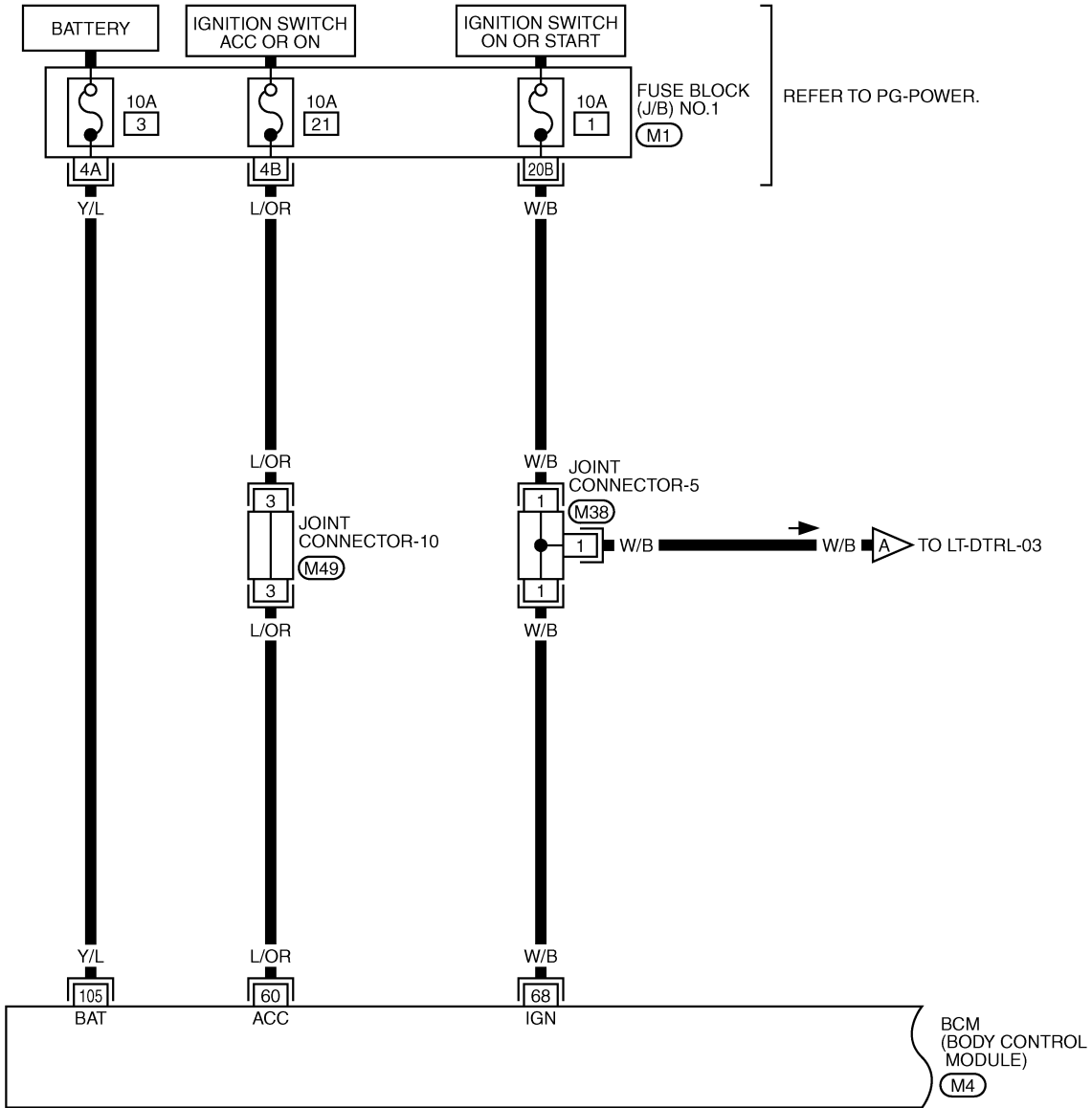


# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## Wiring Diagram — DTRL —

AKS002FJ

LT-DTRL-01



REFER TO THE FOLLOWING.

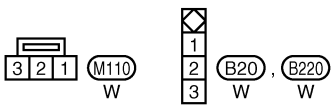
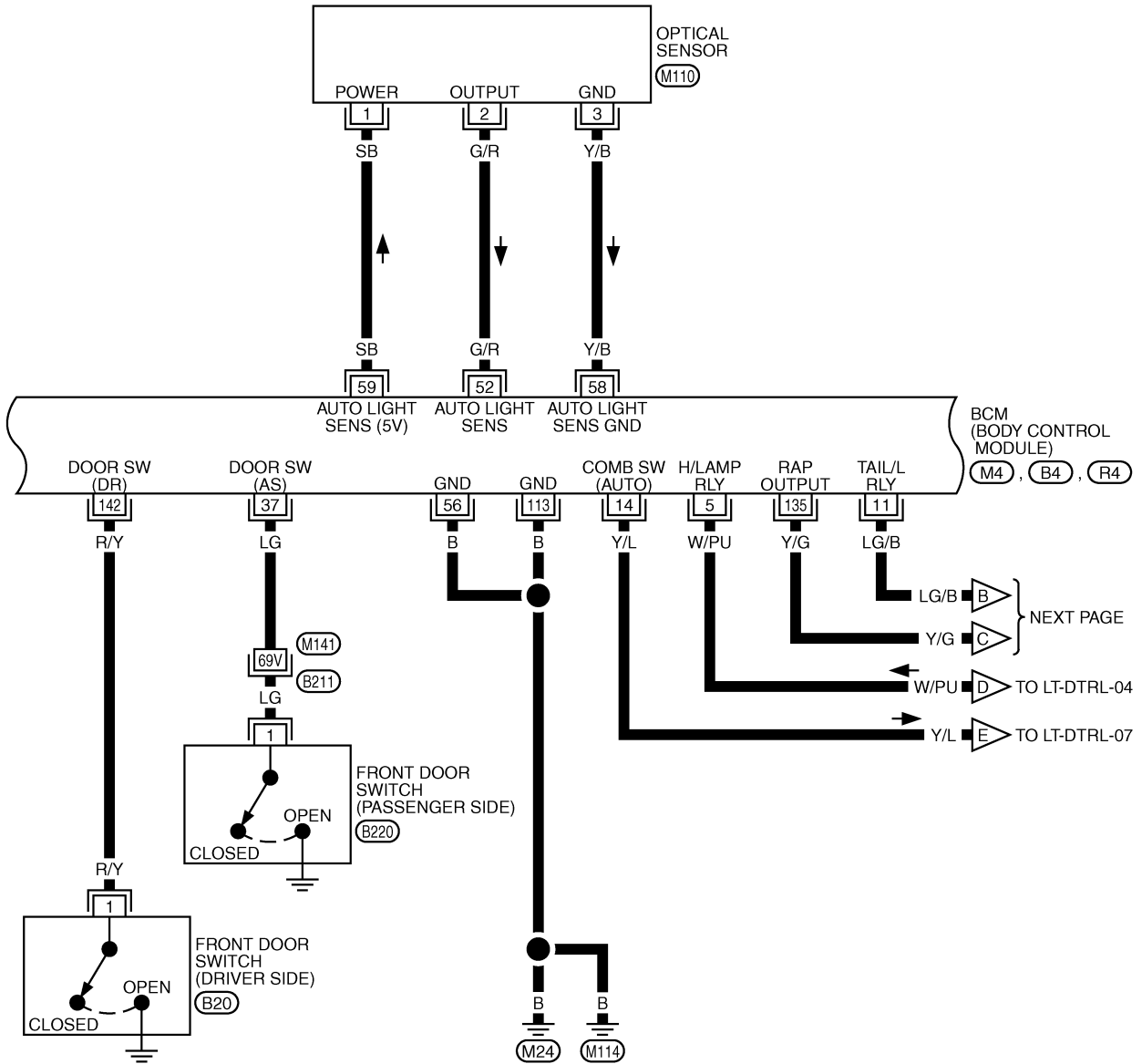
(M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(M4) - ELECTRICAL UNITS

TKWA0524E

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-02



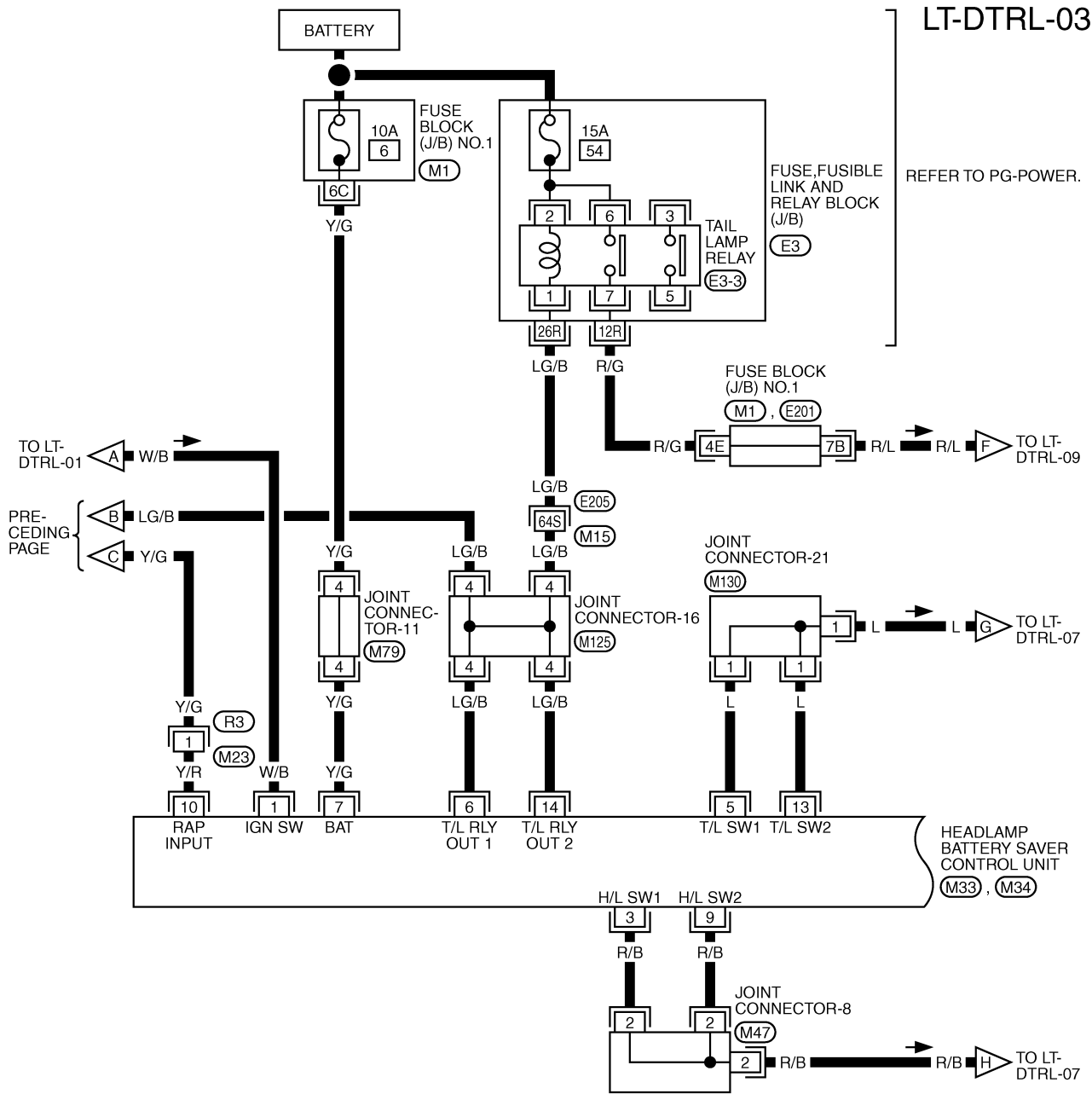
REFER TO THE FOLLOWING.

(B211) -SUPER MULTIPLE JUNCTION (SMJ)

(M4), (B4), (R4)  
-ELECTRICAL UNITS

TKWA0525E

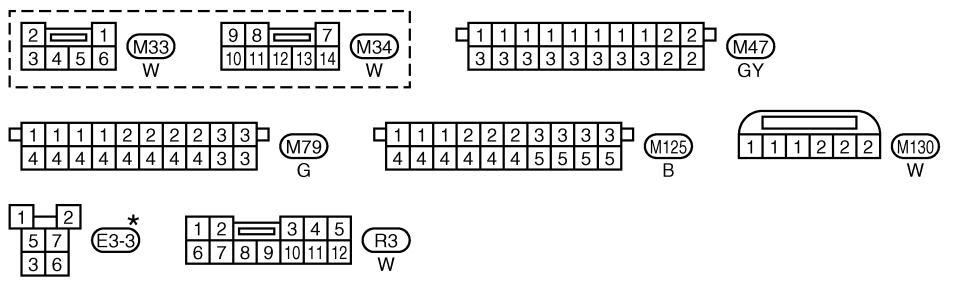
# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -



LT-DTRL-03

REFER TO PG-POWER.

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REFER TO THE FOLLOWING.

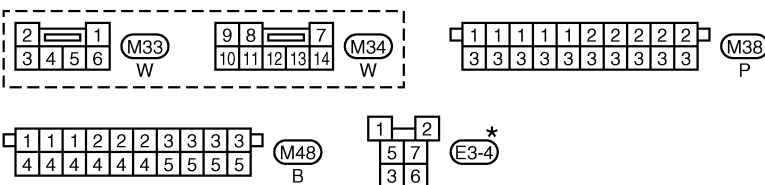
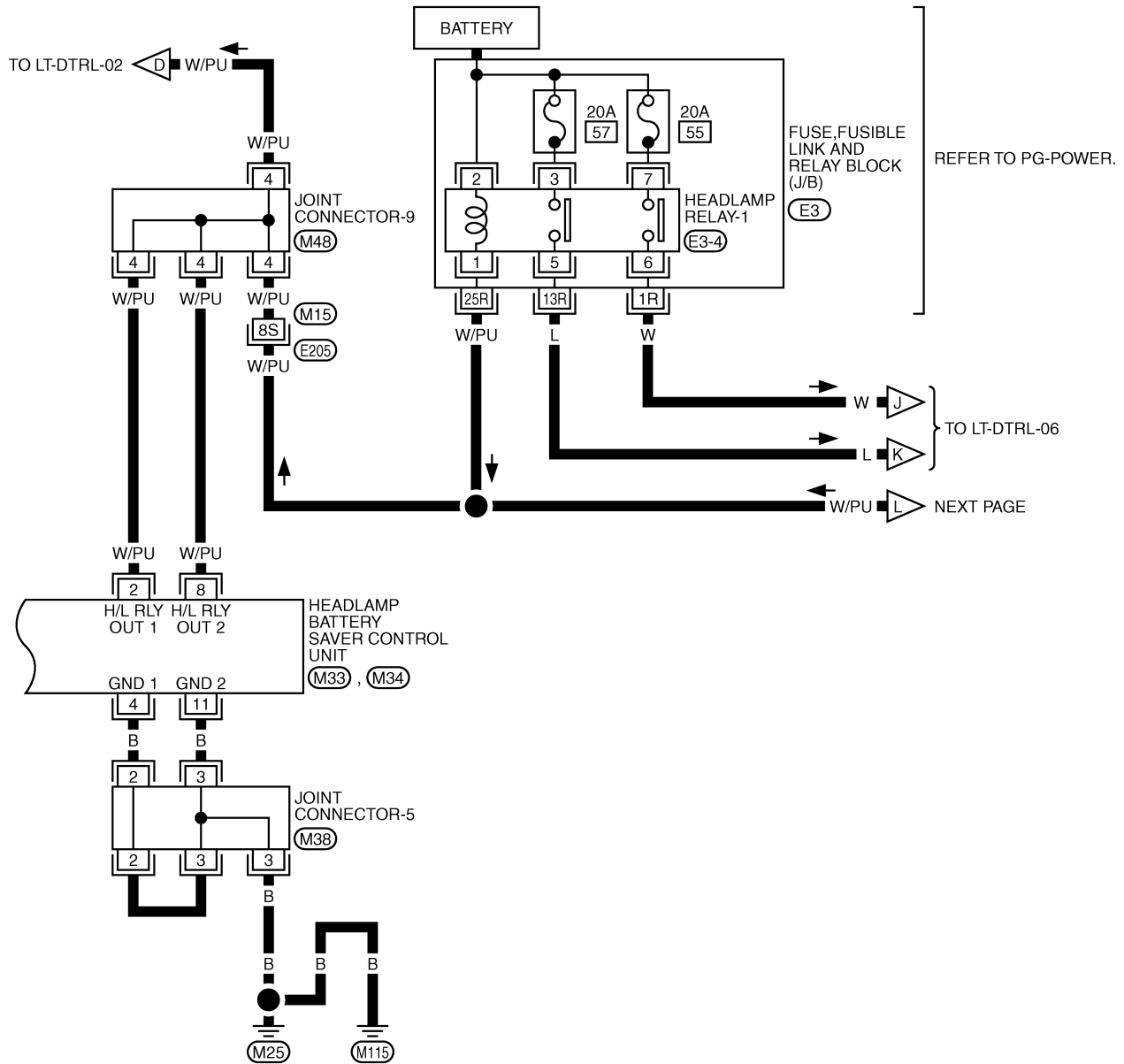
- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (E3) -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWA0526E

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-04



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

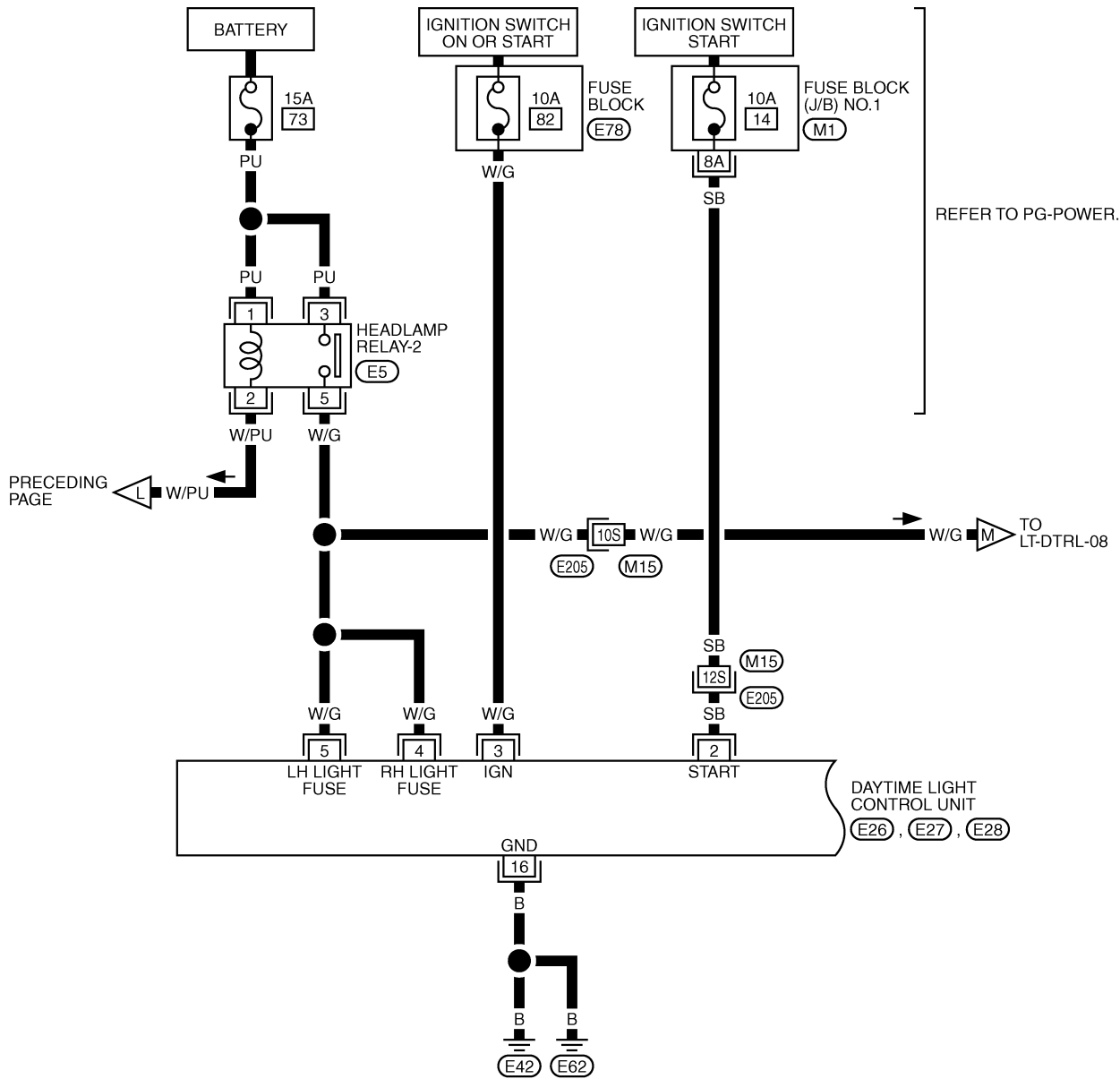
REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (E3) -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)

TKWA0527E

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-05

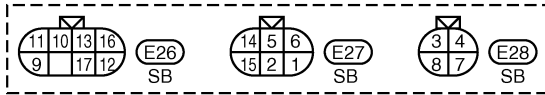
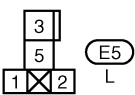


REFER TO PG-POWER.

PRECEDING PAGE

TO LT-DTRL-08

DAYTIME LIGHT CONTROL UNIT (E26, E27, E28)



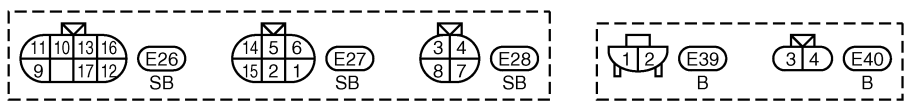
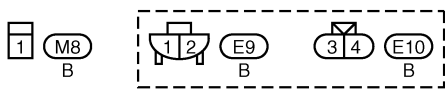
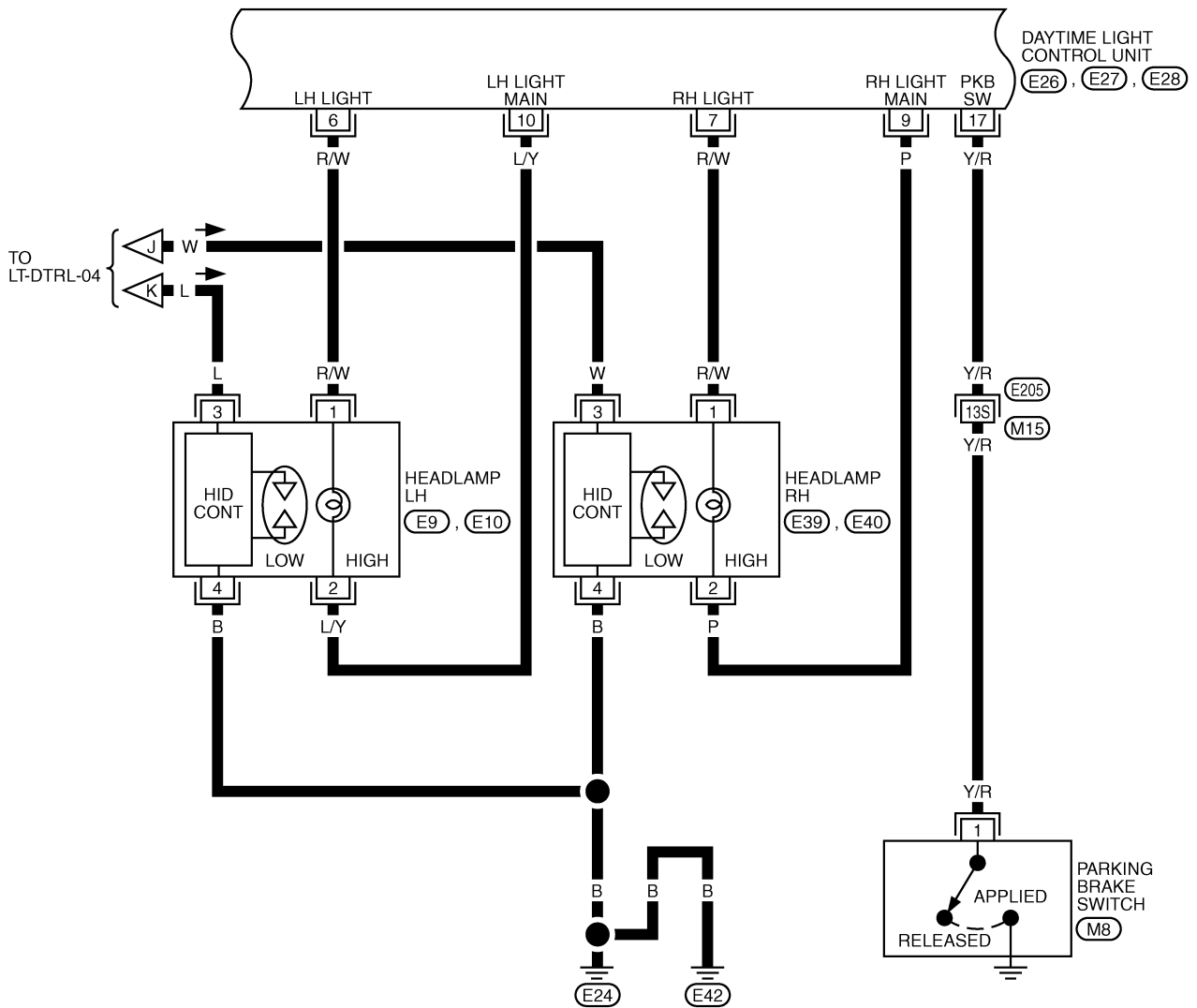
REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (E78) -FUSE BLOCK

TKWA0528E

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-06

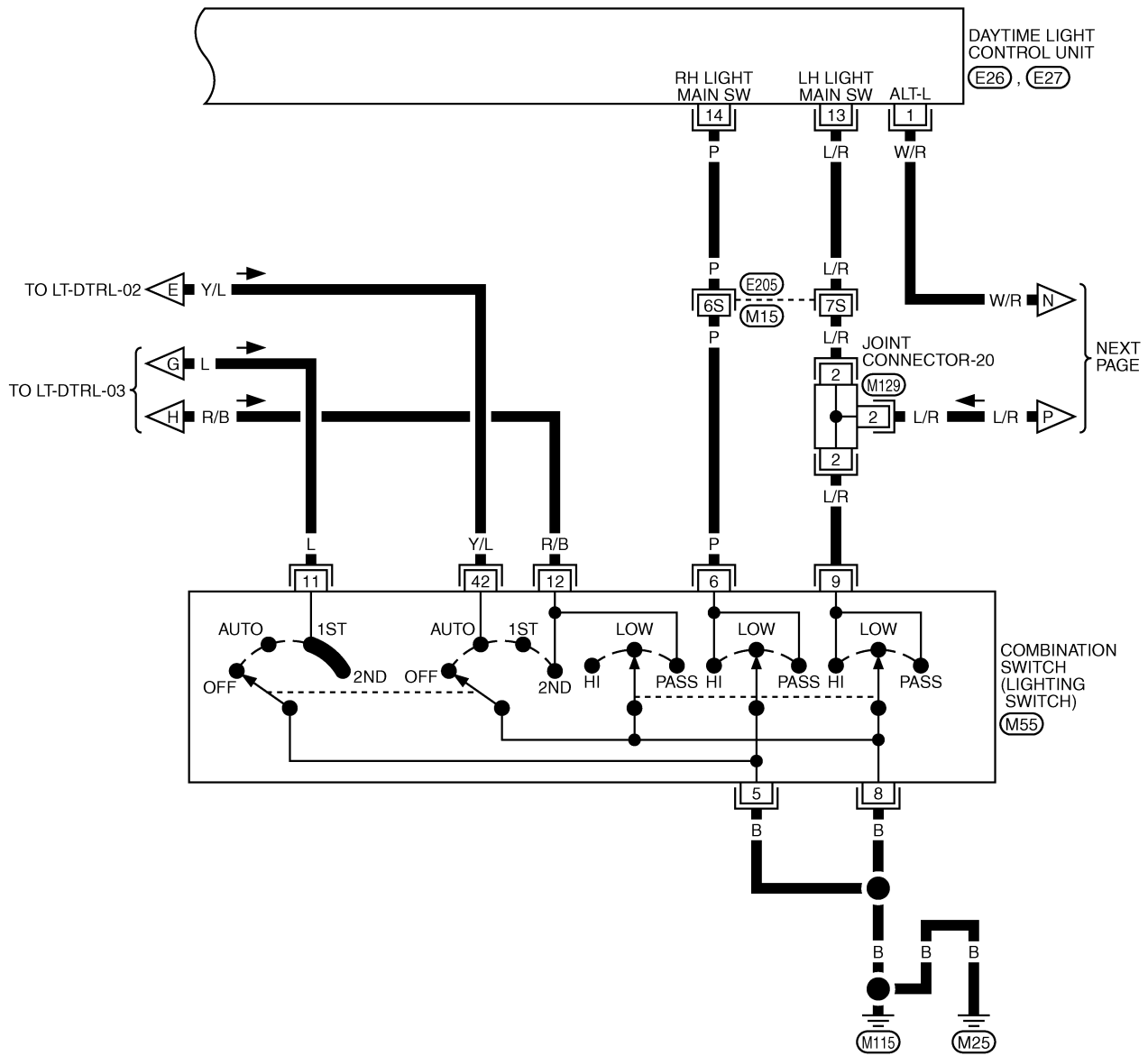


REFER TO THE FOLLOWING.  
 E205 -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0529E

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-07



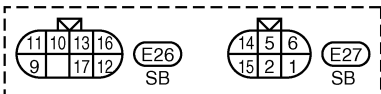
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(M55)  
W

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4	4	4	4	4	4	4	4	3	3

(M129)  
G

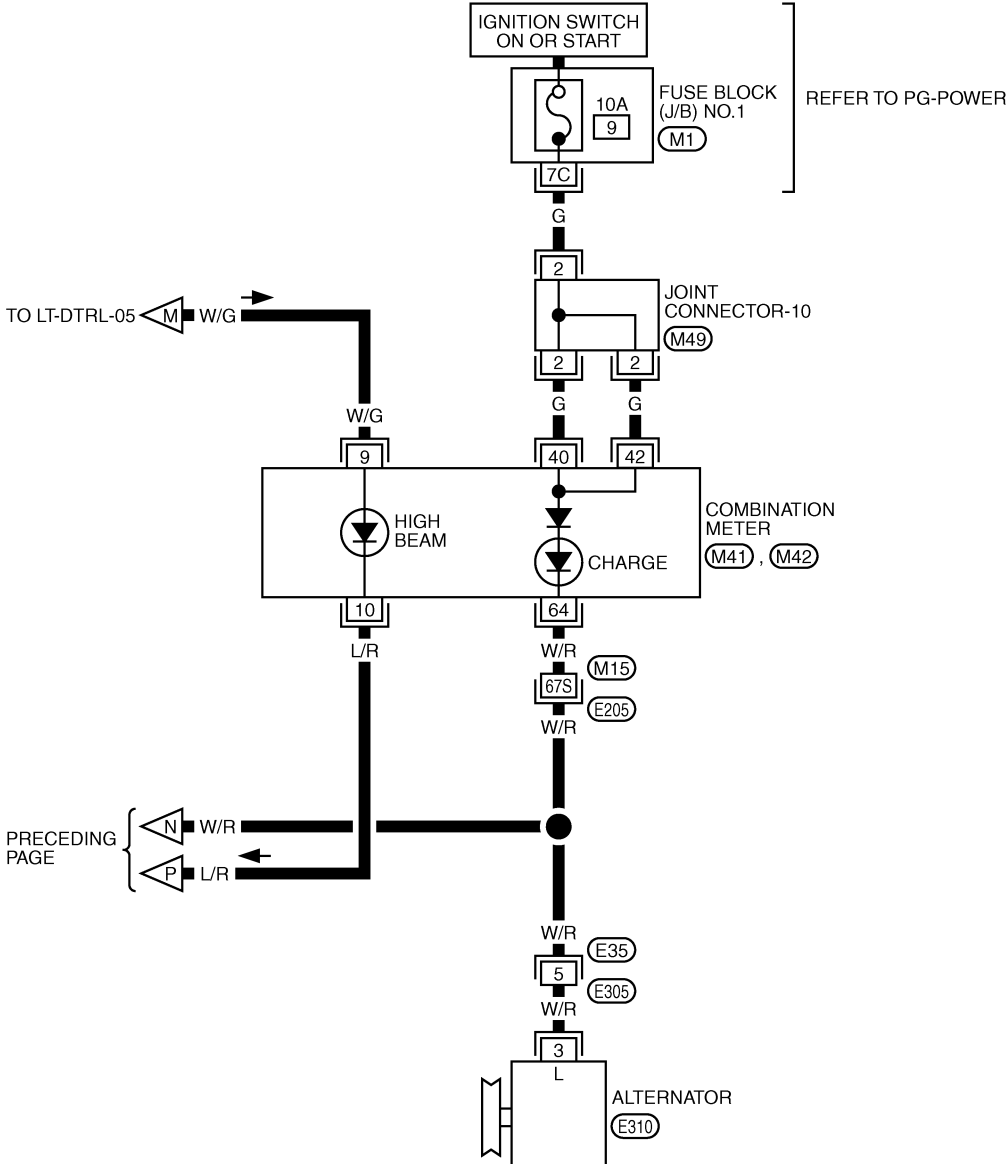


REFER TO THE FOLLOWING.  
(E205) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0530E

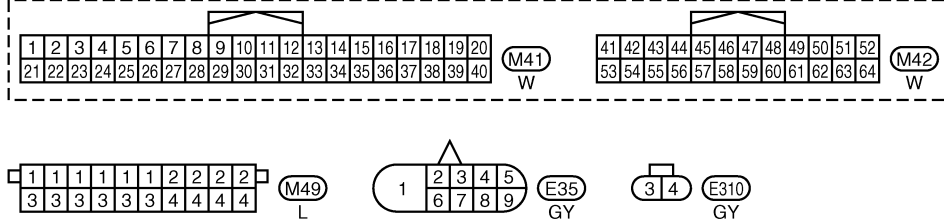
# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-08



REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

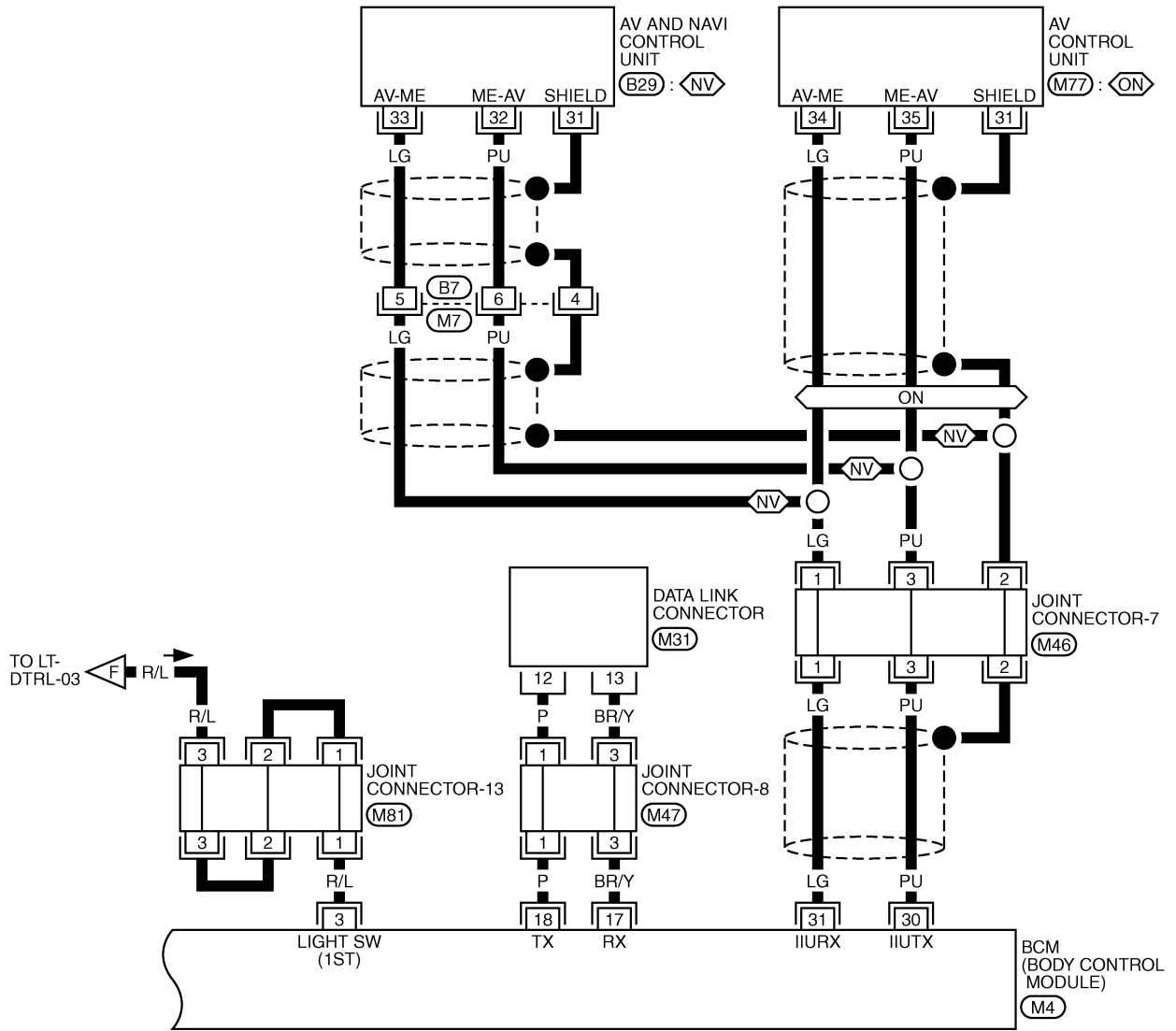




# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

LT-DTRL-09

NV : WITH NAVI  
ON : WITHOUT NAVI



1	2	3	4	5	6	7	8	9	10	11		
12	13	14	15	16	17	18	19	20	21	22	23	24

(M7) W

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

(M31) W

1	1	1	2	2	3	3	3	3
4	4	4	4	4	5	5	5	5

(M46) B

1	1	1	1	1	1	1	1	2	2
3	3	3	3	3	3	3	3	2	2

(M47) GY

48	45	42	39	37	35	33	30	27
47	44	41	38	36	34	32	29	26
46	43	40			31	28	25	

(M77) GY, (B29) GY

1	1	1	1	1	2	2	2	2
3	3	3	3	3	3	3	3	3

(M81) P

REFER TO THE FOLLOWING.  
M4 -ELECTRICAL UNITS

TKWA0532E

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## Terminals and Reference Value for Headlamp Battery Saver Control Unit

AKS004D0

Terminal No.	Wire color	Item	Operation or condition		Reference value	
1	W/B	Ignition switch ON or START	Ignition switch	OFF or ACC	Approx. 0V	
				ON or START	Battery voltage	
2	W/PU	Headlamp relay out 1	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				ON or START	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	ON or START	Approx. 0V
			Headlamps illuminate by auto light control.			
3	R/B	Headlamp switch 1	Lighting switch	1ST	Approx. 2.4V	
				PASS or 2ND	Approx. 0V	
			Headlamps illuminate by auto light control.			
4	B	Ground	—		Approx. 0V	
5	L	Tail lamp switch out 1	Lighting switch	OFF	Battery voltage	
				1ST or 2ND	Approx. 0V	
6	LG/B	Tail lamp relay out 1	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				ON or START	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	ON or START	Approx. 0V
			Headlamps illuminate by auto light control.			
7	Y/G	Battery power supply	—		Battery voltage	
8	W/PU	Headlamp relay out 2	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				ON or START	With 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	ON or START	Approx. 0V
			Headlamps illuminate by auto light control.			
9	R/B	Headlamp switch 2	Lighting switch	1ST	Approx. 2.4V	
				PASS or 2ND	Approx. 0V	
			Headlamps illuminate by auto light control.			
10	Y/R	RAP input signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Battery voltage	
				ON or START	Approx. 0V	
11	B	Ground	—		Approx. 0V	
13	L	Tail lamp switch 2	Lighting switch	OFF	Battery voltage	
				1ST or 2ND	Approx. 0V	
14	LG/B	Tail lamp relay out 2	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				ON or START	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START	ON or START	Approx. 0V
			Headlamps illuminate by auto light control.			

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## Terminals and Reference Value for BCM

AKS004D1

Terminal No.	Wire color	Item	Measuring condition		Reference value
			Ignition switch	Operation or condition	
3	R/L	Tail lamp signal	ON	Lighting switch: 1st	ON Battery voltage
					OFF Approx. 0V
5	W/PU	Headlamp relay control signal	ON	Lighting switch: AUTO	Light is applied to optical sensor. Battery voltage
11	LG/B	Tail lamp relay control signal	ON	Light switch: AUTO	Light is applied to optical sensor. Battery voltage
14	Y/L	Lighting switch AUTO signal	ON	Lighting switch	AUTO Approx. 0V
17	BR/Y	Data link RX	—	—	—
18	P	Data link TX	—	—	—
30	PU	Communication signal TX (BCM-AV: Transmission)	—	—	—
31	LG	Communication signal RX (AV-BCM: Receiving)	—	—	—
37	LG	Front door switch (Passenger side) signal	OFF	Front door switch (Passenger side)	ON (open) Approx. 0V
					OFF (close) Battery voltage
52	G/R	Auto light sensor signal	ON		Light is applied to optical sensor. 3V or more
					Light is not applied to optical sensor. Approx. 0V
56	B	Ground	—	—	Approx. 0V
58	Y/B	Auto light sensor ground	ON	—	Approx. 0V
59	SB	Auto light sensor power supply	ON	—	5V or more
60	L/OR	Ignition switch ACC or ON	ACC	—	Battery voltage
68	W/B	Ignition switch ON or START	ON	—	Battery voltage
105	Y/L	Battery power supply	OFF	—	Battery voltage
113	B	Ground	—	—	Approx. 0V
135	Y/G	RAP output signal	OFF	When headlamp battery saver timer is operated.	Approx. 0V
142	R/Y	Front door switch (Driver side) signal	OFF	Front door switch (Driver side) signal	ON (open) Approx. 0V
					OFF (close) Battery voltage

## Terminals and Reference Value for Daytime Light Control Unit

AKS004T0

Terminal No.	Wire color	Item	Condition	Reference value
1	W/R	Alternator	When turning ignition switch to "ON"	Approx. 0V
			When engine is running	Battery voltage
			When turning ignition switch to "OFF" and "ACC"	Approx. 0V
2	SB	Ignition switch START	When turning ignition switch to "START"	Battery voltage
			When turning ignition switch to "ON" from "START"	Approx. 0V
			When turning ignition switch to "OFF" and "ACC"	Approx. 0V

## HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

Terminal No.	Wire color	Item	Condition	Reference value
3	W/G	Ignition switch ON or START	When turning ignition switch to "ON"	Battery voltage
			When turning ignition switch to "START"	Battery voltage
			When turning ignition switch to "OFF" and "ACC"	Approx. 0V
4	W/G	RH light fuse	When lighting switch is turned to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Battery voltage
			When lighting switch is turned to "FLASH TO PASS" position with ignition switch "ON" position	Battery voltage
5	W/G	LH light fuse	When lighting switch is turned to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Battery voltage
			When lighting switch is turned to "FLASH TO PASS" position with ignition switch "ON" position	Battery voltage
6	R/W	LH high	When lighting switch is turned to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Battery voltage
			When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> <b>Block wheels and ensure selector lever is in N or P position.</b>	Half battery voltage
7	R/W	RH high	When lighting switch is turned to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Battery voltage
			When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> <b>Block wheels and ensure selector lever is in N or P position.</b>	Battery voltage
9	P	RH high main (ground)	When turning lighting switch to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Approx. 0V
			When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> <b>Block wheels and ensure selector lever is in N or P position.</b>	Half battery voltage
10	L/Y	LH high main (ground)	When turning lighting switch to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Approx. 0V
			When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> <b>Block wheels and ensure selector lever is in N or P position.</b>	Approx. 0V
13	L/R	LH light main switch (High beam)	When turning lighting switch to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Approx. 0V
14	P	RH light main switch (High beam)	When turning lighting switch to the 2ND position with "HI BEAM" or "FLASH TO PASS" position	Approx. 0V
16	B	Ground	—	Approx. 0V
17	Y/R	Parking brake switch	When parking brake is released	Battery voltage
			When parking brake is set	Approx. 0V

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## Symptom Chart

AKS002FL

Symptom	Possible cause and reference
Neither headlamp operates.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-61, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-70, "Lighting Switch Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>
Headlamp (low beam) does not operate, but headlamp (high beam) does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-61, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-64, "Headlamp Relay-1 Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>
Headlamp (high beam) does not operate, but headlamp (low beam) does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-61, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-64, "Headlamp Relay-2 Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the headlamp battery saver control unit.</p>
RH low beam does not operate, but LH low beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-61, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-64, "Headlamp Relay-1 Circuit Inspection"</a> .</li> </ul>
LH low beam does not operate, but RH low beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-65, "Headlamp (Low) Circuit Inspection"</a> .</li> </ul>
RH high beam does not operate, but LH high beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-68, "Headlamp RH (High) Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-70, "Lighting Switch Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the daytime light control unit.</p>
LH high beam does not operate, but RH high beam does operate.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-66, "Headlamp LH (High) Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-70, "Lighting Switch Circuit Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the daytime light control unit.</p>
High beam indicator does not work.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-69, "High Beam Indicator Circuit Inspection"</a> .</li> </ul> <p>If above system is normal, replace the combination meter.</p>
Battery saver control does not operate properly.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-71, "Front Door Switch Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-73, "Headlamp Battery Saver Control Unit Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-70, "Lighting Switch Circuit Inspection"</a> .</li> </ul> <p>If the above systems are normal, replace the headlamp battery saver control unit.</p>
Daytime light control does not operate properly.	<ul style="list-style-type: none"> <li>● Refer to <a href="#">LT-61, "Power Supply and Ground Circuit Inspection"</a> .</li> <li>● Refer to <a href="#">LT-73, "Daytime Light Control Unit Circuit Inspection"</a> .</li> </ul> <p>If the above systems are normal, replace the daytime light control unit.</p>

## Power Supply and Ground Circuit Inspection

AKS003SD

### 1. CHECK FUSE

Check for blown headlamp battery saver control unit, headlamp relay-1 and -2, and daytime light control unit fuses.

Unit or relay	Power source	Fuse No.
Headlamp battery saver control unit	Battery	6
Headlamp relay-1	Battery	55
		57
Headlamp relay-2	Battery	73
Daytime light control unit	Ignition switch ON or START position	82

Refer to [LT-49, "Wiring Diagram — DTRL —"](#) .

### OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 2. CHECK HEADLAMP BATTERY SAVER CONTROL UNIT POWER SUPPLY CIRCUIT

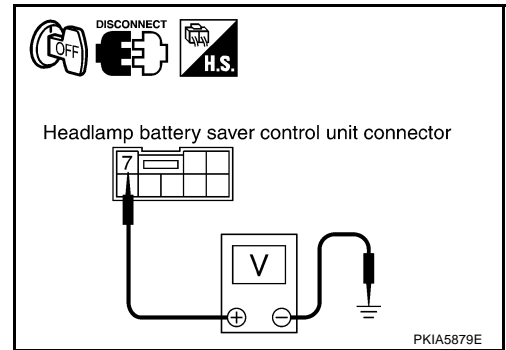
1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit connector.
3. Check voltage between headlamp battery saver control unit harness connector M34 terminal 7 (Y/G) and ground.

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

OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short between headlamp battery saver control unit and fuse.



## 3. CHECK HEADLAMP RELAY-1 POWER SUPPLY CIRCUIT

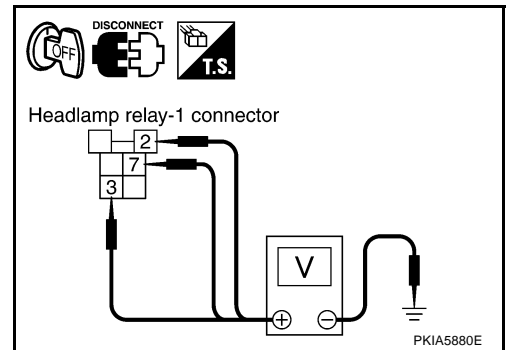
1. Remove headlamp relay-1.
2. Check voltage between headlamp relay-1 harness connector E3-4 terminals 2, 3 or 7 and ground.

Terminals		(-)	Ignition switch position
(+)			
Connector	Terminal		OFF
E3 - 4	2	Ground	Battery voltage
	3		
	7		

OK or NG

OK >> GO TO 4.

NG >> Replace fuse, fusible link and relay block (J/B).



## 4. CHECK HEADLAMP RELAY-2 POWER SUPPLY CIRCUIT

1. Remove headlamp relay-2.
2. Check voltage between headlamp relay-2 harness connector E5 terminal 1 (PU) and ground.

**1 (PU) - Ground : Battery voltage should exist.**

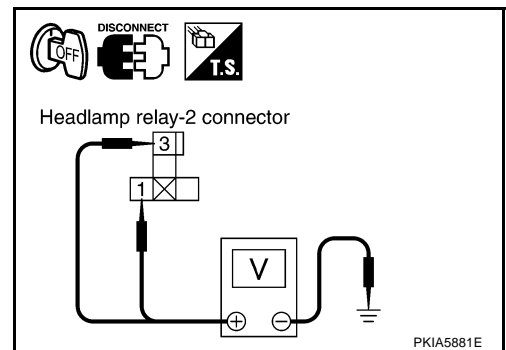
3. Check voltage between headlamp relay-2 harness connector E5 terminal 3 (PU) and ground.

**3 (PU) - Ground : Battery voltage should exist.**

OK or NG

OK >> GO TO 5.

NG >> Replace fuse, fusible link and relay block.



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 5. CHECK DAYTIME LIGHT CONTROL UNIT POWER SUPPLY CIRCUIT

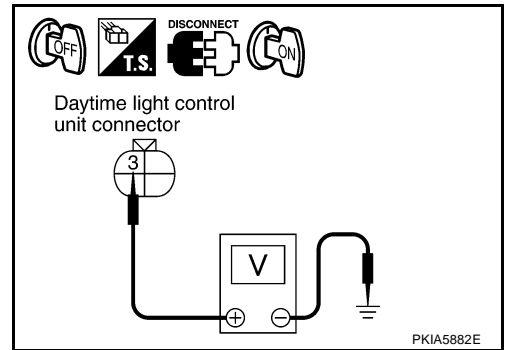
1. Disconnect daytime light control unit connector.
2. Turn ignition switch ON.
3. Check voltage between daytime light control unit harness connector E28 terminal 3 (W/G) and ground.

**3 (W/G) - Ground : Battery voltage should exist.**

OK or NG

OK >> GO TO 6.

NG >> Check harness for open or short between daytime light control unit and fuse.



## 6. CHECK HEADLAMP BATTERY SAVER CONTROL UNIT GROUND CIRCUIT

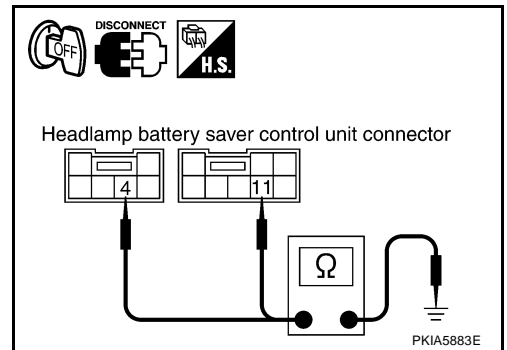
1. Turn ignition switch OFF.
2. Check continuity between headlamp battery saver control unit harness connector terminals and ground.

Terminals		Continuity
Connector	Terminal (Wire color)	
M33	4 (B)	Ground Yes
M34	11 (B)	

OK or NG

OK >> GO TO 7.

NG >> Check harness ground circuit.



## 7. CHECK DAYTIME LIGHT CONTROL UNIT GROUND CIRCUIT

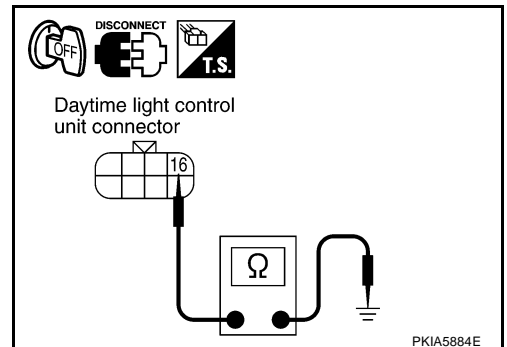
Check continuity between daytime light control unit harness connector E26 terminal 16 (B) and ground.

**16 (B) - Ground : Continuity should exist.**

OK or NG

OK >> INSPECTION END

NG >> Repair harness.



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

AKS003SE

## Headlamp Relay-1 Circuit Inspection

### 1. CHECK HEADLAMP RELAY-1

1. Turn ignition switch OFF.
2. Remove headlamp relay-1.
3. Apply 12V between headlamp relay-1 terminals 2 and 1, and check continuity between terminals 3 and 5 and between terminals 6 and 7.

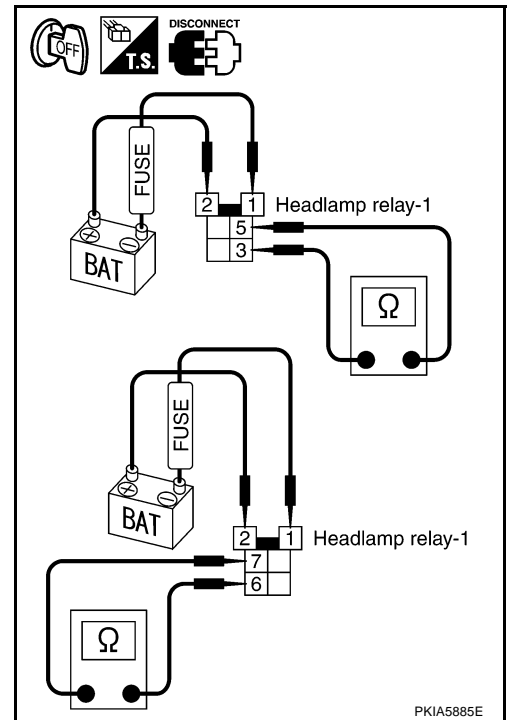
**3 - 5 : Continuity should exist.**

**6 - 7 : Continuity should exist.**

OK or NG

OK >> GO TO 2.

NG >> Replace headlamp relay-1.



### 2. CHECK HEADLAMP RELAY-1 CONTROL SIGNAL

1. Install headlamp relay-1.
2. Disconnect headlamp relay-2 and headlamp battery saver control unit connectors.
3. Check voltage between headlamp battery saver control unit harness connector M33 terminal 2 (W/PU) and ground.

**2 (W/PU) - Ground : Battery voltage should exist.**

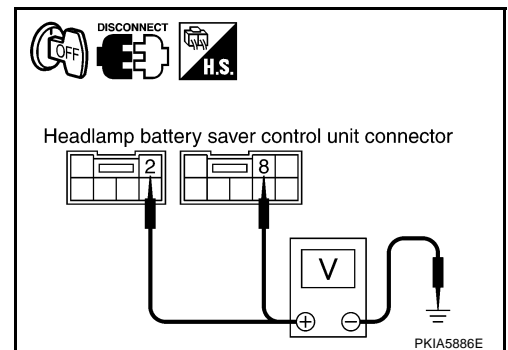
4. Check voltage between headlamp battery saver control unit harness connector M34 terminal 8 (W/PU) and ground.

**8 (W/PU) - Ground : Battery voltage should exist.**

OK or NG

OK >> INSPECTION END

NG >> Check harness for open or short between headlamp relay-1 and headlamp battery saver control unit.



## Headlamp Relay-2 Circuit Inspection

AKS003SF

### 1. CHECK HEADLAMP RELAY-2

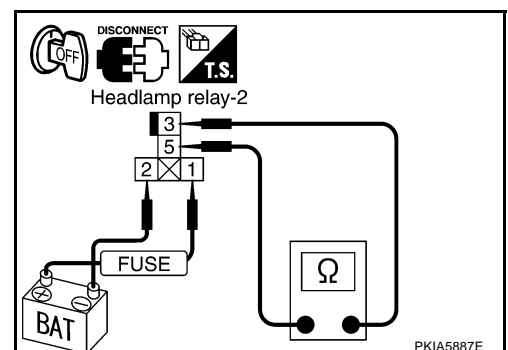
1. Remove headlamp relay-2.
2. Apply 12V between headlamp relay-2 terminals 1 and 2, and check continuity between terminals 3 and 5.

**3 - 5 : Continuity should exist.**

OK or NG

OK >> GO TO 2.

NG >> Replace headlamp relay-2.





# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

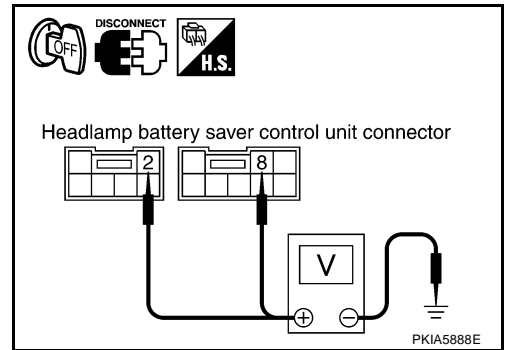
## 2. CHECK HEADLAMP RELAY-2 CONTROL SIGNAL

1. Install headlamp relay-2.
2. Disconnect headlamp relay-1 and headlamp battery saver control unit connectors.
3. Check voltage between headlamp battery saver control unit harness connector M33 terminal 2 (W/PU) and ground.

**2 (W/PU) - Ground : Battery voltage should exist.**

4. Check voltage between headlamp battery saver control unit harness connector M34 terminal 8 (W/PU) and ground.

**8 (W/PU) - Ground : Battery voltage should exist.**



OK or NG

OK >> INSPECTION END

NG >> Check harness for open or short between headlamp relay-2 and headlamp battery saver control unit.

## Headlamp (Low) Circuit Inspection

AKS003SG

### 1. CHECK XENON BULB

1. Replace xenon bulb with other side bulb or new one.
2. Check if headlamp illuminates correctly.

OK or NG

OK >> Replace bulb.

NG >> GO TO 2.

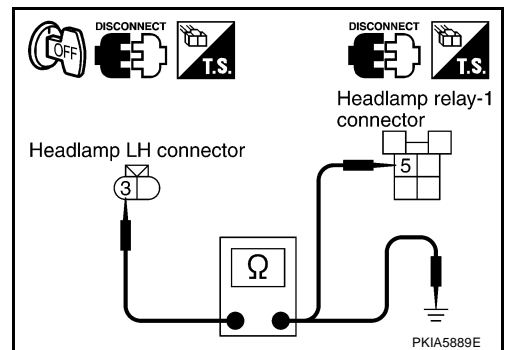
## 2. CHECK HEADLAMP LH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove headlamp relay-1 and disconnect headlamp LH connector.
3. Check continuity between headlamp LH harness connector E10 terminal 3 (L) and headlamp relay-1 harness connector E3-4 terminal 5.

**3 (L) - 5 : Continuity should exist.**

4. Check continuity between headlamp LH harness connector E10 terminal 3 (L) and ground.

**3 (L) - Ground : Continuity should not exist.**



### NOTE:

If headlamp LH is normal, skip this procedure and go to 3.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

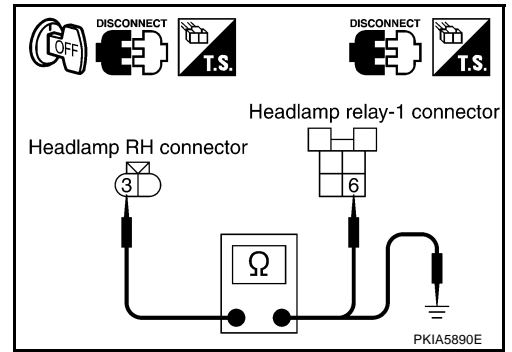
## 3. CHECK HEADLAMP RH POWER SUPPLY CIRCUIT

1. Remove headlamp relay-1 and disconnect headlamp RH connector.
2. Check continuity between headlamp RH harness connector E40 terminal 3 (W) and headlamp relay-1 harness connector E3-4 terminal 6.

**3 (W) - 6 : Continuity should exist.**

3. Check continuity between headlamp RH harness connector E40 terminal 3 (W) and ground.

**3 (W) - Ground : Continuity should not exist.**



OK or NG

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

## 4. CHECK HEADLAMP GROUND CIRCUIT

Check continuity between headlamp LH harness connector E10 terminal 4 (B) or headlamp RH harness connector E40 terminal 4 (B) and ground.

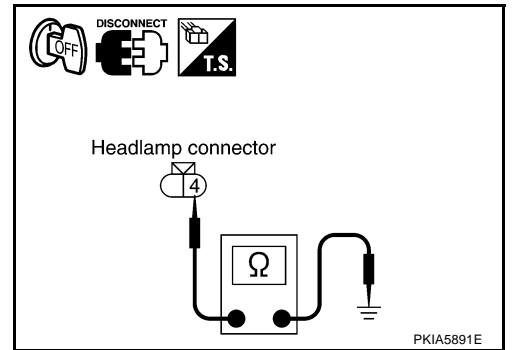
Unit	Terminals		Continuity
	Connector	Terminal (Wire color)	
Headlamp LH	E10	4 (B)	Ground Yes
Headlamp RH	E40		

### NOTE:

Only headlamp which does not turn on should be inspected.

OK or NG

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



## 5. CHECK HID CONTROL UNIT

1. Install headlamp relay-1.
2. Replace HID control unit with other side control unit or new one.
3. Check if headlamp illuminates correctly.

OK or NG

- OK >> Replace HID control unit.  
NG >> INSPECTION END

## Headlamp LH (High) Circuit Inspection

AKS003TU

### 1. CHECK BULB

1. Replace bulb with other side bulb or new one.
2. Check if headlamp illuminates correctly.

OK or NG

- OK >> Replace bulb.  
NG >> GO TO 2.

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 2. CHECK LH LIGHT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove headlamp relay-2 and disconnect daytime light control unit connector.
3. Check continuity between daytime light control unit harness connector E27 terminal 5 (W/G) and headlamp relay-2 harness connector E5 terminal 5 (W/G).

**5 (W/G) - 5 (W/G) : Continuity should exist.**

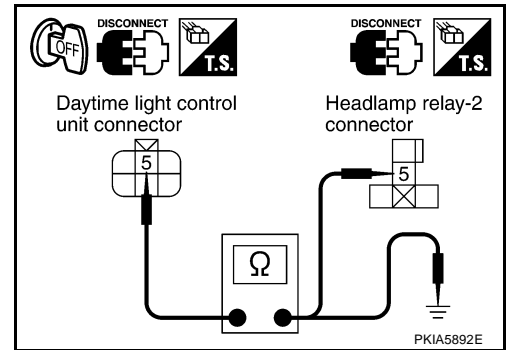
4. Check continuity between daytime light control unit harness connector E27 terminal 5 (W/G) and ground.

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

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.



## 3. CHECK LH LIGHT MAIN SWITCH CIRCUIT

1. Disconnect lighting switch.
2. Check continuity between daytime light control unit harness connector E26 terminal 13 (L/R) and lighting switch harness connector M55 terminal 9 (L/R).

**13 (L/R) - 9 (L/R) : Continuity should exist.**

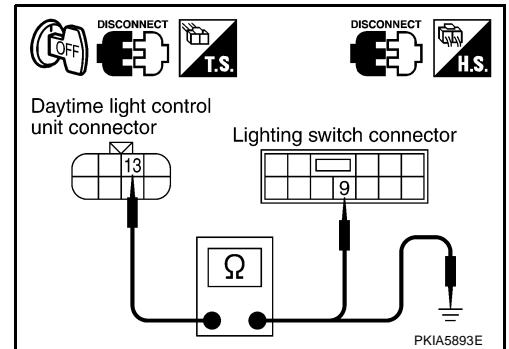
3. Check continuity between daytime light control unit connector E26 terminal 13 (L/R) and ground.

**13 (L/R) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.



## 4. CHECK LH LIGHT MAIN CIRCUIT

1. Disconnect headlamp LH connector.
2. Check continuity between daytime light control unit harness connector E26 terminal 10 (L/Y) and headlamp LH harness connector E9 terminal 2 (L/Y).

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

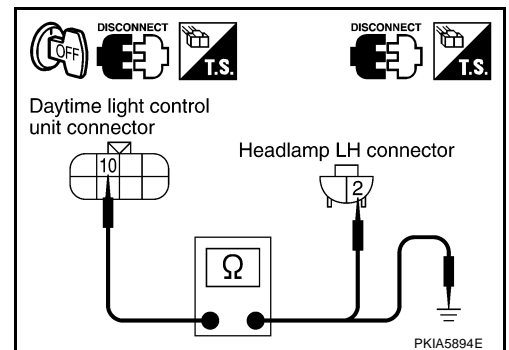
3. Check continuity between daytime light control unit harness connector E26 terminal 10 (L/Y) and ground.

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

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 5. CHECK LH LIGHT GROUND CIRCUIT

1. Check continuity between daytime light control unit harness connector E27 terminal 6 (R/W) and headlamp LH harness connector E9 terminal 1 (R/W).

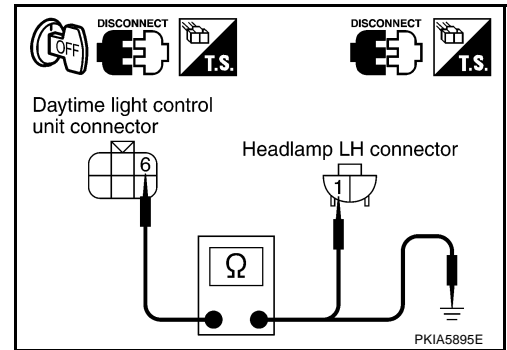
**6 (R/W) - 1 (R/W) : Continuity should exist.**

2. Check continuity between daytime light control unit harness connector E27 terminal 6 (R/W) and ground.

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

OK or NG

- OK >> INSPECTION END  
NG >> Repair harness or connector.



AKS003SH

## Headlamp RH (High) Circuit Inspection

### 1. CHECK BULB

1. Replace bulb with other side bulb or new one.
2. Check if headlamp illuminates correctly.

OK or NG

- OK >> Replace bulb.  
NG >> GO TO 2.

## 2. CHECK RH LIGHT POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove headlamp relay-2 and disconnect daytime light control unit connector.
3. Check continuity between daytime light control unit harness connector E28 terminal 4 (W/G) and headlamp relay-2 harness connector E5 terminal 5 (W/G).

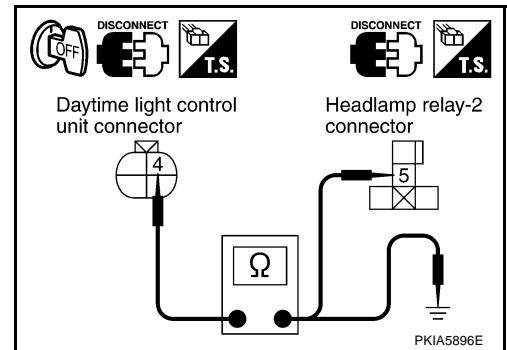
**4 (W/G) - 5 (W/G) : Continuity should exist.**

4. Check continuity between daytime light control unit harness connector E28 terminal 4 (W/G) and ground.

**4 (W/G) - Ground : Continuity should not exist.**

OK or NG

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



## 3. CHECK RH LIGHT MAIN SWITCH CIRCUIT

1. Disconnect lighting switch connector.
2. Check continuity between daytime light control unit harness connector E27 terminal 14 (P) and lighting switch harness connector M55 terminal 6 (P).

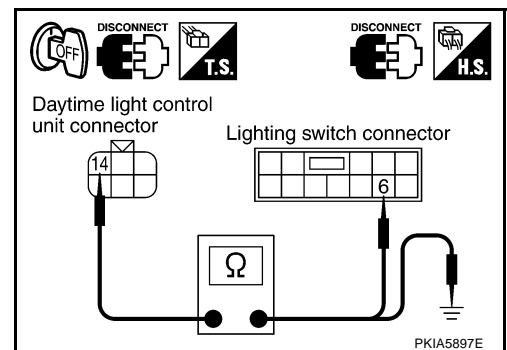
**14 (P) - 6 (P) : Continuity should exist.**

3. Check continuity between daytime light control unit harness connector E27 terminal 14 (P) and ground.

**14 (P) - Ground : Continuity should not exist.**

OK or NG

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



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 4. CHECK RH LIGHT MAIN CIRCUIT

1. Disconnect headlamp RH connector.
2. Check continuity between daytime light control unit harness connector E26 terminal 9 (P) and headlamp RH harness connector E39 terminal 2 (P).

**9 (P) - 2 (P) : Continuity should exist.**

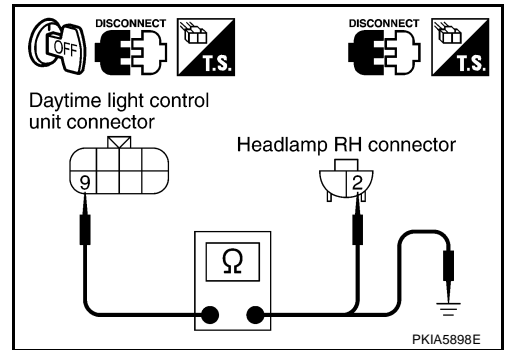
3. Check continuity between daytime light control unit harness connector E26 terminal 9 (P) and ground.

**9 (P) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.



## 5. CHECK RH LIGHT GROUND CIRCUIT

1. Check continuity between daytime light control unit harness connector E28 terminal 7 (R/W) and headlamp RH harness connector E39 terminal 1 (R/W).

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

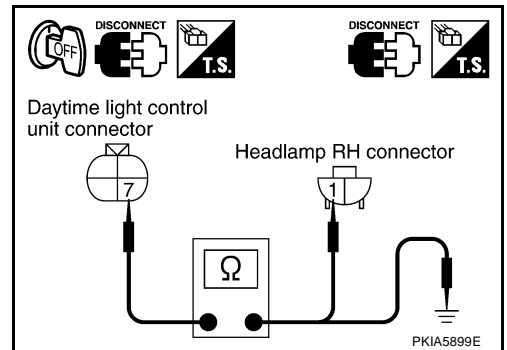
2. Check continuity between daytime light control unit harness connector E28 terminal 7 (R/W) and ground.

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

OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.



## High Beam Indicator Circuit Inspection

### 1. CHECK BULB

Check bulb in combination meter.

OK or NG

OK >> GO TO 2.

NG >> Replace bulb.

### 2. CHECK HIGH BEAM INDICATOR POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove headlamp relay-2 and disconnect combination meter connector.
3. Check continuity between combination meter harness connector M41 terminal 9 (W/G) and headlamp relay-2 harness connector E5 terminal 5 (W/G).

**9 (W/G) - 5 (W/G) : Continuity should exist.**

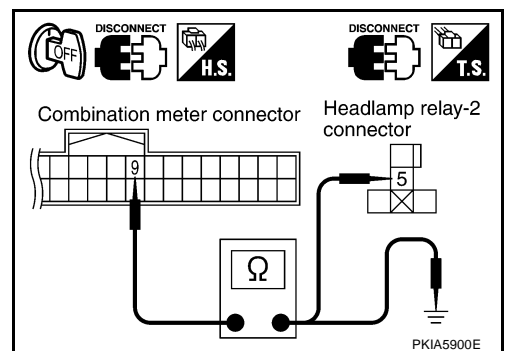
4. Check continuity between combination meter harness connector M41 terminal 9 (W/G) and ground.

**9 (W/G) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

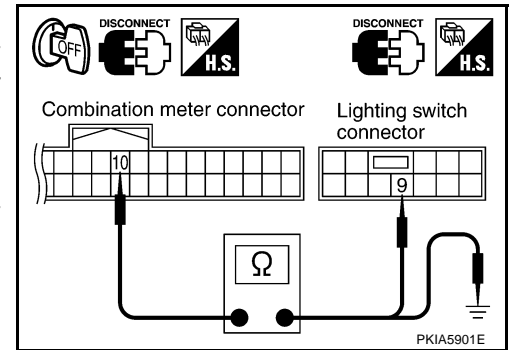
## 3. CHECK HIGH BEAM INDICATOR GROUND CIRCUIT

1. Disconnect lighting switch connector.
2. Check continuity between combination meter harness connector M41 terminal 10 (L/R) and lighting switch harness connector M55 terminal 9 (L/R).

**10 (L/R) - 9 (L/R) : Continuity should exist.**

3. Check continuity between combination meter harness connector M41 terminal 10 (L/R) and ground.

**10 (L/R) - Ground : Continuity should not exist.**



OK or NG

- OK >> INSPECTION END  
NG >> Repair harness or connector.

## Lighting Switch Circuit Inspection

AKS003SJ

### 1. CHECK LIGHTING SWITCH

Check continuity of lighting switch. Refer to [LT-102, "Switch Circuit Inspection"](#).

OK or NG

- OK >> GO TO 2.  
NG >> Replace lighting switch.

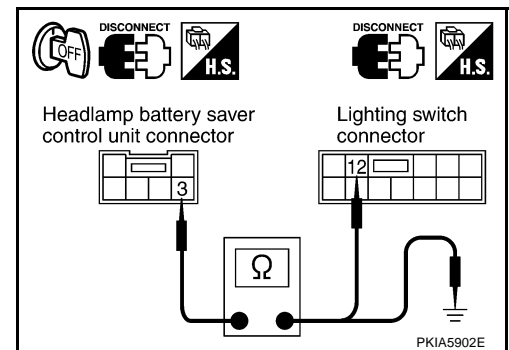
### 2. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit connector and lighting switch connector.
3. Check continuity between headlamp battery saver control unit harness connector M33 terminal 3 (R/B) and lighting switch harness connector M55 terminal 12 (R/B).

**3 (R/B) - 12 (R/B) : Continuity should exist.**

4. Check continuity between headlamp battery saver control unit harness connector M33 terminal 3 (R/B) and ground.

**3 (R/B) - Ground : Continuity should not exist.**



OK or NG

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

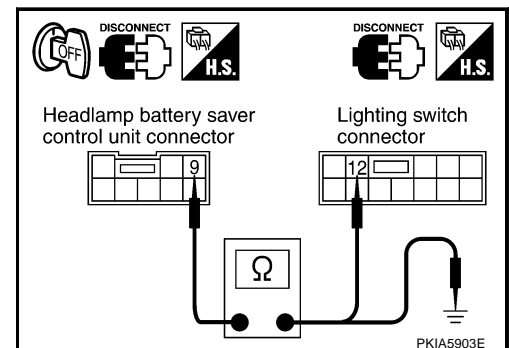
### 3. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 2

1. Check continuity between headlamp battery saver control unit harness connector M34 terminal 9 (R/B) and lighting switch harness connector M55 terminal 12 (R/B).

**9 (R/B) - 12 (R/B) : Continuity should exist.**

2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 9 (R/B) and ground.

**9 (R/B) - Ground : Continuity should not exist.**



OK or NG

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

# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

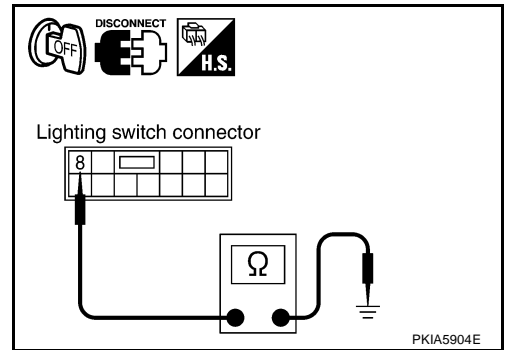
## 4. CHECK LIGHTING SWITCH GROUND CIRCUIT

Check continuity between lighting switch harness connector M55 terminal 8 (B) and ground.

**8 (B) - Ground : Continuity should exist.**

OK or NG

- OK >> INSPECTION END  
NG >> Repair harness ground circuit.



## Front Door Switch Circuit Inspection

### 1. CHECK DOOR SWITCH SIGNAL

Ⓟ With CONSULT-II

1. Select "INTERIOR ILLUMINATION" of "IVMS" on "SELECT SYSTEM" screen.
2. Operate each door via "DOOR SW-DR" and "DOOR SW-AS" on "DATA MONITOR" screen and make sure that the switch turns on and off as commanded.

ⓧ Without CONSULT-II

- Open and close the front door (driver side, passenger side) and make sure that the switch turns on and off by "switch monitor" in the self-diagnosis function.

OK or NG

- OK >> INSPECTION END  
NG >> ● When front door switch (driver side) is malfunction, go to 2.  
● When front door switch (passenger side) is malfunction, go to 4.

DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
RECORD	

SKIA3814E

### 2. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door switch (driver side) connector.
3. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and front door switch (driver side) harness connector B20 terminal 1 (R/Y).

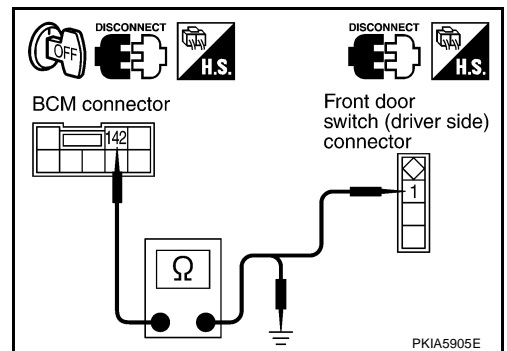
**142 (R/Y) - 1 (R/Y) : Continuity should exist.**

4. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and ground.

**142 (R/Y) - Ground : Continuity should not exist.**

OK or NG

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



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 3. CHECK FRONT DOOR SWITCH (DRIVER SIDE)

Check front door switch (driver side).

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

OK or NG

OK >> Replace BCM.

NG >> Replace front door switch (driver side).

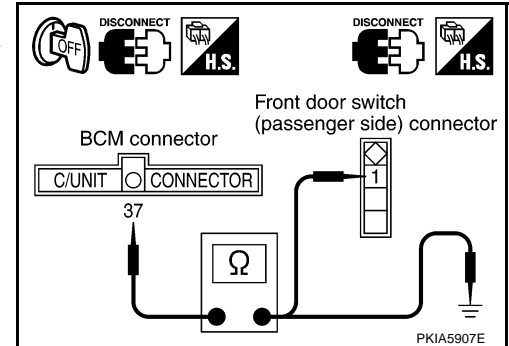
## 4. CHECK FRONT DOOR SWITCH (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door switch (passenger side) connector.
3. Check continuity between BCM harness connector M4 terminal 37 (LG) and front door switch (passenger side) harness connector B220 terminal 1 (LG).

**37 (LG) - 1 (LG) : Continuity should exist.**

4. Check continuity between BCM harness connector M4 terminal 37 (LG) and ground.

**37 (LG) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.

## 5. CHECK FRONT DOOR SWITCH (PASSENGER SIDE)

Check front door switch (passenger side).

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

OK or NG

OK >> Replace BCM.

NG >> Replace front door switch (passenger side).



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

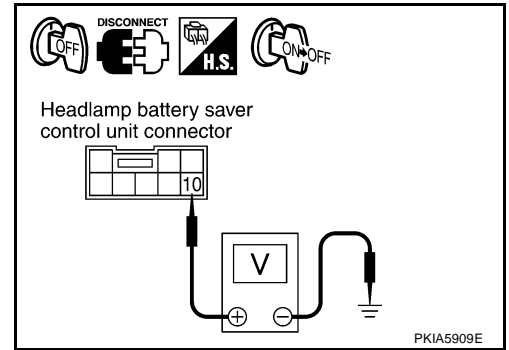
## Headlamp Battery Saver Control Unit Circuit Inspection

AKS003SL

### 1. CHECK RAP SIGNAL

1. Turn ignition switch OFF.
2. Disconnect battery saver control unit connector.
3. Turn ignition switch ON.
4. Check voltage between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and ground after turning off ignition switch.

Connector	Terminal (Wire color)	Condition	Voltage
M34	10 (Y/R)	Within 45 seconds after ignition switch is turned off	Approx. 0V
		Front door is opened or more than 45 seconds after ignition switch is turned off	Battery voltage



OK or NG

- OK >> INSPECTION END  
 NG >> GO TO 2.

### 2. CHECK RAP SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and BCM harness connector R4 terminal 135 (Y/G).

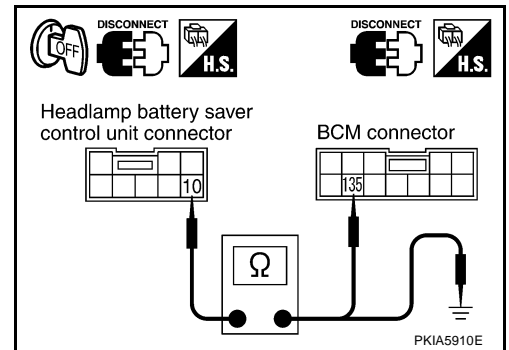
**10 (Y/R) - 135 (Y/R) : Continuity should exist.**

3. Check continuity between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and ground.

**10 (Y/R) - Ground : Continuity should not exist.**

OK or NG

- OK >> Replace BCM.  
 NG >> Repair harness or connector.



## Daytime Light Control Unit Circuit Inspection

AKS003SM

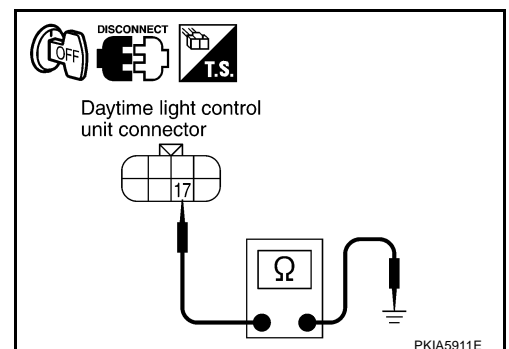
### 1. CHECK PARKING BRAKE SWITCH SIGNAL

1. Turn ignition switch OFF.
2. Disconnect daytime light control unit.
3. Check continuity between daytime light control unit harness connector E26 terminal 17 (Y/R) and ground.

Terminals		Parking brake condition	Continuity
Connector	Terminal (Wire color)		
E26	17 (Y/R)	Applied	Yes
		Released	No

OK or NG

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



# HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM -

## 2. CHECK PARKING BRAKE SWITCH CIRCUIT

1. Disconnect parking brake switch connector.
2. Check continuity between daytime light control unit harness connector E26 terminal 17 (Y/R) and parking brake switch harness connector M8 terminal 1 (Y/R).

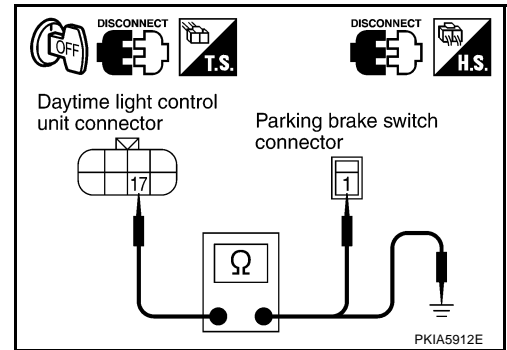
**17 (Y/R) - 1 (Y/R) : Continuity should exist.**

3. Check continuity between daytime light control unit harness connector E26 terminal 17 (Y/R) and ground.

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

OK or NG

- OK >> Check parking brake switch and case ground.  
NG >> Repair harness or connector.



## 3. CHECK ALTERNATOR CIRCUIT

1. Disconnect alternator connector.
2. Check continuity between daytime light control unit harness connector E27 terminal 1 (W/R) and alternator harness connector E310 terminal 3 (W/R).

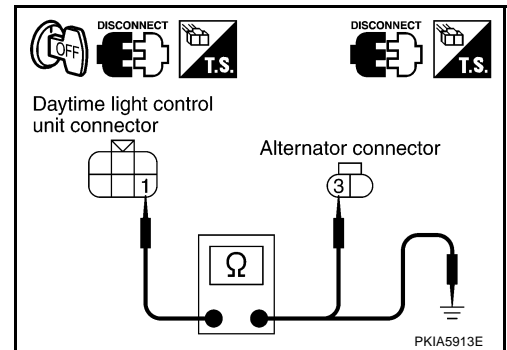
**1 (W/R) - 3 (W/R) : Continuity should exist.**

3. Check continuity between daytime light control unit harness connector E27 terminal 1 (W/R) and ground.

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

OK or NG

- OK >> INSPECTION END  
NG >> Repair harness or connector.



## Aiming Adjustment

AKS002FM

Refer to [LT-39, "Aiming Adjustment"](#) in "HEADLAMP (FOR USA)".

## Bulb Replacement

AKS002FN

Refer to [LT-41, "Bulb Replacement"](#) in "HEADLAMP (FOR USA)".

## Removal and Installation

AKS002FO

Refer to [LT-42, "Removal and Installation"](#) in "HEADLAMP (FOR USA)".

## Disassembly and Assembly

AKS002FP

Refer to [LT-43, "Disassembly and Assembly"](#) in "HEADLAMP (FOR USA)".

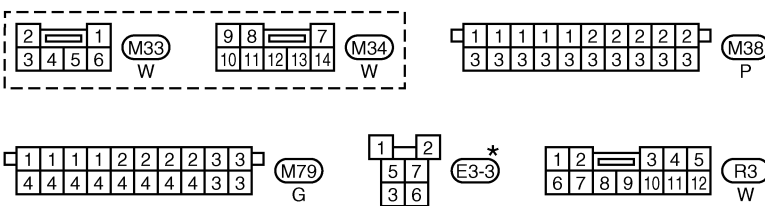
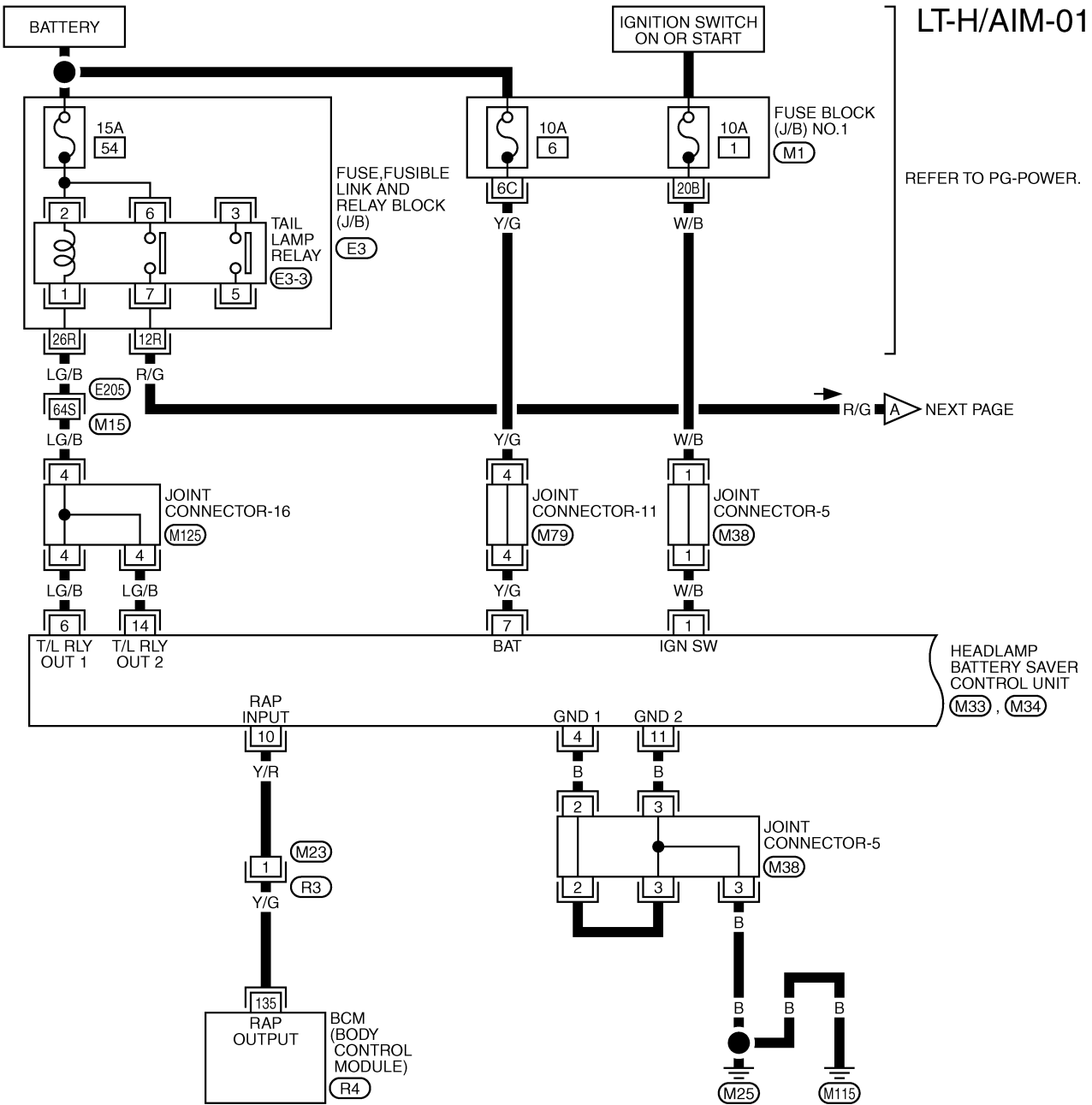
# HEADLAMP AIMING CONTROL

PPF:26010

## HEADLAMP AIMING CONTROL

### Wiring Diagram — H/AIM —

AKS002FQ

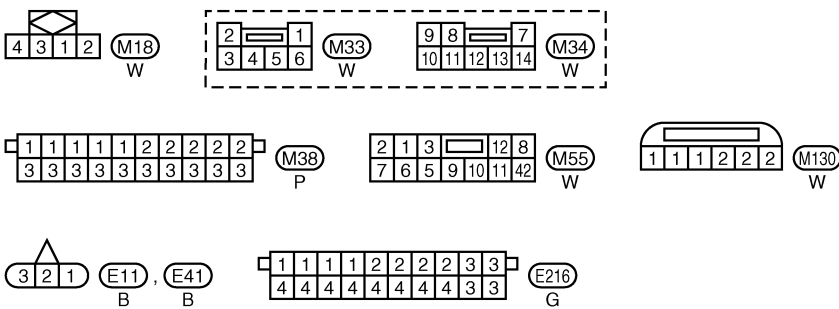
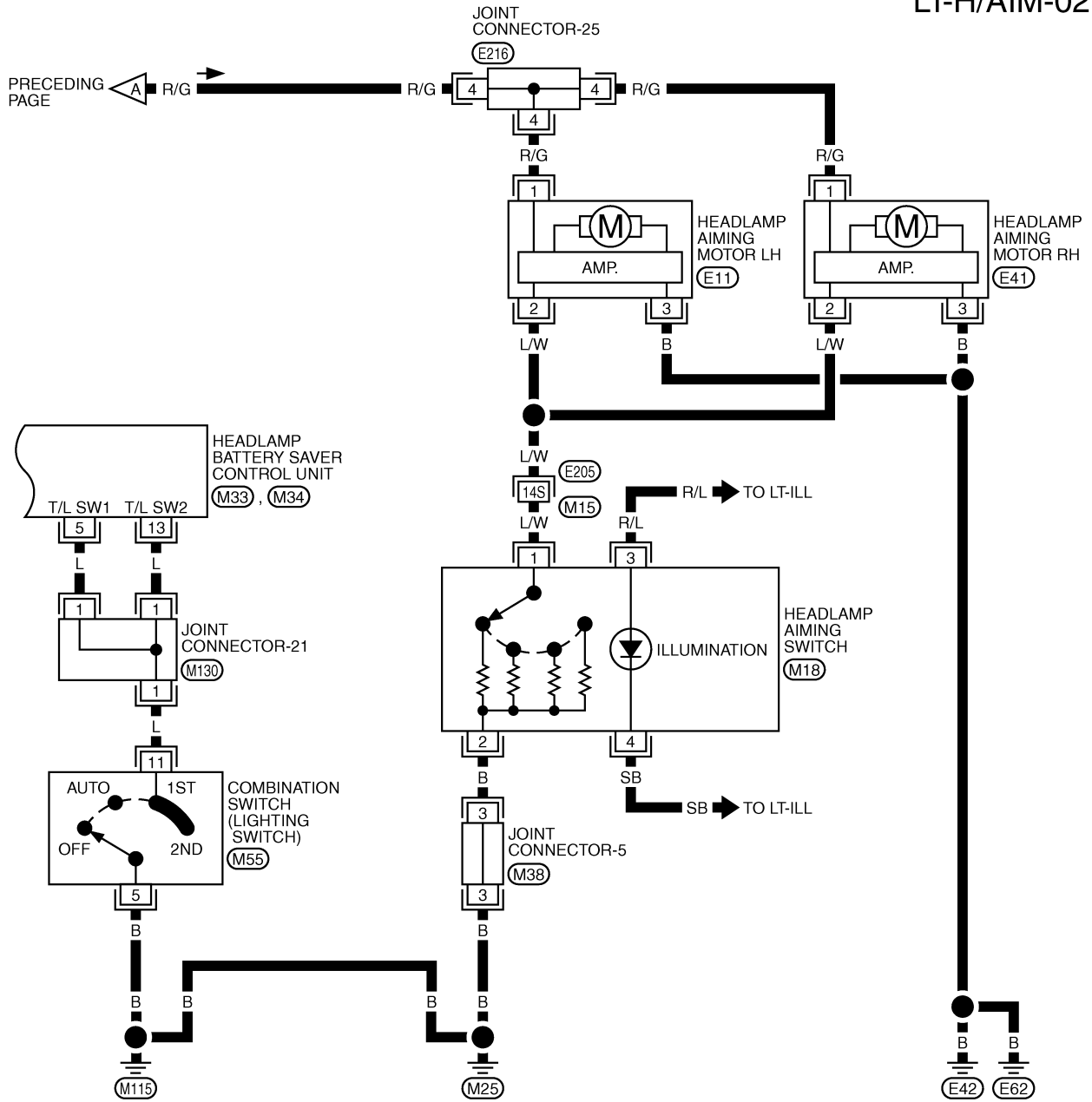


\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

- REFER TO THE FOLLOWING.
- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
  - (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
  - (E3) -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)
  - (R4) -ELECTRICAL UNITS

# HEADLAMP AIMING CONTROL

LT-H/AIM-02



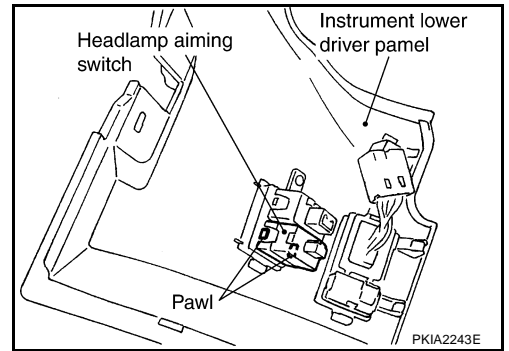
REFER TO THE FOLLOWING.  
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0534E

# HEADLAMP AIMING CONTROL

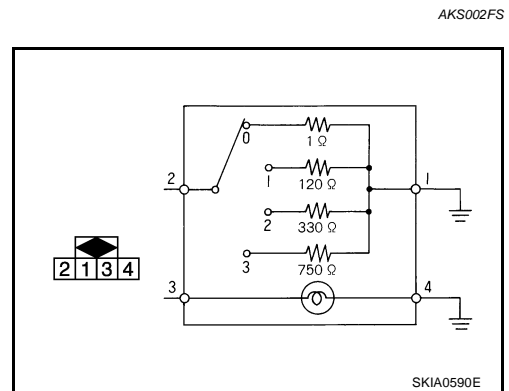
## Removal and Installation

1. Remove instrument lower driver panel. Refer to [IP-11, "WORK STEPS"](#) in "INSTRUMENT PANEL (IP)" section.
2. Press headlamp aiming switch fixing pawls and remove unit from instrument lower driver panel.



## Switch Circuit Inspection

Using a circuit tester, check continuity between headlamp aiming switch connector terminals in each operation status of headlamp aiming switch.



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

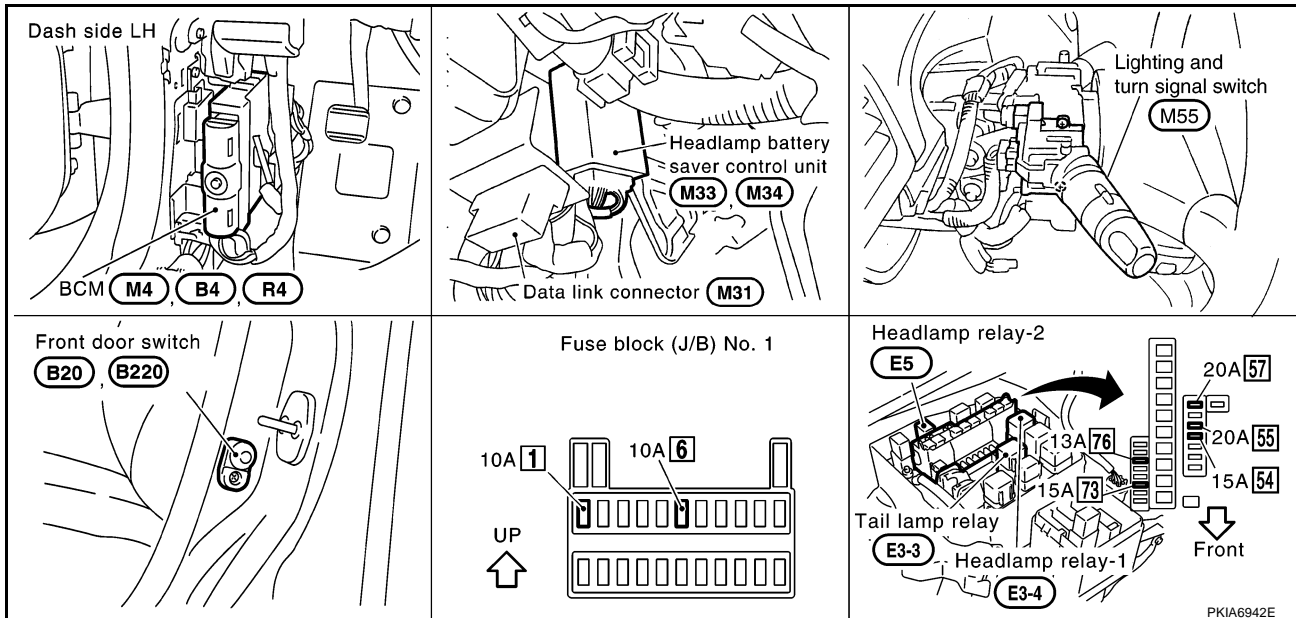
# FRONT FOG LAMP

PFP:26150

## FRONT FOG LAMP

### Component Parts and Harness Connector Location

AKS00ARW



### System Description OUTLINE

AKS003RR

Power is supplied at all times

- to headlamp relay-1 terminal 2,
- to headlamp relay-1 terminal 3
- through 20A fuse [No. 57, located in fuse, fusible link and relay block (J/B)],
- to headlamp relay-1 terminal 7
- through 20A fuse [No. 55, located in fuse, fusible link and relay block (J/B)],
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 6, located in fuse block (J/B) No. 1],
- to front fog lamp relay terminal 3
- through 15A fuse (No. 76, located in fuse, fusible link and relay block).

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

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 1, located in fuse block (J/B) No. 1].

Ground is supplied

- to headlamp battery saver control unit terminals 4 and 11
- through grounds M25 and M115.

When lighting switch is in 2ND position, ground is supplied

- to headlamp relay-1 terminal 1 from headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 3 and 9
- through lighting switch terminals 8 and 12
- through grounds M25 and M115.

### Fog Lamp Operation

The fog lamp switch is built in the combination switch. The lighting switch must be in the 2ND position and low (B) position, and the fog lamp switch must be ON for fog lamp operation.

With the fog lamp switch in the ON position, ground is supplied

- to front fog lamp relay terminal 2

## FRONT FOG LAMP

- through front fog lamp switch, lighting switch and grounds M25 and M115.

The front fog lamp relay is energized and power is supplied

- from front fog lamp relay terminal 5
- to front fog lamp LH and RH terminals 2.

Ground is supplied

- to front fog lamp LH and RH terminals 1
- through grounds E24, E42 and E62.

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

### BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while front fog lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from BCM terminal 135.

After counting 45 seconds by the RAP signal from the BCM to headlamp battery saver control unit, the ground supply to headlamp relay-1 terminal 1 from headlamp battery saver control unit terminals 2 and 8 is terminated.

Then the front fog lamps are turned off.

The front fog lamps are turned off when front door (driver or passenger side) is opened even if 45 seconds have not passed after ignition switch is turned from ON (or START) to OFF (or ACC) positions while front fog lamp are illuminated.

When the lighting switch is turned from OFF to 2ND after front fog lamps are turned to off by the battery saver control, ground is supplied

- to headlamp relay-1 terminal 1 from headlamp battery saver control unit terminals 2 and 8
- through headlamp battery saver control unit terminals 3 and 9 from lighting switch terminal 12.

Then front fog lamps illuminate again.

A

B

C

D

E

F

G

H

I

J

LT

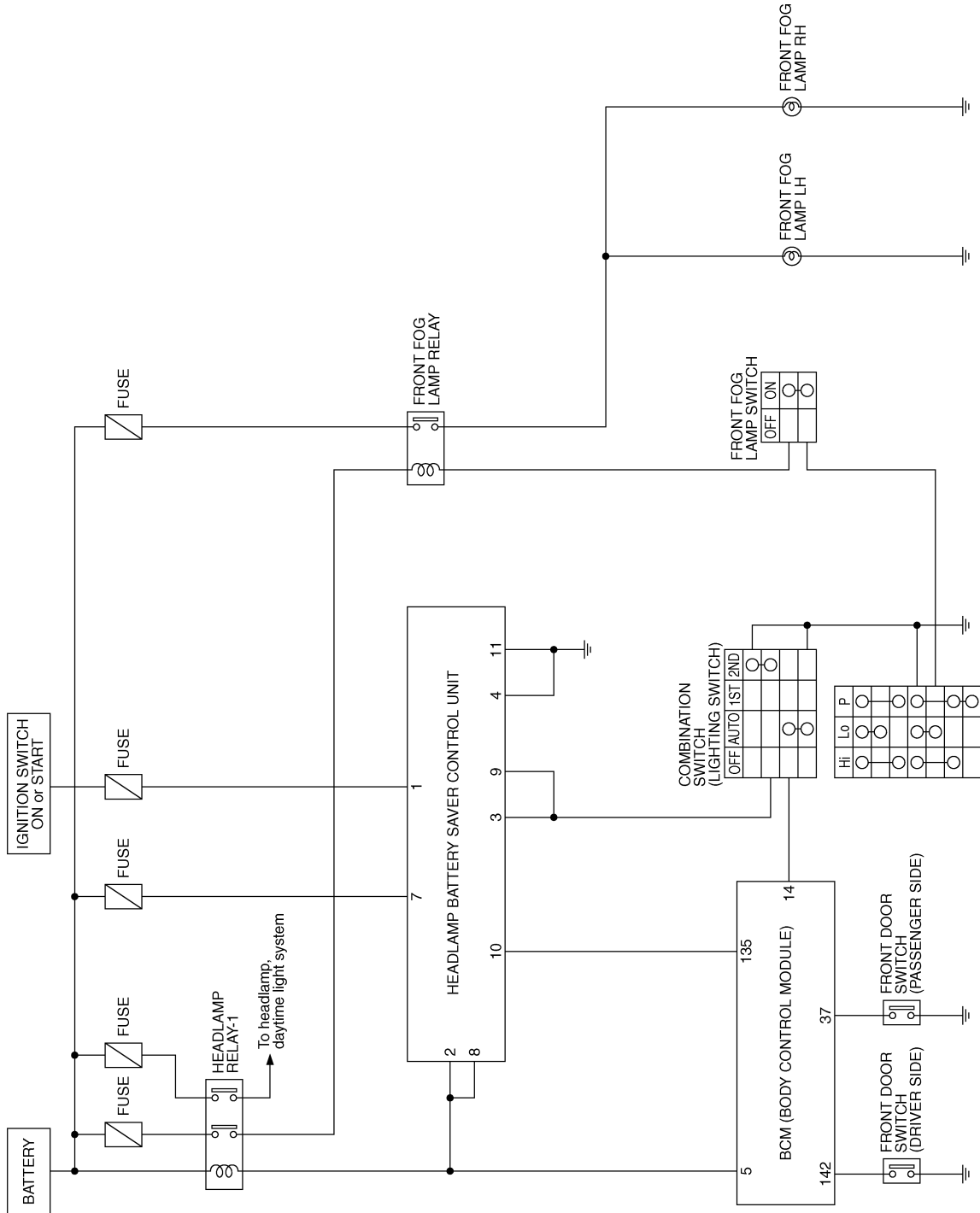
L

M

# FRONT FOG LAMP

## Schematic

AKS00ARX



TKWA0541E

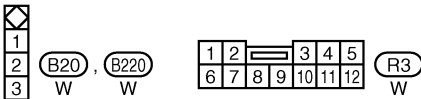
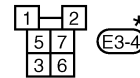
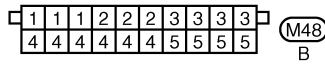
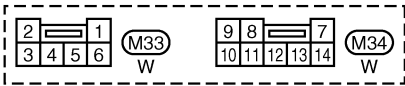
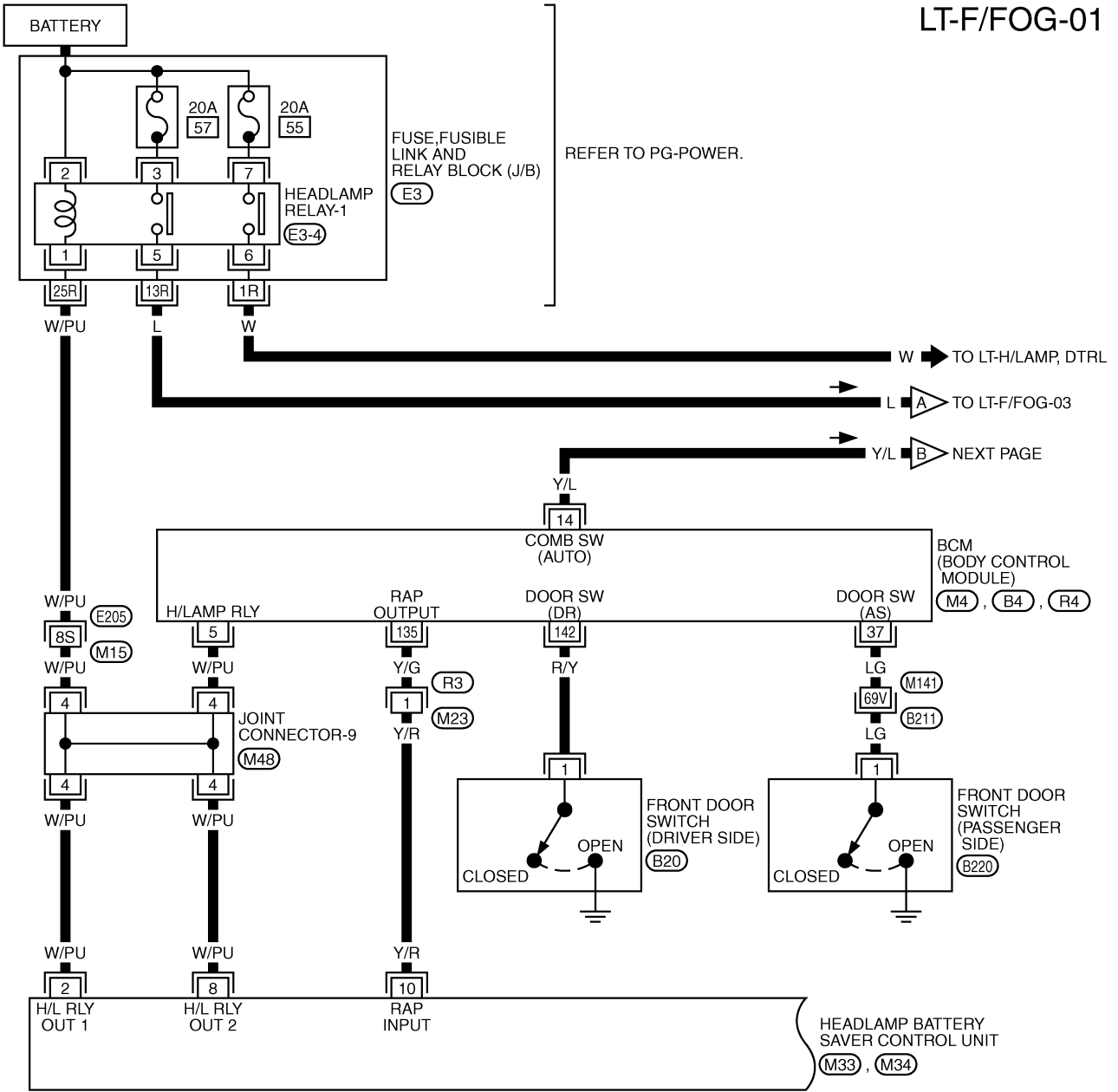


# FRONT FOG LAMP

## Wiring Diagram — F/FOG —

AKS003RS

LT-F/FOG-01



REFER TO THE FOLLOWING.

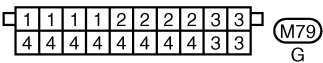
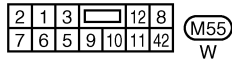
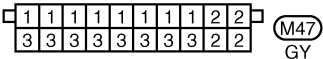
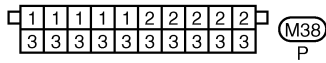
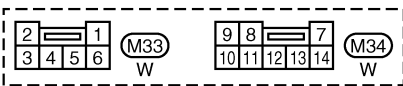
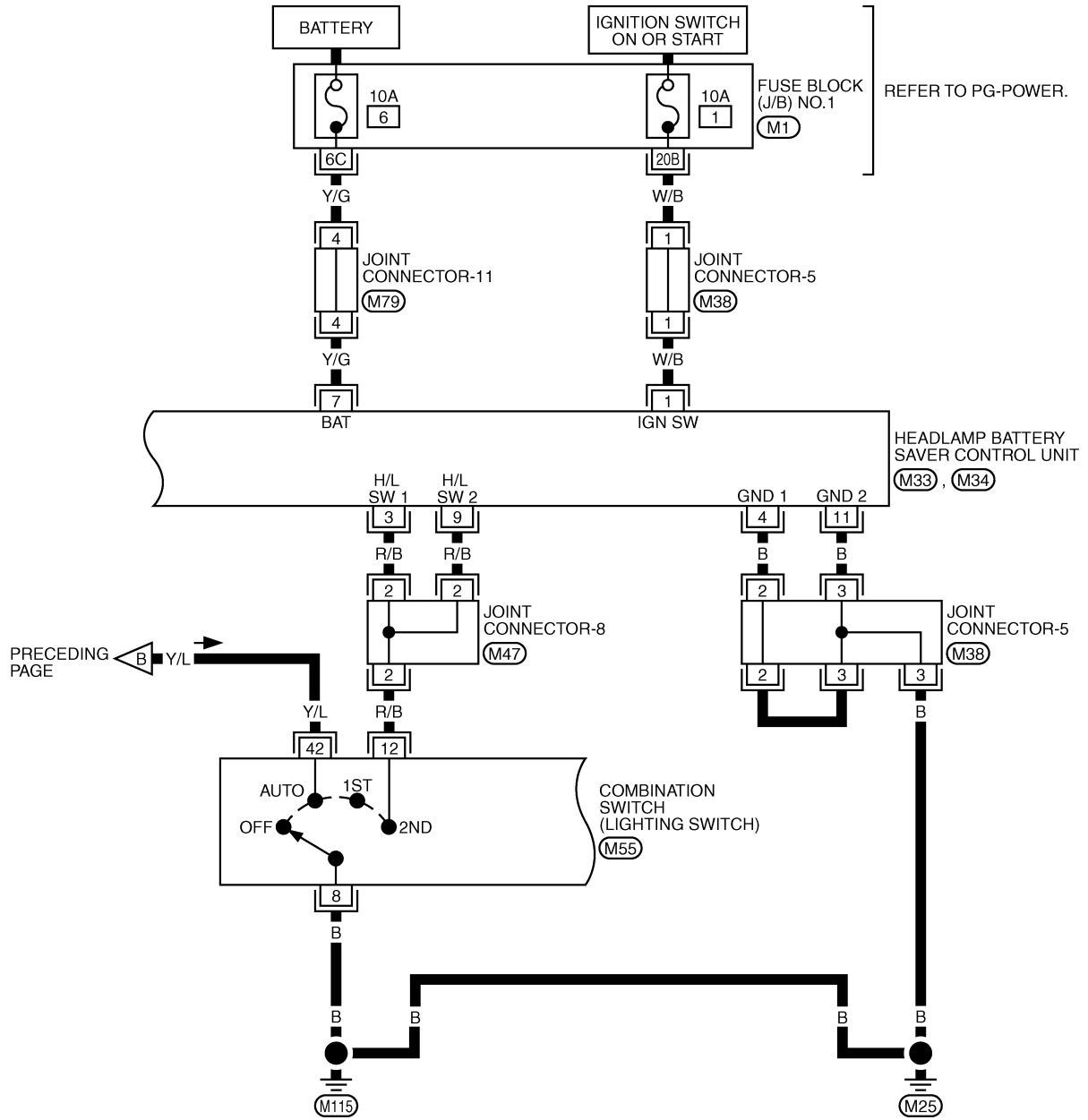
- (E205), (B211) -SUPER MULTIPLE JUNCTION (SMJ)
- (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)
- (M4), (B4), (R4) -ELECTRICAL UNITS

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWA0542E

# FRONT FOG LAMP

LT-F/FOG-02

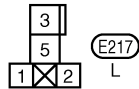
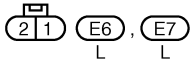
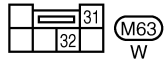
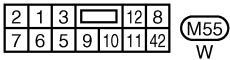
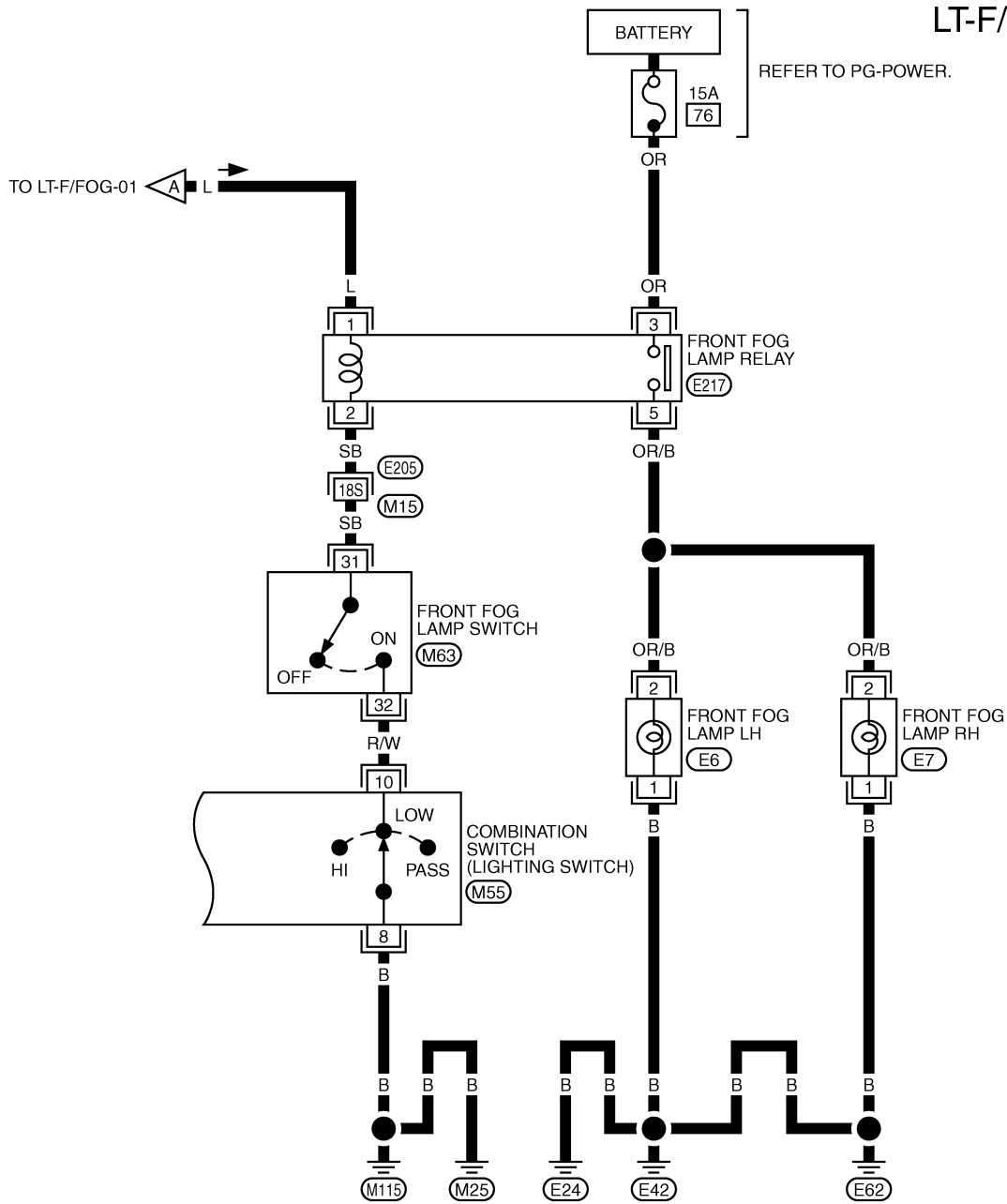


REFER TO THE FOLLOWING.  
 (M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0543E

# FRONT FOG LAMP

LT-F/FOG-03



REFER TO THE FOLLOWING.  
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)

A  
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L  
M

# FRONT FOG LAMP

## Terminals and Reference Value for Headlamp Battery Saver Control Unit

AKS004SY

Terminal No.	Wire color	Item	Operation or condition		Reference value	
			Ignition switch	Operation or condition		
1	W/B	Ignition switch ON or START	Ignition switch	OFF or ACC	Approx. 0V	
				ON or START	Battery voltage	
2	W/PU	Headlamp relay out 1	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				ON or START	Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
					Approx. 0V	
			Headlamps illuminate by auto light control.			
3	R/B	Headlamp switch 1	Lighting switch	1ST	Approx. 2.4V	
				PASS or 2ND	Approx. 0V	
			Headlamps illuminate by auto light control.			
4	B	Ground	—		Approx. 0V	
7	Y/G	Battery power supply	—		Battery voltage	
8	W/PU	Headlamp relay out 2	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
				ON or START	With 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
					Approx. 0V	
			Headlamps illuminate by auto light control.			
9	R/B	Headlamp switch 2	Lighting switch	1ST	Approx. 2.4V	
				PASS or 2ND	Approx. 0V	
			Headlamps illuminate by auto light control.			
10	Y/R	RAP input signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Battery voltage	
				ON or START	Approx. 0V	
11	B	Ground	—		Approx. 0V	

## Terminals and Reference Value for BCM

AKS004SZ

Terminal No.	Wire color	Item	Measuring condition		Reference value	
			Ignition switch	Operation or condition		
5	W/PU	Headlamp relay control signal	ON	Lighting switch: AUTO	Light is applied to optical sensor.	Battery voltage
					Light is not applied to optical sensor.	Approx. 0V
14	Y/L	Lighting switch AUTO signal	ON	Lighting switch	AUTO	Approx. 0V
					OFF	8V or more
37	LG	Front door switch (Passenger side) signal	OFF	Front door switch (Passenger side)	ON (open)	Approx. 0V
					OFF (close)	Battery voltage
135	Y/G	RAP output signal	OFF	When headlamp battery saver timer is operated		Approx. 0V
142	R/Y	Front door switch (Driver side) signal	OFF	Front door switch (Driver side) signal	ON (open)	Approx. 0V
					OFF (close)	Battery voltage

# FRONT FOG LAMP

AKS003RT

## Front Fog Lamps Do Not Illuminate (Both Sides)

### 1. CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove front fog lamp relay.
3. Check voltage between front fog lamp relay harness connector E217 terminal 3 (OR) and ground.

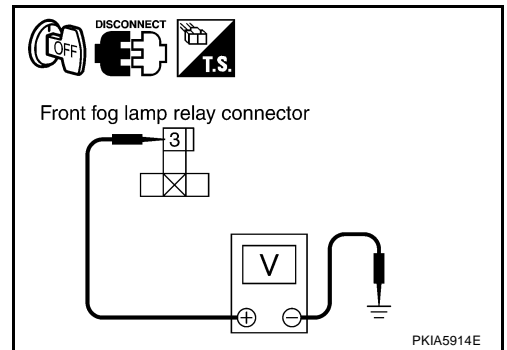
**3 (OR) - Ground : Battery voltage should exist.**

#### OK or NG

OK >> GO TO 2.

NG >> Check the following.

- 15A fuse (No.76 located in fuse, fusible link and relay block)
- Harness for open or short between front fog lamp relay and fuse



### 2. CHECK FRONT FOG LAMP RELAY

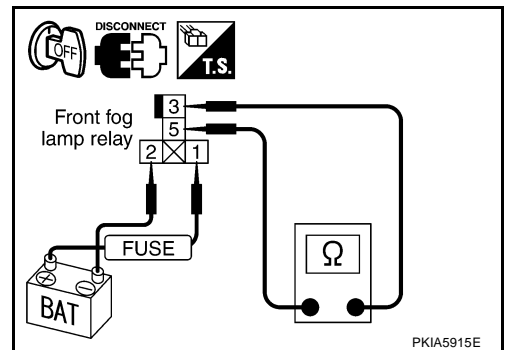
Apply 12V between front fog lamp relay terminals 1 and 2, and check continuity between terminals 3 and 5.

**3 - 5 : Continuity should exist.**

#### OK or NG

OK >> GO TO 3.

NG >> Replace front fog lamp relay.



### 3. CHECK FRONT FOG LAMP RELAY POWER SUPPLY CIRCUIT

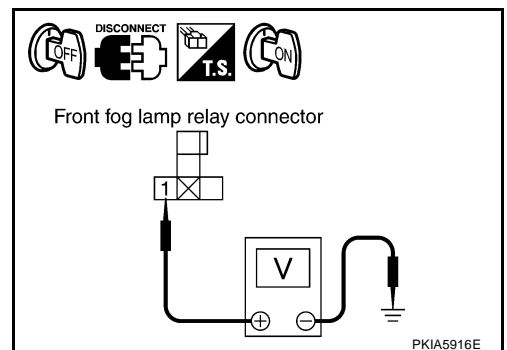
1. Turn ignition switch ON.
2. Check voltage between front fog lamp relay harness connector E217 terminal 1 (L) and ground.

**1 (L) - Ground : Lighting switch 2ND : Battery voltage should exist.**

#### OK or NG

OK >> GO TO 4.

NG >> Check harness for open or short between front fog lamp relay and headlamp relay-1.



A  
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L  
M

# FRONT FOG LAMP

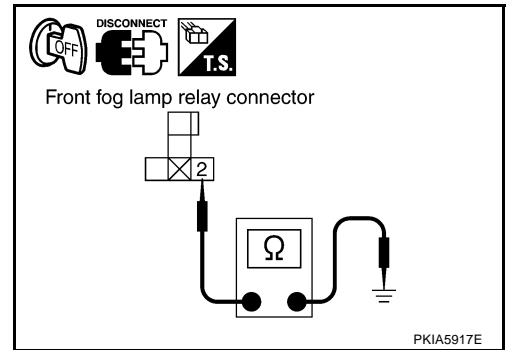
## 4. CHECK FRONT FOG LAMP SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between front fog lamp relay harness connector E217 terminal 2 (SB) and ground while operating front fog lamp switch with lighting switch "LOW" position.

Terminals			Fog lamp switch condition	Continuity
Connector	Terminal (Wire color)			
B217	2 (SB)	Ground	ON	Yes
			OFF	No

OK or NG

- OK >> Check harness for open or short between front fog lamp relay and front fog lamps.  
 NG >> GO TO 5.



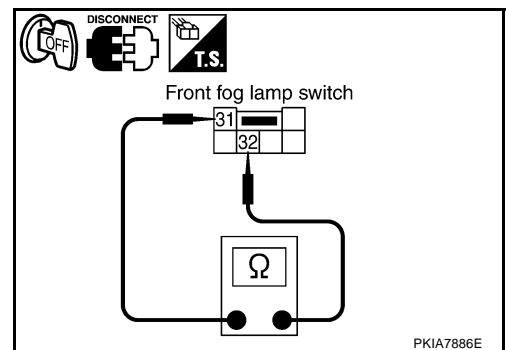
## 5. CHECK FRONT FOG LAMP SWITCH

1. Disconnect front fog lamp switch.
2. Check continuity between front fog lamp switch terminals 31 and 32 while operating front fog lamp switch.

Terminals		Fog lamp switch condition	Continuity
31	32		
		ON	Yes
		OFF	No

OK or NG

- OK >> GO TO 6.  
 NG >> Replace the front fog lamp switch.



## 6. CHECK LIGHTING SWITCH CIRCUIT

1. Disconnect lighting switch.
2. Check continuity between front fog lamp switch harness connector M63 terminal 32 (R/W) and lighting switch harness connector M55 terminal 10 (R/W).

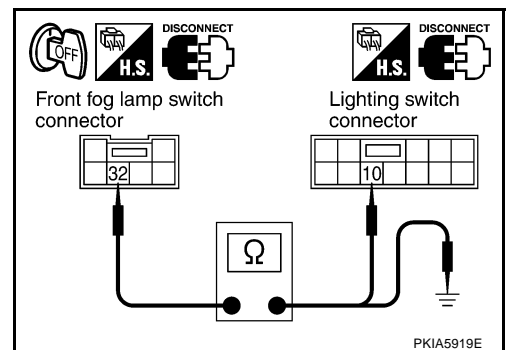
**32 (R/W) - 10 (R/W) : Continuity should exist.**

3. Check continuity between front fog lamp switch harness connector M63 terminal 32 (R/W) and ground.

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

OK or NG

- OK >> Check lighting switch. Refer to [LT-102, "Switch Circuit Inspection"](#) .  
 NG >> Repair harness or connector.



## Front Fog Lamp Does Not Illuminate (One Side)

AKS003RU

### 1. BULB INSPECTION

1. Replace bulb with other side bulb or new one.
2. Check if front fog lamp illuminates correctly.

OK or NG

- OK >> Replace front fog lamp bulb.  
 NG >> GO TO 2.

# FRONT FOG LAMP

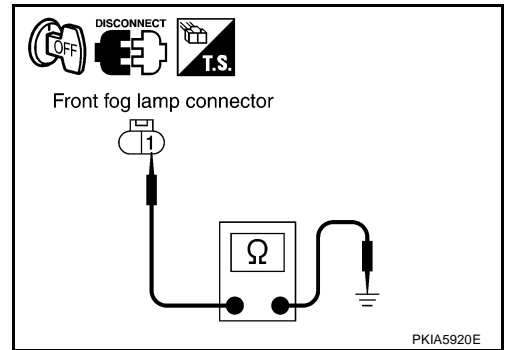
## 2. CHECK FRONT FOG LAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front fog lamp connector.
3. Check continuity between front fog lamp harness connector terminal 1 (B) of lamp which does not illuminate and ground.

**1 (B) - Ground : Continuity should exist.**

### OK or NG

- OK >> Check harness for open or short between front fog lamp relay and front fog lamp.  
NG >> Repair harness.

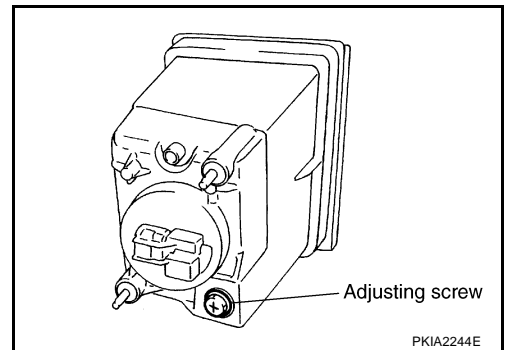


## Aiming Adjustment

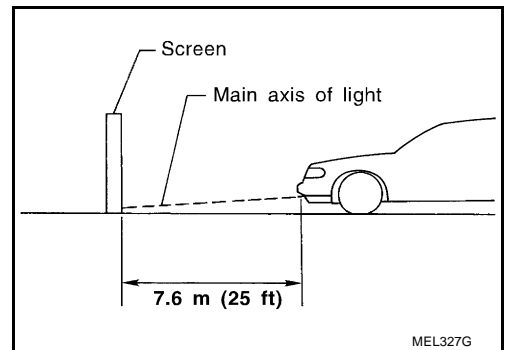
The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. Before performing aiming adjustment, make sure of the following.

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

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

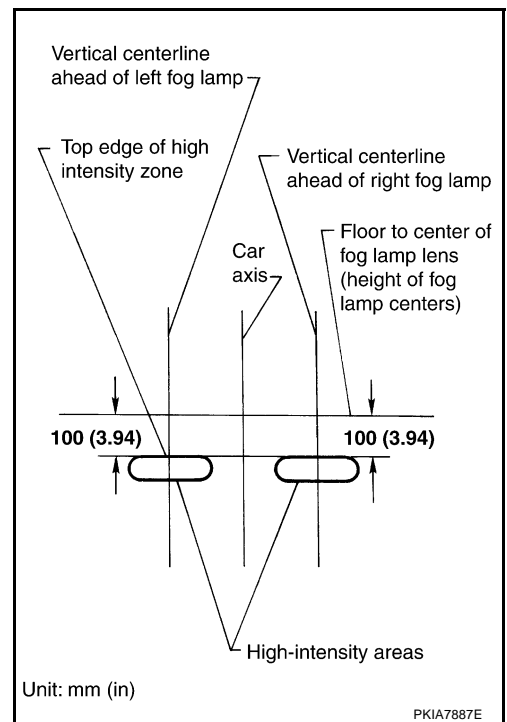


1. Set the distance between the screen and the center of fog lamp lens as shown.
2. Turn front fog lamps ON.



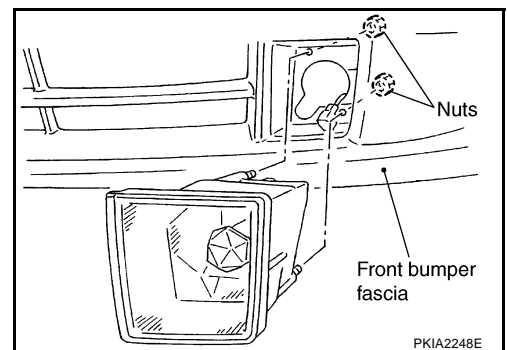
# FRONT FOG LAMP

- Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone is 100 mm (3.94 in) below the height of the fog lamp centers as shown.
  - When performing adjustment, if necessary, cover headlamps and opposite fog lamp.



## Bulb Replacement, Removal and Installation

- Remove fender protector. Refer to [EI-21, "FENDER PROTECTOR"](#).
- Disconnect front fog lamp connector.
- Remove nuts, and slide fog lamp out of front bumper fascia.



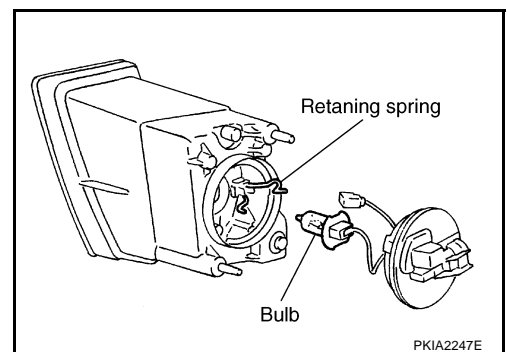
- Turn the plastic cap counterclockwise and unlock it.
- Unlock the retaining spring and remove the bulb from the front fog lamp.

**Fog lamp** :12V – 55W (H3 halogen)

- Install in the reverse order of removal.

### CAUTION:

- Do not touch the glass of bulb directly by hand. Keep grease and other oily matters 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.





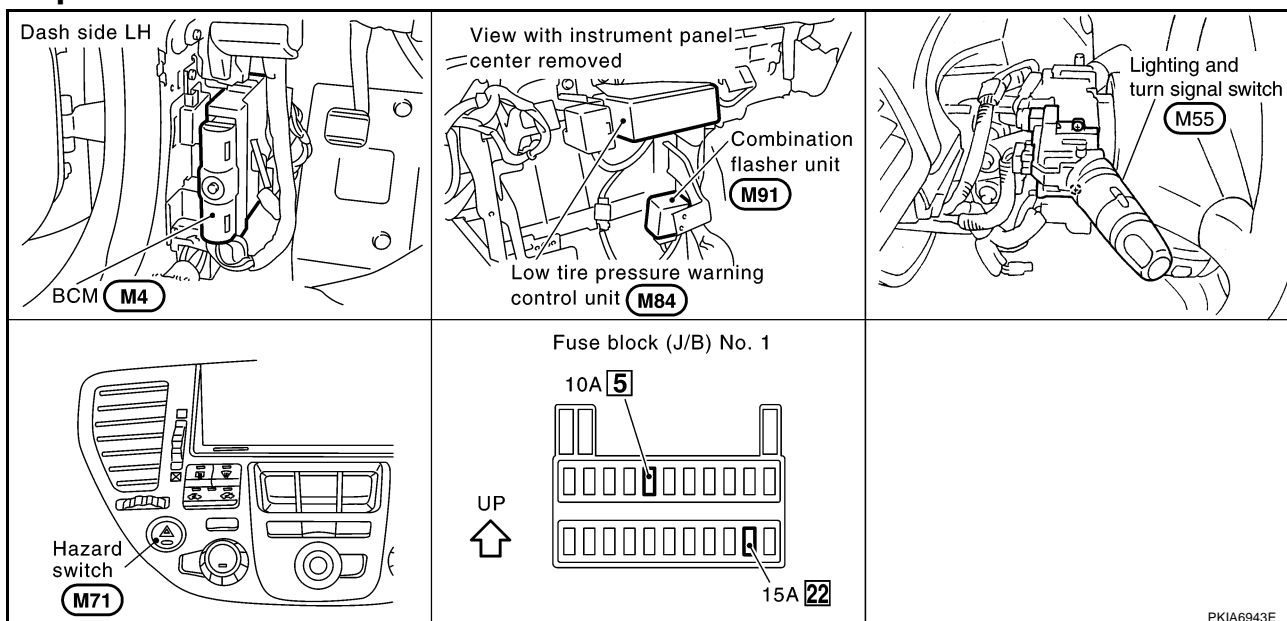
# TURN SIGNAL AND HAZARD WARNING LAMPS

## TURN SIGNAL AND HAZARD WARNING LAMPS

PFP:26120

### Component Parts and Harness Connector Location

AKS00AS4



### System Description

#### TURN SIGNAL LAMP OPERATION

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

- through 10A fuse [No. 5, located in fuse block (J/B) No. 1]
- to combination flasher unit terminal 1
- through combination flasher unit terminal 2
- to combination switch (turn signal) terminal 1.

Ground is supplied

- to combination flasher unit terminal 7
- through grounds M24 and M114.

#### Turn Signal Lamp LH

When the combination switch (turn signal) is moved to the L position, power is supplied

- through combination switch (turn signal) terminal 3
- to front combination lamp LH terminal 3
- to rear combination lamp LH terminal 5
- to door mirror (driver side) terminal 7
- to combination meter terminal 19.

Ground is supplied

- to front combination lamp LH terminal 2 through grounds E24, E42 and E62
- to rear combination lamp LH terminal 6 through grounds B17 and B57
- to door mirror (driver side) terminal 5 through grounds M24 and M114
- to combination meter terminal 45 through grounds M24 and M114.

With power and ground supplied, the combination flasher unit controls the flashing of the LH turn signal lamps.

#### Turn Signal Lamp RH

When the combination switch (turn signal) is moved to the R position, power is supplied

- through combination switch (turn signal) terminal 2
- to front combination lamp RH terminal 3
- to rear combination lamp RH terminal 5
- to door mirror (passenger side) terminal 7

# TURN SIGNAL AND HAZARD WARNING LAMPS

---

- to combination meter terminal 41.

Ground is supplied

- to front combination lamp RH terminal 2 through grounds E24, E42 and E62
- to rear combination lamp RH terminal 6 through grounds B17 and B57
- to door mirror (passenger side) terminal 5 through grounds M24 and M114
- to combination meter terminal 45 through grounds M24 and M114.

With power and ground supplied, the combination flasher unit controls the flashing of the RH turn signal lamps.

## HAZARD LAMP OPERATION

Power is supplied at all times

- through 15A fuse [No. 22, located in fuse block (J/B) No. 1]
- to combination flasher unit terminal 4
- through combination flasher unit terminal 6
- to hazard switch terminal 1.

With the hazard switch in the ON position,  
Ground is supplied

- to hazard switch terminal 2
- through grounds M24 and M114.

Power is supplied

- through combination flasher unit terminal 8
- to front combination lamp LH terminal 3
- to rear combination lamp LH terminal 5
- to door mirror (driver side) terminal 7
- to combination meter terminal 19.

Power is supplied

- through combination flasher unit terminal 3
- to front combination lamp RH terminal 3
- to rear combination lamp RH terminal 5
- to door mirror (passenger side) terminal 7
- to combination meter terminal 41.

Ground is supplied

- to front combination lamp LH and RH terminals 2 through grounds E24, E42 and E62
- to rear combination lamp LH and RH terminals 6 through grounds B17 and B57
- to door mirror driver side and passenger side terminals 5 through grounds M24 and M114
- to combination meter terminal 45 through grounds M24 and M114.

With power and ground supplied, the combination flasher unit controls the flashing of the hazard warning lamps.

## MULTI-REMOTE CONTROL SYSTEM OPERATION

Power is supplied at all times

- through 15A fuse [No. 22, located in fuse block (J/B) No. 1]
- to combination flasher unit terminal 4.

Ground is supplied

- to combination flasher unit terminal 6, when multi-remote control system is triggered through BCM.

Refer to [BL-51, "REMOTE KEYLESS ENTRY SYSTEM"](#) in BL section.

The BCM is energized.

Power is supplied

- through combination flasher unit terminal 8
- to front combination lamp LH terminal 3
- to rear combination lamp LH terminal 5

# TURN SIGNAL AND HAZARD WARNING LAMPS

- to door mirror (driver side) terminal 7
- to combination meter terminal 19.

Power is supplied

- through combination flasher unit terminal 3
- to front combination lamp RH terminal 3
- to rear combination lamp RH terminal 5
- to door mirror (passenger side) terminal 7
- to combination meter terminal 41.

Ground is supplied

- to front combination lamp LH and RH terminals 2 through grounds E24, E42 and E62
- to rear combination lamp LH and RH terminals 6 through grounds B17 and B57
- to door mirror driver side and passenger side terminals 5 through grounds M24 and M114
- to combination meter terminal 45 through grounds M24 and M114.

With power and ground supplied, the BCM controls the flashing of the hazard warning lamps.

## LOW TIRE PRESSURE WARNING CONTROL SYSTEM

When ID is normally registered to each transmitter in the low tire pressure warning control unit, the hazard warning lamp flashes twice. Refer to [WT-14, "ID Registration Procedure"](#) in WT section.

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J

LT

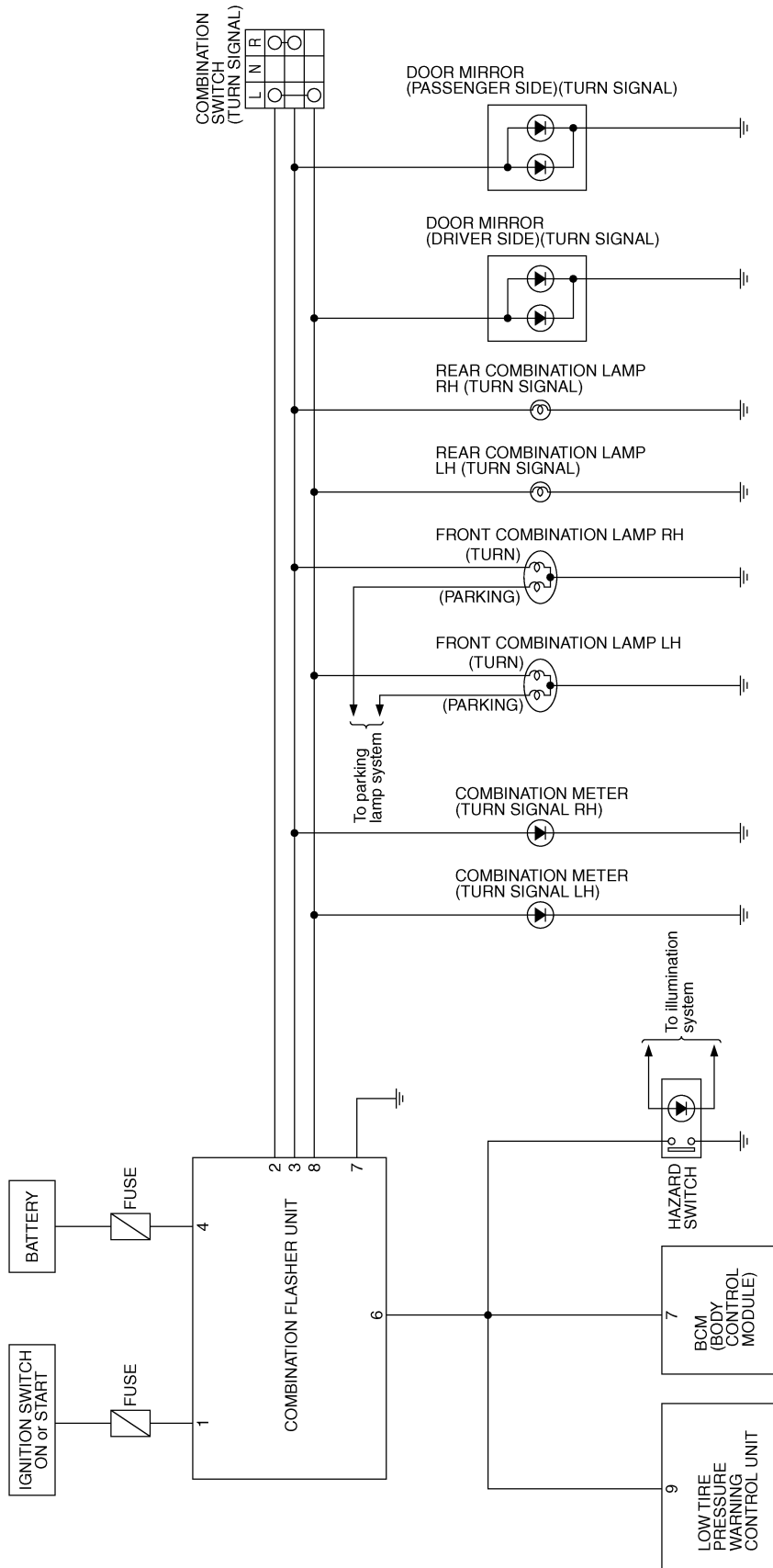
L

M

# TURN SIGNAL AND HAZARD WARNING LAMPS

## Schematic

AKS002FU



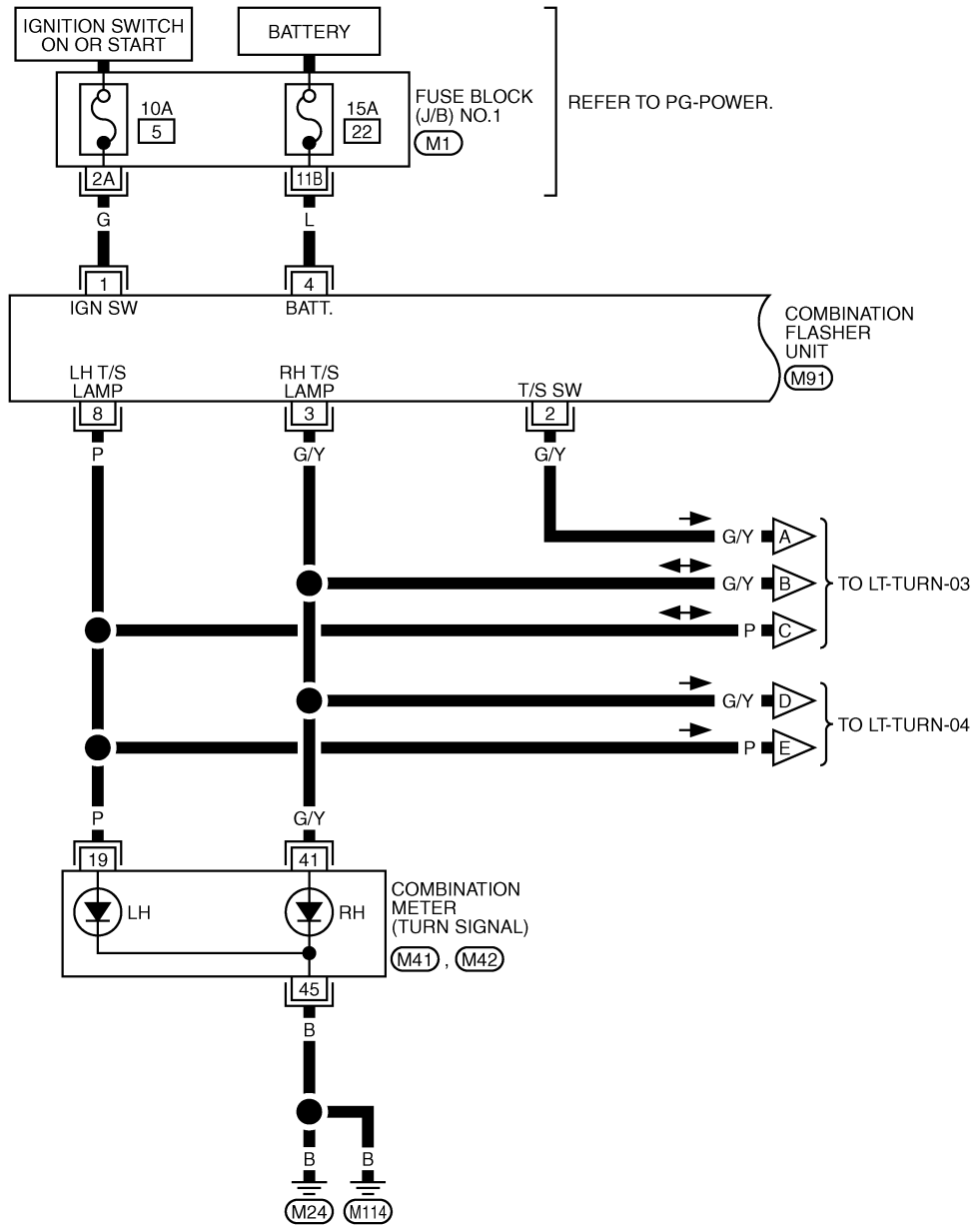
TKWA0547E

# TURN SIGNAL AND HAZARD WARNING LAMPS

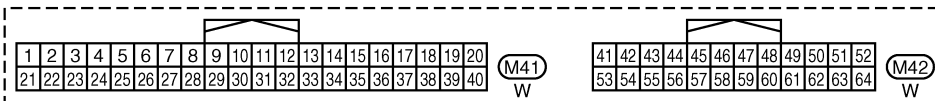
## Wiring Diagram — TURN —

AKS002FV

LT-TURN-01



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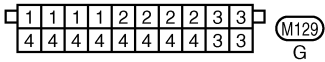
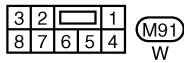
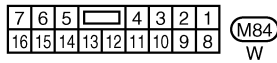
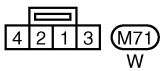
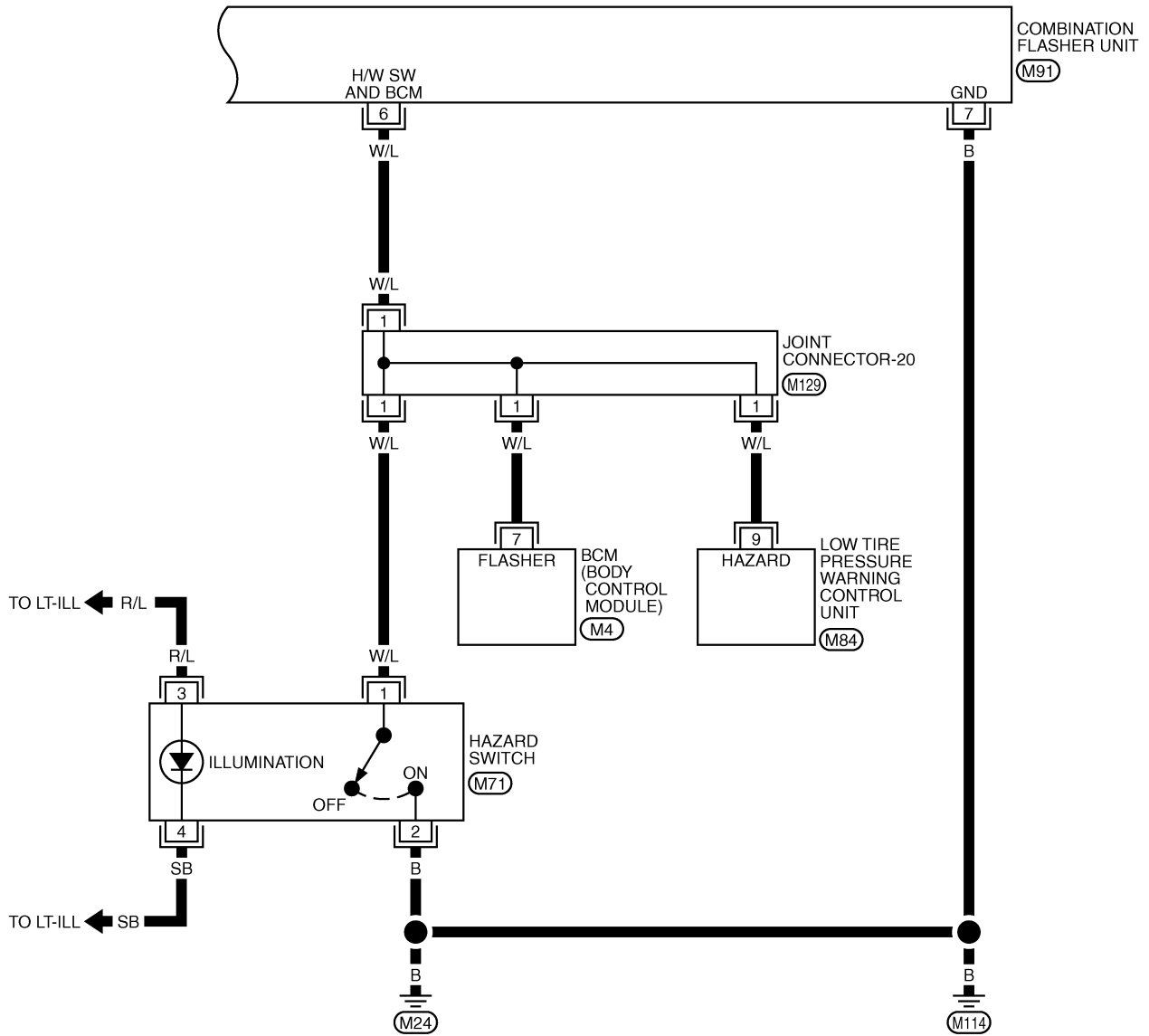


REFER TO THE FOLLOWING.  
 (M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0548E

# TURN SIGNAL AND HAZARD WARNING LAMPS

LT-TURN-02



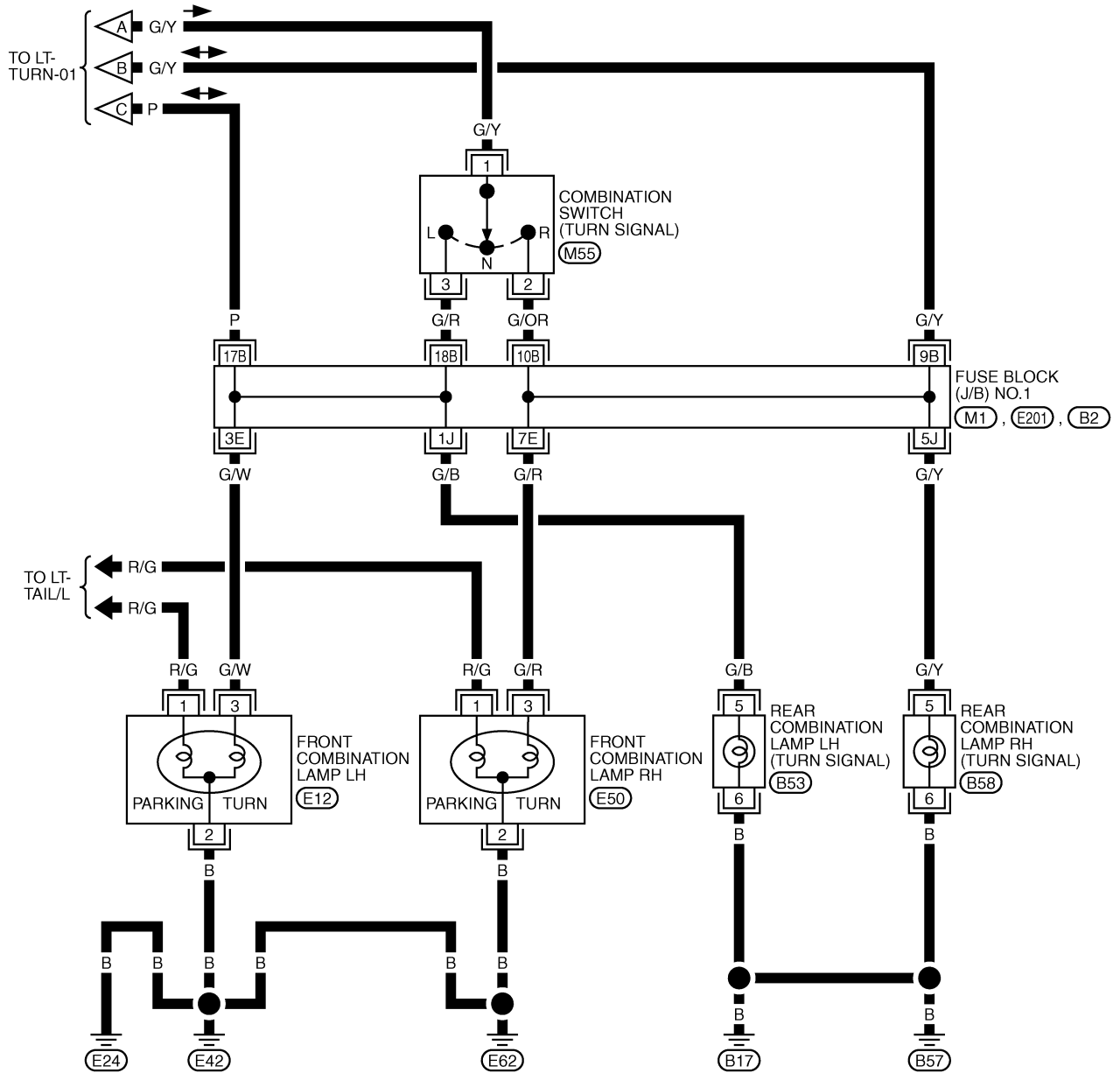
REFER TO THE FOLLOWING.

(M4) -ELECTRICAL UNITS

TKWA0549E

# TURN SIGNAL AND HAZARD WARNING LAMPS

LT-TURN-03



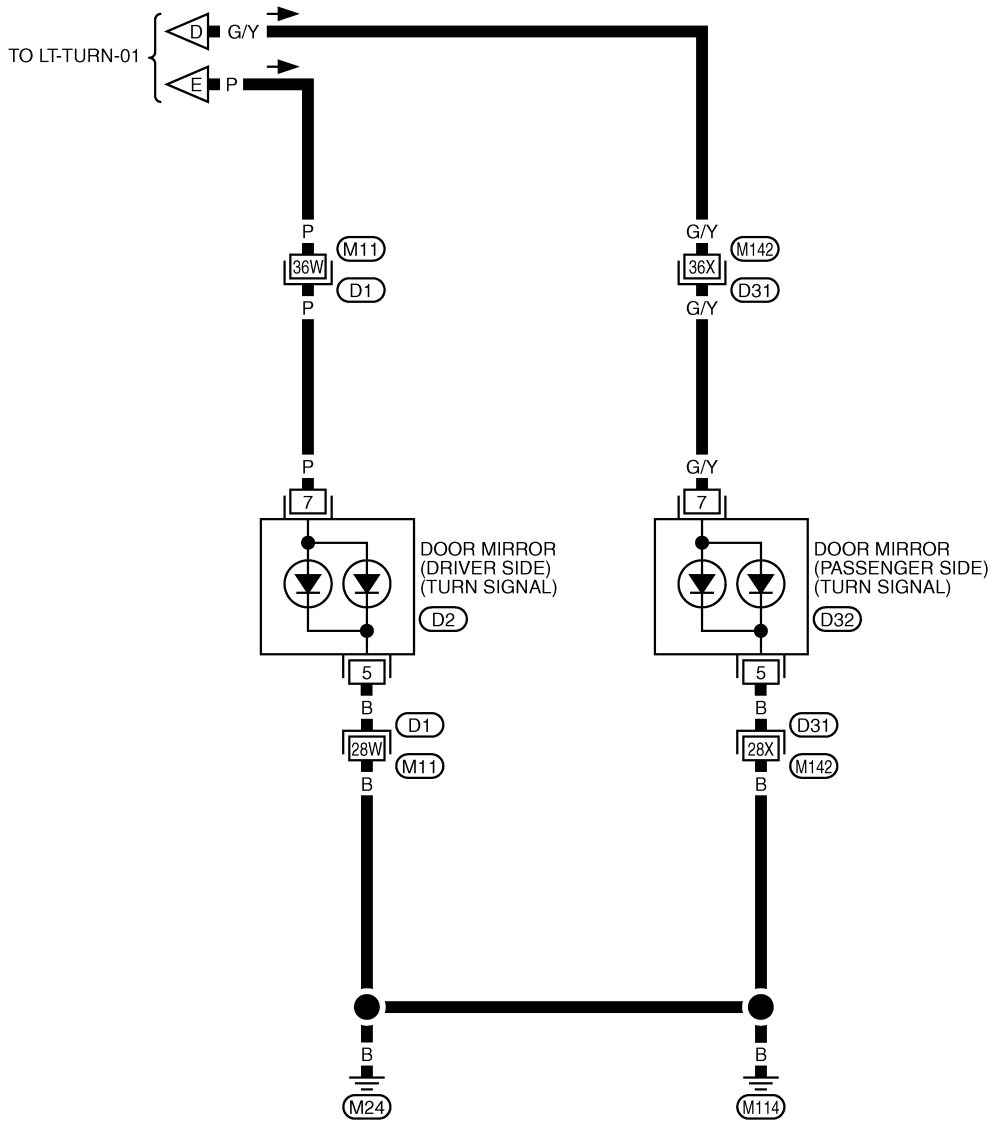
REFER TO THE FOLLOWING.  
 (M1), (E201), (B2) - FUSE  
 BLOCK-JUNCTION BOX (J/B) NO.1

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G  
H  
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J  
K  
L  
M

LT

# TURN SIGNAL AND HAZARD WARNING LAMPS

LT-TURN-04



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

D2 , D32  
 BR BR
 

REFER TO THE FOLLOWING.  
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0551E



# TURN SIGNAL AND HAZARD WARNING LAMPS

## Turn Signal Lamps Do Not Operate

AKS003V8

### 1. CHECK FUSE

Check for blown combination flasher unit fuse.

Unit	Power source	Fuse No.
Combination flasher unit	Ignition switch ON or START position	5

Refer to [LT-93, "Wiring Diagram — TURN —"](#).

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK COMBINATION FLASHER UNIT POWER SUPPLY CIRCUIT

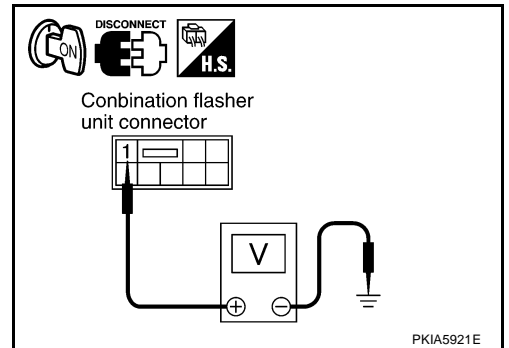
1. Turn ignition switch OFF.
2. Disconnect combination flasher unit connector.
3. Turn ignition switch ON.
4. Check voltage between combination flasher unit harness connector M91 terminal 1 (G) and ground.

**1 (G) - Ground : Battery voltage should exist.**

OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short between combination flasher unit and fuse.



### 3. CHECK COMBINATION FLASHER UNIT

Check operation of combination flasher unit. Refer to [LT-101, "COMBINATION FLASHER UNIT CHECK"](#).

OK or NG

OK >> GO TO 4.

NG >> Replace combination flasher unit.

### 4. CHECK COMBINATION SWITCH (TURN SIGNAL)

1. Disconnect combination switch (turn signal) connector.
2. Check operation of the combination switch. Refer to [LT-102, "Switch Circuit Inspection"](#).

OK or NG

OK >> Check harness for open or short between combination flasher unit and combination switch (turn signal).

NG >> Replace combination switch (turn signal).

## Hazard Warning Lamps Do Not Operate

AKS003V9

### 1. CHECK FUSE

Check for blown combination flasher unit fuse.

Unit or relay	Power source	Fuse No.
Combination flasher unit	Battery	22

Refer to [LT-93, "Wiring Diagram — TURN —"](#).

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

# TURN SIGNAL AND HAZARD WARNING LAMPS

## 2. CHECK COMBINATION FLASHER UNIT POWER SUPPLY CIRCUIT

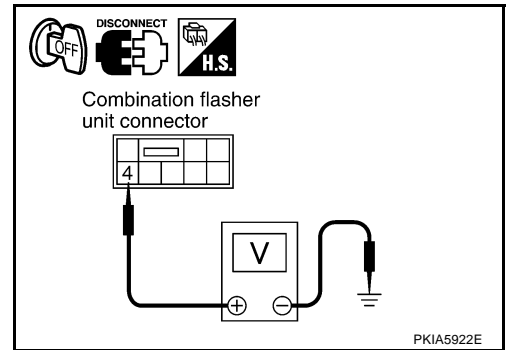
1. Turn ignition switch OFF.
2. Disconnect combination flasher unit connector.
3. Check voltage between combination flasher unit harness connector M91 terminal 4 (L) and ground.

**4 (L) - Ground : Battery voltage should exist.**

OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short between combination flasher unit and fuse.



## 3. CHECK COMBINATION FLASHER UNIT

Check operating of combination flasher unit. Refer to [LT-101, "COMBINATION FLASHER UNIT CHECK"](#).

OK or NG

OK >> GO TO 4.

NG >> Replace combination flasher unit.

## 4. CHECK HAZARD SWITCH CIRCUIT

1. Disconnect hazard switch connector.
2. Check continuity between combination flasher unit harness connector M91 terminal 6 (W/L) and hazard switch harness connector M71 terminal 1 (W/L).

**6 (W/L) - 1 (W/L) : Continuity should exist.**

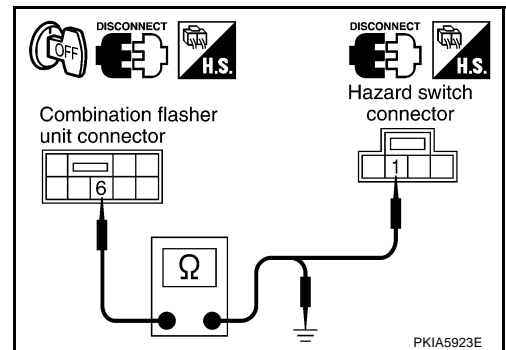
3. Check continuity between combination flasher unit harness connector M91 terminal 6 (W/L) and ground.

**6 (W/L) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.



## 5. CHECK HAZARD SWITCH

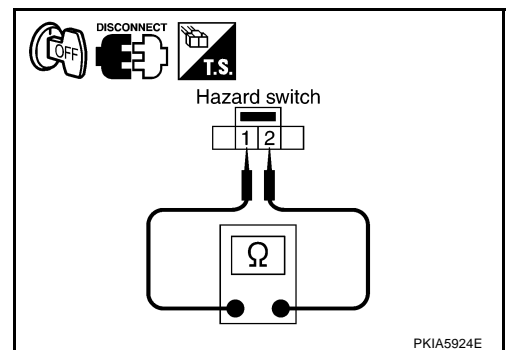
Check continuity between hazard switch terminals 1 and 2.

Terminals		Switch condition	Continuity
1	2	Released (OFF)	No
		Pressed (ON)	Yes

OK or NG

OK >> Check harness ground circuit.

NG >> Replace hazard switch.



# TURN SIGNAL AND HAZARD WARNING LAMPS

## Front Turn Signal Lamp LH or RH Does Not Operate

AKS003VA

### 1. CHECK BULB

1. Replace bulb with other side bulb or new one.
2. Check if front turn signal lamp illuminates correctly.

#### OK or NG

- OK >> Replace combination flasher unit.  
NG >> GO TO 2.

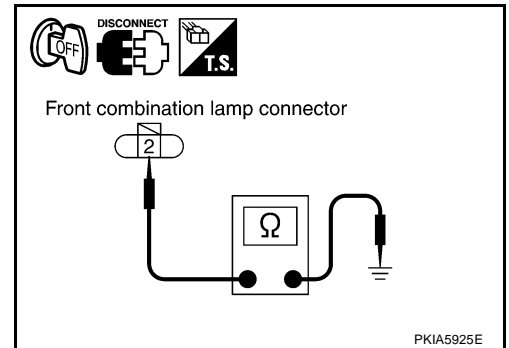
### 2. CHECK FRONT COMBINATION LAMP GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front combination lamp connector.
3. Check continuity between front combination lamp LH harness connector E12 terminal 2 (B), and front combination lamp RH harness connector E50 terminal 2 (B) and ground.

**2 (B) - Ground : Continuity should exist.**

#### OK or NG

- OK >> Check harness for open or short between front combination lamp and combination switch.  
NG >> Repair harness.



## Rear Turn Signal Lamp LH or RH Does Not Operate

AKS003VB

### 1. CHECK BULB

1. Replace bulb with other side bulb or new one.
2. Check if rear turn signal lamp illuminates correctly.

#### OK or NG

- OK >> Replace combination flasher unit.  
NG >> GO TO 2.

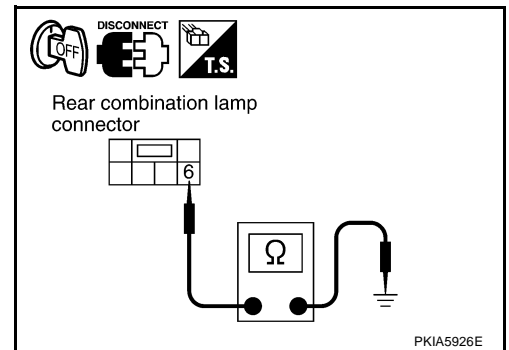
### 2. CHECK REAR COMBINATION LAMP GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear combination lamp connector.
3. Check continuity between rear combination lamp LH harness connector B53 terminal 6 (B), and rear combination lamp RH harness connector B58 terminal 6 (B) and ground.

**6 (B) - Ground : Continuity should exist.**

#### OK or NG

- OK >> Check harness for open or short between front combination lamp and combination switch.  
NG >> Repair harness.



# TURN SIGNAL AND HAZARD WARNING LAMPS

## LH and RH Turn Indicators Do Not Operate

AKS003ZL

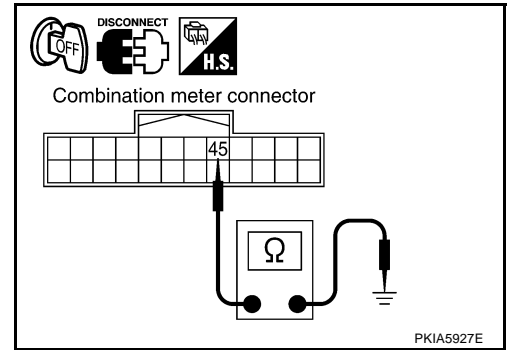
### 1. CHECK COMBINATION METER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector M42 terminal 45 (B) and ground.

**45 (B) - Ground : Continuity should exist.**

OK or NG

- OK >> Replace combination meter.  
NG >> Repair harness.



## LH or RH Turn Indicator Does Not Operate

AKS003ZM

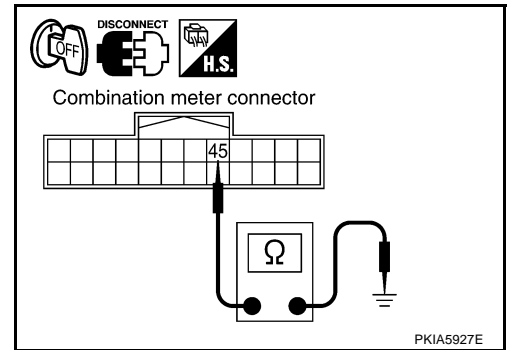
### 1. CHECK COMBINATION METER GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector M42 terminal 45 (B) and ground.

**45 (B) - Ground : Continuity should exist.**

OK or NG

- OK >> ● When LH turn indicator does not operate, GO TO 2.  
● When RH turn indicator does not operate, GO TO 3.  
NG >> Repair harness.



### 2. CHECK COMBINATION METER LH INDICATOR POWER SUPPLY CIRCUIT

1. Disconnect combination switch connector.
2. Check continuity between combination meter harness connector M41 terminal 19 (P) and combination switch harness connector M55 terminal 3 (G/R).

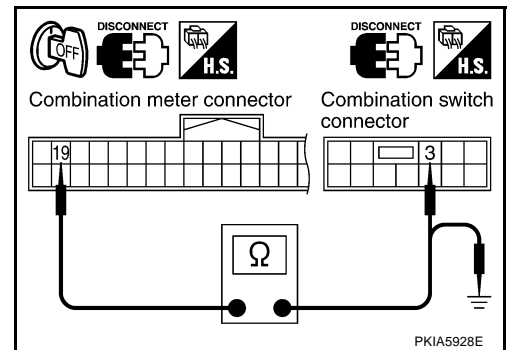
**19 (P) - 3 (G/R) : Continuity should exist.**

3. Check continuity between combination meter harness connector M41 terminal 19 (P) and ground.

**19 (P) - Ground : Continuity should not exist.**

OK or NG

- OK >> Replace combination meter.  
NG >> Repair harness or connector.



# TURN SIGNAL AND HAZARD WARNING LAMPS

## 3. CHECK COMBINATION METER RH INDICATOR POWER SUPPLY CIRCUIT

1. Disconnect combination switch connector.
2. Check continuity between combination meter harness connector M42 terminal 41 (G/Y) and combination switch harness connector M55 terminal 2 (G/OR).

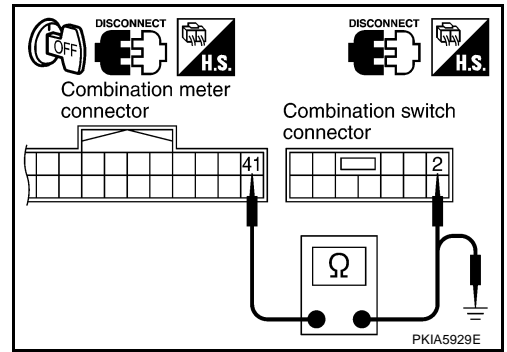
**41 (G/Y) - 2 (G/OR) : Continuity should exist.**

3. Check continuity between combination meter harness connector M42 terminal 41 (G/Y) and ground.

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

OK or NG

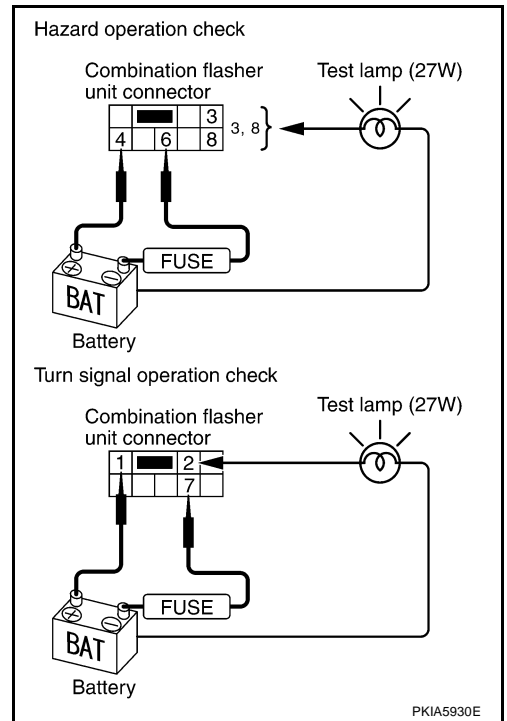
- OK >> Replace combination meter.
- NG >> Repair harness or connector.



## Electrical Components Inspection COMBINATION FLASHER UNIT CHECK

AKS002FX

- Before checking, ensure that bulbs meet specifications.
- Connect a battery and test lamp to the combination flasher unit, as shown. Combination flasher unit is properly functioning if it blinks when power is supplied to the circuit.



## Bulb Replacement FRONT TURN SIGNAL LAMP

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

## REAR TURN SIGNAL LAMP

Refer to [LT-125, "REAR COMBINATION LAMP"](#) in "PARKING, LICENSE PLATE AND TAIL LAMPS".

## Removal and Installation FRONT TURN SIGNAL LAMP

AKS002FZ

Refer to [LT-42, "Removal and Installation"](#) in "HEADLAMP (USA)".

## SIDE TURN SIGNAL LAMP

Refer to [GW-118, "Disassembly and Assembly"](#) in "GLASSES, WINDOW SYSTEM & MIRRORS (GW)" section.

## REAR TURN SIGNAL LAMP

Refer to [LT-127, "REAR COMBINATION LAMP"](#) in "PARKING, LICENSE PLATE AND TAIL LAMPS".

# LIGHTING AND TURN SIGNAL SWITCH

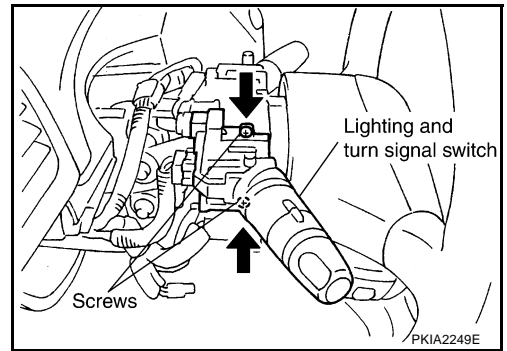
## LIGHTING AND TURN SIGNAL SWITCH

PFP:25540

### Removal and Installation

AKS002G0

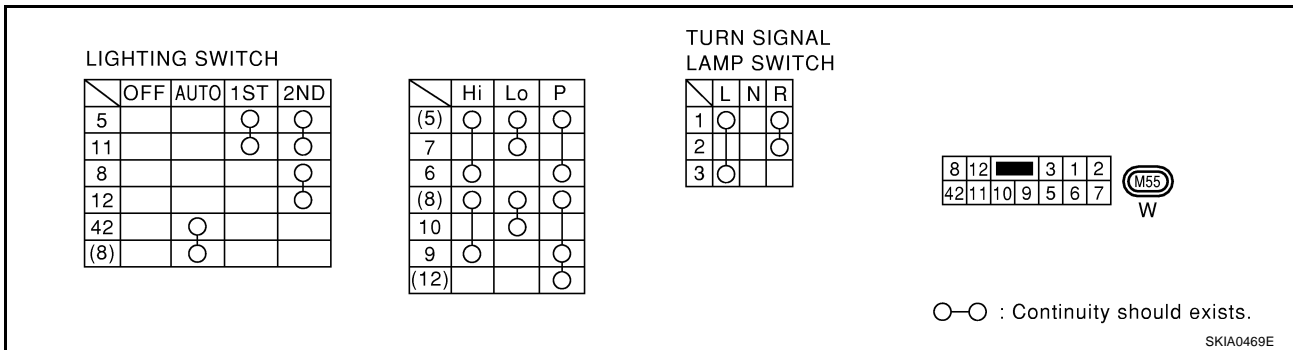
1. Remove steering column cover. Refer to [IP-11, "WORK STEPS"](#) in "IP" section.
2. Remove lighting and turn signal switch mounting screws and remove lighting and turn signal switch from spiral cable.
3. Disconnect lighting and turn signal switch connector.



### Switch Circuit Inspection

AKS002G1

Using circuit tester, check continuity between the lighting and turn signal switch connector terminals in each operation status of the switch.



Hi: "HIGH BEAM" position, Lo: "LOW BEAM" position, P: "FLASH TO PASS" position

# HAZARD SWITCH

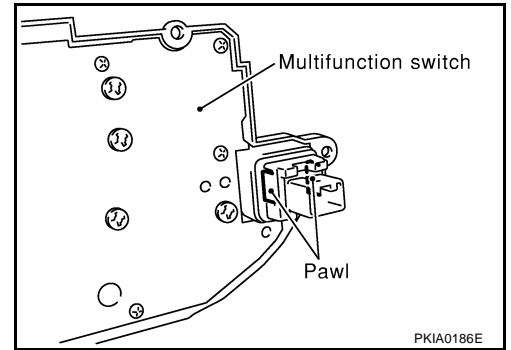
## HAZARD SWITCH

PPF:25290

### Removal and Installation

AKS002G2

Refer to [DI-88. "Disassembly and Assembly for Multifunction Switch"](#) in "DRIVER INFORMATION SYSTEM (DI)" section.



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# STOP LAMP

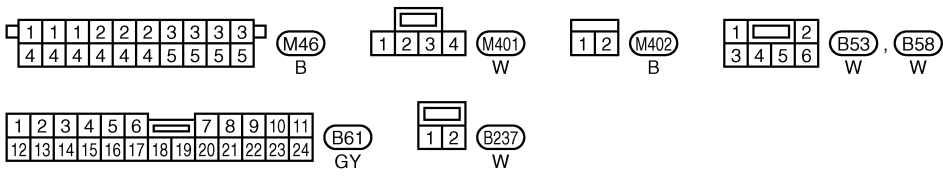
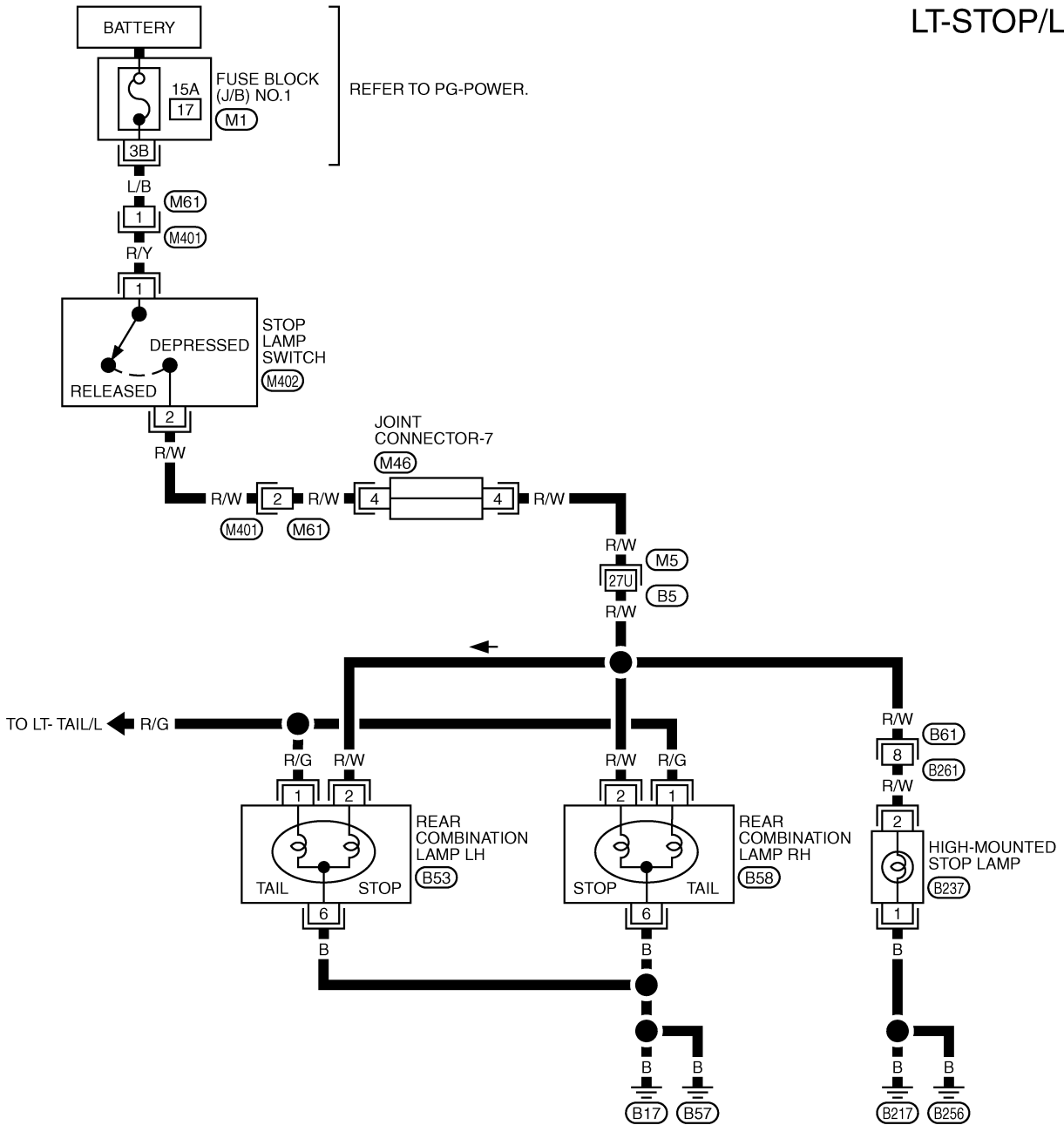
PFP:26550

## STOP LAMP

### Wiring Diagram — STOP/L —

AKS002G3

## LT-STOP/L-01



REFER TO THE FOLLOWING.

- (M5) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0545E



# STOP LAMP

## Bulb Replacement STOP LAMP

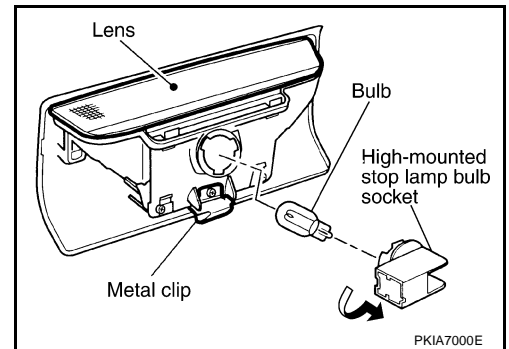
AKS002G4

Refer to [LT-125, "REAR COMBINATION LAMP"](#) in "PARKING, LICENSE PLATE AND TAIL LAMPS".

### HIGH-MOUNTED STOP LAMP

1. Remove high-mounted stop lamp. Refer to [LT-105, "HIGH-MOUNTED STOP LAMP"](#) in "Removal and Installation".
2. Turn high-mounted stop lamp bulb socket counterclockwise and unlock it.
3. Remove bulb.

**High-mounted stop lamp : 12V 18W**



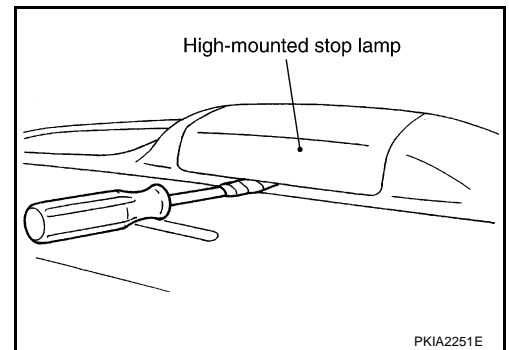
## Removal and Installation STOP LAMP

AKS002G5

Refer to [LT-127, "REAR COMBINATION LAMP"](#) in "PARKING, LICENSE PLATE AND TAIL LAMPS".

### HIGH-MOUNTED STOP LAMP

1. Pull up high-mounted stop lamp while pressing it toward rear of the vehicle and remove from the vehicle.
2. Disconnect high-mounted stop lamp connector.



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# BACK-UP LAMP

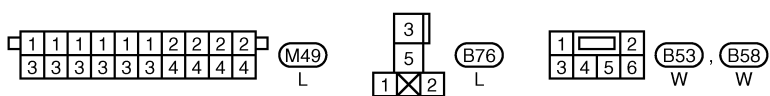
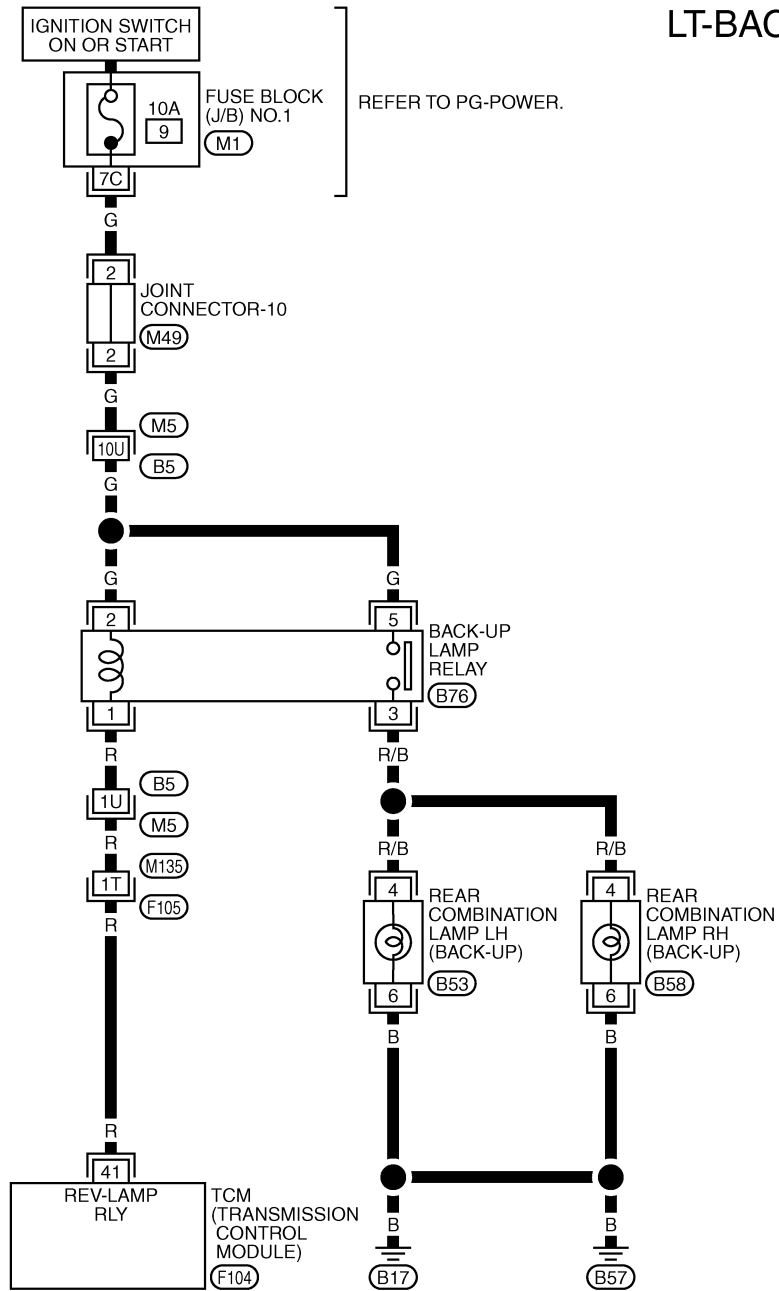
PFP:26550

## BACK-UP LAMP

### Wiring Diagram — BACK/L —

AKS002G6

## LT-BACK/L-01



REFER TO THE FOLLOWING.  
 (M5), (F105) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1  
 (F104) -ELECTRICAL UNITS

TKWA0546E

# BACK-UP LAMP

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## Bulb Replacement

AKS002G7

Refer to [LT-125, "REAR COMBINATION LAMP"](#) in PARKING, LICENSE PLATE AND TAIL LAMPS.

A

## Removal and Installation

AKS002G8

Refer to [LT-127, "REAR COMBINATION LAMP"](#) in PARKING, LICENSE PLATE AND TAIL LAMPS.

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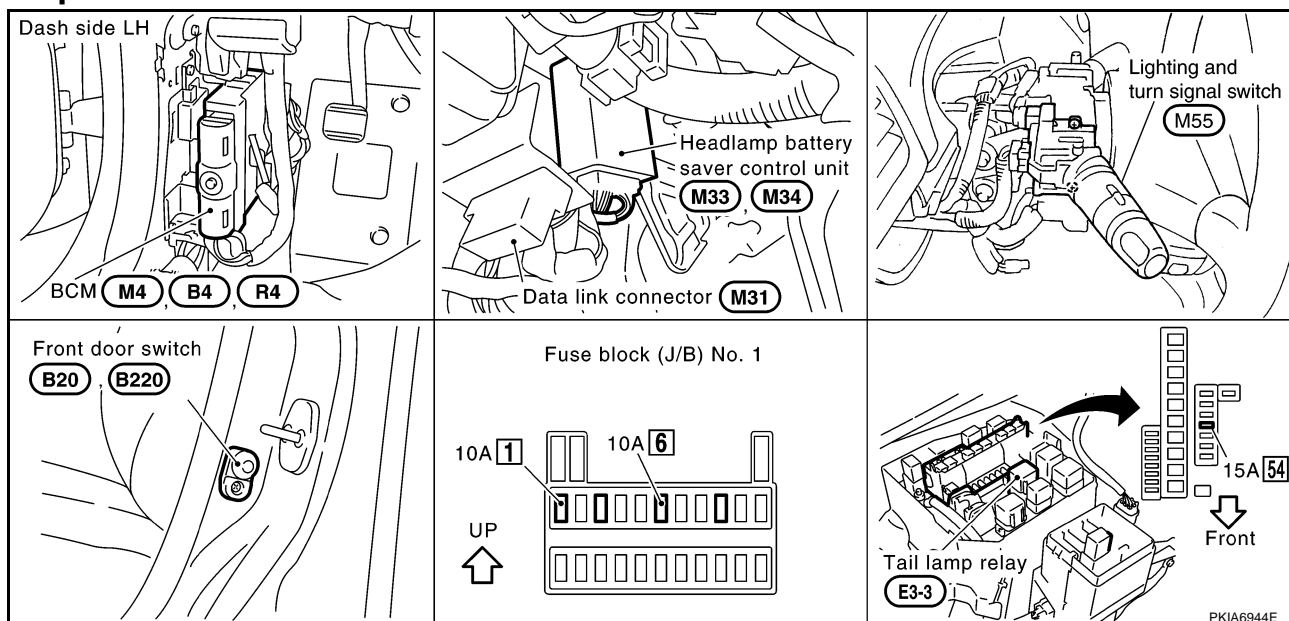
M

## PARKING, LICENSE PLATE AND TAIL LAMPS

PFP:26550

### Component Parts and Harness Connector Location

AKS00AS8



### System Description

AKS002G9

The parking, license side marker and tail lamps operation are controlled by the lighting switch which is built into the spiral cable and BCM. The battery saver system is controlled by the headlamp battery saver control unit and BCM.

Power is supplied at all times

- to tail lamp relay terminals 2 and 6
- through 15A fuse [No. 54, located in fuse, fusible link and relay block (J/B)],
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 6, located in fuse block (J/B) No. 1].

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

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 1, located in fuse block (J/B) No. 1].

Ground is supplied

- to headlamp battery saver control unit terminals 4 and 11
- through grounds M25 and M115.

### LIGHTING OPERATION BY LIGHTING SWITCH

When lighting switch is in 1ST (or 2ND) position, ground is supplied

- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13
- through lighting switch terminals 11 and 5
- through grounds M25 and M115.

Tail lamp relay is then energized and the parking, license, side marker and tail lamps illuminate.

### BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while parking, license, side marker and tail lamps are illuminated, the RAP signal is supplied to terminal 10 of headlamp battery saver control unit terminal from BCM terminal 135.

After counting 45 seconds by the RAP signal from the BCM to headlamp battery saver control unit, the ground supply to the tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14 is terminated.

## PARKING, LICENSE PLATE AND TAIL LAMPS

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Then the parking, license, side marker and tail lamps are turned off.

The parking, license, side marker and tail lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while the parking, license, side marker and tail lamps are illuminated.

When the lighting switch is turned from OFF to 1ST (or 2ND) after the parking, license, side marker and tail lamps are turned off by the headlamp battery saver control, ground is supplied.

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14.

Then the parking, license, side marker and tail lamps illuminate again.

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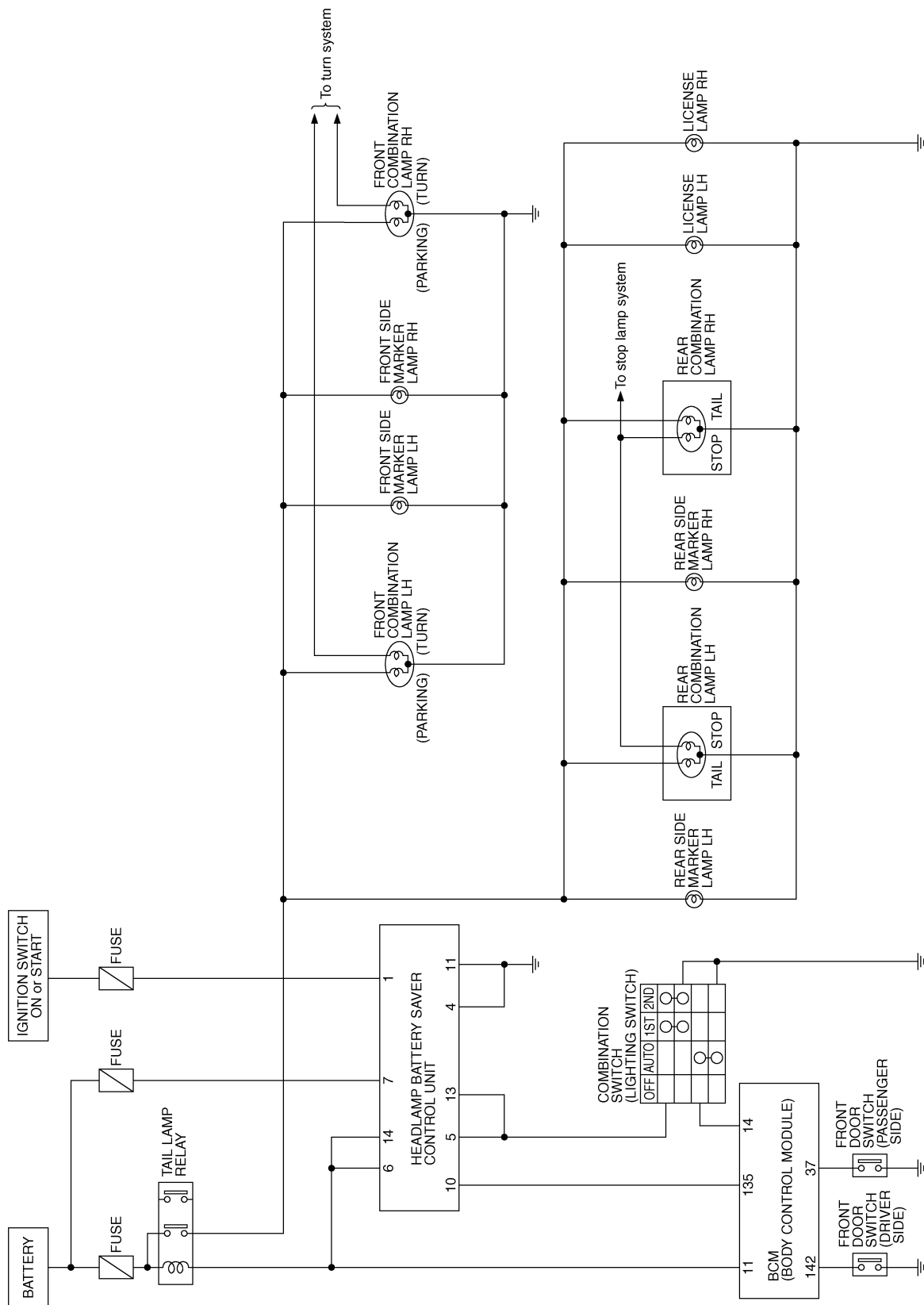
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# PARKING, LICENSE PLATE AND TAIL LAMPS

## Schematic

AKS002GA



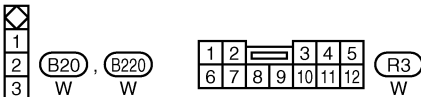
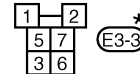
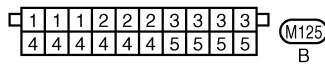
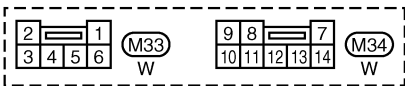
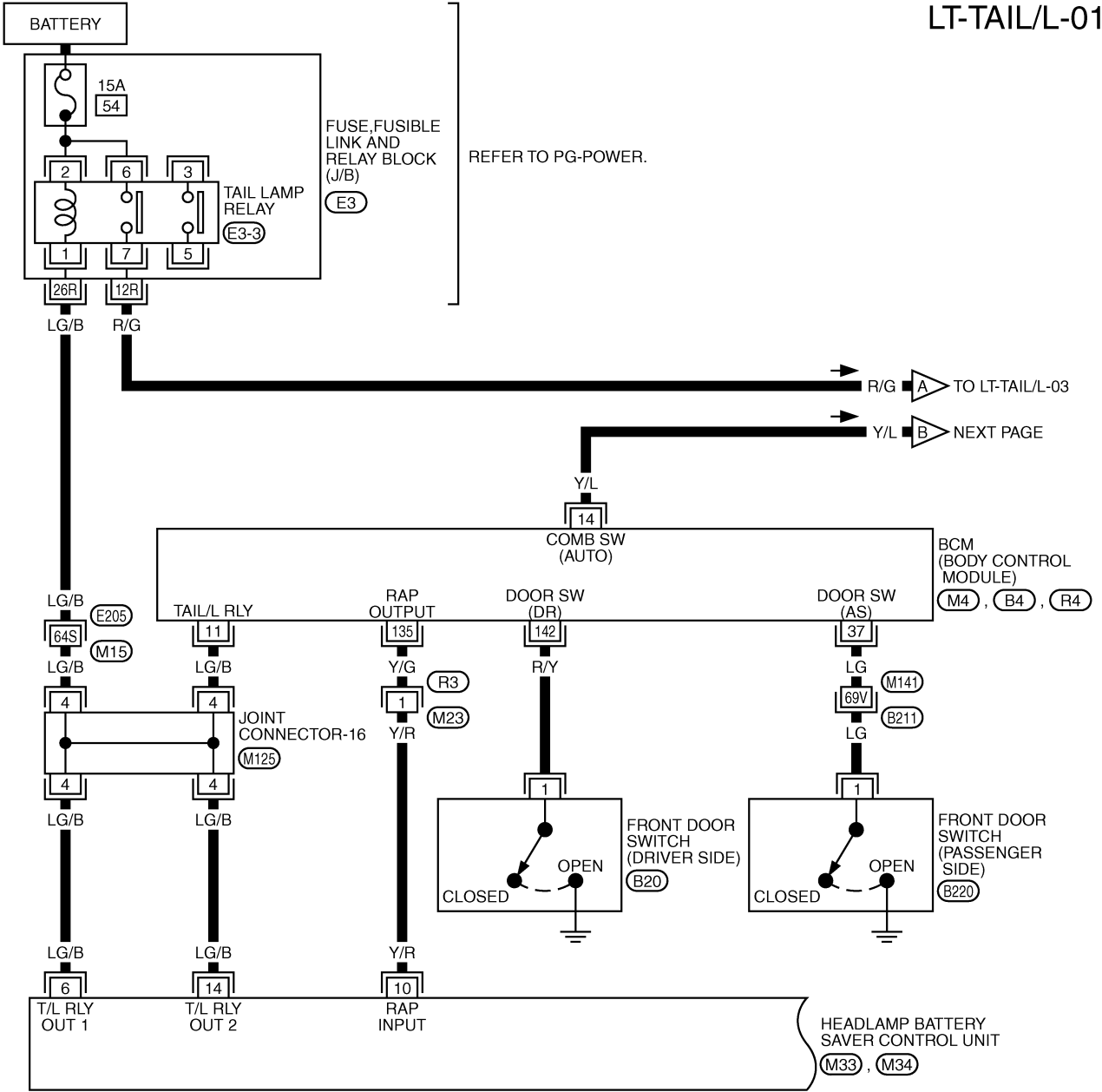
TKWA0535E

# PARKING, LICENSE PLATE AND TAIL LAMPS

## Wiring Diagram — TAIL/L —

AKS002GB

LT-TAIL/L-01



REFER TO THE FOLLOWING.  
 E205, B211 -SUPER MULTIPLE JUNCTION (SMJ)  
 E3 -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)  
 M4, B4, R4 -ELECTRICAL UNITS

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

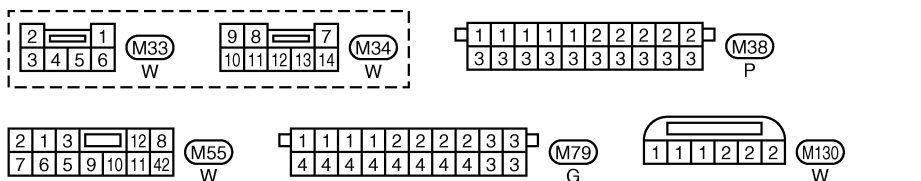
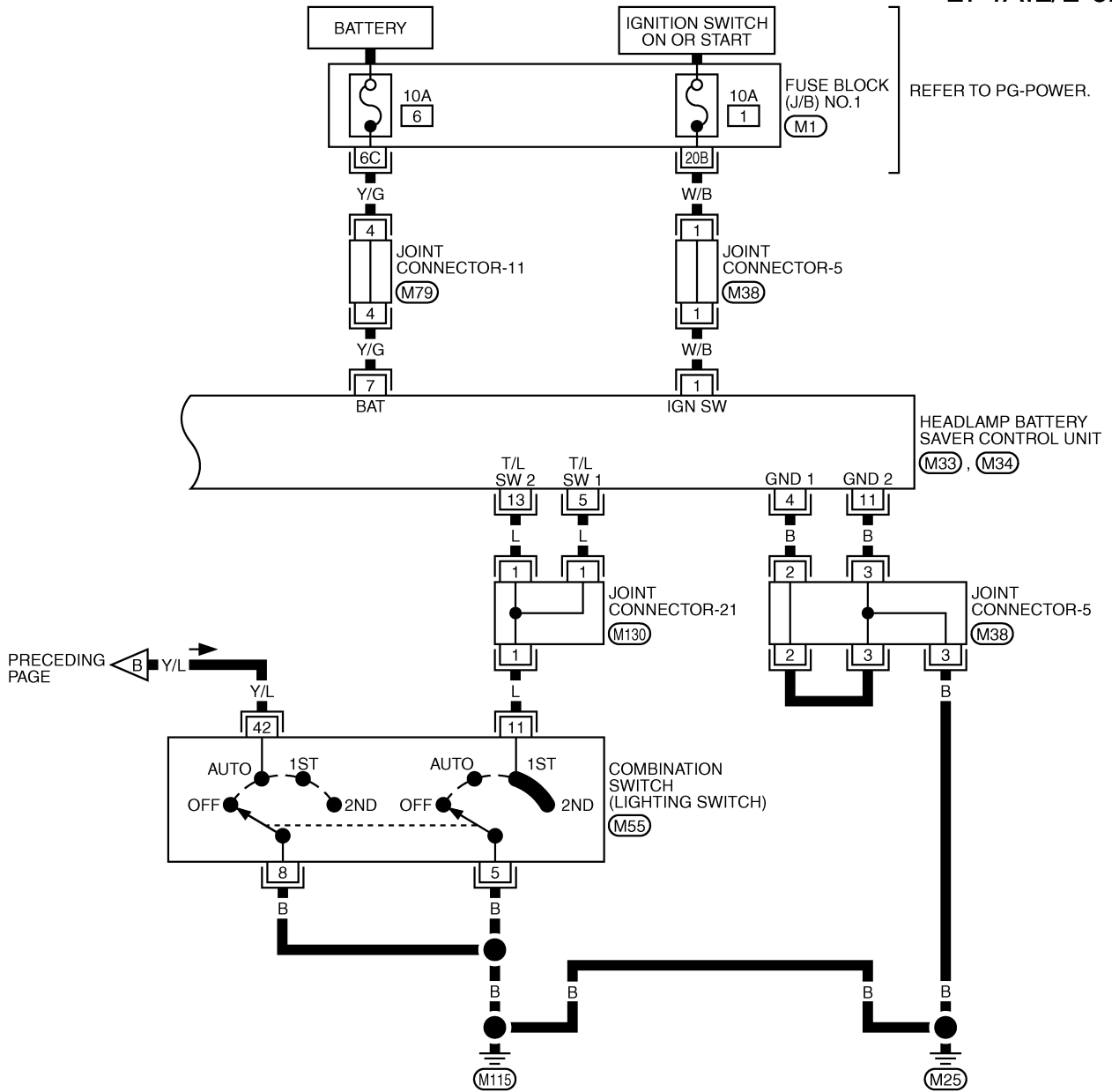
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# PARKING, LICENSE PLATE AND TAIL LAMPS

LT-TAIL/L-02



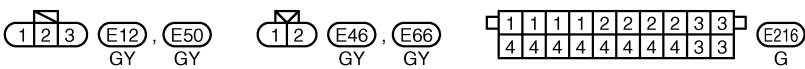
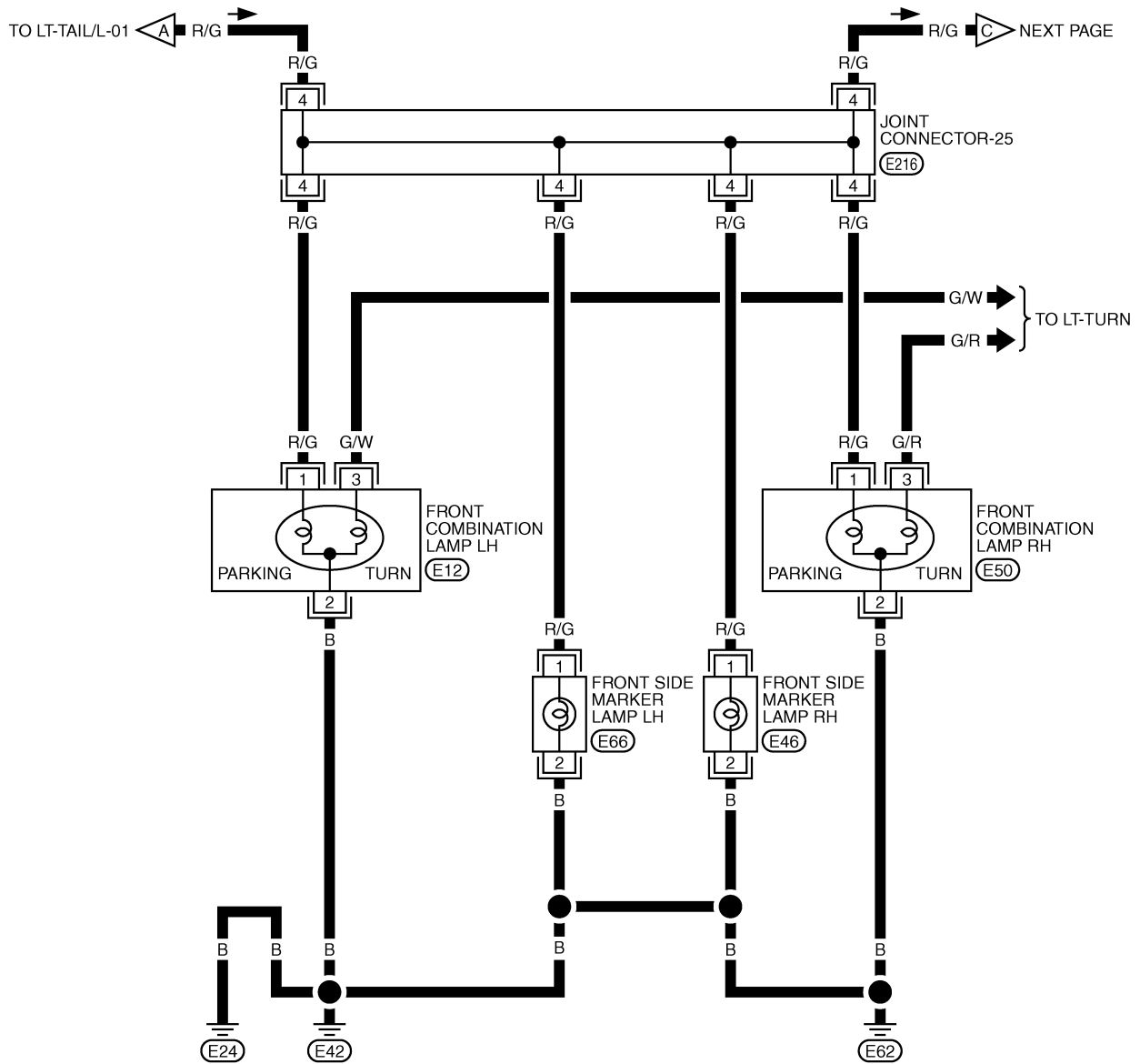
REFER TO THE FOLLOWING.  
 (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0537E



# PARKING, LICENSE PLATE AND TAIL LAMPS

LT-TAIL/L-03

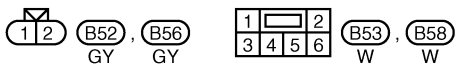
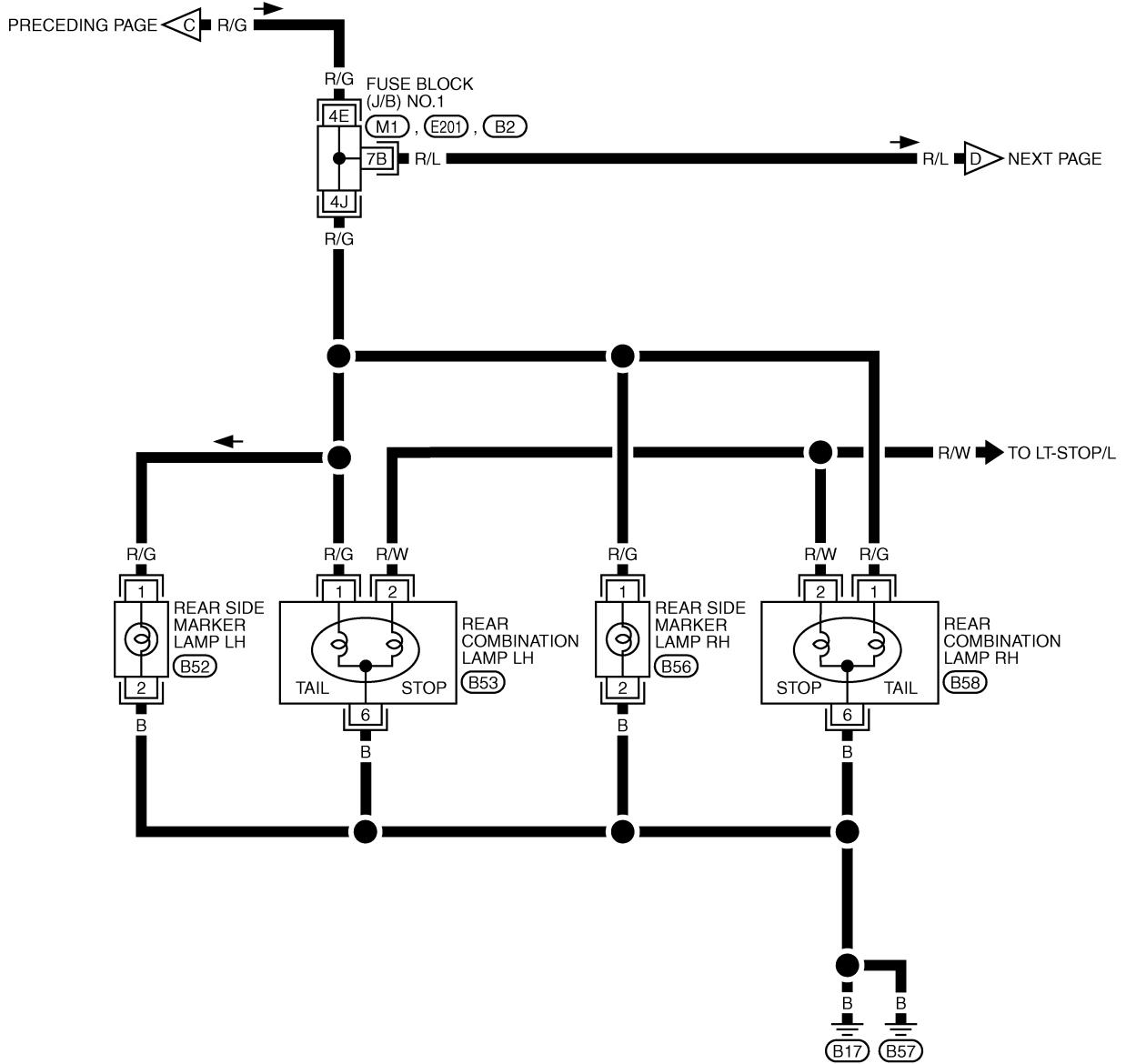


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# PARKING, LICENSE PLATE AND TAIL LAMPS

LT-TAIL/L-04



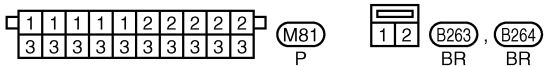
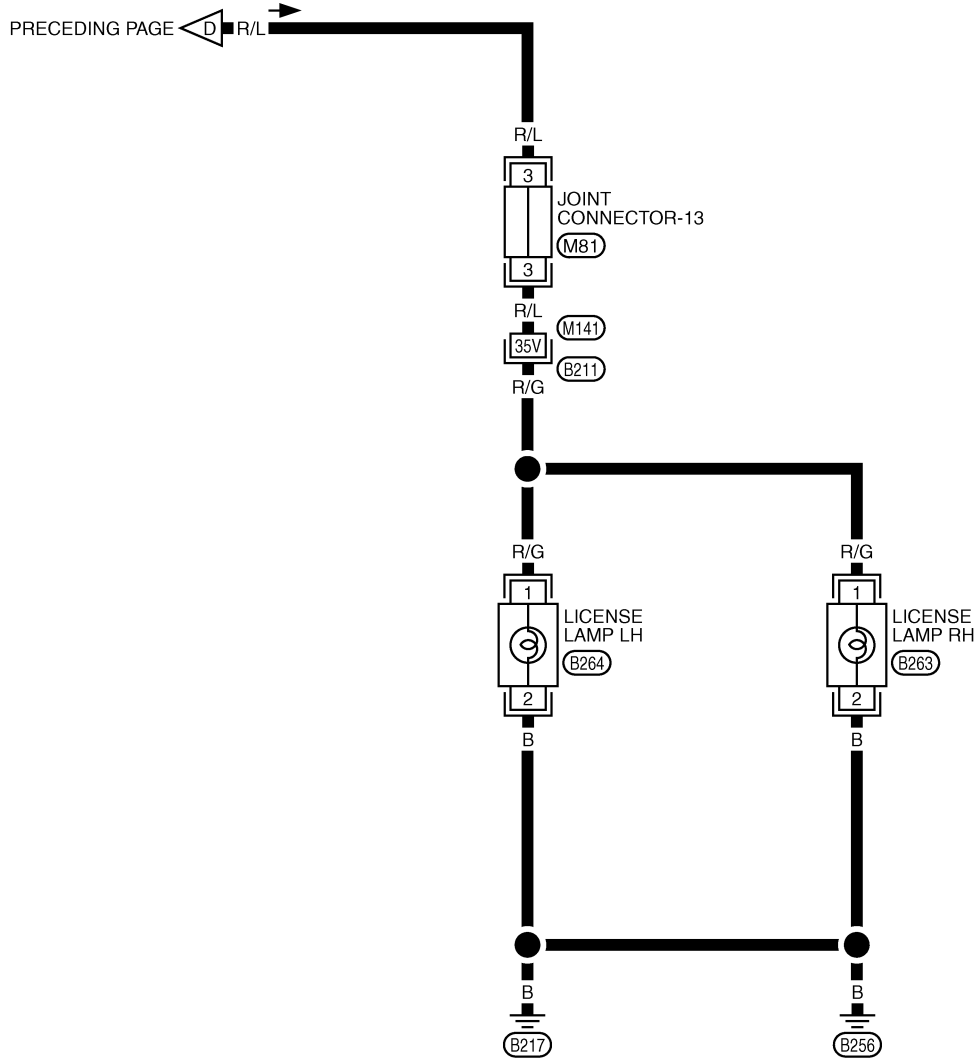
REFER TO THE FOLLOWING.  
 (M1), (E201), (B2) - FUSE  
 BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0539E

# PARKING, LICENSE PLATE AND TAIL LAMPS

LT-TAIL/L-05

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REFER TO THE FOLLOWING.  
 (B211) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0540E

# PARKING, LICENSE PLATE AND TAIL LAMPS

## Terminals and Reference Value for Headlamp Battery Saver Control Unit

AKS003ZH

Terminal No.	Wire color	Item	Operation or condition		Reference value	
1	W/B	Ignition switch ON or START	Ignition switch	OFF or ACC	Approx. 0V	
				ON or START	Battery voltage	
4	B	Ground	—		Approx. 0V	
5	L	Tail lamp switch 1	lighting switch	OFF	Battery voltage	
				1ST or 2ND	Approx. 0V	
6	LG/B	Tail lamp relay 1	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
					Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START		Approx. 0V
				Headlamps illuminate by auto light control.		Approx. 0V
7	Y/G	Battery power supply	—		Battery voltage	
10	Y/R	RAP input signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Battery voltage	
				ON or START	Approx. 0V	
11	B	Ground	—		Approx. 0V	
13	L	Tail lamp switch 2	Lighting switch	OFF	Battery voltage	
				1ST or 2ND	Approx. 0V	
14	LG/B	Tail lamp relay 2	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
					Within 45 seconds after ignition switch is turned OFF or ACC	Approx. 0V
				ON or START		Approx. 0V
				Headlamps illuminate by auto light control.		Approx. 0V

## Terminals and Reference Value for BCM

AKS003ZI

Terminal No.	Wire color	Item	Measuring condition			Reference value
			Ignition switch	Operation or condition		
11	LG/B	Tail lamp relay control signal	ON	Lighting switch: AUTO	Light is applied to optical sensor.	Battery voltage
					Light is not applied to optical sensor.	Approx. 0V
14	Y/L	Lighting switch (AUTO) signal	ON	Lighting switch	AUTO	Approx. 0V
					OFF	8V or more
37	LG	Front door switch (passenger side) signal	OFF	Front door switch (passenger side)	ON (open)	Approx. 0V
					OFF (close)	Battery voltage
135	Y/G	RAP output signal	OFF	When headlamp battery saver timer is operated		Approx. 0V
142	R/Y	Front door switch (driver side) signal	OFF	Front door switch (driver side)	ON (open)	Approx. 0V
					OFF (close)	Battery voltage

## CONSULT-II Function

AKS003ZI

Refer to [LT-20, "CONSULT-II Function for Auto Light System"](#) in HEADLAMP (FOR USA).

# PARKING, LICENSE PLATE AND TAIL LAMPS

AKS003Y6

## No Lamps Operate (Including Headlamps)

### 1. CHECK FUSE

Check for blown headlamp battery saver control unit fuse.

Unit	Power source	Fuse No.
Headlamp battery saver control unit	Ignition switch ON or START position	1
	Battery	6

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

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

### 2. CHECK HEADLAMP BATTERY SAVER CONTROL UNIT POWER SUPPLY CIRCUIT

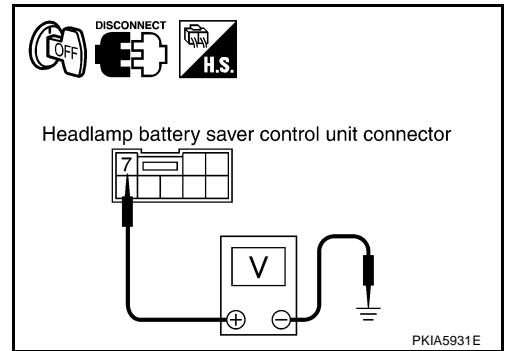
1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit connector.
3. Check voltage between headlamp battery saver control unit harness connector M34 terminal 7 (Y/G) and ground.

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

OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short headlamp battery saver control unit and fuse.



### 3. CHECK HEADLAMP BATTERY SAVER CONTROL UNIT GROUND CIRCUIT

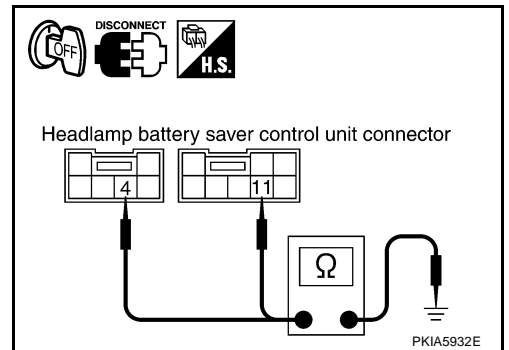
Check continuity between headlamp battery saver control unit harness connector terminals and ground.

Terminals		Continuity
Connector	Terminal (Wire color)	
M33	4 (B)	Ground Yes
M34	11 (B)	

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



### 4. CHECK LIGHTING SWITCH

Check continuity of lighting switch. Refer to [LT-102, "Switch Circuit Inspection"](#).

OK or NG

OK >> GO TO 5.

NG >> Replace lighting switch.

# PARKING, LICENSE PLATE AND TAIL LAMPS

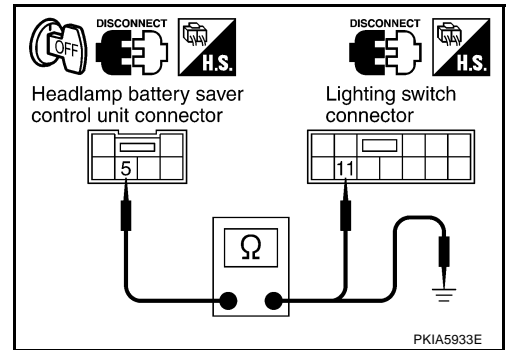
## 5. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 1

1. Disconnect headlamp battery saver control unit connector and lighting switch connector.
2. Check continuity between headlamp battery saver control unit harness connector M33 terminal 5 (L) and lighting switch harness connector M55 terminal 11 (L).

**5 (L) - 11 (L) : Continuity should exist.**

3. Check continuity between headlamp battery saver control unit harness connector M33 terminal 5 (L) and ground.

**5 (L) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 6.

NG >> Repair harness or connector.

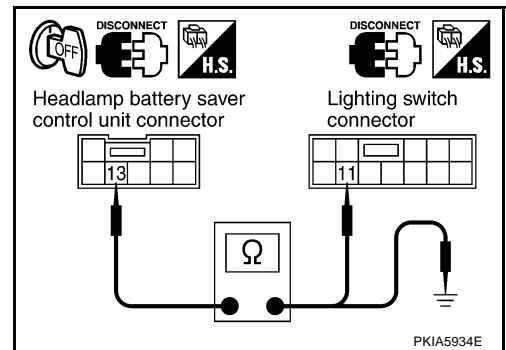
## 6. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 2

1. Check continuity between headlamp battery saver control unit harness connector M34 terminal 13 (L) and lighting switch harness connector M55 terminal 11 (L).

**13 (L) - 11 (L) : Continuity should exist.**

2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 13 (L) and ground.

**13 (L) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 7.

NG >> Repair harness or connector.

## 7. CHECK LIGHTING SWITCH GROUND CIRCUIT

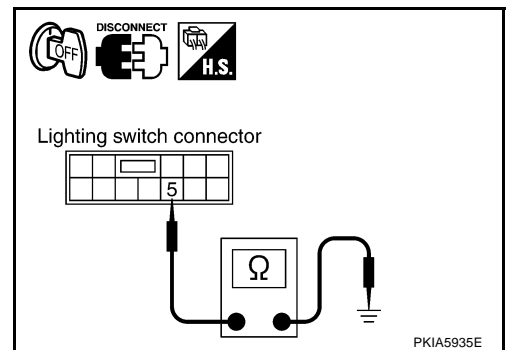
Check continuity between lighting switch harness connector M55 terminal 5 (B) and ground.

**5 (B) - Ground : Continuity should exist.**

OK or NG

OK >> Replace headlamp battery saver control unit.

NG >> Repair harness.



## No Parking, Side Marker, License and Tail Lamps Operate Properly

AKS003Y7

### 1. CHECK FUSE

Check for blown tail lamp relay fuse.

Relay	Power source	Fuse No.
Tail lamp relay	Battery	54

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

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

# PARKING, LICENSE PLATE AND TAIL LAMPS

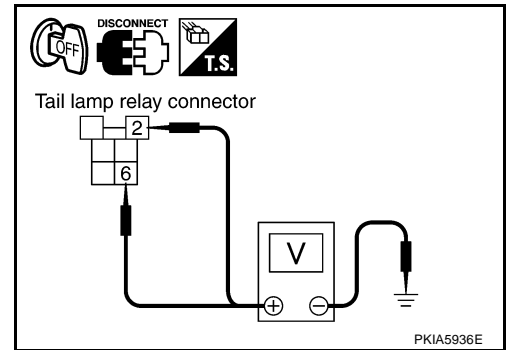
## 2. CHECK TAIL LAMP RELAY POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Remove tail lamp relay.
3. Check voltage between tail lamp relay connector E3-3 terminals 2 or 6 and ground.

**2 - 6 : Battery voltage should exist.**

OK or NG

- OK >> GO TO 3.  
NG >> Replace fuse, fusible link and relay block (J/B).



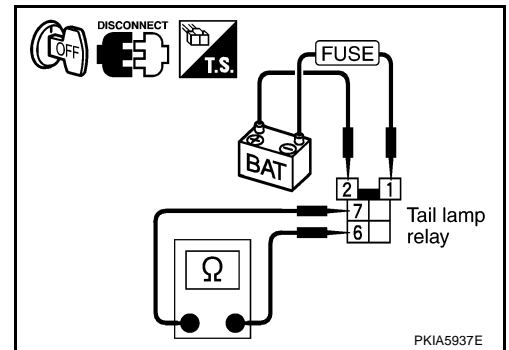
## 3. CHECK TAIL LAMP RELAY

Apply 12V between tail lamp relay terminals 2 and 1, and check continuity between terminals 6 and 7.

**6 - 7 : Continuity should exist.**

OK or NG

- OK >> GO TO 4.  
NG >> Replace tail lamp relay.



## 4. CHECK TAIL LAMP RELAY CONTROL SIGNAL CIRCUIT 1

1. Disconnect headlamp battery saver control unit connector and BCM connector.
2. Check continuity between headlamp battery saver control unit harness connector M33 terminal 6 (LG/B) and tail lamp relay connector E3-3 terminal 1(LG/B).

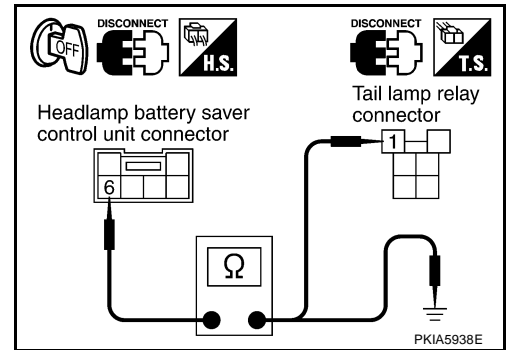
**6 (LG/B) - 1 (LG/B) : Continuity should exist.**

3. Check continuity between headlamp battery saver control unit harness connector M33 terminal 6 (LG/B) and ground.

**6 (LG/B) - Ground : Continuity should not exist.**

OK or NG

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



## 5. CHECK TAIL LAMP RELAY CONTROL SIGNAL CIRCUIT 2

1. Check continuity between headlamp battery saver control unit harness connector M34 terminal 14 (LG/B) and tail lamp relay connector E3-3 terminal 1 (LG/B).

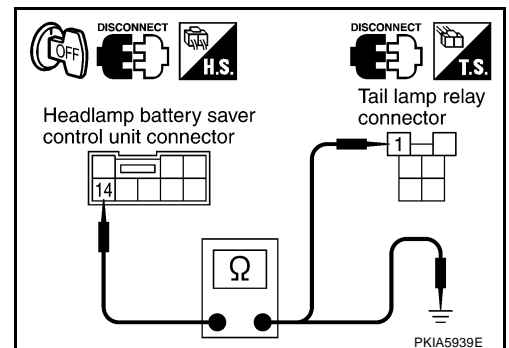
**14 (LG/B) - 1 (LG/B) : Continuity should exist.**

2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 14 (LG/B) and ground.

**14 (LG/B) - Ground : Continuity should not exist.**

OK or NG

- OK >> GO TO 6.  
NG >> Repair harness or connector.

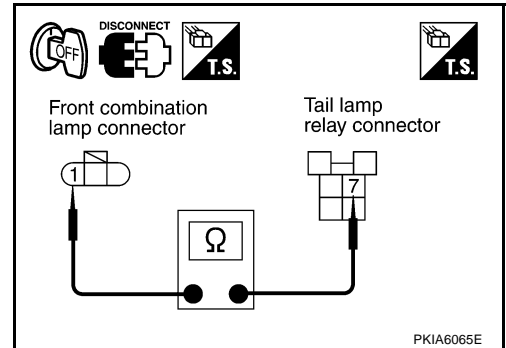


# PARKING, LICENSE PLATE AND TAIL LAMPS

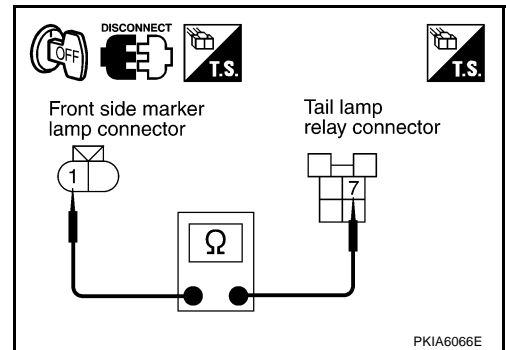
## 6. CHECK EACH COMBINATION LAMPS POWER SUPPLY CIRCUIT

1. Disconnect connectors from front combination lamp LH and RH, front side marker lamp LH and RH, rear combination lamp LH and RH, rear side marker lamp LH and RH and license lamp LH and RH.
2. Check continuity between front combination lamp, front side marker lamp, rear combination lamp, rear side marker lamp and license lamp harness connector and tail lamp relay harness connector.

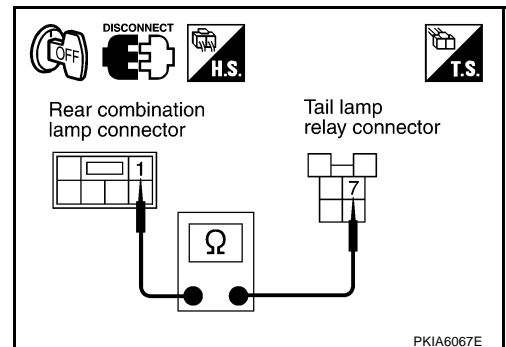
Terminals					Continuity
Front combination lamp		Tail lamp relay			
Connector		Terminal (Wire color)	Connector	Terminal (Wire color)	Yes
RH	E50	1 (R/G)	E3-3	7 (R/G)	
LH	E12				



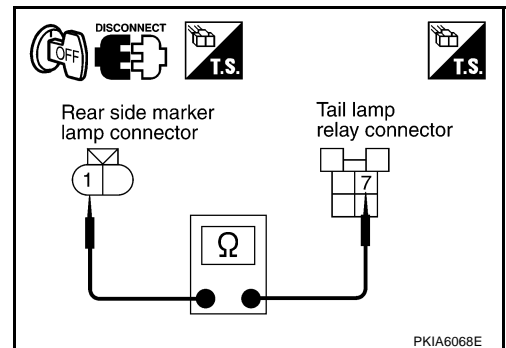
Terminals					Continuity
Front side marker lamp		Tail lamp relay			
Connector		Terminal (Wire color)	Connector	Terminal (Wire color)	Yes
RH	E46	1 (R/G)	E3-3	7 (R/G)	
LH	E66				



Terminals					Continuity
Rear combination lamp		Tail lamp relay			
Connector		Terminal (Wire color)	Connector	Terminal (Wire color)	Yes
RH	E58	1 (R/G)	E3-3	7 (R/G)	
LH	B53				



Terminals					Continuity
Rear side marker lamp		Tail lamp relay			
Connector		Terminal (Wire color)	Connector	Terminal (Wire color)	Yes
RH	E56	1 (R/G)	E3-3	7 (R/G)	
LH	B52				



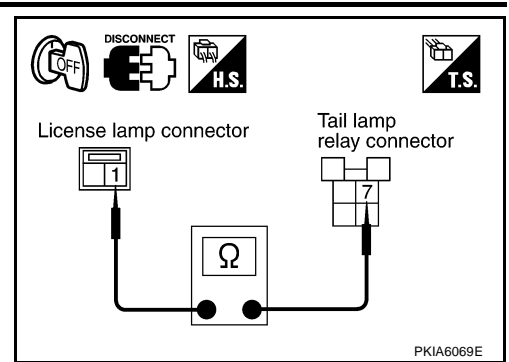


# PARKING, LICENSE PLATE AND TAIL LAMPS

Terminals					Continuity
License lamp		Tail lamp relay			
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)		
RH	B263	E3-3	7 (R/G)	1 (R/G)	Yes
LH	B264				

OK or NG

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



## 7. CHECK LIGHTING SWITCH

Check continuity of lighting switch. Refer to [LT-102, "Switch Circuit Inspection"](#).

OK or NG

- OK >> GO TO 8.
- NG >> Replace lighting switch.

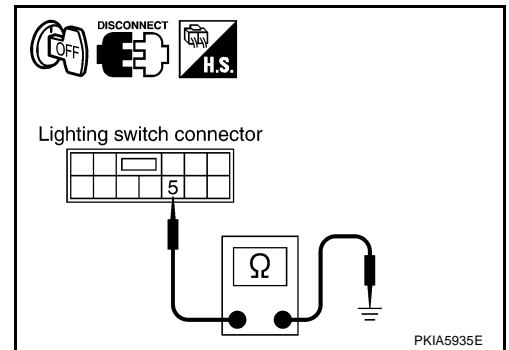
## 8. CHECK LIGHTING SWITCH GROUND CIRCUIT

Check continuity between lighting switch harness connector M55 terminal 5 (B) and ground.

**5 (B) - Ground : Continuity should exist.**

OK or NG

- OK >> Replace headlamp battery saver control unit.
- NG >> Check harness ground circuit.



## Battery Saver Control Does Not Operate Properly

### 1. CHECK DOOR SWITCH SIGNAL

☐ With CONSULT-II

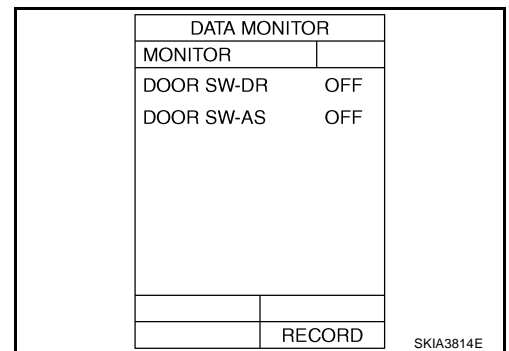
1. Select "INTERIOR ILLUMINATION" of "IVMS" on "SELECT SYSTEM" screen.
2. Operate each door via "DOOR SW-DR" and "DOOR SW-PA" on "DATA MONITOR" screen and make sure that the switch turns on and off as commanded.

☒ Without CONSULT-II

- Open and close the front door (driver side, passenger side) and make sure that the switch turns on and off by "switch monitor" in the self-diagnosis function.

OK or NG

- OK >> GO TO 6.
- NG >> ● When front door switch (driver side) is malfunction, GO TO 2.
- When front door switch (passenger side) is malfunction, GO TO 4.



# PARKING, LICENSE PLATE AND TAIL LAMPS

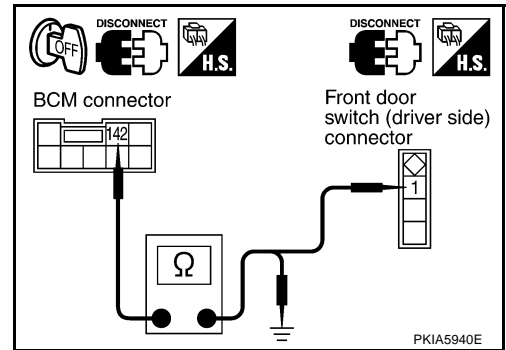
## 2. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door switch (driver side) connector.
3. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and front door switch (driver side) harness connector B20 terminal 1 (R/Y).

**142 (R/Y) - 1 (R/Y) : Continuity should exist.**

4. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and ground.

**142 (R/Y) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

## 3. CHECK FRONT DOOR SWITCH (DRIVER SIDE)

Check front door switch (driver side).

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

OK or NG

OK >> Replace BCM.

NG >> Replace front door switch (driver side).

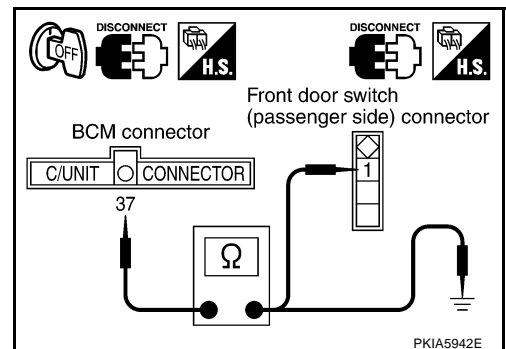
## 4. CHECK FRONT DOOR SWITCH (PASSENGER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch (passenger side) connectors.
3. Check continuity between BCM harness connector M4 terminal 37 (LG) and front door switch (passenger side) harness connector B220 terminal 1 (LG).

**37 (LG) - 1 (LG) : Continuity should exist.**

4. Check continuity between BCM harness connector M4 terminal 37 (LG) and ground.

**37 (LG) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.

## 5. CHECK FRONT DOOR SWITCH (PASSENGER SIDE)

Check front door switch (passenger side).

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

OK or NG

OK >> Replace BCM.

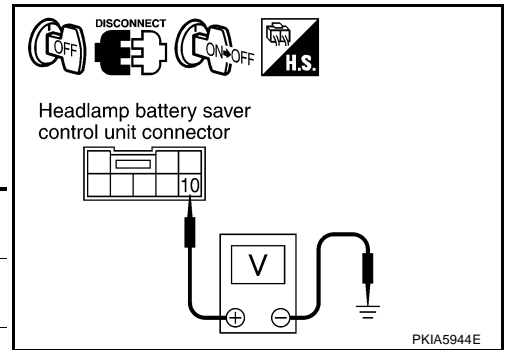
NG >> Replace front door switch (passenger side).

# PARKING, LICENSE PLATE AND TAIL LAMPS

## 6. CHECK RAP SIGNAL

1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit connector.
3. Check voltage between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and ground after turning off ignition switch.

Connector	Terminal (Wire color)	Condition	Voltage
M34	10 (Y/R)	Within 45 seconds after ignition switch is turned off	Less than 1V
		Front door is opened or more than 45 seconds after ignition switch is turned off	Battery voltage



OK or NG

- OK >> GO TO 8.  
 NG >> GO TO 7.

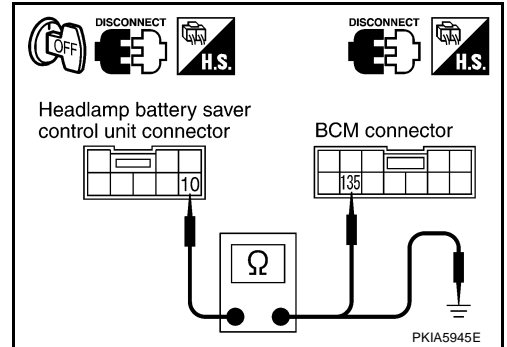
## 7. CHECK HARNESS CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and BCM harness connector R4 terminal 135 (Y/G).

**10 (Y/R) - 135 (Y/R) : Continuity should exist.**

4. Check continuity between headlamp battery saver control unit harness connector M34 terminal 10 (Y/R) and ground.

**10 (Y/R) - Ground : Continuity should not exist.**



OK or NG

- OK >> Replace BCM.  
 NG >> Repair harness or connector.

## 8. CHECK LIGHTING SWITCH

Check continuity of lighting switch. Refer to [LT-102, "Switch Circuit Inspection"](#).

OK or NG

- OK >> GO TO 9.  
 NG >> Replace lighting switch.

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

LT

# PARKING, LICENSE PLATE AND TAIL LAMPS

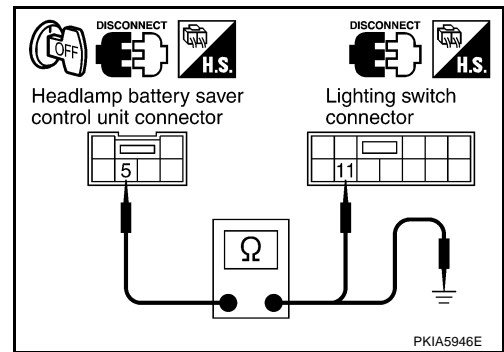
## 9. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect headlamp battery saver control unit and lighting switch connectors.
3. Check continuity between headlamp battery saver control unit harness connector M33 terminal 5 (L) and lighting switch harness connector M55 terminal 11 (L).

**5 (L) - 11 (L) : Continuity should exist.**

4. Check continuity between headlamp battery saver control unit harness connector M33 terminal 5 (L) and ground.

**5 (L) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 10.

NG >> Repair harness or connector.

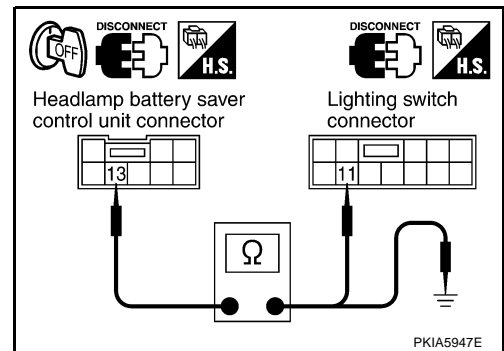
## 10. CHECK LIGHTING SWITCH POWER SUPPLY CIRCUIT 2

1. Check continuity between headlamp battery saver control unit harness connector M34 terminal 13 (L) and lighting switch harness connector M55 terminal 11 (L).

**13 (L) - 11 (L) : Continuity should exist.**

2. Check continuity between headlamp battery saver control unit harness connector M34 terminal 13 (L) and ground.

**13 (L) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 11.

NG >> Repair harness or connector.

## 11. CHECK LIGHTING SWITCH GROUND CIRCUIT

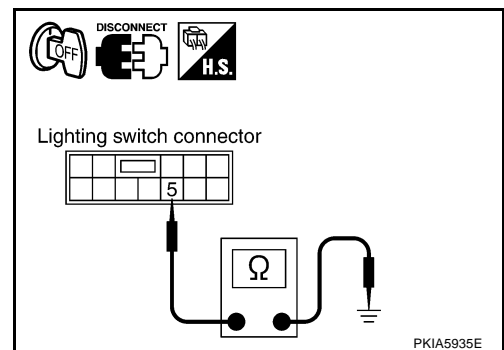
Check continuity between lighting switch harness connector M55 terminal 5 (B) and ground.

**5 (B) - Ground : Continuity should exist.**

OK or NG

OK >> Replace headlamp battery saver control unit.

NG >> Repair harness.



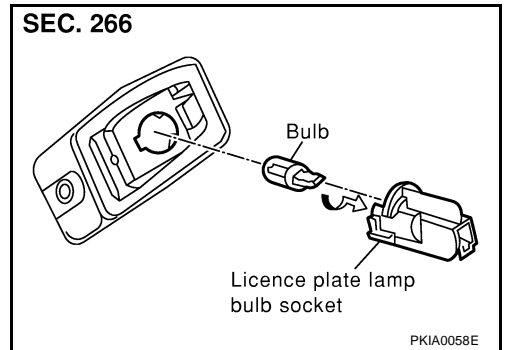
# PARKING, LICENSE PLATE AND TAIL LAMPS

## Bulb Replacement LICENSE PLATE LAMP

AKS002GD

1. Remove trunk lid finisher. Refer to [EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) in "EXTERIOR & INTERIOR (EI)" section.
2. Disconnect license plate lamp connector.
3. Turn bulb socket counterclockwise and unlock it.
4. Remove bulb from its socket.

**License plate lamp : 12V 5W**



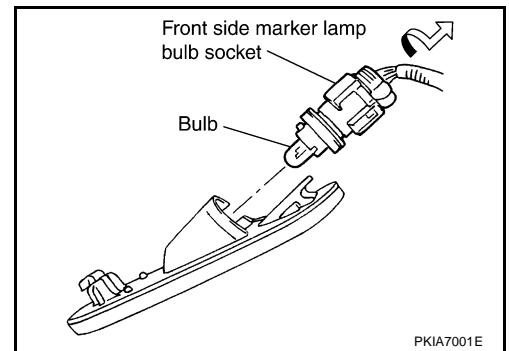
## FRONT PARKING LAMP

Refer to [LT-41, "FRONT TURN SIGNAL AND PARKING \(CLEARANCE\) LAMP"](#) in "HEADLAMP (FOR USA)".

## FRONT SIDE MARKER LAMP

1. Remove fender protector (front). Refer to [EI-21, "FENDER PROTECTOR"](#) in "EI" section.
2. Turn bulb socket counterclockwise and unlock it.
3. Remove bulb from its socket.

**Front side marker lamp : 12V 3.8W**



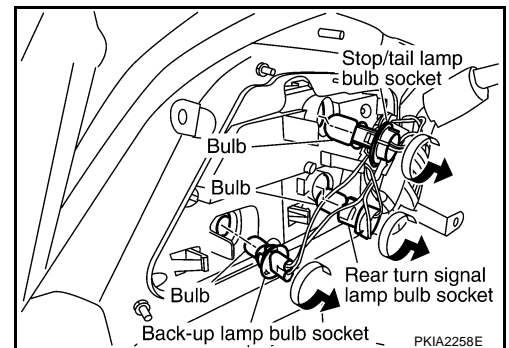
## REAR COMBINATION LAMP

1. Remove trunk side finisher. Refer to [EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) in "EXTERIOR & INTERIOR (EI)" section.
2. Turn bulb socket counterclockwise and unlock it.
3. Remove bulb.

**Stop/Tail lamp (outer-inner side) : 12V 21/5W**

**Rear turn signal lamp : 12V 21W (amber)**

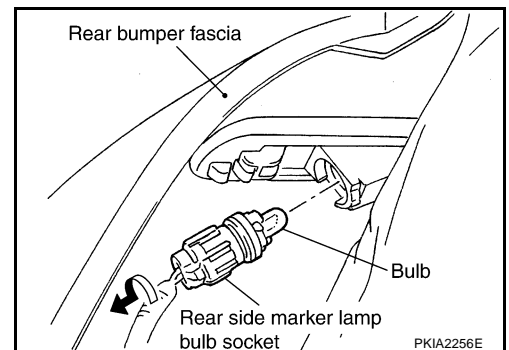
**Buck-up lamp : 12V 18W**



## REAR SIDE MARKER LAMP

1. Remove rear combination lamp. Refer to [LT-127, "REAR COMBINATION LAMP"](#).
2. Turn bulb socket counterclockwise and unlock it.
3. Remove bulb from bulb socket.

**Rear side marker lamp : 12V 3.8W**



# PARKING, LICENSE PLATE AND TAIL LAMPS

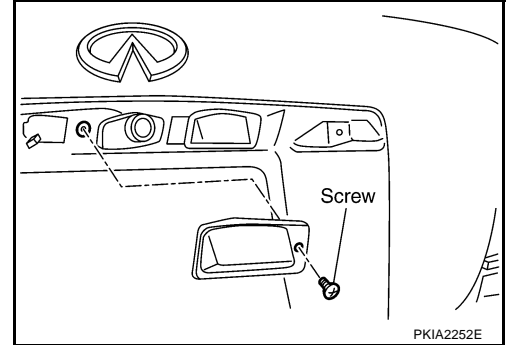
AKS002GE

## Removal and Installation

### LICENSE PLATE LAMP

#### Removal

1. Remove trunk lid finisher outer. Refer to [EI-30, "TRUNK LID FINISHER"](#) in "EXTERIOR & INTERIOR (EI)" section.
2. Disconnect license plate lamp connector.
3. Remove license plate lamp mounting screw and remove license plate lamp from the vehicle.



#### Installation

Install in the reverse order of removal, taking care of the following points.

**License plate lamp mounting screw** : 2.4 N·m (0.24 kg·m, 21 in·lb)

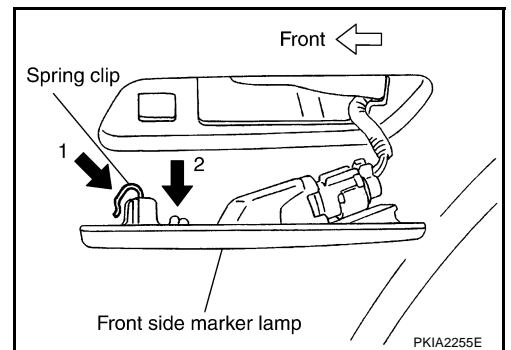
### FRONT PARKING LAMP

Refer to [LT-42, "Removal and Installation"](#) in "HEADLAMP (FOR USA)".

### FRONT SIDE MARKER LAMP

#### Removal

1. Remove fender protector (front). Refer to [EI-21, "FENDER PROTECTOR"](#) in "EI" section.
2. While keep pressing spring clip of lamp with a pair of pliers, pull lamp unit toward outside of vehicle.
3. Disconnect bulb socket connector and remove lamp from the vehicle.



#### Installation

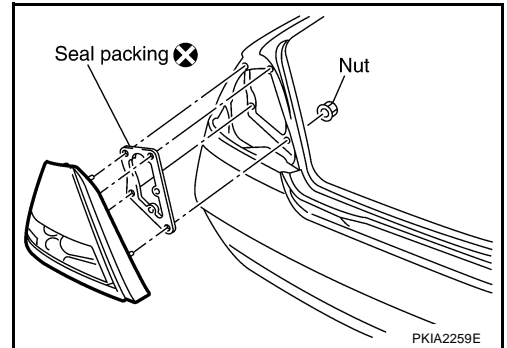
Install in the reverse order of removal.

# PARKING, LICENSE PLATE AND TAIL LAMPS

## REAR COMBINATION LAMP

### Removal

1. Remove trunk side finisher. Refer to [EI-42, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) in "EXTERIOR & INTERIOR (EI)" section.
2. Disconnect rear combination lamp connector.
3. Remove rear combination lamp mounting nuts.
4. Pull rear combination lamp toward rear of the vehicle and remove from the vehicle.
5. Remove seal packing from the vehicle.



### Installation

Install in the reverse order of removal, taking care of the following points.

- Install a new seal packing to the rear combination lamp.

#### **CAUTION:**

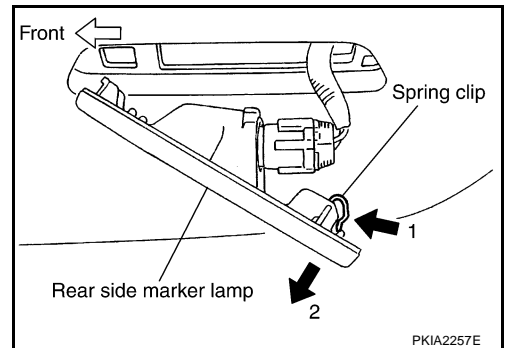
**Seal packing cannot be reused.**

**Rear combination lamp mounting nut** : 3.3 N·m (0.34 kg·m, 29 in·lb)

## REAR SIDE MARKER LAMP

### Removal

1. Remove rear combination lamp. Refer to [LT-127, "REAR COMBINATION LAMP"](#).
2. While keep pressing spring clip of lamp with a flat blade screwdriver, pull lamp unit toward out of vehicle.
3. Disconnect bulb socket connector and remove lamp from the vehicle.



### Installation

Install in the reverse order of removal.

# INTERIOR ROOM LAMP

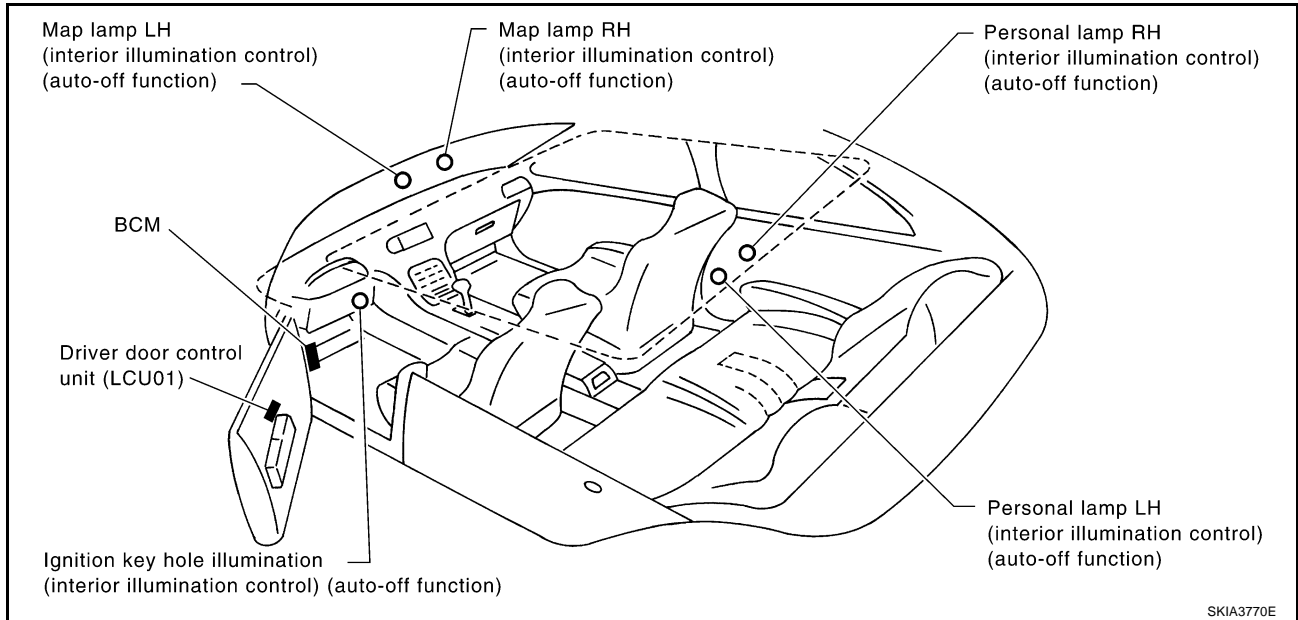
## INTERIOR ROOM LAMP

PFP:26410

### System Description OUTLINE

AKS002GF

Controls on/off and afterglow time of the map lamp (front personal light), personal lamp (rear personal light), and ignition key hole illumination.



SKIA3770E

### TIMER FUNCTION

Controls the illumination duration of the lamps and illuminations according to the signals from the front door lock actuator (driver side) (door unlock sensor), front door switch (driver side), ignition switch and key switch.

- The timer operates for approx. 30 seconds.
- The timer will be actuated or cancelled by the signals from the following switches.

Function	Operation
Front door lock actuator (driver side) (door unlock sensor)	<ul style="list-style-type: none"> <li>● Timer will be actuated by input of the door unlock sensor ON (door unlocked) signal when the front door switch (driver side) is OFF (door closed) and the key switch is OFF (key withdrawn).</li> <li>● Timer will be cancelled by input of the door unlock sensor OFF (door locked) signal.</li> </ul>
Front door switch (driver side)	<ul style="list-style-type: none"> <li>● Timer will be actuated by input of the front door switch (driver side) ON→OFF (door open→closed) signal when the key switch is OFF.</li> <li>● Timer will be cancelled by input of the front door switch (driver side) ON (door open) signal.</li> </ul>
Ignition switch	<ul style="list-style-type: none"> <li>● Timer will be cancelled by input of the ignition switch ACC or ON signal.</li> </ul>
key switch	<ul style="list-style-type: none"> <li>● Timer will be actuated by input of the key switch ON→OFF (key inserted→withdrawn) signal when the front door switch (driver side) is OFF (door closed).</li> </ul>

- If a new timer actuation signal is input while the timer is operating, the later input will have priority.
- If any lamp switch is operated and a separate actuation signal is input while the timer is operating, the lamp operation will be prioritized. However, the timer operation will not be renewed or cancelled.



# INTERIOR ROOM LAMP

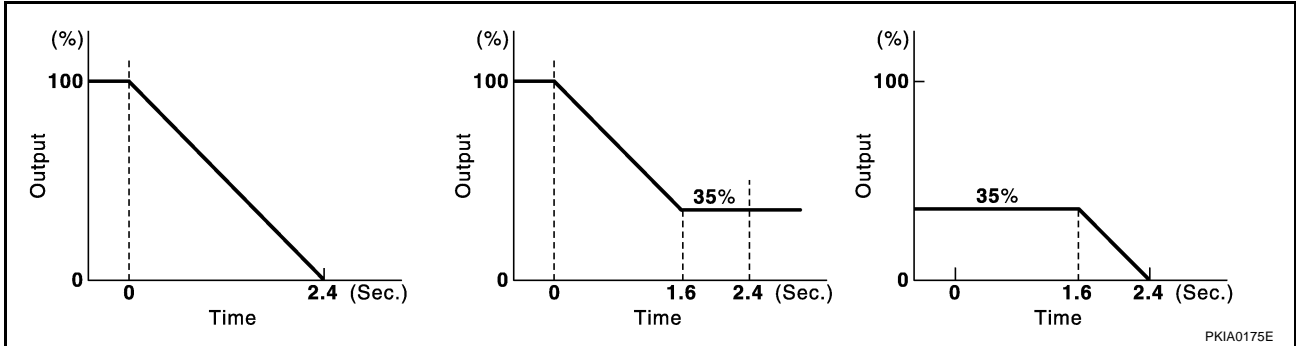
## LAMP OUTPUT CONTROL FUNCTION

Controls output of lamps except for the ignition key hole illumination.

- In case from full illumination to off, from full illumination to half illumination, and from half illumination to off.

### NOTE:

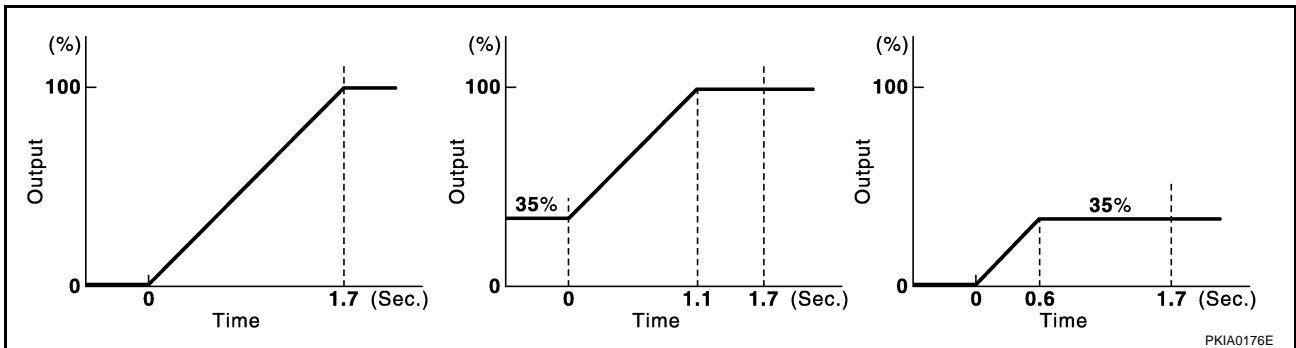
In full illumination, brightness of the lamps is 100%. In half illumination, it is 35% (25% for the personal lamp).



- In case from off to full illumination, from half illumination to full illumination, and from off to half illumination.

### NOTE:

In full illumination, brightness of the lamps is 100%. In half illumination, it is 35% (25% for the personal lamp).



## AUTO OFF FUNCTION

When ignition switch is in OFF, and following condition is continued for approximately 30 minutes without the change, then interior room lamps are automatically turned OFF.

- Interior lamp ill switch and personal lamps switch are "AUTO" position, and then door switch of either is opened.
- Interior lamp ill switch is "ON" position.
- Personal lamp switch is "FULL" position.

The auto off function is turned OFF when the one of following change is operated, and executes a usual operation control thereafter.

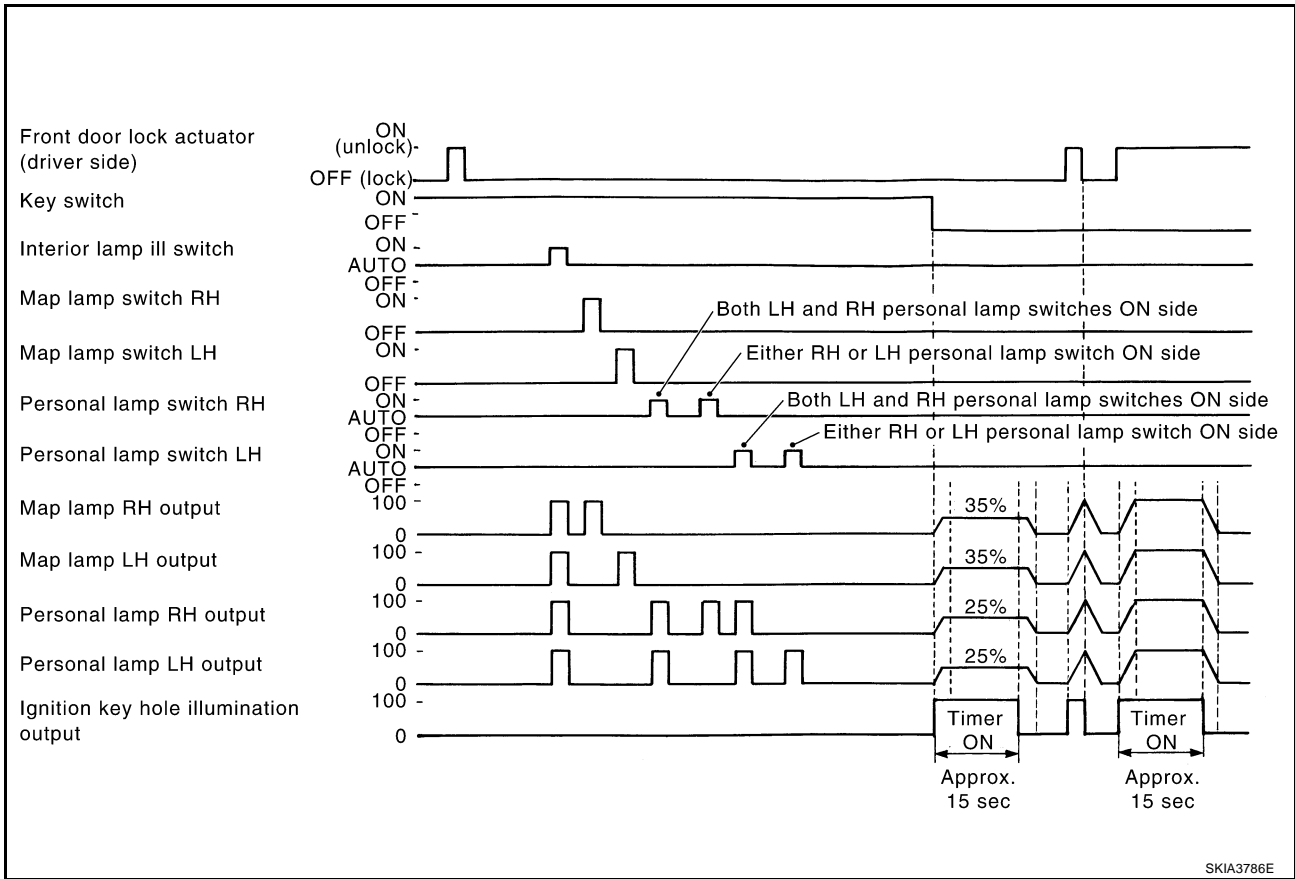
- Ignition switch is turned from OFF to ON.
- Each door switch is switched from OFF to ON. (Door closed → open)
- Interior lamp ill switch is switched from OFF to ON.
- Personal lamp switch is switched from AUTO to ON.

## LIGHTS ON/OFF MODES

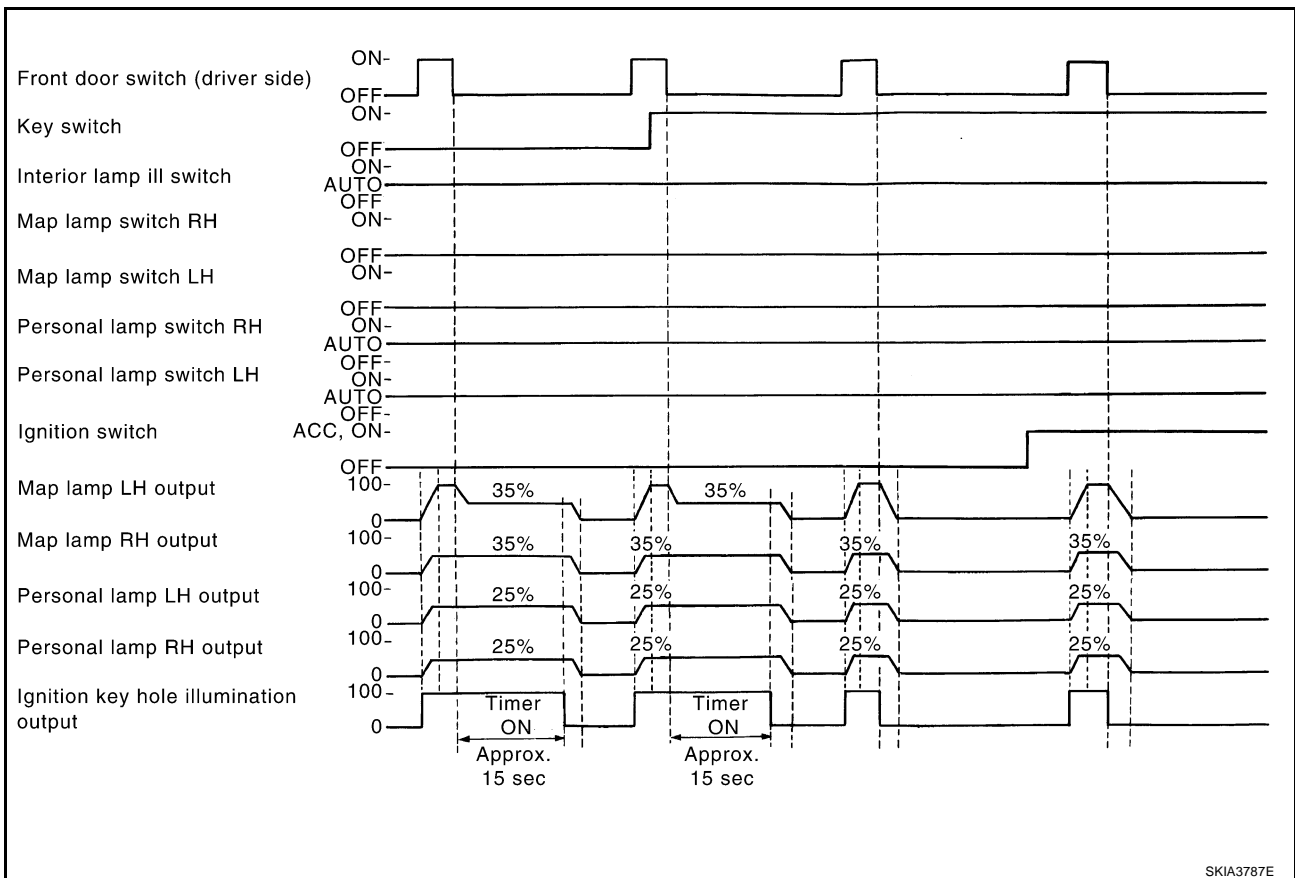
Separate signal from each switch and signals of higher output have priority over these modes.

# INTERIOR ROOM LAMP

## 1. Lights on-off modes when each lamp switch is operated

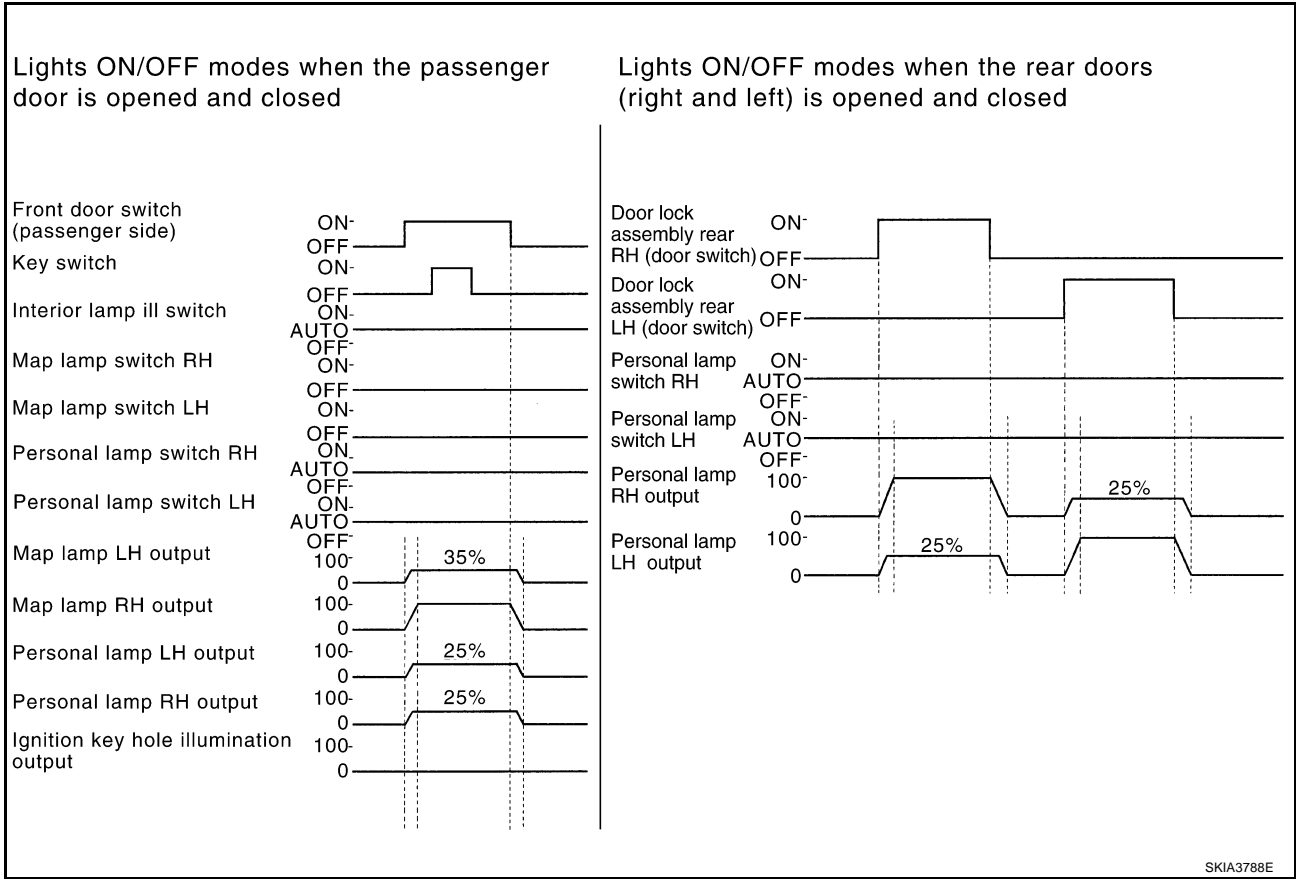


## 2. Lights on-off modes when the driver door is opened and closed



# INTERIOR ROOM LAMP

3. Lights on-off modes when the passenger door is opened and closed, lights on-off modes when door lock assembly rear LH, RH are opened and closed



SKIA3788E

## Major Components and Their Functions

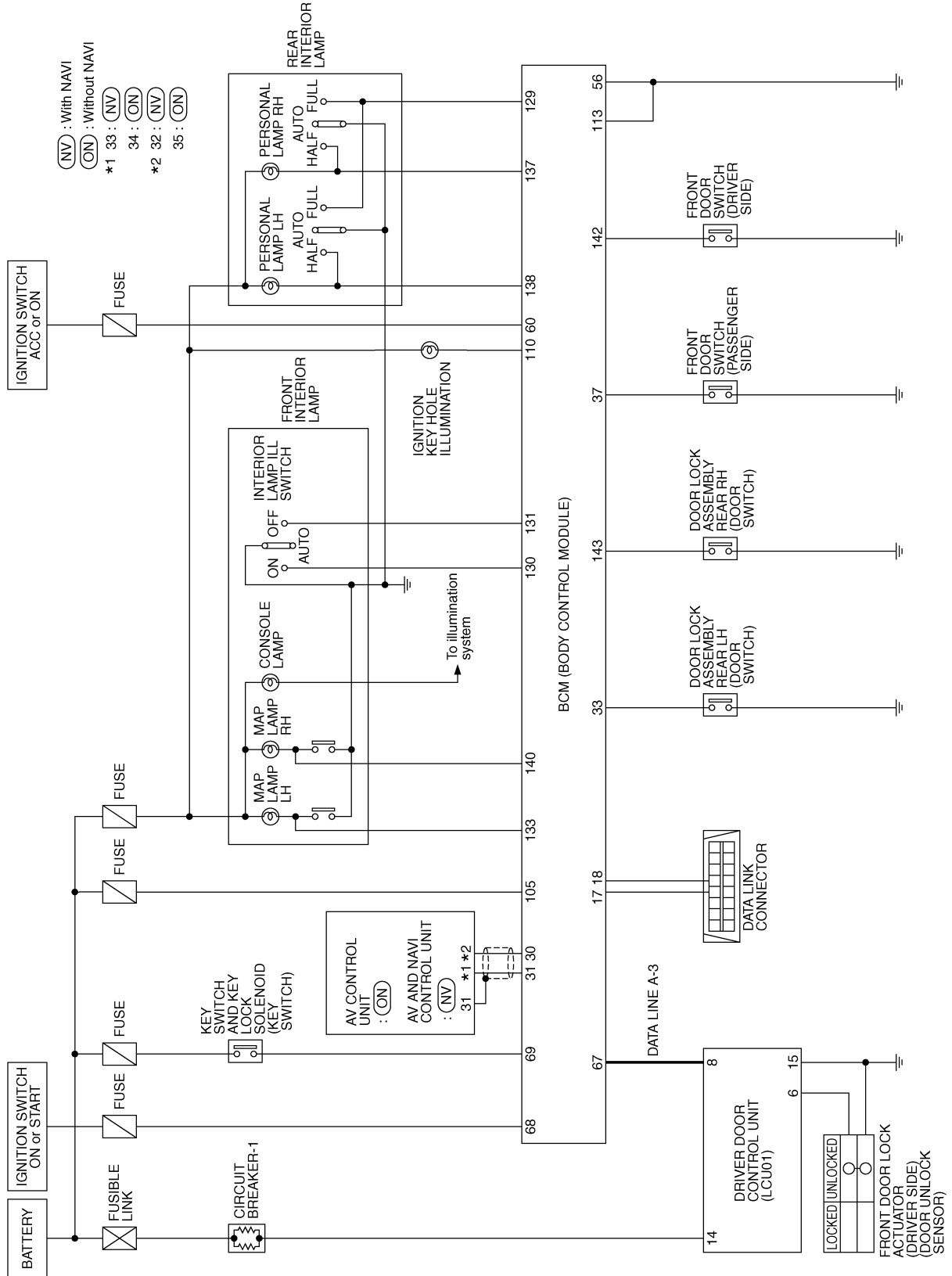
AKS002GG

Components	Functions
BCM	<ul style="list-style-type: none"> <li>● Controls on/off and afterglow time of the interior lamps and illuminations according to the signals from the ignition switch, key switch, lighting switch, each door switch, front door lock actuator (driver side) (door unlock sensor), and each lamp switch.</li> </ul> <p><b>CAUTION:</b>  <b>On/off control varies with signal input from each switch. Refer to <a href="#">LT-129, "LIGHTS ON/OFF MODES"</a>.</b></p>
Front door lock actuator (driver side)	<ul style="list-style-type: none"> <li>● Detects driver door lock (switch OFF)/unlock (switch ON) status and inputs it to the BCM via the driver door control unit.</li> </ul>
Front door switch (driver side)	<ul style="list-style-type: none"> <li>● Detects driver door open (switch ON)/closed (switch OFF) status and inputs it to the BCM.</li> </ul>
Ignition switch	<ul style="list-style-type: none"> <li>● Detects ignition switch OFF (OFF), ACC-IGN (ON) status and inputs it to the BCM.</li> </ul>
key switch	<ul style="list-style-type: none"> <li>● Detects ignition key inserted (ON)/withdrawn (OFF) status and inputs it to the BCM.</li> </ul>

# INTERIOR ROOM LAMP

## Schematic

AKS002GH



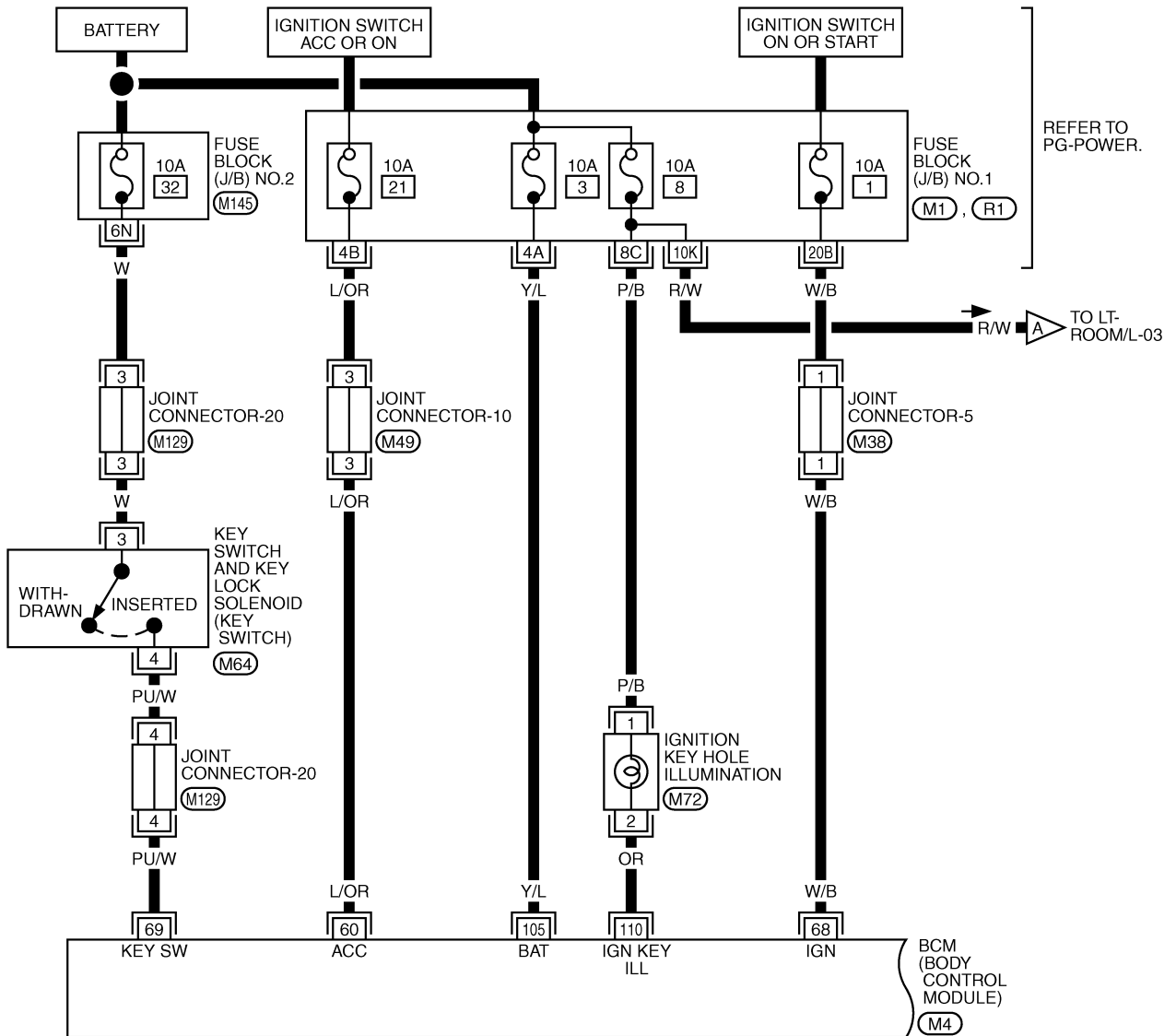
TKWA0562E

# INTERIOR ROOM LAMP

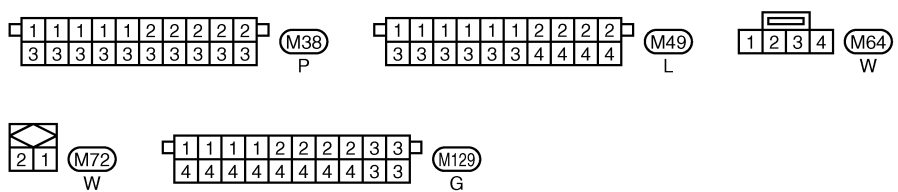
## Wiring Diagram — ROOM/L —

AKS002GI

LT-ROOM/L-01



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

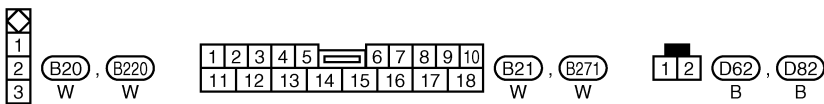
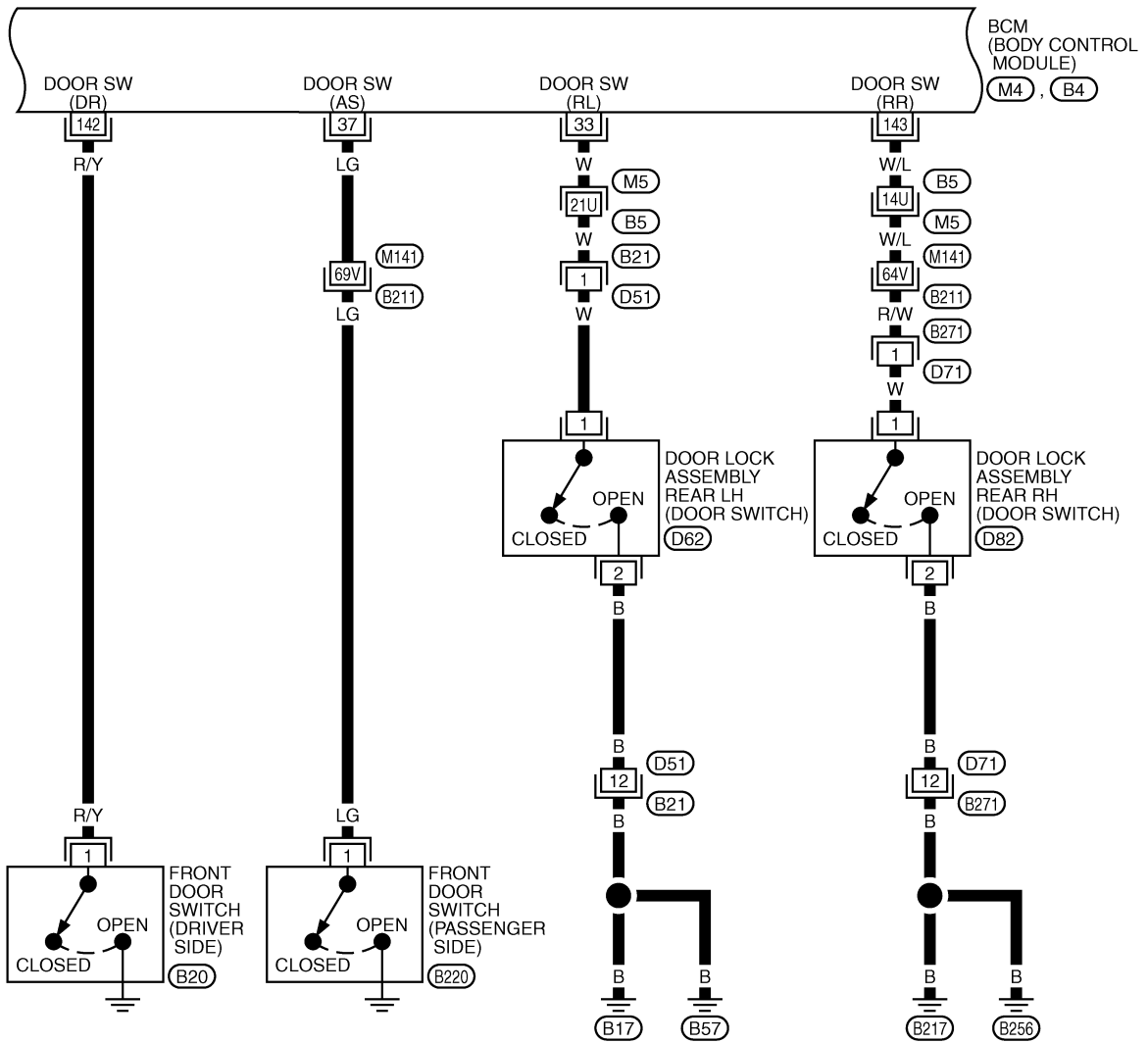


REFER TO THE FOLLOWING.  
 (M1), (R1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1  
 (M145) - FUSE BLOCK-JUNCTION BOX (J/B) NO.2  
 (M4) - ELECTRICAL UNITS

TKWA0565E

# INTERIOR ROOM LAMP

LT-ROOM/L-02

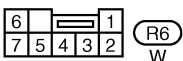
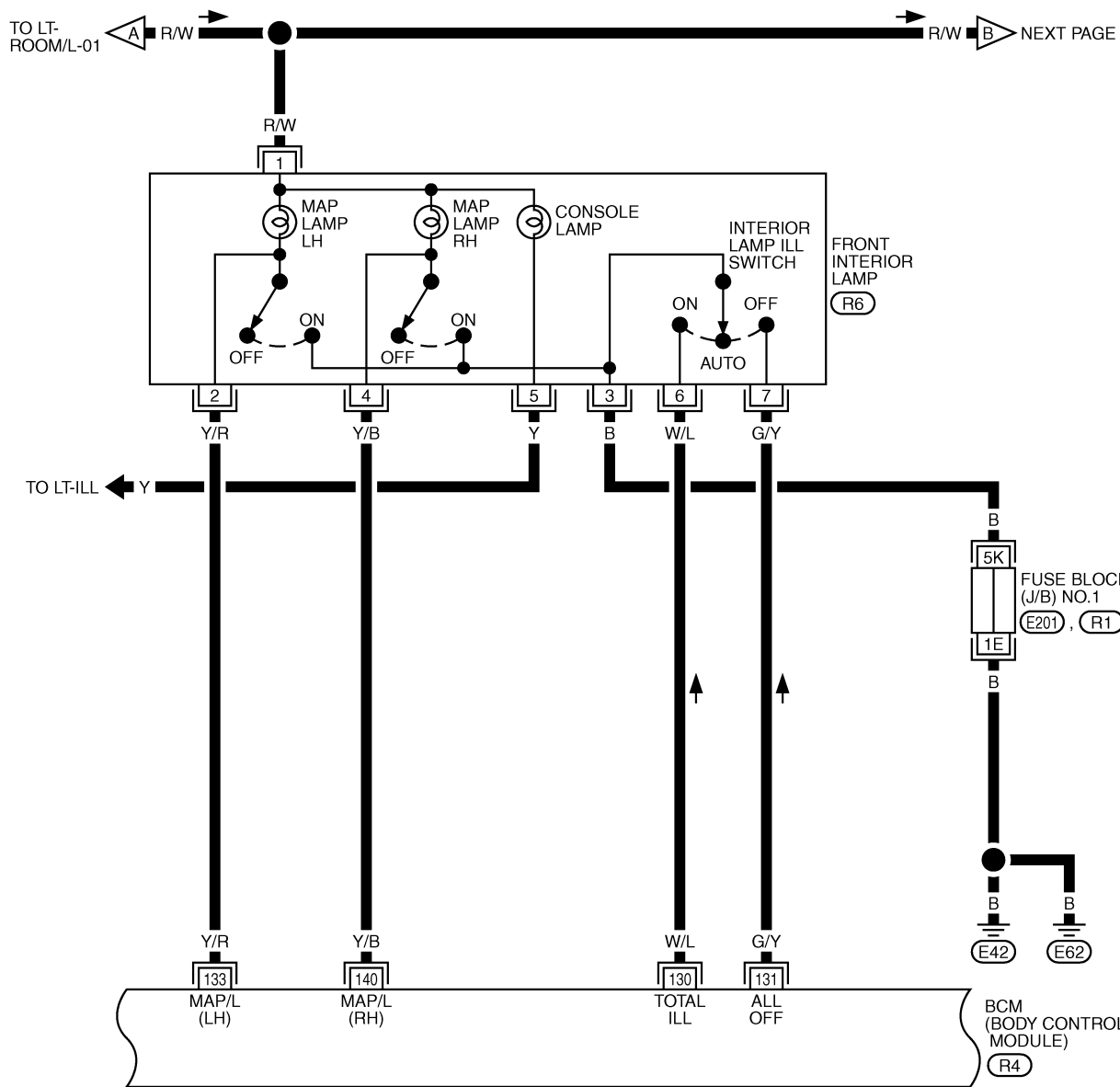


REFER TO THE FOLLOWING.  
 (M5), (B211) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M4), (B4) -ELECTRICAL UNITS

TKWA0566E

# INTERIOR ROOM LAMP

LT-ROOM/L-03



REFER TO THE FOLLOWING.

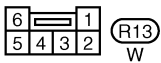
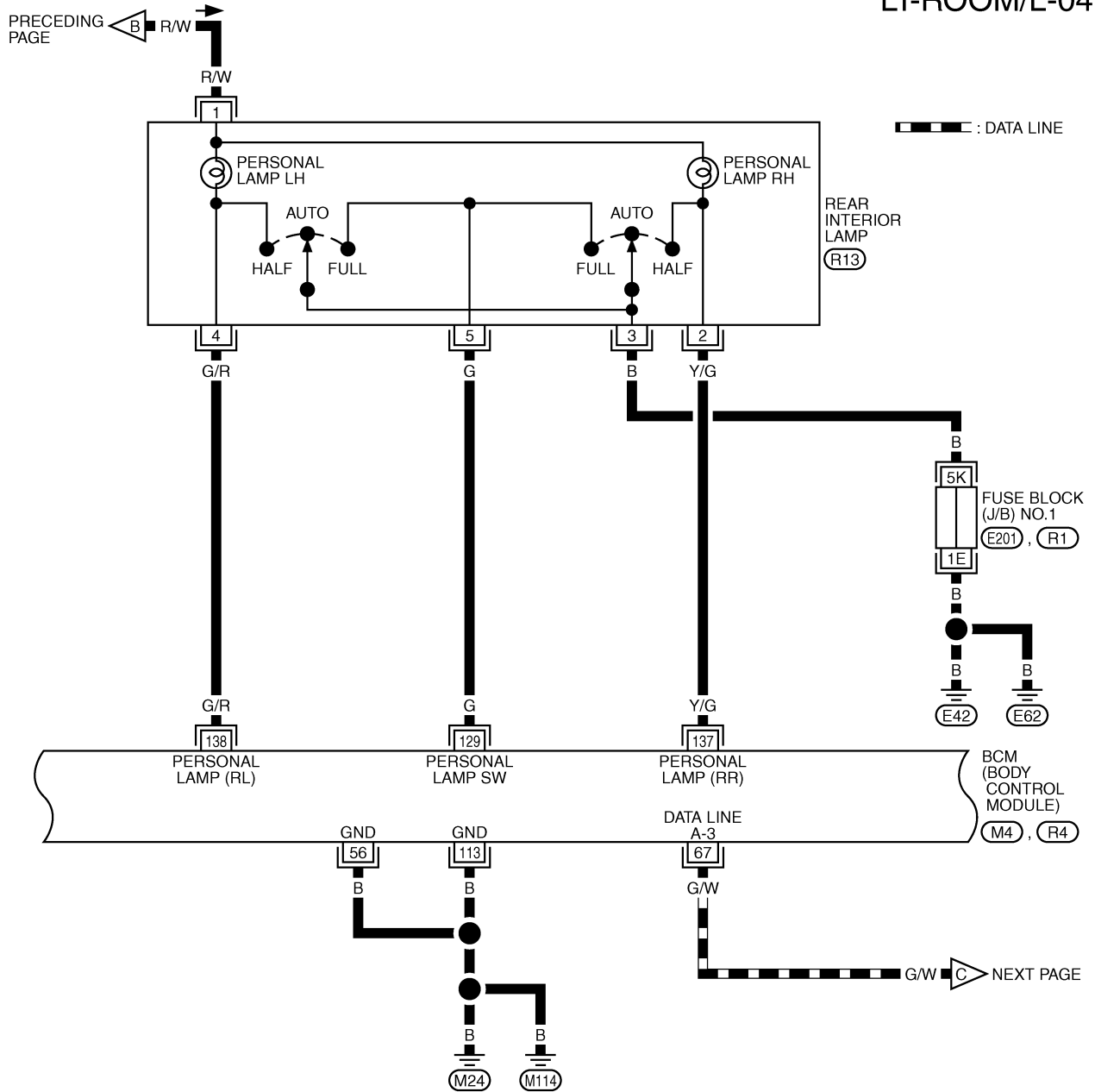
(E201), (R1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(R4) - ELECTRICAL UNITS

TKWA0567E

# INTERIOR ROOM LAMP

LT-ROOM/L-04



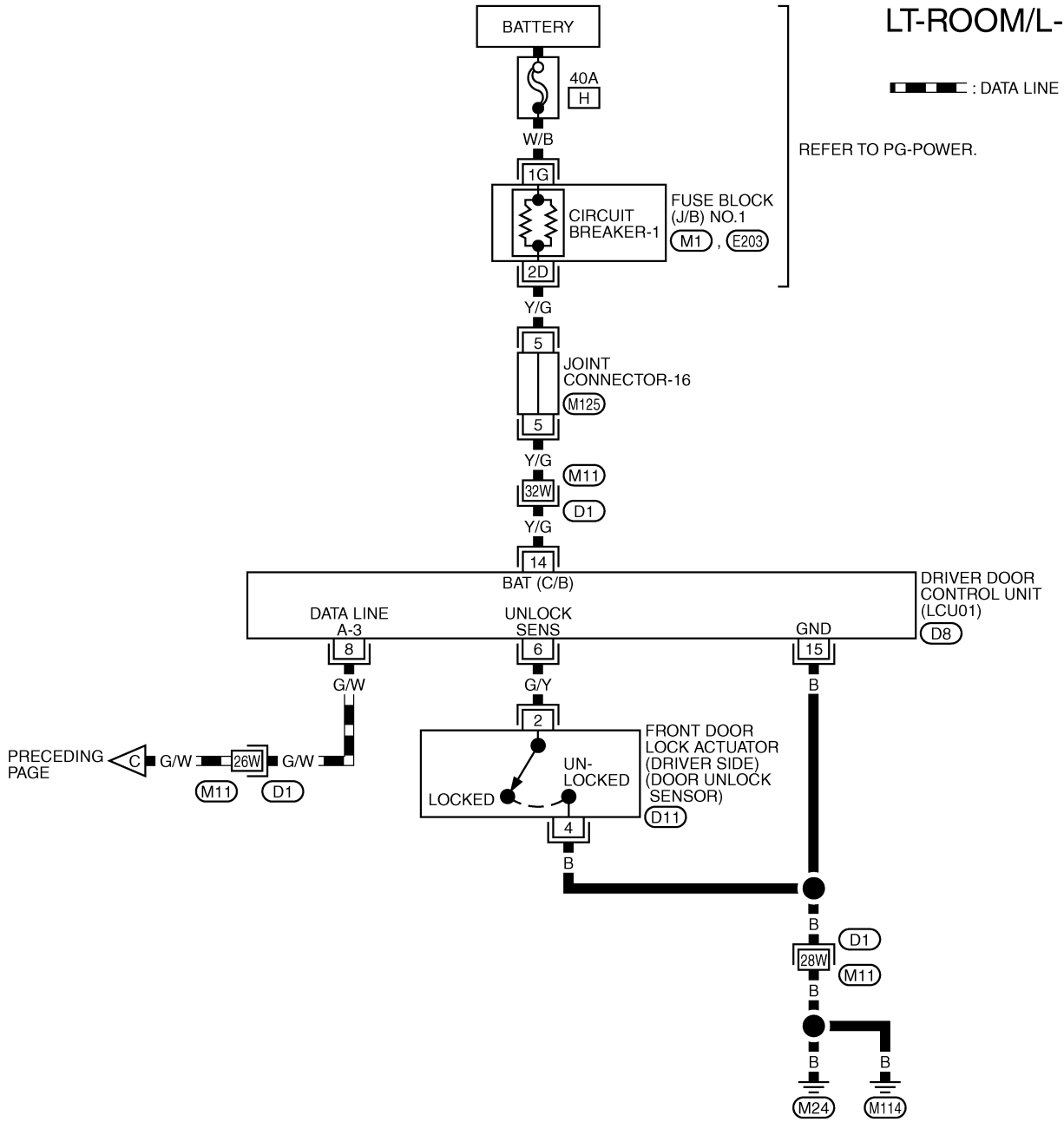
REFER TO THE FOLLOWING.  
 (E201), (R1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1  
 (M4), (R4) - ELECTRICAL UNITS

TKWA0568E



# INTERIOR ROOM LAMP

LT-ROOM/L-05

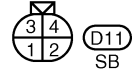


1	1	1	2	2	2	3	3	3	3
4	4	4	4	4	4	5	5	5	5

M125  
B

10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		

D8  
W



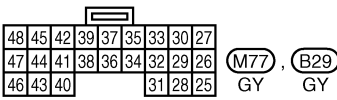
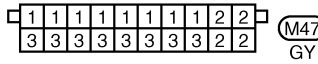
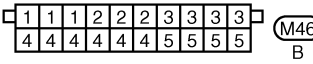
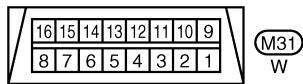
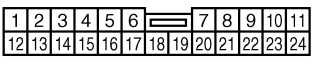
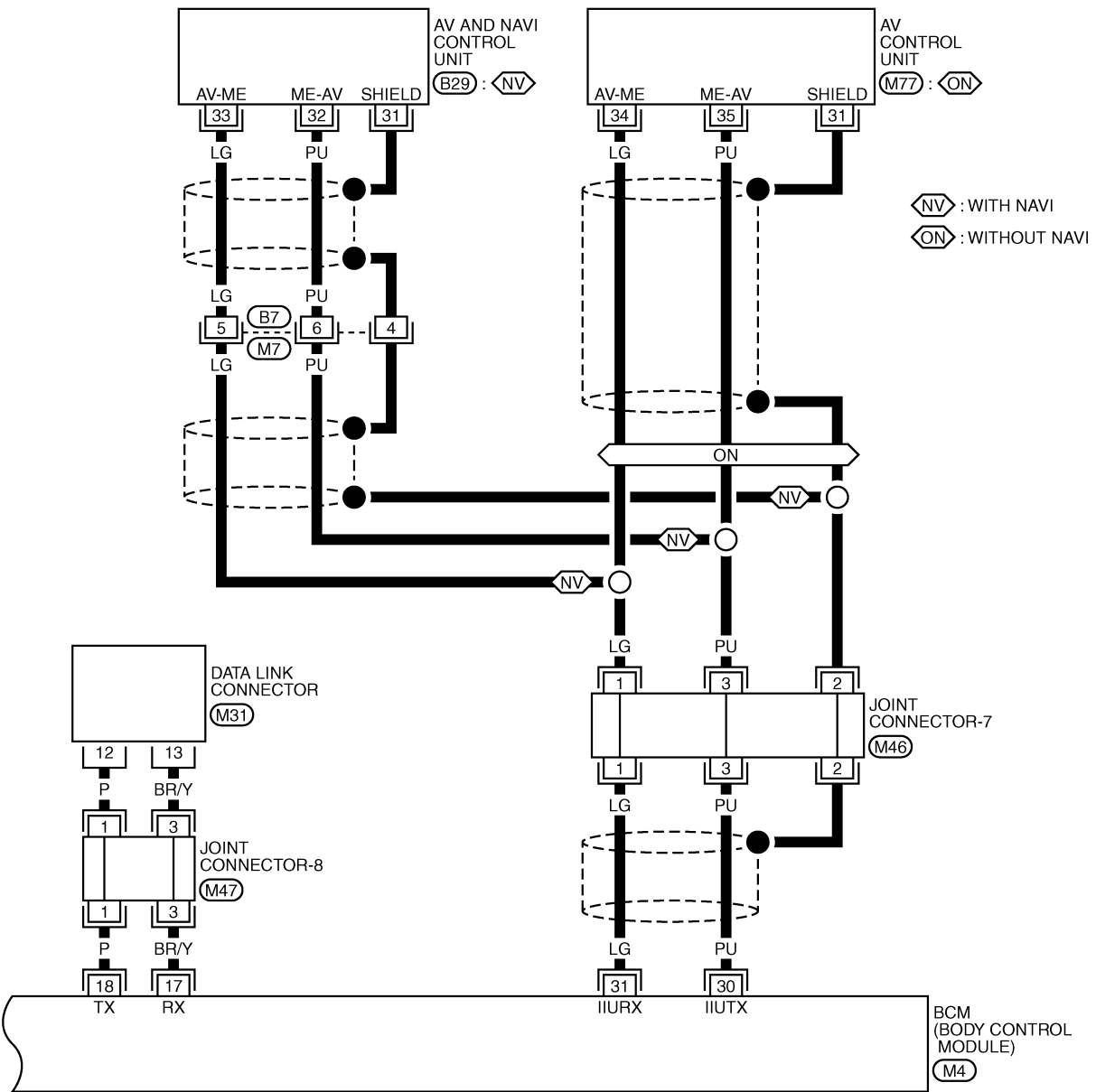
D11  
SB

REFER TO THE FOLLOWING.  
 (D1) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M1) , (E203) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

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

# INTERIOR ROOM LAMP

LT-ROOM/L-06



REFER TO THE FOLLOWING.  
 (M4) -ELECTRICAL UNITS

TKWA0570E

# INTERIOR ROOM LAMP

## Terminals and Reference Value for BCM

AKS002GJ

Terminal No.	Wire color	Signal description	Measuring condition		Reference value	
			Ignition switch	Operation or condition		
17	BR/Y	Data link RX	—	—	—	
18	P	Data link TX	—	—	—	
30	PU	Communication signal TX (BCM-AV: Transmission)	—	—	—	
31	LG	Communication signal RX (AV-BCM: Receiving)	—	—	—	
33	W	Door lock assembly rear LH (door switch) signal	OFF	Door lock assembly rear LH (door switch)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage
37	LG	Front door switch (passenger side) signal	OFF	Front door switch (passenger side)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage
56	B	Ground	—	—	Approx. 0V	
60	L/OR	Ignition switch ACC or ON	ACC	—	Battery voltage	
67	G/W	DATA line A-3	—	—	—	
68	W/B	Ignition switch ON or START	ON	—	Battery voltage	
69	PU/W	key switch signal	OFF	Key withdrawn (OFF)	—	Approx. 0V
				Key inserted (ON)	—	Battery voltage
105	Y/L	Battery power supply	OFF	—	Battery voltage	
110	OR	Ignition key hole illumination signal	OFF	Turned OFF	—	Battery voltage
				Turned ON	—	Approx. 0V
113	B	Ground	—	—	Approx. 0V	
129	G	Personal lamp switch signal	OFF	Personal lamp switch	One switch ON	5V or more
					AUTO	5V or more
					Both switch ON	Approx. 0V
130	W/L	Interior lamp switch ON signal	OFF	Room lamp switch	ON	Approx. 0V
					AUTO	5V or more
					OFF	5V or more
131	G/Y	Interior lamp switch OFF signal	OFF	Room lamp switch	ON	5V or more
					AUTO	5V or more
					OFF	Approx. 0V
133	Y/R	Map lamp LH signal	OFF	Turned OFF	—	Battery voltage
				Dimming	—	8V or more
				Turned ON	—	Approx. 0V
137	Y/G	Personal lamp RH signal	OFF	Turned OFF	—	Battery voltage
				Dimming	—	8V or more
				Turned ON	—	Approx. 0V
138	G/R	Personal lamp LH signal	OFF	Turned OFF	—	Battery voltage
				Dimming	—	8V or more
				Turned ON	—	Approx. 0V
140	Y/B	Map lamp RH signal	OFF	Turned OFF	—	Battery voltage
				Dimming	—	8V or more
				Turned ON	—	Approx. 0V

# INTERIOR ROOM LAMP

Terminal No.	Wire color	Signal description	Measuring condition			Reference value
			Ignition switch	Operation or condition		
142	R/Y	Front door switch (driver side) signal	OFF	Front door switch (driver side)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage
143	W/L	Door lock assembly rear RH (door switch) signal	OFF	Door lock assembly rear RH (door switch)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage

## Terminals and Reference Value for Driver Door Control Unit (LCU)

AKS002GK

Terminal No.	Wire color	Item	Condition	Reference value
6	G/Y	Door unlock sensor	OFF (Locked) → ON (unlocked)	5V → 0V
8	G/W	Data line A-3	—	—
14	Y/G	Power source (PTC)	—	Battery voltage
15	B	Ground	—	Approx. 0V

## Work Flow

AKS002GL

1. Confirm the symptom or customer complaint.
2. Understand system description. Refer to [LT-128, "System Description"](#).
3. Perform the preliminary check. Refer to [LT-140, "Preliminary Check"](#).
4. Does the door lock system operate normally? If YES, GO TO 5. If NO, refer to [BL-30, "Work Flow"](#) in BL section.
5. Find the cause of trouble following the malfunction diagnosis chart by symptom and repair or replace as necessary. Refer to [LT-146, "Symptom Chart"](#).
6. Does the total coordinated interior illumination operate normally? If YES, GO TO 7. If NO, GO TO 5.
7. INSPECTION END

## Preliminary Check

AKS002GM

### SETTING CHANGE FUNCTION

- Setting for each operation can be changed using CONSULT-II and a display unit.

Item	Description	CONSULT-II (Work support)	Display unit (Setting of various vehicle conditions)	Factory setting
SET INT- L LOGIC-TIM (CONSULT-II) Interior Lights Off Delay (display unit)	Selects interior lamp timer set time in four steps.	Mode 1 (off)	OFF: Display OFF	—
		Mode 2 (15 seconds)	15 seconds: Display 15 sec.	—
		Normal (30 seconds)	30 seconds: Display 30 sec.	×
		Mode 3 (45 seconds)	45 seconds: Display 45 sec.	—
SET I/L LGC-D- UNLCK (CONSULT-II) Illuminate Interior When Unlocking Vehicle (display unit)	Selects ON-OFF of the interior lamp illumination at the time the driver door is unlocked.	ON	ON: Indicator ON	×
		OFF	OFF: indicator OFF	—

#### CAUTION:

After the setting is changed, the new setting will be maintained even if the battery is disconnected.

# INTERIOR ROOM LAMP

## INSPECTION FOR POWER AND GROUND CIRCUIT

### 1. CHECK FUSE

Check if any of the following fuses in BCM are blown.

Unit	Power source	Fuse No.
BCM	Battery	3
		8
	Ignition switch ACC or ON position	21
	Ignition switch ON or START position	1

Refer to [LT-133, "Wiring Diagram — ROOM/L —"](#).

OK or NG

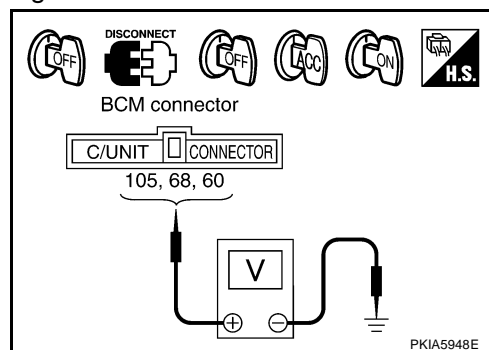
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-2, "POWER SUPPLY ROUTING"](#).

### 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM connector and driver door control unit connector.
- Check voltage between BCM harness connector M4 terminals and ground.

Terminals		(-)	Ignition switch position		
Connector	Terminal (Wire color)		OFF	ACC	ON
M4	105 (Y/L)	Ground	Battery voltage	Battery voltage	Battery voltage
	68 (W/B)		0V	0V	Battery voltage
	60 (L/OR)		0V	Battery voltage	Battery voltage



- Check voltage between driver door control unit harness connector D8 terminal 14 (Y/G) and ground.

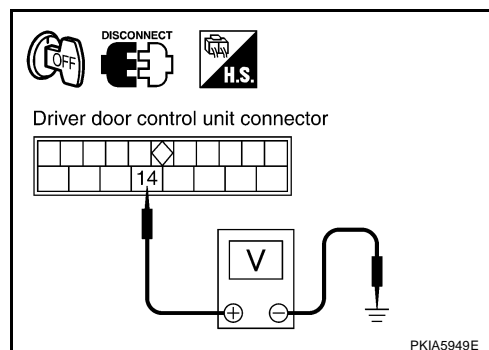
**14 (Y/G) - Ground : Battery voltage should exist.**

OK or NG

OK >> GO TO 3.

NG >> Check the following.

- Harness for open or short between BCM and fuse
- Harness for open or short between driver door control unit and fusible link

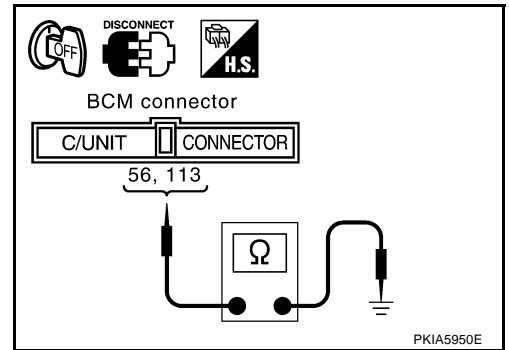


# INTERIOR ROOM LAMP

## 3. CHECK GROUND CIRCUIT

1. Check continuity between BCM harness connector M4 terminals 56 (B), 113 (B) and ground.

Terminals		Continuity
Connector	Terminal (Wire color)	
M4	56 (B)	Ground Yes
	113 (B)	

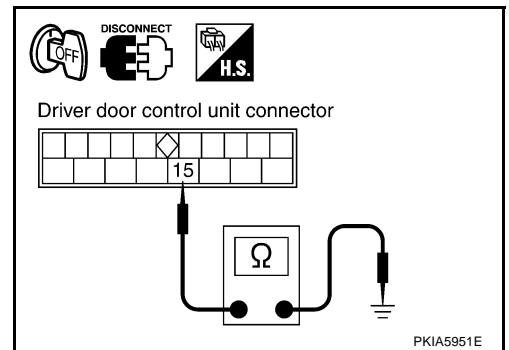


2. Check continuity between driver door control unit harness connector D8 terminal 15 (B) and ground.

**15 (B) - Ground : Continuity should exist.**

OK or NG

OK >> INSPECTION END  
 NG >> Repair harness.



## CONSULT-II Function

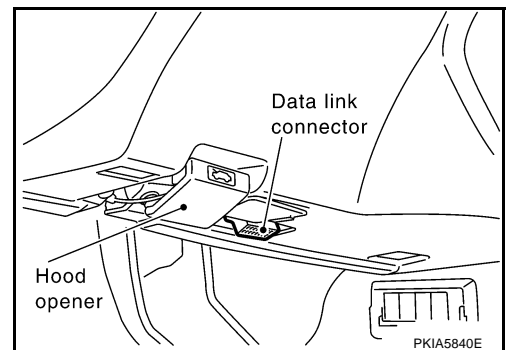
AKS002GN

- CONSULT-II has the display function for the work support, data monitor and active test for each part by combining data receiving and sending via the communication line from the BCM.

IVMS diagnosis position	Diagnosis mode	Description
Interior illumination	Work support	Changes setting of each function.
	Data monitor	Displays input data of the BCM and each LCU in real-time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
BCM part number		Displays BCM part No.

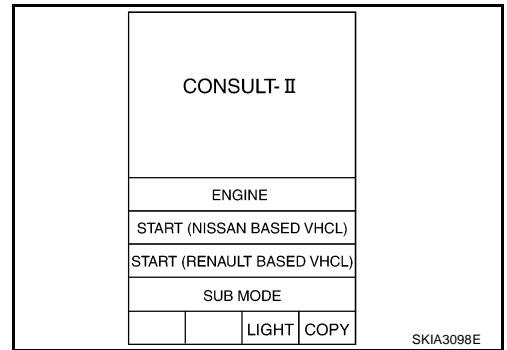
## CONSULT-II BASIC OPERATION PROCEDURE

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

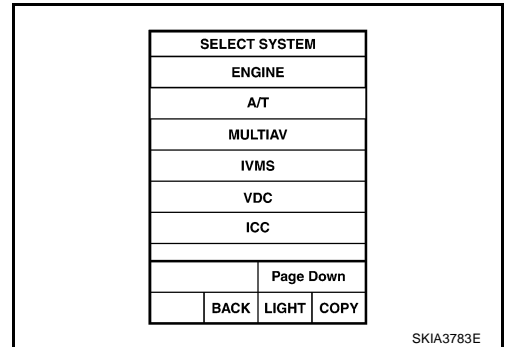


# INTERIOR ROOM LAMP

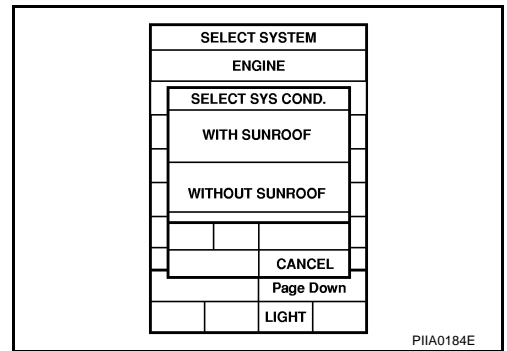
2. Touch "START(NISSAN BASED VHCL)".



3. Touch "IVMS" on "SELECT SYSTEM" screen. If "IVMS" is not indicated, refer to [GI-38, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#) .



4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".
6. Select the desired part to be diagnosed on "SELECT TEST ITEM" screen.



## WORK SUPPORT

### Operation Procedure

1. Touch "INTERIOR ILLUMINATION" on "SELECT TEST ITEM" screen.
2. Touch "WORK SUPPORT" on "SELECT DIAG MODE" screen.
3. Touch "SET INT-L LOGIC-TIM" or "SET I/L LGC-D-UNLCK" on "SELECT WORK ITEM" screen.
4. Touch "START".
5. Touch "NORMAL"/"MODE 1 - 3" of which setting is to be changed (for the interior lamp logic timer setting only).
6. Touch "CHANGE SET".
7. The setting will be changed and the current setting status will be displayed.
8. Touch "END".

### Display Item List

Refer to [LT-140, "SETTING CHANGE FUNCTION"](#) .

## DATA MONITOR

### Operation Procedure

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

# INTERIOR ROOM LAMP

MAIN SIGNALS	Monitors the main items.
SELECTION FROM MENU	Selects and monitors the items.

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

## Data Monitor Item

Monitored item ["OPERATION OR UNIT"]	Description
IGN ON SW [ON/OFF]	Displays status of the ignition switch as judged from the ignition switch signal. (Key is in ON position: ON/Key is in ACC or OFF position: OFF)
DOOR SW-DR [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status as judged from the front door switch (driver side) signal. (Door is open: ON/Door is closed: OFF)
DOOR SW-AS [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the front door switch (passenger side) signal.
DOOR SW-RR [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the door lock assembly rear RH (door switch) signal.
DOOR SW-RL [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the door lock assembly rear LH (door switch) signal.
HD/LMP 1ST SW [ON/OFF]	Displays status of the lighting switch as judged from the lighting switch signal. (OFF or AUTO position: OFF/Other than OFF and AUTO position: ON)
IGN KEY SW [ON/OFF]	Displays "Key inserted (ON)/key withdrawn (OFF)" status judged from the key switch signal.
IGN ACC SW [ON/OFF]	Displays "Ignition ON or ACC (ON)/ignition OFF (OFF)" status judged from the ignition switch signal.
LOCK SIG-DR [LOCK/UNLK]	Displays "Door locked (LOCK)/door unlocked (UNLK)" status judged from the front door lock actuator (driver side) (door unlock sensor) signal.

## ACTIVE TEST

### Operation Procedure

1. Touch "INTERIOR ILLUMINATION" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on the "SELECT DIAG MODE" screen.
3. Touch item to be tested and check operation of the selected item.
4. Touch "STOP" while testing and the operation will be stopped.

### Active Test Item

Test items	Display on CONSULT-II screen	Description
Map lamp output	FR PERSONAL LAMP	Map lamp can be operated by any ON-OFF operation of lights.
Personal lamp output	RR PERSONAL LAMP	Personal lamp can be operated by any ON-OFF operation of lights.
Ignition key hole illumination output	KEY RING ILLUM	Ignition key hole illumination can be operated by any ON-OFF operation of lights.

### CAUTION:

Active test should be conducted with the lamp switch in AUTO position.

## On Board Diagnosis

AKS002G0

### ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

- Map lamps and step lamps (all seats) act the indicators for the on board diagnosis.

### DIAGNOSIS ITEM

Diagnosis item	Description
Switch monitor	Checks for malfunction in switch systems that input to BCM and each LCU.

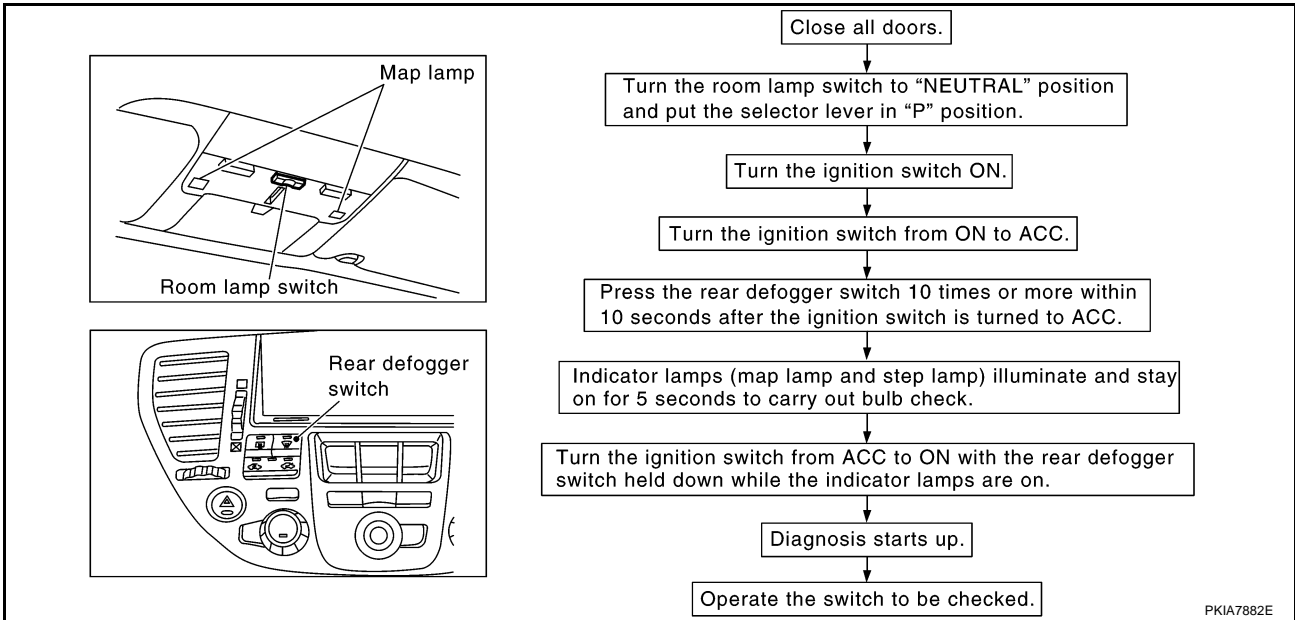


# INTERIOR ROOM LAMP

## SWITCH MONITOR

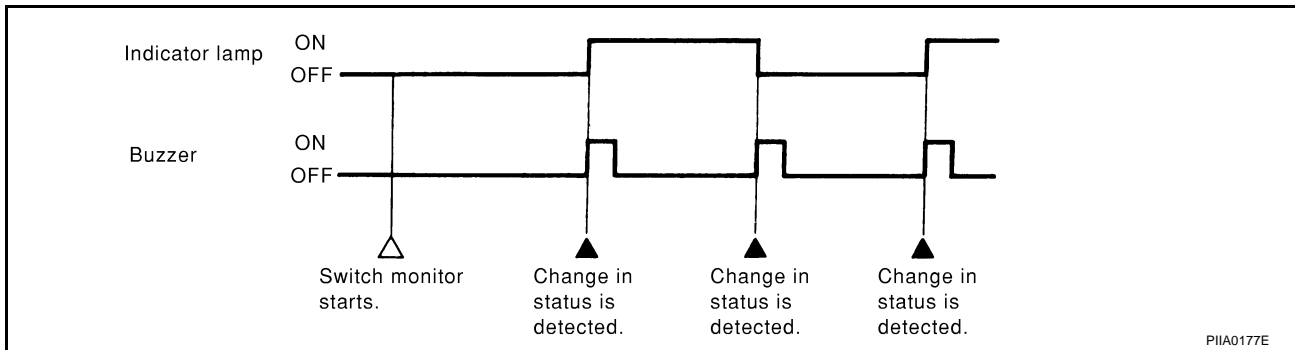
- Perform the diagnosis on the switch system to each control unit.

### How to Perform Switch Monitor



### Description

- In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the map lamps and front step lamps with buzzer.



### Switch Monitor Item

- The status of the switch (except the ignition switch, interior lamp ill switch, and map lamp switch) as input to each control unit can be monitored.

Control unit	Item
BCM	Lighting switch (AUTO, 1st position)
	Each door switch
Driver door control unit (LCU)	Front door lock actuator (driver side) (door lock sensor)

### Cancel of Switch Monitor

If the following conditions are satisfied, the communication diagnosis is cancelled.

- Turn ignition switch OFF.
- Drive the vehicle more than 7 km/h (4 MPH).

# INTERIOR ROOM LAMP

## Symptom Chart

AKS002GP

Symptom	Malfunctioning system and reference
<ul style="list-style-type: none"> <li>Map lamp, and personal lamp will not illuminate when the interior lamp ill switch is turned ON with the personal lamp switch in AUTO position.</li> <li>Map lamp, and personal lamp will not go out when the interior lamp ill switch is turned OFF with the personal lamp switch in AUTO position.</li> </ul>	<ul style="list-style-type: none"> <li>Interior lamp ill switch system. Refer to <a href="#">LT-146. "Interior Lamp Illumination Switch System Inspection"</a> .</li> </ul> <p>If above systems are normal, replace the BCM.</p>
<ul style="list-style-type: none"> <li>Personal lamp will not illuminate when RH personal lamp switch is turned ON with LH personal lamp switch in AUTO position.</li> <li>Personal lamp will not illuminate when LH personal lamp switch is turned ON with RH personal lamp switch in AUTO position.</li> <li>Personal lamp switch will not go out when both RH and LH personal lamp switches are turned to AUTO position.</li> </ul>	<ul style="list-style-type: none"> <li>Personal lamp switch system. Refer to <a href="#">LT-148. "Personal Lamp Switch System Inspection"</a> .</li> </ul> <p>If above system is normal, replace the BCM.</p>
<ul style="list-style-type: none"> <li>All lamps (except step lamp) will not illuminate in the lamp illumination conditions with the interior lamp ill switch and RH and LH personal lamp switches in AUTO position.</li> <li>All lamps (except step lamp) will not go out in the lamp off conditions with the interior lamp switch and RH and LH personal lamp switches in AUTO position.</li> </ul>	<ul style="list-style-type: none"> <li>Interior lamp ill switch system. Refer to <a href="#">LT-146. "Interior Lamp Illumination Switch System Inspection"</a> .</li> <li>Door switch system. Refer to <a href="#">LT-149. "Door Switch System Inspection"</a> .</li> <li>Key switch system. Refer to <a href="#">LT-151. "Key Switch System Inspection"</a> .</li> </ul> <p>If above system is normal, replace the BCM.</p>
<ul style="list-style-type: none"> <li>Lamps illuminate fully in half illumination conditions.</li> <li>Dimming function will not operate when turning the lamp off.</li> </ul>	<p>Replace the BCM. *</p>

\*: When BCM input/output signal are normal.

## Interior Lamp Illumination Switch System Inspection

AKS002GQ

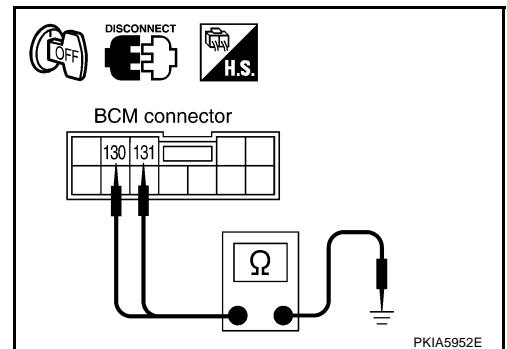
### 1. CHECK INTERIOR LAMP ILL SWITCH SIGNAL

- Turn ignition switch OFF.
- Disconnect BCM connector.
- Check continuity between BCM harness connector R4 terminals 130 (W/L), 131 (G/Y) and ground while operating the interior lamp ill switch.

Terminals		Condition	Continuity
Connector	Terminal (Wire color)		
R4	130 (W/L)	Interior lamp ill switch ON	Yes
		Interior lamp ill switch OFF and AUTO	No
	131 (G/Y)	Interior lamp ill switch OFF	Yes
		Interior lamp ill switch ON and AUTO	No

OK or NG

- OK >> Interior lamp ill switch is OK.  
 NG >> GO TO 2.



# INTERIOR ROOM LAMP

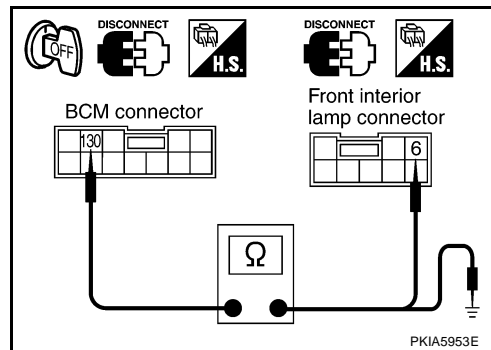
## 2. CHECK INTERIOR LAMP ILL SWITCH TOTAL ILL CIRCUIT

1. Disconnect front interior lamp connector.
2. Check continuity between BCM harness connector R4 terminal 130 (W/L) and front interior lamp harness connector R6 terminal 6 (W/L).

**130 (W/L) - 6 (W/L) : Continuity should exist.**

3. Check continuity between BCM harness connector R4 terminal 130 (W/L) and ground.

**130 (W/L) - Ground : Continuity should not exist.**



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

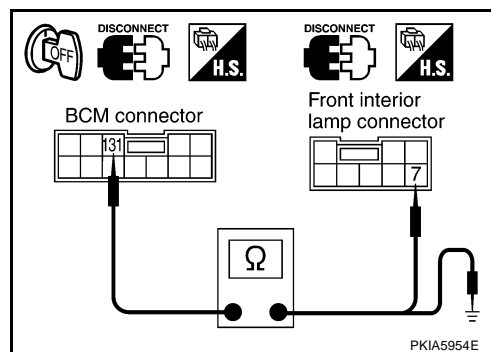
## 3. CHECK INTERIOR LAMP ILL SWITCH ALL OFF CIRCUIT

1. Disconnect front interior lamp connector.
2. Check continuity between BCM harness connector R4 terminal 131 (G/Y) and front interior lamp harness connector R6 terminal 7 (G/Y).

**131 (G/Y) - 7 (G/Y) : Continuity should exist.**

3. Check continuity between BCM harness connector R4 terminal 131 (G/Y) and ground.

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



OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

## 4. CHECK INTERIOR LAMP ILL SWITCH GROUND CIRCUIT

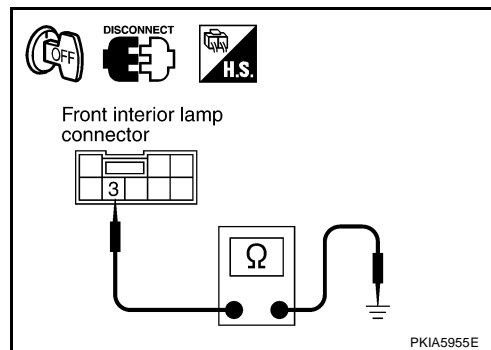
Check continuity between front interior lamp harness connector R6 terminal 3 (B) and ground.

**3 (B) - Ground : Continuity should exist.**

OK or NG

OK >> Replace front interior lamp.

NG >> Check harness ground circuit.



# INTERIOR ROOM LAMP

AKS002GR

## Personal Lamp Switch System Inspection

### 1. CHECK PERSONAL LAMP SWITCH SIGNAL

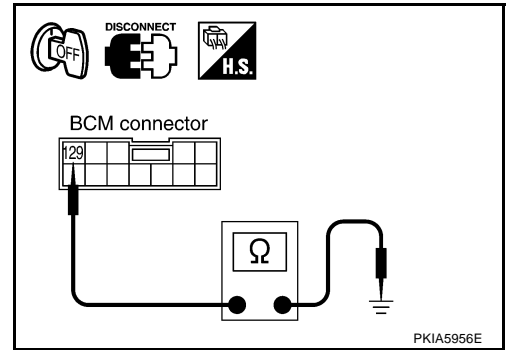
1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector R4 terminal 129 (G) and ground while operating the personal lamp switch.

Terminals			RH, LH personal lamp switch position	Continuity
Connector	Terminal (Wire color)	Ground		
R4	129 (G)	Ground	HALF or AUTO	No
			FULL	Yes

OK or NG

OK >> Personal lamp switch is OK.

NG >> GO TO 2.



### 2. CHECK PERSONAL LAMP SWITCH CIRCUIT

1. Disconnect rear interior lamp connector.
2. Check continuity between BCM harness connector R4 terminal 129 (G) and rear interior lamp harness connector R13 terminal 5 (G).

**129 (G) - 5 (G) : Continuity should exist.**

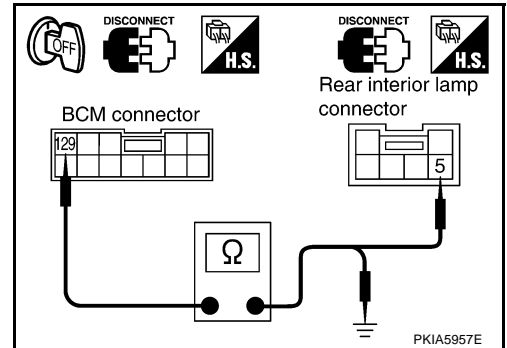
3. Check continuity between BCM harness connector R4 terminal 129 (G) and ground.

**129 (G) - Ground : Continuity should not exist.**

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.



### 3. CHECK PERSONAL LAMP SWITCH GROUND CIRCUIT

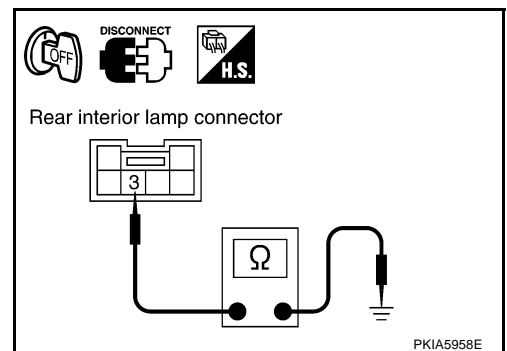
Check continuity between rear interior lamp harness connector R13 terminal 3 (B) and ground.

**3 (B) - Ground : Continuity should exist.**

OK or NG

OK >> Replace rear interior lamp.

NG >> Repair harness.



# INTERIOR ROOM LAMP

AKS002GS

## Door Switch System Inspection

### 1. CHECK DOOR SWITCH SIGNAL

① With CONSULT-II

- Operate each door via "DOOR SW" on "DATA MONITOR" screen and make sure that the switch turns on and off as commanded.

② Without CONSULT-II

- Operate each door and via "switch monitor" of the self-diagnosis function and make sure that the switch turns on and off as commanded.

OK or NG

OK >> Door switch is OK.

NG >> GO TO 2.

DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
DOOR SW-RR	OFF
DOOR SW-RL	OFF

RECORD

SKIA0441E

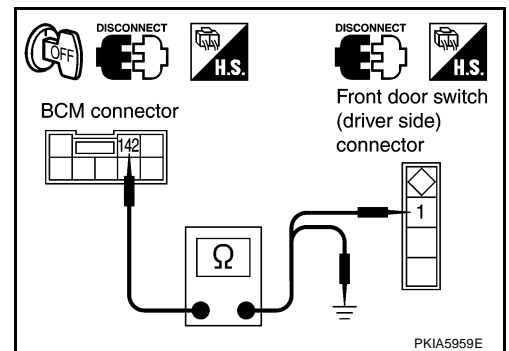
### 2. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM connector and front door switch (driver side) connector.
- Check continuity between BCM harness connector B4 terminal 142 (R/Y) and front door switch (driver side) harness connector B20 terminal 1 (R/Y).

**142 (R/Y) - 1 (R/Y) : Continuity should exist.**

- Check continuity between BCM harness connector B4 terminal 142 (R/Y) and ground.

**142 (R/Y) - Ground : Continuity should not exist.**



**NOTE:**

If front door switch (driver side) is normal, skip this procedure and go to 3.

OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

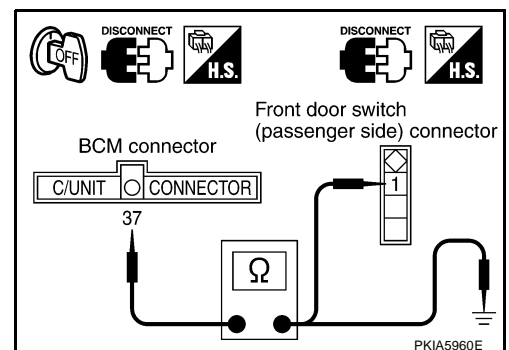
### 3. CHECK FRONT DOOR SWITCH (PASSENGER SIDE) CIRCUIT

- Disconnect front door switch (passenger side) connector.
- Check continuity between BCM harness connector M4 terminal 37 (LG) and front door switch (passenger side) harness connector B220 terminal 1 (LG).

**37 (LG) - 1 (LG) : Continuity should exist.**

- Check continuity between BCM harness connector M4 terminal 37 (LG) and ground.

**37 (LG) - Ground : Continuity should not exist.**



**NOTE:**

If front door switch (passenger side) is normal, skip this procedure and go to 4.

OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

# INTERIOR ROOM LAMP

## 4. CHECK DOOR LOCK ASSEMBLY REAR LH (DOOR SWITCH) CIRCUIT

1. Disconnect door lock assembly rear LH connector.
2. Check continuity between BCM harness connector M4 terminal 33 (W) and door lock assembly rear LH harness connector D62 terminal 1 (W).

**33 (W) - 1 (W) : Continuity should exist.**

3. Check continuity between BCM harness connector M4 terminal 33 (W) and ground.

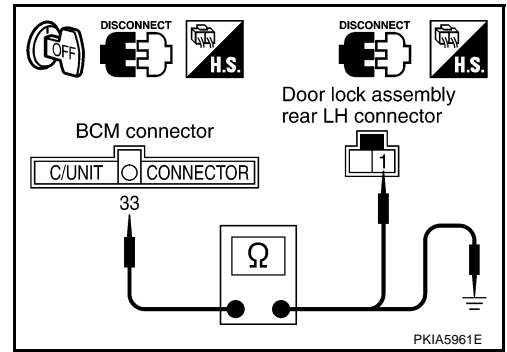
**33 (W) - Ground : Continuity should not exist.**

**NOTE:**

If door lock assembly rear LH (door switch) is normal, skip this procedure and go to 5.

OK or NG

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



## 5. CHECK DOOR LOCK ASSEMBLY REAR RH (DOOR SWITCH) CIRCUIT

1. Disconnect door lock assembly rear RH connector.
2. Check continuity between BCM harness connector B4 terminal 143 (W/L) and door lock assembly rear RH harness connector D82 terminal 1 (W).

**143 (W/L) - 1 (W) : Continuity should exist.**

3. Check continuity between BCM harness connector B4 terminal 143 (W/L) and ground.

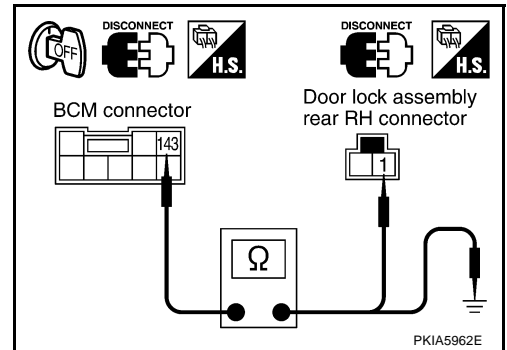
**143 (W/L) - Ground : Continuity should not exist.**

**NOTE:**

If door lock assembly rear RH (door switch) is normal, skip this procedure and go to 6.

OK or NG

- OK >> GO TO 6.
- NG >> Repair harness or connector.



## 6. CHECK DOOR SWITCH

1. Check front door switch.

**Switch released (ON) : Continuity should exist.**

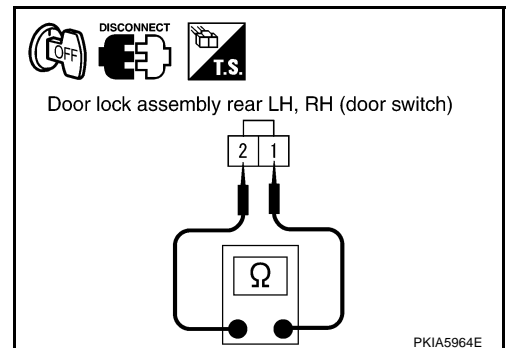
**Switch pressed (OFF) : Continuity should not exist.**

2. Check continuity between door lock assembly rear LH, RH (door switch) connector D62, D82 terminals 1 and 2 while turning the door switches ON (open) and OFF (closed).

Connector	Terminal		Condition	Continuity
D62	1	2	ON (Door open)	Yes
D82			OFF (Door closed)	No

OK or NG

- OK >> Check front door switch case ground condition or door lock assembly rear LH, RH (door switch) ground circuit.
- NG >> Replace the door switch.



# INTERIOR ROOM LAMP

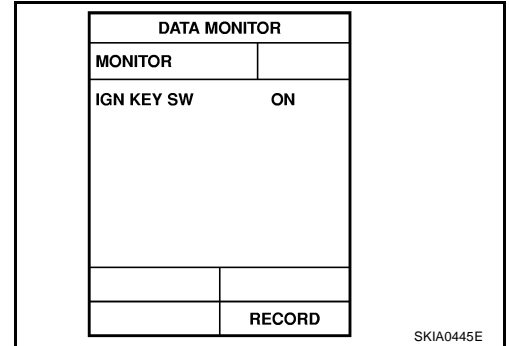
## Key Switch System Inspection

AKS002GT

### 1. CHECK KEY SWITCH SIGNAL

With CONSULT-II

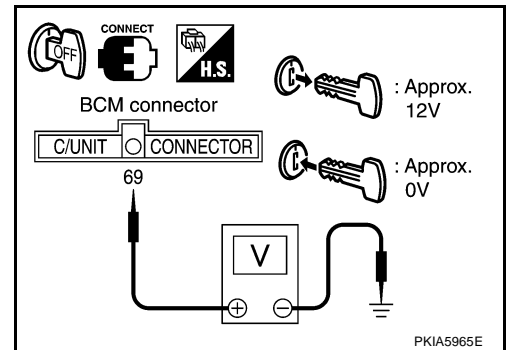
- Insert and withdraw the key via “IGN KEY SW” on “DATA MONITOR” screen and make sure that the switch turns on and off accordingly.



Without CONSULT-II

- Check voltage between BCM connector M4 terminal 69 (PU/W) and ground while inserting and withdrawing the key.

Terminals		(-)	Key condition	Voltage
(+) Connector				
Connector	Terminal (Wire color)			
M4	69 (PU/W)	Ground	Withdrawn (Switch OFF)	Approx. 0V
			Inserted (Switch ON)	Battery voltage



OK or NG

- OK >> Key switch is OK.
- NG >> GO TO 2.

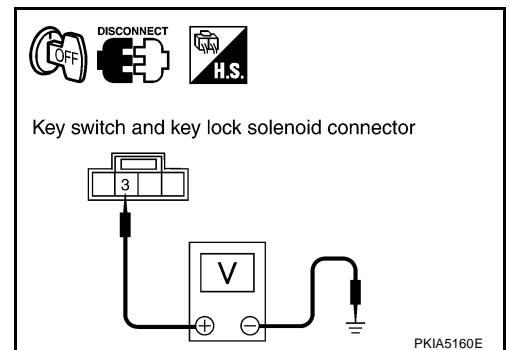
### 2. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect key switch connector.
3. Check voltage between key switch harness connector M64 terminal 3 (W) and ground.

**3 (W) - Ground : Battery voltage should exist.**

OK or NG

- OK >> GO TO 3.
- NG >> Check the following.
  - If the key switch 10A fuse is blown [No. 32 located in fuse block (J/B) No. 2]
  - Harness for open or short between key switch and fuse



A  
B  
C  
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LT  
L  
M

# INTERIOR ROOM LAMP

## 3. CHECK KEY SWITCH

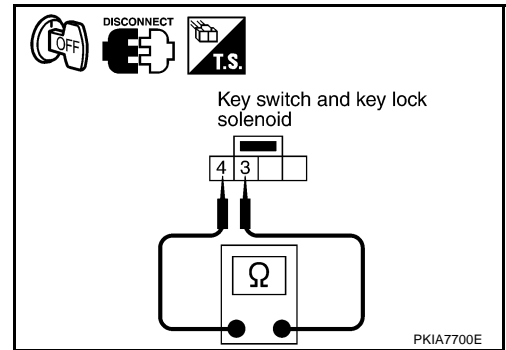
Check continuity between key switch terminals 3 and 4 while inserting and withdrawing ignition key.

Terminals		Key condition	Continuity
3	4	Withdrawn (Switch OFF)	No
		Inserted (Switch ON)	Yes

OK or NG

OK >> GO TO 4.

NG >> Replace key switch.



## 4. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M4 terminal 69 (PU/W) and the key switch harness connector M64 terminal 4 (PU/W).

**69 (PU/W) - 4 (PU/W) : Continuity should exist.**

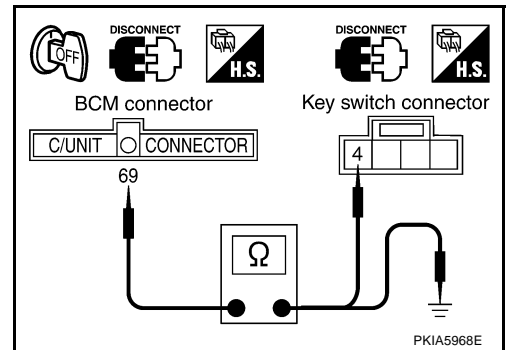
3. Check continuity between BCM harness connector M4 terminal 69 (PU/W) and ground.

**69 (PU/W) - Ground : Continuity should not exist.**

OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.



## Bulb Replacement

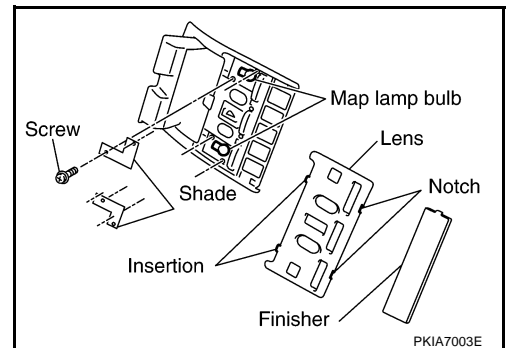
### MAP LAMP (FRONT PERSONAL LIGHT) AND CONSOLE LAMP (CONSOLE LIGHT)

AKS002GU

#### Map Lamp

1. Remove finisher using a clip driver or a suitable tool.
2. Insert a thin screwdriver in the notch and remove lens.
3. Remove screw and remove shade.
4. Remove bulb.

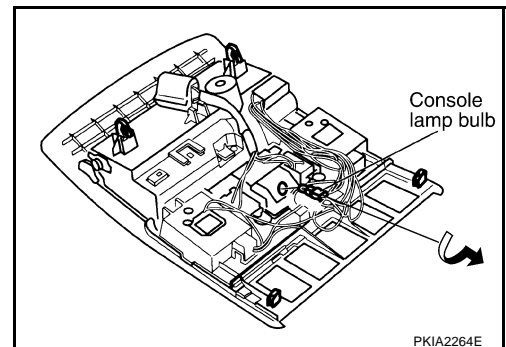
**Map lamp (Front personal light) : 12V 8W**



#### Console Lamp

1. Remove front interior lamp. Refer to [LT-153, "FRONT INTERIOR LAMP"](#).
2. Turn console lamp bulb socket counterclockwise and unlock it.

**Console lamp (Console light) : 12V 1.4W**



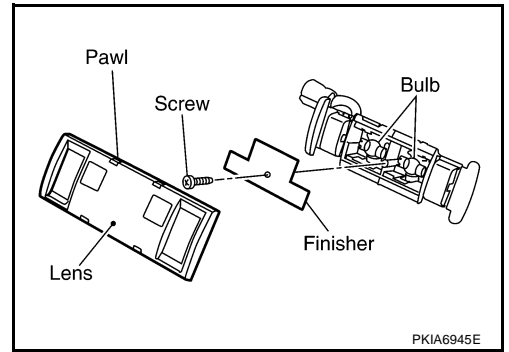


# INTERIOR ROOM LAMP

## PERSONAL LAMP (REAR PERSONAL LIGHT)

1. Unfold the pawls and remove lens.
2. Remove shade mounting screw and remove shade.
3. Remove bulb.

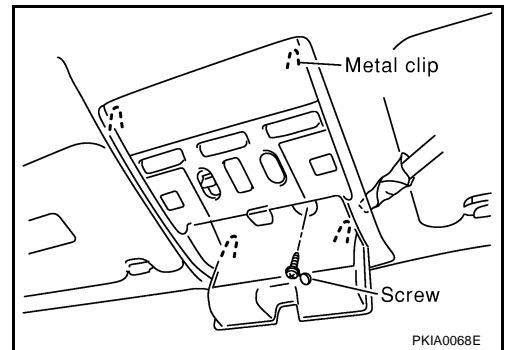
**Personal lamp (Rear personal light) : 12V 8W**



AKS002GV

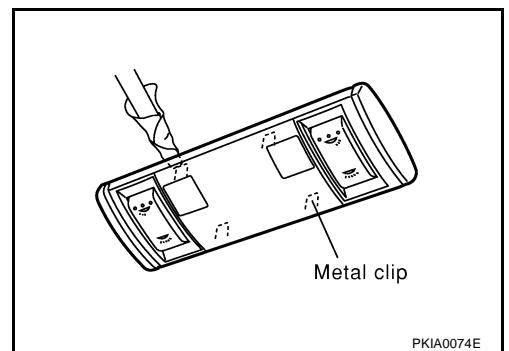
## Removal and Installation FRONT INTERIOR LAMP

1. Open front interior lamp box and remove screw.
2. Insert a clip driver or a suitable tool and disengage metal clip fittings of front interior lamp.
3. Disconnect connector and remove front interior lamp.



## PERSONAL LAMP (REAR PERSONAL LIGHT)

1. Using a clip driver or a suitable tool, press and remove metal clip of personal lamp.
2. Disconnect personal lamp connector.



A  
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I  
J  
LT  
L  
M

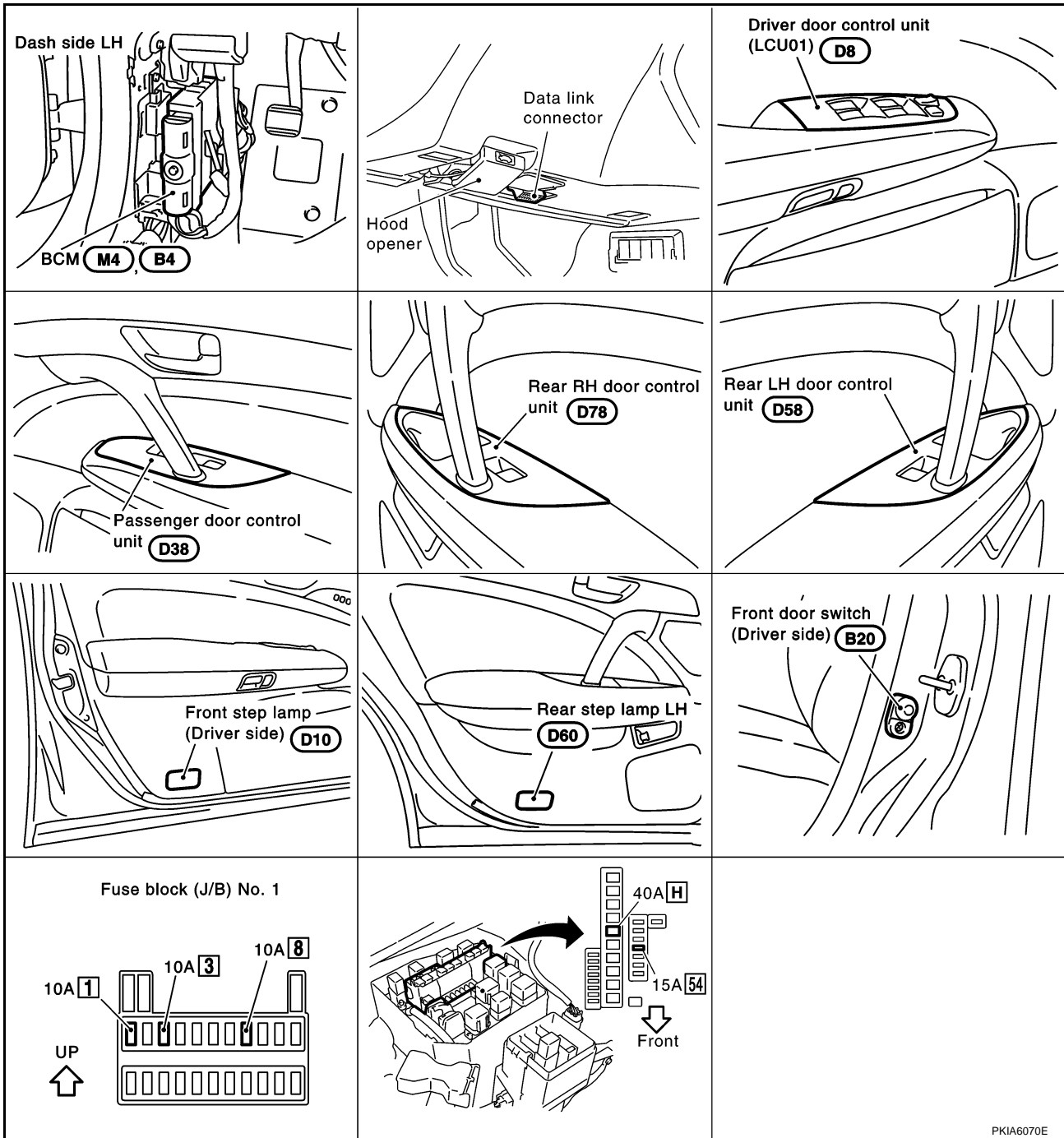
# STEP LAMP

## STEP LAMP

PFP:26420

### Component Parts and Harness Connector Location

AKS002GW



PKIA6070E

### System Description POWER SUPPLY AND GROUND

AKS002GX

Power is supplied at all times

- to BCM terminal 105
- through 10A fuse [No. 3, located in fuse block (J/B) No. 1],
- to all step lamps terminal 1
- through 10A fuse [No. 8, located in fuse block (J/B) No. 1].

Ground is supplied

- to driver door control unit terminal 15 through grounds M24 and M114
- to passenger door control unit terminal 11 through grounds M24 and M114

# STEP LAMP

- 
- to rear LH door control unit terminal 11 through grounds B17 and B57
  - to rear RH door control unit terminal 11 through grounds B217 and B256.

A

## OPERATING PROCEDURE

BCM is connected to driver door control unit as DATA LINE A-3.

B

Then driver door control unit is connected to each door control unit.

When any door switch is in OPEN position, ground is supplied

- to BCM terminal 33, 37, 142, or 143
- through front door switch (driver or passenger side), door lock assembly rear LH or RH (door switch).

C

Then BCM sends a signal to the driver door control unit (LCU 01) to turn on step lamp. With ground supplied, step lamp turns on.

D

E

F

G

H

I

J

LT

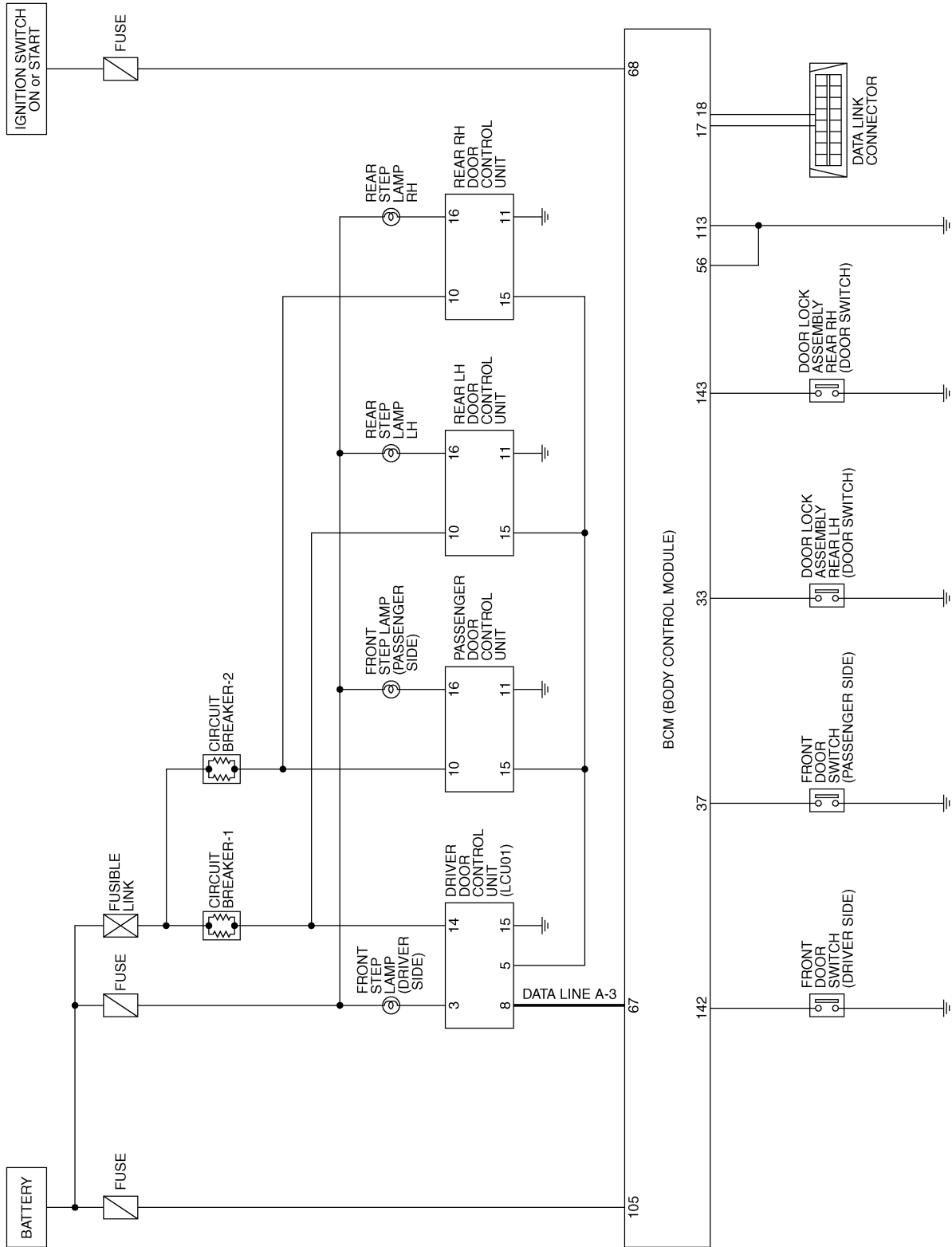
L

M

# STEP LAMP

## Schematic

AKS002GY



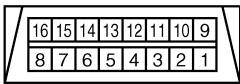
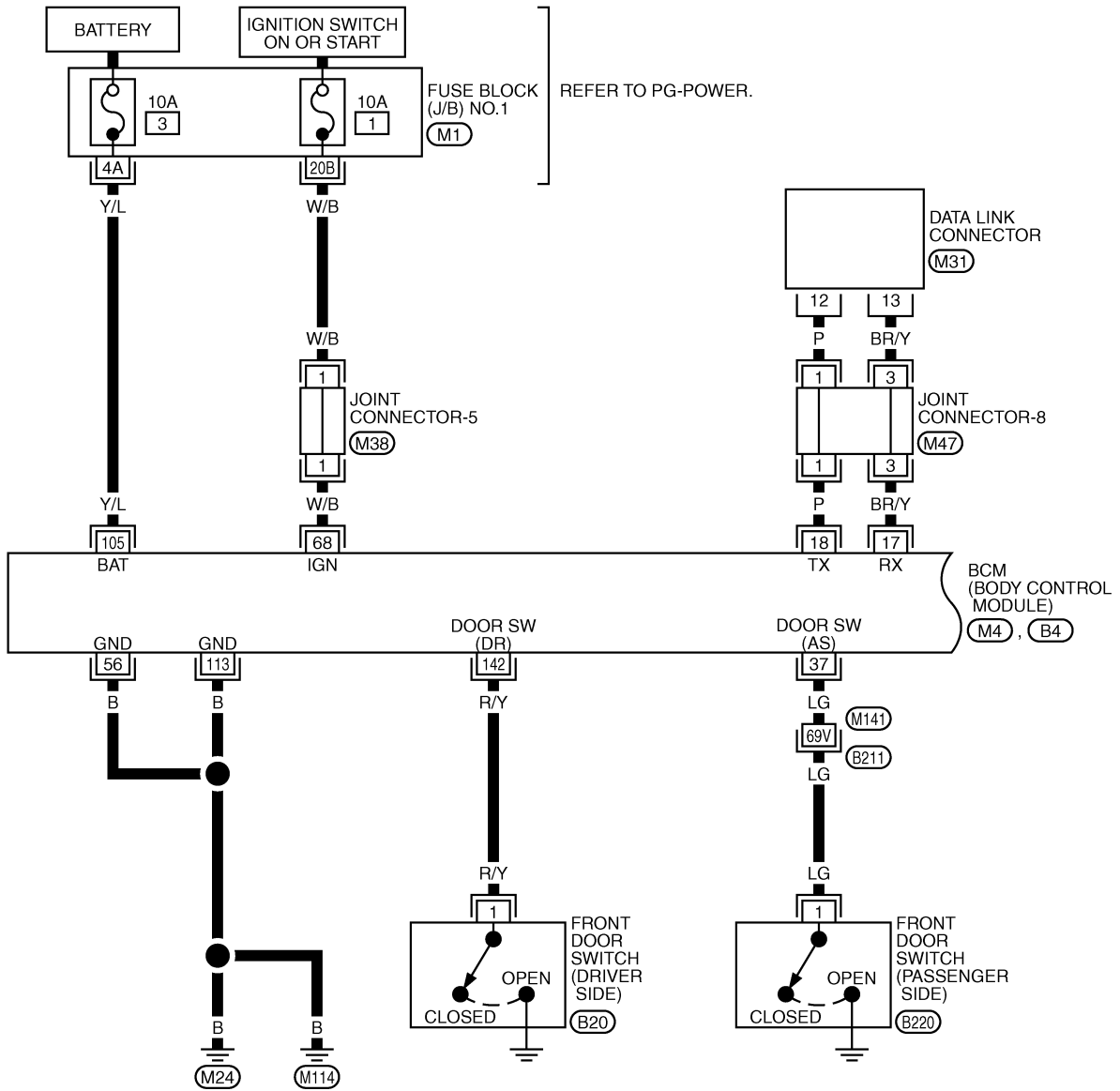
TKWA0571E

# STEP LAMP

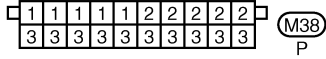
## Wiring Diagram — STEP/L —

AKS002.GZ

### LT-STEP/L-01



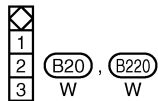
(M31)  
W



(M38)  
P



(M47)  
GY



(B20), (B220)  
W W

REFER TO THE FOLLOWING.

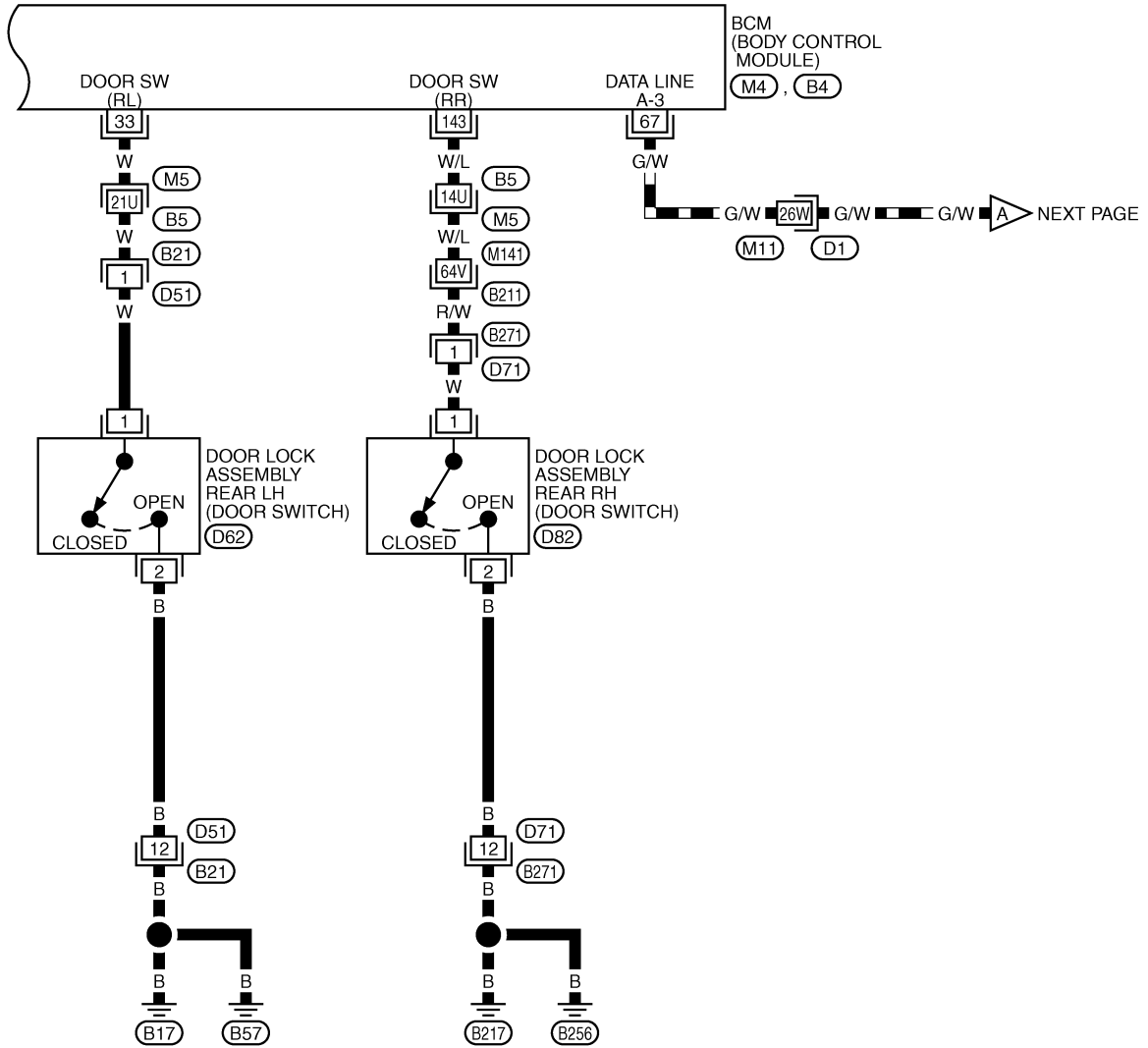
- (B211) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (M4), (B4) -ELECTRICAL UNITS

TKWA0572E

# STEP LAMP

LT-STEP/L-02

▬ : DATA LINE



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(B21), (B271)  
W W

1 2 (D62), (D82)  
B B

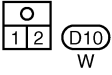
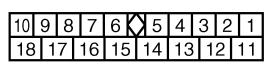
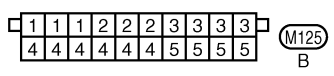
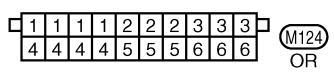
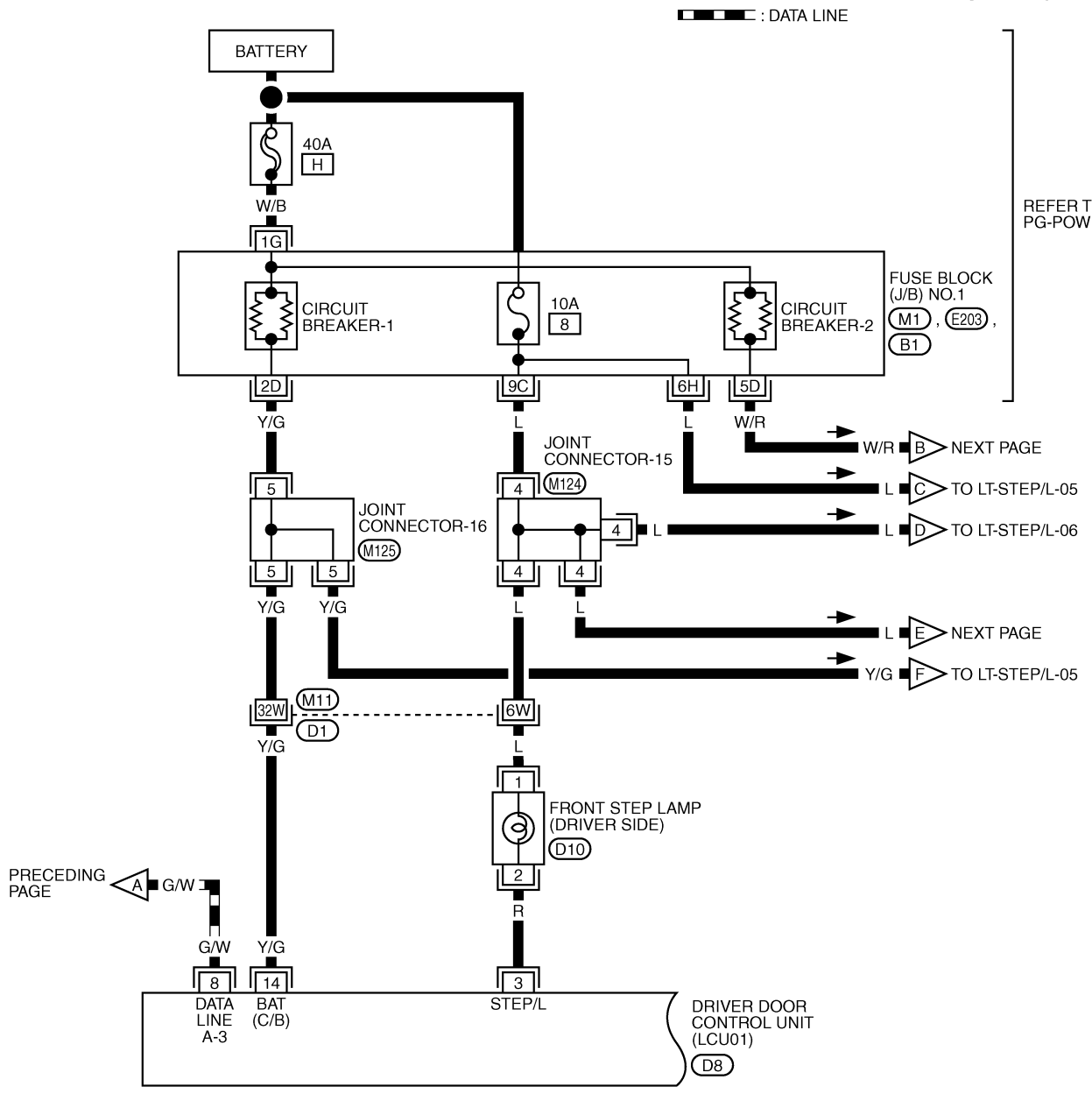
REFER TO THE FOLLOWING.  
 (M5), (B21), (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M4), (B4) -ELECTRICAL  
 UNITS

TKWA0573E

# STEP LAMP

LT-STEP/L-03

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



REFER TO THE FOLLOWING.

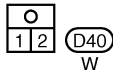
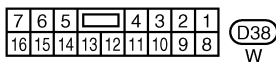
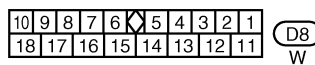
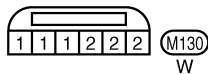
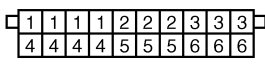
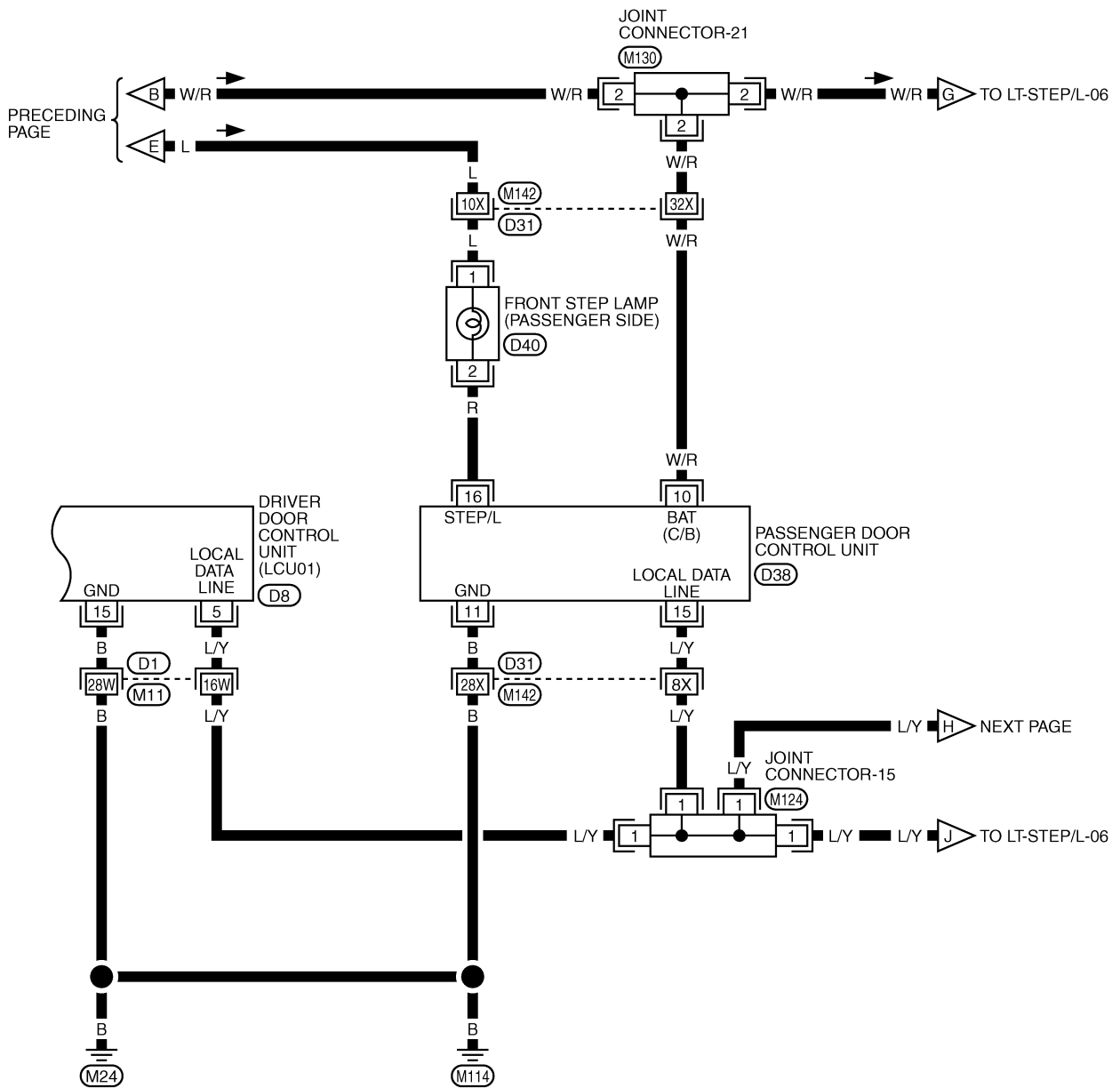
(D1) -SUPER MULTIPLE JUNCTION (SMJ)

(M1), (E203), (B1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0574E

# STEP LAMP

LT-STEP/L-04



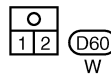
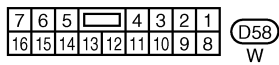
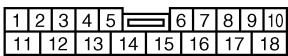
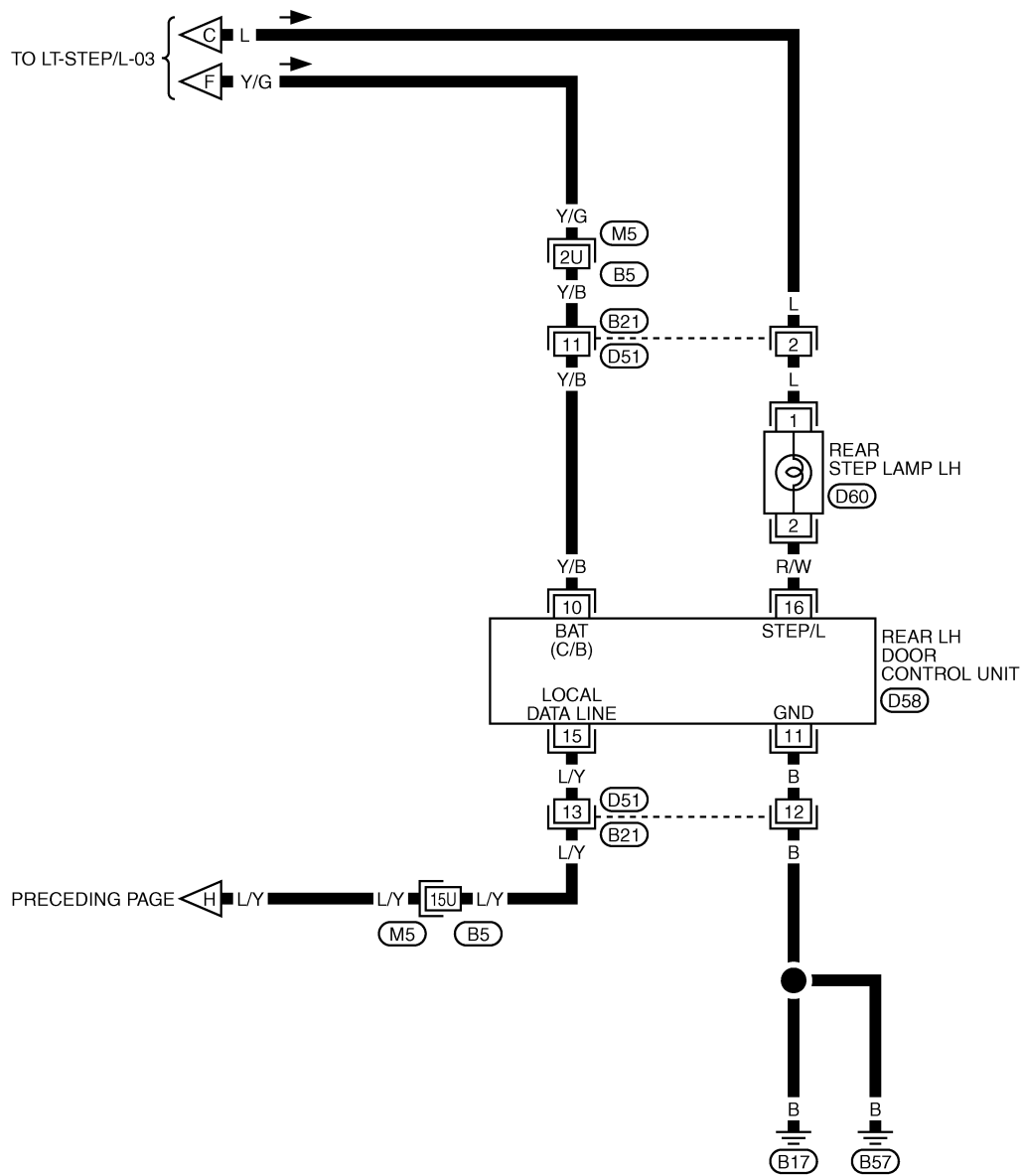
REFER TO THE FOLLOWING.  
 (D1), (D31) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0575E



# STEP LAMP

LT-STEP/L-05



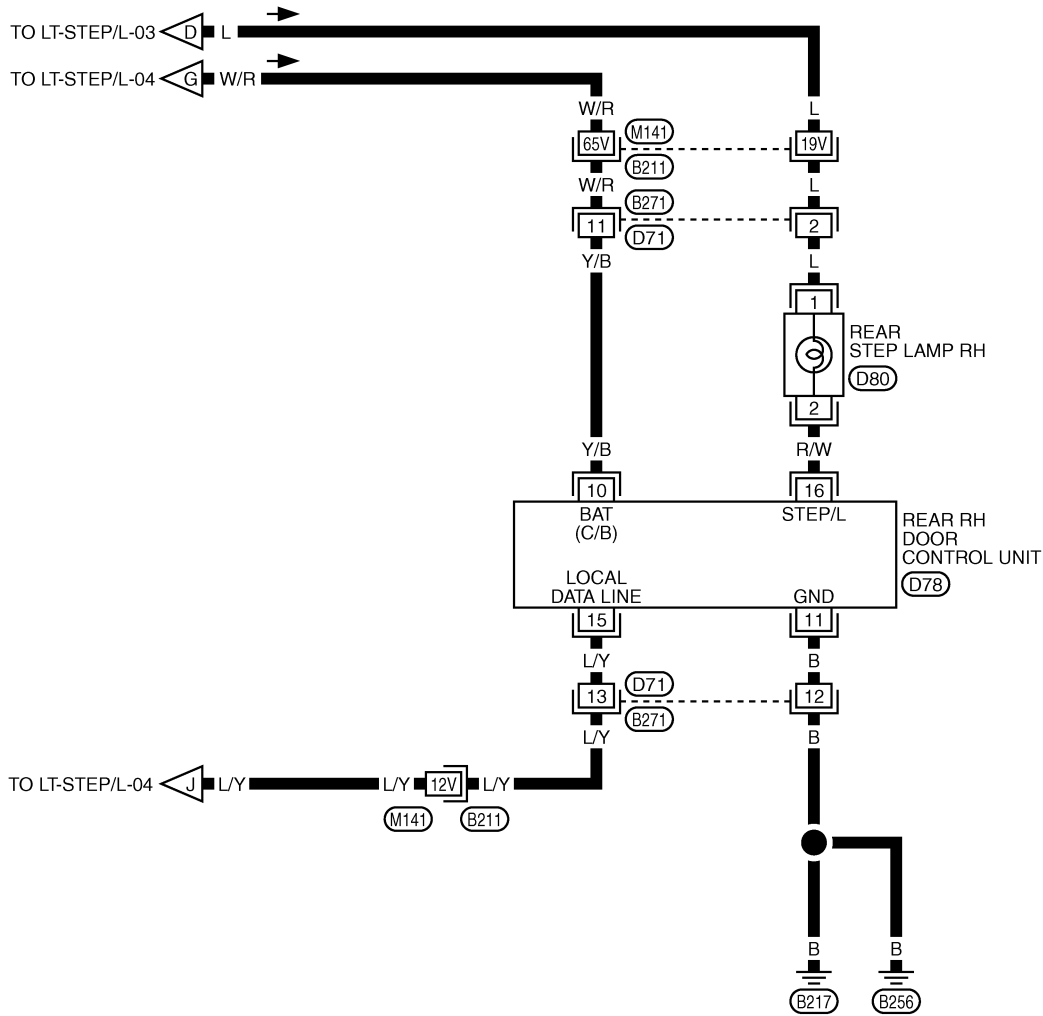
REFER TO THE FOLLOWING.

(M5) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0576E

# STEP LAMP

LT-STEP/L-06



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

(B271)  
W

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

(D78)  
W

○
1 2

(D80)  
W

REFER TO THE FOLLOWING.

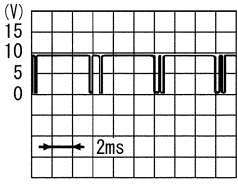
(B211) -SUPER MULTIPLE JUNCTION (SMJ)

TKWA0577E

# STEP LAMP

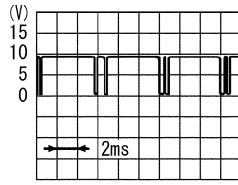
## Terminals and Reference Value for Driver Door Control Unit (LCU 01)

AKS004DH

Terminal No.	Wire color	Item	Operation or condition		Reference value
3	R	Step lamp	Each door switch	ON (open)	Approx. 0V
				OFF (closed)	Battery voltage
5	L/Y	Local data line	—		
8	G/W	Data line A-3	—		—
14	Y/G	Power source (PTC)	—		Battery voltage
15	B	Ground	—		Approx. 0V

## Terminals and Reference Value for Passenger and Rear LH, RH Door Control Unit

AKS002HZ

Terminal No.	Wire color	Item	Operation or condition		Reference value
10	W/R (Y/B)*	Power source (PTC)	—		Battery voltage
11	B	Ground	—		Approx. 0V
15	L/Y	Local data line	—		
16	R (R/W)*	Step lamp	Each door switch	ON (open)	Approx. 0V
				OFF (closed)	Battery voltage

\*: Rear LH door control unit and rear RH control unit

## Terminals and Reference Value for BCM

AKS004DI

Terminal No.	Wire color	Signal description	Measuring condition			Reference value
			Ignition switch	Operation or condition		
17	BR/Y	Data link RX	—	—		—
18	P	Data link TX	—	—		—
33	W	Door lock assembly rear LH (door switch) signal	OFF	Door lock assembly rear LH (door switch)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage
37	LG	Front door switch (passenger side) signal	OFF	Front door switch (passenger side)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage
56	B	Ground	—	—		Approx. 0V
67	G/W	Data line A-3	—	—		—
68	W/B	Ignition switch ON or START	ON	—		Battery voltage
105	Y/L	Battery power supply	OFF	—		Battery voltage
113	B	Ground	—	—		Approx. 0V

# STEP LAMP

Terminal No.	Wire color	Signal description	Measuring condition			Reference value
			Ignition switch	Operation or condition		
142	R/Y	Front door switch (driver side) signal	OFF	Front door switch (driver side)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage
143	W/L	Door lock assembly rear RH (door switch) signal	OFF	Door lock assembly rear RH (door switch)	ON (open)	Approx. 0V
					OFF (closed)	Battery voltage

## Work Flow

AKS002H3

1. Confirm the symptom or customer complaint.
2. Understand system description. Refer to [LT-154, "System Description"](#) .
3. Perform preliminary check. Refer to [LT-164, "Preliminary Check"](#) .
4. Does the door lock system operate normally? If YES, GO TO 5. If NO, refer to [BL-30, "Work Flow"](#) in BL section.
5. Find the cause of malfunction following the trouble diagnosis chart by symptom and repair or replace as necessary. Refer to [LT-169, "Step Lamp Does Not Illuminate/Does Not Go Off When Door Is Opened/Closed"](#) .
6. Does the total coordinated interior illumination operate normally? If YES, GO TO 7. If NO, GO TO 5.
7. Inspection end.

## Preliminary Check

AKS002H4

### INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT

#### 1. CHECK FUSE

Check if any of the following fuses in BCM are blown.

Unit	Power source	Fuse No.
BCM	Battery	3
	Ignition switch ON or START position	1

Refer to [LT-157, "Wiring Diagram — STEP/L —"](#) .

#### OK or NG

OK >> GO TO 2.

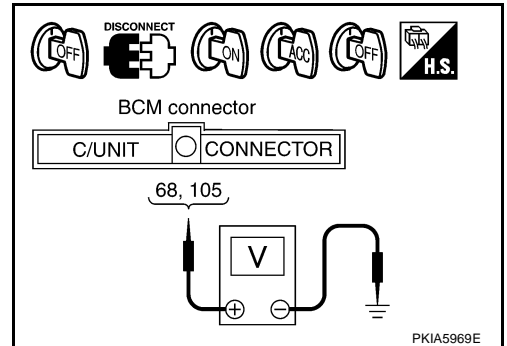
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-2, "POWER SUPPLY ROUTING"](#) .

# STEP LAMP

## 2. CHECK POWER SUPPLY CIRCUIT

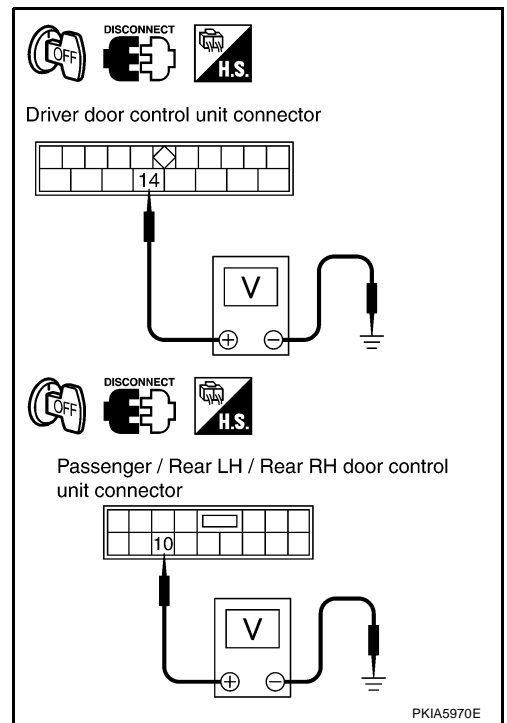
1. Turn ignition switch OFF.
2. Disconnect the connectors for the BCM and driver door control unit, passenger door control unit or rear LH, RH door control units.
3. Check voltage between BCM harness connector M4 terminals 68 (W/B), 105 (Y/L) and ground.

Terminals		Ignition switch position			
(+)		(-)	OFF	ACC	ON
Connector	Terminals (Wire color)		Battery voltage	Battery voltage	Battery voltage
M4	105 (Y/L)	Ground	Battery voltage	Battery voltage	Battery voltage
	68 (W/B)		0V	0V	Battery voltage



4. Check voltage between the following harness connector terminal of the driver door control unit, passenger door control unit or rear LH/RH door control units and ground.

Terminals		(-)	Ignition switch position	Voltage
(+)				
Connector	Terminals (Wire color)	Ground	OFF	Battery voltage
Driver door control unit (D8)	14 (Y/G)	Ground	OFF	Battery voltage
Passenger door control unit (D38)	10 (W/R)			
Rear LH door control unit (D58)	10 (Y/B)			
Rear RH door control unit (D78)	10 (Y/B)			



### OK or NG

- OK >> GO TO 3.  
 NG >> Check harness for open or short power supply circuit.

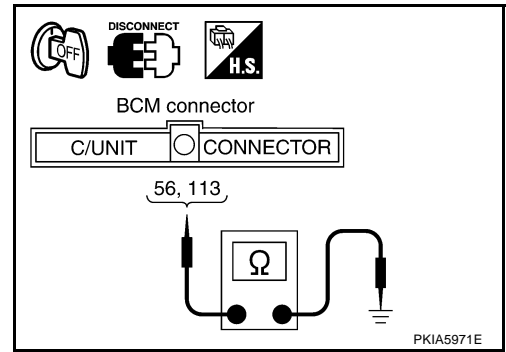
A  
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M

# STEP LAMP

## 3. CHECK GROUND CIRCUIT

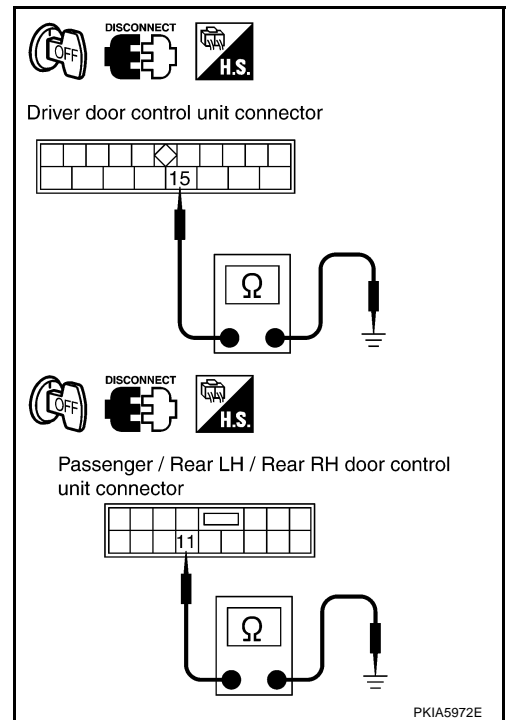
1. Check continuity between BCM harness connector M4 terminals 56 (B), 113 (B) and ground.

Terminals			Continuity
Connector	Terminal (Wire color)	Ground	
M4	56 (B)		Ground
	113 (B)		



2. Check continuity between the following harness connector terminal of the driver door control unit, passenger door control unit, or rear LH/RH door control units and ground.

Terminals			Continuity
Connector	Terminal (Wire color)	Ground	
Driver door control unit (D8)	15 (B)		Ground
Passenger door control unit (D38)	11 (B)		
Rear LH door control unit (D58)			
Rear RH door control unit (D78)			



OK or NG

- OK >> INSPECTION END
- NG >> Repair harness.

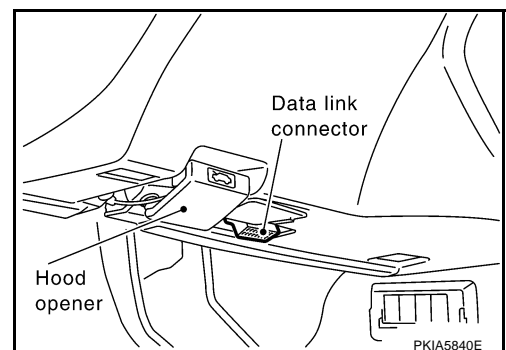
## CONSULT-II Function

- CONSULT-II has the display function for the work support, data monitor and active test for each part by combining data receiving and sending via the communication line from the BCM.

IVMS diagnosis position	Diagnosis mode	Description
Step lamp	Data monitor	Displays input data of the BCM and each LCU in real-time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
BCM part number		Displays BCM part No.

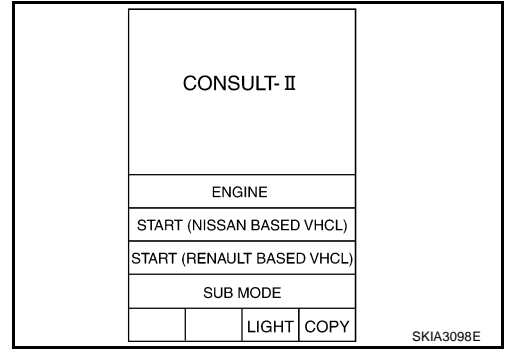
## CONSULT-II BASIC OPERATION PROCEDURE

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

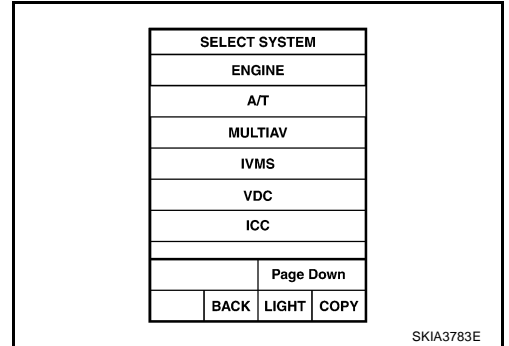


# STEP LAMP

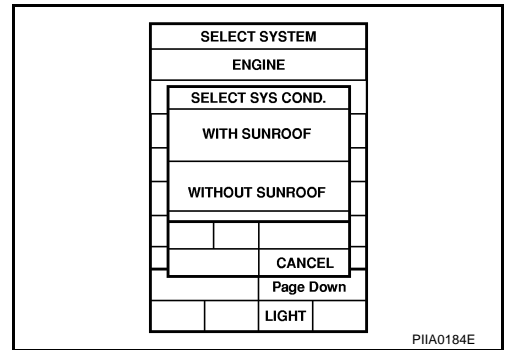
2. Touch "START (NISSAN BASED VHCL)".



3. Touch "IVMS" on "SELECT SYSTEM" screen. If "IVMS" is not indicated, refer to [GI-38, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).



4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".
6. Select the desired part to be diagnosed on "SELECT TEST ITEM" screen.



## DATA MONITOR

### Operation Procedure

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

MAIN SIGNALS	Monitors the main items.
SELECTION FROM MENU	Selects and monitors the items.

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

### Data Monitor Item

Monitored item ["OPERATION or UNIT"]	Description
DOOR SW-DR [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the front door switch (driver side) signal.
DOOR SW-AS [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the front door switch (passenger side) signal.

# STEP LAMP

Monitored item ["OPERATION or UNIT"]	Description
DOOR SW-RR [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the door lock assembly rear RH (door switch) signal.
DOOR SW-RL [ON/OFF]	Displays "Door open (ON)/door closed (OFF)" status judged from the door lock assembly rear LH (door switch) signal.

## ACTIVE TEST

### Operation Procedure

1. Touch "STEP 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. Touch "STOP" while testing and the operation will be stopped.

### Active Test Item

Test items	Display on CONSULT-II screen	Description
Front step lamp (driver side) output	STEP LAMP-DR	Front step lamp (driver side) can be operated by any ON-OFF operation of lights.
Front step lamp (passenger side) output	STEP LAMP-AS	Front step lamp (passenger side) can be operated by any ON-OFF operation of lights.
Rear step lamp RH output	STEP LAMP-RR/RH	Rear step lamp RH can be operated by any ON-OFF operation of lights.
Rear step lamp LH output	STEP LAMP-RR/LH	Rear step lamp LH can be operated by any ON-OFF operation of lights.

## On Board Diagnosis

AKS002H6

### ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

- Map lamps and step lamps (all seats) act the indicators for the on board diagnosis.

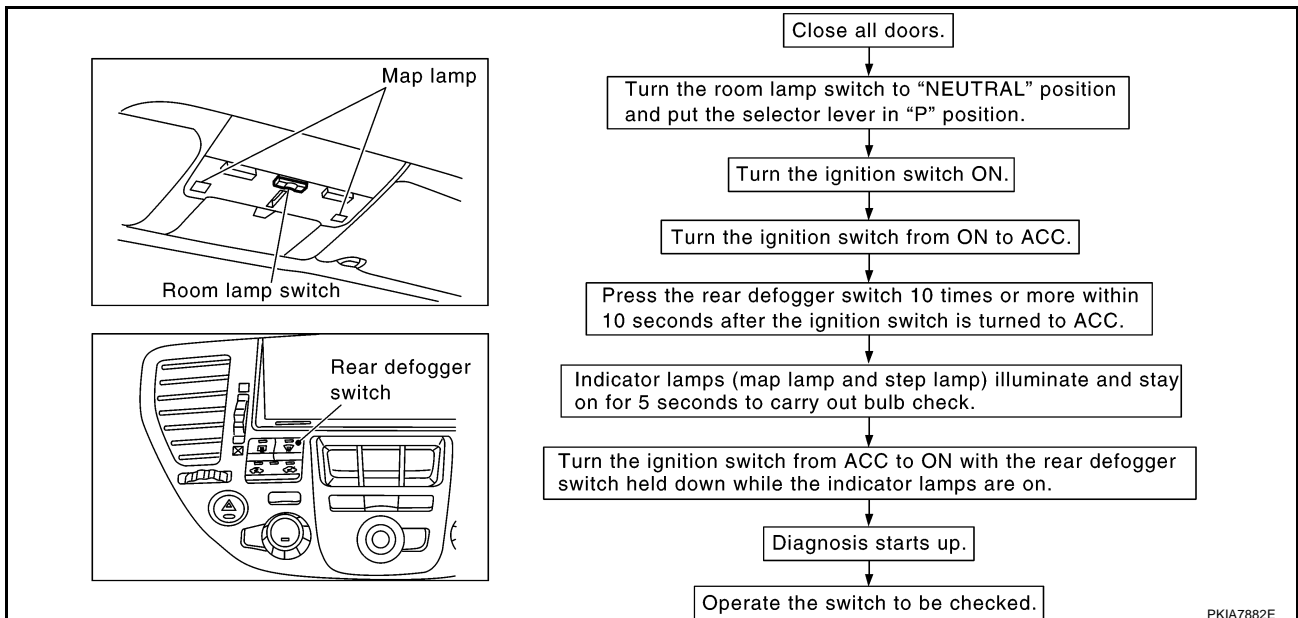
### DIAGNOSIS ITEM

Diagnosis item	Description
Switch monitor	Checks for malfunction in switch systems that input to BCM and each LCU.

### SWITCH MONITOR

- Perform the diagnosis on the switch system to each control unit.

### How to Perform Switch Monitor

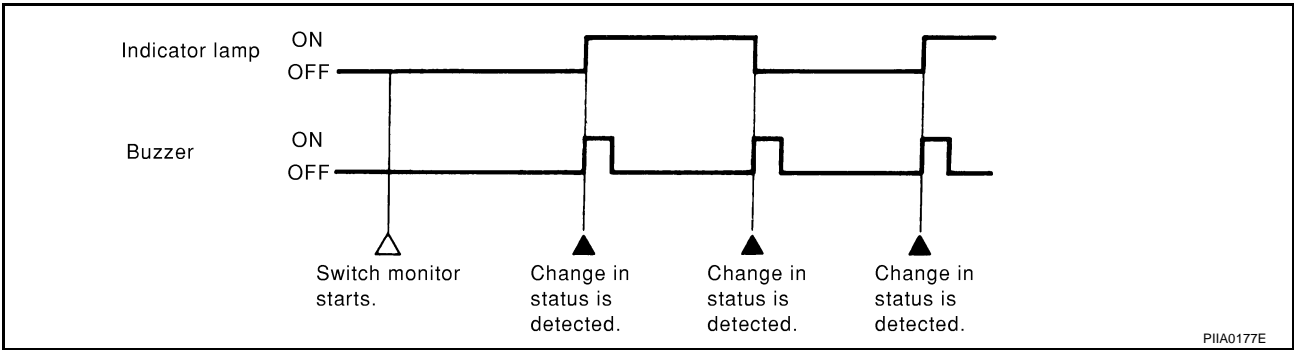




# STEP LAMP

## Description

- In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the map lamps and front step lamps with buzzer.



## Switch Monitor Item

- The status of the switch (except the ignition switch, interior lamp ill switch, and map lamp switch) as input to each control unit can be monitored.

Control unit	Item
BCM	Each door switch

## Cancel of Switch Monitor

If the following conditions are satisfied, the communication diagnosis is cancelled.

- Turn ignition switch OFF.
- Drive the vehicle more than 7 km/h (4 MPH).

## Step Lamp Does Not Illuminate/Does Not Go Off When Door Is Opened/Closed

AKS002H7

### 1. CHECK DOOR SWITCH SIGNAL

Ⓟ With CONSULT-II

- Operate each door via "DOOR SW" on "DATA MONITOR" screen and make sure that the switch turns on and off as commanded.

ⓧ Without CONSULT-II

- Operate each door and via "switch monitor" of the self-diagnosis function and make sure that the switch turns on and off as commanded.

OK or NG

- OK >> GO TO 7.
- NG >> GO TO 2.

DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
DOOR SW-RR	OFF
DOOR SW-RL	OFF
	RECORD

SKIA0441E

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M

LT

# STEP LAMP

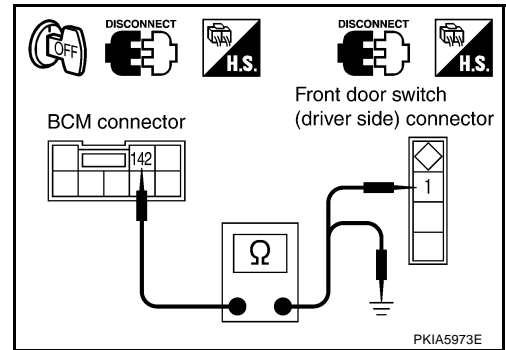
## 2. CHECK FRONT DOOR SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front door switch (driver side) connector.
3. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and front door switch (driver side) harness connector B20 terminal 1 (R/Y).

**142 (R/Y) - 1 (R/Y) : Continuity should exist.**

4. Check continuity between BCM harness connector B4 terminal 142 (R/Y) and ground.

**142 (R/Y) - Ground : Continuity should not exist.**



### NOTE:

If front door switch (driver side) is normal, skip this procedure and go to 3.

### OK or NG

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

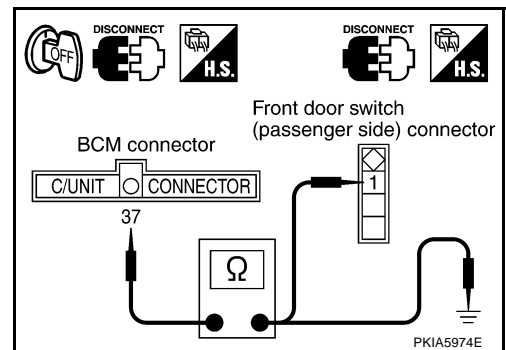
## 3. CHECK FRONT DOOR SWITCH (PASSENGER SIDE) CIRCUIT

1. Disconnect front door switch (passenger side) connector.
2. Check continuity between BCM harness connector M4 terminal 37 (LG) and front door switch (passenger side) harness connector B220 terminal 1 (LG).

**37 (LG) - 1 (LG) : Continuity should exist.**

3. Check continuity between BCM harness connector M4 terminal 37 (LG) and ground.

**37 (LG) - Ground : Continuity should not exist.**



### NOTE:

If front door switch (passenger side) is normal, skip this procedure and go to 4.

### OK or NG

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

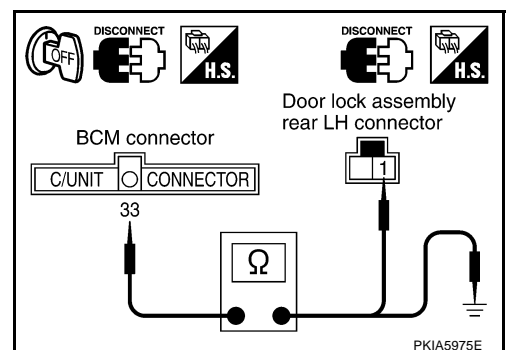
## 4. CHECK DOOR LOCK ASSEMBLY REAR LH (DOOR SWITCH) CIRCUIT

1. Disconnect door lock assembly rear LH connector.
2. Check continuity between BCM harness connector M4 terminal 33 (W) and door lock assembly rear LH harness connector D62 terminal 1 (W).

**33 (W) - 1 (W) : Continuity should exist.**

3. Check continuity between BCM harness connector M4 terminal 33 (W) and ground.

**33 (W) - Ground : Continuity should not exist.**



### NOTE:

If door lock assembly rear LH (door switch) is normal, skip this procedure and go to 5.

### OK or NG

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

# STEP LAMP

## 5. CHECK DOOR LOCK ASSEMBLY REAR RH (DOOR SWITCH) CIRCUIT

1. Disconnect door lock assembly rear RH connector.
2. Check continuity between BCM harness connector B4 terminal 143 (W/L) and door lock assembly rear RH harness connector D82 terminal 1 (W).

**143 (W/L) - 1 (W) : Continuity should exist.**

3. Check continuity between BCM harness connector B4 terminal 143 (W/L) and ground.

**143 (W/L) - Ground : Continuity should not exist.**

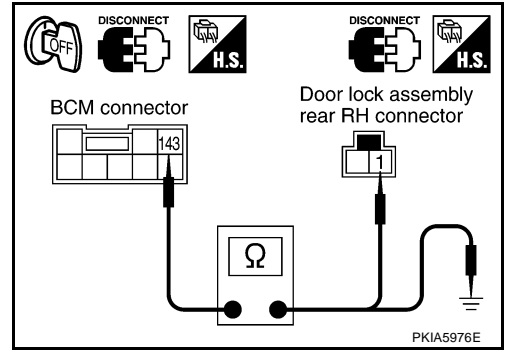
### NOTE:

If door lock assembly rear RH (door switch) is normal, skip this procedure and go to 6.

### OK or NG

OK >> GO TO 6.

NG >> Repair harness or connector.



## 6. CHECK DOOR SWITCH

1. Check front door switch.

**Switch released (ON) : Continuity should exist.**

**Switch pressed (OFF) : Continuity should not exist.**

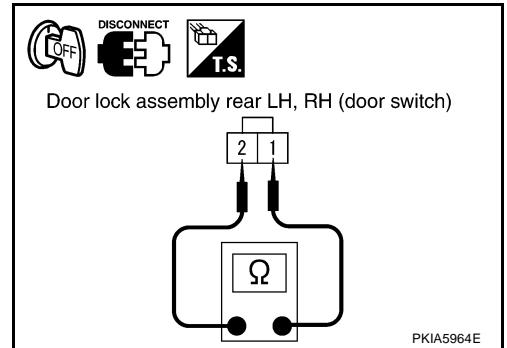
2. Check continuity between door lock assembly rear LH, RH (door switch) terminals 1 and 2 while turning the door switches ON (open) and OFF (closed).

Terminal		Condition	Continuity
1	2	ON (Door open)	Yes
		OFF (Door closed)	No

### OK or NG

OK >> Check front door switch case ground condition or door lock assembly rear LH, RH (door switch) ground circuit.

NG >> Replace door switch.



## 7. CHECK BULB

Check step lamp bulb.

### OK or NG

OK >> GO TO 8.

NG >> Replace bulb.

# STEP LAMP

## 8. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect step lamp connector.
3. Check voltage between step lamp connector D10, D40, D60 or D80 terminal 1 (L) and ground.

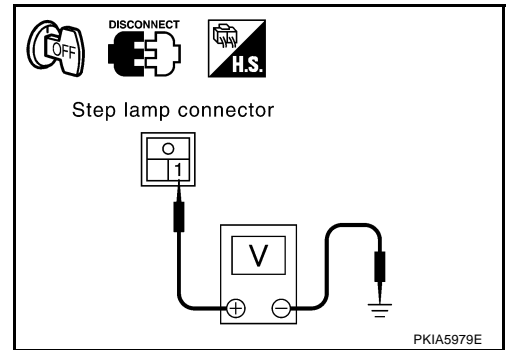
**1 (L) - Ground : Battery voltage should exist.**

### OK or NG

OK >> Check connector or harness for open or short between step lamp and door control unit.

NG >> Check the following.

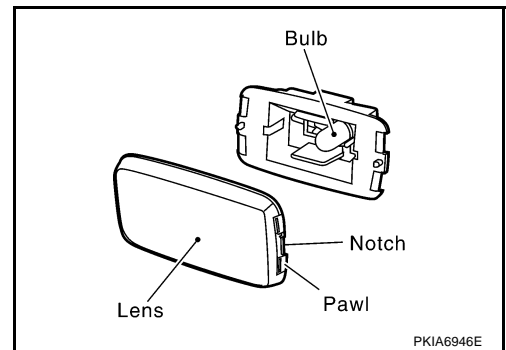
- 10A fuse [No. 8, located in fuse block (J/B) No. 1]
- Harness for open or short between fuse and step lamp



## Bulb Replacement

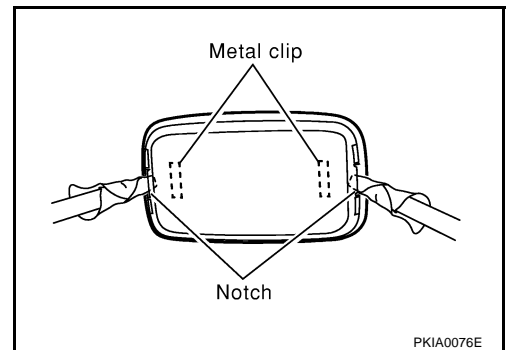
1. Insert a screwdriver in the notch and remove lens.
2. Remove bulb.

**Step lamp : 12V 2.7W**



## Removal and Installation

1. Using a clip driver or a suitable tool, press and remove metal clip of the step lamp.
2. Disconnect step lamp connector.



## ILLUMINATION

PFP:27545

### System Description

AKS002HA

The illumination lamp operation is controlled by the lighting switch which is built into the spiral cable and headlamp battery saver control unit. The battery saver system is controlled by headlamp battery saver control unit and BCM.

Power is supplied at all times

- to tail lamp relay terminals 2 and 6
- through 15A fuse [No. 54, located in fuse, fusible link and relay block (J/B)],
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 6, located in fuse block (J/B) No. 1].

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

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 1, located in fuse block (J/B) No. 1].

Ground is supplied

- to headlamp battery saver control unit terminals 4 and 11
- through grounds M25 and M115.

### LIGHTING OPERATION BY LIGHTING SWITCH

When lighting switch is 1ST (or 2ND) position, ground is supplied

- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13
- through lighting switch and grounds M25 and M115.

Tail lamp relay is then energized and illumination lamps illuminate.

The lighting switch must be in the 1ST or 2ND position for illumination.

The illumination control switch that controls the amount of current to the illumination system. As the amount of current increases, the illumination becomes brighter.

The ground for all of the components except for glove box lamp, front cigarette lighter, rear ashtray, AV and NAVI control unit (with NAVI) and AV control unit (without NAVI) are controlled through illumination control switch terminals 2 and 3 and grounds M25 and M115.

### BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while illumination lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from BCM terminal 135.

After counting 45 seconds by the RAP signal from the BCM to headlamp battery saver control unit, the ground supply to the tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14 is terminated.

Then illumination lamps are turned off.

Illumination lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while illumination lamps are illuminated.

When the lighting switch is turned from OFF to 1ST (or 2ND) after illumination lamps are turned off by the battery saver control, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to tail lamp relay terminal 1 from headlamp battery saver control unit terminals 6 and 14.

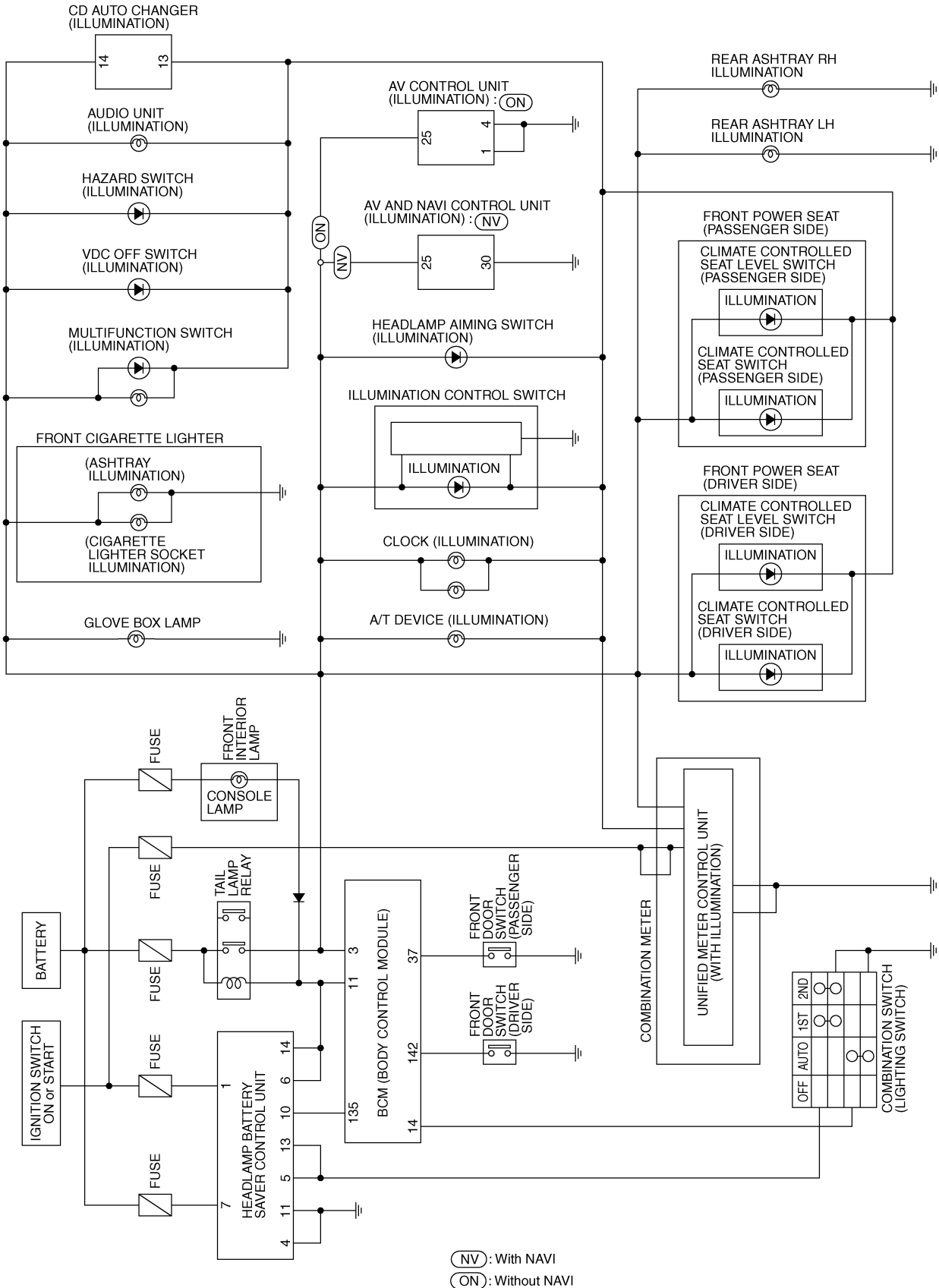
Then illumination lamps illuminate again.

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# ILLUMINATION

## Schematic

AKS002HB



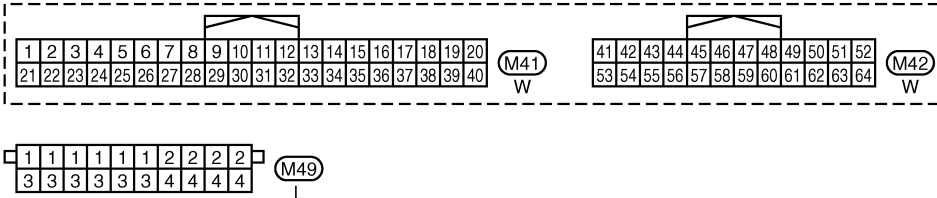
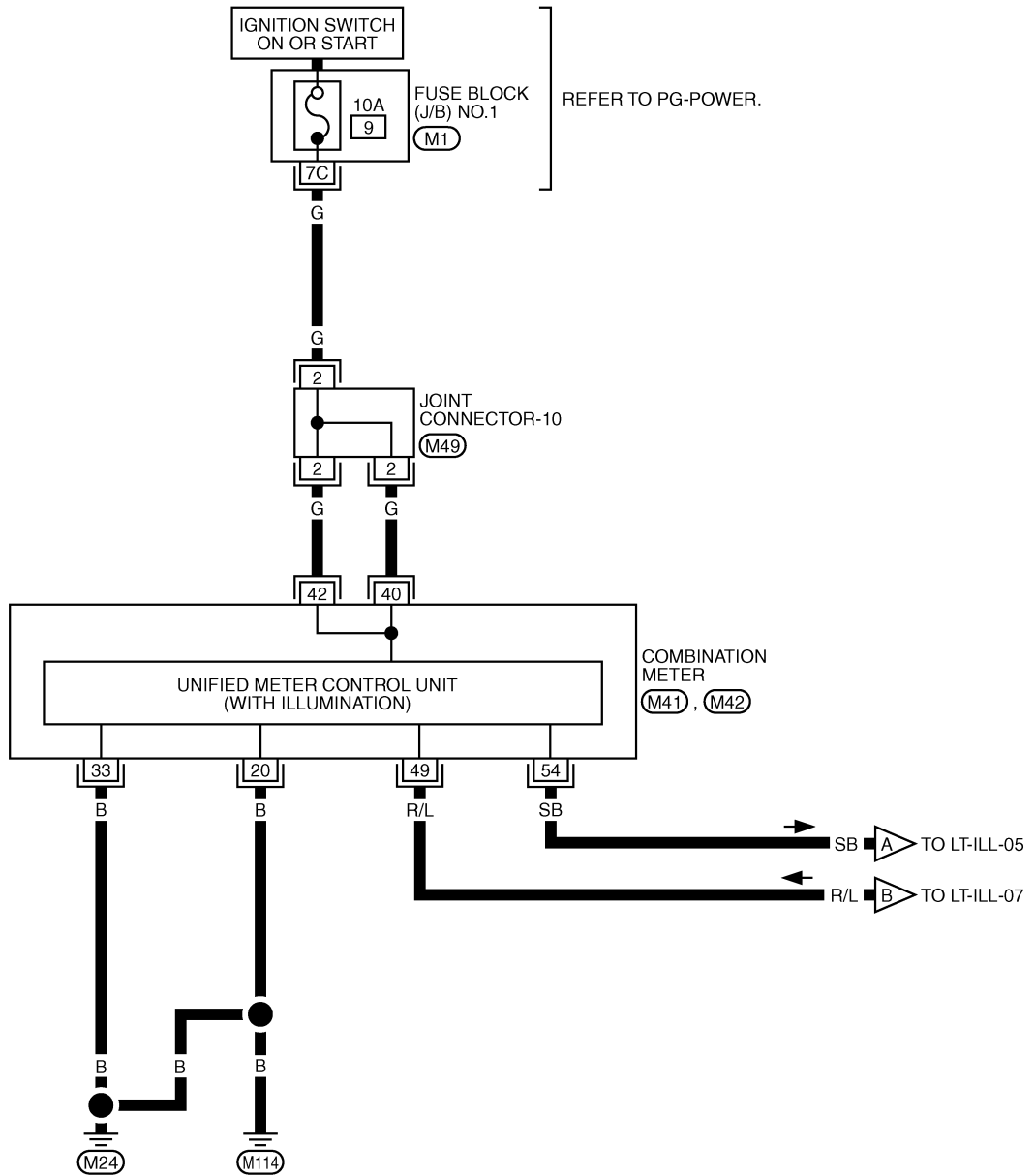
TKWB0116E

# ILLUMINATION

## Wiring Diagram — ILL —

AKS002HC

LT-ILL-01

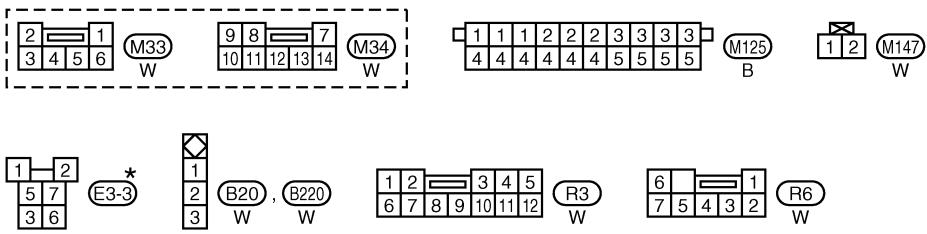
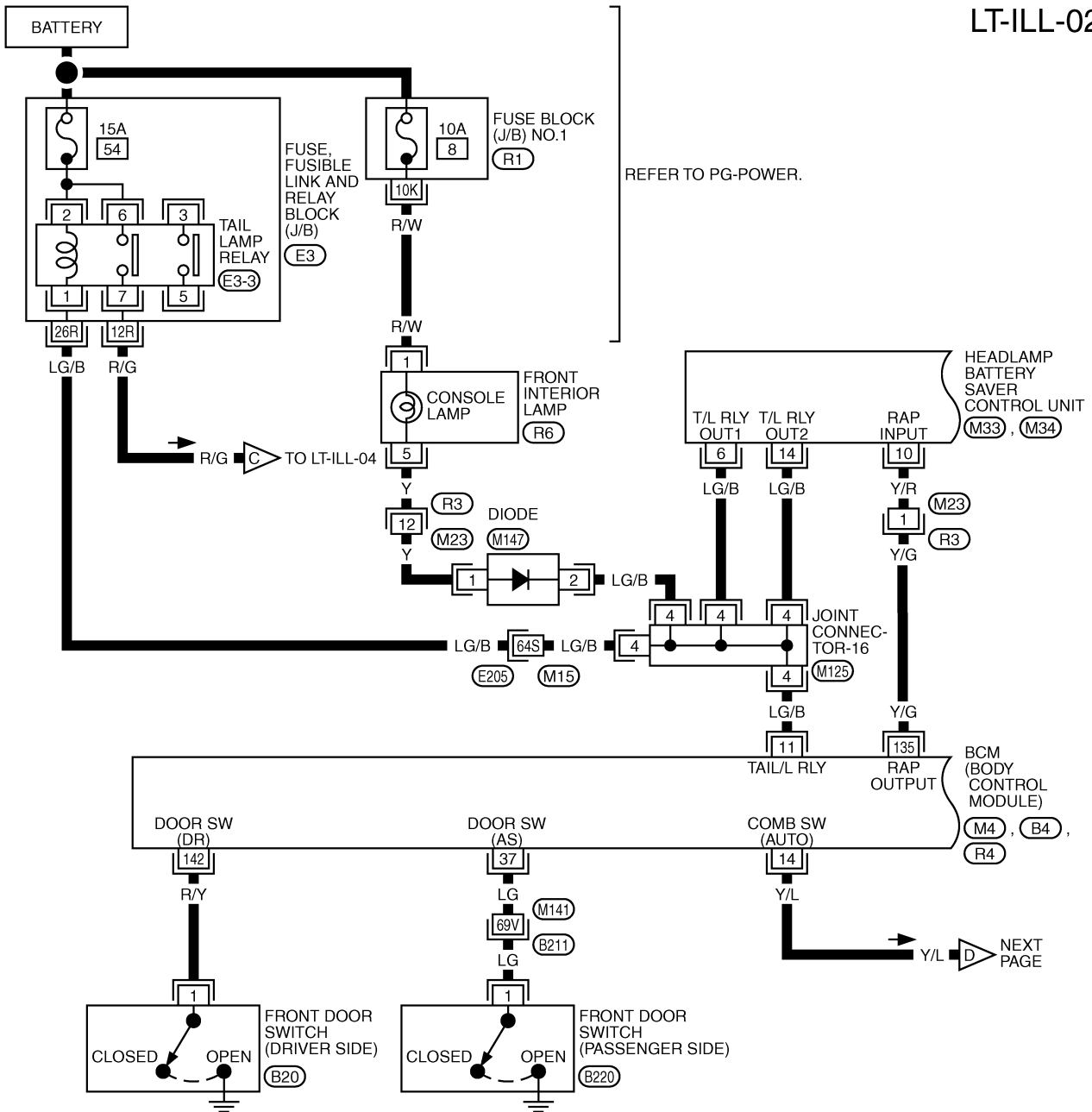


REFER TO THE FOLLOWING.  
 (M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWA0553E

# ILLUMINATION

LT-ILL-02



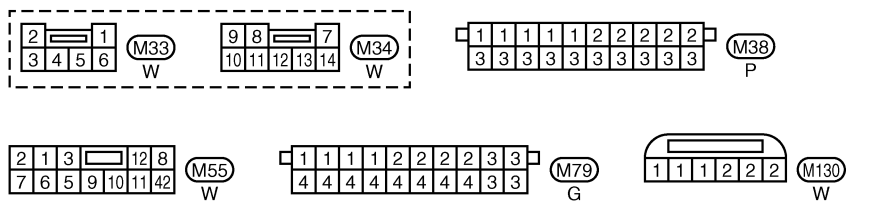
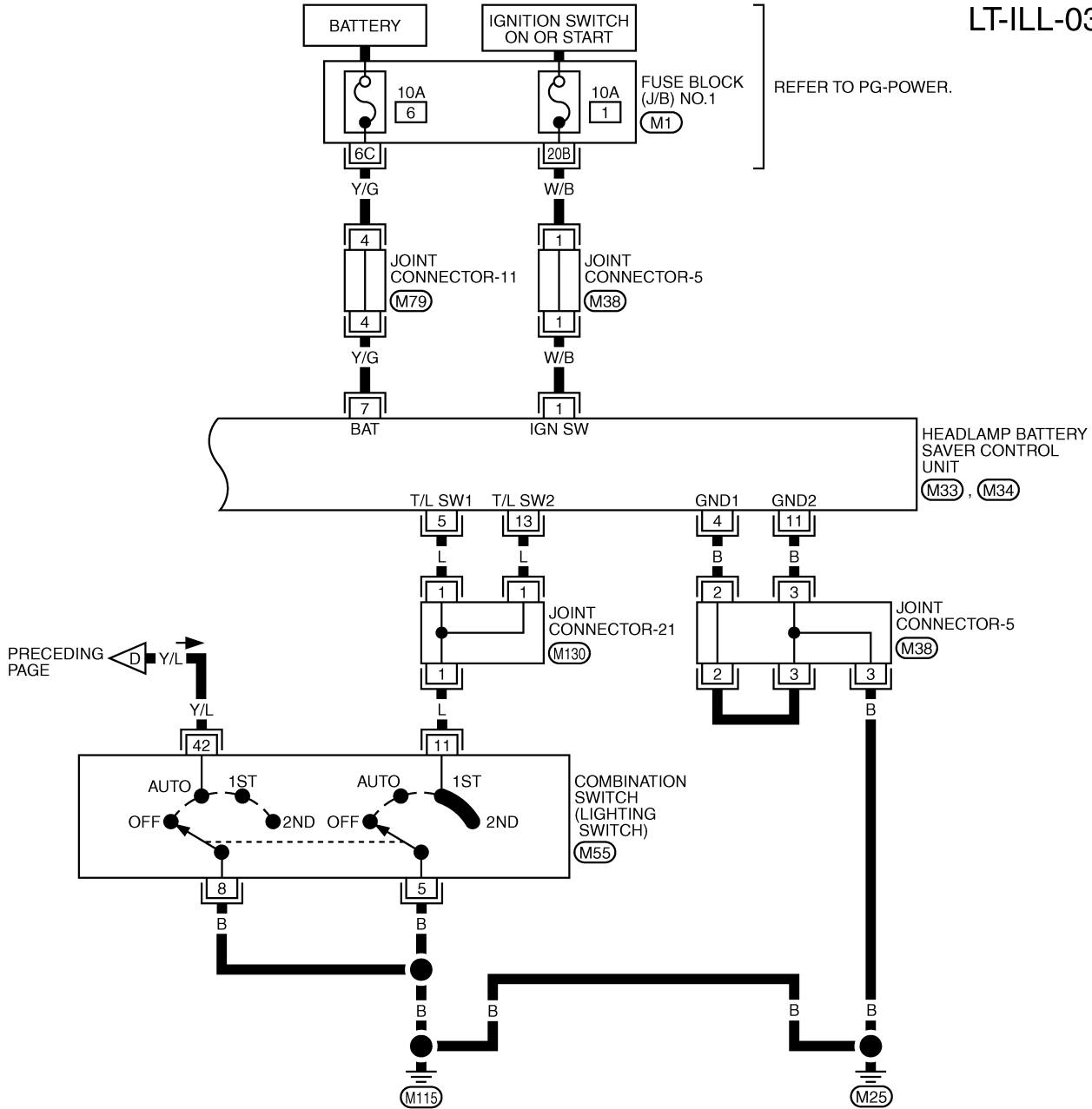
REFER TO THE FOLLOWING.  
 (E205), (B211) -SUPER MULTIPLE JUNCTION (SMJ)  
 (R1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1  
 (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)  
 (M4), (B4), (R4) -ELECTRICAL UNITS

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.



# ILLUMINATION

LT-ILL-03

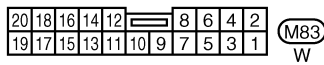
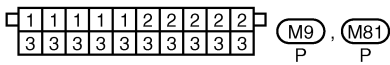
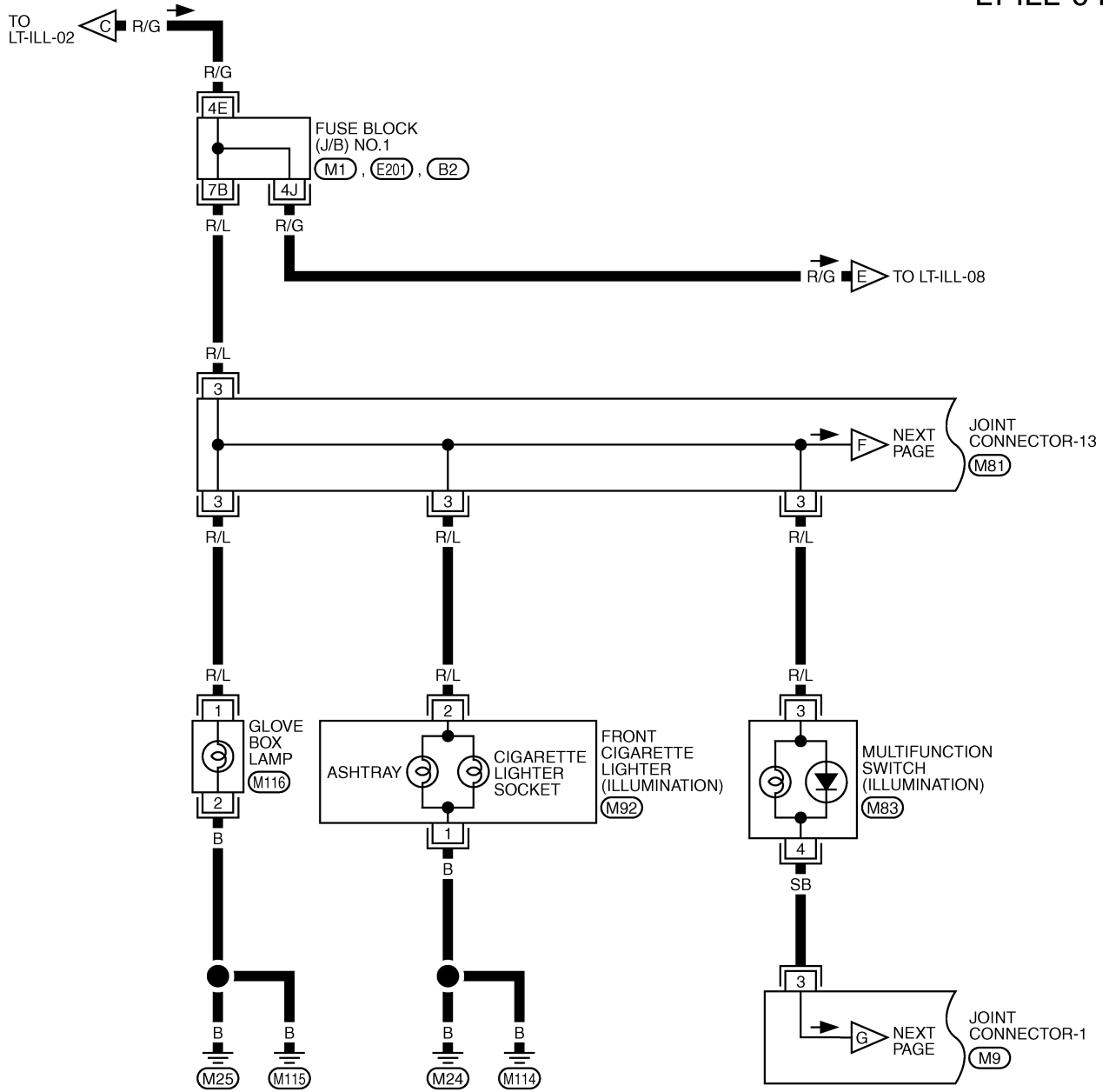


REFER TO THE FOLLOWING.  
 (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

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# ILLUMINATION

LT-ILL-04

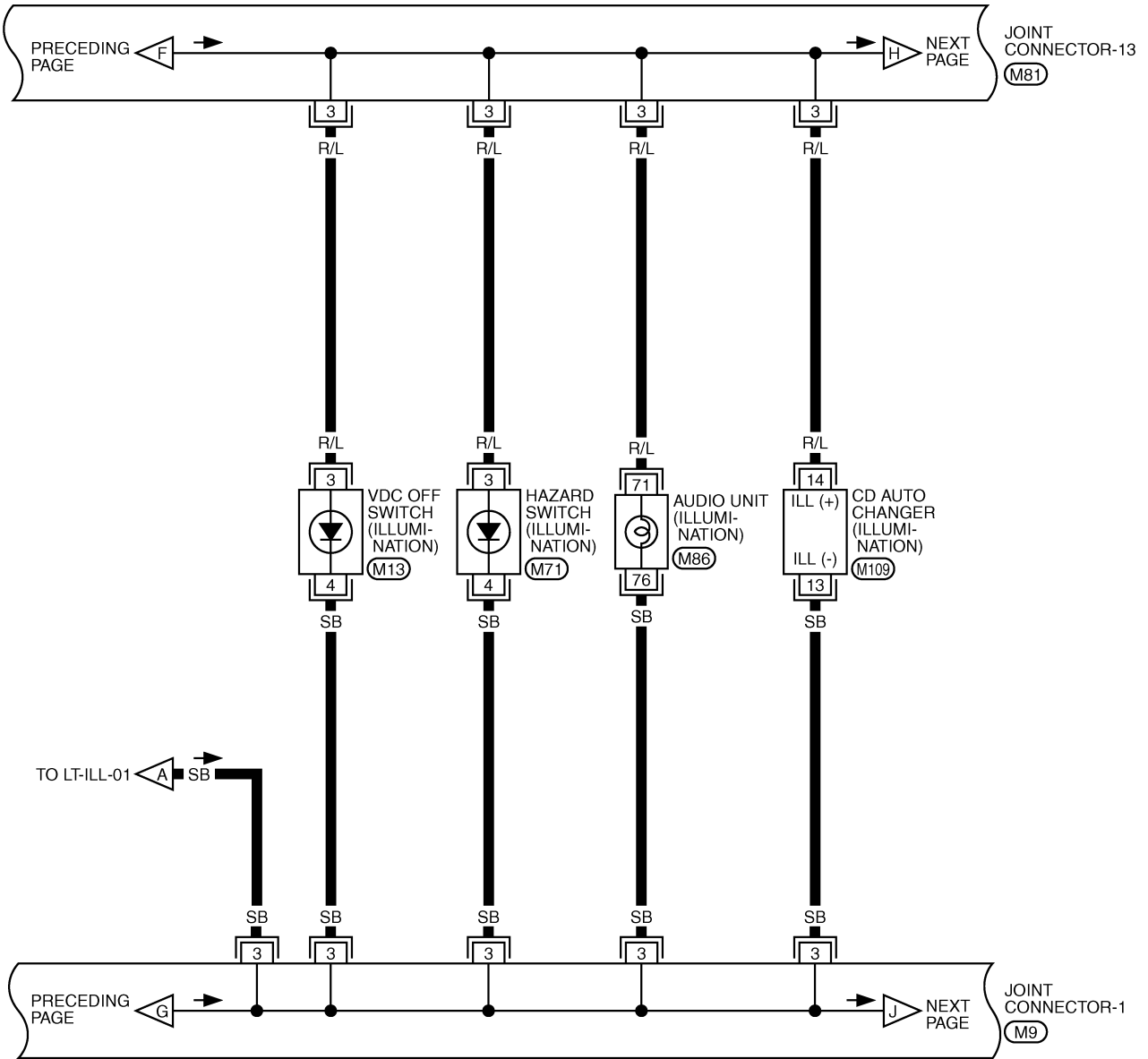


REFER TO THE FOLLOWING.  
 (M1), (E201), (B2)  
 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

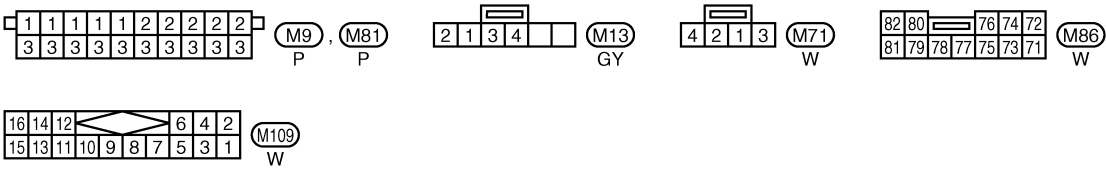
TKWA0556E

# ILLUMINATION

LT-ILL-05



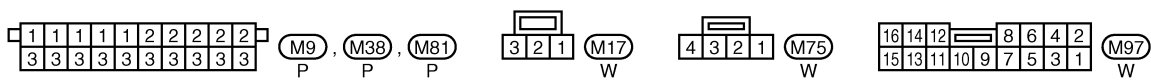
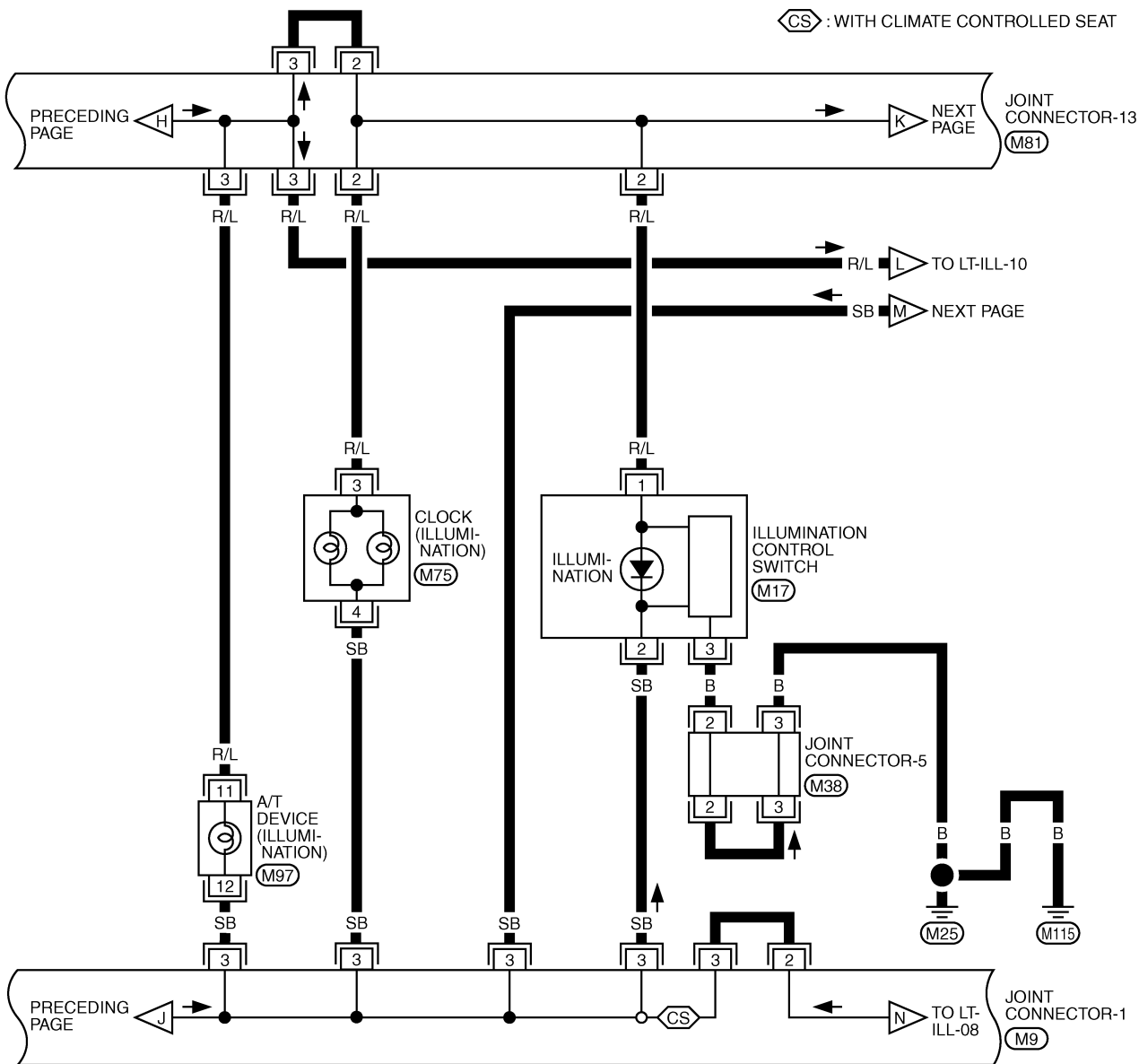
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TKWB0117E

# ILLUMINATION

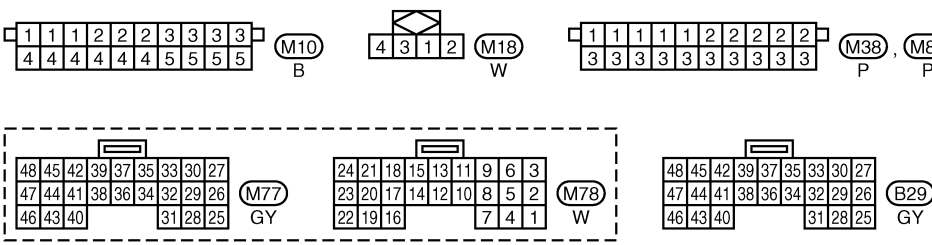
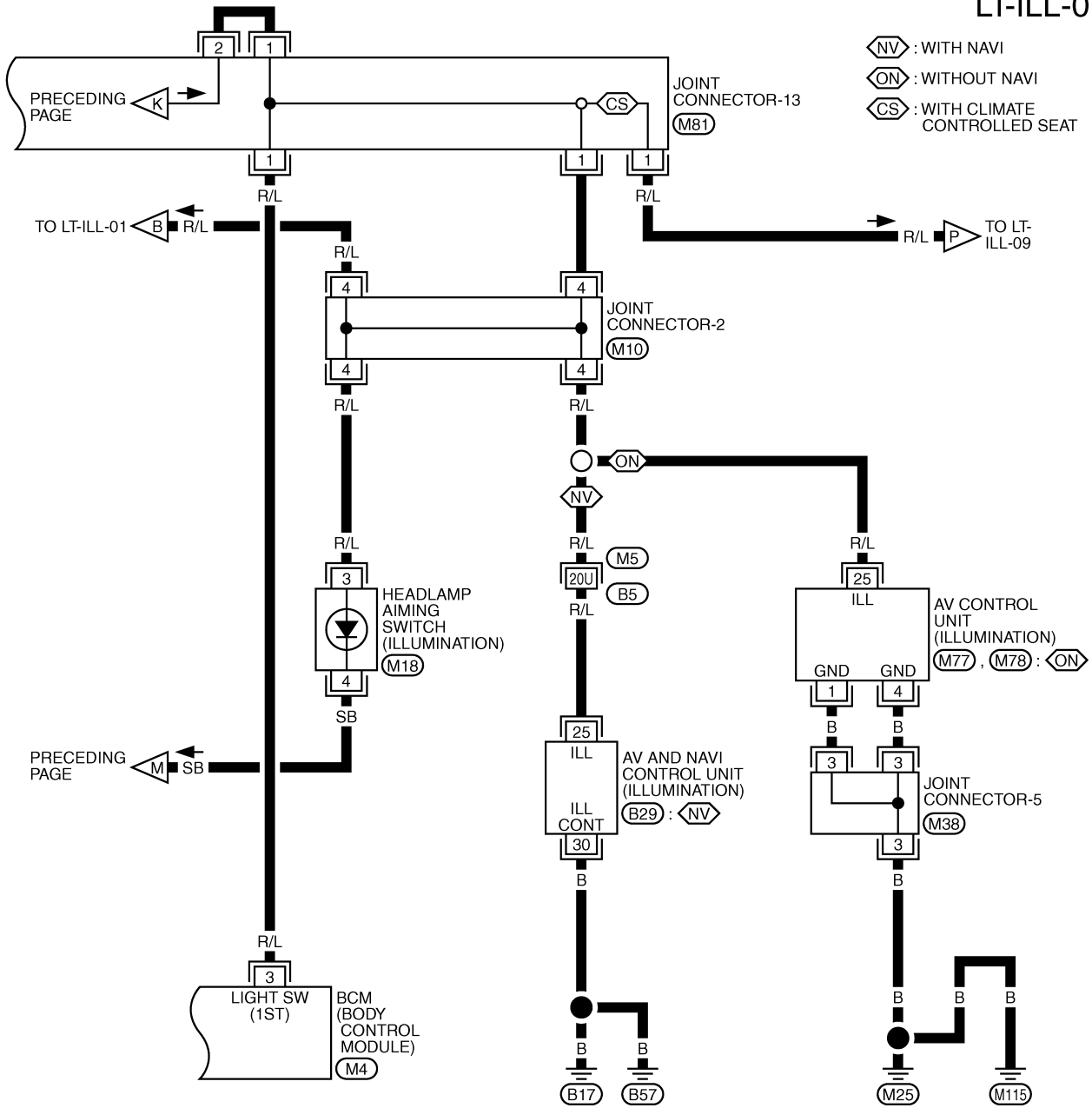
LT-ILL-06



TKWA1650E

# ILLUMINATION

LT-ILL-07



REFER TO THE FOLLOWING.

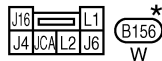
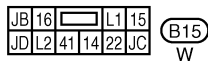
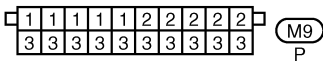
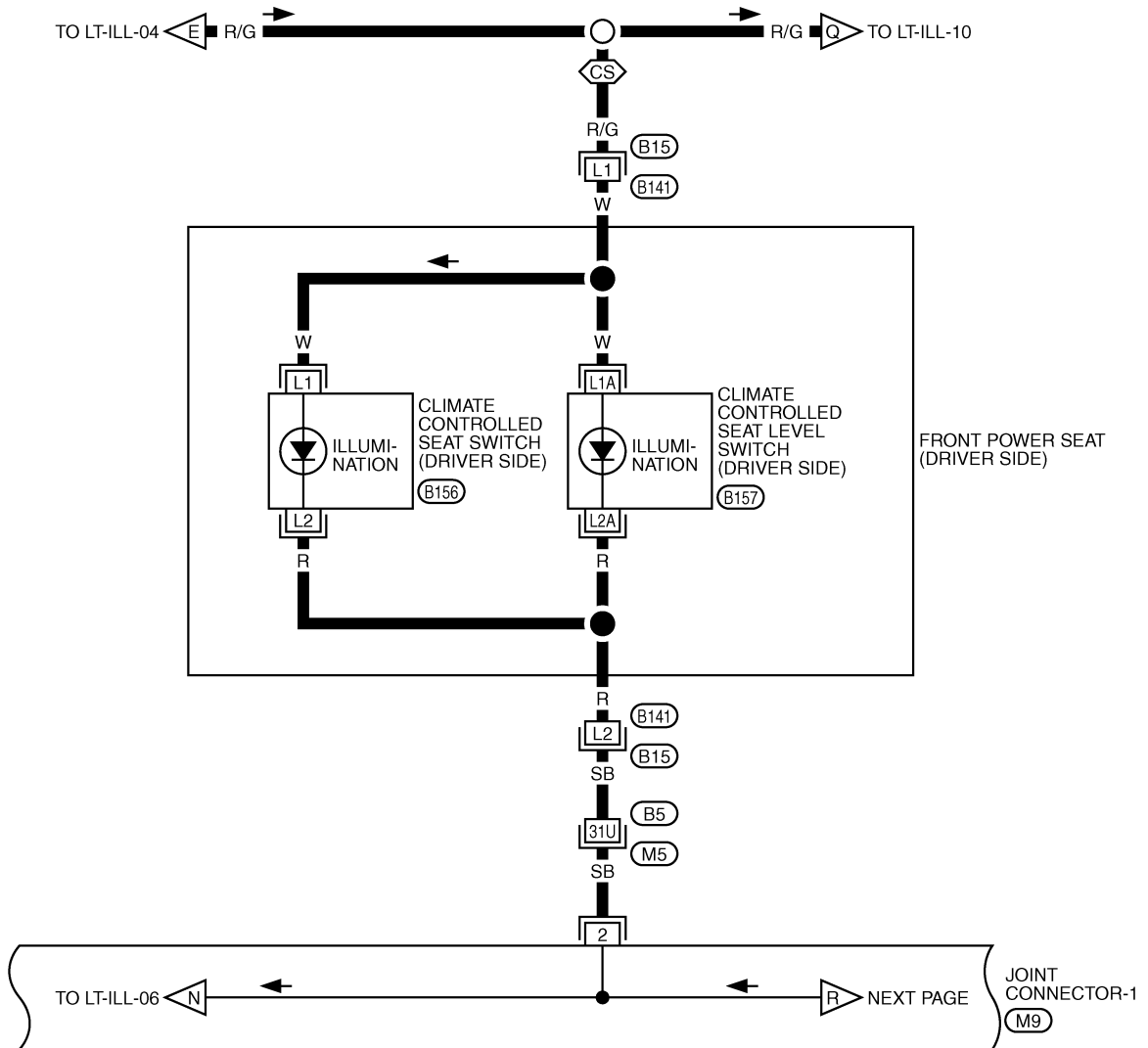
- (M5)** -SUPER MULTIPLE JUNCTION (SMJ)
- (M4)** -ELECTRICAL UNITS

TKWA0559E

# ILLUMINATION

LT-ILL-08

CS : WITH CLIMATE CONTROLLED SEAT



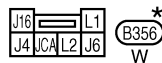
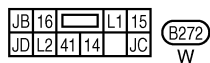
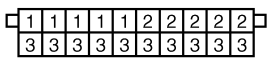
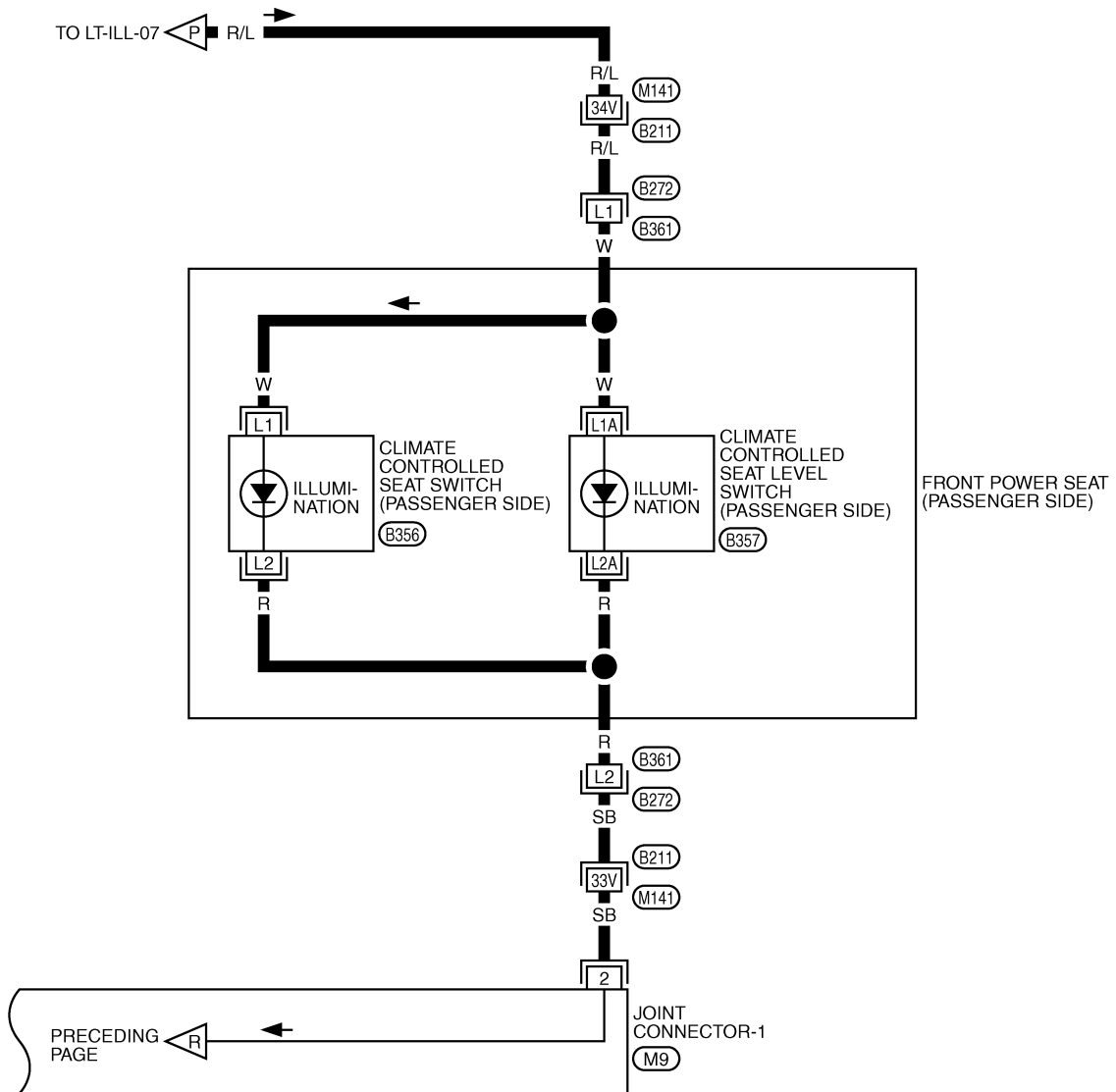
REFER TO THE FOLLOWING.  
 (M5) -SUPER MULTIPLE JUNCTION (SMJ)

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWA0902E

# ILLUMINATION

LT-ILL-09



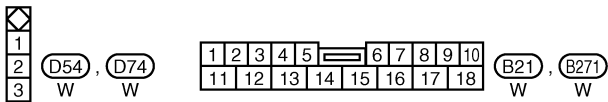
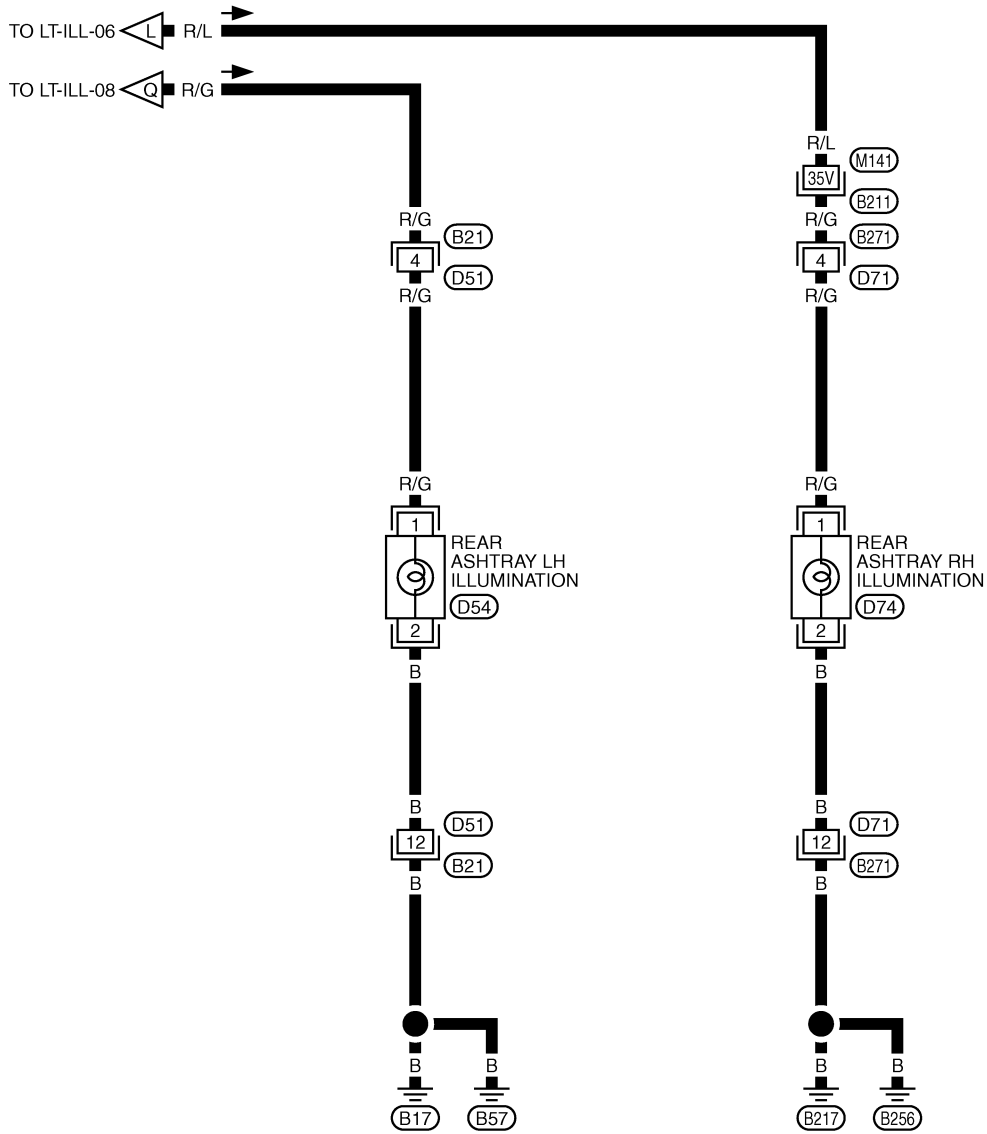
REFER TO THE FOLLOWING.  
 (B211) -SUPER MULTIPLE JUNCTION (SMJ)

\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWA0903E

# ILLUMINATION

LT-ILL-10



REFER TO THE FOLLOWING.  
 (B21) -SUPER MULTIPLE  
 JUNCTION (SMJ)

TKWA0560E



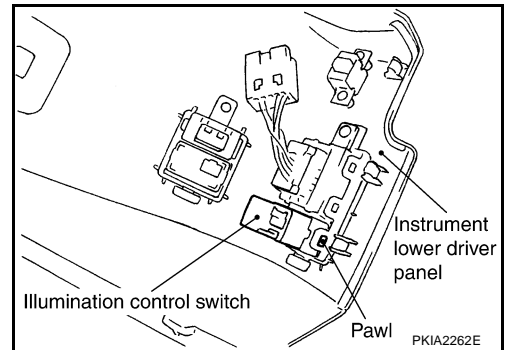
# ILLUMINATION

## Removal and Installation

### ILLUMINATION CONTROL SWITCH

AKS002HD

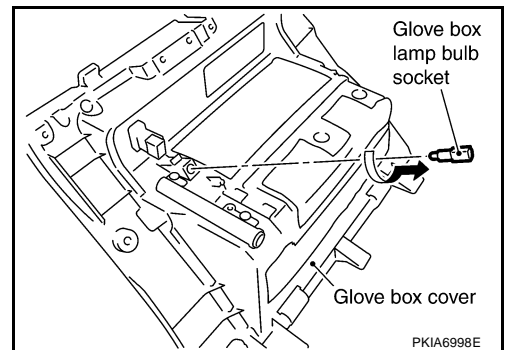
1. Remove instrument lower driver panel. Refer to [IP-10, "Component Parts Drawing"](#) in "INSTRUMENT PANEL (IP)" section.
2. Press illumination control switch fixing pawls and remove unit from instrument lower driver panel.



### GLOVE BOX LAMP

1. Remove glove box cover. Refer to [IP-10, "Component Parts Drawing"](#) in "INSTRUMENT PANEL (IP)" section.
2. Turn bulb socket counterclockwise and unlock it.

**Glove box lamp : 12V 1.4W**



## Removal and Installation

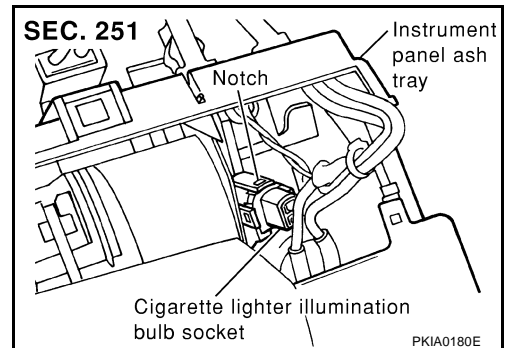
### FRONT CIGARETTE LIGHTER ILLUMINATION

AKS002HE

#### Cigarette Lighter Socket Illumination

1. Remove instrument panel ashtray. Refer to [IP-10, "Component Parts Drawing"](#) in "INSTRUMENT PANEL (IP)" section.
2. Unfold three notches and remove bulb socket.

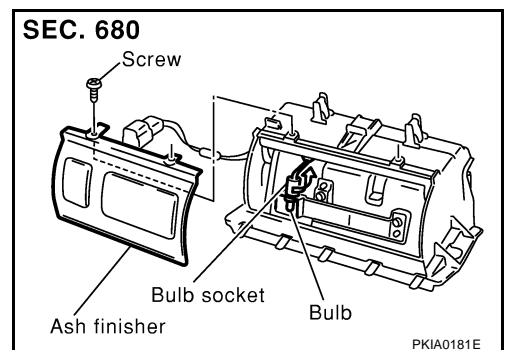
**Cigarette lighter illumination : 12V 1.4W**



### Ashtray Illumination

1. Remove instrument panel ashtray. Refer to [IP-10, "Component Parts Drawing"](#) in "INSTRUMENT PANEL (IP)" section.
2. Remove ashtray finisher mounting screws and remove ashtray finisher.
3. Turn bulb socket counterclockwise and unlock it.

**Ashtray illumination : 12V 1.4W**



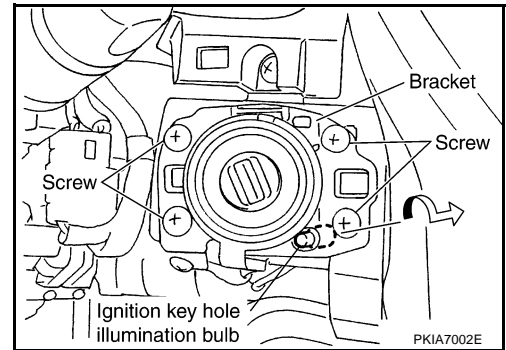
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# ILLUMINATION

## IGNITION KEY HOLE ILLUMINATION

1. Remove steering lock escutcheon. Refer to [IP-10. "Component Parts Drawing"](#) in "INSTRUMENT PANEL (IP)" section.
2. Remove bracket mounting screws and remove it
3. Turn bulb socket counterclockwise and unlock it.

**Ignition key hole illumination :12V 1.4W**



# VANITY MIRROR AND TRUNK ROOM LAMPS

PDF:26470

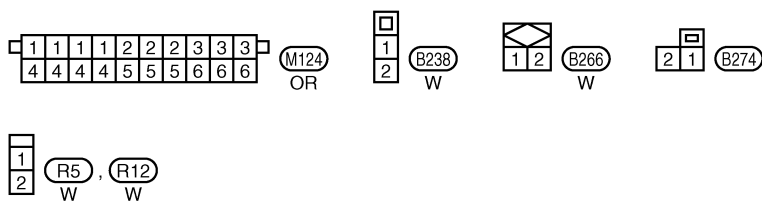
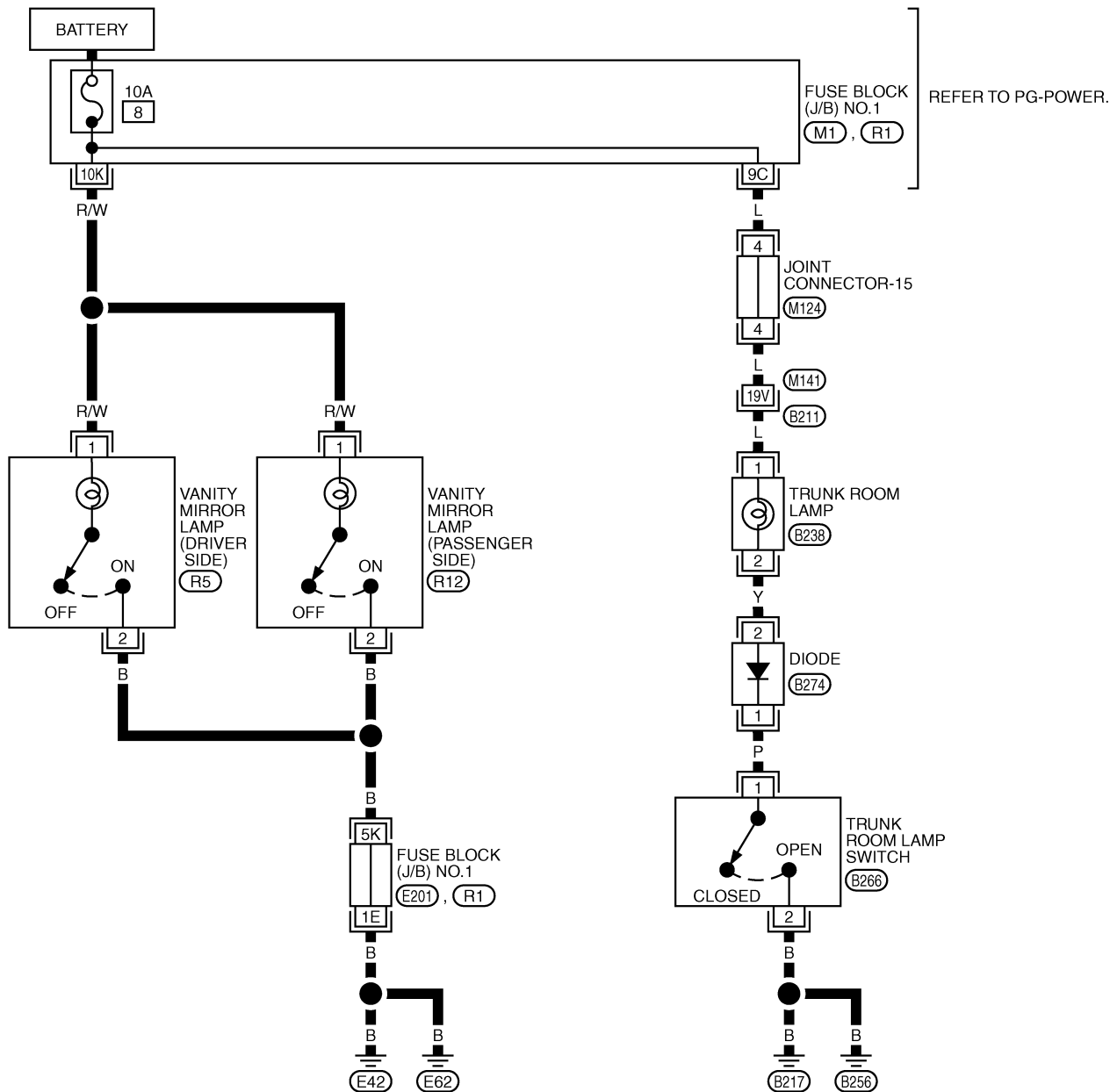
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## VANITY MIRROR AND TRUNK ROOM LAMPS

### Wiring Diagram — INT/L —

AKS002HF

LT-INT/L-01



REFER TO THE FOLLOWING.  
 (B211) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M1), (E201), (R1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWB0118E

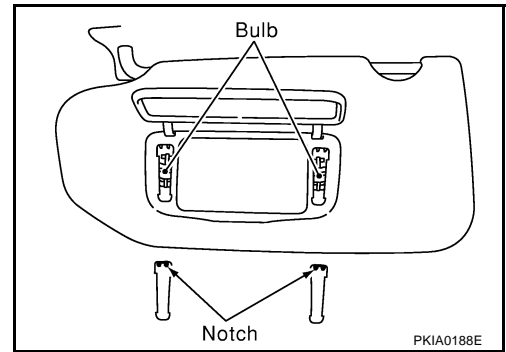
# VANITY MIRROR AND TRUNK ROOM LAMPS

AKS002HG

## Bulb Replacement VANITY MIRROR LAMP

1. Insert a thin screwdriver in the notch and remove lens.
2. Remove bulb.

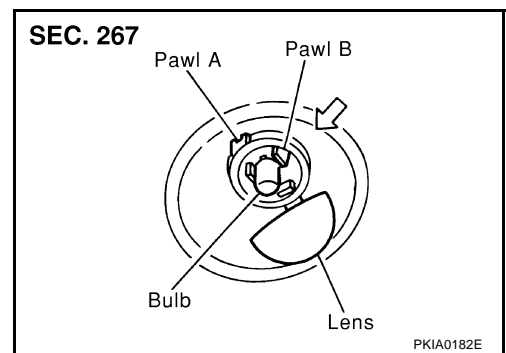
**Vanity mirror lamp : 12V 1.4W**



## TRUNK ROOM LAMP

1. Unfold pawl A and remove lens.
2. Remove bulb.
3. Remove trunk room lamp while pressing pawl B in the direction of the arrow.
4. Disconnect trunk room lamp connector.

**Trunk room lamp : 12V 3.4W**



# BULB SPECIFICATIONS

## BULB SPECIFICATIONS

PPF:26297

### Headlamp

AKS002HH

Item	Wattage (W)
Low	35 (D2R)
High	60W (HB3)

### Exterior Lamp

AKS002HJ

Item	Wattage (W)	
Front fog lamp	55 (H3)	
Front combination lamp (Headlamp)	Turn signal lamp and parking lamp (Clearance lamp)	27/8 (amber)
Front side marker lamp	3.8	
Rear combination lamp	Stop/Tail lamp	21/5
	Turn signal lamp	21
	Back-up lamp	18
Rear side marker lamp	3.8	
License plate lamp	5	
High-mounted stop lamp	18	

### Interior Lamp/Illumination

AKS002HJ

Item	Wattage (W)
Map lamp (Front personal light)	8
Console lamp (Console light)	1.4
Personal lamp (Rear personal light)	8
Step lamp	2.7
Vanity mirror lamp	1.4
Trunk room lamp	3.4

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# BULB SPECIFICATIONS

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