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SECTION EXL

EXTERIOR LIGHTING SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

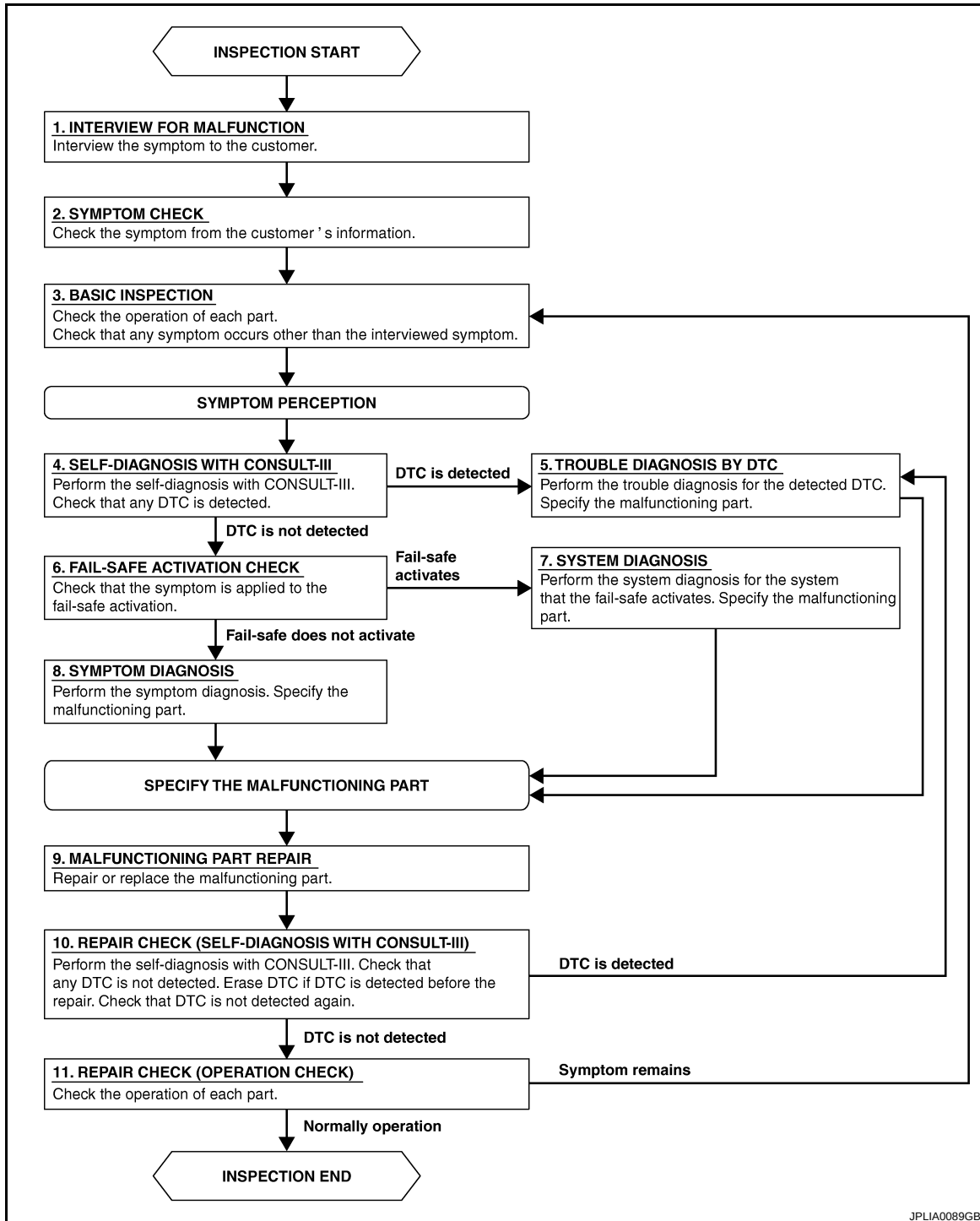
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001523224

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2

2. SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3

3. BASIC INSPECTION

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

>> GO TO 4

4. SELF-DIAGNOSIS WITH CONSULT-III

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

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

5. TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

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

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 11

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

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

Is any DTC detected?

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

YES >> GO TO 5

NO >> GO TO 11

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

YES >> INSPECTION END

NO >> GO TO 3

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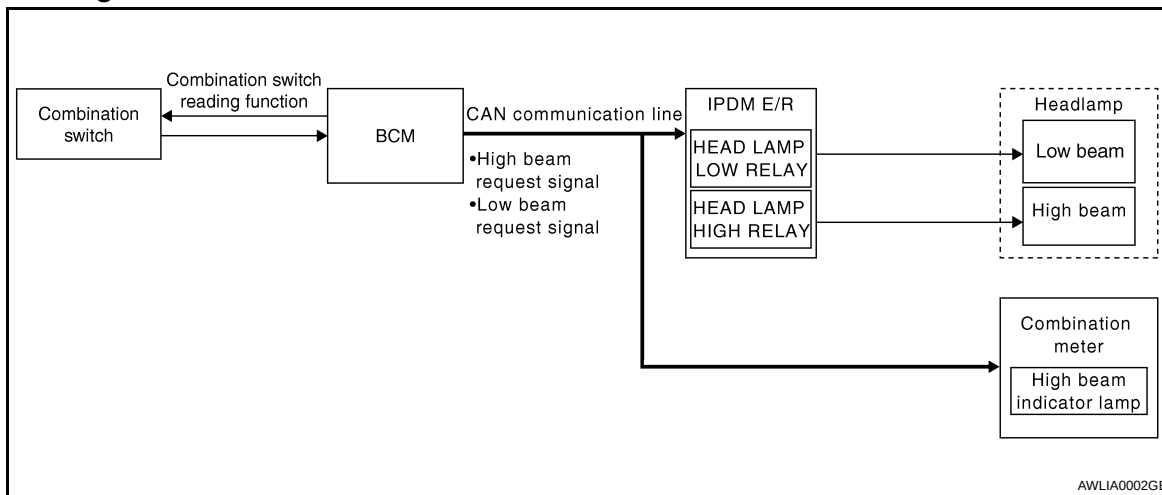
HEADLAMP (HALOGEN)

< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS

HEADLAMP (HALOGEN)

System Diagram



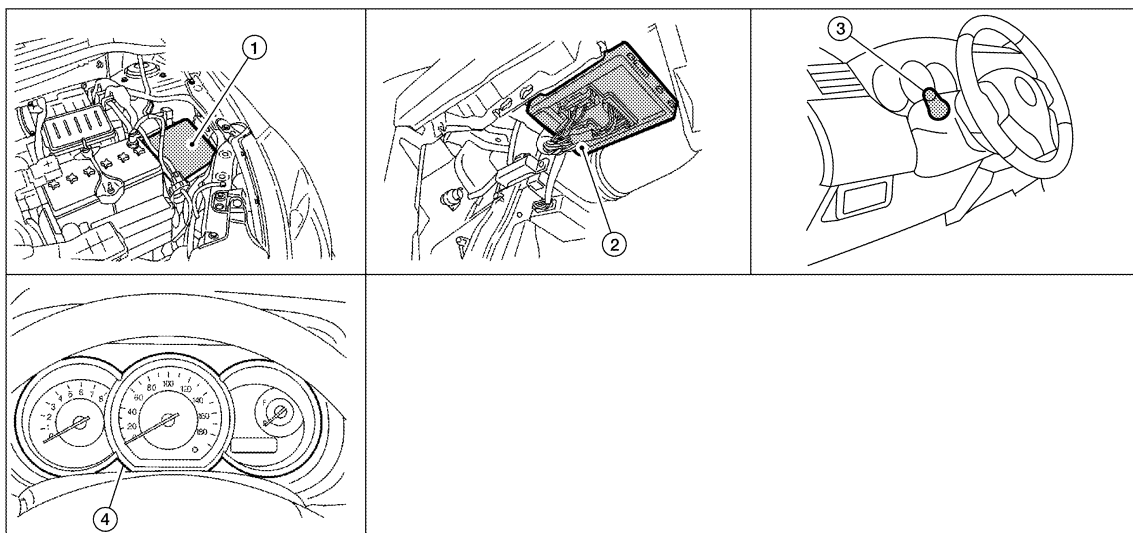
System Description

INFOID:0000000001523226

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

Component Parts Location

INFOID:0000000001523227



WKIA5469E

1. IPDM E/R E46, E47, E48
2. BCM M16, M17, M18, M19 (view with glove box removed)
3. Combination switch M28
4. Combination meter M24

Component Description

INFOID:0000000001523228

LOW BEAM OPERATION

HEADLAMP (HALOGEN)

< FUNCTION DIAGNOSIS >

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

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

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

The combination meter receives a high beam request signal (ON) via the CAN communication lines and turns the high beam indicator lamp ON.

COMBINATION SWITCH READING FUNCTION

Refer to XX-XX, "*****".

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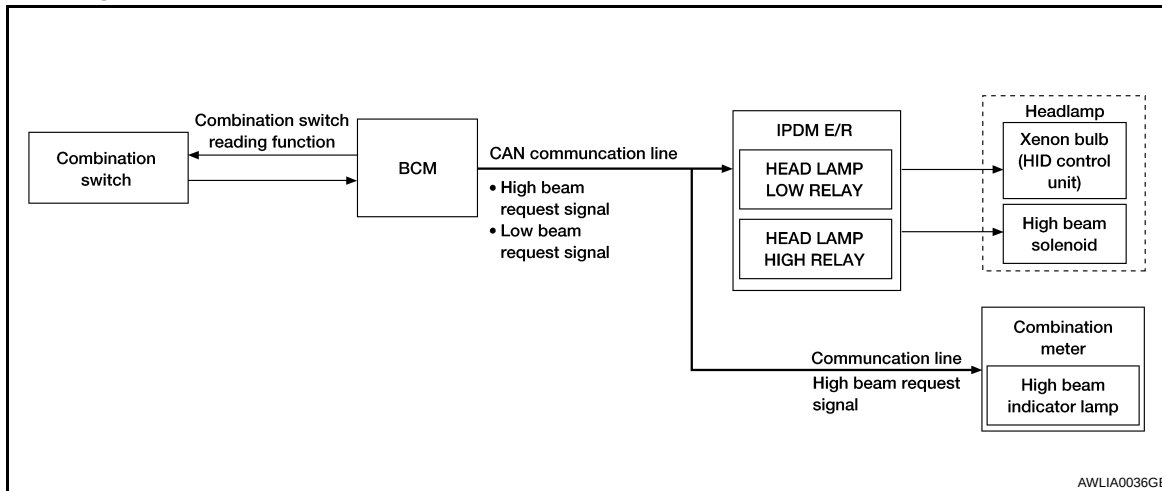
HEADLAMP (XENON)

< FUNCTION DIAGNOSIS >

HEADLAMP (XENON)

System Diagram

INFOID:000000001527648



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System Description

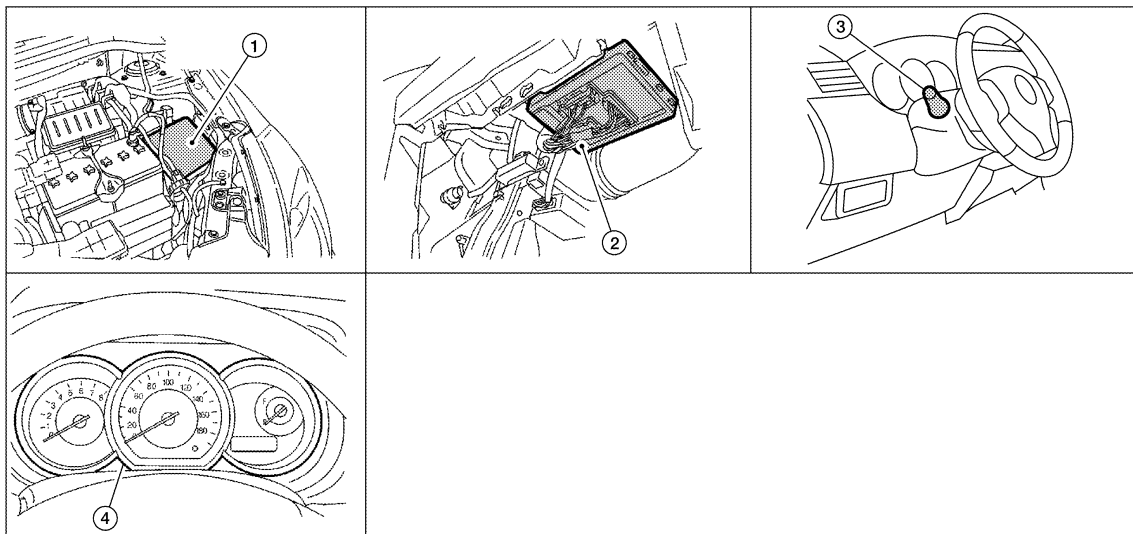
INFOID:000000001527649

A mobile valve shade type xenon headlamp is used. The xenon headlamp uses one xenon bulb each on the LH and RH side. The xenon headlamp switches between high beam and low beam by using a high beam solenoid to move the mobile valve shade over the xenon bulb.

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

Component Parts Location

INFOID:000000001527650



WKIA5469E

1. IPDM E/R E46, E47, E48
2. BCM M16, M17, M18, M19 (view with glove box removed)
3. Combination switch M28
4. Combination meter M24

HEADLAMP (XENON)

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000001527651

Part		Description
BCM		• Monitors the combination switch position. • Requests the IPDM E/R (via CAN communication lines) to actuate the headlamp high and low relays based on combination switch position . • Requests the combination meter (via CAN communication lines) to turn the high beam indicator lamp ON.
IPDM E/R		Controls the integrated headlamp high and low relays based on input from the BCM over the CAN communication lines.
Combination switch (Lighting & turn signal switch)		Refer to BCS-9, "System Description" .
Combination meter (High beam indicator lamp)		Controls the high beam indicator lamp ON during high beam operation based on input from the BCM over the CAN communication lines.
Headlamp assembly	HID control unit	Controls electricity flow through the xenon bulb.
	Xenon bulb	Uses two tungsten electrodes and is filled with xenon gas and other metal halides. Electricity flows between the electrodes to illuminate.
	High beam solenoid	Actuates the mobile valve shade to control high and low beam operation.
	Mobile valve shade	When actuated by the high beam solenoid, it shades light output from the xenon bulb for low beam operation and opens to allow more light output during high beam operation.

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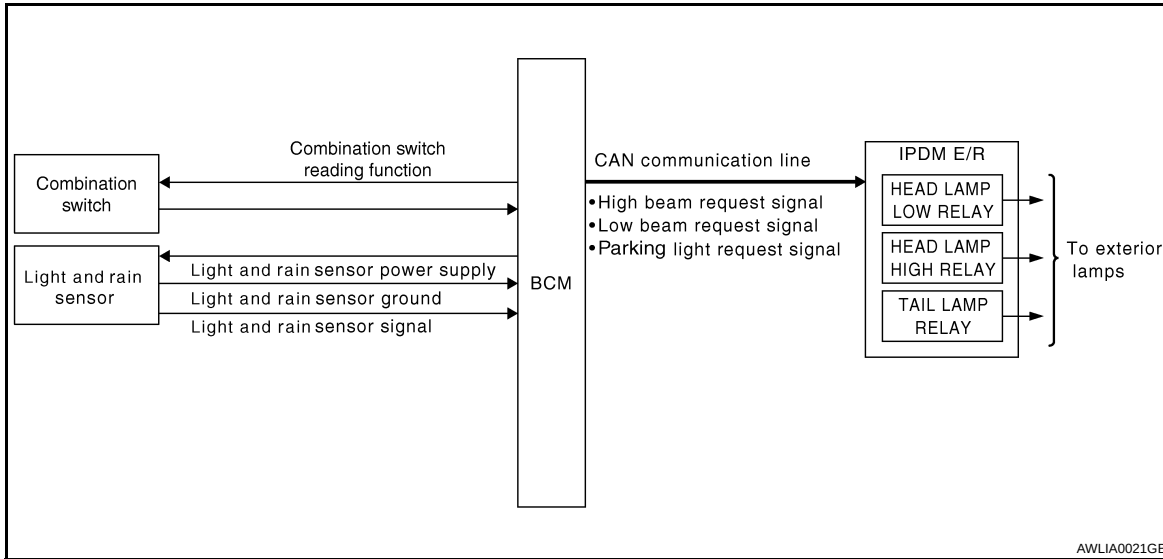
AUTO LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

AUTO LIGHT SYSTEM

System Diagram

INFOID:000000001523233



System Description

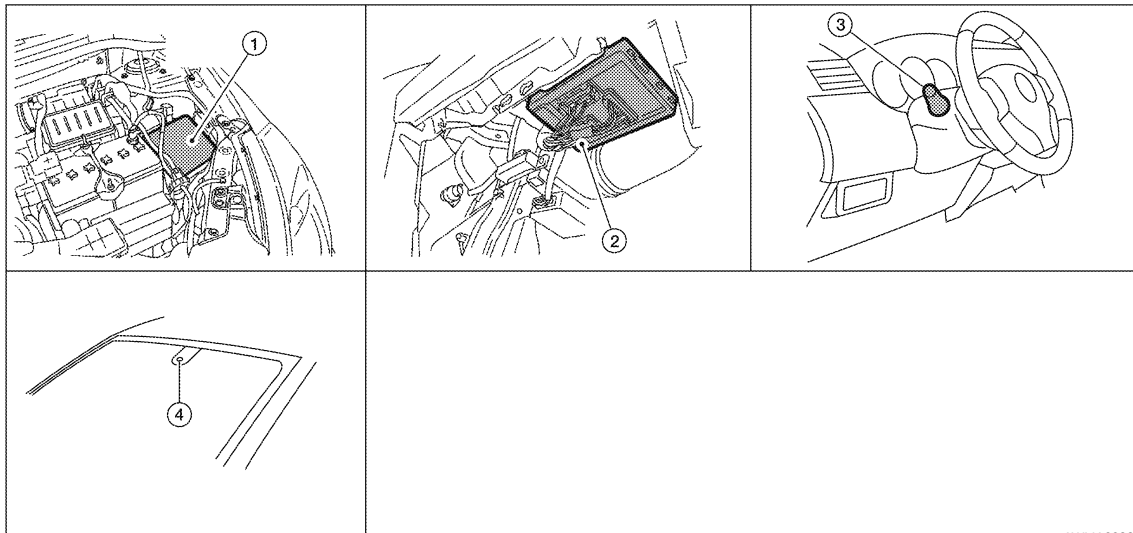
INFOID:000000001523234

When the lighting switch is in AUTO position, it automatically turns ON/OFF the exterior lamps in accordance with the ambient light levels.

The light and rain sensor detects ambient brightness and converts light (lux) to voltage which is output to the BCM. The BCM (Body Control Module) controls auto light operation according to the signal inputs from the light and rain sensor, lighting switch and ignition switch. If conditions are met, the BCM sends a request (via CAN communication lines) to the IPDM E/R (Intelligent Power Distribution Module Engine Room) to activate the exterior lamps.

Component Parts Location

INFOID:000000001523235



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1. IPDM E/R E46, E47, E48
2. BCM M16, M17, M18, M19, M21 (view with glove box removed)
3. Combination switch M28
4. Light and rain sensor R11

AUTO LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

Component Description

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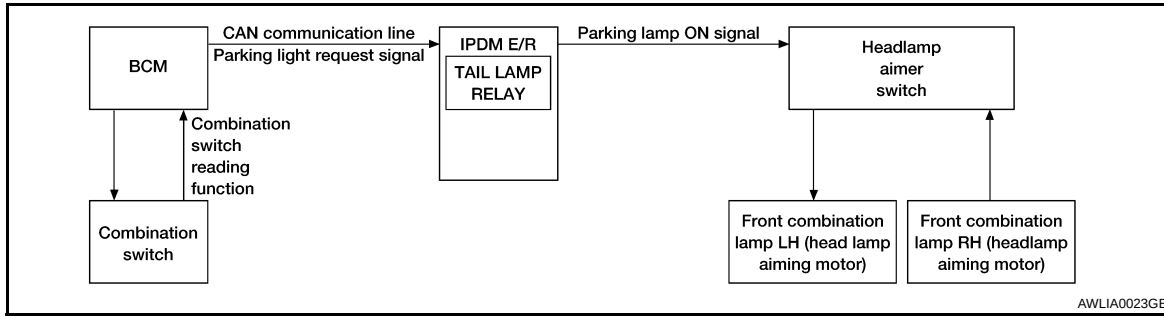
Part	Description
Light and rain sensor	Converts light to voltage and ouputs that voltage signal to the BCM.
BCM	• Monitors the combination switch position. • Monitors the light and rain sensor signal. • Requests the IPDM E/R (via CAN communication lines) to actuate the headlamp high, headlamp low and tail lamp relays based on lighting switch position, ignition switch position, light and rain sensor signals and autolight settings.
IPDM E/R	Controls the integrated headlamp high, headlamp low and tail lamp relays based on input from the BCM over the CAN communication lines.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Description" .

HEADLAMP AIMING SYSTEM (MANUAL)

< FUNCTION DIAGNOSIS >

HEADLAMP AIMING SYSTEM (MANUAL)

System Diagram



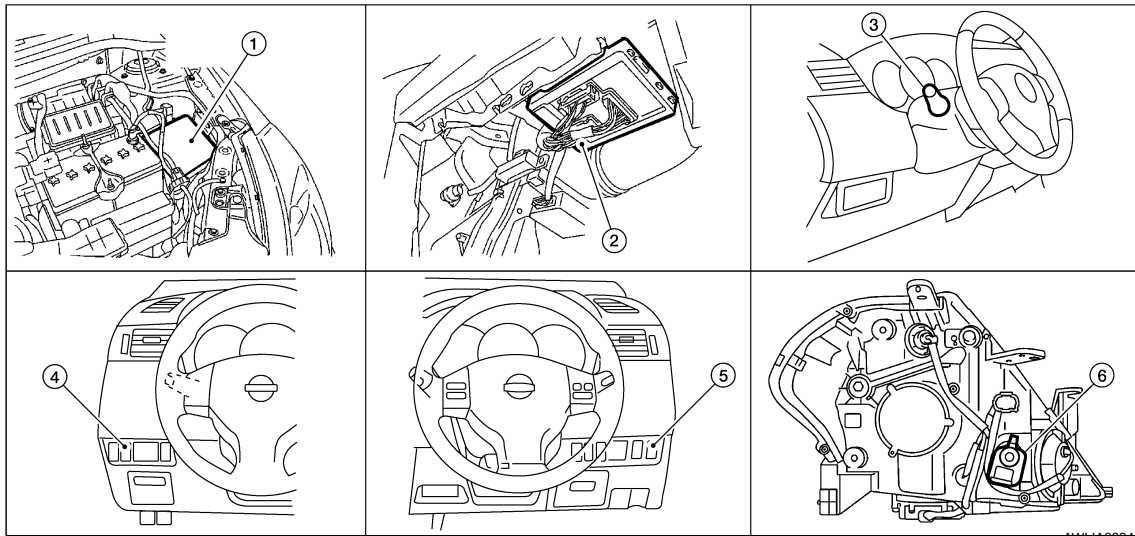
System Description

INFOID:000000001527663

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

Component Parts Location

INFOID:000000001527664



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- | | | |
|---|---|---|
| 1. IPDM E/R E46, E47, E48 | 2. BCM M16, M17, M18, M19 (view with glove box removed) | 3. Combination switch M28 |
| 4. Headlamp aimer switch M56 (LHD models) | 5. Headlamp aimer switch M56 (RHD models) | 6. Front combination lamp (headlamp aiming motor)
• LH E36 (shown)
• RH E37 (similar) |

Component Description

INFOID:000000001527665

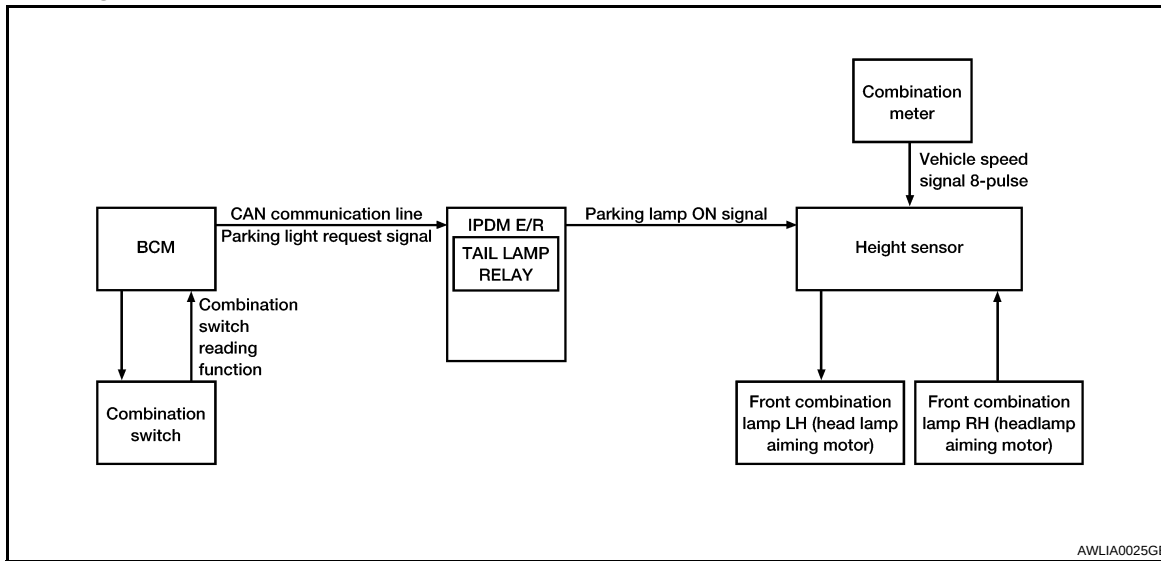
Part	Description
Headlamp aiming motor	Moves the headlamp up/down based on input from the headlamp aimer switch.
Headlamp aimer switch	Controls variable ground to the headlamp aiming motor signal to move the headlamp aiming motor up/down.

HEADLAMP AIMING SYSTEM (AUTOMATIC)

< FUNCTION DIAGNOSIS >

HEADLAMP AIMING SYSTEM (AUTOMATIC)

System Diagram



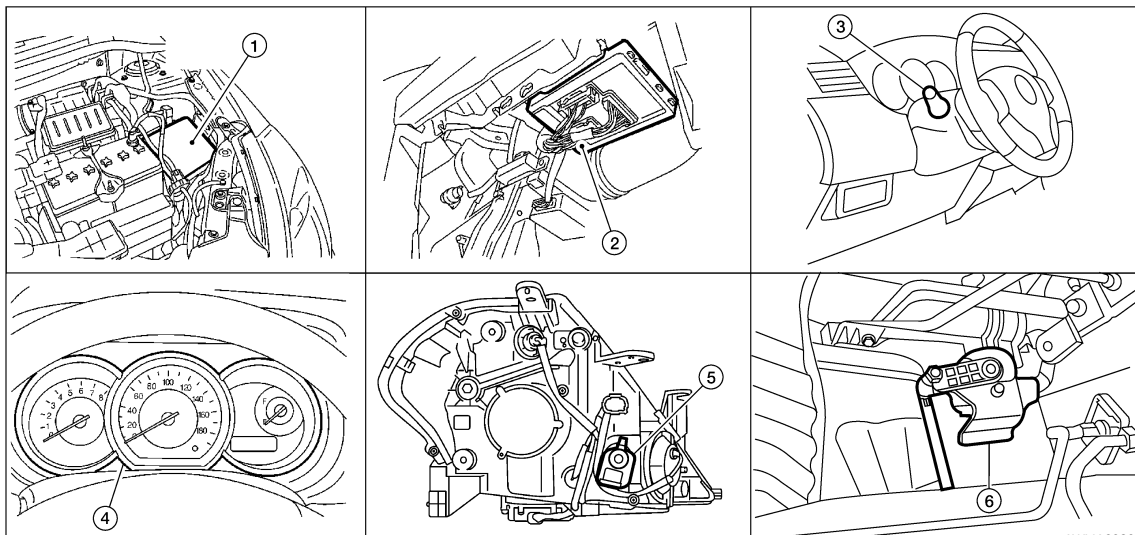
System Description

INFOID:000000001527659

The headlamp aiming system (automatic) controls the headlamp light axis height appropriately according to the vehicle height and vehicle speed as determined by the height sensor. The height sensor controls the signal ground of the headlamp aiming motors located on the front combination lamp LH and RH.

Component Parts Location

INFOID:000000001527660



- | | | |
|---------------------------|---|---|
| 1. IPDM E/R E46, E47, E48 | 2. BCM M16, M17, M18, M19 (view with glove box removed) | 3. Combination switch M28 |
| 4. Combination meter M24 | 5. Front combination lamp (headlamp aiming motor) <ul style="list-style-type: none">• E36 LH (shown)• E37 RH (similar) | 6. Height sensor B47 (view above center of rear axle) |

Component Description

INFOID:000000001527661

HEADLAMP AIMING SYSTEM (AUTOMATIC)

< FUNCTION DIAGNOSIS >

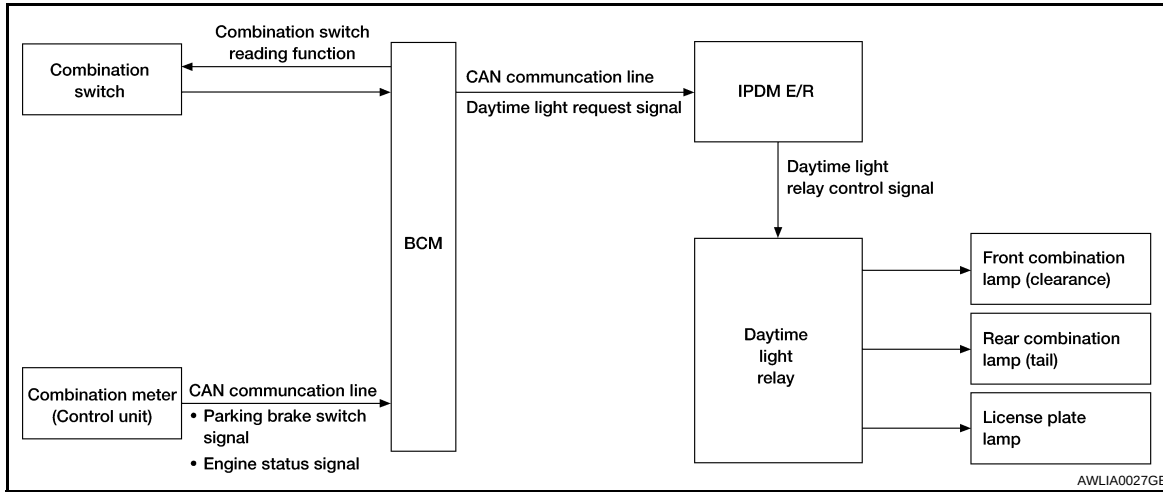
Part	Description
Height sensor	Controls the headlamp aiming motor signal ground based on vehicle height and vehicle speed.
Headlamp aiming motor	Moves the headlamp up/down based on input from the height sensor. Located in the front combination lamp LH and RH.

DAYTIME LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

DAYTIME LIGHT SYSTEM

System Diagram



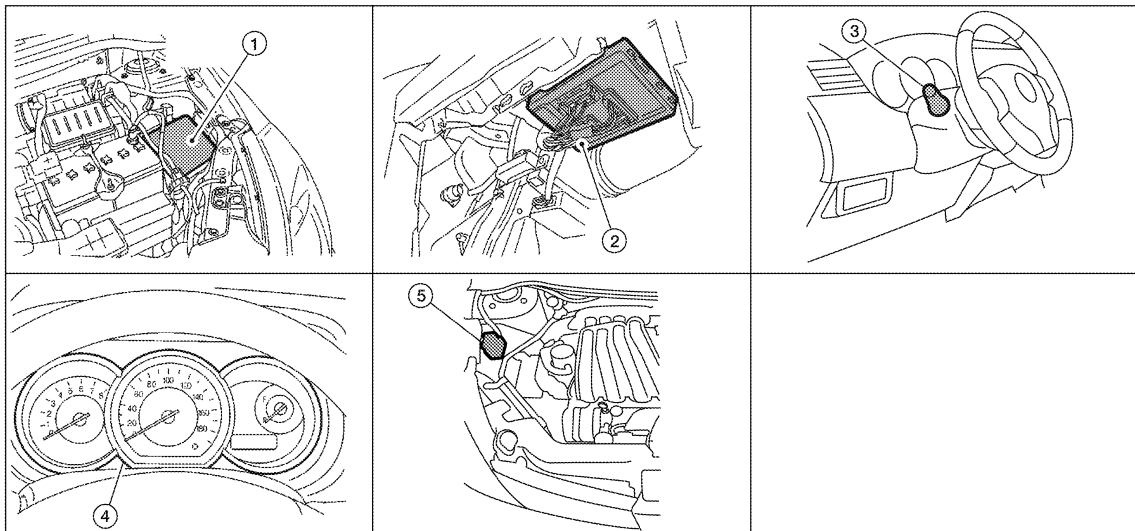
System Description

INFOID:000000001527655

The daytime light system operates the front clearance lamps, rear tail lamps and license plate lamps. The BCM monitors the engine running status and lighting switch (combination switch) signal to determine whether the daytime light system should be activated. With the engine running and the lighting switch OFF, the BCM sends a signal via CAN communication to the IPDM E/R (Intelligent Power Distribution Module Engine Room) to activate the headlamp low relay and the daytime light relay. The IPDM E/R supplies ground to the headlamp low relay coil and daytime light relay coil which then energize to send power to the low beam headlamps, front clearance lamps, rear tail lamps and license plate lamps.

Component Parts Location

INFOID:000000001527656



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- | | | |
|---------------------------|---|---------------------------|
| 1. IPDM E/R E46, E47, E48 | 2. BCM M16, M17, M18, M19 (view with glove box removed) | 3. Combination switch M28 |
| 4. Combination meter M24 | 5. Daytime light relay E67 | |

DAYTIME LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000001527657

Part	Description
BCM	- Monitors lighting switch position, engine running status and parking brake status to determine if conditions are set for daytime light system operation. - Requests the IPDM E/R via CAN communication lines to ground the daytime light relay coil.
IPDM E/R	Controls ground to the daytime light relay coil based on requests from the BCM (via CAN communication lines).
Combination switch (Lighting & turn signal switch)	Refer to <u>XX-XX, "*****"</u> .
Combination meter	Monitors engine running status and forwards that information to the BCM via CAN communication lines.

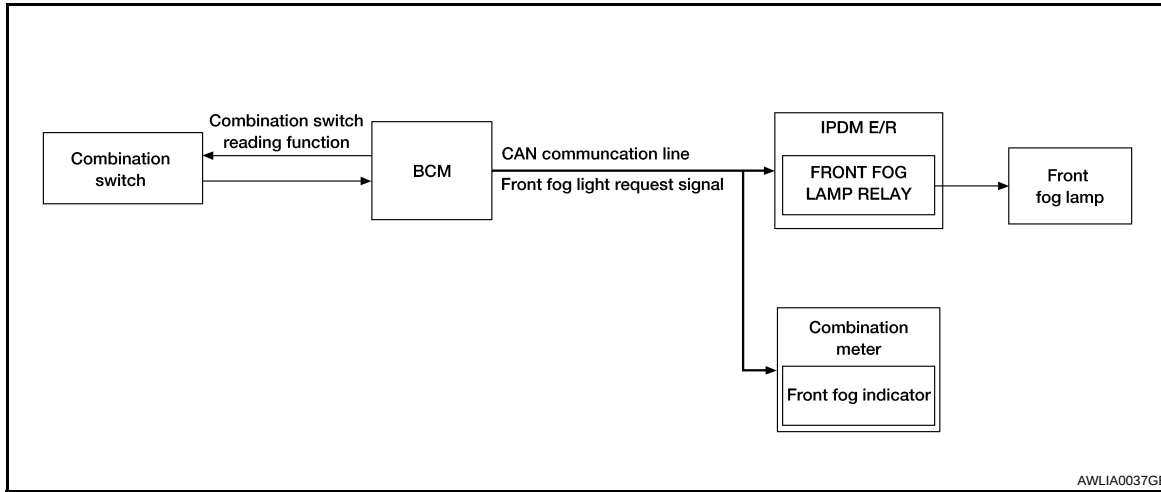
FRONT FOG LAMP

< FUNCTION DIAGNOSIS >

FRONT FOG LAMP

System Diagram

INFOID:000000001523237



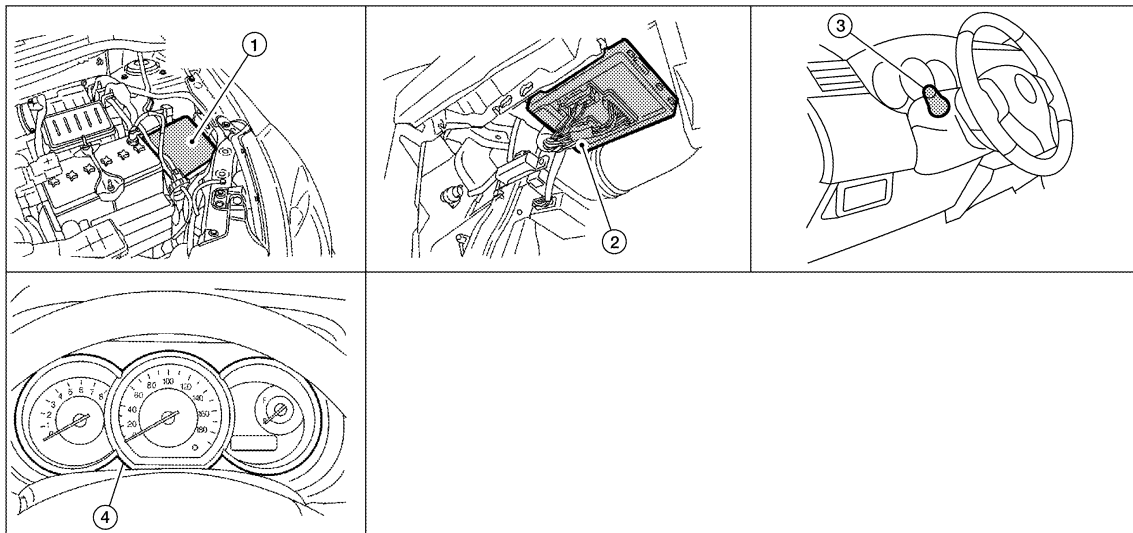
System Description

INFOID:000000001523238

The BCM (Body Control Module) controls front fog lamp operation based on input from the lighting switch (combination switch). The BCM requests (via CAN communication lines) the IPDM E/R (Intelligent Power Distribution Module Engine Room) to activate the integrated front fog lamp relay and requests the combination meter to illuminate the front fog lamp light.

Component Parts Location

INFOID:000000001523239



1. IPDM E/R E46, E47, E48
2. BCM M16, M17, M18, M19 (view with glove box removed)
3. Combination switch M28
4. Combination meter M24

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FRONT FOG LAMP

< FUNCTION DIAGNOSIS >

Component Description

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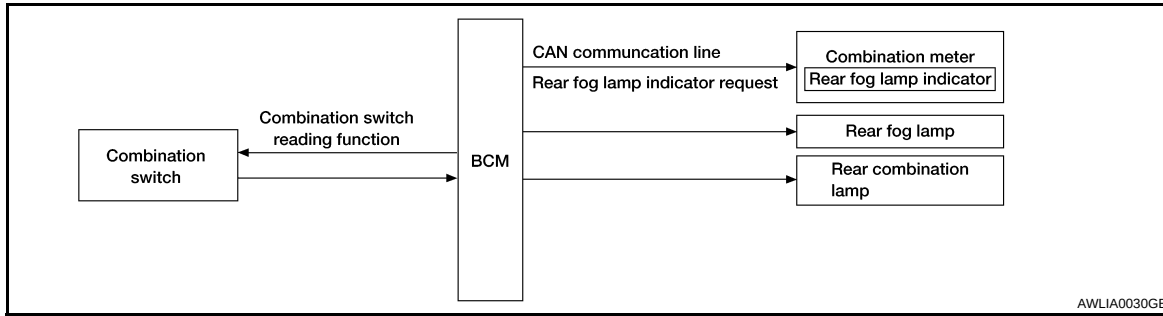
Part	Description
BCM	• Monitors the combination switch position. • Requests the IPDM E/R (via CAN communication lines) to actuate the front fog lamp relay. • Requests the combination meter (via CAN communication lines) to turn the front fog lamp indicator lamp ON.
IPDM E/R	Controls the integrated front fog lamp relay based on input from the BCM via the CAN communication lines.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Description" .
Combination meter (front fog lamp indicator lamp)	Controls the front fog lamp indicator during front fog lamp operation based on input from the BCM via the CAN communication lines.

REAR FOG LAMP

< FUNCTION DIAGNOSIS >

REAR FOG LAMP

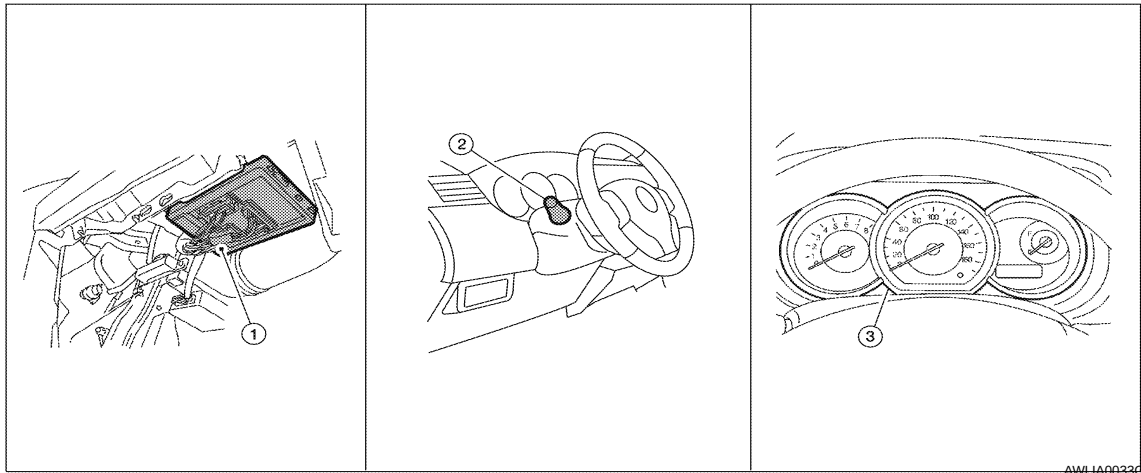
System Diagram



System Description

The BCM (Body Control Module) controls rear fog lamp operation based on input from the lighting switch (combination switch). When the lighting switch is in the 1st or 2nd position or auto position and the rear fog lamp switch is ON, the BCM outputs battery voltage to the rear fog lamps. The BCM sends a request signal to the combination meter via CAN communication lines to illuminate the rear fog lamp indicator.

Component Parts Location



1. BCM M16, M17, M18, M19 (view with glove box removed)
2. Combination switch M28
3. Combination meter M24

Component Description

Part	Description
BCM	- Monitors the combination switch position. - Outputs battery voltage to operate the rear fog lamps. - Requests the combination meter (via CAN communication lines) to turn the rear fog lamp indicator lamp ON.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Description" .
Combination meter (rear fog lamp indicator lamp)	Controls the rear fog lamp indicator during rear fog lamp operation based on input from the BCM over the CAN communication lines.

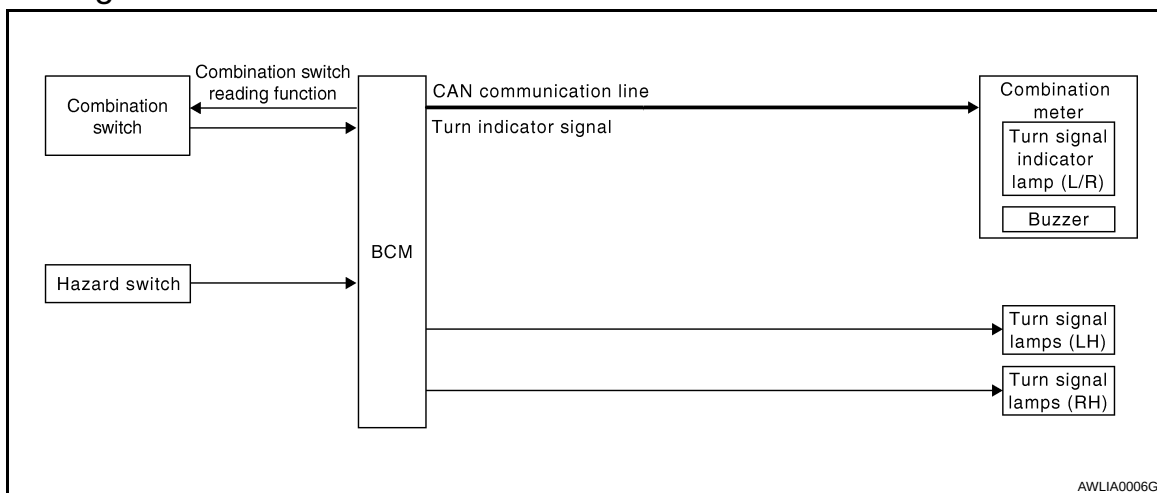
TURN SIGNAL AND HAZARD WARNING LAMPS

< FUNCTION DIAGNOSIS >

TURN SIGNAL AND HAZARD WARNING LAMPS

System Diagram

INFOID:000000001523241



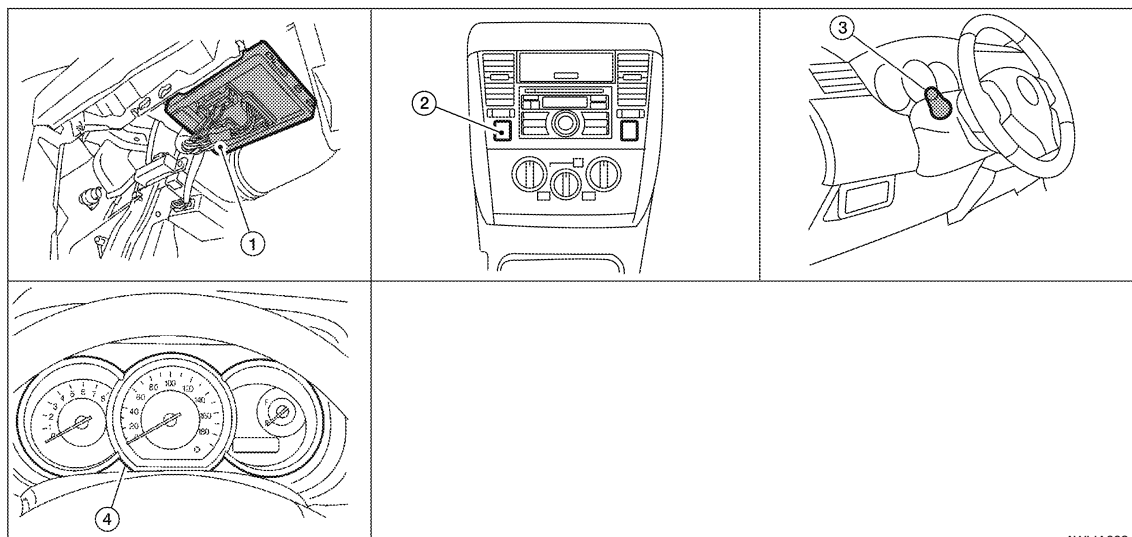
System Description

INFOID:000000001523242

The BCM (Body Control Module) controls turn signal lamp and hazard warning lamp operation based on input from the combination switch. The combination meter operates the turn RH and turn LH indicators based on input from the BCM via the CAN communication lines.

Component Parts Location

INFOID:000000001523243



AWLIA0034GB

1. BCM M16, M17, M18, M19 (view with glove box removed)
2. Hazard switch M55
3. Combination switch M28
4. Combination meter M24

TURN SIGNAL AND HAZARD WARNING LAMPS

< FUNCTION DIAGNOSIS >

Component Description

INFOID:000000001523244

Part	Description
BCM	• Monitors the combination switch position. • Monitors hazard switch position. • Controls flasher output to the front, side and rear turn signals based on inputs from the combination and hazard switches. • Requests the combination meter (via CAN communication lines) to turn the turn RH and turn LH indicator lamps ON.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Description" .
Combination meter (turn LH and turn RH indicator lamp)	Controls the front fog lamp indicator during front fog lamp operation based on input from the BCM via the CAN communication lines.

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PARKING, LICENSE PLATE AND TAIL LAMPS

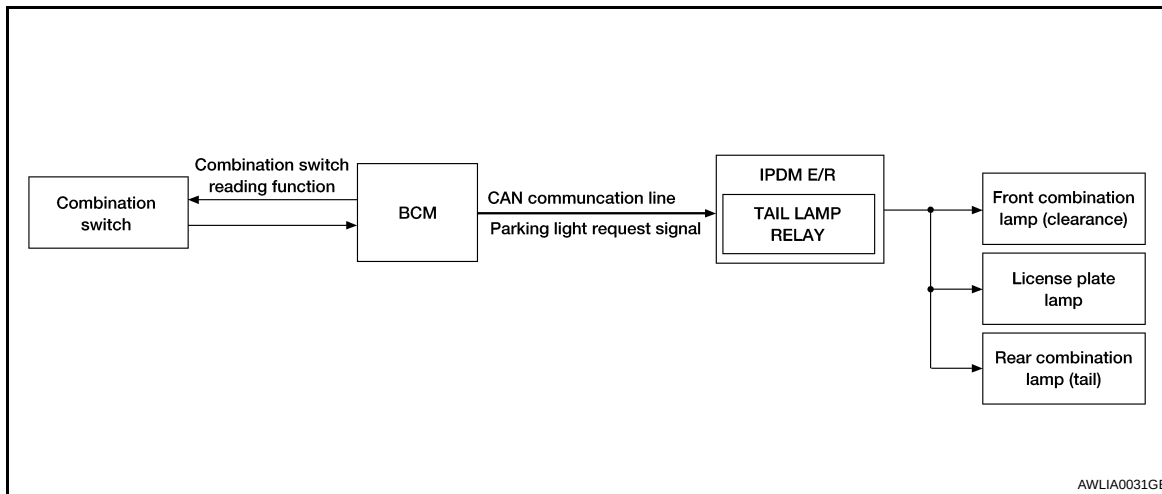
< FUNCTION DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS

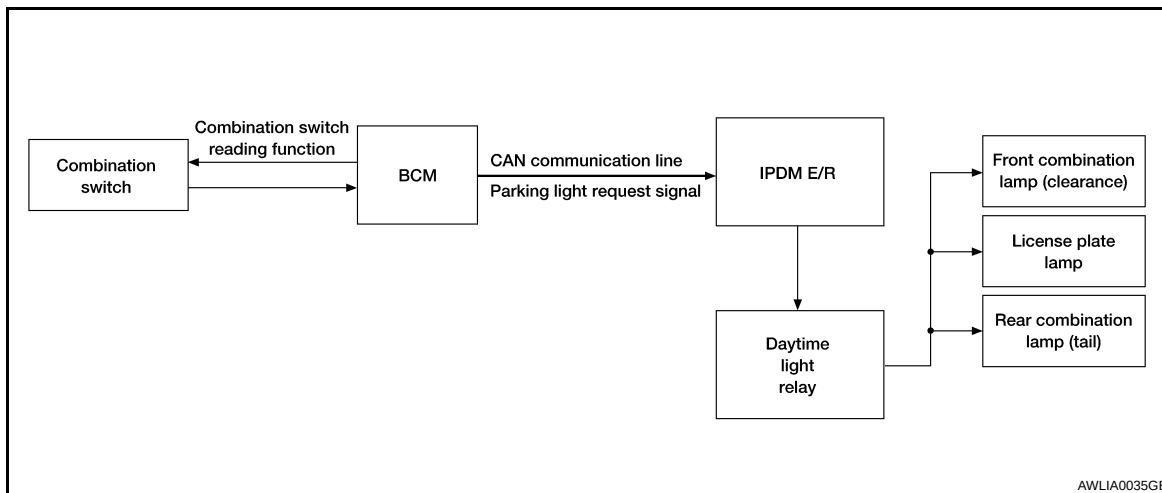
System Diagram

INFOID:000000001523245

WITHOUT DAYTIME LIGHT SYSTEM



WITH DAYTIME LIGHT SYSTEM



System Description

INFOID:000000001523246

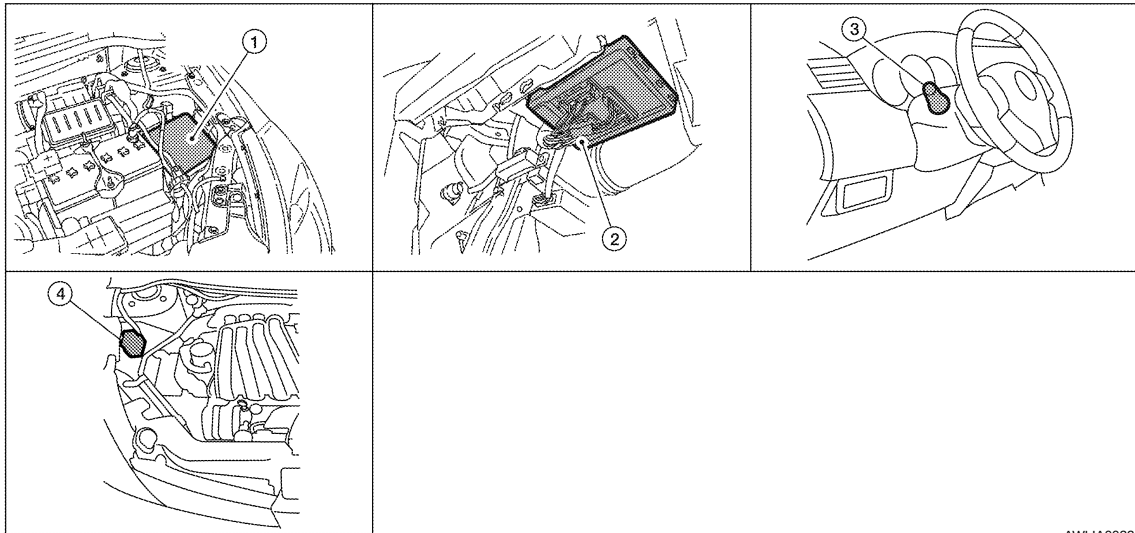
The BCM (Body Control Module) controls parking, license plate and tail lamps operation based on lighting switch (combination switch) input. The BCM requests the IPDM E/R (Intelligent Power Distribution Module Engine Room) (via CAN communication lines) to activate the tail lamp relay (without daytime light system) or the daytime light relay (with daytime light system).

PARKING, LICENSE PLATE AND TAIL LAMPS

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:000000001523247



AWLIA0032GB

1. IPDM E/R E46, E47, E48
2. BCM M16, M17, M18, M19 (view with glove box removed)
3. Combination switch M28
4. Daytime light relay E67

Component Description

INFOID:000000001523248

Part	Description
BCM	• Monitors the combination switch position. • Requests the IPDM E/R (via CAN communication lines) to actuate the tail lamp relay (without daytime light system) or the daytime light relay (with daytime light system.)
IPDM E/R	Controls the integrated tail lamp relay (without daytime light system) or the daytime light relay (with daytime light system) based on input from the BCM over the CAN communication lines.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Description" .

EXL

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000001528970

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-54, "DTC Index" .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	- Enables to read and save the vehicle specification. - Enables to write the vehicle specification when replacing BCM.

BCM

BCM : CONSULT-III Function (BCM - BCM)

INFOID:0000000001528971

WORK SUPPORT

Item	Description
RESET SETTING VALUE	Return a value set with WORK SUPPORT of each system to a default value in factory shipment.

HEADLAMP

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

INFOID:0000000001528977

WORK SUPPORT

Work item	Setting	Description
BATTERY SAVER SET	ON*	Battery saver mode can be changed.
	OFF	

*: Initial setting

DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judged from IGN signal (ignition power supply) Each switch status that BCM judges from the combination switch reading function
HI BEAM SW [ON/OFF]	
H/L SW POS [ON/OFF]	
LIGHT SW 1ST [ON/OFF]	
PASSING SW [ON/OFF]	
AUTO LIGHT SW [ON/OFF]	
FR FOG SW [ON/OFF]	
RR FOG SW [ON/OFF]	
DOOR SW-DR [ON/OFF]	The switch status input from front door switch (driver side)
ENGINE STATUS	The engine status received from ECM with CAN communication

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor item [Unit]	Description
LIT-SEN FAIL [OK/NOTOK]	- The sensor status received from light & rain sensor with serial link - The serial link condition that BCM judges
AUT LIGHT SYS [ON/OFF]	Auto light system status that BCM judges from the vehicle condition

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	ON	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	OFF	Stops the tail lamp request signal transmission.
HEAD LAMP	HI	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
	LO	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	OFF	Stops the high & low beam request signal transmission.
FR FOG LAMP	ON	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	OFF	Stops the front fog lights request signal transmission.
RR FOG LAMP	ON	- Outputs the voltage to turn the rear fog lamp ON. - Transmits the rear fog lamp status signal to the combination meter with CAN communication to turn the rear fog lamp indicator lamp ON.
	OFF	- Stops the voltage to turn the rear fog lamp OFF. - Stops the rear fog lamp status signal transmission.
DAYTIME RUNNING LIGHT	ON	Transmits the day time running light request signal to IPDM E/R with CAN communication to turn the each lamps ON.
	OFF	Stops the day time running light request signal transmission.

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:0000000001528979

WORK SUPPORT

Work Item	Description								
HAZARD LAMP SET	Operation	MODE1		MODE2		MODE3		MODE4	
	Keyfob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
	Hazard lamp flash	-	-	-	Twice	Once	-	Once	Twice

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judged from IGN signal (ignition power supply)
HAZARD SW [ON/OFF]	The switch status input from the hazard switch
TURN SIGNAL R [ON/OFF]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
TURN/L MNTR [ON/OFF]	Displays status (one bulb out: ON/other: OFF) as judged from bulb signal

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Test Item	Operation	Description
FLASHER	RH	Outputs the voltage to turn the right side turn signal lamps ON.
	LH	Outputs the voltage to turn the left side turn signal lamps ON.
	OFF	Stops the voltage to turn the turn signal lamps OFF.

COMB SW

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

INFOID:000000001528982

DATA MONITOR

Monitor Item [Unit]	Description
TURN SIGNAL R [OFF/ON]	Displays the status of the TURN RH switch in combination switch judged by BCM with the combination switch reading function.
TURN SIGNAL L [OFF/ON]	Displays the status of the TURN LH switch in combination switch judged by BCM with the combination switch reading function.
HI BEAM SW [OFF/ON]	Displays the status of the HI BEAM switch in combination switch judged by BCM with the combination switch reading function.
H/L SW POS [OFF/ON]	Displays the status of the HEADLAMP switch in combination switch judged by BCM with the combination switch reading function.
LIGHT SW 1ST [OFF/ON]	Displays the status of the HEADLAMP switch in combination switch judged by BCM with the combination switch reading function.
PASSING SW [OFF/ON]	Displays the status of the PASSING switch in combination switch judged by BCM with the combination switch reading function.
AUTO LIGHT SW [OFF/ON]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function.
FR FOG SW [OFF/ON]	Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function.
RR FOG SW [OFF/ON]	Displays the status of the RR FOG switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER HI [OFF/ON]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [OFF/ON]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [OFF/ON]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
FR WASHER SW [OFF/ON]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by BCM with the combination switch reading function.
RR WIPER ON [OFF/ON]	Displays the status of the RR WIPER switch in combination switch judged by BCM with the combination switch reading function.
RR WIPER INT [OFF/ON]	Displays the status of the RR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
RR WASHER SW [OFF/ON]	Displays the status of the RR WASHER switch in combination switch judged by BCM with the combination switch reading function.

BATTERY SAVER

BATTERY SAVER : CONSULT-III Function (BCM - BATTERY SAVER)

INFOID:000000001528984

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Work Item	Setting Item	Setting	
ROOM LAMP TIMER SET	MODE 1*	15 min.	Sets the interior room lamp battery saver timer operating time.
	MODE 2	30 min.	

*: Initial setting

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)
KEY SW ¹ [ON/OFF]	The switch status input from key switch
PUSH SW ² [ON/OFF]	Push switch status received from Intelligent Key unit by CAN communication
DOOR SW-DR [ON/OFF]	The switch status input from front door switch (driver side)
DOOR SW-AS [ON/OFF]	The switch status input from front door switch (passenger side)
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH
DOOR SW- RL [ON/OFF]	The switch status input from rear door switch LH
BACK DOOR SW [ON/OFF]	The switch status input from back door switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
I-KEY LOCK ² [ON/OFF]	Lock signal status received from Intelligent Key unit by CAN communication
I-KEY UNLOCK ² [ON/OFF]	Unlock signal status received from Intelligent Key unit by CAN communication
KEYLESS LOCK ¹ [ON/OFF]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
KEYLESS UNLOCK ¹ [ON/OFF]	Unlock signal status received from remote keyless entry receiver (integrated in the BCM)

1: With remote keyless entry

2: With Intelligent Key

ACTIVE TEST

Test item	Operation	Description
BATTERY SAVER	OFF	Cuts the interior room lamp power supply to turn interior room lamps OFF.
	ON	Outputs the interior room lamp power supply to turn interior room lamps ON.*

*: Each lamp switch is in ON position.

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT - III Function (IPDM E/R)

INFOID:000000001523254

APPLICATION ITEM

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

Diagnosis mode	Description
SELF-DIAG RESULTS	Displays the diagnosis results judged by IPDM E/R.
DATA MONITOR	Displays the real-time input/output data from IPDM E/R input/output data.
ACTIVE TEST	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN DIAG SUPPORT MONITOR	The results of transmit/receive diagnosis of CAN communication can be read.

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIG- NALS	Description
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
TAIL & CLR REQ [Off/On]	×	Displays the status of the tail and clearance lamp request signal received from BCM via CAN communication.
DTRL REQ [Off]		NOTE: The item is indicated, but not monitored.

ACTIVE TEST

Test item

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

DIAGNOSIS SYSTEM (HEADLAMP LEVELIZER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (HEADLAMP LEVELIZER)

CONSULT-III Function

INFOID:000000001530336

APPLICATION ITEM

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

Diagnosis mode	Description
SELF-DIAG RESULTS	Displays the diagnosis results judged by IPDM E/R.
DATA MONITOR	Displays the real-time input/output data from IPDM E/R input/output data.
ACTIVE TEST	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN DIAG SUPPORT MONITOR	The results of transmit/receive diagnosis of CAN communication can be read.

SELF-DIAG RESULTS

Error item	Description	Possible cause/Action to take
PARA NOT PROG [B208A]	Height sensor not initialized	Initialize sensor using CONSULT-III
INITIAL NOT DONE [B2081]	Height sensor not initialized	

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIG- NALS	Description
INT SEN VALUE [%]		
ACT OUTPUT [%]		
ACT MEASURED [%]		
SPEED SIG [km/h]		Displays the vehicle speed as received from the combination meter.
LIGHT SIGNAL [V]		Displays voltage of the parking lamps ON signal as received from the IPDM E/R
INT SEN VOLT [V]		Displays voltage available to the height sensor.
EXT SEN VOLT [V]		
EXT SEN SIG [V]		

ACTIVE TEST

Test item

Test item	Operation	Description
LAMP TEST	MIN	Operates aiming motor to lowest axis.
	MID	Operates aiming motor to middle axis.
	MAX	Operates aiming motor to highest axis.

WORK SUPPORT

Support item

Test item	Description
SENSOR INITIALISE	Adjust sensor and store initial height setting.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000001523255

For BCM power supply and ground circuit information, refer to XX-XX, "*****".

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

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

INFOID:000000001523256

For IPDM E/R power supply and ground circuit information, refer to XX-XX, "*****".

HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (HI) CIRCUIT

HEADLAMP (HALOGEN)

HEADLAMP (HALOGEN) : Description

INFOID:000000001523259

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

HEADLAMP (HALOGEN) : Component Function Check

INFOID:000000001523260

1.CHECK HEADLAMP (HI) OPERATION

⊗WITHOUT CONSULT-III

1. Start IPDM E/R auto active test. Refer to XX-XX, "*****".
2. Check that the headlamp switches to the high beam.

NOTE:

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

📖CONSULT-III

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

HI : Headlamp switches to the high beam.

OFF : Headlamp OFF

Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-33, "HEADLAMP (HALOGEN) : Diagnosis Procedure".

HEADLAMP (HALOGEN) : Diagnosis Procedure

INFOID:000000001523261

1.CHECK HEADLAMP (HI) FUSES

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

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

EXL

Is the fuse open?

YES >> Repair the harness and replace the fuse.

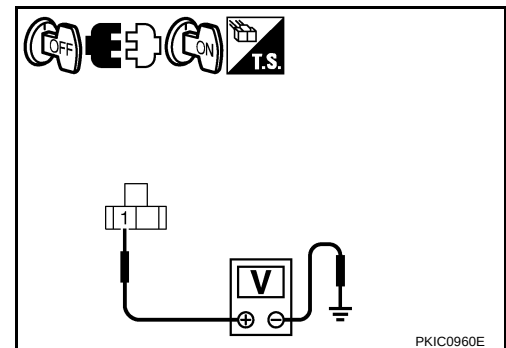
NO >> GO TO 2

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

📖CONSULT-III ACTIVE TEST

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

(+)		Terminal	(-)	Voltage
Connector				
LH	E25	1	Ground	Battery voltage
RH	E26			



HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

Is the measurement value normal?

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

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E47	E25	1	Yes
RH		E26		

Does continuity exist?

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

4.CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

Connector	Terminal	—	Continuity
LH	E25	2	Yes
RH	E26		

Does continuity exist?

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

HEADLAMP (XENON)

HEADLAMP (XENON) : Description

INFOID:0000000001527565

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

HEADLAMP (XENON) : Component Function Check

INFOID:0000000001527566

1.CHECK HEADLAMP (HI) OPERATION

⊗WITHOUT CONSULT-III

1. Start IPDM E/R auto active test. Refer to XX-XX. "*****".
2. Check that the headlamp switches to the high beam.

NOTE:

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

ⓈCONSULT-III

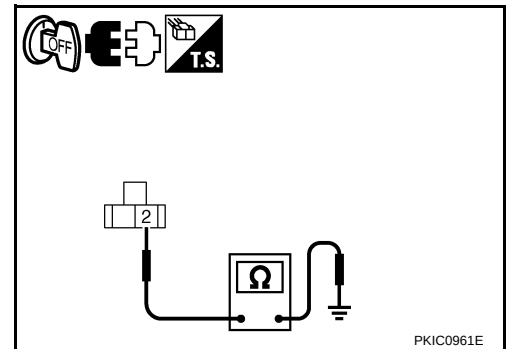
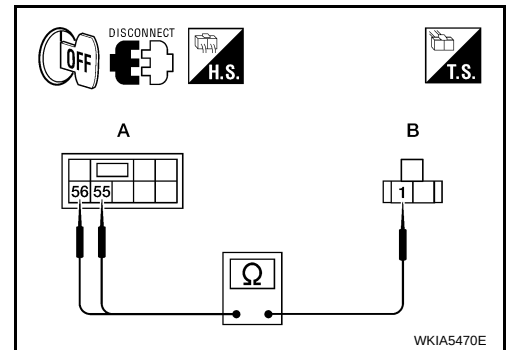
1. Select "EXTERNAL LAMP" of IPDM E/R active test item.
2. With operating the test items, check that the headlamp switches to the high beam.

HI : Headlamp switches to the high beam.

OFF : Headlamp OFF

Does the headlamp switch to the high beam?

- YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-35. "HEADLAMP (XENON) : Diagnosis Procedure".



HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (XENON) : Diagnosis Procedure

INFOID:000000001527567

1.CHECK HEADLAMP (HI) FUSES

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

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

Is the fuse open?

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

CONSULT-III ACTIVE TEST

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

(+)			(-)	Voltage
Connector		Terminal		
LH	E25	4	Ground	Battery voltage
RH	E26	4		

Is the measurement value normal?

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

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

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

A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E47	55	E25	4	Yes
RH		56	E26	4	

Does continuity exist?

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

4.CHECK HEADLAMP (HI) GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
LH	E25	1	Ground	Yes
RH	E26	1		

Does continuity exist?

- YES >> Inspect the headlamp bulb.

HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

NO >> Repair the harness.

HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (LO) CIRCUIT

HEADLAMP (HALOGEN)

HEADLAMP (HALOGEN) : Description

INFOID:000000001523262

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

HEADLAMP (HALOGEN) : Component Function Check

INFOID:000000001523263

1.CHECK HEADLAMP (LO) OPERATION

⊗WITHOUT CONSULT-III

1. Start IPDM E/R auto active test. Refer to XX-XX, "*****".
2. Check that the headlamp is turned ON.

NOTE:

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

📖CONSULT-III

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

LO : Headlamp ON

OFF : Headlamp OFF

Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to EXL-37, "HEADLAMP (HALOGEN) : Diagnosis Procedure".

HEADLAMP (HALOGEN) : Diagnosis Procedure

INFOID:000000001523264

1.CHECK HEADLAMP (LO) FUSES

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

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

Is the fuse open?

YES >> Repair the harness and replace the fuse.

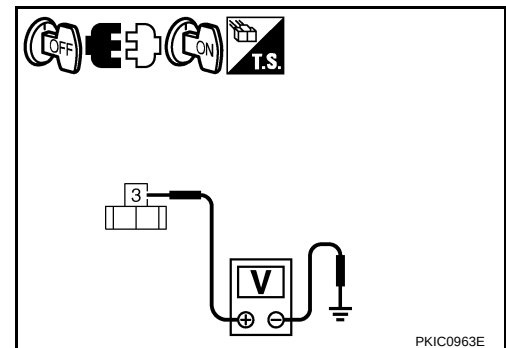
NO >> GO TO 2

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

📖CONSULT-III

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

(+)			(-)	Voltage
Connector		Terminal		
LH	E25	3	Ground	Battery voltage
RH	E26	3		



HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

Is the measurement value normal?

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

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E47	E25	3	Yes
RH		E26	3	

Does continuity exist?

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

4.CHECK HEADLAMP (LO) GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
LH	E25	2	Ground	Yes
RH	E26	2		

Does continuity exist?

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

HEADLAMP (XENON)

HEADLAMP (XENON) : Description

INFOID:0000000001527568

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

HEADLAMP (XENON) : Component Function Check

INFOID:0000000001527569

1.CHECK HEADLAMP (LO) OPERATION

⊗WITHOUT CONSULT-III

1. Start IPDM E/R auto active test. Refer to XX-XX, "*****".
2. Check that the headlamp is turned ON.

NOTE:

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

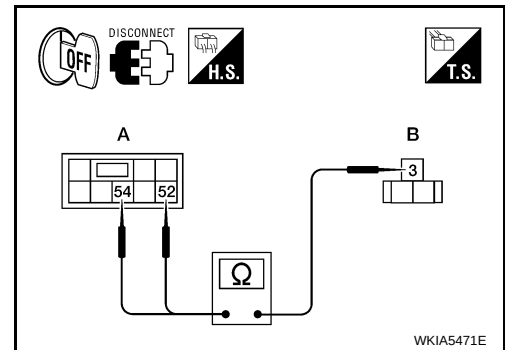
ⓈCONSULT-III

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

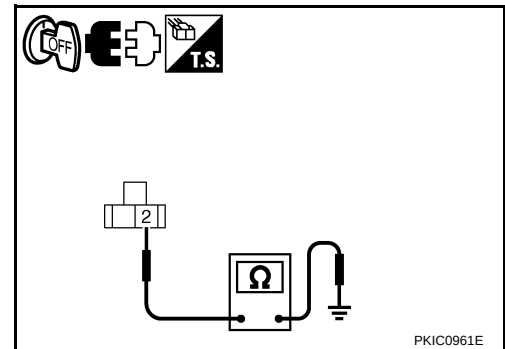
LO : Headlamp ON
OFF : Headlamp OFF

Is the headlamp turned ON?

- YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-39, "HEADLAMP (XENON) : Diagnosis Procedure".



WKIA5471E



PKIC0961E

HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (XENON) : Diagnosis Procedure

INFOID:000000001527570

1.CHECK HEADLAMP (LO) FUSES

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

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

Is the fuse open?

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

CONSULT-III

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

(+)			(-)	Voltage
Connector		Terminal		
LH	E25	3	Ground	Battery voltage
RH	E26	3		

Is the measurement value normal?

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

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

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

A			B		Continuity
Connector		Terminal	Connector	Terminal	
LH	E47	52	E25	3	Yes
RH		54	E26	3	

Does continuity exist?

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

4.CHECK HEADLAMP (LO) GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
LH	E25	1	Ground	Yes
RH	E26	1		

Does continuity exist?

- YES >> Inspect the headlamp bulb.

HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

NO >> Repair the harness.

FRONT FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

FRONT FOG LAMP CIRCUIT

Description

INFOID:000000001523265

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM via the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay to fuse 56 in the IPDM E/R and on to the front fog lamps.

Component Function Check

INFOID:000000001523266

1.CHECK FRONT FOG LAMP OPERATION

CONSULT-III

1. Select "FR FOG LAMP" of IPDM E/R EXTERNAL LAMPS active test item.
2. With test items operating, check that the front fog lamps are turned ON.

ON : Front fog lamp ON

OFF : Front fog lamp OFF

Is the front fog lamp turned ON?

- YES >> Front fog lamp circuit is normal.
NO >> Refer to [EXL-41, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001523267

1.CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	56	15A

Is the fuse open?

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

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT-III

1. Turn the ignition switch OFF.
2. Disconnect the front fog lamp connector.
3. Turn the ignition switch ON.
4. Select "FR FOG LAMP" of BCM active test item.
5. With FR FOG LAMP ON, check the voltage between the fog lamp connector and ground.

(+) Connector		Terminal	(-)	Voltage
LH	RH			
E27	E28	6	Ground	Battery voltage

Is the measurement value normal?

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

3.CHECK FRONT FOG LAMP OPEN CIRCUIT

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

FRONT FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

A		B		Continuity
Connector	Terminal	Connector	Terminal	
LH	E47	50	E27	Yes
RH		51	E28	

Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
LH	E27	7	Ground	Yes
RH	E28	7		

Does continuity exist?

YES >> Inspect the fog lamp bulb.

NO >> Repair the harness.

REAR FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

REAR FOG LAMP CIRCUIT

Description

INFOID:0000000001527571

The BCM (Body Control Module) controls power to the rear fog lamps based on inputs from the lighting switch (combination switch). The BCM sends a request (via CAN communication lines) to the combination meter to turn the rear fog lamp indicator light ON.

Component Function Check

INFOID:0000000001527572

1.CHECK REAR FOG LAMP OPERATION

CONSULT-III

1. Select "RR FOG LAMP" of BCM active test item.
2. With test items operating, check that the rear fog lamps are turned ON.

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

Is the rear fog lamp turned ON?

- YES >> Rear fog lamp circuit is normal.
NO >> Refer to [EXL-43, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000001527573

HATCHBACK

1.CHECK BCM POWER AND GROUND SUPPLY

Verify BCM power and ground supply. Refer to [BCS-30, "Diagnosis Procedure"](#).

Does BCM have proper power and ground?

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

2.CHECK REAR FOG LAMP OUTPUT VOLTAGE

CONSULT-III

1. Turn the ignition switch OFF.
2. Disconnect the rear fog lamp connector B89 and rear combination lamp LH connector B80.
3. Turn the ignition switch ON.
4. Select "RR FOG LAMP" of BCM active test item.
5. With RR FOG LAMP ON, check the voltage between the rear fog lamp connector B89 terminal 1, rear combination lamp LH connector B80 terminal 2 and ground.

(+) (−)		(−)	Voltage
Connector	Terminal		
B89	1	Ground	Battery voltage
B80	2		

Is battery voltage present?

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

3.CHECK REAR FOG LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM connector M20.
3. Check continuity between the BCM harness connector M20 (A) terminal 69 and the rear fog lamp harness connector B89 (B) terminal 1 and rear combination lamp LH connector B80 (C) terminal 2.

REAR FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

A		—		Continuity
Connector	Terminal	Connector	Terminal	
M20	69	B:B89	1	Yes
		C:B80	2	

Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4.CHECK REAR FOG LAMP GROUND CIRCUIT

1. Disconnect the rear fog lamp connector B89 and rear combination lamp LH connector B80.
2. Check continuity between the rear fog lamp connector B89 terminal 2 and rear combination lamp LH connector B80 terminal 1 and ground.

Connector	Terminal	—	Continuity
B89	2	Ground	Yes
B80	1		

Does continuity exist?

YES >> Inspect the fog lamp bulb.

NO >> Repair the harness.

SEDAN

1.CHECK BCM POWER AND GROUND SUPPLY

Verify BCM power and ground supply. Refer to [BCS-30. "Diagnosis Procedure"](#)

Does BCM have proper power and ground?

YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK REAR FOG LAMP OUTPUT VOLTAGE

ⓅCONSULT-III

1. Turn the ignition switch OFF.
2. Disconnect the rear fog lamp connector B89 and rear combination lamp RH connector B59.
3. Turn the ignition switch ON.
4. Select "RR FOG LAMP" of BCM active test item.
5. With RR FOG LAMP ON, check the voltage between the rear fog lamp connector B89 terminal 2, rear combination lamp RH connector B59 terminal 2 and ground.

(+) (+)			(-)	Voltage
Connector		Terminal		
Rear fog lamp	B89	2	Ground	Battery voltage
Rear combination lamp RH	B59	2		

Is battery voltage present?

YES >> GO TO 4

NO >> GO TO 3

3.CHECK REAR FOG LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM connector M20.
3. Check continuity between the BCM harness connector M20 (A) terminal 69 and the rear fog lamp harness connector B89 (B) terminal 2 and rear combination lamp RH connector B59 (C) terminal 2.

A		—		Continuity
Connector	Terminal	Connector	Terminal	

REAR FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

M20	69	B:B89	2	Yes
		C:B59	2	

Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4.CHECK REAR FOG LAMP GROUND CIRCUIT

1. Disconnect the rear fog lamp connector B89 and rear combination lamp RH connector B59.
2. Check continuity between the rear fog lamp connector B89 terminal 1 and rear combination lamp LH connector B59 terminal 1 and ground.

Connector	Terminal	—	Continuity
B89	1	Ground	Yes
B59	1		

Does continuity exist?

YES >> Inspect the fog lamp bulb.

NO >> Repair the harness.

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PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING LAMP CIRCUIT WITH DAYTIME LIGHT SYSTEM

WITH DAYTIME LIGHT SYSTEM : Description

INFOID:000000001523268

The IPDM E/R (Intelligent Power Distribution Module Engine Room) controls the daytime light relay based on inputs from the BCM via the CAN communication lines. When the daytime light relay is energized power flows to the front and rear combination lamps and the license plate lamps.

WITH DAYTIME LIGHT SYSTEM : Component Function Check

INFOID:000000001523269

1.CHECK PARKING LAMP OPERATION

CONSULT-III

1. Select "TAIL LAMP" of IPDM E/R active test item.
2. With test items operating, check that the parking lamps are turned ON.

ON : Parking lamp ON
OFF : Parking lamp OFF

Is the parking lamp turned ON?

- YES >> Parking lamp circuit is normal.
NO >> Refer to [EXL-46, "WITH DAYTIME LIGHT SYSTEM : Diagnosis Procedure"](#).

WITH DAYTIME LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000001523270

1.CHECK PARKING LAMP FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuse is not open.

Unit	Location	Fuse No.	Capacity
Daytime light relay (parking lamps)	Fuse and fusible link box	26	10A

Is the fuse open?

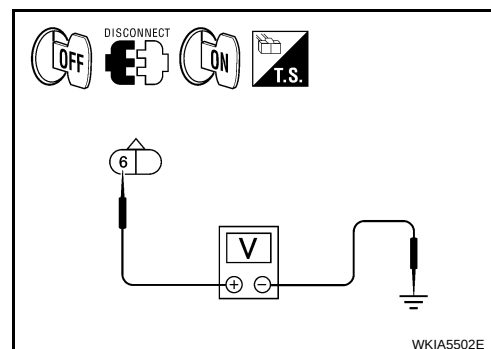
- YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

2.CHECK DAYTIME LIGHT RELAY OUTPUT (VOLTAGE)

CONSULT-III

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

(+) Front combination lamp connector		Terminal	(-)	Voltage
LH	E53	6	Ground	Battery voltage
RH	E54			



PARKING LAMP CIRCUIT

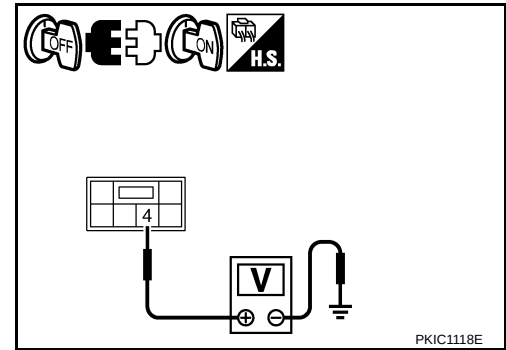
< COMPONENT DIAGNOSIS >

(+)			(-)	Voltage
License plate lamp connector		Terminal		
LH	A: B87 (hatchback) B: B62 (sedan)	1	Ground	Battery voltage
RH	A: B88 (hatchback) B: B63 (sedan)			

(+)		Terminal	(-)	Voltage
Rear combination lamp connector				
LH	B80	4	Ground	Battery voltage
RH	B59			

Is battery voltage present?

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



3.CHECK PARKING LAMP CIRCUIT (OPEN)

- Turn the ignition switch OFF.
- Disconnect daytime light relay connector E67.
- Check continuity between the daytime light relay harness connector E67 (A) and the front combination lamp harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
E67	3	LH	E53	Yes
		RH	B54	

- Check continuity between the daytime light relay harness connector E67 (A) and the license plate lamp harness connector (B)(hatchback) or (C)(sedan).

Connector	Terminal	Connector	Terminal	Continuity
A: E67	3	LH	B: B87 (hatchback) C: B62 (sedan)	Yes
		RH	B: B88 (hatchback) C: B63 (sedan)	

- Check continuity between the daytime light relay harness connector E67 (A) and the rear combination lamp harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
E67	3	LH	B80	Yes
		RH	B59	

Does continuity exist?

YES >> GO TO 4
NO >> Repair the daytime light relay, harness or connectors.

4.CHECK PARKING LAMP GROUND CIRCUIT

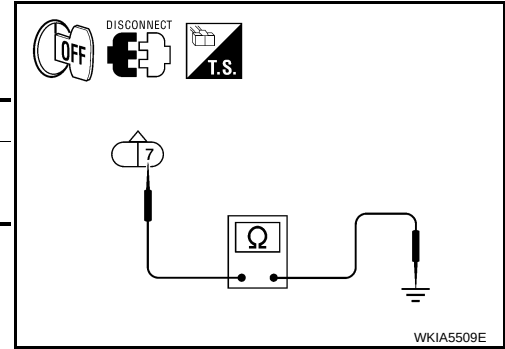
- Turn ignition switch OFF.

PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

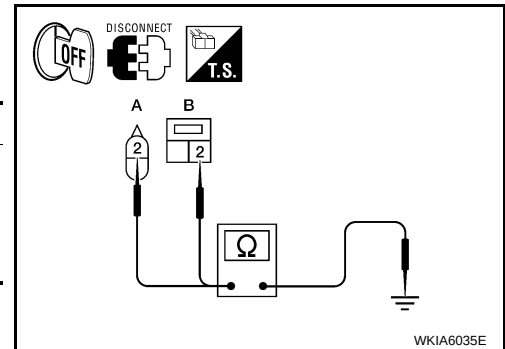
- Disconnect the front combination lamp connectors, rear combination lamp connectors or license plate lamp connectors.
- Check continuity between the front combination lamp harness connector terminal and ground.

Front combination lamp connector		Terminal	—	Continuity
LH	E53	7	Ground	Yes
RH	E54			



- Check continuity between the license plate lamp harness connector terminal and ground.

License plate lamp connector		Terminal	—	Continuity
LH	A: B87 (hatchback) B: B62 (sedan)	2	Ground	Yes
RH	A: B88 (hatchback) B: B63 (sedan)			

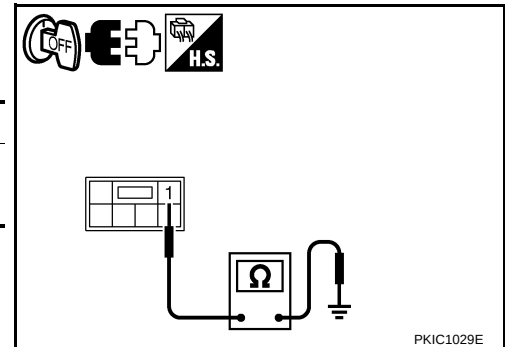


- Check continuity between the rear combination lamp harness connector terminal and ground.

Connector		Terminal	—	Continuity
LH	B80	1	Ground	Yes
RH	B59			

Does continuity exist?

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



WITHOUT DAYTIME LIGHT SYSTEM

WITHOUT DAYTIME LIGHT SYSTEM : Description

INFOID:000000001527574

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

WITHOUT DAYTIME LIGHT SYSTEM : Component Function Check

INFOID:000000001527575

1. CHECK PARKING LAMP OPERATION

CONSULT-III

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

ON : Parking lamp ON
OFF : Parking lamp OFF

Is the parking lamp turned ON?

- YES >> Parking lamp circuit is normal.
NO >> Refer to [EXL-49. "WITHOUT DAYTIME LIGHT SYSTEM : Diagnosis Procedure"](#).

PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

WITHOUT DAYTIME LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000001527577

1.CHECK PARKING LAMP FUSE

1. Turn the ignition switch OFF.
2. Check that the following fuse is not open.

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

Is the fuse open?

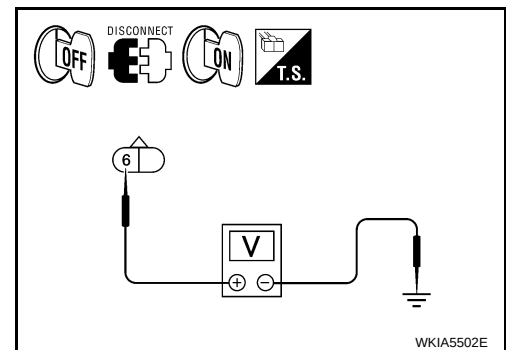
- YES >> Repair the harness and replace the fuse.
NO >> GO TO 2

2.CHECK TAIL LIGHT RELAY OUTPUT (VOLTAGE)

CONSULT-III

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

(+) Front combination lamp connector		Terminal	(-) Ground	Voltage
LH	E53	6	Ground	Battery voltage
RH	E54			



(+) License plate lamp connector		Terminal	(-) Ground	Voltage
LH	A: B87 (hatchback) B: B62 (sedan)	1	Ground	Battery voltage
RH	A: B88 (hatchback) B: B63 (sedan)			

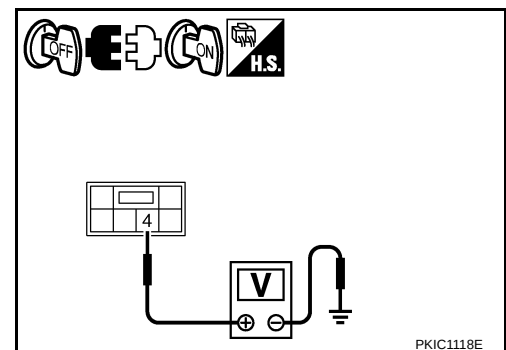
(+) Front combination lamp connector		Terminal	(-) Ground	Voltage
LH	B80	4	Ground	Battery voltage
RH	B59			

Is battery voltage present?

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

3.CHECK PARKING LAMP CIRCUIT (OPEN)

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.



PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
E45	27	LH	E53	Yes
		RH	B54	

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

Connector	Terminal	Connector		Terminal	Continuity
A: E45	29	LH	B: B87 (hatchback) C: B62 (sedan)	1	Yes
		RH	B: B88 (hatchback) C: B63 (sedan)		

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
E45	29	LH	B80	Yes
		RH	B59	

Does continuity exist?

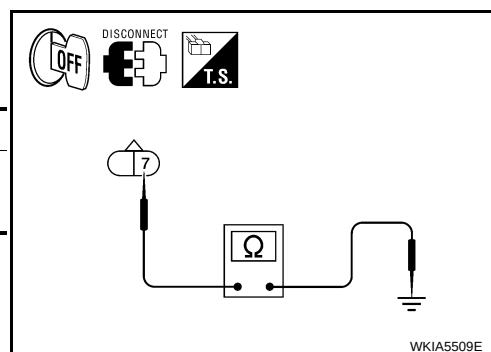
YES >> GO TO 4

NO >> Repair the daytime light relay, harness or connectors.

4. CHECK PARKING LAMP GROUND CIRCUIT

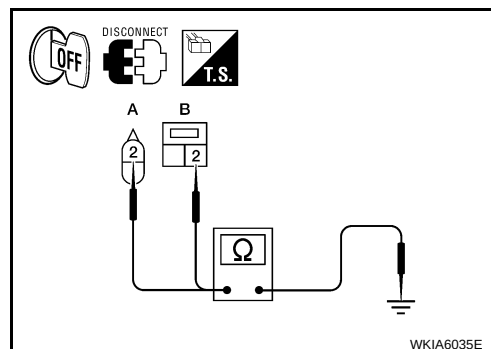
- Turn ignition switch OFF.
- Disconnect the front combination lamp connectors, rear combination lamp connectors or license plate lamp connectors.
- Check continuity between the front combination lamp harness connector terminal and ground.

Front combination lamp connector		Terminal	—	Continuity
LH	E53	7	Ground	Yes
RH	E54			



- Check continuity between the license plate lamp harness connector terminal and ground.

License plate lamp connector		Terminal	—	Continuity
LH	A: B87 (hatchback) B: B62 (sedan)	2	Ground	Yes
RH	A: B88 (hatchback) B: B63 (sedan)			



PARKING LAMP CIRCUIT

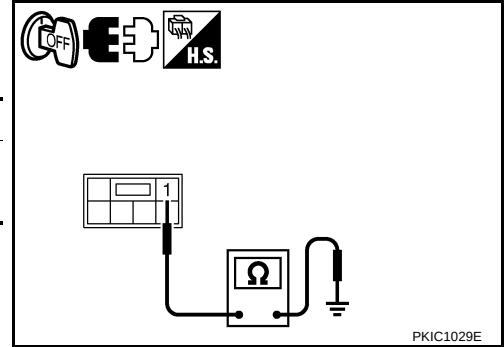
< COMPONENT DIAGNOSIS >

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

Connector		Terminal	—	Continuity
LH	B80	1	Ground	Yes
RH	B59			

Does continuity exist?

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



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TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:000000001523271

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage directly to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.

The BCM performs the fast flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.

NOTE:

Turn signal lamps blink at normal speed when using the hazard warning lamp.

Component Function Check

INFOID:000000001523272

1.CHECK TURN SIGNAL LAMP

CONSULT-III

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

LH : Turn signal lamp LH blinking

RH : Turn signal lamp RH blinking

OFF : The turn signal lamp OFF

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to [EXL-52, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001523273

1.CHECK TURN SIGNAL LAMP BULB

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

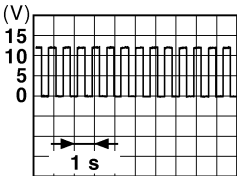
Is the bulb OK?

YES >> GO TO 2

NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector, the rear combination lamp connector and the side turn signals.
3. Turn the ignition switch ON.
4. With the turn signal switch operating, check voltage between the BCM harness connector M20 and ground.

(+) Connector		Terminal	(-)	Voltage
M20	LH	65	Ground	
	RH	66		

PKID0926E

Is the measurement value normal?

YES >> GO TO 3

NO >> Replace BCM.

TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

3.CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

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

A		B		Continuity
Connector	Terminal	Connector	Terminal	
Front LH	M20	65	E29 (hallogen headlamps)	Yes
			E25 (xenon headlamps)	
Front RH	M20	66	E30 (hallogen headlamps)	
			E26 (xenon headlamps)	

4. Check the continuity between the BCM harness connector M20 and the side turn signals.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
Side LH	M20	65	E56	Yes
Side RH		66	E57	

5. Check the continuity between the BCM harness connector M20 and the rear combination lamps.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
Rear LH	M20	65	B80	Yes
Rear RH		66	B59	

Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4.CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector M20 and ground.

Connector		Terminal	—	Continuity
LH	M20	65	Ground	No
RH		66		

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5

5.CHECK TURN SIGNAL LAMP GROUND CIRCUIT

Check continuity between the front combination lamp, the rear combination lamp or the side turn signal and ground.

Connector	Terminal	—	Continuity
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TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

Front LH	E29 (halogen headlamps)	5	Ground	Yes
	E25 (xenon headlamps)	2		
Rear LH	B80	1		
Side LH	E56	2		
Front RH	E30 (halogen headlamps)	5		
	E26 (xenon headlamps)	2		
Rear RH	B59	1		
Side RH	E57	2		

Does continuity exist?

- YES >> Replace the front combination lamp, side turn signal lamp or the rear combination lamp.
 NO >> Repair the harnesses or connectors.

LIGHT & RAIN SENSOR

< COMPONENT DIAGNOSIS >

LIGHT & RAIN SENSOR

Description

INFOID:000000001523274

The light and rain sensor converts outside light (lux) to voltage and transmits the light and rain sensor signal to the BCM.

Component Function Check

INFOID:000000001523275

1.CHECK LIGHT AND RAIN SENSOR SIGNAL BY CONSULT-III

CONSULT-III

1. Turn the ignition switch ON.
2. Select "LIT-SEN FAIL" of BCM (HEAD LAMP) DATA MONITOR item.
3. Check the monitor status.

Monitor item	Condition
LIT-SEN FAIL	OK
	NOT OK

Is the item status OK?

- YES >> Light and rain sensor is OK.
NO >> Refer to [EXL-55, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000001523276

1.CHECK LIGHT AND RAIN SENSOR POWER SUPPLY

1. Turn the ignition switch ON.
2. Check the voltage between the light and rain sensor harness connector and ground.

(+) Connector Terminal		(-) Ground	Voltage 12V
R11	1	Ground	12V

Is the voltage as specified?

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

2.CHECK LIGHT AND RAIN SENSOR GROUND CIRCUIT

Check the voltage between the light and rain sensor harness connector R11 terminal 3 and ground.

(+) Connector Terminal		(-) Ground	Voltage Less than 0.2 V
R11	3	Ground	Less than 0.2 V

Is the voltage as specified?

- YES >> GO TO 3
NO >> Repair the harness or connector.

3.CHECK LIGHT AND RAIN SENSOR SIGNAL FOR OPEN OR SHORT CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the light and rain sensor connector R11 and BCM connector M19.
3. Check continuity between the light and rain sensor harness connector R11 (A) terminal 2 and the BCM harness connector M19 (B) terminal 63.

LIGHT & RAIN SENSOR

< COMPONENT DIAGNOSIS >

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R11	2	M19	63	Yes

4. Check continuity between the light and rain sensor harness connector R11 (A) terminal 2 and ground.

A		—	Continuity
Connector	Terminal		
R11	2	Ground	No

Are the continuity check results as specified?

YES >> Replace the light and rain sensor.

NO >> Repair harness or connector.

4. CHECK LIGHT AND RAIN SENSOR POWER SUPPLY FOR OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the light and rain sensor connector R11 and BCM connector M20.
3. Check continuity between the light and rain sensor harness connector R11 (A) terminal 1 and the BCM harness connector M20 (B) terminal 73.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
R11	1	M20	73	Yes

Are continuity check results as specified?

YES >> Replace the BCM.

NO >> Repair the harnesses or connectors.

HEADLAMP AIMER SWITCH

< COMPONENT DIAGNOSIS >

HEADLAMP AIMER SWITCH

Description

INFOID:000000001532097

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

Diagnosis Procedure

INFOID:000000001532099

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

1. Turn ignition switch OFF.
2. Disconnect headlamp aimer switch connector M56, headlamp aimer motor LH connector E36 and headlamp aimer motor RH connector E37.
3. Check continuity between the headlamp aimer switch connector M56 (A) terminal 1 and headlamp aimer motor LH E37 and RH E36 (B) terminal 2.

A		B	Continuity
Connector	Terminal		
M56	1	Ground	Yes

4. Check continuity between the headlamp aimer switch connector M56 (A) terminal 1 and ground.

A		—	Continuity
Connector	Terminal		
M56	1	Ground	No

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair the harness or connector.

2.CHECK HEADLAMP AIMER SWITCH

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

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

Are the continuity check results as specified?

YES >> GO TO 3

NO >> Replace the headlamp aimer switch.

3.CHECK HEADLAMP AIMER SWITCH GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect headlamp aimer switch connector M56.
3. Check continuity between headlamp aimer switch connector M56 terminal 2 and ground.

Connector	Terminal	—	Continuity
M56	2	Ground	Yes

Is continuity as specified?

YES >> Inspect headlamp aimer motors.

NO >> Repair harness or connector.

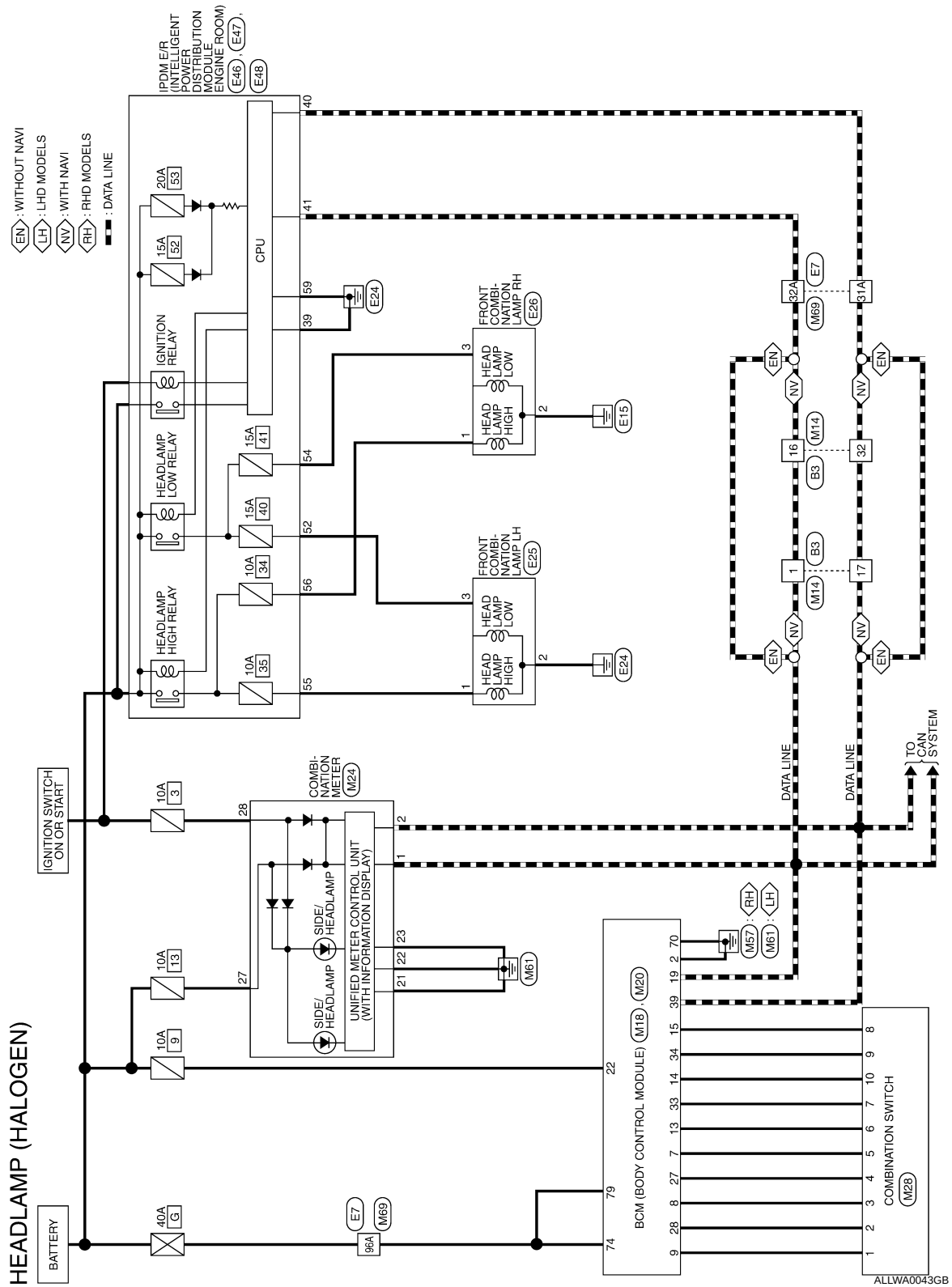
HEADLAMP (HALOGEN)

< COMPONENT DIAGNOSIS >

HEADLAMP (HALOGEN)

Wiring Diagram

INFOID:000000001523277



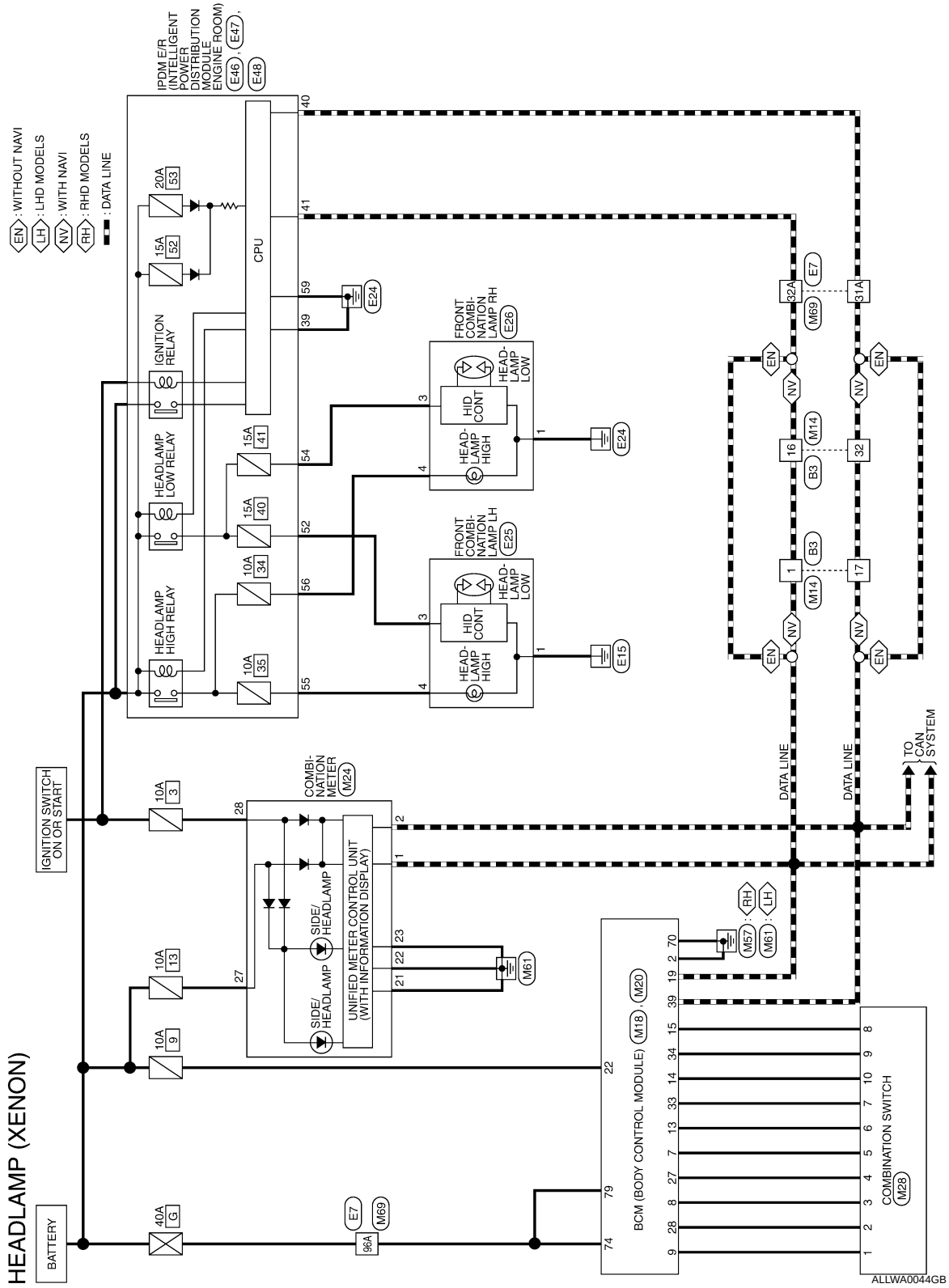
HEADLAMP (XENON)

< COMPONENT DIAGNOSIS >

HEADLAMP (XENON)

Wiring Diagram

INFOID:000000001527578



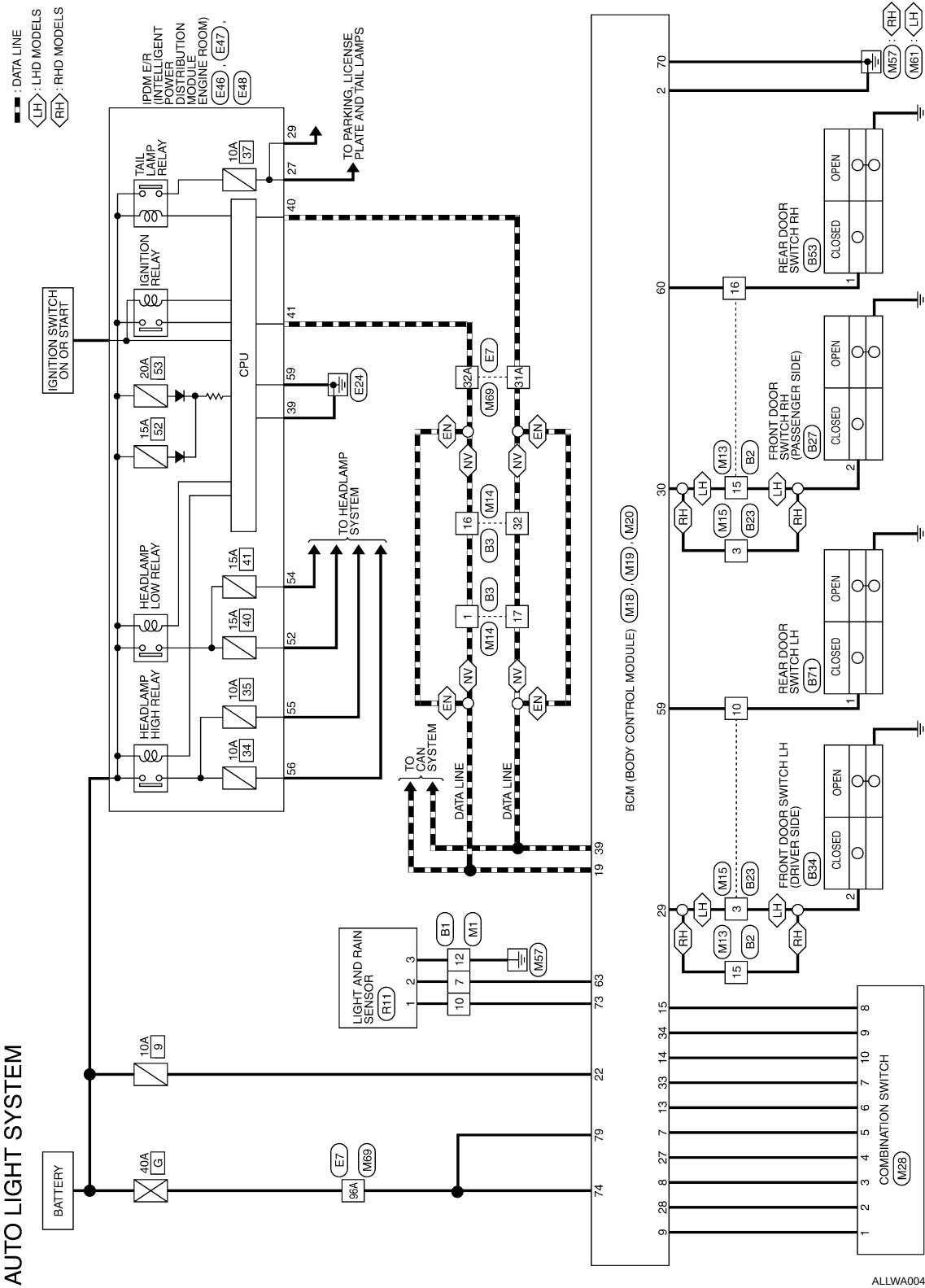
AUTO LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:000000001523279



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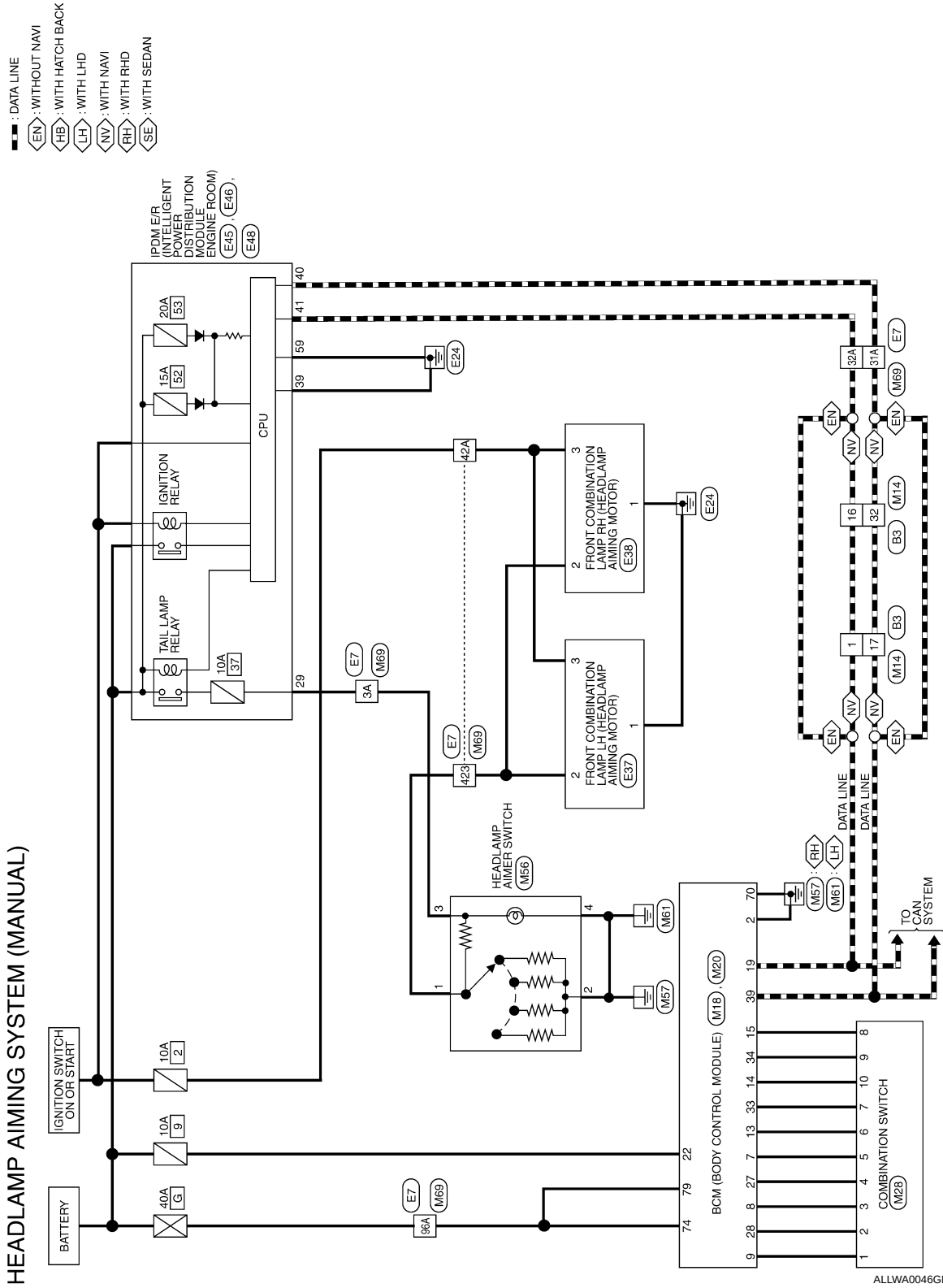
HEADLAMP AIMING SYSTEM (MANUAL)

< COMPONENT DIAGNOSIS >

HEADLAMP AIMING SYSTEM (MANUAL)

Wiring Diagram

INFOID:000000001527579



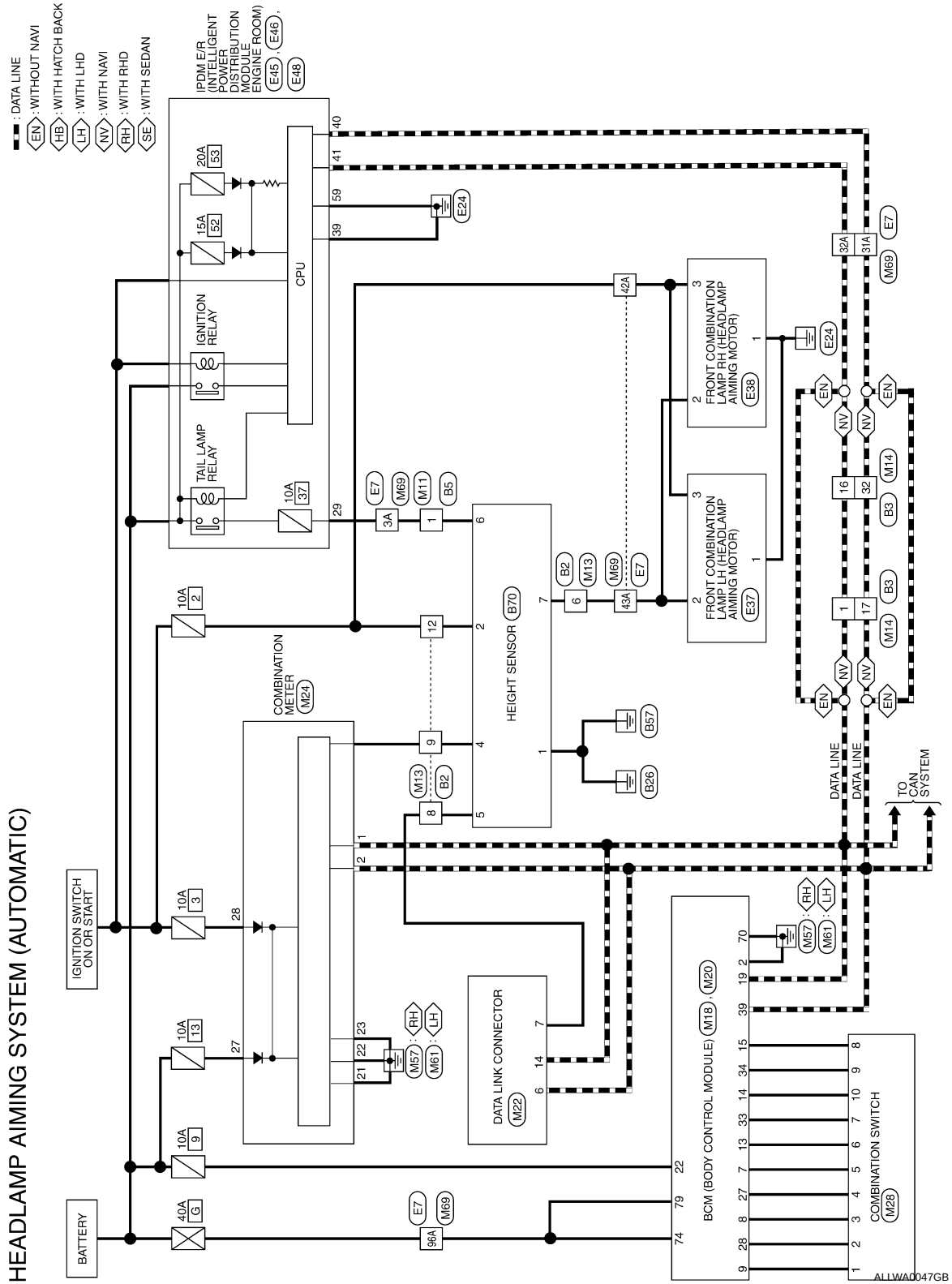
HEADLAMP AIMING SYSTEM (AUTOMATIC)

< COMPONENT DIAGNOSIS >

HEADLAMP AIMING SYSTEM (AUTOMATIC)

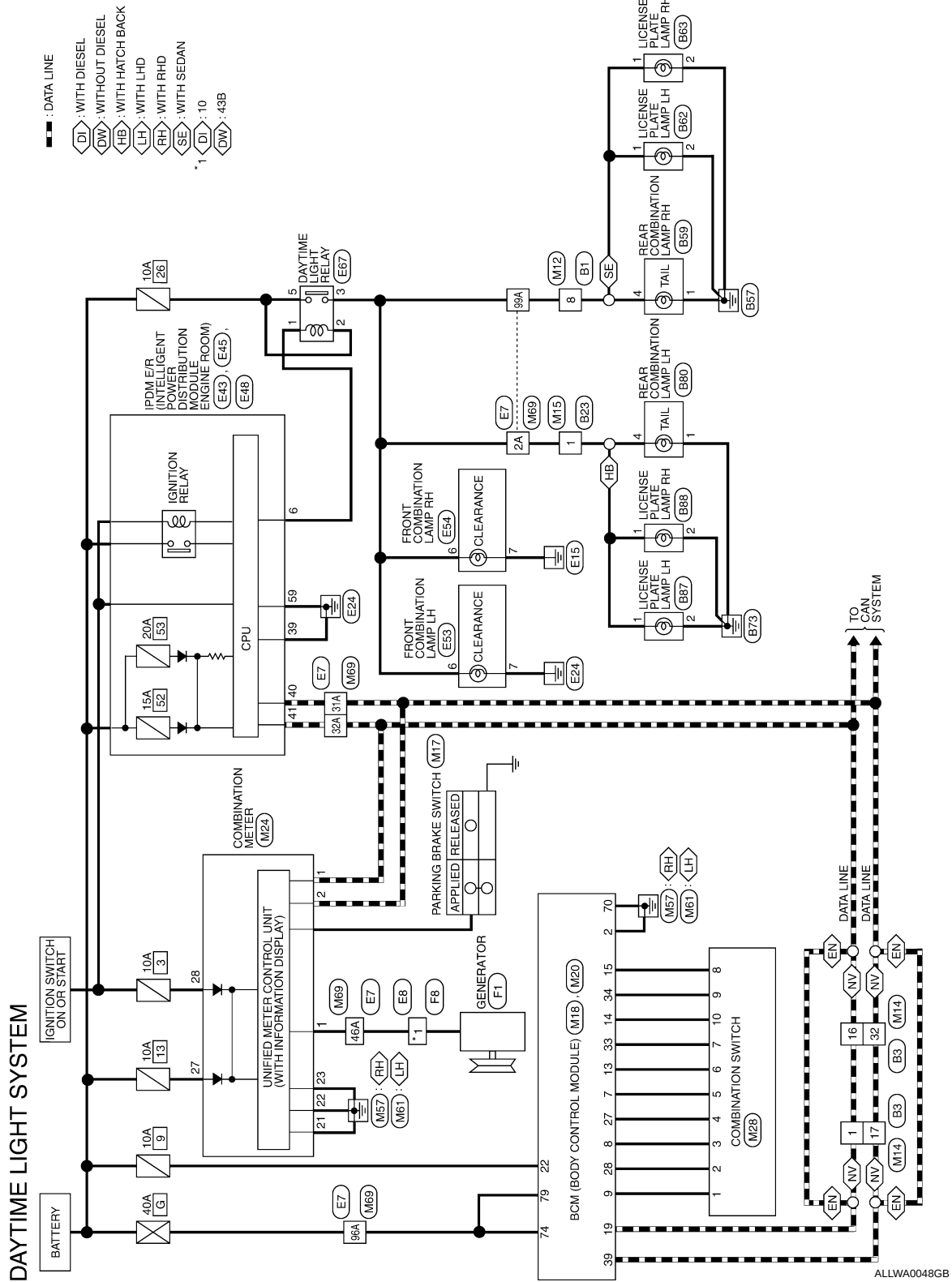
Wiring Diagram

INFOID:000000001527580



Wiring Diagram

INFOID:0000000001523278



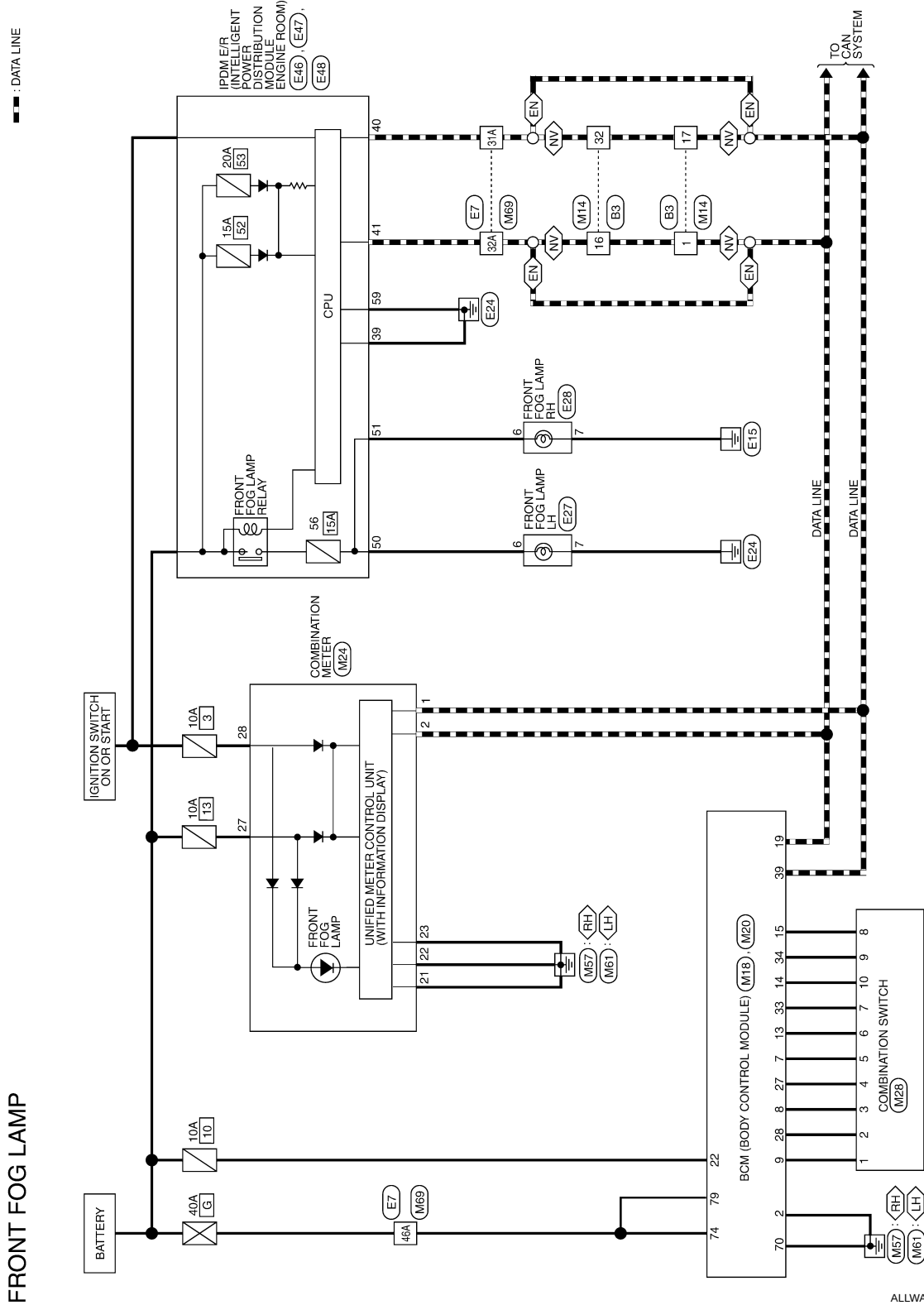
FRONT FOG LAMP

< COMPONENT DIAGNOSIS >

FRONT FOG LAMP

Wiring Diagram

INFOID:000000001523280



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REAR FOG LAMP

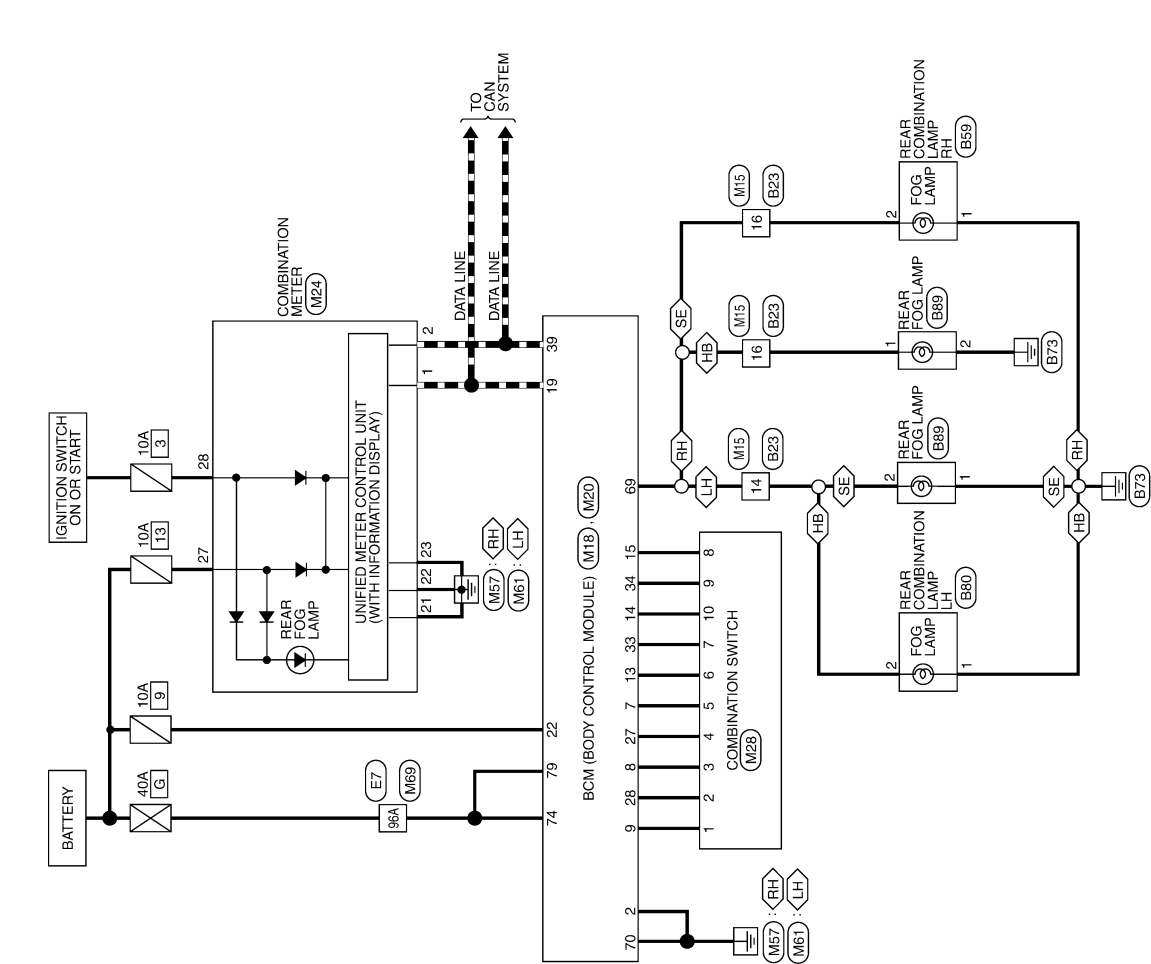
< COMPONENT DIAGNOSIS >

REAR FOG LAMP

Wiring Diagram

INFOID:000000001527582

■ : DATA LINE
 HB : WITH HATCH BACK
 LH : WITH LHD
 RH : WITH RHD
 SE : WITH SEDAN



REAR FOG LAMP

ALLWA0050GB

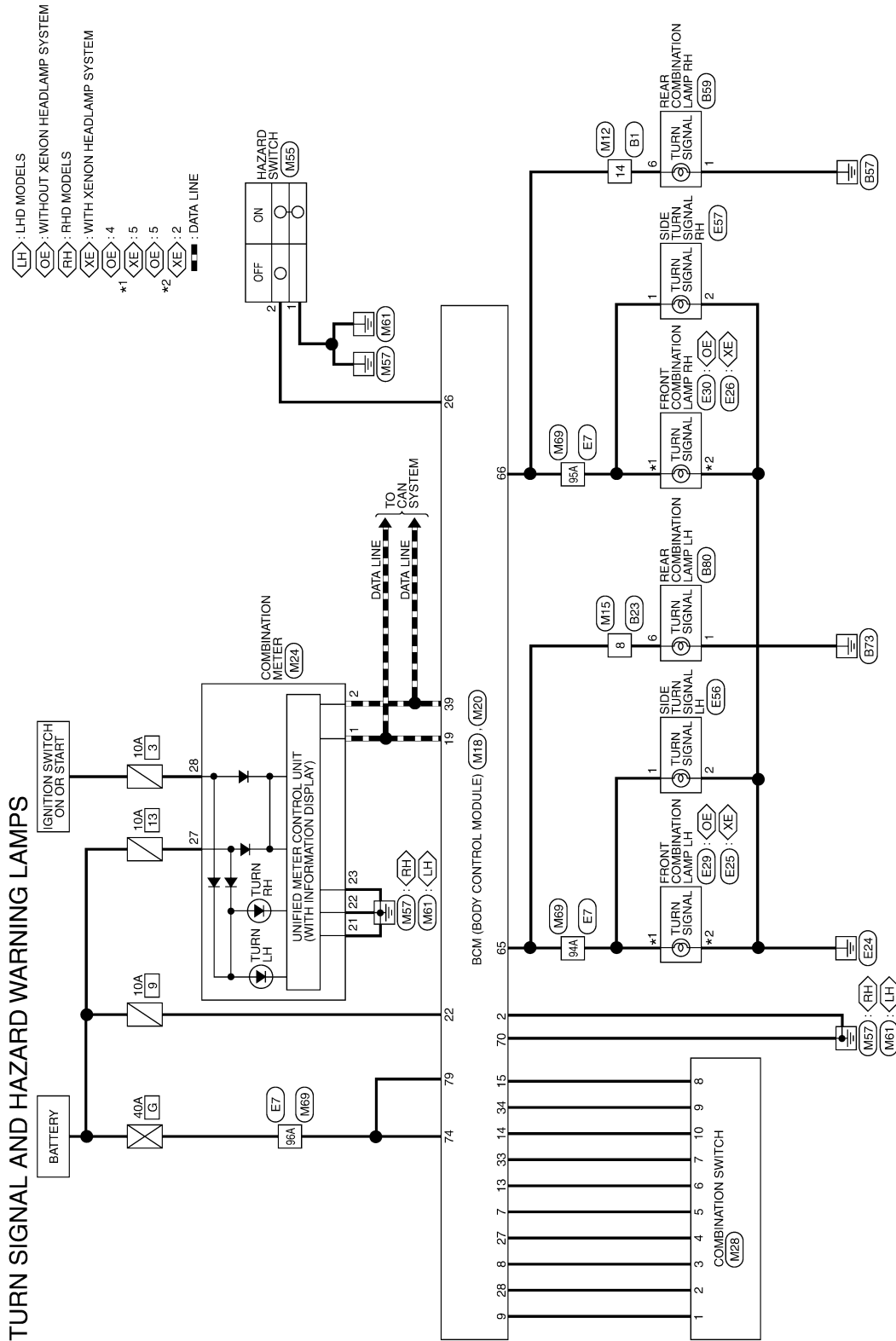
TURN SIGNAL AND HAZARD WARNING LAMPS

< COMPONENT DIAGNOSIS >

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram

INFOID:000000001523281



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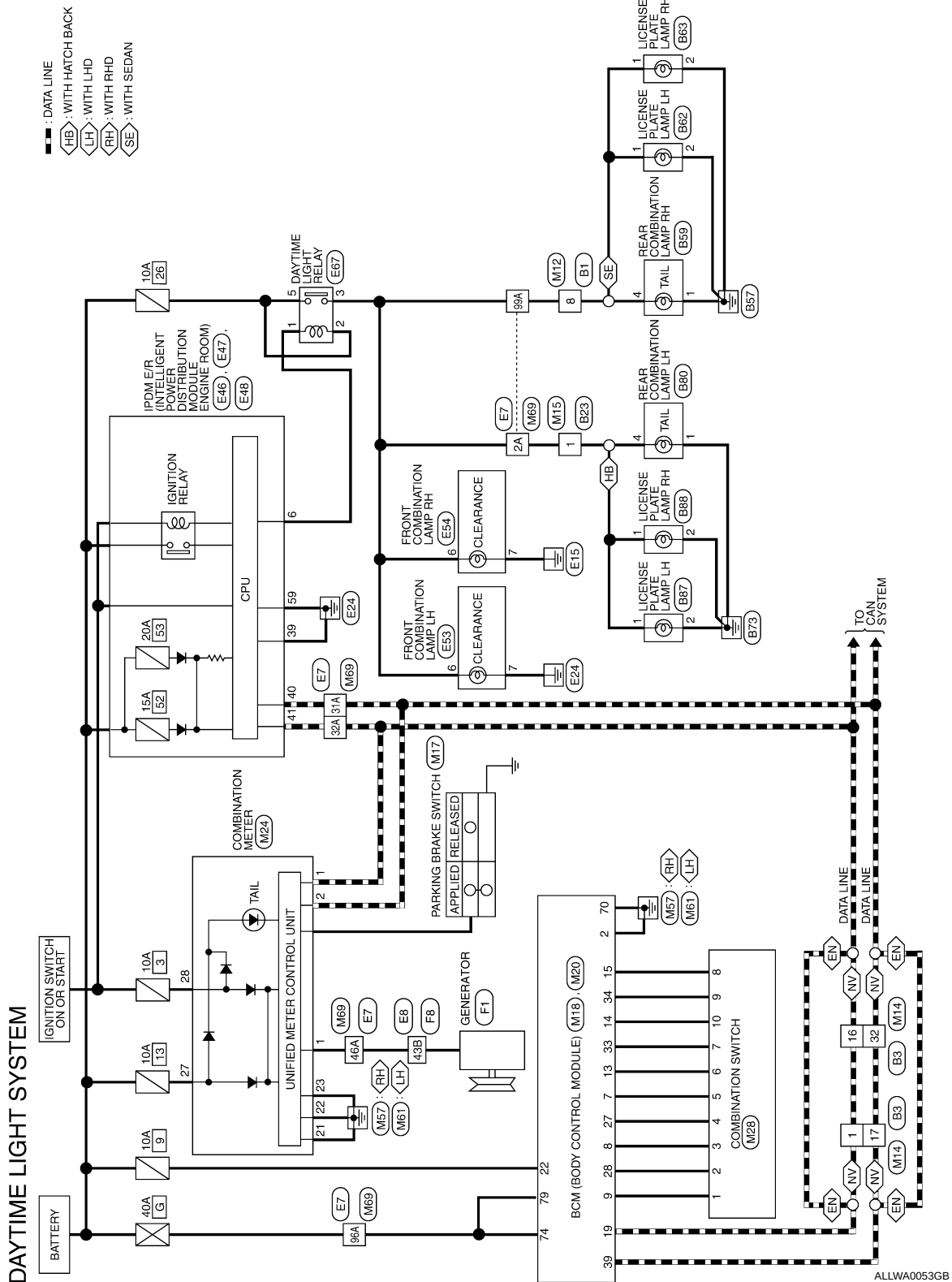
PARKING, LICENSE PLATE AND TAIL LAMPS

< COMPONENT DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS WITH DAYTIME LIGHT SYSTEM

WITH DAYTIME LIGHT SYSTEM : Wiring Diagram

INFOID:000000001523282

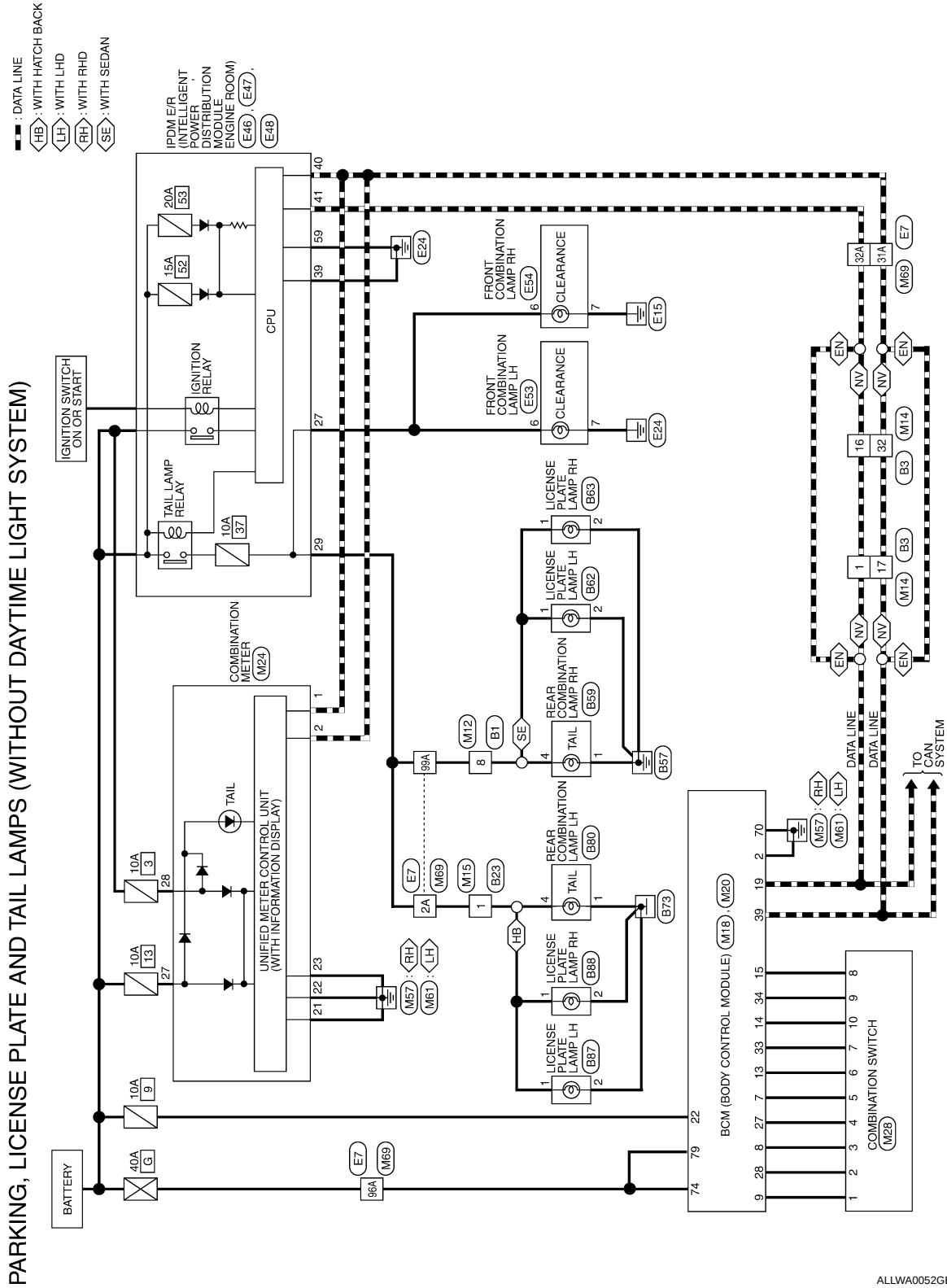


PARKING, LICENSE PLATE AND TAIL LAMPS

< COMPONENT DIAGNOSIS >

WITHOUT DAYTIME LIGHT SYSTEM : Wiring Diagram

INFOID:000000001527581



ALLWA0052GB

STOP LAMP

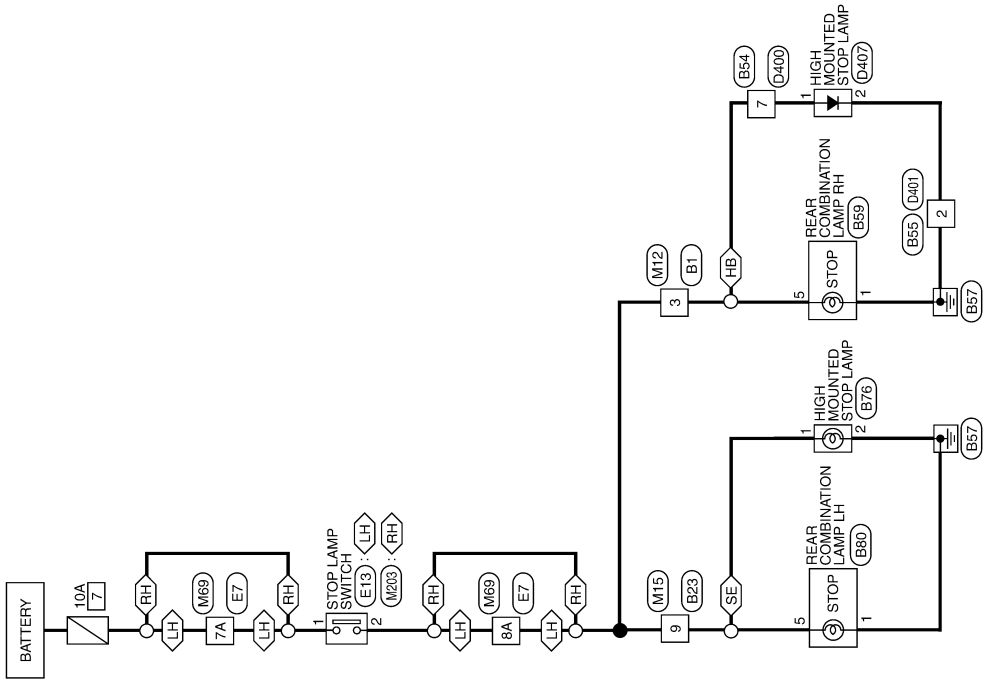
< COMPONENT DIAGNOSIS >

STOP LAMP

Wiring Diagram

INFOID:000000001523283

- HB : WITH HATC BACK
- LH : WITH LHD
- RH : WITH RHD
- SE : WITH SEDAN



STOP LAMP

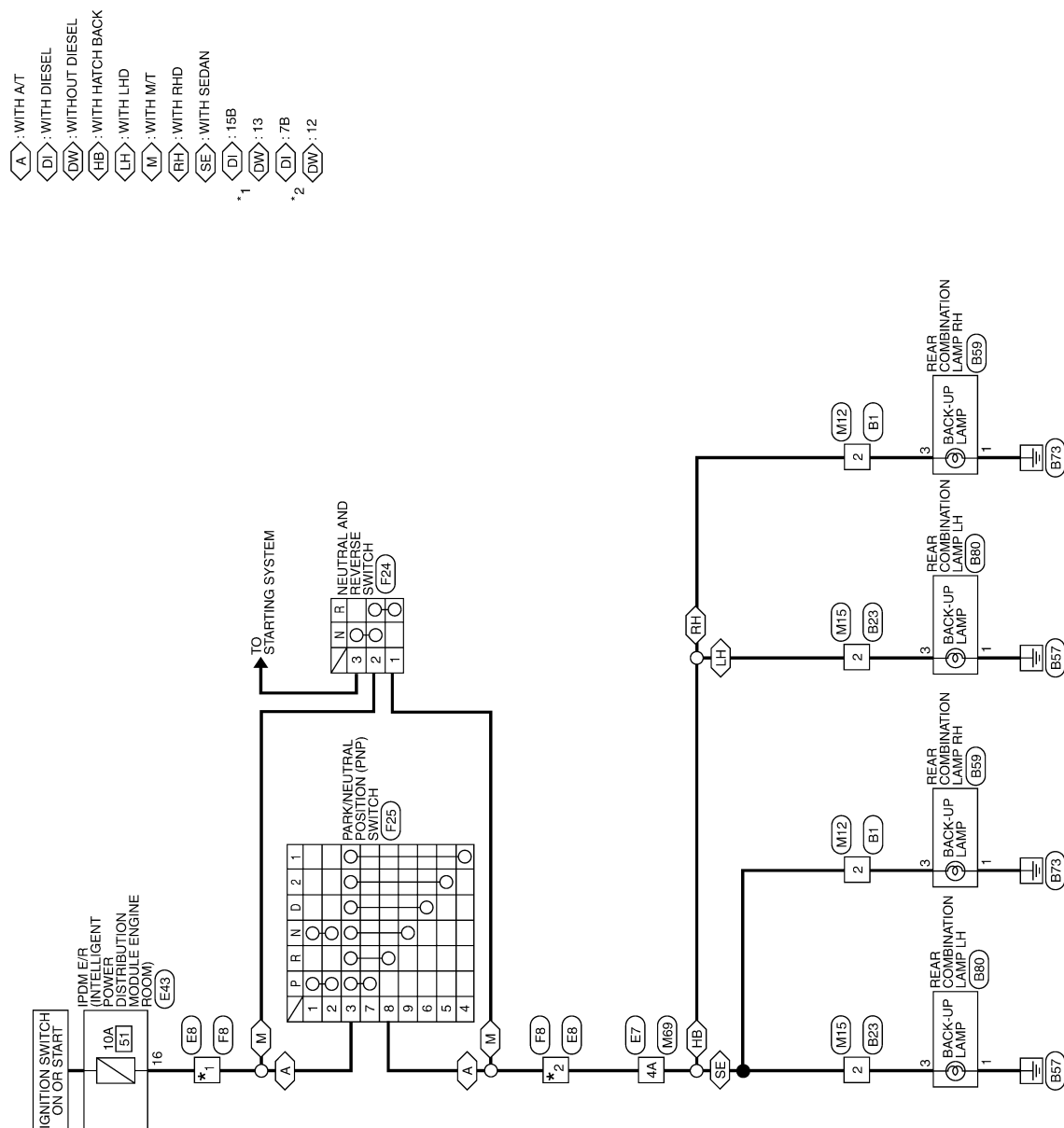
EXL

EXL-70

BACK-UP LAMP

BACK-UP LAMP

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Description

INFOID:000000001523285

REFERENCE VALUES FOR BCM

For BCM reference values, refer to XX-XX, "*****".

TERMINAL LAYOUT FOR BCM

For the terminal layout for the BCM, refer to XX-XX, "*****".

PHYSICAL VALUES FOR BCM

For physical values for the BCM, refer to XX-XX, "*****".

WIRING DIAGRAM - BCM

For the BCM wiring diagram, refer to XX-XX, "*****".

FAIL SAFE - BCM

For BCM fail safe information, refer to XX-XX, "*****".

DTC INSPECTION PRIORITY CHART - BCM

For the BCM DTC inspection priority chart, refer to XX-XX, "*****".

DTC INDEX - BCM

For the BCM DTC index, refer to XX-XX, "*****".

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EXL

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

< ECU DIAGNOSIS >

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

Description

INFOID:0000000001523286

REFERENCE VALUES FOR IPDM E/R

For IPDM E/R reference values, refer to XX-XX, "*****".

TERMINAL LAYOUT FOR IPDM E/R

For the terminal layout for the IPDM E/R, refer to XX-XX, "*****".

PHYSICAL VALUES FOR IPDM E/R

For physical values for the IPDM E/R, refer to XX-XX, "*****".

WIRING DIAGRAM - IPDM E/R

For the IPDM E/R wiring diagram, refer to XX-XX, "*****".

FAIL SAFE - IPDM E/R

For IPDM E/R fail safe information, refer to XX-XX, "*****".

DTC INSPECTION PRIORITY CHART - IPDM E/R

For the IPDM E/R DTC inspection priority chart, refer to

DTC INDEX - IPDM E/R

For the IPDM E/R DTC index, refer to XX-XX, "*****".

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:000000001523287

CAUTION:

Perform the self-diagnosis with CONSULT-III before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	- Fuse - Harness between IPDM E/R and the front combination lamp - Front combination lamp (High beam relay) - IPDM E/R	Headlamp (HI) circuit Refer to EXL-33 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-76 .	
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		- Combination meter - BCM	- Combination meter. Data monitor "HI-BEAM IND" - BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	Front combination lamp (Low beam relay)	—
	Both sides	- Combination switch - Harness between the combination switch and BCM - BCM	Combination switch Refer to XX-XX . ^{1)******11} .
		High beam request signal	IPDM E/R Data monitor "HL HI REQ"
		IPDM E/R	—
Headlamp does not turn ON.	One side	- Fuse - Bulb - Harness between IPDM E/R and the front combination lamp - Front combination lamp - IPDM E/R	Headlamp (LO) circuit Refer to EXL-37 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-77 , "Description".	
Headlamp does not turn OFF.	When the ignition switch is turned ON	- BCM - Combination switch	Combination switch Refer to XX-XX . ^{1)******11} .
	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	—
Headlamp is not turned ON/OFF with the lighting switch AUTO.		- Combination switch - Harness between the combination switch and BCM - BCM	Combination switch Refer to XX-XX . ^{1)******11} .
		- Light & rain sensor - Harness between the light & rain sensor and BCM - BCM	light & rain sensor Refer to EXL-55 .

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom		Possible cause	Inspection item
Daytime light system does not activate.		• Either high beam bulb • Parking brake switch • Combination switch • BCM • IPDM E/R • Daytime light relay • Harness between IPDM E/R and daytime light relay.	Daytime light system description. Refer to XX-XX, "*****" .
Front fog lamp is not turned ON.	One side	• Front fog lamp bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R	Front fog lamp circuit Refer to EXL-41 .
	Both side	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-79 .	
Parking lamp is not turned ON.	One side	• Fuse • Parking lamp bulb • Harness between IPDM E/R and the front/rear combination lamp • Front/rear combination lamp • IPDM E/R	Parking lamp circuit Refer to EXL-46 .
	Both sides	Symptom diagnosis "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-78 .	
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	• Harness between BCM and each turn signal lamp • Turn signal lamp bulb • Door mirror (if equipped with turn signals in the door mirrors)	Turn signal lamp circuit Refer to EXL-52 .
Turn signal indicator lamp does not blink.	One side	Combination meter	—
	Both sides (Always)	• Turn signal indicator lamp signal • Combination meter • BCM	• Combination meter. • Data monitor "TURN IND" • BCM (FLASHER) • Active test "FLASHER"
	Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)	• The combination meter power supply and the ground circuit • Combination meter	Combination meter Power supply and the ground circuit Refer to XX-XX, "*****" .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

INFOID:000000001523288

AUTO LIGHT SYSTEM

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

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BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:000000001523289

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

Diagnosis Procedure

INFOID:000000001523290

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to XX-XX, "*****".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

ⒺCONSULT-III DATA MONITOR

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

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to XX-XX, "*****".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-33, "HEADLAMP (HALOGEN) : Description".

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to XX-XX, "*****".

NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:000000001523291

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

Diagnosis Procedure

INFOID:000000001523292

1.CHECK COMBINATION SWITCH

Check the combination switch. Refer to XX-XX, "*****".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

CONSULT-III DATA MONITOR

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

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to XX-XX, "*****".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-37. "HEADLAMP (HALOGEN) : Description".

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to XX-XX, "*****".

NO >> Repair or replace the malfunctioning part.

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EXL

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000001523293

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

Diagnosis Procedure

INFOID:0000000001523294

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to XX-XX, "*****".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

ⒺCONSULT-III DATA MONITOR

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

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to XX-XX, "*****".

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-46, "WITH DAYTIME LIGHT SYSTEM : Description".

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to XX-XX, "*****".

NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000001523295

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

Diagnosis Procedure

INFOID:0000000001523296

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to XX-XX, "*****".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

CONSULT-III DATA MONITOR

1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.

2. With operating the front fog lamp switch, check the monitor status.

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to XX-XX, "*****".

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-41, "Description".

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to XX-XX, "*****".

NO >> Repair or replace the malfunctioning part.

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001530389

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. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

HEADLAMP

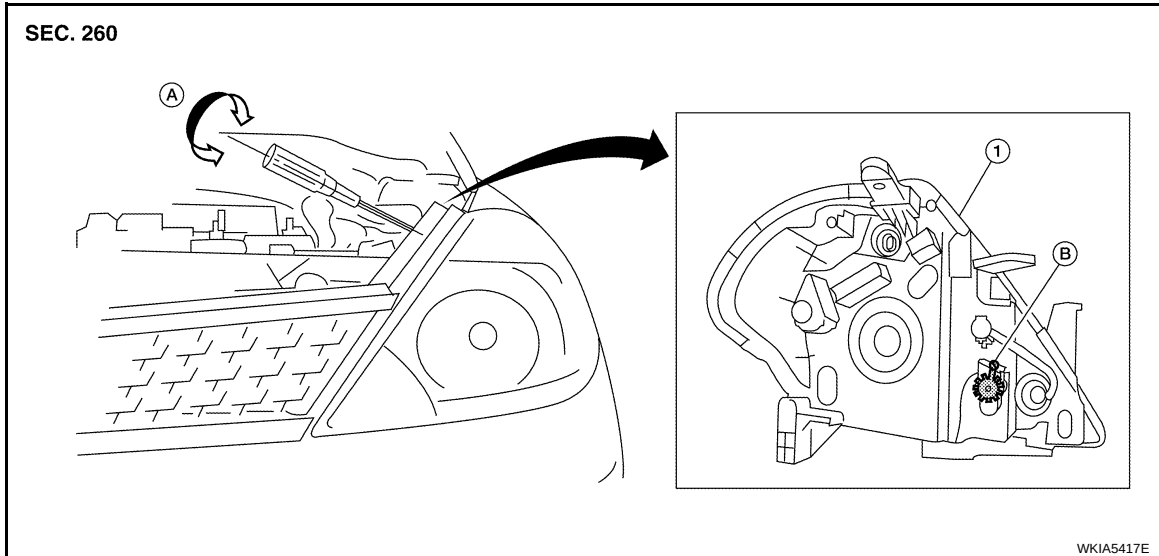
< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

HEADLAMP

Aiming Adjustment

INFOID:000000001529251



1. Headlamp

A. Inner and outer adjustment

B. Adjusting screw

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following.

1. Keep all tires inflated to correct pressures.
2. Place vehicle on level surface.
3. Set 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.

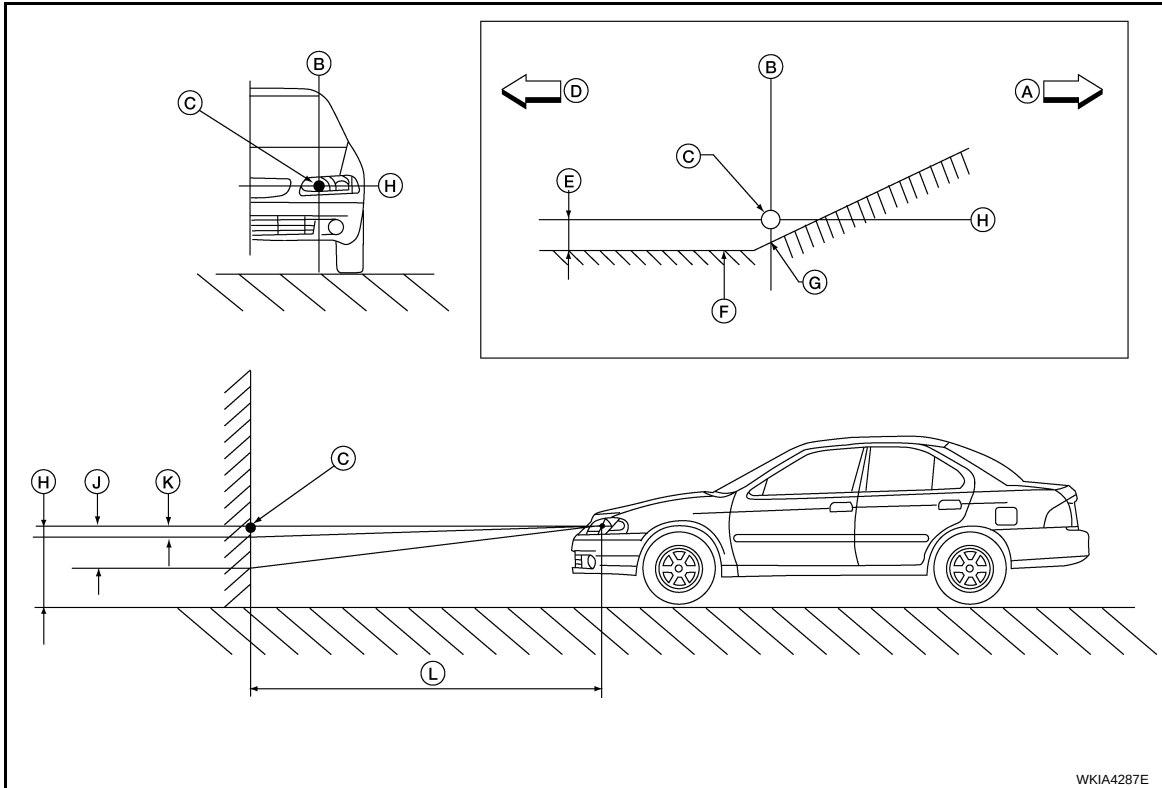
LOW BEAM AND HIGH BEAM

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

ADJUSTMENT USING AN ADJUSTMENT SCREEN (LIGHT/DARK BORDERLINE)

HEADLAMP

< ON-VEHICLE MAINTENANCE >



WKIA4287E

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

- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.
- For horizontal headlamp aiming, adjust headlamp until beam pattern is at horizontal center point.
- For vertical headlamp aiming, adjust headlamp until beam pattern is positioned per specified dimensions.

Description	Halogen Headlamp	Xenon Headlamp
Vertical aiming cutoff point (E)	104.8 mm (4.126 in)	120 mm (4.72 in)
Minimum acceptable vertical aiming point (K)	95.6 mm (3.764 in)	120 mm (4.72 in)
Maximum acceptable vertical aiming point (J)	119.1 mm (4.689 in)	150 mm (5.91 in)
Aiming distance from center of headlamp to aiming screen (L)	7.62 m (25 ft)	10,000 mm (393.70 in)

FRONT FOG LAMP

< ON-VEHICLE MAINTENANCE >

FRONT FOG LAMP

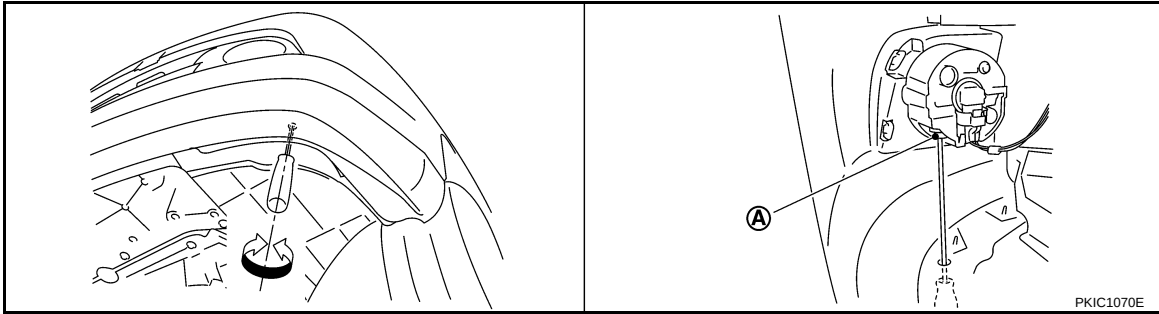
Aiming Adjustment

INFOID:000000001529283

The front 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 surface.
- Set 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.

Adjust aiming in the vertical direction by turning the adjusting screw (A).

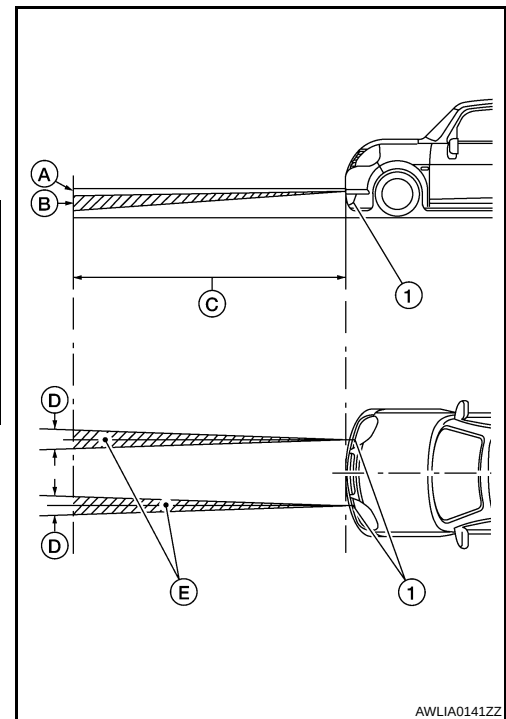


1. Set the distance (C) between the screen and the center of front fog lamp lens (E) as shown.
2. Turn front fog lamps (1) to ON.
3. Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone (A) is as shown.

Aiming distance from center of fog lamp to screen (C)	25,000 mm (984.3 in)
Foglamp beam width (D)	870 mm (34.3 in)
Horizontal distance from lamp center line to the top of edge of high intensity zone (A)	200 mm (7.9 in)
Horizontal distance from bottom edge to top edge of high intensity zone (B)	21.75 mm (0.9 in)

NOTE:

When performing adjustment, if necessary, cover the headlamps and opposite front fog lamp.



HEADLAMP

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

HEADLAMP

Bulb Replacement

INFOID:000000001529252

HEADLAMP - HALOGEN (HIGH/LOW)

CAUTION:

After installing the halogen bulb, install the back cover and bulb socket securely to ensure a water tight seal.

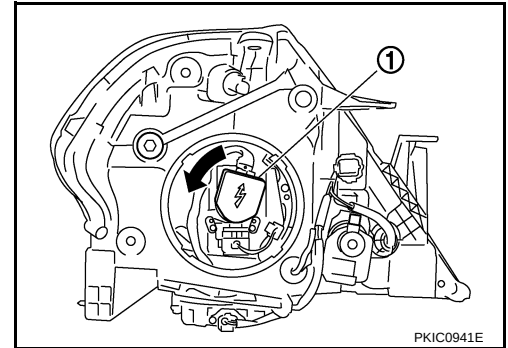
1. Turn lighting switch OFF.
2. Disconnect the battery negative terminal.
3. Remove the back cover.
4. Unlock the retaining spring and remove the bulb from the combination lamp.

HEADLAMP - XENON (HIGH/LOW)

CAUTION:

After installing the xenon bulb, install the plastic cap and bulb socket securely to ensure a water tight seal.

1. Turn lighting switch OFF.
2. Disconnect the battery negative terminal.
3. Turn the plastic cap counterclockwise to unlock and remove it
4. Turn the bulb socket (1) counterclockwise to unlock it.
5. Unlock the retaining spring and remove the xenon bulb from the combination lamp.



PARKING (CLEARANCE) LAMP

1. Turn lighting switch OFF.
2. Remove the headlamp. Refer to [EXL-84, "Removal and Installation"](#).
3. Turn bulb socket counterclockwise and unlock it.
4. Remove bulb from its socket.

FRONT TURN SIGNAL LAMP

1. Turn lighting switch OFF.
2. Remove the headlamp. Refer to [EXL-84, "Removal and Installation"](#).
3. Turn bulb socket counterclockwise and unlock it.
4. Remove bulb from its socket.

Removal and Installation

INFOID:000000001529253

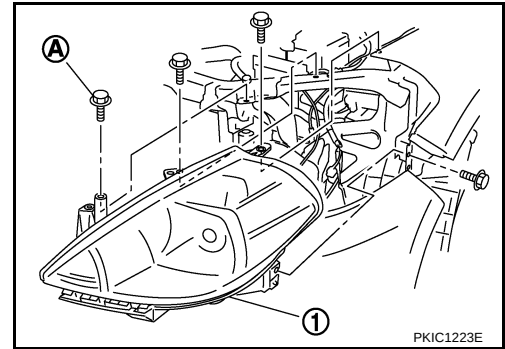
REMOVAL

1. Disconnect the battery negative terminal.
2. Remove the front bumper fascia. Refer to [EXT-13, "Removal and Installation"](#).

HEADLAMP

< ON-VEHICLE REPAIR >

3. Remove the headlamp bolts (A).
4. Pull the headlamp (1) toward the vehicle front, disconnect the headlamp connector, and remove the headlamp.



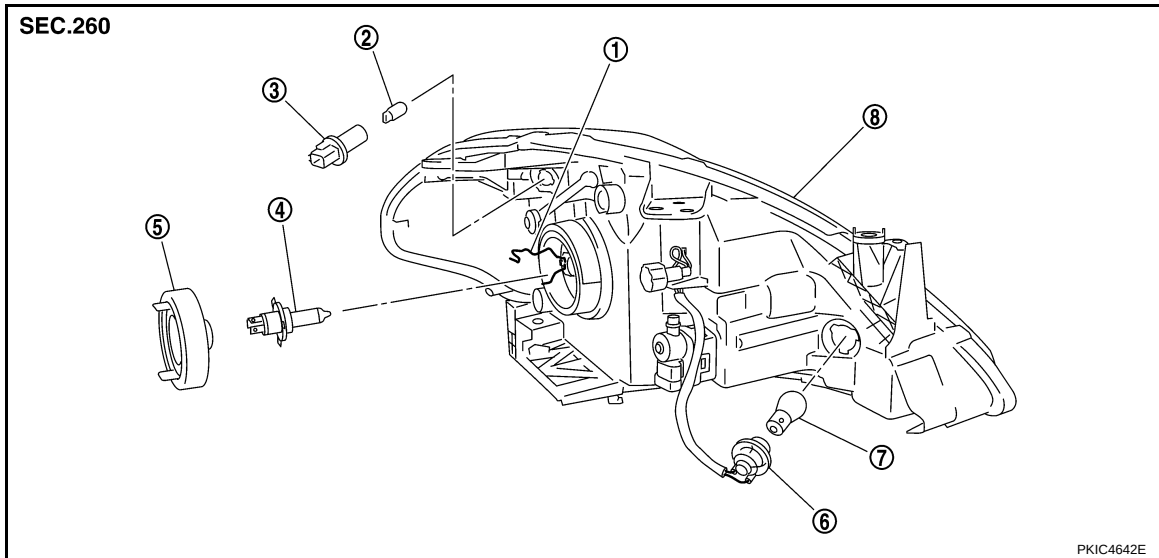
INSTALLATION

Installation is in the reverse order of removal.

- After installation, perform aiming adjustment. Refer to [EXL-81, "Aiming Adjustment"](#).

Disassembly and Assembly - Halogen

INFOID:000000001529254



- | | | |
|--------------------------------|----------------------------------|---|
| 1. Retaining spring | 2. Parking (clearance) lamp bulb | 3. Parking (clearance) lamp bulb socket |
| 4. Halogen bulb (High/Low) | 5. Back cover | 6. Front turn signal lamp bulb socket |
| 7. Front turn signal lamp bulb | 8. Headlamp housing assembly | |

EXL

DISASSEMBLY

1. Remove the back cover.
2. Unlock the retaining spring and remove the halogen bulb.
3. Turn parking (clearance) lamp bulb socket counterclockwise to unlock it.
4. Remove the parking (clearance) lamp bulb from the socket.
5. Turn front turn signal lamp bulb socket counterclockwise to unlock it.
6. Remove the front turn signal lamp bulb from the socket.
7. Remove the bumper stay.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

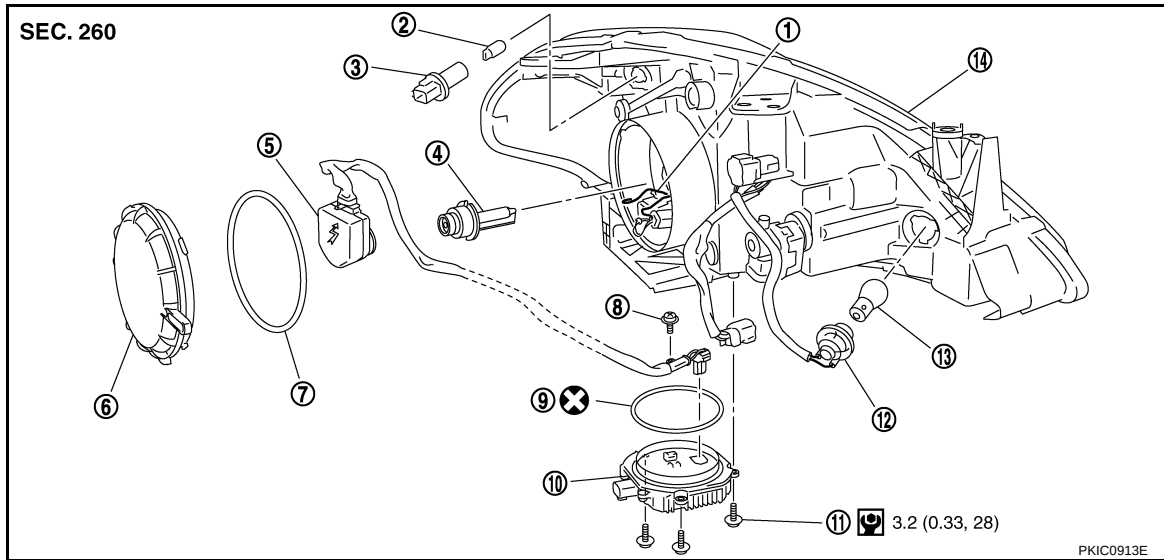
After installing the halogen bulb, install the plastic cap securely to insure a water tight seal.

HEADLAMP

< ON-VEHICLE REPAIR >

Disassembly and Assembly - Xenon

INFOID:000000001530430



- | | | |
|----------------------------------|----------------------------------|---|
| 1. Retaining spring | 2. Parking (clearance) lamp bulb | 3. Parking (clearance) lamp bulb socket |
| 4. Xenon bulb (High/Low) | 5. Xenon bulb socket | 6. Plastic cap |
| 7. Seal packing | 8. Screw | 9. Seal packing |
| 10. HID control unit | 11. Screw | 12. Front turn signal lamp bulb socket |
| 13. Front turns signal lamp bulb | 14. Headlamp housing assembly | |

DISASSEMBLY

1. Turn the plastic cap counterclockwise and remove it.
2. Turn the xenon bulb socket counterclockwise to unlock it.
3. Unlock the retaining spring and remove the xenon bulb (high/low).
4. Remove the mounting screws from the HID control unit.
5. Disconnect the HID control unit connector and remove the screw from the HID control unit.
6. Turn the parking (clearance) lamp bulb socket counter clockwise and remove it.
7. Remove the parking lamp bulb from the socket.
8. Turn the front turn signal lamp bulb socket counterclockwise and remove it.
9. Remove the front turn signal lamp bulb from the socket.

ASSEMBLY

Assembly is the reverse order of disassembly.

CAUTION:

- If the HID control unit is removed, reinstall it securely.
- After installing the Xenon bulb, install the plastic cap and bulb socket securely to insure it is water tight.

FRONT FOG LAMP

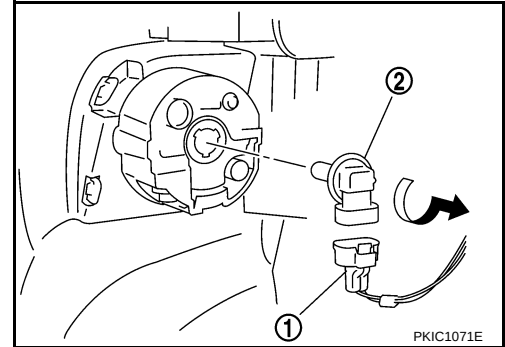
< ON-VEHICLE REPAIR >

FRONT FOG LAMP

Bulb Replacement

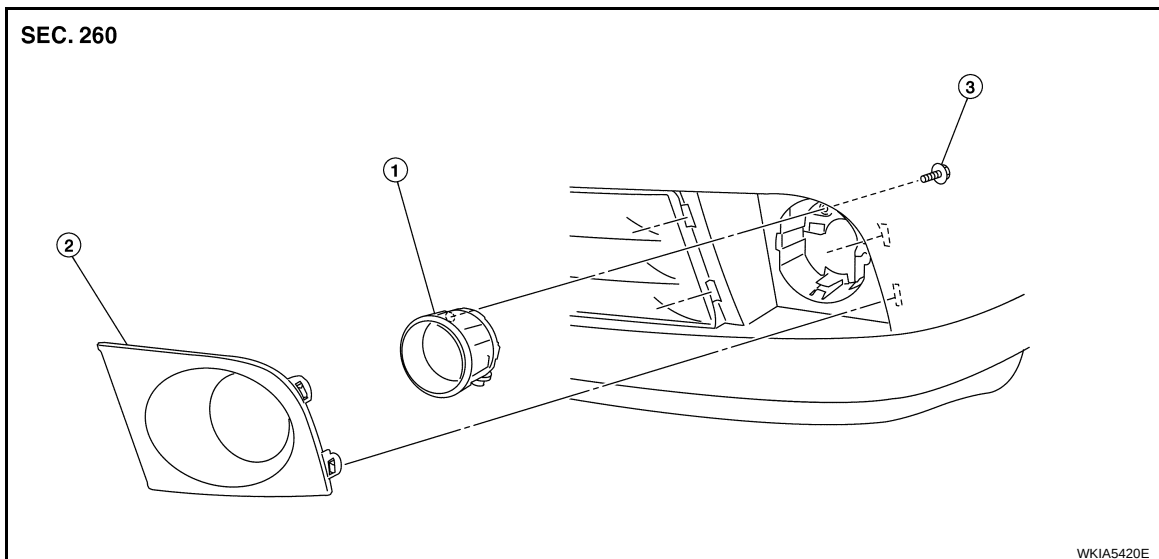
INFOID:000000001529284

1. Turn the lighting switch OFF.
2. Reposition the fender protector (front) out of the way to access the front fog lamp.
3. Disconnect the front fog lamp connector (1).
4. Turn the bulb socket (2) counterclockwise to unlock it.
5. Remove the socket and bulb from the fog lamp.
6. Remove the bulb from the socket.



Removal and Installation

INFOID:000000001529285



1. Front fog lamp
2. Front bumper finisher
3. Front fog lamp bolt

REMOVAL

1. Reposition the fender protector (front) out of the way to access the front fog lamp.
2. Disconnect the front fog lamp connector.
3. Release the pawl and remove the front bumper finisher from the front bumper.
4. Remove front fog lamp bolt and remove the front fog lamp from the front bumper finisher.

INSTALLATION

Installation is in the reverse order of removal.

HEADLAMP AIMING CONTROL

< ON-VEHICLE REPAIR >

HEADLAMP AIMING CONTROL

Removal and Installation of Headlamp Aiming Switch

INFOID:000000001530404

REMOVAL

1. Remove the instrument lower finisher. Refer to [IP-11, "Removal and Installation"](#).
2. Spread the switch panel finisher pawls to remove the headlamp aiming switch.

INSTALLATION

Installation is in the reverse order of removal.

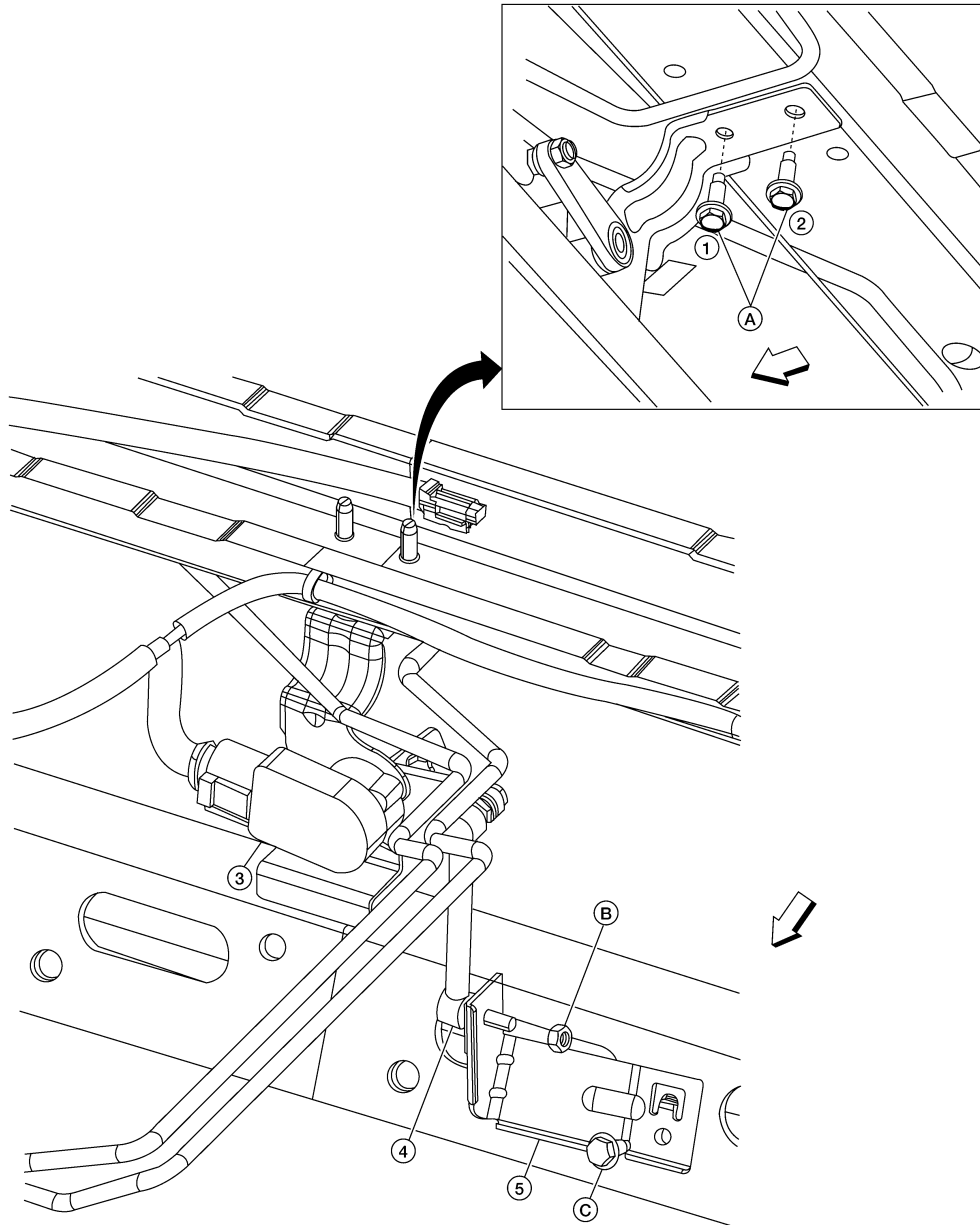
HEADLAMP AIMING CONTROL

< ON-VEHICLE REPAIR >

Removal and Installation of Height Sensor

INFOID:000000001530540

SEC. 538



- | | | |
|--------------------------|------------------------------|-----------------------|
| 1. Tightening order | 2. Tightening order | 3. Height sensor |
| 4. Height sensor arm | 5. Height sensor arm bracket | A. Height sensor bolt |
| B. Height sensor arm nut | C. Height sensor arm bracket | ⇒ Front |

REMOVAL

1. Disconnect the height sensor connector.
2. Disconnect the height sensor arm from the height sensor arm bracket.
3. Remove the height sensor bolts and remove the height sensor.

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HEADLAMP AIMING CONTROL

< ON-VEHICLE REPAIR >

INSTALLATION

Installation is in the reverse order of removal.

- Tighten the height sensor bolt closest to the vehicle front first when installing the height sensor.
- The new height sensor must be initialized using Consult III for proper functioning of the automatic headlamp aiming system.

AUTO LIGHT SYSTEM

Removal and Installation of Light and Rain Sensor

INFOID:000000001530408

REMOVAL

1. Remove the rear view mirror. Refer to [MIR-9. "Removal and Installation"](#).
2. Disconnect the light and rain sensor connector.
3. Remove the light and rain sensor.

INSTALLATION

Installation is in the reverse order of removal.

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SIDE TURN SIGNAL LAMP

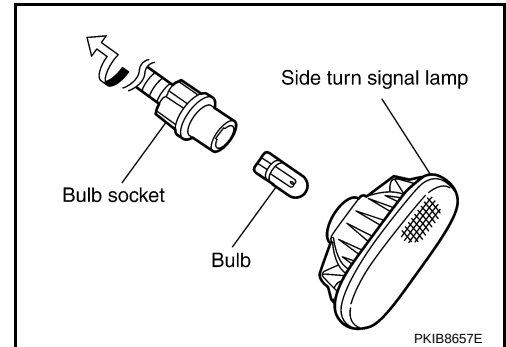
< ON-VEHICLE REPAIR >

SIDE TURN SIGNAL LAMP

Bulb Replacement

INFOID:000000001530538

1. Remove the side turn signal lamp. Refer to [EXL-92. "Removal and Installation"](#).
2. Turn bulb socket counterclockwise to unlock it.
3. Remove the bulb from the socket.



Removal and Installation

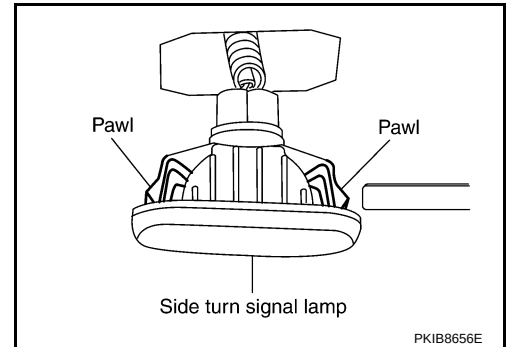
INFOID:000000001530539

REMOVAL

1. Insert a suitable tool under the side turn signal lamp. While pushing in on the side turn signal lamp pawl, pull the lamp away from the front fender as shown.
2. Disconnect the side turn signal lamp connector and remove the side turn signal lamp.

NOTE:

Secure the side turn signal lamp harness with tape to prevent the harness from falling into the front fender.



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Install the lamp housing with the bead facing up.

REAR COMBINATION LAMP

< ON-VEHICLE REPAIR >

REAR COMBINATION LAMP

Bulb Replacement

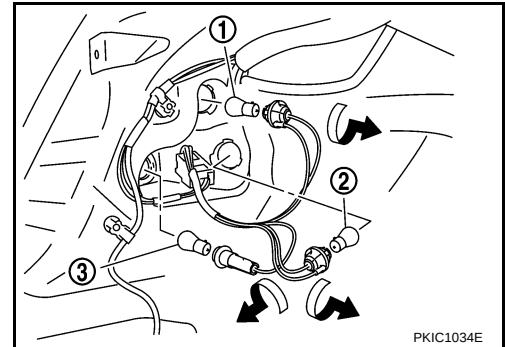
INFOID:000000001530525

HATCHBACK

1. Remove the rear combination lamp. Refer to [EXL-93, "Removal and Installation"](#).
2. Turn the bulb socket counterclockwise to unlock it.
3. Remove the bulb.
4. Installation is in the reverse order of removal.

SEDAN

1. Remove the trunk side finisher. Refer to [INT-35, "Removal and Installation"](#).
2. Turn the bulb socket counterclockwise to unlock it.
3. Remove the stop/tail lamp bulb (1), turn signal lamp bulb (2), and the back-up lamp bulb (3).
4. Installation is in the reverse order of removal.



Removal and Installation

INFOID:000000001530526

HATCHBACK

Removal

1. Remove the rear combination lamp nuts.
2. Pull the rear combination lamp toward rear of the vehicle to disengage the pawls.
3. Disconnect the rear combination lamp connector, and remove the rear combination lamp.

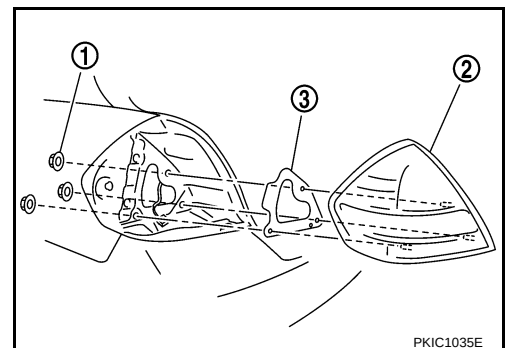
Installation

Installation is in the reverse order of removal.

SEDAN

Removal

1. Remove trunk side finisher, if equipped. Refer to [INT-35, "Removal and Installation"](#).
2. Disconnect the rear combination lamp connector.
3. Remove the rear combination lamp nuts (1).
4. Remove the rear combination lamp (2).
5. Remove the rear combination lamp seal (3).



Installation

Installation is in the reverse order of removal.

Disassembly and Assembly

INFOID:000000001530527

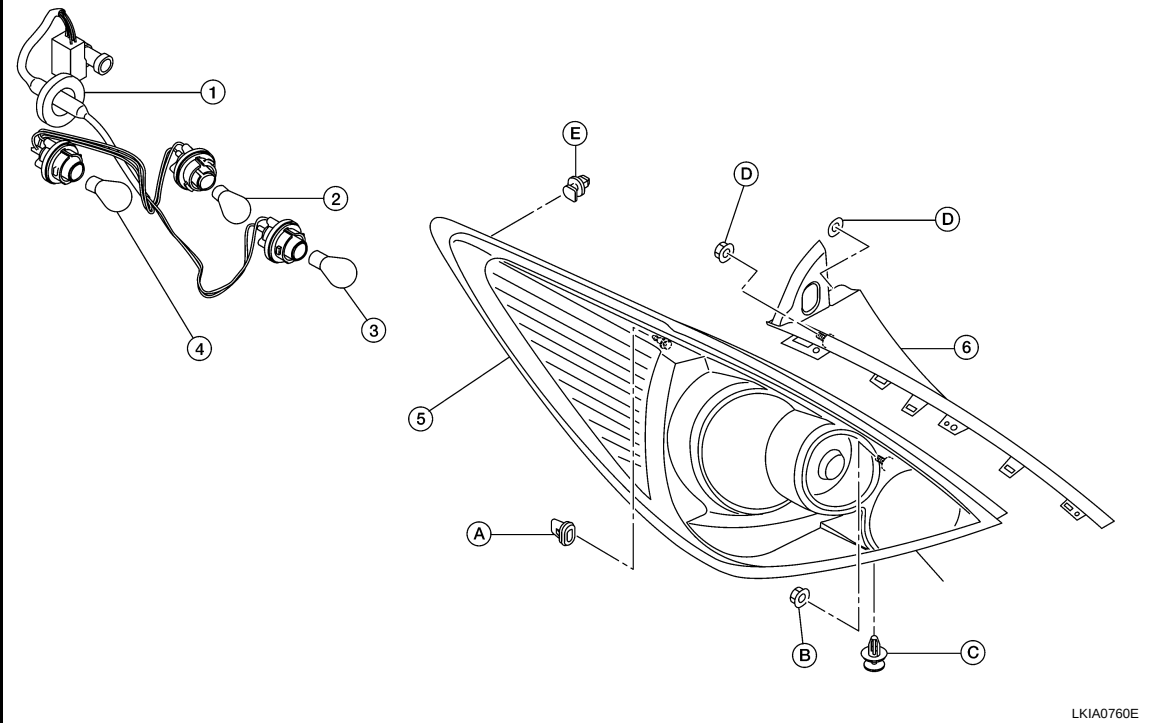
Exploded View

REAR COMBINATION LAMP

< ON-VEHICLE REPAIR >

Hatchback

SEC. 260

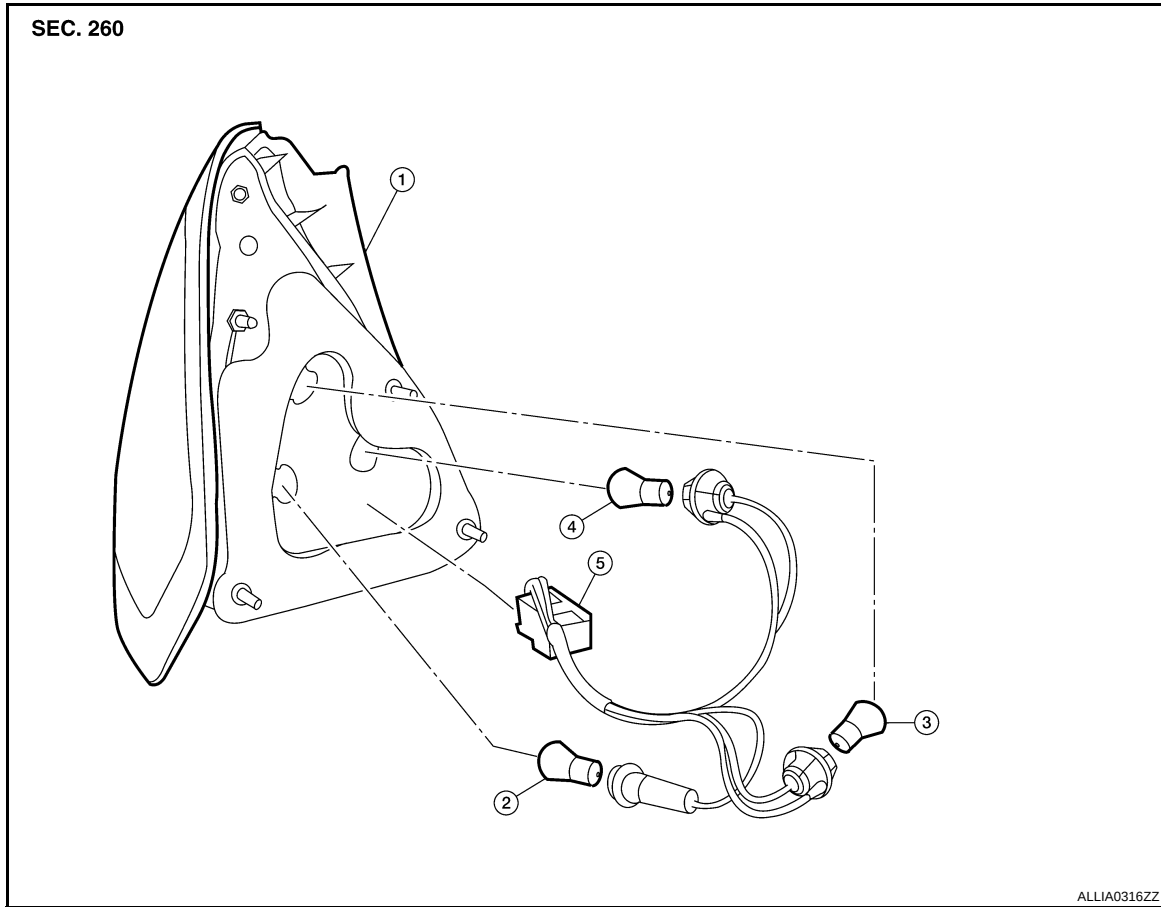


- | | | |
|----------------------------------|---|----------------------|
| 1. Rear combination lamp harness | 2. Turn signal lamp bulb | 3. Back-up lamp bulb |
| 4. Stop/tail lamp bulb | 5. Rear combination lamp housing assembly | 6. Bumper stay |
| A. Grommet | B. Nut | C. Clip |
| D. Nuts | E. Clip | |

REAR COMBINATION LAMP

< ON-VEHICLE REPAIR >

Sedan



- | | | |
|--------------------------|----------------------------------|--------------------------|
| 1. Rear combination lamp | 2. Back-up lamp bulb | 3. Turn signal lamp bulb |
| 4. Stop/tail lamp bulb | 5. Rear combination lamp harness | |

DISSASSEMBLY

1. Remove the rear combination lamp harness.
2. Remove the bulbs from the rear combination lamp harness, as necessary.
3. Remove the bumper stay (hatchback only).
4. Remove the rear combination lamp seal (sedan only).

ASSEMBLY

Assembly is in the reverse order of disassembly.

HIGH-MOUNTED STOP LAMP

< ON-VEHICLE REPAIR >

HIGH-MOUNTED STOP LAMP

Bulb Replacement

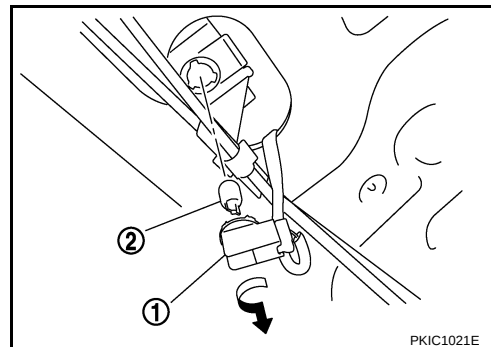
INFOID:000000001530528

HATCHBACK

The LED element is not serviced separately, the high-mounted stop lamp must be replaced as an assembly.

SEDAN

1. Open the luggage compartment lid to access the high-mounted stop lamp.
2. Remove the high-mounted stop lamp bulb socket (1) and remove the high-mounted stop lamp (2).



3. Installation is in the reverse order of removal.

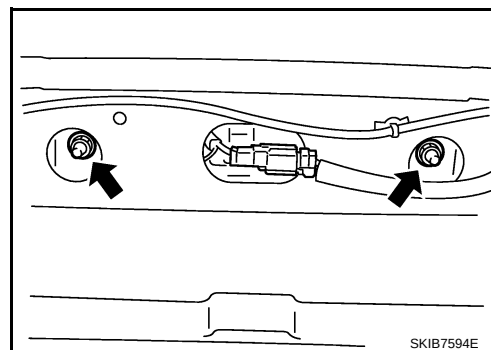
Removal and Installation

INFOID:000000001530529

HATCHBACK

Removal

1. Remove the rear hatch finish panel. Refer to [INT-18. "Removal and Installation"](#).
2. Disconnect the high-mounted stop lamp connector.
3. Remove the high-mounted stop lamp nuts as shown.
4. Remove the high-mounted stop lamp from the rear hatch.



Installation

Installation is in the reverse order of removal.

CAUTION:

Properly seal the high-mounted stop lamp base to the rear hatch to prevent water leaks.

SEDAN

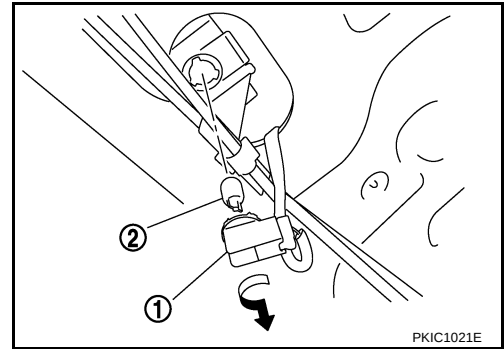
Removal

1. Open the luggage compartment lid to access the high-mounted stop lamp.

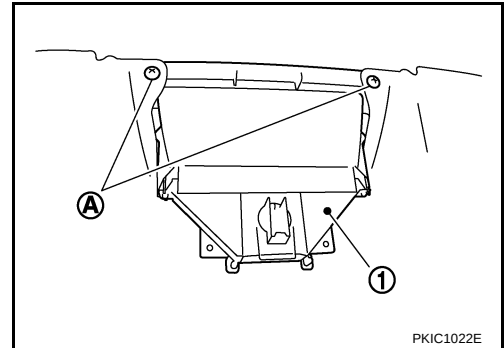
HIGH-MOUNTED STOP LAMP

< ON-VEHICLE REPAIR >

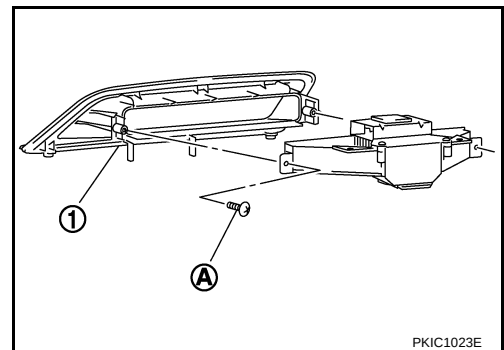
2. Remove the high-mounted stop lamp bulb socket (1) and remove the high-mounted stop lamp (2).



3. Remove the rear parcel shelf. Refer to [INT-26. "Removal and Installation"](#).
4. Remove the high-mounted stop lamp screws (A) and remove the high-mounted stop lamp (1).



5. Remove the high-mounted stop lamp finisher screws (A) and remove the high-mounted stop lamp finisher (1).



Installation

Installation is in the reverse order of removal.

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LICENSE PLATE LAMP

< ON-VEHICLE REPAIR >

LICENSE PLATE LAMP

Bulb Replacement

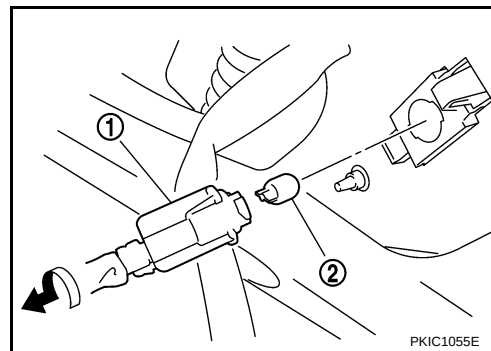
INFOID:000000001530532

HATCHBACK

1. Remove the license plate lamp. Refer to [INT-35, "Removal and Installation"](#).
2. Turn the bulb socket counterclockwise to unlock it.
3. Remove the bulb from the socket.
4. Installation is in the reverse order of removal.

SEDAN

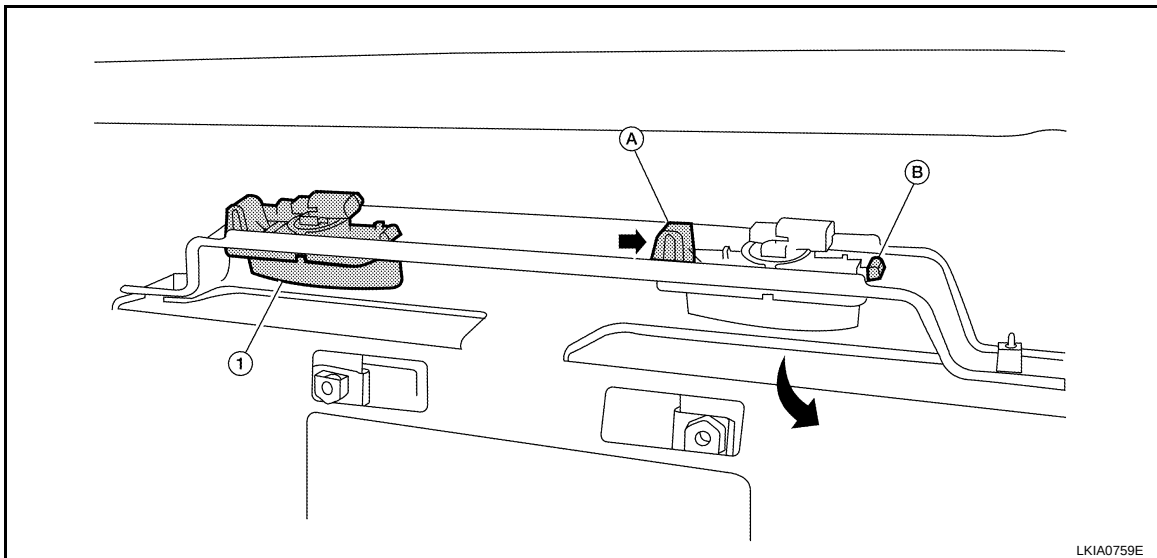
1. Remove the trunk lid finisher. Refer to [INT-35, "Removal and Installation"](#).
2. Remove the license plate lamp bulb socket (1) and remove the license plate lamp bulb (2).
3. Installation is in the reverse order of removal.



Removal and Installation

INFOID:000000001530533

HATCHBACK



1. License plate lamp

A. Pawl

B. Hook

Removal

1. Press the license plate lamp pawl on the side of the rear bumper fascia, then swing the license plate lamp down to release the license plate lamp hook from the rear bumper fascia.
2. Disconnect the license plate lamp connector and remove the license plate lamp.

Installation

Installation is in the reverse order of removal.

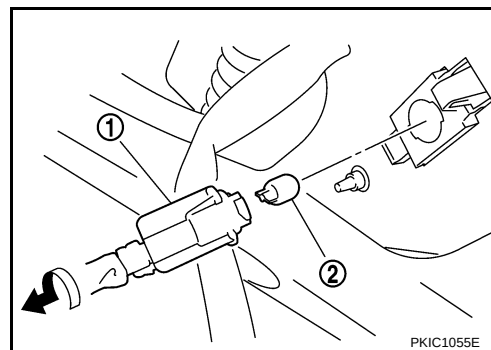
SEDAN

Removal

LICENSE PLATE LAMP

< ON-VEHICLE REPAIR >

1. Remove the trunk lid finisher. Refer to [EXT-29, "Removal and Installation"](#).
2. Remove the license plate lamp bulb socket (1).
 - License plate lamp bulb (2).



3. Remove the license plate lamp finisher. Refer to [EXT-29, "Removal and Installation"](#).
4. Remove the license plate lamp assembly.

Installation

Installation is in the reverse order of removal.

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REAR FOG LAMP

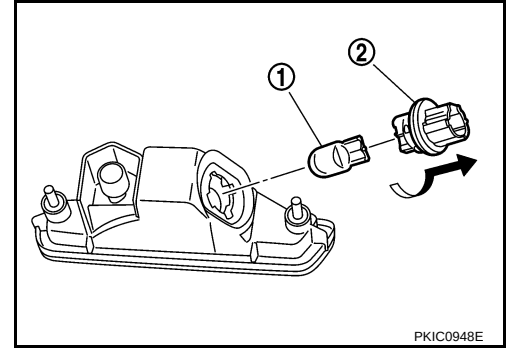
< ON-VEHICLE REPAIR >

REAR FOG LAMP

Bulb Replacement

INFOID:000000001530536

1. Remove the clips for the rear bumper fascia lower side. Refer to [EXT-17, "Removal and Installation - Sedan"](#).
2. Disconnect the rear fog lamp connector.
3. Turn the bulb socket (2) counterclockwise to unlock it.
4. Remove bulb (1) from the socket.
5. Installation is in the reverse order of removal.

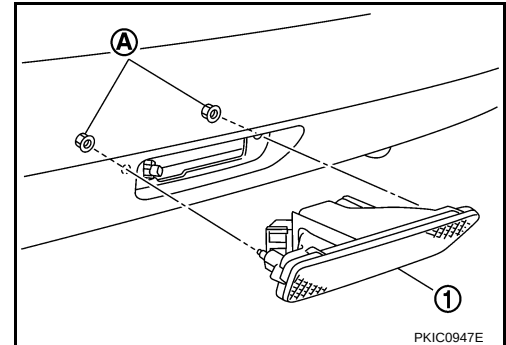


Removal and Installation

INFOID:000000001530537

REMOVAL

1. Remove the rear bumper fascia. Refer to [EXT-17, "Removal and Installation - Sedan"](#).
2. Disconnect the rear fog lamp connector.
3. Remove the rear fog lamp nuts (A) and remove rear fog lamp (1).



INSTALLATION

Installation is in the reverse order of removal.

Rear fog lamp nuts : 5.1 N·m (0.52 kg-m, 45 in-lb)

LIGHTING & TURN SIGNAL SWITCH

< ON-VEHICLE REPAIR >

LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:000000001529304

NOTE:

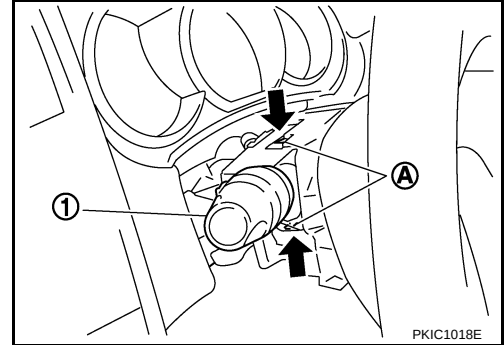
The lighting and turn signal switch is located on the LH side of the steering column for both the LHD and RHD models.

REMOVAL

1. Remove the upper and lower steering column covers. Refer to [IP-11, "Removal and Installation"](#).
2. While pressing in on the pawls (A) as shown, pull the lighting and turn signal switch (1) straight out to disconnect from the base and remove.

NOTE:

LHD shown, RHD similar.



INSTALLATION

Installation is in the reverse order of removal.

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HAZARD SWITCH

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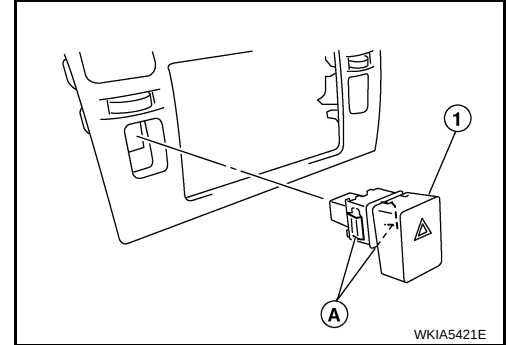
HAZARD SWITCH

Removal and Installation

INFOID:000000001529305

REMOVAL

1. Remove the cluster lid C. Refer to [IP-11. "Removal and Installation"](#).
2. Disconnect the hazard switch connector.
3. Press in on pawl (A) on the back of the hazard switch (1), and remove the hazard switch (1).



INSTALLATION

Installation is in the reverse order of removal.

BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Headlamp

INFOID:0000000001529358

Item	Wattage
High/Low (Halogen type)	60/55 (H4)
High/Low (Xenon type)	35

Exterior Lamp

INFOID:0000000001529359

Item		Wattage (description)
Front combination lamp	Turn signal lamp	21 (amber)
	Parking (clearance) lamp	5 (white)
Front fog lamp (Halogen type)		35 (H8)
Side turn signal lamp		5 (amber)
Rear combination lamp	Stop/Tail lamp	21/5 (white)
	Turn signal lamp	21 (amber)
	Back-up lamp	21 (white)
Rear fog lamp		21 (white)
High-mounted stop lamp	Hatchback	LED
	Sedan	18 (white)
License plate lamp		5 (white)

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