

SECTION **EXL**

EXTERIOR LIGHTING SYSTEM

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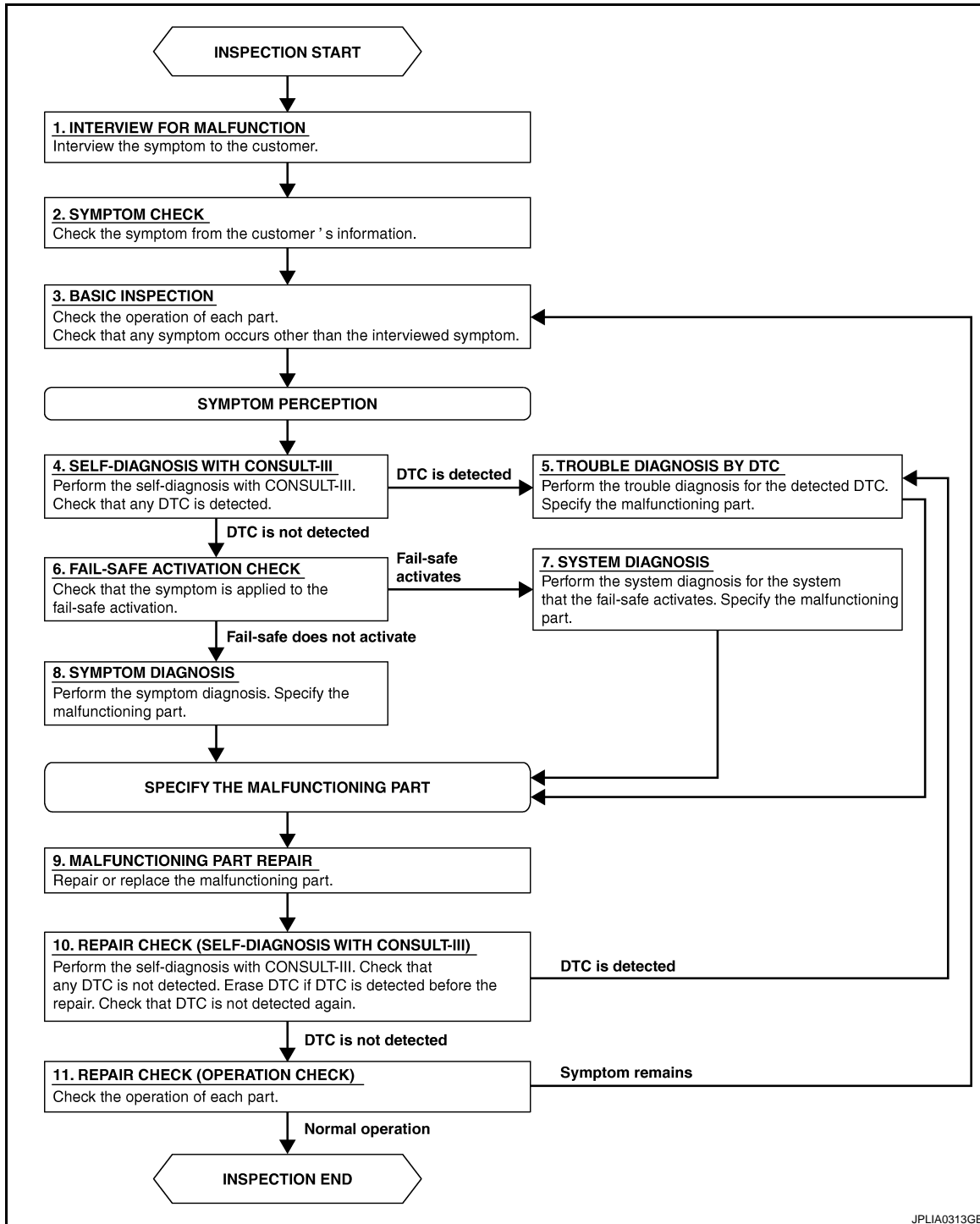
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000004404096

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

DIAGNOSIS AND REPAIR WORKFLOW

[XENON TYPE]

< BASIC INSPECTION >

>> GO TO 2.

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3.

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> 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

Check that the symptom is applied to the 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 that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9.

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

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

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 11.

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

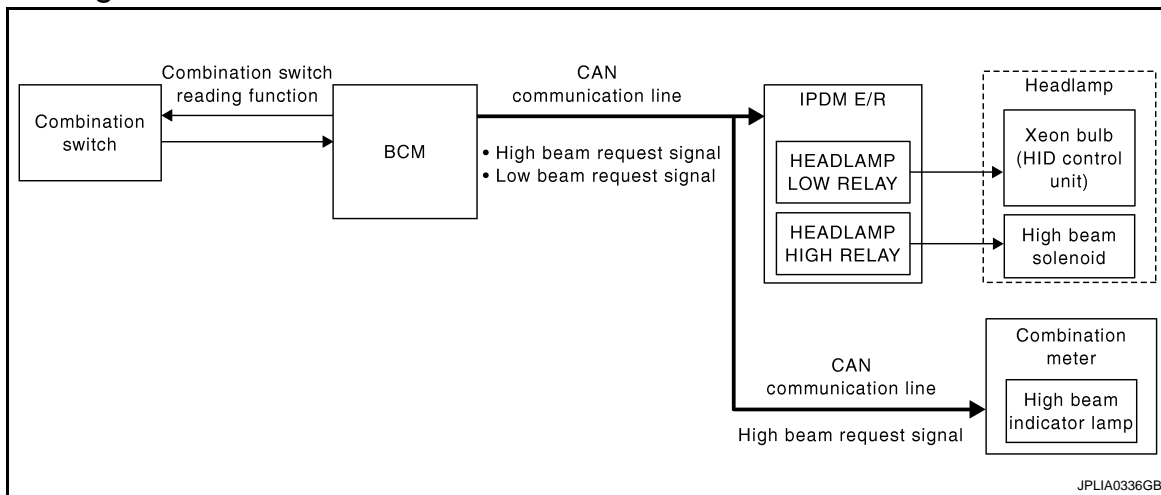
YES >> INSPECTION END

NO >> GO TO 3.

SYSTEM DESCRIPTION

HEADLAMP SYSTEM

System Diagram



System Description

INFOID:000000004404102

OUTLINE

- Mobile valve shade type is adopted. Xenon headlamp switches the high beam and the low beam with one xenon bulb each on right and left.
- Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and relay control function of IPDM E/R.

HEADLAMP BASIC OPERATION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM transmits the low beam request signal to IPDM E/R with CAN communication according to the headlamp ON condition.

Headlamp ON condition

- Lighting switch 2ND
- Lighting switch PASS
- Lighting switch AUTO, and the auto light function ON judgment
- IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp ON according to the low beam request signal.

HEADLAMP HI/LO SWITCHING OPERATION

- BCM transmits the high beam request signal to IPDM E/R and the combination meter with CAN communication according to the high beam switching condition.

High beam switching condition

- Lighting switch HI with the headlamp ON
- Lighting switch PASS
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

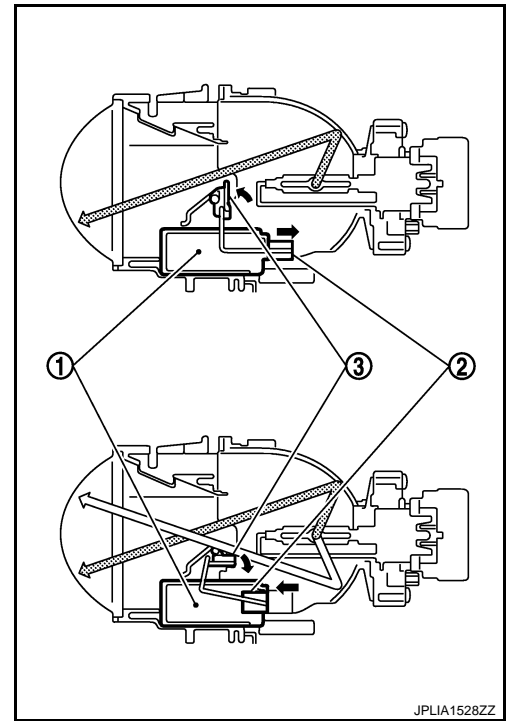
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HEADLAMP SYSTEM

[XENON TYPE]

< SYSTEM DESCRIPTION >

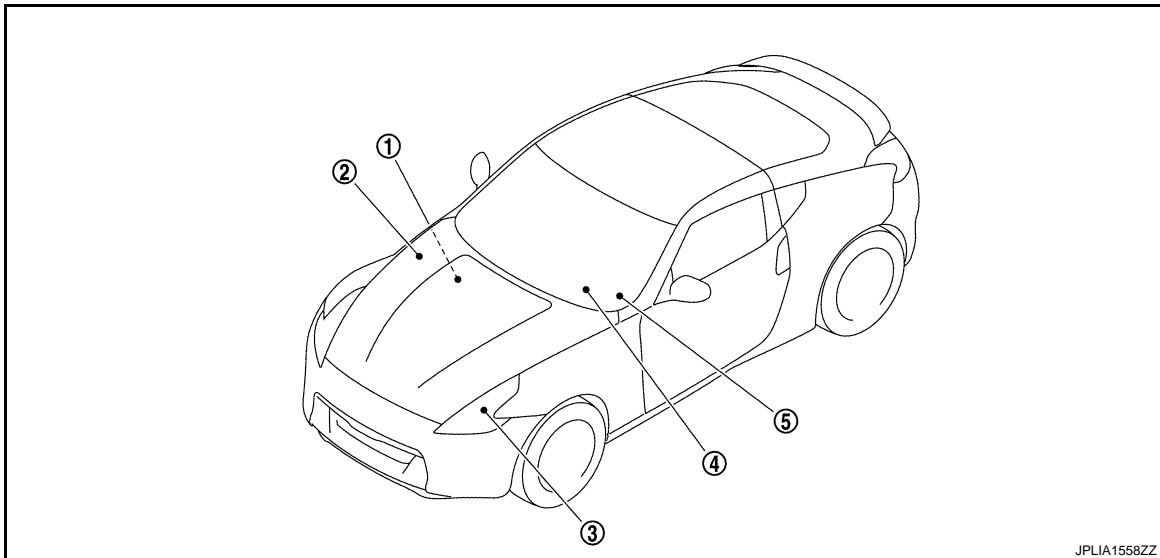
- When the headlamp high relay is turned ON, magnetic force is applied to the high beam solenoid (1) by a current. The mobile valve shade (3) is switched to the high beam position through the actuator rod (2).
- When the headlamp high relay is turned OFF, the current stops. The mobile valve shade returns to the low beam position automatically.



JPLIA1528ZZ

Component Parts Location

INFOID:000000004404103



JPLIA1558ZZ

- | | | |
|--|---|-------------|
| 1. BCM
Refer to BCS-8, "Component Parts Location" . | 2. IPDM E/R
Refer to PCS-5, "Component Parts Location" . | 3. Headlamp |
| 4. Combination meter
(High beam indicator lamp) | 5. Combination switch | |

HEADLAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Description

INFOID:000000004404104

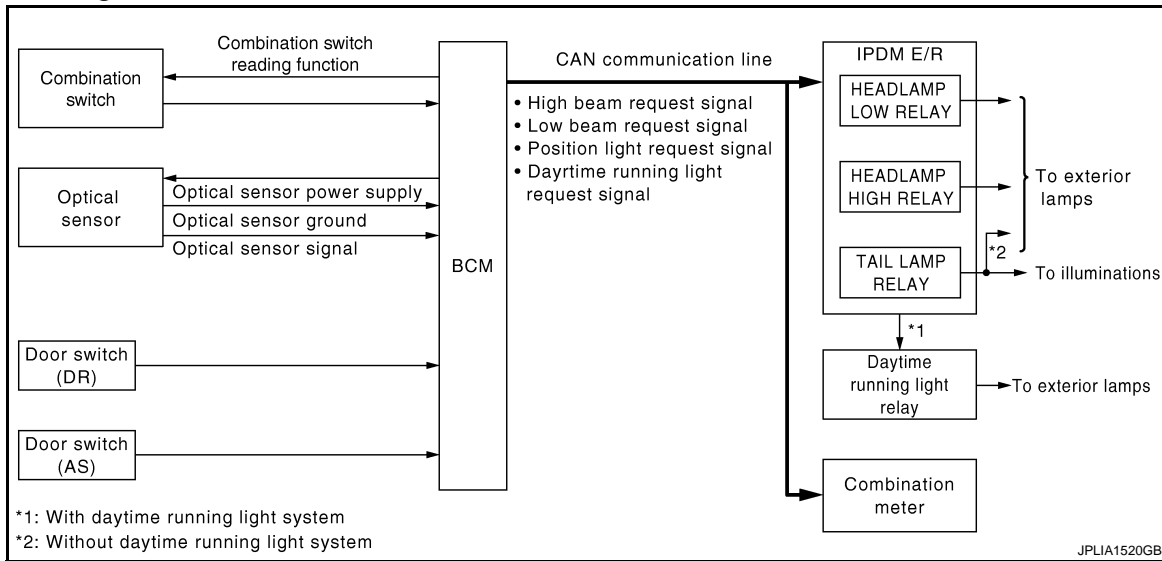
Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition by the combination switch reading function. • Judges that the headlamp is turned ON according to the vehicle condition. - Requests the headlamp relay (HI/LO) ON to IPDM E/R (with CAN communication). - Requests the high beam indicator lamp ON to the combination meter (with CAN communication).
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .
Combination meter (High beam indicator lamp)	Turns the high beam indicator lamp ON according to the request from BCM (with CAN communication).
Headlamp assembly	<ul style="list-style-type: none"> • HID control unit • Xenon bulb
	High beam solenoid

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EXL

AUTO LIGHT SYSTEM

System Diagram



System Description

INFOID:000000004404106

OUTLINE

- Auto light system is controlled by each function of BCM and IPDM E/R.

Control by BCM

- Combination switch reading function
- Headlamp control function
- Auto light function
- Delay timer function

Control by IPDM E/R

- Relay control function
- Auto light system has the auto light function and the delay timer function.
- Auto light function turns the exterior lamps* and each illumination ON/OFF automatically according to the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns the exterior lamps OFF depending on the vehicle condition with the auto light function after a certain period of time.

*: Headlamp (LO/HI), parking lamp, side marker lamp and tail lamp (Headlamp HI depend on the combination switch condition.)

AUTO LIGHT FUNCTION

- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to optical sensor when the ignition switch is turned ON or ACC.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- BCM judges outside brightness from the optical sensor signal and judges ON/OFF condition of the exterior lamp and each illumination according to the outside brightness.
- BCM transmits each request signal to IPDM E/R with CAN communication according to ON/OFF condition by the auto light function.

NOTE:

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT-III. Refer to [EXL-26, "HEADLAMP : CONSULT-III Function \(BCM - HEAD LAMP\)"](#).

DELAY TIMER FUNCTION

BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.

- Turns the exterior lamp OFF 5 minutes after detecting that any door opens (Door switch ON).
- Turns the exterior lamp OFF a certain period of time* after closing all doors (Door switch ON→OFF).

AUTO LIGHT SYSTEM

[XENON TYPE]

< SYSTEM DESCRIPTION >

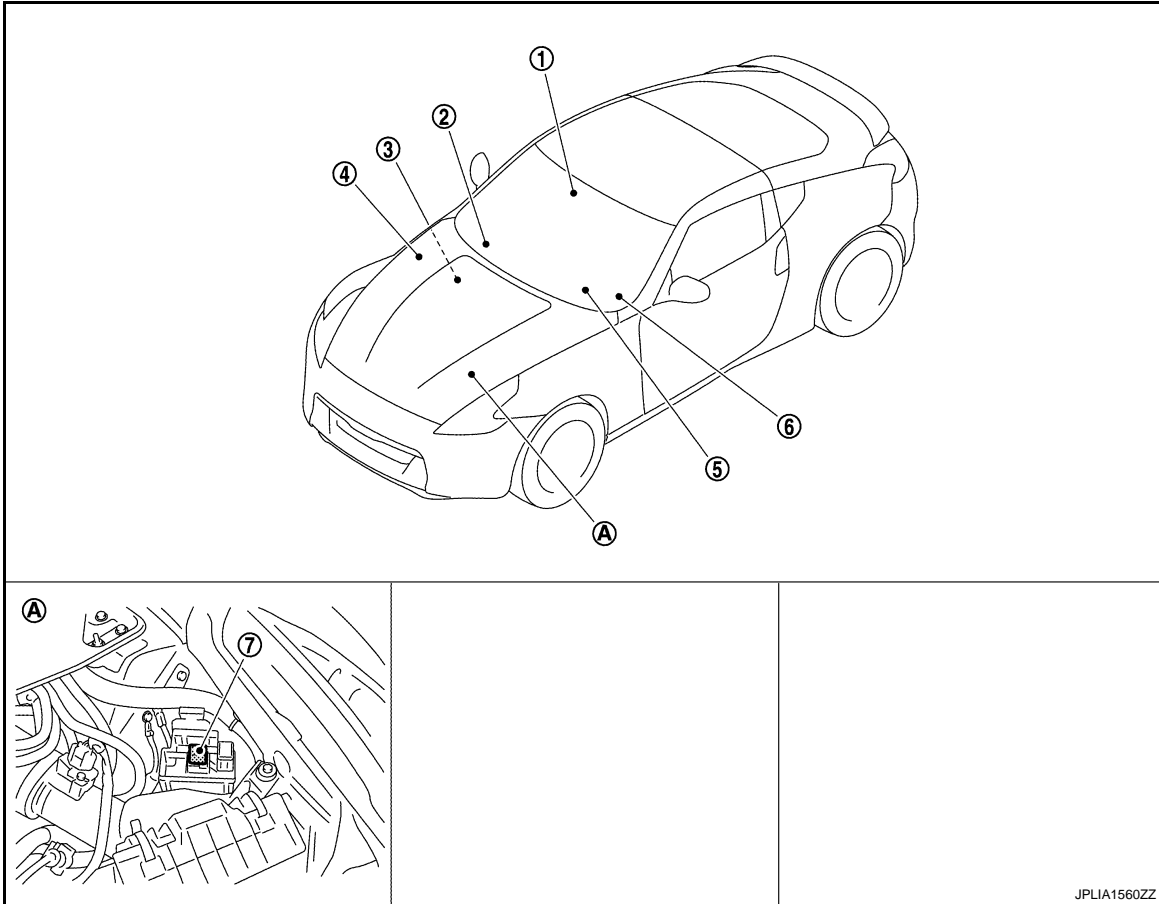
- Turns the exterior lamp OFF with the ignition switch ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT-III. Refer to [EXL-26, "HEADLAMP : CONSULT-III Function \(BCM - HEAD LAMP\)"](#).

NOTE:

When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

Component Parts Location

INFOID:000000004404107



- | | | |
|---|----------------------|--|
| 1. Door switch | 2. Optical sensor | 3. BCM
Refer to BCS-8, "Component Parts Location" . |
| 4. IPDM E/R
Refer to PCS-5, "Component Parts Location" . | 5. Combination meter | 6. Combination switch |
| 7. Daytime running light relay | | |
| A. Engine room (LH) | | |

Component Description

INFOID:000000004404108

Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition by the combination switch reading function. • Judges the outside brightness from the optical sensor signal. • Judges the OFF timing according to the vehicle condition. • Judges the ON/OFF status of the exterior lamp and each illumination according to the outside brightness and the vehicle condition. - Requests ON/OFF of each relay to IPDM E/R (with CAN communication).
IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (with CAN communication).

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AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Part	Description
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .
Optical sensor	Refer to EXL-55, "Description" .

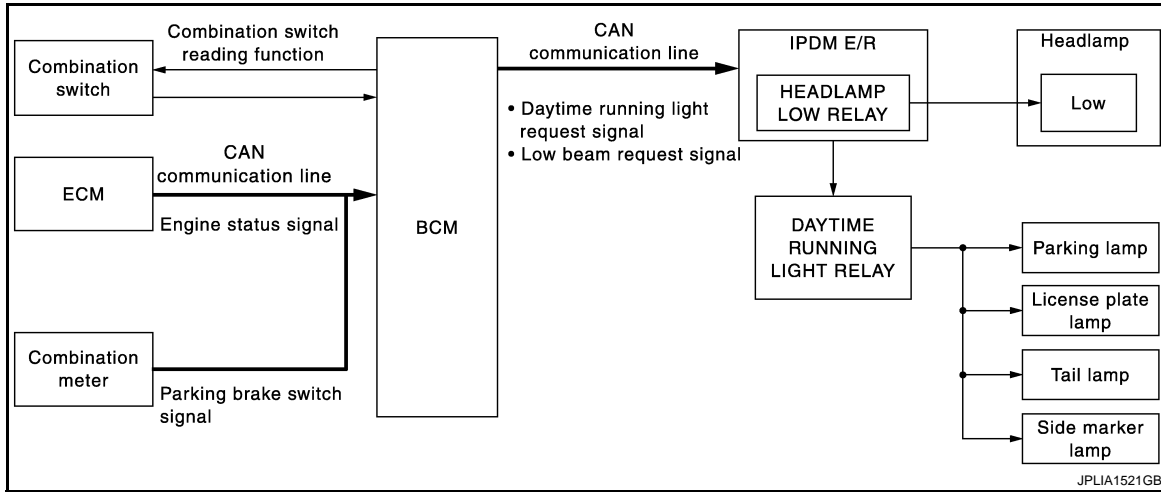
DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

System Diagram



System Description

INFOID:000000004459638

OUTLINE

- Turns the following exterior lamps ON as the daytime running light.
 - Headlamp (LO)
 - Parking, tail, license plate and side marker lamps.
- Daytime running light is controlled by daytime running light control function and combination switch reading function of BCM, and relay control function of IPDM E/R.

DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM detects vehicle condition depending on the following signals.
 - Engine condition signal (received from ECM with CAN communication).
 - Parking brake switch signal (received from combination meter with CAN communication)
- BCM transmits the daytime running light request signal and low beam request signal to IPDM E/R with CAN communication according to the daytime running light ON condition.

Daytime running light ON condition

- While the engine running with the parking brake released.
- Lighting switch OFF
- IPDM E/R turns the integrated headlamp low relay and daytime running light relay ON according to the daytime running light request signal and low beam request signal. And it turns each lamps ON.

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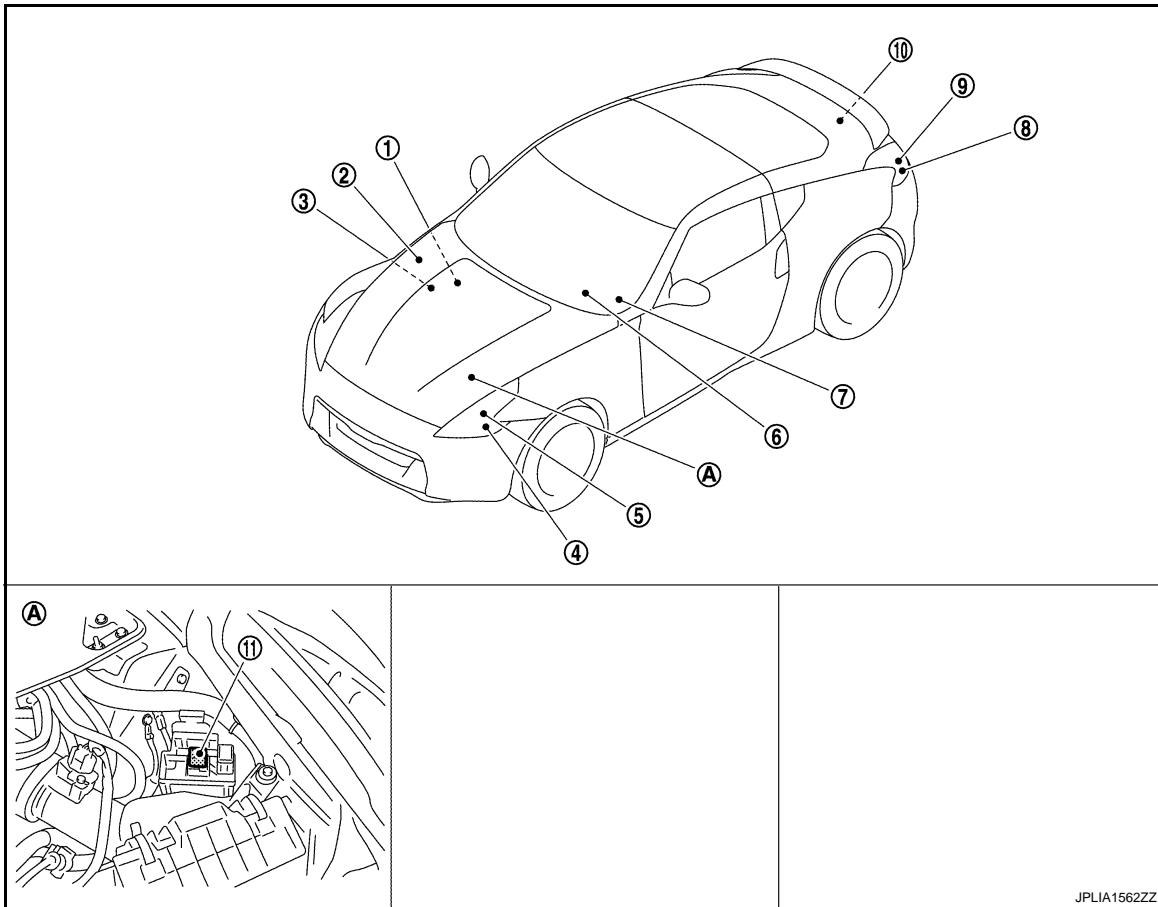
DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:000000004459639



- | | | |
|--|---|--|
| 1. BCM
Refer to BCS-8, "Component Parts Location" . | 2. IPDM E/R
Refer to PCS-5, "Component Parts Location" . | 3. ECM
Refer to EC-26, "Component Parts Location" . |
| 4. Parking lamp | 5. Front side marker lamp | 6. Combination meter |
| 7. Combination switch | 8. Rear side marker lamp | 9. Tail lamp |
| 10. License plate lamp | 11. Daytime running light relay | |
| A. Engine room (LH) | | |

Component Description

INFOID:000000004459640

Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition with the combination switch reading function. • Judges each lamps ON/OFF condition according to the vehicle condition. - Requests the each relay ON to IPDM E/R (with CAN communication).
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .
ECM	Transmits the engine status signal to BCM with CAN communication.
Combination meter	Transmits the parking brake switch signal to BCM with CAN communication.

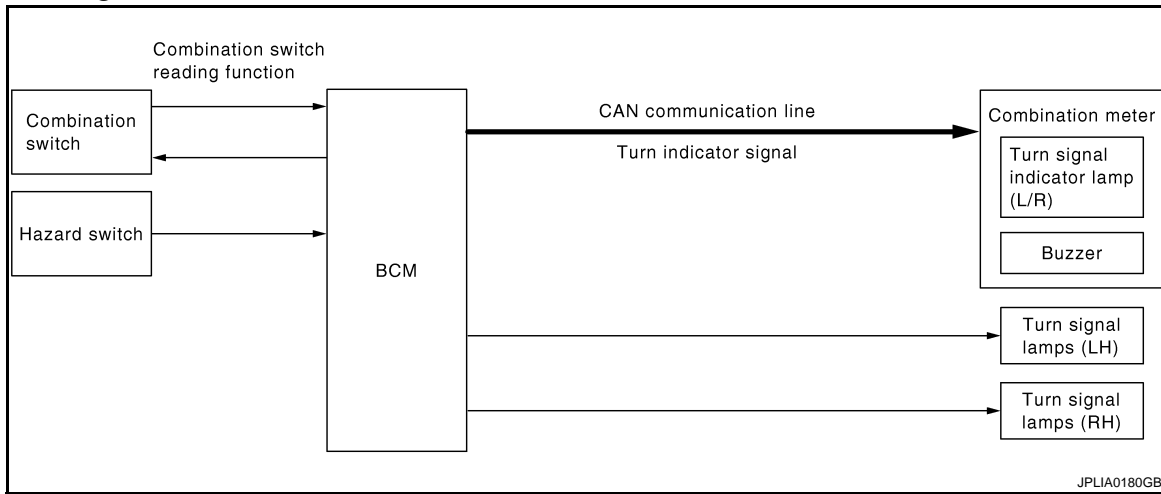
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

System Diagram



System Description

INFOID:000000004404122

OUTLINE

Turn signal and the hazard warning lamp is controlled by combination switch reading function and the flasher control function of BCM.

TURN SIGNAL LAMP OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM supplies voltage to the right (left) turn signal lamp circuit when the ignition switch is turned ON and the turn signal switch is in the right (left) position. BCM blinks the turn signal lamp.

HAZARD WARNING LAMP OPERATION

BCM supplies voltage to both turn signal lamp circuit when the hazard switch is turned ON. BCM blinks the hazard warning lamp.

TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL SOUND OPERATION

- BCM transmits the turn indicator signal to the combination meter with CAN communication while the turn signal lamp and the hazard warning lamp operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn indicator signal.

HIGH FLASHER OPERATION (FAIL-SAFE)

- BCM detects the turn signal lamp circuit status from the current value.
- BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while operating the hazard warning lamp.

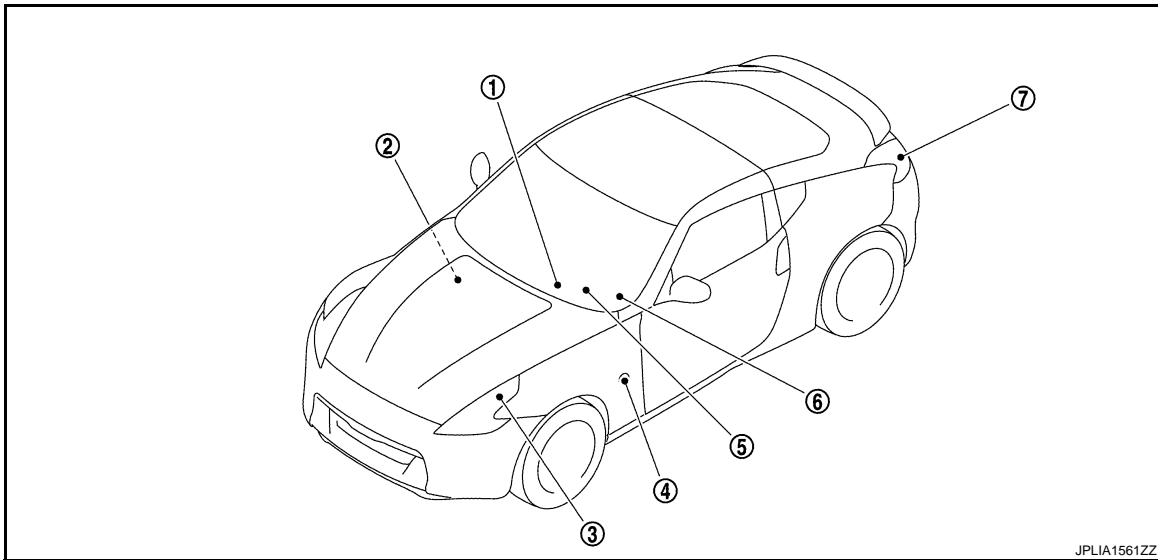
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:000000004404123



- | | | |
|--------------------------|--|---------------------------|
| 1. Hazard switch | 2. BCM
Refer to BCS-8, "Component Parts Location" . | 3. Front turn signal lamp |
| 4. Side turn signal lamp | 5. Combination meter
(Turn signal indicator lamp) | 6. Combination switch |
| 7. Rear turn signal lamp | | |

Component Description

INFOID:000000004404124

Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition by the combination switch reading function. • Judges the blinks of the turn signal lamp and the hazard warning lamp from each switch status. The applicable turn signal lamp blinks. - Requests the turn signal indicator lamp blink to the combination meter (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .
Hazard switch	Inputs the hazard switch ON/OFF signal to BCM.
Combination meter (Turn signal indicator lamp & buzzer)	Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM (with CAN communication).

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

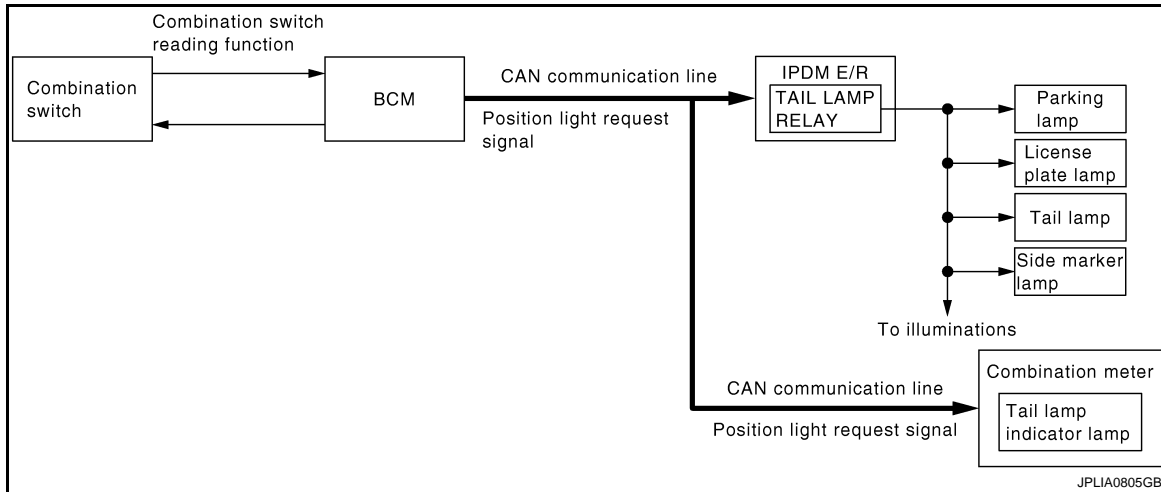
< SYSTEM DESCRIPTION >

[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:000000004459607



WITHOUT DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:000000004459608

OUTLINE

Parking, license plate, tail and side marker lamps are controlled by combination switch reading function and headlamp control function of BCM, and relay control function of IPDM E/R.

PARKING, LICENSE PLATE, TAIL AND SIDE MARKER LAMPS OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the position light request signal to IPDM E/R and the combination meter with CAN communication according to the ON/OFF condition of the parking, license plate, tail and side marker lamps.

Parking, license plate, tail and side marker lamps ON condition

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment
- IPDM E/R turns the integrated tail lamp relay ON and turns the parking, license plate, tail and side marker lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

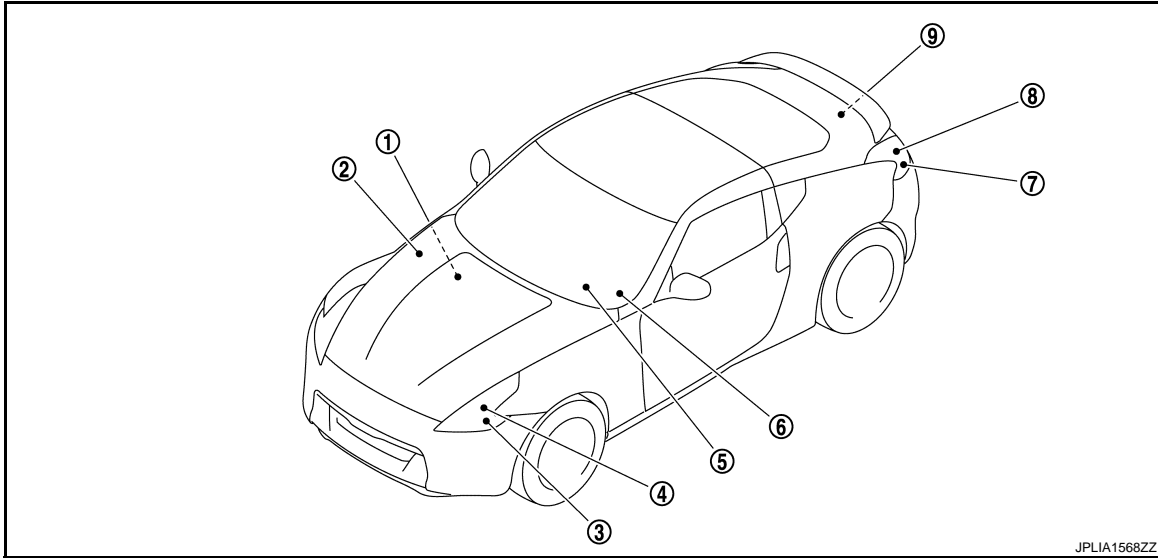
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Parts Location

INFOID:000000004459609



JPLIA1568ZZ

- | | | |
|--|---|-----------------------|
| 1. BCM
Refer to BCS-8, "Component Parts Location" . | 2. IPDM E/R
Refer to PCS-5, "Component Parts Location" . | 3. Parking lamp |
| 4. Front side marker lamp | 5. Combination meter
(Tail lamp indicator lamp) | 6. Combination switch |
| 7. Rear side marker lamp | 8. Tail lamp | 9. License plate lamp |

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Description

INFOID:000000004459610

Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition by the combination switch reading function. • Judges the ON/OFF status of the parking, license plate, tail and side marker lamps according to the vehicle condition. - Requests the tail lamp relay ON to IPDM E/R (with CAN communication). - Requests the tail lamp indicator lamp ON to the combination meter (with CAN communication).
IPDM E/R	Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .
Combination meter (Tail lamp indicator lamp)	Turns the tail lamp indicator lamp ON according to the request from BCM (with CAN communication).

WITH DAYTIME RUNNING LIGHT SYSTEM

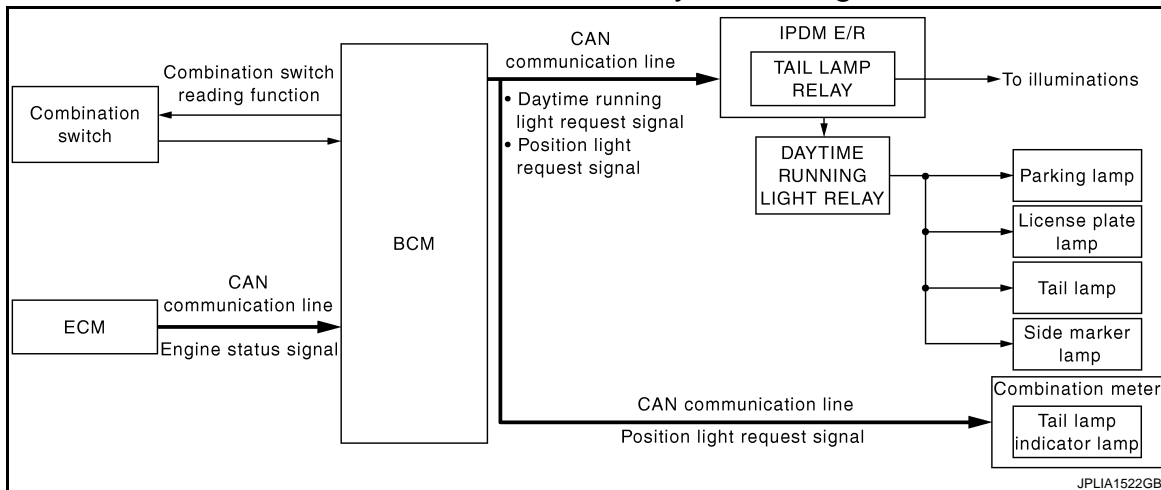
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

WITH DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:000000004459611



WITH DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:000000004459612

OUTLINE

Parking, license plate, tail and side marker lamps are controlled by combination switch reading function and headlamp control function of BCM, and relay control function of IPDM E/R.

PARKING, LICENSE PLATE, TAIL AND SIDE MARKER LAMPS OPERATION

- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the daytime running light request signal or position light request signal to IPDM E/R and the combination meter with CAN communication according to the ON/OFF condition of the parking, license plate, tail and side marker lamps.

Parking, license plate, tail and side marker lamps ON condition

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment
- Daytime running light ON judgment
- IPDM E/R turns the daytime running light relay and tail lamp relay ON according to the daytime running light request signal or position light request signal. And turns the parking, license plate, tail, side marker lamps and illuminations ON.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

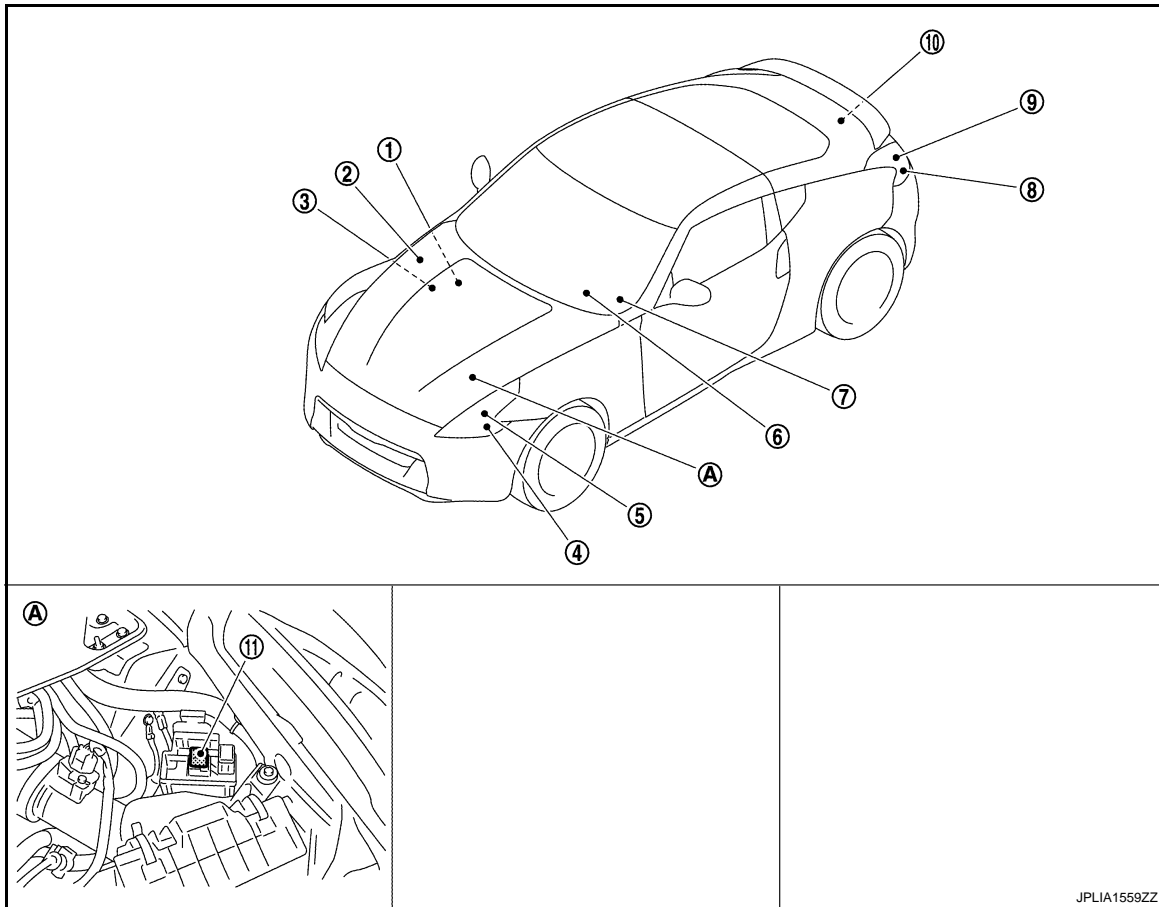
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

WITH DAYTIME RUNNING LIGHT SYSTEM : Component Parts Location

INFOID:000000004459613



- | | | |
|--|---|--|
| 1. BCM
Refer to BCS-8. "Component Parts Location" . | 2. IPDM E/R
Refer to PCS-5. "Component Parts Location" . | 3. ECM
Refer to EC-26. "Component Parts Location" . |
| 4. Parking lamp | 5. Front side marker lamp | 6. Combination meter
(Tail lamp indicator lamp) |
| 7. Combination switch | 8. Rear side marker lamp | 9. Tail lamp |
| 10. License plate lamp | 11. Daytime running light relay | |
| A. Engine room (LH) | | |

WITH DAYTIME RUNNING LIGHT SYSTEM : Component Description

INFOID:000000004459614

Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition by the combination switch reading function. • Judges the ON/OFF status of the parking, license plate, tail and side marker lamps according to the vehicle condition. - Requests the daytime running light relay and tail lamp relay ON to IPDM E/R (with CAN communication).
IPDM E/R	<ul style="list-style-type: none"> • Controls the daytime running light relay and supplies voltage to the load according to the request from BCM (with CAN communication). • Controls the integrated relay and supplies voltage to the load according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9. "System Diagram" .
Combination meter (Tail lamp indicator lamp)	Turns the tail lamp indicator lamp ON according to the request from BCM (with CAN communication).

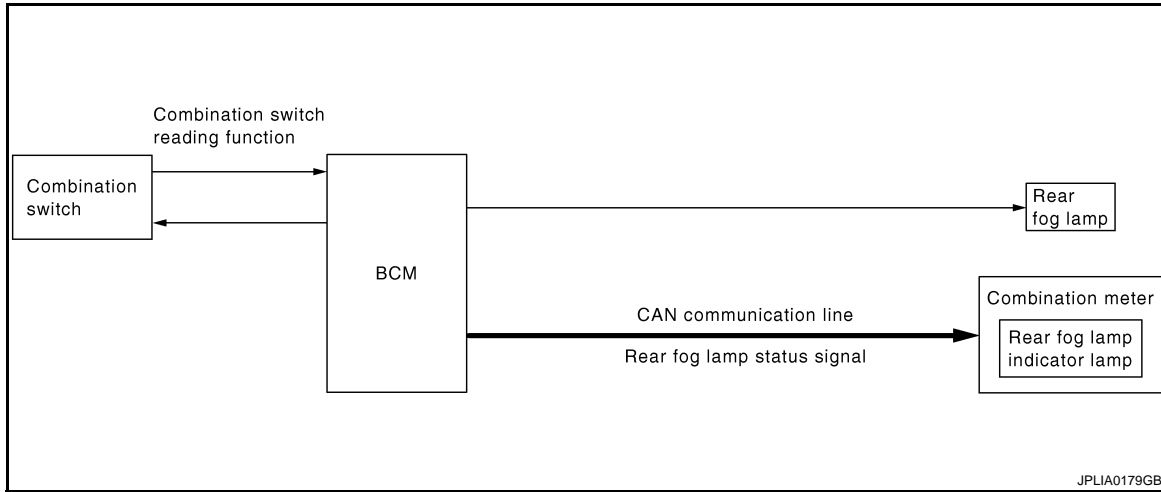
REAR FOG LAMP SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

REAR FOG LAMP SYSTEM

System Diagram



System Description

INFOID:000000004459604

OUTLINE

Rear fog lamp is controlled with the combination switch reading function and the rear fog lamp control function of BCM.

REAR FOG LAMP OPERATION

- BCM detects the condition of the combination switch by the combination switch reading function.
- BCM supplies voltage to rear fog lamp according to the rear fog lamp ON condition.

Rear fog lamp ON condition

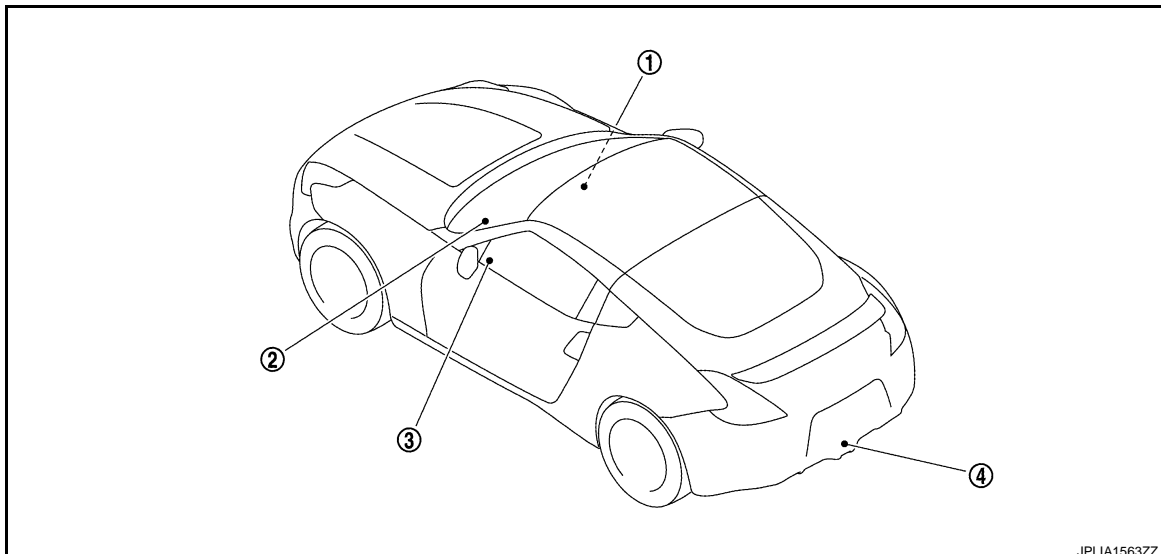
- When rear fog lamp switch signal is input (OFF → ON) with headlamp ON and rear fog lamp OFF

Rear fog lamp OFF condition (satisfied any condition as follows)

- When rear fog lamp switch signal is input (OFF → ON) with rear fog lamp ON
- Headlamp OFF
- BCM transmits the rear fog lamp status signal to the combination meter with CAN communication.
- Combination meter turns the rear fog lamp indicator lamp ON according to the rear fog lamp status signal.

Component Parts Location

INFOID:000000004459605



REAR FOG LAMP SYSTEM

[XENON TYPE]

< SYSTEM DESCRIPTION >

1. BCM
Refer to [BCS-8, "Component Parts Location"](#).
2. Combination meter
(Rear fog lamp indicator lamp)
3. Combination switch
4. Rear fog lamp

Component Description

INFOID:000000004459606

Part	Description
BCM	<ul style="list-style-type: none">• Detects each switch condition by the combination switch reading function.• Judges that the rear fog lamp is turned ON according to the vehicle status- Supplies voltage to the rear fog lamp- Requests the rear fog lamp indicator lamp ON to the combination meter (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "System Diagram" .
Combination meter (Rear fog lamp indicator lamp)	Turns the rear fog lamp indicator lamp ON according to the request from BCM (with CAN communication).

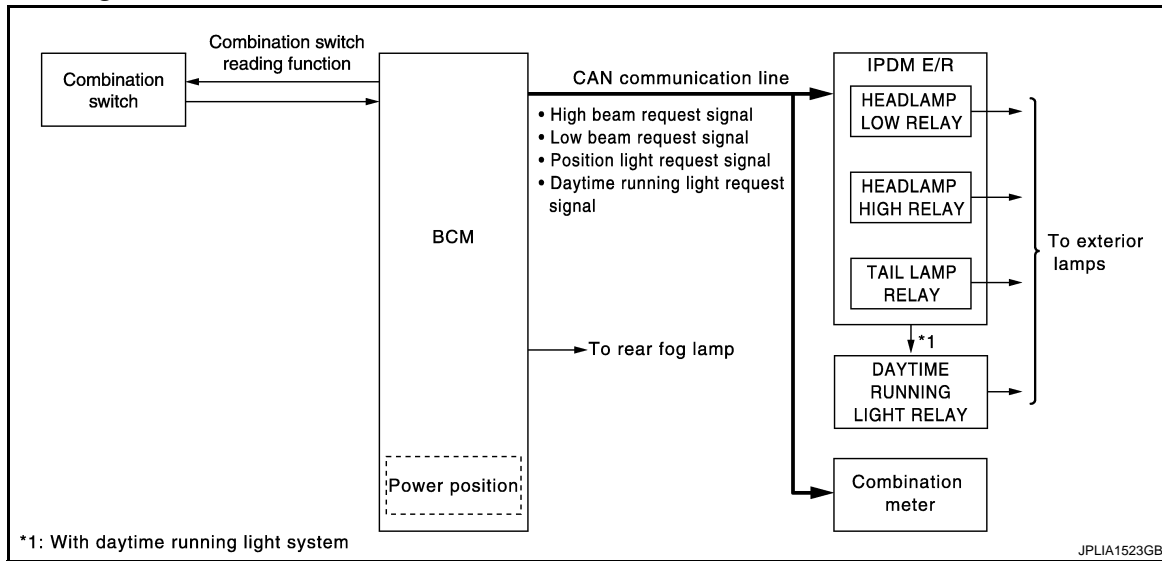
EXTERIOR LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

EXTERIOR LAMP BATTERY SAVER SYSTEM

System Diagram



System Description

INFOID:000000004404130

OUTLINE

- Exterior lamp battery saver system is controlled by each function of BCM and IPDM E/R.

Control by BCM

- Combination switch reading function
- Headlamp control function
- Exterior lamp battery saver function

Control by IPDM E/R

- Relay control function
 - BCM turns the exterior lamp* OFF after a period of time to prevent the battery from over-discharge when the ignition switch is turned OFF with the exterior lamp ON.
- *: Headlamp (LO/HI), parking lamp, tail lamp, license plate lamp, side marker lamp and rear fog lamp.

NOTE:

When the lighting switch is turned AUTO, the exterior lamp battery saver switches to the auto light system. Refer to [EXL-10. "System Diagram"](#).

EXTERIOR LAMP BATTERY SAVER ACTIVATION

BCM activates the timer and turns the exterior lamp OFF 5 minutes after the ignition switch is turned from ON → OFF with the exterior lamps ON.

NOTE:

- Headlamp control function turns the exterior lamps ON normally when the ignition switch is turned ACC or the engine started (both before and after the exterior lamp battery saver is turned OFF).
- The timer starts at the time that the lighting switch is turned from OFF → 1ST or 2ND with the exterior lamp OFF.

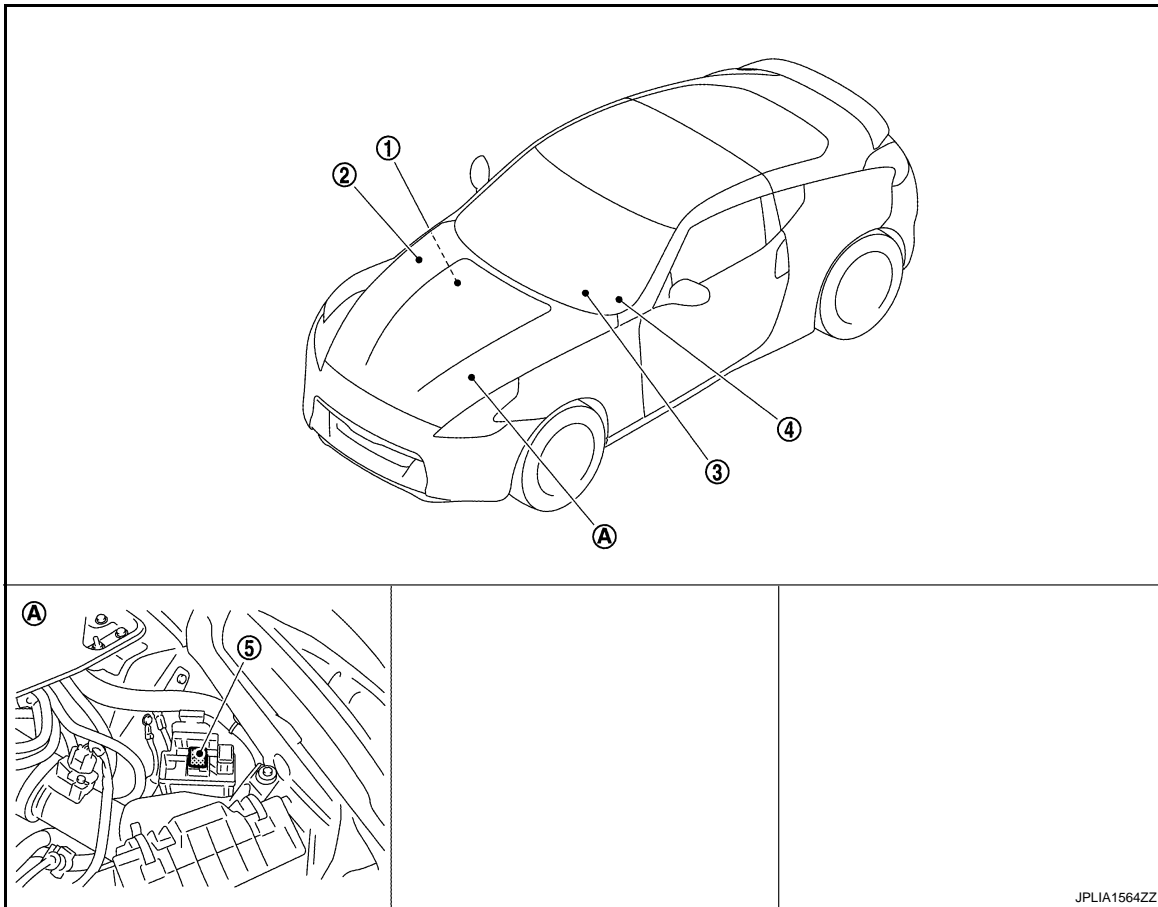
EXTERIOR LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

Component Parts Location

INFOID:000000004404131



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- | | | |
|--|---|----------------------|
| 1. BCM
Refer to BCS-8. "Component Parts Location" . | 2. IPDM E/R
Refer to PCS-5. "Component Parts Location" . | 3. Combination meter |
| 4. Combination switch | 5. Daytime running light relay | |
| A. Engine room (LH) | | |

Component Description

INFOID:000000004404132

Part	Description
BCM	<ul style="list-style-type: none"> • Detects each switch condition by the combination switch reading function. • Judges the exterior lamp OFF according to the vehicle condition. - Requests each relay OFF to IPDM E/R (with CAN communication). - Turn rear fog lamp OFF.
IPDM E/R	Controls the integrated relay according to the request from BCM (with CAN communication).
Combination switch (Lighting & turn signal switch)	Refer to BCS-9. "System Diagram" .

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:000000004704237

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 Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
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	<ul style="list-style-type: none"> • Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

x: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	x	x	x
Rear window defogger	REAR DEFOGGER		x	x
Warning chime	BUZZER		x	x
Interior room lamp timer	INT LAMP	x	x	x
Exterior lamp	HEAD LAMP	x	x	x
Wiper and washer	WIPER	x	x	x
Turn signal and hazard warning lamps	FLASHER	x	x	x
—	AIR CONDITONER*			
<ul style="list-style-type: none"> • Intelligent Key system • Engine start system 	INTELLIGENT KEY	x	x	x
Combination switch	COMB SW		x	
Body control system	BCM	x		
IVIS - NATS	IMMU		x	x
Interior room lamp battery saver	BATTERY SAVER	x	x	x
Trunk lid open	TRUNK		x	x
Vehicle security system	THEFT ALM	x	x	x
RAP system	RETAINED PWR		x	
Signal buffer system	SIGNAL BUFFER		x	x
TPMS	TPMS (AIR PRESSURE MONITOR)	x	x	x

NOTE:

*: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

DIAGNOSIS SYSTEM (BCM)

[XENON TYPE]

< SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"
	OFF>ACC		While turning power supply position from "OFF" to "ACC"
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
	ACC		Power supply position is "ACC" (Ignition switch ACC)
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)
ENGINE RUN	Power supply position is "RUN" (Ignition switch ON with engine running)		
CRANKING	Power supply position is "CRANKING" (At engine cranking)		
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected <ul style="list-style-type: none"> • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 	

HEADLAMP

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

INFOID:000000004404134

WORK SUPPORT

Service item	Setting item	Setting
BATTERY SAVER SET	On*	With the exterior lamp battery saver function
	Off	Without the exterior lamp battery saver function

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

Service item	Setting item	Setting	
ILL DELAY SET	MODE 1*	45 sec.	Sets delay timer function timer operation time. (All doors closed)
	MODE 2	Without the function	
	MODE 3	30 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	
CUSTOM A/LIGHT SETTING	MODE 1*	Normal	
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)	
	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)	
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)	

*: Factory setting

DATA MONITOR

Monitor item [Unit]	Description	
PUSH SW [On/Off]	The switch status input from push-button ignition switch	
ENGINE STATE [Stop/Stall/Crank/Run]	The engine status received from ECM with CAN communication	
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter with CAN communication	
KEY SW-SLOT [On/Off]	Key switch status input from key slot	
TURN SIGNAL R [On/Off]	Each switch status that BCM judges from the combination switch reading function	
TURN SIGNAL L [On/Off]		
TAIL LAMP SW [On/Off]		
HI BEAM SW [On/Off]		
HEAD LAMP SW1 [On/Off]		
HEAD LAMP SW2 [On/Off]		
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		
FR FOG SW [On/Off]		NOTE: The item is indicated, but not monitored.
RR FOG SW [On/Off]		Each switch status that BCM judges from the combination switch reading function
DOOR SW-DR [On/Off]	The switch status input from driver side door switch	
DOOR SW-AS [On/Off]	The switch status input from passenger side door switch	

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

Monitor item [Unit]	Description
DOOR SW-RR [On/Off]	NOTE: The item is indicated, but not monitored.
DOOR SW-RL [On/Off]	
DOOR SW-BK [On/Off]	
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor

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 position light request signal transmission.
HEAD LAMP	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
	Low	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	NOTE: The item is indicated, but cannot be tested.
	Off	
RR FOG LAMP	On	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Stops the voltage to turn the rear fog lamp OFF. • Stops the rear fog lamp status signal transmission.
DAYTIME RUNNING LIGHT	On	Transmits the low beam request signal and the daytime running light request signal with CAN communication to turn the headlamp (LO), parking, license plate, tail and side marker lamps ON.
	Off	Stops the low beam request signal and the daytime running light request signal transmission.
CORNERING LAMP	RH	NOTE: The item is indicated, but cannot be tested.
	LH	
	Off	
ILL DIM SIGNAL	On	NOTE: The item is indicated, but cannot be tested.
	Off	

FLASHER

FLASHER : CONSULT-III Function (BCM - FLASHER)

INFOID:000000004404135

WORK SUPPORT

Service item	Setting item	Setting
HAZARD ANSWER BACK	Lock Only*	With locking only
	Unlk Only	With unlocking only
	Lock/Unlk	With locking/unlocking
	Off	Without the function
		Sets the hazard warning lamp answer back function when the door is lock/unlock with the request switch or the key fob.

*: Factory setting

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[XENON TYPE]

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	The switch status input from the request switch (driver side)
REQ SW-AS [On/Off]	The switch status input from the request switch (passenger side)
PUSH SW [On/Off]	The switch status input from the push-button ignition switch
TURN SIGNAL R [On/Off]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch
RKE-LOCK [On/Off]	Lock signal status received from the remote keyless entry receiver
RKE-UNLOCK [On/Off]	Unlock signal status received from the remote keyless entry receiver
RKE-PANIC [On/Off]	Panic alarm signal status received from the remote keyless entry receiver

ACTIVE TEST

Test item	Operation	Description
FLASHER	RH	Outputs the voltage to blink the right side turn signal lamps.
	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

A
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EXL

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:000000004704238

AUTO ACTIVE TEST

Description

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

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- License plate lamps
- Side marker lamps
- Tail lamps
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan (cooling fan control module)

Operation Procedure

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)
NOTE:
 When auto active test is performed with hood opened, sprinkle water on windshield beforehand.
2. Turn the ignition switch OFF.
3. Turn the ignition switch ON, and within 20 seconds, press the front door switch (driver side) 10 times. Then turn the ignition switch OFF.
CAUTION:
Close passenger door.
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
5. The oil pressure warning lamp starts blinking when the auto active test starts.
6. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

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

CAUTION:

- If auto active test mode cannot be actuated, check door switch system. Refer to [DLK-60](#), "[Component Function Check](#)".
- Do not start the engine.

Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 6 steps are repeated 3 times.

Operation sequence	Inspection location	Operation
1	Oil pressure warning lamp	Blinks continuously during operation of auto active test
2	Front wiper	LO for 5 seconds → HI for 5 seconds
3	<ul style="list-style-type: none"> • Parking lamps • License plate lamps • Side marker lamps • Tail lamps 	10 seconds
4	Headlamps	LO for 10 seconds → HI ON ⇔ OFF 5 times
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
6*	Cooling fan	MID for 5 seconds → HI for 5 seconds

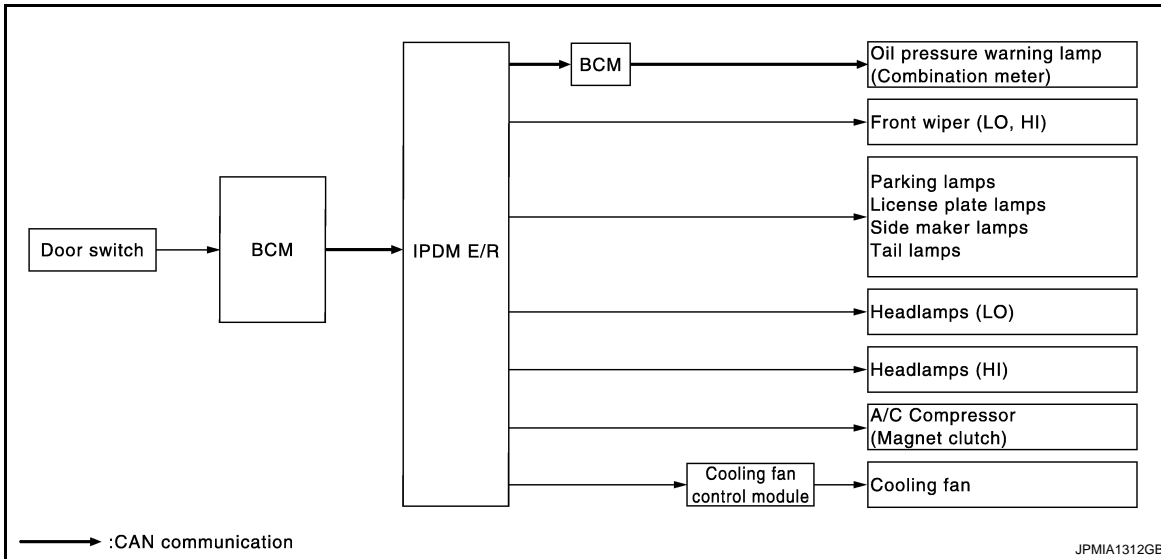
*: Outputs duty ratio of 50% for 5 seconds → duty ratio of 100% for 5 seconds on the cooling fan control module.

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[XENON TYPE]

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents	Possible cause
Any of the following components do not operate <ul style="list-style-type: none"> • Parking lamps • License plate lamps • Side maker lamps • Tail lamps • Headlamp (HI, LO) • Front wiper (HI, LO) 	Perform auto active test. Does the applicable system operate?	YES BCM signal input circuit
		NO <ul style="list-style-type: none"> • Lamp or motor • Lamp or motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES <ul style="list-style-type: none"> • Unified meter and A/C amp. signal input circuit • CAN communication signal between unified meter and A/C amp. and ECM • CAN communication signal between ECM and IPDM E/R
		NO <ul style="list-style-type: none"> • Magnet clutch • Harness or connector between IPDM E/R and magnet clutch • IPDM E/R
Oil pressure warning lamp does not operate	Perform auto active test. Does the oil pressure warning lamp blink?	YES <ul style="list-style-type: none"> • Harness or connector between IPDM E/R and oil pressure switch • Oil pressure switch • IPDM E/R
		NO <ul style="list-style-type: none"> • CAN communication signal between IPDM E/R and BCM • CAN communication signal between BCM and unified meter and A/C amp. • Combination meter

DIAGNOSIS SYSTEM (IPDM E/R)

[XENON TYPE]

< SYSTEM DESCRIPTION >

Symptom	Inspection contents	Possible cause
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	<p style="text-align: center;">YES</p> <ul style="list-style-type: none"> • ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		<p style="text-align: center;">NO</p> <ul style="list-style-type: none"> • Cooling fan • Harness or connector between cooling fan and cooling fan control module • Cooling fan control module • Harness or connector between IPDM E/R and cooling fan control module • Cooling fan relay • Harness or connector between IPDM E/R and cooling fan relay • IPDM E/R

CONSULT-III Function (IPDM E/R)

INFOID:000000004704239

APPLICATION ITEM

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

Diagnosis mode	Description
Ecu Identification	Allows confirmation of IPDM E/R part number.
Self Diagnostic Result	Displays the diagnosis results judged by IPDM E/R.
Data Monitor	Displays the real-time input/output data from IPDM E/R input/output data.
Active Test	IPDM E/R can provide a drive signal to electronic components to check their operations.
CAN Diag Support Monitor	The results of transmit/receive diagnosis of CAN communication can be read.

SELF DIAGNOSTIC RESULT

Refer to [EXL-146. "DTC Index"](#).

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIG- NALS	Description
RAD FAN REQ [%]	×	Displays the value of the cooling fan speed signal received from ECM via CAN communication.
AC COMP REQ [Off/On]	×	Displays the status of the A/C compressor request signal received from ECM via CAN communication.
TAIL&CLR REQ [Off/On]	×	Displays the status of the position light request signal received from BCM via CAN communication.
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.
FR FOG REQ [Off/On]	×	NOTE: The item is indicated, but not monitored.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper stop position signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[XENON TYPE]

Monitor Item [Unit]	MAIN SIG- NALS	Description
IGN RLY1 -REQ [Off/On]		Displays the status of the ignition switch ON signal received from BCM via CAN communication.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
PUSH SW [Off/On]		Displays the status of the push-button ignition switch judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the clutch interlock switch (M/T models) or shift position (A/T models) judged by IPDM E/R.
ST RLY CONT [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
IHBT RLY -REQ [Off/On]		Displays the status of the starter control relay signal received from BCM via CAN communication.
ST/INHI RLY [Off/ST ON/INHI ON/UNKWN]		Displays the status of the starter relay and starter control relay judged by IPDM E/R.
DETENT SW [Off/On]		Displays the status of the A/T shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		Displays the status of the steering lock relay request received from BCM via CAN communication.
S/L STATE [LOCK/UNLOCK/UNKWN]		Displays the status of the steering lock judged by IPDM E/R.
DTRL REQ [Off/On]		Displays the status of the daytime running light request signal received from BCM via CAN communication. NOTE: This item is monitored only the vehicle with daytime running light system.
OIL P SW [Open/Close]		Displays the status of the oil pressure switch judged by IPDM E/R.
HOOD SW [Off/On]		Displays the status of the hood switch judged by IPDM E/R.
HL WASHER REQ [Off/On]		NOTE: The item is indicated, but not monitored.
THFT HRN REQ [Off/On]		Displays the status of the theft warning horn request signal received from BCM via CAN communication.
HORN CHIRP [Off/On]		Displays the status of the horn reminder signal received from BCM via CAN communication.
CRNRNG LMP REQ [Off/On]		NOTE: The item is indicated, but not monitored.

ACTIVE TEST

Test item

Test item	Operation	Description
CORNERING LAMP	Off	NOTE: The item is indicated, but cannot be tested.
	LH	
	RH	
HORN	On	Operates horn relay 1 and horn relay 2 for 20 ms.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.

DIAGNOSIS SYSTEM (IPDM E/R)

[XENON TYPE]

< SYSTEM DESCRIPTION >

Test item	Operation	Description
MOTOR FAN	1	OFF
	2	Outputs 50% pulse duty signal (PWM signal) to the cooling fan control module.
	3	Outputs 80% pulse duty signal (PWM signal) to the cooling fan control module.
	4	Outputs 100% pulse duty signal (PWM signal) to the cooling fan control module.
HEAD LAMP WASHER	On	NOTE: The item is indicated, but cannot be tested.
EXTERNAL LAMPS	Off	OFF
	TAIL	Operates the tail lamp relay and daytime running light relay. NOTE: Daytime running light relay is with daytime running light system only.
	Lo	Operates the headlamp low relay.
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.
	Fog	NOTE: The item is indicated, but cannot be tested.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000004704240

1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	K
	10

Is the fuse fusing?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Battery voltage
Connector	Terminal	
M118	1	
M119	11	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		Existed
M119	13		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

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

INFOID:000000004704241

1. CHECK FUSES AND FUSIBLE LINK

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Signal name	Fuses and fusible link No.
Battery power supply	C
	50
	51

Is the fuse fusing?

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

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector.
3. Check voltage between IPDM E/R harness connector and the ground.

Terminals		Voltage (Approx.)
(+)	(-)	
IPDM E/R		Battery voltage
Connector	Terminal	
E4	1	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair the harness or connector.

3.CHECK GROUND CIRCUIT

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E5	12		Existed
E6	41		

Does continuity exist?

YES >> INSPECTION END

NO >> Repair the harness or connector.

EXTERIOR LAMP FUSE

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

EXTERIOR LAMP FUSE

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Description

INFOID:000000004404173

Fuse list

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#54	10 A
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp LO (LH)	IPDM E/R	#56	15 A
Headlamp LO (RH)	IPDM E/R	#57	15 A
<ul style="list-style-type: none">• Parking lamp• Front side marker lamp	IPDM E/R	#52	10 A
<ul style="list-style-type: none">• Tail lamp• Rear side marker lamp• License plate lamp• Each illumination	IPDM E/R	#53	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	FUSE BLOCK (J/B)	#4	10 A

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004404174

1. CHECK FUSE

Check that the following fuses are not fusing.

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#54	10 A
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp LO (LH)	IPDM E/R	#56	15 A
Headlamp LO (RH)	IPDM E/R	#57	15 A
<ul style="list-style-type: none">• Parking lamp• Front side marker lamp	IPDM E/R	#52	10 A
<ul style="list-style-type: none">• Tail lamp• Rear side marker lamp• License plate lamp• Each illumination	IPDM E/R	#53	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	FUSE BLOCK (J/B)	#4	10 A

Is the fuse fusing?

YES >> Repair the applicable circuit. And then replace the fuse.

NO >> The fuse is normal.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM : Description

INFOID:000000004459615

Fuse list

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#54	10 A
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp LO (LH)	IPDM E/R	#56	15 A
Headlamp LO (RH)	IPDM E/R	#57	15 A

EXTERIOR LAMP FUSE

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Unit	Location	Fuse No.	Capacity
<ul style="list-style-type: none"> • Daytime running light relay - Parking lamp - Front side marker lamp - Tail lamp - Rear side marker lamp - License plate lamp 	IPDM E/R	#59	10 A
Each illumination	IPDM E/R	#53	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	FUSE BLOCK (J/B)	#4	10 A

WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004459616

1. CHECK FUSE

Check that the following fuses are not fusing.

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#54	10 A
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp LO (LH)	IPDM E/R	#56	15 A
Headlamp LO (RH)	IPDM E/R	#57	15 A
<ul style="list-style-type: none"> • Daytime running light relay - Parking lamp - Front side marker lamp - Tail lamp - Rear side marker lamp - License plate lamp 	IPDM E/R	#59	10 A
Each illumination	IPDM E/R	#53	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	FUSE BLOCK (J/B)	#4	10 A

Is the fuse fusing?

- YES >> Repair the applicable circuit. And then replace the fuse.
 NO >> The fuse is normal.

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

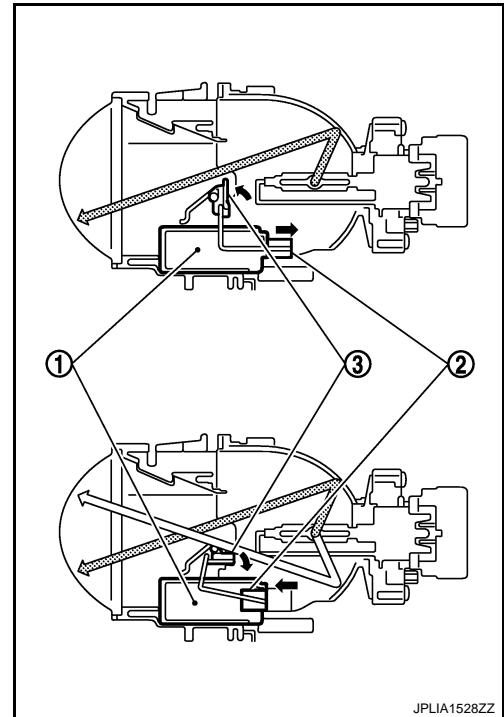
HEADLAMP (HI) CIRCUIT

Description

INFOID:000000004404175

The high beam solenoid drives the mobile valve shade. And the mobile valve shade switches the high beam and low beam of headlamp.

- When the headlamp high relay is turned ON, magnetic force is applied to the high beam solenoid (1) by a current. The mobile valve shade (3) is switched to the high beam position through the actuator rod (2).
- When the headlamp high relay is turned OFF, the current stops. The mobile valve shade returns to the low beam position automatically.



Component Function Check

INFOID:000000004404176

1. CHECK HEADLAMP (HI) OPERATION

IPDM E/R AUTO ACTIVE TEST

1. Start IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the headlamp switches to the high beam.

CONSULT-III ACTIVE TEST

1. Select "EXTERNAL LAMPS" 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

NOTE:

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

Does the headlamp switch to the high beam?

- YES >> Headlamp (HI) circuit is normal.
NO >> Refer to [EXL-39, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004404177

1. 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 LAMPS" of IPDM E/R active test item.
5. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

HEADLAMP (HI) CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Terminals			Test item	Voltage (Approx.)	
(+)	(-)				
IPDM E/R			EXTERNAL LAMPS	Ground	
Connector	Terminal				
RH	E8	89	Hi		Battery voltage
LH		90	Off		0 V
			Hi	Battery voltage	
			Off	0 V	

Is the measurement value normal?

- YES >> GO TO 2.
NO >> GO TO 3.

2.CHECK HEADLAMP (HI) OPEN CIRCUIT

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

IPDM E/R		Front combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E8	E28	7	Existed
LH		90	E58	

Does continuity exist?

- YES >> Replace the front combination lamp.
NO >> Repair the harnesses or connectors.

3.CHECK HEADLAMP (HI) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp HI (RH)	IPDM E/R	#55	10 A
Headlamp HI (LH)	IPDM E/R	#54	10 A

Is the fuse fusing?

- YES >> GO TO 4.
NO >> Replace IPDM E/R.

4.CHECK FRONT COMBINATION LAMP (HI) SHORT CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between the IPDM E/R harness connector terminal and the ground.

IPDM E/R			Ground	Continuity
Connector	Terminal			
RH	E8	89	Ground	Not existed
LH		90		

Does continuity exist?

- YES >> Repair the harnesses or connectors. And then replace the fuse.
NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP (LO) CIRCUIT

Description

INFOID:000000004404178

Headlamp (LO) circuit is connected to HID control unit integrated in the headlamp. Headlamp (LO) circuit turns xenon headlamp ON.

For the details of HID control unit and the xenon headlamp, refer to [EXL-43, "Description"](#).

Component Function Check

INFOID:000000004404179

1. CHECK HEADLAMP (LO) OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Start IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the headlamp is turned ON.

Ⓜ CONSULT-III ACTIVE TEST

1. Select "EXTERNAL LAMPS" 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-41, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004404180

1. CHECK HEADLAMP (LO) 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 LAMPS" of IPDM E/R active test item.
5. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

Terminals			Test item	Voltage (Approx.)
(+)	(-)			
IPDM E/R			EXTERNAL LAMPS	Battery voltage
Connector	Terminal			
RH	E8	83	Lo	Battery voltage
				Off
LH		84	Lo	Battery voltage
			Off	0 V

Is the measurement value normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK HEADLAMP (LO) OPEN CIRCUIT

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

HEADLAMP (LO) CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

IPDM E/R		Front combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E8	E28	5	Existed
LH		84	E58	

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

3. CHECK HEADLAMP (LO) FUSE

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

Unit	Lotion	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	#57	15 A
Headlamp LO (LH)	IPDM E/R	#56	15 A

Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

4. CHECK HEADLAMP (LO) SHORT CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between the IPDM E/R harness connector and the ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
RH	E8		Not existed
LH			

Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if the fuse is fusing again.)

5. CHECK HEADLAMP GROUND OPEN CIRCUIT

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

Front combination lamp		Ground	Continuity
Connector	Terminal		
RH	E28		Existed
LH	E58		

Does continuity exist?

YES >> Perform the xenon headlamp diagnosis. Refer to [EXL-43, "Description"](#).

NO >> Repair the harnesses or connectors.

XENON HEADLAMP

Description

INFOID:000000004404181

OUTLINE

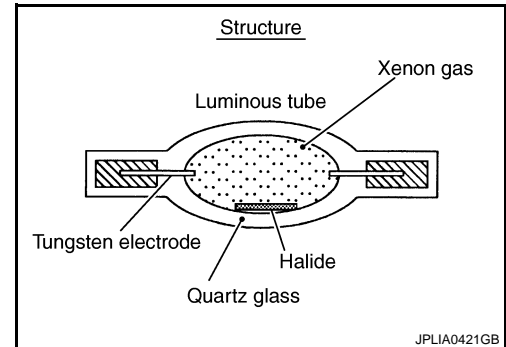
- The lamp light source is by the arch discharge by applying high voltage into the xenon gas-filled bulb instead of the halogen bulb filament.
- Sight becomes more natural and brighter because the amount of light are gained adequately and the color of light is sunshine-like white.
- The xenon bulb drops the amount of light, repeats blinking, and illuminates in red if the bulb reaches the service life.

ILLUMINATION PRINCIPLE

1. Discharging starts in high voltage pulse between bulb electrodes.
2. Xenon gas is activated by current between electrodes. Pale light is emitted.
3. The luminous tube (bulb) temperature elevates. Evaporated halide is activated by discharge. The color of light changes into white.

NOTE:

- Brightness and the color of light may change slightly immediately after the headlamp turned ON until the xenon bulb becomes stable. This is not malfunction.
- Illumination time lag may occur between right and left. This is not malfunction.



PRECAUTIONS FOR TROUBLE DIAGNOSIS

Representative malfunction examples are; “Light does not turn ON”, “Light blinks”, and “Brightness is inadequate”. The cause often be the xenon bulb. Such malfunctions, however, are occurred occasionally by HID control unit malfunction or lamp case malfunction. Specify the malfunctioning part with diagnosis procedure.

WARNING:

- **Never touch the harness, HID control unit, the inside and metal part of lamp when turning the headlamp ON or operating the light switch.**
- **Never work with wet hands.**

CAUTION:

- **Never perform HID control unit circuit diagnosis with a circuit tester or an equivalent.**
- **Temporarily install the headlamp on the vehicle. Connect the battery to the connector (vehicle side) when checking ON/OFF status.**
- **Disconnect the battery negative terminal before disconnecting the lamp socket connector or the harness connector.**
- **Check for fusing of the fusible link(s), open around connector, short, disconnection if the symptom is caused by electric error.**

NOTE:

- Turn the switch OFF once before turning ON, if the ON/OFF is inoperative.
- The xenon bulb drops the amount of light, repeats blinking, and illuminates in red if the bulb reaches the service life.

Diagnosis Procedure

INFOID:000000004404182

1. CHECK XENON BULB

Install the normal bulb to the applicable headlamp. Check that the xenon bulb is turned ON.

Is the headlamp turned ON?

- YES >> Replace the xenon bulb.
- NO >> GO TO 2.

2. CHECK HID CONTROL UNIT

Install the normal HID control unit to the applicable headlamp. Check that the lamp is turned ON.

Is the headlamp turned ON?

XENON HEADLAMP

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

YES >> Replace HID control unit.

NO >> GO TO 3.

3. CHECK XENON HEADLAMP HOUSING ASSEMBLY

Install the normal xenon headlamp housing assembly to the applicable headlamp. Check that the xenon headlamp is turned ON.

Is the headlamp turned ON?

YES >> Replace the front combination lamp. (Xenon headlamp housing voltage converter malfunctions.)

NO >> Xenon headlamp is normal. Check the headlamp control system.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:000000004459617

1. CHECK DAYTIME RUNNING LIGHT OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the parking lamp and tail lamp are turned ON.

Ⓜ CONSULT-III ACTIVE TEST

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. With operating the test item, check that parking lamp and tail lamp are turned ON.

TAIL : Parking lamp and tail lamp ON

Off : Parking lamp and tail lamp OFF

Are parking lamp and tail lamp turned ON?

- YES >> Daytime running light relay circuit is normal.
 NO >> Refer to [EXL-45, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004459618

1. CHECK DAYTIME RUNNING LIGHT RELAY FUSE

Check that the following fuse is not fusing.

Unit	Location	Fuse No.	Capacity
Daytime running light relay	IPDM E/R	#59	10 A

Is the fuse fusing?

- YES >> Replace the fuse after repairing the applicable circuit.
 NO >> GO TO 2.

2. CHECK DAYTIME RUNNING LIGHT RELAY POWER SUPPLY

1. Remove the daytime running light relay.
2. Check voltage between the daytime running light relay harness connector and the ground.

Terminals		Voltage (Approx.)
(+)	(-)	
Daytime running light relay		Battery voltage
Connector	Terminal	
E13	1 3	

Is the measurement value normal?

- YES >> GO TO 3.
 NO >> Repair harnesses or connectors.

3. CHECK DAYTIME RUNNING LIGHT RELAY

Check the daytime running light relay. Refer to [EXL-46, "Component Inspection"](#).

Is the daytime running light relay normal?

- YES >> GO TO 4.
 NO >> Replace the daytime running light relay.

4. CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OUTPUT

Ⓜ CONSULT-III ACTIVE TEST

1. Turn the ignition switch OFF.
2. Install the daytime running light relay.

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

EXL

DAYTIME RUNNING LIGHT RELAY CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test item, check voltage between the IPDM E/R harness connector and the ground.

Terminals		Test item	Voltage (Approx.)
(+)	(-)		
IPDM E/R		EXTERNAL LAMPS	0 V
Connector	Terminal		
E9	105	TAIL	0 V
		Off	Battery voltage

Is the measurement value normal?

YES >> Check the parking lamp circuit. Refer to [EXL-50, "WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

Fixed at 0 V >> GO TO 5.

Fixed at battery voltage >> Replace IPDM E/R.

5. CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OPEN CIRCUIT

- Remove the daytime running light relay.
- Disconnect IPDM E/R harness connector.
- Check continuity between the IPDM E/R harness connector and the daytime running light relay harness connector.

IPDM E/R		Daytime running light relay		Continuity
Connector	Terminal	Connector	Terminal	
E9	105	E13	2	Existed

Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

6. CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL SHORT CIRCUIT

Check continuity between the IPDM E/R harness connector and the ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E9	105		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace IPDM E/R.

Component Inspection

INFOID:000000004459619

1. CHECK DAYTIME RUNNING LIGHT RELAY EXCITATION COIL SIDE

- Turn the ignition switch OFF.
- Remove the daytime running light relay.
- Check continuity of the daytime running light relay excitation coil side.

Daytime running light relay		Continuity
Terminal		
1	2	Existed

Does continuity exist?

YES >> GO TO 2.

NO >> Replace the daytime running light relay.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

2. CHECK DAYTIME RUNNING LIGHT RELAY CONTACT SIDE

1. Apply battery voltage to the daytime running light relay between the terminals 1 and 2.
2. Check continuity of the daytime running light relay.

Daytime running light relay		Condition	Continuity
Terminal		Voltage	
3	4	Apply	Existed
		Not Apply	Not existed

Does continuity exist?

- YES >> Daytime running light relay is normal.
NO >> Replace the daytime running light relay.

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

EXL

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

PARKING LAMP CIRCUIT

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Function Check

INFOID:000000004404188

1.CHECK PARKING LAMP OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the parking lamp is turned ON.

Ⓟ CONSULT-III ACTIVE TEST

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

TAIL : Parking lamp ON

Off : Parking lamp OFF

Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

NO >> Refer to [EXL-48, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004404189

1.CHECK PARKING LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
<ul style="list-style-type: none">• Parking lamp• Front side marker lamp	IPDM E/R	#52	10 A

Is the fuse fusing?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK PARKING LAMP SHORT CIRCUIT

1. Disconnect IPDM E/R connector and the front combination lamp connector.
2. Check continuity between the IPDM E/R harness connector and the ground.

IPDM E/R			Ground	Continuity
Connector	Terminal			
RH	E9	91	Not existed	
LH		92		

Does continuity exist?

YES >> Repair the harnesses or connectors. And then replace the fuse.

NO >> Replace the fuse. (Replace IPDM E/R if fusing is found again.)

3.CHECK PARKING LAMP BULB AND FRONT SIDE MARKER LAMP

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

4.CHECK PARKING LAMP OUTPUT VOLTAGE

Ⓟ CONSULT-III ACTIVE TEST

1. Disconnect the front combination lamp connector.

PARKING LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

2. Turn the ignition switch ON.
3. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
4. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

Terminals			Test item	Voltage (Approx.)
(+)	(-)			
IPDM E/R			EXTERNAL LAMPS	Battery voltage
Connector	Terminal			
RH	E9	91	TAIL	0 V
LH		92	Off	Battery voltage
			Off	0 V

Is the measurement value normal?

- YES >> GO TO 5.
NO >> Replace IPDM E/R.

5.CHECK PARKING LAMP OPEN CIRCUIT

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

IPDM E/R			Front combination lamp		Continuity
Connector	Terminal		Connector	Terminal	
RH	E9	91	E28	8	Existed
LH		92	E58	8	

Does continuity exist?

- YES >> GO TO 6.
NO >> Repair the harnesses or connectors.

6.CHECK PARKING LAMP GROUND OPEN CIRCUIT

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

Front combination lamp			Ground	Continuity
Connector	Terminal			
RH	E28	4		Existed
LH	E58	4		

Does continuity exist?

- YES >> Replace the front combination lamp.
NO >> Repair the harnesses or connectors.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM : Component Function Check INFOID:000000004459620

NOTE:

Check the daytime running light relay circuit first if the parking lamp, tail lamp, license plate lamp and side marker lamp are not turned ON. Refer to [EXL-45. "Component Function Check"](#).

1.CHECK PARKING LAMP OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30. "Diagnosis Description"](#).
2. Check that the parking lamp is turned ON.

PARKING LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

ⓐCONSULT-III ACTIVE TEST

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

TAIL : Parking lamp ON

Off : Parking lamp OFF

Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

NO >> Refer to [EXL-50. "WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004459621

1.CHECK PARKING LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

2.CHECK PARKING LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Remove the daytime running light relay.
3. Disconnect the front combination lamp connector.
4. Check continuity between the daytime running light relay harness connector and the front combination lamp harness connector.

Daytime running light relay		Front combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E13	E28	8	Existed
LH		E58	8	

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK PARKING LAMP SHORT CIRCUIT

Check continuity between the daytime running light relay harness connector and the ground.

Daytime running light relay		Ground	Continuity
Connector	Terminal		
E13	5		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 4.

4.CHECK PARKING LAMP GROUND OPEN CIRCUIT

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

Front combination lamp			Ground	Continuity
Connector	Terminal			
RH	E28	4		Existed
LH	E58	4		

Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:000000004404190

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

NOTE:

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

Component Function Check

INFOID:000000004404191

1. CHECK TURN SIGNAL LAMP

ⓂCONSULT-III ACTIVE TEST

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

LH : Turn signal lamp LH blinking

RH : Turn signal lamp RH blinking

Off : The turn signal lamp OFF

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to [EXL-51. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004404192

1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

2. CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

ⓂCONSULT-III ACTIVE TEST

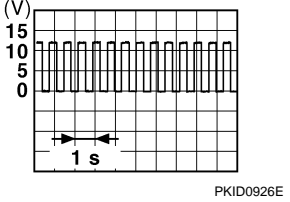
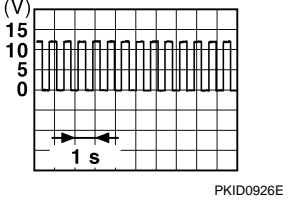
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector, side turn signal lamp connector or the rear combination lamp connector.
3. Turn the ignition switch ON.
4. Select "FLASHER" of BCM (FLASHER) active test item.
5. With operating the turn signal switch, check the voltage between the BCM harness connector and the ground.

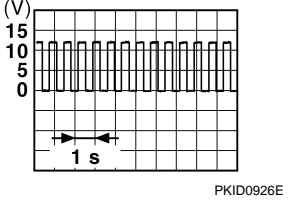
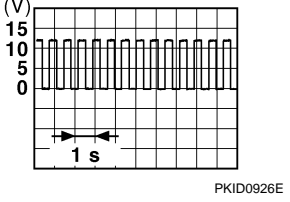
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TURN SIGNAL LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Terminals			Test item	Voltage (Approx.)
(+)	(-)			
BCM			FLASHER	
Connector	Terminal			
RH	M119	17	RH	
		Ground	Off	0 V
LH	M119	18	LH	
		Ground	Off	0 V

Terminals			Test item	Voltage (Approx.)
(+)	(-)			
BCM			FLASHER	
Connector	Terminal			
RH	M120	20	RH	
		Ground	Off	0 V
LH	M120	25	LH	
		Ground	Off	0 V

Is the measurement value normal?

- YES >> GO TO 3.
- NO >> Replace BCM.

3. CHECK TURN SIGNAL LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM connector.
3. Check the continuity between the BCM harness connector and the front combination lamp, side turn signal lamp or rear combination lamp harness connector.

TURN SIGNAL LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Front turn signal lamp

BCM		Front combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	M119	17	E28	Existed
LH		18	E58	

Side turn signal lamp

BCM		Side turn signal lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	M119	17	E24	Existed
LH		18	E55	

Rear turn signal lamp

BCM		Rear combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	M120	20	B67	Existed
LH		25	B60	

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 and the ground.

Front/side

BCM		Ground	Continuity
Connector	Terminal		
RH	M119	17	Not existed
LH		18	

Rear

BCM		Ground	Continuity
Connector	Terminal		
RH	M120	20	Not existed
LH		25	

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5.

5. CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

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

Front turn signal lamp

Front combination lamp		Ground	Continuity
Connector	Terminal		
RH	E28	4	Existed
LH	E58	4	

TURN SIGNAL LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

Side turn signal lamp

Side turn signal lamp			Ground	Continuity
Connector		Terminal		Existed
RH	E24	2		
LH	E55	2		

Rear turn signal lamp

Rear combination lamp			Ground	Continuity
Connector		Terminal		Existed
RH	B67	3		
LH	B60	3		

Does continuity exist?

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

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

OPTICAL SENSOR

Description

INFOID:000000004404193

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

Component Function Check

INFOID:000000004404194

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT-III

CONSULT-III DATA MONITOR

1. Turn the ignition switch ON.
2. Select "OPTICAL SENSOR" of BCM (HEADLAMP) data monitor item.
3. Turn the lighting switch AUTO.
4. With the optical sensor illuminating, check the monitor status.

Monitor item	Condition		Voltage (Approx.)
OPTICAL SENSOR	Optical sensor	When illuminating	3.1 V or more *
		When shutting off light	0.6 V or less

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

Is the item status normal?

- YES >> Optical sensor is normal.
 NO >> Refer to [EXL-55, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004404195

1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn the ignition switch ON.
2. Turn the lighting switch AUTO.
3. Check the voltage between the optical sensor harness connector and the ground.

Terminals			Voltage (Approx.)
(+)	(-)		
Optical sensor			5 V
Connector	Ground		
M94	1		

Is the measurement value normal?

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

2.CHECK OPTICAL SENSOR GROUND INPUT

Check the voltage between the optical sensor harness connector and the ground.

Terminals			Voltage (Approx.)
(+)	(-)		
Optical sensor			0 V
Connector	Ground		
M94	3		

Is the measurement value normal?

- YES >> GO TO 3.
 NO >> GO TO 6.

3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

OPTICAL SENSOR

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

With illuminating the optical sensor, check the voltage between the optical sensor harness connector and the ground.

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
Optical sensor		Optical sensor	
Connector	Terminal		
M94	2	When illuminating	3.1 V or more *
		When shutting off light	0.6 V or less

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

Is the measurement value normal?

YES >> GO TO 7.

NO >> Replace the optical sensor.

4. CHECK OPTICAL SENSOR OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector.
3. Check continuity between the optical sensor harness connector and the BCM harness connector.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M94	1	M123	138	Existed

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

5. CHECK OPTICAL SENSOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M94	1		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

6. CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector.
3. Check continuity between the optical sensor harness connector and the BCM harness connector.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M94	3	M123	137	Existed

Does continuity exist?

YES >> Replace BCM.

NO >> Repair the harnesses or connectors.

7. CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor connector and BCM connector.
3. Check continuity between the optical sensor harness connector and the BCM harness connector.

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M94	2	M123	113	Existed

Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

8.CHECK OPTICAL SENSOR SHORT CIRCUIT

Check the continuity between the optical sensor harness connector and the ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M94	2		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

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HAZARD SWITCH

Component Function Check

INFOID:000000004404197

1. CHECK HAZARD SWITCH SIGNAL BY CONSULT-III

CONSULT-III DATA MONITOR

1. Turn the ignition switch ON.
2. Select "HAZARD SW" of BCM (FLASHER) data monitor item.
3. With operating the hazard switch, check the monitor status.

Monitor item	Condition	Monitor status
HAZARD SW	Hazard switch	ON
		Off

Is the item status normal?

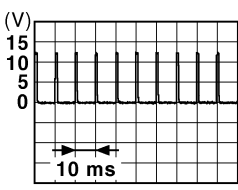
- YES >> Hazard switch circuit is normal.
 NO >> Refer to [EXL-58, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004404198

1. CHECK HAZARD SWITCH SIGNAL INPUT

With operating the hazard switch, check the voltage between the BCM harness connector and the ground.

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
BCM		Hazard switch	0 V
Connector	Terminal		
M122	110	ON	
		OFF	
		Ground	

JPMIA0012GB

Is the measurement value normal?

- YES >> Replace BCM.
 NO >> GO TO 2.

2. CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the hazard switch connector and BCM connector.
3. Check continuity between the hazard switch harness connector and the BCM harness connector.

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M144	2	M122	110	Existed

Does continuity exist?

- YES >> GO TO 3.
 NO >> Repair the harnesses or connectors.

3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between the hazard switch harness connector and the ground.

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Hazard switch		Ground	Continuity
Connector	Terminal		
M144	2		Not existed

A

Does continuity exist?

B

YES >> Repair the harnesses or connectors.

NO >> GO TO 4.

C

4.CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between the hazard switch harness connector and the ground.

D

Hazard switch		Ground	Continuity
Connector	Terminal		
M144	1		Existed

E

Does continuity exist?

YES >> Replace the hazard switch.

NO >> Repair the harnesses or connectors.

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TAIL LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

TAIL LAMP CIRCUIT

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Function Check

INFOID:000000004404199

1. CHECK TAIL LAMP OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the tail lamp is turned ON.

Ⓟ CONSULT-III ACTIVE TEST

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

TAIL : Tail lamp ON

Off : Tail lamp OFF

Is the tail lamp turned ON?

YES >> Tail lamp circuit is normal.

NO >> Refer to [EXL-60, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004404200

1. CHECK TAIL LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
<ul style="list-style-type: none">• Tail lamp• Rear side marker lamp• License plate lamp	IPDM E/R	#53	10 A

Is the fuse fusing?

YES >> Repair the malfunctioning part before replacing the fuse.

NO >> GO TO 2.

2. CHECK TAIL LAMP OUTPUT VOLTAGE

Ⓟ CONSULT-III ACTIVE TEST

1. Disconnect the rear combination lamp connector.
2. Turn the ignition switch ON.
3. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
4. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

Terminals		Test item	Voltage (Approx.)
(+)	(-)		
IPDM E/R		EXTERNAL LAMPS	Battery voltage
Connector	Terminal		
E5	7	TAIL	
		Off	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Replace IPDM E/R.

3. CHECK TAIL LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.

TAIL LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

2. Disconnect IPDM E/R connector.
3. Check continuity between the IPDM E/R harness connector and the rear combination lamp harness connector.

IPDM E/R		Rear combination lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E5	7	B67	Existed
LH			B60	

Does continuity exist?

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

4.CHECK TAIL LAMP GROUND OPEN CIRCUIT

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

Rear combination lamp			Ground	Continuity
Connector	Terminal			
RH	B67	3	Existed	
LH	B60	3		

Does continuity exist?

- YES >> Replace the rear combination lamp.
 NO >> Repair the harnesses or connectors.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM : Component Function Check INFOID:000000004459624

NOTE:

Check the daytime running light relay circuit first if the parking lamp, tail lamp, license plate lamp and side marker lamp are not turned ON. Refer to [EXL-45. "Component Function Check"](#).

1.CHECK TAIL LAMP OPERATION

⊗ IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30. "Diagnosis Description"](#).
2. Check that the tail lamp is turned ON.

Ⓜ CONSULT-III ACTIVE TEST

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

TAIL : Tail lamp ON

Off : Tail lamp OFF

Is the tail lamp turned ON?

- YES >> Tail lamp circuit is normal.
 NO >> Refer to [EXL-61. "WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure INFOID:000000004459625

1.CHECK TAIL LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

- YES >> GO TO 2.
 NO >> Replace the bulb.

2.CHECK TAIL LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.

TAIL LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

2. Remove the daytime running light relay.
3. Disconnect the rear combination lamp connector.
4. Check continuity between the daytime running light relay harness connector and the rear combination lamp harness connector.

Daytime running light relay		Rear combination lamp		Continuity	
Connector	Terminal	Connector	Terminal		
RH	E13	5	B67	2	Existed
LH			B60		

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3. CHECK TAIL LAMP GROUND OPEN CIRCUIT

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

Rear combination lamp			Ground	Continuity
Connector	Terminal			
RH	B67	3		Existed
LH	B60	3		

Does continuity exist?

YES >> Replace the rear combination lamp.

NO >> Repair the harnesses or connectors.

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

LICENSE PLATE LAMP CIRCUIT WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Function Check

INFOID:000000004404201

NOTE:

Check the tail lamp circuit if the tail lamp and the license plate lamp are not turned ON.

1.CHECK LICENSE PLATE LAMP OPERATION

IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the license plate lamp is turned ON.

CONSULT-III ACTIVE TEST

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. With operating the lighting switch, check that the license plate lamp is turned ON.

TAIL : License plate lamp ON
Off : License plate lamp OFF

Is the license plate lamp turned ON?

- YES >> License plate lamp circuit is normal.
NO >> Refer to [EXL-63, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004404202

1.CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

- YES >> GO TO 2.
NO >> Replace the bulb.

2.CHECK LICENSE PLATE LAMP OPEN CIRCUIT

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

IPDM E/R		License plate lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E5	7	B153	Existed
LH			B152	

Does continuity exist?

- YES >> GO TO 3.
NO >> Repair the harnesses or connectors.

3.CHECK LICENSE PLATE LAMP GROUND OPEN CIRCUIT

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

License plate lamp			Ground	Continuity
Connector	Terminal			
RH	B153	1	Existed	
LH	B152	1		

Does continuity exist?

- YES >> Replace the license plate lamp.

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LICENSE PLATE LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair the harnesses or connectors.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM : Component Function Check INFOID:000000004459622

NOTE:

Check the daytime running light relay circuit first if the parking lamp, tail lamp, license plate lamp and side marker lamp are not turned ON. Refer to [EXL-45, "Component Function Check"](#).

1.CHECK LICENSE PLATE LAMP OPERATION

IPDM E/R AUTO ACTIVE TEST

1. Activate IPDM E/R auto active test. Refer to [EXL-30, "Diagnosis Description"](#).
2. Check that the license plate lamp is turned ON.

CONSULT-III ACTIVE TEST

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
2. With operating the lighting switch, check that the license plate lamp is turned ON.

TAIL : License plate lamp ON
Off : License plate lamp OFF

Is the license plate lamp turned ON?

YES >> License plate lamp circuit is normal.

NO >> Refer to [EXL-64, "WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure INFOID:000000004459623

1.CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

2.CHECK LICENSE PLATE LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Remove the daytime running light relay.
3. Disconnect the license plate lamp connector.
4. Check continuity between the daytime running light relay harness connector and the license plate lamp harness connector.

Daytime running light relay		License plate lamp		Continuity
Connector	Terminal	Connector	Terminal	
RH	E13	5	B153	Existed
LH			B152	

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.CHECK LICENSE PLATE LAMP GROUND OPEN CIRCUIT

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

License plate lamp			Ground	Continuity
Connector	Terminal			
RH	B153	1	Existed	
LH	B152	1		

Does continuity exist?

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

- YES >> Replace the license plate lamp.
- NO >> Repair the harnesses or connectors.

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REAR FOG LAMP CIRCUIT

[XENON TYPE]

< DTC/CIRCUIT DIAGNOSIS >

REAR FOG LAMP CIRCUIT

Component Function Check

INFOID:000000004459626

1. CHECK REAR FOG LAMP OPERATION

CONSULT-III ACTIVE TEST

1. Select "RR FOG LAMP" of BCM (HEAD LAMP) active test item.
2. With operating the test items, check that the rear fog lamp is turned ON.

On : Rear fog lamp ON
Off : Rear fog lamp OFF

Is rear fog lamp turned ON?

- YES >> Rear fog lamp circuit is normal.
NO >> Refer to [EXL-66, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000004459627

1. CHECK REAR FOG LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

- YES >> GO TO 2.
NO >> Replace the bulb.

2. CHECK REAR FOG LAMP OUTPUT VOLTAGE

CONSULT-III ACTIVE TEST

1. Turn the ignition switch OFF.
2. Disconnect the rear fog lamp connector.
3. Turn the ignition switch ON.
4. Select "RR FOG LAMP" of BCM (HEAD LAMP) active test item.
5. With operating the test items, check voltage between BCM harness connector and the ground.

Terminals		Test item	Voltage (approx.)
(+)	(-)		
BCM		RR FOG LAMP	Battery voltage
Connector	Terminal		
M120	24		
		On	Battery voltage
		Off	0 V

Is the measurement value normal?

- YES >> GO TO 3.
NO >> Replace BCM.

3. CHECK REAR FOG LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector and rear fog lamp harness connector.

BCM		Rear fog lamp		Continuity
Connector	Terminal	Connector	Terminal	
M120	24	B70	1	Existed

Does continuity exist?

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

REAR FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

4. CHECK REAR FOG LAMP SHORT CIRCUIT

Check for continuity between BCM harness connector and the ground.

BCM		Ground	Continuity
Connector	Terminal		
M120	24		Not existed

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

5. CHECK REAR FOG LAMP GROUND OPEN CIRCUIT

Check for continuity between rear fog lamp harness connector and the ground.

Rear fog lamp		Ground	Continuity
Connector	Terminal		
B70	2		Existed

Does continuity exist?

YES >> Replace the rear fog lamp.

NO >> Repair the harnesses or connectors.

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HEADLAMP SYSTEM

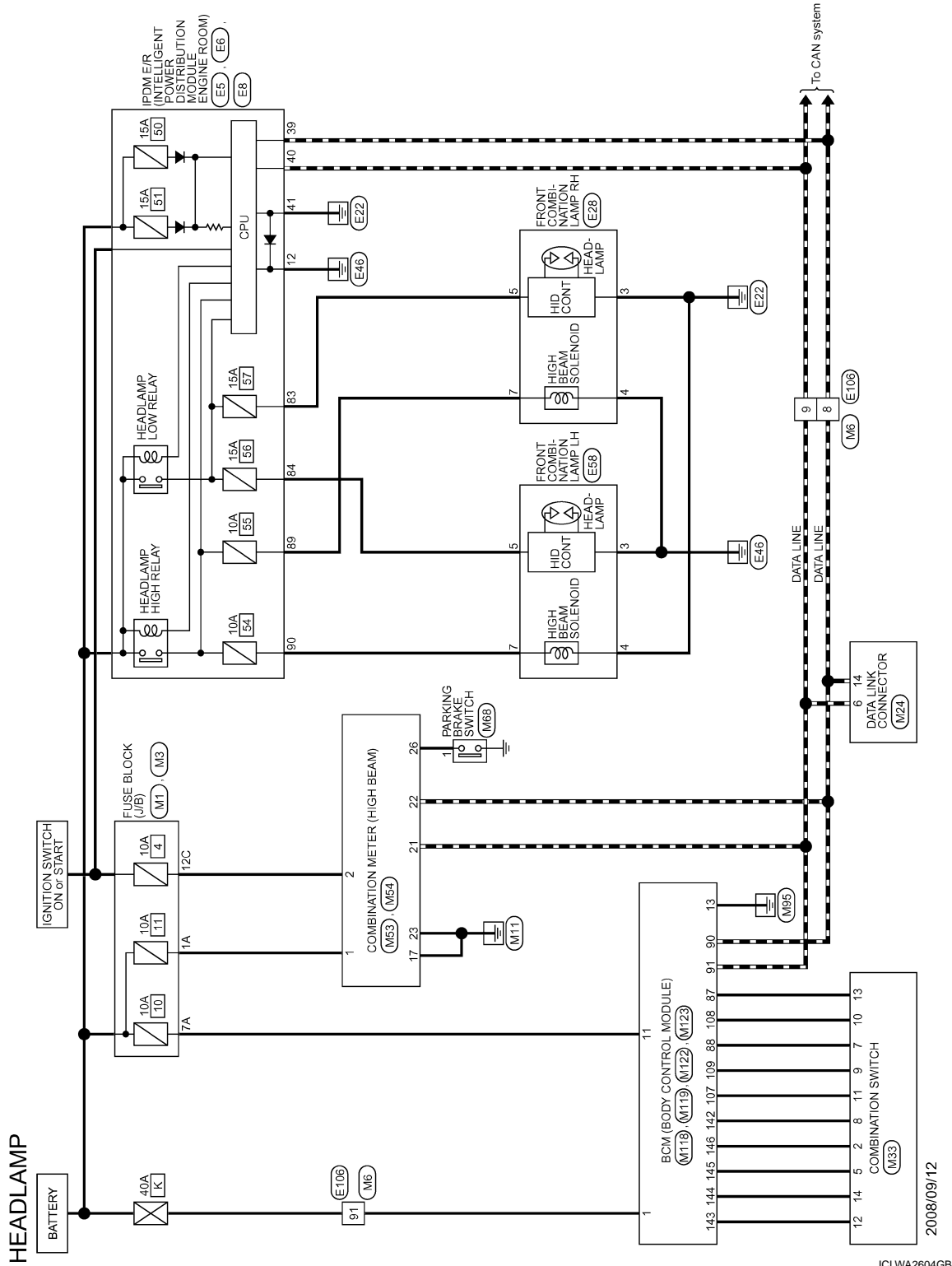
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[XENON TYPE]

HEADLAMP SYSTEM

Wiring Diagram - HEADLAMP -

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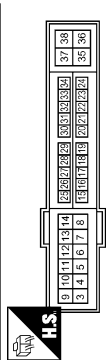
HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

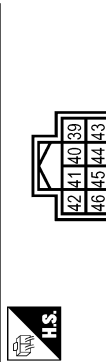
HEADLAMP

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-IV



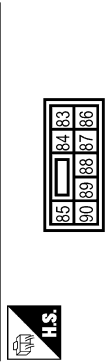
Terminal No.	Color of Wire	Signal Name [Specification]
12	B/W	-

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH68FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS30FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
83	R	-
84	P	-
89	BR	-
90	LG	-

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS06FGY-PR



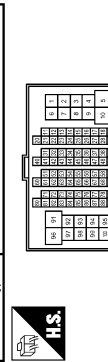
Terminal No.	Color of Wire	Signal Name [Specification]
3	B	-
4	B/W	-
5	R	-
7	BR	-

Connector No.	E66
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RS06FGY-PR



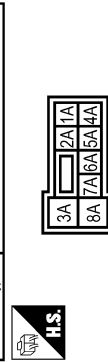
Terminal No.	Color of Wire	Signal Name [Specification]
3	B	-
4	B/W	-
5	P	-
7	LG	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH60FW-CS16-TM4



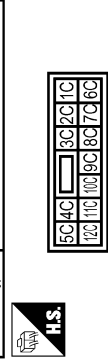
Terminal No.	Color of Wire	Signal Name [Specification]
8	P	-
9	L	-
91	W	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	-
7A	BR	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

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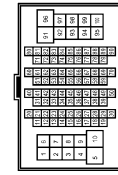
HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH30MW-CS16-TM4



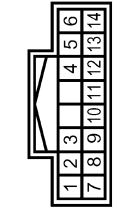
Terminal No.	Color of Wire	Signal Name [Specification]
8	P	-
9	L	-
91	W	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



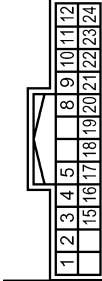
Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH116FW-NH



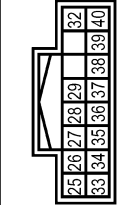
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	V	INPUT 3
8	O	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH24FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
17	B	GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND

Connector No.	M54
Connector Name	COMBINATION METER
Connector Type	TH116FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
26	O	PARKING BRAKE SWITCH SIGNAL

Connector No.	M68
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A



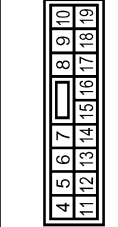
Terminal No.	Color of Wire	Signal Name [Specification]
1	O	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	BAT FUSE
13	B	GND

HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

HEADLAMP

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name (Specification)
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name (Specification)
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4

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AUTO LIGHT SYSTEM

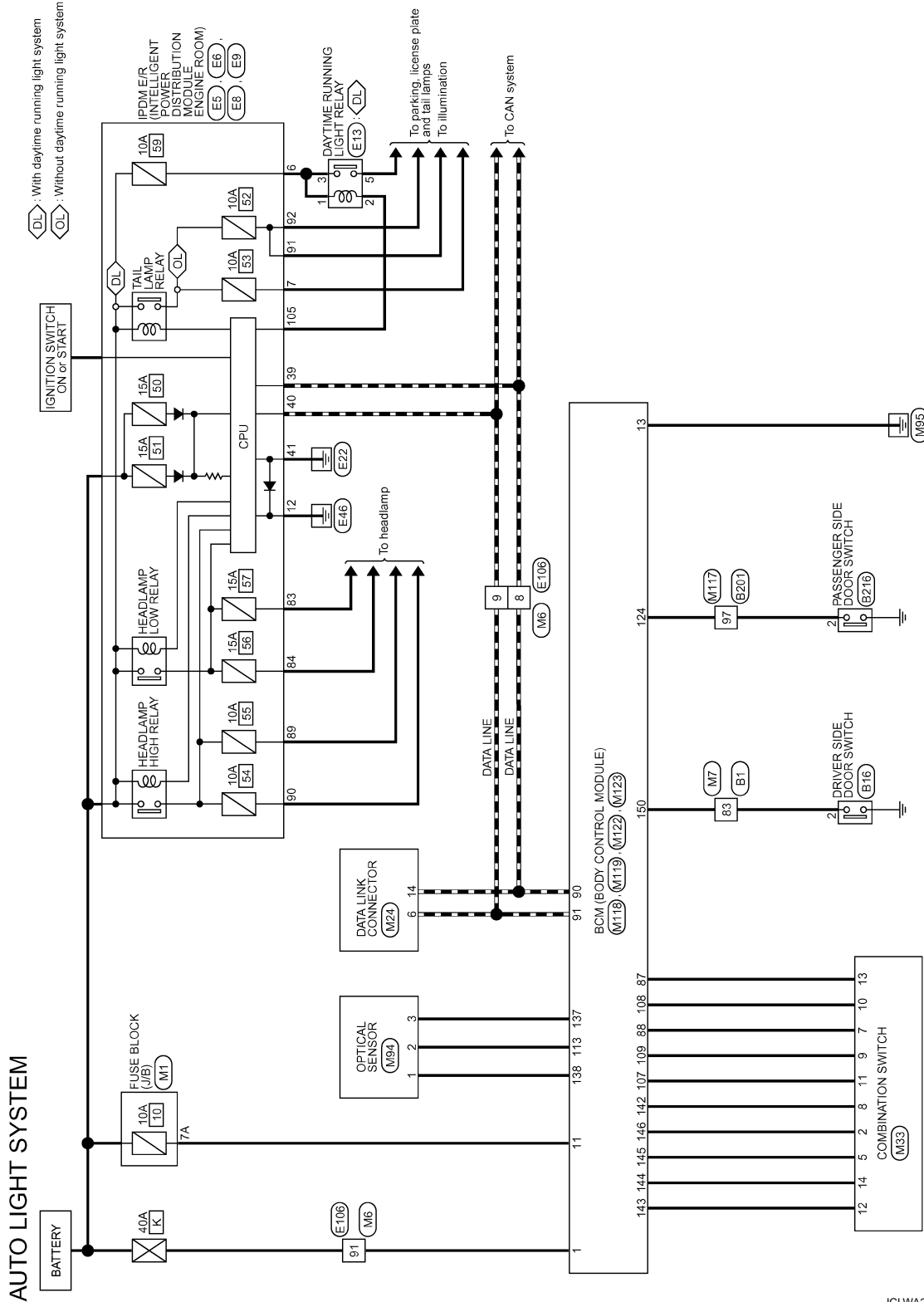
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[XENON TYPE]

AUTO LIGHT SYSTEM

Wiring Diagram - AUTO LIGHT SYSTEM -

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AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	83	GR	Signal Name [Specification]
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Connector No.	B16
Connector Name	DRIVER SIDE DOOR SWITCH
Connector Type	A03FW

Terminal No.	2	GR	Signal Name [Specification]
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Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

Terminal No.	97	LG	Signal Name [Specification]
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Connector No.	B218
Connector Name	PASSENGER SIDE DOOR SWITCH
Connector Type	A03FW

Terminal No.	2	LG	Signal Name [Specification]
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Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-MF-IV

Terminal No.	6	R	Signal Name [Specification]
7	R		
12	B/W		

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH80FW-NH

Terminal No.	39	P	Signal Name [Specification]
40	L		
41	B/W		

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS38FW-CS

Terminal No.	83	R	Signal Name [Specification]
84	P		
89	BR		
90	LG		

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH

Terminal No.	91	P	Signal Name [Specification]
92	O		
105	SB		

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AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

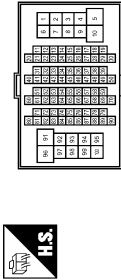
AUTO LIGHT SYSTEM

Connector No.	E13
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Type	MS2EL-M2-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	SB	-
3	R	-
5	O	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



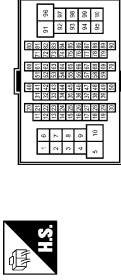
Terminal No.	Color of Wire	Signal Name [Specification]
8	P	-
9	L	-
91	W	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS30FW-M2



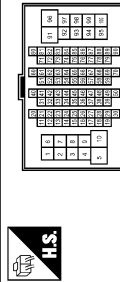
Terminal No.	Color of Wire	Signal Name [Specification]
7A	BR	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



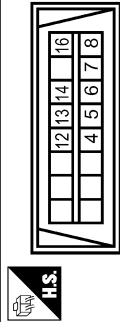
Terminal No.	Color of Wire	Signal Name [Specification]
8	P	-
9	L	-
91	W	-

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



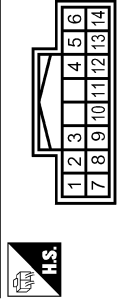
Terminal No.	Color of Wire	Signal Name [Specification]
83	GR	-

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M83
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	V	INPUT 3
8	O	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M84
Connector Name	OPTICAL SENSOR
Connector Type	TK03FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	POWER
2	O	OUTPUT
3	P	GND

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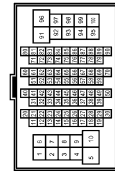
AUTO LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

AUTO LIGHT SYSTEM

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH30MW-CS16-TM4



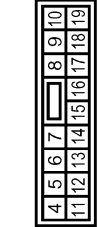
Terminal No.	Color of Wire	Signal Name [Specification]
97	LG	-

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	IM3FB-LC



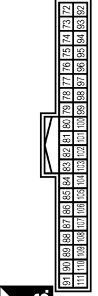
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (E/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



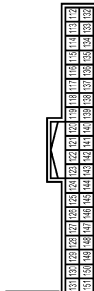
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	BAT (FUSE)
13	B	GND

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH4GF-B-NH



Terminal No.	Color of Wire	Signal Name [Specification]
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH4UFG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
113	O	OPTICAL SENSOR
124	LG	PASSENGER DOOR SW
137	P	RECEIVER SENSOR GND
138	V	RECEIVER SENSOR POWER SUPPLY
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	I	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4
150	GR	DRIVER DOOR SW

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DAYTIME RUNNING LIGHT SYSTEM

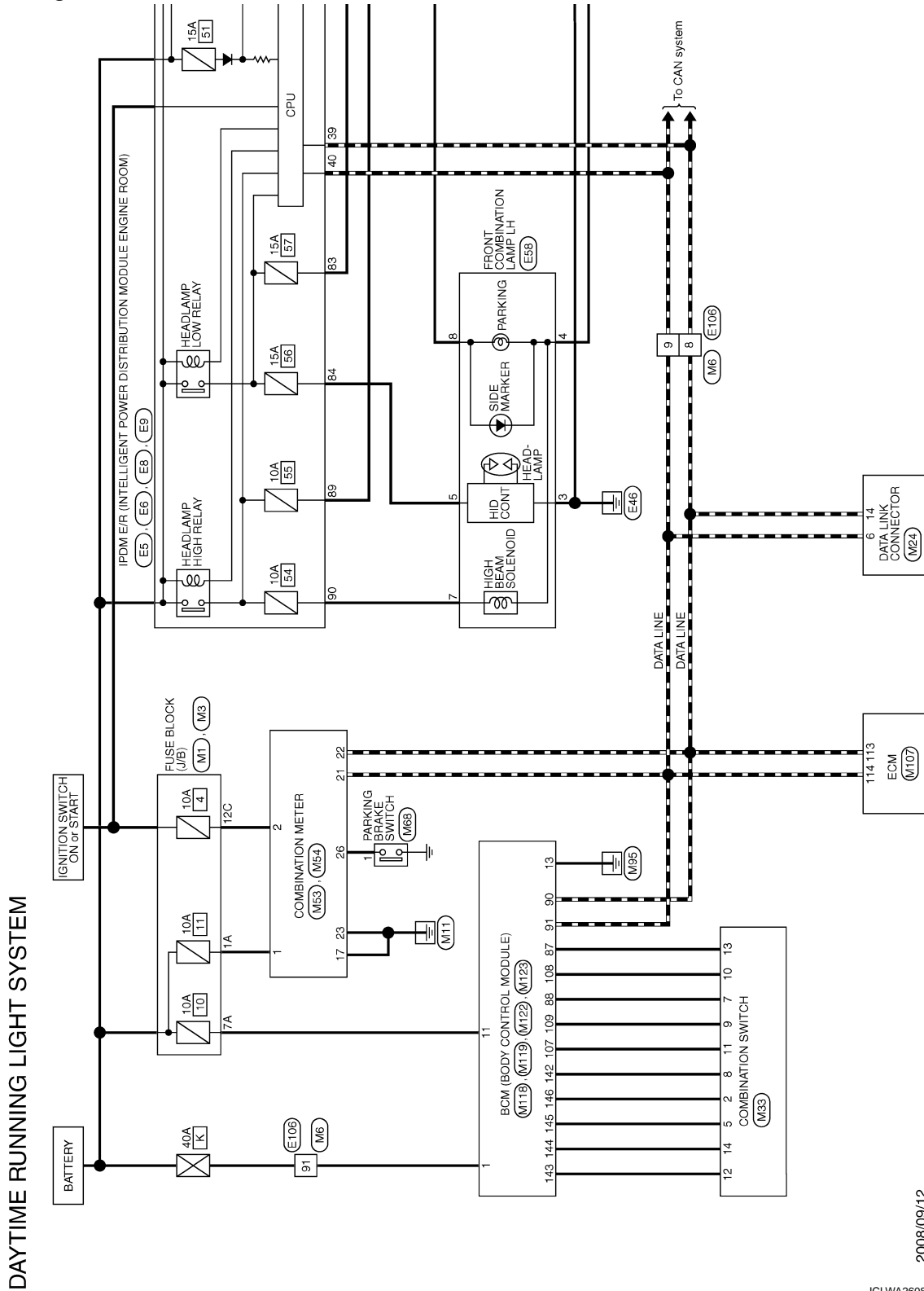
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram - DAYTIME RUNNING LIGHT SYSTEM -

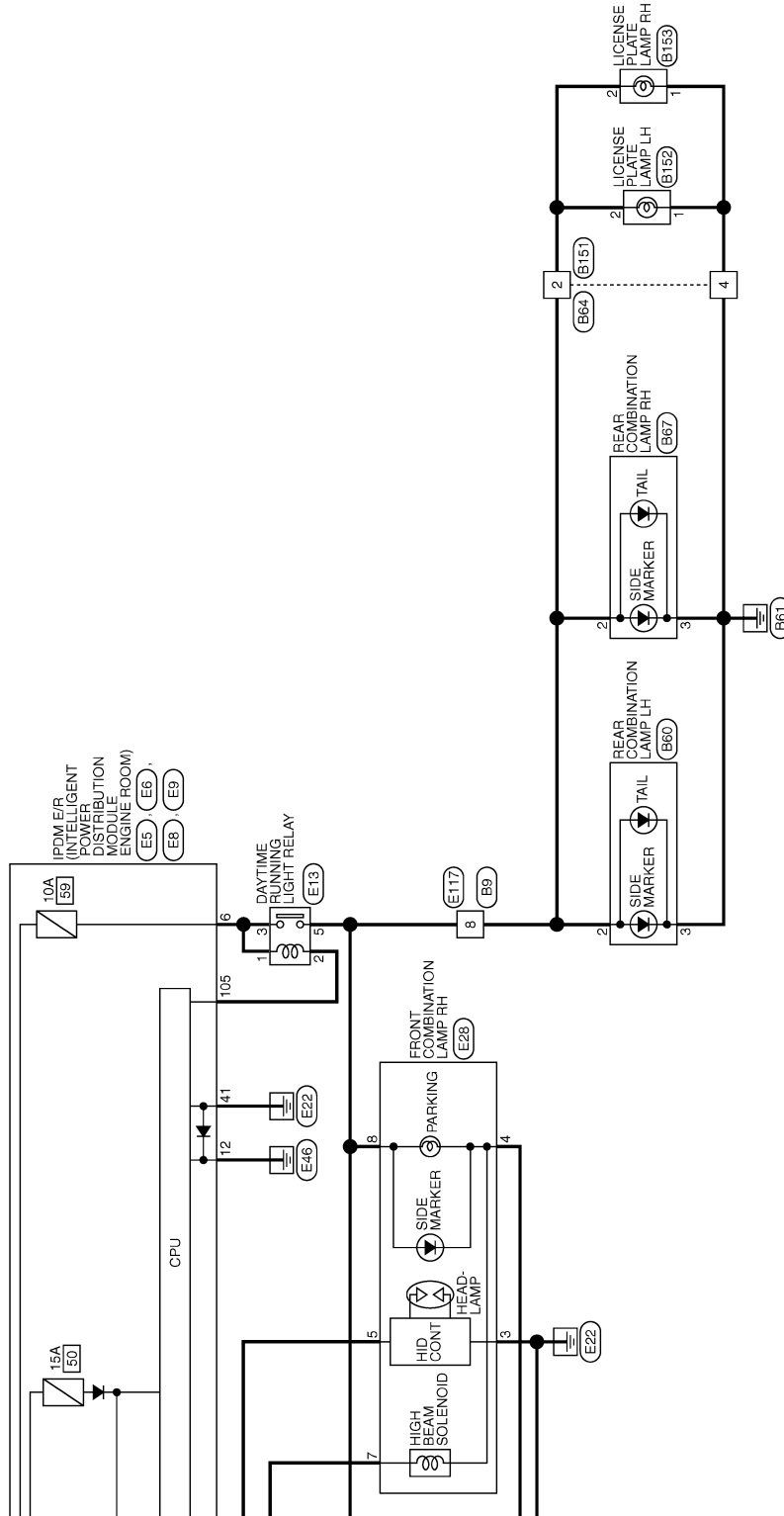
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DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]



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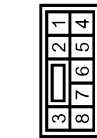
DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Connector No.	B39
Connector Name	WIRE TO WIRE
Connector Type	RSB9FW-CS



Terminal No.	8	R	
Color of Wire			Signal Name [Specification]

Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	RSB9FY-FR



Terminal No.	2	R	
Color of Wire			Signal Name [Specification]
	3	B	

Connector No.	B64
Connector Name	WIRE TO WIRE
Connector Type	RS34FB-FR



Terminal No.	2	R	
Color of Wire			Signal Name [Specification]
	4	B	

Connector No.	B67
Connector Name	REAR COMBINATION LAMP RH
Connector Type	RS36FY-FR



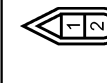
Terminal No.	2	R	
Color of Wire			Signal Name [Specification]
	3	B	

Connector No.	B151
Connector Name	WIRE TO WIRE
Connector Type	RS34MB



Terminal No.	2	R	
Color of Wire			Signal Name [Specification]
	4	B	

Connector No.	B152
Connector Name	LICENSE PLATE LAMP LH
Connector Type	RK02FBR



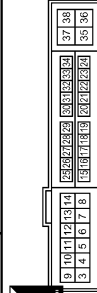
Terminal No.	1	B	
Color of Wire			Signal Name [Specification]
	2	R	

Connector No.	B153
Connector Name	LICENSE PLATE LAMP RH
Connector Type	RK02FBR



Terminal No.	1	B	
Color of Wire			Signal Name [Specification]
	2	R	

Connector No.	E5
Connector Name	FRONT-REAR INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	T12ZPFV-CS12-MH-T1V



Terminal No.	6	R	
Color of Wire			Signal Name [Specification]
	12	B/W	

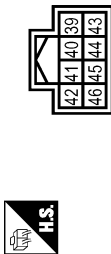
DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH88FW-NH



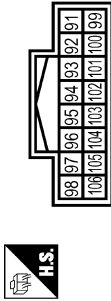
Terminal No.	Color of Wire	Signal Name [Specification]
38	P	-
40	L	-
41	B/W	-

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
83	R	-
84	P	-
89	BR	-
90	LG	-

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
105	SB	-

Connector No.	E13
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Type	MS08LE-M2-LC



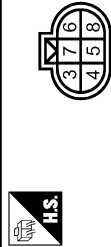
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	SB	-
3	R	-
5	O	-

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS08FGY-PR



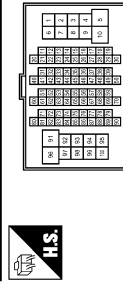
Terminal No.	Color of Wire	Signal Name [Specification]
3	B	-
4	B/W	-
5	R	-
7	BR	-
8	P	-

Connector No.	E58
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RS08FGY-PR



Terminal No.	Color of Wire	Signal Name [Specification]
3	B	-
4	B/W	-
5	P	-
7	LG	-
8	O	-

Connector No.	E108
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS (P-TM4)



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	-
9	L	-
91	W	-

Connector No.	E117
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
8	O	-

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DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

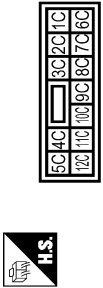
DAYTIME RUNNING LIGHT SYSTEM

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



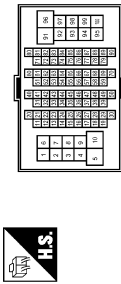
Terminal No.	Color of Wire	Signal Name [Specification]
1A	V	—
7A	BR	—

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



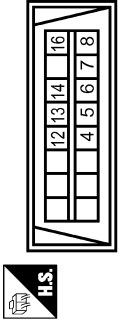
Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	—

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS (B-TM)



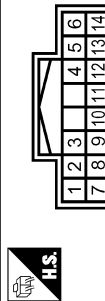
Terminal No.	Color of Wire	Signal Name [Specification]
8	P	—
9	L	—
91	W	—

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



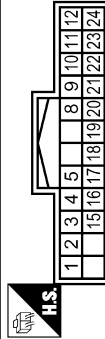
Terminal No.	Color of Wire	Signal Name [Specification]
6	L	—
14	P	—

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	V	INPUT 3
8	O	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH24FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
17	B	GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND

Connector No.	M54
Connector Name	COMBINATION METER
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
26	O	PARKING BRAKE SWITCH SIGNAL

Connector No.	M68
Connector Name	PARKING BRAKE SWITCH
Connector Type	FO1FB-A



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	—

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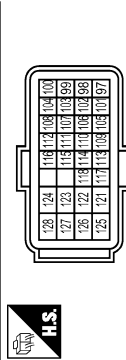
DAYTIME RUNNING LIGHT SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

DAYTIME RUNNING LIGHT SYSTEM

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-R26-R-LH-Z



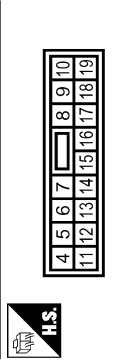
Terminal No.	Color of Wire	Signal Name [Specification]
113	P	VEHCAN-L1
114	L	VEHCAN-H1

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



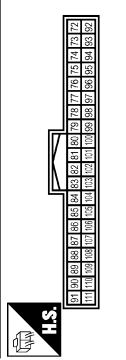
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (E/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



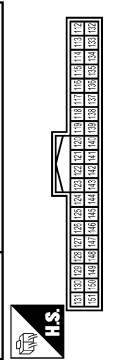
Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	BAT (FUSE)
13	B	GND

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

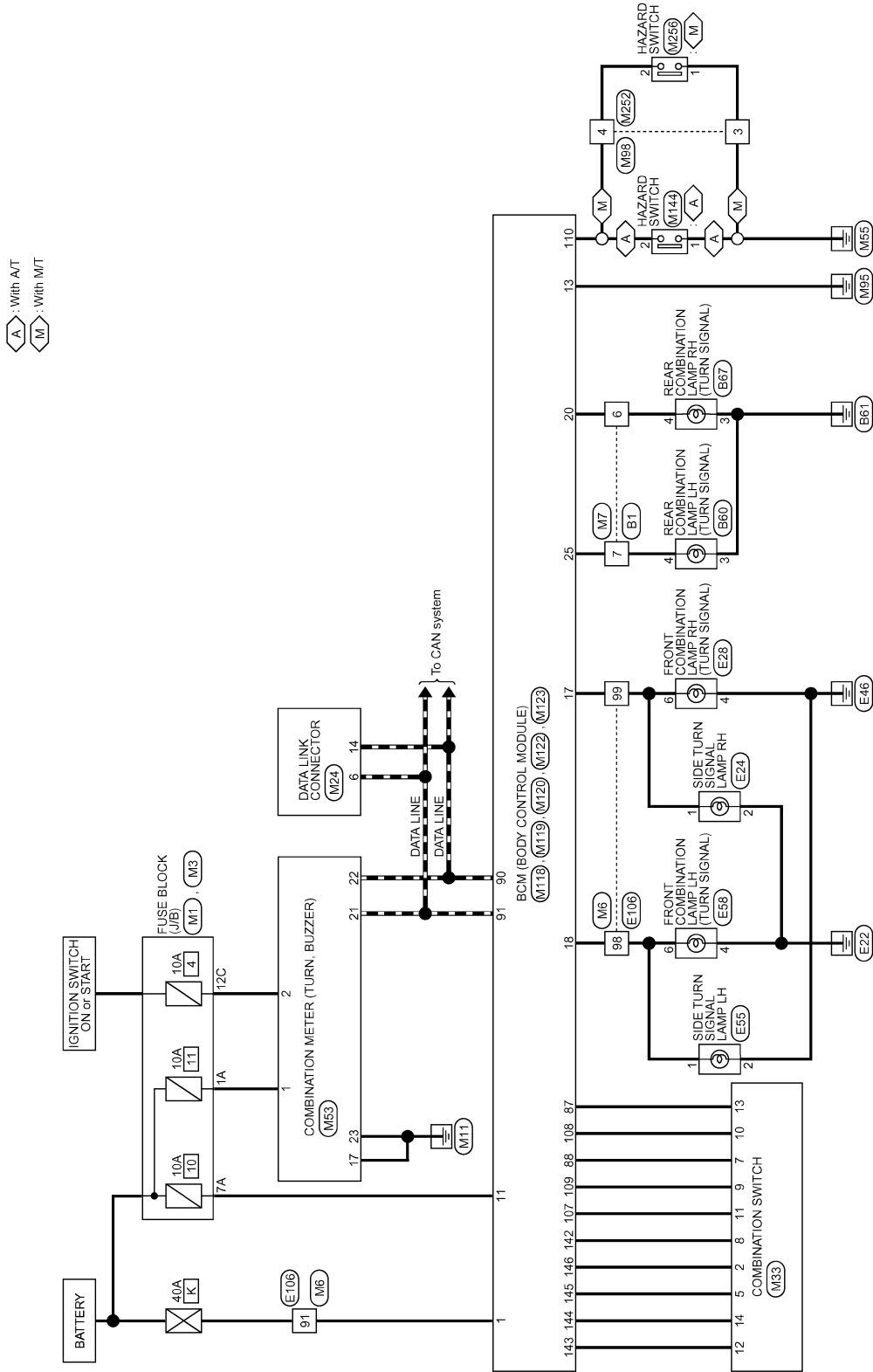
[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram - TURN SIGNAL AND HAZARD WARNING LAMPS -

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TURN SIGNAL AND HAZARD WARNING LAMPS



2008/09/12

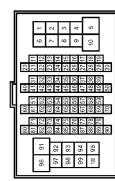













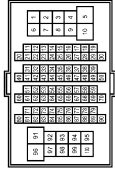

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Connector No. B1	WIRE TO WIRE TH80FW-CS16-TM4			Terminal No.	Color of Wire	Signal Name [Specification]
				6	V	
				7	LG	
Connector No. E24	SIDE TURN SIGNAL LAMP RH RK02FGY			Terminal No.	Color of Wire	Signal Name [Specification]
				1	V	
				2	B	
Connector No. E28	FRONT COMBINATION LAMP RH RS06FGY-PR			Terminal No.	Color of Wire	Signal Name [Specification]
				4	B/W	
				6	LG	
Connector No. E55	SIDE TURN SIGNAL LAMP LH RK02FGY			Terminal No.	Color of Wire	Signal Name [Specification]
				1	GR	
				2	B	
Connector No. E58	FRONT COMBINATION LAMP LH RS06FGY-PR			Terminal No.	Color of Wire	Signal Name [Specification]
				4	B/W	
				6	GR	
Connector No. E60	REAR COMBINATION LAMP LH RS06FGY-PR			Terminal No.	Color of Wire	Signal Name [Specification]
				3	B	
				4	LG	
Connector No. E67	REAR COMBINATION LAMP RH RS06FGY-PR			Terminal No.	Color of Wire	Signal Name [Specification]
				3	B	
				4	V	
Connector No. E106	WIRE TO WIRE TH80FW-CS16-TM4			Terminal No.	Color of Wire	Signal Name [Specification]
				91	W	
				98	GR	
				99	LG	

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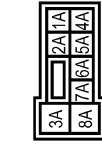
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

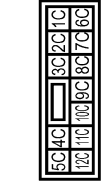
[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS (6-TM)



Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MM-CS (6-TM)



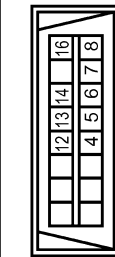
Terminal No.	1A	V
Terminal No.	7A	BR

Terminal No.	12C	O
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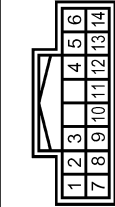
Terminal No.	91	W
Terminal No.	98	O
Terminal No.	99	W

Terminal No.	6	V
Terminal No.	7	LG

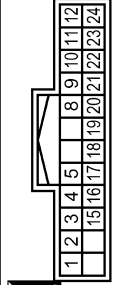
Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



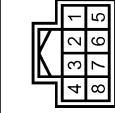
Connector No.	M83
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Connector No.	M83
Connector Name	COMBINATION METER
Connector Type	TH24FW-NH



Connector No.	M88
Connector Name	WIRE TO WIRE
Connector Type	TH08FW-NH



Terminal No.	6	L
Terminal No.	14	P

Terminal No.	2	SB
Terminal No.	5	L
Terminal No.	7	V
Terminal No.	8	O
Terminal No.	9	Y
Terminal No.	10	R
Terminal No.	11	LG
Terminal No.	12	P
Terminal No.	13	BR
Terminal No.	14	G

Terminal No.	1	V
Terminal No.	2	O
Terminal No.	17	B
Terminal No.	21	L
Terminal No.	22	P
Terminal No.	23	B

Terminal No.	3	GR
Terminal No.	4	P

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

TURN SIGNAL AND HAZARD WARNING LAMPS

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FE-LC



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	BAT (FUSE)
13	B	GND
17	W	TURN SIGNAL RH (FRONT, SIDE)
18	O	TURN SIGNAL LH (FRONT, SIDE)

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



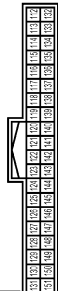
Terminal No.	Color of Wire	Signal Name [Specification]
20	V	TURN SIGNAL RH (REAR)
25	LG	TURN SIGNAL LH (REAR)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2
110	P	HAZARD SW

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4

Connector No.	M144
Connector Name	HAZARD SWITCH (WITH A/T)
Connector Type	TK04FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	GND
2	P	BCM

Connector No.	M232
Connector Name	WIRE TO WIRE
Connector Type	TH08MMF-NH



Terminal No.	Color of Wire	Signal Name [Specification]
3	B	-
4	G	-

Connector No.	M256
Connector Name	HAZARD SWITCH (WITH M/T)
Connector Type	TK04FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	B	GND
2	P	BCM

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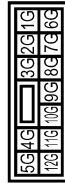
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

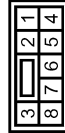
PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	B66
Connector Name	FUSE BLOCK (W/B)
Connector Type	NS12FBR-CS



Terminal No.	4G	R	Signal Name [Specification]
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Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	8	R	Signal Name [Specification]
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Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	RS06FGY-PR



Terminal No.	2	R	Signal Name [Specification]
Terminal No.	3	B	Signal Name [Specification]

Connector No.	B64
Connector Name	WIRE TO WIRE
Connector Type	RS06FB-PR



Terminal No.	2	R	Signal Name [Specification]
Terminal No.	4	B	Signal Name [Specification]

Connector No.	B67
Connector Name	REAR COMBINATION LAMP RH
Connector Type	RS06FGY-PR



Terminal No.	2	R	Signal Name [Specification]
Terminal No.	3	B	Signal Name [Specification]

Connector No.	B151
Connector Name	WIRE TO WIRE
Connector Type	RS0AMB



Terminal No.	2	R	Signal Name [Specification]
Terminal No.	4	B	Signal Name [Specification]

Connector No.	B152
Connector Name	LICENSE PLATE LAMP LH
Connector Type	PK02FBR



Terminal No.	1	B	Signal Name [Specification]
Terminal No.	2	R	Signal Name [Specification]

Connector No.	B153
Connector Name	LICENSE PLATE LAMP RH
Connector Type	PK02FBR



Terminal No.	1	B	Signal Name [Specification]
Terminal No.	2	R	Signal Name [Specification]

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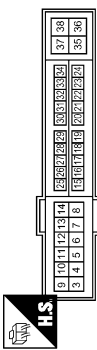
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH80FW-CS12-3M-IV



Terminal No.	Color of Wire	Signal Name [Specification]
6	R	-
7	R	-
12	B/W	-

Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH88FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH116FW-NH



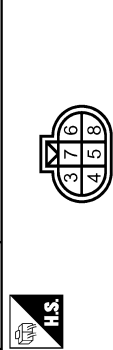
Terminal No.	Color of Wire	Signal Name [Specification]
91	P	-
92	O	-
105	SB	-

Connector No.	E13
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Type	MS12EL-M2-LC



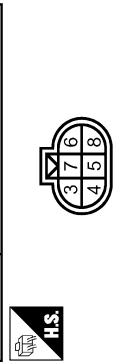
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	SB	-
3	R	-
5	O	-

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Type	RS88FGY-PR



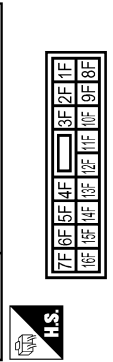
Terminal No.	Color of Wire	Signal Name [Specification]
4	B/W	-
8	P	-

Connector No.	E58
Connector Name	FRONT COMBINATION LAMP LH
Connector Type	RS88FGY-PR



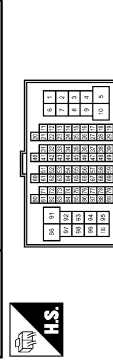
Terminal No.	Color of Wire	Signal Name [Specification]
4	B/W	-
8	O	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS116FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
9F	R	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
8	P	-
9	L	-
91	W	-

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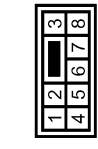
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

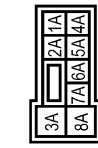
PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	E117
Connector Name	WIRE TO WIRE
Connector Type	NS3BMW-CS



Terminal No.	8	O	Signal Name [Specification]
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Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



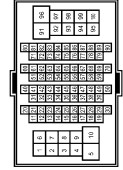
Terminal No.	7A	BR	Signal Name [Specification]
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Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS10FW-CS



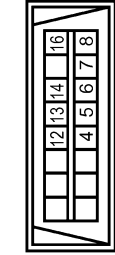
Terminal No.	8B	R	Signal Name [Specification]
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Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH48BMH-CS(6-TM4)



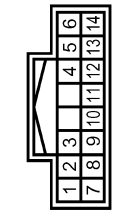
Terminal No.	8	P	Signal Name [Specification]
	9	L	
	9T	W	

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



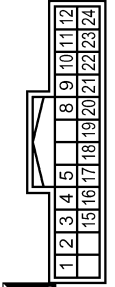
Terminal No.	6	L	Signal Name [Specification]
	14	P	

Connector No.	M3
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	2	SB	Signal Name [Specification]
	7	L	OUTPUT 4
	8	V	OUTPUT 3
	9	O	INPUT 3
	10	Y	OUTPUT 5
	11	R	INPUT 2
	12	P	INPUT 4
	13	LG	INPUT 1
	14	BR	OUTPUT 1
			INPUT 5
			OUTPUT 2

Connector No.	M3
Connector Name	COMBINATION METER
Connector Type	TH24FW-NH



Terminal No.	21	L	Signal Name [Specification]
	22	P	CAN-H
			CAN-L

Connector No.	M11B
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MG0FB-LC



Terminal No.	1	W	Signal Name [Specification]
			BAT (F/L)

JCLWA2633GB

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

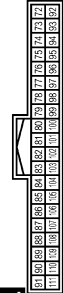
PARKING, LICENSE PLATE AND TAIL LAMPS

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-GS



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	BAT (FUSE)
13	B	GND

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
87	BR	COMBI SW INPUT 5
88	V	COMBI SW INPUT 3
90	P	CAN-L
91	L	CAN-H
107	LG	COMBI SW INPUT 1
108	R	COMBI SW INPUT 4
109	Y	COMBI SW INPUT 2

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4

JCLWA2634GB

STOP LAMP

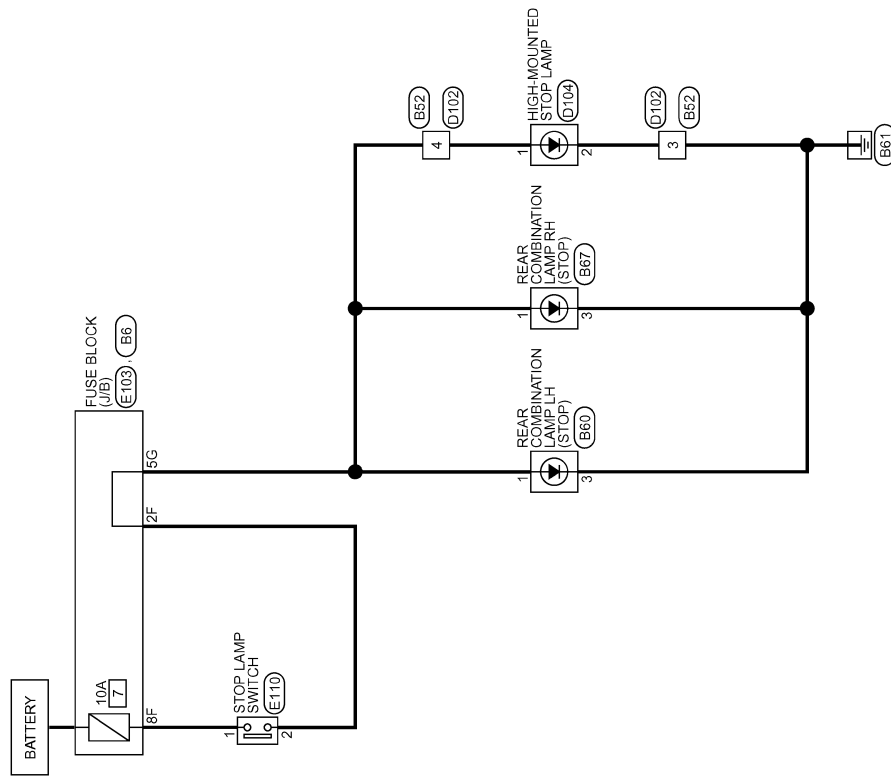
< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

STOP LAMP

Wiring Diagram - STOP LAMP -

INFOID:000000004404209



STOP LAMP

2008/09/12

JCLWA2625GB

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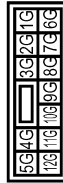
STOP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

STOP LAMP

Connector No.	B6
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FB-CS



Terminal No.	5G	Color of Wire	LG	Signal Name [Specification]	

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Type	TH04MW-NH



Terminal No.	3	Color of Wire	L	Signal Name [Specification]	
	4	Color of Wire	LG	Signal Name [Specification]	

Connector No.	B00
Connector Name	REAR COMBINATION LAMP LH
Connector Type	RS08FY-PR



Terminal No.	1	Color of Wire	G	Signal Name [Specification]	
	3	Color of Wire	B	Signal Name [Specification]	

Connector No.	B67
Connector Name	REAR COMBINATION LAMP RH
Connector Type	RS08FY-PR



Terminal No.	1	Color of Wire	LG	Signal Name [Specification]	
	3	Color of Wire	B	Signal Name [Specification]	

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Type	TH04FW-NH



Terminal No.	3	Color of Wire	B	Signal Name [Specification]	
	4	Color of Wire	LG	Signal Name [Specification]	

Connector No.	D104
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Type	TK02FW



Terminal No.	1	Color of Wire	LG	Signal Name [Specification]	
	2	Color of Wire	B	Signal Name [Specification]	

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS



Terminal No.	2F	Color of Wire	W	Signal Name [Specification]	
	8F	Color of Wire	L	Signal Name [Specification]	

Connector No.	E110
Connector Name	STOP LAMP SWITCH
Connector Type	MG4FW-LC



Terminal No.	1	Color of Wire	L	Signal Name [Specification]	
	2	Color of Wire	W	Signal Name [Specification]	

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BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

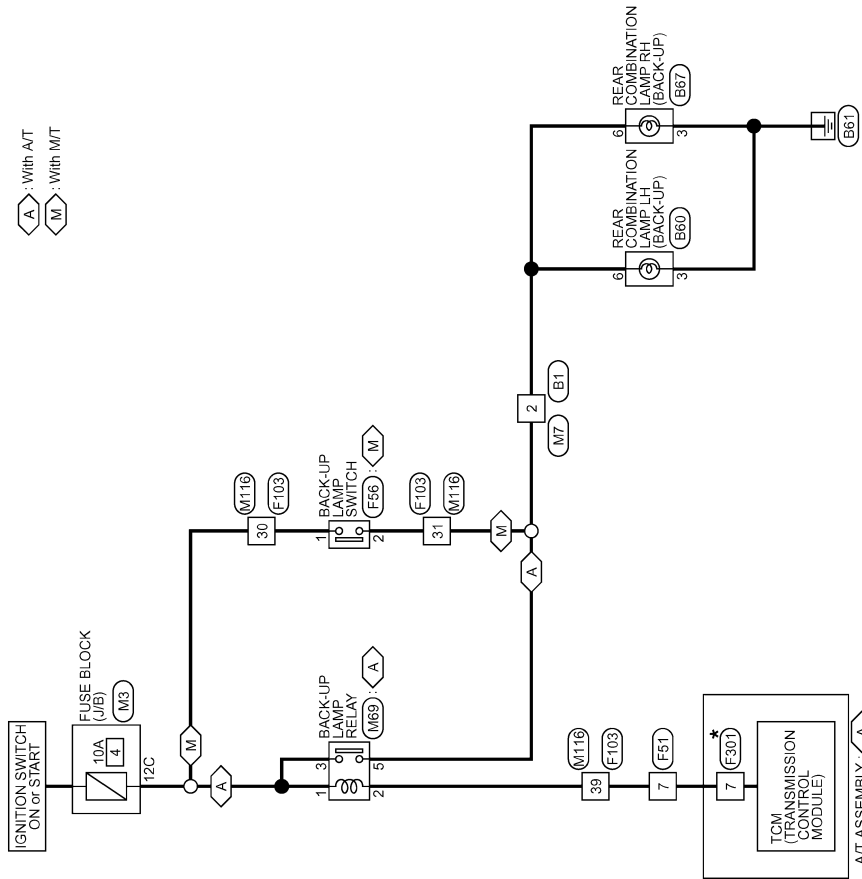
[XENON TYPE]

BACK-UP LAMP

Wiring Diagram - BACK-UP LAMP -

INFOID:000000004404210

BACK-UP LAMP



2008/09/12

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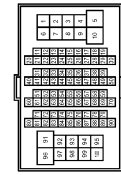
BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

BACK-UP LAMP

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH8DFW-GS16-TM4



Terminal No.	2	O	—	—
Color of Wire				
Signal Name [Specification]				

Connector No.	B60
Connector Name	REAR COMBINATION LAMP LH
Connector Type	RS08FY-PR



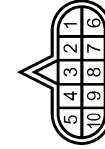
Terminal No.	3	B	O	—
Color of Wire				
Signal Name [Specification]				

Connector No.	B67
Connector Name	REAR COMBINATION LAMP RH
Connector Type	RS08FY-PR



Terminal No.	3	B	O	—
Color of Wire				
Signal Name [Specification]				

Connector No.	F51
Connector Name	A/T ASSEMBLY
Connector Type	RK10FG-DGY



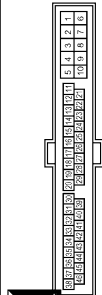
Terminal No.	7	W	—	—
Color of Wire				
Signal Name [Specification]				

Connector No.	F56
Connector Name	BACK-UP LAMP SWITCH
Connector Type	RK02PB



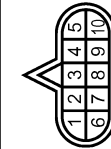
Terminal No.	1	R	—	—
Color of Wire				
Signal Name [Specification]				

Connector No.	F103
Connector Name	WIRE TO WIRE
Connector Type	TK08FW-NS1.0



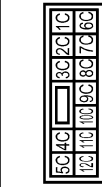
Terminal No.	30	R	O	W
Color of Wire				
Signal Name [Specification]				

Connector No.	F301
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	SP10FG



Terminal No.	7	L	—	—
Color of Wire				
Signal Name [Specification]				

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FY-CS



Terminal No.	12C	O	—	—
Color of Wire				
Signal Name [Specification]				

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BACK-UP LAMP

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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BACK-UP LAMP

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MF-CS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
2	O	-

Connector No.	M116
Connector Name	WIRE TO WIRE
Connector Type	TK38MF-NS/D

Terminal No.	Color of Wire	Signal Name [Specification]
30	R	-
31	O	-
39	G	-

Connector No.	M89
Connector Name	BACK-UP LAMP RELAY
Connector Type	NS20EL-ME-LC

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	G	-
3	R	-
5	O	-

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REAR FOG LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

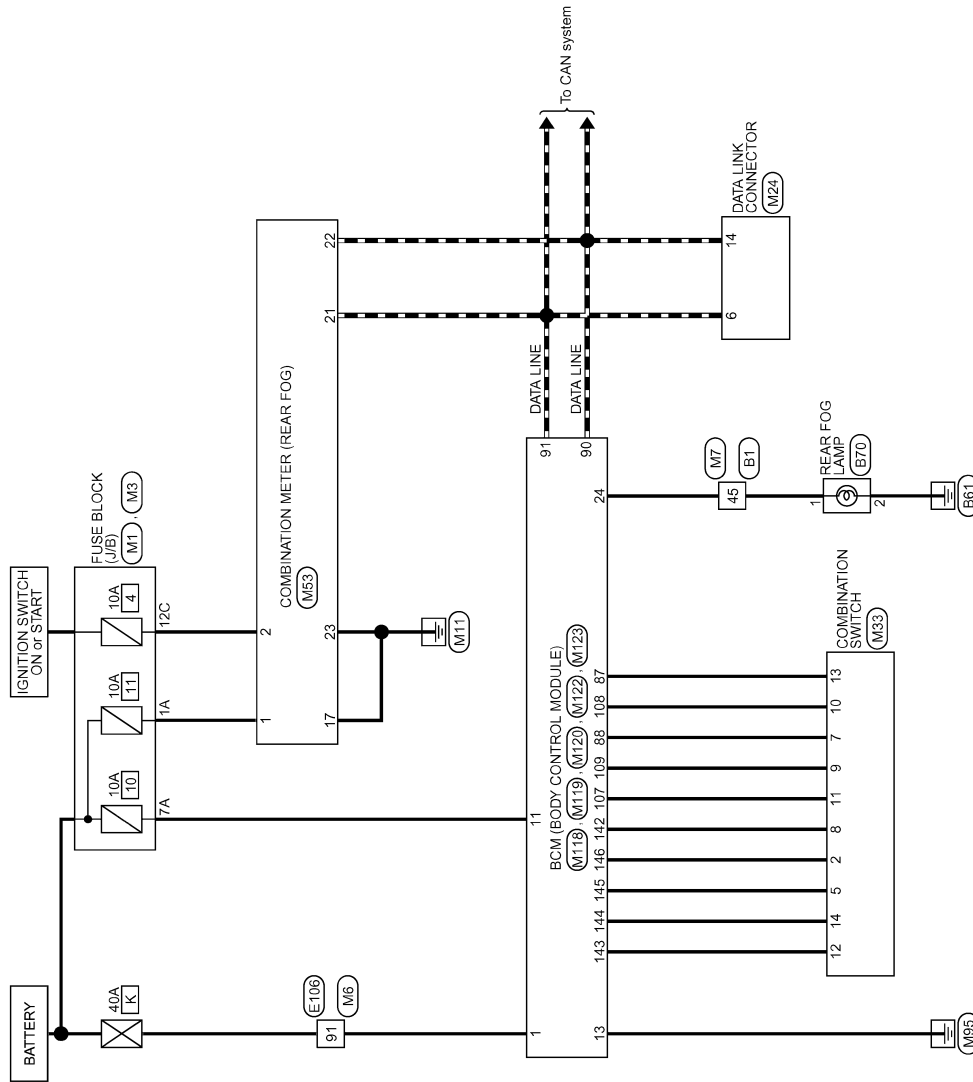
[XENON TYPE]

REAR FOG LAMP SYSTEM

Wiring Diagram -REAR FOG LAMP-

INFOID:000000004459628

REAR FOG LAMP



2008/09/12

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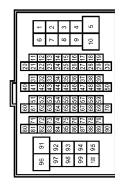
REAR FOG LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

REAR FOG LAMP

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



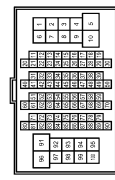
Terminal No.	45	O	—
Color of Wire	O	—	—
Signal Name [Specification]	—	—	—

Connector No.	B7D
Connector Name	REAR FOG LAMP
Connector Type	RS2FGY



Terminal No.	1	O	—
Color of Wire	O	—	—
Signal Name [Specification]	—	—	—

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	91	W	—
Color of Wire	W	—	—
Signal Name [Specification]	—	—	—

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS06FW-M2



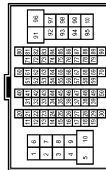
Terminal No.	1A	V	—
Color of Wire	V	—	—
Signal Name [Specification]	—	—	—

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	MS12FW-CS



Terminal No.	12C	O	—
Color of Wire	O	—	—
Signal Name [Specification]	—	—	—

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



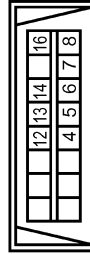
Terminal No.	91	W	—
Color of Wire	W	—	—
Signal Name [Specification]	—	—	—

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	45	O	—
Color of Wire	O	—	—
Signal Name [Specification]	—	—	—

Connector No.	M24
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



Terminal No.	6	L	—
Color of Wire	L	—	—
Signal Name [Specification]	—	—	—

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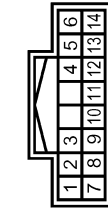
REAR FOG LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

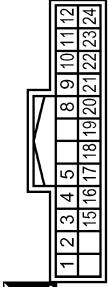
REAR FOG LAMP

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



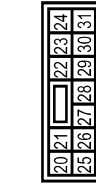
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
5	L	OUTPUT 3
7	V	INPUT 3
8	O	OUTPUT 5
9	Y	INPUT 2
10	R	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M53
Connector Name	COMBINATION METER
Connector Type	TH24FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	BATTERY POWER SUPPLY
2	O	IGNITION SIGNAL
17	B	GROUND
21	L	CAN-H
22	P	CAN-L
23	B	GROUND

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MS12PW-CS



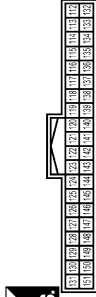
Terminal No.	Color of Wire	Signal Name [Specification]
24	O	REAR FOG OUTPUT

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MS3FB-LC



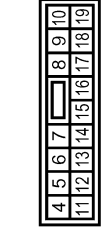
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (F/L)

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



Terminal No.	Color of Wire	Signal Name [Specification]
142	O	COMBI SW OUTPUT 5
143	P	COMBI SW OUTPUT 1
144	G	COMBI SW OUTPUT 2
145	L	COMBI SW OUTPUT 3
146	SB	COMBI SW OUTPUT 4

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	MS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
11	BR	BAT (FUSE)
13	B	GND

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000004704242

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TURN SIGNAL R	Other than turn signal switch RH	Off
	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
	Lighting switch AUTO	On
FR FOG SW	NOTE: The item is indicated, but not monitored.	Off
RR FOG SW	Rear fog lamp switch OFF	Off
	Rear fog lamp switch ON	On
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	NOTE: The item is indicated, but not monitored.	Off

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status
DOOR SW-RL	NOTE: The item is indicated, but not monitored.	Off
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than door lock and unlock switch LOCK	Off
	Door lock and unlock switch LOCK	On
CDL UNLOCK SW	Other than door lock and unlock switch UNLOCK	Off
	Door lock and unlock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW NOTE: At models with NAVI this item is not monitored.	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
H/L WASH SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
RKE-PANIC	PANIC button of the Intelligent Key is not pressed	Off
	PANIC button of the Intelligent Key is pressed	On
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status	
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off	A
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off	B
REQ SW -BD/TR	Back door request switch is not pressed	Off	C
	Back door request switch is pressed	On	
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off	D
	Push-button ignition switch (push switch) is pressed	On	
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off	E
	Ignition switch in ON position	On	
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off	F
CLUCH SW NOTE: At A/T models this item is not monitored.	The clutch pedal is not depressed	Off	G
	The clutch pedal is depressed	On	
BRAKE SW 1	Stop lamp switch 1 signal circuit is open	Off	H
	Stop lamp switch 1 signal circuit is normal	On	
BRAKE SW 2	The brake pedal is not depressed	Off	I
	The brake pedal is depressed	On	
DETE/CANCL SW NOTE: At M/T models with SynchroRev Match mode this item is not monitored.	<ul style="list-style-type: none"> • Selector lever in P position (A/T models) • The clutch pedal is depressed (M/T models without SynchroRev Match mode) 	Off	J
	<ul style="list-style-type: none"> • Selector lever in any position other than P (A/T models) • The clutch pedal is not depressed (M/T models without SynchroRev Match mode) 	On	
SFT PN/N SW NOTE: At M/T models without SynchroRev Match mode this item is not monitored.	<ul style="list-style-type: none"> • Selector lever in any position other than P and N (A/T models) • Control lever in any position other than neutral position (M/T models with SynchroRev Match mode) 	Off	K
	<ul style="list-style-type: none"> • Selector lever in P or N position (A/T models) • Control lever in neutral position (M/T models with SynchroRev Match mode) 	On	
S/L -LOCK	Steering is unlocked	Off	EXL
	Steering is locked	On	
S/L -UNLOCK	Steering is locked	Off	M
	Steering is unlocked	On	
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off	N
	Ignition switch in ON position	On	
UNLK SEN -DR	Driver door is unlocked	Off	O
	Driver door is locked	On	
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off	P
	Push-button ignition switch (push-switch) is pressed	On	
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off	P
	Ignition switch in ON position	On	
DETE SW -IPDM	Selector lever in any position other than P	Off	P
	Selector lever in P position	On	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Monitor Item	Condition	Value/Status
SFT PN -IPDM	<ul style="list-style-type: none"> • Selector lever in any position other than P and N (A/T models) • The clutch pedal is not depressed (M/T models) 	Off
	<ul style="list-style-type: none"> • Selector lever in P or N position (A/T models) • The clutch pedal is depressed (M/T models) 	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	Steering is unlocked	Off
	Steering is locked	On
S/L UNLK-IPDM	Steering is locked	Off
	Steering is unlocked	On
S/L RELAY-REQ	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK	Off
	Steering lock system are not the LOCK condition or the changing condition from LOCK to UNLOCK	On
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (60 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	Wait with selective UNLOCK operation (60 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Steering is locked	Reset
	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The Intelligent Key is not inserted into key slot	Off
	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

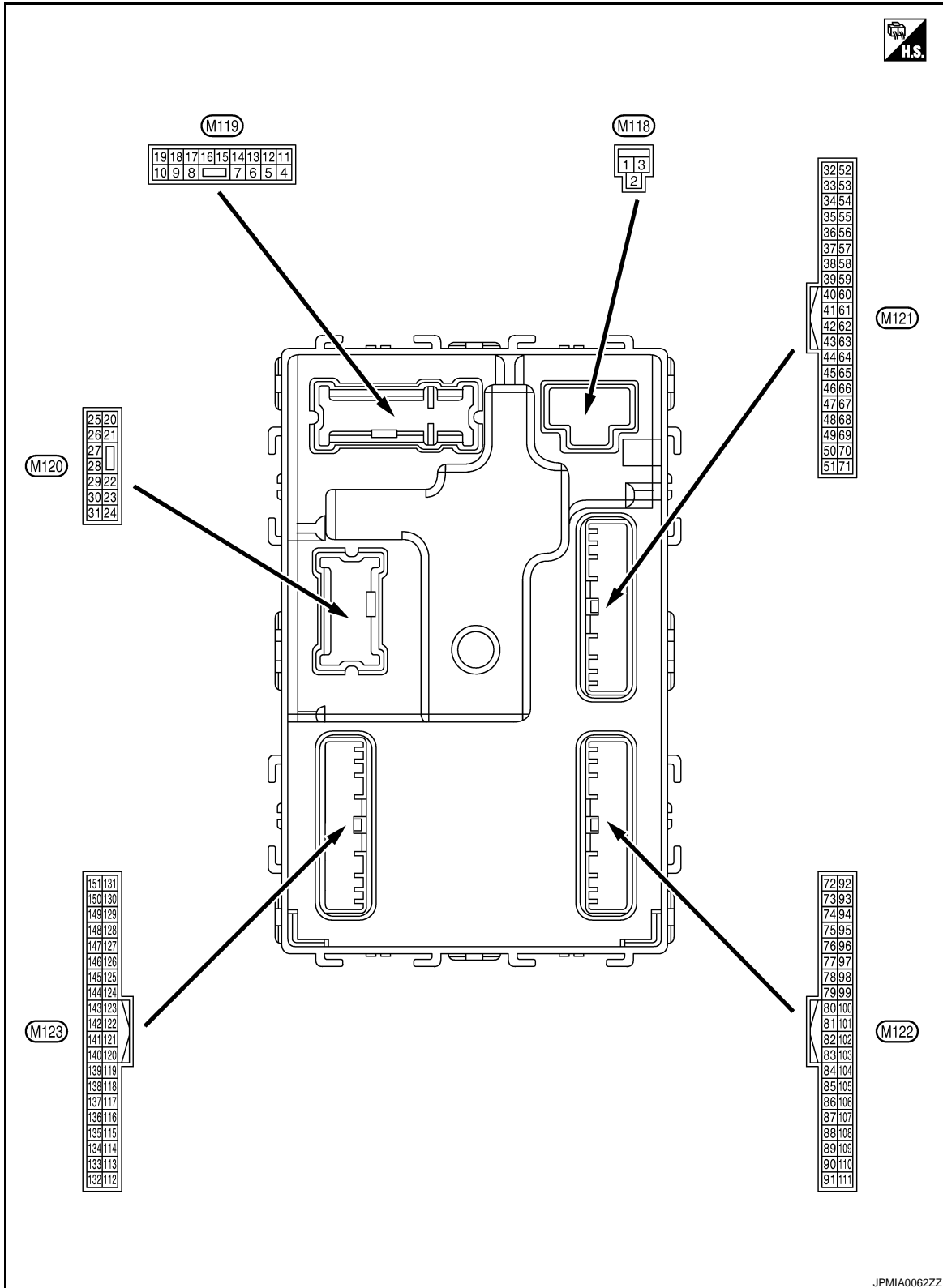
Monitor Item	Condition	Value/Status	
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet	A
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done	B
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet	C
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done	D
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet	E
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done	F
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet	G
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done	H
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet	I
	The ID of fourth Intelligent Key is registered to BCM	Done	J
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet	K
	The ID of third Intelligent Key is registered to BCM	Done	L
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet	M
	The ID of second Intelligent Key is registered to BCM	Done	N
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet	O
	The ID of first Intelligent Key is registered to BCM	Done	P
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire	EXL
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire	
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire	
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire	
ID REGST FL1	ID of front LH tire transmitter is registered	Done	
	ID of front LH tire transmitter is not registered	Yet	
ID REGST FR1	ID of front RH tire transmitter is registered	Done	M
	ID of front RH tire transmitter is not registered	Yet	
ID REGST RR1	ID of rear RH tire transmitter is registered	Done	
	ID of rear RH tire transmitter is not registered	Yet	N
ID REGST RL1	ID of rear LH tire transmitter is registered	Done	
	ID of rear LH tire transmitter is not registered	Yet	O
WARNING LAMP	Tire pressure indicator OFF	Off	
	Tire pressure indicator ON	On	
BUZZER	Tire pressure warning alarm is not sounding	Off	P
	Tire pressure warning alarm is sounding	On	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

TERMINAL LAYOUT

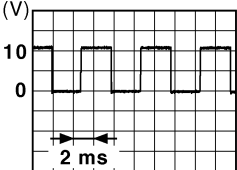


PHYSICAL VALUES

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	-					
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		12 V
4 (R)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
5 (G)	Ground	Passenger door UN- LOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Ac- tuator is not activated)	0 V
8 (V)	Ground	All doors, fuel lid LOCK	Output	All doors, fuel lid	LOCK (Actuator is activated)	12 V
					Other than LOCK (Actuator is not activated)	0 V
9 (G)	Ground	Driver door, fuel lid UNLOCK	Output	Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
					Other than UNLOCK (Actuator is not activated)	0 V
11 (BR)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
14 (R)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	<p>NOTE: When the illumination brighten- ing/dimming level is in the neutral position.</p>  <p style="text-align: right; font-size: small;">JSNIA0010GB</p>
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC	0 V

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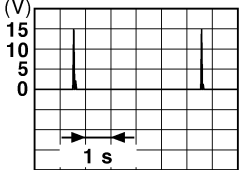
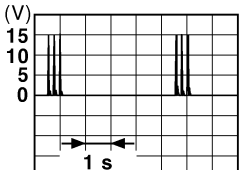
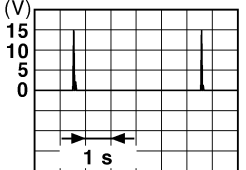
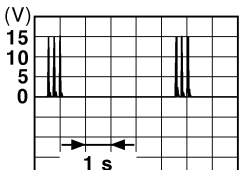
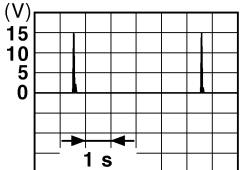
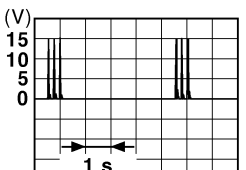
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
17 (W)	Ground	Turn signal RH (Front and side)	Output	Ignition switch OFF	0 V
				Ignition switch ON	Turn signal switch RH
18 (O)	Ground	Turn signal LH (Front and side)	Output	Ignition switch OFF	0 V
				Ignition switch ON	Turn signal switch LH
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp OFF	12 V
				Interior room lamp ON	0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch OFF	0 V
				Ignition switch ON	Turn signal switch RH
23 (L)	Ground	Back door open	Output	Back door OPEN (Back door opener actuator is activated)	12 V
				Back door Other than OPEN (Back door opener actuator is not activated)	0 V
24*1 (O)	Ground	Rear fog lamp	Output	Rear fog lamp OFF	0 V
				Rear fog lamp ON	12 V
25 (LG)	Ground	Turn signal LH (Rear)	Output	Ignition switch OFF	0 V
				Ignition switch ON	Turn signal switch LH
30 (R)	Ground	Luggage room lamp	Output	Luggage room lamp ON	0 V
				Luggage room lamp OFF	12 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
34 (G)	Ground	Luggage room antenna (-)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
35 (R)	Ground	Luggage room antenna (+)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
38 (B)	Ground	Rear bumper antenna (-)	Output	When the back door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When the back door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

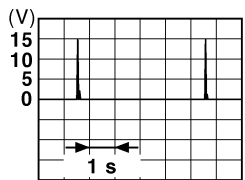
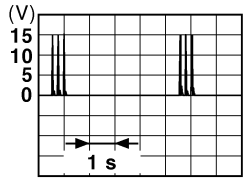
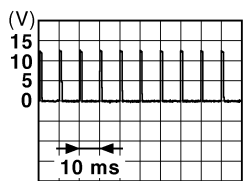
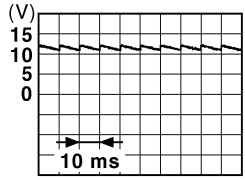
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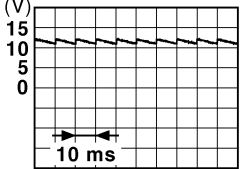
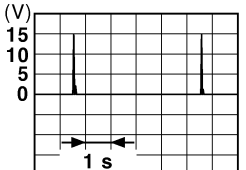
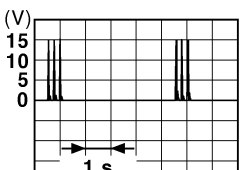
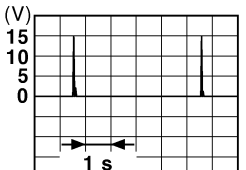
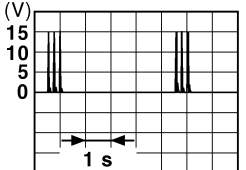
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
39 (W)	Ground	Rear bumper antenna (+)	Output	When the Intelligent Key is in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When the back door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
47 (V)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC: 12 V ON: 0 V
52 (SB)	Ground	Starter relay control	Output	Ignition switch ON (A/T models)	When selector lever is in P or N position: 12 V
				Ignition switch ON (M/T models)	When selector lever is not in P or N position: 0 V
				Ignition switch ON (M/T models)	When the clutch pedal is depressed: Battery voltage
				Ignition switch ON (M/T models)	When the clutch pedal is not depressed: 0 V
61 (W)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed): 0 V
				OFF (Not pressed)	 <p style="text-align: right; font-size: small;">JPMIA0016GB</p>
64 (G)	Ground	Intelligent Key warning buzzer	Output	Intelligent Key warning buzzer	Sounding: 0 V Not sounding: 12 V
				OFF (Door close)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close): 11.8 V
				ON (Door open)	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Pressed	0 V
				Back door opener switch	Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>
72 (L)	Ground	Room antenna (-) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				Ignition switch OFF	When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
73 (P)	Ground	Room antenna (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				Ignition switch OFF	When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

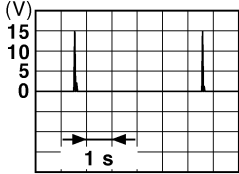
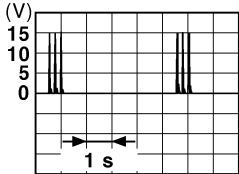
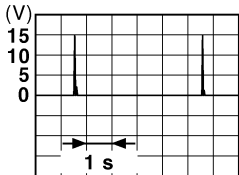
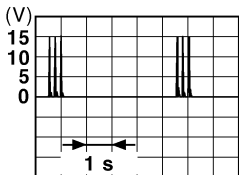
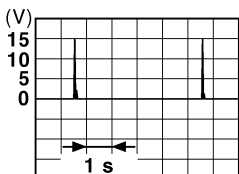
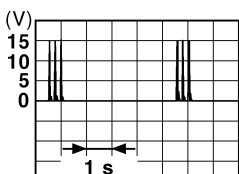
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BCM (BODY CONTROL MODULE)

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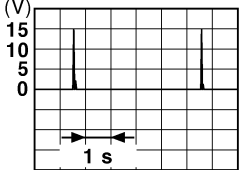
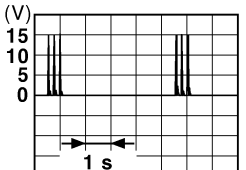
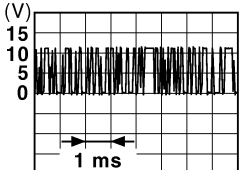
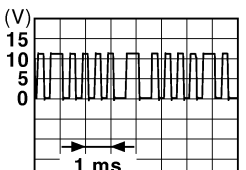
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
74 (SB)	Ground	Passenger door antenna (-)	Output	When Intelligent Key is in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When the passenger door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
75 (BR)	Ground	Passenger door antenna (+)	Output	When Intelligent Key is in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When the passenger door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
76 (V)	Ground	Driver door antenna (-)	Output	When Intelligent Key is in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When the driver door request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

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[XENON TYPE]


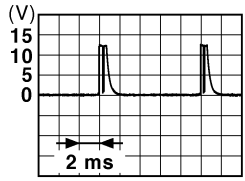
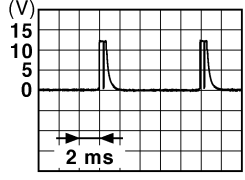
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
77 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area  <small>JMKIA0062GB</small>
				When Intelligent Key is not in the antenna detection area  <small>JMKIA0063GB</small>	
80 (GR)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp (Built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.
82 (R)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC ON
					0 V 12 V
83 (GR)	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting	 <small>JMKIA0064GB</small>
				When operating either button on the Intelligent Key	 <small>JMKIA0065GB</small>

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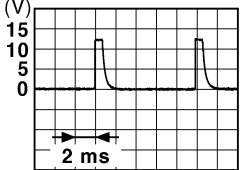

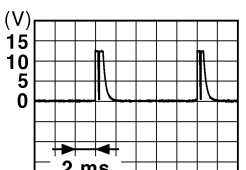

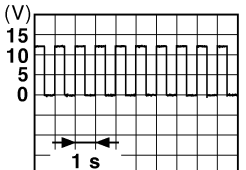
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4 V</p>
				Combination switch	Rear fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0038GB</p> <p style="text-align: center;">1.3 V</p>
				Combination switch	Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7 	 <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3 V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	 <small>JPMIA0041GB</small> 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 <small>JPMIA0036GB</small> 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 <small>JPMIA0037GB</small> 1.3 V
					Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 	 <small>JPMIA0040GB</small> 1.3 V
89 (BR)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ignition switch (push switch)	Pressed Not pressed	0 V Battery voltage
90 (P)	Ground	CAN-L	Input/ Output	—	—	—
91 (L)	Ground	CAN-H	Input/ Output	—	—	—
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF	0 V
					Blinking	 <small>JPMIA0015GB</small> 6.5 V
					ON	12 V

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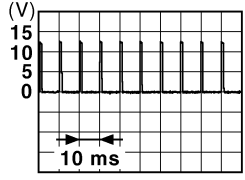
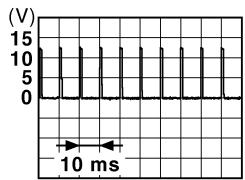
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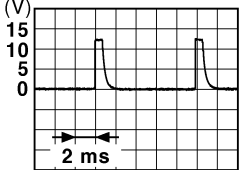

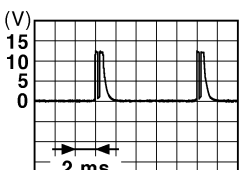

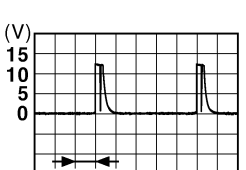
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON	0 V
95 (O)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
96*2 (Y)	Ground	A/T shift selector (Detention switch) power supply	Output	—	—	12 V
97 (L)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	12 V
98 (P)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	12 V
					UNLOCK status	0 V
99*3 (R)*2 (BR)*4	Ground	Selector lever P position switch (A/T models)	Input	Selector lever	P position	0 V
					Any position other than P	12 V
		Clutch pedal position switch (M/T models without SynchroRev Match mode)		Clutch pedal position switch	OFF (Clutch pedal is depressed)	0 V
					ON (Clutch pedal is not depressed)	Battery voltage
100 (GR)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 1.0 V
101 (Y)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 1.0 V
102 (O)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF	—	12 V
106 (W)	Ground	Steering lock unit power supply	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

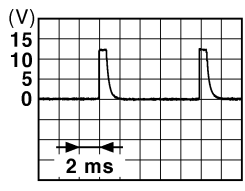
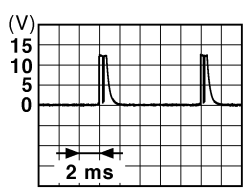
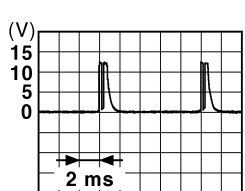
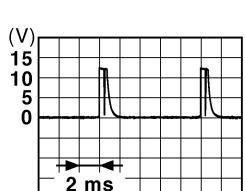
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	All switches OFF	 1.4 V
					Turn signal switch LH	 1.3 V
					Turn signal switch RH	 1.3 V
					Front wiper switch LO	 1.3 V
					Front washer switch ON	 1.3 V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

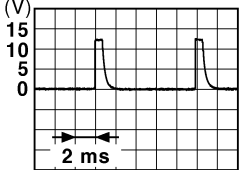

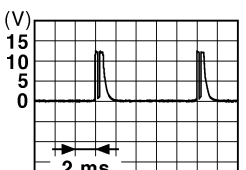


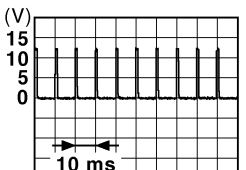
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	All switches OFF (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="font-size: small;">JPMIA0041GB</p> </div>
				Lighting switch AUTO (Wiper intermittent dial 4)	<div style="text-align: right;">  <p style="font-size: small;">JPMIA0038GB</p> </div>
				Lighting switch 1ST (Wiper intermittent dial 4)	<div style="text-align: right;">  <p style="font-size: small;">JPMIA0036GB</p> </div>
				Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6 	<div style="text-align: right;">  <p style="font-size: small;">JPMIA0039GB</p> </div>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switches OFF	 <small>JPMIA0041GB</small> 1.4 V
					Lighting switch PASS	 <small>JPMIA0037GB</small> 1.3 V
					Lighting switch 2ND	 <small>JPMIA0036GB</small> 1.3 V
					Front wiper switch INT	 <small>JPMIA0038GB</small> 1.3 V
					Front wiper switch HI	 <small>JPMIA0040GB</small> 1.3 V
					ON	0 V
110 (P)	Ground	Hazard switch	Input	Hazard switch	OFF	 <small>JPMIA0012GB</small> 1.1 V
				OFF	OFF	OFF

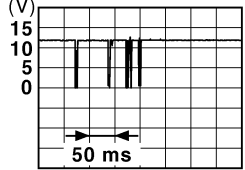
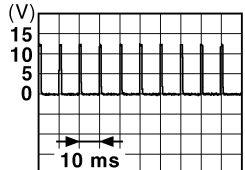
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

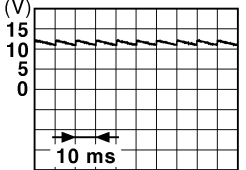
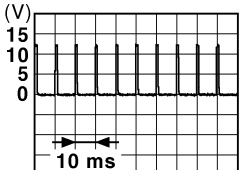

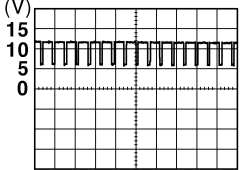
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
111 (Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status	12 V
					LOCK or UNLOCK	 <p style="text-align: right; font-size: small;">JMKIA0066GB</p>
					For 15 seconds after UNLOCK	12 V
					15 seconds or later after UNLOCK	0 V
113 (O)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V
					When dark outside of the vehicle	Close to 0 V
114 ⁺⁵ (R)	Ground	Clutch interlock switch	Input	Clutch interlock switch	OFF (Clutch pedal is not depressed)	0 V
					ON (Clutch pedal is depressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input	—	Battery voltage	
118 (P)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is depressed)	Battery voltage
119 (SB)	Ground	Driver side door lock assembly (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	 <p style="text-align: right; font-size: small;">JPMIA0012GB</p>
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (R)	Ground	Key slot switch	Input	When the Intelligent Key is inserted into key slot	12 V	
				When the Intelligent Key is not inserted into key slot	0 V	
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	 <small>JPMIA0011GB</small> 11.8 V
					ON (Door open)	0 V
130*6 (L)	Ground	Rear window defogger switch	Input	Ignition switch ON	Rear window defogger switch OFF	 <small>JPMIA0012GB</small> 1.1 V
					Rear window defogger switch ON	0 V
132 (Y)	Ground	Power window switch communication	Input/ Output	Ignition switch ON	Ignition switch ON	 <small>JPMIA0013GB</small> 10.2 V
					Ignition switch OFF or ACC	12 V
133 (G)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps OFF)	9.5 V
					ON (Tail lamps ON)	<p style="text-align: center;">NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.</p>  <small>JPMIA0159GB</small>
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (P)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138 (V)	Ground	Receiver and sensor power supply	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V

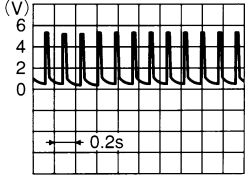

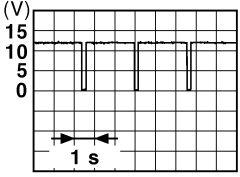
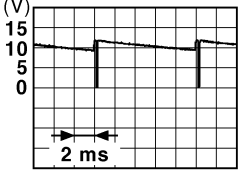
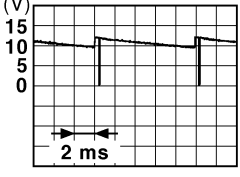
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BCM (BODY CONTROL MODULE)

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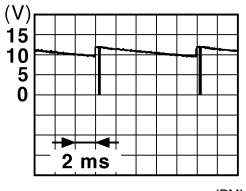
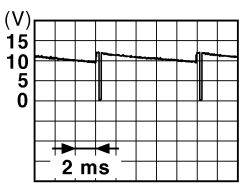
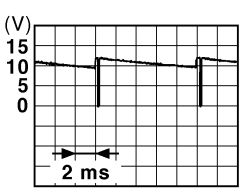
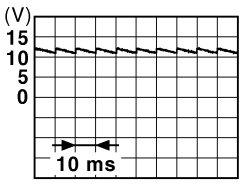
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
139 (L)	Ground	Tire pressure receiver communication	Input/ Output	Ignition switch ON	Standby state	 OCC3881D
				Ignition switch ON	When receiving the signal from the transmitter	 OCC3880D
140 ^{*7} (G)	Ground	Selector lever P/N position (A/T models)	Input	Selector lever	P or N position	12 V
					Except P and N positions	0 V
		Transmission range switch (M/T models with SynchroRev Match mode)	Input	Ignition switch ON	Control lever in neutral position	Battery voltage
					Control lever in any position other than neutral	0 V
141 (Y)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB
					OFF	12 V
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4) Front wiper switch HI (Wiper intermittent dial 4)	0 V
				Combination switch	Any of the conditions below with all switches OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7 	 JPMIA0032GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)		
		Signal name	Input/ Output				
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144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switches OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
					Any of the conditions below with all switches OFF		10.7 V
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V	
					Front wiper switch INT		
					Front wiper switch LO		
					Lighting switch AUTO		
					Rear fog lamp switch ON		10.7 V
146 (SB)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermittent dial 4)	All switches OFF	0 V	
					Lighting switch 2ND		
					Lighting switch PASS		
					Turn signal switch LH		10.7 V
149 (W)	Ground	Tire pressure warning check switch	Input	—	12 V		
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)		
					ON (Door open)		0 V
151 (G)	Ground	Rear window defogger relay control	Output	Rear window defogger	Active	0 V	
				Not activated	Battery voltage		

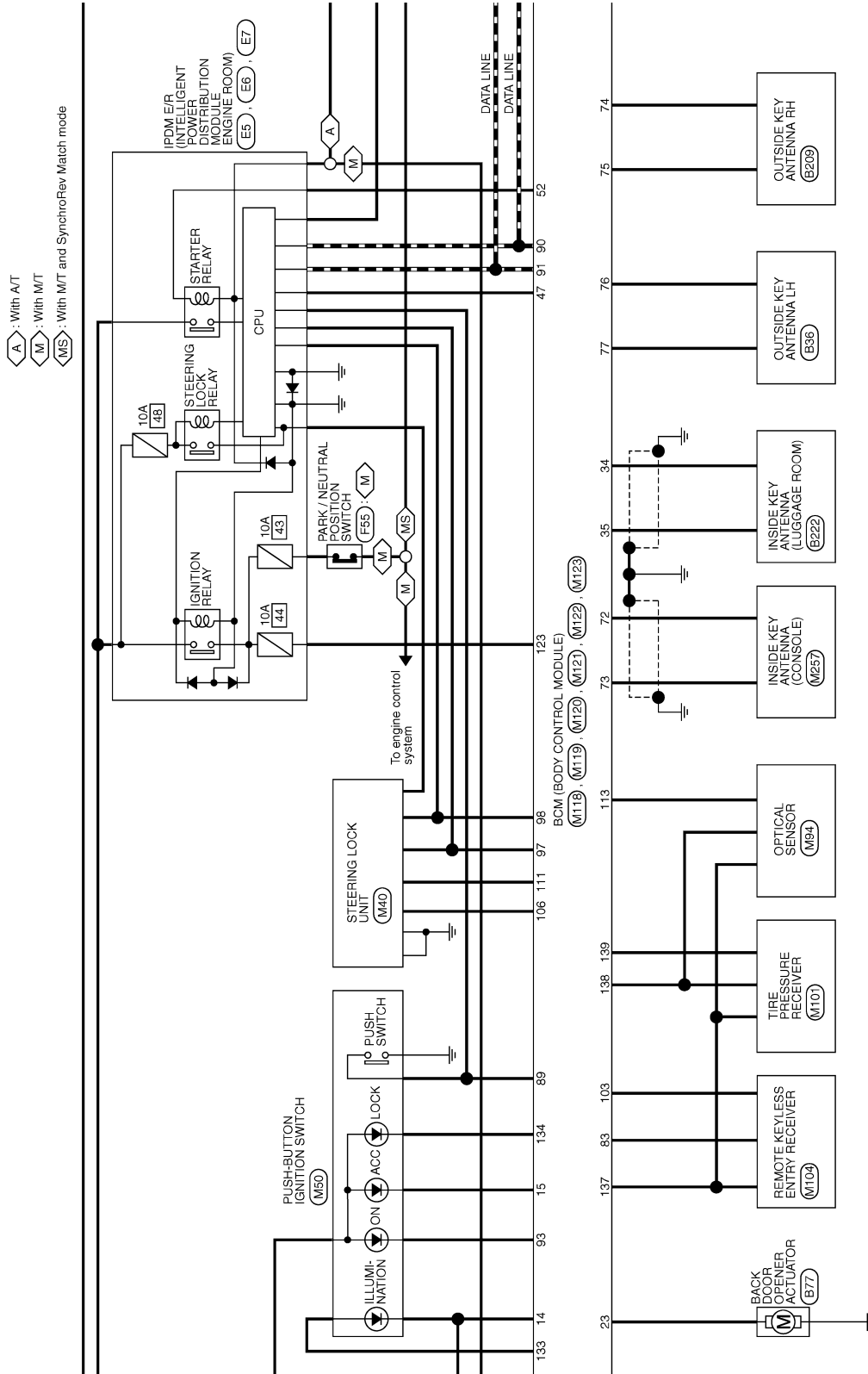
- *1: For Canada
- *2: A/T models
- *3: Except M/T models with SynchroRev Match mode
- *4: M/T models without SynchroRev Match mode
- *5: M/T models
- *6: Without NAVI
- *7: Except M/T models without SynchroRev Match mode

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BCM (BODY CONTROL MODULE)

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[XENON TYPE]



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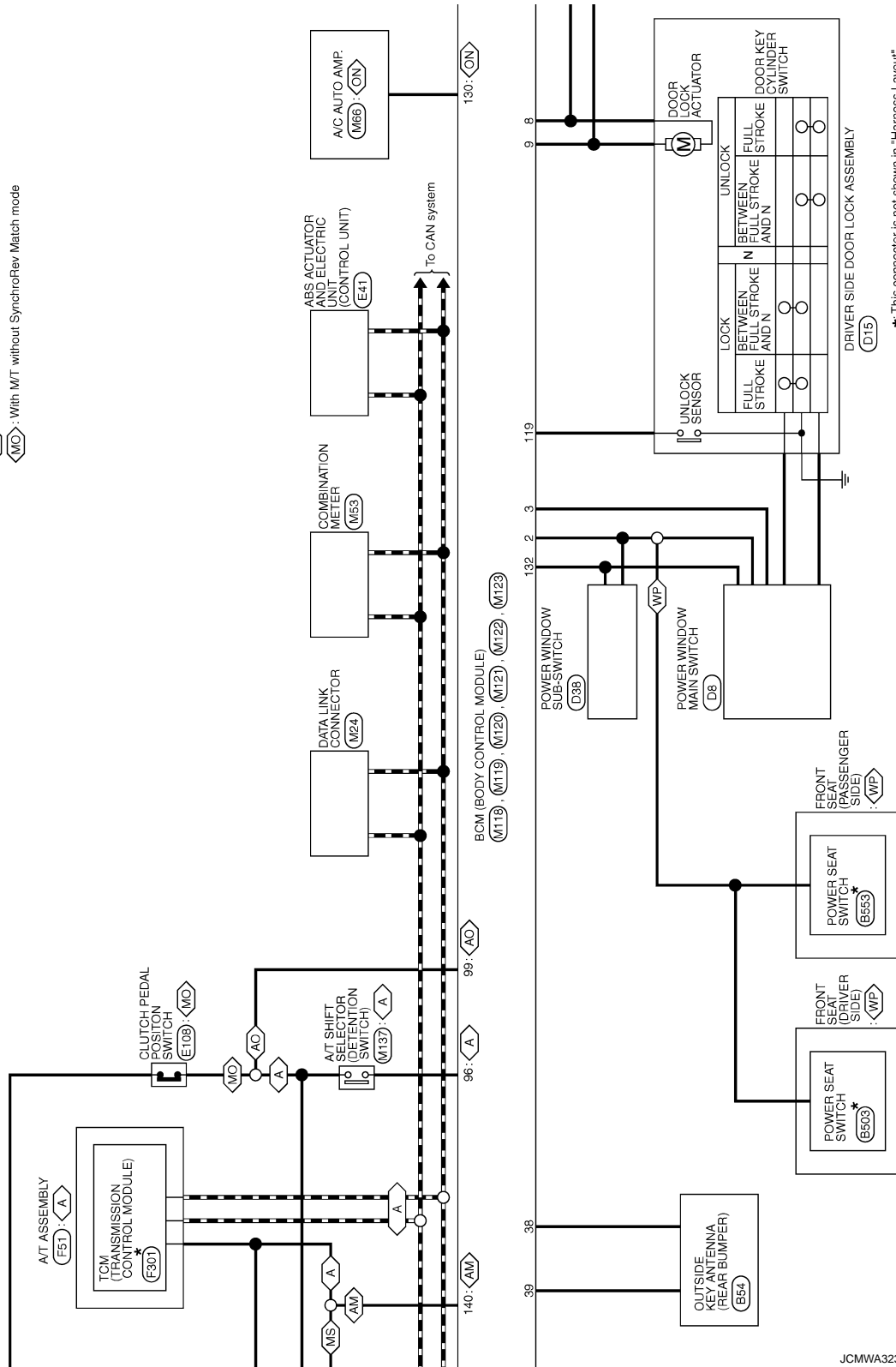
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

- <A> : With A/T
- <WP> : With power seat
- <ON> : Without NAVI
- <AM> : With A/T or with M/T and SynchroRev Match mode
- <AO> : With A/T or with M/T without SynchroRev Match mode
- <MS> : With M/T and SynchroRev Match mode
- <MO> : With M/T without SynchroRev Match mode



*: This connector is not shown in "Harness Layout".

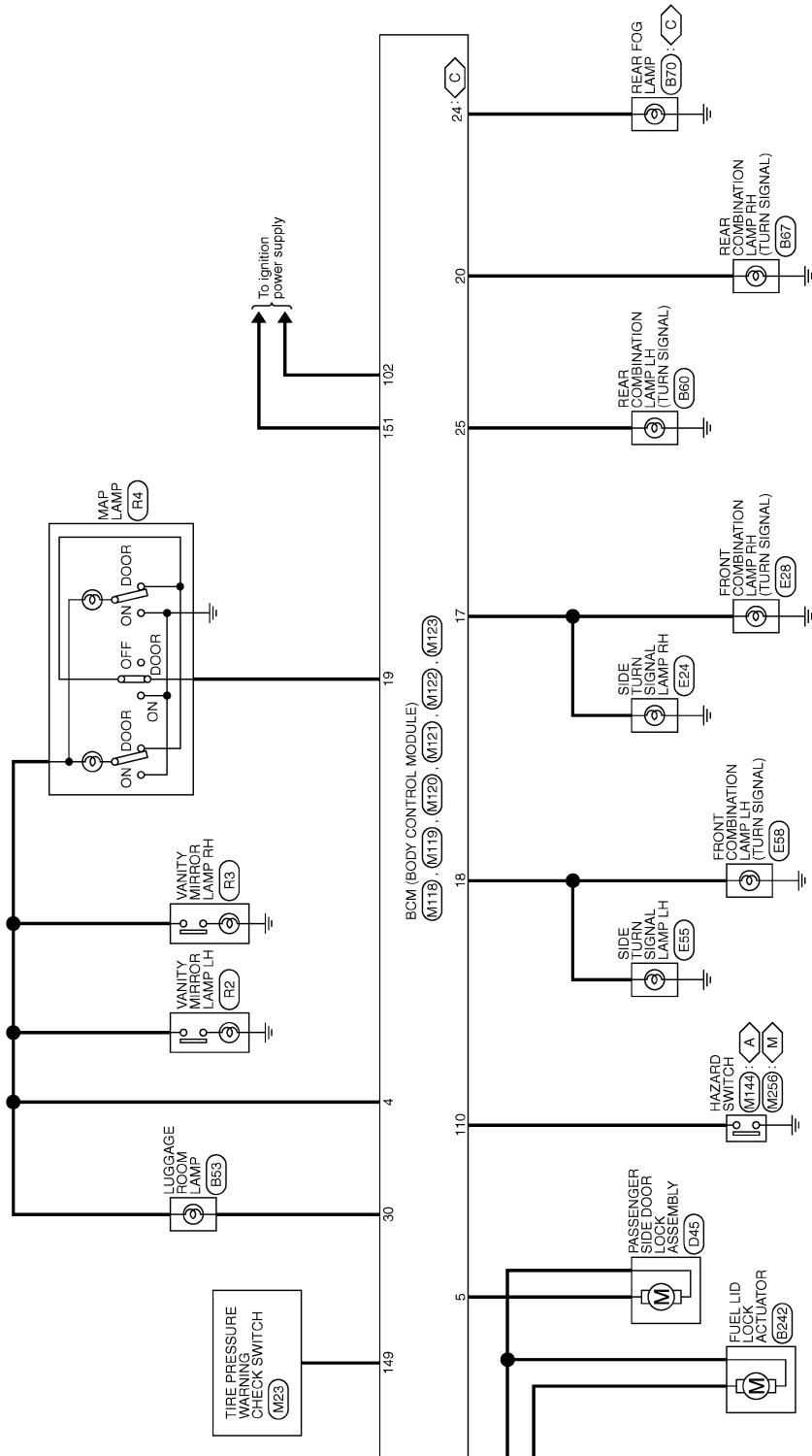
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

- A : With A/T
- M : With M/T
- C : For Canada



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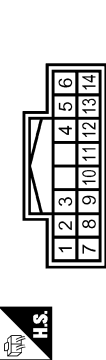
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

BCM (BODY CONTROL MODULE)

Connector No.	M33
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



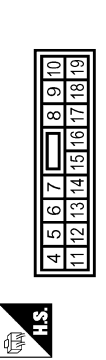
Terminal No.	Color of Wire	Signal Name [Specification]
2	SB	OUTPUT 4
3	L	OUTPUT 3
4	V	INPUT 3
5	O	OUTPUT 5
6	Y	INPUT 2
7	R	INPUT 4
8	LG	INPUT 1
9	P	OUTPUT 1
10	BR	INPUT 5
11	G	OUTPUT 2

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	IM3EB-LC



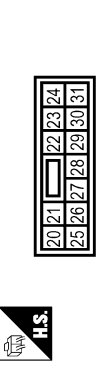
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	BAT (E/L)
2	W	POWER WINDOW POWER SUPPLY (BAT)
3	Y	POWER WINDOW POWER SUPPLY (RAP)

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



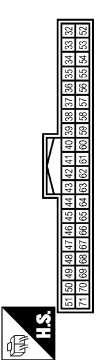
Terminal No.	Color of Wire	Signal Name [Specification]
4	R	INTERIOR ROOM LAMP POWER SUPPLY
5	G	PASSENGER DOOR UNLOCK OUTPUT
6	V	ALL DOOR FUEL LID LOCK OUTPUT
7	G	DRIVER DOOR FUEL LID UNLOCK OUTPUT
8	BR	BAT (FUSE)
9	B	GND
10	R	PUSH-BUTTON IGNITION SW ILL GND
11	Y	ACC IND
12	W	TURN SIGNAL RH (FRONT, SIDE)
13	O	TURN SIGNAL LH (FRONT, SIDE)
14	V	ROOM LAMP-TIMER CONT

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



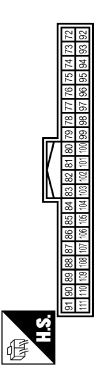
Terminal No.	Color of Wire	Signal Name [Specification]
20	V	TURN SIGNAL RH (REAR)
21	L	BACK DOOR OPEN OUTPUT
22	O	REAR FOG OUTPUT
23	LG	TURN SIGNAL LH (REAR)
24	R	LUGGAGE ROOM LAMP OUTPUT

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40GY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	G	LUGGAGE ROOM ANT-
35	R	LUGGAGE ROOM ANT+
36	B	BACK DOOR ANT-
37	W	BACK DOOR ANT+
38	B	IGN RELAY (F/R) CONT
39	V	STARTER RELAY CONT
40	SB	BACK DOOR OPENER REQUEST SW
41	W	F-KEY WARN BUZZER (ENG ROOM)
42	G	BACK DOOR SW
43	R	BACK DOOR OPENER SW

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
68	V	ROOM ANT-
69	L	ROOM ANT+
70	P	PASSENGER DOOR ANT-
71	BR	PASSENGER DOOR ANT+
72	V	DRIVER DOOR ANT-
73	LG	DRIVER DOOR ANT+
74	W	IMMOBI ANTENNA CONTROL
75	R	IMMOBI ANTENNA SIGNAL
76	Y	IGN RELAY (E/S) CONT
77	BR	KEYLESS ENTRY RECEIVER COMM
78	GR	COMBI SW INPUT 3

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
88	V	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	LG	KEY SLOT ILL
93	V	IGN IND
94	O	ACC RELAY CONT
95	Y	A/T SHIFT SELECTOR POWER SUPPLY
96	L	S/L CONDITION 1
97	P	S/L CONDITION 2
98	BR	ASCD CLUTCH SW (With M/T, without Synchro/Reh, Match mode)
99	BR	SHIFT P. [With A/T]
100	GR	PASSENGER DOOR REQUEST SW
101	Y	DRIVER DOOR REQUEST SW
102	O	BLOWER FAN MOTOR RELAY CONT
103	LG	KEYLESS ENTRY RECEIVER POWER SUPPLY
104	W	S/L UNIT POWER SUPPLY
105	W	COMBI SW INPUT 1
106	R	COMBI SW INPUT 4
107	Y	COMBI SW INPUT 2
108	P	HAZARD SW
109	Y	S/L UNIT COMM

JCMWA3239Gt

BCM (BODY CONTROL MODULE)

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BCM (BODY CONTROL MODULE)

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40F-G-RH

Terminal No.	Color of Wire	Signal Name [Specification]
113	O	OPTICAL SENSOR
114	R	CLUTCH INTERLOCK SW
116	SB	STOP LAMP SW 1
118	P	STOP LAMP SW 2
119	SB	DR DOOR UNLOCK SENSOR
121	R	KEY SLOT SW
123	W	IGN F/B
124	LG	PASSENGER DOOR SW
130	L	REAR DEFOGGER SW
132	Y	POWER WINDOW SW COMM
133	G	PUSH BUTTON IGNITION SW ILL POWER

134	GR	LOCK IND
137	P	RECEIVER/SENSOR GND
138	V	RECEIVER/SENSOR POWER SUPPLY
139	L	TIRE PRESSURE RECEIVER COMM
140	G	TIRES (REAR) (REAR LEFT) (REAR RIGHT) (REAR CENTER)
140	G	SHIFT I/P (Mtd. A, F)
141	Y	SECURITY INDICATOR
142	O	COMBET SW OUTPUT 5
143	P	COMBET SW OUTPUT 1
144	G	COMBET SW OUTPUT 2
145	L	COMBET SW OUTPUT 3
146	SB	COMBET SW OUTPUT 4
149	W	TIRE PRESSURE WARN CHECK SW
150	GR	DRIVER DOOR SW
151	G	REAR WINDOW DEFOGGER RELAY CONT

Fail-safe

FAIL-SAFE CONTROL BY DTC

BCM performs fail-safe control when any DTC are detected.

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent <ul style="list-style-type: none"> • Starter control relay signal • Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Status 1 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Status 1 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent <ul style="list-style-type: none"> • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)

BCM (BODY CONTROL MODULE)

[XENON TYPE]

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has becomes consistent <ul style="list-style-type: none"> Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	<ul style="list-style-type: none"> Inhibit engine cranking Inhibit steering lock 	When the following steering lock conditions agree <ul style="list-style-type: none"> BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled <ul style="list-style-type: none"> IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled <ul style="list-style-type: none"> Power position changes to ACC Receives engine status signal (CAN)
B2612: S/L STATUS	<ul style="list-style-type: none"> Inhibit engine cranking Inhibit steering lock 	When any of the following conditions are fulfilled <ul style="list-style-type: none"> Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E8: CLUTCH SW	Inhibit engine cranking	When any of the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> Status 1 <ul style="list-style-type: none"> Clutch switch signal (CAN from ECM): ON Clutch interlock switch signal: OFF (0 V) Status 2 <ul style="list-style-type: none"> Clutch switch signal (CAN from ECM): OFF Clutch interlock switch signal: ON (Battery voltage)
B26E9: S/L STATUS	<ul style="list-style-type: none"> Inhibit engine cranking Inhibit steering lock 	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled <ul style="list-style-type: none"> Steering condition No. 1 signal: LOCK (0 V) Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

NOTE:

If rain sensor malfunction is detected when ignition switch is turned OFF ⇒ ON and front wiper switch is INT position, BCM operates a fail-safe control.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

DTC Inspection Priority Chart

INFOID:000000004704245

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	<ul style="list-style-type: none">• U1000: CAN COMM CIRCUIT• U1010: CONTROL UNIT (CAN)
3	<ul style="list-style-type: none">• B2190: NATS ANTENNA AMP• B2191: DIFFERENCE OF KEY• B2192: ID DISCORD BCM-ECM• B2193: CHAIN OF BCM-ECM• B2195: ANTI SCANNING
4	<ul style="list-style-type: none">• B2013: ID DISCORD BCM-S/L• B2014: CHAIN OF S/L-BCM• B2553: IGNITION RELAY• B2555: STOP LAMP• B2556: PUSH-BTN IGN SW• B2557: VEHICLE SPEED• B2560: STARTER CONT RELAY• B2601: SHIFT POSITION• B2602: SHIFT POSITION• B2603: SHIFT POSI STATUS• B2604: PNP SW• B2605: PNP SW• B2606: S/L RELAY• B2607: S/L RELAY• B2608: STARTER RELAY• B2609: S/L STATUS• B260A: IGNITION RELAY• B260B: STEERING LOCK UNIT• B260C: STEERING LOCK UNIT• B260D: STEERING LOCK UNIT• B260F: ENG STATE SIG LOST• B2612: S/L STATUS• B2614: ACC RELAY CIRC• B2615: BLOWER RELAY CIRC• B2616: IGN RELAY CIRC• B2617: STARTER RELAY CIRC• B2618: BCM• B2619: BCM• B261A: PUSH-BTN IGN SW• B261E: VEHICLE TYPE• B26E8: CLUTCH SW• B26E9: S/L STATUS• B26EA: KEY REGISTRATION• C1729: VHCL SPEED SIG ERR• U0415: VEHICLE SPEED SIG

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Priority	DTC	
5	<ul style="list-style-type: none"> • C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT 	A B C D E F G
6	<ul style="list-style-type: none"> • B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA 	H

DTC Index

INFOID:000000004704246

NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to [BCS-17. "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)"](#).

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer- ence page
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	—	BCS-38
U1010: CONTROL UNIT (CAN)	—	—	—	—	BCS-39
U0415: VEHICLE SPEED SIG	—	—	—	—	BCS-40
B2013: ID DISCORD BCM-S/L	×	×	—	—	SEC-50
B2014: CHAIN OF S/L-BCM	×	×	—	—	SEC-51
B2190: NATS ANTENNA AMP	×	—	—	—	SEC-42
B2191: DIFFERENCE OF KEY	×	—	—	—	SEC-45
B2192: ID DISCORD BCM-ECM	×	—	—	—	SEC-46
B2193: CHAIN OF BCM-ECM	×	—	—	—	SEC-48
B2195: ANTI SCANNING	×	—	—	—	SEC-49
B2553: IGNITION RELAY	—	×	—	—	PCS-48
B2555: STOP LAMP	—	×	—	—	SEC-54

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer- ence page
B2556: PUSH-BTN IGN SW	—	×	×	—	SEC-56
B2557: VEHICLE SPEED	×	×	×	—	SEC-58
B2560: STARTER CONT RELAY	×	×	×	—	SEC-59
B2562: LOW VOLTAGE	—	×	—	—	BCS-41
B2601: SHIFT POSITION	×	×	×	—	SEC-60
B2602: SHIFT POSITION	×	×	×	—	SEC-63
B2603: SHIFT POSI STATUS	×	×	×	—	SEC-66
B2604: PNP SW	×	×	×	—	SEC-69
B2605: PNP SW	×	×	×	—	SEC-71
B2606: S/L RELAY	×	×	×	—	SEC-73
B2607: S/L RELAY	×	×	×	—	SEC-74
B2608: STARTER RELAY	×	×	×	—	SEC-76
B2609: S/L STATUS	×	×	×	—	SEC-78
B260A: IGNITION RELAY	×	×	×	—	PCS-50
B260B: STEERING LOCK UNIT	—	×	×	—	SEC-82
B260C: STEERING LOCK UNIT	—	×	×	—	SEC-83
B260D: STEERING LOCK UNIT	—	×	×	—	SEC-84
B260F: ENG STATE SIG LOST	×	×	×	—	SEC-85
B2612: S/L STATUS	×	×	×	—	SEC-90
B2614: ACC RELAY CIRC	—	×	×	—	PCS-52
B2615: BLOWER RELAY CIRC	—	×	×	—	PCS-55
B2616: IGN RELAY CIRC	—	×	×	—	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	—	SEC-94
B2618: BCM	×	×	×	—	PCS-61
B2619: BCM	×	×	×	—	SEC-96
B261A: PUSH-BTN IGN SW	—	×	×	—	PCS-62
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	—	SEC-97
B2622: INSIDE ANTENNA	—	×	—	—	DLK-55
B2623: INSIDE ANTENNA	—	×	—	—	DLK-57
B26E8: CLUTCH SW	×	×	×	—	SEC-86
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	—	SEC-88
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	—	SEC-89
C1704: LOW PRESSURE FL	—	—	—	×	WT-16
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	
C1708: [NO DATA] FL	—	—	—	×	WT-18
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Refer- ence page
C1712: [CHECKSUM ERR] FL	—	—	—	×	WT-21
C1713: [CHECKSUM ERR] FR	—	—	—	×	
C1714: [CHECKSUM ERR] RR	—	—	—	×	
C1715: [CHECKSUM ERR] RL	—	—	—	×	WT-24
C1716: [PRESSDATA ERR] FL	—	—	—	×	
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	WT-26
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1720: [CODE ERR] FL	—	—	—	×	
C1721: [CODE ERR] FR	—	—	—	×	WT-29
C1722: [CODE ERR] RR	—	—	—	×	
C1723: [CODE ERR] RL	—	—	—	×	
C1724: [BATT VOLT LOW] FL	—	—	—	×	WT-32
C1725: [BATT VOLT LOW] FR	—	—	—	×	
C1726: [BATT VOLT LOW] RR	—	—	—	×	
C1727: [BATT VOLT LOW] RL	—	—	—	×	WT-34
C1729: VHCL SPEED SIG ERR	—	—	—	×	
C1734: CONTROL UNIT	—	—	—	×	

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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

Reference Value

INFOID:000000004704247

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition		Value/Status
RAD FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	0 - 100 %
AC COMP REQ	Engine running	A/C switch OFF	Off
		A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		On
HL LO REQ	Lighting switch OFF		Off
	Lighting switch 2ND HI or AUTO (Light is illuminated)		On
	Daytime running light system is operated (With daytime running light system)		
HL HI REQ	Lighting switch OFF		Off
	Lighting switch HI		On
FR FOG REQ	NOTE: The item is indicated, but not monitored.		Off
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	Stop
		Front wiper switch INT	1LOW
		Front wiper switch LO	Low
		Front wiper switch HI	Hi
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	Off
		Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
PUSH SW	Release the push-button ignition switch		Off
	Press the push-button ignition switch		On
INTER/NP SW	Ignition switch ON	Selector lever in any position other than P or N (A/T models)	Off
		Release clutch pedal (M/T models)	
	Ignition switch ON	Selector lever in P or N position (A/T models)	On
		Depress clutch pedal (M/T models)	
ST RLY CONT	Ignition switch ON		Off
	At engine cranking		On
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On

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

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[XENON TYPE]

Monitor Item	Condition	Value/Status
ST/INHI RLY	Ignition switch ON	Off
	At engine cranking	INHI ON → ST ON
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF	UNKWN
DETENT SW	Ignition switch ON <ul style="list-style-type: none"> • Press the selector button with selector lever in P position • Selector lever in any position other than P 	Off
	Release the selector button with selector lever in P position NOTE: Fixed On for M/T models	On
S/L RLY -REQ	None of the conditions below are present	Off
	<ul style="list-style-type: none"> • Open the driver door after the ignition switch is turned OFF (for a few seconds) • Press the push-button ignition switch when the steering lock is activated • Depress the clutch pedal when the steering lock is activated 	On
S/L STATE	Steering lock is activated	LOCK
	Steering lock is deactivated	UNLOCK
	[DTC: B210A] is detected	UNKWN
DTRL REQ NOTE: This item is monitored only on the vehicle with the daytime running light system.	Daytime running light system is not operated	Off
	Daytime running light system is operated	On
OIL P SW	Ignition switch OFF, ACC or engine running	Open
	Ignition switch ON	Close
HOOD SW	Close the hood	Off
	Open the hood	On
HL WASHER REQ	NOTE: The item is indicated, but not monitored.	Off
THFT HRN REQ	Not operation	Off
	<ul style="list-style-type: none"> • Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM 	On
HORN CHIRP	Not operating	Off
	Door locking with Intelligent Key (horn chirp mode)	On
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitored.	Off

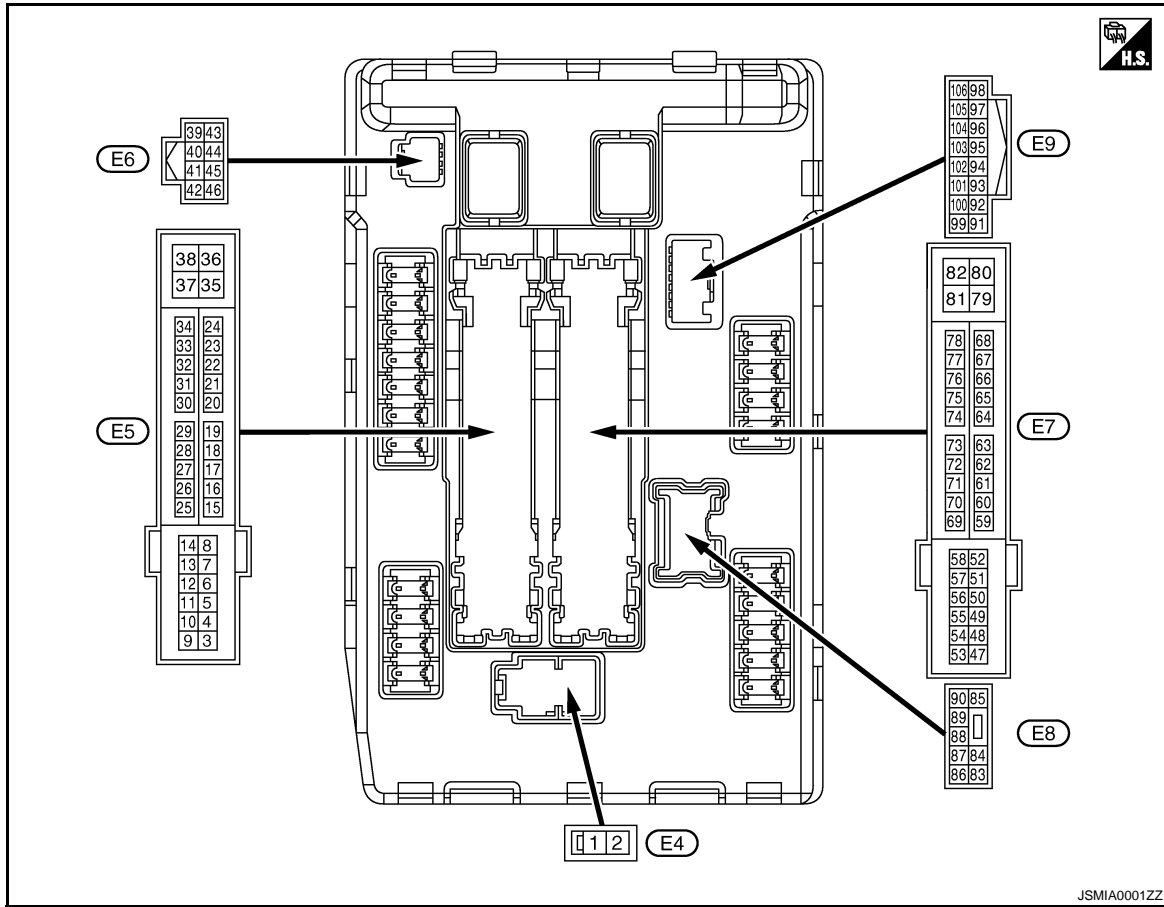
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (W)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (V)	Ground	Front wiper LO	Output	Ignition switch OFF	Front wiper switch OFF	0 V
				Ignition switch ON	Front wiper switch LO	Battery voltage
5 (L)	Ground	Front wiper HI	Output	Ignition switch OFF	Front wiper switch OFF	0 V
				Ignition switch ON	Front wiper switch HI	Battery voltage
6*1 (R)	Ground	Daytime running light relay	Input	Ignition switch OFF		Battery voltage
7 (R)	Ground	Illuminations*1	Output	Ignition switch ON	Lighting switch OFF	0 V
		Tail, license plate lamps & illuminations*2			Lighting switch 1ST	Battery voltage
11 (BR)	Ground	Steering lock unit power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B/W)	Ground	Ground	—	Ignition switch ON		0 V

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[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)	
13 (Y)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V	A
				<ul style="list-style-type: none"> • Approximately 1 second after turning the ignition switch ON • Engine running 		Battery voltage	B
16 (LG)	Ground	Front wiper auto stop	Input	Ignition switch ON	Front wiper stop position	0 V	C
					Any position other than front wiper stop position	Battery voltage	D
19 (W)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	E
				Ignition switch ON		Battery voltage	
25 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	
				Ignition switch ON		Battery voltage	
27 (Y)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage	F
				Ignition switch ON		0 V	
28 (L)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V	G
				Release the push-button ignition switch		Battery voltage	
30 (GR)	Ground	Starter relay control	Input	A/T models	Selector lever in any position other than P or N (Ignition switch ON)	0 V	H
					Selector lever P or N (Ignition switch ON)	Battery voltage	
				M/T models	Release the clutch pedal	0 V	I
					Depress the clutch pedal	Battery voltage	
32 (L)	Ground	Steering lock unit condition-1	Input	Steering lock is activated		0 V	J
				Steering lock is deactivated		Battery voltage	
33 (P)	Ground	Steering lock unit condition-2	Input	Steering lock is activated		Battery voltage	
				Steering lock is deactivated		0 V	K
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage	
39 (P)	—	CAN-L	Input/ Output	—		—	EXL
40 (L)	—	CAN-H	Input/ Output	—		—	M
41 (B/W)	Ground	Ground	—	Ignition switch ON		0 V	
42 (Y)	Ground	Cooling fan relay control	Input	Ignition switch OFF or ACC		0 V	N
				Ignition switch ON		0.7 V	
43 ^{*3} (SB)	Ground	A/T shift selector (Detention switch)	Input	Ignition switch ON	<ul style="list-style-type: none"> • Press the selector button (selector lever P) • Selector lever in any position other than P 	Battery voltage	O
					Release the selector button (selector lever P)	0 V	P
44 (W)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage	
				The horn is activated		0 V	
45 (G)	Ground	Anti theft horn relay control	Input	The horn is deactivated		Battery voltage	
				The horn is activated		0 V	

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

< ECU DIAGNOSIS INFORMATION >

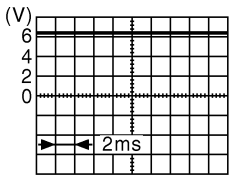
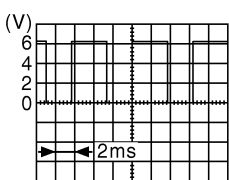
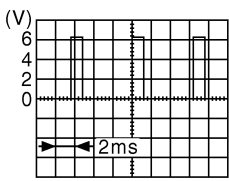
[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
46 (V)	Ground	Starter relay control	Input	A/T models	Selector lever in any position other than P or N (Ignition switch ON)	0 V
					Selector lever P or N (Ignition switch ON)	Battery voltage
				M/T models	Release the clutch pedal	0 V
					Depress the clutch pedal	Battery voltage
48 (L)	Ground	A/C relay power supply	Output	Engine running	A/C switch OFF	0 V
					A/C switch ON (A/C compressor is operating)	Battery voltage
49 (O)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> • Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage
51 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
53 (W)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> • Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage
54 (V)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> • Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		Battery voltage
55 (SB)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
58 ^{*3} (P)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (BR)	Ground	ECM relay control	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		Battery voltage
				<ul style="list-style-type: none"> • Ignition switch ON • Ignition switch OFF (For a few seconds after turning ignition switch OFF) 		0 - 1.5 V

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-					
70 (O)	Ground	Throttle control motor relay control	Output	Ignition switch ON → OFF		0 - 1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON		0 - 1.0 V
73*4 (GR)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
74 (G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
75 (SB)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (Y)	Ground	Power generation com- mand signal	Output	Ignition switch ON		 <p style="text-align: right; font-size: small;">JPMIA0001GB</p> <p style="text-align: center;">6.3 V</p>
				40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 <p style="text-align: right; font-size: small;">JPMIA0002GB</p> <p style="text-align: center;">3.8 V</p>
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 <p style="text-align: right; font-size: small;">JPMIA0003GB</p> <p style="text-align: center;">1.4 V</p>
77 (R)	Ground	Fuel pump relay control	Output	<ul style="list-style-type: none"> • Approximately 1 second after turning the ignition switch ON • Engine running 		0 - 1.0 V
				Approximately 1 second or more after turning the ignition switch ON		Battery voltage
80 (W)	Ground	Starter motor	Output	At engine cranking		Battery voltage
83 (R)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
				Daytime running light system activated*1		Battery voltage

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
84 (P)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
				Daytime running light system activated*1		
88 (G)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (BR)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					<ul style="list-style-type: none"> • Lighting switch HI • Lighting switch PASS 	
90 (LG)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					<ul style="list-style-type: none"> • Lighting switch HI • Lighting switch PASS 	
91*2 (P)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	
92*2 (O)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	
97 (V)	Ground	Cooling fan control	Output	Engine idling		0 - 5 V
104 (LG)	Ground	Hood switch	Input	Close the hood		Battery voltage
				Open the hood		0 V
105*1 (SB)	Ground	Daytime running light relay control	Output	<ul style="list-style-type: none"> • Parking lamp • Side maker lamp • License plate lamp • Tail lamp 	Turned OFF	Battery voltage
					Turned ON	

*1: With daytime running light system

*2: Without daytime running light system

*3: A/T models only

*4: M/T models only

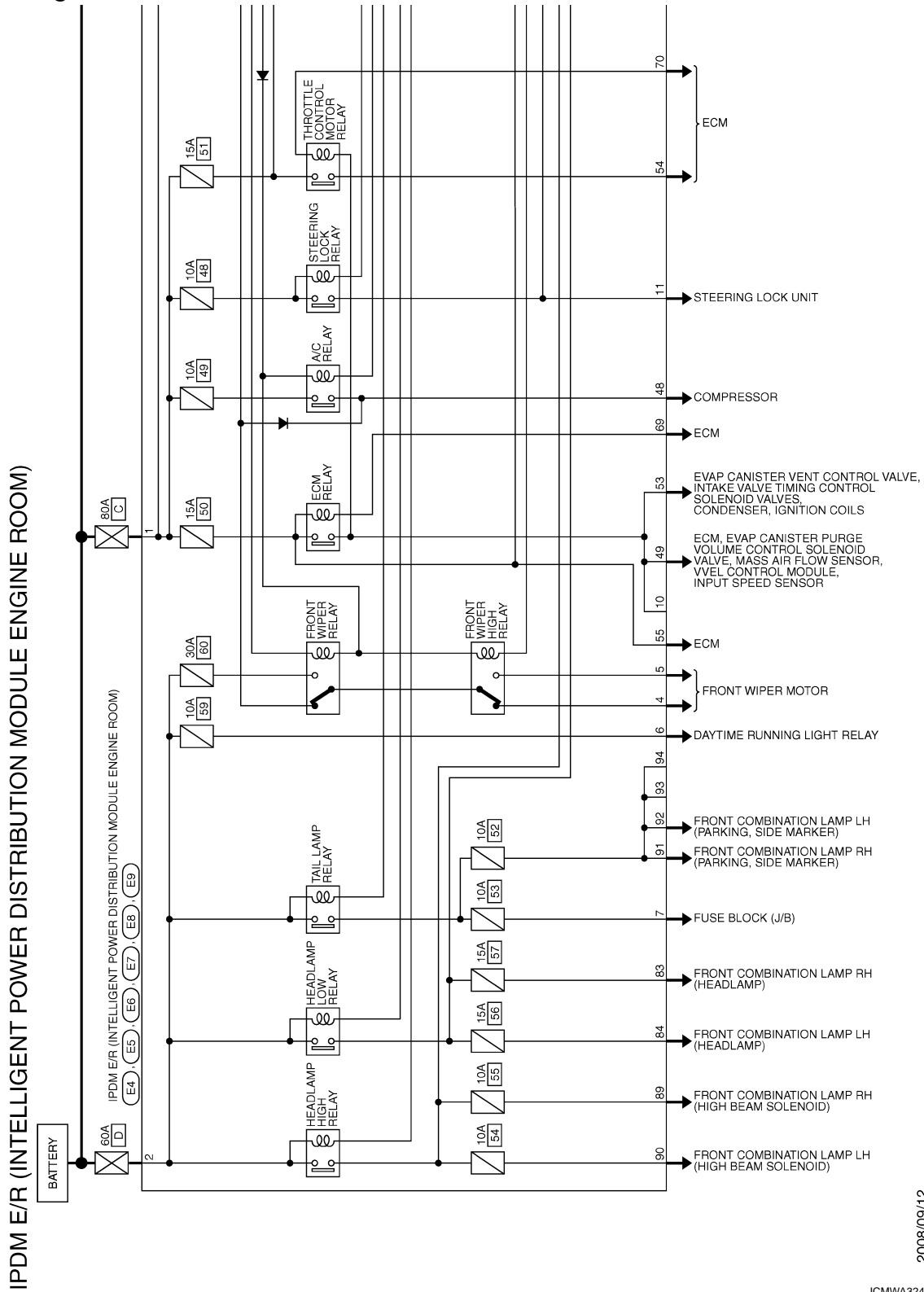
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Wiring Diagram - IPDM E/R -

INFOID:000000004704248



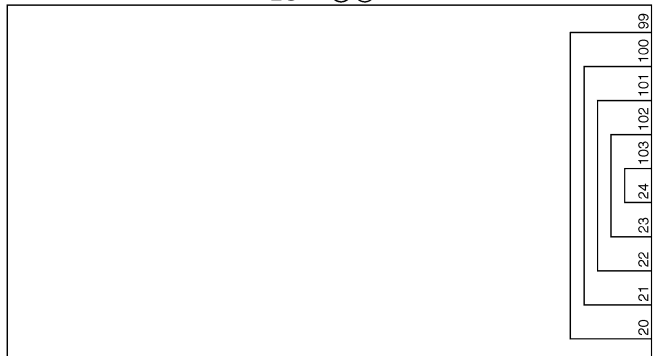
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JCMWA3244GE

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IPDM E/R
 (INTELLIGENT POWER
 DISTRIBUTION MODULE
 ENGINE ROOM)
 (E4) (E5) (E6)
 (E7) (E8) (E9)



JCMWA3246GE

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

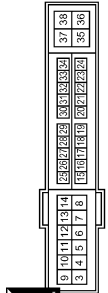
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Connector No.	E4
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	L02FB-MC



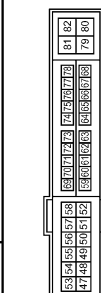
Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	L	-

Connector No.	E5
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-TV



Terminal No.	Color of Wire	Signal Name [Specification]
4	V	-
5	L	-
6	R	-
7	R	-
11	BR	-
12	B/W	-
13	Y	-
16	LG	-
19	W	-
25	G	-
27	Y	-

Connector No.	E7
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4

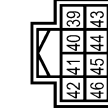


Terminal No.	Color of Wire	Signal Name [Specification]
48	L	-
49	O	-
51	Y	-
53	W	-
54	V	-
55	SB	-
56	LG	-
57	G	-
58	P	-
59	BR	-
70	O	-

28	L	-
30	GR	-
32	L	-
33	P	-
36	G	-

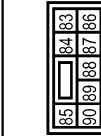


Connector No.	E6
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH48FW-NH



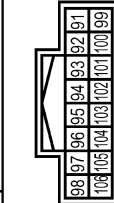
Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-
41	B/W	-
42	Y	-
43	SB	-
44	W	-
45	G	-
46	V	-

Connector No.	E8
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS30FPV-CS



Terminal No.	Color of Wire	Signal Name [Specification]
83	R	-
84	P	-
88	G	-
89	BR	-
90	LG	-

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH10FPV-NH



Terminal No.	Color of Wire	Signal Name [Specification]
91	P	-
92	O	-
97	V	-
104	LG	-
105	SB	-

Fail-safe

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

JCMWA3247G1

INFOID:000000004704249

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Control part	Fail-safe operation
Cooling fan	<ul style="list-style-type: none"> • Outputs the pulse duty signal (PWM signal) 100% when the ignition switch is turned ON • Outputs the pulse duty signal (PWM signal) 0% when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
Headlamp	<ul style="list-style-type: none"> • Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF
<ul style="list-style-type: none"> • Parking lamps • Side maker lamp • License plate lamps • Illuminations • Tail lamps 	<ul style="list-style-type: none"> • Turns ON the tail lamp relay and the daytime running light relay* when the ignition switch is turned ON • Turns OFF the tail lamp relay and the daytime running light relay* when the ignition switch is turned OFF
Front wiper	<ul style="list-style-type: none"> • The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the AUTO mode and the front wiper motor is operating.
Horn	Horn relay OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Steering lock unit	Steering lock relay OFF

*: With daytime running light system

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

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

Voltage judgment		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
ON	ON	Ignition relay ON normal	—
OFF	OFF	Ignition relay OFF normal	—
ON	OFF	Ignition relay ON stuck	<ul style="list-style-type: none"> • Detects DTC "B2098: IGN RELAY ON" • Turns ON the tail lamp relay and the daytime running light relay* for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"

*: With daytime running light system

FRONT WIPER CONTROL

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

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

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

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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

NOTE:

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

STARTER MOTOR PROTECTION FUNCTION

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

DTC Index

INFOID:000000004704250

NOTE:

- The details of time display are as follows.
 - CRNT: A malfunction is detected now.
 - PAST: A malfunction was detected in the past.
- IGN counter is displayed on FFD (Freeze Frame data).
 - The number is 0 when is detected now.
 - The number increases like 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
 - The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

×: Applicable

CONSULT display	Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—
U1000: CAN COMM CIRCUIT	×	PCS-15
B2098: IGN RELAY ON	×	PCS-16
B2099: IGN RELAY OFF	—	PCS-17
B2108: STRG LCK RELAY ON	—	SEC-100
B2109: STRG LCK RELAY OFF	—	SEC-102
B210A: STRG LCK STATE SW	—	SEC-103
B210B: START CONT RLY ON	—	SEC-107
B210C: START CONT RLY OFF	—	SEC-108
B210D: STARTER RELAY ON	—	SEC-109
B210E: STARTER RELAY OFF	—	SEC-110
B210F: INTRLCK/PNP SW ON	—	SEC-112
B2110: INTRLCK/PNP SW OFF	—	SEC-114

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Symptom Table

INFOID:000000004404225

CAUTION:

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

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	<ul style="list-style-type: none"> Fuse Harness between IPDM E/R and the front combination lamp Front combination lamp (High beam solenoid) IPDM E/R 	Headlamp (HI) circuit Refer to EXL-39 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-152 .	
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		Combination meter	<ul style="list-style-type: none"> Combination meter Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	Front combination lamp (High beam solenoid)	—
	Both sides	<ul style="list-style-type: none"> Combination switch Harness between the combination switch and BCM BCM 	Combination switch Refer to BCS-82 .
		High beam request signal	IPDM E/R Data monitor "HL HI REQ"
		IPDM E/R	—
Headlamp is not turned ON.	One side	<ul style="list-style-type: none"> Fuse Xenon bulb Harness between IPDM E/R and the front combination lamp Front combination lamp (xenon headlamp) IPDM E/R 	Headlamp (LO) circuit Refer to EXL-41 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-153 .	
Headlamp is not turned OFF.	When the ignition switch is turned ON	Refer to EXL-153 .	
	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.	<ul style="list-style-type: none"> Combination switch Harness between the combination switch and BCM BCM 		Combination switch Refer to BCS-82 .
	<ul style="list-style-type: none"> Optical sensor Harness between the optical sensor and BCM BCM 		Optical sensor Refer to EXL-55 .

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

[XENON TYPE]

< SYMPTOM DIAGNOSIS >

Symptom	Possible cause	Inspection item	
Parking lamp is not turned ON.	<ul style="list-style-type: none"> • Fuse • Parking lamp bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R 	Parking lamp circuit Refer to EXL-48 .	
Tail lamp is not turned ON.	<ul style="list-style-type: none"> • Harness between IPDM E/R and the rear combination lamp • Rear combination lamp 	Tail lamp circuit Refer to EXL-60 .	
License plate lamp is not turned ON.	<ul style="list-style-type: none"> • Harness between IPDM E/R and the license plate lamp • License plate lamp 	License plate lamp circuit Refer to EXL-63 .	
Tail lamp and license plate lamp are not turned ON.	<ul style="list-style-type: none"> • Fuse • Harness between IPDM E/R and the rear combination lamp • IPDM E/R 	Tail lamp circuit Refer to EXL-60 .	
<ul style="list-style-type: none"> • Parking lamp, tail lamp and license plate lamp are not turned ON. • Parking lamp, tail lamp and license plate lamp are not turned OFF. (Each illumination is turned ON/OFF.)	Symptom diagnosis "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-154 .		
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation.)	<ul style="list-style-type: none"> • Harness between BCM and each turn signal lamp • Turn signal lamp bulb 	Turn signal lamp circuit Refer to EXL-51 .
	Indicator lamp is included	<ul style="list-style-type: none"> • Combination switch • Harness between the combination switch and BCM • BCM 	Combination switch Refer to BCS-82 .
Turn signal indicator lamp does not blink. (The turn signal indicator lamp is normal.)	One side	Combination meter	—
	Both sides (Always)	<ul style="list-style-type: none"> • Turn signal indicator lamp signal - Combination meter - BCM • Combination meter 	<ul style="list-style-type: none"> • Combination meter • Data monitor "TURN IND" • BCM (FLASHER) • Active test "FLASHER"
	Both sides (Only when activating the hazard warning lamp with the ignition switch OFF)	<ul style="list-style-type: none"> • Combination meter power supply and the ground circuit • Combination meter 	Combination meter Power supply and the ground circuit Refer to MWI-44 .
<ul style="list-style-type: none"> • Hazard warning lamp does not activate. • Hazard warning lamp continues activating. (Turn signal is normal.)	<ul style="list-style-type: none"> • Hazard switch • Harness between the hazard switch and BCM • BCM 	Hazard switch Refer to EXL-58 .	
Rear fog lamp is not turned ON.	Rear fog lamp indicator lamp is normal.	<ul style="list-style-type: none"> • Harness between BCM and rear fog lamp • Rear fog lamp bulb • BCM 	Rear fog lamp circuit Refer to EXL-66 .
	Rear fog lamp indicator lamp is included.	<ul style="list-style-type: none"> • Rear fog lamp indicator lamp is included. • Harness between combination switch and BCM • BCM 	Combination switch Refer to BCS-82 .

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM : Symptom Table

INFOID:000000004459631

CAUTION:

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	<ul style="list-style-type: none"> • Fuse • Harness between IPDM E/R and the front combination lamp • Front combination lamp (High beam solenoid) • IPDM E/R 	Headlamp (HI) circuit Refer to EXL-39 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-152 .	
High beam indicator lamp is not turned ON. (The headlamp switches to the high beam.)		Combination meter	<ul style="list-style-type: none"> • Combination meter Data monitor "HI-BEAM IND" • BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	Front combination lamp (High beam solenoid)	—
	Both sides	<ul style="list-style-type: none"> • Combination switch • Harness between the combination switch and BCM • BCM 	Combination switch Refer to BCS-82 .
		High beam request signal	IPDM E/R Data monitor "HL HI REQ"
		IPDM E/R	—
Headlamp is not turned ON.	One side	<ul style="list-style-type: none"> • Fuse • Xenon bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp (xenon headlamp) • IPDM E/R 	Headlamp (LO) circuit Refer to EXL-41 .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-153 .	
Headlamp is not turned OFF.	When ignition switch is turned ON	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-153 .	
	Ignition switch is turned OFF.	IPDM E/R	—
Headlamp is not turned ON/OFF with the lighting switch AUTO.	<ul style="list-style-type: none"> • Combination switch • Harness between the combination switch and BCM • BCM 		Combination switch Refer to BCS-82 .
	<ul style="list-style-type: none"> • Optical sensor • Harness between the optical sensor and BCM • BCM 		Optical sensor Refer to EXL-55 .
Parking lamp is not turned ON.		<ul style="list-style-type: none"> • Parking lamp bulb • Harness between daytime running light relay and the front combination lamp • Front combination lamp 	Parking lamp circuit Refer to EXL-49 .
Tail lamp is not turned ON.		<ul style="list-style-type: none"> • Harness between daytime running light relay and the rear combination lamp • Rear combination lamp 	Tail lamp circuit Refer to EXL-61 .

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

Symptom	Possible cause	Inspection item
License plate lamp is not turned ON.	<ul style="list-style-type: none"> • Harness between daytime running light relay and the license plate lamp • License plate lamp 	License plate lamp circuit Refer to EXL-64 .
Tail lamp and license plate lamp are not turned ON.	<ul style="list-style-type: none"> • Fuse • Harness between daytime running light relay and the rear combination lamp 	Tail lamp circuit Refer to EXL-61 .
<ul style="list-style-type: none"> • Parking lamp, tail lamp and license plate lamp are not turned ON. • Parking lamp, tail lamp and license plate lamp are not turned OFF. (Each illumination is turned ON/OFF.)	Symptom diagnosis "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-154 .	
Tail lamp indicator lamp is not turned ON. (Parking and tail lamps are turned ON.)	Combination meter	<ul style="list-style-type: none"> • Combination meter • Data monitor "LIGHT IND" • BCM (HEAD LAMP) • Active test "TAIL LAMP"
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation.)	<ul style="list-style-type: none"> • Harness between BCM and each turn signal lamp • Turn signal lamp bulb Turn signal lamp circuit Refer to EXL-51 .
	Indicator lamp is included	<ul style="list-style-type: none"> • Combination switch • Harness between the combination switch and BCM • BCM Combination switch Refer to BCS-82 .
Turn signal indicator lamp does not blink. (The turn signal indicator lamp is normal.)	One side	Combination meter —
	Both sides (Always)	<ul style="list-style-type: none"> • Turn signal indicator lamp signal - combination meter - BCM • Combination meter <ul style="list-style-type: none"> • Combination meter • Data monitor "TURN IND" • BCM (FLASHER) • Active test "FLASHER"
	Both sides (Only when activating the hazard warning lamp with the ignition switch OFF.)	<ul style="list-style-type: none"> • Combination meter power supply and the ground circuit • Combination meter Combination meter Power supply and the ground circuit Refer to MWI-44 .
<ul style="list-style-type: none"> • Hazard warning lamp does not activate. • Hazard warning lamp continues activating. (Turn signal is normal.)	<ul style="list-style-type: none"> • Hazard switch • Harness between the hazard switch and BCM • BCM 	Hazard switch Refer to EXL-58 .
Rear fog lamp is not turned ON.	Rear fog lamp indicator lamp is normal.	<ul style="list-style-type: none"> • Harness between BCM and rear fog lamp • Rear fog lamp bulb • BCM Rear fog lamp circuit Refer to EXL-66 .
	Rear fog lamp indicator lamp is included.	<ul style="list-style-type: none"> • Combination switch • Harness between combination switch and BCM • BCM Combination switch Refer to BCS-82 .
Rear fog lamp indicator lamp is not turned ON. (Rear fog lamp is turned ON.)	<ul style="list-style-type: none"> • Rear fog lamp status signal - Combination meter. - BCM • Combination meter 	<ul style="list-style-type: none"> • Combination meter • Data monitor "RR FOG IND" • BCM (HEAD LAMP) • Active test "RR FOG LAMP"

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

NORMAL OPERATING CONDITION

Description

INFOID:000000004404226

XENON HEADLAMP

- Brightness and the color of light may change slightly immediately after turning the headlamp ON until the xenon bulb becomes stable. This is normal.
- Illumination time lag may occur between right and left. This is normal.

AUTO LIGHT SYSTEM

The headlamp may not be turned ON/OFF immediately after passing dark area or bright area (short tunnel, sky bridge, shadowed area etc.) while using the auto light system. This causes for the control difference. This is normal.

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EXL

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:000000004404227

The headlamp (both sides) does not switch to the high beam when setting to the lighting switch HI or PASS.

Diagnosis Procedure

INFOID:000000004404228

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-82, "Symptom Table"](#).

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.

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to [EXL-39, "Description"](#).

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:000000004404229

The headlamps (both sides) are not turned ON in any condition.

Diagnosis Procedure

INFOID:000000004404230

1. CHECK COMBINATION SWITCH

Check the combination switch. Refer to [BCS-82. "Symptom Table"](#).

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.

3. HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to [EXL-41. "Description"](#).

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

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EXL

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Description

INFOID:000000004404231

The parking, license plate, tail, side marker lamps and each illumination are not turned ON in any condition.

WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004404232

1.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-82. "Symptom Table"](#).

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.

3.TAIL LAMP CIRCUIT INSPECTION

Check the tail lamp circuit. Refer to [EXL-60. "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Component Function Check"](#).

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM : Description

INFOID:000000004459632

The parking, license plate and tail lamps are not turned ON in any condition.

WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure

INFOID:000000004459633

1.SYMPTOM CONFIRMATION

Turn the lighting switch 1ST.

Are each illumination turned ON?

YES >> GO TO 4.

NO >> GO TO 2.

2.COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to [BCS-82. "Symptom Table"](#).

Is the combination switch normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning part.

3.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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 >> Replace IPDM E/R.

NO >> Replace BCM.

4. DAYTIME RUNNING LIGHT RELAY CIRCUIT INSPECTION

Check the daytime running light relay circuit. Refer to [EXL-45. "Component Function Check"](#).

Is the daytime running light relay circuit normal?

YES >> Check the parking lamp circuit. Refer to [EXL-50. "WITH DAYTIME RUNNING LIGHT SYSTEM : Diagnosis Procedure"](#).

NO >> Repair or replace the malfunctioning part.

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EXL

PRECAUTION

PRECAUTIONS

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

INFOID:000000004704254

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

WARNING:

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

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

WARNING:

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

Precautions For Xenon Headlamp Service

INFOID:000000004703698

WARNING:

Comply with the following warnings to prevent any serious accident.

- Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.
- Never work with wet hands.
- Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)
- Never touch the bulb glass immediately after turning it OFF. It is extremely hot.

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)
- Never perform HID circuit inspection with a tester.
- Never touch the xenon bulb glass with hands. Never put oil and grease on it.
- Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.
- Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).

Precaution for Battery Service

INFOID:000000004704255

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description

INFOID:000000004404238

PREPARATION BEFORE ADJUSTING

NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

NOTE:

Do not remove the temporary tire, jack and on-vehicle tool.

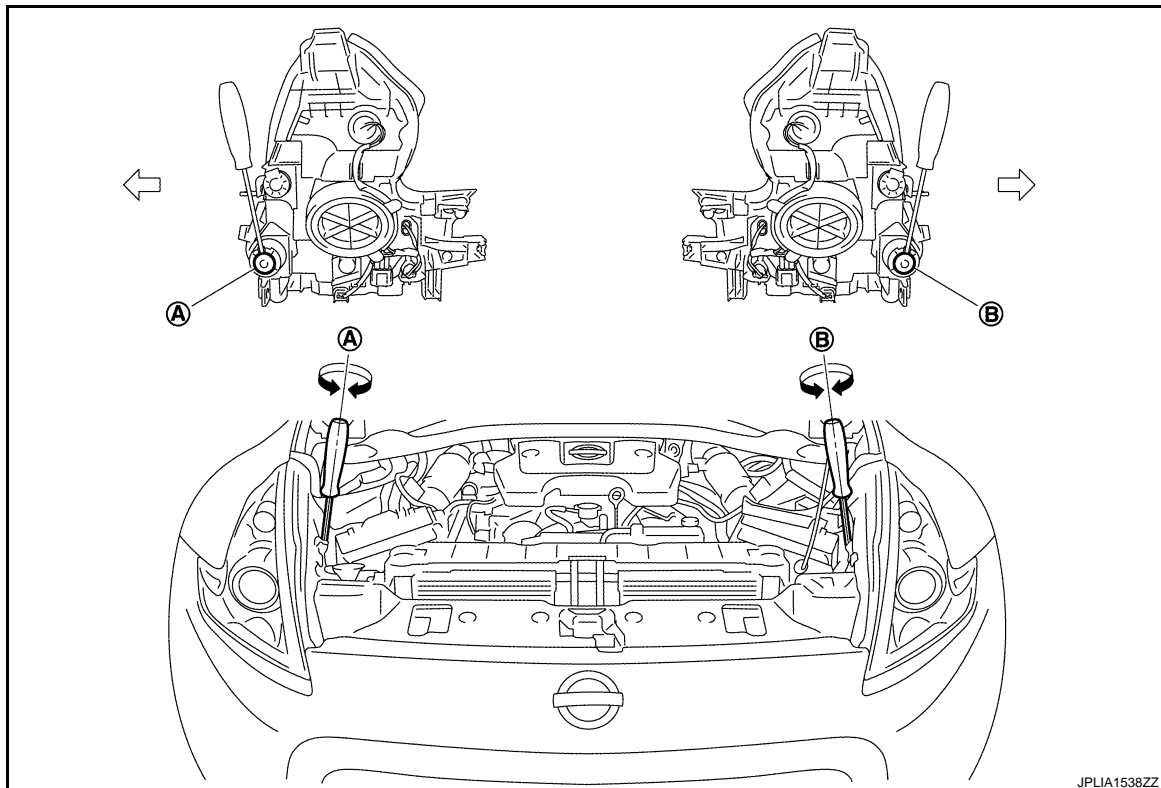
- Wipe out dirt on the headlamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

- Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW



A. Headlamp (RH) adjustment screw B. Headlamp (LH) adjustment screw

↔: Vehicle center

Adjustment screw	Screw driver rotation	Facing direction
A Headlamp (RH)	Clockwise	UP
	Counterclockwise	DOWN

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

	Adjustment screw	Screw driver rotation	Facing direction
B	Headlamp (LH)	Clockwise	UP
		Counterclockwise	DOWN

Aiming Adjustment Procedure

INFOID:000000004404239

- Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.

- Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the headlamp center and the screen.

- Start the engine. Turn the headlamp (LO) ON.

NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.

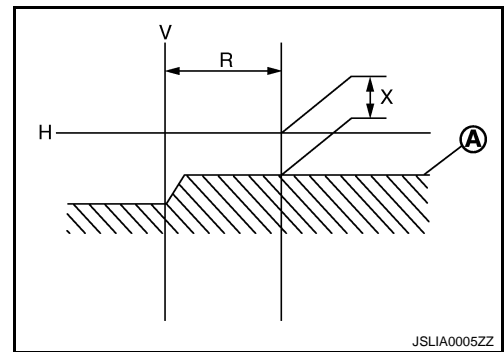
CAUTION:

Never cover the lens surface with a tape etc. The lens is made of resin.

- Measure the distance (X) between the horizontal center line of headlamp (H) and the cutoff line (A) within the light axis measurement range (R) from the vertical center line ahead of headlamp (V).

Light axis measurement range (R) : 350 ± 175 mm (13.78 ± 6.89 in)

Low beam distribution on the screen

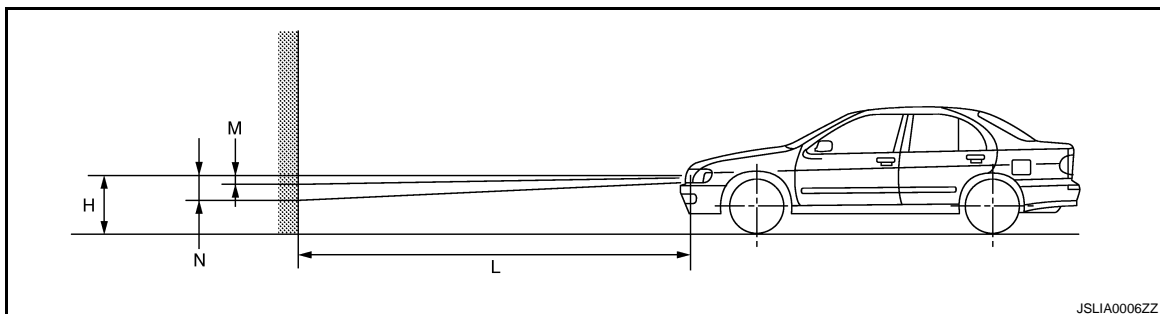


- Adjust the cutoff line height with the aiming adjustment screw so as to enter in the adjustment range (M–N) according to the horizontal center line of headlamp (H).

unit: mm (in)

Horizontal center line of headlamp (H)	Highest cutoff line height (M)	Lowest cutoff line height (N)
700 (27.56) or less	4 (0.16)	30 (1.18)
701(27.60) – 800 (31.50)	4 (0.16)	30 (1.18)
801 (31.54) or more	17 (0.67)	44 (1.73)

Side view



Distance between the headlamp center and the screen (L) : 10 m (32.8 ft)

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

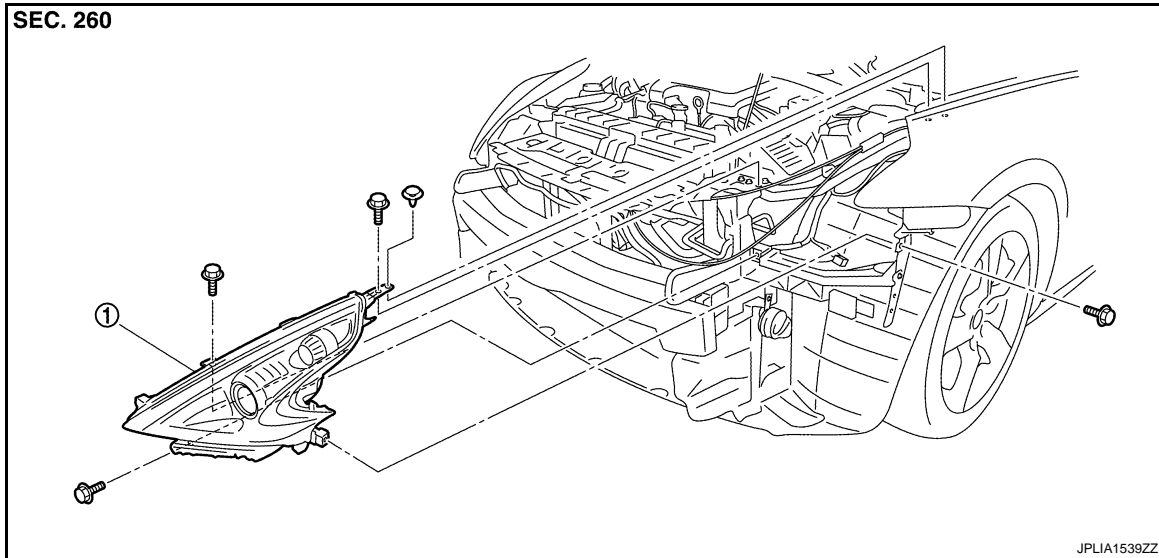
REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

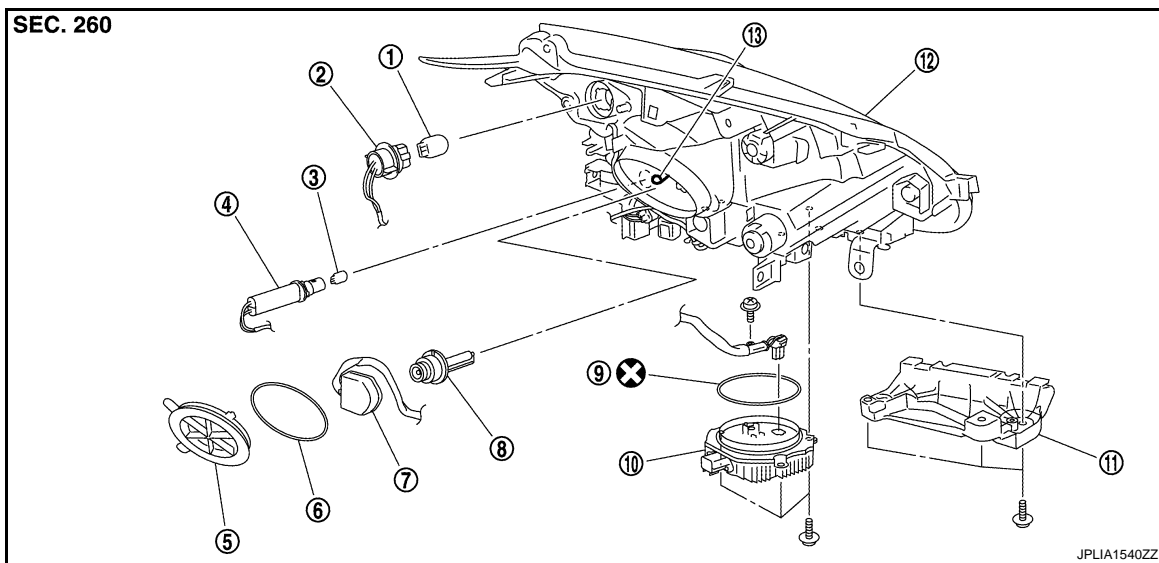
INFOID:000000004527534

REMOVAL



1. Front combination lamp

DISASSEMBLY



- | | | |
|--------------------------------|---------------------------------------|-------------------------------|
| 1. Front turn signal lamp bulb | 2. Front turn signal lamp bulb socket | 3. Parking lamp bulb |
| 4. Parking lamp bulb socket | 5. Resin cap | 6. Seal packing |
| 7. Xenon bulb socket | 8. Xenon bulb | 9. Seal packing |
| 10. HID control unit | 11. Bumper bracket | 12. Headlamp housing assembly |
| 13. Retaining spring | | |

Refer to [GI-4, "Components"](#) for symbols in the figure.

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

Removal and Installation

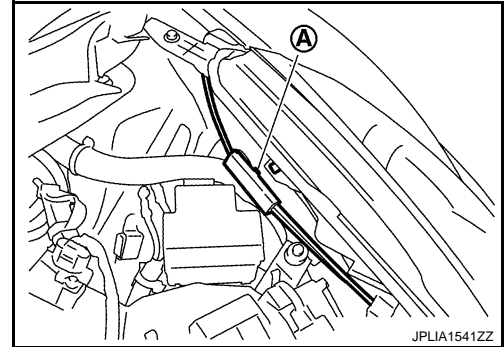
INFOID:000000004527535

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the front bumper fascia. Refer to [EXT-12, "Exploded View"](#).
2. Remove the headlamp mounting bolts and clip.
3. Remove the holding clip (A)* and harness clip.
*: Left side only
4. Pull out the headlamp assembly forward the vehicle.
5. Disconnect the connector before removing the headlamp housing assembly.



INSTALLATION

Install in the reverse order of removal.

NOTE:

- After installation, perform aiming adjustment. Refer to [EXL-157, "Description"](#).
- After installation, check that headlamp lighting. Refer to [EXL-161, "Inspection After Installation \(HID Control Unit\)"](#).

Replacement

INFOID:000000004527536

CAUTION:

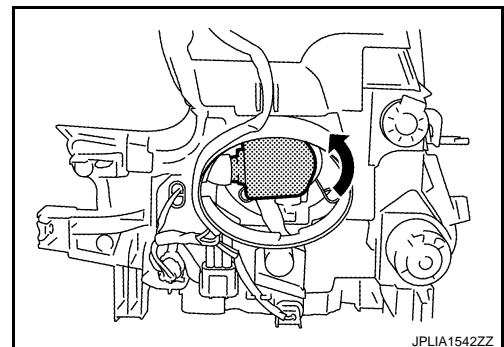
- Disconnect the battery negative terminal or remove the fuse.
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned off.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

HEADLAMP BULB

1. Remove the fender protector. Keep a service area. Refer to [EXT-24, "FENDER PROTECTOR : Exploded View"](#).
2. Rotate the resin cap counterclockwise and unlock it.
3. Rotate the bulb socket counterclockwise and unlock it.
4. Remove the retaining spring lock. Remove the bulb from the headlamp housing assembly.

CAUTION:

Never break the xenon bulb ceramic tube when replacing the bulb.



PARKING LAMP BULB

1. Remove the fender protector. Keep a service area. Refer to [EXT-24, "FENDER PROTECTOR : Exploded View"](#).
2. Rotate the bulb socket counterclockwise and unlock it.
3. Remove the bulb from the bulb socket.

FRONT COMBINATION LAMP

[XENON TYPE]

< REMOVAL AND INSTALLATION >

FRONT TURN SIGNAL LAMP BULB

1. Remove the fender protector. Keep a service area. Refer to [EXT-24, "FENDER PROTECTOR : Exploded View"](#).
2. Rotate the bulb socket counterclockwise and unlock it.
3. Remove the bulb from the bulb socket.

SIDE MARKER LAMP

Replacement integral with front combination lamp. Refer to [EXL-159, "Exploded View"](#).

Disassembly and Assembly

INFOID:000000004527537

DISASSEMBLY

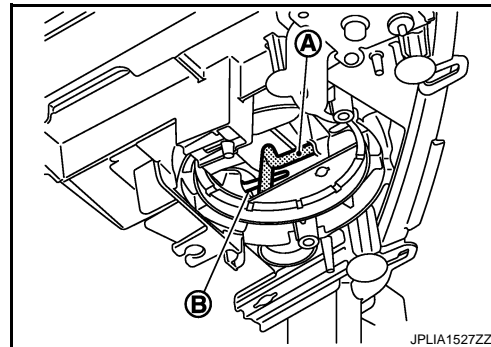
1. Rotate the resin cap counterclockwise and unlock it.
2. Rotate the xenon bulb socket counterclockwise and unlock it.
3. Remove the retaining spring lock. Remove the xenon bulb.
4. Remove the bumper bracket.
5. Remove the HID control unit installation screw.
6. Remove the screw. Disconnect the connector from HID control unit.
7. Pull out the xenon bulb socket from the headlamp housing assembly.
8. Rotate the parking lamp bulb socket counterclockwise and unlock it.
9. Remove the bulb from the parking lamp bulb socket.
10. Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
11. Remove the bulb from the front turn signal lamp bulb socket.

ASSEMBLY

Assemble in the reverse order of disassembly.

CAUTION:

- When xenon bulb socket installation, fix xenon bulb socket harness (A) to a protruding portion (B) in a headlamp housing surely.



- Install HID control unit securely.
- After installing the bulb, install the resin cap and the bulb socket securely for watertightness.
- Seal packing cannot be reused.
- After installation, check that headlamp lighting. Refer to [EXL-161, "Inspection After Installation \(HID Control Unit\)"](#).

Inspection After Installation (HID Control Unit)

INFOID:000000004527538

CAUTION:

Temporarily install the headlamp on the vehicle. Connect the battery to the connector (vehicle side) when checking ON/OFF status.

XENON HEADLAMP LIGHTING CHECK

When recycled HID Control Unit, check the following, when there is abnormality replace the HID Control Unit.

1. Xenon bulb is cold condition (turn OFF more than 10 minutes), and repetition does headlamp turned ON/OFF, check that a headlamp illuminated it surely.
2. Headlamp is turn ON until the xenon bulb becomes stable condition (for about 5 minutes) from cold condition, check that there are not on and off light, abnormality such as blinking.

FRONT COMBINATION LAMP

[XENON TYPE]

< REMOVAL AND INSTALLATION >

3. Xenon bulb is warm condition (turn ON more than 15 minutes and turn OFF for 1 minute), and repetition does headlamp turned ON/OFF, check that a headlamp illuminated it surely.
4. Headlamp is turn ON for about 30 minutes, check that there are not on and off light, abnormality such as blinking whether brightness of right and left does not have a difference.

OPTICAL SENSOR

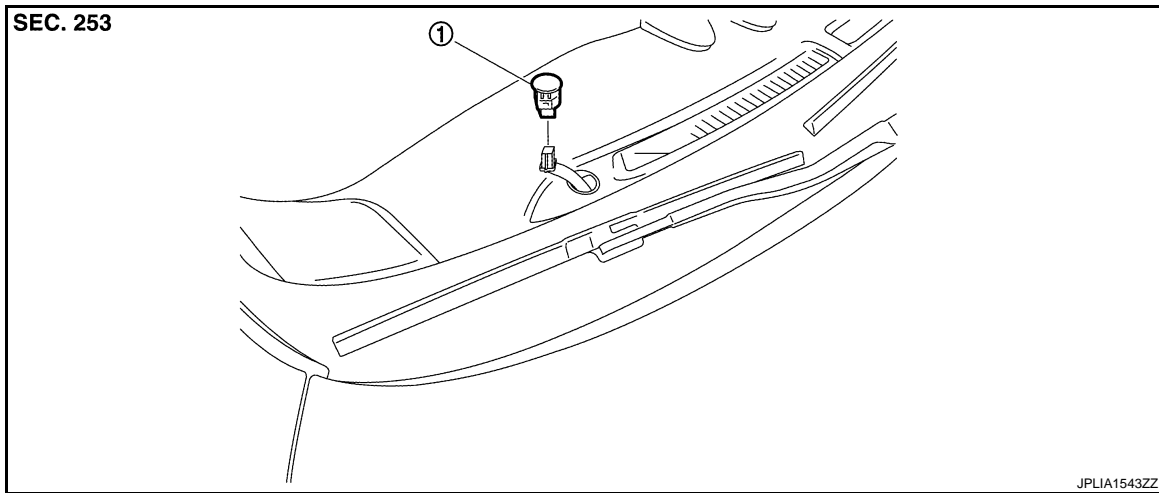
< REMOVAL AND INSTALLATION >

[XENON TYPE]

OPTICAL SENSOR

Exploded View

INFOID:000000004404247



1. Optical sensor

Removal and Installation

INFOID:000000004404248

REMOVAL

1. Insert an appropriate tool between the optical sensor and the instrument upper panel. Pull out the optical sensor upward.
2. Disconnect the connector. Remove the optical sensor.

INSTALLATION

Install in the reverse order of removal.

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LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

[XENON TYPE]

LIGHTING & TURN SIGNAL SWITCH

Exploded View

INFOID:000000004404249

The lighting & turn switch is integrated in the combination switch. Refer to [BCS-85. "Exploded View"](#).

HAZARD SWITCH

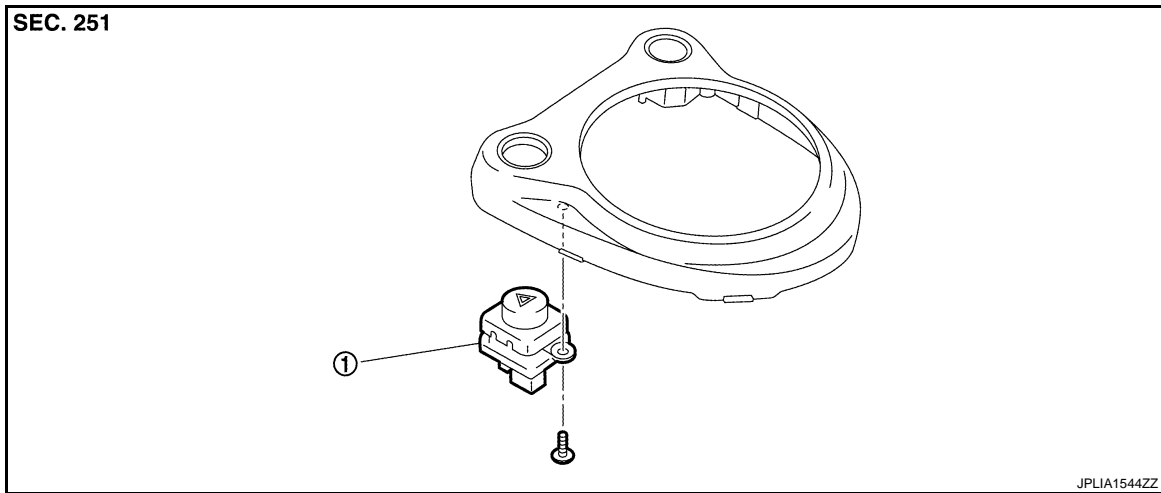
< REMOVAL AND INSTALLATION >

[XENON TYPE]

HAZARD SWITCH

Exploded View

INFOID:000000004404250



1. Hazard switch

Removal and Installation

INFOID:000000004522732

REMOVAL

1. Remove the console finisher. Refer to [IP-23. "Exploded View"](#).
2. Remove the hazard switch from the console finisher.

INSTALLATION

Install in the reverse order of removal.

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EXL

SIDE TURN SIGNAL LAMP

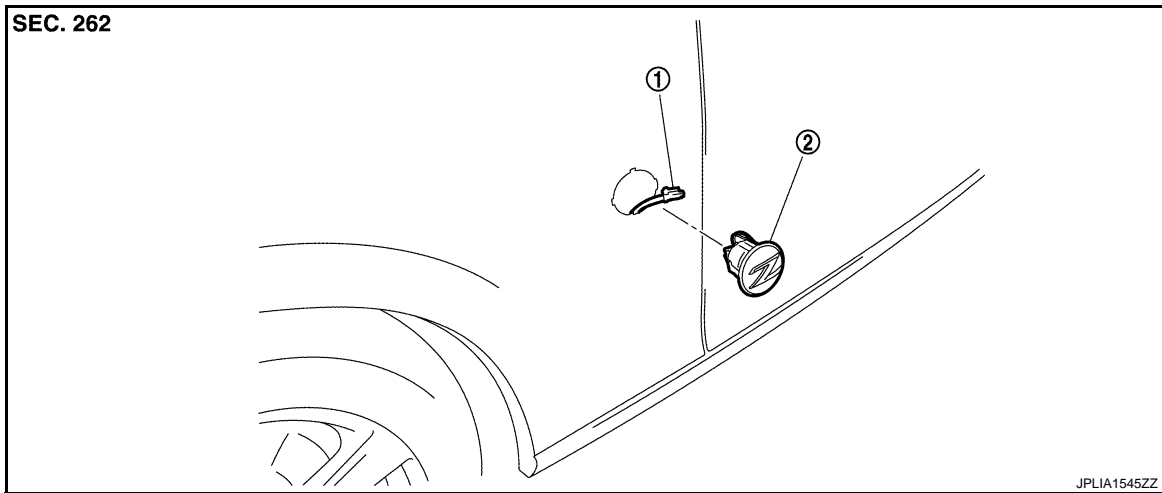
< REMOVAL AND INSTALLATION >

[XENON TYPE]

SIDE TURN SIGNAL LAMP

Exploded View

INFOID:000000004522733



1. Side turn signal lamp connector
2. Side turn signal lamp

Removal and Installation

INFOID:000000004522734

CAUTION:

Disconnect battery negative terminal or remove the fuse.

REMOVAL

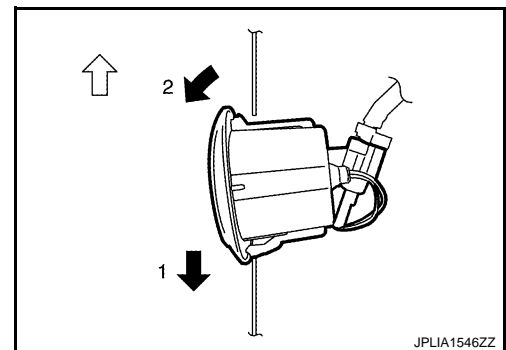
1. Remove the side turn signal lamp in numerical order shown in the figure.

← : Vehicle front

2. Disconnect the side turn signal lamp connector.

NOTE:

Support the vehicle-side harness of the side turn signal lamp with tape so that it does not drop inside the front fender.



INSTALLATION

1. Connect the connector.
2. Fix the pawl-side behind the side turn signal lamp housing first, then push the resin clip-side.

Replacement

INFOID:000000004522735

SIDE TURN SIGNAL LAMP BULB

Replace the side turn signal lamp as an assembly because it cannot be disassembled.

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

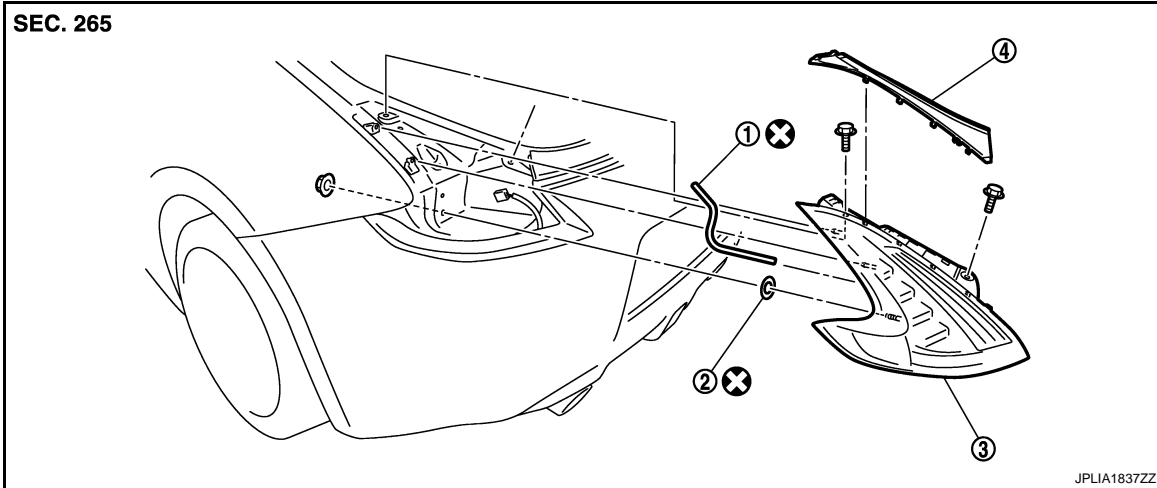
[XENON TYPE]

REAR COMBINATION LAMP

Exploded View

INFOID:000000004404258

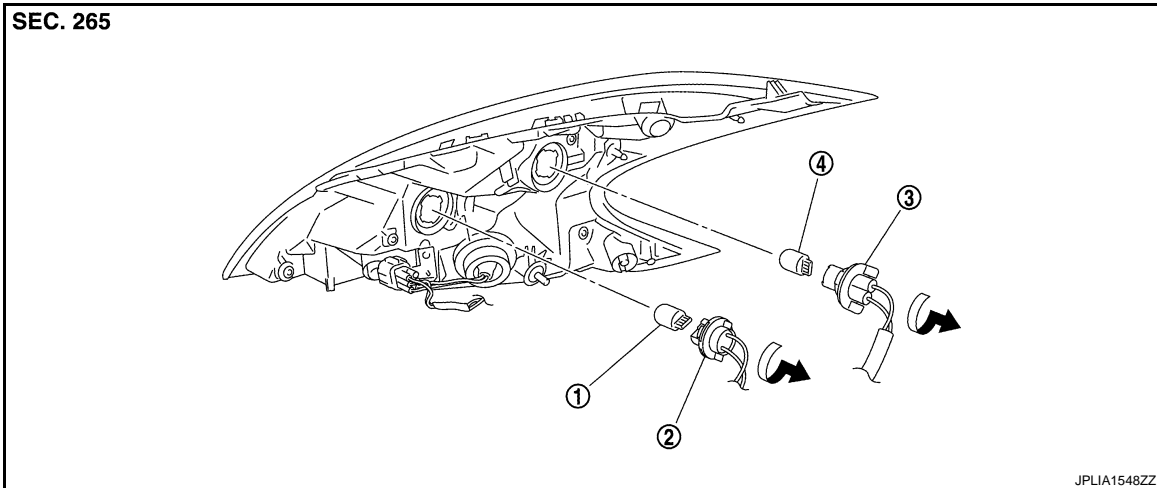
REMOVAL



1. EPT sealer
2. Seal packing
3. Rear combination lamp assembly
4. Rear combination lamp finisher

Refer to [GI-4, "Components"](#) for symbols in the figure.

DISASSEMBLY



1. Rear turn signal lamp bulb
2. Rear turn signal lamp bulb socket
3. Back-up lamp bulb socket
4. Back-up lamp

Removal and Installation

INFOID:000000004404259

CAUTION:
Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the rear combination lamp finisher.
2. Remove the luggage side finisher upper. Refer to [INT-26, "Exploded View"](#).
3. Remove the rear combination lamp mounting nut and bolts.
4. Pull the rear combination lamp toward rear of the vehicle.

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REAR COMBINATION LAMP

[XENON TYPE]

< REMOVAL AND INSTALLATION >

5. Disconnect the rear combination lamp connector.

INSTALLATION

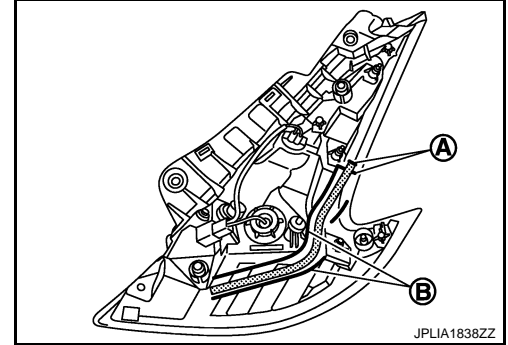
Install in the reverse order of removal.

CAUTION:

Always replace EPT sealer and seal packing with a new one, if rear combination lamp assembly is reused.

Installation EPT sealer

1. Remove the EPT sealer from rear combination lamp assembly.
2. Apply new EPT sealer within mark off line (A) surface while following the mark off line (B) as shown in the figure.



Replacement

INFOID:000000004404260

CAUTION:

- Disconnect the battery negative terminal or remove the fuse.
- Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.
- Never touch bulb by hand while it is lit or right after being turned off.
- Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

REAR TURN SIGNAL LAMP BULB

1. Remove the rear combination lamp assembly.
2. Turn the rear turn signal lamp bulb socket counterclockwise and unlock it.
3. Remove the bulb from the socket.

BACK-UP LAMP BULB

1. Remove the rear combination lamp assembly.
2. Turn the bulb socket counterclockwise and unlock it.
3. Remove the bulb from the socket.

STOP/TAIL LAMP

Replacement integral with rear combination lamp. Refer to [EXL-167, "Exploded View"](#).

REAR SIDE MARKER LAMP

Replacement integral with rear combination lamp. Refer to [EXL-167, "Exploded View"](#).

HIGH-MOUNTED STOP LAMP

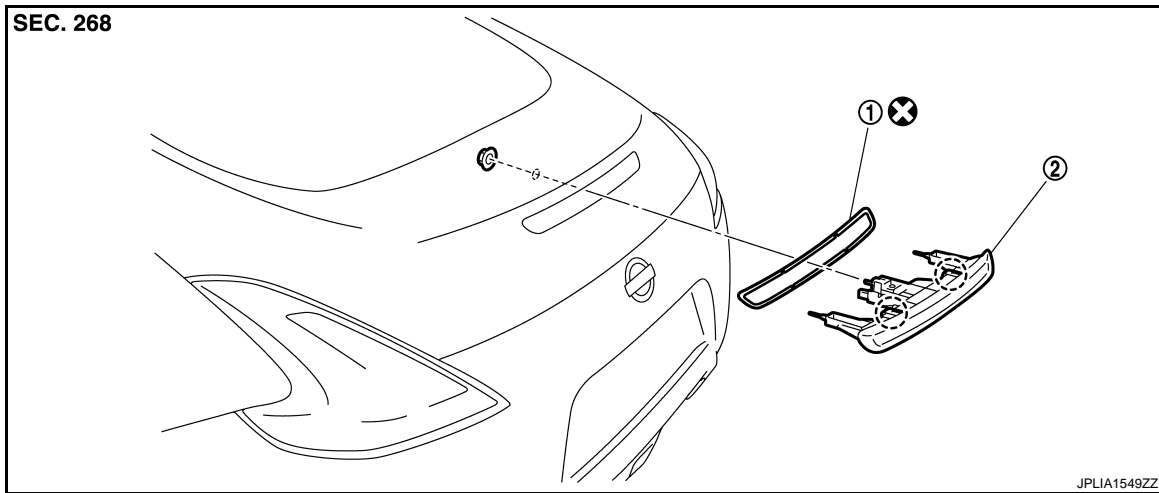
< REMOVAL AND INSTALLATION >

[XENON TYPE]

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:000000004404261



1. Seal packing
2. High-mounted stop lamp

⊗ : Metal clip

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000004404262

CAUTION:

- Disconnect the battery negative terminal or remove the fuse.
- Wrap the tip of remover tool with a cloth to protect the body from damage.

REMOVAL

1. Remove the back door trim. Refer to [INT-28, "Exploded View"](#).
2. Remove the high-mounted stop lamp mounting nut.
3. Disconnect the high-mounted stop lamp connector.
4. Insert any appropriate tool in high-mounted stop lamp and a gap of the back door. Remove the metal clip.
5. Remove the high-mounted stop lamp from the back door.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Seal packing cannot be reused.

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LICENSE PLATE LAMP

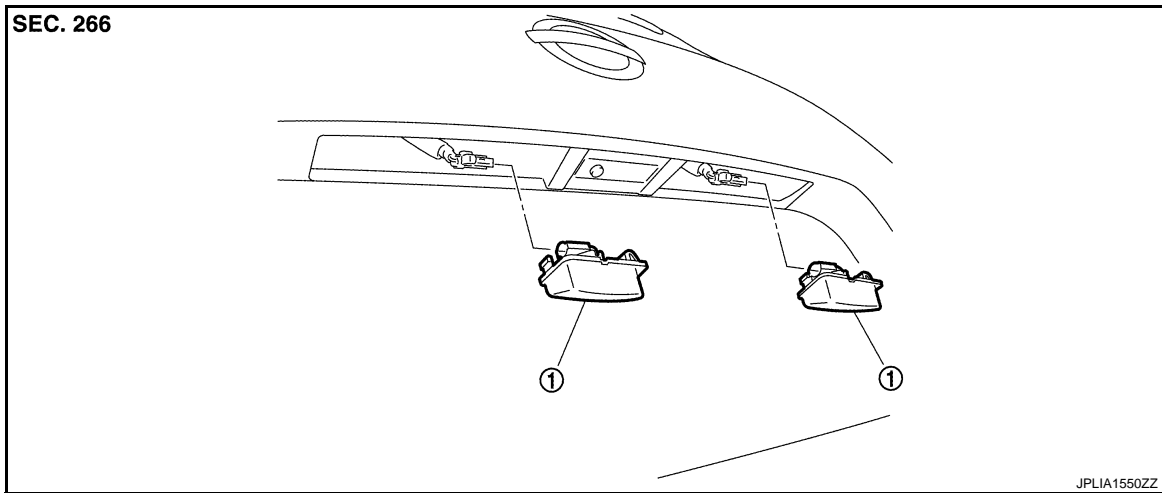
< REMOVAL AND INSTALLATION >

[XENON TYPE]

LICENSE PLATE LAMP

Exploded View

INFOID:000000004404265



1. License plate lamp

Removal and Installation

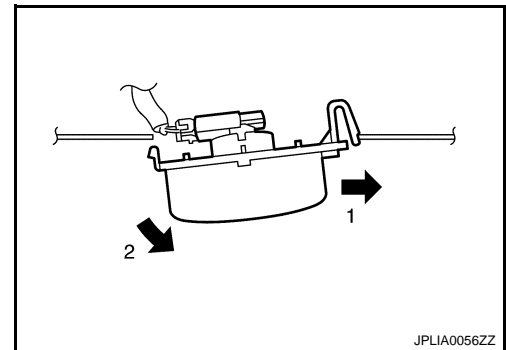
INFOID:000000004404266

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

REMOVAL

1. Remove the license plate lamp in numerical order.
2. Disconnect the license plate lamp connector.
3. Remove the license plate lamp.



INSTALLATION

1. Connect the license plate lamp connector.
2. Fix the pawl side. And then push the resin clip side.

Replacement

INFOID:000000004404267

CAUTION:

- **Disconnect the battery negative terminal or remove the fuse.**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

LICENSE PLATE LAMP BULB

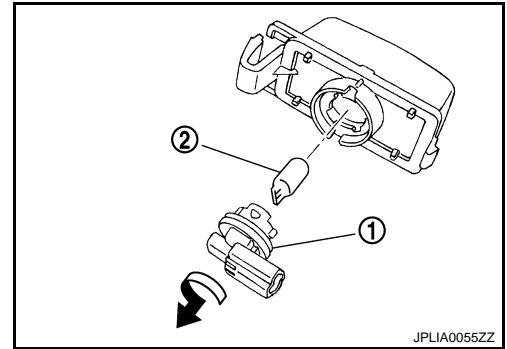
1. Remove the license plate lamp.

LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

2. Turn the bulb socket (1) counterclockwise and unlock it.
3. Remove the bulb (2) from the socket.



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REAR FOG LAMP

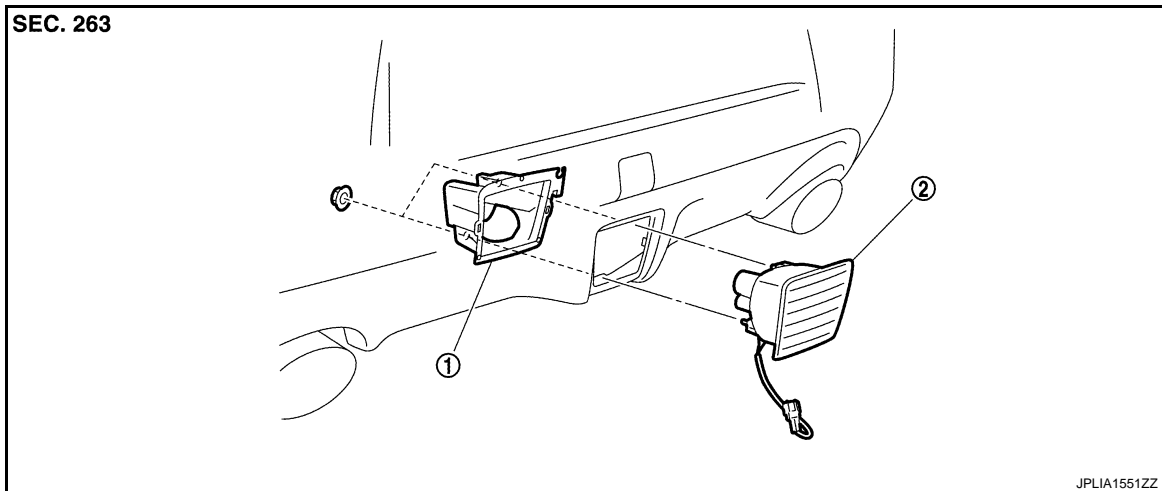
< REMOVAL AND INSTALLATION >

[XENON TYPE]

REAR FOG LAMP

Exploded View

INFOID:000000004459634



1. Rear fog lamp bracket

2. Rear fog lamp

Removal and Installation

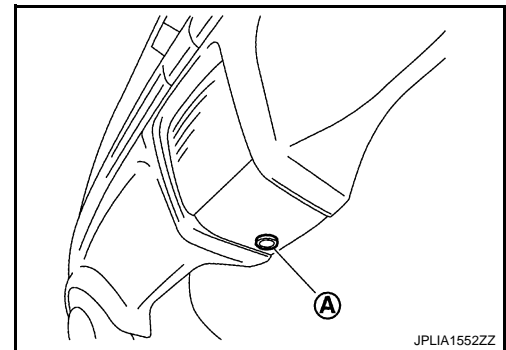
INFOID:000000004459635

CAUTION:

Disconnect battery negative terminal or remove the fuse.

REMOVAL

1. Remove the clip (A), keep a service area.
2. Remove the rear fog lamp mounting nuts.
3. Turn the bulb socket counterclockwise and unlock it.
4. Remove the rear fog lamp from the rear fog lamp bracket.
5. Disconnect the rear fog lamp connector.
6. Remove the rear fog lamp bracket from the rear bumper fascia.



INSTALLATION

Installation is the reverse order of removal.

Replacement

INFOID:000000004459636

CAUTION:

- **Disconnect the battery negative terminal or remove the fuse.**
- **Never touch the glass of bulb directly by hand. Keep grease and other oily matters away from it.**
- **Never touch bulb by hand while it is lit or right after being turned off.**
- **Never leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

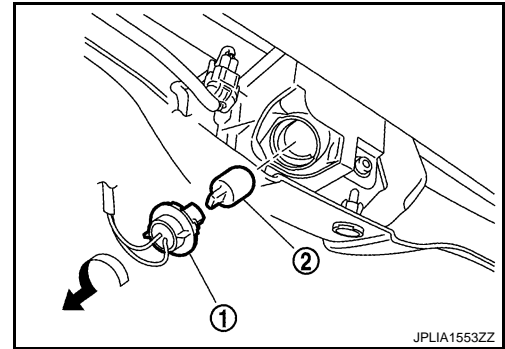
REAR FOG LAMP BULB

REAR FOG LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

1. Turn the bulb socket (1) counterclockwise and unlock it.
2. Remove the bulb (2) from the rear fog lamp bulb socket.



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SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[XENON TYPE]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:000000004404268

Item	Type	Wattage (W)
Front combination lamp	Headlamp (HI/LO)	D2S (Xenon) 35
	Front turn signal lamp	7444NA (Amber) 28/8
	Parking lamp	W5W 5
	Front side marker lamp	LED —
Side turn signal lamp	LED —	
Rear combination lamp	Stop lamp/Tail lamp	LED —
	Rear turn signal lamp	WY21W (Amber) 21
	Rear side marker lamp	LED —
	Back-up lamp	W16W 16
License plate lamp	W5W 5	
High-mounted stop lamp	LED —	
Rear fog lamp	W21W 21	