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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

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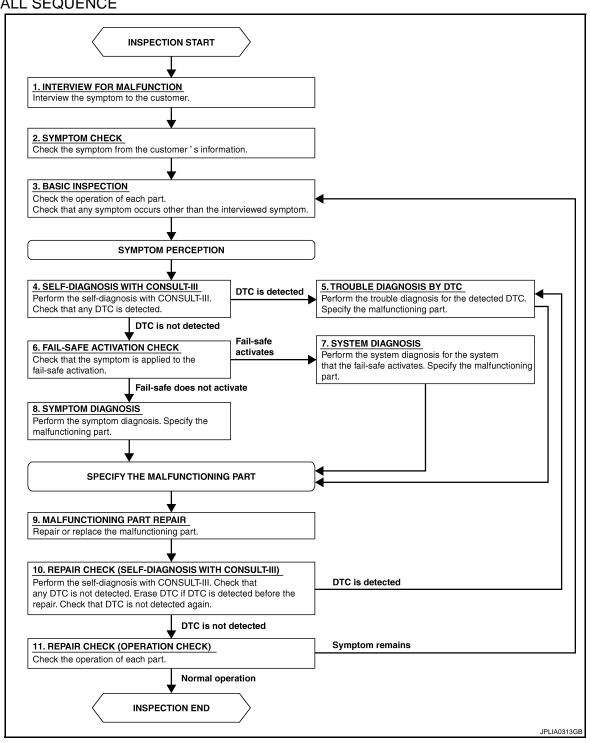
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OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

DIAGNOSIS AND REPAIR WORKFLOW

< 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?

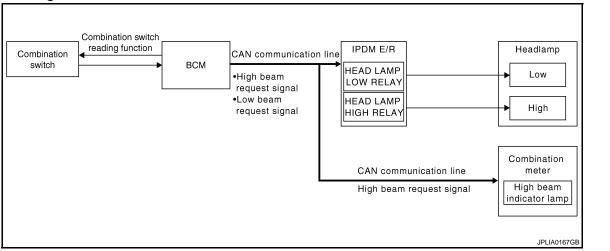
YES >> INSPECTION END

NO >> GO TO 3.

SYSTEM DESCRIPTION

HEADLAMP SYSTEM

System Diagram



System Description

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INFOID:0000000005491607

OUTLINE

Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and relay control function of IPDM E/R.

HEADLAMP (LO) 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 (LO) ON condition.

Headlamp (LO) ON condition

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

NOTE:

Daytime running light model goes through the daytime running light relay-2 in headlamp low (RH) circuit. For details, refer to EXL-9, "System Description".

HEADLAMP (HI) OPERATION

• BCM transmits the high beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (HI) ON condition.

Headlamp (HI) ON condition

- Lighting switch HI with the lighting switch 2ND or AUTO (auto light function ON judgment)
- 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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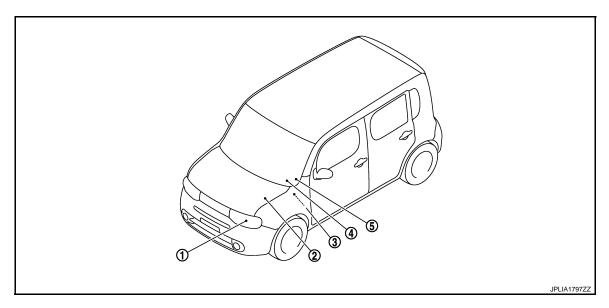
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Component Parts Location

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- 1. Headlamp
- 4. Combination meter (High beam indicator lamp)
- 2. IPDM E/R
 Refer to PCS-6, "Component Parts
 Location".
- 5. Combination switch
- 3. BCM
 Refer to BCS-9, "Component Parts
 Location".

Component Description

INFOID:0000000005491610

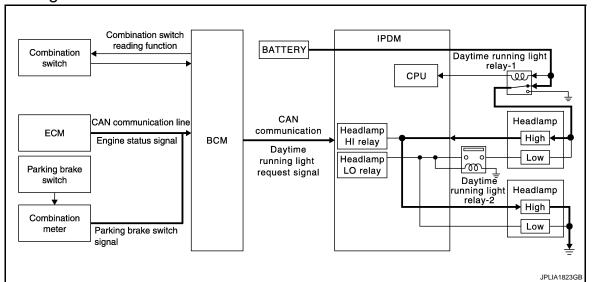
Part	Description
BCM	 Detects each switch condition by the combination switch reading function. Judges that the headlamp is turned ON according to the vehicle condition. Requests the headlamp relay (HI/LO) ON to IPDM E/R (with CAN communication). Requests the high beam indicator lamp ON to the combination 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-10, "System Diagram".
Combination meter (High beam indicator lamp)	Turns the high beam indicator lamp ON according to the request from BCM (with CAN communication).

DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

DAYTIME RUNNING LIGHT SYSTEM

System Diagram



System Description

INFOID:0000000005491612

OUTLINE

- Turns the headlamp high ON (high beam at approximately half illumination) as the daytime running light.
- 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 the engine condition by the engine status signal received from ECM with CAN communication.
- BCM detects the parking brake condition by the parking brake switch signal received from combination meter with CAN communication.
- BCM transmits the daytime running light request signal to IPDM E/R with CAN communication according to the daytime running light ON condition.

Daytime running light ON condition

- Éngine running
- Lighting switch OFF or 1ST
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay-1 (ground-side) to turn ON according to the daytime running light request signal.
- Power is supplied from the daytime running light relay-1 through headlamp high (RH) and IPDM E/R to headlamp high (LH). And high beam headlamps are illuminated (approximately half illumination) as the daytime running light.

NOTE:

- Daytime running light relay-2 is turned ON when headlamp is low.
- Daytime running light relay-2 is OFF to cut voltage of headlamp low circuit when daytime running light is ON.

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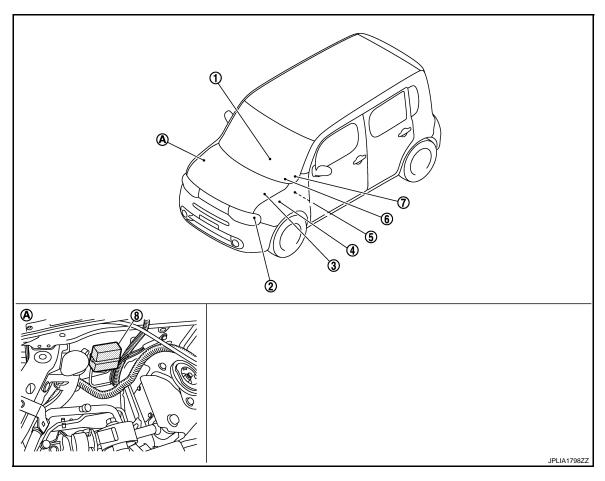
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Component Parts Location

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- 1. Parking brake switch
- 4. ECM
 Refer to EC-23.
 "Component Parts Location".
- 7. Combination switch
- A. Engine room (RH)

- 2. Daytime running light (Headlamp HI)
- 5. BCM
 Refer to BCS-9, "Component Parts
 Location".
- 8. Daytime running light relay-1
 - Daytime running light relay-2
- IPDM E/R
 Refer to PCS-6, "Component Parts
 Location".
- 6. Combination meter

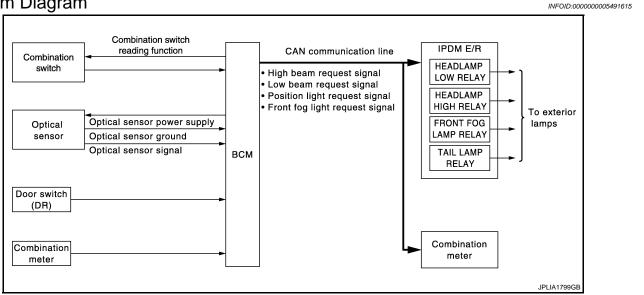
Component Description

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Part	Description
BCM	 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 relay and supplies voltage to the load according to the request from BCM (with CAN communication).
Daytime running light relay-1	Switches headlamp (HI) circuit to illuminate the daytime running light.
Daytime running light relay-2	Cuts voltage of headlamp low circuit when daytime running light is ON.
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "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).

AUTO LIGHT SYSTEM

System Diagram



System Description

INFOID:000000005491616

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
- Wiper linked auto lighting function

Control by IPDM E/R

- Relay control function
- Auto light system has the auto light function (with twilight lighting function^{*1}), wiper linked auto lighting function and delay timer function.
 - *1:For USA only
- Auto light function automatically turns ON/OFF the exterior lamps*2 and each illumination automatically, depending on the outside brightness.
- Wiper linked auto lighting function automatically turns ON/OFF the exterior lamps* and each illumination when the light switch is in the AUTO position, according to a front wiper operation.
- 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.
- *2: Headlamp (LO/HI), parking lamp (illuminated as front side marker lamps too), tail lamp, rear side marker lamp and front fog lamp (Headlamp HI and front fog lamp depend on the combination switch condition.) NOTE:

The settings of the twilight lighting function and the wiper linked auto lighting function can be changed with CONSULT-III. Refer to EXL-23, "HEADLAMP: CONSULT-III Function (BCM - HEAD LAMP)".

AUTO LIGHT FUNCTION (WITH TWILIGHT LIGHTING FUNCTION)

Description

- BCM detects the combination switch condition with the combination switch reading function.
- BCM supplies voltage to the 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 detects outside brightness from the optical sensor signal and judges ON/OFF condition of the exterior lamp and each illumination, depending on the outside brightness condition (standard or twilight).

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AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

• BCM transmits each request signal to IPDM E/R via CAN communication, according to ON/OFF condition by the auto light function.

NOTE:

As to ON/OFF timing, the sensitivity depends on setings. The settings can be changed with CONSULT-III. Refer to EXL-23, "HEADLAMP: CONSULT-III Function (BCM - HEAD LAMP)".

Auto Lighting Timing Table

When the light switch is in AUTO position and the ignition switch is ON, the exterior lamps turns ON/OFF in the following condition.

Exterior lamps	Standard Light ON (Sudden increase/decrease in brightness)	Twilight Light ON (Gradual increase/decrease in brightness)
ON	Outside brightness is 1250 lx or less for 3 seconds or more.	Filtered brightness is 3000 lx or less
OFF	Outside brightness is 2500 lx or more for 5 seconds or more.	Filtered brightness is 5000 lx or more

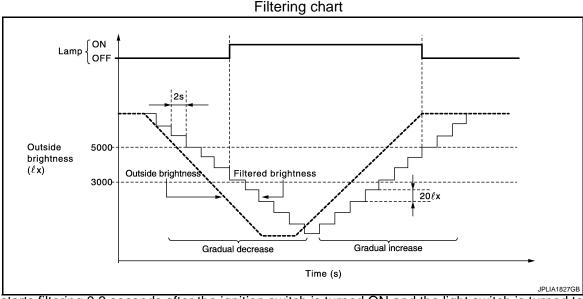
Standard Light ON

BCM turns exterior lamps ON when outside brightness obtained from the optical sensor signal is 1250 lx or less for 3 seconds or more. And BCM turns exterior lamp OFF when outside brightness from the optical sensor signal is 2500 lx or more for 5 seconds or more.

Twilight Light ON (Twilight Lighting Function)

BCM detects twilight by filtered brightness.

- BCM filters outside brightness to block the impact of the rapid change in brightness, based on the optical sensor signal, and judges outside brightness.
- BCM detects changes in outside brightness, based on outside brightness obtained from the optical sensor signal and filtered brightness and judges ON/OFF of the exterior lamps.



- BCM starts filtering 0.3 seconds after the ignition switch is turned ON and the light switch is turned to AUTO.
- BCM filters signals from the optical sensor at intervals of 2 seconds. When the filtered brightness is higher than outside brightness (signal from the optical sensor), BCM decreases the filtered brightness by 20 lx*. When the filtered brightness is lower than outside brightness, BCM increases the filtered brightness by 20 lx*.
- BCM turns ON the exterior lamps when filtered brightness reaches 3000 lx and turnes OFF when reaching 5000 lx.
- *: When vehicle speed is 5 km/h or less, BCM decreases/increases the filtered brightness by 5 lx.

WIPER LINKED AUTO LIGHTING FUNCTION

BCM turns the exterior lamp ON when detecting 4 operations of the front wiper woth the light switch in AUTO position.

NOTE:

BCM turns OFF the headlamps 3 seconds after the front wiper switch is turned from HI⇒OFF.

AUTO LIGHT SYSTEM

< SYSTEM DESCRIPTION >

DELAY TIMER FUNCTION

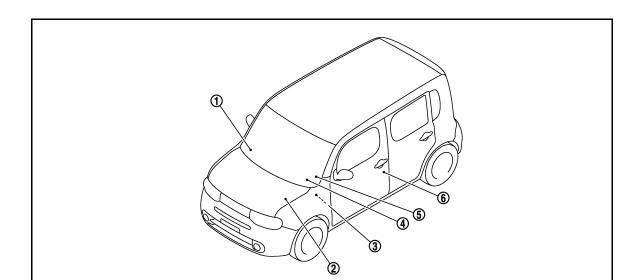
BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.

- 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).
- 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 <u>EXL-23</u>, <u>"HEADLAMP : CONSULT-III Function (BCM HEAD LAMP)"</u>.

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



1. Optical sensor

- IPDM E/R
 Refer to PCS-6, "Component Parts
 Location".
- 4. Combination meter
- Combination switch
- 3. BCM
 Refer to BCS-9, "Component Parts
 Location".
- 6. Door switch

Component Description

INFOID:0000000005491618

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Part	Description
BCM	 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).
Combination switch (Lighting & turn signal switch)	Refer to BCS-10, "System Diagram".
Optical sensor	Refer to EXL-64, "Description".

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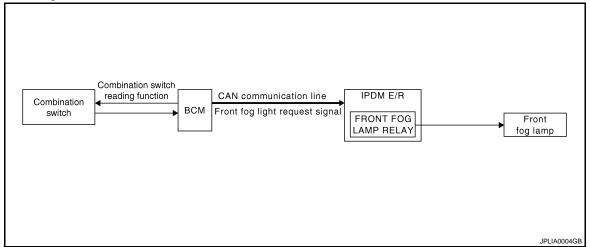
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FRONT FOG LAMP SYSTEM

System Diagram

INFOID:0000000005491619



System Description

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OUTLINE

Front fog lamp is controlled by combination switch reading function and front fog lamp control function of BCM, and relay control function of IPDM E/R.

FRONT FOG LAMP OPERATION

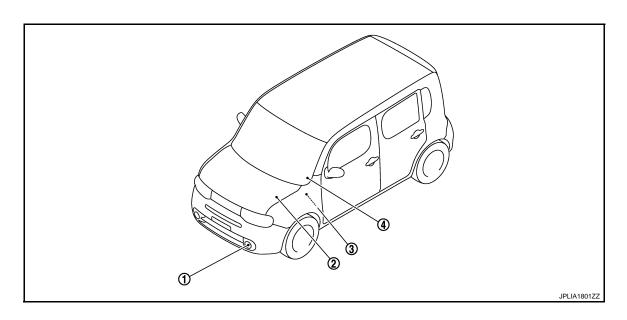
- BCM detects the combination switch condition by the combination switch reading function.
- BCM transmits the front fog lights request signal to IPDM E/R with CAN communication according to the front fog lamp ON condition.

Front fog lamp ON condition

- Front fog lamp switch ON with headlamp ON (except for the high beam ON)
- IPDM E/R turns the integrated front fog lamp relay ON, and turns the front fog lamp ON according to the front fog lights request signal.

Component Parts Location

INFOID:0000000005491621



FRONT FOG LAMP SYSTEM

< SYSTEM DESCRIPTION >

- Front fog lamp
 IPDM E/R
 Refer to PCS-6, "Component Parts
 Location".
- 3. BCM
 Refer to BCS-9, "Component Parts
 Location".

4. Combination switch

Component Description

INFOID:0000000005491622

Part	Description
BCM	 Detects each switch condition by the combination switch reading function. Judges the front fog lamp ON/OFF status according to the vehicle condition. Requests the front fog lamp 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-10, "System Diagram".

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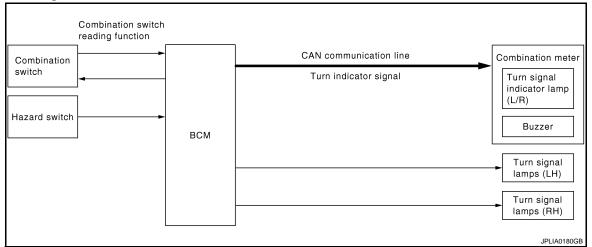
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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

System Diagram

INFOID:0000000005491623



System Description

INFOID:0000000005491624

OUTLINE

Turn signal lamp 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 OPERATION

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

HIGH FLASHER OPERATION

- BCM detects the turn signal lamp circuit status from the terminal voltage.
- 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 >

Component Parts Location

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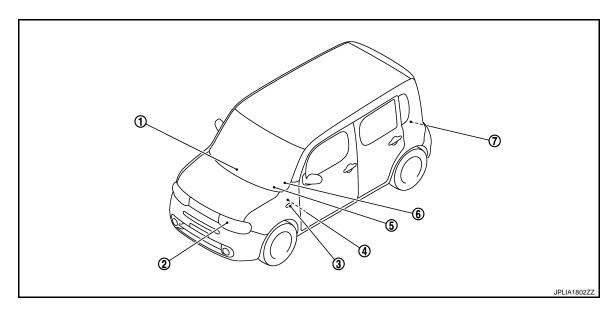
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- 1. Hazard switch
- 4. BCM
 Refer to BCS-9. "Component Parts
 Location".
- 7. Rear turn signal lamp
- 2. Front turn signal lamp
- Combination meter (Turn signal indicator lamp)
- 3. Side turn signal lamp
- 6. Combination switch

Component Description

INFOID:0000000005491626

Part	Description
ВСМ	 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-10, "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).

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Revision: 2009 October EXL-17 2010 Z12

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS SYSTEM

System Diagram

INFOID:0000000005491627 Combination switch reading function CAN communication line IPDM E/R Combination всм TAIL LAMP Parking switch Position light request RELAY lamp signal License plate lamp Tail lamp Rear side marker lamp To illuminations Combination meter CAN communication line Tail lamp Position light request signal indicator lamp

System Description

INFOID:0000000005491628

JPLIA1803GE

OUTLINE

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

*: Illuminated as front side marker lamps too.

PARKING, LICENSE PLATE, TAIL AND REAR 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 rear side marker lamps.

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

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment (with auto light system)
- IPDM E/R turns the integrated tail lamp relay ON and turns the parking lamp, the license plate, tail and rear 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, SIDE MARKER AND TAIL LAMPS SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

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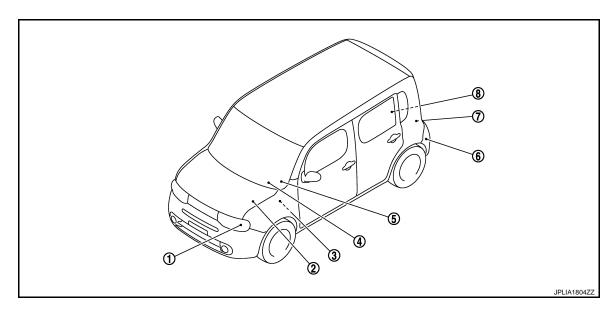
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- Parking lamp (Front side marker lamp)
- 4. Combination meter (Tail lamp indicator lamp)
- 7. Tail lamp

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- 2. IPDM E/R
 Refer to PCS-6, "Component Parts
 Location".
- 5. Combination switch
- 8. License plate lamp
- 3. BCM Refer to BCS-9, "Component Parts Location".
- 6. Rear side marker lamp

Component Description

INFOID:0000000005491630

Part	Description
BCM	 Detects each switch condition by the combination switch reading function. Judges the ON/OFF status of the parking, license plate, tail and rear 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-10, "System Diagram".
Combination meter (Tail lamp indicator lamp)	Turns the tail lamp indicator lamp ON according to the request from BCM (with CAN communication).

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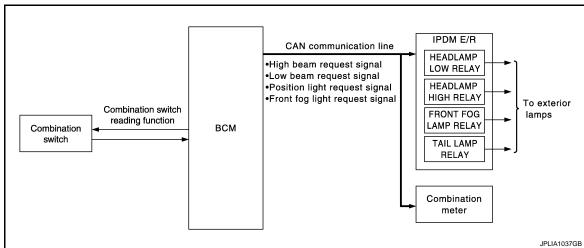
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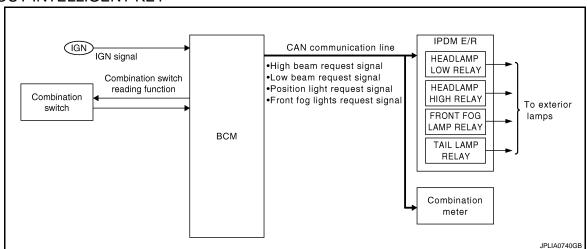
EXTERIOR LAMP BATTERY SAVER SYSTEM

System Diagram

WITH INTELLIGENT KEY



WITHOUT INTELLIGENT KEY



System Description

INFOID:0000000005491632

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(front side marker) lamp, tail lamp, license plate lamp, rear side marker lamp and front fog lamp

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 \rightarrow OFF with the exterior lamps ON.

NOTE:

EXTERIOR LAMP BATTERY SAVER SYSTEM

< SYSTEM DESCRIPTION >

- · 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.

Component Parts Location

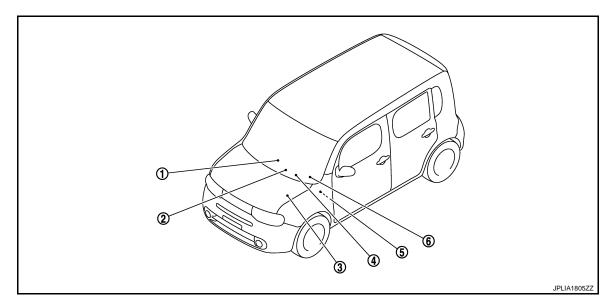
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- Push switch (With Intelligent Key)
- Combination meter
- Key switch (Without Intelligent Key)
- Refer to BCS-9, "Component Parts Location".
- IPDM E/R Refer to PCS-6, "Component Parts Location".
- Combination switch

Component Description

INFOID:0000000005491634

Part	Description
ВСМ	 Detects each switch condition by the combination switch reading function. Activates the battery saver to turn the exterior lamps OFF according to the vehicle condition. Requests each relay OFF to IPDM E/R (with CAN communication).
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-10, "System Diagram".

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM) COMMON ITEM

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

INFOID:0000000005491635

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	 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		
System	Work Support		Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Automatic air conditioner	AIR CONDITONER		×	×
Intelligent Key system Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	ВСМ	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×

FREEZE FRAME DATA (FFD)

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

< 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 (Odomete	r value) of the moment a particular DTC is detected	
	SLEEP>LOCK		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"	
Vehicle Condition	OFF>ACC	Power position status of the moment a particular DTC is detected	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 The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 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		l		
HEADLAMP : C	ONSULT-II	I Function (BCM	- HEAD LAMP)	
WORK SUPPORT				
For USA				

Revision: 2009 October EXL-23 2010 Z12

< SYSTEM DESCRIPTION >

Service item	Setting item		Setting		
	MODE 1*	With twilight ON custom & with wiper INT, LO and HI			
	MODE 2	With twilight ON custom & with wiper LO and HI			
AUTO LIGHT LOGIC SET	MODE 3	With twilight ON custom & without			
AOTO EIGITI EGGIO GET	MODE 4	Without twilight ON custom	& with wiper INT, LO and HI		
	MODE 5	Without twilight ON custom	& with wiper LO and HI		
	MODE 6	Without twilight ON custom	& without		
	MODE 1*	Normal			
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)			
CUSTOM A/LIGHT SETTING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)			
	MODE 4	Without twilight ON custom er than normal operation.)	Without twilight ON custom & less sensitive setting than normal setting (Turns ON later than normal operation.)		
BATTERY SAVER SET	On [*]	With the exterior lamp batte	ery saver function		
BATTERT SAVER SET	Off	Without the exterior lamp battery saver function			
	MODE 1*	45 sec.			
	MODE 2	Without the function			
	MODE 3	30 sec.			
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.		
	MODE 5	90 sec.	(All doors closed)		
	MODE 6	120 sec.			
	MODE 7	150 sec.			
	MODE 8	180 sec.			

^{*:} Factory setting

For CANADA

Service item	Setting item	Setting		
	MODE 1			
	MODE 2			
AUTO LIGHT LOGIC SET	MODE 3	NOTE:		
AUTO LIGHT LOGIC SET	MODE 4	The item is indicated, but not operated.		
	MODE 5			
	MODE 6			
	MODE 1*	Normal		
CUSTOM A/LIGHT SETTING	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)		
OOTOW/VEIGHT GETTING	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.)		
BATTERY SAVER SET	On [*]	With the exterior lamp battery saver function		
	Off	Without the exterior lamp battery saver function		

< SYSTEM DESCRIPTION >

Service item	Setting item	Setting	
	MODE 1*	45 sec.	
	MODE 2	Without the function	
	MODE 3	30 sec.	
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.
ILL DELAT OLT	MODE 5	90 sec.	(All doors closed)
	MODE 6	120 sec.	
	MODE 7	150 sec.	
	MODE 8	180 sec.	

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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
HI BEAM SW [On/Off]	
HEAD LAMP SW1 [On/Off]	
HEAD LAMP SW2 [On/Off]	
LIGHT SW 1ST [On/Off]	Each switch status that BCM judges from the combination switch reading function
PASSING SW [On/Off]	
FR FOG SW [On/Off]	
AUTO LIGHT SW [On/Off]	
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
BACK DOOR SW [On/Off]	The switch status input from back door switch
TURN SIGNAL R [On/Off]	
TURN SIGNAL L [On/Off]	Each switch status that BCM judges from the combination switch reading function
TAIL LAMP SW [On/Off]	

Revision: 2009 October EXL-25 2010 Z12

^{*:} Factory setting

< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
OPTICAL SENSOR [On/Off]	The sensor status input from optical sensor
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	Off	Stops the tail lamp request signal transmission.
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
HEAD LAMP	Lo	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	Off	Stops the high & low beam request signal transmission.
FR FOG LAMP	On	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog lights request signal transmission.
ILL DIM SIGNAL	On	NOTE:
ILL DIW SIGNAL	Off	The item is indicated, but cannot be tested.

FLASHER

FLASHER: CONSULT-III Function (BCM - FLASHER)

INFOID:0000000005491637

WORK SUPPORT

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

^{*:} Factory setting

DATA MONITOR

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 quitab status that DCM detects from the combination quitab reading function
TURN SIGNAL L [On/Off]	Each switch status that BCM detects from the combination switch reading function

< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
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
	RH	Outputs the voltage to blink the right side turn signal lamps.
FLASHER	LH	Outputs the voltage to blink the left side turn signal lamps.
	Off	Stops the voltage to turn the turn signal lamps OFF.

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM) COMMON ITEM

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

INFOID:0000000005491638

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	 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.

×: Applicable item

System	Sub system selection item	Diagnosis mode			
System	Sub system selection item	Work Support	Data Monitor	Active Test	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	
Interior room lamp control	INT LAMP	×	×	×	
Remote keyless entry system	MULTI REMOTE ENT	×	×	×	
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×	×	×	
Turn signal and hazard warning lamps	FLASHER		×	×	
Automatic air conditioner Manual air conditioner	AIR CONDITONER		×	×	
Combination switch	COMB SW		×		
Body control system	ВСМ	×			
NVIS - NATS	IMMU	×	×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	
Back door	TRUNK		×		
Vehicle security system	THEFT ALM	×	×	×	
RAP system	RETAINED PWR		×	×	
Signal buffer system	SIGNAL BUFFER		×	×	
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×	
Panic alarm system	PANIC ALARM			×	

HEADLAMP

< SYSTEM DESCRIPTION >

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

INFOID:0000000005491639

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WORK SUPPORT

For USA

Service item	Setting item	Setting				
	MODE 1*	With twilight ON custom & with wiper INT, LO and HI				
	MODE 2	With twilight ON custom & with wiper LO and HI				
AUTO LIGHT LOGIC SET	MODE 3	With twilight ON custom & without				
7.010 2.0111 200.0 021	MODE 4	Without twilight ON custom & with wiper INT, LO and HI				
	MODE 5	Without twilight ON custom	& with wiper LO and HI			
	MODE 6	Without twilight ON custom & without				
BATTERY SAVER SET	On [*]	With the exterior lamp battery saver function				
DATTERT OAVER OFT	Off	Without the exterior lamp b	attery saver function			
	MODE 1*	45 sec.				
	MODE 2	Without the function				
	MODE 3	30 sec.				
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.			
	MODE 5	90 sec.	(All doors closed)			
	MODE 6	120 sec.				
	MODE 7	150 sec.				
	MODE 8 180 sec.					

^{*:} Factory setting

For CANADA

Service item	Setting item	Setting				
	MODE 1					
	MODE 2	NOTE: The item is indicated, but not operated.				
AUTO LIGHT LOGIC SET	MODE 3					
AUTO LIGHT LOGIC SET	MODE 4					
	MODE 5					
	MODE 6					
BATTERY SAVER SET	On*	With the exterior lamp battery saver function				
BATTER ON ER GET	Off	Without the exterior lamp battery saver function				
	MODE 1*	45 sec.				
	MODE 2	Without the function				
	MODE 3	30 sec.				
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function timer operation time.			
ILL DELAT SET	MODE 5	90 sec.	(All doors closed)			
	MODE 6	120 sec.				
	MODE 7	150 sec.				
	MODE 8	180 sec.				

^{*:} Factory setting

DATA MONITOR

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< SYSTEM DESCRIPTION >

Monitor item [Unit]	Description
IGN ON SW [On/Off]	Ignition switch (ON) status judged from IGN signal (ignition power supply)
ACC SW [On/Off]	Ignition switch (ACC) status judged from ACC signal (ACC power supply)
VEH SPEED [km/h]	The value of the vehicle speed received from combination meter with CAN communication
HI BEAM SW [On/Off]	
HEAD LAMP SW1 [On/Off]	
HEAD LAMP SW2 [On/Off]	
PASSING SW [On/Off]	Each switch status that BCM judges from the combination switch reading function
FR FOG SW [On/Off]	
AUTO LIGHT SW [On/Off]	
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored
DOOR SW-DR [On/Off]	The switch status input from front door switch (driver side)
DOOR SW-AS [On/Off]	The switch status input from front door switch (passenger side)
DOOR SW-RR [On/Off]	The switch status input from rear door switch RH
DOOR SW- RL [On/Off]	The switch status input from rear door switch LH
BACK DOOR SW [On/Off]	The switch status input from back door switch
TURN SIGNAL R [On/Off]	
TURN SIGNAL L [On/Off]	Each switch status that BCM judges from the combination switch reading function
TAIL LAMP SW [On/Off]	
KEY ON SW [On/Off]	The switch status input from key on switch
KEYLESS LOCK [On/Off]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
PKB SW [On/Off]	The parking brake switch status received from combination meter with CAN communication
ENGINE RUN [On/Off]	The engine status received from ECM with CAN communication
LIG SEN COND [On/Off]	The sensor condition received from light sensor
OPTI SEN (DTCT) [V]	The value of outside brightness voltage input from the optical sensor
OPTI SEN (FILT) [V]	The value of outside brightness voltage filtered by BCM

ACTIVE TEST

Revision: 2009 October EXL-30 2010 Z12

< SYSTEM DESCRIPTION >

Test item	Test item Operation Description	
TAIL LAMP	On	Transmits the position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	Off	Stops the tail lamp request signal transmission.
	Hi	Transmits the high beam request signal with CAN communication to turn the headlamp (HI).
HEAD LAMP	Lo	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	Off	Stops the high & low beam request signal transmission.
FR FOG LAMP	On	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	Off	Stops the front fog lights request signal transmission.
III. DIM OLONAL	On	NOTE:
ILL DIM SIGNAL	Off	The item is indicated, but cannot be tested.

FLASHER

FLASHER: CONSULT-III Function (BCM - FLASHER)

DATA MONITOR

Monitor item [Unit]	Description	
IGN ON SW [On/Off]	Ignition switch (ON) status judged from IGN signal (ignition power supply)	
TURN SIGNAL R [On/Off]	Each switch status that BCM detects from the combination switch reading function	
TURN SIGNAL L [On/Off]	Each switch status that bein detects from the combination switch reading function	
HAZARD SW [On/Off]	The switch status input from the hazard switch	

ACTIVE TEST

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

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (IPDM E/R) (WITH INTELLIGENT KEY SYSTEM)

Diagnosis Description

INFOID:0000000005491641

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
- Rear window defogger
- Front wiper (LO, HI)
- Parking lamps
- Side marker lamp
- License plate lamps
- Tail lamps
- Front fog lamps
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- · Cooling fan

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 driver door switch 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:**

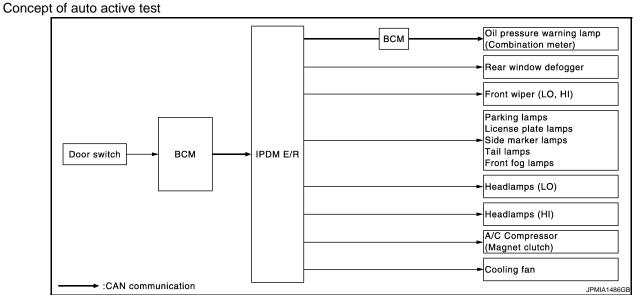
- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-55</u>, <u>"Component Function Check"</u>.
- Do not start the engine.

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
А	Oil pressure warning lamp	Blinks continuously during operation of auto active test
1	Rear window defogger	10 seconds
2	Front wiper	LO for 5 seconds → HI for 5 seconds
3	 Parking lamps Side marker lamps License plate lamps Tail lamps Front fog 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	LO for 5 seconds → HI for 5 seconds

< SYSTEM DESCRIPTION >



- 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	
		YES	BCM signal input circuit	
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	NO	Rear window defogger Rear window defogger ground circuit Harness or connector between IPDM E/R and rear window defogger IPDM E/R	
Any of the following components do not operate		YES	BCM signal input circuit	
 Parking lamps Side marker lamps License plate lamps Tail lamps Front fog lamps Headlamps (HI, LO) Front wiper (HI, LO) 	Perform auto active test. Does the applicable system operate?	NO	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	A/C amp. signal input circuit CAN communication signal between A/C amp. and ECM CAN communication signal between ECM and IPDM E/R	
	ate:	NO	Magnet clutch Harness or connector between IPDM E/R and magnet clutch IPDM E/R	

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< SYSTEM DESCRIPTION >

Symptom	Inspection contents Possible of		Possible cause
Oil pressure warning lamp does not operate	Perform auto active test. Does the oil pressure warning lamp blink?	YES	Harness or connector between IPDM E/R and oil pressure switch Oil pressure switch IPDM E/R
		NO	 CAN communication signal between IPDM E/R and BCM CAN communication signal between BCM and combi- nation meter Combination meter
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R
		NO	Cooling fan motor Harness or connector between IPDM E/R and cooling fan motor IPDM E/R

CONSULT-III Function (IPDM E/R)

INFOID:0000000005491642

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	Support Monitor The results of transmit/receive diagnosis of CAN communication can be read.	

SELF DIAGNOSTIC RESULT

Refer to PCS-32, "DTC Index".

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIG- NALS	Description
MOTOR FAN REQ [1/2/3/4]	×	Displays the value of the cooling fan speed request 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]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	MAIN SIG- NALS	Description
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
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 (CVT 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 CVT shift selector (detention switch) judged by IPDM E/R.
S/L RLY -REQ [Off/On]		Displays the status of the steering lock relay signal 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]		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.

ACTIVE TEST

Test item

Test item	Operation	Description
HORN	On	Operates horn relay for 20 ms.
FRONT WIPER	Off	OFF
	Lo	Operates the front wiper relay.
	Hi	Operates the front wiper relay and front wiper high relay.
MOTOR FAN	1	OFF
	2	Operates the cooling fan relay (LO operation).
	3	Operates the cooling fan relay (HI operation).
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< SYSTEM DESCRIPTION >

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

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (IPDM E/R) (WITHOUT INTELLIGENT KEY SYS-TEM)

Diagnosis Description

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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
- Rear window defogger
- Front wiper (LO, HI)
- Parking lamps
- Side marker lamp
- License plate lamps
- Tail lamps
- Front fog lamps
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan

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 driver door switch 10 times. Then turn the ignition switch OFF.

CAUTION:

Close passenger door.

- Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
- 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-55, "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
А	Oil pressure warning lamp	Blinks continuously during operation of auto active test
1	Rear window defogger	10 seconds
2	Front wiper	LO for 5 seconds → HI for 5 seconds
3	 Parking lamps Side marker lamps License plate lamps Tail lamps Front fog lamps 	10 seconds
4	Headlamps	LO for 10 seconds →HI ON ⇔ OFF 5 times

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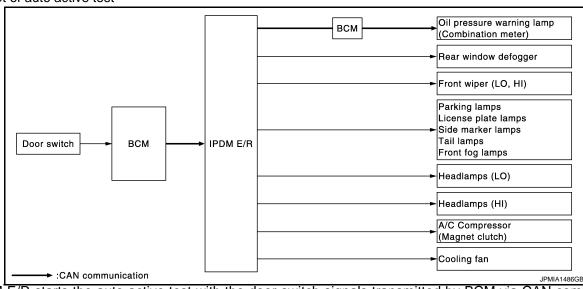
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< SYSTEM DESCRIPTION >

Operation sequence	Inspection location	Operation
5	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
6	Cooling fan	LO for 5 seconds → HI for 5 seconds

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
		YES	BCM signal input circuit
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	NO	Rear window defogger Rear window defogger ground circuit Harness or connector between IPDM E/R and rear window defogger IPDM E/R
Any of the following components do not operate		YES	BCM signal input circuit
 Parking lamps Side marker lamps License plate lamps Tail lamps Front fog lamps Headlamps (HI, LO) Front wiper (HI, LO) 	Perform auto active test. Does the applicable system operate?	NO	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	A/C amp. signal input circuit CAN communication signal between A/C amp. and ECM CAN communication signal between ECM and IPDM E/R
		NO	Magnet clutch Harness or connector between IPDM E/R and magnet clutch IPDM E/R

< SYSTEM DESCRIPTION >

Symptom	Inspection contents		Possible cause
		YES	Harness or connector between IPDM E/R and oil pressure switch Oil pressure switch IPDM E/R
Oil pressure warning lamp does not operate	Perform auto active test. Does the oil pressure warning lamp blink?	NO	CAN communication signal between IPDM E/R and BCM CAN communication signal between BCM and combination meter Combination meter
	Perform auto active test. Does the cooling fan operate?	YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R
Cooling fan does not operate		NO	Cooling fan motor Harness or connector between IPDM E/R and cooling fan motor IPDM E/R

CONSULT-III Function (IPDM E/R)

INFOID:0000000005491644

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 PCS-62, "DTC Index".

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIG- NALS	Description	
MOTOR FAN REQ [1/2/3/4]	×	Displays the value of the cooling fan speed request 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]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.	
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Displays the status of the front wiper request signal received from BCM via CAN communication.	

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< SYSTEM DESCRIPTION >

Monitor Item [Unit]	MAIN SIG- NALS	Description
WIP AUTO STOP [STOP P/ACT P]	×	Displays the status of the front wiper auto stop signal judged by IPDM E/R.
WIP PROT [Off/BLOCK]	×	Displays the status of the front wiper fail-safe operation judged by IPDM E/R.
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by IPDM E/R.
INTER/NP SW [Off/On]		Displays the status of the shift position (CVT models) judged by IPDM E/R.
ST RLY-REQ [Off/On]		Displays the status of the starter relay status signal received from BCM via CAN communication.
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]		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.

ACTIVE TEST

Test item

Test item	Operation	Description	
HORN	On	Operates horn relay for 20 ms.	
	Off	OFF	
FRONT WIPER	Lo	Operates the front wiper relay.	
	Hi	Operates the front wiper relay and front wiper high relay.	
1 OFF		OFF	
MOTOR FAN	2	Operates the cooling fan relay (LO operation).	
	3	Operates the cooling fan relay (HI operation). OFF	
	4		
	Off		
	TAIL	Operates the tail lamp relay.	
EXTERNAL LAMPS	Lo	Operates the headlamp low relay.	
	Hi	Operates the headlamp low relay and ON/OFF the headlamp high relay at 1 second intervals.	
	Fog	Operates the front fog lamp relay.	

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM)

BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM) : Diagnosis
Procedure

1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.	
Ratton, power cumby	G	
Battery power supply	8	

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

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

(Voltage		
В	СМ		(Approx.)
Connector	Connector Terminal		
M70	70	Ground	Battery voltage
IVI7 O	57		Dattery Voltage

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.

В	СМ		Continuity
Connector	Terminal	Ground	Continuity
M70	67		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM)

BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

1. CHECK FUSES AND FUSIBLE LINK

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

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< DTC/CIRCUIT DIAGNOSIS >

Signal name	Fuses and fusible link No.	
Battery power supply	8	
	G	
ACC power supply	20	
Ignition power supply	2	

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		Ignition switch position		neition	
(+) BCM			ignition switch position		
		(–)	OFF	ACC	ON
Connector	Terminal		OFF	ACC	ON
M67	70	Battery	Battery	Battery	
IVIO	57		voltage	voltage	voltage
M65	11	Ground	Approx. 0 V	Battery voltage	Battery voltage
WOJ	38		Approx. 0 V	Approx. 0 V	Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M67	67		Existed	

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

IPDM E/R (WITH INTELLIGENT KEY SYSTEM)

IPDM E/R (WITH INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000005491647

1. CHECK FUSES AND FUSIBLE LINK

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

Signal name	Fuses and fusible link No.	
Battery power supply	С	
	D	
	J	

Is the fuse fusing?

< DTC/CIRCUIT DIAGNOSIS >

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.

(+)	(-)	Voltage
IPDM E/R		(-)	Voltage (Approx.)
Connector	Terminal		
E9	1	Ground	
L9	2	Glound	Battery voltage
E10	8		

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			Continuity	
Connector	Terminal	Ground	Continuity	
E11	9	Ground	Existed	
E12	19		Existed	

Does continuity exist?

YES >> INSPECTION END

NO >> Repair the harness or connector.

IPDM E/R (WITHOUT INTELLIGENT KEY SYSTEM)

IPDM E/R (WITHOUT INTELLIGENT KEY SYSTEM): Diagnosis Procedure

1. CHECK FUSES AND FUSIBLE LINK

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

Signal name	Fuses and fusible link No.
	С
Battery power supply	D
	J

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

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

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(+)	(-)	Voltage
IPDM E/R		(-)	(Approx.)
Connector	Terminal		
E9	1	Ground	
L9	2	Giodila	Battery voltage
E10	8		

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair the harness or connector.

3. CHECK IGNITION POWER SUPPLY CIRCUIT

- 1. Turn the ignition switch ON.
- 2. Check voltage between IPDM E/R harness connector and the ground.

(+) (-)			Voltage
IPDM E/R			(Approx.)
Connector Terminal		Ground	
E12	18		Battery voltage

Is the measurement value normal?

YES >> GO TO 4.

NO >> Repair the harness or connector.

4. CHECK GROUND CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Check continuity between IPDM E/R harness connectors and the ground.

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E11	9	Giodila	Existed
E12	19		LXISIEU

Does continuity exist?

YES >> INSPECTION END

NO >> Repair the harness or connector.

EXTERIOR LAMP FUSE

< DTC/CIRCUIT DIAGNOSIS >

EXTERIOR LAMP FUSE

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Description

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Fuse list

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#52	10 A
Headlamp HI (RH)	IPDM E/R	#51	10 A
Headlamp LO (LH)	IPDM E/R	#53	15 A
Headlamp LO (RH)	IPDM E/R	#54	15 A
Front fog lamp	IPDM E/R	#50	15 A
 Parking lamp (also used as the front side marker lamp) Tail lamp Rear side marker lamp License plate lamp Each illumination 	IPDM E/R	#47	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	IPDM E/R	#55	10 A

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000005491

1.CHECK FUSE

Check that the following fuses are not fusing.

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#52	10 A
Headlamp HI (RH)	IPDM E/R	#51	10 A
Headlamp LO (LH)	IPDM E/R	#53	15 A
Headlamp LO (RH)	IPDM E/R	#54	15 A
Front fog lamp	IPDM E/R	#50	15 A
 Parking lamp (also used as the front side marker lamp) Tail lamp Rear side marker lamp License plate lamp Each illumination 	IPDM E/R	#47	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	IPDM E/R	#55	10 A

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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:0000000005491651

Fuse list

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#52	10 A
Headlamp HI (RH)	IPDM E/R	#51	10 A

EXTERIOR LAMP FUSE

< DTC/CIRCUIT DIAGNOSIS >

Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	#53	15 A
Headlamp LO (RH)	IPDM E/R	#54	15 A
Front fog lamp	IPDM E/R	#50	15 A
 Parking lamp (also used as the front side marker lamp) Tail lamp Rear side marker lamp License plate lamp Each illumination 	IPDM E/R	#47	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	IPDM E/R	#55	10 A

WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000005491652

1. CHECK FUSE

Check that the following fuses are not fusing.

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	#52	10 A
Headlamp HI (RH)	IPDM E/R	#51	10 A
Headlamp LO (LH)	IPDM E/R	#53	15 A
Headlamp LO (RH)	IPDM E/R	#54	15 A
Front fog lamp	IPDM E/R	#50	15 A
 Parking lamp (also used as the front side marker lamp) Tail lamp Rear side marker lamp License plate lamp Each illumination 	IPDM E/R	#47	10 A
Stop lamp	FUSE BLOCK (J/B)	#7	10 A
Back-up lamp	IPDM E/R	#55	10 A

Is the fuse fusing?

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

NO >> The fuse is normal.

< DTC/CIRCUIT DIAGNOSIS >

HEADLAMP (HI) CIRCUIT

Component Function Check

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1. CHECK HEADLAMP (HI) OPERATION

®IPDM E/R AUTO ACTIVE TEST

- 1. Start IPDM E/R auto active test. Refer to EXL-32, "Diagnosis Description".
- Check that the headlamp switches to the high beam.

PCONSULT-III ACTIVE TEST

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. With operating the test items, check that the headlamp (HI) is turned ON.

Hi : Headlamp (HI) ON
Off : Headlamp (HI) OFF

NOTE:

ON/OFF is repeated 1 second each.

Is the headlamp (HI) turned ON?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-47, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491654

1. CHECK HEADLAMP (HI) OUTPUT VOLTAGE

(P)CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Disconnect the headlamp 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					
(+)		(-)	root itom							
IPDM E/R			EXTERNAL	(Approx.)						
Cor	nector	Terminal		LAMPS						
RH	H 49	49	49 Ground -	Hi	Battery voltage					
	E15							0.000	Off	0 V
LH			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 the IPDM E/R connector.
- 3. Check continuity between the IPDM E/R harness connector and the headlamp harness connector.

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	IPDM E	/R	Headlamp		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E15	49	E45	1	Existed
LH	LIJ	50	E26	1	LAISIEU

Does continuity exist?

YES (Without daytime running light system)>>GO TO 5.

YES (With daytime running light system)>>GO TO 6.

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	#51	10 A
Headlamp HI (LH)	IPDM E/R	#52	10 A

Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

4. CHECK HEADLAMP HIGH (HI) SHORT CIRCUIT

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

IPDM E/R			Continuity	
Conr	nector	Terminal	Ground	Continuity
RH	E15	49	Giodila	Not existed
LH	LIS	50		NOT EXISTED

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 (HI) GROUND OPEN CIRCUIT

Check continuity between the headlamp harness connector and the ground.

Headlamp			Continuity	
Conr	nector	Terminal	Ground	Continuity
RH	E45	2	Giodila	Existed
LH	E26	2		LAISIEU

Does continuity exist?

YES >> Replace the headlamp (HI) bulb.

NO >> Repair the harnesses or connectors.

6.CHECK HEADLAMP (HI) GROUND OPEN CIRCUIT (LH)

Check continuity between the headlamp LH harness connector and the ground.

Headlamp			Continuity	
Connector		Terminal	Ground	Existed
LH	LH E26			LXISIGU

Does continuity exist?

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YES >> GO TO 7.

NO >> Repair the harnesses or connectors.

7.CHECK CONTINUITY BETWEEN HEADLAMP HIGH (RH) AND DAYTIME RUNNING LIGHT RELAY-1

- Remove the daytime running light relay-1.
- Check continuity between the headlamp RH harness connector and the daytime running light relay-1 harness connector.

Continuity	Daytime running light relay-1		Headlamp		
- Existed	Terminal	Connector	Terminal	nector	Conr
LXISIEU	1	E57	2	E45	RH

Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harness or connector.

8.CHECK THE DAYTIME RUNNING LIGHT RELAY-1 GROUND OPEN CIRCUIT

Check continuity between the daytime running light relay-1 harness connector and the ground.

Daytime running I	ight relay-1		Continuity
Connector	Connector Terminal		Existed
E57	4		LXISIEU

Does continuity exist?

YES >> GO TO 9.

NO >> Repair the harness or connector.

9. CHECK THE DAYTIME RUNNING LIGHT RELAY-1

Check the daytime running light relay-1. Refer to EXL-58, "Component Inspection (Daytime Running Light Relay-1)".

Is the daytime running light relay-1 normal?

YES >> Replace the headlamp (HI) bulb.

NO >> Replace the daytime running light relay-1.

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< DTC/CIRCUIT DIAGNOSIS >

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000005491655

1. CHECK HEADLAMP (LO) OPERATION

RIPDM E/R AUTO ACTIVE TEST

- Start IPDM E/R auto active test. Refer to <u>EXL-32</u>, "<u>Diagnosis Description</u>".
- Check that the headlamp is turned ON.

(P)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 (LO) is turned ON.

Lo : Headlamp (LO) ON
Off : Headlamp (LO) OFF

Is the headlamp (LO) turned ON?

YES >> Headlamp (LO) is normal.

NO (With daytime running light system)>>Refer to <u>EXL-50</u>, "WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure".

NO (Without daytime running light system)>>Refer to <u>EXL-53</u>, <u>"WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure"</u>.

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

INFOID:0000000005491656

1. CHECK HEADLAMP LOW (LH) OUTPUT VOLTAGE

(P)CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- Disconnect the headlamp LH 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	
((+)		rest item	Voltage
IPDI	Л E/R		EXTERNAL	(Approx.)
Connector	Terminal		LAMPS	
E15	51	Ground	Lo	Battery voltage
			Off	0 V

Is the measurement value normal?

YES >> GO TO 2. NO >> GO TO 8.

2.CHECK HEADLAMP LOW (RH) OUTPUT VOLTAGE

©CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Remove the daytime running light relay-2.
- Turn the ignition switch ON.
- 4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

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Terminals			Test item	
(+	(+) (-)		iest item	Voltage
IPDM	I E/R		EXTERNAL	(Approx.)
Connector	Terminal		LAMPS	
E15	52	Ground	Lo	Battery voltage
			Off	0 V

Is the measurement value normal?

YES >> GO TO 3. NO >> GO TO 8.

3.check headlamp low (LH) open circuit

- 1. Turn the ignition switch OFF.
- Disconnect the IPDM E/R connector.
- Check continuity between the IPDM E/R harness connector and the headlamp LH harness connector.

IPDM	IPDM E/R		Headlamp LH	
Connector	Terminal	Connector Terminal		Continuity
E15	51	E26	3	Existed

Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

4.CHECK CONTINUITY BETWEEN IPDM E/R AND THE DAYTIME RUNNING LIGHT RELAY-2.

- Turn the ignition switch OFF.
- 2. Disconnect the IPDM E/R connector.
- Check continuity between the IPDM E/R harness connector and the daytime running light relay-2 harness connector.

IPDN	IPDM E/R Daytime		g light relay-2	Continuity
Connector	Terminal	Connector	Terminal	Continuity
E15	52	E59	2	Existed
LIJ	32	L39	5	LAISIEU

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

${f 5.}$ CHECK THE DAYTIME RUNNING LIGHT RELAY-2 GROUND OPEN CIRCUIT

Check continuity between the daytime running light relay-2 harness connector and the ground.

Daytime runni	ng light relay-2		Continuity
Connector	Termina	Ground	Continuity
E59	1		Existed

Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

$oldsymbol{6}$.CHECK CONTINUITY BETWEEN THE DAYTIME RUNNING LIGHT RELAY-2 AND HEADLAMP RH

- Turn the ignition switch OFF.
- Disconnect the headlamp RH connector.
- Check continuity between the daytime running light relay-2 harness connector and the headlamp RH harness connector.

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< DTC/CIRCUIT DIAGNOSIS >

Daytime runnii	ng light relay-2	Headlamp RH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E59	3	E45	3	Existed

Does continuity exist?

YES >> GO TO 7.

NO >> Repair the harnesses or connectors.

7.CHECK THE DAYTIME RUNNING LIGHT RELAY-2

Check the daytime running light relay-2. Refer to EXL-59, "Component Inspection (Daytime Running Light Relay-2)".

Is the daytime running light relay-2 normal?

YES >> GO TO 10.

NO >> Replace the daytime running light relay-2.

8.CHECK HEADLAMP (LO) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	#53	10 A
Headlamp LO (RH)	IPDM E/R	#54	10 A

Is the fuse fusing?

YES >> GO TO 9.

NO >> Replace IPDM E/R.

9. CHECK HEADLAMP (LO) SHORT CIRCUIT

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

	IPDM E/	R		Continuity
Conr	nector	Terminal	Ground	Continuity
LH	E15	51	Giodila	Not existed
RH	E13	52		Not existed

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.)

10. CHECK HEADLAMP (LO) GROUND OPEN CIRCUIT (LH)

Check continuity between the headlamp LH harness connector and the ground.

	Headlamp	RH		Continuity
Conr	Connector		Ground	Existed
LH	E26	2		LAISIEU

Does continuity exist?

YES >> GO TO 11.

NO >> Repair the harnesses or connectors.

11.CHECK CONTINUITY BETWEEN HEADLAMP LOW (RH) AND DAYTIME RUNNING LIGHT RELAY-1

- 1. Remove the daytime running light relay-1.
- Check continuity between the headlamp RH harness connector and the daytime running light relay-1 harness connector.

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	Headlamp	RH	Daytime running light relay-1		Continuity
Conr	nector	Terminal	Connector Terminal		Existed
RH	E45	2	E57	3	LXISIGU

Does continuity exist?

YES >> GO TO 12.

NO >> Repair the harness or connector.

12.check the daytime running light relay-1 ground open circuit

Check continuity between the daytime running light relay-1 harness connector and the ground.

Daytime running I	ight relay-1		Continuity
Connector	Terminal	Ground	Existed
E57	4		LXISIEG

Does continuity exist?

YES >> GO TO 13.

NO >> Repair the harness or connector.

13. CHECK THE DAYTIME RUNNING LIGHT RELAY-1

Check the daytime running light relay-1. Refer to EXL-58, "Component Inspection (Daytime Running Light Relay-1)".

Is the daytime running light relay-1 normal?

>> Replace the headlamp (LO) bulb. (Bulb socket is abnormally.)

>> Replace the daytime running light relay-1.

WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Diagnosis Procedure

1. CHECK HEADLAMP (LO) OUTPUT VOLTAGE

(P)CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- Disconnect the headlamp connector.
- Turn the ignition switch ON.
- 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		
	(+)		(-)	163t Item	Voltage	
	IPDM E/R			EXTERNAL	(Approx.)	
Conr	nector	Terminal		LAMPS		
RH	RH	52	52 Ground	Lo	Battery voltage	
	E15		Oround	Off	0 V	
LH	51		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

Turn the ignition switch OFF.

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- 2. Disconnect IPDM E/R connector.
- 3. Check continuity between the IPDM E/R harness connector and the headlamp harness connector.

	IPDN	/I E/R	Headlamp		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E15	52	E45	3	Existed
LH	EIS	51	E26	3	EXISTECT

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

3.CHECK HEADLAMP (LO) FUSE

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

Unit	Lotion	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	#54	15 A
Headlamp LO (LH)	IPDM E/R	#53	15 A

Is the fuse fusing?

YES >> GO TO 4.

NO >> Replace IPDM E/R.

4. CHECK HEADLAMP (LO) SHORT CIRCUIT

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

	IPDM E/R			Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E15	52	Glound	Not existed
LH	LIJ	51		Not existed

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.)

${f 5.}$ CHECK HEADLAMP (LO) GROUND OPEN CIRCUIT

Check continuity between the headlamp harness connector and the ground.

	Headlamp			Continuity	
Con	nector	Terminal	Ground	Continuity	
RH	E45	2	Glound	Existed	
LH	E26	2		Existed	

Does continuity exist?

YES >> Replace the headlamp (LO) bulb. (Bulb socket is abnormally.)

NO >> Repair the harnesses or connectors.

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FRONT FOG LAMP CIRCUIT

Component Function Check

${f 1}$. CHECK FRONT FOG LAMP OPERATION

PIPDM E/R AUTO ACTIVE TEST

- 1. Activate IPDM E/R auto active test. Refer to EXL-32, "Diagnosis Description".
- Check that the front fog lamp is turned ON.

PCONSULT-III ACTIVE TEST

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

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

Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.

>> Refer to EXL-55, "Diagnosis Procedure". NO

Diagnosis Procedure

1. CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	#50	15 A

Is the fuse fusing?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK FRONT FOG LAMP SHORT CIRCUIT

- Disconnect IPDM E/R connector and the front fog connector.
- Check continuity between the IPDM E/R harness connector and the ground.

	IPDM E/	'R		Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E12	21	Ground	Not existed
LH	E12	22		Not existed

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.)

3.CHECK FRONT FOG LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

4. CHECK FRONT FOG LAMP OUTPUT VOLTAGE

(P)CONSULT-III ACTIVE TEST

- 1. Disconnect the front fog lamp connector.
- 2. Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.

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FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

4. With operating the test items, check the voltage between the IPDM E/R harness connector and the ground.

	Terminals			Test item		
(+)		(-)	iest item	Voltage		
	IPDM E/R		EXTERNAL	(Approx.)		
Cor	nnector	Terminal		LAMPS		
RH		21	Ground	Fog	Battery voltage	
	E12	12	Glound	Orouna	Off	0 V
LH	LIZ	22		Fog	Battery voltage	
				Off	0 V	

Is the measurement value normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R.

5. CHECK FRONT FOG LAMP OPEN CIRCUIT

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

	IPDM E	/R	Front fog lamp		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	F12	21	E48	1	Existed
LH	LIZ	22	E30	1	LXISIEU

Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

6.CHECK FRONT FOG LAMP GROUND CIRCUIT OPEN CIRCUIT

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

	Front fog la	amp		Continuity
Conr	nector	Terminal	Ground	Continuity
RH	E48	2	Giodila	Existed
LH	E30	2		Existed

Does continuity exist?

YES >> Replace the front fog lamp.

NO >> Repair the harnesses or connectors.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

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NOTE:

Check the headlamp (HI) circuit if the headlamp (HI) is not turned ON. Refer to EXL-47, "Component Function Check".

CAUTION:

Before performing the diagnosis, check that the headlamp (HI) bulb is normal.

${f 1}$.CHECK DAYTIME RUNNING LIGHT OPERATION

PCONSULT-III ACTIVE TEST

- Select "DAYTIME RUNNING LIGHT" of BCM (HEADLAMP) active test item.
- With operating the test items, check that daytime running light operation.

: Daytime running light ON On Off : Daytime running light OFF

Is the daytime running light turned ON/OFF?

>> Daytime running light relay-1 circuit is normal. NO >> Refer to EXL-57, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000000549166

1.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

Check that the following fuse is not fusing.

Unit	Location	Fuse No.	Capacity
Daytime running light relay-1	Fuse and fusible link block	#32	10A

Is the fuse fusing?

>> Replace the fuse after repairing the applicable circuit.

NO >> GO TO 2.

2.CHECK DAYTIME RUNNING LIGHT RELAY-1 POWER SUPPLY

Remove daytime running light relay-1.

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

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	Terminals			
(+)	(-)	Voltage (Approx.)	
Daytime runni	ng light relay-1		voltage (Approx.)	
Connector	Terminal	Ground		
E57	E57 2 Ground		Rattory voltago	
LJI	5	-	Battery voltage	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harnesses or connectors.

3.CHECK DAYTIME RUNNING LIGHT RELAY-1 $\,$

Check daytime running light relay-1. Refer to EXL-58, "Component Inspection (Daytime Running Light Relay-<u>1)"</u>.

Is the daytime running light relay-1 normal?

YES >> GO TO 4.

>> Replace daytime running light relay-1. NO

$oldsymbol{4}.$ CHECK DAYTIME RUNNING LIGHT RELAY-1 CONTROL SIGNAL OUTPUT

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DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

(P)CONSULT-III ACTIVE TEST

- 1. Turn the ignition switch OFF.
- 2. Install daytime running light relay-1.
- 3. Turn the ignition switch ON.
- 4. Select "DAYTIME RUNNING LIGHT" of BCM (HEAD LAMP) active test item.
- 5. With operating the test item, check voltage between IPDM E/R harness connector and the ground.

	Terminals		Test item	
(+)	(-)	163t Itelli	
IPDN	/I E/R		DAYTIME	Voltage (Approx.)
Connector	Terminal	Ground	RUNNING LIGHT	
E12	28		On	0 V
LIS	E13 28		Off	Battery voltage

Is the measurement value normal?

YES >> Check daytime running light relay-1 circuit. Refer to <u>EXL-58</u>, "Component Inspection (Daytime Running Light Relay-1)".

Fixed at 0 V >> GO TO 5.

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

${f 5.}$ CHECK DAYTIME RUNNING LIGHT RELAY-1 CONTROL SIGNAL OPEN CIRCUIT

- 1. Remove daytime running light relay-1.
- 2. Disconnect IPDM E/R harness connector.
- Check continuity between IPDM E/R harness connector and daytime running light relay-1 harness connector.

IPDM E/R		Daytime running light relay-1		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E13	28	E57	1	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 IPDM E/R harness connector and the ground.

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E13	28		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace IPDM E/R.

Component Inspection (Daytime Running Light Relay-1)

INFOID:0000000005491662

1. CHECK DAYTIME RUNNING LIGHT RELAY-1

- Turn the ignition switch OFF.
- 2. Remove daytime running light relay-1.
- 3. Apply battery voltage to daytime running light relay- between terminals 1 and 2.
- 4. Check continuity of daytime running light relay-1.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Daytime runni	Condition	Continuity	
Terr	Voltage	Continuity	
5		Apply	Existed
	3	Not Apply	Not existed
4	3	Apply	Not existed
		Not Apply	Existed

Does continuity exist?

YES >> Daytime running light relay-1 is normal.

NO >> Replace daytime running light relay-1.

Component Inspection (Daytime Running Light Relay-2)

INFOID:0000000005491663

1. CHECK DAYTIME RUNNING LIGHT RELAY-2

- 1. Turn the ignition switch OFF.
- 2. Disconnect daytime running light relay-2.
- 3. Apply battery voltage to daytime running light relay-2 between terminals 1 and 2.
- 4. Check continuity daytime running light of relay-2.

Daytime runni	Condition	Continuity	
Terminal			
3	5	Apply	Existed
	3	Not Apply	Not existed

Does continuity exist?

YES >> Daytime running light relay-2 is normal.

NO >> Replace Daytime running light relay-2.

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PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000005491664

1. CHECK PARKING LAMP OPERATION

RIPDM E/R AUTO ACTIVE TEST

- Activate IPDM E/R auto active test. Refer to EXL-32, "Diagnosis Description".
- 2. Check that the parking lamp is turned ON.

(P)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-60, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491665

1. CHECK PARKING LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Parking lampLicense plate lampSide marker lampTail lamp	IPDM E/R	#47	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 parking lamp connector.
- Check continuity between the IPDM E/R harness connector and the ground.

IPDM E/R				Continuity
Connector Te		Terminal	Ground	Continuity
RH	E14	37	Ground	Not existed
LH	∟14	36		Not existed

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

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 4.

NO >> Replace the bulb.

4. CHECK PARKING LAMP OUTPUT VOLTAGE

(P)CONSULT-III ACTIVE TEST

1. Disconnect the parking lamp connector.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

- 2. Turn the ignition switch ON.
- B. 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	
(+)		(-)	iest item	Voltage	
-	IPDM E	/R		EXTERNAL	(Approx.)
Coi	nnector	Terminal		LAMPS	
RH	E14	37	Ground	TAIL	Battery voltage
LH		36		OFF	0 V

Is the measurement value normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R.

5. CHECK PARKING LAMP OPEN CIRCUIT

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

IPDM E/R		Parking	Continuity		
Conr	ector	Terminal	Connector	Terminal	Continuity
RH	E14	37	E43	1	Existed
LH	∟14	36	E24	1	LAISIEU

Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harnesses or connectors.

6.CHECK PARKING LAMP GROUND OPEN CIRCUIT

Check continuity between the parking lamp harness connector and the ground.

Parking lamp				Continuity
Connector Terminal		Ground	Continuity	
RH	E43	2	Giodila	Existed
LH	E24	2		LXISIEU

Does continuity exist?

YES >> Replace the front combination lamp.

NO >> Repair the harnesses or connectors.

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TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TURN SIGNAL LAMP CIRCUIT

Description INFOID.000000005491666

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

NOTE:

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

Component Function Check

INFOID:0000000005491667

1. CHECK TURN SIGNAL LAMP

(P)CONSULT-III ACTIVE TEST

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

LH : Turn signal lamps (LH) blink
RH : Turn signal lamps (RH) blink

Off : Turn signal lamps OFF

Does the turn signal lamps blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-62, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491668

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 OPEN CIRCUIT

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

Front turn signal lamp

	BCM		Front turn signal lamp		Continuity
Со	nnector	Terminal	Connector	Terminal	Continuity
RH	M67	61	E46	1	Existed
LH	IVIO7	60	E27	•	LXISIEU

Side turn signal lamp

ВСМ		Side turn signal lamp		Continuity	
Co	nnector	Terminal	rminal Connector Ter		Continuity
RH	M67	61	E40	1	Existed
LH	IVIO7	60	E23	•	LXISIEU

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Rear turn signal lamp

BCM Rear combi		BCM Rear combination lamp		Continuity	
Co	nnector	Terminal	Connector	Terminal	Continuity
RH	M67	61	B59	1	Existed
LH	IVIO7	60	B80	4	LAISIEU

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Does continuity exist?

YES >> GO TO 3.

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NO >> Repair the harnesses or connectors.

3.check turn signal lamp short circuit

Check continuity between the BCM harness connector and the ground.

	BCM		Continuity		
Connector		Terminal	Ground	Continuity	
RH	M67	61	Giouna	Not existed	
LH	IVIO7	60		NOI EXISIEU	

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 4.

4. CHECK TURN SIGNAL LAMP GROUND OPEN CIRCUIT

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

Front turn signal lamp

Front turn signal lamp				Continuity
Connector		Terminal	Ground	Continuity
RH	E46	2	Glound	Existed
LH	E27	2		LXISIEU

Side turn signal lamp

Side turn signal lamp				Continuity
Connector		Terminal	Ground	Continuity
RH	E40	2	Giodila	Existed
LH	E23	2		Existed

Rear turn signal lamp

Rear combination lamp				Continuity
Connector		Terminal	Ground	Continuity
RH	B59	2	Glound	Existed
LH	B80	3		LXISIEU

Does continuity exist?

YES >> Replace BCM.

NO >> Repair the harnesses or connectors.

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OPTICAL SENSOR

Description INFOID:000000005491669

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

Component Function Check

INFOID:0000000005491670

1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT-III

(P)CONSULT-III DATA MONITOR

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

Monitor item	Condition		Voltage (Approx.)
OPTISEN	Optical When illuminating		3.1 V or more *
(DTCT)	sensor	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-64, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491671

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(1	Voltage		
Optica	l sensor		(Approx.)
Connector	Terminal	Ground	
M17	1		5 V

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.

(-	Voltage		
Optical	sensor		(Approx.)
Connector	Terminal	Ground	
M17	3		0 V

Is the measurement value normal?

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

3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

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

Terminals			Condition		
(+)		(–)	Condition	Voltage (Approx.)	
Optical sensor			Optical sensor		
Connector	Terminal	Ground	Optical Serisor		
M17	2	Ground	When illuminating	3.1 V or more *	
IVI 17	2		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

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M17	1	M68	17	Existed

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

${f 5}.$ CHECK OPTICAL SENSOR SHORT CIRCUIT

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

Optica	sensor		Continuity
Connector Terminal		Ground	Continuity
M17	1		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

$\mathsf{6}.$ CHECK OPTICAL SENSOR GROUND OPEN CIRCUIT

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

Optical sensor		BCM		Continuity	
Со	nnector	Terminal	Connector	Terminal	Continuity
	M17	3	M68	18	Existed

Does continuity exist?

YES >> Replace BCM.

NO >> Repair the harnesses or connectors.

7.CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

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OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Optical	cal sensor BCM			Continuity
Connector	Terminal	Connector	Terminal	Continuity
M17	2	M68	14	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		Continuity
Connector Terminal		Ground	Continuity
M17	2		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM.

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

HAZARD SWITCH

Component Function Check

INFOID:0000000005491672

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1. CHECK HAZARD SWITCH SIGNAL BY CONSULT-III

(E)CONSULT-III DATA MONITOR

- 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	Con	Monitor status	
HAZARD SW	Hazard switch	ON	On
	Tiazaiù Switch	OFF	Off

Is the item status normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-67, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491673

1. CHECK HAZARD SWITCH SIGNAL INPUT

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

	Terminals		Condition	
(-	+)	(-)	Condition	Voltage (Approx.)
ВС	CM		Hazard switch	Vollage (Approx.)
Connector	Terminal		riazaid switch	
			ON	0 V
M68	29	Ground	OFF	(V) 15 10 5 0

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Is the measurement value normal?

YES >> Replace BCM. Refer to BCS-146, "Exploded View".

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.

EXL-67

Hazard switch		ВСМ		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M45	2	M68	29	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.

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HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Hazard	Hazard switch		Continuity
Connector	Terminal	Ground	Continuity
M45	2		Not existed

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 4.

4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

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

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M45	1		Existed

Does continuity exist?

YES >> Replace the hazard switch.

NO >> Repair the harnesses or connectors.

TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000005491674

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NOTE:

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

1. CHECK TAIL LAMP OPERATION

PIPDM E/R AUTO ACTIVE TEST

- 1. Activate IPDM E/R auto active test. Refer to EXL-32, "Diagnosis Description".
- 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-69, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491675

1. CHECK TAIL LAMP OUTPUT VOLTAGE

(P)CONSULT-III ACTIVE TEST

- 1. Disconnect the rear combination lamp connector.
- 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				
	(+)		(-)	163t Item	Voltage			
	IPDM E/R			EXTERNAL	(Approx.)			
Co	nnector	Terminal		LAMPS				
RH		38	Ground	TAIL	Battery volt- age			
	E14					Ground	Off	0 V
LH	_ L14	41		TAIL	Battery volt- age			
				Off	0 V			

Is the measurement value normal?

YES >> GO TO 2.

NO >> Replace IPDM E/R.

2. CHECK TAIL LAMP OPEN CIRCUIT

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

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TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

	IPDM E/R		Rear combination lamp		Continuity
C	Connector	Terminal	Connector	Terminal	Continuity
RH	E14	38	B59	6	Existed
LH	E14	41	B80	6	LAISIEU

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 combinat	ion lamp		Continuity
	Connector	Terminal	Ground	Continuity
RH	B59	3	Ground	Existed
LH	B80	3		Existed

Does continuity exist?

YES >> Replace the rear combination lamp.

NO >> Repair the harnesses or connectors.

REAR SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

REAR SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000005491676

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NOTE:

Check the parking lamp circuit if the parking lamp and the rear side marker lamp are not turned ON.

1. CHECK REAR SIDE MARKER LAMP OPERATION

PIPDM E/R AUTO ACTIVE TEST

- 1. Activate IPDM E/R auto active test. Refer to EXL-32, "Diagnosis Description".
- Check that the rear side marker 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 rear side marker lamp is turned ON.

TAIL : Rear side marker lamp ON
Off : Rear side marker lamp OFF

Is the rear side marker lamp turned ON/OFF?

YES >> Rear side marker lamp circuit is normal. NO >> Refer to EXL-71, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491677

1. CHECK REAR SIDE MARKER LAMP BULB

Check the applicable lamp bulb.

Is the bulb normal?

YES >> GO TO 2.

NO >> Replace the bulb.

2.CHECK REAR SIDE MARKER LAMP OPEN CIRCUIT

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

Continuity	Rear side marker lamp		IPDM E/R		
Continuity	Terminal	Connector	Terminal	Connector	C
Existed	1	T5	41	E14	RH
LXISIEU	1	T4	41	L14	LH

Does continuity exist?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3.check rear side marker lamp ground open circuit

Check continuity between the rear side marker lamp harness connector and the ground.

	Rear side mar	ker lamp		Continuity
C	Connector	Terminal	Ground	Continuity
RH	T5	1	Giodila	Existed
LH	T4	1		LAISIEU

Does continuity exist?

YES >> Replace the rear side marker lamp assembly.

NO >> Repair the harnesses or connectors.

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LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000005491678

NOTE:

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

CHECK LICENSE PLATE LAMP OPERATION

PIPDM E/R AUTO ACTIVE TEST

- 1. Activate IPDM E/R auto active test. Refer to EXL-32, "Diagnosis Description".
- 2. Check that the license plate lamp is turned ON.

(P)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-72, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005491679

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

Continuity	License plate lamp		IPDM E/R		
Continuity	Terminal	Connector	Terminal	onnector	С
Existed	1	Т3	41	F14	RH
LXISIEU	1	T2	41	L14	LH

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				Continuity
	Connector Termina		Ground	Continuity
RH	Т3	2	Giodila	Existed
LH	T2	2		LAISIEU

Does continuity exist?

YES >> Replace the license plate lamp.

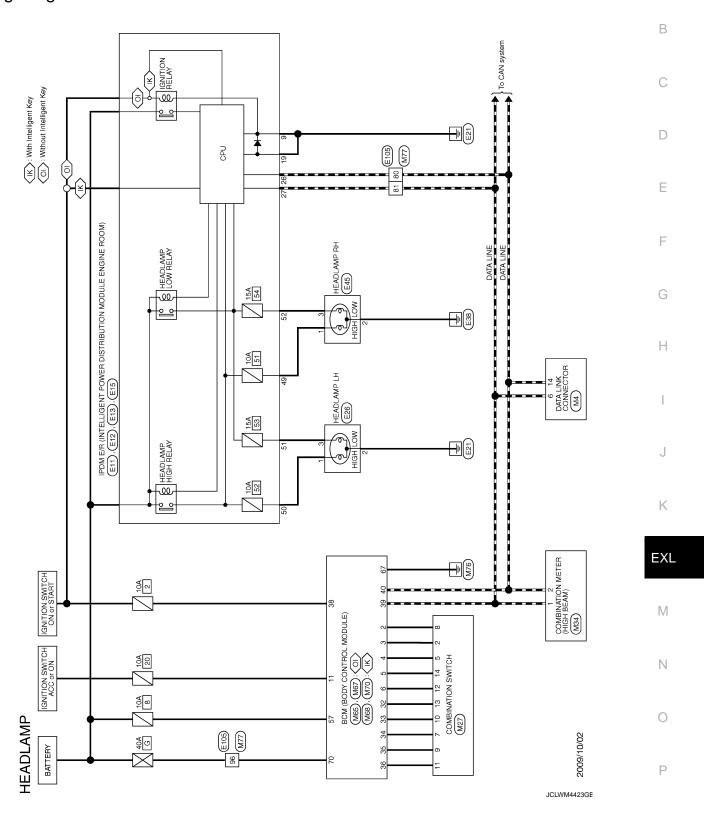
NO >> Repair the harnesses or connectors.

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INFOID:0000000005491680

HEADLAMP SYSTEM

Wiring Diagram - HEADLAMP -



NOGE PLO	Connector No. E26 Connector Name HEADLAMP LH Connector Type N003FB	#8.	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 1 0 0 0 0 0 0 0 0 0	H.S.	Cervinal Color Signal Name Specification 1
Fig. 1 Color	Signal Name [Specification]		E15 Indeed to the contract of		[With CVT] - [With M/T] - [
E12 Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] E12 E12 E12 E13 Signal Name [Specification] Signal Name [Specification] E13 E14 E15 E15 E16 E17 E17 E18 E18 E18 E18 E18 E18		7 - 4 88 ≥ 0 E	विभिन्न		□ ₩ □ ₩ □ ₩ □ ₩ □ ₩ □ ₩ □
	Terminal No. 24	28 28 30 31 33	Connectt Connectt H.S.	Terminal No. 47 49 50	54 54 55 56 56 56 60 60 60 60 60 60
	HEADLAMP Connector No. Et 1 Connector Name prout on outstand proving normal prout on outstand proving normal proving normal proving normal proving NOSFB-1C	11 10 9		21 20 19	

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HEADLAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

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PARKING BRAKE SWITCH SIGNAL BRAKE FLUID LEVEL SWITCH SIGNAL ACO DOWIRE SUPPLY ACO POWER SUPPLY WASHER LEVEL SWITCH SIGNAL SECURITY SIGNAL AMBIENT SENSOR SIGNAL AMBIENT SENSOR GROUND GROUND GROUND FUEL LEVEL SENSOR GROUND AND AND AND SOURCETON SIGNAL AMBIENT SIGNAL FUEL AMBIENT SIGNAL AND AND SENGER SEA TELL WARNING SIGNAL AND AND SENGER SEA TELL WARNING SIGNAL ENGARING SIGNAL ALTERNATOR SIGNAL ALTERNATOR SIGNAL ALTERNATOR SIGNAL	В
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HEADL Connector No	ΣV	D. Wes	Connector No	or No.	M67	12	SB	PASSENGER DOOR SW	69	M/I	POWER WINDOW POWER SUPPLY (BAT)
Connector Name		BCM (BODY CONTROL MODULE)	Connect	Connector Name	BCM (BODY CONTROL MODULE)	13	GR/L	REAR RH DOOR SW	70	>	BAT (F/L)
T soften	╅	14 ACC	100000	T. T. T. Constant	*0 94117 GT00477	4 4	8/1	OPTICAL SENSOR			
	1			adk i in	TEAUSTB-THA0-0A	5 1	R/G	OPTICAL SENSOR POWER SUPPLY	T		
C C			E	_		18	>	RECEIVER / SENSOR GND			
N T			N T			19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY	≻		
5	, ,		1	Ŀ	56 57 58 59 60 61 62 63 64	20	λ/5	KEYLESS ENTRY RECEIVER COMM			
	21 22 23 24	27 28			65 66 67 68 69 70	21 5	P/L	NATS ANTENNA AMP.	_		
				1		77	9 ×	KEYLESS EN I RY RECEIVER KSSI	_		
						23	× 8/8	SECURITY INDICATOR LAMP	_		
Terminal	Color	3	Terminal	Color		52	9	NATS ANTENNA AMP.	_		
No.	of Wire	Signal Name [Specification]	No.	-	Signal Name [Specification]	27	Y/R	A/C SW			
2	BR/W	COMBI SW INPUT 5	26	٦	INTERIOR ROOM LAMP POWER SUPPLY	28	M/S	BLOWER FAN SW			
3	GR	COMBI SW INPUT 4	22	>	BAT (FUSE)	58	L/W	HAZARD SW			
4	\leq	COMBI SW INPUT 3	29	ΓB	DR	31	g/B	DR DOOR UNLOCK SENSOR			
2	g	COMBI SW INPUT 2	9	M/B		35	9	COMBI SW OUTPUT 5	_		
9	۲ ₈	COMBI SW INPUT 1	19	W/L	TURN SIGNAL RH OUTPUT	83	7/	COMBI SW OUTPUT 4	_		
-	W/R	KEY CYL UNLOCK SW	63	땲 :	ROOM LAMP TIMER CONTROL	34	≥ 3	COMBI SW OUTPUT 3	_		
20 0	9/4	SET CAL LUCK SW	2 2	> 0	ALL DOOR LOCK OUTPUT	8 8	٦, <u>۲</u>	COMBI SW CUTFUL 2			
5 Ç	Y S	STOP LAMP SW	9 5		PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT	98 5	2 8	COMBI SW OUTPULT	T		
2 ;	W/L	REAR WINDOW DEFOGGER SW	ه ه	n -	GNOTA VIDELIA GENERAL	8	2	A LANG.			
= \$	<u> </u>	ACC PASSENCED DOOD SW	89 9	7	POWER WINDOW POWER SUPPLY (IGN)	88 8	٥ -	IGN F/B			
71	900	PASSENGER DOOR SW	60 6	<u>*</u> ;	+	g ;	، إ	E-NA)	_		
5 6	7/H2	CODITION SENSOR	2	_	BAT (F/L)	₽	1	CAN-L	7		
<u> </u>	0 // M	TIDE DESS WADNING CHECK SW									
17	B/G	OPTICAL SENSOR POWER SLIPPLY	Connector No.	or No.	M68	Connector No.	for No.	M70			
18		RECEIVER/SENSOR GND	,	1	(Lindon Cottingo Macch) Mod			(Tilliages (Cathering Vacca) Mod			
19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY	Connec	Connector Name	BCIM (BODT CONTROL MODULE)	Connec	Connector Name	BOM (BODT CONTROL MODULE)			
20	G/Y	KEYLESS ENTRY RECEIVER COMM	Connect	Connector Type	TH40FB-NH	Connect	Connector Type	FEA09FB-FHA6-SA			
21	P/L	NATS ANTENNA AMP.	ą			ą			I		
23	ΡV	SECURITY INDICATOR LAMP	唐			厚					
24	GR/R	DONGLE LINK				SH/					
22	5	NATS ANTENNA AMP.		Ŀ	/		Œ -	56 57 58 59 60 61 62 63 64			
26	GR.	THERMO CONTROL AMP.		21 22 23 24	25 26 27 28 29 30 31 32 33		_	65 66 67 68 69 70			
7.7	5/2	A/C SW [With auto A/C]					1				
77	Y/K	A/C SW [With manual A/C]									
2 02	W -	HAZABD SIM	Tomino	, olo		Tomino	, olo		Г		
21	* >	ED DECENOSTED SW	N S	_	Signal Name [Specification]	N S		Signal Name [Specification]			
35	9	COMBI SW OUTPUT 5	2	BR/W	COMBI SW INPUT 5	299		INTERIOR ROOM LAMP POWER SUPPLY	T		
33	1/\L	COMBI SW OUTPUT 4	e	æ		22	>	BAT (FUSE)	_		
34	Α	COMBI SW OUTPUT 3	4	\leq	COMBI SW INPUT 3	29	g	PASSENGER DOOR UNLOCK OUTPUT	_		
35	R/L	COMBI SW OUTPUT 2	ιΩ	g	COMBI SW INPUT 2	09	M/B	TURN SIGNAL LH OUTPUT	_		
36	0/7	COMBI SW OUTPUT 1	9	L/R		61	M/L	TURN SIGNAL RH OUTPUT			
37	R/W	KEY SWITCH	7	W/R	<u>x</u>	63	æ	ROOM LAMP TIMER CONTROL			
38	0	IGN	ω	M/B		65	>	ALL DOOR LOCK OUTPUT	_		
33	_	CAN-H	6	~		99	L/B	DRIVER DOOR UNLOCK OUTPUT			
40	۵	CAN-L	9 ;	× ?	TIRE PRESS WARNING CHECK SW	67	а.	GND	_		
						23	-	THE REPORT OF THE PARTY OF THE	-		

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HEADLAMP SYSTEM

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73	74	9/	77	78	6/	80	81	82	83	84	87	91	92	93	94	92	96	6	98	66	100

	M77	WIRE TO WIRE	TH80FW-CS16-TM4		Signal Name [Specification]	_	1	ı	1	1	1	1	_	1	1	1	I	1	1	1	1	T	1	ı	1	ı	1	ı	t a	1	1	1	1	ı	-	-	-	I	_
LAMI	. No.	Name	Type		Color of Wire	B/0	œ	G/R	3 -	-	W/R	G/W	Y/L	м	GR/L	9/1	∑.	8 8	5 0	9 -	0/5	LG/R	GR/W	BR/Y	0/7	N	P/L	A .	72	9	5 >	. W/W	W/V	N/L	M/B	Y/R	ΓG	SHIELD	P/B
HEAD	Connector	Connector	Connector	H.S.	Terminal No.	-	2	ε,	. L	9	7	8	6	10	31	35	33	34	S S	8 8	44	45	46	47	48	49	20	6	23	5 6	29	g	19	62	63	29	69	70	71

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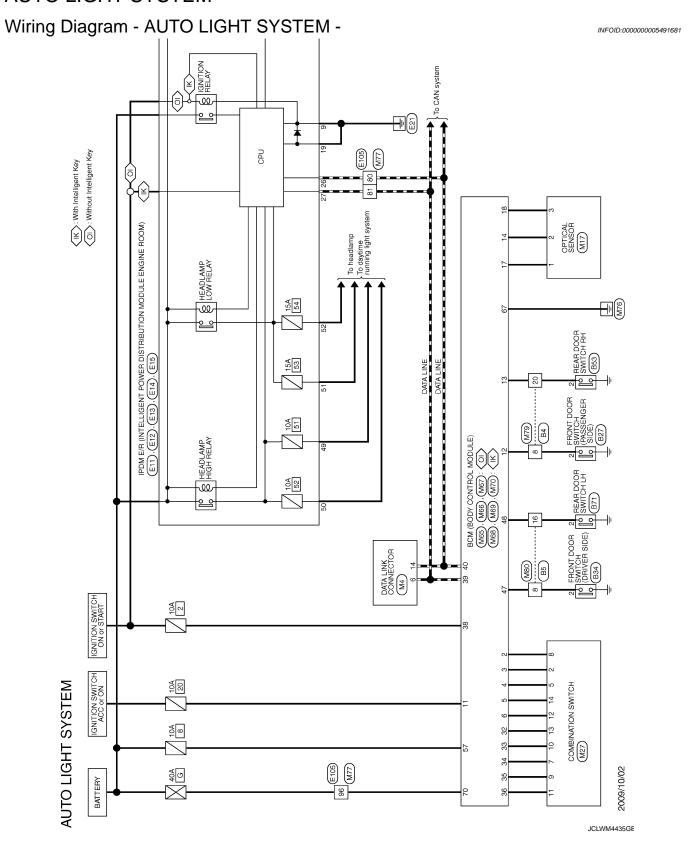
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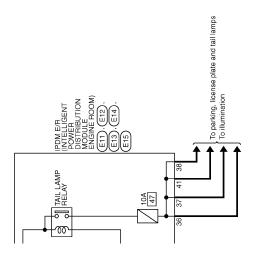
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	P LG/R	-		No. M17	Name OPTICAL SENSOR	Т	1 ype 1 KU3FW						J			of Wire	R/G	1/8	>			No M27	l		tor Type TH16FW-NH			L		1 2 3	7	1		Color		o 8	¥5 .	_ 3	* ≥	- a	3	W 00	BK/W	H/L	1/1	0/1	¥ 0	2 5												С	h.
	16			Connector No.	Connector Name		Confidential		手	Ż.						Š	-	2	e			Connector No		Connector Name	Connector	П	4		Ż.					Terminal		- (2	m =	t u	9	,	- 0	20 0	n Ç	2 ;	- Ş	13 12	4												D)
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						E105	WIRE TO WIRE	TH80MW-CS16-TM4			200 100 100 100 100 100 100 100 100 100	9 7 9	0 10 10 10 10 10 10 10 10 10 10 10 10 10	4 9 11 12 12 12 12 12 12 12 12 12 12 12 12			1	Signal Nam																								2	A] -	A -	1	A] -														J	
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EM	E14 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE						37 36 35	43 42 41 40				Signal Name [Specification]				1			1	1							T POWER DISTRIBITION MODILIE	ENGINE ROOM)					49 48 47	57 56	00 00			Signal Name [Specification]		1	1							- [With CVT]	- [With M/T]											N	1
AUTO LIGHT SYSTEM	E14 IPDM E/R (INTELLIGEN	ENGINE ROOM)	NS12FBR-CS				39 38	46 45 44 4				Signal														F15	IPDM F/R CINTELLIGEN	ENGINE ROOM)	NS16FW-CS				53 52 51 50	2 61 60 59	00 10 3			Signal																						Ν	l
ro Lig	stor No.	Connector Name	Connector Type			œ.						of Wire		>	ŀ	H	H	SB	H	9	╀	╀	0	1		Connector No.		Connector Name	Connector Type		_			1 (0	ଥ			nal Color		╀	: B	╀	+	+	+	+	╀	o ec	H											_	
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Collifector No.			SCENI NO.	MIDO	COLLINGS		VIDO	CONTRECTOR INC.	MIGS
Connector Name	me BCM (BODY CONTROL MODULE)	Conne	Connector Name	BCM (BODY CONTROL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)	Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	pe TH40FW-NH	Conne	Connector Type	FEA09FW-FHA6-SA	Connector Type	П	TH40FB-NH	Connector Type	FEA09FW-FHA6-SA
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Terminal Co No. of V	Color Signal Name [Specification]	Terminal No.	inal Color of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal Color No. of Wire	Signal Name [Specification]
2 BF	BR/W COMBI SW INPUT 5	43	Μ	BACK DOOR SW	2	BR/W	COMBI SW INPUT 5	43 W	BACK DOOR SW
e -	GR COMBI SW INPUT 4	44	g 8	REAR WIPER STOP POSITION	e =	땅 <u>-</u>	COMBI SW INPUT 4	44 45	REAR WIPER STOP POSITION
╁		4	╀	CENTRAL DOOR LINI OCK SW	٠.	٥	COMBI SW INPUT 2	╁	CENTRAL DOOR UNLOCK SW
H	_	47	٣	DRIVER DOOR SW	9	2	COMBI SW INPUT 1	٣	L
7 W	W/R KEY CYL UNLOCK SW	48	9/M	REAR LH DOOR SW	7	W/R	KEY CYL UNLOCK SW	48 W/G	
8 W	W/B KEY CYL LOCK SW	20	SB	A/C INDICATOR OUTPUT	œ	W/B	KEY CYL LOCK SW	54 L/W	
\dashv		54	L/W	REAR WIPER OUTPUT	6	ď	STOP LAMP SW 1	55 G	REAR DOOR UNLOCK OUTPUT
+	W/L REAR WINDOW DEFOGGER SW				0	M//A	TIRE PRESS WARNING CHECK SW		
+		إ			=	5	ACC F/B		
+		Conne	Connector No.	M67	15	88	PASSENGER DOOR SW	Connector No.	M70
5 -	GR/L REAK RH DOOK SW	Conne	Connector Name	BCM (BODY CONTROL MODULE)	2 5	7K/L	COTTON SENSOR	Connector Name	BCM (BODY CONTROL MODULE)
+	TIRE P	Conne	Connector Type	FFA09FB-FHA6-SA	ŧ ç	M/I	REAR WINDOW DEFORGER SW	Connector Type	FFA09FB-FHA6-SA
H	Ĺ				17	R/G	OPTICAL SENSOR POWER SUPPLY		
╁	Т	13	_		18	>	RECEIVER / SENSOR GND	· ·	
Н	BR KEYLESS ENTRY RECEIVER POWER SUPPLY	Ŧ	L V	Ш	19	BR	KEYLESS ENTRY RECEIVER POWER SUPPLY	ě	
+	╗		<u></u> _	56 57 58 59 60 61 62 63 64	20	7/2	KEYLESS ENTRY RECEIVER COMM	止 -	56 57 58 59 60 61 62 63 64
21 23	P/L NATS ANTENNA AMP.		_	65 66 67 68 69 70	21	P/L	NATS TRITTON DIOLENTO DOOR		65 66 67 68 69 70
t			IJ		77	2 2	SCOUDITY MISTOR AND	IJ	
$^{+}$	AN				24	GR/R	DONGLE LINK		
H		Terminal	inal Color	Constant North Nor	25	P	NATS ANTENNA AMP.	Terminal Color	Contraction of the Contraction o
\dashv	Y/G A/C SW [With auto A/C]	No	of Wire	\dashv	27	Y/R	A/C SW	No. of Wire	\dashv
$^{+}$	A/C	26	_	INTERIOR ROOM LAMP POWER SUPPLY	28	g/w	BLOWER FAN SW	26 L	INTERIOR ROOM LAMP POWER SUPPLY
28 G	8	21	┥	BAT (FUSE)	59	Ν	HAZARD SW	57 Y	BAT (FUSE)
+		29	+	DRIVER DOOR UNLOCK OUTPUT	31	g/B	DR DOOR UNLOCK SENSOR	+	PASS
+		09	+	TURN SIGNAL LH OUTPUT	32	D,	COMBI SW OUTPUT 5	+	
\dashv		<u>19</u>	+	TURN SIGNAL RH OUTPUT	33	٧/٢	COMBI SW OUTPUT 4	-	TURN SIGNAL RH OUTPUT
+		63	-	ROOM LAMP TIMER CONTROL	34	>	COMBI SW OUTPUT 3	_	ROOM LAMP TIMER CONTROL
34		92	4	ALL DOOR LOCK OUTPUT	32	R/L	COMBI SW OUTPUT 2	+	4
┥	R/L COMBI SW OUTPUT 2	99	+	PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT	36	9	COMBI SW OUTPUT 1	_	DRIVER DOOF
+	SOO	67	m	GND	37	0/5	SHIFT P	67 B	GND
+	V	89	+	POWER WINDOW POWER SUPPLY (IGN)	88	0	IGN F/B	+	+
+	IGN	69	M ;	POWER WINDOW POWER SUPPLY (BAT)	39	1	CAN-H	M/7 69	POWER WINDO
39	CAN-H	0/	-	BAT (F/L)	40		CAN-L	70	BAT (F/L)
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Connect	or Name	WIRE TO WIRE	9/	D/W	1	20	GR/L	Î	
Connector Type	or Type	TH80FW-CS16-TM4	77	GR/R	_	22	L	-	
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序			79	PC	1	24	G/W	1	
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			87	ŋ	-	Connector Type	r Type	TH16FW-NH	
Terminal		Simal Name [Specification]	91	œ	-	4			
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-	B/0	-	93	Υ) I		[
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33	200		Connector Name	or Name	WIRE TO WIRE	οα	BD/V	1 1	
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9	<u>></u>	1	^	8/B	ı				
9	W/L	1	8	SB	1				
83	M/B	1	=	B O	1				
67	Y/R	1	12	G/R	ı				
69	LG	_	13	R/G	1				
70	SHIELD		15	R/L					
71	P/B	-	16	GR/R	-				
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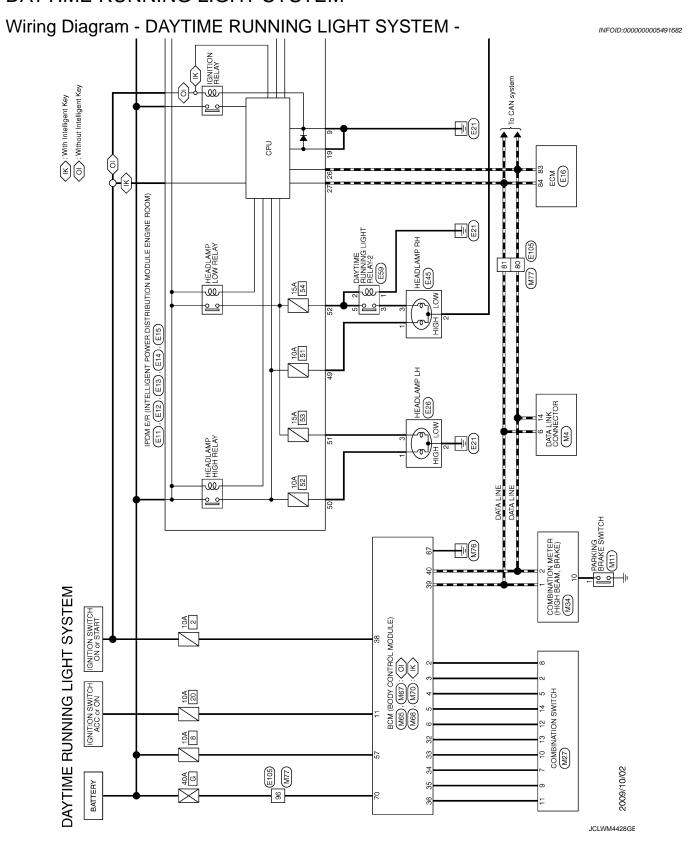
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В С D Е F G Н 10A J Κ M80 B5 EXL \mathbb{N} PARKING LAMP RH (E43) Ν PARKING LAMP LH E24 47 47 0 JCLWM4429GE Р

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DAYTIME RUNNING LIGHT SYSTEM	Connector No 1274	Connector No E11	Tourisms Calax
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	Terminal Color	Terminal	
No. of Wire Signal Name [Specification]			Connector No. E14
- ^ -	- 8	9 B/W –	
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r (N N N N N N N N -	I	
0 0 0	Т	Connector Name EVR (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	39 38
+	Connector Name REAR COMBINATION LAMP LH	And a discontinuity of the state of the stat	46 45 44 43 42 41 40
7 × ×	Connector Type RS06FB-PR	7	
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Connector No. B59		17 16 15	of Wire
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tion]	А
Signal Name [Specification]	В
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ification] infeation] infeation] ing light system] inght system] inght system] inght system]	Е
E43 PARKING LAMP RH RKOZFB Signal Name [Specification] [With day/time running light system][With day/time running light system][With day/time running light system][With day/time running light system][With day/time running light system]	F
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Commector Name Comm	Н
BNCSW ANGC-APS2 ANGC-APS2 ANGC-APS2 ONDA-APS2 ONDA-APS1 ANGC-APS1 ANGC-APS1 ANGC-APS1 ANGC-APS1 APS1 APS1 APS1 APS1 APS1 APS1 APS1	I
	J
100 SB 104 105	K
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Connector Name	M
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Ш	G LIGHT SYSTEM								
Connector No. E105		70	Ś	1	Connector No.	M11	Connector No.	. M34	
Connector Name WIRE TO WIRE		72	ag GR	1 1	Connector Name	PARKING BRAKE SWITCH	Connector Name	me COMBINATION METER	
Connector Type TH80MW-CS16-TM4	6-TM4	73	Н	1	Connector Type	P01FB-A	Connector Type	pe TH40FW-NH	П
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╀	1	88	. >	1	Connector No.	M27	4	VEHICLE SPEED SIGNAL (8-PILLSE)]
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$\frac{1}{1}$	1	25	: >	1	Connector Name	COMBINATION SWITCH	t	L	Τ
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	1	,	Г				H	V/W AMBIENT SENSOR SIGNAL	
36 BR	1	Conne	Connector Name	DATA LINK CONNECTOR	Terminal Color		H		
39 SB	1	Conne	Connector Type	BD16FW	_	Signal Name [Specification]	H		l
44 R	1	[1		1	WASHER (RR)	22	B GROUND	
_	1				2 GR	INPUT 4	23	B GROUND	
L	í	T	Ŀ		3 F	WASHER (FR)	24	V FUEL LEVEL SENSOR GROUND	
	ı	Ĭ	2	14 16	4 W		25	B VDC GROUND	
48 L	1		4/		5 L/Y	INPUT 3	27	LG BATTERY POWER SUPPLY	
49 Y	1			1456/8	9 9	GND	28	GR IGNITION SIGNAL	
90 W	-				7 W	OUTPUT 3	29	BR PASSENGER SEAT BELT WARNING SIGNA	3NAL
51 BR	- [With CVT]				8 BR/W		Н	Н	IGNAL
	- [With M/T]	Terminal	_	Simal Nama [Spacification]	9 R/L	OUTPUT 2	35	ENGINE C	SNAL
	-	No.	of Wire	Ografia rame [Openiication]	10 Y/L		38	GR ALTERNATOR SIGNAL	
-	- [With CVT]	4	В	1	Н				
54 0	- [With M/T]	2	В	-	12 L/R				
57 LG	-	9	7	-	13 LG	0			
29 T	_	7	GR/R	_	14 G	INPUT 2			
+	1	80	0	-					
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62 W	1	16	LG/R	1					
63 L	1								
_	- [With CVT]								
\dashv	- [With M/T]								
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88 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	G
	Н
COMEIS WINDOW CONTROL MODULE) Signal Name [Specification] FOWER WINDOW POWER SUPPLY (IGN) POWER WINDOW POWER SUPPLY (IGN) POWER WINDOW POWER SUPPLY (IGN) FOWER WINDOW POWER SUPPLY (IGN) FOR SUPPLY (IGN) FOWER WINDOW POWER SUPPLY (IGN) FOWER SUPPLY (IG	I
REAUGEB-FHA6-SA	J
Connector No. Connector No. Connector No. Connector Type Connector Type Connector No. Connector	К
	EXL
Connector Name	M
Medic Medi	N
Commetter Name Commetter Name Commetter Name Commetter Name Commetter Type Comm	0
DAYT Comment	0
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< DTC/CIRCUIT DIAGNOSIS >

шΙ	1		2		
Connector No. M77	+	1	Connector No. T1	1 GR	1
Connector Name WIRE TO WIRE	74 L/Y	1 1	Connector Name WIRE TO WIRE	2 B	-
Connector Type TH80FW-CS16-TM4	Н	-	Connector Type RH10MB		
4	+	1	1	Connector No. T4	
	79 LG	-	47	Connector Name SIDE MARKI	SIDE MARKER LAMP LH
200	2 8		H.S.	Connector Type HS02FG-W	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	82 GR	1	(12345	1	
T	H	-	01 8 8 2 10	修	
W W W	84 B	1		S H	[
	+	-	L		
Terminal Color Signal Name [Specification]	+	-	Terminal Color Signal Name [Specification]	ification]	(12)
_	92 0		†	,)
- C	94 B/B		- C		
ľ	95 L/W	1	- B	Color	3
H	┝	1	- W L	No. of Wire	Signal Name [Specification]
H	97 L	-			1
1 1 9	98 BR/W			2 B	1
7 W/R -	H	1	Connector No. T2		
8 G/W	┝	1			
H			Connector Name LICENSE PLAIE LAMP LH	Connector No. T5	
⊢	_		Connector Type RK02FBR		DO CHA L CHACK
31 GR/L -	Connector No.	M80	ſ	Connector Name 51DE MARK	NEW CAMPIN RA
32 L/B -	Nome Nome	E E E E E E E E E E E E E E E E E E E	《	Connector Type HS02FG-W	
L	Connector Name	WIRE TO WIRE	≪	1	
┝	Connector Type	TH16FW-NH			
35 BR –	[2	=======================================	
L	C C		-	H.S.	Ę
L	٤	[(A)
H	e I				
45 LG/R –		8 7 6 5 4 3 2 1	nal	(footion)	
Н		16 15 14 13 12 11 10 9	No. of Wire		
\dashv			1 W -	Terminal Color Sig	Signal Name [Specification]
			2 BR –	of Wire	
4	Terminal Color	Signal Name [Specification]		1 GR	1
-	No. of Wire			2 B	_
	1 L/B	-	Connector No. T3		
Н	2 GR/L	-	HO GWY I STY IC SOLVE OF THE CONTROL		
Н	2 M	-			
GR	7/M 9	1	Connector Type RK02FBR		
>	8 BR/Y	1			
	t	1	*		
t	t				
H	l m				
t	t		2		
= = = = = = = = = = = = = = = = = = =	16 W/G		1		
╁	1				
١	_)		
SHIELD	_				
- E/B	_		Signal Name [Specification]	ification]	
┥	_		of Wire		

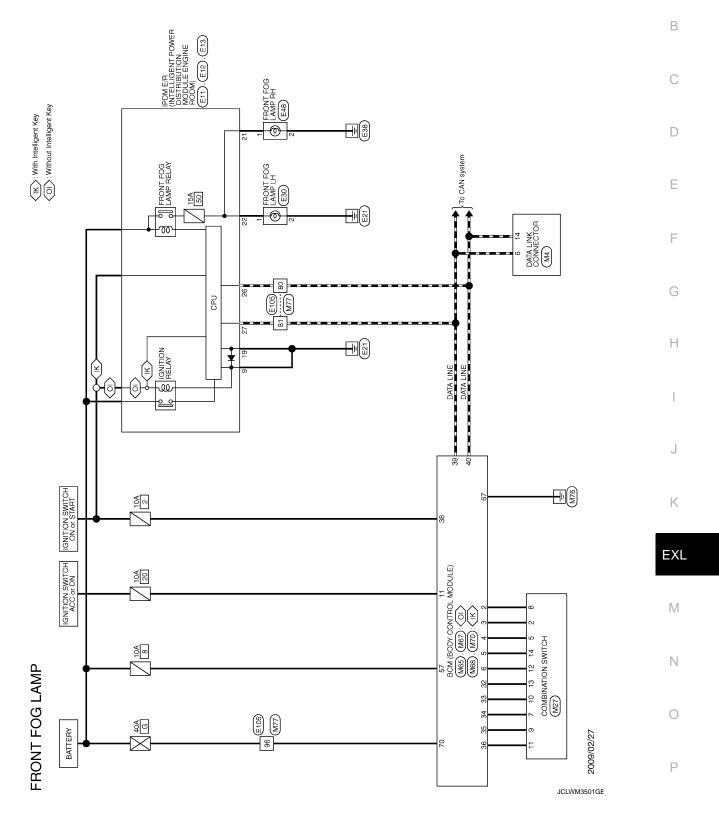
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FRONT FOG LAMP SYSTEM

Wiring Diagram - FRONT FOG LAMP -



FRONT FOG LAMP SYSTEM

70 SHELD	~ L P G O G ×	> 0 88 × C < × × × 8 89 № 89 ×	Connector No. M4 Connector Name DATA LINK CONNECTOR Connector Type BD16FW H.S H.S H.S	Terminal Color Signal Name (Specification)
Connector No. E105 Connector Name WIRE TO WIRE Connector Type TH80MM-CS16-TM4	8 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Color Signal Name [Specification] Color V V V V V V V V V	∞ % a > % 8 % × > a ≥ ¬ >	BR
or Signal Name [Specification]	S 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Connector No. E30 No.	Terminal Color Signal Name [Specification] 33 1 2 W	Terminal Color Signal Name (Specification) 59 51 54 54 54 54 54 54 54
FRONT FOG LAMP Connector No. Et II Connector Name Prove to RUBBILIDENT POWEN DISTIBILITION MODULE BOARD FOOM. Connector Type MOGFB-LC	H.S. [11 10 9] [14 13 12]	Terminal Color Signal Name [Specification] Color No. of Wire Specification] O O O O O O O O O	17 16 15 15 15 15 15 15 15	Connector No. E13 Connector Name Perul an Interpretational Connector Type THIZFW-NH THIZFW-NH LIS. 28 27 26 25 24 23 34 33 32 31 30 29

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FRONT FOG LAMP SYSTEM

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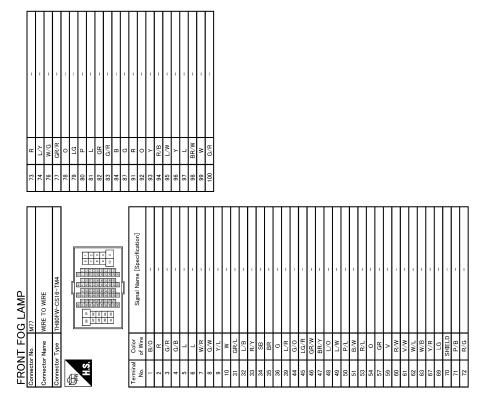
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< DTC/CIRCUIT DIAGNOSIS >

	FRON	FRONT FOG LAMP	LAMP					•
	Connector No			10 W/L	REAR WINDOW DEFOGGER SW ACC	66 67 B	PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT GND	36 L/O COMBI SW OUTPUT 1 37 G/O SHIFT P
	Connector Name		COMBINATION SWITCH	Ħ	PASSENGER DOOR SW	H	POWER WINDOW POWER SUPPLY (IGN)	0
	Connector Type	7	TH16FW-NH	13 GR/L	REAR RH DOOR SW	M/7 69	POWER WINDOW POWER SUPPLY (BAT)	39 L CAN-H
	1			15 L/B	TIRE PRESS WARNING CHECK SW	> 0/	BAI (F/L)	-
	\ = =		[Н	OPTICAL SENSOR POWER SUPPLY			
	115	<u>[</u>	,	\dashv	RECEIVER/SENSOR GND	Connector No.	M68	Connector No. M70
		-	2 d	19 BR	KEYLESS ENTRY RECEIVER POWER SUPPLY	Connector Name	BCM (BODY CONTROL MODULE)	Connector Name BCM (BODY CONTROL MODULE)
		<u> </u>	8 9 10 11 12 13 14	21 P/L	NATS ANTENNA AMP.	Connector Type	TH40FB-NH	Connector Type FEA09FB-FHA6-SA
				Н	SECURITY INDICATOR LAMP	4		
	lal	Color	Signal Name [Specification]	0	DONGLE LINK	彦		彦
	o O	of Wire	(cd) chicken	25 LG	NATS ANTENNA AMP.	HS.		
	- ~	0 8	WASHER (RR)	20 GK	A / C SW IWith auto A / C]	1 2 3	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	26 27 28 29 60 61 62 63
	3 6	<u></u>	WASHER (FR)	27 Y/R	A/C SW [With manual A/C]	21 22 23	24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	
	4	3	NDI	H	BLOWER FAN SW			
	2	S	INPUT 3	H	HAZARD SW			
	9	В	GND	31 G/Y	FR DEFROSTER SW	la l	Simal Nama [Spacification]	-e
	7	W	OUTPUT 3	32 LG	COMBI SW OUTPUT 5	No. of Wire	Ognar valle Lopconcaron	No. of Wire
	8	BR/W	INPUT 5	33 Y/L	COMBI SW OUTPUT 4	2 BR/W	COMBI SW INPUT 5	56 L INTERIOR ROOM LAMP POWER SUPPLY
	6	R/L	OUTPUT 2	34 W	COMBI SW OUTPUT 3	3 GR	COMBI SW INPUT 4	>
	10	1//L	OUTPUT 4	35 R/L	COMBI SW OUTPUT 2	4 L/Y	COMBI SW INPUT 3	G PASS
	11	0/7	OUTPUT 1	36	COMBI SW OUTPUT 1	5	COMBI SW INPUT 2	W/B
	12	L/R	INPUT 1	37 R/W	KEY SWITCH	6 L/R	COMBI SW INPUT 1	61 W/L TURN SIGNAL RH OUTPUT
	13	ÐΠ	OUTPUT 5	H	IGN	7 W/R	KEY CYL UNLOCK SW	BR
	14	9	INPUT 2	39 F	CAN-H	8 W/B	KEY CYL LOCK SW	>
				40 P	CAN-L	6	STOP LAMP SW 1	66 L/B DRIVER DOOR UNLOCK OUTPUT
						10 V/W	TIRE PRESS WARNING CHECK SW	В
	Connector No.	r No. M65	2			11 L/7	ACC F/B	_
	Nomo	П	BCM (BODY CONTBOL MOBILE)	Connector No.	M67	12 SB	PASSENGER DOOR SW	69 L/W POWER WINDOW POWER SUPPLY (BAT)
	OOLINGO		m (BOD) CONTINCE MODOLE)	Conpector Name	BCM (BODY CONTROL MODILIE)	Ť	REAR RH DOOR SW	70 Y BAT (F/L)
	Connector Type	П	TH40FW-NH	OOIIIIGOOO MAIIIIG	DOM (DOD) COMINGE MODOLE)	Н	OPTICAL SENSOR	
	q			Connector Type	FEA09FB-FHA6-SA		REAR WINDOW DEFOGGER SW	
	季			q		17 R/G	OPTICAL SENSOR POWER SUPPLY	
	S.			李		+	RECEIVER / SENSOR GND	
		10015	7 8 9 10 11 10 10 10 10 10 10 10 10 10 10 10	SE	20 00 70 00 00 00 00	+	KEYLESS ENTRY RECEIVER POWER SUPPLY	
		21 22 23 24 25 2	32 33	Ľ	56157 58 59 60 61 62 63 64	+	KEYLESS ENIRY RECEIVER COMM	
	-1				65 66 67 68 69 70	21 P/L	NATS ANTENNA AMP.	
				ij		$^{+}$	SECULDITY INDICATOR LAND	
		-				+	SECURIT INDICATOR LAWF	
		of Wire	Signal Name [Specification]	Tomorphis		#7 J	NATS ANTENIA AND	
	t	W/ da	COMPLEM INBITE	_	Signal Name [Specification]	╀	A / S SW	
	7 0	* G	COMBI SW INFOL S	t	Viddig drawer ascord designation	t	A/C SW	
	? •	5 -	COMPLEM INPUT 4	200	INTERIOR ROOM LAWE FOWER SUFFET	+	DECWER FAIN SW	
	- 4	5 (S IO THE SWIND OF	0/-	DEN (1935)	+	WE CHEZOLI	
	, "	, 4	COMBI SW INPIT 1	╁	THEN SIGNAL I HOLITBILE	t	COMBI SW OUTBUT 5	
	, _	W/R	KEY CYL UNLOCK SW	61 W/L	TURN SIGNAL RH OUTPUT	╀	COMBI SW OUTPUT 4	
		M/B	KEY CYL LOCK SW	t	ROOM LAMP TIMER CONTROL	34 W	COMBI SW OUTPUT 3	
	5	2 00	STOP I AMP SW	╀	ALL DOOR LOCK OLITPUT	35 B/I	COMBI SW OUTPUT 2	
	6	4	STOP LAWF SW	>	ALL DOOR LOCK COINGI	┨	COMBI SW COLFOL 2	
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Revision: 2009 October EXL-93 2010 Z12



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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM < DTC/CIRCUIT DIAGNOSIS > TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM Α Wiring Diagram - TURN AND HAZARD WARNING LAMPS -INFOID:0000000005491684 В To CAN system C #1@/W REAR COMBINATION LAMP RH (TURN SIGNAL) (859) D ⟨IK⟩: With Intelligent Key ⟨OI⟩: Without Intelligent Key DATA LINK CONNECTOR (M4) (M) 88 Е SIGNAL LAMP SIGNAL LAMP (E40) F COMBINATION METER (TURN, BUZZER) ⊚ | SIGNAL LAMP RH E46 G M77 BCM (BODY CONTROL MODULE) (M65), (M67): < OI > (M68), (M70): < IK > Н REAR COMBINATION LAMP LH (TURN SIGNAL) (880) IGNITION SWITCH ON or START J 10A SIDE TURN SIGNAL LAMP LH (E23) TURN SIGNAL AND HAZARD WARNING LAMPS K EXL E105 (M77) M E105 M77 BATTERY 7 10 13 12 14 5 COMBINATION SWITCH (M27) Ν

EXL-95 Revision: 2009 October 2010 Z12

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Connector Name Color Col	Terminal Color Signal Name [Specification] 1 L 2 B/W	HS.	Terminal Color Signal Name [Specification] No. of Wire Signal Name [Specification] 1 W -	<u></u>	Terminal Color Signal Name [Specification]
Signal Name Specification Specific	<u> </u>	Color of Wire Y	п п		1
No No No No No No No No	TURN SIGNAL AND HAZARD WARNING B5 Connector No. B5 Connector Name WRE TO WIRE COnnector Type THISMW-NH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 16 16 16 16 16 16	al Color of Wire V V V V V W	LG R R R R R R R R R R R R R R R R R R R	Connector No. B99 Connector Name REAR COMBINATION LAMP RH Connector Type RS06FB-PR	of Wire of Wire V R W R B Y R

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

KING BRAKE SWITCH SIGNAL MINATION CONTROL SIGNAL ACO POWER SUPPLY SHER LEEL SWITCH SIGNAL ACO FOWER SUPPLY SHER LEEL SWITCH SIGNAL AMBIENT SENSOR SIGNAL MISLEY SENSOR SIGNAL GROUND GR	A B
PASSEN NVO AUTON	С
10 SB 11 G/R 13 G/R 14 G/R 15 G/R 16 G/R	D
12 13 14 15 15 15 15 15 15 15	Е
THI 6FW-NH	F
N.N. N.	G
Commercial Commercial Commercial No.	Н
	I
M4 M4 DATA LINK CONNECTOR BD16FW Signal Name [Sp.	J
NG LAMPS	K
	EXL
Fundamentary Name First Connector Name	M
WINE TO WIFE THBOMM-CSIC	Ν
Connector Name Connector Name Connector Name Connector Name Connector Type Conn	0
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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

Connector No	Connector No Mes AND HAZARD WARNING LAMPS	Connector No	ر ا	Ms7	5	œ.	PASSENGER DOOR SW	69 I /W POWER WINDOW POWER SLIPPLY (RAT)
				Т	13	GR/L	REAR RH DOOR SW	<u>;</u>
Connector Name		Connect	Connector Name		14	R/1	OPTICAL SENSOR	-
Connector Type	pe TH40FW-NH	Connect	Connector Type	FEA09FB-FHA6-SA	15	M/L	REAR WINDOW DEFOGGER SW	
		Œ			18	8/G >	OPTICAL SENSOR POWER SUPPLY RECEIVER / SENSOR GND	
		Į.			10	. H	KEYLESS ENTRY RECEIVER POWER SUPPLY	
<u>2</u>	∦	Ź	ī	56 57 58 59 60 61 62 63 64	20	П	KEYLESS ENTRY RECEIVER COMM	
- 5	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 24 25 26 27 28 29 20 31 31 30 33 34 35 36 37 38 39 40			65 66 67 68 69 70	21	P/L	NATS ANTENNA AMP.	
]		22	M/G	KEYLESS ENTRY RECEIVER RSSI	
					23	<u>ک</u> و	SECURITY INDICATOR LAMP	
F			⊢	L	24	GR/R	DONGLE LINK	
No.	Olor Signal Name [Specification]	No.	of Wire	Signal Name [Specification]	27	2 %	NATS ANTENNA AMP.	
l ^m	BR/W COMBI SW INPUT 5	98	-	INTERIOR ROOM LAMP POWER SUPPLY	28	M/S	BLOWER FAN SW	
Ľ		23	>	BAT (FUSE)	29	N/	HAZARD SW	
Ľ	L/Y COMBI SW INPUT 3	29	ΓB	DRIVER DOOR UNLOCK OUTPUT	31	G/B	DR DOOR UNLOCK SENSOR	
Н	G COMBI SW INPUT 2	09	W/B		32	ΓG	COMBI SW OUTPUT 5	
_		9	W/L		33	Y/L	COMBI SW OUTPUT 4	
>	*	63	띪	æ	34	×	COMBI SW OUTPUT 3	
5	<u>×</u>	92	>	ALL DOOR LOCK OUTPUT	32	R/L	COMBI SW OUTPUT 2	
-	1	99	ر ا	PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT	36	0 :	COMBI SW OUTPUT 1	
1	KEAK WINDO	9 6	n .	GND GRND	£ 5	0/0	A LARS	
1	CP ACC	80 8	- \w	POWER WINDOW POWER SUPPLY (IGN)	38	o -	IGN F/B	
1		99	,	+	60	١,	CANT	
5		9	>	BAI (F/L)	40	<u>-</u>	CAN-L	
1	4							
1	4	4				1		
4	OPT	Connector No	or No.	M68	Connector No.		M70	
Ţ	V KECEIVER/SENSOR GND	Connect	Connector Name	BCM (BODY CONTROL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)	
1	BK KEYLESS ENTRY RECEIVER POWER SUPPLY	topuro	Connector Time	TUAOCO-NI	Connector Time	Т	CEACOLD CLASS CA	
Τ	+		<u> </u>	TINI-GLOPUL		7	EAGST D-T TAG - SA	
<u> </u> "	S				Œ			
Ö	_				1	Į		
Ľ		ζ. Έ			Ν	<u>1</u>	56 57 58 59 60 61 62 63 64	
Ľ	GR THERMO CONTROL AMP.		1 2	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20		2 19	66 67 69 60 70	
Ĺ	Y/G A/C SW [With auto A/C]		21 22 2	23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40		3	60 00 70 00	
Ĺ	Y/R A/C SW [With manual A/C]							
g	G/W BLOWER FAN SW							
Ľ	L/W HAZARD SW	Terminal	_	Simpl Name [Specification]	la l	Color	Circul Nama [Coacification]	
ن		No.	of Wire		No.	of Wire	oignai ivalile [opecilication]	
		2	BR/W		26	_	INTERIOR ROOM LAMP POWER SUPPLY	
	Y/L COMBI SW OUTPUT 4	3	GR	COMBI SW INPUT 4	22	٨	BAT (FUSE)	
Ц		4	\sim		59	5	PASSENGER DOOR UNLOCK OUTPUT	
4	R/L COMBI SW OUTPUT 2	5	g	COMBI SW INPUT 2	09	W/B	TURN SIGNAL LH OUTPUT	
Ľ	CON	9	L/R		61	W/L	TURN SIGNAL RH OUTPUT	
L.	R/W KEY SWITCH	7	W/R	X	63	BR	ROOM LAMP TIMER CONTROL	
	O IGN	8	M/B	KEY CYL LOCK SW	65	>	ALL DOOR LOCK OUTPUT	
4		6	œ		99	L/B	DRIVER DOOR UNLOCK OUTPUT	
╝	P CAN-L	0	<u>×</u>	TIRE PRESS	67	<u>m</u>	GND	
		1	Γ	ACC F/B	89	_	POWER WINDOW POWER SUPPLY (IGN)	

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TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

	Connector No. M77	No.	M77	73	2 ع	1 1
TH80PW-CS16-TM4	onnecto,	r Name	WIRE TO WIRE	76	M/G	-
Signal Name (Specification) Sign	nnecto	r Type	TH80FW-CS16-TM4	77	GR/R	1
No. Connector Name	1	_		78	0	1
Signal Name (Specification) Sign			85 651 83 81 71 81 51 61 81	80	2 a	
Color Signal Name (Specification) Color Color Signal Name (Specification) Color Co	Į.		200	81		ı
Color Colo			2 2 2	82	GR	-
Color Signal Name (Specification) Order Or			5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	83	G/R	-
Signal Name (Specification) Sign			8 2 2 3 8 8	84	В	1
GNWe Signal Name (Specification) 91 R R R R R R R R R R R R R R R R R R	Ī	L		87	g	I
Name	rminal		Signal Name [Specification]	91	۵,	1
Compact of the part of the p	<u>.</u>	or wire		92	>	1 1
G/R	- ~	2	1	94	. B/B	1
GVB	~	G/R	1	92	L/W	1
L	4	g/B	1	96	>	1
N. L S S BR/W G/W	5		1	97	_	1
W/R	9	_	1	86	BR/W	1
GAW	7	W/R	1	66	*	1
W1L W1L W1L W1R	8	G/W		100	G/R	-
WW - Connector Name WIRETO LUB - Connector Name WIRETO RNY - Connector Type THIFFWH SB - - THIFFWH GRW - - THIFFWH GRW - - THIFFWH BRAY - - TW LUW - - TW LVW - - TW PAL - - - BRAY - - - BNA - - - CGR - - - WA - - - NW - - - VW - - - VM - - - VW - - - VW - - - VM - - - VM	6	Y/L	1			
GR/L	10	W	1			
L/B	31	GR/L	1	Connecto	r No.	M80
SRY Connector Type THIEFFU- ERR Connector Type THIEFFU- CV C C C C CK C C C C	32	L/B	1	Connecto	Name	WIRE TO WIRE
SB	33	R/Y	1			
BR C C C C C C C C C	34	SB	1	Connecto	r Type	TH16FW-NH
Color Colo	35	BR	ı	q		
150 150	36	. e	1	事		
LVR Color	68	L/R	1	HS		7
Color Colo	44	0/9	1			7 6 5 1 3
LV	£ 5	7/5/2 20/2	1			y :
L/W	40	W/ND	1			14 13 12 11 10
LW C C C C C C C C C	40	P C	1			
LVW	48	0	1			
B-W	49	M/7	1	erminal	Color	Signal Name [Specification]
R-V	2 2	7/2	1	· No	a Mile	
C C C C C C C C C C	5	M/9	1	-	E/B	1
C C C C C C C C C C	2	١٨,	1	7	J/15	1
No.	54	0	-	5	>	1
No.	57	GR	1	9	M/L	ı
R/W - 9 R/Y V/W - 11 0 W/L - 13 BR/W W/B - 14 W/B I/R - 16 W/G SHELD - - P/G P/B - - R/G R/G - - -	59	>	-	80	BR∕Y	1
W/W - 11 0 W/Z - 13 BR/W W/B - 14 W/B LG - 14 W/G SHFLD - 16 W/G P/B - 16 W/G R/G - 16 W/G	09	R/W	1	6	R/Y	-
W/L - 13 BR/W W/B - 14 W/B Y/R - 16 W/G LG - 16 W/G SHELD - 17 17 P/B - 17 17 R/G - 17 17	61	N/W	-	11	0	-
W/VB - 14 W/VB 1/A - 16 W/C 1/A - 16 W/C SHELD - - P/B - - R/G - -	62	W/L		13	BR/W	1
16 1 16 1 16 1 16 1 16 1 16 1 16 1 16	63	M/B	1	14	M/B	1
- 8/4 - 8/4ETD - 9/3 - 971	67	Y/R	1	16	D/W	ı
SHIELD P/B R/G	69	5J	1			
P/B R/G	07	SHIELD	1			
Г	7.1	P/B				
	72	R/G				

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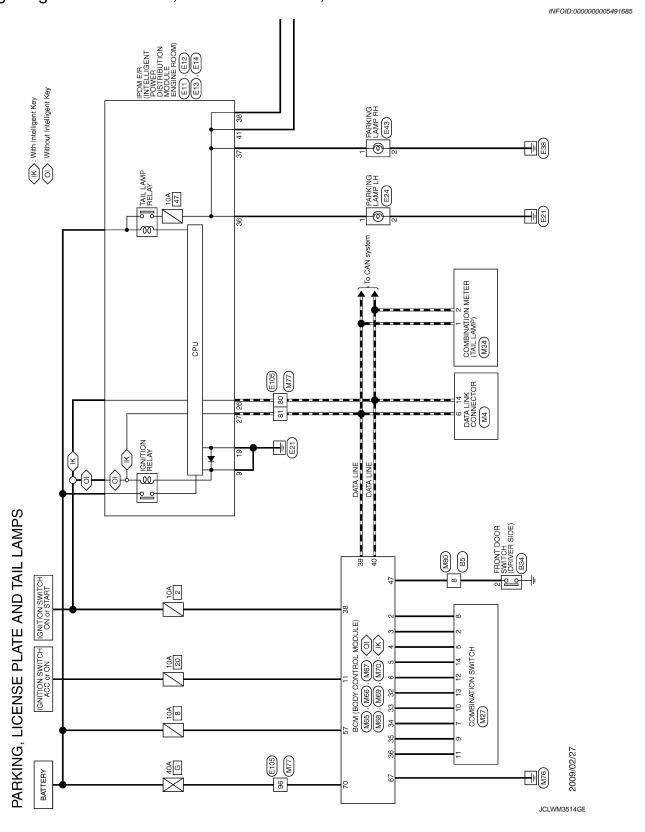
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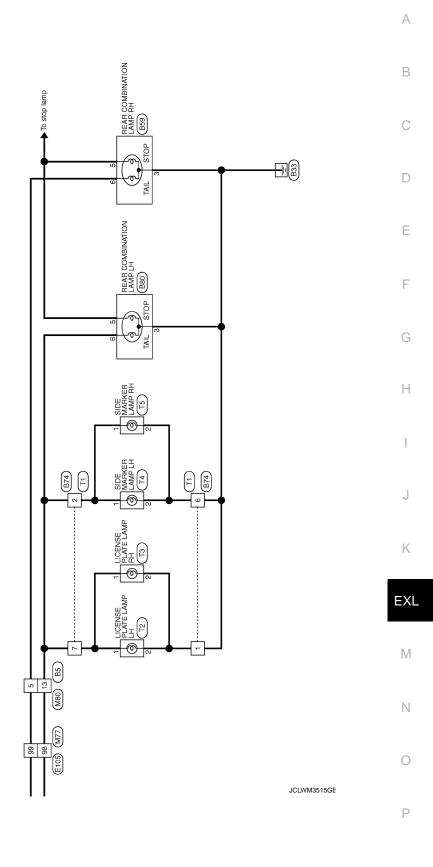
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PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS SYSTEM Wiring Diagram - PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS -





< DTC/CIRCUIT DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL	LAMPS		
Connector No. B5	Connector No. B59	Connector No. B80	lal
Connector Name WIRE TO WIRE	Connector Name REAR COMBINATION LAMP RH	Connector Name REAR COMBINATION LAMP LH	No. of Wire
Connector Type TH16MW-NH	Connector Type RS06FB-PR	Connector Type RS06FB-PR	- B/W
ą.	Ą	á	21 W -
H.S.	HS.	E HS.	22 V
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	(3 1) (6 5 4)	(3 t) (6 5 t)	
nal Color			Connector Type TH12FW-NH
No. of Wire Signal Name [Specification]	No. of Wire Signal Name [Specification]	No. of Wire Signal Name [Specification]	F
2 GR –		3 - 8	/
+	≥ 0	a (27 26 25 24
M 9 8	x >	6 GR	34 33 32 31 30 29
Н	$\left\{ \right.$	┨	- 1
0 0 0	Counceber No. 1074	Connector No Est	Terminal Color Signal Name [Specification]
+	Т		t
Н	. 1		Н
	Connector Type RH10FB	Connector Type M06FB-LC	۵.
Connector No. B34			2/ L = =
١,			30 SB –
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Connector Type A03FW	ر ا لا		0 (
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K	⊢	- 0	
	l erminal Color Signal Name [Specification] No. of Wire	Signal Name [Specification] Of Wire Of Wire Signal Name Specification]	
7	8 5	B/W	
	2 GR = -	10 L	
Terminal Color Signal Name [Specification]	GR	1	
		N	
		1	
		Connector Type NS08FBR-CS	
		修	
		H.S.	
		22 21 20 19 18	

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MA		АВ
Connector No. M4		C D
- (With CVT) - (With CVT) - (With M/T) - (Wi		E
44 44 48 49 4 4 49 4 4 49 4 4 4 4 4 4 4		G
Signal Name [Specification] WIRE CS16-TM4 CS16-TM4 CSnal Name [Specification]		Ι
Connector Name PARKING LAMP RH		J K
		EXL
C		N
PARKIN Commedor Na Commedor Typ Signature Sign	JCLWM4455GE	O P

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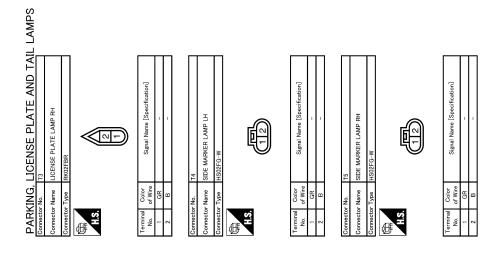
Connector No.	Sonnector No. M34	Connector No.	or No.	M65	Connector No.		M66	Connector No.	No. M68	89
COMBINA	COMBINATION METER	Connect	Connector Name	BCM (BODY CONTROL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)	Connector Name		BCM (BODY CONTROL MODULE)
TH40FW-NF	HN	Connector Type	or Type	TH40FW-NH	Connector Type		FEA09FW-FHA6-SA	Connector Type	П	TH40FB-NH
		E SH			優 SH	L		優 SH		
35 15	13 11 10 9 8 7 6 5 4 3 2 1 31 29 28 27 28 25 24 23 22 21		1 2 3	4 5 6 7 8 9 9 11 12 11 14 15 16 17 18 19 10 10 12 12 12 12 13 14 15 16 17 18 19 10 10 12 12 12 12 12 12 12 12 12 12 12 12 12		<u>1</u>	41 42 43 44 45 46 47 48 49 50 51 52 53 54 55		1 22 23 24 25	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 5 18 27 28 28 30 31 32 33 34 35 36 37 38 39 40
	Signal Name [Specification]	Terminal No.	of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal	Color of Wire	Signal Name [Specification]
	CAN-H	2	BR/W	COMBI SW INPUT 5	t	*	BACK DOOR SW	t	BR/W	COMBI SW INPUT 5
	CAN-L	က	GR	COMBI SW INPUT 4	44	LG	REAR WIPER STOP POSITION	3	GR	COMBI SW INPUT 4
	VEHICLE SPEED SIGNAL (2-PULSE)	4	Š	COMBI SW INPUT 3	45	GR	CENTRAL DOOR LOCK SW	4	S	COMBI SW INPUT 3
	VEHICLE SPEED SIGNAL (8-PULSE)	2	ى -	COMBI SW INPUT 2	46	BR S	CENTRAL DOOR UNLOCK SW	ı, cı	ص ا	COMBI SW INPUT 2
	FUEL LEVEL SENSOR SIGNAL AIR BAG SIGNAI	0 -	× ×	KEY CYLLINI OCK SW	44/	M/G	REAR I H DOOR SW	0 1	W/R	KEY CYLLINI OCK SW
ò	OVERDRIVE CONTROL SWITCH SIGNAL	. @	M/B	KEY CYL LOCK SW	20	SB	A/C INDICATOR OUTPUT	. 00	M/B	KEY CYL LOCK SW
SEAT	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	6	œ	STOP LAMP SW	24	N/	REAR WIPER OUTPUT	6	œ	STOP LAMP SW 1
	PARKING BRAKE SWITCH SIGNAL	2	W/L	REAR WINDOW DEFOGGER SW				10	W/W	TIRE PRESS WARNING CHECK SW
_	BRAKE FLUID LEVEL SWITCH SIGNAL	11	Γ	ACC				=	Γ/Y	ACC F/B
U	ILLUMINATION CONTROL SIGNAL	12	SB	PASSENGER DOOR SW	Connector No.		M67	12	SB	PASSENGER DOOR SW
U	ACC POWER SUPPLY	13	GR/L	REAR RH DOOR SW	Connector Name		BCM (BODY CONTROL MODILIE)	13	GR/L	REAR RH DOOR SW
	WASHER LEVEL SWITCH SIGNAL	14	Ρ,	OPTICAL SENSOR		Т		14	L/B	OPTICAL SENSOR
	SECURITY SIGNAL	12	M//	TIRE PRESS WARNING CHECK SW	Connector Type	╗	FEA09FB-FHA6-SA	12	N/L	REAR WINDOW DEFOGGER SW
	AMBIENT SENSOR SIGNAL	1	S	OPTICAL SENSOR POWER SUPPLY	4			17	R/G	OPTICAL SENSOR POWER SUPPLY
	AMBIENI SENSOR GROUND	2 :	> {	RECEIVER/SENSOR GND	李			82 5	+	RECEIVER / SENSOR GND
	GROUND	20	ž Š	KEYLESS ENIRY RECEIVER POWER SUPPLY KEYLESS ENTRY RECEIVER COMM	H.S.	7	57 58 59 60 61 62 63 64	50 2	¥	KEYLESS ENTRY RECEIVER POWER SUPPLY KEYLESS ENTRY RECEIVER COMM
L	GROUND	21	P/L	NATS ANTENNA AMP.		3 0	- 66 67 69 67	21	P/L	NATS ANTENNA AMP.
	FUEL LEVEL SENSOR GROUND	23	R/Y	SECURITY INDICATOR LAMP		Ó	00 0/ 00	22	D/M	KEYLESS ENTRY RECEIVER RSSI
	VDC GROUND	24	GR/R	DONGLE LINK				23	R/Y	SECURITY INDICATOR LAMP
	IGNITION SIGNAL	96	2 8	THERMO CONTROL AMP	Terminal	Color		24	200	NATS ANTENNA AMP
PA	PASSENGER SEAT BELT WARNING SIGNAL	27	5/A	A/C SW [With auto A/C]	ON	of Wire	Signal Name [Specification]	27	Y/R	A/C SW
Ă	A/C AUTO AMP. CONNECTION RECOGNITION SIGNAL	27	Y/R	A/C SW [With manual A/C]	26	7	INTERIOR ROOM LAMP POWER SUPPLY	28	M/b	BLOWER FAN SW
NE	ENGINE COOLANT TEMPERATURE SIGNAL	28	W/D	BLOWER FAN SW	22	У	BAT (FUSE)	59	M/T	HAZARD SW
U	ALTERNATOR SIGNAL	58	L/W	HAZARD SW	59	L/B	DRIVER DOOR UNLOCK OUTPUT	31	G/B	DR DOOR UNLOCK SENSOR
		31	ζ/5	FR DEFROSTER SW	09	M/B	TURN SIGNAL LH OUTPUT	32	ΓC	COMBI SW OUTPUT 5
		32	LG	COMBI SW OUTPUT 5	61	W/L	TURN SIGNAL RH OUTPUT	33	٦//	COMBI SW OUTPUT 4
		33	χ	COMBI SW OUTPUT 4	63	BR	ROOM LAMP TIMER CONTROL	34	>	COMBI SW OUTPUT 3
		34	≥	COMBI SW OUTPUT 3	65	>	ALL DOOR LOCK OUTPUT	32	R/L	COMBI SW OUTPUT 2
		32	Z .	COMBI SW OUTPUT 2	99	5 6	PASSENGER DOOR, REAR DOOR UNLOCK OUTPUT	36	9 5	COMBI SW OUTPUT 1
		8 5	3	COMBI SW OUTPULL	/g (2	<u>.</u>	GND	£ 6	0/9	7 14ES
		33	<u>%</u>	KEY SWITCH	88	7	POWER WINDOW POWER SUPPLY (IGN)	88 88	。 。	IGN F/B
		8 8	⇒ .	IGN	60	M/	POWER WINDOW POWER SUPPLY (BAL)	65	7	CAN-H

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tion]	А
TI WIRE TO WIRE	В
WIRE TO WIRE T	С
Connector No. Connector Name	D
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M800 WIRE TO WIRE THISFW-NH Signal Name [Specification]	F
R W W W W W W W W W	G
77 77 78 78 88 88 88 88 88 88 88 88 88 8	Н
WIRE TO WIRE TH80FW-CS16-TMA TH80FW-CS16-TMA Signal Name [Specification]	J
900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	K
AMPS	
<u></u>	EXL
A	M
FEAGSPW-FHAE-SA BACK (BODY CONTF FEAGSPW-FHAE-SA BACK WIPE BACK WIPE CENTRAL CENTRAL D BROW (BODY CONTF FEASP WIPE BACK WI	Ν
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Revision: 2009 October EXL-105 2010 Z12

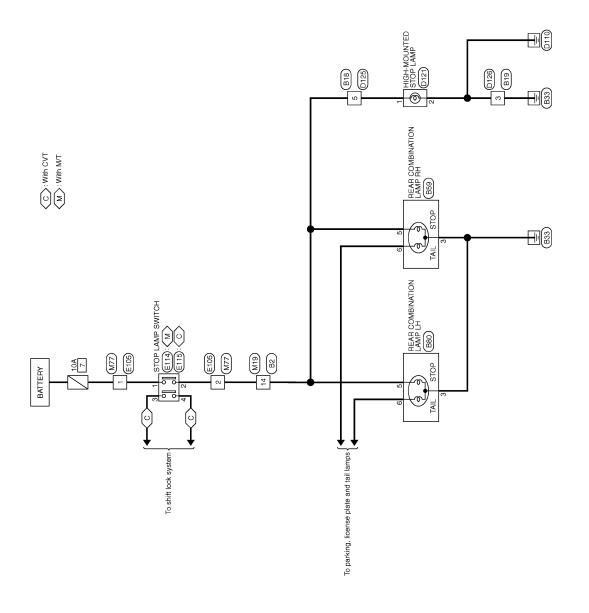


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STOP LAMP

Wiring Diagram - STOP LAMP -

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STOP LAMP

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	l erminal Golor Signal Name [Specification] No. of Wire	· -	H		9 00			H	5	BR	13 W	¥0 >	- 1 9I	ď	Н	20 LG –		Connector No P126	Ι	Connector Name WIRE TO WIRE	Connector Type M04FW-LC	1	E	I S	27 -	4 3		Terminal Color Signal Name [Specification]	2	3 B -												
O nanacados No lono	1.		Connector Type RS06FB-PR	4	至	THE TOTAL STREET		6 5 4)	L	Specification Signal Name [Specification]	+	3 8	- 4	5 R	6 GR –		Connector No D191	ı	Connector Name HIGH-MOUNTED STOP LAMP	Connector Type HS02FG-W		唐	ES SE	(1 2)			Terminal Color Signal Name [Specification]	$^{+}$	2 B -		Connector No. D125	Connector Name WIRE TO WIRE	Connector Type NH10FW-CS10	1		18 6 5 4 3 2 1		20 13 12 11 10 9 2 2	18 17 16 15 14		
F	12 W = -	F	15 Y –		× 0	re			Connector No. B19	Connector Name WIRE TO WIRE	Commentar Time MONAMALI C	Connection Type Into-tining—LC			113.		3.4			No. of Wire Signal Name [Specification]	┪	3 B		Connector No. B59	je.		7	匮	THE SERVICE SE		654		Terminal Color Signal Name [Specification]	+	3 B	4 W	Н	- A 9				
STOP LAMP	Connector No. BZ	Connector Name WIRE TO WIRE	Connector Type NS16MW-CS	4	至了	193 14567	11 10 17	0 3 10 11 17 17 19 19		-	Specification Signal Name [Specification]	T	2 0	ď	7 L	T	9 3	^ 0	Ŧ	╀		16 B -		Connector No. B18		Connector Type NH10MW-CS10			1.5. 1 2 3 4 5 6	0,000	7 8 14 15 16 17 18 19 20		Terminal Color Signal Name [Specification]		3 BR –	H	۵	_	7 G - [Without Intelligent Key]	T	· >	

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STOP L	STOP LAMP	MP LE105	0/	SHIELD	9	1	Connector No.	S	E115
Connector Name	r Name	WIRE TO WIRE	71	GR	~	1	Connector Name	Name	STOP I AMP SWITCH
	2		72	LG	_	1		2	
Connector Type	r Type	TH80MW-CS16-TM4	73	۵		1	Connector Type	Type	M04FW-LC
Q			74	>			q		
季		59 (69 (79 (5)	76	> ¹		1	手		
H.S.		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5 C			HS		
	_	2 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8/ 02	0					3 4
		4 0 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8	2 0					1 2
		2 10 12 12 12 12 12 12 12 12 12 12 12 12 12	8 8	[
			85	≥					
Terminal	_		8	æ		1	Terminal	Color	9
No.		Signal Name [Specification]	84	8		1	No.	of Wire	Signal Name [Specification]
-	^	-	87	GR	~	-	-	^	-
2	Μ	-	91	Μ		-	2	W	-
3	SB	-	95	Υ		_	3	0	_
4	5		93	λ		-	4	9	-
2	Ь	1	94	ď		-			
9	œ	1	92	>		-			
7	٨	1	96	ΓG		-	Connector No.	No.	M19
8	0	1	6	œ		-	Connector Name	Name	HIM OT HIM
6	М	1	86	SB		1	Collifector	Name	WIRE TO WIRE
10	SB	1	66	9		1	Connector Type	Type	NS16FW-CS
31	>	1	100	۵		1	4		
32	œ	1					F		
33	GR	1					Ě	L	
34	Д	-	Connector No.	or No.	E114		5	<u>' `</u>	7 6 5 4 3 2 1
32	>	1	Connector Name	or Nam	STOP I AMP SWITCH	- E		1+	
36	BR	_		. Na		5		<u></u>	ا0 B
39	SB	1	Connector Type	or Type	M02FB-LC				
44	œ	1	q						
42	>	1	事				Terminal	Color	Signal Name [Specification]
46	۵	ı				ſ	No.	of Wire	7
47	м	1			<u>L</u>		-	>	1
48	_	ı			2		S	L/R	1
46	> [1				1	9	œ.	1
20	×						,	-	1
o 1	Ha a	= [with GV1]	F	-			0	9/2	i I
5 6	9	FI ZW IDWA	S S	of Wire		Signal Name [Specification]	9 0	>	1
2 2	3	- [With CVT]	-	>	:		2 =	. W/	1
25	c	- [With M/T]	٠,	۶			12	: i	1
22	9	1					4	2	1
29	_						15	Y/R	1
09	0	1					16	B/R	ı
19	g	1							
62	Μ	1							
63	٦	1							
67	GR	– [With CVT]							
67	>	– [With M/T]							
69	۵	1							

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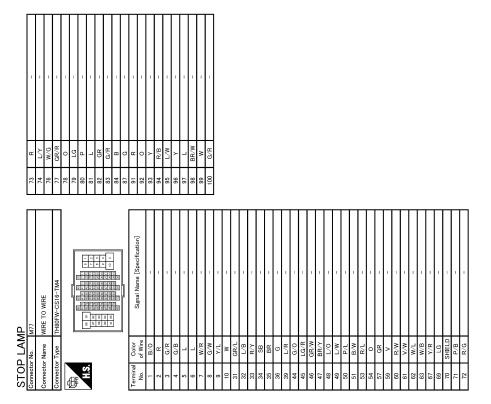
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BACK-UP LAMP

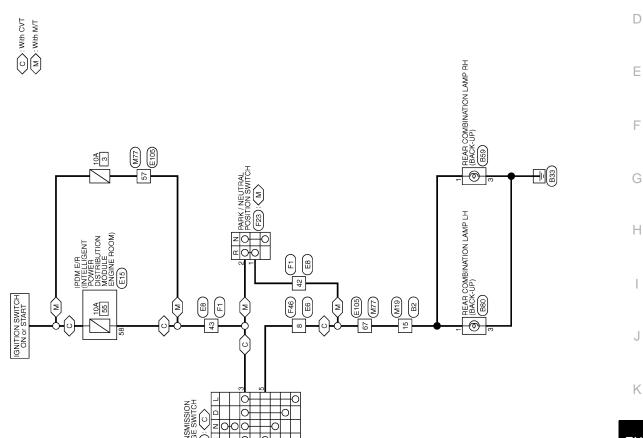
Wiring Diagram - BACK-UP LAMP -

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BACK-UP LAMP

BACK-UP LAMP

잌	4				ſ		-		
Connector No. B2	Conne	Connector No.	B80	Connector No.	I	E8	44		
Connector Name WIRE TO WIRE	Conne	Connector Name	REAR COMBINATION LAMP LH	Connec	Connector Name	WIRE TO WIRE	46	M C	
Connector Type NS16MW-CS	Conne	Connector Type	RS06FB-PR	Connec	Connector Type	SAA36MB-RS10-SJZ2	Н	BR -	
1.2 3 - 4 5 6 7 8 9 10 11 12 13 14 15 16	E =	S. H		是 H.S.		1 2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1	Connector No. Connector Name Connector Type	E 15 Prov. 67 prov.	
Terminal Color Signal Name [Specification]	Terminal No.	nal Color of Wire	Signal Name [Specification]	Terminal No.	Ľů	Signal Name [Specification]	H.S.	53 52 51 50 [
Н	-	>	-	-	BR	1		50 58 57 56 55	
	ω 4	ω α	1 1	3 2	S >	1 1			
┞	5	· c	-	4	*	1			
- R	9	æ	1	_	>-	1	Terminal	Color	
Н				∞	SB	1	┪	e	
				6	٦	1	47	BR -	
\dashv	Conne	Connector No.	E6	10	>	1	49		
4	Conne	Connector Name	WIRE TO WIRE	Ξ	۵	-	20	GR -	
4				12	BR	1	51	- 1	
15 Y –	Conne	Connector Type	RH12FB	13	P	1	+	1	
16 B –	þ			14	Υ	_		GR –	
	厚	_		15	SB	1	55		
	7	٧H	K	16	L	1	56	SB -	
Connector No. B59		3] - -	17	М	1	27		
Connector Name REAR COMBINATION LAMP RH			5 4 3 2	18	0	1	58	R – [With CVT]	
_			7 8 8 2	21	g	1	28	Y – [With M/T]	
Connector Type RS06FB-PR				23	SB	1	59		
Q		Į.		24	*	1	09		
李	Terminal		Signal Name [Specification]	22	BR	1	61		
	No	of Wire		56	В	1	62		
	_	٦	_	27	GR	_			
	2	BR	-	28	Д	-			
(6 5 4	3	Ь	-	59	۸	-			
)	4	٨	1	30	9	1			
	2	57	1	31	Ð	1			
Terminal Color	9	œ	-	32	0	1			
	7	SB	1	33	×	1			
- ×	8	GR	1	34	>	1			
3 8	6	PC	1	32	>	1			
- A	10	~	1	36	۵	1			
H	=	L	1	37	ΓG	1			
>				39	SB	1			
				40	В	1			
				14	0	-			
				42	>	1			
				43	œ	- [With CVT]			
				43	97	- [With M/T]			

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BACK-UP LAMP

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	1 1	1	-		1		1				1			-	1	1	-	1	1		1	1	-		1		1	1	1						NGE SWITCH						a	5	<u>ار</u>	Ŋ			Signal Name [Specification]		ı	_	1	-	-															ı	Ε		
-				~							1			~	or.	~		-										~		~			101	- 1	e TRANSMISSION RANGE SWITCH		RK08FG		<	«		//8/3/7	1 6 4			L				۲		~																	F		
ŀ	15 W	H	17 P	18 BR	╁	F	╁	╀	╀	0.00	+	7 28	29 ^	+	┨	\dashv	H	H	H	36	37 W	┞	40 P	╀	42 G	H	H	46 GR	H	48 BR	+			Connector No.	Connector Name		Connector Type	þ	身	Ě	ė						lerminal Color		-	2 BF	Н	H	5 SB	Н															Н		
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-																												FI		WIRE TO WIRE	SAA36FR-RS10-S.172				18171615	24 23		30 30 31																														,	J		
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		WIRE	TH80MW-CS16-TM4			25 40 80 80 80 121 121 121 121 121 121 121 121 121 12	96 16 18 18 18 18 18 18 18 18 18 18 18 18 18	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	20 St	12 23 28 28 29 29 23 73 88 25 35 35 35 35 35 35 35 35 35 35 35 35 35			Signal Name [Specification]		1	1	1	ı	1	1	1	1	1	1	1	1	1	1	1	1	1	1	ı	1	1	ı	1	_	_	- [With CVT]	- [With M/T]	1	- [With CVT]	- [With M/T]	1		ı	1	ı	_	-	- [With CVT]	- [With M/T]	_															VI		
P LAMF		WIRE TO WIRE	П			Ē	- 0	0	9	9 10																							1	1												ļ	1	1																				ľ	N		
BACK-UP LAMP	Connector No.	Connector Name	Connector Type		1	Ţ	žį.						Terminal Color		-	2 W	3 SB	L		9	L	8	L	10 SB	H	H	33 GR	H	L	ŀ	╁	ł	+	40 4	+	+	48 L	49 Y	20 W	51 BR	51 B	53 SB	54 W	ŀ	H	ł	+	0 0	+				۸ / 2	69 P														(О		
Щ	<u>5 6</u>	σ	ĮĞ	ן ני	4		1					Ŀ	<u>-</u>		_1			_	_	L	L	<u></u>	L	L	<u>L</u>	L	<u></u>	<u></u>	1	<u>l_</u>	1_	1	1	1			_[<u></u>	L	_	1	1	_1	_1			<u> </u>		Ш	I		JC	LW	۷M	144	45:	2G	ЭE								
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M19 WIRE TO WIRE NS16FW-CS Signal Name [Specification] Signal Name [Specification] Signal Name [Specification]		-	_	32 L/B -	- A	24 SB	7	LYR	+	┪	46 GR/W -	H	48 L/0	49 L/W	⊢	51 B/W -	53 R/L -	Н	57 GR –	Н	60 R/W –	Н		\dashv	П	- FG -	70 SHIELD -	72 R/G –		\dashv	\dashv	GR/R	- 0 84	Pla	n	7	+	83 G/R =	В	9	α .	+	+	\dashv	95 L/W –	- A 96	Н	98 BR/W –	Н	100 G/R -	
	Color Colo	LAMP	MT9	WIRE TO WIRE		NS10FW-CS			5 4	15 17 12 12 11 10 0	13 14 13 17 10 3					-	=	-	-	_	1	1	1				1		M77	WIRE TO WIRE		TH80FW-CS16-TM4			10 20 20 20 20 20 20 20 20 20 20 20 20 20	97 90 80 80 80 80 80 80 80 80 80 80 80 80 80	30 36 40 50 50 50 50 50 50 50 50 50 50 50 50 50	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					1	1	ı	-	_			1	1

JCLWM4453GE

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE) WITH INTELLIGENT KEY

WITH INTELLIGENT KEY: Reference Value

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VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONTOR ITEM	ULT-III MONITOR ITEM	R ITEM
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Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
FR WIPER TI	Front wiper switch HI	On
ED WIDED LOW	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
ED MACHED OM	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
ED WIDED INT	Other than front wiper switch INT/AUTO	Off
FR WIPER INT	Front wiper switch INT/AUTO	On
ED WIDED OTOD	Front wiper is not in STOP position	Off
FR WIPER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
DD WIDED ON	Other than rear wiper switch ON	Off
RR WIPER ON	Rear wiper switch ON	On
DD WIDED INT	Other than rear wiper switch INT	Off
RR WIPER INT	Rear wiper switch INT	On
DD WACHED CW	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD WIDED CTOD	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
TUDN CIONAL D	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TUDNI CIONAL I	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAWP SW	Lighting switch 1ST or 2ND	On
LII DEAM CW	Other than lighting switch HI	Off
HI BEAM SW	Lighting switch HI	On
LIEAD LAMD CW 4	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
HEAD LAMD SW 2	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
DASSING SW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
AUTO LICHT CW	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
-K FOG SW	Front fog lamp switch ON	On
DOOD SW DD	Driver door closed	Off
DOOR SW-DR	Driver door opened	On
OOOR SW-AS	Passenger door closed	Off
JOOR SW-AS	Passenger door opened	On
	Rear RH door closed	Off
OOOR SW-RR	Rear RH door opened	On
OOD OW DI	Rear LH door closed	Off
OOOR SW-RL	Rear LH door opened	On
	Back door closed	Off
OOOR SW-BK	Back door opened	On
201 1 0 0 K 0 M	Other than power door lock switch LOCK	Off
CDL LOCK SW	Power door lock switch LOCK	On
100 Y 00 Y 00 Y 00 Y	Other than power door lock switch UNLOCK	Off
CDL UNLOCK SW	Power door lock switch UNLOCK	On
(E) (O) (I I C) (I)	Other than driver door key cylinder LOCK position	Off
(EY CYL LK-SW	Driver door key cylinder LOCK position	On
(E) (O) ((1 N O) ()	Other than driver door key cylinder UNLOCK position	Off
(EY CYL UN-SW	Driver door key cylinder UNLOCK position	On
14.74.DD 014/	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
NEAD DEE 0111	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
R/BD OPEN SW	NOTE: The item is indicated, but not monitored.	Off
FRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
	Blower fan OFF	Off
FAN ON SIG	Blower fan ON	On
	Air conditioner OFF (A/C switch indicator OFF)	Off
AIR COND SW	Air conditioner ON (A/C switch indicator ON)	On
	LOCK button of the key is not pressed	Off
RKE-LOCK	LOCK button of the key is pressed	On
	UNLOCK button of the key is not pressed	Off
RKE-UNLOCK	UNLOCK button of the key is pressed	On
	BACK DOOR OPEN button of the key is not pressed	Off
RKE-TR/BD	BACK DOOR OPEN button of the key is pressed	On
	PANIC button of the key is not pressed	Off
RKE-PANIC	PANIC button of the key is pressed	On
	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
RKE-MODE CHG	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
	Bright outside of the vehicle	Close to 5 V
OPTI SEN (DTCT)	Dark outside of the vehicle	Close to 0 V

Monitor Item	Condition	Value/Status
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
JPTI SEN (FILI)	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 \
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	Off
RAIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -DR	Driver door request switch is not pressed	Off
VEQ OW -DIV	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
TEG OW 710	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
LA ON DD/11	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	Off
DRAKE SW I	The brake pedal is depressed	On
	The brake pedal is depressed when No. 7 fuse is blown	Off
RAKE SW 2	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
DETE/CANCL SW	Selector lever in P position	Off
DETE/CANCL SVV	Selector lever in any position other than P	On
FT PN/N SW	Selector lever in any position other than P and N	Off
OF I PIN/IN OVV	Selector lever in P or N position	On
S/L LOCK	Steering is locked	Off
S/L -LOCK	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
NE -UNLOOK	Steering is locked	On
S/L RELAY-F/B	Steering is unlocked	Off
OIL NELATTI ID	Steering is locked	On
JNLK SEN -DR	Driver door is locked	Off
DINLIN JEIN -UK	Driver door is unlocked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
OOLLOW -IEDIN	Push-button ignition switch (push-switch) is pressed	On
CN DIV1 -E/D	Ignition switch in OFF or ACC position	Off
GN RLY1 -F/B	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
LIL GVV -IFDIVI	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
NI FIN TIPUIVI	Selector lever in P or N position	On

Monitor Item	Condition	Value/Status
OCT D MET	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
CET N. MET	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On
	Engine stopped	Stop
ENIONE OTATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
0/1.1.001/.10014	Steering is locked	Off
S/L LOCK-IPDM	Steering is unlocked	On
0//	Steering is unlocked	Off
S/L UNLK-IPDM	Steering is locked	On
0// 0=/ 0// 0=0	Steering is unlocked	Off
S/L RELAY-REQ	Steering is locked	On
VEH SPEED 1	While driving	Equivalent to speed ometer reading
VEH SPEED 2	While driving	Equivalent to speed ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK EL AO	Steering is locked	Reset
ID OK FLAG	Steering is unlocked	Set
DDMT ENO OTDT	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the 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
OON NWID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
COM INVIDE	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONTINUIDS	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done

< ECU DIAGNOSIS INFORMATION >

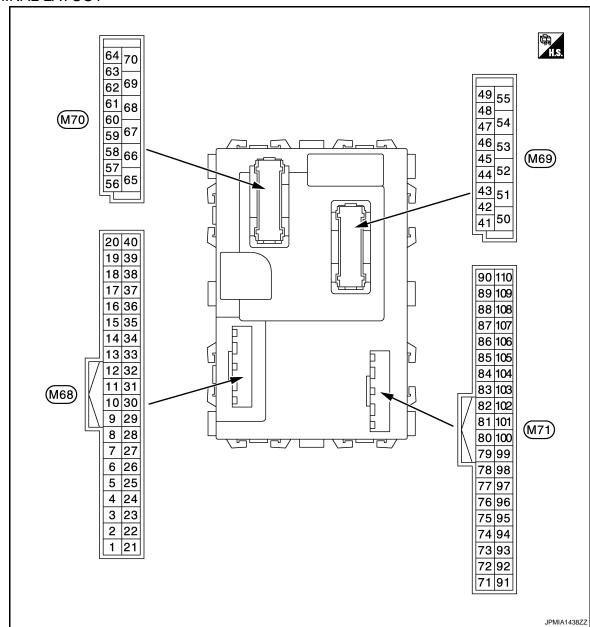
Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
CONFIDMIDA	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
CONFIRM ID1	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
NOT DECISTEDED	BCM detects registered key ID, or BCM does not detect key ID.	ID OK
NOT REGISTERED	BCM detects non-registration key ID.	ID NG
TP 4	The ID of fourth key is not registered to BCM	Yet
174	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
1173	The ID of third key is registered to BCM	Done
TD 2	The ID of second key is not registered to BCM	Yet
TP 2	The ID of second key is registered to BCM	Done
TD 4	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
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 REGGI FLI	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGOT FRI	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
וט מבטטו ממו	ID of rear RH tire transmitter is not registered	Yet
ID DECST DI 1	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MADNING LAMP	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
DI 177ED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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TERMINAL LAYOUT



NOTE:

Connector color

M68, M70: BlackM69, M71: White

PHYSICAL VALUES

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF	0 V
					Turn signal switch RH	
					Lighting switch HI	(V) 15 10 5
				Combination	Lighting switch 1ST	→ +10ms ‡
2 (BR/W)	Ground	Combination switch INPUT 5	Input	switch (Wiper intermit- tent dial 4)		1.0 V
				ŕ	Lighting switch 2ND	(V) 15 10 5 0
					All switch OFF	2.0 V 0 V
					Turn signal switch LH	
					Lighting switch PASS	(V) 15
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermit-	Lighting switch 2ND	10 5 0 +10ms PKIB4958J 1.0 V
(GIV)		INI OT 4		tent dial 4)	Front fog lamp switch ON	(V) 15 10 5 0 → +10ms PKIB4956J
					All switch OFF	0.8 V 0 V
					Front wiper switch LO	
				Combination	Front wiper switch MIST	(V) 15
4 (L/Y)	Ground	Combination switch INPUT 3	Input	switch (Wiper intermittent dial 4)	Front wiper switch INT	10 5 0 → +10ms
					Lighting switch AUTO	PKIB4958J
						1.0 V

	nal No.	Description			0 1111	Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	(V) 15
					Rear washer ON (Wiper intermittent dial 4)	10 5 0
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	→ +10ms PKIB4958J
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 ++10ms
					All 11 055	0.8 V
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	(V) 15
					Rear wiper switch INT (Wiper intermittent dial 4)	10 5 0
					Wiper intermittent dial 3 (All switch OFF)	→ +10ms PKIB4958J
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	(V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1
					Any of the condition below with all switch OFF • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 ++10ms PKIB4956J

Terminal No. (Wire color)		Description				Value
+ (vvire	-	Signal name	Input/ Output		Condition	(Approx.)
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylin- der switch	NEUTRAL position	(V) 15 10 5 0 JPMIA0587GB
						8.0 - 8.5 V
					UNLOCK position	0 V
8 (W/B)	Ground	Door key cylinder switch LOCK	Input	Door key cylin- der switch	NEUTRAL position	12 V
(٧٧/۵)		SWILCH LOCK		der switch	LOCK position	0 V
9	Ground	Stop lamp switch 1	Input	Stop lamp	OFF (Brake pedal is not depressed)	0 V
(R)	Ciodila	Ctop lamp ownor i	mpat	switch	ON (Brake pedal is depressed)	Battery voltage
10 (V/W)	Ground	Tire pressure warning check switch	Input	Ignition switch O	FF	(V) 15 10 5 0 10 ms JPMIA0012GB
11	Ground	ACC feedback	Input	Ignition switch O	FF	0 V
(L/Y)	Oroana	7100 10000001	mpat	Ignition switch A	CC or ON	Battery voltage
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	(V) 15 10 5 0 +-10ms PKIB4960J
						7.0 - 8.0 V
		_			ON (When rear RH door opened)	0 V
14		0 1		Ignition switch	When bright outside of the vehicle	Close to 5 V
(L/B)	Ground	Optical sensor	Input	ON	When dark outside of the vehicle	Close to 0 V

	nal No. color)	Description				Value
+	- -	Signal name	Input/ Output		Condition	(Approx.)
15 (W/L)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					Pressed	0 V
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	OFF, ACC	0 V 5 V
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch O	N	0 V
19 (BR)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch O	FF	(V) 15 10 5 0 500 ms JMKIA3838GB
20	Ground	Remote keyless entry receiver commu-	Input	Waiting		(V) 15 10 5 0 JMKIA3836GB
(G/Y)	Glound	nication	mput	Signal receiving		(V) 15 10 5 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW
21 (P/L)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
-				Waiting	1	0 V
22 (W/G)	Ground	Remote keyless entry receiver RSSI	Input	Signal receiving		(V) 15 10 5 0 500 ms

Terminal No. Description (Wire color)		Description			·	Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
			·		ON	0 V
23 (R/Y)	Ground	Security indicator lamp	Output	Security indicator	Blinking (Ignition switch OFF)	5 0 → 1s JPMIA0590GB 12.0 V
					OFF	Battery voltage
24* (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch O	FF	5 V
25 (LG)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
27	Ground	A/C switch	Input	Air conditioner	OFF (A/C switch indicator: OFF)	(V) 15 10 5 0
(Y/G) Glound					ON (A/C switch indicator:	10 ms JPMIA0012GB 1.0 - 1.5 V
					ON)	
28 (G/W)	Ground	Blower fan switch	Input	Blower fan	OFF	0 V (V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V
29 (L/W)	Ground	Hazard switch	Input	Hazard switch	OFF ON	12 V 0 V
31 (G/B)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
20					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 → 10ms PKIB4960J 7.0 - 8.0 V
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	40
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	0 +10ms PKIB4956J
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	
,					Lighting switch AUTO (Wiper intermittent dial 4)	(y) 15
					Rear wiper switch INT (Wiper intermittent dial 4)	0
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	PKIB4958J

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10
					Rear washer switch ON (Wiper intermittent dial 4)	5 0
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	PKIB4958J 1.2 V
35		Combination switch		Combination switch	All switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
(R/L)	Ground	OUTPUT 2	Output	(Wiper intermittent dial 4)	Lighting switch 2ND Lighting switch PASS	(V) 15
					Front wiper switch INT	10
					Front wiper switch HI	0 + +10ms PKIB4958J 1.2 V
36	Ground	Combination switch	Output	Combination switch	All switch OFF	(V) 15 10 5 0 +-10ms PKIB4960J 7.0 - 8.0 V
(L/O)	Ciound	OUTPUT 1	σαιραί	(Wiper intermit- tent dial 4)	Turn signal switch RH Turn signal switch LH	(V)
				_	Front wiper switch LO (Front wiper switch MIST)	15 0
					Front washer switch ON	→ •10ms PKIB4958J
						1.2 V

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
37 (G/O)	Ground	Selector lever P po- sition switch	Input	Selector lever	P position Any position other than P	0 V 12 V
38 (O)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V Battery voltage
39 (L)	Ground	CAN-H	Input/ Output		_	—
40 (P)	Ground	CAN-L	Input/ Output		_	_
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 9.5 - 10.0 V
					ON (When back door opened)	0 V
					Rear wiper stop position	12 V
44 (LG)	Ground	Rear wiper stop position	Input	Ignition switch ON	Any position other than rear wiper stop position	0 V
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 JPMIA00120 1.0 - 1.5 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA00120 1.0 - 1.5 V
					UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					ON (When rear door LH opened)	0 V
54	01	D	0.1.1	D	OFF (Stopped)	0 V
(L/W)	Ground	Rear wiper	Output	Rear wiper	ON (Activated)	12 V
55	0	Dana dana INI OOK	Outrot	Dana dana	UNLOCK (Actuator is activated)	12 V
(G)	Ground	Rear door UNLOCK	Output	Rear door	Other then UNLOCK (Actuator is not activated)	0 V
					p battery saver is activated. room lamp power supply)	0 V
56 (L)	Ground	Interior room lamp power supply	Output	vated.	p battery saver is not acti- rior room lamp power sup-	12 V
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage
59	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
(G)	Giodila	LOCK	Сигри	r assenger door	Other then UNLOCK (Actuator is not activated)	0 V
					Turn signal switch OFF	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1s
					Turn signal switch OFF	6.0 V
					-	
61 (W/L)	Ground	Turn signal RH O	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0
						6.0 V
63	Ground	Interior room lamp	Output	Interior room	OFF	12 V
(BR)	Ciodila	timer control	Juipui	lamp	ON	0 V

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
65	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
(V)	Ground	All doors LOCK	Output	All doors	Other then LOCK (Actuator is not activated)	0 V
66	Ground	Driver door UN-	Output	. 5:	UNLOCK (Actuator is activated)	12 V
(L/B)	Ground	LOCK	Output	Driver door	Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch O	N	12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage
71	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0
(R)		er communication	Output	ON SWILLI	When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
72	Ground	Back door lock actu-	Output	Back door	LOCK (Actuator is activated)	0 V
(R/W)	Cidana	ator relay control	Jaipai	Back door	Other than LOCK (Actuator is not activated)	Battery voltage
75	Ground	Driver door request	Input	Driver door re-	ON (Pressed)	0 V
(SB)		switch	L	quest switch	OFF (Not pressed)	12 V
76 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed) ON (Pressed)	12 V 0 V
77 (W)	Ground	Back door request switch	Input	Back door re- quest switch	OFF (Not pressed)	12 V

	inal No. e color)	Description			Condition	Value	А
+	-	Signal name	Input/ Output		Condition	(Approx.)	
78	One and	Driver door antenna	0.4.4	When the driver door request	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 MKIA3838GB	B C
(LG)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB	F
79	70	Driver door antenna		When the driver door request	When Intelligent Key is not in the antenna detection area	(V) 15 10 500 ms JMKIA3838GB	G H
(V)	Ground	(-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	J K
80		Passenger door an-		When the passenger door re-	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms	M
(BR/Y)	Ground	tenna (+)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	P

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
81		Passenger door an-	When the passenger door re-		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(L/Y)	Ground	tenna (-)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
82	Ground	Back door antenna	When the back	door request	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB
(W/B)	Glound	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
83	Ground	Back door antenna (-)		When the back door request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 MKIA3838GB
(B/W)			Output		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB

	inal No. e color)	Description	1		O a maliki a m	Value
+	- -	Signal name	Input/ Output		Condition	(Approx.)
84		Room antenna (+)		Ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB
(Y/G)	Ground	(Instrument panel)	Output	ÖFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
85	Crowd	Room antenna (-)	Outout	Ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms
(Y/L)	Ground	(Instrument panel)	Output	OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s
86		Luggage room an-		Ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms
86 (P)	Ground	Luggage room antenna (+)	Output	OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB

Termin		Description				Value	
(Wire o	color) –	Signal name	Input/ Output		Condition	(Approx.)	
87	Cround	Luggage room an-	Output	Ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB	
(L)	Ground	tenna (-)	Output	OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB	
90	_	Push-button ignition		Push-button ig-	ON	12 V	
(W/L)	Ground	switch illumination	Output	nition switch illu- mination	OFF	0 V	
91	Cround	ACC/ON indicator	Outnut	lanition quitab	OFF	Battery voltage	
(Y)	Ground	lamp	Output	Ignition switch	ACC or ON	0.5 V	
					OFF	0 V	
92 (BR/R)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 15 10 5 10 ms JPMIA1554GB 6.0 - 7.0 V	
93		Intelligent Key warn-		Intelligent Key	Sounding	0 V	
(GR/W)	Ground	ing buzzer	Output	warning buzzer	Not sounding	12 V	
94 (Y/R)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status LOCK or UNLOCK For 15 seconds after UNLOCK	12 V (V) 15 10 50 MKIA0066GB	
05		Stooring look unit			15 seconds or later after UNLOCK OFF or ACC	0 V	
95 (W/G)	Ground	Steering lock unit power supply	Output	Ignition switch	ON	0 V	

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	
(Wire color) + -		Signal name	Input/ Output	Condition		(Approx.)	
96	Cravad	ACC relevision trail	Outnut	lanition quitab	OFF	0 V	
(G)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	12 V	
97 (L/R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage	
					When selector lever is not in P or N position	0 V	
98	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V	
(BR)	Giodila			Igrillion Switch	ON	0 V	
99	Ground	Ignition relay control	Output	Ignition switch	OFF or ACC	0 V	
(W/R)	Glodila				ON	12 V	
100	Ground	Push-button ignition switch (push switch)	Input	Push-button ig- nition switch (push switch)	Pressed	0 V	
(L/O)					Not pressed	12 V	
102	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage	
(G)					Except P and N positions	0 V	
104 (Y/R)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch ON		12 V	
105 (B/O)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		Battery voltage	
106	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC	0 V	
(Y/B)					ON	12 V	
107 (L/W)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V	
					UNLOCK status	12 V	
108 (P/L)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	12 V	
					UNLOCK status	0 V	
110	Ground	Tire pressure receiver power supply	Output	Ignition switch	OFF or ACC	0 V	
(BR/W)				Igilition Switch	ON	5 V	

^{*:} For Canada

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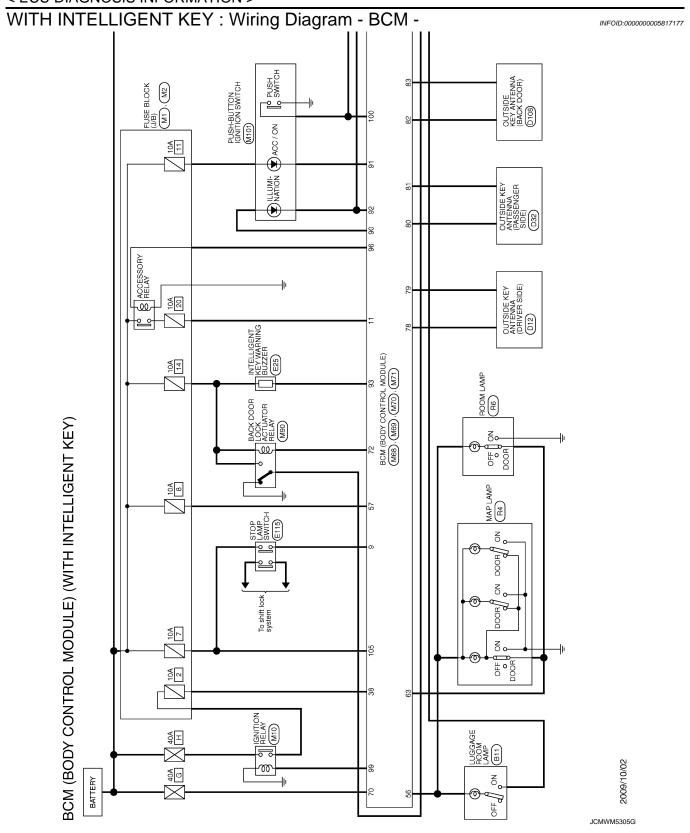
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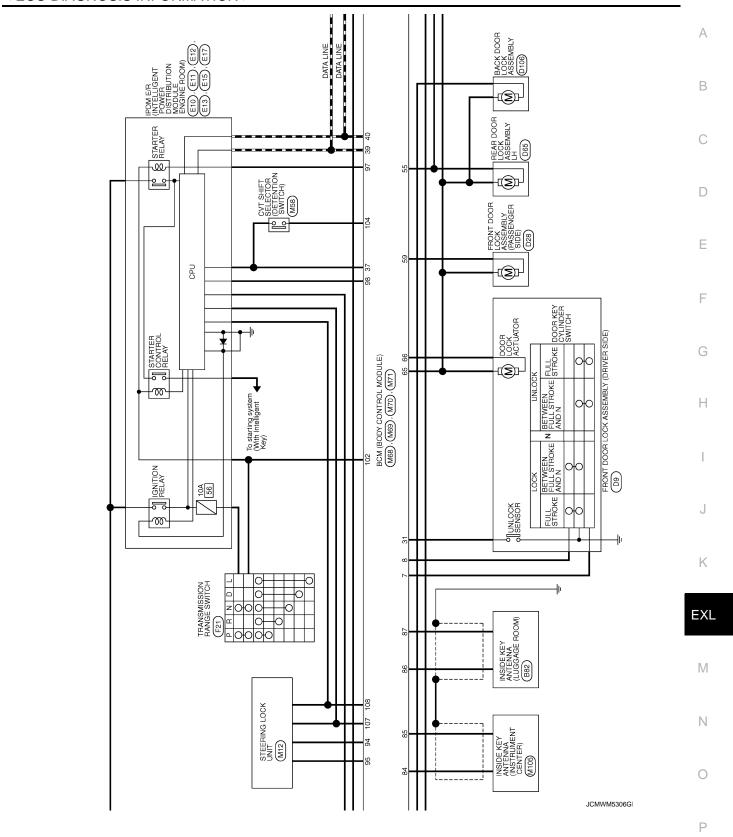
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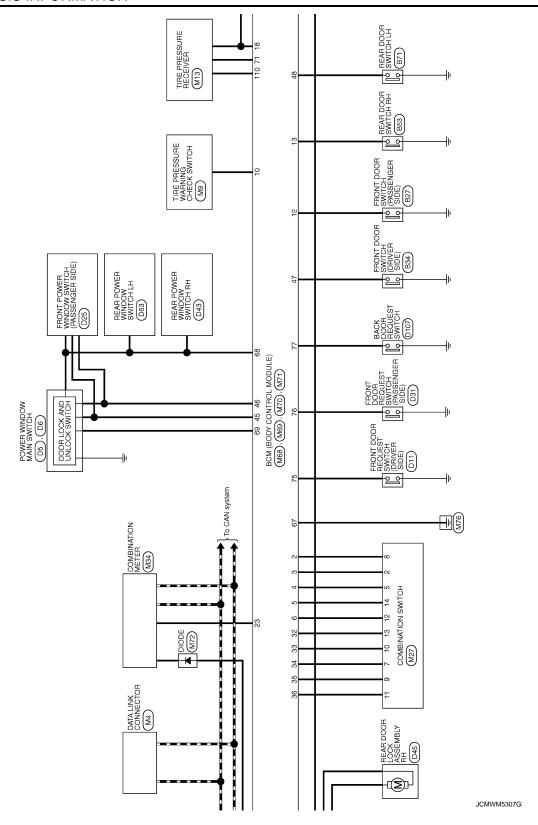
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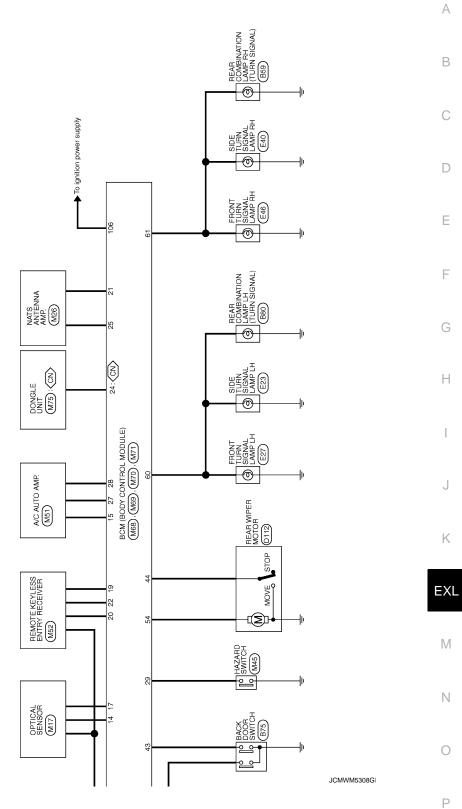
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EXL-139 2010 Z12 Revision: 2009 October

JCMWM5309G

WITH INTELLIGENT KEY: Fail-safe

FAIL-SAFE CONTROL BY DTC

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

EXL-140 Revision: 2009 October 2010 Z12

INFOID:0000000005817178

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation		
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	When communication between BCM and steering lock unit are comm nicated normally.		
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	When communication between BCM and steering lock unit are comnicated normally.		
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 $ON \rightarrow OFF$		
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC		
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC		
B2557: VEHICLE SPEED	Inhibit steering lock	When the following CAN signal status (vehicle speed signal) become consistent Vehicle speed signal (ABS) Vehicle speed signal (Meter)		
B2601: SHIFT POSITION	Inhibit steering lock	 500 ms after the following signal reception status becomes consistent 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 Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery volume) Vehicle speed: 4 km/h (2.5 MPH) or more 		
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Selector lever P/N position signal: Except P and N positions (0 V) Status 2 Ignition switch is in the ON position Selector lever P position switch signal: P position (0 V) Selector lever P/N position signal: P or N positions (12 V) 		
B2604: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) Shift position signal (CAN): P or N position Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Shift position signal (CAN): Except P and N position 		
B2605: PNP/CLUTCH SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions are fulfi • Status 1 • Power position: IGN • Selector lever P/N position signal: Except P and N positions (0 V) • Interlock/PNP switch signal (CAN): OFF • Status 2 • Ignition switch is in the ON position • Selector lever P/N position signal: P or N position (12 V) • Interlock/PNP switch signal (CAN): ON		
B2608: STARTER RELAY Inhibit engine cranking		500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)		
B2609: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status		
B260B: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC		

Revision: 2009 October **EXL-141** 2010 Z12

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation	
B260D: STEERING LOCK UNIT	Inhibit steering lock	Erase DTC	
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilledPower position changes to ACCReceives engine status signal (CAN)	
B2612: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When any of the following conditions are fulfilled 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)	
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal	
B26EF: STRG LCK RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled Steering lock relay signal (CAN): ON Steering lock unit status signal (CAN): ON	
B26F0: STRG LCK RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled Steering lock relay signal (CAN): OFF Steering lock unit status signal (CAN): OFF	
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled Ignition switch ON signal (CAN: Transmitted from BCM): ON Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON	
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled Ignition switch ON signal (CAN: Transmitted from BCM): OFF Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF	
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): OFF • Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF	
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled • Starter control relay signal (CAN: Transmitted from BCM): ON • Starter control relay signal (CAN: Transmitted from IPDM E/R): ON	
B26F7: BCM	Inhibit engine cranking by Intelligent Key system	When room antenna and luggage room antenna functions normally	
U0415: VEHICLE SPEED	Inhibit steering lock	When vehicle speed signal (Meter) (CAN) is received normally	

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

- 1. More than 1 minute is passed after the rear wiper stop.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

WITH INTELLIGENT KEY: DTC Inspection Priority Chart

INFOID:0000000005817179

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	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING B2196: DONGLE NG B2198: NATS ANTENNA AMP

< ECU DIAGNOSIS INFORMATION >

Priority	DTC	
	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	
	B2601: SHIFT POSITION	
	B2602: SHIFT POSITION	
	B2603: SHIFT POSI STATUS	
	B2604: PNP/CLUTCH SW	
	B2605: PNP/CLUTCH SW	
	B2608: STARTER RELAY	
	B2609: S/L STATUS	
	B260B: STEERING LOCK UNIT	
	B260C: STEERING LOCK UNIT	
	B260D: STEERING LOCK UNIT	
	B260F: ENG STATE SIG LOST	
	B2612: S/L STATUS	
4	• B2614: BCM	
4	• B2615: BCM	
	• B2616: BCM	
	• B2618: BCM	
	• B2619: BCM	
	B261A: PUSH-BTN IGN SW	
	B26E9: LOCK MALFUNCTION	
	B26EF: STRG LCK RELAY OFF	
	B26F0: STRG LCK RELAY ON	
	B26F1: IGN RELAY OFF	
	B26F2: IGN RELAY ON	
	B26F3: START CONT RLY ON	
	B26F4: START CONT RLY OFF	
	B26F5: STRG LCK STS SW	
	• B26F6: BCM	
	• B26F7: BCM	
	• B26F8: BCM	
	B26FC: KEY REGISTRATION	
	C1729: VHCL SPEED SIG ERR VEHICLE OF SEED.	
	U0415: VEHICLE SPEED	
	C1704: LOW PRESSURE FL	
	C1705: LOW PRESSURE FR	
	C1706: LOW PRESSURE RR	
	C1707: LOW PRESSURE RL	
	• C1708: [NO DATA] FL	
	• C1709: [NO DATA] FR	
5	• C1710: [NO DATA] RR	
	• C1711: [NO DATA] RL	
	C1716: [PRESSDATA ERR] FL	
	C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	C1734: CONTROL UNIT	
	B2621: INSIDE ANTENNA	
6	B2622: INSIDE ANTENNA	
	B2626: OUTSIDE ANTENNA	
7	B2627: OUTSIDE ANTENNA	

WITH INTELLIGENT KEY: DTC Index

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NOTE

The details of time display are as follows.

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

< ECU DIAGNOSIS INFORMATION >

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to BCS-18, "COM-MON 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	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM	_	_	_	_	BCS-39
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-40
U0415: VEHICLE SPEED	×	_	×	_	BCS-41
B2013: ID DISCORD BCM-S/L	×	×	×	_	SEC-45
B2014: CHAIN OF S/L-BCM	×	×	×	_	SEC-46
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-35
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-37
B2195: ANTI-SCANNING	×	_	_	_	SEC-38
B2196: DONGLE NG	×	_	_	_	SEC-39
B2198: NATS ANTENNA AMP	×	_	_	_	SEC-41
B2553: IGNITION RELAY	_	×	×	_	PCS-77
B2555: STOP LAMP	_	×	×	_	SEC-49
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-51
B2557: VEHICLE SPEED	×	×	×	_	SEC-53
B2562: LOW VOLTAGE	_	×	_	_	BCS-42
B2601: SHIFT POSITION	×	×	×	_	SEC-54
B2602: SHIFT POSITION	×	×	×	_	SEC-57
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-60
B2604: PNP/CLUTCH SW	×	×	×	_	SEC-65
B2605: PNP/CLUTCH SW	×	×	×	_	SEC-68
B2608: STARTER RELAY	×	×	×	_	SEC-70
B2609: S/L STATUS	×	×	×	_	SEC-72
B260B: STEERING LOCK UNIT	×	×	×	_	SEC-75
B260C: STEERING LOCK UNIT		×	×	_	SEC-76
B260D: STEERING LOCK UNIT	×	×	×	_	SEC-77
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-78
B2612: S/L STATUS	×	×	×	_	SEC-79
B2614: BCM	_	×	×	_	PCS-79
B2615: BCM	<u> </u>	×	×	_	PCS-82
B2616: BCM	<u> </u>	×	×	_	PCS-85
B2618: BCM	_	×	×	_	PCS-88
B2619: BCM	×	×	×	_	SEC-82
B261A: PUSH-BTN IGN SW	_	×	×	_	PCS-89
B2621: INSIDE ANTENNA	_	×	_	_	DLK-44
B2622: INSIDE ANTENNA		×	_	_	DLK-46
B2626: OUTSIDE ANTENNA	_	×	_	_	DLK-48

< ECU DIAGNOSIS INFORMATION >

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	Reference page
B2627: OUTSIDE ANTENNA	_	×	_	_	DLK-50
B2628: OUTSIDE ANTENNA	_	×	_	_	DLK-52
B26E9: LOCK MALFUNCTION	_	×	× (Turn ON for 15 seconds)	_	SEC-83
B26EF: STRG LCK RELAY OFF	×	×	×	_	SEC-84
B26F0: STRG LCK RELAY ON	×	×	×	_	SEC-86
B26F1: IGN RELAY OFF	×	×	×	_	PCS-91
B26F2: IGN RELAY ON	×	×	×	_	PCS-94
B26F3: START CONT RLY ON	×	×	×	_	SEC-87
B26F4: START CONT RLY OFF	×	×	×	_	SEC-88
B26F5: STRG LCK STS SW	_	×	×	_	SEC-90
B26F6: BCM	_	×	×	_	PCS-97
B26F7: BCM	×	×	×	_	SEC-93
B26F8: BCM	_	×	×	_	SEC-94
B26FC: KEY REGISTRATION	_	×	×	_	SEC-95
C1704: LOW PRESSURE FL	_	_	_	×	
C1705: LOW PRESSURE FR	_	_	_	×	WT-30
C1706: LOW PRESSURE RR	_	_	_	×	<u> </u>
C1707: LOW PRESSURE RL	_	_	_	×	
C1708: [NO DATA] FL	_	_	_	×	
C1709: [NO DATA] FR	_	_	_	×	W/T 22
C1710: [NO DATA] RR	_	_	_	×	<u>WT-32</u>
C1711: [NO DATA] RL	_	_	_	×	
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT 25
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u>WT-35</u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-37</u>
C1734: CONTROL UNIT	_	_	_	×	WT-39

WITHOUT INTELLIGENT KEY

WITHOUT INTELLIGENT KEY: Reference Value

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VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
IGIN ON SW	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
KET ON SW	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the lock side	On

Monitor Item	Condition	Value/Status
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
ODE ONLOCK SW	Press door lock/unlock switch to the unlock side	On
DOOR SW-DR	Driver's door closed	Off
DOOK SW-DK	Driver's door opened	On
DOOR SW-AS	Passenger door closed	Off
DOOK SW-AS	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
DOOK SW-KK	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
DOOK SW-KL	Rear LH door opened	On
BACK DOOR SW	Back door closed	Off
BACK DOOK SW	Back door opened	On
LOCK STATUS	NOTE: The item is indicated, but not monitored.	Off
ACC ON SW	Ignition switch OFF	Off
ACC ON SW	Ignition switch ACC or ON	On
KEVI ECC I OCK	"LOCK" button of key fob is not pressed	Off
KEYLESS LOCK	"LOCK" button of key fob is pressed	On
KEVI ECC LINII OCK	"UNLOCK" button of key fob is not pressed	Off
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	On
SHOCK SENSOR	NOTE: The item is indicated, but not monitored.	NORMAL
KEN ON TROM	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
KEY OVELEN OW	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
VEHICLE SPEED	While driving	Equivalent to speed- ometer reading
DEAD DEE OW	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
DEVEDOE OW CAN	NOTE:	Off
REVERSE SW CAN	The item is indicated, but not used.	On
TAIL LAMD CVV	Lighting switch OFF	Off
TAIL LAMP SW	Lighting switch 1ST	On
ED EOC CW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
DUCKLE CW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) OFF]	Off
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) ON]	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
ACC 8W	Ignition switch OFF	Off
ACC SW	Ignition switch ACC or ON	On
KYLS TRNK/HAT	NOTE: The item is indicated, but not monitored.	Off
KENI EGO DANIG	PANIC button of key fob is not pressed	Off
KEYLESS PANIC	PANIC button of key fob is pressed	On

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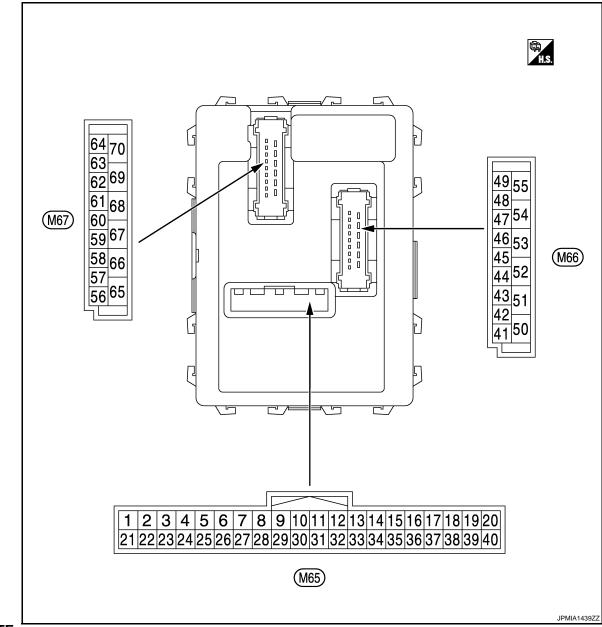
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Monitor Item	Condition	Value/Status
HI BEAM SW	Lighting switch OFF	Off
TII DEAW OW	Lighting switch HI	On
HEAD LAMP SW 1	Lighting switch OFF	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
ILAD LAIVIF SW 2	Lighting switch 2ND	On
AUTO LIGHT SW	Lighting switch OFF	Off
AOTO LIGHT SW	Lighting switch AUTO	On
PASSING SW	Other than lighting switch PASS	Off
-ASSING SW	Lighting switch PASS	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
- SIN SISINAL IN	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
TORN SIGNAL L	Turn signal switch LH	On
PKB SW	Parking brake switch is OFF	Off
- KB 3W	Parking brake switch is ON	On
ENGINE RUN	Engine stopped	Off
INOINE ROIN	Engine running	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V
LIG SEN COND	NOTE: The item is indicated, but not monitored.	OFF
GN SW CAN	Ignition switch OFF or ACC	Off
GN SW CAN	Ignition switch ON	On
R WIPER HI	Front wiper switch OFF	Off
-K WIFEK HI	Front wiper switch HI	On
R WIPER LOW	Front wiper switch OFF	Off
-K WIFER LOW	Front wiper switch LO	On
R WIPER INT	Front wiper switch OFF	Off
TR WIFER IN	Front wiper switch INT	On
FR WASHER SW	Front washer switch OFF	Off
-K WASHER SW	Front washer switch ON	On
NT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
ED WIDED STOD	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On

Monitor Item	Condition	Value/Status
RR WIPER STOP	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
RAIN SENSOR	NOTE: The item is indicated, but not monitored.	Off
HAZABD CM	Hazard switch OFF	Off
HAZARD SW	Hazard switch ON	On
FAN ON SIG	Blower control dial OFF	Off
FAIN OIN SIG	Other than blower control dial OFF	On
AID COND SW	Air conditioner OFF (A/C switch indicator OFF) (Automatic air conditioner) A/C switch OFF (Manual air conditioner)	Off
AIR COND SW	Air conditioner ON (A/C switch indicator ON) (Automatic air conditioner) A/C switch ON (Manual air conditioner)	On
THERMO AMP	Ignition switch ON	Off
NOTE: At models with automatic air conditioner this item is not monitored.	Evaporator is extremely low temperature	On
ED DEE OW	Other than A/C mode defroster ON position	Off
FR DEF SW	A/C mode defroster ON position	On
KEYLESS TRUNK	NOTE: The item is indicated, but not monitored.	Off
TRNK OPNR SW	NOTE: The item is indicated, but not monitored.	Off
TRNK OPN MNTR	NOTE: The item is indicated, but not monitored.	Off
HOOD SW	Close the hood	Off
NOOD SW	Open the hood	On
TRANSPONDER	Other than the ignition switch is ON by key registered to BCM.	Off
TRANSFONDER	The ignition switch is ON by key registered to BCM.	On
INTELLI KEY	NOTE: The item is indicated, but not used.	Off
AUTO RELOCK	NOTE: The item is indicated, but not monitored.	Off
OIL PRESS SW	Ignition switch OFF or ACC Engine running	Off
	Ignition switch ON	On
DDAVE CW	Brake pedal is not depressed	Off
BRAKE SW	Brake pedal is depressed	On

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



NOTE:

M65, M66: WhiteM67: Black

PHYSICAL VALUES

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	nal No.	Description				Value	
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)	
					All switch OFF	0 V	
					Turn signal switch RH		
					Lighting switch HI	(V)	
2 (BR/W)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 1ST	10 5 0 PKIB4958J	
					Lighting switch 2ND	(V) 15 10 5 0	
					All switch OFF	0 V	
		und Combination switch INPUT 4	Input	Combination switch (Wiper intermittent dial 4)	Turn signal switch LH		
					Lighting switch PASS	(V) 15	
3 (GR)	Ground				Lighting switch 2ND	10 5 0 PKIB4958J 1.0 V	
					Front fog lamp switch ON	(V) 15 10 5 0 ++10ms PKIB4956J 0.8 V	
					All switch OFF	0 V	
					Front wiper switch LO		
4				Combination	Front wiper switch MIST	(V) 15	
	Ground	Combination switch	Input	switch	Front wiper switch INT	10	
(L/Y)		INPUT 3		(Wiper intermit- tent dial 4)	Lighting switch AUTO	0 +10ms PKIB4958J	
						1.0 V	

Terminal No. (Wire color)		Description			0 1111	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	(V)
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5
					Any of the condition below with all switch OFF	++10ms
5	Ground	Combination switch	Input	Combination	Wiper intermittent dial 1Wiper intermittent dial 5	PKIB4958J
(G)	Giodila	INPUT 2	IIIput	switch	Wiper intermittent dial 6	1.0 V
						(V) 15
					Rear wiper switch ON	10 5 0
					(Wiper intermittent dial 4)	+<10ms
						PKIB4956J 0.8 V
					All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	(V)
					Rear wiper switch INT	(V) 15 10
					(Wiper intermittent dial 4)	0
					Wiper intermittent dial 3 (All switch OFF)	++10ms
					,	1.0 V
						(V)
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switch OFF	(V) 15 10 5
					Wiper intermittent dial 1Wiper intermittent dial 2	→ -10ms
						PKIB4952J
						1.9 V
					American and Property of the	(V) 15
					Any of the condition below with all switch OFF	10 5 0
					Wiper intermittent dial 6Wiper intermittent dial 7	→
						PKIB4956J

	Terminal No. Description (Wire color)				Value	
+	- COIOT)	Signal name	Input/ Output	Condition		(Approx.)
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position	(V) 15 10 5 0 ** 10ms PKIB4960J 7.0 - 8.0 V
					UNLOCK position	0 V
8	Cround	Door key cylinder	laavit	Door key cylin-	NEUTRAL position	12 V
(W/B)	Ground	switch LOCK	Input	der switch	LOCK position	0 V
9		0. 1		Stop lamp	OFF (Brake pedal is not depressed)	0 V
(R)	Ground	Stop lamp switch	Input	switch	ON (Brake pedal is depressed)	Battery voltage
10	0	Rear window defog-	lanat	Rear window	OFF (Not pressed)	12 V
(W/L)	Ground	ger switch	Input	defogger switch	ON (Pressed)	0 V
11	Cround	Ignition quitab ACC	laaut	Ignition switch OFF		0 V
(L/Y)	Ground	Ignition switch ACC	Input	Ignition switch A	CC or ON	Battery voltage
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 ** 10ms PKIB4960J 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	(V) 15 10 5 0 ** 10ms PKIB4960J 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
14	Ground	nd Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(L/B)		-	•	ON	When dark outside of the vehicle	Close to 0 V

Terminal No. (Wire color)		Description			O a madition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
15 (V/W)	Ground	Tire pressure warning check switch	Input	Ignition switch C	FF	(V) 15 10 5 10 ms JPMIA0012GB 1.0 - 1.5 V
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	OFF, ACC	0 V 5 V
18 (V)	Ground	Receiver and sensor ground	Input	Ignition switch O	N	0 V
					Insert mechanical key into ignition key cylinder	0 V
		Remote keyless en- try receiver power supply	Input		Remove mechanical key from ignition key cylinder (Any door opened)	5 V
19 (BR) Ground	Ground			Ignition switch OFF	Remove mechanical key from ignition key cylinder (Any door closed)	(V) 6 4 2 0 ++0.2 Si JPMIA0338JP
					Insert mechanical key into ignition key cylinder	0 V
20 (G/Y) Ground	Remote keyless en- und try receiver commu- nication	Input	Ignition switch OFF	Waiting	(V) 6 4 2 0 1.0ms	
					Signal receiving	(V) 6 4 2 0
21 (P/L)	Ground	Immobilizer anten- na (Clock)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
					ON	0 V
23 (R/Y)	Ground	Security indicator	Input	Security indicator	Blinking (Ignition switch OFF)	(V) 15 10 5 0 11.3 V
					OFF	12 V
24 (GR/R)	Ground	Dongle link	Input/ Output	Ignition switch O	FF	5 V
25 (LG)	Ground	Immobilizer anten- na (Rx, Tx)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
26* ¹	Ground	Thermo control amp.	Input	Ignition switch ON		0 V
(GR)	Giodila	memio control amp.	input	Evaporator is ex	tremely low temperature	12 V
		A/C switch (Automatic air conditioner)		A/C	OFF (A/C switch indicator: OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
27 (Y/G)* ²	Ground		Input		ON (A/C switch indicator: ON)	0 V
(Y/R)* ³		A/C switch (Manual c air conditioner)		A/C switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					ON	0 V

		Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					Blower fan switch OFF	0 V	
28	Ground	Blower fan switch (Automatic air condi- tioner)	Input	Fan switch	Blower fan switch ON	(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	
(G/W)	Clound	Blower fan switch (Manual air condi- tioner)	три	Fan switch	Blower fan switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
					Blower fan switch ON	0 V	
29	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage	
(L/W)	Giodila	TIAZATU SWILCIT	прис	i iazaiu Swilch	ON	0 V	
31 (G/Y) Ground		Front defroster switch	Input	Ignition switch ON	A/C mode defroster ON position	0 V	
	Ground				Other than A/C mode de- froster ON position	(V) 15 10 5 0 JPMIA0589GB 8.0 - 9.0 V	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
32 (LG)	Ground	nd Combination switch OUTPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4) Rear wiper switch ON (Wiper intermittent dial 4) Any of the condition below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 6	(V) 15 10 +-10ms PKIB4956J 1.0 V	

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10
					Rear wiper switch INT (Wiper intermittent dial 4)	5
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	PKIB4958J 1.2 V
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10
					Rear washer switch ON (Wiper intermittent dial 4)	5
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	PKIB4958J

	nal No.	Description				Value
(VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
				Combination	All switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J
35 (R/L)	Ground	Combination switch OUTPUT 2	Output	switch (Wiper intermittent dial 4)	Lighting switch 2ND Lighting switch PASS Front wiper switch INT	7.0 - 8.0 V
					Front wiper switch HI	++10ms PKIB4958J
						1.Z V
				Combination	All switch OFF	(V) 15 10 5 0 + 10ms PKIB4960J
36 (L/O)	Ground	Combination switch OUTPUT 1	Output	switch (Wiper intermit-	Turn signal switch RH	7.0 - 8.0 V
				tent dial 4)	Turn signal switch LH	(V) 15
					Front wiper switch LO (Front wiper switch MIST)	10 5 0
					Front washer switch ON	PKIB4958J
37				Insert mechanica	al key into ignition key cylin-	1.2 V Battery voltage
(R/W)	Ground	Key switch	Input	Remove mechar cylinder	nical key from ignition key	0 V
38	Ground	Ignition switch ON	Input	Ignition switch O	FF or ACC	0 V
(O)	Siound	ignition switch Oiv	-	Ignition switch O	N	Battery voltage
39 (L)	Ground	CAN-H	Input/ Output		_	_
40 (P)	Ground	CAN-L	Input/ Output		_	_

	nal No. color)	Description			0	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 **-10ms PKIB4960J 7.0 - 8.0 V
					ON (When back door opened)	0 V
44		Poor wiper step no		Ignition switch	Rear wiper stop position	12 V
(LG)	Ground	Rear wiper stop position	Input	ON SWITCH	Any position other than rear wiper stop position	0 V
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB 1.0 - 1.5 V
					LOCK position	0 V
46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	(V) 15 10 5 0 10 ms JPMIA0012GB
					UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V
					ON (When driver door opened)	0 V

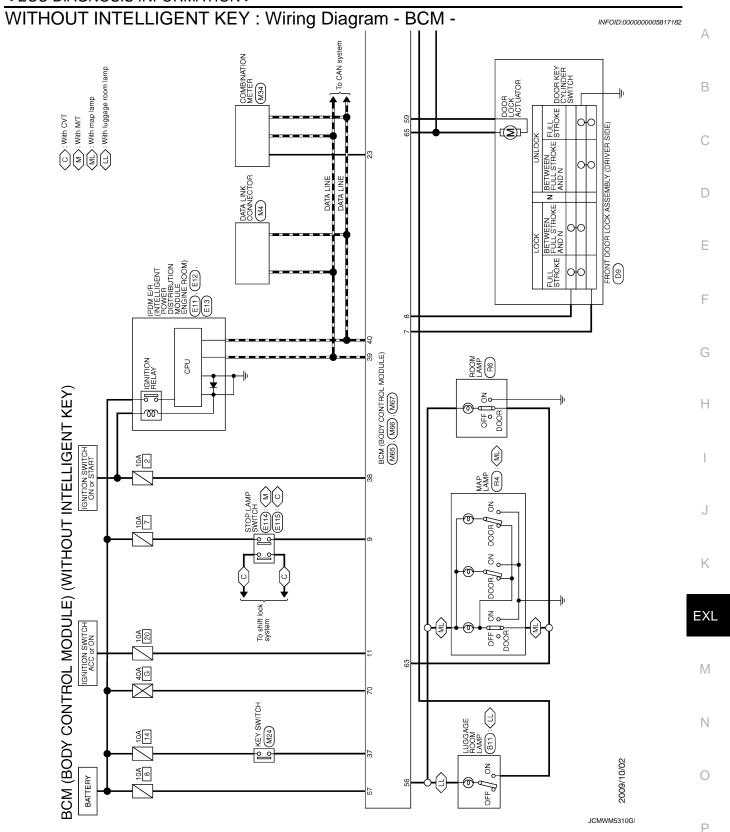
	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	(V) 15 10 5 0 PKIB4960J
					ON (When rear LH door opened)	7.0 - 8.0 V
50* ¹	Ground	A/C indicator	Output	A/C indicator	OFF	12 V
(SB)					ON	0 V
54 (L/W)	Ground	Rear wiper	Output	Ignition switch ON	Rear wiper switch OFF	0 V
(L/VV)					Rear wiper switch ON	12 V
					np battery saver is activated. r room lamp power supply)	0 V
56 (L)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch C)FF	Battery voltage
59	Ground	Driver door UN-	Output	Driver door	UNLOCK (Actuator is activated)	12 V
(L/B)	Ciouna	LOCK	Output	Dilver door	Other then UNLOCK (Actuator is not activated)	0 V
					Turn signal switch OFF	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1s 1s PKIC6370E
					Turn signal switch OFF	0 V
61 (W/L)	Ground	Turn signal RH	I RH Output Ignition swit		Turn signal switch RH	(V) 15 10 5 0 PKIC6370E
			OFF	6.0 V 12 V		
63		Interior room lamp		Interior room		

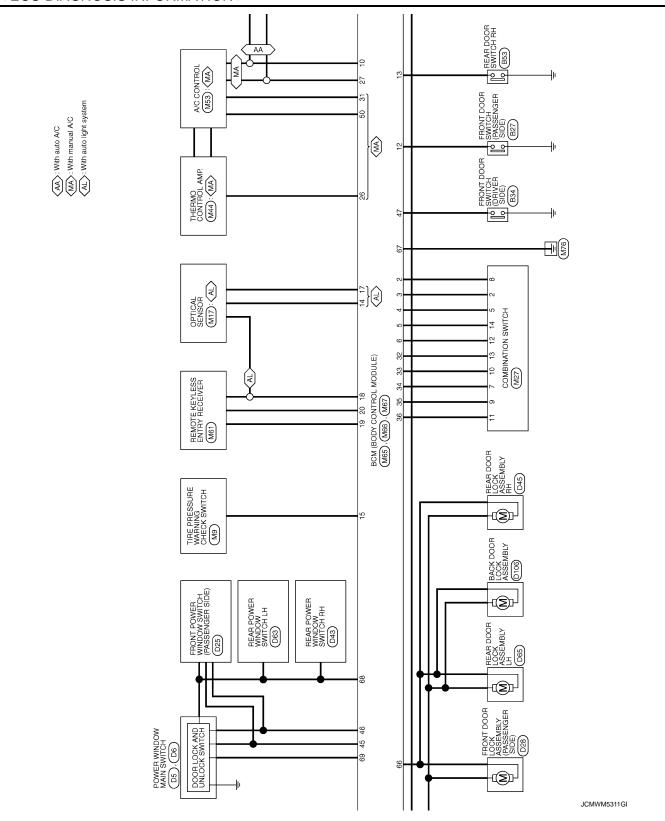
	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
65	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
(V)	Ground	All doors LOCK	Output	All doors	Other then LOCK (Actuator is not activated)	0 V
66	Ground	Passenger door and	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
(G)	Giodila	rear door UNLOCK	Output	and rear door	Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch O	N	0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch O	N	12 V
69 (L/W)	Ground	P/W power supply (BAT)	Output	Ignition switch O	FF	12 V
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch O	FF	Battery voltage

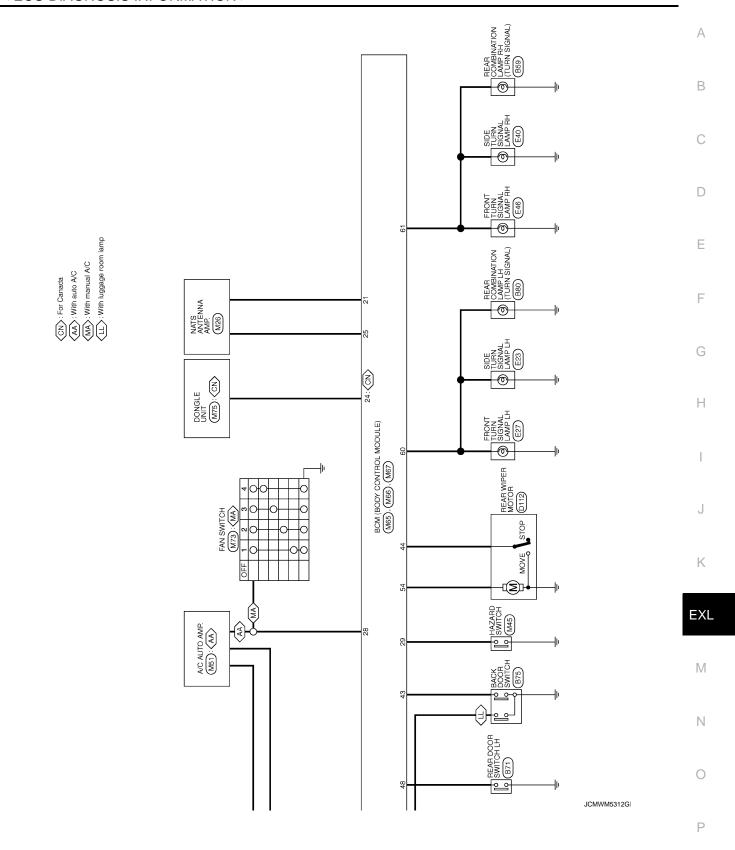
^{• *1:} Only manual air conditioner

^{• *2:} Automatic air conditioner

^{• *3:} Manual air conditioner







54 L/W REAR WIPER OUTPUT		Connector No. M67	L		Connector Type FEA09FB-FHA6-SA	1	手`	H.S. 1- FE 157 158 159 160 161 162 163 164	-	60 00 70 00		L	ja .	ot Wire	L INTERIOR RO	57 T BAT (FUSE)	9 9	a/w	J/W/L	BR:	> (G PASSENGER DOOR, RE	ш	<u>ا</u>	L/W POWER WINDO	70 Y BAT (F/L)										Γ								_
LLIGENT KEY) REAR WINDOW DEFOGGER SW	ACC	REAR RH DOOR SW	OPTICAL SENSOR	TIRE PRESS WARNING CHECK SW	OPTICAL SENSOR POWER SUPPLY	RECEIVER/SENSOR GND	KEYLESS ENTRY RECEIVER POWER SUPPLY	NATS ANTENNA AMP.	SECURITY INDICATOR LAMP	DONGLE LINK	NATS ANTENNA AMP.	THERMO CONTROL AMP.	A/C SW [With auto A/C]	A/C SW [With manual A/C]	BLOWER FAN SW	HAZARU SW	OCMUS CALCULATION S	COMBI SW UDI PUL 5	COMBI SW UUTPUL 4	COMBI SW OUTPUT 3	COMBI SW OUTPUL 2	COMBI SW OUTPULT	KEY SWITCH	IGN	CAN-H	CAN-L		M66	BCM (BODY CONTROL MODULE)		FEA09FW-FHA6-SA		12 12 14 15 15 17 18 10	50 51 52 53 54 55			Signal Name [Specification]	BACK DOOR SW	REAR WIPER STOP POSITION	CENTRAL DOOR LOCK SW	CENTRAL DOOR UNLOCK SW	DRIVER DOOR SW	REAR LH DOOR SW	HIGHIO COLVOIGING OF
· INTE	չ ն	GR/L	I/B	M/A	R/G	> (H S	- 7/A	RY	GR/R	ΓC	æ	5/\	Ϋ́,	Α .	\ \ \ \ \	5	5 5	۲/۲	>	٦, K.L	2	Μ/Α	0	7	۵		П		Т			Ę	5		à	of Wire	>	. 9	æ	BR	BR/Y	9/M	6
HOUT	11 5	13	14	15	17	18	18	21	23	24	25	56	27	27	87 8	67	5 6	35	25	34	8	36	37	38	33	40		Connector No.	Connector Name		Connector Type	修	H.S.			Toriminal	N S	43	44	45	46	47	48	C
BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY) Connector No. M27 REAR WINDOW DE	COMBINATION SWITCH	TH16FW-NH			7	100) 1 1 1 1 1 1 1	2 10 11 17		Signal Name [Specification]	oighaí réamó Lobecmoadón.	WASHER (RR)	INPUT 4	WASHER (FR)	IGN	SINPOLS	CHICALIC	OUIPUI 3	INPUI 5	OUTPUT 2	OUIPUI 4	OUIPUI 1	INPUT 1	OUTPUT 5	INPUT 2		M65	BCM (BODY CONTROL MODILLE)	DOM: (DOD) CONTINUE MODOLE)	TH40FW-NH			5 6 7 8 9 10 11 12 13 14 15 16	32 33 34 35		Signal Name [Specification]	COMBLSW INPLIT 5	COMBI SW INPUT 4	COMBI SW INPUT 3	COMBI SW INPUT 2	COMBI SW INPUT 1	KEY CYL UNLOCK SW	KEY CYL LOCK SW	WS GMD CTO
(BOD	or Name	or Type						=1		╙	of Wire	0	g.	۱ :	× ?	5 0	• }	× 1	a k	R/L	١,٠٠	2	L/R	p,	G			r Name	Mailie	or Type			1 2 3	21 22 23 2	L	Color of Wire	BR/W	e B	Š	g	L/R	W/R	W/B	c
BCM (B	Connector Name	Connector Type		修	Ę.					Terminal	Š	-	2	e	4 1	n q	-	, ,		6	2 ;	=	12	2	14		Connector No.	Connector Name	100	Connector Type		E S				Terminal	2	, e	4	2	9	7	ω .	c

JCMWM5313G

INFOID:0000000005817183

WITHOUT INTELLIGENT KEY: Fail-safe

FAIL-SAFE CONTROL BY DTC

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

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
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
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper auto stop signal.

When the rear wiper auto stop signal does not change more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

- 1. Pass more than 1 minute after the rear wiper stop.
- Turn rear wiper switch OFF.
- Operate the rear wiper switch or rear washer switch.

WITHOUT INTELLIGENT KEY: DTC Inspection Priority Chart

INFOID:0000000005817184

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

Priority	DTC
1	U1000: CAN COMM U1010: CONTROL UNIT (CAN)
2	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING B2196: DONGLE NG
3	C1735: IGN CIRCUIT OPEN
4	 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 C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1729: VHCL SPEED SIG ERR C1734: CONTROL UNIT

WITHOUT INTELLIGENT KEY: DTC Index

INFOID:0000000005817185

NOTE:

Details of time display

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

CONSULT display	Fail-safe	Tire pressure monitor warn- ing lamp ON	Reference
U1000: CAN COMM	_	_	BCS-115
U1010: CONTROL UNIT (CAN)	_	_	BCS-116
B2190: NATS ANTENNA AMP	×		SEC-219
B2191: DIFFERENCE OF KEY	×		<u>SEC-222</u>
B2192: ID DISCORD BCM-ECM	×	_	SEC-223
B2193: CHAIN OF BCM-ECM	×	_	SEC-225
B2195: ANTI SCANNING	×		<u>SEC-226</u>
B2196: DONGLE NG	×		SEC-227
C1704: LOW PRESSURE FL	_	×	
C1705: LOW PRESSURE FR	_	×	MT 20
C1706: LOW PRESSURE RR	_	×	<u>WT-30</u>
C1707: LOW PRESSURE RL	_	×	
C1708: [NO DATA] FL	_	×	
C1709: [NO DATA] FR	_	×	WT 22
C1710: [NO DATA] RR	_	×	<u>WT-32</u>
C1711: [NO DATA] RL	_	×	
C1716: [PRESS DATA ERR] FL	_	×	
C1717: [PRESS DATA ERR] FR	_	×	WT 25
C1718: [PRESS DATA ERR] RR	_	×	<u>WT-35</u>
C1719: [PRESS DATA ERR] RL	_	×	
C1729: VHCL SPEED SIG ERR	_	×	<u>WT-37</u>
C1734: CONTROL UNIT	_	×	<u>WT-39</u>
C1735: IGN CIRCUIT OPEN	_	_	BCS-117

< ECU DIAGNOSIS INFORMATION >

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

WITH INTELLIGENT KEY

WITH INTELLIGENT KEY: Reference Value

INFOID:0000000005817201

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VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Condition	Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1/2/3/4
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
IAILACLK REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
III I O DEO	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND, HI or AUTO	O (Light is illuminated)	On
III III BEO	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND or	Front fog lamp switch OFF	Off
FR FUG KEQ	AUTO (Light is illuminated)	Front fog lamp switch ON	On
		Front wiper switch OFF	Stop
ED WID DEO	Lauritia a assitala ONI	Front wiper switch INT	1LOW
FR WIP REQ	Ignition switch ON	Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
IGN KLTT-KEQ	Ignition switch ON		On
IGN RLY	Ignition switch OFF or ACC		Off
IGNIKLI	Ignition switch ON		On
PUSH SW	Release the push-button ignition	n switch	Off
I GGIT GVV	Press the push-button ignition s	witch	On
INTER/NP SW	Ignition switch ON	Selector lever in any position other than P or N (CVT models) Release clutch pedal (M/T models)	Off
INTLIVINE OVV	ignition switch ON	Selector lever in P or N position (CVT models) Depress clutch pedal (M/T models)	On
ST RLY CONT	Ignition switch ON	Off	
SI KLI CUNI	At engine cranking		On

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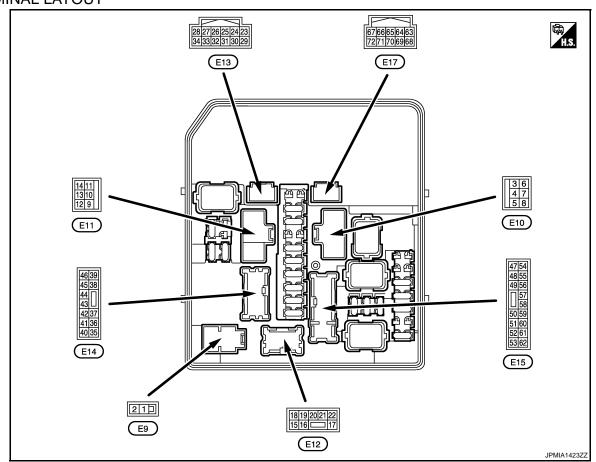
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Monitor Item	Con	dition	Value/Status		
IHBT RLY -REQ	Ignition switch ON		Off		
INDI KLI -KEQ	At engine cranking		On		
	Ignition switch ON		Off		
	At engine cranking		$INHI\;ON\toST\;ON$		
ST/INHI RLY		control relay cannot be recognized by when the starter relay is ON and the	UNKWN		
DETENT SW	Ignition switch ON	 Pull the selector lever with selector lever in P position Selector lever in any position other than P 	Off		
	Release the selector lever with sele NOTE: Fixed On for M/T models	ctor lever in P position	On		
	None of the conditions below are pr	esent	Off		
S/L RLY -REQ	Open the driver door after the ign seconds) Press the push-button ignition sw ed	ition switch is turned OFF (for a few itch when the steering lock is activat-	On		
-	Steering lock is activated		LOCK		
S/L STATE	Steering lock is deactivated		UNLOCK		
	[DTC: B210A] is detected		UNKWN		
DTRL REQ	Not operation		Off		
NOTE: This item is monitored only on the vehicle with the daytime running light system.	Daytime running light system is ope	rated.	On		
OIL D CW	Ignition switch OFF, ACC or engine	running	Open		
OIL P SW	Ignition switch ON		Close		
HOOD SW	NOTE: The item is indicated, but not monitor	ored.	Off		
	Not operation		Off		
THFT HRN REQ	Panic alarm is activated Horn is activated with VEHICLE S TEM	On			
HORN CHIRP	Not operating	Off			
HONN CHIRE	Door locking with Intelligent Key (ho	rn chirp mode)	On		

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

Termin		Description			Value
(Wire	color)	Signal name	Input/ Output	Condition	(Approx.)
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
2 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
3	Ground	Starter motor	Output	Ignition switch ON	0 V
(BR)	Giodila	Starter motor	Output	At engine cranking	Battery voltage
4 (SB)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
5	Ground	Cooling fan relay-1	Output	Cooling fan OFF	0 V
(LG)	Ground	power supply	Output	Cooling fan operated	Battery voltage
				Cooling fan OFF	0 V
7 (Y)	Ground	Cooling fan relay-2 power supply	Output	Cooling fan LO operated	9.0 V
(')		F 5 5 . 6 . 6 . 6 . 7		Cooling fan HI operated	Battery voltage
8 (V)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
9 (B/W)	Ground	Ground	_	Ignition switch ON	0 V
				Cooling fan OFF	0 V
10 (L)	Ground	Cooling fan motor ground	Output	Cooling fan LO operated	5.0 V
(-/		3		Cooling fan HI operated	0 V

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	nal NO.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
13	Ground	Rear window defogger	Output	Ignition switch	Rear window defogger switch OFF	0 V
(W)	Ground	iteal willdow delogger	Output	ON	Rear window defogger switch ON	Battery voltage
19 (B/W)	Ground	Ground	_	Ignition sw	ritch ON	0 V
21 (W)	Ground	Front fog lamp (RH)	Output	Lighting switch	Front fog lamp switch OFF	0 V
(۷۷)				2ND	Front fog lamp switch ON	Battery voltage
22	Ground	Front fog lamp (LH)	Output	Lighting switch	Front fog lamp switch OFF	0 V
(V)				2ND	Front fog lamp switch ON	Battery voltage
24			_	Ignition	Engine stopped	0 V
(LG)	Ground	Oil pressure switch	Input	switch ON	Engine running	Battery voltage
0.5				Ignition	Front wiper stop position	0 V
25 (Y)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage
26 (P)	Ground	CAN-L	Input/ Output		_	_
27 (L)	Ground	CAN-H	Input/ Output		_	_
28 ^{*1}	Ground	Daytime running light	Quitauit	Daytime ru	unning light deactivated	0 V
(P)	Ground	relay-1 control	Output	Daytime ru	unning light activated	Battery voltage
30	Ground	Starter relay control	Output	At engine	cranking	0 V
(SB)	Cround	Starter rolay control	Output	Ignition sw	vitch ON	Battery voltage
31 (W)	Ground	Fuel pump relay control	Output		mately 1 second after turn- gnition switch ON running	0 - 1.5 V
(**)					ately 1 second or more after e ignition switch ON	Battery voltage
				Ignition sw	vitch ON	Battery voltage
33	Ground	Power generation com-	Output		et on "ACTIVE TEST", "AL- PR DUTY" of "ENGINE"	(V) 6 4 2 0 *** 2 ms JPMIA0002GE 3.8 V
(O)		mand signal			ot on "ACTIVE TEST", "AL- PR DUTY" of "ENGINE"	(V) 6 4 2 0 2 2 2 ms JPMIA0003G 1.4 V

Terminal NO. Description (Wire color)					Value				
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)			
34	Ground	Horn relay control	Output	The horn is deactivated		Battery voltage	_		
(R)	Ground	Tiom relay control	Output	The horn is activated		0 V	_		
36	Ground	Parking lamp (LH)	Output	Ignition switch	Lighting switch OFF	0 V			
(Y)	Giodila	Faiking lamp (Lin)	Output	ON Lighting switch 1ST		Battery voltage			
37			•	Ignition	Lighting switch OFF	0 V	_		
(V)	Ground	Parking lamp (RH)	Output	switch ON	Lighting switch 1ST	Battery voltage			
38		Tail lamp (RH) & illumi-	_	Ignition	Lighting switch OFF	0 V	_		
(G)	Ground	nations	Output	switch ON	Lighting switch 1ST	Battery voltage	_		
39			•	Ignition	Front wiper switch OFF	0 V	_		
(V)	Ground	Front wiper HI	Output	switch ON	Front wiper switch HI	Battery voltage			
40					ritch OFF n a few seconds after turn- n switch OFF)	Battery voltage	_		
40 (R)	Ground ECM relay control		Output	Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 - 1.5 V	_		
41		Tail lamp (LH) & license	Output		Ignition	Lighting switch OFF	0 V	_	
(SB)	Ground	plate lamps		tput switch ON	Lighting switch 1ST	Battery voltage	_		
				Ignition switch ACC or ON		0 V	_		
42 (W)	Ground	Steering lock unit pow- er supply	oow- Output	Output	Ignition switch ON	A few seconds after opening the driver door	Battery voltage		
(**)				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage	_		
43		ECM relay power sup-		,	ritch OFF n a few seconds after turn- n switch OFF)	0 V			
43 (G)	Ground	ply	Output	Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage			
44		ECM relay power sup-		Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V			
(P)	Ground	ply	Output	Ignition switch ON Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Ignition switch OFF (For a few seconds after turning ig-		Battery voltage	
45 (Y)	Ground	TCM power supply	Output	Ignition switch OFF		Battery voltage	_		
46			•	Ignition	Front wiper switch OFF	0 V	_		
(O) Ground Front wiper LO		Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage	_		

	nal NO.	Description				Value
+ (Wire	color)	Signal name	Input/ Output	Condition		(Approx.)
47 (BR)		Transmission range switch*2	Input		er in any position other than iition switch ON)	0 V
	Ground			Select lever P or N (Ignition switch ON)		Battery voltage
		Clutch interlockk		Release th	e clutch pedal	0 V
		switch*3		Depress th	ne clutch pedal	Battery voltage
				Ignition	Lighting switch OFF	0 V
49 (W)	Ground	Headlamp HI (RH)	Output	switch ON	Lighting switch HI Lighting switch PASS	Battery voltage
				Daytime ru	inning light activated*1	7.0 V
				Ignition	Lighting switch OFF	0 V
50 (GR)	Ground	Headlamp HI (LH)	Output	switch ON	Lighting switch HI Lighting switch PASS	Battery voltage
				Daytime ru	inning light activated*1	7.0 V
51			0	Ignition	Lighting switch OFF	0 V
(R)	Ground	Headlamp LO (LH)	Output	switch ON	Lighting switch 2ND	Battery voltage
		Headlamp LO (RH)		Ignition	Lighting switch OFF	0 V
52 (P)	Ground	Daytime running light relay-2*1	Output	switch ON	Lighting switch 2ND	Battery voltage
54		Throttle control motor relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
(GR)	Ground			(For a fe	switch ON switch OFF ew seconds after turning ig- vitch OFF)	Battery voltage
55					tely 1 second or more than g the ignition switch ON	0 V
(P)	Ground	Fuel pump power sup- ply	Output		mately 1 second after turn- gnition switch ON unning	Battery voltage
					A/C switch OFF	0 V
56 (SB)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage
			Output			0 - 1.0 V
57 (G)	Ground	Throttle control motor relay control		Ignition switch ON → OFF		↓ Battery voltage ↓
\ = /						0 V
				Ignition sw		0 - 1.0 V
58 (R) ^{*2}	Ground	Ignition relay power	Output	Ignition switch OFF		0 V
(Y)*3	Ground	supply	- Guipui	Ignition sw	itch ON	Battery voltage
59	Ground	Ignition relay power	Output	Ignition sw	itch OFF	0 V
(Y)	Sidding	supply	Jaipai	Ignition sw	itch ON	Battery voltage
60	Ground	Ignition relay power	Output	Ignition sw		0 V
(V)		supply	•	Ignition sw	itch ON	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Termina		Description				Value
(Wire o	color)	Signal name	Input/ Output	Condition		(Approx.)
61	Ground	Ignition relay power	Output	Ignition switch OFF		0 V
(W)	Giodila	supply	Output	Ignition sw	vitch ON	Battery voltage
62	Ground	Ignition relay power	Output	Ignition sw	vitch OFF	0 V
(L)	Giodila	supply	Output	Ignition switch ON		Battery voltage
64 ^{*2}		CVT shift selector (Detention switch)	Input	Ignition t switch ON	Select lever P	0 V
(R)	Ground				Select lever in any position other than P	Battery voltage
65	65 Steering lock ur		Input	Steering lock is activated		0 V
(Y)	Ground	dition-1	Input	Steering lock is deactivated		Battery voltage
66		Push-button ignition	Input	Press the push-button ignition switch		0 V
(L)	Ground	switch		Release the push-button ignition switch		Battery voltage
68	Ground	Steering lock unit con-	lanut	Steering lock is activated		Battery voltage
(W)	Giouria	dition-2	Input	Steering lock is deactivated		0 V
69	Ground	lanition rolay manitar	Input	Ignition switch OFF or ACC		Battery voltage
(Y)	Giouria	ound Ignition relay monitor		Ignition switch ON		0 V

^{*1:} With daytime running light system

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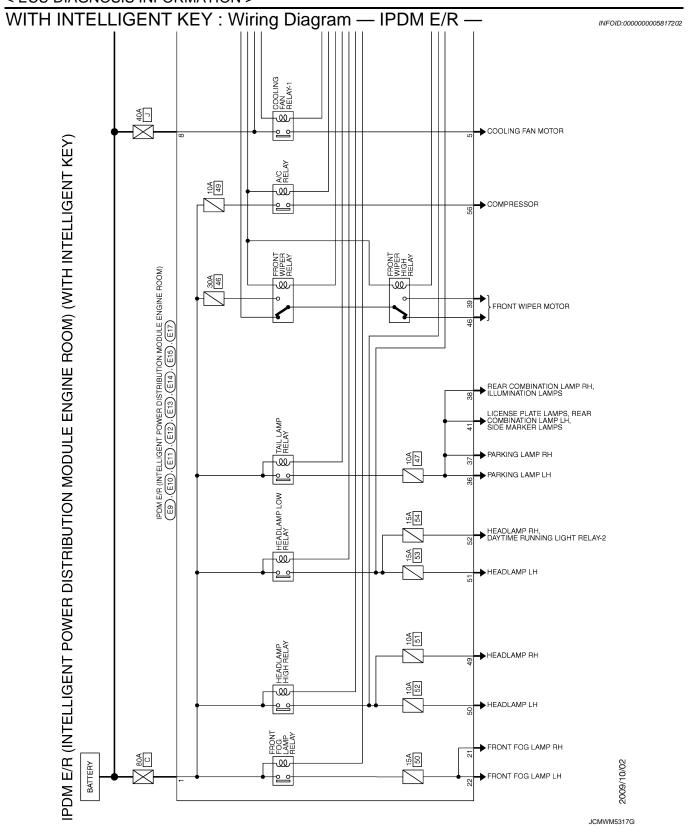
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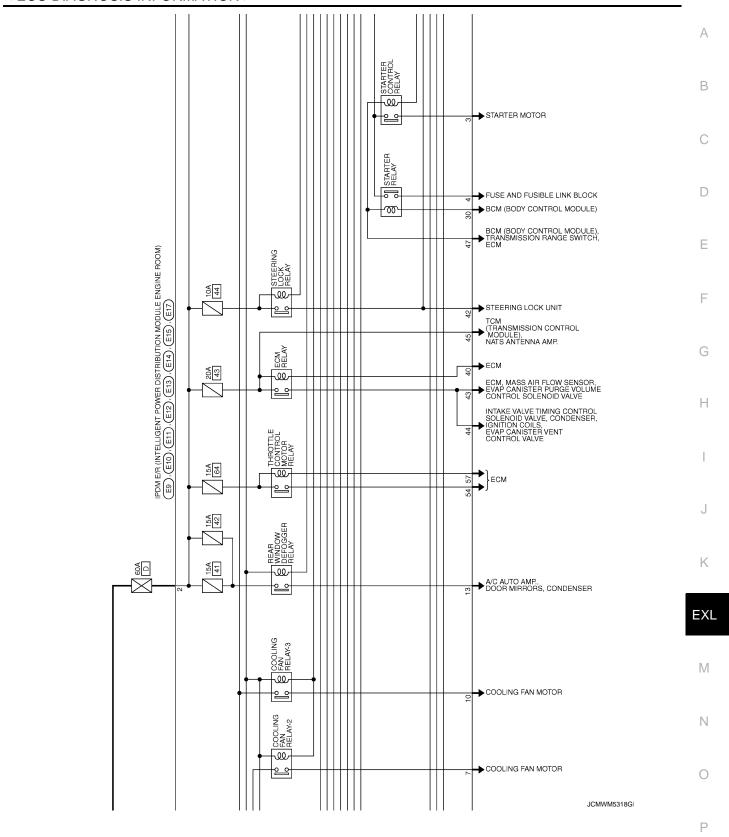
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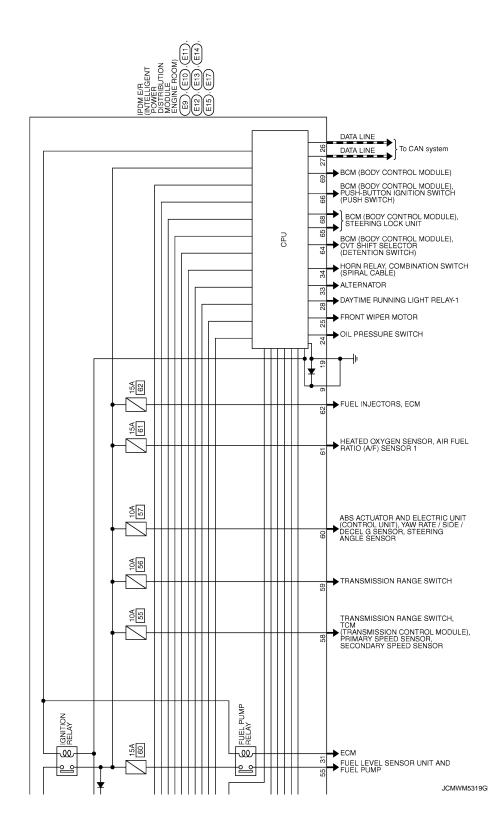
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^{*2:} CVT models

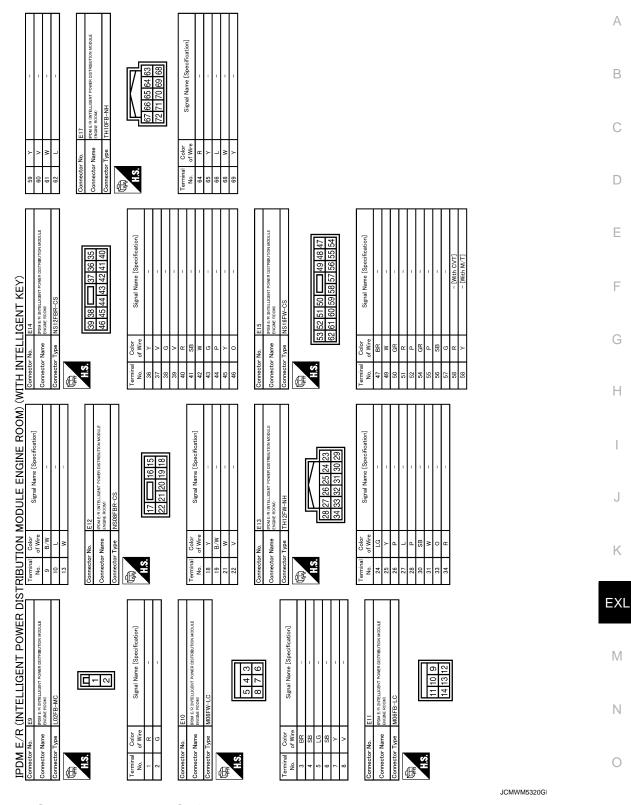
^{*3:} M/T models







< ECU DIAGNOSIS INFORMATION >



WITH INTELLIGENT KEY: 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.

INFOID:0000000005817203

If No CAN Communication Is Available With ECM

< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe operation		
Cooling fan	 The cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 turn ON when the ignition switch is turned ON (Cooling fan HI operation) The cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 turn OFF 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	 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 Daytime running light relay OFF*
Parking lampsSide marker lampsLicense plate lampsIlluminationsTail lamps	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps	Front fog lamp relay OFF
Horn	Horn 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 for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

Voltage	judgment		Operation	
Ignition relay contact side	Ignition relay excitation coil side	IPDM E/R judgment		
ON	ON	Ignition relay ON normal	_	
OFF	OFF	Ignition relay OFF normal	_	
ON	OFF	Ignition relay ON stuck	 Detects DTC "B2098: IGN RELAY ON" Turns ON the tail lamp relay for 10 minutes 	
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"	

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.

< ECU DIAGNOSIS INFORMATION >

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	ON	The front wiper stop position signal does not change for 10 seconds.	

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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.

WITH INTELLIGENT KEY: DTC Index

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 \rightarrow 2 \cdots 38 \rightarrow 39 after returning to the normal condition whenever IGN OFF \rightarrow 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-16
B2098: IGN RELAY ON	×	PCS-17
B2099: IGN RELAY OFF	_	PCS-18
B2108: STRG LCK RELAY ON	_	<u>SEC-96</u>
B2109: STRG LCK RELAY OFF	-	<u>SEC-97</u>
B210A: STRG LCK STATE SW	-	<u>SEC-98</u>
B210B: START CONT RLY ON	-	<u>SEC-101</u>
B210C: START CONT RLY OFF	-	SEC-102
B210D: STARTER RELAY ON	-	<u>SEC-103</u>
B210E: STARTER RELAY OFF	-	<u>SEC-104</u>
B210F: INTRLCK/PNP SW ON	_	SEC-106

WITHOUT INTELLIGENT KEY

B2110: INTRLCK/PNP SW OFF

WITHOUT INTELLIGENT KEY: Reference Value

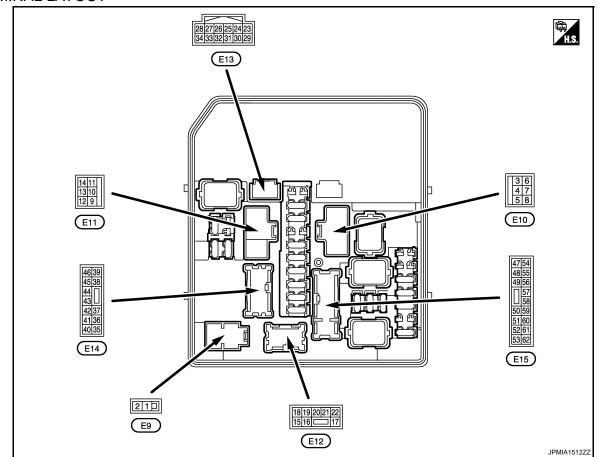
VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Con	Value/Status	
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1/2/3/4

Monitor Item		Condition	Value/Status
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
AILACLK REQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
JI LOBEO	Lighting switch OFF		Off
IL LO REQ	Lighting switch 2ND, HI or AUT	O (Light is illuminated)	On
HL HI REQ	Lighting switch OFF	Off	
ILTITICQ	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND or	Front fog lamp switch OFF	Off
KTOG KLQ	AUTO (Light is illuminated)	Front fog lamp switch ON	On
		Front wiper switch OFF	Stop
R WIP REQ	Ignition switch ON	Front wiper switch INT	1LOW
IN WIF INEW	Ignition switch ON	Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
VIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
GN RLY	Ignition switch OFF or ACC	Off	
GIN KLT	Ignition switch ON	On	
NTER/NP SW	Ignition switch ON	Selector lever in any position other than P or N (CVT models)	Off
WILLWIN SW	ignition switch ON	Selector lever in P or N position (CVT models)	On
ST RLY -REQ	Ignition switch OFF or ACC	Off	
OT NET TREW	Ignition switch ON		On
OTRL REQ	Not operation		Off
NOTE: This item is monitored only on the vehicle with the daytime trunning light system.	Daytime running light system is	operated.	On
	Ignition switch OFF, ACC or eng	gine running	Open
DIL P SW	Ignition switch ON	-	Close
HOOD SW	NOTE: The item is indicated, but not m	onitored.	Off
	Not operation		Off
THFT HRN REQ	Panic alarm is activated Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM		On
	Not operating		Off
HORN CHIRP	Door locking with key fob (horn	chirp mode)	On

< ECU DIAGNOSIS INFORMATION >

TERMINAL LAYOUT



PHYSICAL VALUES

Termina	_	Description			Value
(Wire o	color)	Signal name Input/ Output		Condition	(Approx.)
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
2 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
3	Ground	nd Starter motor	Output	Ignition switch ON	0 V
(BR)	Giodila			At engine cranking	Battery voltage
5	Ground	Cooling fan relay-1	Output	Cooling fan OFF	0 V
(LG)	Ground	power supply	Output	Cooling fan operated	Battery voltage
6 (SB)	Ground	d Ignition switch START	Output	Any position other ignition switch START	0 V
(36)				Ignition switch START	Battery voltage
		Ground Cooling fan relay-2 power supply Outp		Cooling fan OFF	0 V
7 (Y)	Ground		Output	Cooling fan LO operated	9.0 V
(.)	(.,			Cooling fan HI operated	Battery voltage
8 (V)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage
9 (B/W)	Ground	Ground	_	Ignition switch ON	0 V

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	al NO.	Description				Value
(Wire +	color)	Signal name Inpu		Condition		Value (Approx.)
				Cooling fa	n OFF	0 V
10 (L)	Ground	Cooling fan motor ground	Output	Cooling fa	in LO operated	5.0 V
(=)		ground		Cooling fa	in HI operated	0 V
13	Ground	Door window defeager	Output	Ignition switch	Rear window defogger switch OFF	0 V
(W)	Ground	Rear window defogger	Output	ON	Rear window defogger switch ON	Battery voltage
18	Ground	Ignition switch	Output	Ignition sv	vitch OFF	0 V
(Y)	Ground	ignition switch	Output	Ignition sv	vitch ON	Battery voltage
19 (B/W)	Ground	Ground		Ignition sw	vitch ON	0 V
21	Ground	Front fog lamp (RH)	Lighting Output switch		Front fog lamp switch OFF	0 V
(W)				2ND	Front fog lamp switch ON	Battery voltage
22	Ground	Front fog lamp (LH)	Output Lighting switch 2ND		Front fog lamp switch OFF	0 V
(V)				2ND	Front fog lamp switch ON	Battery voltage
24				Ignition	Engine stopped	0 V
(LG)	Ground	Oil pressure switch	Input	switch ON	Engine running	Battery voltage
25				Ignition	Front wiper stop position	0 V
25 (Y)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage
26 (P)	Ground	CAN-L	Input/ Output		_	_
27 (L)	Ground	CAN-H	Input/ Output		_	_
28 ^{*1}	Ground	Daytime running light	Output	Daytime running light deactivated		0 V
(P)	Giodila	relay-1 control	Output	Daytime re	unning light activated	Battery voltage
31 (W)	Ground	Fuel pump relay control	Output		mately 1 second after turn- ignition switch ON running	0 - 1.5 V
(VV)					ately 1 second or more after e ignition switch ON	Battery voltage

	nal NO.	Description				Value			
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)			
				Ignition sw	vitch ON	Battery voltage			
33	Ground	Power generation com-	Output		et on "ACTIVE TEST", "AL- PR DUTY" of "ENGINE"	(V) 6 4 2 0 ■ 2ms JPMIA0002GB			
(O)	Ground	mand signal	Output						
				80 % is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0			
						JРМIA0003GB 1.4 V			
34	Ground	Horn relay control	Output	The horn i	s deactivated	Battery voltage			
(R)	Giodila	rioni relay control	Output	The horn i	s activated	0 V			
36	Craund	Darking Jamp (LU)	Outro et	Ignition switch	Lighting switch OFF	0 V			
(Y)	Ground	Parking lamp (LH)	Output	ON	Lighting switch 1ST	Battery voltage			
37							Ignition	Lighting switch OFF	0 V
(V)	Ground	Parking lamp (RH)	Output	switch ON	Lighting switch 1ST	Battery voltage			
38		Tail lamp (RH) & illumi-	_	Ignition	Lighting switch OFF	0 V			
(G)	Ground	nations	Output	switch ON	Lighting switch 1ST	Battery voltage			
39				Ignition	Front wiper switch OFF	0 V			
(V)	Ground	Front wiper HI	Output	switch ON	Front wiper switch HI	Battery voltage			
40					vitch OFF n a few seconds after turn- n switch OFF)	Battery voltage			
(R)	Ground	ECM relay control	Output	Ignition (For a fee	switch ON switch OFF ew seconds after turning ig- witch OFF)	0 - 1.5 V			
41		Tail lamp (LH) & license	0	Ignition	Lighting switch OFF	0 V			
(SB)	Ground	plate lamps	Output	switch ON	Lighting switch 1ST	Battery voltage			
43		ECM relay power sup-		ing ignition	n a few seconds after turn- n switch OFF)	0 V			
(G)	Ground	ply	Output	Ignition (For a fee	switch ON switch OFF ew seconds after turning ig- vitch OFF)	Battery voltage			

	nal NO. color)	Description	l		Condition	Value
+		Signal name	Input/ Output		Condition	(Approx.)
44		ECM relay power sup-	_	ing ignition	n a few seconds after turn- n switch OFF)	0 V
(P)	Ground	ply	Output	(For a fe	switch ON switch OFF ew seconds after turning ig- vitch OFF)	Battery voltage
45 (Y)	Ground	TCM power supply	Output	Ignition sw	vitch OFF	Battery voltage
46		- · · · · · · · · · · · · · · · · · · ·	0	Ignition	Front wiper switch OFF	0 V
(O)	Ground	Front wiper LO	Output	switch ON	Front wiper switch LO	Battery voltage
		Transmission range	la a cut		er in any position other than nition switch ON)	0 V
47 (BR)	Ground	switch*2	Input	Select leve ON)	er P or N (Ignition switch	Battery voltage
		Clutch interlock	Input	Release th	ne clutch pedal	0 V
		switch*3	трис	Depress th	ne clutch pedal	Battery voltage
				Ignition	Lighting switch OFF	0 V
49 (W) Ground	Headlamp HI (RH)	Output	switch ON	Lighting switch HI Lighting switch PASS	Battery voltage	
				Daytime running light activated*1		7.0 V
		nd Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
50 (GR)	Ground				Lighting switch HI Lighting switch PASS	Battery voltage
				Daytime ru	unning light activated*1	7.0 V
51	0	11	0	Ignition	Lighting switch OFF	0 V
(R)	Ground	Headlamp LO (LH)	Output	switch ON	Lighting switch 2ND	Battery voltage
50		Headlamp LO (RH)		Ignition	Lighting switch OFF	0 V
52 (P)	Ground	Daytime running light relay-2*1	Output	switch ON	Lighting switch 2ND	Battery voltage
54		Throttle control motor			ritch OFF n a few seconds after turn- n switch OFF)	0 V
(GR)	Ground	relay power supply	Output	(For a fe	switch ON switch OFF ew seconds after turning ig- vitch OFF)	Battery voltage
55		Fuel pump power sup-			ately 1 second or more than any the ignition switch ON	0 V
(P)	Ground	ply	Output		mately 1 second after turn- gnition switch ON running	Battery voltage
					A/C switch OFF	0 V
56 (SB)	Ground	A/C relay power supply	Output	Engine running	A/C switch ON (A/C compressor is operating)	Battery voltage

< ECU DIAGNOSIS INFORMATION >

Termina	-	Description			Value
(Wire	color)	Signal name	Input/ Output	Condition	(Approx.)
57 (G)	Ground	Throttle control motor relay control	Output	Ignition switch ON $ ightarrow$ OFF	0 - 1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON	0 - 1.0 V
58		Ignition relay power		Ignition switch OFF	0 V
(R) ^{*2} (Y) ^{*3}	Ground	supply	Output	Ignition switch ON	Battery voltage
59	Cround	Ignition relay power	Outnut	Ignition switch OFF	0 V
(Y)	Ground	supply	Output	Ignition switch ON	Battery voltage
60	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V
(V)	Ground		supply	Output	Ignition switch ON
61	Cround	Ignition relay power	Output	Ignition switch OFF	0 V
(W)	Ground 9	Output	Ignition switch ON	Battery voltage	
62	62 Ignition relay power	Ignition relay power	Output	Ignition switch OFF	0 V
(L)	Ground	supply	Output	Ignition switch ON	Battery voltage

^{*1:} With daytime running light system

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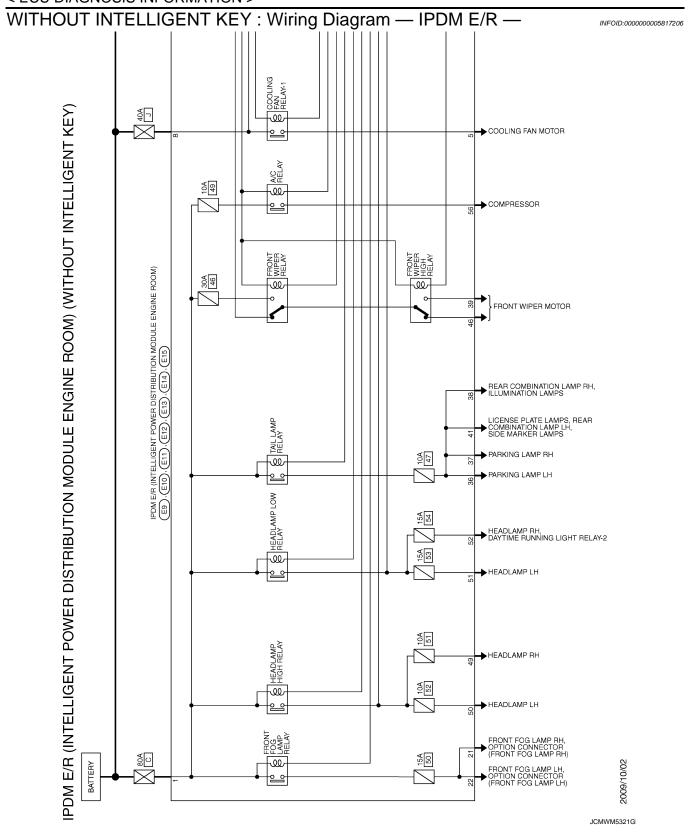
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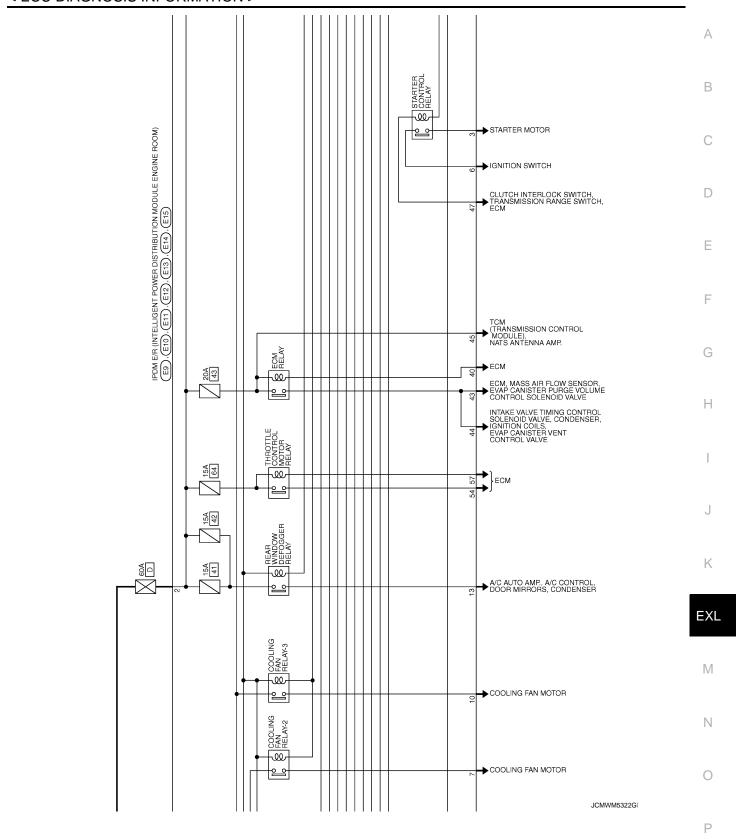
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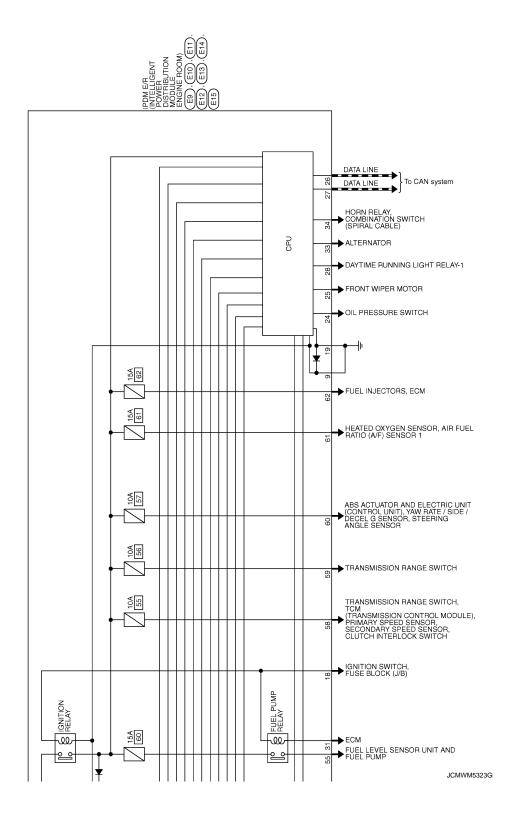
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^{*2:} CVT models

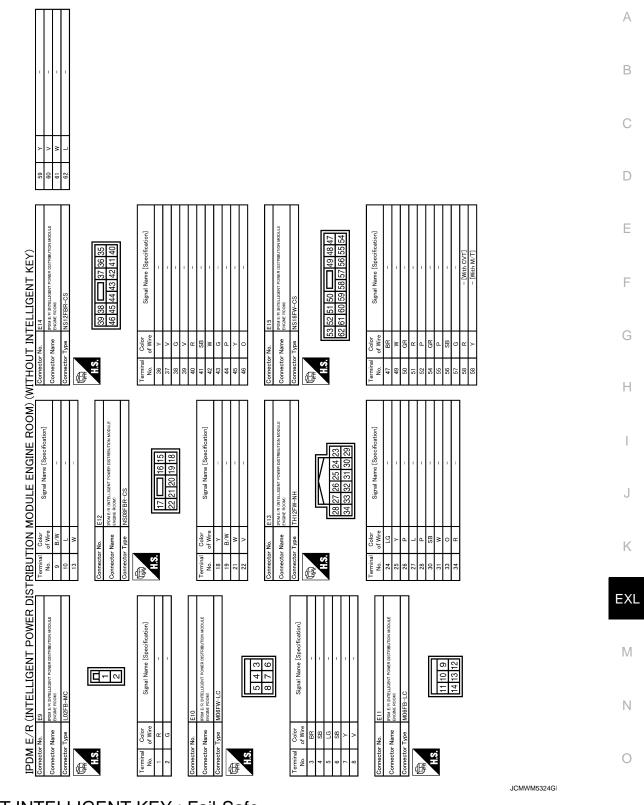
^{*3:} M/T models







< ECU DIAGNOSIS INFORMATION >



WITHOUT INTELLIGENT KEY: 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.

INFOID:0000000005817207

If No CAN Communication Is Available With ECM

< ECU DIAGNOSIS INFORMATION >

Control part	Fail-safe operation
Cooling fan	 The cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 turn ON when the ignition switch is turned ON (Cooling fan HI operation) The cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 turn OFF 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	 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 Daytime running light relay OFF*
Parking lampsSide marker lampsLicense plate lampsIlluminationsTail lamps	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps	Front fog lamp relay OFF
Rear window defogger relay	Rear window defogger relay OFF
Horn	Horn OFF

^{*:} With daytime running light system

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

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

Voltage	judgment			
Ignition relay contact side	Ignition switch status from BCM	IPDM E/R judgment	Operation	
ON	ON	Ignition relay ON normal	_	
OFF	OFF	Ignition relay OFF normal	_	
ON	OFF	Ignition relay ON stuck	 Detects DTC "B2098: IGN RELAY ON" Turns ON the tail lamp relay for 10 minutes 	
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"	

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.

< ECU DIAGNOSIS INFORMATION >

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	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.

WITHOUT INTELLIGENT KEY: DTC Index

INFOID:0000000005817208

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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 \rightarrow 2 \cdots 38 \rightarrow 39 after returning to the normal condition whenever IGN OFF \rightarrow ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

		×: Applicable	G
CONSULT display	Fail-safe	Refer to	
No DTC is detected. further testing may be required.	_	_	Н
U1000: CAN COMM CIRCUIT	×	PCS-16	
B2098: IGN RELAY ON	×	PCS-17	
B2099: IGN RELAY OFF	_	PCS-48	

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< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS WITHOUT DAYTIME RUNNING LIGHT SYSTEM

WITHOUT DAYTIME RUNNING LIGHT SYSTEM: Symptom Table

INFOID:0000000005491706

CAUTION:

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

Symp	otom	Possible cause	Inspection item	
Headlamp (HI) is not turned ON.	One side	Fuse Halogen bulb (HI) Harness between IPDM E/R and the headlamp Harness between headlamp and the ground IPDM E/R	Headlamp (HI) circuit Refer to EXL-47.	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) ARI Refer to EXL-198.	E NOT TURNED ON"	
High beam indicator lam		Combination meter	Combination meter Data monitor "HI-BEAM IND" BCM (HEADLAMP) Active test "HEADLAMP"	
Headlamp (LO) is not turned ON.		 Fuse Halogen bulb (LO) Harness between IPDM E/R and the headlamp Harness between headlamp and the ground IPDM E/R 	Headlamp (LO) circuit Refer to EXL-50.	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-199.		
Headlamp is not turned	When ignition switch is turned ON.			
OFF.	When ignition switch is turned OFF.	IPDM E/R	_	
Headlamp is not turned (DN/OFF with the lighting	Combination switch Harness between the combination switch and BCM BCM	Combination switch Refer to BCS-145.	
switch AUTO.		Optical sensor Harness between the optical sensor and BCM BCM	Optical sensor Refer to <u>EXL-64</u> .	
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and the front fog lamp Front fog lamp IPDM E/R	Front fog lamp circuit Refer to EXL-55.	
Both side		Symptom diagnosis	ADE NOT TUDNES ON	
Front fog lamp is not turr	ned ON.	"BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to <u>EXL-201</u> .		
Parking lamp is not turne	ed ON.	Parking lamp bulb Harness between IPDM E/R and the parking lamp Front combination lamp assembly IPDM E/R	Parking lamp circuit Refer to EXL-60.	

< SYMPTOM DIAGNOSIS >

Sym	ptom	Possible cause	Inspection item
Tail lamp is not turned ON.		Tail lamp bulb Harness between IPDM E/R and the rear combination lamp Rear combination lamp assembly	Tail lamp circuit Refer to EXL-69.
Rear side marker lamp is not turned ON.		Rear side marker lamp bulb Harness between IPDM E/R and the rear side marker lamp Rear side marker lamp assembly	Rear side marker lamp circuit Refer to EXL-71.
License plate lamp is no	t turned ON.	License plate lamp bulb Harness between IPDM E/R and the license plate lamp License plate lamp assembly	License plate lamp circuit Refer to <u>EXL-72</u> .
Parking lamp, tail lamp and license plate lamp Parking lamp, tail lamp and license plate lamp (Each illumination is turn	o are not turned ON. o, rear side marker lamp o are not turned OFF.	Symptom diagnosis "PARKING, LICENSE PLATE, SIDE INOT TURNED ON" Refer to EXL-200.	MARKER AND TAIL LAMPS ARE
Tail lamp indicator is not turned ON. (Parking and tail lamps are turned ON.)		Combination meter	 Combination meter Data monitor "LIGHT IND" BCM (HEADLAMP) Active test "TAIL LAMP"
Turn signal lamp does	Indicator lamp is normal. (Applicable side performs the high flasher activation.)	Harness between BCM and each turn signal lamp Turn signal lamp bulb	Turn signal circuit Refer to EXL-62.
not blink.	Indicator lamp is included.	Combination switch Harness between the combination switch and BCM BCM	Combination switch Refer to BCS-145.
	One side	Combination meter	_
Turn signal indicator lamp does not blink.	Both sides (Always)	Turn signal indicator lamp signal BCM Combination meter	Combination meter Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"
(Turn signal indicator lamp is normal.)	Both sides (Only when activating hazard warning lamp with the ignition switch OFF.)	Combination meter power supply and the ground circuit Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-39.
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.) 		Hazard switch Harness between the hazard switch and BCM BCM	Hazard switch Refer to <u>EXL-67</u> .

WITH DAYTIME RUNNING LIGHT SYSTEM

WITH DAYTIME RUNNING LIGHT SYSTEM: Symptom Table

CAUTION:

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

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INFOID:0000000005491707

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON.	One side	Fuse Halogen bulb (HI) Harness between IPDM E/R and the headlamp Harness between the headlamp and the daytime running light relay-1 Harness between the daytime running light relay-1 and the ground Harness between the headlamp and the ground Daytime running light relay-1 IPDM E/R	Headlamp (HI) circuit Refer to EXL-47.
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to EXL-198.	
High beam indicator lamp [Headlamp (HI) is turned		Combination meter	Combination meter Data monitor "HI-BEAM IND" BCM (HEADLAMP) Active test "HEADLAMP"
Headlamp (LO) is not turned ON.	One side	 Fuse Halogen bulb (LO) Harness between IPDM E/R and the headlamp Harness between IPDM E/R and the daytime running light relay-2 Harness between IPDM E/R and the headlamp Harness between daytime running light relay-2 and the headlamp Harness between the headlamp and the ground Harness between the headlamp and the daytime running light relay-1 Harness between the daytime running light relay-1 Daytime running light relay-1 Daytime running light relay-2 IPDM E/R 	Headlamp (LO) circuit Refer to <u>EXL-50</u> .
Both sides When ignition switch is turned ON.		Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-199.	
OFF.	When ignition switch is turned OFF.	IPDM E/R	_
Daytime running light is not turned ON. [Headlamp (HI) is turned ON.]		Fuse Harness between IPDM E/R and the daytime running light relay-1 Daytime running light relay-1 IPDM E/R BCM ECM Combination meter	Daytime running light relay circuit Refer to EXL-57. BCM (HEADLAMP) Data monitor "ENGINE STATE" Combination mete Data monitor "PKB SW" BCM (HEADLAMP) Active test "DAYTIME RUNNING LIGHT"

< SYMPTOM DIAGNOSIS >

Symptom		Possible cause Inspection item	
Headlamp is not turned ON/OFF with the lighting switch AUTO.		Combination switch Harness between the combination switch and BCM BCM	Combination switch Refer to BCS-79.
		Optical sensor Harness between the optical sensor and BCM BCM	Optical sensor Refer to <u>EXL-64</u> .
Front fog lamp is not turned ON. One side		Front fog lamp bulb Harness between IPDM E/R and the front fog lamp Front fog lamp IPDM E/R	Front fog lamp circuit Refer to <u>EXL-55</u> .
Front fog lamp is not tur	Both side ned ON.	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-201.	
Parking lamp is not turned ON.		Parking lamp bulb Harness between IPDM E/R and the parking lamp Front combination lamp assembly IPDM E/R	Parking lamp circuit Refer to EXL-60.
Tail lamp is not turned ON.		Tail lamp bulb Harness between IPDM E/R and the rear combination lamp Rear combination lamp assembly	Tail lamp circuit Refer to <u>EXL-69</u> .
Rear side marker lamp is not turned ON.		Rear side marker lamp bulb Harness between IPDM E/R and the rear side marker lamp Rear side marker lamp assembly	Rear side marker lamp circuit Refer to EXL-71.
License plate lamp is not turned ON.		License plate lamp bulb Harness between IPDM E/R and the license plate lamp License plate lamp assembly	License plate lamp circuit Refer to EXL-72.
 Parking lamp, tail lamp, rear side marker lamp and license plate lamp are not turned ON. Parking lamp, tail lamp, rear side marker lamp and license plate lamp are not turned OFF. (Each illumination is turned ON/OFF.) 		Symptom diagnosis "PARKING, LICENSE PLATE, SIDE I NOT TURNED ON" Refer to EXL-200.	MARKER AND TAIL LAMPS ARE
Tail lamp indicator is not turned ON. (Parking and tail lamps are turned ON.)		Combination meter	Combination meter Data monitor "LIGHT IND" BCM (HEADLAMP) Active test "TAIL LAMP"
Turn signal lamp does not blink.	Indicator lamp is normal. (Applicable side performs the high flasher activation.)	Harness between BCM and each turn signal lamp Turn signal lamp bulb	Turn signal circuit Refer to EXL-62.
not billik.	Indicator lamp is included.	Combination switch Harness between the combination switch and BCM BCM	Combination switch Refer to BCS-79.

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< SYMPTOM DIAGNOSIS >

Sym	ptom	Possible cause	Inspection item	
	One side	Combination meter	_	
Turn signal indicator lamp does not blink. (Turn signal indicator lamp is normal.)	Both sides (Always)	Turn signal indicator lamp signal BCM Combination meter	Combination meter Data monitor "TURN IND" BCM (FLASHER) Active test "FLASHER"	
	Both sides (Only when activating hazard warning lamp with the ignition switch OFF.)	Combination meter power supply and the ground circuit Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-39.	
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.) 		Hazard switch Harness between the hazard switch and BCM BCM	Hazard switch Refer to <u>EXL-67</u> .	

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description A

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 the control difference. This is normal.

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BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

Description INFOID:000000005491709

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

Diagnosis Procedure

INFOID:0000000005491710

1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-79, "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

(P)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	HI or PASS	ON
	(2ND)	LO	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-81, "Exploded View".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-47, "Component Function Check".

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 >

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:0000000005491711

Both side headlamps (LO) are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000005491712

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1. CHECK COMBINATION SWITCH

Check the combination switch. Refer to BCS-79, "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
	Lighting Switch	OFF	ON OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-81, "Exploded View".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-50, "Component Function Check".

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

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

< SYMPTOM DIAGNOSIS >

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

Description INFOID:000000005491713

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

Diagnosis Procedure

INFOID:0000000005491714

1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-79, "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	Lighting switch	1ST	ON
REQ	Lighting Switch	OFF	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-81, "Exploded View".

${f 3.}$ TAIL LAMP CIRCUIT INSPECTION

Check the tail lamp circuit. Refer to EXL-69, "Component Function Check".

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R.

NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS > BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON Α Description INFOID:0000000005491715 The front fog lamps are not turned ON in any condition. В Diagnosis Procedure INFOID:0000000005491716 1. CHECK FUSE Check that the following fuse is fusing. D Unit Location Fuse No. Capacity IPDM E/R Front fog lamp #65 15 A Is the fuse fusing? Е >> Repair the applicable circuit. And then replace the fuse. NO >> GO TO 2. 2.combination switch inspection F Check the combination switch. Refer to BCS-79, "Symptom Table". Is the combination switch normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning part. 3.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT Н CONSULT-III DATA MONITOR Select "FR FOG REQ" of IPDM E/R data monitor item. With operating the front fog lamp switch, check the monitor status. Monitor item Condition Monitor status ON ON Front fog lamp switch FR FOG REQ (With lighting switch 1ST) OFF OFF Is the item status normal? K YES >> GO TO 4. NO >> Replace BCM. Refer to BCS-81, "Exploded View". 4.FRONT FOG LAMP CIRCUIT INSPECTION **EXL** Check the front fog lamp circuit. Refer to EXL-55, "Component Function Check". Is the front fog lamp circuit normal? M YES >> Replace IPDM E/R. NO >> Repair or replace the malfunctioning part. Ν

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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.

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Description B

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 trunk room.)

NOTE:

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

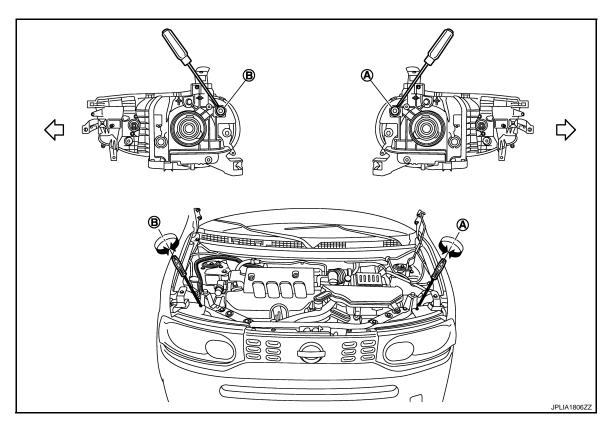
Wipe out dirt on the headlamp.

CAUTION:

Never use organic solvent (thinner, gasoline etc.)

· Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW



A Headlamp (RH) UP/DOWN adjustment screw

∀: Vehicle center

 B. Headlamp (LH) UP/DOWN adjustment screw EXL

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HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

	Adjustment screw	Screw driver rotation	Facing direction
A	Headlamp (RH) UP/DOWN	Clockwise	DOWN
A Headian	neadiamp (Kn) OF/DOWN	Counterclockwise	UP
В	Headlems (LH) LID/DOWN	Clockwise	DOWN
Б Пеа	Headlamp (LH) UP/DOWN	Counterclockwise	UP

Aiming Adjustment Procedure

INFOID:0000000005491719

Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the headlamp center and the screen.
- 3. 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:

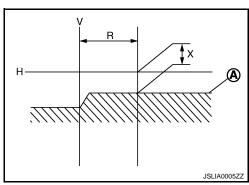
Never cover the lens surface with a tape etc. The lens is made of resin.

4. 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 measure- : 350 \pm 175 mm (13.78 \pm 6.89

ment range (R) in)

Low beam distribution on the screen



5. Adjust the cutoff line height (X) 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

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

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

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FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

FRONT FOG LAMP AIMING ADJUSTMENT

Description INFOID:0000000005491720

PREPARATION BEFORE ADJUSTING

NOTE:

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

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.)

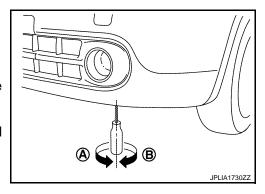
· Ride alone on the driver seat.

AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw for adjustment.
 - A: UP
 - B: DOWN
- For the position and direction of the adjusting screw, refer to the figure.

NOTE:

A screwdriver or hexagonal wrench [6 mm (0.24 in)] can be used for adjustment.



INFOID:0000000005491721

Aiming Adjustment Procedure

1. Place the screen.

NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 10 m (32.8 ft) between the front fog lamp center and the screen.
- 3. Start the engine. Illuminate the front fog lamp.

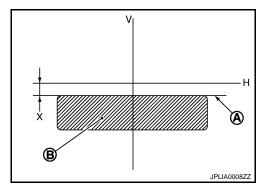
CAUTION:

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

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

4. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 200 mm (7.87 in).

Front fog lamp light distribution on the screen



FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

A : Cutoff line

B : High illuminance area

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H : Horizontal center line of front fog lamp

V : Vertical center line of front fog lamp

X : Cutoff line height

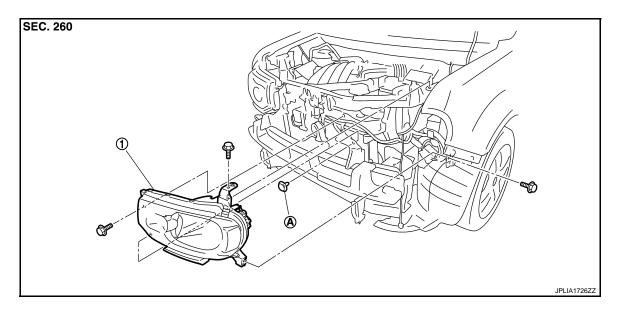
Revision: 2009 October **EXL-207** 2010 Z12

REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

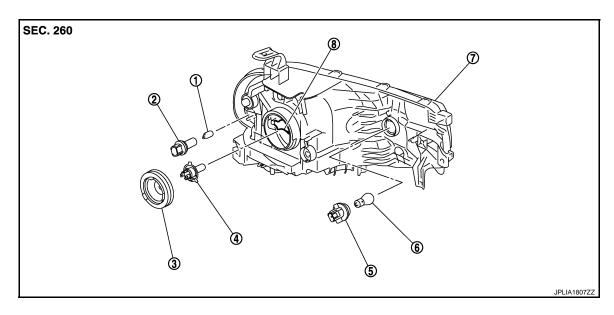
Exploded View

REMOVAL



- 1. Front combination lamp
- A. Air duct clip(only left)

DISASSEMBLY



- 1. Parking(side marker) lamp bulb
- Halogen bulb
- 7. Headlamp housing assembly
- 2. Parking(side marker)lamp bulb sock- 3.
- 5. Front turn signal lamp bulb socket
- 8. Retaining spring

- Back cover
- 6. Front turn signal lamp bulb

Removal and Installation

INFOID:0000000005491723

REMOVAL

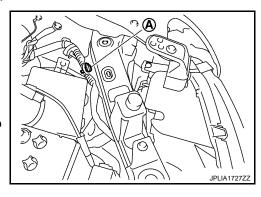
FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

CAUTION:

Disconnect the battery negative terminal or the fuse.

- Remove front bumper fascia. Refer to EXT-12, "Exploded View".
- Remove the harness clips (A)*.
 - *: When replace a left.
- Remove the air duct clip*.
 - *: When replace a left.
- Remove the headlamp mounting bolts.
- Pull out the headlamp assembly forward the vehicle.
- Disconnect the connector before removing the headlamp assembly.



INSTALLATION

Install in the reverse order of removal.

NOTE:

After installation, perform aiming adjustment. Refer to EXL-203, "Description".

Replacement INFOID:0000000005491724

CAUTION:

- Disconnect the battery negative terminal or 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

- Disconnect the headlamp bulb connector.
- Remove the back cover.
- Remove the retaining spring lock. And remove the bulb from the headlamp housing assembly.

PARKING(FRONT SIDE MARKER) LAMP BULB

- Remove the fender protector. Refer to EXT-22, "FENDER PROTECTOR: Exploded View". Keep a service area.
- Rotate the bulb socket counterclockwise and unlock it.
- Remove the bulb from the bulb socket.

FRONT TURN SIGNAL LAMP BULB

- Rotate the bulb socket counterclockwise and unlock it.
- Remove the bulb from the bulb socket.

Disassembly and Assembly

DISASSEMBLY

- 1. Remove the back cover.
- Remove the retaining spring lock. And remove the bulb from the headlamp housing assembly.
- Rotate the parking(front side marker) lamp bulb socket counterclockwise and unlock it.
- Remove the bulb from the parking(front side marker) lamp bulb socket. 4.
- Rotate the front turn signal lamp bulb socket counterclockwise and unlock it.
- Remove the bulb from the front turn signal lamp bulb socket.

ASSEMBLY

Assemble in the reverse order of disassembly.

CAUTION:

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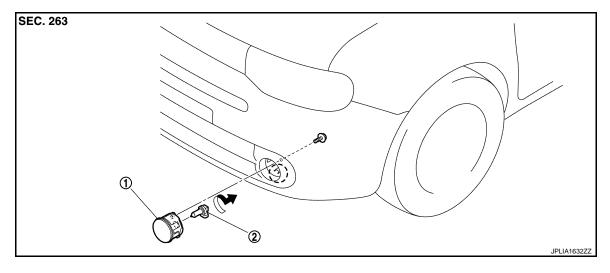
EXL-209 Revision: 2009 October 2010 Z12

FRONT COMBINATION LAMP

After installing the bulb, install the resin cap and the bulb socket securely for watertightness.

FRONT FOG LAMP

Exploded View



Front fog lamp

2. Front fog lamp bulb

() : Pawl

Removal and Installation

CAUTION:

Disconnect the battery negative terminal or the fuse.

REMOVAL

- 1. Remove the fender protector. Refer to EXT-22, "FENDER PROTECTOR: Exploded View".
- Remove the front fog lamp connector.
- 3. Remove the front fog lamp mounting bolt.
- 4. While pressing pawls, remove the front fog lamp.

INSTALLATION

Installation is the reverse order of removal.

NOTE:

After installation, perform aiming adjustment. Refer to EXL-206, "Description".

Replacement

CAUTION:

- Disconnect the battery negative terminal or 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.

FRONT FOG LAMP BULB

1. Remove the fender protector. Keep the service area.Refer to EXT-22, "FENDER PROTECTOR: Exploded View".

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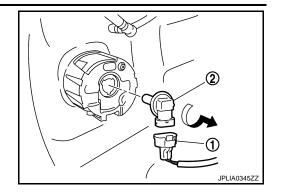
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Revision: 2009 October **EXL-211** 2010 Z12

FRONT FOG LAMP

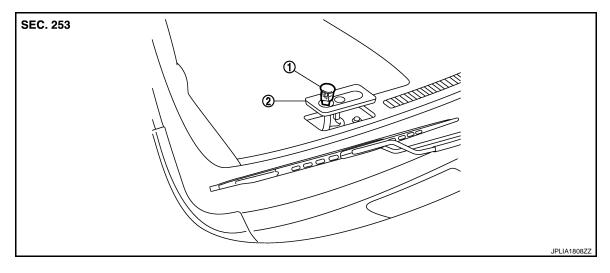
< REMOVAL AND INSTALLATION >

- 2. Remove the front fog lamp bulb connector (1).
- 3. Rotate the bulb (2) counterclockwise and unlock it.



OPTICAL SENSOR

Exploded View



1. Optical sensor

Instrument mask

Removal and Installation

REMOVAL

- Remove the instrument mask.
- 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 >

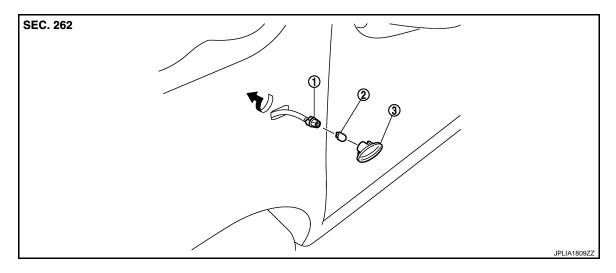
LIGHTING & TURN SIGNAL SWITCH

Exploded View

The lighting & turn switch is integrated in the combination switch. Refer to BCS-82, "Exploded View".

SIDE TURN SIGNAL LAMP

Exploded View INFOID:0000000005491732



- 1. Side turn signal lamp bulb socket
- 2. Side turn signal lamp bulb
- Side turn signal lamp housing

INFOID:0000000005491733

Removal and Installation

Disconnect battery negative terminal or remove the fuse.

REMOVAL

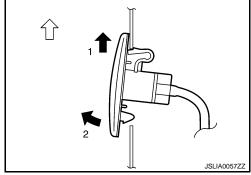
CAUTION:

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

: Installable both direction

Rotate the bulb socket counterclockwise and unlock it.

Support side turn signal lamp harness with tape so that it won't fall into the front fender.



INSTALLATION

- Rotate the bulb socket clockwise and lock it.
- Fix the pawl-side behind the side turn signal lamp housing first, then push the resin clip-side.

Replacement INFOID:0000000005491734

CAUTION:

- Disconnect 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.

SIDE TURN SIGNAL LAMP BULB

- Remove the side turn signal lamp.
- 2. Rotate the bulb socket counterclockwise and unlock it. NOTE:

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EXL-215 Revision: 2009 October 2010 Z12

SIDE TURN SIGNAL LAMP

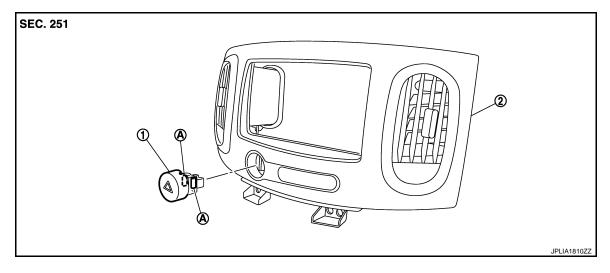
< REMOVAL AND INSTALLATION >

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

3. Remove the bulb from the bulb socket.

HAZARD SWITCH

Exploded View



- 1. Hazard switch
- A. Pawl

2. Cluster lid C

Removal and Installation

REMOVAL

- Remove the cluster lid C. Refer to <u>IP-12, "Exploded View"</u>.
- 2. While pressing pawls, push the hazard switch. And remove it.

INSTALLATION

Install in the reverse order of removal.

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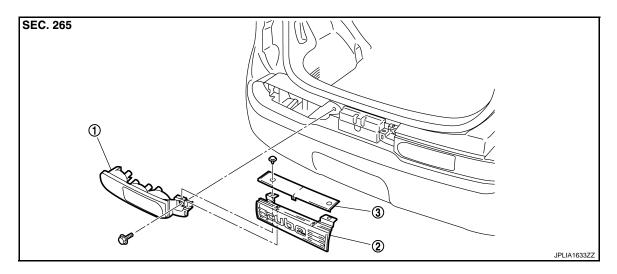
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REAR COMBINATION LAMP

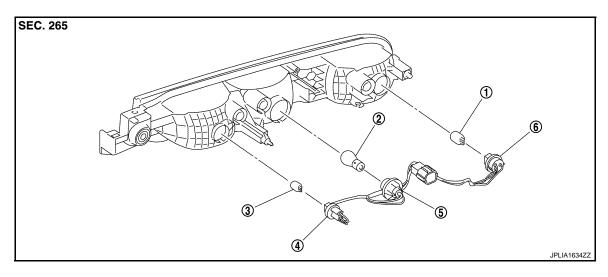
Exploded View

REMOVAL



- 1. Rear combination lamp
- 2. Back door finisher
- 3. Back door finisher cover

DISASSEMBLY



- 1. Stop/tail lamp bulb
- 4. Reverse lamp bulb socket
- 2. Rear turn signal lamp bulb
- 5. Rear turn signal lamp bulb socket
- Reverse lamp bulb
- 6. Stop/tail lamp bulb socket

Removal and Installation

INFOID:0000000005491738

CAUTION:

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

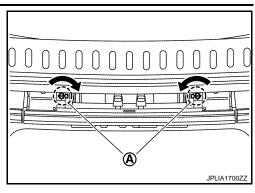
REMOVAL

1. Remove rear back door finisher cover.

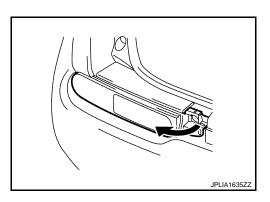
REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

Disengage backdoor finisher mounting fastener (A) to remove the back door finisher.



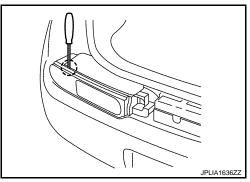
- Remove rear combination lamp mounting bolts.
- Slightly turn the rear combination lamp to leave a clearance.



5. Insert an appropriate tool into the clearance between the rear combination lamp and the rear bamper side bracket.

CAUTION:

Since the rear combination lamp has another clip at the lower center, be careful when removing the outer clip.



- 6. Pull rear combination lamp rearward to remove.
- 7. Disconnect rear combination lamp connector.

INSTALLATION

Install in the reverse order of removal.

NOTE:

The back door finisher mounting fastener remains on the rear combination lamp side after removing the back door finisher. Therefore, be sure to install the mountind fastener on the back door finisher side.

Replacement INFOID:0000000005491739

CAUTION:

- Disconnect the battery negative terminal or 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.

STOP/TAIL LAMP BULB

Revision: 2009 October

- 1. Remove rear combination lamp assembly.
- Rotate the stop/tail lamp bulb socket counterclockwise, and unlock it.
- Remove bulb from the bulb socket.

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REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

REAR TURN SIGNAL LAMP BULB

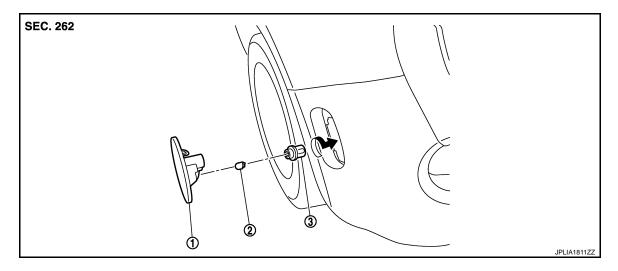
- 1. Remove rear combination lamp assembly.
- 2. Rotate the rear turn signal lamp bulb socket counterclockwise, and unlock it.
- 3. Remove bulb from the bulb socket.

BACK-UP LAMP BULB

- 1. Remove rear combination lamp assembly.
- 2. Rotate the back-up lamp bulb socket counterclockwise, and unlock it.
- 3. Remove bulb from the bulb socket.

REAR SIDE MARKER LAMP

Exploded View INFOID:0000000005491740



- 1. Rear side marker lamp housing
- 2. Rear side marker lamp
- 3. Rear side marker lamp socket

INFOID:0000000005491741

Removal and Installation

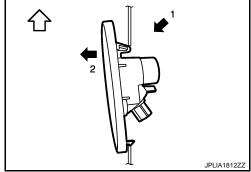
REMOVAL

CAUTION:

Disconnect the battery negative terminal or remove the fuse.

- Remove rear bunper closing. Refer to EXT-15, "Exploded View".
- Disconnect rear side marker lamp connector.
- Remove rear side marker lamp in numerical order shown in the figure.

:Vehicle front



INSTALLATION

Install in the reverse order of removal.

Replacement INFOID:0000000005491742

CAUTION:

- Disconnect 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 SIDE MARKER LAMP BULB

- 1. Remove the rear side marker lamp.
- Rotate the bulb socket counterclockwise and unlock it. 2.
- 3. Remove the bulb from the bulb socket.

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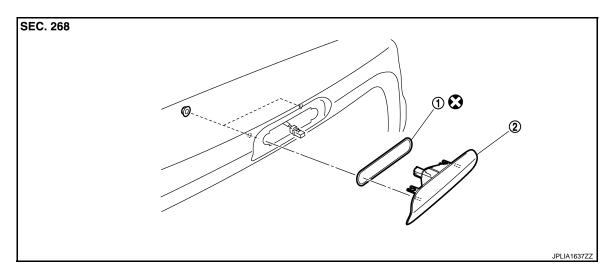
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EXL-221 Revision: 2009 October 2010 Z12

HIGH-MOUNTED STOP LAMP

Exploded View



Seal packing

2. High-mounted stop lamp

Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000005491744

CAUTION:

Disconnect battery negative terminal or remove the fuse.

REMOVAL

- 1. Remove the back door finisher upper. Refer to INT-26, "Exploded View".
- 2. Remove the mounting nuts.
- 3. Disconnect the high-mounted stop lamp connector.
- 4. Pull the high-mounted stop lamp toward rear of the vehicle.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

Seal packing cannot be reused.

Replacement INFOID:000000005491745

CAUTION:

- Disconnect the battery negative terminal or 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.

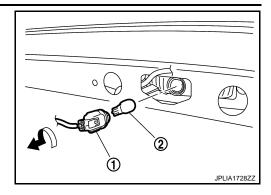
HIGH-MOUNTED STOP LAMP BULB

Remove the back door finisher upper. Refer to <u>INT-26, "Exploded View"</u>.

HIGH-MOUNTED STOP LAMP

< REMOVAL AND INSTALLATION >

- 2. Rotate the bulb socket(1) counterclockwise, and unlock it.
- 3. Remove the bulb from the bulb(2) socket.



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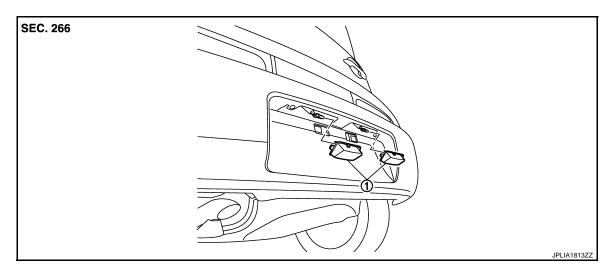
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LICENSE PLATE LAMP

Exploded View



1. License plate lamp

Removal and Installation

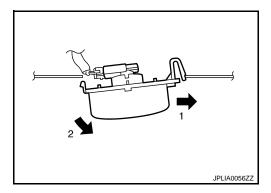
INFOID:0000000005491747

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:000000005491748

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.

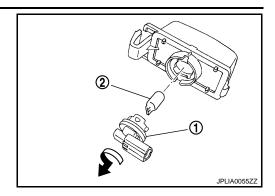
LICENSE PLATE LAMP BULB

Remove the license plate lamp.

LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

- 2. Turn the bulb socket (1) counterclockwise and unlock it.
- 3. Remove the bulb (2) from the socket.



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Bulb Specifications

INFOID:0000000005491749

	Item	Туре	Wattage (W)
	Headlamp (HI/LO)	H4	60/55
Front combination lamp	Front turn signal lamp	PY21W (Amber)	21
Tront combination famp	Parking(front side marker) lamp	W5W	5
Front fog lamp		H8	35
Side turn signal lamp		WY5W (Amber)	5
	Stop lamp/Tail lamp	W21/5W	21/5
Rear combination lamp	Rear turn signal lamp	PY21W	16
	Back-up lamp	W16W	21
License plate lamp		W5W	5
High-mounted stop lamp		W16W	_
Rear side marker lamp		W5W	5