

SECTION **BCS**

BODY CONTROL SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BCM]

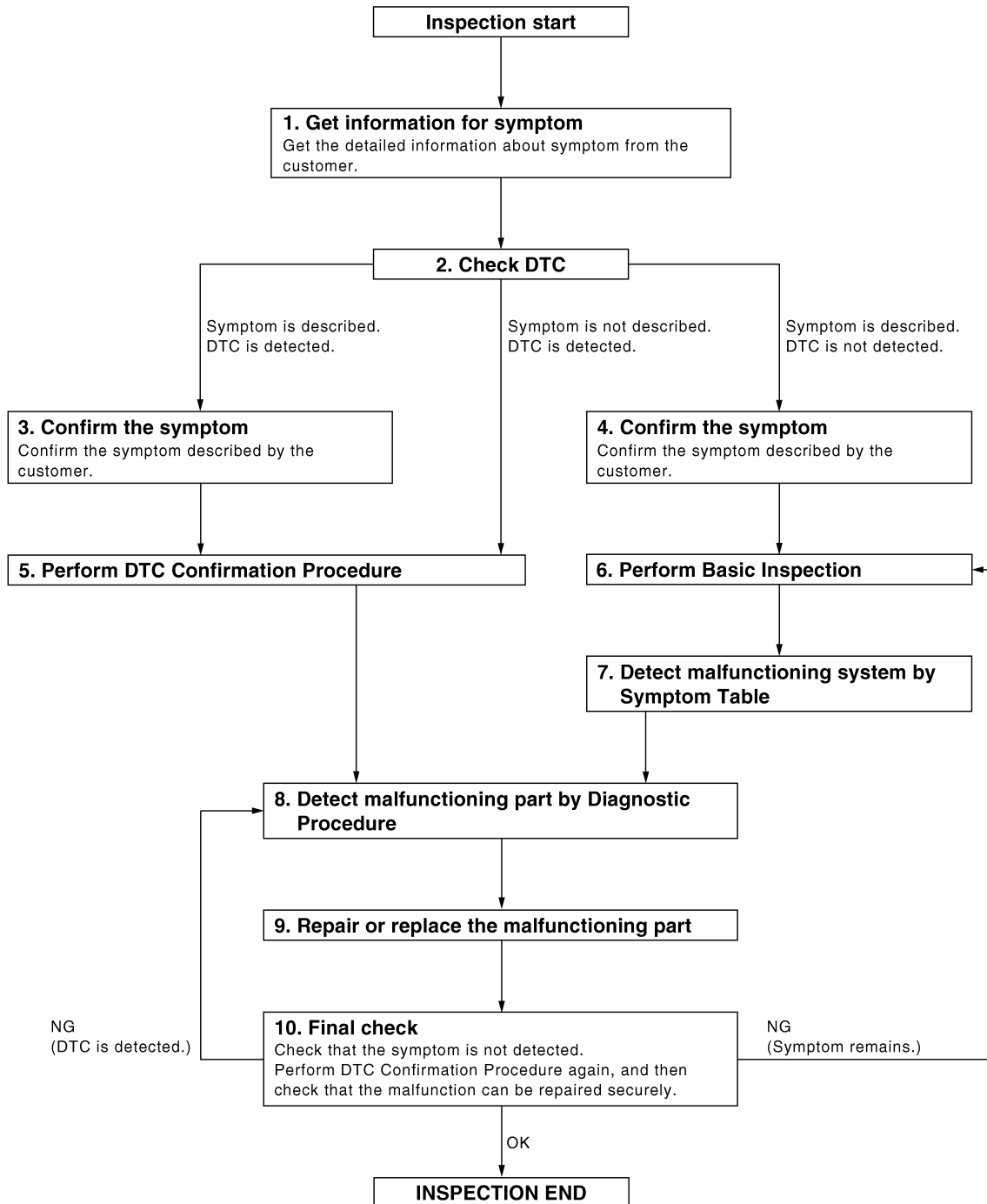
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003899057

OVERALL SEQUENCE



DETAILED FLOW

DIAGNOSIS AND REPAIR WORKFLOW

[BCM]

< BASIC INSPECTION >

1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is displayed.
 - Record DTC and freeze frame data.
 - Erase DTC.
 - Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3

Symptom is described, DTC is not displayed>>GO TO 4

Symptom is not described, DTC is displayed>>GO TO 5

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6

5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.

At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-81. "DTC Inspection Priority Chart"](#) and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC Confirmation Procedure is not included in Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check. If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC Confirmation Procedure.

Is DTC detected?

YES >> GO TO 8

NO >> Refer to [BCS-82. "DTC Index"](#).

6. PERFORM BASIC INSPECTION

Perform [BCS-3. "Work Flow"](#).

Inspection End>>GO TO 7

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to [BCS-8. "System Description"](#) based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 8

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[BCM]

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

YES >> GO TO 9

NO >> Check voltage of related BCM terminals using CONSULT-III.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement.
3. Check DTC. If DTC is displayed, erase it.

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.

When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8

YES (Symptom remains)>>GO TO 6

NO >> Inspection End.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000004219632

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT-III configuration before replacement.

NOTE:

If "READ CONFIGURATION" can not be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

AFTER REPLACEMENT

CAUTION:

- When replacing BCM, you must perform "WRITE CONFIGURATION" with CONSULT-III.
- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- When replacing BCM, perform the system initialization (NATS).

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000004219633

1. SAVING VEHICLE SPECIFICATION

CONSULT-III Configuration

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-6. "CONFIGURATION \(BCM\) : Description"](#).

NOTE:

If "READ CONFIGURATION" cannot be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.

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DIAGNOSIS AND REPAIR WORKFLOW

[BCM]

< BASIC INSPECTION >

>> GO TO 2

2. REPLACE BCM

Replace BCM. Refer to [BCS-87, "Removal and Installation"](#).

>> GO TO 3

3. WRITING VEHICLE SPECIFICATION

ⓐCONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config file" or "WRITE CONFIGURATION - Manual selection" to write vehicle specification. Refer to [BCS-6, "CONFIGURATION \(BCM\) : Special Repair Requirement"](#).

>> GO TO 4

4. INITIALIZE BCM (NATS)

Perform BCM initialization (NATS). Refer to CONSULT-III Operation Manual NATS-IVIS/NVIS.

>> Inspection End.

CONFIGURATION (BCM)

CONFIGURATION (BCM) : Description

INFOID:000000004219634

Vehicle specification needs to be written with CONSULT-III because it is not written after replacing BCM. Configuration has three functions as follows

Function	Description
READ CONFIGURATION	<ul style="list-style-type: none">• Reads the vehicle configuration of current BCM.• Saves the read vehicle configuration.
WRITE CONFIGURATION - Manual selection	Writes the vehicle configuration with manual selection.
WRITE CONFIGURATION - Config file	Writes the vehicle configuration with saved data.

NOTE:

Manual setting item: Items which need selection by vehicle specifications

Automatic setting item: Items which are written in automatically (Setting cannot be changed)

CAUTION:

- When replacing BCM, you must perform "WRITE CONFIGURATION" with CONSULT-III.
- Complete the procedure of "WRITE CONFIGURATION" in order.
- If you set incorrect "WRITE CONFIGURATION", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "WRITE CONFIGURATION" except for new BCM.

CONFIGURATION (BCM) : Special Repair Requirement

INFOID:000000004219635

1. WRITING MODE SELECTION

ⓐCONSULT-III Configuration

Select "CONFIGURATION" of BCM.

When writing saved data>>GO TO 2

When writing manually>>GO TO 3

2. PERFORM "WRITE CONFIGURATION - CONFIG FILE"

ⓐCONSULT-III Configuration

Perform "WRITE CONFIGURATION - Config File".

>> Inspection End.

DIAGNOSIS AND REPAIR WORKFLOW

[BCM]

< BASIC INSPECTION >

3. PERFORM "WRITE CONFIGURATION - MANUAL SELECTION"

CONSULT-III Configuration

1. Select "WRITE CONFIGURATION - Manual selection".
2. Identify the correct model and configuration list. Refer to [BCS-7, "CONFIGURATION \(BCM\) : Configuration list"](#).
3. Confirm and/or change setting value for each item.
4. Select "Setting change".

CAUTION:

Make sure to select "Setting change" even if the indicated configuration of brand new BCM is same as the desirable configuration. If not, configuration which is set automatically by selecting vehicle model cannot be memorized.

5. When "COMMAND FINISHED", select "END".

>> GO TO 4

4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> Inspection End.

CONFIGURATION (BCM) : Configuration list

INFOID:000000004219636

MANUAL SETTING ITEM	
Items	Setting value
AUTO LIGHT	WITH⇔WITHOUT
DTRL	WITH⇔WITHOUT
AV C/U	WITH⇔WITHOUT

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FUNCTION DIAGNOSIS

BODY CONTROL SYSTEM

System Description

INFOID:000000003899058

OUTLINE

- BCM (body control module) controls the various electrical components. It inputs the information required to the control from CAN communication and the signal received from each switch and sensor.
- BCM has combination switch reading function for reading the operation status of combination switches (light, turn signal, wiper and washer) in addition to a function for controlling the operation of various electrical components. It also has the signal transmission function as the passed point of signal and the power saving control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with the diagnosis function that performs the diagnosis with CONSULT-III and various settings.

CAN communication control

In CAN communication, control units are connected with 2 communication lines (CAN-L, CAN-H) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives the data but selectively reads required information only.

CAN communication signal

Refer to the [LAN-24, "CAN Communication Signal Chart"](#).

BCM control function list

System	Refer to
Combination switch reading system	BCS-10, "System Description"
Signal buffer system	BCS-14, "System Description"
Power consumption control system	BCS-15, "System Description"
Auto light system	EXL-13, "System Description"
Turn signal and hazard warning lamp system	EXL-17, "System Description"
Headlamp system (xenon type)	EXL-9, "System Description"
Headlamp system (halogen type)	EXL-182, "System Description"
Front fog lamp system (if equipped)	EXL-15, "System Description"
Exterior lamp battery saver system	EXL-192, "System Description"
Daytime running light system (Canada only)	EXL-11, "System Description"
Interior room lamp control system	INL-6, "System Description"
Step lamp system	
Interior room lamp battery saver system	INL-6, "System Description"
Front wiper and washer system	WW-6, "System Description"
Warning chime system	WCS-4, "WARNING CHIME SYSTEM : System Description"
Door lock system	DLK-13, "DOOR LOCK AND UNLOCK SWITCH : System Description"
Trunk open system	DLK-26, "TRUNK LID OPENER SWITCH : System Description"
Automatic drive positioner system	ADP-10, "AUTOMATIC DRIVE POSITIONER SYSTEM : System Description"
Nissan vehicle immobilizer system	SEC-14, "System Description"
Vehicle security system	SEC-18, "System Description"
Panic alarm	
Rear window defogger system	DEF-6, "System Description"

BODY CONTROL SYSTEM

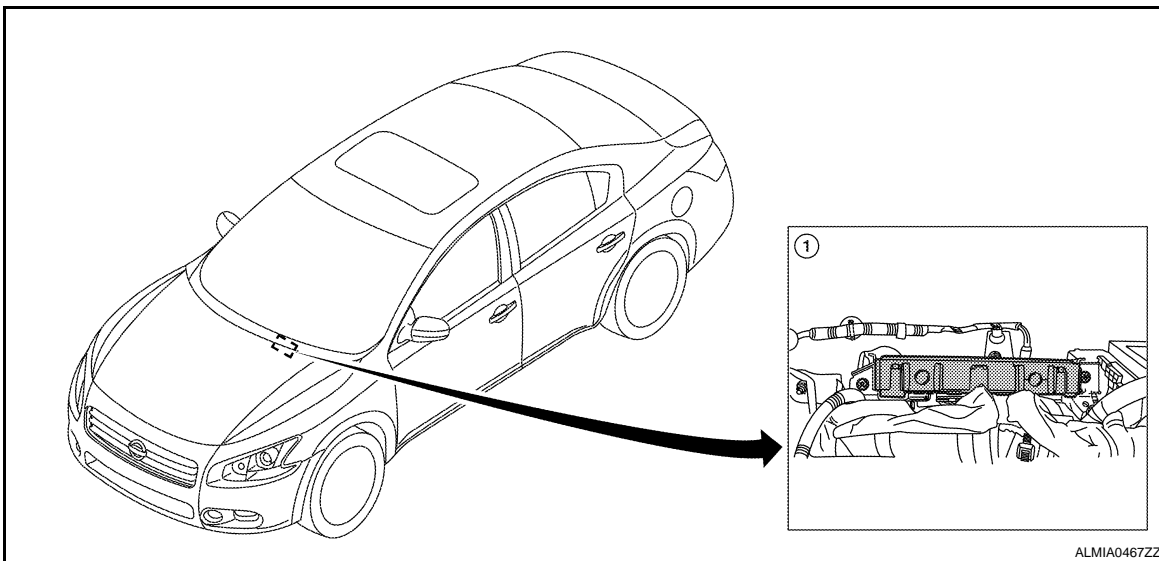
[BCM]

< FUNCTION DIAGNOSIS >

System	Refer to
Intelligent Key system/engine start system	Door lock function <ul style="list-style-type: none"> • DLK-15, "DOOR REQUEST SWITCH : System Description" (door request switch) • DLK-20, "INTELLIGENT KEY : System Description" (Intelligent Key)
	Trunk open function <ul style="list-style-type: none"> • DLK-28, "TRUNK REQUEST SWITCH : System Description" (trunk request switch) • DLK-20, "INTELLIGENT KEY : System Description" (Intelligent Key)
	Warning function <ul style="list-style-type: none"> • DLK-38, "System Description"
	Key reminder function <ul style="list-style-type: none"> • DLK-45, "System Description"
	Engine start function <ul style="list-style-type: none"> • SEC-9, "System Description"
Power window system	<ul style="list-style-type: none"> • PWC-11, "System Description" (LH and RH front window anti-pinch) • PWC-121, "System Description" (front and rear window anti-pinch)
RAP (retained accessory power) system	BCS-33, "RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)"
TPMS (tire pressure monitor system)	WT-8, "System Description"

Component Parts Location

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1. BCM M16, M17, M18, M19, M20, M21 (view with instrument panel removed)

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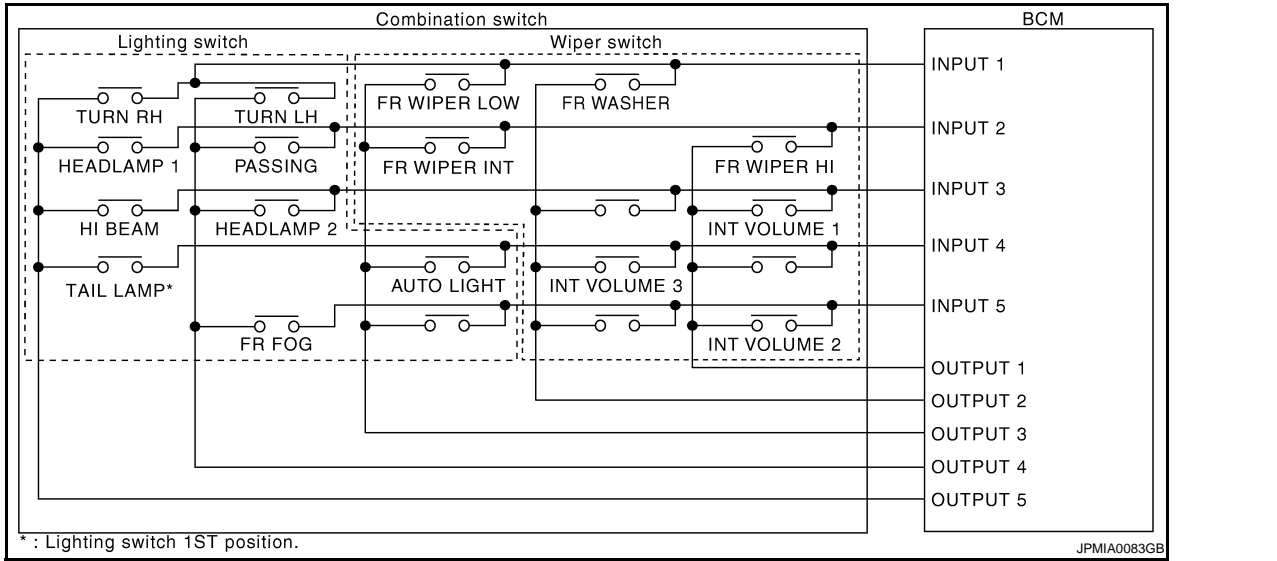
COMBINATION SWITCH READING SYSTEM

< FUNCTION DIAGNOSIS >

[BCM]

COMBINATION SWITCH READING SYSTEM

System Diagram



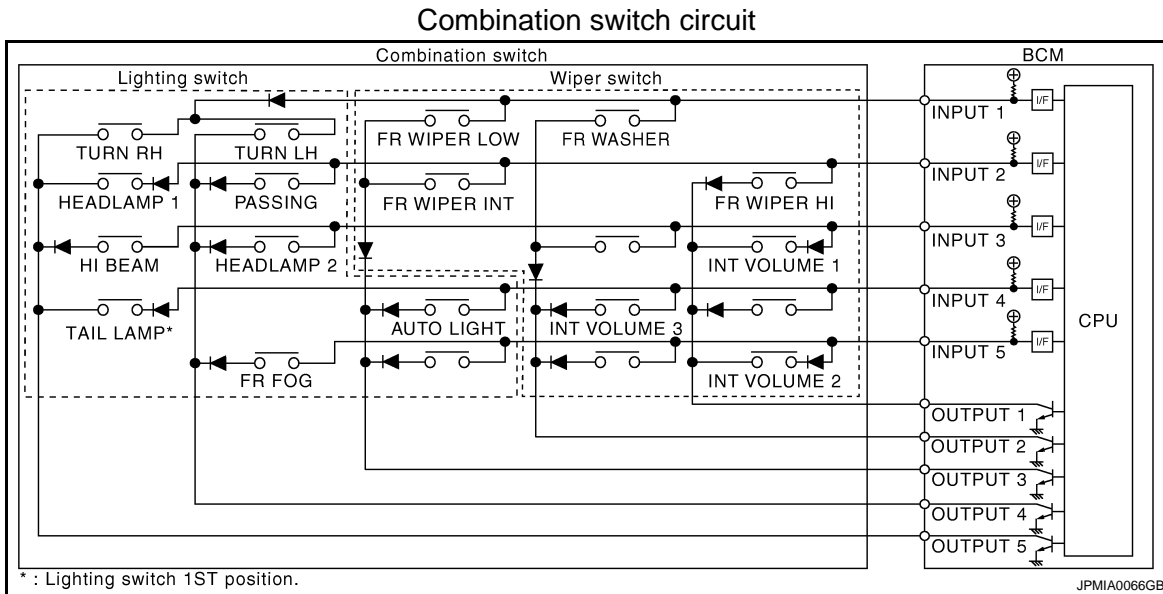
System Description

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OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM is a combination of 5 output terminals (OUTPUT 1 - 5) and 5 input terminals (INPUT 1 - 5). It reads a maximum of 20 switch status.

COMBINATION SWITCH MATRIX



Combination switch INPUT-OUTPUT system list

System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 1	—	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
INPUT 2	FR WIPER HI	—	FR WIPER INT	PASSING	HEADLAMP 1
INPUT 3	INT VOLUME 1	—	—	HEADLAMP 2	HI BEAM

COMBINATION SWITCH READING SYSTEM

[BCM]

< FUNCTION DIAGNOSIS >

System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 4	—	INT VOLUME 3	AUTO LIGHT	—	TAIL LAMP
INPUT 5	INT VOLUME 2	—	—	FR FOG	—

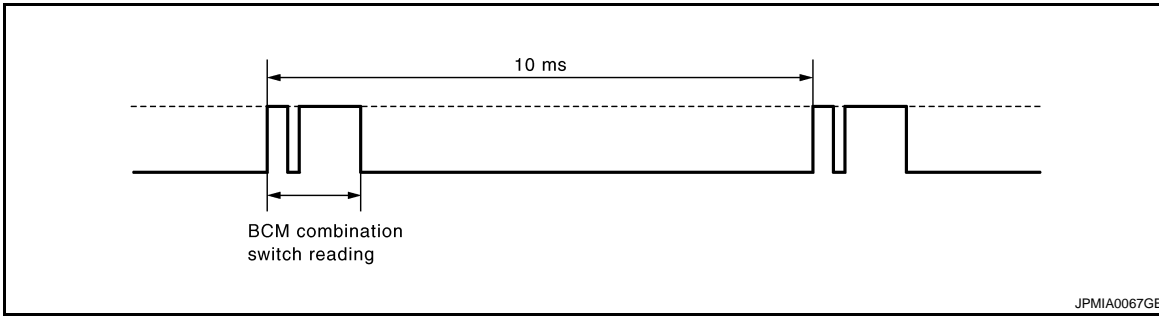
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description

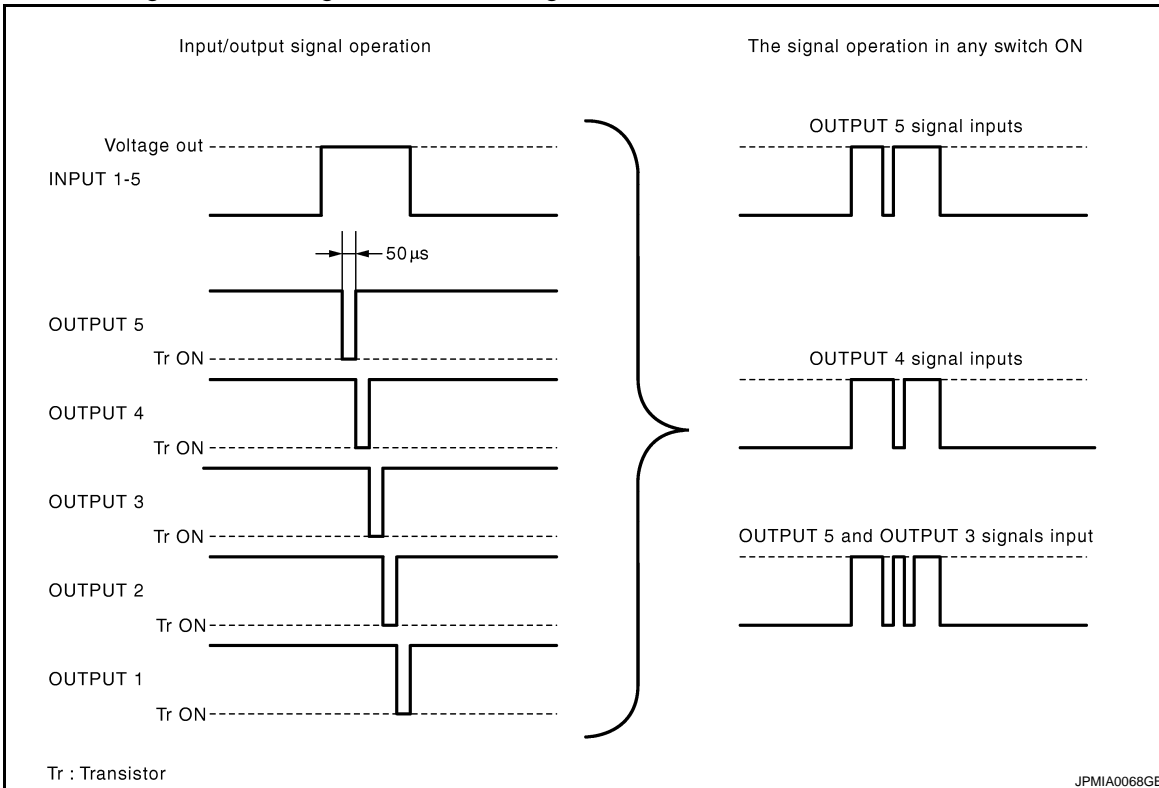
- BCM reads the status of the combination switch at 10ms interval normally.



NOTE:

BCM reads the status of the combination switch at 60ms interval when BCM is controlled at low power consumption mode.

- BCM operates as follows and judges the status of the combination switch.
 - INPUT 1 - 5 outputs the voltage waveforms of 5 systems simultaneously.
 - It operates the transistor on OUTPUT side in the following order: OUTPUT 5 → 4 → 3 → 2 → 1.
 - The voltage waveform of INPUT corresponding to the formed circuit changes according to the operation of the transistor on OUTPUT side if any (1 or more) switches are ON.
 - It reads this change of the voltage as the status signal of the combination switch.



Operation Example

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

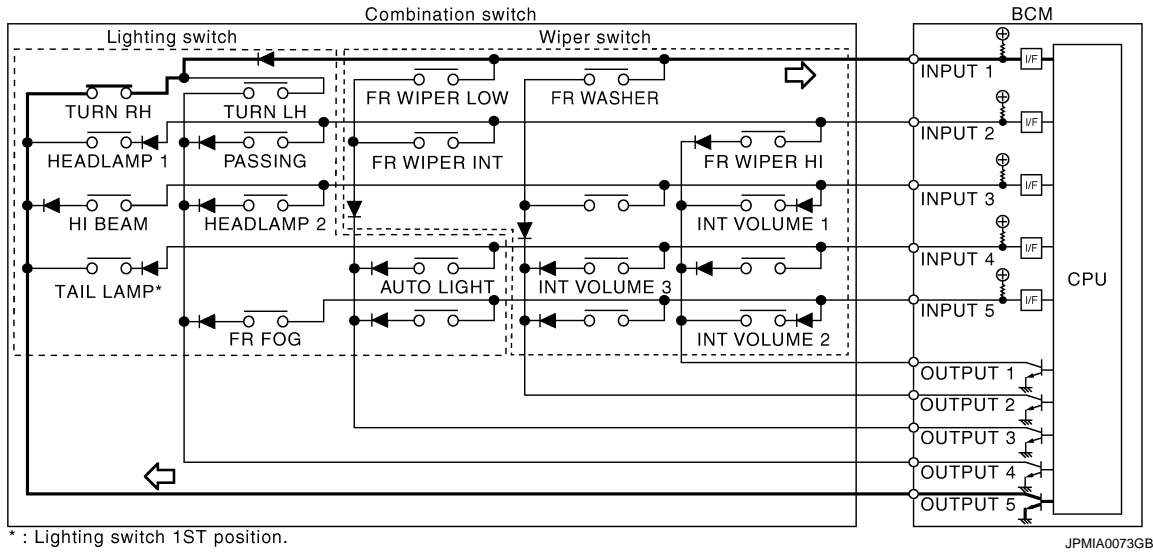
Example 1: When a switch (TURN RH switch) is turned ON

COMBINATION SWITCH READING SYSTEM

[BCM]

< FUNCTION DIAGNOSIS >

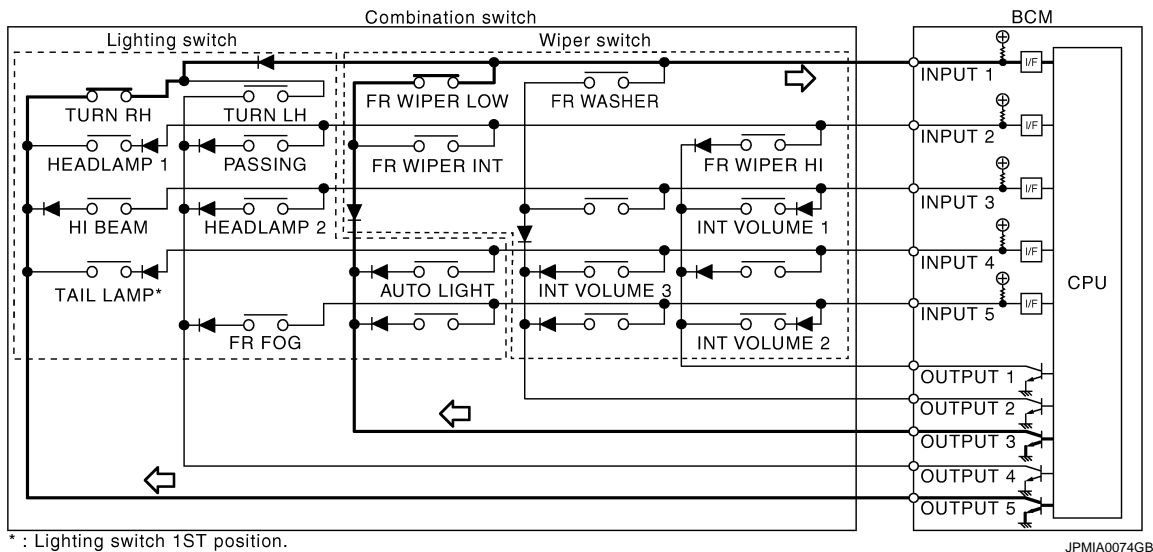
- The circuit between INPUT 1 and OUTPUT 5 is formed when the TURN RH switch is turned ON.



- BCM detects the combination switch status signal "1E" when the signal of OUTPUT 5 is input to INPUT 1.
- BCM judges that the TURN RH switch is ON when the signal "1E" is detected.
- Example 2: When some switches (TURN RH switch, FR WIPER LOW switch) are turned ON

Example 2: When some switches (turn RH switch, front wiper LO switch) are turned ON

- The circuits between INPUT 1 and OUTPUT 5 and between INPUT 1 and OUTPUT 3 are formed when the TURN RH switch and FR WIPER LOW switch are turned ON.



- BCM detects the combination switch status signal "1CE" when the signals of OUTPUT 3 and OUTPUT 5 are input to INPUT 1.
- BCM judges that the TURN RH switch and FR WIPER LOW switch are ON when the signal "1CE" is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION)

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

COMBINATION SWITCH READING SYSTEM

< FUNCTION DIAGNOSIS >

[BCM]

Wiper intermittent dial position	Intermittent operation delay interval	INT VOLUME switch ON/OFF status		
		INT VOLUME 1 switch	INT VOLUME 2 switch	INT VOLUME 3 switch
1	Short ↑	ON	ON	ON
2		ON	ON	OFF
3		ON	OFF	OFF
4		OFF	OFF	OFF
5	↓ Long	OFF	OFF	ON
6		OFF	ON	ON
7		OFF	ON	OFF

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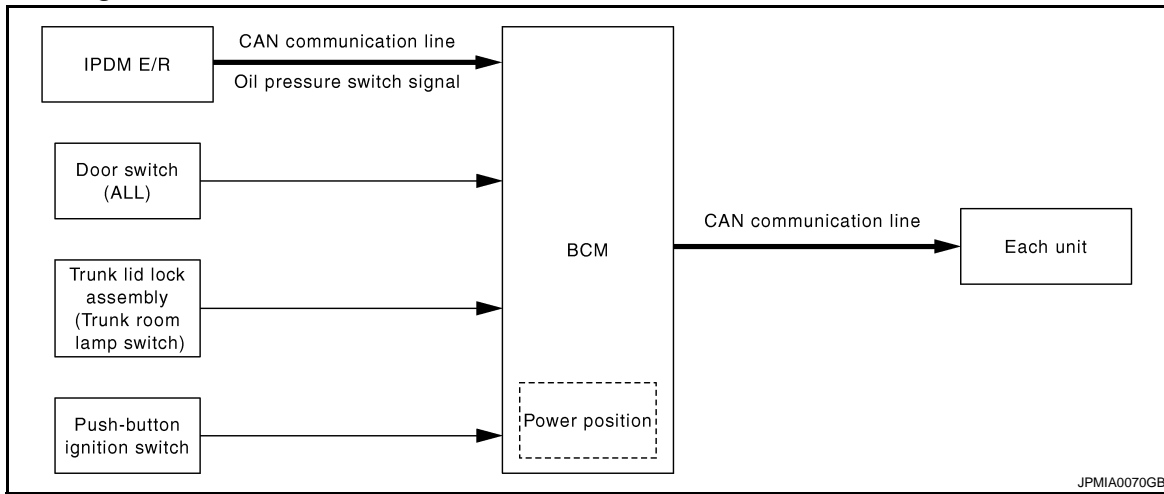
SIGNAL BUFFER SYSTEM

< FUNCTION DIAGNOSIS >

[BCM]

SIGNAL BUFFER SYSTEM

System Diagram



System Description

INFOID:000000003899063

OUTLINE

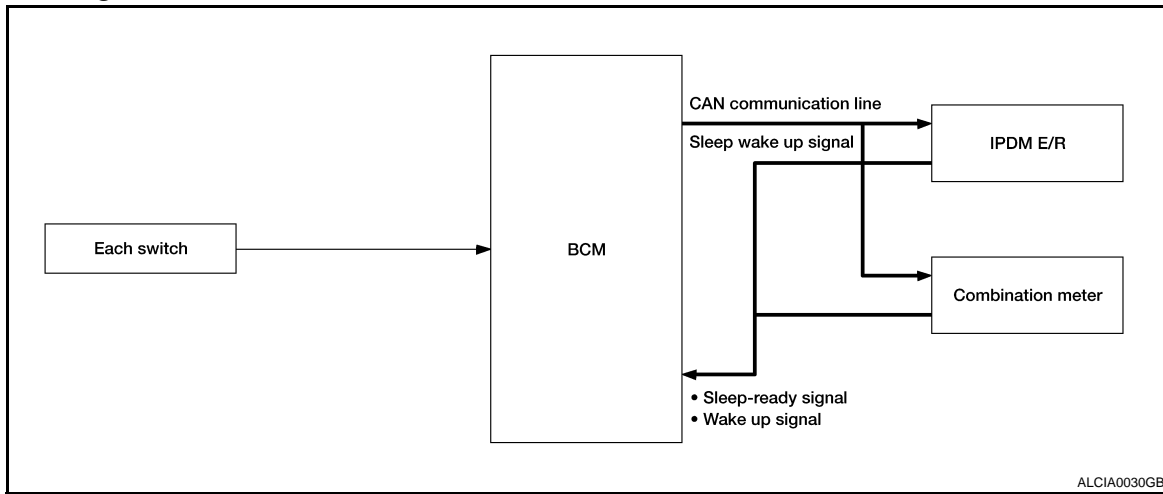
BCM has the signal transmission function that outputs/transmits each input/received signal to each unit.

Signal transmission function list

Signal name	Input	Output	Description
<ul style="list-style-type: none"> Ignition switch ON signal Ignition switch signal 	Engine switch (push switch)	IPDM E/R (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.
Door switch signal	Any door switch	<ul style="list-style-type: none"> Combination meter (CAN) IPDM E/R (CAN) 	Inputs the door switch signal and transmits it via CAN communication.
Trunk switch signal	Trunk room lamp switch	Combination meter (CAN)	Inputs the trunk room lamp switch signal and transmits the trunk switch signal via CAN communication.
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (CAN)	Transmits the received oil pressure switch signal via CAN communication.

POWER CONSUMPTION CONTROL SYSTEM

System Diagram



System Description

INFOID:000000003899065

OUTLINE

- BCM incorporates a power saving control function that reduces the power consumption according to the vehicle status.
- BCM switches the status (control mode) by itself with the power saving control function. It performs the sleep request to each unit (IPDM E/R and combination meter) that operates with the ignition switch OFF.

Normal mode (wake-up)

- CAN communication is normally performed with other units
- Each control with BCM is operating properly

CAN communication sleep mode (CAN sleep)

- CAN transmission is stopped
- Control with BCM only is operating

Low power consumption mode (BCM sleep)

- Low power consumption control is active
- CAN transmission is stopped

LOW POWER CONSUMPTION CONTROL WITH BCM

BCM reduces the power consumption with the following operation in the low power consumption mode.

- The reading interval of the each switches changes from 10 ms interval to 60 ms interval.

Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and combination meter via CAN communication.
- BCM transmits the sleep wake up signal (sleep) to each unit when all of the CAN sleep conditions are fulfilled.
- Each unit stops the transmission of CAN communication with the sleep wakeup signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

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POWER CONSUMPTION CONTROL SYSTEM

[BCM]

< FUNCTION DIAGNOSIS >

Sleep condition

CAN sleep condition	BCM sleep condition
<ul style="list-style-type: none"> Receiving the sleep-ready signal (ready) from all units Ignition switch: OFF Vehicle security system alarm and panic alarm : No operation Warning lamp: Not operation Intelligent Key system buzzer: No operation Trunk room lamp switch status: No change Brake switch: OFF Key slot status: No change Turn signal indicator lamp: No operation Exterior lamp: OFF Door lock status: No change CONSULT-III communication status: No communication Meter display signal : Non-transmission Electronic steering column lock operation: No operation Door switch status: No change Rear window defogger: OFF 	<ul style="list-style-type: none"> Interior room lamp battery saver: Time out RAP system: OFF Power window switch communication: No transmission Push-button ignition switch (push switch) illumination: OFF NATS: No operation Remote keyless entry receiver communication status: No communication Tire pressure monitor system: Stop

Wake-up operation

- BCM changes from the low power consumption mode to the CAN communication sleep mode when the any of the BCM wake-up conditions is fulfilled. Only the control with BCM is activated.
- BCM transmits the sleep wake up signal (wake up) to each unit when any of the CAN wake-up conditions is fulfilled. It changes from the low power consumption mode or the CAN communication sleep mode to the normal mode.
- Each unit starts the transmission of CAN communication with the sleep wake up signal. In addition, the combination meter transmits the wake up signal to BCM via CAN communication to report the CAN communication start.

Wake-up condition

BCM wake-up condition	CAN wake-up condition
<ul style="list-style-type: none"> Door unlock sensor: OFF→ON, ON→OFF Door lock lock assembly LH (key cylinder switch): Lock or unlock Door lock switch: OFF→ON Door unlock switch: OFF→ON Trunk lid opener switch: OFF→ON Power window serial link communication: Receiving Remote keyless entry receiver: Receiving valid keyfob 	<ul style="list-style-type: none"> Receiving the sleep-ready signal (Not-ready) from any units Key slot: OFF→ON, ON→OFF Push-button ignition switch (push switch): OFF→ON Hazard switch: OFF→ON PASSING switch: OFF→ON, ON→OFF TAIL LAMP switch: OFF→ON Driver door switch: OFF→ON, ON→OFF Passenger door switch: OFF → ON, ON → OFF Trunk room lamp switch: OFF→ON, ON→OFF Driver door request switch: OFF→ON Passenger door request switch: OFF→ON Trunk request switch: OFF→ON Stop lamp switch 2 signal: ON Remote keyless entry receiver: Receiving valid keyfob

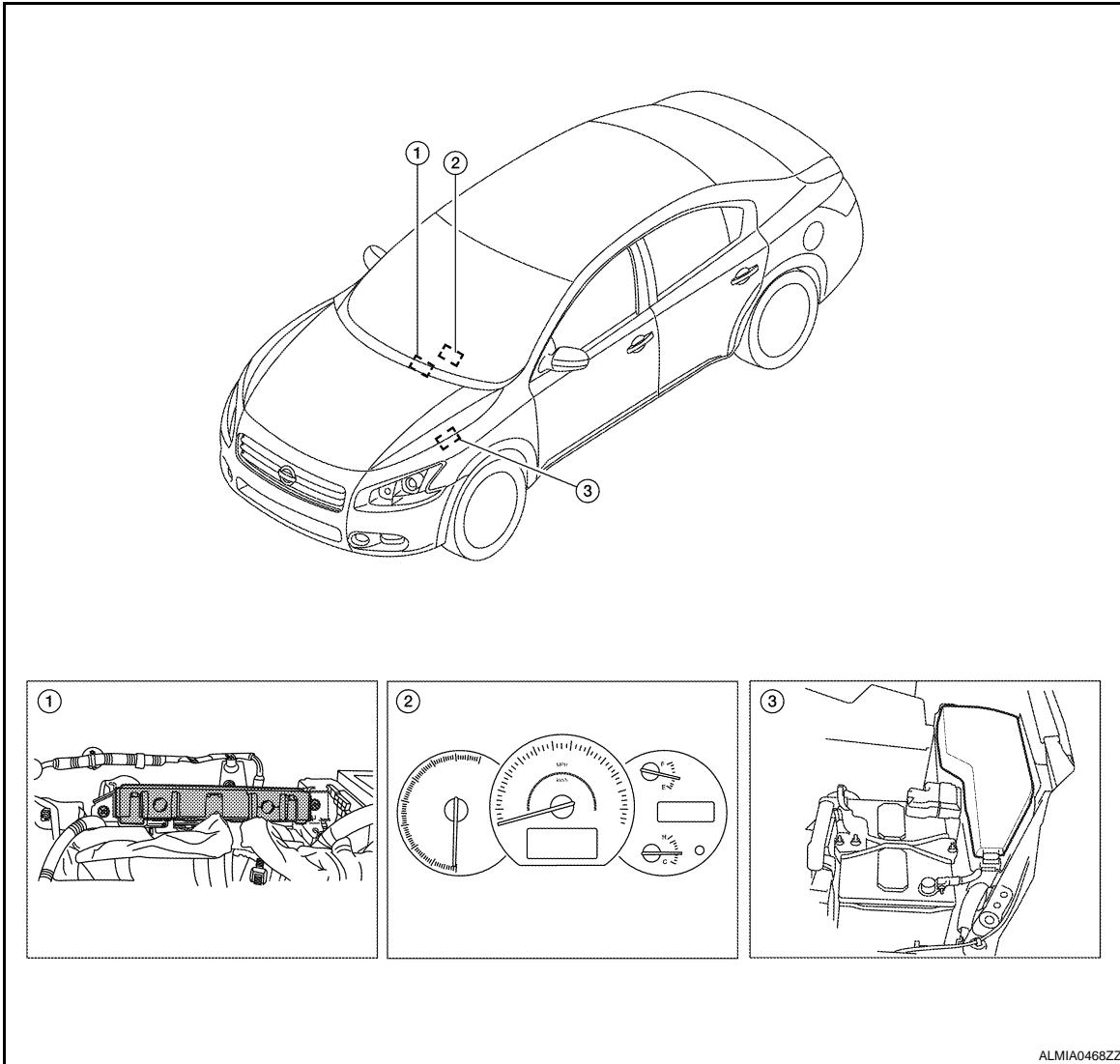
POWER CONSUMPTION CONTROL SYSTEM

< FUNCTION DIAGNOSIS >

[BCM]

Component Parts Location

INFOID:000000003899066



1. BCM M16, M17, M18, M19, M20, M21 (view with instrument panel removed)
2. Combination meter M24
3. IPDM E/R E16, E17, E18, E200, E201, F10

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : Diagnosis Description

INFOID:000000003899067

BCM CONSULT-III FUNCTION

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

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.

System	Sub system selection item	Diagnosis mode		
		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	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	

COMMON ITEM : CONSULT-III Function

INFOID:000000003899068

ECU IDENTIFICATION

Displays the BCM part No.

SELF-DIAG RESULT

Refer to [BCS-82, "DTC Index"](#).

DOOR LOCK

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)

INFOID:000000003899069

WORK SUPPORT

Work Item	Description
DOOR LOCK-UNLOCK SET	<ul style="list-style-type: none">• ON• OFF
AUTOMATIC DOOR LOCK SELECT	<ul style="list-style-type: none">• SHIFT OUT OF P• VH SPD
AUTOMATIC DOOR UNLOCK SELECT	<ul style="list-style-type: none">• MODE1• MODE2• MODE3• MODE4• MODE5• MODE6
AUTOMATIC LOCK/UNLOCK SELECT	<ul style="list-style-type: none">• ON• OFF

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW-DR [ON/OFF]	Indicates condition of door request switch LH
REQ SW-AS [ON/OFF]	Indicates condition of door request switch RH
REQ SW-BD/TR [ON/OFF]	Indicates condition of back door request switch
CDL LOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch LH
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch RH
DOOR SW-RR [ON/OFF]	Indicates condition of rear door switch RH
DOOR SW-RL [ON/OFF]	Indicates condition of rear door switch LH
DOOR SW-BK [ON/OFF]	Indicates condition of back door switch
KEY CYL LK-SW [ON/OFF]	Indicates condition of lock signal from door key cylinder switch
KEY CYL UN-SW [ON/OFF]	Indicates condition of unlock signal from door key cylinder switch

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].

REAR WINDOW DEFOGGER

REAR WINDOW DEFOGGER : CONSULT-III Function (BCM - REAR DEFOGGER)

INFOID:000000003899070

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [ON/OFF]	Indicates condition of push switch
REAR DEF SW [ON/OFF]	Displays "Press (ON)/other (OFF)" status determined with the rear window defogger switch

ACTIVE TEST

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation. Rear window defogger operates when 'ON' on CONSULT-III screen is touched

BUZZER

BUZZER : CONSULT-III Function (BCM-BUZZER)

INFOID:000000003899071

CONSULT-III APPLICATION ITEMS

Test item	Diagnosis mode	Description
BUZZER	Data monitor	Displays BCM input data in real time.
BUZZER	Active test	Operation of electrical loads can be checked by sending driving signal to them.

DATA MONITOR

Display item [Unit]	Description
VEH SPEED 1 [Km/h]	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication line.
PUSH SW [On/Off]	Status of push button ignition switch judged by BCM.
UNLK SEN -DR [On/Off]	Status of door lock assembly (door unlock sensor) judged by BCM.
KEY SW-SLOT [On/Off]	Status of key slot judged by BCM.
TAIL LAMP SW [On/Off]	Status of each switch judged by BCM using the combination SW readout function.
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM.
DOOR SW -DR [On/Off]	Status of driver side door switch judged by BCM.

ACTIVE TEST

Display item [Unit]	Description
IGN KEY WARN ALM	The key warning chime operation can be checked by operating the relevant function (On/Off).
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
ID REGIST WARNING	The ID regist warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).

INT LAMP

DIAGNOSIS SYSTEM (BCM)

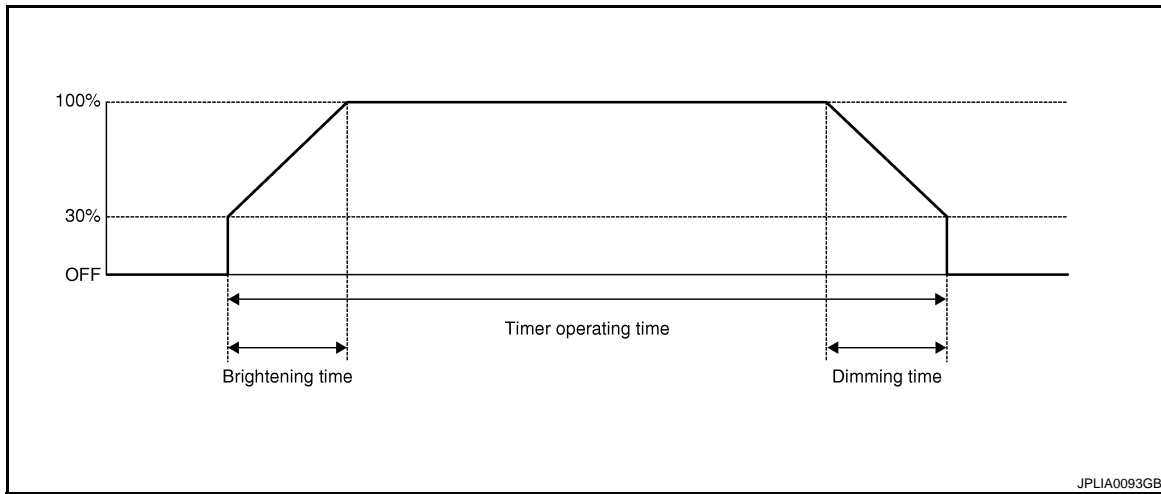
< FUNCTION DIAGNOSIS >

[BCM]

INT LAMP : CONSULT-III Function (BCM-INT LAMP)

INFOID:000000003899072

WORK SUPPORT



Service item	Setting item	Setting
ROOM LAMP TIMER SET	MODE 2	7.5 sec.
	MODE 3*	15 sec.
	MODE 4	30 sec.
		Sets the interior room lamp ON time. (Timer operating time)
SET I/L D-UNLCK INTCON	ON*	With the interior room lamp timer function
	OFF	Without the interior room lamp timer function
ROOM LAMP ON TIME SET	MODE 1	0.5 sec.
	MODE 2*	1 sec.
	MODE 3	2 sec.
	MODE 4	3 sec.
	MODE 5	0 sec.
		Sets the interior room lamp gradual brightening time.
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.
	MODE 2	1 sec.
	MODE 3	2 sec.
	MODE 4*	3 sec.
	MODE 5	0 sec.
		Sets the interior room lamp gradual dimming time.
R LAMP TIMER LOGIC SET	ON* (MODE 1)	Interior room lamp timer activates with synchronizing all doors.
	OFF (MODE 2)	Interior room lamp timer activates with synchronizing the driver door only.

* : Initial setting

DATA MONITOR

Monitor item [Unit]	Description
REQ SW-DR [ON/OFF]	The switch status input from request switch (driver side)
REQ SW-AS [ON/OFF]	The switch status input from front request switch (passenger side)
REQ SW-RL [ON/OFF]	The switch status input from rear request switch (driver side)
REQ SW-RR [ON/OFF]	The switch status input from rear request switch (passenger side)

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Monitor item [Unit]	Description
PUSH SW [ON/OFF]	The switch status input from push-button ignition switch
UNLK SEN-DR [ON/OFF]	Driver door unlock status input from unlock sensor
KEY SW-SLOT [ON/OFF]	Key switch status input from key slot
ACC RLY-F/B [ON/OFF]	Indicates status of accessory relay
DOOR SW-DR [ON/OFF]	The switch status input from front door switch LH
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
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
DOOR SW-BK [ON/OFF]	NOTE: The item is indicated, not monitored.
CDL LOCK SW [ON/OFF]	Lock switch status received from central door lock switch by power window switch serial link
CDL UNLOCK SW [ON/OFF]	Unlock switch status received from central door lock switch by power window switch serial link
KEY CYL LK-SW [ON/OFF]	Lock switch status received from key cylinder switch by power window switch serial link
KEY CYL UN-SW [ON/OFF]	Unlock switch status received from key cylinder switch by power window switch serial link
TRNK/HAT MNTR [ON/OFF]	The switch status input from trunk room lamp switch
RKE-LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver
RKE-UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

Test item	Operation	Description
INT LAMP	ON	Outputs the interior room lamp control signal to turn map lamp and personal lamp ON (Map lamp switch is in DOOR position).
	OFF	Stops the interior room lamp control signal to turn map lamp and personal lamp OFF.
STEP LAMP TEST	ON	Outputs the step lamp control signal to turn step lamp ON.
	OFF	Stops the step lamp control signal to turn step lamp OFF.
LUGGAGE LAMP TEST	ON	Outputs the luggage room lamp control signal to turn step lamp ON.
	OFF	Stops the luggage room lamp control signal to turn step lamp ON.

HEADLAMP

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

INFOID:000000003899073

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

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

* : Initial setting

DATA MONITOR

Monitor item [Unit]	Description
PUSH SW [ON/OFF]	The switch status input from push-button ignition switch
ENGINE STATE [STOP/STALL/CRANK/RUN]	The engine status received from ECM with CAN communication
VEH SPEED 1 [km/h]	The value of the vehicle speed received from combination meter with CAN communication
KEY SW-SLOT [ON/OFF]	Key switch status input from key slot
TURN SIGNAL R [ON/OFF]	Each switch status that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
TAIL LAMP SW [ON/OFF]	
HI BEAM SW [ON/OFF]	
HEAD LAMP SW1 [ON/OFF]	
HEAD LAMP SW2 [ON/OFF]	
PASSING SW [ON/OFF]	
AUTO LIGHT SW [ON/OFF]	
FR FOG SW [ON/OFF]	
DOOR SW-DR [ON/OFF]	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Monitor item [Unit]	Description
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
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
DOOR SW-BK* [ON/OFF]	—
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor

*: The item is indicated, not monitored.

ACTIVE TEST

Test item	Operation	Description
TAIL LAMP	ON	Transmits the Position light request signal to IPDM E/R with CAN communication to turn the tail lamp ON.
	OFF	Stops the tail lamp request signal transmission.
HEAD LAMP	HI	Transmits the high beam request signal with CAN communication to turn the headlamp (HI)
	LO	Transmits the low beam request signal with CAN communication to turn the headlamp (LO).
	OFF	Stops the high & low beam request signal transmission.
FR FOG LAMP	ON	Transmits the front fog lights request signal to IPDM E/R with CAN communication to turn the front fog lamp ON.
	OFF	Stops the front fog lights request signal transmission.
DAYTIME RUNNING LIGHT*	ON	—
	OFF	—
CORNERING LAMP*	RH	—
	LH	—
	OFF	—
ILL DIM SIGNAL*	ON	—
	OFF	—
RR FOG LAMP*	ON	—
	OFF	—

*: The item is indicated, not monitored.

WIPER

WIPER : CONSULT - III Function (BCM-WIPER)

INFOID:000000003899074

WORK SUPPORT

Service item	Setting item	Description
WIPER SPEED SETTING	ON	With vehicle speed (Front wiper intermittent time linked with the vehicle speed and wiper dial position)
	OFF*	Without vehicle speed (Front wiper intermittent time linked with the wiper dial position)

* : Factory setting

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Monitor Item [Unit]	Description
PUSH SW	Displays the status of the engine switch (push switch) judged by BCM.
VEH SPEED 1 [km/h]	Displays the value of the vehicle speed signal received from combination meter with CAN communication.
FR WIPER HI [OFF/ON]	Status of each switch judged by BCM using the combination switch reading function
FR WIPER LOW [OFF/ON]	
FR WASHER SW [OFF/ON]	
FR WIPER INT [OFF/ON]	
FR WIPER STOP [OFF/ON]	Displays the status of the front wiper auto stop signal received from IPDM E/R with CAN communication.
INT VOLUME [1 - 7]	Status of each switch judged by BCM using the combination switch reading function

ACTIVE TEST

Test item	Operation	Description
FR WIPER	HI	Transmits the front wiper request signal (HI) to IPDM E/R with CAN communication to operate the front wiper HI operation.
	LO	Transmits the front wiper request signal (LO) to IPDM E/R with CAN communication to operate the front wiper LO operation.
	INT	Transmits the front wiper request signal (INT) to IPDM E/R with CAN communication to operate the front wiper INT operation.
	OFF	Stops transmitting the front wiper request signal to stop the front wiper operation.

FLASHER

FLASHER : CONSULT-III Function (BCM-FLASHER)

INFOID:000000003899075

WORK SUPPORT

Service item	Setting item	Setting
HAZARD ANSWER BACK	LOCK ONLY*	Activated when locking.
	UNLK ONLY	Activated when unlocking.
	LOCK/UNLK	Activated when locking/ unlocking
	OFF	Not activated
		Sets the hazard warning lamp answer back activation when the door is lock/unlock with the request switch or the key fob.

* : Initial 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

DIAGNOSIS SYSTEM (BCM)

[BCM]

< FUNCTION DIAGNOSIS >

Monitor item [Unit]	Description
TURN SIGNAL R [ON/OFF]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	
HAZARD SW [ON/OFF]	The switch status input from the hazard warning switch
RKE LOCK [ON/OFF]	The lock signal status received from the keyless receiver
RKE UNLOCK [ON/OFF]	The unlock signal status received from the keyless receiver
RKE PANIC [ON/OFF]	The panic alarm signal status received from the keyless receiver

ACTIVE TEST

Test item	Operation	Description
FLASHER	RH	Blinks right turn signal lamp.
	LH	Blinks left turn signal lamp.
	OFF	Turns turn signal lamps (right and left) OFF.

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)

INFOID:000000004221418

BCM CONSULT-III FUNCTION

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

WORK SUPPORT

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode. <ul style="list-style-type: none"> • MODE 1: 1 minute • MODE 2: 5 minutes • MODE 3: 30 seconds • MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) with this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. <ul style="list-style-type: none"> • 0.5 sec. • 1.5 sec. • OFF: Non-operation

DIAGNOSIS SYSTEM (BCM)

[BCM]

< FUNCTION DIAGNOSIS >

Monitor item	Description
PW DOWN SET	Unlock button pressing time on Intelligent Key button to lower front windows can be selected from the following with this mode. <ul style="list-style-type: none"> • 3 sec. • 5 sec. • OFF: Non-operation
TRUNK OPEN DELAY	Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. <ul style="list-style-type: none"> • 0.5 sec. • 1.5 sec. • OFF: No delay
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode. <ul style="list-style-type: none"> • LOCK ONLY: Door lock operation only • UNLOCK ONLY: Door unlock operation only • LOCK AND UNLOCK: Lock/unlock operation • OFF: Non operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. <ul style="list-style-type: none"> • HORN CHIRP: Sound horn • BUZZER: Sound Intelligent Key warning buzzer • OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. <ul style="list-style-type: none"> • 70 msec • 100 msec • 200 msec
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

SELF-DIAG RESULT

Refer to [BCS-82, "DTC Index"](#).

DATA MONITOR

Monitor Item	Condition
REQ SW-DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push button ignition switch.
IGN RLY2-F/B	Indicates [ON/OFF] condition of ignition relay 2.
ACC RLY1-F/B	Indicates [ON/OFF] condition of accessory relay.
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN-DR	Indicates [ON/OFF] condition of driver door UNLOCK status.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Monitor Item	Condition
PUSH SW -IPDM	Indicates [ON/OFF] condition of push button ignition switch from IPDM E/R via CAN.
IGN RLY1-F/B	Indicates [ON/OFF] condition of ignition relay 1 from IPDM E/R via CAN.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position from TCM via CAN.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position from TCM via CAN.
SFT P -MET	Indicates [ON/OFF] condition of P position from TCM via CAN.
SFT N -MET	Indicates [ON/OFF] condition of N position from IPDM E/R via CAN.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states from ECM via CAN.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK) request from IPDM E/R via CAN.
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK) request from IPDM E/R via CAN.
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay from IPDM E/R via CAN.
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime by combination meter operation. <ul style="list-style-type: none"> • Take out warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. • Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. • P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. • ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
INDICATOR	This test is able to check warning lamp operation. <ul style="list-style-type: none"> • "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. • "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Test item	Description
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	This test is able to check meter display information <ul style="list-style-type: none"> • Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. • Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. • Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. • Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. • P position warning displays when "P RNG IND" on CONSULT-III screen is touched. • Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. • Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. • Take away window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. • Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched. • OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check CVT device power supply CVT device power is supplied when "ON" on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.

COMB SW

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

INFOID:000000003899078

DATA MONITOR

Monitor item [UNIT]	Description
FR WIPER HI [OFF/ON]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [OFF/ON]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.
FR WASHER SW [OFF/ON]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [OFF/ON]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER STOP [OFF/ON]	Displays the status of the front wiper stop position signal received from IPDM E/R via CAN communication.
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by BCM with the combination switch reading function
TURN SIGNAL R [OFF/ON]	Displays the status of theTURN RH switch in combination switch judged by BCM with the combination switch reading function.

DIAGNOSIS SYSTEM (BCM)

[BCM]

< FUNCTION DIAGNOSIS >

Monitor item [UNIT]	Description
TURN SIGNAL L [OFF/ON]	Displays the status of the TURN LH switch in combination switch judged by BCM with the combination switch reading function.
TAIL LAMP SW [OFF/ON]	Displays the status of the TAIL LAMP switch in combination switch judged by BCM with the combination switch reading function.
HI BEAM SW [OFF/ON]	Displays the status of the HI BEAM switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 1 [OFF/ON]	Displays the status of the HEADLAMP 1 switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 2 [OFF/ON]	Displays the status of the HEADLAMP 2 switch in combination switch judged by BCM with the combination switch reading function.
PASSING SW [OFF/ON]	Displays the status of the PASSING switch in combination switch judged by BCM with the combination switch reading function.
AUTO LIGHT SW [OFF/ON]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function.
FR FOG SW [OFF/ON]	Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function.

BCM

BCM : CONSULT-III Function (BCM - BCM)

INFOID:000000003899079

WORK SUPPORT

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

IMMU

IMMU : CONSULT-III Function (BCM - IMMU)

INFOID:000000003899080

DATA MONITOR

Monitor item	Content
CONFIRM ID ALL	Indicates [YET] at all time. Switch to [DONE] when a registered Intelligent Key is inserted into the key slot.
CONFIRM ID4	
CONFIRM ID3	
CONFIRM ID2	
CONFIRM ID1	
TP 4	Indicates the number of ID which has been registered.
TP 3	
TP 2	
TP 1	
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator operation [ON/OFF].

BATTERY SAVER

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

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

INFOID:000000003899081

WORK SUPPORT

Service item	Setting item	Setting	
BATTERY SAVER SET	ON*	With the exterior lamp battery saver function	
	OFF	Without the exterior lamp battery saver function	
ROOM LAMP BAT SAV SET	ON*	With the interior room lamp battery saver function	
	OFF	Without the interior room lamp battery saver function	
ROOM LAMP TIMER SET	MODE 1*	30 min.	Sets the interior room lamp battery saver timer operating time.
	MODE 2	60 min.	

* : Initial setting

DATA MONITOR

Monitor item [Unit]	Description
REQ SW-DR [ON/OFF]	The switch status input from front request switch (driver side)
REQ SW-AS [ON/OFF]	The switch status input from front request switch (passenger side)
REQ SW-RL [ON/OFF]	The switch status input from rear request switch (driver side)
REQ SW-RR [ON/OFF]	The switch status input from rear request switch (passenger side)
PUSH SW [ON/OFF]	The switch status input from push-button ignition switch
ACC RLY-F/B [ON/OFF]	Indicates accessory relay status
UNLK SEN-DR [ON/OFF]	The unlock status input from front door unlock sensor LH
KEY SW-SLOT [ON/OFF]	Key switch status input from key slot
DOOR SW-DR [ON/OFF]	The switch status input from front door switch LH
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH
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
DOOR SW-BK [ON/OFF]	NOTE: The item is indicated, not monitored.
CDL LOCK SW [ON/OFF]	Lock switch status received from central door lock switch by power window switch serial link
CDL UNLOCK SW [ON/OFF]	Unlock switch status received from central door lock switch by power window switch serial link
KEY CYL LK-SW [ON/OFF]	Lock switch status received from key cylinder switch by power window switch serial link
KEY CYL UN-SW [ON/OFF]	Unlock switch status received from key cylinder switch by power window switch serial link
TRNK/HAT MNTR [ON/OFF]	The switch status input from trunk room lamp switch

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Monitor item [Unit]	Description
RKE-LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver
RKE-UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver

ACTIVE TEST

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

* : Each lamp switch is in ON position.

TRUNK

TRUNK : CONSULT-III Function (BCM - TRUNK)

INFOID:000000003899082

DATA MONITOR

Monitor Item	Contents
PUSH SW	Indicates [ON/OFF] condition of push button ignition switch.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
VEH SPEED 1	Indicates [Km/h] condition of vehicle speed signal from combination meter.
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.
TR CANCEL SW	Indicates [ON/OFF] condition of trunk cancel switch.
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
TRUNK/GLASS HATCH	This test is able to check trunk open operation. Trunk opens when "OPEN" on CONSULT-III screen is touched.

THEFT ALM

THEFT ALM : CONSULT-III Function (BCM - THEFT ALM)

INFOID:000000003899083

WORK SUPPORT

Test Item	Description
SECURITY ALARM SET	This mode is able to confirm and change security alarm ON-OFF setting.
THEFT ALM TRG	The switch which triggered vehicle security alarm is recorded. This mode is able to confirm and erase the record of vehicle security alarm. The trigger data can be erased by touching "CLEAR" on CONSULT-III screen.

DATA MONITOR

Monitored Item	Description
REQ SW -DR	Indicates [ON/OFF] condition of front door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of front door request switch (passenger side).
REQ SW -RR	Indicates [ON/OFF] condition of rear door request switch (passenger side).

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Monitored Item	Description
REQ SW -RL	Indicates [ON/OFF] condition of rear door request switch (driver side).
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	NOTE: This is displayed even when it is not equipped.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from front door key cylinder switch.
KEY CYL SW-TR	NOTE: This is displayed even when it is not equipped.
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk opener switch.
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT-III screen is touched.
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation. The horns will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
HEADLAMP(HI)	This test is able to check vehicle security lamp operation. The headlamps will be activated for 0.5 seconds after "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check vehicle security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:000000003899084

Data monitor

Monitor Item [Unit]	Description
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch LH.
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch RH.

SIGNAL BUFFER

SIGNAL BUFFER : CONSULT-III Function (BCM-SIGNAL BUFFER)

INFOID:000000003899085

DATA MONITOR

Monitor item [UNIT]	Description
PUSH SW [OFF/ON]	Displays the status of the push-button ignition switch (push switch) judged by BCM.

ACTIVE TEST

Test item	Operation	Description
OIL PRESSURE SW	OFF	OFF
	ON	BCM transmits the oil pressure switch signal to the combination meter via CAN communication, which illuminates the oil pressure warning lamp.

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : Diagnosis Description

INFOID:000000003899086

DESCRIPTION

During driving, the TPMS receives the signal transmitted from the transmitter installed in each wheel, when the tire pressure becomes low. The control unit (BCM) of this system has pressure judgment and trouble diagnosis functions.

When the TPMS detects low inflation pressure or another unusual symptom, the warning lamps in the combination meter comes on.

SELF DIAGNOSTIC PROCEDURE (WITH CONSULT-III)

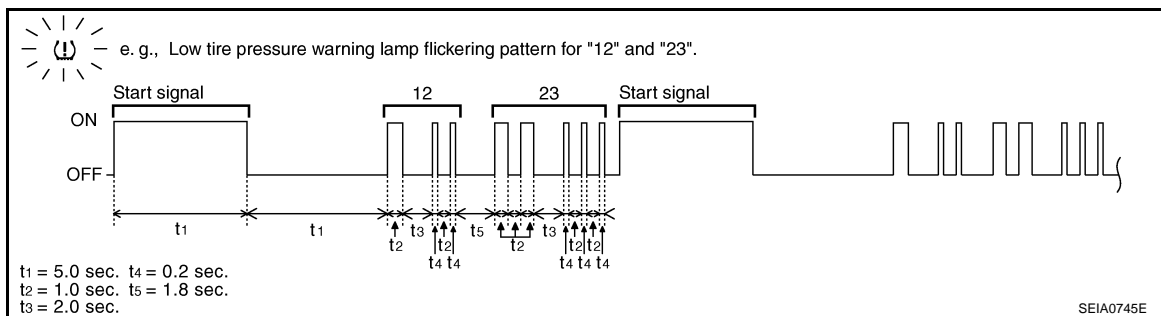
Ⓜ With CONSULT-III

- Touch "SELF-DIAG RESULTS" display shows malfunction experienced since the last erasing operation. Refer to [BCS-82. "DTC Index"](#).

SELF DIAGNOSTIC PROCEDURE (WITHOUT CONSULT-III)

ⓧ Without CONSULT-III

To start the self-diagnostic results mode, ground terminal of the tire pressure warning check connector. The malfunction location is indicated by the warning lamp flashing.



NOTE:

When the low tire warning lamp flashes 5 Hz and continues repeating it, the system is normal.

Flickering pattern	Items	Diagnostic items detected when...	Check item
15	Tire pressure value (Front LH)	Front LH tire pressure drops to 181 kPa (1.8 kg/cm, 26 psi) or less.	-
16	Tire pressure value (Front RH)	Front RH tire pressure drops to 181 kPa (1.8 kg/cm, 26 psi) or less.	
17	Tire pressure value (Rear RH)	Rear RH tire pressure drops to 181 kPa (1.8 kg/cm, 26 psi) or less.	
18	Tire pressure value (Rear LH)	Rear LH tire pressure drops to 181 kPa (1.8 kg/cm, 26 psi) or less.	
21	Transmitter no data (Front LH)	Data from front LH transmitter cannot be received.	WT-49
22	Transmitter no data (Front RH)	Data from front RH transmitter cannot be received.	
23	Transmitter no data (Rear RH)	Data from Rear RH transmitter cannot be received.	
24	Transmitter no data (Rear LH)	Data from Rear LH transmitter cannot be received.	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[BCM]

Flickering pattern	Items	Diagnostic items detected when...	Check item
31	Transmitter checksum error (Front LH)	Checksum data from front LH transmitter is malfunctioning.	WT-49
32	Transmitter checksum error (Front RH)	Checksum data from front RH transmitter is malfunctioning.	
33	Transmitter checksum error (Rear RH)	Checksum data from rear RH transmitter is malfunctioning.	
34	Transmitter checksum error (Rear LH)	Checksum data from rear LH transmitter is malfunctioning.	
35	Transmitter pressure data error (Front LH)	Air pressure data from front LH transmitter is malfunctioning.	WT-49
36	Transmitter pressure data error (Front RH)	Air pressure data from front RH transmitter is malfunctioning.	
37	Transmitter pressure data error (Rear RH)	Air pressure data from rear RH transmitter is malfunctioning.	
38	Transmitter pressure data error (Rear LH)	Air pressure data from rear LH transmitter is malfunctioning.	
41	Transmitter function code error (Front LH)	Function code data from front LH transmitter is malfunctioning.	WT-49
42	Transmitter function code error (Front RH)	Function code data from front RH transmitter is malfunctioning.	
43	Transmitter function code error (Rear RH)	Function code data from rear RH transmitter is malfunctioning.	
44	Transmitter function code error (Rear LH)	Function code data from rear LH transmitter is malfunctioning.	
45	Transmitter battery voltage low (Front LH)	Battery voltage of front LH transmitter drops.	WT-49
46	Transmitter battery voltage low (Front RH)	Battery voltage of front RH transmitter drops.	
47	Transmitter battery voltage low (Rear RH)	Battery voltage of rear RH transmitter drops.	
48	Transmitter battery voltage low (Rear LH)	Battery voltage of rear LH transmitter drops.	
52	Vehicle speed signal error	Speed signal is not detected.	WT-49
53	BCM failure about TPMS	Tire pressure monitoring system malfunction in BCM	WT-49
No flickering	Tire pressure warning check switch	Tire pressure warning switch circuit is open.	-

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ERASE SELF-DIAGNOSIS

☐ With CONSULT-III

1. Perform applicable inspection of malfunctioning item and then repair or replace.
2. Turn ignition switch "ON" and select "SELF-DIAG RESULTS" mode for "AIR PRESSURE MONITOR" with CONSULT-III.
3. Touch "ERASE" on CONSULT-III screen to erase memory.

☒ Without CONSULT-III

- In order to make it easier to find the cause of hard-to-duplicate malfunctions, malfunction information is stored into the control unit as necessary during use. This memory is not erased no matter how many times the ignition switch is turned "ON" and "OFF".
- However, this information is erased by turning ignition switch "OFF" after performing self-diagnostic or by erasing the memory using the CONSULT-III.

AIR PRESSURE MONITOR : CONSULT-III Function (BCM-AIR PRESSURE MONI-

N
O
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TOR)

WORK SUPPORT

ID Read

The registered ID number is displayed.

ID Regist

Refer to [WT-6. "ID Registration Procedure"](#).

SELF-DIAG RESULTS

Operation Procedure

Refer to [BCS-82. "DTC Index"](#).

DATA MONITOR

Screen of data monitor mode is displayed.

NOTE:

When malfunction is detected, CONSULT-III perform REAL-TIME DIAGNOSIS. Also, any malfunction detected while in this mode will be displayed at real time.

Display item list

Monitor	Condition	Specification
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	<ul style="list-style-type: none"> Drive vehicle for a few minutes. or Ignition switch ON and activation tool is transmitting activation signals. 	Tire pressure (kPa, kg/cm ² or Psi)
ID REGST FL ID REGST FR ID REGST RR ID REGST RL	Ignition switch ON	Registration ID: Green No registration: Red
WARNING LAMP		Low tire pressure warning lamp on: ON Low tire pressure warning lamp off: OFF
BUZZER		Buzzer in combination meter on: ON Buzzer in combination meter off: OFF

NOTE:

Before performing the self-diagnosis, be sure to register the ID, or erase the actual malfunction location may be different from that displayed on CONSULT-III.

ACTIVE TEST

NOTE:

Before performing the self-diagnosis, be sure to register the ID, or else the actual malfunction may be different from that displayed on CONSULT-III.

TEST ITEM LIST

Test item	Content
WARNING LAMP	This test is able to check to make sure that the warning lamp turns on.
ID REGIST WARNING	This test is able to check to make sure that the buzzer sounds or the warning lamp turns on.
FLASHER	This test is able to check to make sure that each turn signal lamp turns on.
HORN	This test is able to check to make sure that the horn sounds.

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[BCM]

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000003899089

Refer to [LAN-24, "CAN Communication Signal Chart"](#).

DTC Logic

INFOID:000000003899090

DTC DETECTION LOGIC

CONSULT-III display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1000]	When any listed module cannot communicate CAN communication signal continuously for 2 seconds or more with ignition switch ON	In CAN communication system, any item (or items) of the following listed below is malfunctioning. <ul style="list-style-type: none">• Transmission• Receiving (ECM)• Receiving (VDC/TCS/ABS)• Receiving (METER/M&A)• Receiving (TCM)• Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:000000003899091

1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check "SELF- DIAG RESULTS".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-54, "Diagnosis Procedure"](#).
NO >> Refer to [GI-39, "Intermittent Incident"](#).

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U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[BCM]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000003899092

DTC DETECTION LOGIC

CONSULT-III display description	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit malfunction.	BCM

Diagnosis Procedure

INFOID:000000003899093

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to [BCS-87, "Removal and Installation"](#).

U0415 VEHICLE SPEED SIG

[BCM]

< COMPONENT DIAGNOSIS >

U0415 VEHICLE SPEED SIG

Description

INFOID:000000003899094

U0415 is displayed if any unusual condition is present in the reception status of the vehicle speed signal from the ABS actuator and electric unit (control unit).

DTC Logic

INFOID:000000003899095

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Probable malfunction location
U0415	VEHICLE SPEED SIG [U0415]	When the vehicle speed signal received from the ABS actuator and electric unit (control unit) remains abnormal for 2 seconds or more.	<ul style="list-style-type: none">• ABS actuator and electric unit (control unit)• BCM

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

1. Erase the DTC.
2. Turn ignition switch OFF.
3. Perform the "SELF-DIAG RESULTS" of CONSULT-III, after the ignition switch has been turned ON for 2 seconds or more.

Is any DTC detected?

- YES >> Refer to [BCS-82, "DTC Index"](#).
NO >> Inspection End.

Diagnosis Procedure

INFOID:000000003899096

1. ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF-DIAG RESULTS

Perform "SELF-DIAG RESULTS" of ABS actuator and electric unit (control unit) with CONSULT-III. Refer to [BRC-22, "CONSULT-III Function \(ABS\)"](#).

Is any DTC detected?

- YES >> Repair or replace the malfunctioning part.
NO >> Replace BCM. Refer to [BCS-87, "Removal and Installation"](#).

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B2562 LOW VOLTAGE

DTC Logic

INFOID:000000003899097

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Possible cause
B2562	LOW VOLTAGE	When the power supply voltage to BCM remains less than 8.8 V for 1.5 seconds or more	Harness or connector (power supply circuit)

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

1. Erase DTC.
2. Turn ignition switch OFF.
3. Perform the "SELF-DIAG RESULTS" of CONSULT-III, after the ignition switch has been turned ON for 1.5 seconds or more.

Is any DTC detected?

- YES >> Refer to [BCS-40, "Diagnosis Procedure"](#).
 NO >> Inspection End.

Diagnosis Procedure

INFOID:000000003899098

1. CHECK BATTERY VOLTAGE

Check battery voltage.

Is battery voltage less than 8.8V?

- YES >> Charge battery and retest. Refer to [PG-4, "Work Flow"](#).
 NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to [BCS-41, "Diagnosis Procedure"](#).

Is the circuit OK?

- YES >> Replace BCM. Refer to [BCS-87, "Removal and Installation"](#).
 NO >> Repair or replace the malfunctioning part.

Special Repair Requirement

INFOID:000000003899099

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to [BCS-6, "CONFIGURATION \(BCM\) : Special Repair Requirement"](#).

>> Work End.

POWER SUPPLY AND GROUND CIRCUIT

[BCM]

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000003899103

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	H
11		10
24		7

Is the fuse or fusible link blown?

- YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
- NO >> GO TO 2

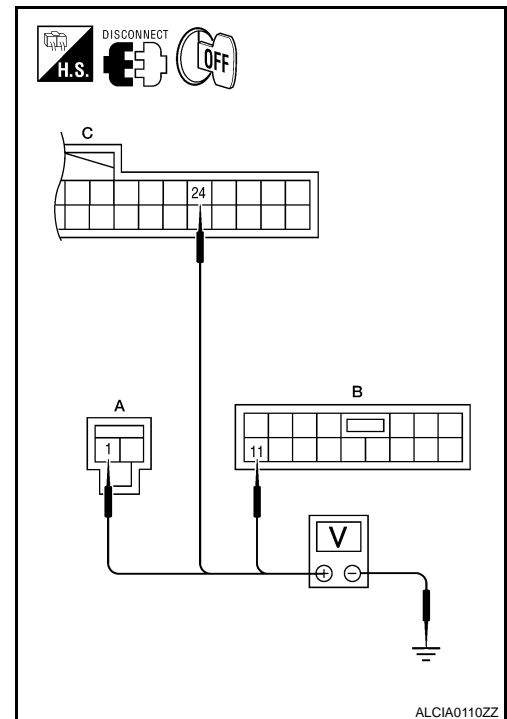
2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground Battery voltage
Connector	Terminal	
M16 (A)	1	
M17 (B)	11	
M18 (C)	24	

Is the measurement normal?

- YES >> GO TO 3
- NO >> Repair or replace harness.



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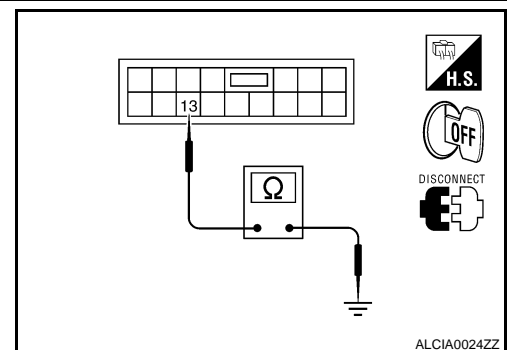
3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		Yes
M17	13		Yes

Does continuity exist?

- YES >> Inspection End.
- NO >> Repair or replace harness.



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Special Repair Requirement

INFOID:000000003899104

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to [BCS-6. "CONFIGURATION \(BCM\) : Special Repair Requirement"](#).

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[BCM]

>> Work End.

COMBINATION SWITCH INPUT CIRCUIT

[BCM]

< COMPONENT DIAGNOSIS >

COMBINATION SWITCH INPUT CIRCUIT

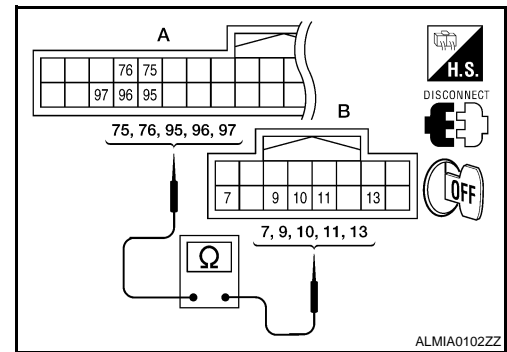
Diagnosis Procedure

INFOID:000000003899105

1. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
INPUT 1	M19 (A)	95	M28 (B)	11	Yes
INPUT 2		97		9	
INPUT 3		76		7	
INPUT 4		96		10	
INPUT 5		75		13	



Does continuity exist?

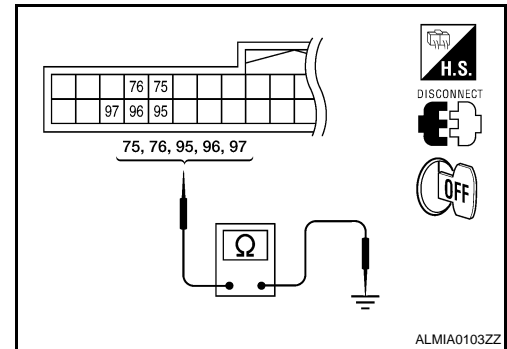
YES >> GO TO 2

NO >> Repair or replace harness.

2. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BCM		Continuity
	Connector	Terminal	
INPUT 1	M19	95	No
INPUT 2		97	
INPUT 3		76	
INPUT 4		96	
INPUT 5		75	



Does continuity exist?

YES >> Repair or replace harness.

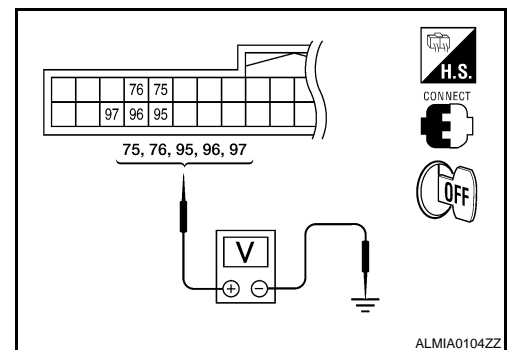
NO >> GO TO 3

3. CHECK BCM OUTPUT VOLTAGE

1. Connect the BCM.
2. Check voltage between BCM harness connector and ground.

System	Terminals		Voltage (Approx.)
	(+)	(-)	
	BCM		
	Connector	Terminal	
INPUT 1	M19	95	Ground
INPUT 2		97	
INPUT 3		76	
INPUT 4		96	
INPUT 5		75	

Refer to [BCS-52. "Physical Values"](#).



Is the measurement normal?

YES >> GO TO 4

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COMBINATION SWITCH INPUT CIRCUIT

[BCM]

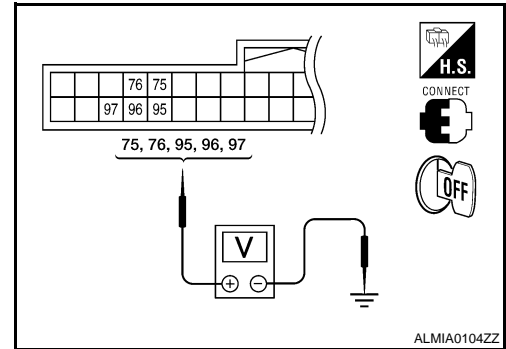
< COMPONENT DIAGNOSIS >

NO >> Replace BCM. Refer to [BCS-87, "Removal and Installation"](#).

4. CHECK BCM INPUT SIGNAL

1. Connect the combination switch.
2. Turn ON any switch in the system that is malfunctioning.
3. Check voltage between BCM harness connector and ground.

System	Terminals		Voltage (Approx.)	
	(+)	(-)		
	BCM			
	Connector	Terminal	Ground	Refer to BCS-52, "Physical Values" .
INPUT 1	M19	95		
INPUT 2		97		
INPUT 3		76		
INPUT 4		96		
INPUT 5		75		



Is the measurement normal when any of the switches is turned ON?

YES >> Replace BCM. Refer to [BCS-87, "Removal and Installation"](#).

NO >> Replace the combination switch. Refer to [WW-98, "Removal and Installation"](#).

Special Repair Requirement

INFOID:000000003899106

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to [BCS-6, "CONFIGURATION \(BCM\) : Special Repair Requirement"](#).

>> Work end.

COMBINATION SWITCH OUTPUT CIRCUIT

< COMPONENT DIAGNOSIS >

[BCM]

COMBINATION SWITCH OUTPUT CIRCUIT

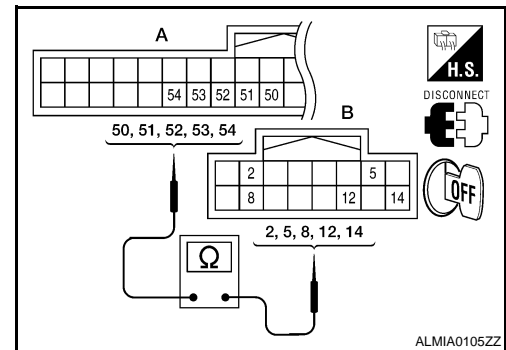
Diagnosis Procedure

INFOID:000000003899107

1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	
OUTPUT 1	M18 (A)	51	M28 (B)	12	Yes
OUTPUT 2		52		14	
OUTPUT 3		53		5	
OUTPUT 4		54		2	
OUTPUT 5		50		8	



Does continuity exist?

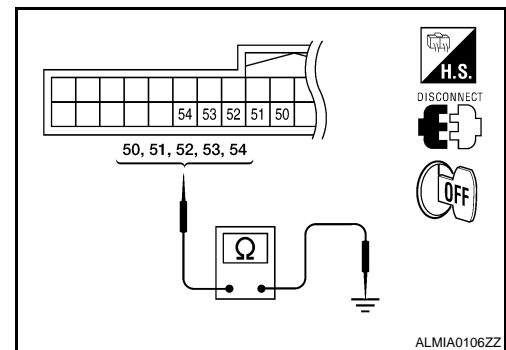
YES >> GO TO 2

NO >> Repair or replace harness.

2. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	BCM		Continuity
	Connector	Terminal	
OUTPUT 1	M18	51	No
OUTPUT 2		52	
OUTPUT 3		53	
OUTPUT 4		54	
OUTPUT 5		50	



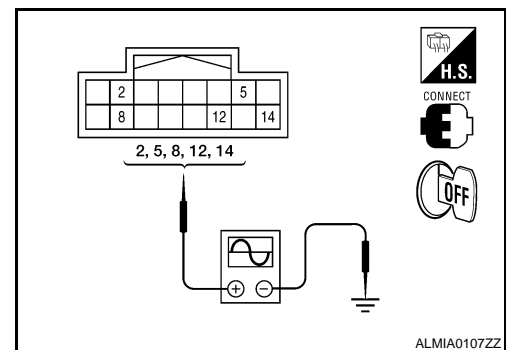
Does continuity exist?

YES >> Repair or replace harness.

NO >> GO TO 3

3. CHECK COMBINATION SWITCH OUTPUT VOLTAGE

1. Connect the BCM and combination switch.
2. Turn ON any switch in the system that is malfunctioning.
3. Check voltage between combination switch harness connector and ground.



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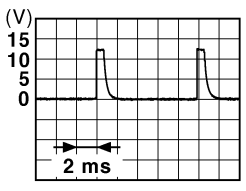
BCS

COMBINATION SWITCH OUTPUT CIRCUIT

< COMPONENT DIAGNOSIS >

[BCM]

System	Terminals		Value (Approx.)
	(+)	(-)	
	Combination switch		
	Conne- ctor	Terminal	
OUTPUT 1	M28	12	Ground
OUTPUT 2		14	
OUTPUT 3		5	
OUTPUT 4		2	
OUTPUT 5		8	



JPMA0041GB

1.4 V

Is the measurement normal when any of the switches is turned ON?

YES >> Replace BCM. Refer to [BCS-87. "Removal and Installation"](#).

NO >> Replace the combination switch. Refer to [WW-98. "Removal and Installation"](#).

Special Repair Requirement

INFOID:000000003899108

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to [BCS-6. "CONFIGURATION \(BCM\) : Special Repair Requirement"](#).

>> Work end.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003899109

VALUES ON THE DIAGNOSIS TOOL

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

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Monitor Item	Condition	Value/Status
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
	Power door lock switch UNLOCK	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
	When outside of the vehicle is dark	Close to 0 V
REQ SW-DR	When front door request switch is not pressed (driver side)	OFF
	When front door request switch is pressed (driver side)	ON
REQ SW-AS	When front door request switch is not pressed (passenger side)	OFF
	When front door request switch is pressed (passenger side)	ON
REQ SW-RL	When rear door request switch is not pressed (driver side)	OFF
	When rear door request switch is pressed (driver side)	ON
REQ SW-RR	When rear door request switch is not pressed (passenger side)	OFF
	When rear door request switch is pressed (passenger side)	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Monitor Item	Condition	Value/Status	
REQ SW-BD/TR	When trunk request switch is not pressed	OFF	A
	When trunk request switch is pressed	ON	
PUSH SW	When engine switch (push switch) is not pressed	OFF	B
	When engine switch (push switch) is pressed	ON	
IGN RLY 2-F/B	Ignition switch OFF or ACC	OFF	C
	Ignition switch ON	ON	
ACC RLY-F/B	Ignition switch OFF	OFF	D
	Ignition switch ACC or ON	ON	
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.	OFF	
BRAKE SW 1	When the brake pedal is not depressed	ON	E
	When the brake pedal is depressed	OFF	
DETE/CANCL SW	When selector lever is in P position	OFF	F
	When selector lever is in any position other than P	ON	
SFT PN/N SW	When selector lever is in any position other than P or N	OFF	G
	When selector lever is in P or N position	ON	
S/L-LOCK	Electronic steering column lock LOCK status	OFF	H
	Electronic steering column lock UNLOCK status	ON	
S/L-UNLOCK	Electronic steering column lock UNLOCK status	OFF	I
	Electronic steering column lock LOCK status	ON	
S/L RELAY-F/B	Ignition switch OFF or ACC	OFF	J
	Ignition switch ON	ON	
UNLK SEN-DR	Driver door UNLOCK status	OFF	K
	Driver door LOCK status	ON	
PUSH SW-IPDM	When engine switch (push switch) is not pressed	OFF	L
	When engine switch (push switch) is pressed	ON	
IGN RLY1 F/B	Ignition switch OFF or ACC	OFF	
	Ignition switch ON	ON	
DETE SW -IPDM	When selector lever is in P position	OFF	
	When selector lever is in any position other than P	ON	
SFT PN -IPDM	When selector lever is in any position other than P or N	OFF	BCS
	When selector lever is in P or N position	ON	
SFT P-MET	When selector lever is in any position other than P	OFF	
	When selector lever is in P position	ON	N
SFT N-MET	When selector lever is in any position other than N	OFF	
	When selector lever is in N position	ON	
ENGINE STATE	Engine stopped	STOP	O
	While the engine stalls	STALL	
	At engine cranking	CRANK	P
	Engine running	RUN	
S/L LOCK-IPDM	Electronic steering column lock LOCK status	OFF	
	Electronic steering column lock UNLOCK status	ON	
S/L UNLCK-IPDM	Electronic steering column lock UNLOCK status	OFF	
	Electronic steering column lock LOCK status	ON	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Monitor Item	Condition	Value/Status
S/L RELAY-REQ	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
DOOR STAT-AS	Passenger door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STAT	When the engine start is prohibited	RESET
	When the engine start is permitted	SET
PRMT RKE STAT	NOTE: This item is displayed, but cannot be monitored.	RESET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
CONFIRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TP 4	The ID of fourth key is not registered to BCM	YET
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	YET
	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	YET
	The ID of second key is registered to BCM	DONE

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Monitor Item	Condition	Value/Status	
TP 1	The ID of first key is not registered to BCM	YET	A
	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	B
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire	C
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	D
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE	
	When ID of front LH tire transmitter is not registered	YET	E
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE	
	When ID of front RH tire transmitter is not registered	YET	
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE	F
	When ID of rear RH tire transmitter is not registered	YET	
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE	G
	When ID of rear LH tire transmitter is not registered	YET	
WARNING LAMP	Tire pressure indicator OFF	OFF	
	Tire pressure indicator ON	ON	H
BUZZER	Tire pressure warning alarm is not sounding	OFF	
	Tire pressure warning alarm is sounding	ON	I

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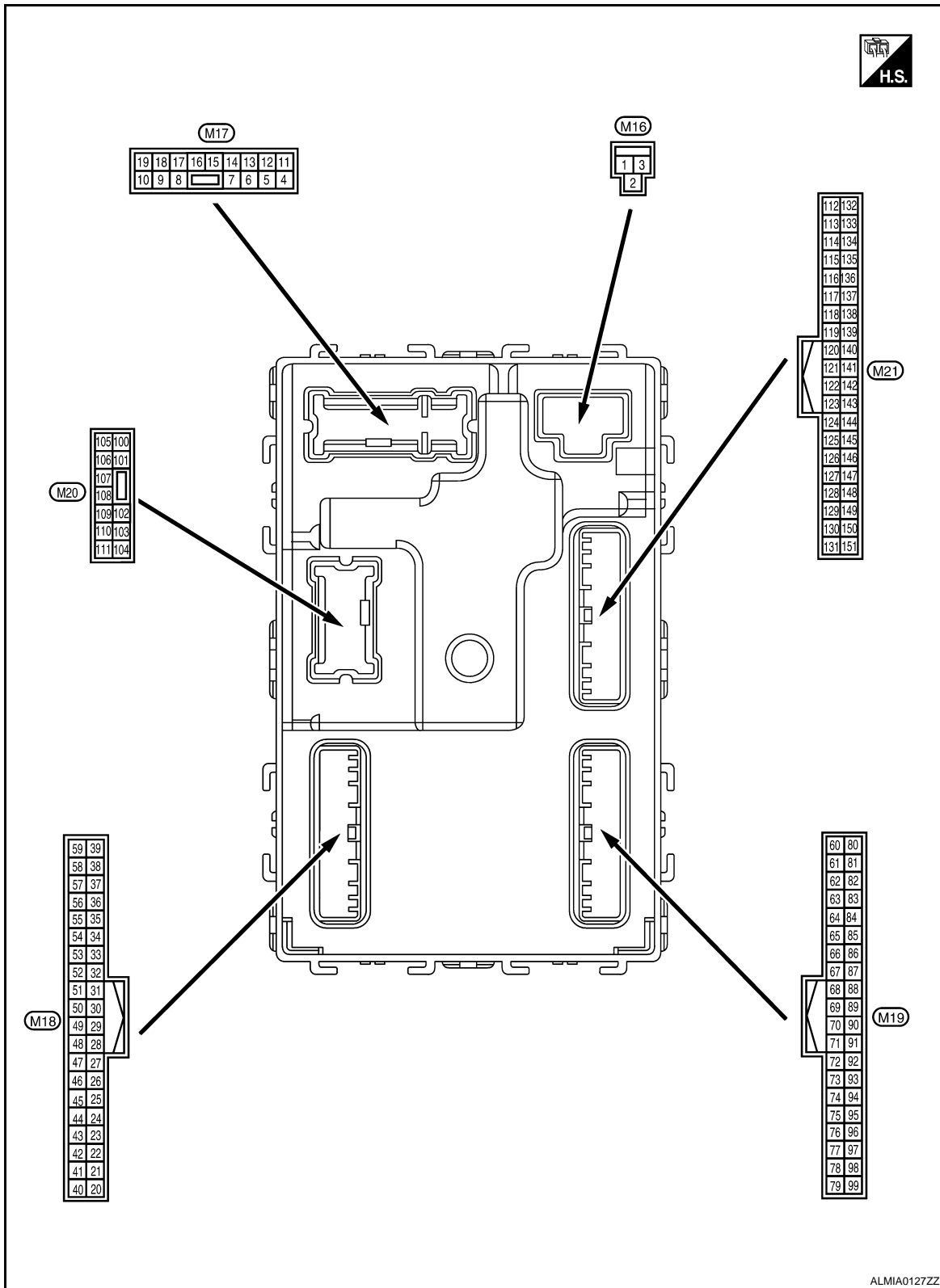
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Terminal Layout

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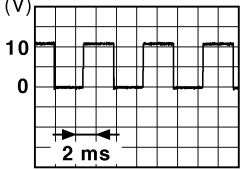
Physical Values

INFOID:000000003899111

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
(+)	(-)					
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (G)	Ground	Front door RH UNLOCK	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0V
					OFF	Battery voltage
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
					Other than LOCK (actuator is not activated)	0V
9 (L)	Ground	Front door LH UNLOCK	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
10 (G)	Ground	Rear door RH and rear door LH UNLOCK	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0V
14 (GR/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	0V
					ON	<p>NOTE: When the illumination brightening/dimming level is in the neutral position</p>  <p style="text-align: right; font-size: small;">JSNIA0010GB</p>
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0V

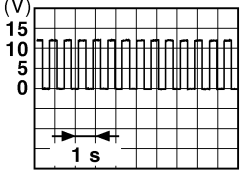
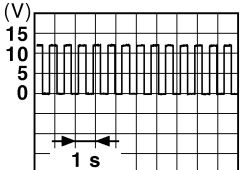
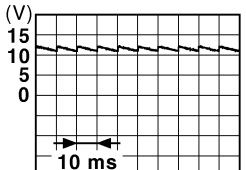
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BCM (BODY CONTROL MODULE)

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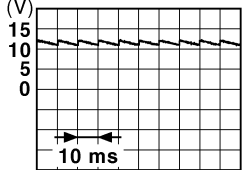
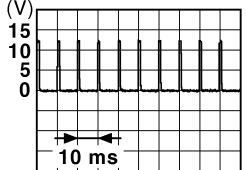
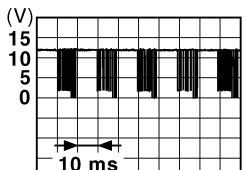
[BCM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch RH	 <p style="text-align: center;">6.5 V</p>
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF	0V
					Turn signal switch LH	 <p style="text-align: center;">6.5 V</p>
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0V
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehi- cle is bright	Close to 5V
					When outside of the vehi- cle is dark	Close to 0V
24 (R/W)	Ground	Stop lamp switch 1	Input	—	Battery voltage	
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not de- pressed)	0V
					ON (brake pedal is de- pressed)	Battery voltage
27 (O)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	LOCK status	 <p style="text-align: center;">11.8V</p>
					UNLOCK status	0V
29 (Y)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot	Battery voltage	
				When Intelligent Key is not inserted into key slot	0V	
30 (V/Y)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
					ACC or ON	Battery voltage
31 (G)	Ground	Rear window defog- ger feedback signal	Input	Rear window de- fogger switch	OFF	0V
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p> <p style="text-align: center;">11.8 V</p>
					ON (when front door RH opens)	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 <p style="text-align: right; font-size: small;">JPMIA0012GB</p> <p style="text-align: center;">1.1V</p>
					ON	0V
38 (GR/W)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	5V
					ON	0V
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON	 <p style="text-align: right; font-size: small;">JPMIA0013GB</p> <p style="text-align: center;">10.2V</p>	
				Ignition switch OFF or ACC	0V	
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illumination	ON	5.5V
					OFF	0V
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0V
					OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON	0V	
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF	0V
					ACC or ON	5.0V

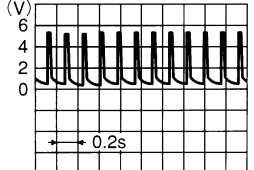

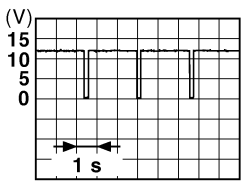
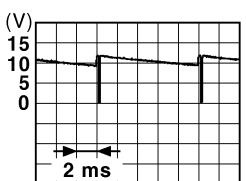
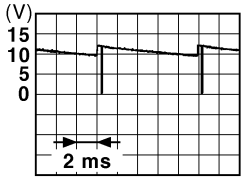
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
(+)	(-)				
47 (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state  OCC3881D
				When receiving the signal from the transmitter  OCC3880D	
48 (R/G)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position 12.0V
				Except P and N positions 0V	
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	ON 0V
				Blinking  11.3V JPMIA0014GB	
50 (LG/B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF 0V
				Turn signal switch RH  10.7V JPMIA0031GB	Lighting switch 1ST
					Lighting switch high-beam
					Lighting switch 2ND
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4) 0V
				Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7  10.7V JPMIA0032GB	Front wiper switch HI (Wiper intermittent dial 4)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)		
(+)	(-)	Signal name	Input/ Output				
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V	
					Front washer switch ON (Wiper intermittent dial 4)	<p style="text-align: right; font-size: small;">JPMIA0033GB</p>	
					Any of the conditions below with all switch OFF		10.7V
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0V	
					Front wiper switch INT	<p style="text-align: right; font-size: small;">JPMIA0034GB</p>	
					Front wiper switch LO		10.7V
					Lighting switch AUTO		
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0V	
					Front fog lamp switch ON	<p style="text-align: right; font-size: small;">JPMIA0035GB</p>	
					Lighting switch 2ND		10.7V
					Lighting switch flash-to- pass		
57 (W)	Ground	Tire pressure warn- ing check switch	Input	—	—	5V	
					—		
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	<p style="text-align: right; font-size: small;">JPMIA0011GB</p>	
					11.8V		
59 (G/R)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	Battery voltage	
					Not activated	0V	

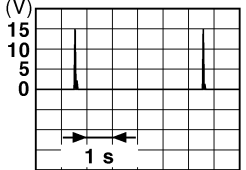
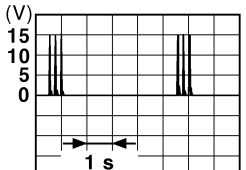
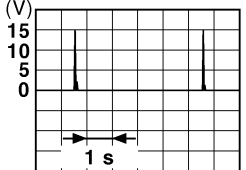
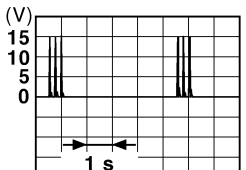
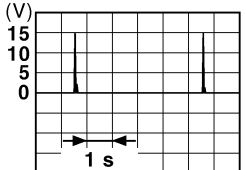
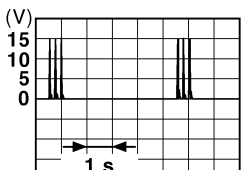
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BCM (BODY CONTROL MODULE)

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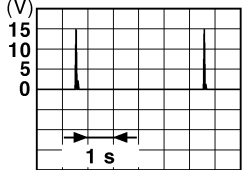
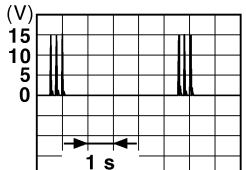
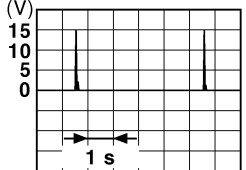
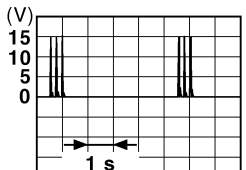
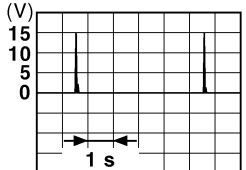
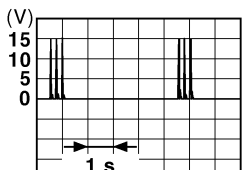
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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
62 (V)	Ground	Front outside handle RH antenna (-)	Output	When the front door RH request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
63 (P)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area 
				When Intelligent Key is not in the antenna detection area	
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area 
				When Intelligent Key is not in the antenna detection area	
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area 
				When Intelligent Key is not in the antenna detection area	

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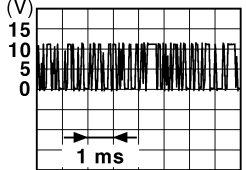
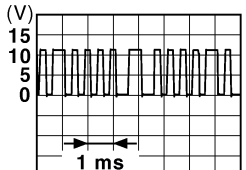
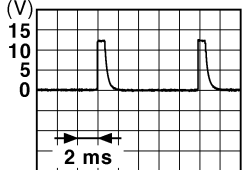
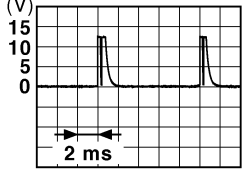

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
66 (R)	Ground	Instrument panel antenna (-)	Output	Ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>	
				When Intelligent Key is not in the passenger compartment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>	
67 (G)	Ground	Instrument panel antenna (+)	Output	Ignition switch OFF	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>	
				When Intelligent Key is not in the passenger compartment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>	
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.	
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.	
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC	0V
				ON	Battery voltage	

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
71 (L/O)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting	 <p style="text-align: right; font-size: small;">JMKIA0064GB</p>
				When operating either button on Intelligent Key	 <p style="text-align: right; font-size: small;">JMKIA0065GB</p>
75 (R/Y)	Ground	Combination switch INPUT 5	Input	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4V</p>
				Combination switch Front fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3V</p>
				Any of the conditions below with all switch OFF	<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7  <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3V</p>

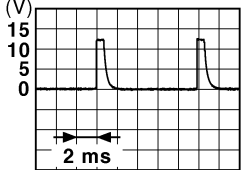
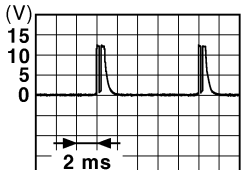

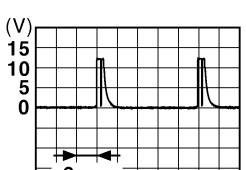
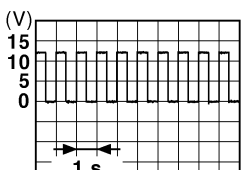
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BCM (BODY CONTROL MODULE)

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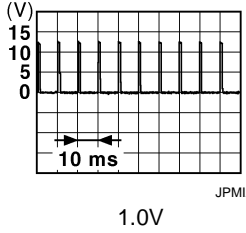
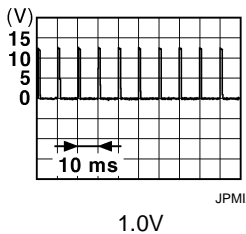
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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)  1.4V <small>JPMIA0041GB</small>
					Lighting switch high-beam (Wiper intermittent dial 4)  1.3V <small>JPMIA0036GB</small>
					Lighting switch 2ND (Wiper intermittent dial 4)  1.3V <small>JPMIA0037GB</small>
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3  1.3V <small>JPMIA0040GB</small>
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed 0V Not pressed Battery voltage
				78 (P)	Ground
79 (L)	Ground	CAN-H	Input/ Output	—	—
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF 0V
					Blinking  6.5V <small>JPMIA0015GB</small>
					ON Battery voltage

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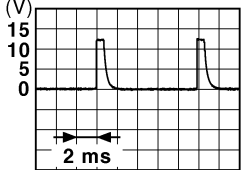

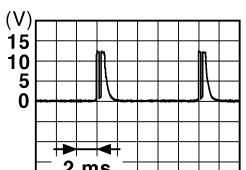
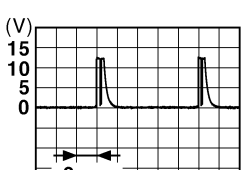
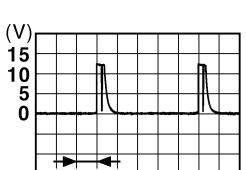
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
(+)	(-)					
81 (Y/L)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
83 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0V
					ACC or ON	Battery voltage
84 (Y/R)	Ground	A/T device	Output	—		Battery voltage
85 (L/O)	Ground	Electronic steering column lock condition No. 1	Input	Electronic steering column lock	Lock status	0V
					Unlock status	Battery voltage
86 (G/R)	Ground	Electronic steering column lock condition No. 2	Input	Electronic steering column lock	Lock status	Battery voltage
					Unlock status	0V
87 (G/B)	Ground	Selector lever P position switch	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
88 (R)	Ground	Front door RH request switch	Input	Front door RH request switch	ON (pressed)	0V
					OFF (not pressed)	
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	ON (pressed)	0V
					OFF (not pressed)	
90 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
94 (G/Y)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V

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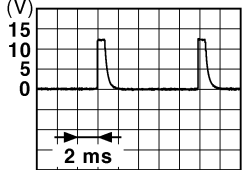
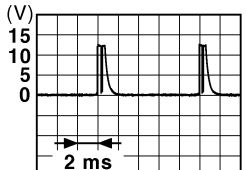
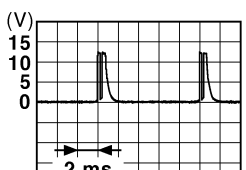
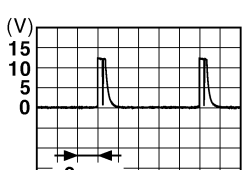
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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 <small>JPMIA0041GB</small> 1.4V
					Turn signal switch LH	 <small>JPMIA0037GB</small> 1.3V
					Turn signal switch RH	 <small>JPMIA0036GB</small> 1.3V
					Front wiper switch LO	 <small>JPMIA0038GB</small> 1.3V
					Front washer switch ON	 <small>JPMIA0039GB</small> 1.3V

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[BCM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
96 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="font-size: small;">JPMIA0041GB</p> <p>1.4V</p> </div>
					Lighting switch AUTO (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="font-size: small;">JPMIA0038GB</p> <p>1.3V</p> </div>
					Lighting switch 1ST (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="font-size: small;">JPMIA0036GB</p> <p>1.3V</p> </div>
					Any of the conditions below with all switch OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6 <div style="text-align: right;">  <p style="font-size: small;">JPMIA0039GB</p> <p>1.3V</p> </div>

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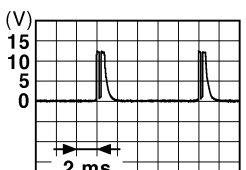
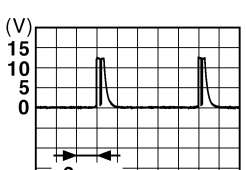
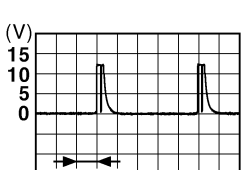
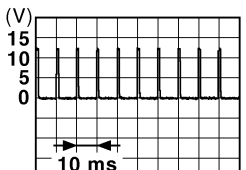
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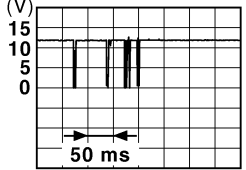
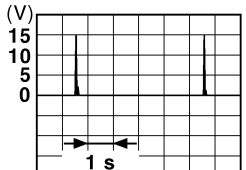
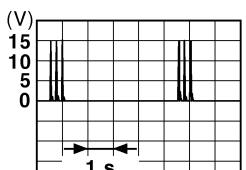
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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
97 (R/B)	Ground	Combination switch INPUT 2	Input			Combination switch (Wiper intermittent dial 4)
				Lighting switch flash-to-pass	 1.3V	
				Lighting switch 2ND	 1.3V	
				Front wiper switch INT	 1.3V	
				Front wiper switch HI	 1.3V	
				Pressed	0 V	
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	 1.1V

BCM (BODY CONTROL MODULE)

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[BCM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
99 (L/Y)	Ground	Electronic steering column lock unit com- munication	Input/ Output	Electronic steer- ing column lock	LOCK status	Battery voltage
					LOCK or UNLOCK	 <p style="text-align: right; font-size: small;">JMKIA0066GB</p>
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0V
103 (V)	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener ac- tuator is activated)	Battery voltage
					Close (trunk lid opener ac- tuator is not activated)	0V
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
					When Intelligent Key is not in the passenger compart- ment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

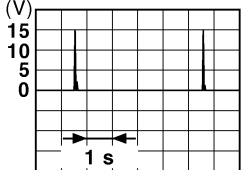
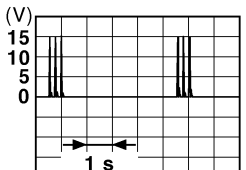
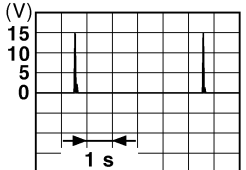
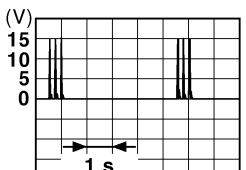
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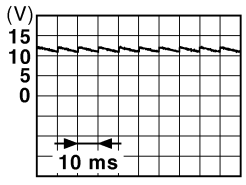
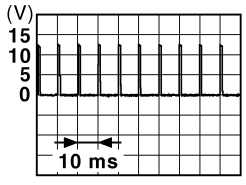
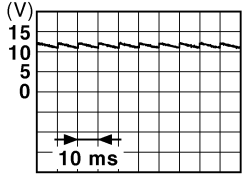
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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
115 (W)	Ground	Trunk room antenna 1 (+)	Output		
118 (L/O)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid request switch is operated with ignition switch OFF When Intelligent Key is in the antenna detection area When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>  <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
119 (BR/ W)	Ground	Rear bumper anten- na (+)	Output	When the trunk lid request switch is operated with ignition switch OFF When Intelligent Key is in the antenna detection area When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>  <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
(+)	(-)					
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	 <p style="text-align: center;">11.8V</p>
					ON (trunk is open)	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch OFF (M/T vehi- cle)	When the clutch pedal is depressed	Battery voltage
					When the clutch pedal is not depressed	0V
				Ignition switch ON (other than M/ T vehicle)	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	0V
141 (BR)	Ground	Trunk request switch	Input	Trunk request switch	ON (pressed)	0V
					OFF (not pressed)	 <p style="text-align: center;">1.0V</p>
144 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0V
					Not sounding	Battery voltage
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0V
					Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	 <p style="text-align: center;">11.8V</p>
					ON (when rear door RH opens)	0V

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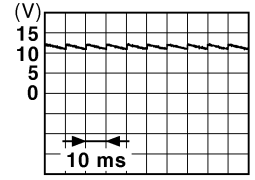
BCS

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)
				ON (when rear door LH opens)	0V



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11.8V

BCM (BODY CONTROL MODULE)

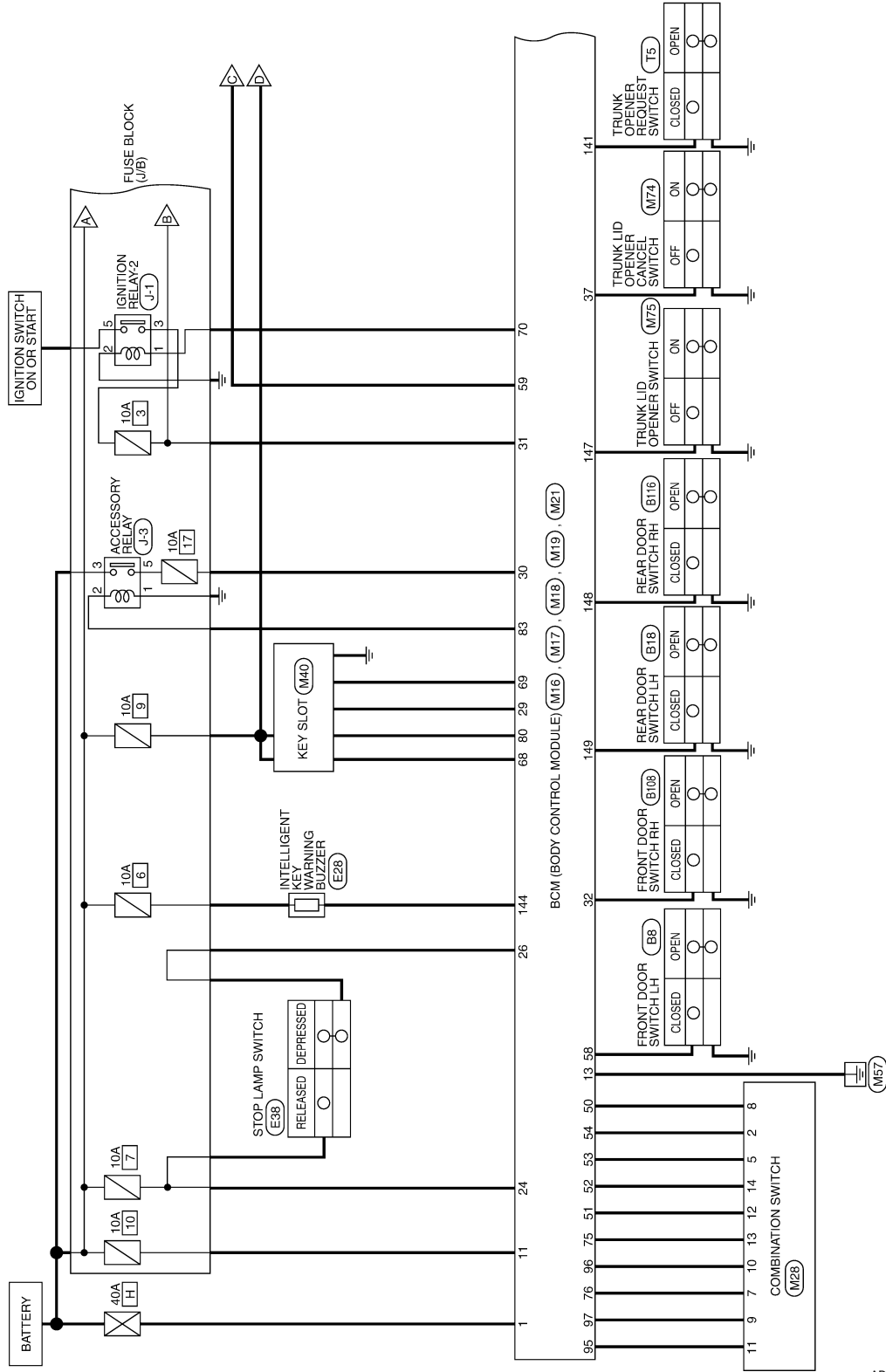
[BCM]

< ECU DIAGNOSIS >

Wiring Diagram

INFOID:00000000389113

BCM (BODY CONTROL MODULE)



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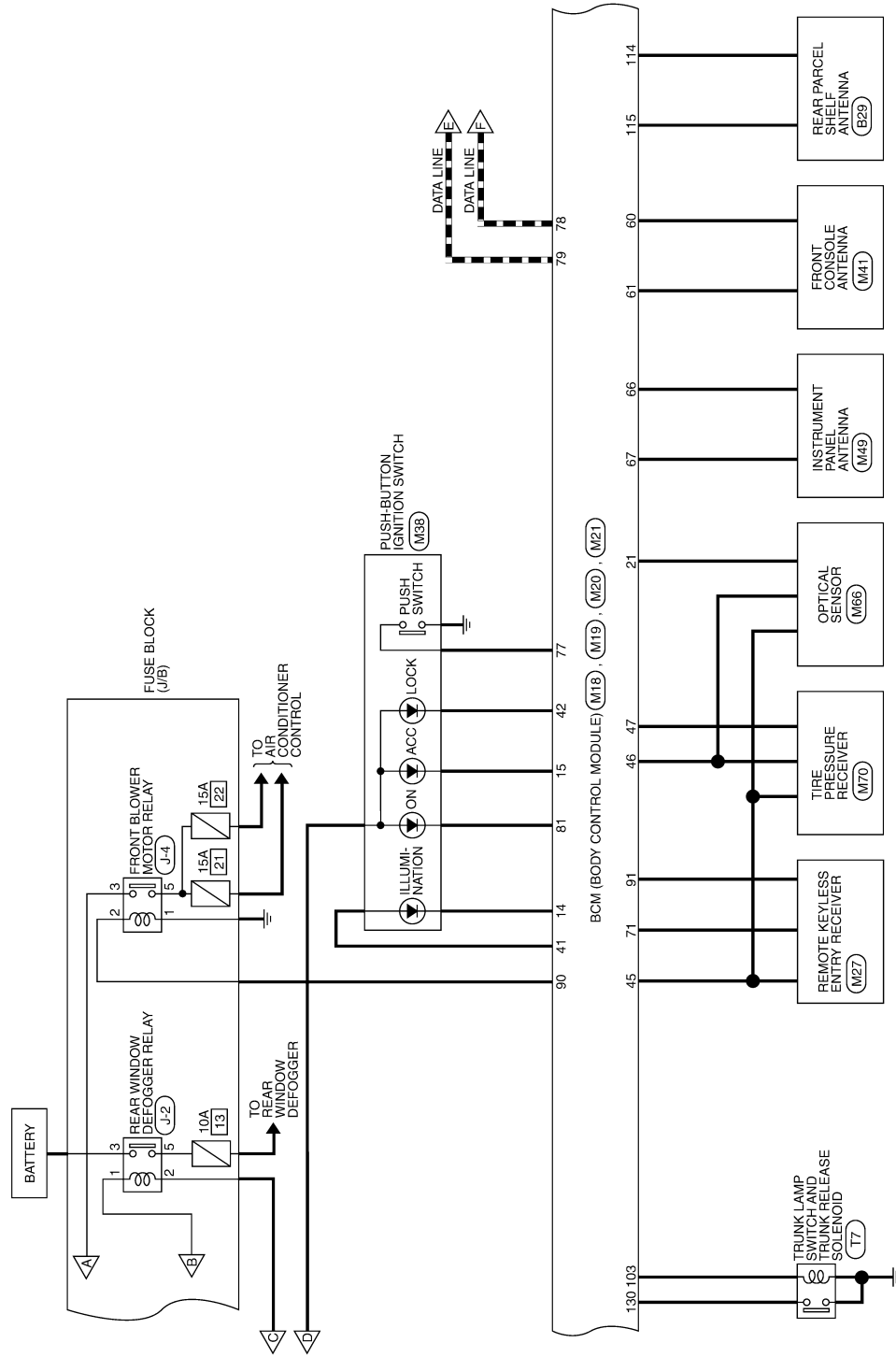
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

— : DATA LINE



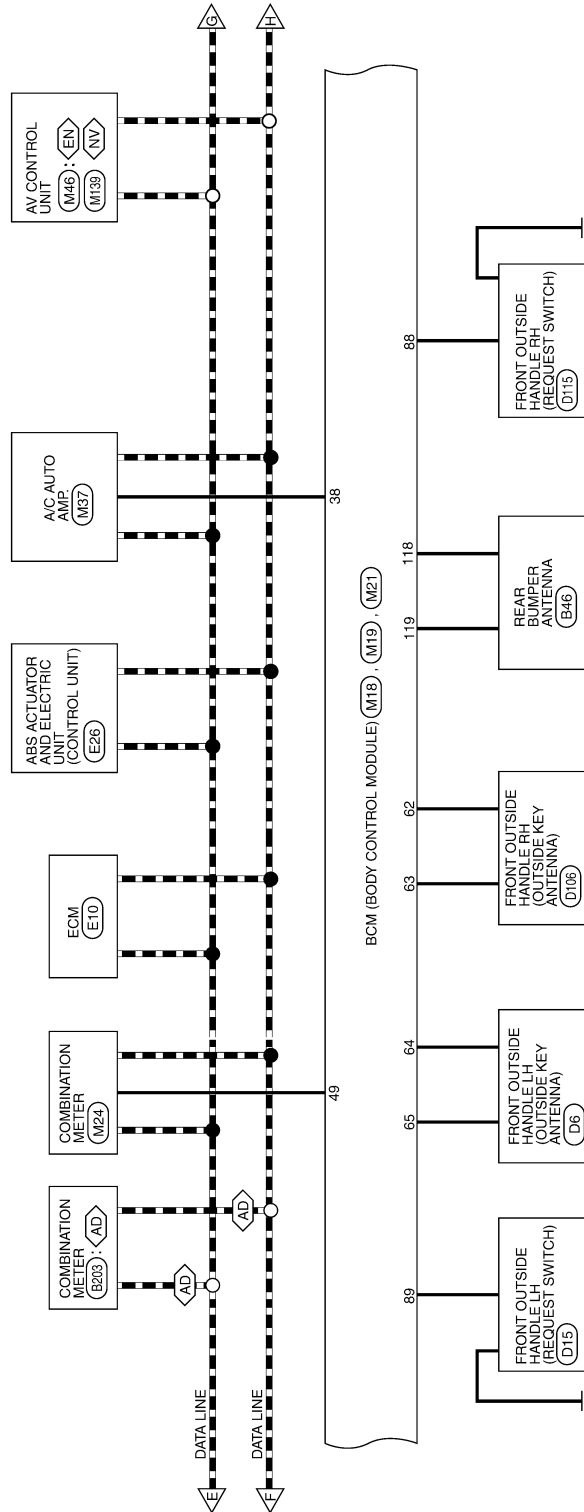
ABMWA0078GI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

- - - : DATA LINE
 <AD> : WITH AUTOMATIC DRIVE POSITIONER
 <EN> : WITHOUT NAVI
 <NV> : WITH NAVI



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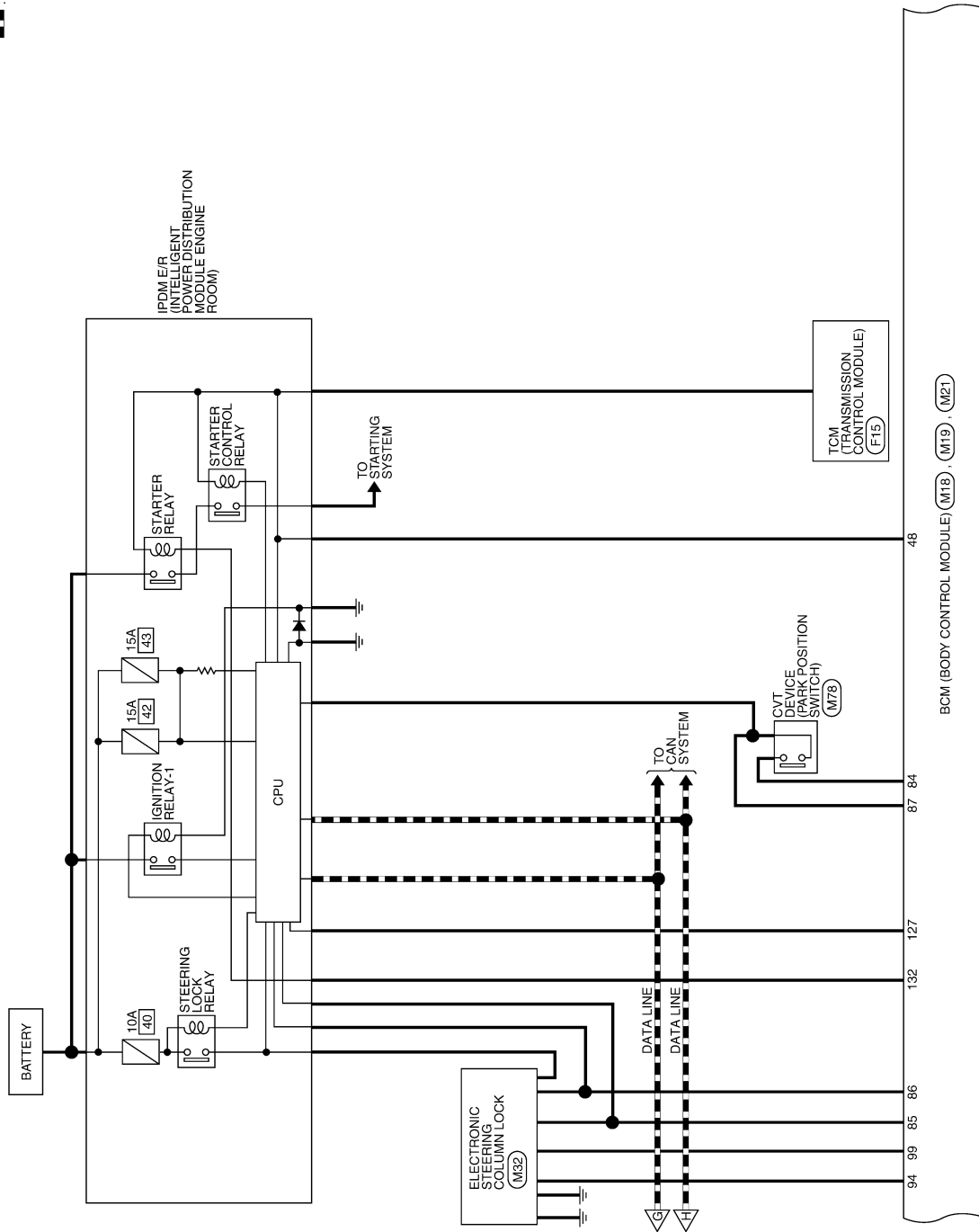
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

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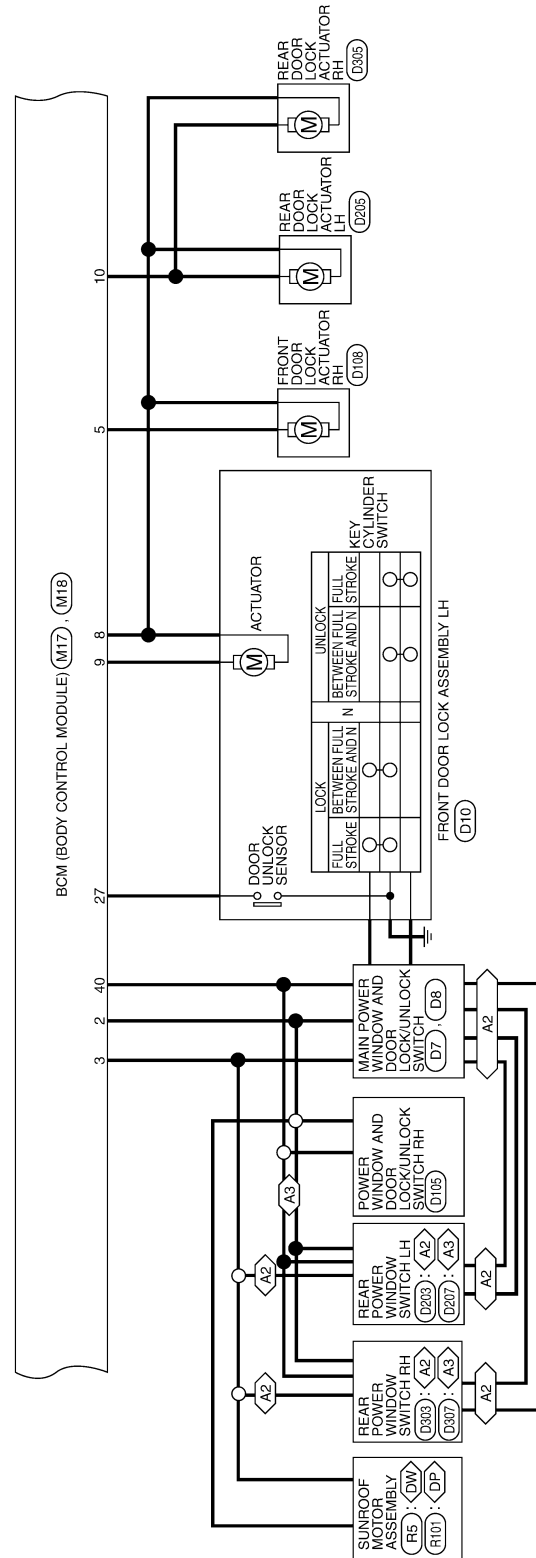
ABMWA0080GI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

- <A2> : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
- <A3> : WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM
- <DP> : WITH DUAL PANEL SUNROOF
- <DW> : WITHOUT DUAL PANEL SUNROOF



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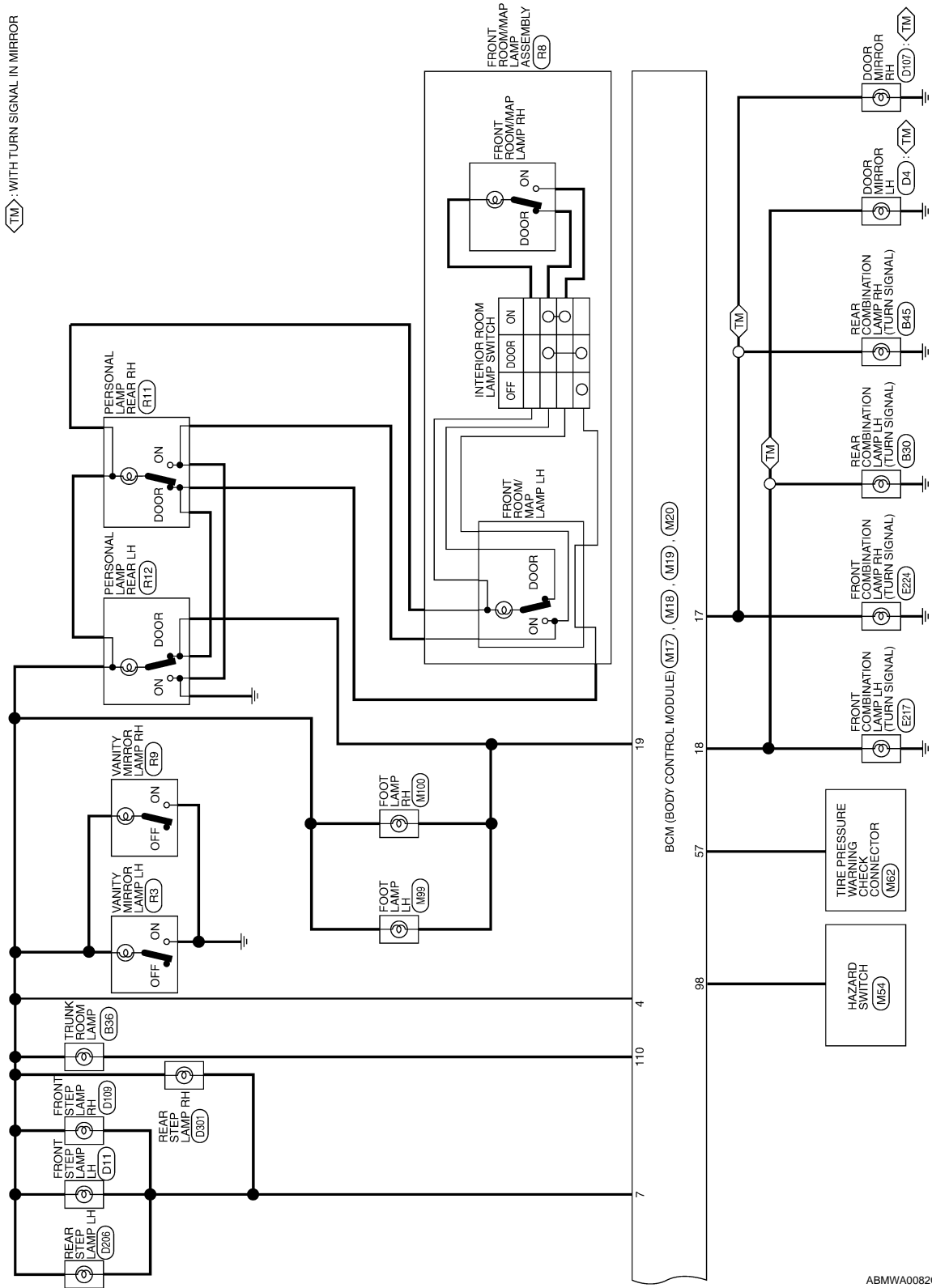
BCS

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

TM : WITH TURN SIGNAL IN MIRROR



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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

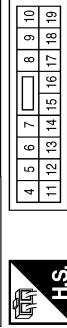
BCM (BODY CONTROL MODULE) CONNECTORS

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	W/B	BAT POWER F/L
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	P/W	R/L POWER SUPPLY
5	G	DOOR UNLOCK OUTPUT AS
6	-	-
7	R/W	STEP LAMP CONT
8	V	DOOR UNLOCK OUTPUT ALL
9	L	DOOR UNLOCK OUTPUT (DR/FL)

Terminal No.	Color of Wire	Signal Name
10	G	DOOR UNLOCK OUTPUT (RR/RL)
11	Y/R	BAT BCM FUSE
12	-	-
13	B	GND1
14	GR/W	LOW SIDE PUSH LED
15	Y/L	ACC LED
16	-	-
17	G/B	FR FLASHER
18	G/Y	FL FLASHER
19	Y	ROOM LAMP CONT

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
20	-	-
21	P/B	A/L SIGNAL TYPE 1
22	-	-
23	-	-
24	R/W	BRAKE SW1
25	-	-
26	O/L	BRAKE SW2

Terminal No.	Color of Wire	Signal Name
27	O	DOOR LOCK STATUS DR
28	-	-
29	Y	FOB IN SW 1
30	V/Y	ACC F/B
31	G	IGN F/B
32	R/B	AS DOOR SW 1
33	-	-
34	-	-
35	-	-
36	-	-
37	O	TRUNK CANCEL SW
38	GR/W	REAR DEFOGGER SW
39	-	-
40	Y/G	PW K-LINE
41	W	PUSH LED
42	R	S/L LOCK LED
43	-	-
44	-	-

Terminal No.	Color of Wire	Signal Name
45	P	GND RF2 A/L
46	V/W	A/L POWER SUPPLY 5V
47	G/O	RF2 TUNER SIGNAL
48	R/G	SHIFT N/R/NEUTRAL SW
49	L/O	IMMO LED (SECURITY INDICATOR)
50	LG/B	COMBI SW OUT 5
51	L/W	COMBI SW OUT 1
52	G/B	COMBI SW OUT 2
53	LG/R	COMBI SW OUT 3
53	G/Y	COMBI SW OUT 4
54	-	-
55	-	-
56	W	TPMS MODE
58	SB	DR DOOR SW
59	G/R	REAR DEFOGGER

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM ANT 2 B
61	W/R	ROOM ANT 2 A
62	V	AS DOOR ANT B
63	P	AS DOOR ANT A
64	V	DR DOOR ANT B
65	P	DR DOOR ANT A
66	R	ROOM ANT 1 B

Terminal No.	Color of Wire	Signal Name
67	G	ROOM ANT 1 A
68	G/O	FOB READER CLOCK
69	O	FOB READER DATA
70	R/B	IGN REL OUTPUT 2
71	L/O	RF1 TUNER SIGNAL
72	-	-
73	-	-
74	-	-
75	R/Y	COMBI SW IN 5
76	R/G	COMBI SW IN 3
77	BR	ENG START SW
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB SLOT ILLUMINATION
81	Y/L	IGN ON LED
82	-	-
83	L	ACC CONT

Terminal No.	Color of Wire	Signal Name
84	Y/R	AT DEVICE OUT
85	L/O	S/L CONDITION 1
86	G/R	S/L CONDITION 2
87	G/B	SHIFT P/ASCD CANCEL SW
88	R	AS REQUEST SW
89	R	DR REQUEST SW
90	Y	BLOWER FAN RELAY
91	L/R	RF POWER SUPPLY 12V
92	-	-
93	-	-
94	G/Y	S/L POWER SUPPLY 12V
95	RW	COMBI SW IN 1
96	P/B	COMBI SW IN 4
97	R/B	COMBI SW IN 2
98	G/O	HAZARD SW
99	L/Y	S/L K-LINE

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



100	101	102	103	104		
105	106	107	108	109	110	111

Terminal No.	Color of Wire	Signal Name
104	-	-
105	-	-
106	-	-
107	-	-
108	-	-
109	-	-
110	V/W	TRUNK LAMP CONT
111	-	-

Terminal No.	Color of Wire	Signal Name
100	-	-
101	-	-
102	-	-
103	V	CDL BACK TRUNK

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BCM (BODY CONTROL MODULE)

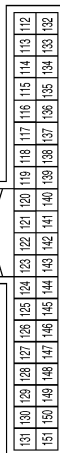
< ECU DIAGNOSIS >

[BCM]

Terminal No.	Color of Wire	Signal Name
136	-	-
137	-	-
138	-	-
139	-	-
140	-	-
141	BR	TRUNK REQUEST SW
142	-	-
143	-	-
144	GR	BUZZER
145	-	-
146	-	-
147	L/R	BACK TRUNK OPENER
148	R/W	RR DOOR SW
149	R/B	RL DOOR SW
150	-	-
151	-	-

Terminal No.	Color of Wire	Signal Name
119	BR/W	BACK DOOR ANT A
120	-	-
121	-	-
122	-	-
123	-	-
124	-	-
125	-	-
126	-	-
127	BR/W	IGN RELAY OUTPUT
128	-	-
129	-	-
130	W	TRUNK SW
131	-	-
132	R	ST RELAY OUTPUT
133	-	-
134	-	-
135	-	-

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
112	-	-
113	-	-
114	B	TRUNK ANT 1 B
115	W	TRUNK ANT 1 A
116	-	-
117	-	-
118	L/O	BACK DOOR ANT B

Fail Safe

ABMIA0179GB

INFOID:000000003899114

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Display contents of CONSULT	Fail-safe	Cancellation
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	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Starter control relay signal • Starter relay status signal
B2562: LO VOLTAGE	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	5 seconds after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> • Status 1 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position <ul style="list-style-type: none"> - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit electronic steering column lock 	When the following electronic steering column lock conditions agree <ul style="list-style-type: none"> • BCM electronic steering column lock control status • Electronic steering column lock condition No. 1 signal status • Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled <ul style="list-style-type: none"> • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit electronic steering column lock 	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Electronic steering column lock unit status signal (CAN) is received normally • The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power supply output control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled <ul style="list-style-type: none"> • Power position changes to ACC • Receives engine status signal (CAN)

DTC Inspection Priority Chart

INFOID:000000003899115

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

Priority	DTC
1	<ul style="list-style-type: none"> • B2562: LO VOLTAGE
2	<ul style="list-style-type: none"> • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	<ul style="list-style-type: none"> • B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

Priority	DTC
4	<ul style="list-style-type: none"> • B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B26E1: ENG STATE NO RECIV • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG
5	<ul style="list-style-type: none"> • C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT
6	<ul style="list-style-type: none"> • B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:000000003899116

NOTE:

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

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 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	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 CIRCUIT	—	—	—	BCS-37
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-38
U0415: VEHICLE SPEED SIG	—	—	—	BCS-39
B2013: ID DISCORD BCM-S/L	×	—	—	SEC-30
B2014: CHAIN OF S/L-BCM	×	—	—	SEC-31
B2190: NATS ANTENNA AMP	×	—	—	SEC-34
B2191: DIFFERENCE OF KEY	×	—	—	SEC-37
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-38
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-39
B2553: IGNITION RELAY	—	—	—	PCS-54
B2555: STOP LAMP	—	—	—	SEC-40
B2556: PUSH-BTN IGN SW	—	×	—	SEC-42
B2557: VEHICLE SPEED	×	×	—	SEC-44
B2560: STARTER CONT RELAY	×	×	—	SEC-45
B2562: LOW VOLTAGE	—	—	—	BCS-40
B2601: SHIFT POSITION	×	×	—	SEC-46
B2602: SHIFT POSITION	×	×	—	SEC-49
B2603: SHIFT POSI STATUS	×	×	—	SEC-51
B2604: PNP SW	×	×	—	SEC-54
B2605: PNP SW	×	×	—	SEC-56
B2606: S/L RELAY	×	×	—	SEC-58
B2607: S/L RELAY	×	×	—	SEC-59
B2608: STARTER RELAY	×	×	—	SEC-61
B2609: S/L STATUS	×	×	—	SEC-63
B260A: IGNITION RELAY	×	×	—	PCS-56
B260B: STEERING LOCK UNIT	—	×	—	SEC-67
B260C: STEERING LOCK UNIT	—	×	—	SEC-68
B260D: STEERING LOCK UNIT	—	×	—	SEC-69
B260F: ENG STATE SIG LOST	×	×	—	SEC-70
B2612: S/L STATUS	×	×	—	SEC-72
B2614: ACC RELAY CIRC	—	×	—	PCS-58
B2615: BLOWER RELAY CIRC	—	×	—	PCS-61
B2616: IGN RELAY CIRC	—	×	—	PCS-64
B2617: STARTER RELAY CIRC	×	×	—	PCS-64
B2618: BCM	×	×	—	PCS-67

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[BCM]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2619: BCM	×	×	—	SEC-78
B261A: PUSH-BTN IGN SW	—	×	—	SEC-79
B2621: INSIDE ANTENNA	—	—	—	DLK-57
B2622: INSIDE ANTENNA	—	—	—	DLK-60
B2623: INSIDE ANTENNA	—	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	—	SEC-71
C1704: LOW PRESSURE FL	—	—	×	WT-48
C1705: LOW PRESSURE FR	—	—	×	WT-48
C1706: LOW PRESSURE RR	—	—	×	WT-48
C1707: LOW PRESSURE RL	—	—	×	WT-48
C1708: [NO DATA] FL	—	—	×	WT-13
C1709: [NO DATA] FR	—	—	×	WT-13
C1710: [NO DATA] RR	—	—	×	WT-13
C1711: [NO DATA] RL	—	—	×	WT-13
C1712: [CHECKSUM ERR] FL	—	—	×	WT-15
C1713: [CHECKSUM ERR] FR	—	—	×	WT-15
C1714: [CHECKSUM ERR] RR	—	—	×	WT-15
C1715: [CHECKSUM ERR] RL	—	—	×	WT-15
C1716: [PRESSDATA ERR] FL	—	—	×	WT-17
C1717: [PRESSDATA ERR] FR	—	—	×	WT-17
C1718: [PRESSDATA ERR] RR	—	—	×	WT-17
C1719: [PRESSDATA ERR] RL	—	—	×	WT-17
C1720: [CODE ERR] FL	—	—	×	WT-15
C1721: [CODE ERR] FR	—	—	×	WT-15
C1722: [CODE ERR] RR	—	—	×	WT-15
C1723: [CODE ERR] RL	—	—	×	WT-15
C1724: [BATT VOLT LOW] FL	—	—	×	WT-15
C1725: [BATT VOLT LOW] FR	—	—	×	WT-15
C1726: [BATT VOLT LOW] RR	—	—	×	WT-15
C1727: [BATT VOLT LOW] RL	—	—	×	WT-15
C1729: VHCL SPEED SIG ERR	—	—	×	WT-18
C1734: CONTROL UNIT	—	—	×	WT-19

COMBINATION SWITCH SYSTEM SYMPTOMS

[BCM]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:000000003899117

1. Perform the data monitor of CONSULT-III to check for any malfunctioning item.
2. Check the malfunction combinations.

Malfunction item: x

Malfunction combination	Data monitor item													
	FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW
A		x	x			x	x							
B	x			x						x		x		
C					x				x		x			
D					x			x					x	
E					x									x
F	x				x									
G			x		x									
H		x		x									x	
I							x				x	x		x
J						x		x	x	x				
K	All Items													
L	If only one item is detected or the item is not applicable to the combinations A to K													

3. Identify the malfunctioning part from the agreed combination and repair or replace the part.

Malfunction combination	Malfunctioning part	Repair or replace
A	Combination switch INPUT 1 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-43, "Diagnosis Procedure" .
B	Combination switch INPUT 2 circuit	
C	Combination switch INPUT 3 circuit	
D	Combination switch INPUT 4 circuit	
E	Combination switch INPUT 5 circuit	
F	Combination switch OUTPUT 1 circuit	Inspect the combination switch output circuit applicable to the malfunctioning part. Refer to BCS-45, "Diagnosis Procedure" .
G	Combination switch OUTPUT 2 circuit	
H	Combination switch OUTPUT 3 circuit	
I	Combination switch OUTPUT 4 circuit	
J	Combination switch OUTPUT 5 circuit	
K	BCM	Replace BCM. Refer to BCS-87, "Removal and Installation" .
L	Combination switch	Replace the combination switch. Refer to WW-98, "Removal and Installation" .

PRECAUTION

PRECAUTIONS

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

INFOID:000000004221447

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 SR and SB section of this Service Manual.

WARNING:

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

ON-VEHICLE REPAIR

BCM (BODY CONTROL MODULE)

Removal and Installation

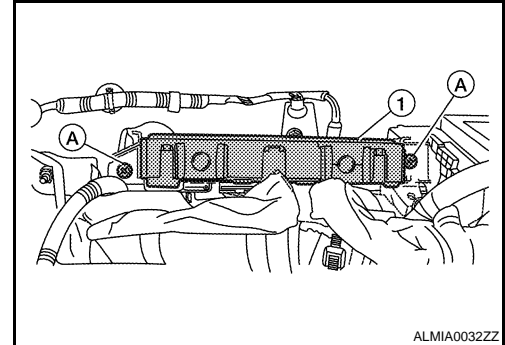
INFOID:000000003899118

REMOVAL

CAUTION:

Before replacing BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to [BCS-5, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

1. Remove the combination meter. Refer to [MWI-144, "Removal and Installation"](#).
2. Remove the BCM screws (A), and pull out the BCM (1).
3. Disconnect the BCM connector and remove the BCM (1).



INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When replacing BCM, perform "WRITE CONFIGURATION". Refer to [BCS-5, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).
- When replacing BCM, perform the system initialization (NATS). Refer to the CONSULT-III operation manual for the initialization procedure.
- When replacing BCM, if new BCM does not come with keyfobs attached, all existing keyfobs must be re-registered. Refer to the CONSULT-III operation manual for the initialization procedure.

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

BCS

N
O
P