SECTION BCS **BODY CONTROL SYSTEM**

А

С

D

Е

CONTENTS

WITH INTELLIGENT KEY SYSTEM

PRECAUTION5
PRECAUTIONS
PREPARATION6
PREPARATION
SYSTEM DESCRIPTION7
COMPONENT PARTS7
BODY CONTROL SYSTEM
POWER CONSUMPTION CONTROL SYSTEM7 POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location7
SYSTEM8
BODY CONTROL SYSTEM
COMBINATION SWITCH READING SYSTEM9 COMBINATION SWITCH READING SYSTEM : System Description
SIGNAL BUFFER SYSTEM
POWER CONSUMPTION CONTROL SYSTEM13 POWER CONSUMPTION CONTROL SYSTEM : System Description
SHIPPING MODE CONTROL SYSTEM14

SHIPPING MODE CONTROL SYSTEM : System Description15	F
DIAGNOSIS SYSTEM (BCM)16	G
COMMON ITEM	Н
DOOR LOCK	I
REAR DEFOGGER17 REAR DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)17	J
BUZZER18 BUZZER : CONSULT Function (BCM - BUZZER)18	K
INT LAMP18 INT LAMP : CONSULT Function (BCM - INT LAMP)	L
HEAD LAMP19 HEAD LAMP : CONSULT Function (BCM - HEAD- LAMP)19	BC
WIPER20 WIPER : CONSULT Function (BCM - WIPER)20	Ν
FLASHER21 FLASHER : CONSULT Function (BCM - FLASH- ER)	0
INTELLIGENT KEY	Ρ
COMB SW24 COMB SW : CONSULT Function (BCM - COMB SW)	
BCM25	

	25
IMMU	25
IMMU : CONSULT Function (BCM - IMMU)	
BATTERY SAVER	25
BATTERY SAVER : CONSULT Function (BCM -	20
BATTERY SAVER)	26
TRUNK	26
TRUNK : CONSULT Function (BCM - TRUNK)	
THEFT ALM	26
THEFT ALM : CONSULT Function (BCM - THEFT	20
ALM)	26
RETAINED PWR	27
RETAINED PWR : CONSULT Function (BCM -	21
RETAINED PWR)	27
SIGNAL BUFFER	27
SIGNAL BUFFER : CONSULT Function (BCM -	
SIGNAL BUFFER)	27
AIR CONDITIONER	27
AIR CONDITIONER : CONSULT Function (BCM -	
AIR CONDITIONER)	27
ECU DIAGNOSIS INFORMATION	29
BCM	
Reference Value Fail Safe	
DTC Inspection Priority Chart	
DTC Index	
WIRING DIAGRAM	51
BCM	51
Wiring Diagram	
BASIC INSPECTION	
INSPECTION AND ADJUSTMENT	
ADDITIONAL SERVICE WHEN REPLACING	61
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)	61
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING	61 61
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description	61 61
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING	61 61
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure	61 61 61
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure	 61 61 61 61 62
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure CONFIGURATION (BCM) CONFIGURATION (BCM) : Description CONFIGURATION (BCM) : Work Procedure	 61 61 61 61 62 62 62
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure CONFIGURATION (BCM)	 61 61 61 61 62 62 62
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure CONFIGURATION (BCM) CONFIGURATION (BCM) : Description CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Configuration List SHIPPING MODE CANCEL OPERATION	 61 61 61 61 62 62 63 64
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure CONFIGURATION (BCM) CONFIGURATION (BCM) : Description CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Configuration List	 61 61 61 61 62 62 63 64
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure CONFIGURATION (BCM) CONFIGURATION (BCM) : Description CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Configuration List SHIPPING MODE CANCEL OPERATION	 61 61 61 62 62 63 64 64
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure CONFIGURATION (BCM) CONFIGURATION (BCM) : Description CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Work Procedure CONFIGURATION (BCM) : Configuration List SHIPPING MODE CANCEL OPERATION Work Procedure	 61 61 61 62 62 63 64 64 65

DTC Logic	
Diagnosis Procedure	
U1010 CONTROL UNIT (CAN)	
DTC Logic Diagnosis Procedure	
U0415 VEHICLE SPEED SIG	
Description	
DTC Logic	67
Diagnosis Procedure	67
B2562 LOW VOLTAGE	
DTC Logic	
Diagnosis Procedure	
POWER SUPPLY AND GROUND CIRCUIT	
Diagnosis Procedure	
COMBINATION SWITCH INPUT CIRCUIT	
Diagnosis Procedure	
COMBINATION SWITCH OUTPUT CIRCUIT	
Diagnosis Procedure	
SYMPTOM DIAGNOSIS	74
COMBINATION SWITCH SYSTEM SYMP-	
TOMS	
Symptom Table	74
NORMAL OPERATING CONDITION	
Description	75
REMOVAL AND INSTALLATION	76
BCM (BODY CONTROL MODULE)	76
Removal and Installation	76
COMBINATION SWITCH	77
Exploded View	
Removal and Installation	
PRECAUTION	78
PRECAUTIONS	78
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	
SIONER"	78
PREPARATION	
PREPARATION	
SYSTEM DESCRIPTION	80
COMPONENT PARTS	80
BODY CONTROL SYSTEM	80
BODY CONTROL SYSTEM : Component Parts	
Location	80

POWER CONSUMPTION CONTROL SYSTEM80 POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location
SYSTEM81
BODY CONTROL SYSTEM
COMBINATION SWITCH READING SYSTEM82 COMBINATION SWITCH READING SYSTEM : System Description
SIGNAL BUFFER SYSTEM
POWER CONSUMPTION CONTROL SYSTEM85 POWER CONSUMPTION CONTROL SYSTEM : System Description
SHIPPING MODE CONTROL SYSTEM
DIAGNOSIS SYSTEM (BCM)88
COMMON ITEM
DOOR LOCK
REAR DEFOGGER
BUZZER
INT LAMP
MULTI REMOTE ENT
HEAD LAMP
WIPER
FLASHER
COMB SW
BCM93

BCM : CONSULT Function (BCM - BCM)	
IMMU	
BATTERY SAVER	
TRUNK	
THEFT ALM	
RETAINED PWR	
AIR PRESSURE MONITOR	95
ECU DIAGNOSIS INFORMATION	97
BCM	97 08 09
WIRING DIAGRAM 11	
BCM11 Wiring Diagram	
BASIC INSPECTION 12	22
INSPECTION AND ADJUSTMENT12	22
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)	22
CONFIGURATION (BCM)	23 23
SHIPPING MODE CANCEL OPERATION 12 Work Procedure	
DTC/CIRCUIT DIAGNOSIS 12	
U1000 CAN COMM CIRCUIT	26 26
U1010 CONTROL UNIT (CAN)	27
S-3 2016 Rogue NAN	N

Revision: September 2015

BCS-3

DTC Logic	
Diagnosis Procedure	127
U0415 VEHICLE SPEED SIG	
Description	
DTC Logic	
Diagnosis Procedure	128
B2562 LOW VOLTAGE	
DTC Logic	
Diagnosis Procedure	129
POWER SUPPLY AND GROUND CIRCUIT Diagnosis Procedure	
COMBINATION SWITCH INPUT CIRCUIT . Diagnosis Procedure	
COMBINATION SWITCH OUTPUT CIRCUIT	r. 133

Diagnosis Procedure 133
SYMPTOM DIAGNOSIS135
COMBINATION SWITCH SYSTEM SYMP-
TOMS135
Symptom Table 135
NORMAL OPERATING CONDITION136
Description136
REMOVAL AND INSTALLATION137
BCM (BODY CONTROL MODULE)137
Removal and Installation 137
COMBINATION SWITCH138
Exploded View 138
Removal and Installation

< PRECAUTION > PRECAUTION

А

В

Е

PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. 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.

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

WARNING:

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

K

BCS

Ν

Ρ

PREPARATION PREPARATION

Special Service Tool

INFOID:000000012422459

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description
— (J-50190) Signal Tech II	ALEIA0131ZZ	 Activate and display TPMS transmitter IDs Display tire pressure reported by the TPMS transmitter Read TPMS DTCs Register TPMS transmitter IDs Check Intelligent Key relative signal strength Confirm vehicle Intelligent Key antenna signal strength Compatible with future sensors Equipped with a display

[WITH INTELLIGENT KEY SYSTEM]

А

В

D

Е

F

Н

J

Κ

L

BCS

Ν

Ο

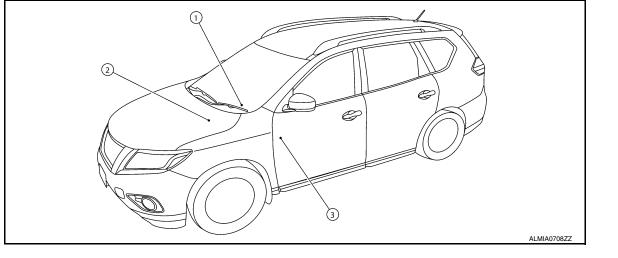
Ρ

INFOID:000000012422460

ALMIA0707ZZ

INFOID:000000012422461

COMPONENT PARTS < SYSTEM DESCRIPTION > SYSTEM DESCRIPTION **COMPONENT PARTS BODY CONTROL SYSTEM BODY CONTROL SYSTEM : Component Parts Location** А Ċ Α 1. BCM Behind instrument panel (LH) Α. POWER CONSUMPTION CONTROL SYSTEM **POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location** 1 (2)C Ø



- 1. Combination meter Refer to MWI-6, "METER SYSTEM : Component Parts Location".
- IPDM E/R Refer to PCS-6, "Component Parts Location".

2.

BCM 3. Refer to BCS-7, "BODY CONTROL SYSTEM : Component Parts Location".

SYSTEM BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : System Description

INFOID:000000012422462

OUTLINE

- BCM (body control module) controls various electrical components. It receives the information required from CAN communication and the signals received from each switch and sensor.
- BCM has a combination switch reading function for reading the status of combination switches (light, turn signal, wiper and washer) in addition to functions for controlling the operation of various electrical components. It also has a signal transmission function for other systems, and a power consumption control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with a diagnosis function that operates with CONSULT and allows for various settings to be changed.

BCM FUNCTION LIST

System	Refer to		
Combination switch reading system	BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description"		
Signal buffer system	BCS-12, "SIGNAL BUFFER SYSTEM : System Description"		
Power consumption control system	BCS-13, "POWER CONSUMPTION CONTROL SYSTEM : Sys- tem Description"		
Shipping mode control system	BCS-15, "SHIPPING MODE CONTROL SYSTEM : System De- scription"		
Headlamp system	EXL-11, "HEADLAMP SYSTEM : System Description" (halogen headlamp) EXL-142, "HEADLAMP SYSTEM : System Description" (LED headlamp)		
Auto light system	EXL-12, "AUTO LIGHT SYSTEM : System Description" (halo- gen headlamp) EXL-143, "AUTO LIGHT SYSTEM : System Description" (LED headlamp)		
Daytime light system	EXL-13, "DAYTIME RUNNING LIGHT SYSTEM : System De- scription" (halogen headlamp) EXL-144, "DAYTIME RUNNING LIGHT SYSTEM : System De- scription" (LED headlamp)		
Turn signal and hazard warning lamps system	 EXL-14, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description" (halogen headlamp) EXL-145, "TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description" (LED headlamp) 		
Parking, license plate and tail lamps system	 EXL-14, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description" (halogen head- lamp) EXL-145, "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description" (LED headlamp) 		
Front fog lamp system	EXL-16. "FRONT FOG LAMP SYSTEM : System Description" (halogen headlamp) EXL-147. "FRONT FOG LAMP SYSTEM : System Description" (LED headlamp)		
Exterior lamp battery saver system	EXL-17. "EXTERIOR LAMP BATTERY SAVER SYSTEM : Sys- tem Description" (halogen headlamp) EXL-148. "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description" (LED headlamp)		
Interior room lamp control system	INL-7, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Description"		
Interior room lamp battery saver system	INL-9, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description"		

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

System		Refer to		
Front wiper and washer system		WW-8, "FRONT WIPER AND WASHER SYSTEM : System De- scription"		
Rear wiper and washer system		WW-10, "REAR WIPER AND WASHER SYSTEM : System De- scription"		
Warning chime system		WCS-6. "WARNING CHIME SYSTEM : System Description"		
Door lock system		DLK-28. "System Description"		
Back door open system		DLK-41, "System Description"		
Nissan vehicle immobilizer system (NVIS)		SEC-13, "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"		
Vehicle security system		SEC-15, "VEHICLE SECURITY SYSTEM : System Description"		
Panic alarm				
Rear window defogger system		DEF-8, "System Description"		
Power window system		PWC-9, "System Description"		
Moonroof system		RF-7, "MOONROOF : System Description"		
Door lock function		DLK-31, "DOOR LOCK FUNCTION : System Description"		
Intelligent Key system/engine start sys-	Back door open func- tion	DLK-33, "BACK DOOR OPEN FUNCTION : System Description"		
tem Warning function		DLK-37, "WARNING FUNCTION : System Description"		
	Engine start function	SEC-10. "INTELLIGENT KEY SYSTEM/ENGINE START FUNC- TION : System Description"		
RAP (retained accessory power) system		BCS-27, "RETAINED PWR : CONSULT Function (BCM - RE- TAINED PWR)"		
TPMS (tire pressure monitoring system)		WT-9, "System Description"		

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Description

SYSTEM DIAGRAM

Lighting switch				Output 1 signal	BCM	
Г	•	•	•			
FR FOG		PASSING	HI BEAM	Wiper & washer	Output 2 signal	
TAIL LAMP		HEADLAMP			Output 3 signal	
			RR WASHER	FR WASHER	Output 4 signal	
NO LIGHT			FR WIPER HI	FR WIPER LOW	Output 5 signal	
	RR WIPER ON			INT VOLUME 2	Input 1 signal	
					Input 2 signal	
					Input 3 signal	
					Input 4 signal	
					Input 5 signal	

OUTLINE

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

COMBINATION SWITCH MATRIX

J

Κ

L

BCS

Ν

0

Ρ

INFOID:000000012422463

< SYSTEM DESCRIPTION >

Combination switch circuit

	Ligh	Combination swit ting switch	ch		I	BC	М
		•		-1	Output 1 signal	ٹر 🛁	
FR FOG				Wiper & washer	Output 2 signal	ئ	-
		HEADLAMP	======		Output 3 signal	 ٹر	
			RR WASHER	FR WASHER	Output 4 signal		
NO LIGHT	==========			FR WIPER LOW	Output 5 signal		CPU
					Input 1 signal	UF	
					Input 2 signal		
					Input 3 signal	I/F	
					Input 4 signal]
	L				Input 5 signal	UF.	1
L						UF.	1

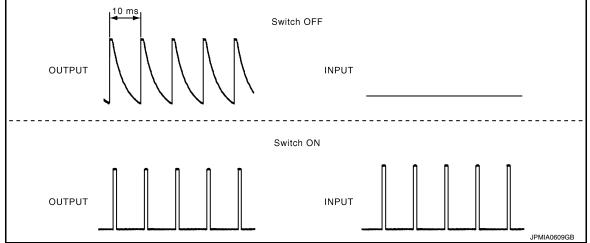
Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	—	HI BEAM	PASSING	—	FR FOG
OUTPUT 2	INT VOLUME 1	—	HEADLAMP	AUTO LIGHT	TAIL LAMP
OUTPUT 3	FR WASHER	RR WASHER	—	TURN LH	TURN RH
OUTPUT 4	FR WIPER LOW	FR WIPER HI	FR WIPER INT	—	NO LIGHT
OUTPUT 5	INT VOLUME 2	INT VOLUME 3	RR WIPER INT	RR WIPER ON	—

COMBINATION SWITCH READING FUNCTION

Description

• BCM reads the status of the combination switch at 10 ms intervals normally.



NOTE:

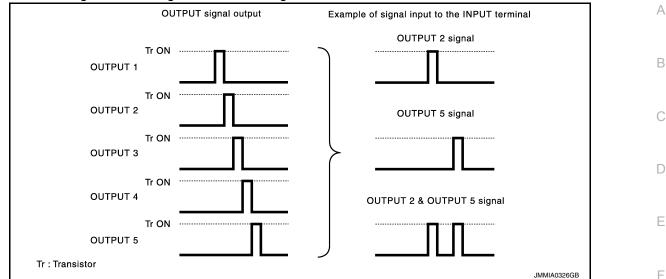
BCM reads the status of the combination switch at 60 ms intervals when BCM is controlled at low power consumption control mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]





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) is turned ON

• The circuit between OUTPUT 3 and INPUT 5 is formed when the TURN RH switch is turned ON.

	Lighting	Combination switch				BCM
	Eighting	owner		7	Output 1 signal	
FR FOG		PASSING	HI BEAM	Wiper & washer	Output 2 signal	
		HEADLAMP			Output 3 signal	B
		======	RR WASHER	FR WASHER	Output 4 signal	
		FR WIPER INT	FR WIPER HI	FR WIPER LOW	Output 5 signal	
					Input 1 signal	E T T T
					Input 2 signal	
					Input 3 signal	<u> </u>
					Input 4 signal	
	L				Input 5 signal	
					· •	UF (5)
						L]

BCM detects the combination switch status signal "5C" when the signal of OUTPUT 3 is input to INPUT 5.
BCM judges that the TURN RH switch is ON when the signal "5C" is detected.

, ,

Example 2: When some switches (FR FOG, TURN RH) are turned ON



Ν

Н

Κ

L

BCS

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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

·	L	Combination swi	tch	, 🔶	Output 1 signal	BCM
FR FOG			HI BEAM	Wiper & washer	Output 2 signal	A B
TAIL LAMP	AUTO LIGHT	HEADLAMP	-		Output 3 signal	ا آ تر
			RR WASHER	FR WASHER	Output 4 signal	
NO LIGHT			FR WIPER HI		Output 5 signal	
					Input 1 signal	Ē
					Input 2 signal	
					Input 3 signal	
					Input 4 signal	
				<u>→</u>	Input 5 signal	
						AWMIA1519GF

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

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION) BCM judges the wiper intermittent dial 1 - 4 by the status of INT VOLUME 1, 2, and 3 switches.

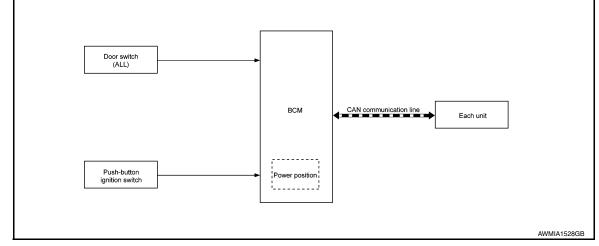
Wiper intermittent	Switch status					
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3			
1	OFF	OFF	OFF			
2	ON	OFF	OFF			
3	OFF	ON	OFF			
4	OFF	OFF	ON			

SIGNAL BUFFER SYSTEM

SIGNAL BUFFER SYSTEM : System Description

INFOID:000000012422464

SYSTEM DIAGRAM



OUTLINE

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

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

SIGNAL TRANSMISSION FUNCTION LIST

Signal name	Input	Output	Description
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 sta- tus judged with BCM via CAN communication.
Door switch signal	Any door switch	Combination meter (CAN) IPDM E/R (CAN)	Inputs the door switch signal and transmits it via CAN com- munication.

POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:000000012422465

Δ

Ε

Κ

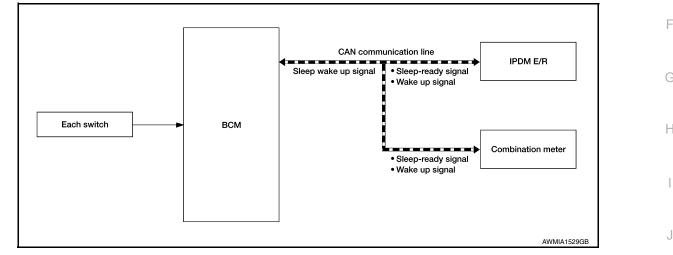
L

BCS

Ν

Ρ

SYSTEM DIAGRAM



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 each switch 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 wake-up signal. BCM is in CAN communication sleep mode.

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

• BCM is in the low power consumption mode and performs the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

Sleep condition

CAN sleep condition	BCM sleep condition
 Receiving the sleep-ready signal (ready) from all units Ignition switch: OFF Vehicle security system alarm and panic alarm: No operation Warning lamp: No operation Intelligent Key system buzzer: No operation Brake switch: OFF Turn signal indicator lamp: No operation Exterior lamp: OFF Door lock status: No change CONSULT communication status: No communication Meter display signal: Non-transmission Door switch status: No change Rear window defogger: OFF 	 Interior room lamp battery saver: Time out RAP system: OFF Push-button ignition switch (push switch) illumination: OFF NATS: No operation Tire pressure monitoring system: Stop

WAKE-UP OPERATION

- BCM transmits the sleep wake-up signal (wake up) to each unit when any of the CAN wake-up conditions are 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.

BCM wake-up condition	CAN wake-up condition
 Front door lock assembly LH (key cylinder switch): Lock or unlock Door lock switch: OFF→ON Door unlock switch: OFF→ON Back door opener switch: OFF→ON 	 Receiving the sleep-ready signal (Not-ready) from any units Push-button ignition switch (push switch): OFF→ON Hazard switch: OFF→ON PASSING switch: OFF→ON, ON→OFF TAIL LAMP switch: OFF→ON Front door switch LH: OFF→ON, ON→OFF Front door switch RH: OFF → ON, ON → OFF Back door switch: OFF→ON, ON→OFF Front outside handle LH request switch: OFF→ON Front outside handle RH request switch: OFF→ON Back door request switch: OFF→ON Stop lamp switch signal: ON

SHIPPING MODE CONTROL SYSTEM

< SYSTEM DESCRIPTION >

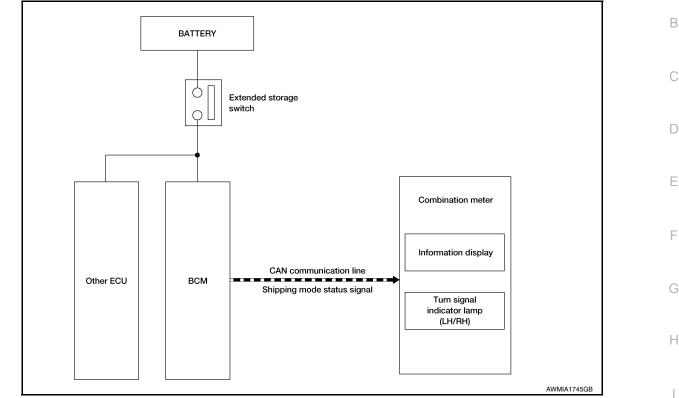
[WITH INTELLIGENT KEY SYSTEM]

SHIPPING MODE CONTROL SYSTEM : System Description

INFOID:000000012422466

А

SYSTEM DIAGRAM



DESCRIPTION

- BCM switches the status (shipping mode or normal mode) by itself according to the extended storage fuse switch condition, and transmits shipping mode status signal to combination meter and each unit via CAN communication.
- When shipping mode function operates, each control unit does not detect DTCs.
- BCM control functions are limited in shipping mode. Refer to BCS-75, "Description".
- The combination meter displays extended storage fuse warning message* on the information display, and turns the turn signal indicator lamp (LH/RH) ON, when BCM is in shipping mode.
- *: When shipping mode function operates, "SHIPPING MODE ON PUSH STORAGE FUSE" is displayed.

BCS

L

J

Ν

0

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000012422467

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
Ecu Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	The vehicle specification can be read and saved.The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION BCM can perform the following functions.

				Direct D	Diagnosti	c Mode		
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
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			×	×			
Intelligent Key system	INTELLIGENT KEY		х	×	х	×		
Combination switch	COMB SW			×				
BCM	BCM	×	х			×	×	×
Immobilizer	IMMU		х	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
Air conditioner	AIR CONDITIONER				×			

Revision: September 2015

REAR DEFOGGER

* : Initial setting

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION > [WITH DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

SELF DIAGNOSTIC RESULT

Refer to BCS-48, "DTC Index".

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.	
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.	
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock 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 UNLK].	
DOOR LOCK IND	This test is able to check door lock indication [On/Off].	

WORK SUPPORT

Support Item	Setting	Description	
	On*	Automatic door locks function ON.	K
DOOR LOCK-UNLOCK SET	Off	Automatic door locks function OFF.	
AUTO UNLOCK TYPE	MODE2	Driver door only unlocks automatically.	
AUTO UNLOCK TIPE	MODE1*	All doors unlock automatically.	— L
	MODE3	This mode is not used.	
AUTO LOCK FUNCTION	MODE2	Doors lock automatically when shifted out of P (park).	BCS
AUTO LOCK FUNCTION	MODE1*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).	
	Off	-	
	MODE3	This mode is not used.	N
AUTO UNLOCK FUNCTION	MODE2	Doors unlock automatically when shifted into P (park).	
AUTO UNLOCK FUNCTION	MODE1*	Doors unlock automatically when ignition is switched from ON to OFF.	0
	Off		0
SIGNATURE LIGHT SETTING	On*	Signature light mode function is ON.	
SIGNATURE LIGHT SETTING	Off	Signature light mode function if OFF.	Р

REAR DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)

BCS-17

INFOID:000000012422469

[WITH INTELLIGENT KEY SYSTEM]

INFOID:000000012422468

А

В

Н

J

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.

REAR DEF SW [On/Off] Indicates condition of rear window defogger switch.

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation [Off/On].

WORK SUPPORT

Support Item	Setting	Description
SET R-DEF TIMER	MODE3	Rear defogger turns OFF after 1 minute.
	MODE2	Rear defogger remains ON until turned OFF.
	MODE1*	Rear defogger turns OFF after 15 minutes.

* : Initial setting BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

DATA MONITOR

Description	
Indicates condition of push-button ignition switch.	
Indicates vehicle speed signal received from ABS on CAN communication line.	
Indicates condition of combination switch.	
Indicates condition of front fog lamp switch.	
Indicates condition of front door switch LH.	
Indicates condition of lock signal from door lock and unlock switch.	

ACTIVE TEST

Test Item	Description
SEAT BELT WARN TEST	This test is able to check seat belt warning chime operation [On/Off].
LIGHT WARN ALM	This test is able to check light warning chime operation [On/Off].
REVERSE WARNING	This test is able to check reverse warning chime operation [On/Off].

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

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.
PUSH -SW [On/Off]	Indicates condition of push-button ignition 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.

Revision: September 2015

INFOID:000000012422471

INFOID:000000012422470

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description	
DOOR SW-BK [On/Off]	Indicates condition of back door switch.	A
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.	В
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.	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.	С
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.	

ACTIVE TEST

Test Item	Description	
INT LAMP	This test is able to check interior room lamp operation [On/Off].	E

WORK SUPPORT

Support Item	Setting	Description	
SET I/L D-UNLCK INTCON	On	Interior room lamp timer function ON.	
	Off*	Interior room lamp timer function OFF.	(
FOG LAMP OVERRIDE	On	Fog lamp override function ON.	
	Off*	Fog lamp override function OFF.	
*: Initial catting			

*: Initial setting

HEAD LAMP

HEAD LAMP : CONSULT Function (BCM - HEADLAMP)

INFOID:000000012422472

D

J

DATA MONITOR

Monitor Item [Unit]	Description	
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	
ENGINE STATE [STOP/STALL/CRANK/ RUN]	Indicates engine status received from ECM on CAN communication line.	— K
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.	
TURN SIGNAL R [On/Off]		L
TURN SIGNAL L [On/Off]		
TAIL LAMP SW [On/Off]		BCS
HI BEAM SW [On/Off]		
HEAD LAMP SW [On/Off]	Indicates condition of combination switch.	
LIGHT OFF SW [On/Off]		Ν
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		0
FR FOG SW [On/Off]		
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.	P
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.	
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.	

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.

ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
STOP LAMP 1	This test is able to check rear combination lamp stop lamp operation [On/Off].
STOP LAMP 3	This test is able to check high-mounted stop lamp operation [On/Off].
DAYTIME RUNNING LIGHT	This test is able to check daytime running light operation [On/Off].
ILL DIM SIGNAL	This test is able to check illumination dimmer signal [On/Off].

WORK SUPPORT

Support Item	Setting	Description
TWILIGHT ON	MODE2*	Autolamp function ON.
	MODE1	Autolamp function OFF.
	MODE4	Less sensitive than normal setting (turns ON later).
CUSTOM A/LIGHT SETTING	MODE3	More sensitive than MODE2.
COSTOM A/LIGHT SETTING	MODE2	More sensitive than normal setting (turns ON earlier).
	MODE1*	Normal setting.
	MODE 8	
	MODE 7	
	MODE 6	
ILL DELAY SET	MODE 5	
ILL DELAY SET	MODE 4	Autolamp delay timer.
	MODE 3	
	MODE 2	
	MODE 1*	
	MODE 4	This item is displayed but cannot be used
	MODE 3*	With wiper INT, LO and HI
WIPER LINK	MODE 2	With wiper LO and HI
	MODE 1	Without wiper linked and auto light function

*: Initial setting

WIPER

WIPER : CONSULT Function (BCM - WIPER)

INFOID:000000012422473

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
FR WIPER HI [On/Off]	
FR WIPER LOW [On/Off]	Indicates condition of winer energian of combination switch
FR WASHER SW [On/Off]	Indicates condition of wiper operation of combination switch.
FR WIPER INT [On/Off]	

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description
FR WIPER STOP [On/Off]	Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line.
INT VOLUME [1 – 7]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	
RR WIPER INT [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WASHER SW [On/Off]	
RR WIPER STOP [On/Off]	Indicates rear wiper motor auto stop input from rear wiper motor.

ACTIVE TEST

Test Item	Description	
FR WIPER	This test is able to check front wiper operation [Hi/Lo/INT/Off].	Е
RR WIPER	This test is able to check rear wiper operation [On/Off].	

WORK SUPPORT

Support Item	Setting	Description	
WIPER SPEED SETTING	On [*]	Front wiper intermittent time linked with vehicle speed and wiper intermit- tent dial position.	G
	Off	Front wiper intermittent time is not linked with vehicle speed and wiper in- termittent dial position.	
FR RR DRIP	On*	Front wiper drop wipe and rear wiper drop wipe operation ON	Н
	Off	Front wiper drop wipe and rear wiper drop wipe operation OFF	
REAR WIPER LINK WITH REVERSE SETTING	On	Rear wiper operation linked with reverse ON	1
	Off*	Rear wiper operation linked with reverse OFF	

*: Initial Setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

DATA MONITOR

Monitor Item [Unit]	Description	L
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.	
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.	BCS
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	
TURN SIGNAL R [On/Off]		N
TURN SIGNAL L [On/Off]	Indicates condition of turn signal function of combination switch.	N
HAZARD SW [On/Off]	Indicates condition of hazard switch.	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.	0
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.	
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.	

WORK SUPPORT

Support Item	Setting	Description
3-TIME FLASHER SETTING	On*	3-time flasher setting ON.
5-mile r EAGHER GET HING	Off	3-time flasher setting OFF.

*: Initial setting

Revision: September 2015

J

D

F

- INFOID:000000012422474
 - K

< SYSTEM DESCRIPTION >

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000012422475

SELF DIAGNOSTIC RESULT

Refer to BCS-48, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main	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.	
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.	
BRAKE SW 1 [On/Off]	×	Indicates condition of brake pedal position switch.	
BRAKE SW 2 [On/Off]		Indicates condition of stop lamp switch.	
DETE/CANCL SW [On/Off]	×	Indicates condition of park position switch.	
PUSH SW -IPDM [On/Off]		Indicates condition of push-button ignition switch received from IPDM E/R on CAN communication line.	
IGN RLY1 -F/B [On/Off]		Indicates condition of ignition relay 1 received from IPDM E/R on CAN commu- nication line.	
NEUTRAL SW -IPDM [On/Off]		Indicates condition of transmission range switch received from IPDM E/R on CAN communication line.	
SFT PN -IPDM [On/Off]		Indicates condition of P (park) or N (neutral) position from TCM on CAN com- munication line.	
STARTER RELAY -IPDM [On/Off]		Indicates condition of starter relay received from IPDM E/R on CAN communi- cation line.	
ENGINE STATE [STOP/START/CRANK/ RUN]	×	Indicates condition of engine state from ECM on CAN communication line.	
ST/INH RELAY - IPDM [On/Off]		Indicates condition of starter relay and starter control relay status signal from IPDM E/R.	
REVERSE SIGNAL -IPDM [On/Off]		Indicates condition of transmission range switch received from IPDM E/R on CAN communication line.	
CRANKING PERMIT -ECM [PERMIT]		Indicates condition of engine start possibility from ECM on CAN communication line.	
IS STATUS -ECM [On/Off]		Indicates IS status from ECM on CAN communication line.	
STARTER CUT RELAY -ECM [On/Off]		Indicates condition of starter cut relay from ECM on CAN communication line.	
VEH SPEED 1 [mph/km/h]	×	Indicates condition of vehicle speed signal received from ABS on CAN commu- nication line.	
VEH SPEED 2 [mph/km/h]	×	Indicates condition of vehicle speed signal received from combination meter on CAN communication line.	
IGN REQ -IPDM [On/Off]		Indicates condition of ignition request from IPDM E/R on CAN communication line.	
STARTER REQ -IPDM [On/Off]		Indicates condition of starter request received from IPDM E/R on CAN commu- nication line.	
DOOR STAT -DR [LOCK/READY/UNLK]	×	Indicates condition of driver side door status.	
DOOR STAT -AS [LOCK/READY/UNLK]	×	Indicates condition of passenger side door status.	
DOOR STAT -RR [LOCK/READY/UNLK]	×	Indicates condition of rear right side door status.	
DOOR STAT -RL [LOCK/READY/UNLK]	×	Indicates condition of rear left side door status.	
BK DOOR STATE [LOCK/READY/UNLK]	×	Indicates condition of back door status.	
ID OK FLAG [Set/Reset]		Indicates condition of Intelligent Key ID.	
PRMT ENG STRT [Set/Reset]		Indicates condition of engine start possibility.	

Revision: September 2015

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Main	Description	
PRMT RKE STRT [Set/Reset]		Indicates condition of engine start possibility from Intelligent Key.	
I-KEY OK FLAG [Key ON/Key OFF]	×	Indicates condition of Intelligent Key OK flag.	
PRBT ENG STRT [Set/Reset]		Indicates condition of engine start prohibit.	
ID AUTHENT CANCEL TIMER [STOP]		Indicates condition of Intelligent Key ID authentication.	
ACC BATTERY SAVER [STOP]		Indicates condition of battery saver.	
CRNK PRBT TMR [On/Off]		Indicates condition of crank prohibit timer.	
AUT CRNK TMR [On/Off]		Indicates condition of automatic engine crank timer from Intelligent Key.	
CRNK PRBT TME [sec]		Indicates condition of engine crank prohibit time.	
AUTO CRNK TME [sec]		Indicates condition of automatic engine crank time from Intelligent Key.	
CRANKING TME [sec]		Indicates condition of engine cranking time from Intelligent Key.	
RKE OPE COUN1 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while oper- ating on Intelligent Key, the numerical value start changing.	
RKE OPE COUN2 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while oper- ating on Intelligent Key, the numerical value start changing.	
RKE-LOCK [On/Off]		Indicates condition of lock signal from Intelligent Key.	
RKE-UNLOCK [On/Off]		Indicates condition of unlock signal from Intelligent Key.	
RKE-TR/BD [On/Off]		Indicates condition of back door open signal from Intelligent Key.	
RKE-PANIC [On/Off]		Indicates condition of panic signal from Intelligent Key.	
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal from Intelligent Key.	
RKE PBD [On/Off]		Indicates condition of automatic back door signal from Intelligent Key.	

ACTIVE TEST

Description			
This test is able to check Intelligent Key warning buzzer operation [On/Off].	1		
This test is able to check combination meter warning chime operation [Take Out/Knob/Key/ Off].	J		
This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off].	K		
This test is able to check flasher operation [On/Off].	1 4		
This test is able to check horn operation [On/Off].			
This test is able to check ignition relay-2 control operation [On/Off].	L		
This test is able to check push-button ignition switch START indicator operation [On/Off].			
This test is able to check BCM starter request switch signal to IPDM E/R via CAN comm cation [MODE 1/MODE 2/MODE 3/OFF].			
This test is able to check ignition relay operation [On/Off].			
This test is able to check the starter control relay [On/Off].			
This test is able to check BCM sends power supply to audio unit or NAVI control unit [On/Off].			
This test is able to check automatic back door operation [On/Off].			
This test is able to check BCM sends power supply to ACC relay [MODE 1/MODE 2/MOD 3/OFF].			
This test is able to check luggage room lamp test operation [On/Off].			
	 This test is able to check Intelligent Key warning buzzer operation [On/Off]. This test is able to check combination meter warning chime operation [Take Out/Knob/Key/Off]. This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off]. This test is able to check flasher operation [On/Off]. This test is able to check horn operation [On/Off]. This test is able to check ignition relay-2 control operation [On/Off]. This test is able to check push-button ignition switch START indicator operation [On/Off]. This test is able to check BCM starter request switch signal to IPDM E/R via CAN communication [MODE 1/MODE 2/MODE 3/OFF]. This test is able to check the starter control relay [On/Off]. This test is able to check BCM sends power supply to audio unit or NAVI control unit [On/Off]. This test is able to check BCM sends power supply to ACC relay [MODE 1/MODE 2/MODE 3/OFF]. 		

WORK SUPPORT

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Support Item	Se	etting	Description
SHORT CRANKING OUTPUT	Start	70 msec 100 msec 200 msec	Starter motor operation duration times.
	End		
INSIDE ANT DIAGNOSIS		_	This function allows inside key antenna self-diagnosis.
	On*		Door lock/unlock by I-Key ON.
LOCK/UNLOCK BY I-KEY	Off		Door lock/unlock by I-Key OFF.
	Mode 1	OFF	
	Mode 2	30 sec.	
	Mode 3*	1 min.	
AUTO LOCK SET	Mode 4	2 min.	Auto door lock operation time can be changed in this mode.
	Mode 5	3 min.	
	Mode 6	4 min.	
	Mode 7	5 min.	
IGN/ACC BATTERY SAVER	On*		Battery saver system ON.
IGN/ACC DATTERT SAVER	Off		Battery saver system OFF.
ENGINE START BY I-KEY	On*		Engine start function from Intelligent Key ON.
ENGINE START BT I-RET	Off		Engine start function from Intelligent Key OFF.
TRUNK/GLASS HATCH OPEN	On*		Buzzer reminder function by back door request switch ON.
IRUNNGLASS HAICH OPEN	Off		Buzzer reminder function by back door request switch OFF.
ANSWER BACK	On		Horn chirp reminder when doors are locked with Intelligent Key.
ANSWER BACK	Off*		No horn chirp reminder when doors are locked with Intelligent Key.
	BUZZER*		Buzzer reminder function by door lock/unlock request switch ON.
ANSWER BACK I-KEY LOCK UN-	HORN		Horn chirp reminder function by door lock request switch ON.
LOCK	Off		No reminder function by door lock/unlock request switch.
	INVALID		This mode is not used.
ANSWERBACK KEYLESS LOCK UN- LOCK	On*		Buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.
	Off		No buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:000000012422476

DATA MONITOR

Monitor Item [Unit]	Description
FR WIPER HI [On/Off]	
FR WIPER LOW [On/Off]	Indicator condition of winer exerction of combination switch
FR WASHER SW [On/Off]	 Indicates condition of wiper operation of combination switch.
FR WIPER INT [On/Off]	
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	
RR WIPER INT [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WASHER SW [On/Off]	

Revision: September 2015

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Ε

F

Н

Κ

L

BCS

Ρ

INFOID:000000012422477

INFOID:000000012422478

Monitor Item [Unit]	Description	
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch.	A
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch.	
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch.	В
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch.	
HEAD LAMP SW [On/Off]	Indicates condition of head lamp switch operation of combination switch.	
LIGHT OFF SW [On/Off]	Indicates condition of no light switch operation of combination switch.	С
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.	
AUTO LIGHT SW [On/Off]	Indicates condition of auto light switch operation of combination switch.	D
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch.	

BCM

BCM : CONSULT Function (BCM - BCM)

ECU IDENTIFICATION

The BCM part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to BCS-48, "DTC Index".

WORK SUPPORT

Support Item	Setting	Description
RESET SETTING VALUE	Reset	Returns BCM to initial value in factory shipment.
	Cancel	Cancels the reset function.

CONFIGURATION

Refer to BCS-62, "CONFIGURATION (BCM) : Description".

CAN DIAG SUPPORT MNTR

Refer to <u>LAN-17</u>, "CAN Diagnostic Support Monitor". IMMU

IMMU : CONSULT Function (BCM - IMMU)

SELF DIAGNOSTIC RESULT

Refer to BCS-48, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description	_
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	Ν

ACTIVE TEST

Test Item	Description	0
THEFT IND	This test is able to check security indicator operation [On/Off].	

WORK SUPPORT

Support Item	Setting	Description
CONFIRM DONGLE ID	—	Dongle ID can be checked.

BATTERY SAVER

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM) [WITH INTELLIGENT KEY SYSTEM]

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:000000012422479

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.
PUSH SW [On/Off]	Indicates condition push-button ignition 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.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock 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.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check battery saver operation [On/Off].

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
STARTER CUT RELAY [On/Off]	Indicates condition of starter cut relay.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
BACK DOOR OPENER SW [On/Off]	Indicates condition of back door opener switch.
RKE-TR/BD [On/Off]	Indicates condition of back door open signal from Intelligent Key.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT ALM)

INFOID:000000012422481

INFOID:000000012422480

DATA MONITOR

Monitored Item	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.
PUSH SW [On/Off]	Indicates condition of push-button ignition 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.

Revision: September 2015



< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Monitored Item	Description	
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.	P
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.	
DOOR SW-BK [On/Off]	Indicates condition of back door switch.	B
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.	
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.	C
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.	
KEY CYL SW-TR	Indicates condition of key cylinder switch back door.	Γ
SEN CANCEL SW	Indicates condition of sensor cancel switch.	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.	
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.	E
RKE-TR/BD [On/Off]	Indicates condition of back door open signal from Intelligent Key.	
ACTIVE TEST		F

ACTIVE TEST

Test Item	Description	-
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation [On].	G
HEAD LAMP	This test is able to check vehicle security lamp operation [MODE 1/MODE 2/MODE 3/OFF].	_

WORK SUPPORT

Support Item	Setting	Description	
SECURITY ALARM SET	On*	Security alarm ON.	
	Off	Security alarm OFF.	

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

SIGNAL BUFFER : CONSULT Function (BCM - SIGNAL BUFFER)

DATA MONITOR

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

DATA MONITOR

SIGNAL BUFFER

INFOID:000000012422484

INFOID:000000012422482

INFOID:000000012422483

Ν

Ρ

BCS

Н

J

Κ

Monitor Item [Unit] Description 0 PUSH SW [On/Off] Indicates condition of the push-button ignition switch.

AIR CONDITIONER

AIR CONDITIONER : CONSULT Function (BCM - AIR CONDITIONER)

Active Test

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Test Item	Description
PTC RELAY-1	This test is able to check PTC relay 1 operation [On/Off].
PTC RELAY-2	This test is able to check PTC relay 2 operation [On/Off].
PTC RELAY-3	This test is able to check PTC relay 3 operation [On/Off].

< ECU DIAGNOSIS INFORMATION >

	IOSIS INFORMATION			
BCM				
Reference Value		INFOID:000000012422485		
OTE: he Signal Tech II Too User Guide for addit Activate and display		g functions. Refer to the Signal Tech		
Display tire pressure Read TPMS DTCs Register TPMS sens	e reported by the TPMS sensor			
	ligent Key antenna signal strength			
Monitor Item	Condition	Value/Status		
ACC BATTERY SAVER	When battery saver is OFF.	STOP		
	When the remote engine start timer is OFF.	Off		
AUT CRNK TMR	When the remote engine start timer is ON.	On		
AUTO CRNK TME	Remote engine start timer duration.	sec		
	Lighting switch OFF	Off		
AUTO LIGHT SW	Lighting switch AUTO	On		
BACK DOOR OPENER	Back door opener switch OFF	Off		
SW	Back door opener switch pressed On			
	Back door LOCK status	LOCK		
BK DOOR STATE	Back door UNLOCK status	UNLK		
	Wait with selective UNLOCK operation (5 seconds)	READY		
	Brake pedal released	On		
BRAKE SW 1	Brake pedal depressed	Off		
	Brake pedal released	Off		
BRAKE SW 2	Brake pedal depressed	On		
	Buzzer in combination meter OFF	Off		
BUZZER	Buzzer in combination meter ON	On		
	Door lock/unlock switch does not operate	Off		
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	On		
	Door lock/unlock switch does not operate	Off		
CDL UNLOCK SW	Press door lock/unlock switch to the UNLOCK side	On		
CRANKING PERMIT - ECM	When engine start is permitted	PERMIT		
CRANKING TME	Engine start timer duration.	sec		
CRNK PRBT TME	Engine start prohibit timer duration.	sec		
	When the engine start prohibit timer is OFF.	Off		
CRNK PRBT TMR	When the engine start prohibit timer is ON.	On		
	When selector lever is in P position	Off		
DETE/CANCL SW				

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Passenger door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door LOCK status	LOCK
DOOR STAT-DR	Driver door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Rear left door LOCK status	LOCK
DOOR STAT-RL	Rear left door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Rear right door LOCK status	LOCK
DOOR STAT-RR	Rear right door UNLOCK status	UNLK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Front door RH closed	Off
DOOR SW-AS	Front door RH opened	On
	Back door closed	Off
DOOR SW-BK	Back door opened	On
	Front door LH closed	Off
DOOR SW-DR	Front door LH opened	On
	Rear door LH closed	Off
DOOR SW-RL	Rear door LH opened	On
	Rear door RH closed	Off
DOOR SW-RR	Rear door RH opened	On
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Blower motor fan switch OFF	Off
FAN ON SIG	Blower motor fan switch ON	On
	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
	Front wiper switch OFF	Off
FR WIPER LOW	Front wiper switch LO	On
	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
	When hazard switch is not pressed	Off
HAZARD SW	When hazard switch is pressed	On
HAZARD SW	When hazard switch is pressed Headlamp switch OFF	On Off

Revision: September 2015

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
	High beam switch OFF	Off
HI BEAM SW	High beam switch HI	On
	Ignition switch ON	Reset
ID OK FLAG	Ignition switch OFF	Set
	Ignition switch OFF	Off
IGN REQ -IPDM	Ignition switch ON	On
	Ignition switch OFF	Off
IGN RLY1 F/B	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
HI BEAM SW D OK FLAG GN REQ -IPDM GN RLY1 F/B NT VOLUME S STATUS -ECM -KEY OK FLAG KEY CYL LK-SW KEY CYL UN-SW KEY CYL SW-TR LIGHT OFF SW NEUTRAL SW-IPDM DPTI SEN (DTCT)	IS status OFF	Off
IS STATUS-ECM	IS status ON	On
	High beam switch OFF W High beam switch HI G Ignition switch ON Ignition switch OFF Ignition switch OFF IPDM Ignition switch OFF Ignition switch OFF Ignition switch OFF Ignition switch OFF Ignition switch OFF Ignition switch ON Ignition switch OFF Ignition switch OFF Ignition switch OFF Ignition switch OFF Ignition switch ON VE Wiper intermittent dial is in a dial position 1 - 7 IS status OFF Isstatus OFF I-Key OFF I-Key OFF I-Key ON Door key cylinder that LOCK position Door key cylinder other than LOCK position Door key cylinder other than UNLOCK position Back door key cylinder UNLOCK position Back door key cylinder other than UNLOCK position Back door key cylinder other than UNLOCK position Back door key cylinder other than UNLOCK position SW-IPDM Back door key cylinder other than UNLOCK position Selector lever N (Neutral) position Selector lever N (Neutral) (DTCT) Bright outside of the vehicle Dark outside of the vehicle Dark outside of the vehic	Key OFF
I-KEY OK FLAG		Key ON
Monitor Item Condition BEAM SW High beam switch OFF High beam switch OFF High beam switch OFF Ignition switch OF Ignition switch OFF IN REQ -IPDM Ignition switch OFF Ignition switch OFF Ignition switch OFF Is status OFF Is status OFF STATUS -ECM IS status OFF IS status OFF Is status ON EV OK FLAG I-Key OFF I-Key ON Door key cylinder LOCK position Door key cylinder ONLOCK position Door key cylinder UNLOCK position EV CYL UN-SW Door key cylinder UNLOCK position Door key cylinder ONLOCK position Back door key cylinder other than UNLOCK position EY CYL SW-TR Back door key cylinder other than UNLOCK position GHT OFF SW Headlamp switch OFF EUTRAL SW-IPDM Selector lever N (Neutral) position<	Off	
KEY CYL LK-SW	AM SW High beam switch OFF High beam switch HI Ignition switch ON FLAG Ignition switch OFF EQ -IPDM Ignition switch OFF Ignition switch OFF Ignition switch ON LY1 F/B Ignition switch ON DLUME Wiper intermittent dial is in a dial position 1 - 7 Status OFF Is status ON DLUME Is status OFF IS status ON It Key OFF I-Key OFF I-Key OFF I-Key ON Door key cylinder LOCK position Dor key cylinder other than LOCK position Door key cylinder other than UNLOCK position Poor key cylinder other than UNLOCK position Back door key cylinder UNLOCK position Poor key cylinder other than UNLOCK position Back door key cylinder UNLOCK position Set ctor lever any position except N (Neutral) Back door key cylinder UNLOCK position Set ctor lever N (Neutral) position Set ctor lever N (Neutral) Set ctor lever N (Neutral) position Set ctor lever N (Neutral) Set ctor lever N (Neutral) position Set ctor lever N (Neutral) Set ctor lever N (Neutral) position Set ctor lever N (Neutral) <	On
I-KEY OK FLAG KEY CYL LK-SW KEY CYL UN-SW KEY CYL SW-TR LIGHT OFF SW NEUTRAL SW-IPDM OPTI SEN (DTCT)	Door key cylinder UNLOCK position	Off
	Door key cylinder other than UNLOCK position	On
	Back door key cylinder UNLOCK position	Off
EY CYL SW-TR IGHT OFF SW	Back door key cylinder other than UNLOCK position	On
	Headlamp switch ON	Off
LIGHT OFF SW	Headlamp switch OFF	On
	Selector lever N (Neutral) position	Off
NEUTRAL SW-IPDM	Selector lever any position except N (Neutral)	On
	Bright outside of the vehicle	Close to 5V
OPTI SEN (DTCT)	Ignition switch ON OLUME Wiper intermittent dial is in a dial position 1 - 7 ATUS -ECM IS status OFF IS status ON IS status ON OK FLAG I-Key OFF I-Key ON Door key cylinder LOCK position DOr key cylinder other than LOCK position Door key cylinder other than UNLOCK position CYL UN-SW Door key cylinder other than UNLOCK position DOY key cylinder other than UNLOCK position Back door key cylinder other than UNLOCK position CYL SW-TR Back door key cylinder other than UNLOCK position Back door key cylinder other than UNLOCK position Headlamp switch ON CPF SW Headlamp switch ON Headlamp switch OFF Selector lever N (Neutral) position RAL SW-IPDM Selector lever N (Neutral) position SEN (DTCT) Bright outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle DAG SUBSING Other than lighting switch PASS	Close to 0V
	Bright outside of the vehicle	Close to 5V
GN REQ -IPDM Ignition switch ON Ignition switch OFF Ignition switch OFF Ignition switch ON Ignition switch ON NT VOLUME Wiper intermittent dial is in a dial position 1 - 7 IS status OFF IS status OFF IS status OFF IS status OFF IS status ON I-Key OK FLAG I-Key OK FLAG I-Key OFF I-Key ON Door key cylinder LOCK position Cer Yu LK-SW Door key cylinder UNLOCK position Door key cylinder UNLOCK position Door key cylinder UNLOCK position Key CYL UN-SW Door key cylinder UNLOCK position Back door key cylinder UNLOCK position Back door key cylinder UNLOCK position Key CYL SW-TR Back door key cylinder UNLOCK position Headlamp switch OFF Back door key cylinder UNLOCK position IGHT OFF SW Headlamp switch OFF Belector lever ny Novition except N (Neutral) Selector lever any position except N (Neutral) DPTI SEN (DTCT) Bright outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle DPTI SEN (FILT) Bright outside of the vehicle DPTI SEN (FILT) Other than lighting switch PASS	Close to 0V	
IS status ONKEY OK FLAGI-Key OFFI-Key ONEY CYL LK-SWDoor key cylinder tother than LOCK positionEY CYL UN-SWDoor key cylinder other than UNLOCK positionEY CYL SW-TRBack door key cylinder UNLOCK positionBack door key cylinder other than UNLOCK positionEY CYL SW-TRBack door key cylinder other than UNLOCK positionBack door key cylinder other the velaclePTI SEN (DTCT)Bright outside of the vehiclePTI SEN (FILT)PTICAL SENSOROptical sensor OFFOptical sensor OFFOptical sensor ONASSING SWLighting switch PASSRBT ENG STRTWhen the engine start is prohibitedWhen the engine start is prohibitedWhen the engine s	Off	
	Optical sensor ON	On
	Ignition switch OFF Ignition switch ON N RLY1 F/B Ignition switch OFF Ignition switch ON V VOLUME Wiper intermittent dial is in a dial position 1 - 7 STATUS -ECM IS status OFF IS status ON IS status ON EY OK FLAG I-Key OFF I-Key ON Door key cylinder LOCK position Y CYL LK-SW Door key cylinder UNLOCK position Door key cylinder UNLOCK position Door key cylinder UNLOCK position Y CYL UN-SW Door key cylinder UNLOCK position Door key cylinder UNLOCK position Back door key cylinder UNLOCK position SHT OFF SW Headlamp switch OFF Back door key cylinder UNLOCK position Back door key cylinder UNLOCK position SHT OFF SW Headlamp switch OFF SUTRAL SW-IPDM Selector lever N (Neutral) position Selector lever any position except N (Neutral) Selector lever any position except N (Neutral) PTI SEN (FILT) Bright outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle PTI SEN (FILT) Bright outside of the vehicle Dark outside of the vehicle Dark outside of the vehicle <t< td=""><td>Off</td></t<>	Off
Ignition switch ONSN RLY1 F/BIgnition switch OFFIgnition switch ONNT VOLUMEWiper intermittent dial is in a dial position 1 - 7S STATUS -ECMIS status OFFIS status ONKEY OK FLAGI-Key OFFI-Key ONEY CYL LK-SWDoor key cylinder LOCK positionDoor key cylinder other than LOCK positionEY CYL UN-SWDoor key cylinder other than UNLOCK positionEY CYL UN-SWDoor key cylinder other than UNLOCK positionEY CYL SW-TRBack door key cylinder other than UNLOCK positionBack door key cylinder other than UNLOCK positionBack door key cylinder other than UNLOCK positionHeadlamp switch ONHeadlamp switch OFFEUTRAL SW-IPDMSelector lever any position except N (Neutral)PTI SEN (PTCT)Bright outside of the vehicleDark outside of the vehicleDark outside of the vehicleDark outside of the vehicleDark outside of the vehicleDAR SING SWASSING SWCher than lighting switch PASSART ENG STRTWhen the engine start is prohibitedWhen the engine start is prohibited <tr< td=""><td>Lighting switch PASS</td><td>On</td></tr<>	Lighting switch PASS	On
	When the engine start is prohibited	Reset
PRBT ENG STRT	When the engine start is permitted	Set
	When the engine start is prohibited	Reset
PRMT ENG STRT		Set
		Reset
PRMT RKE STRT		Set
		Off
PUSH SW		On
		Off
PUSH SW-IPDM		On
		Off
REAR DEF SW		On

BCM

< ECU DIAGNOSIS INFORMATION >

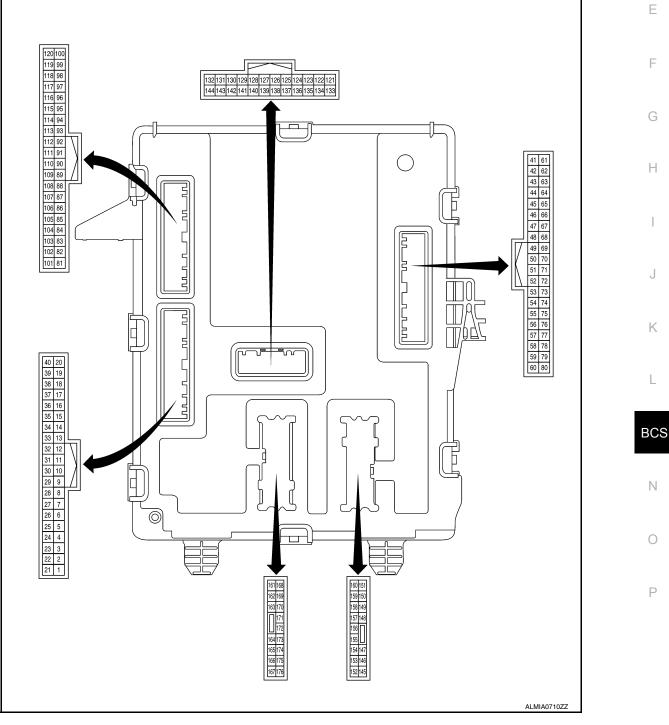
[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
REQ SW-AS	When passenger door request switch is not pressed	Off
REQ 3W-A3	When passenger door request switch is pressed	On
REQ SW-BD/TR	When back door request switch is not pressed	Off
REQ 3W-DD/TR	When back door request switch is pressed	On
	When driver door request switch is not pressed	Off
REQ SW-DR	When driver door request switch is pressed	On
REVERSE SIGNAL -	Selector lever R (Reverse) position	Off
IPDM	Selector lever any position except R (Reverse)	On
	When LOCK button of Intelligent Key is not pressed	Off
RKE-LOCK	When LOCK button of Intelligent Key is pressed	On
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	Off
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	On
RKE OPE COUN1	Operation frequency of Intelligent Key	0-19
RKE OPE COUN2	Operation frequency of Intelligent Key	0-19
	When PANIC button of Intelligent Key is not pressed	Off
RKE-PANIC	When PANIC button of Intelligent Key is pressed	On
	I-Key automatic back door button not pressed	Off
RKE PBD	I-Key automatic back door button pressed	On
	When BACK DOOR OPEN button of Intelligent Key is not pressed	Off
RKE-TR/BD	When BACK DOOR OPEN button of Intelligent Key is pressed	On
	When UNLOCK button of Intelligent Key is not pressed	Off
RKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
	Any position other than rear wiper stop position	Off
RR WIPER STOP	Rear wiper stop position	On
SFT PN -IPDM	When selector lever is in any position other than P or N	Off
SFT PN -IPDM	When selector lever is in P or N position	On
STARTER CUT RELAY -	Starter cut relay OFF	Off
ECM	Starter cut relay ON	On
STARTER OPERATION	_	Displays the number of times the starter motor is turned ON.
	Starter relay OFF	Off
STARTER RELAY -IPDM	Starter relay ON	On
	Starter OFF	Off
STARTER REQ -IPDM	Starter ON	On
	Starter and starter control relay OFF	Off
ST/INH RELAY - IPDM	Starter and starter control relay ON	On

1 < E

< ECU DIAGNOSIS	S INFORMATION >	[WITH INTELLIGENT KEY SYSTEM]		
Monitor Item	Condition	Value/Status		
TAIL LAMP SW	Lighting switch OFF	Off		
TAIL LAIVIP SVV	Lighting switch ON	On		
	Turn signal switch OFF	Off		
TURN SIGNAL L	Turn signal switch LH	On		
	Turn signal switch OFF	Off		
TURN SIGNAL R	Turn signal switch RH	On		
VEH SPEED 1	While driving, equivalent to speedometer reading	mph, km/h		
VEH SPEED 2	While driving, equivalent to speedometer reading	mph, km/h		

TERMINAL LAYOUT



Ε

F

G

Н

J

Κ

L

Ν

0

Ρ

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS INFORMATION >

PHYSICAL VALUES

Terminal No. (Wire color)		Description		Qualities		Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0V
2 (LA/G)	Ground	Door mirror LH turn signal lamp output	Output	Push-button ignition switch ON	Turn signal switch LH	(V) 15 10 50 1 s PKID0926E
					Turn signal switch OFF	6.5 V 0V
3 (LA/Y)	Ground	Door mirror RH turn signal lamp output	Output	Push-button ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 5 0 1 5 0 Fill F
				D ab b Was	Interior room lamp battery saver opera- tion timed out	Battery voltage
4 (P)	Ground	Room lamp relay control	Output	t ignition switch OFF	Any time prior to inte- rior room lamp bat- tery saver operation timed out	0V
5 (R)	Ground	CAN low	Input/ Output		_	_
6 (L)	Ground	CAN high	Input/ Output		_	_
8 (L)	Ground	CAN high	Input/ Output		_	_
9 (R)	Ground	CAN low	Input/ Output		_	_
				Main power window and	Lock	Battery voltage
10 (BG)	Ground	Main power window and door lock/unlock switch lock signal	Input	door lock/un- lock switch (door lock/un- lock switch)	Unlock	0V
					Pressed	0 V
11 (Y)	Ground	Hazard switch	Input	Hazard switch	Released	(V) 15 0 10 10 ms JPMIA0012GB 1.1V

BCM

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description				Value	
(vvire (+)	(-)	Signal name	Input/ Output	Condition		(Approx.)	
(+)	(-)		•	Push-button	OFF	0V	
(W)	Ground	Auto light power supply 5V	Output	ignition switch	ON	5V	
16 (P)	Ground	Audio dongle	Input/ Output	Push-button ignition switch	OFF	5V	
17	Oracial	CVT shift selector park po-	0	O alla attau lavvau	P position	0V	
(L)	Ground	sition switch power	Output	Selector lever	Except P position	Battery voltage	
19	Ground	Auto light signal	Input	Push-button ignition switch	Outside of vehicle is bright	Close to 5V	
(LG)			-	ŎN	Outside of vehicle is dark	Close to 0V	
23	Ground	Power window relay control	Output	Push-button	OFF	Battery voltage	
(G)	2.00110			ignition switch	ON	0V	
24	Ground	Rear window defogger re-	Output	Rear window	Not activated	Battery voltage	
(LA/R)		lay control		defogger	Activated	0V	
25	Ground	Accessory relay-1 control	Output	Output Push-button	OFF	Battery voltage	
(BR)				ignition switch	ON	0V	
27 (X)	Ground	Ignition relay-1 control	Output	Push-button	OFF	Battery voltage	
(Y)				ignition switch	ON	0V	
28 (LA/W)	Ground	Front blower motor relay control	Output	Push-button ignition switch	OFF	Battery voltage	
				-	ON	0V	
30 (V)	Ground	Auto light reference ground	Output	Push-button ignition switch	ON	0V	
33	Ground	Combination switch output	Output	Combination switch	OFF	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
(LG)		5		(Wiper inter- mittent dial 1)	INT VOLUME 2		
					INT VOLUME 3	(V) 15 10	
					RR WIPER INT		
					RR WIPER ON	v t10ms times → +10ms times PKiB4958J	
						1.2V	
					OFF	0V	
					FR FOG	(V)	
				Combination	TAIL LAMP		
34 (Y)	Ground	Combination switch input 5	Input	switch (Wiper inter-	TURN RH		
(1)				mittent dial 1)	NO LIGHT	v ++10ms PKIB4958J 1.0∨	

Revision: September 2015

BCM

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value
(Wire (+)	color) (-)	Signal name	Input/ Output		Condition	(Approx.)
					ON	0V
35 (BG)	Ground	Security indicator	Output	Security indi- cator	Blinking	JPMIA0014GB 11.3V
					OFF	Battery voltage
36	Ground	Combination switch output 3		Combination	OFF	(V) 15 0 5 0 + + 10ms РКІВН960Ј 7.0 – 8.0V
(G)			Output	(Wiper inter- mittent dial 1)	FR WASHER	
					RR WASHER TURN LH	(V) 15 10 5
					TURN RH	5 0 ++10ms PKiB4958J 1.2V
37	Ground	Combination switch output	Output	Combination	OFF	(V) 15 10 • • 10ms • • 10ms • • 10ms • • • • 10ms • • • • 00ms • • • • 00ms • • • • 00ms • • • • • • • • • • • • • • • • • • •
(GR)	Ground	4	Output	(Wiper inter- mittent dial 1)	FR WIPER LOW	(1)
				FR WIPER INT	10 5 0 ++10ms	
						PKIB4958J 1.2V

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description		_		Value	А
(VVire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
38		Combination switch output		Combination	OFF	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0V	B C D
(V)	Ground	1	Output	(Wiper inter-	HI BEAM		
				mittent dial 1)	PASSING	(V) 15	Е
					FR FOG	10 5 0 ++10ms 1.2V	F
				Combination	OFF	(V) 15 10 5 0 •••• 10ms PKIB4960J 7.0 - 8.0V	G H
39 (W)	Ground	Combination switch output 2	Output	switch (Wiper inter- mittent dial 4)	INT VOLUME 1 HEADLAMP AUTO LIGHT	(V) 15 10 5	J
					TAIL LAMP	0 ++10ms PKIB4958J 1.2V	K
				Main power	Unlock	Battery voltage	
40 (SB)	Ground	Main power window and door lock/unlock switch un- lock signal	Input	window and door lock/un- lock switch (door lock/un- lock switch)	Lock	0V	BC
					ON (pressed)	0V	Ν
46 (R)	Ground	Back door request switch	Input	Back door opener switch (request switch)	OFF (released)	(V) 15 0 10 ms JPMIA0016GB 1.0V	O
49 (G)	Ground		Input	_	_	_	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(+)	color) (-)	Signal name	Input/ Output		Condition	(Approx.)
50 (W)	Ground	Right rear door switch	Input	Rear door switch RH	OFF (door closed)	(V) 15 10 10 10 ms JPMIA0011GB 11.8V
					ON (door open)	0V
51 (LG)	Ground	Back door switch	Input	Back door lock assem- bly (door ajar switch)	OFF (door closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					ON (door open)	0V
52 (R)	Ground	Left rear door switch	Input	Rear door switch LH	OFF (door closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					ON (door open)	0V
53 (SB)	Ground	Passenger door switch	Input	Front door switch RH	OFF (door closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (door open)	0V
55 (LA/G)	Ground	Rear wiper autostop switch		Push-button ignition switch	Rear wiper stop posi- tion	Battery voltage
(LA/G)					Any position other than rear wiper stop	0V
56 (Y)	Ground	Back door open switch	Input	Back door opener switch	Switch released Switch pressed	Battery voltage 0V

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description				Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
57 (SB)	Ground	Driver door switch	Input	Front door switch LH	OFF (door closed)	(V) 15 10 5 0 10 ms 10 ms 11.8V
					ON (door open)	0V
60 (L)	Ground	CAN high	Input/ Output		_	_
61		Outside key antenna (rear		Back door re- quest switch	Intelligent Key in an- tenna detection area	(V) 15 0 15 0 15 0 15 0 15 0 15 0 15 0 15
(BR)	Ground	bumper) B	Output	operated with push-button ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
62	Ground	Inside key antenna (con-	Output	Push-button	Intelligent Key in an- tenna detection area	(V) 15 10 5 0 •••••••••••••••••••••••••••••
(Y)	Ground	sole) B	Output	ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value
(vvire (+)	color) (-)	Signal name	Input/ Output	(Condition	(Approx.)
63	Ground	Inside key antenna (con- sole) A	na (con-Output Push-button ignition switch — OFF		Intelligent Key in an- tenna detection area	(V) 15 0 0 1 s JMKIA0062GB
(L)	Clound	sole) A		Intelligent Key not in antenna detection area	(V) 15 0 1 1 5 0 1 5 1 5	
64	64 Outside key antenna (rear	Back door re- quest switch operated with	Intelligent Key in an- tenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1		
(G)	Clound	bumper) A	Output	push-button ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1
79 (LA/W)	Ground	High-mounted stop lamp output	Output	Brake pedal	Released Depressed	0V Battery voltage
80 (P)	Ground	CAN low	Input/ Output		_	_
					ON (pressed)	0V
82 (W)	Ground	Passenger request switch	Input	Front outside handle as- sembly RH request switch	OFF (released)	(V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1

Revision: September 2015

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	nal No. color)	Description				Value	
(vvire (+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
					OFF	0V	
					HI BEAM		
				Combination	RR WASHER	(V) 15	
84	Ground	Combination switch input 2	Input	switch	FR WIPER HI		
(BR)	Ground	Combination switch input 2	(wiper inter-	(Wiper inter- mittent dial 1)	INT VOLUME 3	0 Hardbardbardbardbardbardbardbardbard + +10ms Hardbardbardbardbard PKIB4958J 1.0V	
					OFF	0V	
					INT VOLUME 1		
					FR WASHER	(V)	
85				Combination switch	FR WIPER LOW		
85 (SB)	Ground	Combination switch input 1	Input	(Wiper inter-			
		mittent dial 1)	mittent dial 1)	INT VOLUME 2	++10ms PKIB495&J		
						1.0V	
					OFF	0V	
				Combination	PASSING		
					HEADLAMP		
86 (P) Ground	Combination switch input 3	Input	switch (Wiper inter-	FR WIPER INT			
(P)			(wiper inte		mittent dial 1)	RR WIPER INT	
					055	1.0V	
					OFF	0V	
				Combination	AUTO LIGHT	(V)	
~ -					TURN LH		
87 (BG)	Ground	Combination switch input 4	Input	switch (Wiper inter- mittent dial 1)	RR WIPER ON	5 0 + 10ms	
						PKIB4958J 1.0V	
88	Ground	Start switch backlight LED	Output	Push-button ignition switch	ON	5.5V	
(W)	Cround		Juipui	illumination	OFF	0V	
89	Ground	Push-button ignition switch	Input	Push-button	Pressed	0V	
(Y)	C. Galia		mput	ignition switch	Not pressed	Battery voltage	
92 BR)	Ground	Front door lock assembly LH key cylinder switch lock signal	Input	Key cylinder switch	OFF (neutral) ON (lock)	Battery voltage	
		Front door lock assembly			OFF (neutral)	Battery voltage	
93 (P)	Ground	LH key cylinder switch un-	Input	Key cylinder switch	ON (unlock)	0V	
		lock signal CVT shift selector park po-			P position	0V	
94		LIVE STUT SELECTOR DARK DO-	Input	Selector lever	- poolaon	U V	

Revision: September 2015

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(VVire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
95 (V)	Ground	Shorting input	Input	Push-button ignition switch	OFF	Battery voltage
100 (V) Ground Outside key antenna (driv- er side) A Outpu	Output	Front outside handle as- sembly LH re- queet switch	Intelligent Key in an- tenna detection area	(V) 15 0 5 0 1 s JMKIA0062GB		
(V)	Clouid	er side) A	operated with push-button ignition switch OFF Ir a	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
104	Ground	Front door lock assembly LH knob switch unlock sig-	Input	Door lock	OFF (lock)	Battery voltage
(R)	Ground	nal	input	knob	ON (unlock)	0V
105 (Y)	Ground	Driver request switch	Input	Front outside handle as- sembly LH re- quest switch	OFF (released)	(V) 15 10 5 10 10 ms JPMIA0016GB 1.0V
106 (W)	Ground	Audio unit/AV control unit accessory power supply	Input	Push-button ignition switch	ON	Battery voltage
110 (BG)	Ground	Dimmer signal output (MR output)	Output	Push-button ignition switch ON	 Either of the following conditions Lighting switch OFF The area around the vehicle is bright (Shine a light on the optical sensor) 	OV
					The area around the vehicle is dark (Block the light from the opti- cal sensor)	Battery voltage
114 (Y)	Ground	NATS antenna amp. B	Output	During wait- ing	Intelligent Key back- side is contacted to push-button ignition switch, turn ignition switch ON.	Just after pressing push-button ignition switch. Pointer of analog volt meter should move.

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

	inal No.	Description		-		Value	А
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	~
115 (W)	Ground	NATS antenna amp. A	Output	During wait- ing	Intelligent Key back- side is contacted to push-button ignition switch, turn ignition switch ON.	Just after pressing push-button ignition switch. Pointer of analog volt meter should move.	B
116	Ground	Inside key antenna (instru-	Output	Push-button	Intelligent Key in an- tenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	D
(BG)	Ground	ment center) B	Output	ut ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 5 0 1 5 10 1 5 10 1 5 10 1 5 10 10 15 10 10 15 10 10 15 10 10 15 15 10 10 10 10 10 10 10 10 10 10 10 10 10	F G H
117	Ground	Inside key antenna (instru-	Output	Push-button ignition switch	Intelligent Key in an- tenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	I J K
(GR)	Ground	ment center) A	Gutput	OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s 1 s JJMKIA0063GB	L

Ν

0

ECU	DIAGNO	SIS INFORMATION >		BCIW	CM [WITH INTELLIGENT KEY SYSTEM]			
	nal No.	Description				Value (Approx.)		
(Wire (+)	color)	Signal name	Input/ Output		Condition			
118	Ground	Outside key antenna (pas-	Output	Front outside handle as- sembly RH request	Intelligent Key in an- tenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB		
(SB)	Ground	senger side) B	Output	switch operat- ed with push- button ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB		
119	Ground	Outside key antenna (pas-	Front outside handle as- sembly RH request	Intelligent Key in an- tenna detection area	(V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 15 10 5 0 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15			
(P)	Ground	senger side) A	Output	switch operat- ed with push- button ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GE		
120	Ground	Outside key antenna (driv-	Output	Front outside handle as- sembly LH re- quest switch	Intelligent Key in an- tenna detection area	(V) 15 10 5 0 1 s JMKIA0062GE		
(BR)	Ground	er side) B	Uutput	operated with push-button ignition switch OFF	Intelligent Key not in antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GE		
125	Ground	Stop lamp switch signal	Innut	Brake pedal	Released	0V		
(LG)	Ground	Stop lamp switch signal	Input	Diake peual	Depressed	Battery voltage		

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Quadition		Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
126		Brake pedal position switch			Released	0V	
(W)	Ground	signal	Input	Brake pedal	Depressed	Battery voltage	
132		Intelligent Key warning		Intelligent	Sounding	0V	
(Y)	Ground	buzzer output	Output	output Key warning buzzer	Not sounding	Battery voltage	
				buzzei	Turn signal switch	0V	
135 (BR)	Ground	Front combination lamp LH turn signal lamp output	Output	Push-button ignition switch ON	Turn signal switch LH	$(V) \\ 15 \\ 10 \\ 0 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ $	
					Turn signal switch OFF	0V	
136 (GR)	Ground	Front combination lamp RH turn signal lamp output	Output	Push-button ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 •••••••••••••••••••••••••••••	
					OFF	6.5 V Battery voltage	
139 (G)	Ground	Starter cut relay control	Output	Push-button ignition switch	ON		
145		Back door lock assembly		Back door opener switch pressed	Open (motor activat- ed)	Battery voltage	
(LA/V)	Ground	opener motor open	Output	Back door opener switch released	Closed (motor not ac- tivated)	0V	
147	Ground	Rear wiper output	Output	Rear winor	OFF	0V	
(LA/R)	Ground	iveal wiper output	Juiput	Rear wiper	ON	Battery voltage	
140		Door door look octuated 11		Main power window and	Unlock (actuator activated)	Battery voltage	
148 (W)	Ground	Rear door lock actuator LH and RH actuator unlock	Output	door lock/un- lock switch (door lock/un- lock switch)	Lock (actuator not ac- tivated)	0V	
149	0	Rear door lock actuator LH	Outral	Main power window and door lock/un-	Lock (actuator acti- vated)	Battery voltage	
(L)	Ground	and RH actuator lock	Output	lock switch (door lock/un- lock switch)	Unlock (actuator not activated)	0V	
151	Ground	Luggage lamp control	Output	Room lamp	OFF	Battery voltage	
(R)	Cround	(pwm)	Julpur	relay	ON	0V	
153	Ground	Rear combination lamp RH	Output	Brake pedal	Released	0V	
(LA/W)	0.00110	stop lamp output	- Liput	podu	Depressed	Battery voltage	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire (+)	color)	Signal name	Input/ Output	(Condition	Value (Approx.)
					Turn signal switch OFF	0V
157 (GR)	Ground	Rear combination lamp LH turn signal/hazard lamp output	Output	Push-button ignition switch ON	Turn signal switch LH	
150		Deer combination lamp H			Released	6.5 V 0V
158 (LA/Y)	Ground	Rear combination lamp LH stop lamp output	Output	Brake pedal	Depressed	Battery voltage
					Turn signal switch	0V
160 (P)	Ground	Rear combination lamp RH turn signal/hazard lamp output	Output	Push-button ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
161 (W)	Ground	BCM power supply	Input	Push-button ignition switch	OFF	Battery voltage
162 (SB)	Ground	Interior lamp control (pwm)	Output	Map lamp and/or per- sonal lamp 2nd row	OFF DOOR	Battery voltage 0V
				Main power window and	Unlock (actuator acti- vated)	Battery voltage
163 (L)	Ground	Front door lock actuator RH actuator unlock	Output	door lock/un- lock switch (door lock/un- lock switch)	Lock (actuator not ac- tivated)	0V
				Main power window and	Lock (actuator acti- vated)	Battery voltage
165 (V)	Ground	Front door lock actuator LH and RH actuator lock	Output	door lock/un- lock switch (door lock/un- lock switch)	Unlock (actuator not activated)	0V
167 (LA/V)	Ground	Power door lock battery power supply	Input	Push-button ignition switch	OFF	Battery voltage
168 (BG)	Ground	Turn signal/hazard battery power supply	Input	Push-button ignition switch	OFF	Battery voltage
169 (GR)	Ground	Stop lamp battery power supply	Input	Push-button ignition switch	OFF	Battery voltage
170 (B)	Ground	Ground1	Input	Push-button ignition switch	ON	0V
171 (B)	Ground	Ground2	Input	Push-button ignition switch	ON	0V

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

olor)						Δ.
(-)	Signal name	Input/ Output	iput/ Condition (Approx.)		Value (Approx.)	A
			Main power window and	Unlock (actuator acti- vated)	Battery voltage	В
Ground	Front door lock assembly LH actuator unlock	Output	door lock/un- lock switch (door lock/un- lock switch)	Lock (actuator not ac- tivated)	0V	С
Ground	Power door lock2 battery power supply	Input	Push-button ignition switch	OFF	Battery voltage	
Ground	Rear wiper battery power supply	Input	Push-button ignition switch	OFF	Battery voltage	D
Gro	bund	DundFront door lock assembly LH actuator unlockDundPower door lock2 battery power supplyDundRear wiper battery power	DundFront door lock assembly LH actuator unlockOutputDundPower door lock2 battery power supplyInputDundRear wiper battery powerInput	DundFront door lock assembly LH actuator unlockOutputMain power window and door lock/un- lock switch (door lock/un- lock switch)DundPower door lock2 battery power supplyInputPush-button ignition switchDundRear wiper battery powerInputPush-button	Dund Front door lock assembly LH actuator unlock Output Main power window and door lock/un- lock switch (door lock/un- lock switch) Unlock (actuator acti- vated) Dund Power door lock2 battery power supply Input Push-button ignition switch OFF Dund Rear wiper battery power Input Push-button or supply OFF	Dund Front door lock assembly LH actuator unlock Output Main power window and door lock/un- lock switch (door lock/un- lock switch) Unlock (actuator acti- vated) Battery voltage Dund Power door lock2 battery power supply Input Push-button ignition switch OFF Battery voltage

Fail Safe

INFOID:000000012422486

CONSULT Display	Fail-safe	Cancellation			
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC			
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC			
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC			
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC			
B2198: IMMOBI ANT NG	Inhibit engine cranking	Erase DTC			
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent: Starter motor relay control signal Starter relay status signal (CAN) 			
B260F: ECM CAN COMM Inhibit engine crank		When any of the following conditions are fulfilled:Ignition switch changes to ONReceives engine status signal (CAN)			
B26F1: IGNITION RELAY OFF STUCK FAIL	Inhibit engine cranking	 When the following conditions are fulfilled: Ignition switch ON signal (CAN: Transmitted from BCM): ON Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON 			
B26F2: IGNITION RELAY ON STUCK FAIL	Inhibit engine cranking	 When the following conditions are fulfilled: Ignition switch ON signal (CAN: Transmitted from BCM): OFF Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF 			
B261E: FUEL MIS CONFIG	Inhibit engine cranking	BCM initialization			

DTC Inspection Priority Chart

INFOID:000000012422487

BCS

Ν

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

Priority	DTC	
1	B2562: LOW VOLTAGE	(
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2196: DONGLE NG B2198: NATS ANTENNA AMP 	F

< ECU DIAGNOSIS INFORMATION >

Priority	DTC
4	 B2556: ENG START SW B2557: VEHICLE SPEED B2602: SHIFT P DIAG B2604: SHIFT PN DIAG CAN B2608: STARTER RELAY B260F: ECM CAN COMM B261A: ENGINE SW B261E: FUEL MIS CONFIG B26F1: IGNITION RELAY OFF STUCK FAIL B26F2: IGNITION RELAY OFF STUCK FAIL B26FC: KEYFOB MISS REGISTRATION B27D1: ST CUT RELAY OFF STUCK FAIL B27D2: ST CUT RELAY ON STUCK FAIL C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG
5	 CUTIO: VEHICLE OF LED SIG 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] RR C1716: [PRESSDATA ERR] FR C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1730: FLAT TIRE FR C1730: FLAT TIRE FR C1731: FLAT TIRE FR C1732: FLAT TIRE RR C1733: FLAT TIRE RR C1734: CONTROL UNIT C1735: IGN CIRCUIT OPEN C1765: WSSP DATA FAIL FL C1766: WSSP DATA FAIL FR C1767: WSSP DATA FAIL RR C1768: WSSP DATA FAIL RR C1768: WSSP DATA FAIL RR C1769: CONFIG SETTING C1771: G SENSOR FAIL FR C1772: G SENSOR FAIL RR
6	B2621: INSIDE ANTENNA 1 B2622: INSIDE ANTENNA 2

DTC Index

NOTE:

- Details of time display are as follows: CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

CONSULT display	Fail-safe	Freeze Frame Data	Key system malfunction	Security indi- cator lamp ON	Reference page
No DTC is detected. Further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	—	_	BCS-65, "Description"
U1010: CONTROL UNIT (CAN)	_	—	—	_	BCS-66, "DTC Logic"
U0415: VEHICLE SPEED SIG	_	—	×	—	BCS-67, "Description"
B2190: NATS ANTENNA AMP	×	—	—	×	SEC-77, "Description"



INFOID:000000012422488

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data	Key system malfunction	Security indi- cator lamp ON	Reference page	А
B2191: DIFFERENCE OF KEY	×	—	_	×	SEC-80, "DTC Logic"	
B2192: ID DISCORD BCM-ECM	×	—	_	×	SEC-81, "DTC Logic"	В
B2193: CHAIN OF BCM-ECM	×	—	_	×	SEC-82, "DTC Logic"	
B2196: DONGLE NG	—	—	_	—	SEC-83, "Description"	С
B2198: IMMOBI ANT NG	×	—	_	×	SEC-85, "DTC Logic"	0
B2556: ENG START SW	—	×	×	_	SEC-87, "DTC Logic"	
B2557: VEHICLE SPEED	_	×	×	_	SEC-89, "DTC Logic"	D
B2562: LOW VOLTAGE	—	×	_	_	BCS-68, "DTC Logic"	
B2602: SHIFT P DIAG	—	×	×	_	SEC-90, "DTC Logic"	Е
B2604: SHIFT PN DIAG CAN	_	×	×	_	SEC-93, "DTC Logic"	
B2608: STARTER RELAY	×	×	×	_	SEC-96, "DTC Logic"	
B260F: ECM CAN COMM	×	×	×	—	SEC-97, "Description"	F
B261A: PUSH-BTN IGN SW	—	×	×	_	PCS-80, "DTC Logic"	
B261E: FUEL MIS CONFIG	×	_	_	_	SEC-99, "Description"	
B2621: INSIDE ANTENNA 1	_	×	×	_	DLK-148, "DTC Logic"	G
B2622: INSIDE ANTENNA 2	_	×	×	—	DLK-150, "DTC Logic"	
B26F1: IGNITION RELAY OFF STUCK FAIL	×	×	×	_	PCS-82, "DTC Logic"	Н
B26F2: IGNITION RELAY ON STUCK FAIL	×	×	×	_	PCS-84, "DTC Logic"	
B26FC: KEYFOB MISS REGISTRATION	_	×	×	_	SEC-101, "DTC Logic"	
B27D1: ST CUT RELAY OFF STUCK FAIL	—	×	×	—	SEC-102, "DTC Logic"	
B27D2: ST CUT RELAY ON STUCK FAIL		×	×	_	SEC-105, "DTC Logic"	
C1704: LOW PRESSURE FL	_	_	_	_		J
C1705: LOW PRESSURE FR	_	_		_		0
C1706: LOW PRESSURE RR			_	_	WT-31, "DTC Logic"	
C1707: LOW PRESSURE RL	_	_		_		Κ
C1708: [NO DATA] FL	_	_	-	_		
C1709: [NO DATA] FR	_	_		_		1
C1710: [NO DATA] RR		_		_	WT-33, "DTC Logic"	
C1711: [NO DATA] RL	_	_	_	_		
C1716: [PRESSDATA ERR] FL	_	_	_	_		BCS
C1717: [PRESSDATA ERR] FR	_	_	-	_		
C1718: [PRESSDATA ERR] RR	_	_	_	_	WT-36, "DTC Logic"	NI
C1719: [PRESSDATA ERR] RL	_	_		_		Ν
C1729: VHCL SPEED SIG ERR	_	_		_	WT-38, "DTC Logic"	
C1730: FLAT TIRE FL	—	—	—	—		0
C1731: FLAT TIRE FR	_	_	—	_		
C1732: FLAT TIRE RR	—	_	—	_	WT-39, "DTC Logic"	
C1733: FLAT TIRE RL		_	_	_		Ρ
C1734: CONTROL UNIT	_	_	_	_	WT-41, "DTC Logic"	
C1735: IGN CIRCUIT OPEN	—			_	WT-43, "DTC Logic"	

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data	Key system malfunction	Security indi- cator lamp ON	Reference page
C1765: WSSP DATA FAIL FL	—	—	_	—	
C1766: WSSP DATA FAIL FR	_	—	_	_	WT-44, "DTC Logic"
C1767: WSSP DATA FAIL RL	_	—	—	—	WI-44, DICLOGIC
C1768: WSSP DATA FAIL RR	_	—	_	—	
C1769: CONFIG SETTING	_	_	_	—	WT-45, "DTC Logic"
C1770: G SENSOR FAIL FL	_	_	_	—	
C1771: G SENSOR FAIL FR	_	—	_	—	WT-46, "DTC Logic"
C1772: G SENSOR FAIL RR	—	—	_	—	WI-40, DIC LOgic
C1773: G SENSOR FAIL RL	—	_	_	—	

WIRING DIAGRAM

BCM

Wiring Diagram INFOID:000000012422489 BROCK BLOCK M33 (J/B) B30 B30 B30 B30 B30 B30 CK 3 INSIDE KEY ANTENNA (CONSOLE) B77 \mathbb{A} 15A 1 INSIDE KEY ANTENNA (INSTRUMENT CENTER) (M15) 168 TO AIR CONDITIONER CONTROL OUTSIDE KEY ANTENNA (REAR BUMPER) (B76) 7 ^{15A} BLOWEF MOTOR MOTOR RELAY 15A 17 للك 0 FRONT OUTSIDE HANDLE ASSEMBLY RH D126) þ 28 15A 176 DATA LINE DATA LINE FRONT OUTSIDE HANDLE ASSEMBLY LH D11 IGNITION RELAY-2 J-1 g 20 ٢ ۶ BCM (BODY CONTROL MODULE) - WITH INTELLIGENT KEY SYSTEM 80 -----B16 27 ŝ 30A , M20 ⊵ (M19) 15A 33 TO IGNITION POWER SUPPLY COMBINATION SWITCH M18 c 20A BCM (BODY CONTROL MODULE) FRONT AND REAR WASHER MOTOR (E41) 167 20A 22 14 5A 16 ß B142 B142 B142 10A BATTERY 161 20 4 20 BCS B141 B141 B141 B141 24 15A 23 00 20 15A 24 BEFOGGER RELAY BOOR SWITCH LH B70 22 B71 B71 B71 B71 B71 10A 00 5 -----170 TO REAR WINDOW DEFOGGER 5

BCM

А

В

С

D

Ε

F

Н

J

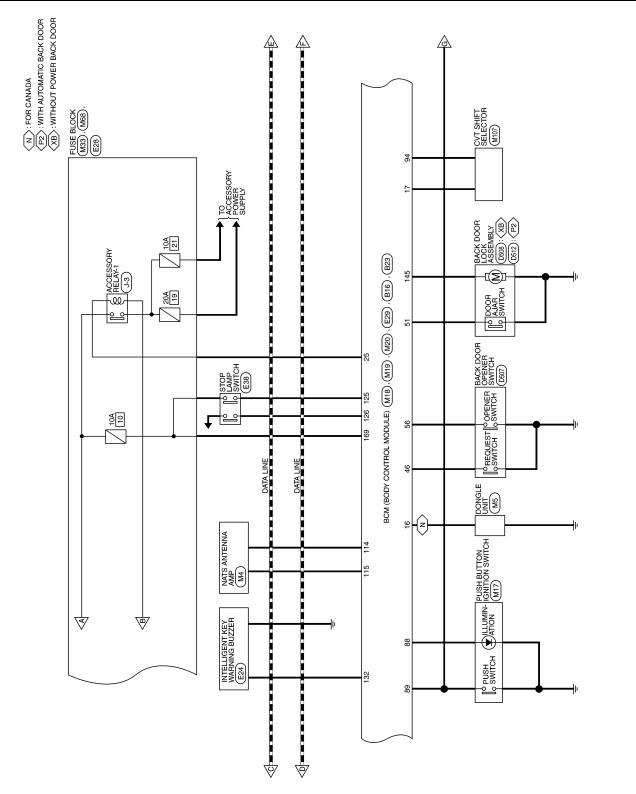
Κ

Ν

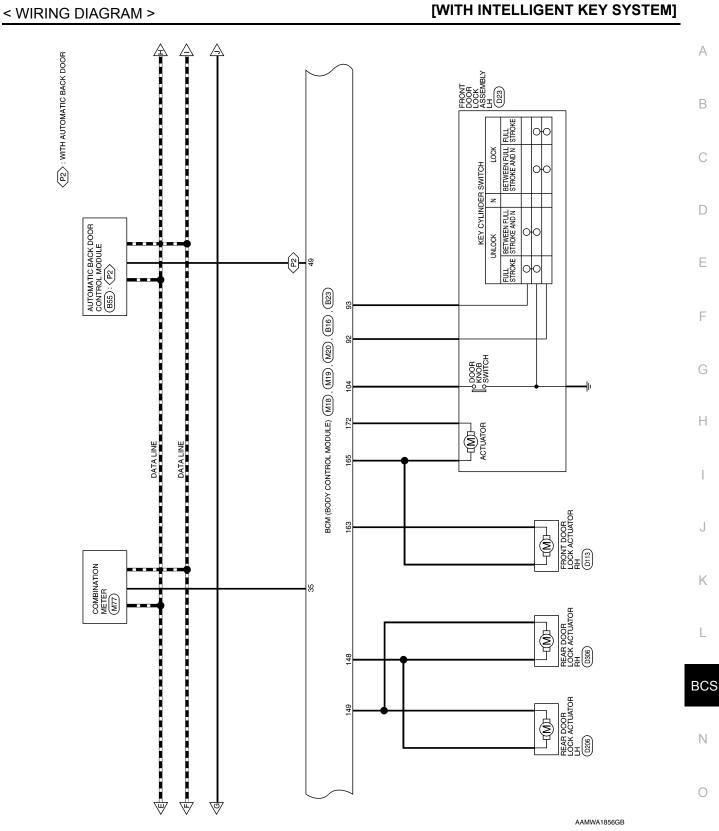
Ο

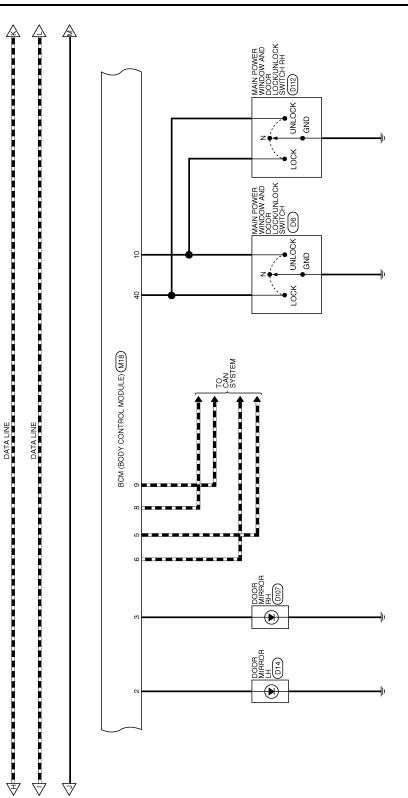
Ρ

AAMWA1869GB

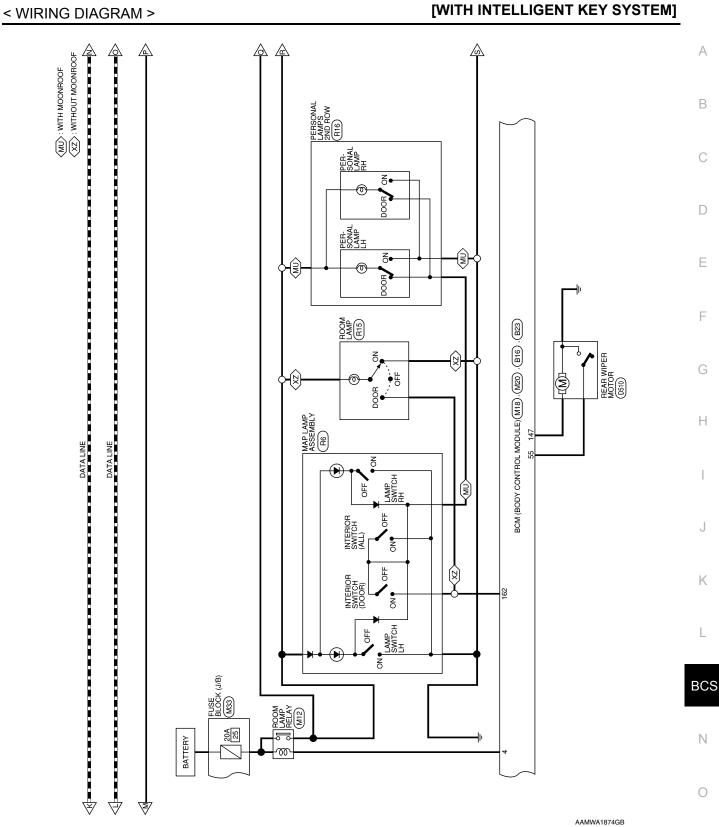


AAMWA1870GB





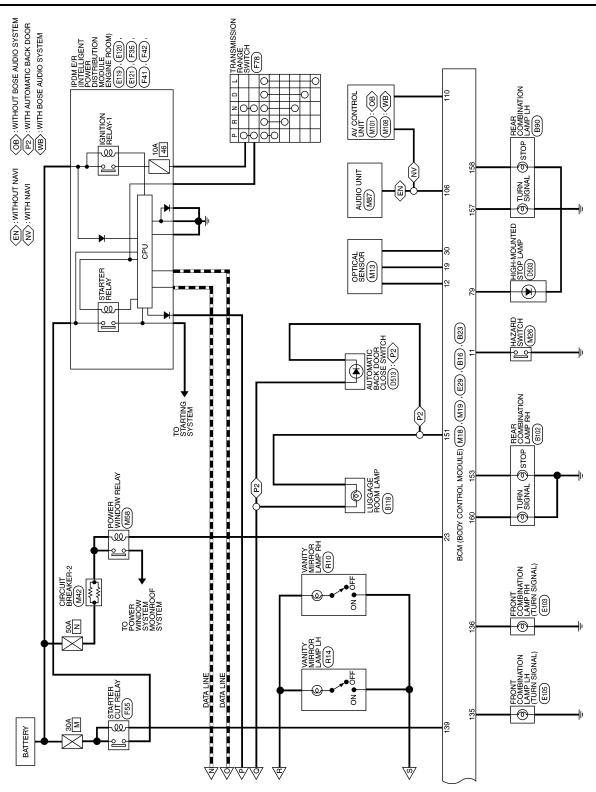
AAMWA1434GB



Р

Revision: September 2015

2016 Rogue NAM



AAMWA1871GB



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

	-	21
	 N 	22
	e	23
	4	2
	2	25
	9	26
	2	27 26
	œ	
17	0	29 28
	9	31 30
	Ŧ	31
	12	32
	13	33
	14	34 33
	15	35
	16	36 35
	19 18 17 16 15 14 13 12	
10	18	38
S S T		40 39 38 37
偕、	20	40

Signal Name	I	O DI FR LEFT D	O DI FR RIGHT D	O ROOMLAMP BATSAVER RL	CAN-L	CAN-H	1	CAN-H	CAN-L	I DOORLOCK SW	I HAZARD SW D	O PWR AUTOLIGHT SENSOR	I	I	I	DONGLE UART	O PWR ATDVC	I
Color of Wire	I	LA/G	LAY	٩	œ	_	I	_	щ	BG	≻	×	-	I	I	Ь	_	I
Terminal No.	-	2	e	4	5	9	7	æ	6	10	÷	12	13	14	15	16	17	18

BCS-57

AAMIA2831GB
AAMIA2831GB

I AUTOLIGHT SENSOR

ŋ

19

Ρ

< WIRING DIAGRAM >	
	-

O DEFROSTER RL D I DOORUNLOCK SW O WL AUTHORIZATION RL O GND AUTOLIGHT SENSOR O SECURITY LED O BAT TEMP1 RL Signal Name O IGN1 RL O IGN2 RL O CSW 5 I CSW 1 I CSW 5 I CSW 3 I CSW 4 I CSW 2 ī I I I I I Terminal No. Color of Wire LA/R LAW SB ŋ BG ВВ GR ≥ I T T ശ I ≻ I > I I ≻ G > 24 25 26 27 33 35 39 SS 40 21 23 22 23 29 28 30 33 34 36 37

А

В

С

D

Ε

F

G

Н

J

Κ

L

BCS

Ν

0

	BCM (BODY CONTROL MODULE)	z	167[166]165[164]163[162]161] 176[175[174]173[172]171[170]166]168]	Signal Name	I PWR ECU	PWM ROOMLAMP 1	O AS LOCK OR UNLOCK D	1	DR OR FR LOCK D	I	PWR DOORLOCK1	I PWR FLASHERS	PWR STOP LAMP	I GND1	I GND2	FR OR DR UNLOCK D	I	I	PWR DOORLOCK2	I PWR WIPER
lo. M20		Color BROWN	167166165164 176175174173	Color of Wire	×	SB OI		1	0 >	I	LA/V II	BG	GR	В	в	G OF	I	ı	н н	ГG
Connector No.	Connector Name	Connector C	后 H.S.	Terminal No.	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176

Signal Name	I	I	I	I DR KNOB SW	I SES DR HANDLE BUTTON SW (WITH INTELLIGENT KEY SYSTEM)	O AUTO ACC2	I	I	I	O MR OUTPUT	I	I	I	O IMMOBILIZER KAZASHI B (WITH INTELLIGENT KEY SYSTEM)	O IMMOBILIZER KAZASHI A (WITH INTELLIGENT KEY SYSTEM)	SES INT FRONT ANTENNA B (WITH INTELLIGENT KEY SYSTEM)	SES INT FRONT ANTENNA A (WITH INTELLIGENT KEY SYSTEM)	SES EXT AS ANTENNA B (WITH INTELLIGENT KEY SYSTEM)	SES EXT AS ANTENNA A (WITH INTELLIGENT KEY SYSTEM)	SES EXT DR ANTENNA B (WITH INTELLIGENT KEY SYSTEM)
Color of Wire	I	I	I	ч	~	×	I	I	I	BG	I	I	I	7	M	BG	GR	SB	٩	BR
Terminal No.	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
					102 101															

	F		
Connector No.		6	
Connector Name		BCM (BODY CONTROL MODULE)	
Connector Co	Color BLA	BLACK	
¢			
H.S. 12011	98 97 96 9118117116	100 99 98 97 96 95 94 93 92 91 90 88 87 96 85 84 83 87 120119/118/117/116/115/114/113/112/1111/109/109/108/107/106/105/104/03/103/10	85 84 83 82 10510410310
Terminal No.	Color of] <u> </u>	
81			
82	M	I SES FR HANDLE BUTTON SW (WITH INTELLIGENT KEY SYSTEM)	
83	I	I	
84	BR	0 CSW 2	
85	SB	0 CSW 1	
86	Ч	O CSW 3	
87	ÐВ	O CSW 4	
88	W	O START SW BACKLIGHT LED (WITH INTELLIGENT KEY SYSTEM)	
89	٢	I START WO ESCL SW (WITH INTELLIGENT KEY SYSTEM)	
06	-	Ι	
91	-	I	
62	ВR	I KEY CYLINDER LOCK SW	
63	Ч	I KEY CYLINDER UNLOCK SW	
94	ŋ	I AT LOCKED IN PARK SW	
96	٨	I SHORTING PIN	
96	Ι	I	
97	-	I	
98	I	I	
66	Ι		
100	٧	SES EXT DR ANTENNA A (WITH INTELLIGENT KEY SYSTEM)	

AAMIA3598GB

Connector No.	M28
Connector Name	Connector Name COMBINATION SWITCH
Connector Color WHITE	WHITE
<u>जि</u> त्रे	

9 12

H.S.

Signal Name	1	1	I	I	I	I	I	I	I	I	I	I	I	Ι	I	I
Color of Wire	ГG	SB	GB	BG	σ	×	≻	>	σ	ВВ	≻	I	I	ГG	٩	GR
Terminal No.	-	5	e	4	£	9	7	æ	6	10	1	12	13	14	15	16

Te																
Signal Name	I	Η	I	I	-	I	I	Ι	Ι	Γ	-	Ι	Γ	I	1	I
color of Wire	ГG	SB	GR	BG	G	Μ	Y	٧	G	BR	Y	I	Ι	ГG	Ρ	GR

				121	144 143 142 141 140 139 138 137 136 135 134 133
				122	134
				123	135
	Ë			124	136
	6		7	125	137
	Õ			126	138
				127	139
	ЮЩ			128	140
	BCM (BOE MODULE)	S		132 131 130 129 128 127 126 125 124 123 122 121	141
E29	응답	Ā		130	142
ш	m≥	B		131	143
	e	٦r		132	144
ö	au	응			
Ž	I Z	Ω.			
ī	1 g	<u>ā</u>			
ĕ) e	ĕ		ú	ñ
Connector No.	Connector Name BCM (BODY CONTROL MODULE)	Connector Color BLACK	L R		0 L
Ő	Ũ	Ű		ř	

< WIRING DIAGRAM >

H.S.	144 143 142	1441431421441140139138137136135134133
erminal No.	Color of Wire	Signal Name
121	I	I
122	I	I
123	I	I
124	I	I
125	ГG	I BRAKE SW2
126	Ν	I BRAKE SW1
127	Ι	I
128	Ι	1
129	I	I
130	-	I
131	-	I
132	≻	O BUZZER
133	-	I
134	-	I
135	BR	O DI FR LEFT E
136	ЯÐ	O DI FR RIGHT E
137	-	I
138	I	I
139	9	O STCUT RL
140	-	I
141	I	I
142	I	I
143	-	I

	BCW	

Ρ

0

2016 Rogue NAM

T

I

144

G

Н

А

В

С

D

Е

F

Κ

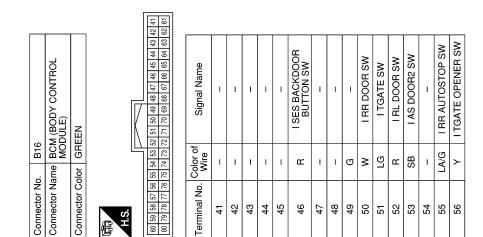
J

L

BCS

Ν

	BCM (BODY CONTROL MODULE)			148 147 146 145 157 156 155 157 150				Signal Name	O TGATE OPENER	I	O RR WIPER	O RR UNLOCK B	O RR LOCK B	I	O PWM ROOMLAMP 5	I	O STOP LAMP1	I	I	I	O DI RR LEFT B	O STOP LAMP2 NISSAN EUR	1	O DI RR RIGHT B
B23		or GRAY		151 150 149 148 D	00110011			Color of Wire	LAV	I	LA/R	W	L	I	R (I	LA/W	ı	1	ı	GR	LAY	1	٩
Connector No.	Connector Name	Connector Color		悟	H.S.			Terminal No. ⁽	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Signal Name	I DR DOOR2 SW	1	1	CAN-H	SES EXT REAR ANTENNA B	SES INT MIDDLE ANTENNA B	SES INT MIDDLE ANTENNA A	SES EXT REAR ANTENNA A	1	1			1			1	1	1	1	1	1	1	O STOP LAMP3	CAN-L
Color of	Wire SB	ı	I	_	BR	~	Γ	σ	1	1	1	,	1	1	1	1	1	1	1	ı	ı	I	LA/W	٩
Q Z	ż																							



65 66 67 67 71 71 71 72 73 73 73 73 73 77 77 77 77 77 80 80

AAMIA3599GB

Terminal I

57 58 59 60

61 62 63 64

INSPECTION AND ADJUSTMENT	
< BASIC INSPECTION > [WITH INTELLIGENT KEY SYSTEM]	
BASIC INSPECTION	А
INSPECTION AND ADJUSTMENT	1
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)	В
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description	D
BEFORE REPLACEMENT	С
When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement. Refer to <u>BCS-61</u> , "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure".	D
NOTE: If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replac- ing BCM.	E
AFTER REPLACEMENT CAUTION:	
 When replacing BCM, you must perform "After Replace ECU" with CONSULT. Complete the procedure of "After Replace ECU" in order. 	F
 If you set incorrect "After Replace ECU", incidents might occur. Configuration is different for each vehicle model. Confirm configuration of each vehicle model. When replacing BCM, perform the system initialization (NATS). When replacing BCM, perform "Configuration" of CAN gateway. 	G
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Proce-	Н
dure (NFOID:000000012422491	
1.SAVING VEHICLE SPECIFICATION (BCM)	I
CONSULT Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification. NOTE:	J
If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replac- ing BCM.	K
>> GO TO 2.	
2.SAVING VEHICLE SPECIFICATION (CAN GATEWAY)	L
CONSULT Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>LAN-94, "CONSULT</u> <u>Function"</u> .	BC
NOTE: If "READ CONFIGURATION" cannot be used, use the "WRITE CONFIGURATION - Manual selection" after replacing BCM.	Ν
>> GO TO 3.	\sim
3.REPLACE BCM	0
Replace BCM. Refer to BCS-76, "Removal and Installation".	Р
>> GO TO 4.	Г
4.WRITING VEHICLE SPECIFICATION (BCM)	
REALET	

CONSULTEnter "Re/Programming, Configuration".

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

- If "Before Replace ECU" operation was performed, automatically an "Operation Log Selection" screen will be displayed. Select the applicable file from the "Saved Data List" and press "Confirm" to write vehicle specification. Refer to <u>BCS-62</u>, "<u>CONFIGURATION (BCM)</u>: <u>Work Procedure</u>".
- 3. If "Before Replace ECU" operation was not performed, select "After Replace ECU" or "Manual Configuration" to write vehicle specification. Refer to <u>BCS-62</u>, "CONFIGURATION (BCM) : Work Procedure".

>> GO TO 5.

5.REGISTER INTELLIGENT KEYS

For initialization and registration of Intelligent Keys, refer to CONSULT Immobilizer mode and follow the onscreen instructions.

>> GO TO 5.

6.INITIALIZE BCM (NATS)

Perform BCM initialization. (NATS)

>> GO TO 6.

7.INITIALIZE TPMS

Perform TPMS initialization. Refer to WT-29, "Work Procedure".

>> GO TO 7.

 $\mathbf{8}$. WRITING VEHICLE SPECIFICATION (CAN GATEWAY FUNCTION)

CONSULT

Perform "WRITE CONFIGURATION – Config file" or "WRITE CONFIGURATION – Manual selection" to write vehicle specification. Refer to <u>LAN-96, "Work Procedure"</u>.

>> Work End. CONFIGURATION (BCM)

CONFIGURATION (BCM) : Description

INFOID:000000012422492

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

Function	Description
"Before Replace ECU"	Reads the vehicle configuration of current BCM.Saves the read vehicle configuration.
"After Replace ECU"	Writes the vehicle configuration with manual selection.
"Select Saved Data List"	Writes the vehicle configuration with saved data.

CAUTION:

- When replacing BCM, you must perform "Select Saved Data List" or "After Replace ECU" with CON-SULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new BCM.

CONFIGURATION (BCM) : Work Procedure

INFOID:000000012422493

1.WRITING MODE SELECTION

CONSULT
 Select "Reprogramming, Configuration" of BCM.

<u>SASIC INSPECTION > [WITH INTELLIGENT KEY SYSTEM]</u> When writing saved data>>GO TO 2. When writing manually>>GO TO 3. 2. PERFORM "SAVED DATA LIST"
When writing manually>>GO TO 3. 2.PERFORM "SAVED DATA LIST" CONSULT Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm". >> Work End. 3.PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"
2.PERFORM "SAVED DATA LIST" CONSULT Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm". >> Work End. 3.PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"
©CONSULT Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm". >> Work End. 3.PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"
Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm". >> Work End. 3.PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"
3.PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"
(E)CONSULT
1. Select "After Replace ECU" or "Manual Configuration".
 Identify the correct model and configuration list. Refer to <u>BCS-63</u>, "CONFIGURATION (BCM) : Configura- tion List".
3. Confirm and/or change setting value for each item.
CAUTION:
Thoroughly read and understand the vehicle specification. ECU control may not operate normally
if the setting is not correct. 4. Select "Next".
CAUTION:
Make sure to select "Next", confirm each setting value and press "OK" even if the indicated con-
figuration 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 "Completed", select "End".
>> GO TO 4.
4. OPERATION CHECK
Confirm that each function controlled by BCM operates normally.
communication and an and an and an an and an an and an an and an
>> Work End.

INSPECTION AND ADJUSTMENT

CONFIGURATION (BCM) : Configuration List

CAUTION:

- Thoroughly read and understand the vehicle specification. Incorrect settings may result in abnormal control of ECU.
- The "setting value" of this vehicle is as follows: Never select any other value then the setting value shown below. (If there is only 1 item in "setting value" that means that item is the only choice for this certain vehicle.)

MANUAL SETTIN	GITEM	NOTE				
Items	Setting value	NOTE	Ν			
AUTO LIGHT	MODE 4 ⇔ WITHOUT	MODE4: With auto light systemWITHOUT: Without auto light system	_			
CAN ERR DETECT ABD	WITH ⇔ WITHOUT	WITH: With power back doorWITHOUT: Without power back door	0			
DONGLE	WITH ⇔ WITHOUT	WITH: With dongle function (Canada)WITHOUT: Without dongle function (USA)	P			
CAN ERR DETECT TELEMATICS	WITH ⇔ WITHOUT	WITH: With telematicsWITHOUT: Without telematics	_			

 $\Leftrightarrow:$ Items which confirm vehicle specifications

INFOID:000000012422494

Κ

L

BCS

[WITH INTELLIGENT KEY SYSTEM]

SHIPPING MODE CANCEL OPERATION

Work Procedure

INFOID:000000012422495

1. SHIPPING MODE CANCEL OPERATION

- 1. Turn ignition switch OFF.
- 2. Push in (switch on) the extended storage fuse switch. Refer to PG-75, "How To Check".
- 3. Turn ignition switch ON.
- 4. Turn ignition switch OFF and wait at least 2 seconds.

NOTE:

Pressing in the extended storage switch moves the mode from Shipping to Normal.

>> GO TO 2.

2. SHIPPING MODE CANCEL CHECK

- 1. Turn ignition switch ON.
- 2. Check that extended storage fuse warning message is not displayed on information display.

>> Work End.

DTC/CIRCUIT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

Refer to LAN-11, "System Description".

DTC Logic

DTC DETECTION LOGIC

NOTE:

U1000 can be set if a module harness was disconnected and reconnected, perhaps during a repair. Confirm that there are actual CAN diagnostic symptoms and a present DTC by performing the Self Diagnostic Result procedure.

CONSULT Display	DTC Detection Condition	Possible cause	
CAN COMM CIRCUIT [U1000]	When any listed module cannot communicate with 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: • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (IPDM E/R)	(

Diagnosis Procedure

1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

YES >> Perform CAN Diagnosis as described in DIAGNOSIS section of CONSULT Operation Manual.

NO >> Refer to <u>GI-45, "Intermittent Incident"</u>.

INFOID:000000012422496

INFOID:000000012422497

INFOID:000000012422498

D

Ε

А

В

- - J
 - Κ

L

BCS

Ν

Ο

Ρ

U1010 CONTROL UNIT (CAN) [WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000012422499

INFOID:000000012422500

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible Cause
CAN COMM CIRCUIT [U1010]	BCM detected internal CAN communication circuit mal- function.	BCM

Diagnosis Procedure

1. REPLACE BCM

When DTC U1010 is detected, replace BCM.

>> Replace BCM. Refer to <u>BCS-76, "Removal and Installation"</u>.

< DTC/CIRCUIT DIAGNOSIS >

U0415 VEHICLE SPEED SIG

Description

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:000000012422502

INFOID:000000012422501

DTC DETECTION LOGIC

NOTE:

- If DTC U0415 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-65, "DTC Logic"</u>.
- If DTC U0415 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-66, "DTC Logic"</u>.

CONSULT Display	DTC Detection Condition	Possible Cause	
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.	ABS systemCombination meter systemCAN bus harness	F
DTC CONFIRMATION	ON PROCEDURE		G
1. DTC CONFIRMA	TION		G
 Erase the DTC. Turn ignition swit Perform "Self Dia 2 seconds or more 	ignostic Result" of "BCM" with CONSULT, aft	er the ignition switch has been turned ON for	Н
Is any DTC detected?	-		I
YES >> Refer to NO >> Inspectio	<u>BCS-48, "DTC_Index"</u> . n End.		
Diagnosis Proce		INFOID:000000012422503	J
1. ABS ACTUATOR	AND ELECTRIC UNIT (CONTROL UNIT) S	ELF DIAGNOSTIC RESULT	
	stic Result" of "ABS" with CONSULT. Refer t		Κ
Is any DTC detected?	-		
YES >> Perform 1 NO >> GO TO 2	the trouble diagnosis related to the detected	DTC. Refer to <u>BRC-57, "DTC Index"</u> .	L
2. CHECK ABS AC	TUATOR AND ELECTRIC UNIT (CONTRO	L UNIT) POWER SUPPLY AND GROUND	
CIRCUIT		E	BC
Check ABS actuator dure".	and electric unit (control unit) power and gr	ound. Refer to <u>BRC-158, "Diagnosis Proce-</u>	
<u>Is the inspection resu</u>	It normal?		Ν
YES >> GO TO 3			
^	replace harness or connectors.		0
	IETER SELF DIAGNOSTIC RESULT		0
Perform "Self Diagno (METER/M&A)".	ostic Result" of "METER M&A" with CONSU	JLT. Refer to <u>MWI-21, "CONSULT Function</u>	
Is any DTC detected?	2		Ρ
YES >> Perform	the trouble diagnosis related to the detected <u>GI-45, "Intermittent Incident"</u> .	DTC. Refer to <u>MWI-31, "DTC Index"</u> .	

С

Ε

< DTC/CIRCUIT DIAGNOSIS >

B2562 LOW VOLTAGE

DTC Logic

INFOID:000000012422504

INFOID:000000012422505

[WITH INTELLIGENT KEY SYSTEM]

DTC DETECTION LOGIC

CONSULT Display DTC Detection Condition Possible		Possible cause
LOW VOLTAGE [B2562]	When the power supply voltage to BCM remains less than 8.8V for 120 seconds or more.	Harness or connector (power supply circuit)Vehicle battery

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

1. Erase DTC.

- 2. Turn ignition switch OFF.
- 3. Perform the "Self Diagnostic Result" of "BCM" with CONSULT, after the ignition switch has been turned ON for 120 seconds or more.

Is any DTC detected?

- YES >> Refer to <u>BCS-68</u>, "Diagnosis Procedure".
- NO >> Inspection End.

Diagnosis Procedure

1. CHECK BATTERY VOLTAGE

Check battery voltage.

Is battery voltage less than 8.8V?

YES >> Charge battery and retest. Refer to <u>CHG-10</u>, "Work Flow (With EXP-800 NI or <u>GR8-1200 NI</u>)" or <u>CHG-13</u>, "Work Flow (Without EXP-800 NI or <u>GR8-1200 NI</u>)".

NO >> GO TO 2.

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to BCS-69, "Diagnosis Procedure".

Is the inspection result normal?

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

3. BCM SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "BCM" with CONSULT. Refer to <u>BCS-25, "BCM : CONSULT Function</u> (BCM - BCM)".

Is DTC B2562 CRNT?

- YES >> Replace BCM. Refer to <u>BCS-76, "Removal and Installation"</u>.
- NO >> Refer to <u>GI-45, "Intermittent Incident"</u>.

P < DTC/CIRCUIT DIAGNOS			JIT FELLIGENT KEY SYSTEM]
POWER SUPPLY A	-		
Diagnosis Procedure			INFOID:000000012422506
Regarding Wiring Diagram ir	formation, refer to <u>BCS-51.</u>	"Wiring Diagram".	
1. CHECK FUSE			
Check that the following fuse	e is not blown.		
Terminal No.	Signal name		Fuse No.
161	BCM power sup		7 (10A)
NO >> GO TO 2.	wn fuse after repairing the at	ffected circuit.	
2. CHECK POWER SUPPL	Y CIRCUIT		
 Disconnect BCM connect Check voltage between 	ctor M20. BCM connector M20 and gr	ound.	
BCI	Λ	Ground	Voltage
Connector	Terminal		(Approx.)
M20	161	_	Battery voltage
Is the inspection result norm YES >> GO TO 3. NO >> Repair or replac 3. CHECK GROUND CIRC Check continuity between BC	e harness or connectors. UIT	ınd.	
BCI	И		
Connector	Terminal	Ground	Continuity
M20	170 171	_	Yes
Is the inspection result norm	al?		
YES >> Inspection End. NO >> Repair or replac	e harness or connectors.		

Р

0

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

INFOID:000000012422507

Regarding Wiring Diagram information, refer to BCS-51. "Wiring Diagram".

1. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and combination switch connector.
- 3. Check continuity between BCM connector M18 and combination switch connector M28.

Combination switch	BC	BCM		Combination switch	
	Connector	Terminal	Connector	Terminal	Continuity
INPUT 1		38		8	
INPUT 2	-	39	-	6	-
INPUT 3	M18	36	M28	5	Yes
INPUT 4		37	_	3	
INPUT 5	-	33		1	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check continuity between BCM connector M18 and ground.

Combination switch	BCM			Continuity
signal	Connector	Terminal	*	Continuity
INPUT 1		38	_	
INPUT 2		39	Ground	
INPUT 3	M18	36		No
INPUT 4		37	_	
INPUT 5		33		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK BCM OUTPUT VOLTAGE

1. Connect BCM connector M18 and combination switch connector.

- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M18 and ground.

Combination switch	BCM		Ground	Voltago
signal	Connector	Terminal	Ground	Voltage
INPUT 1		38		
INPUT 2		39	_	
INPUT 3	M18	36	—	Refer to <u>BCS-29, "Ref-</u> erence Value".
INPUT 4		37	_	
INPUT 5		33		

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >		[WITH INTELLIGENT KEY SYSTEM]	
Is the i	nspection result normal?		
YES NO	>> Replace the combination switch. Refer to <u>BC</u> >> Replace BCM. Refer to <u>BCS-76. "Removal a</u>	<u>S-77, "Removal and Installation".</u>	

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:000000012422508

Regarding Wiring Diagram information, refer to BCS-51. "Wiring Diagram".

1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M19 and combination switch connector.
- 3. Check continuity between BCM connector M19 and combination switch connector M28.

Combination switch	BCM		Combination switch		Continuity
signal	Connector	Terminal	Connector	Terminal	Continuity
OUTPUT 1		85		2	
OUTPUT 2		84		10	
OUTPUT 3	M19	86	M28	15	Yes
OUTPUT 4		87		4	
OUTPUT 5		34		7	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace harness or connectors.

2. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check continuity between BCM connector M19 and ground.

Combination switch	BCM			Continuity
signal	Connector	Terminal		Continuity
OUTPUT 1		85	_	
OUTPUT 2		84	Ground	
OUTPUT 3	M19	86	_	No
OUTPUT 4		87	_	
OUTPUT 5		34		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

 $\mathbf{3}$. CHECK BCM INPUT VOLTAGE

1. Connect BCM connector M19 and combination switch connector.

- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M19 and ground.

Combination switch	BCM		Ground	Valtaga
signal	Connector	Terminal	Giouna	Voltage
OUTPUT 1		85		
OUTPUT 2		84	_	
OUTPUT 3	M19	86		Refer to <u>BCS-29, "Ref-</u> erence Value".
OUTPUT 4		87	_	
OUTPUT 5		34		

		TH INTELLIGENT KEY SYSTEM]
	nspection result normal?	
YES NO	>> Replace BCM. Refer to <u>BCS-76, "Removal and Installation"</u> . >> Replace the combination switch. Refer to <u>BCS-77, "Removal</u>	and Installation".
		В
		С
		D
		E
		F
		G

BCS

Н

J

Κ

L

Ν

0

Ρ

COMBINATION SWITCH SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

INFOID:000000012422509

[WITH INTELLIGENT KEY SYSTEM]

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

								Data	monite	or item	1						
Malfunction combination	FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	INT VOLUME	RR WIPER ON	RR WIPER INT	RR WASHER SW	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW	LIGHT OFF SW	PASSING SW	AUTO LIGHT SW	FR FOG SW
A												×			×		×
В					×						×		×			×	
С			×					×	×	×							
D	×	×		×										×			
E					×	×	×										
F		×	×		×												
G	×				×			×				×					
Н				×			×						×		×		
I						×				×						×	
J									×		×			×			×
К			•		•	•		ļ	All Iten	าร	•			•	•	•	·
L			If only	/ one i	tem is	detect	ed or t	he iten	n is no	t appli	cable t	o the o	combir	ations	A to k	K	

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

Malfunction combination	Malfunctioning part	Repair or replace				
А	Combination switch INPUT 1 circuit					
В	Combination switch INPUT 2 circuit					
С	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to <u>BCS-70</u> , "Diagnosis Procedure".				
D	Combination switch INPUT 4 circuit					
E	Combination switch INPUT 5 circuit	-				
F	Combination switch OUTPUT 1 circuit					
G	Combination switch OUTPUT 2 circuit					
Н	Combination switch OUTPUT 3 circuit	Inspect the combination switch output circuit applicable to the malfunction- ing part. Refer to <u>BCS-72</u> , " <u>Diagnosis Procedure</u> ".				
I	Combination switch OUTPUT 4 circuit	ing part. Refer to <u>Deo rz. Diagnosis riocedule</u> .				
J	Combination switch OUTPUT 5 circuit					
K	ВСМ	Replace BCM. Refer to BCS-76, "Removal and Installation".				
L	Combination switch	Replace the combination switch. Refer to <u>BCS-77, "Removal and Installa-</u> tion".				

NORMAL OPERATING CONDITION

NORMAL OPERATING CONDITION

Description

SHIPPING MODE

- Shipping mode inhibits battery power consumption during transportation or storage of the vehicle. Vehicle is set to shipping mode before being shipped from the factory.
- When ignition switch is OFF, BCM operates shipping mode.
- BCM control function is limited in shipping mode. Remote keyless entry function is not operated during the shipping mode.
- For shipping mode cancel operation, refer to <u>BCS-64, "Work Procedure"</u>. NOTE:

Do not cancel shipping mode during storage of the vehicle. Always cancel shipping mode before delivery of the vehicle to customer.

F

А

В

INFOID:000000012422510

[WITH INTELLIGENT KEY SYSTEM]

Κ

L

Ο

REMOVAL AND INSTALLATION BCM (BODY CONTROL MODULE)

Removal and Installation

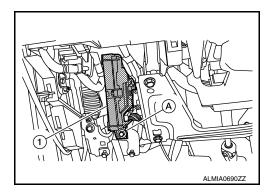
INFOID:000000012422511

CAUTION:

Before replacing the BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-122</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u> : <u>Description</u>".

REMOVAL

- 1. Disconnect the negative battery terminal. Refer to PG-82, "Removal and Installation".
- 2. Remove the front kicking plate (LH). Refer to <u>INT-23, "KICKING PLATE : Removal and Installation Front Kicking Plate"</u>.
- 3. Remove the dash side finisher (LH). Refer to INT-24, "DASH SIDE FINISHER : Removal and Installation".
- 4. Remove the instrument lower panel LH. Refer to IP-23, "Removal and Installation".
- 5. Disconnect the fuse box and the harness connectors.
- 6. Remove the bolt (A), then pull out the BCM (1).



7. Disconnect the harness connectors from the BCM and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- When replacing BCM, perform "WRITE CONFIGURATION" Refer to <u>BCS-123</u>, "CONFIGURATION (<u>BCM)</u>: <u>Description</u>".
- When replacing BCM, perform the system initialization (NATS). Refer to <u>BCS-61, "ADDITIONAL SER-</u> <u>VICE WHEN REPLACING CONTROL UNIT (BCM) : Description"</u>.
- When replacing BCM, if new BCM does not come with Intelligent keys attached, all existing Intelligent keys must be re-registered. Refer to the CONSULT immobilizer mode and follow the on screen instructions.

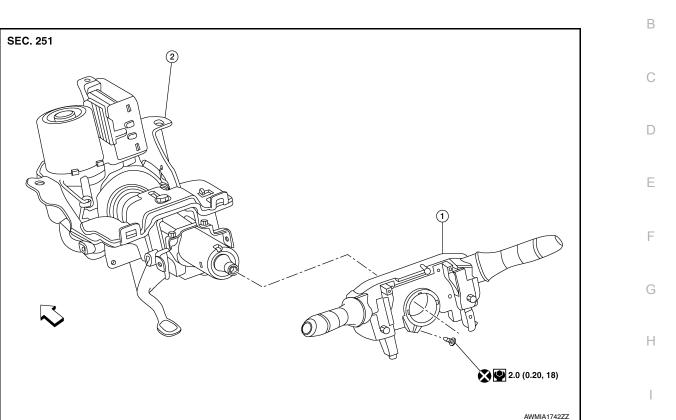
< REMOVAL AND INSTALLATION >

COMBINATION SWITCH

Exploded View

INFOID:000000012422512

А

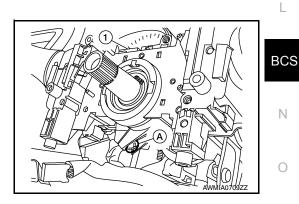


1. Combination switch 2. Steering column <

Removal and Installation

REMOVAL

- 1. Remove the steering angle sensor. Refer to <u>BRC-189</u>, "Removal and Installation".
- 2. Disconnect harness connector from combination switch.
- 3. Remove screw (A) and combination switch (1).



J

Κ

INFOID:000000012422513

INSTALLATION Installation is in the reverse order of removal. CAUTION: Do not reuse screw securing combination switch.

Revision: September 2015

PRECAUTION PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. 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.

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

WARNING:

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

PREPARATION

PREPARATION

Special Service Tool

INFOID:000000012422515

А

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description	
 (J-50190) Signal Tech II		 Activate and display TPMS transmitter IDs Display tire pressure reported by the TPMS transmitter Read TPMS DTCs 	
		 Register TPMS transmitter IDs Check Intelligent Key relative signal strength Confirm vehicle Intelligent Key antenna sig- 	
	ALEIA0131ZZ	nal strengthCompatible with future sensorsEquipped with a display	

G

Н

J

Κ

L

BCS

Ν

0

Р

PREPARATION [WITHOUT INTELLIGENT KEY SYSTEM]

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

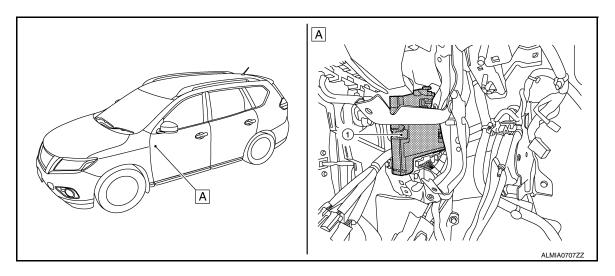
SYSTEM DESCRIPTION

COMPONENT PARTS

BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : Component Parts Location

INFOID:000000012422516



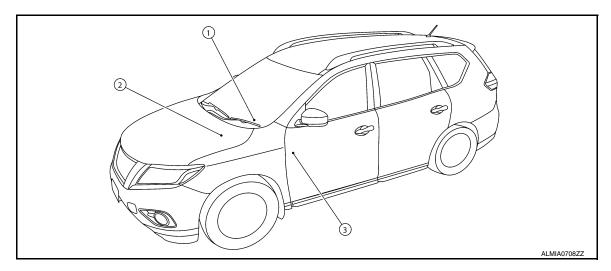
- 1. BCM
- A. Behind instrument panel (LH)

POWER CONSUMPTION CONTROL SYSTEM

2.

POWER CONSUMPTION CONTROL SYSTEM : Component Parts Location

INFOID:000000012422517



- 1. Combination meter Refer to <u>MWI-6, "METER SYSTEM :</u> <u>Component Parts Location"</u>.
- IPDM E/R 3. Refer to <u>PCS-6. "Component Parts</u> Location".
- BCM Refer to <u>BCS-80, "BODY CONTROL</u> <u>SYSTEM : Component Parts Loca-</u> <u>tion"</u>.

SYSTEM BODY CONTROL SYSTEM

BODY CONTROL SYSTEM : System Description

INFOID:0000000012422518

А

В

Е

OUTLINE

- BCM (body control module) controls various electrical components. It receives the information required from CAN communication and the signals received from each switch and sensor.
- BCM has a combination switch reading function for reading the status of combination switches (light, turn signal, wiper and washer) in addition to functions for controlling the operation of various electrical components. It also has a signal transmission function for other systems, and a power consumption control function that reduces the power consumption with the ignition switch OFF.
- BCM is equipped with a diagnosis function that operates with CONSULT and allows for various settings to be changed.

BCM FUNCTION LIST

System	Refer to
Combination switch reading system	BCS-82, "COMBINATION SWITCH READING SYSTEM : System Description"
Signal buffer system	BCS-85, "SIGNAL BUFFER SYSTEM : System Description"
Power consumption control system	BCS-85, "POWER CONSUMPTION CONTROL SYSTEM : Sys- tem Description"
Shipping mode control system	BCS-87, "SHIPPING MODE CONTROL SYSTEM : System De- scription"
Headlamp system	EXL-11. "HEADLAMP SYSTEM : System Description" (halogen headlamp)
Daytime light system	EXL-13, "DAYTIME RUNNING LIGHT SYSTEM : System De- scription" (halogen headlamp)
Turn signal and hazard warning lamps system	EXL-14. "TURN SIGNAL AND HAZARD WARNING LAMP SYS- TEM : System Description" (halogen headlamp)
Parking, license plate and tail lamps system	EXL-14. "PARKING. LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description" (halogen headlamp)
Exterior lamp battery saver system	EXL-17. "EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description" (halogen headlamp)
Interior room lamp control system	INL-7, "INTERIOR ROOM LAMP CONTROL SYSTEM : System Description"
Interior room lamp battery saver system	INL-9, "INTERIOR ROOM LAMP BATTERY SAVER SYSTEM : System Description"
Front wiper and washer system	WW-8. "FRONT WIPER AND WASHER SYSTEM : System De- scription"
Rear wiper and washer system	WW-10. "REAR WIPER AND WASHER SYSTEM : System De- scription"
Warning chime system	WCS-6, "WARNING CHIME SYSTEM : System Description"
Door lock system	DLK-298, "POWER DOOR LOCK SYSTEM : System Description"
Back door open system	<u>DEN-290, FOWER DOOR LOOK STSTEM</u> , System Description
Nissan vehicle immobilizer system (NVIS)	SEC-126. "NISSAN VEHICLE IMMOBILIZER SYSTEM-NATS : System Description"
Vehicle security system	
Panic alarm	SEC-127. "VEHICLE SECURITY SYSTEM : System Description"
Rear window defogger system	DEF-8, "System Description"
Power window system	PWC-9, "System Description"
Remote keyless entry system	DLK-299, "REMOTE KEYLESS ENTRY SYSTEM : System De- scription"

SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

System	Refer to
RAP (retained accessory power) system	BCS-95, "RETAINED PWR : CONSULT Function (BCM - RE- TAINED PWR)"
TPMS (tire pressure monitoring system)	WT-9, "System Description"

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Description

INFOID:000000012422519

SYSTEM DIAGRAM

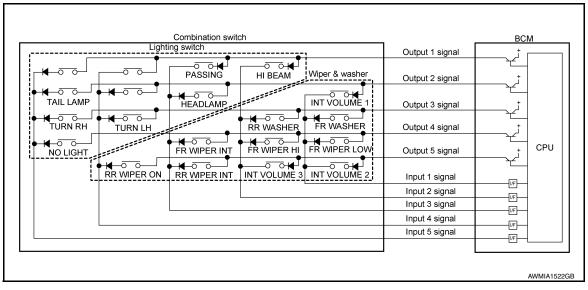
	Lic	Combination swit	ch		l	BCM
<u>۲</u>	 •	•	•	-1	Output 1 signal	
		PASSING	HI BEAM	Wiper & washer	Output 2 signal	
•		HEADLAMP			Output 3 signal	
•			RR WASHER	FR WASHER	Output 4 signal	
•		FR WIPER INT	FR WIPER HI	FR WIPER LOW	Output 5 signal	
	RR WIPER ON			INT VOLUME 2	Input 1 signal	
					Input 2 signal	
					Input 3 signal	
					Input 4 signal	
					Input 5 signal	

OUTLINE

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

COMBINATION SWITCH MATRIX

Combination switch circuit



SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

D

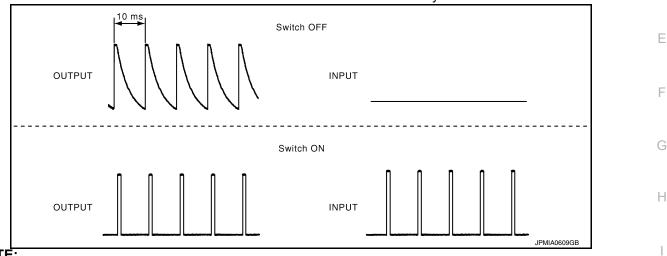
Κ

Combination switch INF	PUT-OUTPUT system lis	st				
System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	А
OUTPUT 1	_	HI BEAM	PASSING	_	_	
OUTPUT 2	INT VOLUME 1	_	HEADLAMP		TAIL LAMP	D
OUTPUT 3	FR WASHER	RR WASHER	_	TURN LH	TURN RH	В
OUTPUT 4	FR WIPER LOW	FR WIPER HI	FR WIPER INT		NO LIGHT	
OUTPUT 5	INT VOLUME 2	INT VOLUME 3	RR WIPER INT	RR WIPER ON	_	С

COMBINATION SWITCH READING FUNCTION

Description

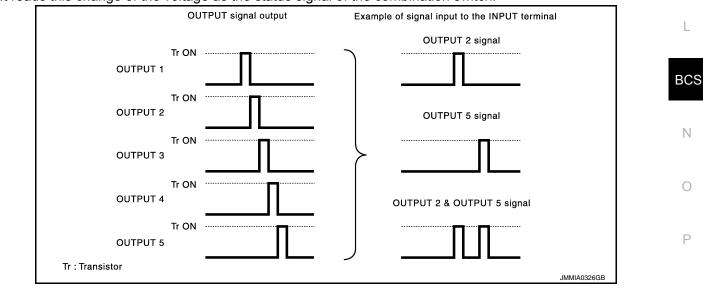
• BCM reads the status of the combination switch at 10 ms intervals normally.



NOTE:

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

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 5$, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT 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) is turned ON

SYSTEM

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

The circuit between OUTPUT 3 and INPUT 5 is formed when the TURN RH switch is turned ON.

	Lighting	Combination switch switch	ı 	-	Output 1 signal	BCM
			HI BEAM	Wiper & washer	Output 2 signal	A A B
TAIL LAMP		HEADLAMP	RR WASHER	INT VOLUME 1	Output 3 signal Output 4 signal	© †
		FR WIPER INT	FR WIPER HI		Output 5 signal	
	RR WIPER ON				Input 1 signal	E I I I I
					Input 2 signal	F_2 3
			→		Input 4 signal Input 5 signal	
						AWMIA1523

- BCM detects the combination switch status signal "5C" when the signal of OUTPUT 3 is input to INPUT 5.
- BCM judges that the TURN RH switch is ON when the signal "5C" is detected.

Example 2: When some switches (TAIL LAMP, TURN RH) are turned ON

The circuits between OUTPUT 2 and INPUT 5 and between OUTPUT 3 and INPUT 5 are formed when the TAIL LAMP switch and TURN RH switch are turned ON.

·	Li	Combination swit	tch		Output 1 signal	BCM +
		PASSING	Output 2 signal	A A		
		HEADLAMP			Output 3 signal	B لم
			RR WASHEF	R FR WASHER	Output 4 signal	
NO LIGHT			FR WIPER H		Output 5 signal	
				3 INT VOLUME 2	Input 1 signal	
					Input 2 signal	
					Input 3 signal	
					Input 4 signal	(4)
					Input 5 signal	
						AWMIA15240

- BCM detects the combination switch status signal "5BC" when the signals of OUTPUT 2 and OUTPUT 3 are input to INPUT 5.
- BCM judges that the TAIL LAMP switch and TURN RH switch are ON when the signal "5BC" is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION) BCM judges the wiper intermittent dial 1 - 4 by the status of INT VOLUME 1, 2, and 3 switches.

Wiper intermittent	Switch status							
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3					
1	OFF	OFF	OFF					
2	ON	OFF	OFF					
3	OFF	ON	OFF					
4	OFF	OFF	ON					

SIGNAL BUFFER SYSTEM

< SYSTEM DESCRIPTION >

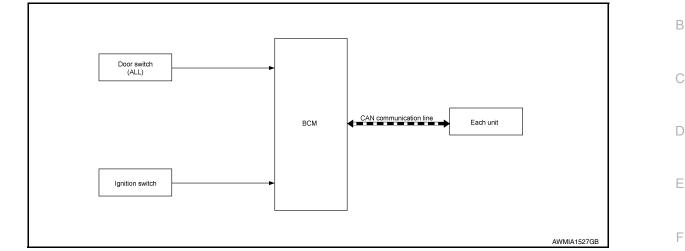
[WITHOUT INTELLIGENT KEY SYSTEM]

SIGNAL BUFFER SYSTEM : System Description

INFOID:000000012422520

А

SYSTEM DIAGRAM



SYSTEM

OUTLINE

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

SIGNAL TRANSMISSION FUNCTION LIST

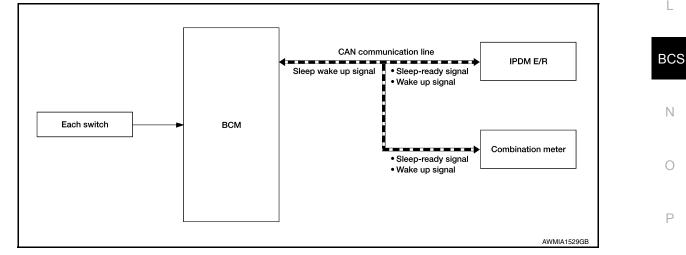
Signal name	Input	Output	Description	ŀ
 Ignition switch ON signal Ignition switch signal	Ignition switch	IPDM E/R (CAN)	Inputs the ignition switch signal and transmits the ignition switch status judged with BCM via CAN communication.	I
Door switch signal	Any door switch	Combination meter (CAN) IPDM E/R (CAN)	Inputs the door switch signal and transmits it via CAN com- munication.	U.

POWER CONSUMPTION CONTROL SYSTEM

POWER CONSUMPTION CONTROL SYSTEM : System Description

INFOID:000000012422521

SYSTEM DIAGRAM



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.

< SYSTEM DESCRIPTION >

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 each switch 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 wake-up signal. BCM is in CAN communication sleep mode.
- BCM is in the low power consumption mode and performs the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

Sleep condition

CAN sleep condition	BCM sleep condition
 Receiving the sleep-ready signal (ready) from all units Ignition switch: OFF Vehicle security system alarm and panic alarm: No operation Warning lamp: No operation Brake switch: OFF Turn signal indicator lamp: No operation Exterior lamp: OFF Door lock status: No change CONSULT communication status: No communication Meter display signal: Non-transmission Door switch status: No change Rear window defogger: OFF 	 Interior room lamp battery saver: Time out RAP system: OFF NATS: No operation Tire pressure monitoring 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 are 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 are 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.

BCM wake-up condition	CAN wake-up condition
 Front door lock assembly LH (key cylinder switch): Lock or unlock Door lock switch: OFF→ON Door unlock switch: OFF→ON Back door opener switch: OFF→ON 	 Receiving the sleep-ready signal (Not-ready) from any units Ignition switch: OFF→ON Hazard switch: OFF→ON, ON→OFF PASSING switch: OFF→ON, ON→OFF TAIL LAMP switch: OFF→ON, ON→OFF Front door switch LH: OFF→ON, ON→OFF Front door switch RH: OFF → ON, ON → OFF Back door switch: OFF→ON, ON→OFF Stop lamp switch signal: ON

SHIPPING MODE CONTROL SYSTEM

SHIPPING MODE CONTROL SYSTEM : System Description

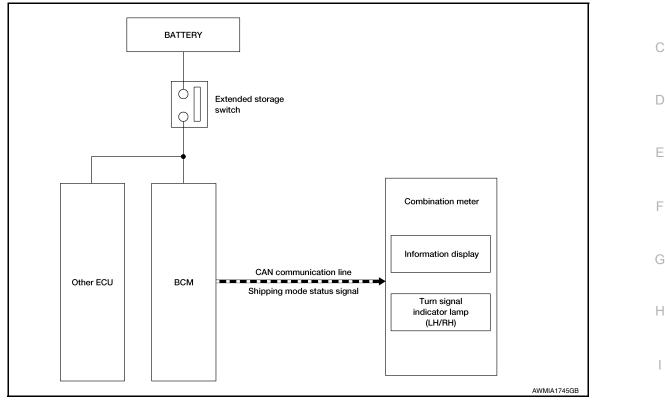
INFOID:000000012422522

А

В

SYSTEM DIAGRAM

< SYSTEM DESCRIPTION >



DESCRIPTION

- BCM switches the status (shipping mode or normal mode) by itself according to the extended storage fuse switch condition, and transmits shipping mode status signal to combination meter and each unit via CAN communication.
- When shipping mode function operates, each control unit does not detect DTCs.
- BCM control functions are limited in shipping mode. Refer to <u>BCS-136, "Description"</u>.
- The combination meter displays extended storage fuse warning message* on the information display, and turns the turn signal indicator lamp (LH/RH) ON, when BCM is in shipping mode.
- *: When shipping mode function operates, "SHIPPING MODE ON PUSH STORAGE FUSE" is displayed.

Κ

L

0

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000012422523

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description	
Ecu Identification	The BCM part number is displayed.	
Self Diagnostic Result	The BCM self diagnostic results are displayed.	
Data Monitor	The BCM input/output data is displayed in real time.	
Active Test	The BCM activates outputs to test components.	
Work support	The settings for BCM functions can be changed.	
Configuration	The vehicle specification can be read and saved.The vehicle specification can be written when replacing BCM.	
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.	

SYSTEM APPLICATION BCM can perform the following functions.

				Direct D	Diagnosti	c Mode		
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK			×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT					×		
Exterior lamp	HEADLAMP			×	×			
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×		×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
TPMS	AIR PRESSURE MONITOR		×	х	×	×		

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:000000012422524

SELF DIAGNOSTIC RESULT

< SYSTEM DESCRIPTION >

Refer to BCS-109, "DTC Index".

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)
[WITHOUT INTELLIGENT KEY SYSTEM]

А

F

Monitor Item [Unit]	Description	r
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.	
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	[
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock 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 UNLK].	G

WORK SUPPORT

Support Item	Setting	Description	Η
	On*	Automatic door locks function ON.	
DOOR LOCK-UNLOCK SET	Off	Automatic door locks function OFF.	
AUTO UNLOCK TYPE	MODE2	Driver door only unlocks automatically.	
AUTO UNLOCK TIPE	MODE1*	All doors unlock automatically.	
AUTO LOCK FUNCTION	MODE3	This mode is not used.	J
	MODE2	Doors lock automatically when shifted out of P (park).	
	MODE1*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).	
	Off	_	K
	MODE3	This mode is not used.	
AUTO UNLOCK FUNCTION	MODE2	Doors unlock automatically when shifted into P (park).	L
	MODE1*	Doors unlock automatically when ignition is switched from ON to OFF.	
	Off	-	

* : Initial setting REAR DEFOGGER

REAR DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)

INFOID:000000012422525

BCS

Ο

DATA MONITOR

		P
REAR DEF SW [On/Off]	Indicates condition of rear window defogger switch.	_
Monitor Item [Unit]	Description	

ACTIVE TEST

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation [Off/On].

WORK SUPPORT

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

INFOID:000000012422526

INFOID:000000012422527

Support Item	Setting	Description
	MODE3	Rear defogger turns OFF after 1 minute.
SET R-DEF TIMER	MODE2	Rear defogger remains ON until turned OFF.
	MODE1*	Rear defogger turns OFF after 15 minutes.

* : Initial setting

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

DATA MONITOR

Monitor Item [Unit]	Description	
TAIL LAMP SW [On/Off]	Indicates condition of combination switch.	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	

ACTIVE TEST

Test Item	Description
SEAT BELT WARN TEST	This test is able to check seat belt warning chime operation [On/Off].
LIGHT WARN ALM	This test is able to check light warning chime operation [On/Off].
REVERSE WARNING	This test is able to check reverse warning chime operation [On/Off].
ID REGIST WARNING	This test is able to check TPMS sensor ID regist warning chime operation [On/Off].

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

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.
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.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock 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.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.
	·

ACTIVE TEST

Test Item	Description
INT LAMP	This test is able to check interior room lamp operation [On/Off].

WORK SUPPORT

DIAGNOSIS SYSTEM (BCM)

Interior room lamp timer function ON.

Interior room lamp timer function OFF.

[WITHOUT INTELLIGENT KEY SYSTEM]

А

Description

FR WIPER LOW [On/Off]

FR WASHER SW [On/Off] FR WIPER INT [On/Off]

WORK SUPPORT			
Support Item	Setting	Desci	ription
REMO CONT ID CONFIR	_	Keyfob ID code registration is d	isplayed.
HEAD LAMP HEAD LAMP : CONSUL	T Function (BCM	- HEADLAMP)	INFOID:00000001242252
DATA MONITOR			
Monitor Item [Unit]		Description	
TURN SIGNAL R [On/Off]			
TURN SIGNAL L [On/Off]			
TAIL LAMP SW [On/Off]			
HI BEAM SW [On/Off]	Indicates condition	of combination switch.	
HEAD LAMP SW [On/Off]			
LIGHT OFF SW [On/Off]			
PASSING SW [On/Off]			
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.	
ACTIVE TEST			
Test Item		Description	
DAYTIME RUNNING LIGHT	This test is able to o	check daytime running lamp operation	[On/Off].
ILL DIM SIGNAL	This test is able to o	check head lamp illumination dimming	operation [On/Off].
WIPER			
WIPER : CONSULT Fun	ction (BCM - WIF	PER)	INFOID:0000000124225
DATA MONITOR			
Monitor Item [Unit]		Description	

Setting

On*

Off

Indicates condition of wiper operation of combination switch.

< SYSTEM DESCRIPTION >

SET I/L D-UNLCK INTCON

Support Item

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description
FR WIPER STOP [On/Off]	Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line.
INT VOLUME [1 – 4]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	
RR WIPER INT [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WASHER SW [On/Off]	
RR WIPER STOP [On/Off]	Indicates rear wiper motor auto stop input from rear wiper motor.

ACTIVE TEST

Test Item	Description
FR WIPER	This test is able to check front wiper operation [Hi/Lo/INT/Off].
RR WIPER	This test is able to check rear wiper operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description	
WIPER SPEED SETTING	On [*]	Front wiper intermittent time linked with vehicle speed and wiper intermittent dial position.	
	Off	Front wiper intermittent time is not linked with vehicle speed and wiper in- termittent dial position.	

*: Initial Setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:000000012422531

DATA MONITOR

Description	
Indiastop condition of turn signal function of combination quitch	
 Indicates condition of turn signal function of combination switch. 	
Indicates condition of hazard switch.	
Indicates condition of lock signal from Intelligent Key.	
Indicates condition of unlock signal from Intelligent Key.	
Indicates condition of panic alarm signal from Intelligent Key.	

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:000000012422532

DATA MONITOR

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description	A
FR WIPER HI [On/Off]		
FR WIPER LOW [On/Off]	Indicates condition of winer exerction of combination quitch	_
FR WASHER SW [On/Off]	Indicates condition of wiper operation of combination switch.	E
FR WIPER INT [On/Off]		
INT VOLUME [1 - 4]	Indicates condition of intermittent wiper operation of combination switch.	(
RR WIPER ON [On/Off]		
RR WIPER INT [On/Off]	Indicates condition of rear wiper operation of combination switch.	
RR WASHER SW [On/Off]		
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch.	
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch.	F
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch.	
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch.	
HEAD LAMP SW [On/Off]	Indicates condition of head lamp switch operation of combination switch.	F
LIGHT OFF SW [On/Off]	Indicates condition of no light switch operation of combination switch.	
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.	

BCM

BCM : CONSULT Function (BCM - BCM)

ECU IDENTIFICATION

The BCM part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to <u>BCS-109, "DTC Index"</u>.

WORK SUPPORT

Support Item	Setting	Description	
RESET SETTING VALUE	Reset	Returns BCM to initial value in factory shipment.	K
RESET SETTING VALUE	Cancel	Cancels the reset function.	

CONFIGURATION

Refer to BCS-123, "CONFIGURATION (BCM) : Description".

CAN DIAG SUPPORT MNTR

Refer to <u>LAN-17, "CAN Diagnostic Support Monitor"</u>. IMMU

IMMU : CONSULT Function (BCM - IMMU)

SELF DIAGNOSTIC RESULT

Refer to BCS-109, "DTC Index".

ACTIVE TEST

Test Item	Description	Ρ
THEFT IND	This test is able to check security indicator operation [On/Off].	

WORK SUPPORT

Support Item	Setting	Description
CONFIRM DONGLE ID	—	Dongle ID can be checked.

Ο

L

Н

INFOID:000000012422534

INFOID:000000012422533

DIAGNOSIS SYSTEM (BCM) [WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:000000012422535

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.
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.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock 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.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check battery saver operation [On/Off].

TRUNK

TRUNK : CONSULT Function (BCM - TRUNK)

DATA MONITOR

Monitor Item [Unit]	Description
BACK DOOR OPENER SW [On/ Off]	Indicates condition of back door opener switch.

THEFT ALM

THEFT ALM : CONSULT Function (BCM - THEFT ALM)

INFOID:000000012422537

INFOID:000000012422536

DATA MONITOR

Monitored Item	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.
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.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock 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.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

Revision: September 2015



< SYSTEM DESCRIPTION >

ACTIVE TEST

	()	
[WITHOUT INTELLIGENT KE	Y SYSTEM]

Test Item	Description	
FLASHER	This test is able to check turn signal lamp operation [LH/RH/Off].	_
THEFT IND	This test is able to check security indicator lamp operation [On/Off].	В
VEHICLE SECURITY HORN	This test is able to check vehicle security horn operation [On].	_
HEADLAMP(HI)	This test is able to check vehicle security lamp operation [On].	С

DIAGNOSIS SYSTEM (BCM)

WORK SUPPORT

Support Item	Setting	Description	D
SECURITY ALARM SET	On*	Security alarm ON.	
SECONT ALANM SET	Off	Security alarm OFF.	

RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

DATA MONITOR

Monitor Item [Unit]	Description	G
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.	Н

AIR PRESSURE MONITOR

AIR PRESSURE MONITOR : CONSULT Function (BCM-AIR PRESSURE MONITOR)

NOTE:

The Signal Tech II Tool [— (J-50190)] can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

· Activate and display TPMS sensor IDs

- · Display tire pressure reported by the TPMS sensor
- Read TPMS DTCs

Register TPMS sensor IDs

SELF DIAGNOSTIC RESULT

NOTE:

Before performing Self Diagnostic Result, be sure to register the sensor ID or the actual malfunction may be different from that displayed on CONSULT.

Refer to BCS-109, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description	
AIR PRESS FL [kPa, kg/cm ² or Psi]	Indicates air pressure of front LH tire.	
AIR PRESS FR [kPa, kg/cm ² or Psi]	Indicates air pressure of front RH tire.	0
AIR PRESS RR [kPa, kg/cm ² or Psi]	Indicates air pressure of rear RH tire.	
AIR PRESS RL [kPa, kg/cm ² or Psi]	Indicates air pressure of rear LH tire.	Ρ
ID REGST FL1 [Done/Yet]	Indicates ID registration status of front LH sensor.	
ID REGST FR1 [Done/Yet]	Indicates ID registration status of front RH sensor.	
ID REGST RR1 [Done/Yet]	Indicates ID registration status of rear RH sensor.	
ID REGST RL1 [Done/Yet]	Indicates ID registration status of rear LH sensor.	

INFOID:000000012422538

Κ

L

BCS

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item [Unit]	Description
WARNING LAMP [Off/On]	Indicates condition of low tire pressure warning lamp in combination meter.
BUZZER [Off/On]	Indicates condition of buzzer in combination meter.

ACTIVE TEST

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].
WARNING LAMP	This test is able to check tire pressure warning lamp operation [On/Off].
ID REGIST WARNING	This test is able to check ID regist warning chime operation [On/Off].

WORK SUPPORT

Support Item	Description
ID READ	The registered ID number is displayed.
ID REGIST	Refer to <u>WT-26, "Description"</u> .

ECU DIAGNOSIS INFORMATION

BCM

Reference Value

А

С

D

Ε

INFOID:000000012422540

[WITHOUT INTELLIGENT KEY SYSTEM]

NOTE:

The Signal Tech II Tool [– (J-50190)] can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS sensor IDs
- Display tire pressure reported by the TPMS sensor
- Read TPMS DTCs
- Register TPMS sensor IDs

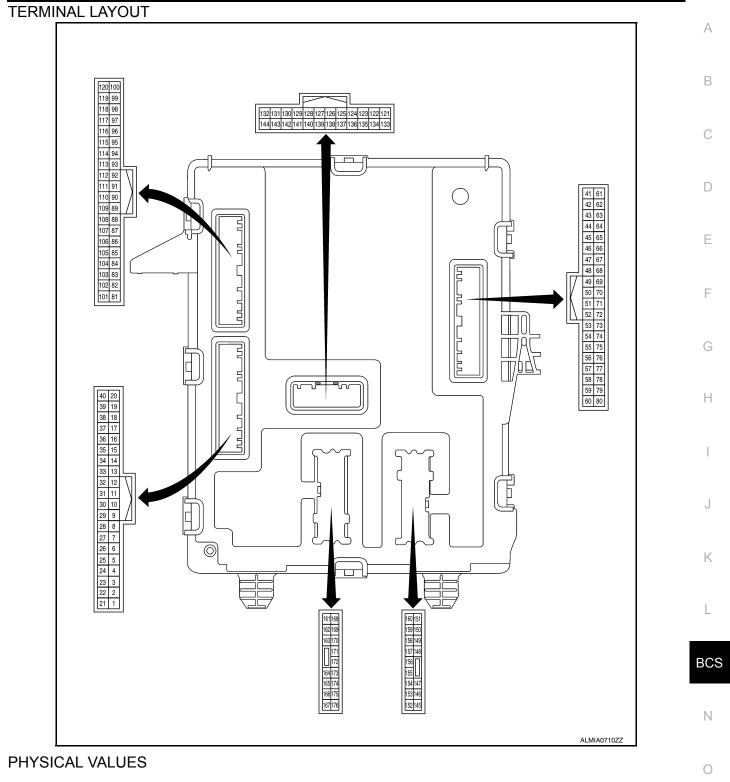
VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm ² , psi	
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm ² , psi	F
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm ² , psi	
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm ² , psi	G
	Buzzer in combination meter OFF	Off	
BUZZER	Buzzer in combination meter ON	On	Н
	Door lock/unlock switch does not operate	Off	
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	On	
	Door lock/unlock switch does not operate	Off	
CDL UNLOCK SW	Press door lock/unlock switch to the UNLOCK side	On	
	Front door RH closed	Off	
DOOR SW-AS	Front door RH opened	On	
	Back door closed	Off	
DOOR SW-BK	Back door opened	On	K
	Front door LH closed	Off	
DOOR SW-DR	Front door LH opened	On	
	Rear door LH closed	Off	L
DOOR SW-RL	Rear door LH opened	On	
	Rear door RH closed	Off	BCS
DOOR SW-RR	Rear door RH opened	On	
	Front washer switch OFF	Off	
FR WASHER SW	Front washer switch ON	On	— N
	Front wiper switch OFF	Off	
FR WIPER LOW	Front wiper switch LO	On	0
	Front wiper switch OFF	Off	
FR WIPER HI	Front wiper switch HI	On	
	Front wiper switch OFF	Off	P
FR WIPER INT	Front wiper switch INT	On	
	Any position other than front wiper stop position	Off	
FR WIPER STOP	Front wiper stop position	On	
	When hazard switch is not pressed	Off	
HAZARD SW	When hazard switch is pressed	On	

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
HEAD LAMP SW	Headlamp switch OFF	Off
TIEAD LAWF SW	Headlamp switch ON	On
HI BEAM SW	High beam switch OFF	Off
	High beam switch HI	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 4	1 - 4
KEY CYL LK-SW	Door key cylinder LOCK position	Off
REFUTEER-SW	Door key cylinder other than LOCK position	On
	Door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Door key cylinder other than UNLOCK position	On
LIGHT OFF SW	Headlamp switch ON	Off
	Headlamp switch OFF	On
PASSING SW	Other than lighting switch PASS	Off
PASSING SVV	Lighting switch PASS	On
	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
	Any position other than rear wiper stop position	Off
RR WIPER STOP	Rear wiper stop position	On
	When LOCK button of keyfob is not pressed	Off
RKE-LOCK	When LOCK button of keyfob is pressed	On
	When PANIC button of keyfob is not pressed	Off
RKE-PANIC	When PANIC button of keyfob is pressed	On
	When UNLOCK button of keyfob is not pressed	Off
RKE-UNLOCK	When UNLOCK button of keyfob is pressed	On
	Lighting switch OFF	Off
TAIL LAMP SW	Lighting switch ON	On
	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
	Low tire pressure warning lamp in combination meter OFF	Off
WARNING LAMP	Low tire pressure warning lamp in combination meter ON	On

[WITHOUT INTELLIGENT KEY SYSTEM]



BCM

Ρ

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire (+)	color) (-)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0V
2 (LA/G)	Ground	Door mirror LH turn signal lamp output	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 1 1 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
					Turn signal switch OFF	0V
3 (LA/Y)	Ground	Door mirror RH turn signal lamp output	Output	Ignition switch ON	Turn signal switch RH	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1
		d Room lamp relay control	Output	Ignition	Interior room lamp battery saver opera- tion timed out	Battery voltage
4 (P)	Ground			switch OFF	Any time prior to inte- rior room lamp bat- tery saver operation timed out	0V
5 (R)	Ground	CAN low	Input/ Output		_	_
6 (L)	Ground	CAN high	Input/ Output		_	_
8 (L)	Ground	CAN high	Input/ Output		_	_
9 (R)	Ground	CAN low	Input/ Output		_	_
10 (BG)	Ground	Main power window and door lock/unlock switch lock signal	Input	Main power window and door lock/un- lock switch (door lock/un- lock switch)	Lock Unlock	Battery voltage 0V
					Pressed	0 V
11 (Y)	Ground	Hazard switch	Input	Hazard switch	Released	(V) 15 0 10 10 10 10 1.1V

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	nal No. color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Jonulion	(Approx.)
12		Auto light annual Cit		Ignition	OFF	0V
(W)	Ground	Auto light power supply 5V	Output	switch	ON	5V
16 (P)	Ground	Audio dongle	Input/ Output	Ignition switch	OFF	5V
17	Ground	CVT shift selector park po-	Output	Selector lever	P position	0V
(L)	Giouna	sition switch power	Output		Except P position	Battery voltage
19	Ground	Auto light signal	Input	Ignition	Outside of vehicle is bright	Close to 5V
(LG)	Cround		mput	switch ON	Outside of vehicle is dark	Close to 0V
23	Ground	Power window relay control	Output	Ignition	OFF	Battery voltage
(G)	Croana		output	switch	ON	0V
24	Ground	Rear window defogger re-	Output	Rear window	Not activated	Battery voltage
(LA/R)		lay control		defogger	Activated	0V
25 (BR)	Ground	Accessory relay-1 control	Output	Ignition switch	OFF	Battery voltage
					ON	0V
27 (Y)	Ground	Ignition relay-1 control	Output	Ignition switch	OFF ON	Battery voltage
		En al bland a la characteristica de la chara			OFF	Battery voltage
28 (LA/W)	Ground	Front blower motor relay control	Output	Ignition switch	OFF	0V
30 (V)	Ground	Auto light reference ground	Output	Ignition switch	ON	0V
33 (LG)	Ground	Combination switch output 5	Output	Combination switch (Wiper inter- mittent dial 1)	OFF INT VOLUME 2 INT VOLUME 3 RR WIPER INT RR WIPER ON	$(y) \\ f \\ $
34 (Y)	Ground	Combination switch input 5	Input	Combination switch (Wiper inter- mittent dial 1)	OFF TAIL LAMP TURN RH NO LIGHT	1.2V OV (V) 15 0 5 0 • • • 10ms • • • 10ms

Revision: September 2015

2016 Rogue NAM

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(VVire (+)	color)	Signal name	Input/ Output	Condition		(Approx.)
35 (BG)	Ground	Security indicator	Output	Security indi- cator	ON Blinking OFF	OV (V) 15 10 5 0 15 0 15 15 0 15 15 0 15 15 15 15 15 15 15 15 15 15
36 (G)	Ground	Combination switch output 3	Output	Combination switch (Wiper inter- mittent dial 1)	OFF FR WASHER RR WASHER TURN LH TURN RH	Battery voltage (V) 10 5 0 + 10ms FKIB4960J 7.0 - 8.0V (V) 10 5 0 + 10ms FKIB495EJ FKIB495EJ 1.2V
37 (GR)	Ground	Combination switch output 4	Output	Combination switch (Wiper inter- mittent dial 1)	OFF FR WIPER LOW FR WIPER HI FR WIPER INT NO LIGHT	(V) 10 0 0 0 0 0 0 0 0 0 0 0 0 0

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
(vvire (+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
					OFF	(V) 15 10 5 0 + 10ms	
38	Ground	Combination switch output	Output	Combination switch		PKIB4960J 7.0 – 8.0V	
(V)		1		(Wiper inter- mittent dial 1)	HI BEAM PASSING	(V) 15	
					FR FOG	+ +10ms PKIB4958J	
						1.2V	
					OFF	(V) 15 10 5 0 + 10ms	
39	Ground	Combination switch output 2	Output	Output Combination switch (Wiper inter- mittent dial 4)	switch		PKIB4960J 7.0 – 8.0V
(W)	Giouna				INT VOLUME 1 HEADLAMP	(V) 15	
						TAIL LAMP	
				Main power	Unlock	Battery voltage	
40 (SB)	Ground	Main power window and door lock/unlock switch un- lock signal	Input	window and door lock/un- lock switch (door lock/un- lock switch)	Lock	٥V	
50 (W)	Ground	Right rear door switch	Input	Rear door switch RH	OFF (door closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	
					ON (door open)	0V	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(vvire (+)	color) (-)	Signal name	Input/ Output		Condition	(Approx.)
51 (LG)	Ground	Back door switch	Input	Back door lock assem- bly (door ajar switch)	OFF (door closed) ON (door open)	(V) 15 10 5 0 JPMIA0011GB 11.8V 0V
52 (R)	Ground	Left rear door switch	Input	Rear door switch LH	OFF (door closed)	(V) 15 0 5 0 10 ms JPMIA0011GB
					ON (door open)	11.8V 0V
53 (SB)	Ground	Passenger door switch	Input	Front door switch RH	OFF (door closed)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (door open)	0V
55 (LA/G)	Ground	Rear wiper autostop switch	Input	Ignition switch ON	Rear wiper stop posi- tion Any position other than rear wiper stop	Battery voltage
56	0	Deal deserves a link	1	Back door	Switch released	Battery voltage
(Y)	Ground	Back door open switch	Input	opener switch	Switch pressed	0V
57 (SB)	Ground	Driver door switch	Input	Front door switch LH	OFF (door closed)	(V) 15 0 10 5 0 10 ms JPMIA0011GB
					ON (door open)	11.8V 0V
60 (L)	Ground	CAN high	Input/ Output			
79	Cround	High-mounted stop lamp		Droke nedel	Released	0V
(LA/W)	Ground	output	Output	Brake pedal	Depressed	Battery voltage
80 (P)	Ground	CAN low	Input/ Output		_	_

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal No. (Wire color)		Description		0		Value					
(Wire (+)	color)	Signal name	Input/ Output	(Condition	(Approx.)					
81	Ground			Ignition	Ignition key inserted into ignition key cylin- der	Battery voltage					
(L)	Ground	Key switch signal	Input	switch	Ignition key removed from ignition key cyl- inder	0 V					
82 (LA/R)	Ground	Ignition switch start signal	Input	lgnition switch	OFF START	0 V Battery voltage					
					OFF	0V					
					HI BEAM						
				Combination	RR WASHER	(V) 15					
84	Ground	Combination switch input 2	Input	switch	FR WIPER HI						
(BR)	Giouna		input	(Wiper inter- mittent dial 1)	INT VOLUME 3	0 million tandha tangha hari t					
						1.0V					
					OFF	0V					
		d Combination switch input 1		Combination switch (Wiper inter- mittent dial 1)	INT VOLUME 1						
					FR WASHER	(V) 15					
85	Ground		Input		FR WIPER LOW						
(SB)	Cround				INT VOLUME 2	0 +++10ms ++++++++++++++++++++++++++++++++++++					
						1.0V					
					OFF	0V					
									F	PASSING	(V)
				Combination	HEADLAMP	(V) 15 10					
86 (P)	Ground	Combination switch input 3	Input	switch (Wiper inter- mittent dial 1)	(Wiper inter-	(Wiper inter-	t (Wiper inter-	(wiper inter-	FR WIPER INT	5 0 →→+10ms	
						рків4958J 1.0V					
					OFF	0V					
					TURN LH						
87 (BG)	Ground	Combination switch input 4	Input	Combination switch (Wiper inter- mittent dial 1)	RR WIPER ON	(V) 15 0 + 10ms PKIB4958J 1.0V					
92		Front door lock assembly		Key cylinder	OFF (neutral)	Battery voltage					
92 (BR)	Ground	LH key cylinder switch lock signal	Input	switch	ON (lock)	0V					
93		Front door lock assembly		Key cylinder	OFF (neutral)	Battery voltage					
(P)	Ground	LH key cylinder switch un- lock signal	Input	switch	ON (unlock)	0V					

< ECU DIAGNOSIS INFORMATION >

< ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				
(Wire (+)	color) (-)	Signal name	Input/ Output	(Condition	Value (Approx.)
94	(-)	C)/T shift selector park pa	Output		P position	0V
94 (G)	Ground	CVT shift selector park po- sition switch signal	Input	Selector lever	Except P position	Battery voltage
95 (V)	Ground	Shorting input	Input	Ignition switch	OFF	Battery voltage
104		Front door lock assembly		Door lock	OFF (lock)	Battery voltage
(R)	Ground	LH knob switch unlock sig- nal	Input	knob	ON (unlock)	0V
105	Ground	Ignition switch ON signal	Input	Ignition	OFF	0 V
(Y)	Ground		mput	switch	ON	Battery voltage
106 (W)	Ground	Audio unit/AV control unit accessory power supply	Input	Ignition switch	ON	Battery voltage
109 (P)	Ground	Immobilizer one way com- munication (clock) signal	Input/ Output	Ignition switch ON	While waiting	Ignition switch ON: pointer of tester should move.
110 (BG)	Ground	Dimmer signal output	Output	Ignition switch ON	 Either of the following conditions: Lighting switch OFF The area around the vehicle is bright (block the light from the optical sensor) 	0 V
					The area around the vehicle is dark (block the light from the optical sensor)	Battery voltage
113 (LG)	Ground	Immobilizer two way com- munication signal	Input/ Output	Ignition switch ON	While waiting	Ignition switch ON: pointer of tester should move.
125	Ground	Stop lamp switch signal	Input	Brake pedal	Released	0V
(LG)					Depressed	Battery voltage
126 (W)	Ground	Brake pedal position switch signal	Input	Brake pedal	Released Depressed	0V Battery voltage
(,					Turn signal switch	
					OFF	0V
135 (BR)	Ground	Front combination lamp LH turn signal lamp output	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
					Turn signal switch OFF	0V
136 (GR)	Ground	Front combination lamp RH turn signal lamp output	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 0 15 15 15 15 15 15 15 15 15 15

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value
(vvire (+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
139			•	Ignition	OFF	Battery voltage
(G)	Ground	Starter cut relay control	Output	switch	ON	0V
145	Ground	Back door lock assembly	Output	Back door opener switch pressed	Open (motor activat- ed)	Battery voltage
(LA/V)	Glound	opener motor open	Output	Back door opener switch released	Closed (motor not ac- tivated)	0V
147	Ground	Rear wiper output	Output	Rear wiper	OFF	0V
(LA/R)	Giouna		Output	iteal wiper	ON	Battery voltage
148		Rear door lock actuator LH		Main power window and door lock/un-	Unlock (actuator acti- vated)	Battery voltage
(W)	Ground	and RH actuator unlock	Output	lock switch (door lock/un- lock switch)	Lock (actuator not ac- tivated)	٥V
				Main power window and	Lock (actuator acti- vated)	Battery voltage
149 (L)	Ground	Rear door lock actuator LH and RH actuator lock	Output	door lock/un- lock switch (door lock/un- lock switch)	Unlock (actuator not activated)	٥V
151	Oraciand	Luggage lamp control	Quitaut	Room lamp	OFF	Battery voltage
(R)	Ground	(pwm)	Output	relay	ON	0V
153		Rear combination lamp RH	0.1.1		Released	0V
(LA/W)	Ground	stop lamp output	Output	Brake pedal	Depressed	Battery voltage
					Turn signal switch OFF	0V
157 (GR)	Ground	Rear combination lamp LH turn signal/hazard lamp output	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 50 1 s PKID0926E 6.5 V
158		Rear combination lamp LH	0 1 1	5	Released	0V
(LA/Y)	Ground	stop lamp output	Output	Brake pedal	Depressed	Battery voltage
					Turn signal switch OFF	0V
160 (P)	Ground	Rear combination lamp RH bund turn signal/hazard lamp O output	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 15 15 15 15 15 15 15 15 15 15
161 (W)	Ground	BCM power supply	Input	Ignition switch	OFF	6.5 V Battery voltage

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

	nal No.	Description				Value
(+)	color) (-)	Signal name	Input/ Output	(Condition	(Approx.)
162	Ground	Interior lamp control (pwm)	Output	Map lamp and/or per-	OFF	Battery voltage
(SB)	Cloand		output	sonal lamp 2nd row	DOOR	0V
163		Front door lock actuator RH		Main power window and door lock/un-	Unlock (actuator acti- vated)	Battery voltage
(L)	Ground	actuator unlock	Output	lock switch (door lock/un- lock switch)	Lock (actuator not ac- tivated)	0V
405				Main power window and	Lock (actuator acti- vated)	Battery voltage
165 (V)	Ground	Front door lock actuator LH and RH actuator lock	Output	door lock/un- lock switch (door lock/un- lock switch)	Unlock (actuator not activated)	0V
167 (LA/V)	Ground	Power door lock battery power supply	Input	Ignition switch	OFF	Battery voltage
168 (BG)	Ground	Turn signal/hazard battery power supply	Input	Ignition switch	OFF	Battery voltage
169 (GR)	Ground	Stop lamp battery power supply	Input	Ignition switch	OFF	Battery voltage
170 (B)	Ground	Ground1	Input	Ignition switch	ON	0V
171 (B)	Ground	Ground2	Input	Ignition switch	ON	0V
470		Front door look concerning.		Main power window and	Unlock (actuator acti- vated)	Battery voltage
172 (G)	Ground	Front door lock assembly LH actuator unlock	Output	ut door lock/un- lock switch (door lock/un- lock switch)	Lock (actuator not ac- tivated)	0V
175 (R)	Ground	Power door lock2 battery power supply	Input	lgnition switch	OFF	Battery voltage
176 (LG)	Ground	Rear wiper battery power supply	Input	Ignition switch	OFF	Battery voltage

Fail Safe

INFOID:000000012422541

CONSULT Display	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2198: IMMOBI ANT NG	Inhibit engine cranking	Erase DTC
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent: Starter motor relay control signal Starter relay status signal (CAN)
B260F: ECM CAN COMM	Inhibit engine cranking	When any of the following conditions are fulfilled:Ignition switch changes to ONReceives engine status signal (CAN)
B261E: FUEL MIS CONFIG	Inhibit engine cranking	BCM initialization

Revision: September 2015

< ECU DIAGNOSIS INFORMATION > DTC Inspection Priority Chart

INFOID:000000012422542

А

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

Priority	DTC	В
1	B2562: LOW VOLTAGE	
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	C
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2196: DONGLE NG B2198: NATS ANTENNA AMP 	D
4	 B2608: STARTER RELAY B260F: ECM CAN COMM B261E: FUEL MIS CONFIG B27D1: ST CUT RELAY OFF STUCK FAIL B27D2: ST CUT RELAY ON STUCK FAIL C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG 	F
	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1730: FLAT TIRE FL 	H J
5	 C1731: FLAT TIRE FR C1732: FLAT TIRE RR C1733: FLAT TIRE RL C1734: CONTROL UNIT 	K
	 C1735: IGN CIRCUIT OPEN C1765: WSSP DATA FAIL FL C1766: WSSP DATA FAIL FR C1767: WSSP DATA FAIL RL 	L
	 C1768: WSSP DATA FAIL RR C1769: CONFIG SETTING C1770: G SENSOR FAIL FL 	BCS
	 C1771: G SENSOR FAIL FR C1772: G SENSOR FAIL RR C1773: G SENSOR FAIL RL 	Ν

DTC Index

NOTE:

Details of time display are as follows:

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

INFOID:000000012422543

Ο

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

No DTC is detected. Further testing may be required. BCS-125, "Description" U1000: CAN COMM CIRCUIT RCS-125, "Description" U0415: VEHICLE SPEED SIG RCS-125, "Description" B2190: N15 ANTENNA AMP × XSEC-173, "DTC Logic" B2191: DIFFERENCE OF KEY × XSEC-173, "DTC Logic" B2192: DI DISCORD BCM-ECM × XSEC-173, "DTC Logic" B2192: DI DISCORD BCM-ECM × XSEC-173, "DTC Logic" B2193: DIONGLE NO XSEC-177, "DTC Logic" B2195: DONGLE NO XSEC-183, "DTC Logic" B2195: ID MISCORD BCM-ECM × SEC-182, "DEscription" B2195: ID MISCORD BCM-ECM × × SEC-182, "DTC Logic" B2195: ID MISCORD BCM-ECM × × SEC-182, "DTC Logic" B2705: IS CUT RELAY OFF STUCK FAIL	CONSULT display	Fail-safe	Freeze Frame Data	Key system malfunction	Security indi- cator lamp ON	Reference page
U1010: CONTROL UNIT (CAN) BCS-127. 'DTC Logic' U0415: VEHICLE SPEED SIG - × BCS-128. 'Description' B2190: INATS ANTENNA AMP × - X SEC-173. 'Description' B2191: UFFRENCE OF KEY × - X SEC-173. 'DTC Logic' B2192: ID DISCORD BCM-ECM × - X SEC-173. 'DTC Logic' B2193: UNAIN OF BCM-ECM × - X SEC-173. 'DTC Logic' B2193: UNAIS ANT NOF K X SEC-173. 'DTC Logic' B2198: INMOBINAT NG × X SEC-173. 'DTC Logic' B2198: INMOBINAT NG × X SEC-173. 'DTC Logic' B2198: INMOBINAT NG × X SEC-173. 'DTC Logic' B2198: INDE INSCONFIG × - SEC-183. 'DTC Logic' B2191: DTC HEAY OFF STUCK FAIL × X		_	_	_	_	_
U0415: VEHICLE SPEED SIG × BCS:128. "Description" B2190: NATS ANTENNA AMP × × SEC:173. "Description" B2191: DIFFERENCE OF KEY × × SEC:173. "Description" B2192: ID DISCORD BCM-ECM × × SEC:173. "DTC Logic" B2193: CHAIN OF BCM-ECM × × SEC:173. "DEscription" B2196: DONGLE NG × SEC:181. "DTC Logic" B2562: LOW VOLTAGE × BCS:128. "DTC Logic" B2606: STARTER RELAY × × SEC:181. "DTC Logic" B2606: FEM CAN COMM × × × SEC:181. "DTC Logic" B27D: ST CUT RELAY OFF STUCK FAIL × × SEC:192. "DTC Logic" B27D: ST CUT RELAY OFF STUCK FAIL × × SEC:192. "DTC Logic" C1704: LOW PRESSURE FR	U1000: CAN COMM CIRCUIT	—	—		_	BCS-126, "Description"
B2190: NATS ANTENNA AMP × × SEC-173. "Description" B2191: DIFFERENCE OF KEY × × SEC-176. "DTC Logic" B2192: DI DISCORD BCM-ECM × × SEC-176. "DTC Logic" B2193: CHAN OF ECM-ECM × × SEC-177. "Description" B2198: CHAN OF ECM-ECM × × SEC-177. "Description" B2198: CHAN OF ECM-ECM × × SEC-177. "Description" B2198: IMMOBI ANT NG × × SEC-187. "Description" B2605: ECM CAN COMM × × × SEC-187. "Description" B27D1: ST CUT RELAY OFF STUCK FAIL × × SEC-198. "DTC Logic" C1706: LOW PRESSURE FR C1707: LOW PRESSURE RR C1708: LOW PRESSURE RR <td>U1010: CONTROL UNIT (CAN)</td> <td>_</td> <td>_</td> <td>-</td> <td>_</td> <td>BCS-127, "DTC Logic"</td>	U1010: CONTROL UNIT (CAN)	_	_	-	_	BCS-127, "DTC Logic"
B2191: DIFFERENCE OF KEY × × SEC-176. "DTC Logic" B2192: ID DISCORD BCM-ECM × × SEC-177. "DTC Logic" B2193: ID NOF BCM-ECM × × SEC-178. "DTC Logic" B2196: IMMOBI ANT NG × × SEC-179. "Description" B2195: IMMOBI ANT NG × × SEC-179. "Description" B2195: IMMOBI ANT NG × SEC-181. "DTC Logic" B2562: LOW VOLTAGE × X SEC-181. "DTC Logic" B2567: ECM CAN COMM × × × SEC-181. "DTC Logic" B260F: ECM CAN COMM × × × SEC-181. "DTC Logic" B27D1: ST CUT RELAY OFF STUCK FAIL × × SEC-189. "DEscription" B27D1: ST CUT RELAY ON STUCK FAIL × × SEC-192. "DTC Logic" C1706: LOW PRESSURE R <	U0415: VEHICLE SPEED SIG	_	_	×	_	BCS-128, "Description"
B2192: ID DISCORD BCM-ECM × × SEC-177. 'DTC Logic' B2193: CHAIN OF BCM-ECM × × SEC-178. 'DTC Logic' B2196: DONGLE NG SEC-178. 'DTC Logic' B2198: IMMOBI ANT NG × SEC-179. 'Description' B2626: LOW VOLTAGE × BCS:129. 'DTC Logic' B2608: STARTER RELAY × × SEC-181. 'DTC Logic' B2609: STARTER RELAY × × SEC-185. 'Description' B261E: FUE MIS CONFIG × SEC-185. 'Description' B27D: ST CUT RELAY OFF STUCK FAIL × × B27D: ST CUT RELAY OFF STUCK FAIL × SEC-182. 'DTC Logic' C1704: LOW PRESSURE FL SEC-192. 'DTC Logic' C1707: IOW PRESSURE RR C1708: IOW DATAJ FR C1710: ION DATAJ R	B2190: NATS ANTENNA AMP	×	_	_	×	SEC-173, "Description"
B2193: CHAIN OF BCM-ECM × × SEC-178. "DTC Logic" B2198: IMMOBI ANT NG SEC-179. "Description" B2198: IMMOBI ANT NG × SEC-179. "Description" B2582: LOW VOLTAGE × BCS-129. "DTC Logic" B2608: STARTER RELAY × × SEC-184. "DTC Logic" B260F: ECM CAN COMM × × × SEC-185. "Description" B27D1: ST CUT RELAY OFF STUCK FAIL × × SEC-182. "DEscription" B27D2: ST CUT RELAY ON STUCK FAIL × × SEC-192. "DTC Logic" B27D2: ST CUT RELAY ON STUCK FAIL SEC-192. "DTC Logic" C1706: LOW PRESSURE FR SEC-192. "DTC Logic" C1706: IND DATAJ FL C1706: IND DATAJ FR <	B2191: DIFFERENCE OF KEY	×	—		×	SEC-176, "DTC Logic"
B2198: DONGLE NG SEC-179. "Description" B2198: IMMOBI ANT NG × × SEC-181. "DTC Logic" B2562: LOW VOLTAGE × BCS-129. "DTC Logic" B2608: STARTER RELAY × × SEC-181. "DTC Logic" B2606: ECM CAN COMM × × × SEC-185. "Description" B2615: FUEL MIS CONFIG × SEC-187. "Description" B27D1: ST CUT RELAY OF STUCK FAIL × × B27D2: ST CUT RELAY ON STUCK FAIL × × C1704: LOW PRESSURE FR C1706: LOW PRESSURE RR C1708: INO DATAJ FR C1710: INO DATAJ RR C1710: INO DATAJ RR C1711: INO DATAJ RR	B2192: ID DISCORD BCM-ECM	×	_		×	SEC-177, "DTC Logic"
B2198: IMMOBI ANT NG × × SEC-181. "DTC Logic" B2562: LOW VOLTAGE × BCS-129. "DTC Logic" B2608: STARTER RELAY × × × SEC-184. "DTC Logic" B2608: STARTER RELAY × × × SEC-185. "Description" B261E: FUEL MIS CONFIG × SEC-185. "Description" B27D1: ST CUT RELAY OF STUCK FAIL × × B27D2: ST CUT RELAY OF STUCK FAIL × SEC-182. "DTC Logic" C1704: LOW PRESSURE FR C1705: LOW PRESSURE RR C1706: INO DATAJ FR C1709: INO DATAJ RR C1710: INO DATAJ RR	B2193: CHAIN OF BCM-ECM	×	—	_	×	SEC-178, "DTC Logic"
B2562: LOW VOLTAGE × BCS-129DTC Logic" B2608: STARTER RELAY × × × × SEC-184DTC Logic" B2607: ECM CAN COMM × × × × SEC-185"Description" B2611: FUEL MIS CONFIG × SEC-185"Description" B27D1: ST CUT RELAY OF STUCK FAIL × × SEC-189"DTC Logic" B27D2: ST CUT RELAY ON STUCK FAIL × × SEC-192"DTC Logic" C1706: LOW PRESSURE FL SEC-192"DTC Logic" C1706: LOW PRESSURE RR SEC-192"DTC Logic" C1706: I.OW PRESSURE RL SEC-192"DTC Logic" C1707: LOW PRESSURE RL C1706: I.OW PRESSURE RL C1707: I.OW PRESSURE RL C1709: INO DATAJ FL	B2196: DONGLE NG	_	—	_	_	SEC-179, "Description"
B2608: STARTER RELAY ×	B2198: IMMOBI ANT NG	×	_	_	×	SEC-181, "DTC Logic"
B260F: ECM CAN COMM × × × × × × × × × × × × × × × × SEC-185. "Description" B261E: FUEL MIS CONFIG × SEC-187. "Description" B27D1: ST CUT RELAY ON STUCK FAIL × × SEC-189. "DTC Logic" B27D2: ST CUT RELAY ON STUCK FAIL × × SEC-192. "DTC Logic" C1706: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FR <td< td=""><td>B2562: LOW VOLTAGE</td><td></td><td>×</td><td></td><td>_</td><td>BCS-129, "DTC Logic"</td></td<>	B2562: LOW VOLTAGE		×		_	BCS-129, "DTC Logic"
B261E: FUEL MIS CONFIG × SEC-187. "Description" B27D1: ST CUT RELAY OFF STUCK FAIL × × SEC-189. "DTC Logic" B27D2: ST CUT RELAY ON STUCK FAIL × × SEC-192. "DTC Logic" B27D2: ST CUT RELAY ON STUCK FAIL × × SEC-192. "DTC Logic" C1704: LOW PRESSURE FL C1705: LOW PRESSURE RR C1707: LOW PRESSURE RR C1706: [NO DATA] FR	B2608: STARTER RELAY	×	×	×	_	SEC-184, "DTC Logic"
B27D1: ST CUT RELAY OFF STUCK FAIL × × SEC-189. "DTC Logic" B27D2: ST CUT RELAY ON STUCK FAIL × × SEC-192. "DTC Logic" C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1708: INO DATAJ FL C1709: INO DATAJ FR C1710: INO DATAJ RR C1711: INO DATAJ RR C1711: INO DATAJ RL C1711: INO DATAJ RR 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-	B260F: ECM CAN COMM	×	×	×	_	SEC-185, "Description"
B27D2: ST CUT RELAY ON STUCK FAIL - × × × - SEC-192. "DTC Logic" C1704: LOW PRESSURE FL - - - - - - C1705: LOW PRESSURE FR - - - - - - C1706: LOW PRESSURE RR - - - - - - C1707: LOW PRESSURE RL -	B261E: FUEL MIS CONFIG	×	_		_	SEC-187, "Description"
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] FR - - - - - C1710: [NO DATA] FR - - - - - C1710: [NO DATA] RL - - - - - C1711: [NO DATA] RL - - - - - C1711: [PRESSDATA ERR] FR - - - - - C1711: [PRESSDATA ERR] RR -<	B27D1: ST CUT RELAY OFF STUCK FAIL		×	×	_	SEC-189, "DTC Logic"
C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1707: LOW PRESSURE RL C1707: IOW PRESSURE RL C1708: [NO DATA] FL C1710: [NO DATA] FR C1716: [PRESSDATA ERR] FL C1716: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR <	B27D2: ST CUT RELAY ON STUCK FAIL		×	×	_	SEC-192, "DTC Logic"
C1706: LOW PRESSURE RR — …	C1704: LOW PRESSURE FL		_		_	
C1706: LOW PRESSURE RR — — — — — C1707: LOW PRESSURE RL — — — — — C1708: [NO DATA] FL — — — — — C1709: [NO DATA] FR — — — — — C1710: [NO DATA] RR — — — — — C1711: [NO DATA] RR — — — — — C1716: [PRESSDATA ERR] FL — — — — — C1717: [PRESSDATA ERR] FR — — — — — C1718: [PRESSDATA ERR] RR — — — — — _	C1705: LOW PRESSURE FR	_	_	_	_	
C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1729: VHCL SPEED SIG ERR C1730: FLAT TIRE FL C1732: FLAT TIRE RR C1733: FLAT TIRE RR C1734: CONTROL UNIT WT-43. "DTC Logic" C1735: IGN CIRCUIT OPEN	C1706: LOW PRESSURE RR		_	_		<u>WI-31, "DTC Logic"</u>
C1709: [NO DATA] FR — — — — — — — — — — — — — — …	C1707: LOW PRESSURE RL		_	_		
C1710: [NO DATA] RR — …	C1708: [NO DATA] FL		_		_	
C1710: [NO DATA] RR — — — — C1711: [NO DATA] RL — — — — C1716: [PRESSDATA ERR] FL — — — — C1717: [PRESSDATA ERR] FR — — — — C1718: [PRESSDATA ERR] RR — — — — C1719: [PRESSDATA ERR] RR — — — — C1719: [PRESSDATA ERR] RL — — — — C1719: [PRESSDATA ERR] RR — — — — C1729: VHCL SPEED SIG ERR — — — — WT-38. "DTC Logic" C1730: FLAT TIRE FL — — — — — — C1731: FLAT TIRE RR — — — — — … <td>C1709: [NO DATA] FR</td> <td>_</td> <td>_</td> <td>_</td> <td></td> <td></td>	C1709: [NO DATA] FR	_	_	_		
C1716: [PRESSDATA ERR] FL - - - - - C1716: [PRESSDATA ERR] FR - - - - - C1717: [PRESSDATA ERR] FR - - - - - C1718: [PRESSDATA ERR] RR - - - - - C1719: [PRESSDATA ERR] RR - - - - - C1719: [PRESSDATA ERR] RL - - - - - C1729: VHCL SPEED SIG ERR - - - - WT-38. "DTC Logic" C1730: FLAT TIRE FL - - - - - - C1731: FLAT TIRE FR - - - - - - C1732: FLAT TIRE RR -	C1710: [NO DATA] RR	_	_	_	_	<u>WT-33, "DTC Logic"</u>
C1717: [PRESSDATA ERR] FR — — — — — — — — …	C1711: [NO DATA] RL	_	_	_	_	
C1718: [PRESSDATA ERR] RR — … C1719: [PRESSDATA ERR] RL — — — — — — — — … WT-38. "DTC Logic" WT-38. "DTC Logic" WT-38. "DTC Logic" WT-39. "DTC Logic" MT-39. "DTC Logic" MT-41. "DTC Logic"	C1716: [PRESSDATA ERR] FL					
C1718: [PRESSDATA ERR] RR — — — — — C1719: [PRESSDATA ERR] RL — — — — — C1719: [PRESSDATA ERR] RL — — — — — C1729: VHCL SPEED SIG ERR — — — — WT-38. "DTC Logic" C1730: FLAT TIRE FL — — — — — — C1731: FLAT TIRE FR — — — — —	C1717: [PRESSDATA ERR] FR					
C1729: VHCL SPEED SIG ERR — — — — — WT-38. "DTC Logic" C1730: FLAT TIRE FL — — — — — — — C1731: FLAT TIRE FR — — — — — —	C1718: [PRESSDATA ERR] RR					WT-36, "DTC Logic"
C1729: VHCL SPEED SIG ERR — — — — — WT-38. "DTC Logic" C1730: FLAT TIRE FL — — — — — — — C1731: FLAT TIRE FR — — — — — —	C1719: [PRESSDATA ERR] RL		_			
C1730: FLAT TIRE FL — — — — — — C1731: FLAT TIRE FR — — — — — — C1732: FLAT TIRE RR — — — — — — C1733: FLAT TIRE RR — — — — — — C1733: FLAT TIRE RL — — — — — — C1734: CONTROL UNIT — — — — WT-41, "DTC Logic" C1735: IGN CIRCUIT OPEN — — — — WT-43, "DTC Logic" C1765: WSSP DATA FAIL FL — — — — WT-41, "DTC Logic" C1766: WSSP DATA FAIL FR — — — — — C1767: WSSP DATA FAIL RR — — — — — C1768: WSSP DATA FAIL RR — — — — —			_	_	_	WT-38, "DTC Logic"
C1732: FLAT TIRE RR — — — — — — — WT-39, "DTC Logic" C1733: FLAT TIRE RL — … <td>C1730: FLAT TIRE FL</td> <td></td> <td>_</td> <td>_</td> <td>_</td> <td></td>	C1730: FLAT TIRE FL		_	_	_	
C1732: FLAT TIRE RR — …	C1731: FLAT TIRE FR		_	_	_	
C1733: FLAT TIRE RL — — — — — — — — — — …	C1732: FLAT TIRE RR		_			WT-39, "DTC Logic"
C1735: IGN CIRCUIT OPEN — — — — WT-43. "DTC Logic" C1765: WSSP DATA FAIL FL — — — — — C1766: WSSP DATA FAIL FR — — — — — C1766: WSSP DATA FAIL FR — — — — — C1767: WSSP DATA FAIL RL — — — — — C1768: WSSP DATA FAIL RR — — — — —			_			
C1735: IGN CIRCUIT OPEN — — — — WT-43. "DTC Logic" C1765: WSSP DATA FAIL FL — — — — — C1766: WSSP DATA FAIL FR — — — — — C1766: WSSP DATA FAIL FR — — — — — C1767: WSSP DATA FAIL RL — — — — — C1768: WSSP DATA FAIL RR — — — — —			_	_	_	WT-41, "DTC Logic"
C1765: WSSP DATA FAIL FL — — — — — C1766: WSSP DATA FAIL FR — — — — — C1767: WSSP DATA FAIL RL — — — — — C1768: WSSP DATA FAIL RR — — — — —		_	_			
C1766: WSSP DATA FAIL FR — — — — — — — — — — — — _		_				
C1767: WSSP DATA FAIL RL — — — — — — — WT-44, "DTC Logic" C1768: WSSP DATA FAIL RR — # # # </td <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td>		_				
C1768: WSSP DATA FAIL RR — — — — —						WT-44, "DTC Logic"
	C1769: CONFIG SETTING					WT-45, "DTC Logic"

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Freeze Frame Data	Key system malfunction	Security indi- cator lamp ON	Reference page	_
C1770: G SENSOR FAIL FL	—	_	—	_		-
C1771: G SENSOR FAIL FR	—	—	—	—	WT-46, "DTC Logic"	
C1772: G SENSOR FAIL RR	_	—	—	_	WI-46, DTC LOGIC	
C1773: G SENSOR FAIL RL	_			_		
C1773: G SENSOR FAIL RL	_					

BCS

Е

F

G

Н

J

Κ

L

Ν

0

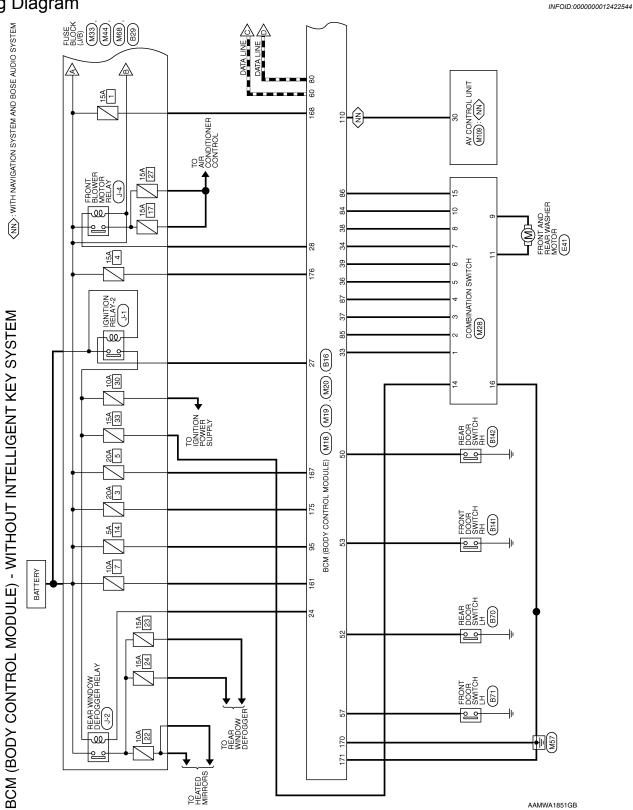
Р

< WIRING DIAGRAM >

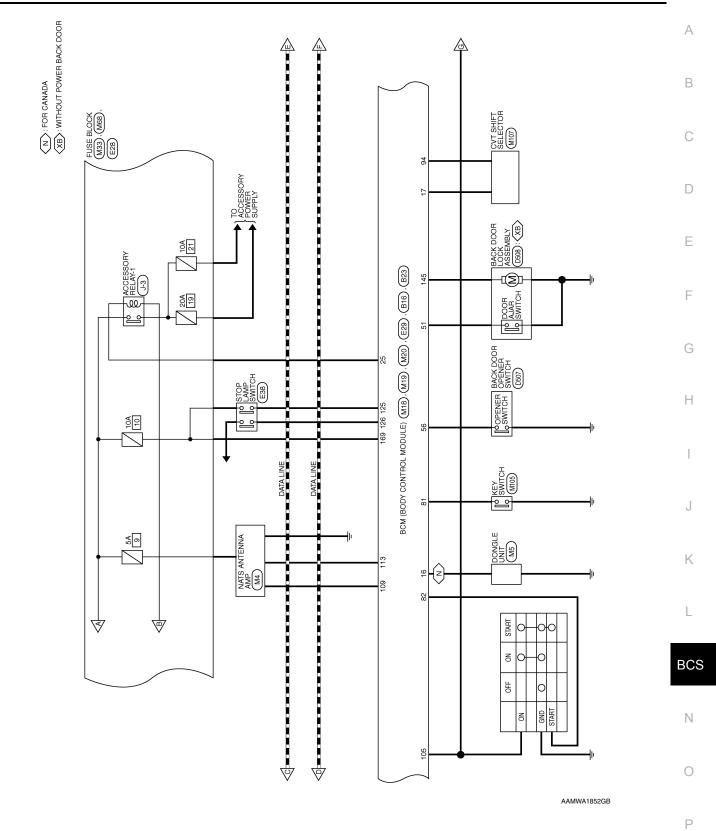
WIRING DIAGRAM

BCM

Wiring Diagram

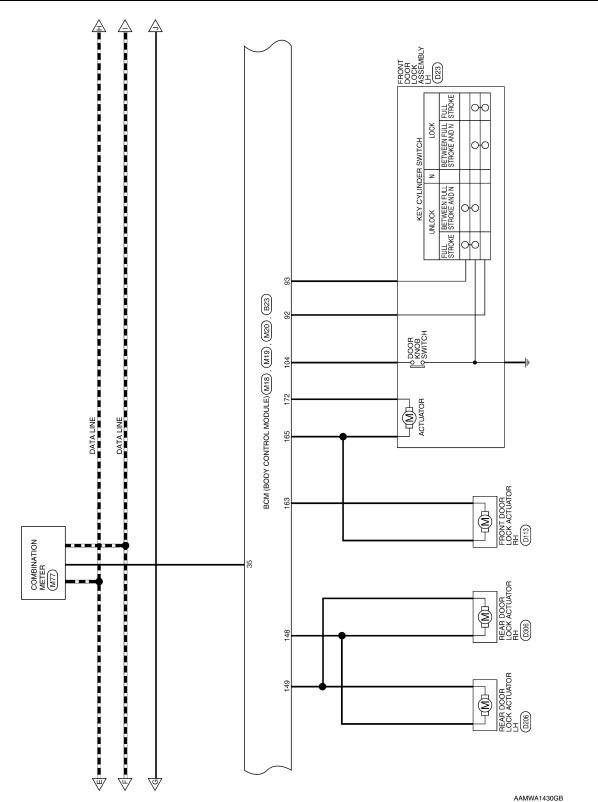


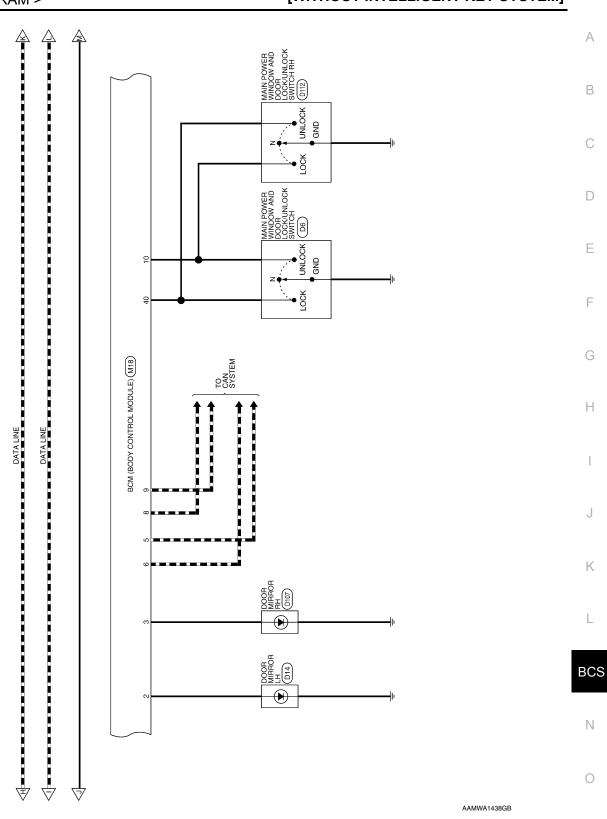
[WITHOUT INTELLIGENT KEY SYSTEM]



BCM

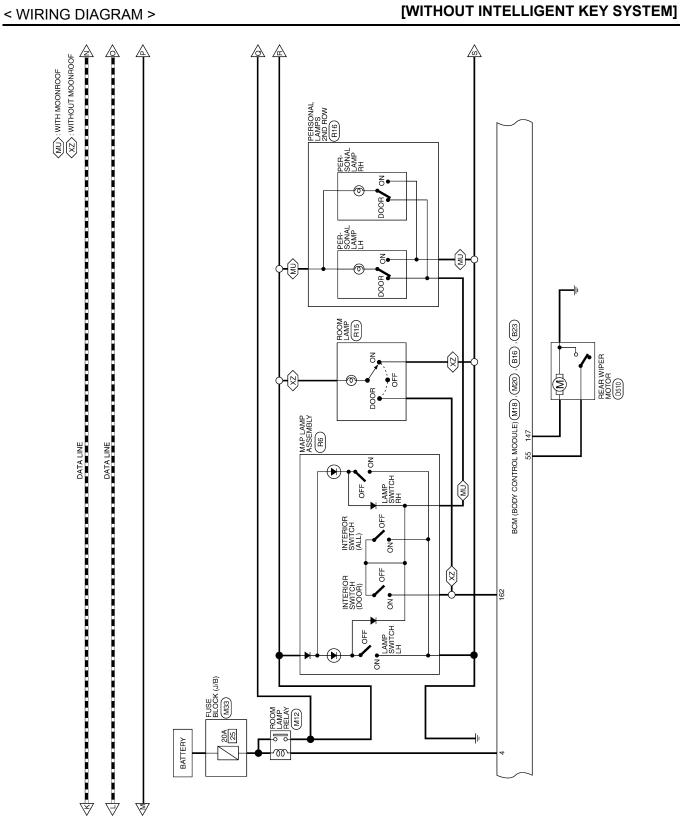
Revision: September 2015



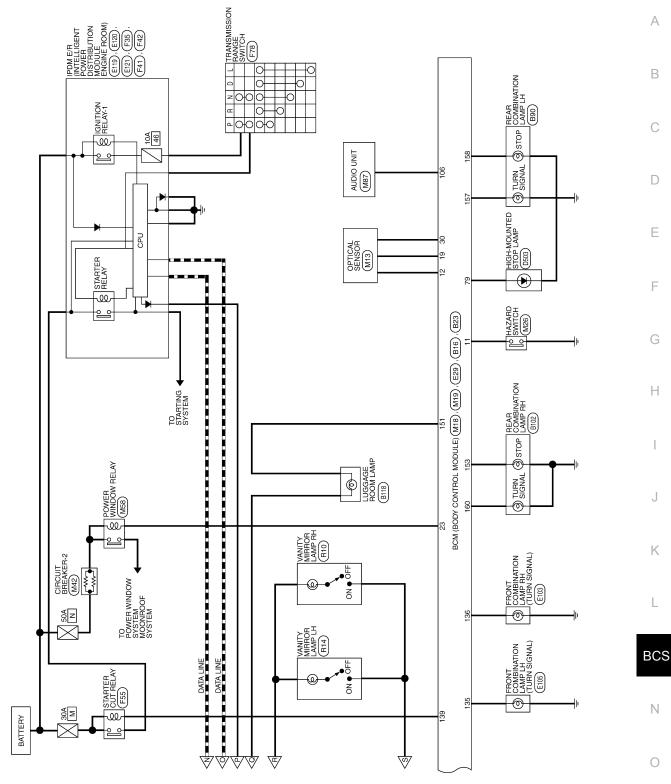


[WITHOUT INTELLIGENT KEY SYSTEM]

Ρ



AAMWA1452GB



А

В

С

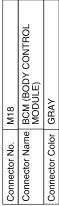
F

J

Κ

L

[WITHOUT INTELLIGENT KEY SYSTEM]



Revision: September 2015



	_	_	1	
	-	21		
	2	22		_
	Э	24 23		
	4	24		
	5	25		
	9	26		
	7	27		
	8	28		
17	ത	8		
IV		30		
IN	÷	31		
	12	32		┝
	18 17 16 15 14 13 12 11 10	33		
	14	34		
	15	36 35		
	16	36		
	17	37		
16	18	38		
H.S.	19	40 39		
	20	40		

Signal Name	Ξ	O DI FR LEFT D	O DI FR RIGHT D	O ROOMLAMP BATSAVER RL	CAN-L	CAN-H	Т	CAN-H	CAN-L	I DOORLOCK SW	I HAZARD SW D	O PWR AUTOLIGHT SENSOR	I	H	H	DONGLE UART	O PWR ATDVC	H	I AUTOLIGHT SENSOR
Color of Wire	I	LA/G	LΑγ	٩	œ	_	I	L	н	BG	≻	M	I	I	I	٩	Γ	I	ГG
Terminal No.	F	2	ო	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19

BCS-118

2016 Rogue NAM

A

-																						
	Signal Name	I	I	I	O WL AUTHORIZATION RL	O DEFROSTER RL D	O BAT TEMP1 RL	I	O IGN1 RL	O IGN2 RL	I	O GND AUTOLIGHT SENSOR	I	I	I CSW 5	O CSW 5	O SECURITY LED	I CSW 3	I CSW 4	I CSW 1	I CSW 2	I DOORUNLOCK SW
	Color of Wire	I	I	I	G	LA/R	BR	I	Y	LA/W	I	>	I	I	ГG	٢	BG	σ	GR	>	Ν	SB
	Terminal No.	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

	BCM (BODY CONTROL MODULE)	BROWN		167166165164	41/31/21/11/01/08/168				Signal Name	I PWR ECU	O PWM ROOMLAMP 1	O AS LOCK OR UNLOCK D	1							I GND1	I GND2	O FR OR DR UNLOCK D	I	1	I PWR DOORLOCK2	I PWB WIPER	
1		-	-	16716616	/119/11				Color of	Wire W	SB	_	1	>	>	- 1 1		ק ק ק	rg (m	в	თ	I	1	æ	<u>ر</u>	2
Connector No.	Connector Name	Connector Color		佢	H.S.				Terminal No	161	162	163	164	165	166	167	101	108	601	170	171	172	173	174	175	176	
F Signal Name		1	1	1	1	1	1	1	I DR KNOB SW	I IGN SW (WITHOUT	KEY SYSTEM)	O AUTO ACC2	1	1	O CLK IMMOBILIZER	O MR OUTPUT	1	1	O DATA IMMOBILIZER	1		I	1	1	1	1	I
Color of		1	1	ı	1	1	ı	1	æ	≻		N	ı	Т	Ч	BG	ı	ı	ГG	1			•	ı	1	T	I
Terminal No.	96	97	86	66	100	101	102	103	104	105		106	107	108	109	110	111	112	113	114	- T	c 911	2	117	118	119	120
		1]				34 83 82 81 74103102101																				

	82 81 102 101																
	100 39 98 97 96 95 94 93 92 91 90 89 88 87 86 84 83 82 91 101 101 101 101 101 101 101 101 101	Signal Name	I KEY SW	I STARTER SW (WITHOUT INTELLIGENT KEY SYSTEM)	I	O CSW 2	0 CSW 1	O CSW 3	O CSW 4	Н	Н	-	Т	I KEY CYLINDER LOCK SW	I KEY CYLINDER UNLOCK SW	I AT LOCKED IN PARK SW	I SHORTING PIN
	95 94 93 1 115 114 113 1	Color of Wire	-	LA/R	I	ВВ	SB	٩	BG	I	I	I	I	BR	٩	ŋ	>
同 H.S.	100 99 98 97 96 120 119 118 117 116	Terminal No.	81	88	83	84	85	86	87	88	89	06	91	92	93	64	95

AAMIA3592GB

Ρ

Ο

Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK

Connector No. M19

А

В

С

D

Е

F

G

Н

J

Κ

L

BCS

Ν

Connector No.	M28		
Connector Name COMBINATION SWITCH	COMB	INATIO	DN SWITCH
Connector Color WHITE	WHITE		
悟		$\left \right $	
2	3 7 6	6 5 4 3	2 1
Ó			

E

Signal Name	I	1	I	I	I	I	I	I	I	1	I	I	I	I	1	1
Color of Wire	ГG	SB	GR	BG	g	×	Y	^	σ	BR	۲	I	I	ГG	Р	GR
Ferminal No.	-	2	e	4	5	9	7	8	6	10	11	12	13	14	15	16

BCS-120

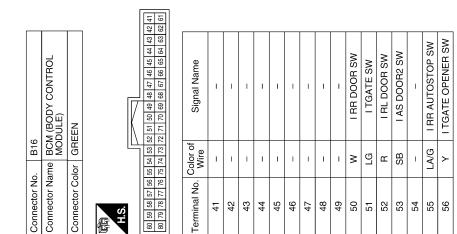
2016 Rogue NAM

6 6 4 3 14 13 12 11 10 9	Signal Name	I	I	I	I	I	I	-	I	I	-	I	I	1	I	-	
8 7	Color of Wire	ГG	SB	GR	BG	σ	×	≻	>	σ	BR	≻	I	I	LG	٩	0
际场 H.S.	Terminal No.	-	2	e	4	5	9	7	8	6	10	11	12	13	14	15	4

or No. E29	Connector Name BCM (BODY CONTROL MODULE)	Connector Color BLACK	
Connector No.	Connector Nan	Connector Cold	

E I		
H.S.	132 131 130 144 143 142	132/131/130/129/128/127/126/129/123/131
erminal No.	Color of Wire	Signal Name
121	I	1
122	I	1
123	I	1
124	I	I
125	ГG	I BRAKE SW2
126	×	I BRAKE SW1
127	I	1
128	I	1
129	I	I
130	I	I
131	I	1
132	I	I
133	Ι	I
134	Ι	I
135	BR	O DI FR LEFT E
136	GR	O DI FR RIGHT E
137	Ι	I
138	I	1
139	ŋ	O STCUT RL
140	I	I
141	I	1
142	I	I
143	I	I
144	I	1

Signal Name Signal Name I DR DOOR2 SW - - - 143 LA MM - - - - - - - - - - - - - - -	(BODY CONTROL		17		151150149148 1147146145 460460450455456456454450450					Signal Name	O TGATE OPENER	1	O RR WIPER	O RR UNLOCK B	O RR LOCK B	1	O PWM ROOMLAMP 5	1	O STOP LAMP1	I	I	I	O DI RR LEFT B	O STOP LAMP2 NISSAN EUR	I	O DI RR RIGHT B
Signal Name I DR DOOR2 SW I DR DOOR2 SW CAN-H CAN-H CAN-H CAN-L CAN-L CAN-L CAN-L				-	1511501	I ACI DOI			Color of	Wire	LAV	I	LA/R	×	_	I	æ	I	LA/W	I	I	I	GR	LAV	Ι	٩
Signal Name I DR DOOR2 SW I DR DOOR2 SW CAN-H CAN-L CAN-L CAN-L	Connector No.		Connector Co		悟	H.S.				Terminal No.	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Terminal No. 57 58 59 60 61 61 62 63 63 63 63 63 65 63 65 63 65 63 65 67 71 71 71 72 73 73 73 73 73 73 73 73 73 73 73 73 88 89 63 68 88 63 73 88 73 73 88 73 73 88 73 88 83 86 73 83 83 83 83 83 83 83 83 84 83 83 83 84 84 83 83 84 83 83 84 84 83 83 84 84 84 83 86 83 86 83 86 83 86 83 86 83 86 83 86 86 83 86 83 86 83 86 86 86 86 86 86 86 86 86 86 86 86 86	Color of Wire	SB I DR DOOR2 SW	1	1		1	 1	I	1	1	1	-	1	1	1	1	1	1	1	1	1	1	LA/W O STOP LAMP3	P CAN-L		



AAMIA2130GB

0

А

В

С

D

Ε

F

G

Н

J

Κ

L

BCS

Ν

[WITHOUT INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

BASIC INSPECTION

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description

INFOID:000000012422545

BEFORE REPLACEMENT

When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement. Refer to <u>BCS-122</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u> : <u>Work Procedure</u>".

NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing BCM.

AFTER REPLACEMENT

CAUTION:

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Work Procedure

1.SAVING VEHICLE SPECIFICATION (BCM)

CONSULT

Enter "Re/Programming, Configuration" and perform "Before Replace ECU" to save or print current vehicle specification.

NOTE:

If "Before Replace ECU" cannot be used, use the "After Replace ECU" or "Manual Configuration" after replacing BCM.

>> GO TO 2.

2.SAVING VEHICLE SPECIFICATION (CAN GATEWAY)

CONSULT

Perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>LAN-94</u>, "CONSULT <u>Function</u>".

NOTE:

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

>> GO TO 3.

3.REPLACE BCM

Replace BCM. Refer to <u>BCS-137</u>, "Removal and Installation".

>> GO TO 4.

4.WRITING VEHICLE SPECIFICATION (BCM)

CONSULT

1. Enter "Re/Programming, Configuration".

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >	[WITHOUT INTELLIGENT KEY SYSTEM]
 If "Before Replace ECU" operation was performed, au be displayed. Select the applicable file from the "Say specification. Refer to <u>BCS-123</u>, "CONFIGURATION (ed Data List" and press "Confirm" to write vehicle
 If "Before Replace ECU" operation was not performed tion" to write vehicle specification. Refer to <u>BCS-123, '</u> 	, select "After Replace ECU" or "Manual Configura-
>> GO TO 5.	
5. REGISTER IGNITION KEYS	
For initialization and registration of ignition keys, refer to screen instructions.	CONSULT immobilizer mode and follow the on-
>> GO TO 6.	
6.REGISTER KEYFOB ID	
For registration of keyfob ID, refer to <u>DLK-331, "ADDITI</u> <u>UNIT : Description"</u> .	ONAL SERVICE WHEN REPLACING CONTROL
>> GO TO 7	
7.INITIALIZE TPMS	
Perform TPMS initialization. Refer to WT-29, Work Proceed	dure".
>> GO TO 7.	
8.writing vehicle specification (can gateway	FUNCTION)
CONSULT Perform "WRITE CONFIGURATION – Config file" or "WRI vehicle specification. Refer to <u>LAN-96. "Work Procedure"</u> .	TE CONFIGURATION – Manual selection" to write
>> Work End. CONFIGURATION (BCM)	
CONFIGURATION (BCM) : Description	INFOID:000000012422547
Vehicle specification needs to be written with CONSULT be	ecause it is not written after replacing BCM.

Ve Configuration has three functions as follows:

Function	Description	
"Before Replace ECU"	Reads the vehicle configuration of current BCM.Saves the read vehicle configuration.	BCS
"After Replace ECU"	Writes the vehicle configuration with manual selection.	
"Select Saved Data List"	Writes the vehicle configuration with saved data.	Ν

CAUTION:

- When replacing BCM, you must perform "Select Saved Data List" or "After Replace ECU" with CON-SULT.
- Complete the procedure of "Select Saved Data List" or "After Replace ECU" in order.
- If you set incorrect "Select Saved Data List" or "After Replace ECU", incidents might occur.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Select Saved Data List" or "After Replace ECU" except for new BCM.

CONFIGURATION (BCM) : Work Procedure

INFOID:000000012422548

А

В

D

Ε

F

Н

Κ

Ο

Ρ

1.WRITING MODE SELECTION

CONSULT Select "Reprogramming, Configuration" of BCM. When writing saved data>>GO TO 2. When writing manually>>GO TO 3.

2.PERFORM "SAVED DATA LIST"

CONSULT

Automatically "Operation Log Selection" window will display if "Before Replace ECU" was performed. Select applicable file from the "Save Data List" and press "Confirm".

>> Work End.

3. PERFORM "AFTER REPLACE ECU" OR "MANUAL CONFIGURATION"

CONSULT

- 1. Select "After Replace ECU" or "Manual Configuration".
- 2. Identify the correct model and configuration list. Refer to <u>BCS-124</u>, <u>"CONFIGURATION (BCM) : Configu-</u> ration List".
- 3. Confirm and/or change setting value for each item.
 - CAUTION:

Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.

Select "Next".
 CAUTION:

Make sure to select "Next", confirm each setting value and press "OK" 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 "Completed", select "End".

>> GO TO 4.

4.OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> Work End.

CONFIGURATION (BCM) : Configuration List

INFOID:000000012422549

CAUTION:

- Thoroughly read and understand the vehicle specification. ECU control may not operate normally if the setting is not correct.
- the "setting value" of this vehicle is as follows: Never select any other value then the setting value shown below. (If there is only 1 item in "setting value" that means that item is the only choice for this certain vehicle.)

MANUAL SET	TING ITEM	NOTE		
Items	Setting value	NOTE		
UNLOCK WITH SHOCK	WITHOUT	_		
RAP FUNC SET	MODE1 ⇔ WITHOUT	 MODE1: With retained accessory power (RAP) for 45 sec. WITHOUT: Without retained accessory power (RAP) 		
DONGLE		 WITH: With dongle function (Canada) WITHOUT: Without dongle function (USA) 		
TRANSMISSION	AT with ABS	_		

⇔: Items which confirm vehicle specifications

[WITHOUT INTELLIGENT KEY SYSTEM]

SHIPPING MODE CANCEL OPERATION А Work Procedure INFOID:000000012422550 1. SHIPPING MODE CANCEL OPERATION В 1. Turn ignition switch OFF. 2. Push in (switch on) the extended storage fuse switch. Refer to PG-75. "How To Check". Turn ignition switch ON. 3. С Turn ignition switch OFF and wait at least 2 seconds. 4. NOTE: Pressing in the extended storage switch moves the mode from Shipping to Normal. D >> GO TO 2. 2. SHIPPING MODE CANCEL CHECK Ε Turn ignition switch ON. 1. Check that extended storage fuse warning message is not displayed on information display. 2. F >> Work End. Н

BCS

Κ

L

Ν

0

Ρ

DTC/CIRCUIT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

Refer to LAN-11, "System Description".

DTC Logic

DTC DETECTION LOGIC

NOTE:

U1000 can be set if a module harness was disconnected and reconnected, perhaps during a repair. Confirm that there are actual CAN diagnostic symptoms and a present DTC by performing the Self Diagnostic Result procedure.

CONSULT Display	DTC Detection Condition	Possible cause
CAN COMM CIRCUIT [U1000]	When any listed module cannot communicate with 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: • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:000000012422553

1. PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

YES >> Perform CAN Diagnosis as described in DIAGNOSIS section of CONSULT Operation Manual.

NO >> Refer to <u>GI-45, "Intermittent Incident"</u>.

INFOID:000000012422551

INFOID:000000012422552

U1010 CONTROL UNIT (CAN) [WITHOUT INTELLIGENT KEY SYSTEM] < DTC/CIRCUIT DIAGNOSIS > U1010 CONTROL UNIT (CAN) А **DTC Logic** INFOID:000000012422554 DTC DETECTION LOGIC В CONSULT Display DTC Detection Condition Possible Cause CAN COMM CIRCUIT С BCM detected internal CAN communication circuit mal-BCM [U1010] function. **Diagnosis Procedure** INFOID:000000012422555 D **1.** REPLACE BCM When DTC U1010 is detected, replace BCM. Ε >> Replace BCM. Refer to BCS-137, "Removal and Installation". F Н

BCS

J

Κ

L

Ν

0

Ρ

< DTC/CIRCUIT DIAGNOSIS >

U0415 VEHICLE SPEED SIG

Description

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:000000012422557

INFOID:000000012422556

DTC DETECTION LOGIC

NOTE:

- If DTC U0415 is displayed with DTC U1000, first perform the trouble diagnosis for DTC U1000. Refer to <u>BCS-126, "DTC Logic"</u>.
- If DTC U0415 is displayed with DTC U1010, first perform the trouble diagnosis for DTC U1010. Refer to <u>BCS-127, "DTC Logic"</u>.

CONSULT Display	DTC Detection Condition	Possible Cause
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.	ABS systemCombination meter systemCAN bus harness

DTC CONFIRMATION PROCEDURE

1. DTC CONFIRMATION

1. Erase the DTC.

- 2. Turn ignition switch OFF.
- 3. Perform "Self Diagnostic Result" of "BCM" with CONSULT, after the ignition switch has been turned ON for 2 seconds or more.

Is any DTC detected?

YES >> Refer to <u>BCS-109, "DTC Index"</u>.

NO >> Inspection End.

Diagnosis Procedure

INFOID:000000012422558

1. ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "ABS" with CONSULT. Refer to <u>BRC-45, "CONSULT Function"</u>. <u>Is any DTC detected?</u>

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to <u>BRC-57. "DTC Index"</u>.

NO >> GO TO 2.

2. CHECK ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) POWER SUPPLY AND GROUND CIRCUIT

Check ABS actuator and electric unit (control unit) power and ground. Refer to <u>BRC-158</u>, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

- NO >> Repair or replace harness or connectors.
- $\mathbf{3.}$ COMBINATION METER SELF DIAGNOSTIC RESULT

Perform "Self Diagnostic Result" of "METER M&A" with CONSULT. Refer to <u>MWI-21, "CONSULT Function</u> (<u>METER/M&A)"</u>.

Is any DTC detected?

YES >> Perform the trouble diagnosis related to the detected DTC. Refer to <u>MWI-31, "DTC Index"</u>.

NO >> Refer to <u>GI-45</u>, "Intermittent Incident".

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS > B2562 LOW VOLTAGE

DTC Logic

А

В

INFOID:000000012422559

DTC DETECTION LOGIC

CONSULT Display	DTC Detection Condition	Possible cause
LOW VOLTAGE [B2562]	When the power supply voltage to BCM remains less than 8.8V for 120 seconds or more.	Harness or connector (power supply circuit)Vehicle battery
DTC CONFIRMA	TION PROCEDURE	
1. DTC CONFIRM	ATION	
ON for 120 sec	elf Diagnostic Result" of "BCM" with CONSL onds or more.	ILT, after the ignition switch has been turned
Is any DTC detecte YES >> Refer to	<u>d?</u> o <u>BCS-129, "Diagnosis Procedure"</u> .	
NO >> Inspect		
Diagnosis Proc	edure	INFOID:000000012422560
1. CHECK BATTE		
Check battery volta	-	
	battery and retest. Refer to <u>CHG-10, "Work</u>	Flow (With EXP-800 NI or GR8-1200 NI)" or
NO >> GO TO	3, "Work Flow (Without EXP-800 NI or GR8-1 2.	<u>200 NI)"</u> .
NO >> GO TO		<u>200 NI)"</u> .
NO $> \overline{\text{GO TO}}$ 2. CHECK POWE	2.	
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res	2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130.</u> sult normal?	
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO	2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130.</u> sult normal? 3.	
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO NO >> Repair	 2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130.</u> <u>sult normal?</u> 3. or replace harness or connectors. 	
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO NO >> Repair 3. BCM SELF DIA	 2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130</u>, sult normal? 3. or replace harness or connectors. GNOSTIC RESULT 	"Diagnosis Procedure".
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO NO >> Repair 3. BCM SELF DIA Perform "Self Diag	 2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130</u>, sult normal? 3. or replace harness or connectors. GNOSTIC RESULT 	
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO NO >> Repair 3. BCM SELF DIA	 2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130</u>, sult normal? 3. or replace harness or connectors. GNOSTIC RESULT nostic Result" of "BCM" with CONSULT. Result 	"Diagnosis Procedure".
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO NO >> Repair 3. BCM SELF DIA Perform "Self Diag (BCM - BCM)". Is DTC B2562 CRN YES >> Replac	 2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130</u>, sult normal? 3. or replace harness or connectors. GNOSTIC RESULT nostic Result" of "BCM" with CONSULT. Re IT? e BCM. Refer to <u>BCS-137</u>, "Removal and Ins 	"Diagnosis Procedure". fer to <u>BCS-93, "BCM : CONSULT Function</u>
NO >> GO TO 2. CHECK POWE Check BCM power Is the inspection res YES >> GO TO NO >> Repair 3. BCM SELF DIA Perform "Self Diag (BCM - BCM)". Is DTC B2562 CRN YES >> Replac	 2. R SUPPLY AND GROUND CIRCUIT supply and ground circuit. Refer to <u>BCS-130</u>, sult normal? 3. or replace harness or connectors. GNOSTIC RESULT nostic Result" of "BCM" with CONSULT. Re 	"Diagnosis Procedure". fer to <u>BCS-93, "BCM : CONSULT Function</u>

Ο

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000012422561

Regarding Wiring Diagram information, refer to BCS-112, "Wiring Diagram".

1. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.

2. Check voltage between BCM connector M20 and ground.

B	CM	Ground	Voltage		
Connector	Terminal	Ground	(Approx.)		
M20	161	_	Battery voltage		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M20 and ground.

B	CM	Ground	Continuity		
Connector	Terminal	Ground	Continuity		
M20	170		Yes		
	171	_	165		

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH INPUT CIRCUIT

Diagnosis Procedure

Regarding Wiring Diagram information, refer to BCS-112, "Wiring Diagram".

1. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and combination switch connector.
- 3. Check continuity between BCM connector M18 and combination switch connector M28.

Combination switch	BC	M	Combinati	Continuity	
signal	Connector	Terminal	Connector	Terminal	Continuity
INPUT 1		38		8	
INPUT 2	M18	39		6	-
INPUT 3		36	M28	5	Yes
INPUT 4		37		3	-
INPUT 5	-	33	-	1	-
) 2. or replace harnes	ss or connectors. IRCUIT FOR SHC	DRT		

Combination switch	В	СМ		Continuity	J
signal	Connector	Terminal	Continuity		
INPUT 1		38			
INPUT 2		39	Ground		K
INPUT 3	M18	36		No	
INPUT 4		37			L
INPUT 5		33			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

$\mathbf{3}$. CHECK BCM OUTPUT VOLTAGE

1. Connect BCM connector M18 and combination switch connector.

- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M18 and ground.

Combination switch	В	СМ	Ground	Voltaga	
signal	Connector	Terminal	Giouna	Voltage	Р
INPUT 1		38			
INPUT 2	M18	39			
INPUT 3		36		Refer to <u>BCS-97, "Ref-</u> erence Value".	
INPUT 4		37		<u></u>	
INPUT 5		33			

Α

В

D

INFOID:000000012422562

Ν

0

BCS

COMBINATION SWITCH INPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace the combination switch. Refer to <u>BCS-138</u>, "Removal and Installation".
- NO >> Replace BCM. Refer to <u>BCS-137</u>, "Removal and Installation".

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

COMBINATION SWITCH OUTPUT CIRCUIT

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>BCS-112, "Wiring Diagram"</u>.

1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M19 and combination switch connector.
- 3. Check continuity between BCM connector M19 and combination switch connector M28.

Combination switch	BC	CM Combination switch			Continuity	
signal	Connector	Terminal	Connector	Terminal	- Continuity	
OUTPUT 1		85		2		-
OUTPUT 2		84		10		
OUTPUT 3	M19	86	M28	15	Yes	
OUTPUT 4		87		4	-	
OUTPUT 5		34	7	-		
	2. r replace harness					-
CHECK OUTPU						
Combination switch		BCM				-

Combination switch	В	CM		Continuity	J
signal	Connector	Terminal		Continuity	
OUTPUT 1		85	_		
OUTPUT 2		84	Ground		K
OUTPUT 3	M19	86	_	No	
OUTPUT 4		87	_		L
OUTPUT 5		34			_
					-

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK BCM INPUT VOLTAGE

1. Connect BCM connector M19 and combination switch connector.

- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M19 and ground.

Combination switch	В	СМ	Ground	Voltago	
signal	Connector	Terminal	Ground	Voltage	F
OUTPUT 1		85			
OUTPUT 2	M19	84		Refer to <u>BCS-97. "Ref-</u> erence Value".	
OUTPUT 3		86			
OUTPUT 4		87	_		
OUTPUT 5		34			

[WITHOUT INTELLIGENT KEY SYSTEM]

INFOID:000000012422563

А

В

D

BCS

Ν

0

COMBINATION SWITCH OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace BCM. Refer to <u>BCS-137</u>, "Removal and Installation".
- NO >> Replace the combination switch. Refer to <u>BCS-138</u>, "Removal and Installation".

COMBINATION SWITCH SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

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

							Data	monito	or item							
Malfunction combination	FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	INT VOLUME	RR WIPER ON	RR WIPER INT	RR WASHER SW	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW	LIGHT OFF SW	PASSING SW	E
A												×			×	F
В					×						×		×			
С			×					×	×	×						
D	×	×		×										×		G
E					×	×	×									
F		×	×		×											H
G	×				×			×				×				
Н				×			×						×		×	
I						×				×						
J									×		×			×		
К		All Items									.]					
L		lt	f only o	ne item	is dete	ected or	the ite	m is no	t applic	able to	the con	nbinatio	ons A to	κ		0

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

Malfunction combination	Malfunctioning part	Repair or replace	
А	Combination switch INPUT 1 circuit		L
В	Combination switch INPUT 2 circuit		
С	Combination switch INPUT 3 circuit	Inspect the combination switch input circuit applicable to the malfunctioning part. Refer to BCS-131, "Diagnosis Procedure".	DC
D	Combination switch INPUT 4 circuit		BC
Е	Combination switch INPUT 5 circuit		
F	Combination switch OUTPUT 1 circuit		Ν
G	Combination switch OUTPUT 2 circuit		
Н	Combination switch OUTPUT 3 circuit	Inspect the combination switch output circuit applicable to the malfunction- ing part. Refer to BCS-133, "Diagnosis Procedure".	
	Combination switch OUTPUT 4 circuit	ing part. Refer to <u>Dee roo, Diagnosis Procedure</u> .	0
J	Combination switch OUTPUT 5 circuit		
K	ВСМ	Replace BCM. Refer to BCS-137, "Removal and Installation".	Р
L	Combination switch	Replace the combination switch. Refer to <u>BCS-138, "Removal and Installa-</u> tion".	

[WITHOUT INTELLIGENT KEY SYSTEM]

INFOID:000000012422564

Malfunction item: ×

А

Κ

NORMAL OPERATING CONDITION

Description

INFOID:000000012422565

SHIPPING MODE

- Shipping mode inhibits battery power consumption during transportation or storage of the vehicle. Vehicle is set to shipping mode before being shipped from the factory.
- When ignition switch is OFF, BCM operates shipping mode.
- BCM control function is limited in shipping mode. Remote keyless entry function is not operated during the shipping mode.
- For shipping mode cancel operation, refer to <u>BCS-125, "Work Procedure"</u>. **NOTE:**

Do not cancel shipping mode during storage of the vehicle. Always cancel shipping mode before delivery of the vehicle to customer.

BCM (BODY CONTROL MODULE) TION > [WITHOUT INTELLIGENT KEY SYSTEM]

REMOVAL AND INSTALLATION BCM (BODY CONTROL MODULE)

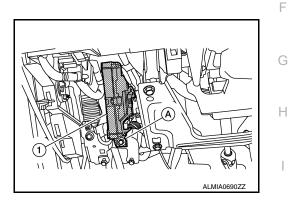
Removal and Installation

CAUTION:

Before replacing the BCM, perform "READ CONFIGURATION" to save or print current vehicle specification. Refer to <u>BCS-122, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u> : <u>Description</u>".

REMOVAL

- 1. Disconnect the negative battery terminal. Refer to PG-82. "Removal and Installation".
- 2. Remove the front kicking plate (LH). Refer to <u>INT-23, "KICKING PLATE : Removal and Installation Front Kicking Plate"</u>.
- 3. Remove the dash side finisher (LH). Refer to INT-24, "DASH SIDE FINISHER : Removal and Installation".
- 4. Remove the instrument lower panel LH. Refer to IP-23. "Removal and Installation".
- 5. Disconnect the fuse box and the harness connectors.
- 6. Remove the bolt (A), then pull out the BCM (1).



7. Disconnect the harness connectors from the BCM and remove.

INSTALLATION

Installation is in the reverse order of removal.

- **CAUTION:**
- When replacing BCM, perform "WRITE CONFIGURATION" Refer to <u>BCS-123</u>, "CONFIGURATION (<u>BCM</u>) : Description".
- When replacing BCM, perform the system initialization (NATS). Refer to <u>BCS-122, "ADDITIONAL</u> <u>SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description"</u>.
- When replacing BCM, if new BCM does not come with keyfobs attached, all existing keyfobs must be re-registered. Refer to the CONSULT immobilizer mode and follow the on screen instructions.

Κ

А

D

Ε

INFOID:000000012422566

0

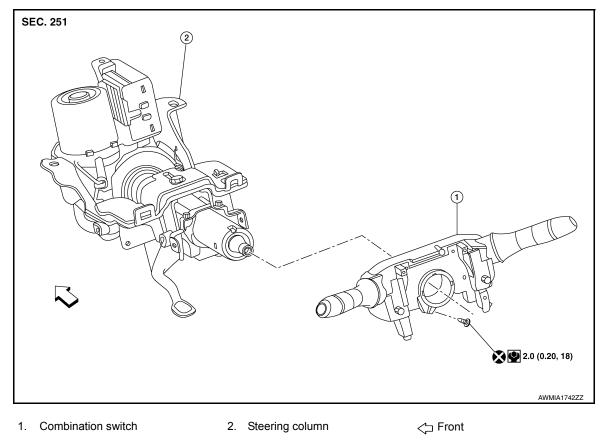
< REMOVAL AND INSTALLATION >

COMBINATION SWITCH

Exploded View

INFOID:000000012422567

[WITHOUT INTELLIGENT KEY SYSTEM]

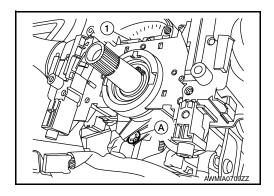


Removal and Installation

INFOID:000000012422568

REMOVAL

- 1. Remove the steering angle sensor. Refer to <u>BRC-189</u>, "Removal and Installation".
- 2. Disconnect harness connector from combination switch.
- 3. Remove screw (A) and combination switch (1).



INSTALLATION Installation is in the reverse order of removal. CAUTION: Do not reuse screw securing combination switch.