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# **CONTENTS**

INSPECTION AND ADJUSTMENT3	COMMON ITEM1  COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)1
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)	DOOR LOCK
CONTROL UNIT (BCM): Description	REAR WINDOW DEFOGGER2 REAR WINDOW DEFOGGER : CONSULT Function (BCM - REAR DEFOGGER)2
CONFIGURATION (BCM)	BUZZER2 BUZZER : CONSULT Function (BCM - BUZZER)2 INT LAMP2
TRANSIT MODE CANCEL OPERATION	INT LAMP : CONSULT Function (BCM - INT LAMP)2  HEADLAMP2
SYSTEM DESCRIPTION9	HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (Xenon Type)2
BODY CONTROL SYSTEM	HEADLAMP : CONSULT Function (BCM - HEAD LAMP) (Halogen Type)2  WIPER
COMBINATION SWITCH READING SYSTEM	WIPER : CONSULT Function (BCM - WIPER)2
System Diagram11 System Description11	FLASHER
SIGNAL BUFFER SYSTEM         15           System Diagram         15           System Description         15	FLASHER: CONSULT Function (BCM - FLASH-ER) (Halogen Type)
POWER CONSUMPTION CONTROL SYS- TEM16	INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)
System Diagram	COMB SW
DIAGNOSIS SYSTEM (BCM)19	BCM : CONSULT Function (BCM - BCM)

IMMUIMMU : CONSULT Function (BCM - IMMU)		POWER SUPPLY AND GROUND CIRCUIT  Diagnosis Procedure	
BATTERY SAVERBATTERY SAVER : CONSULT Function (BCM -	. 36	COMBINATION SWITCH INPUT CIRCUIT Diagnosis Procedure	47
BATTERY SAVER)  TRUNK  TRUNK : CONSULT Function (BCM - TRUNK)	. 38	COMBINATION SWITCH OUTPUT CIRCUIT.  Diagnosis Procedure	49
THEFT ALM	. 38	ECU DIAGNOSIS INFORMATION	51
THEFT ALM : CONSULT Function (BCM - THEFT)		BCM (BODY CONTROL MODULE)	51
RETAIND PWR	. 39	Wiring Diagram - BCM	
RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)		Fail-safe DTC Inspection Priority Chart DTC Index	90
SIGNAL BUFFERSIGNAL BUFFER : CONSULT Function (BCM -	. 40	SYMPTOM DIAGNOSIS	94
SIGNAL BUFFER)	. 40	COMBINATION SWITCH SYSTEM SYMP-	
AIR PRESSURE MONITORAIR PRESSURE MONITOR : CONSULT Function		TOMS Symptom Table	
(BCM - AIR PRESSURE MONITOR)	. 40	NORMAL OPERATING CONDITION	95
DTC/CIRCUIT DIAGNOSIS	. 42	Description	95
U1000 CAN COMM CIRCUIT	. 42	PRECAUTION	96
Description	. 42	PRECAUTIONS	96
DTC Logic		Precautions for Removing Battery Terminal	
Diagnosis Procedure		Precaution for Supplemental Restraint System	
U1010 CONTROL UNIT (CAN)		(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER"	96
DTC Logic  Diagnosis Procedure			
		REMOVAL AND INSTALLATION	97
U0415 VEHICLE SPEED SIG  Description		BCM (BODY CONTROL MODULE)	
DTC Logic		Exploded View	
Diagnosis Procedure		Removal and Installation	97
B2562 LOW VOLTAGE	. 45	COMBINATION SWITCH	
DTC Logic		Exploded View	
Diagnosis Procedure		Removal and Installation	98

>> WORK END CONFIGURATION (BCM)

## **BASIC INSPECTION** Α INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Description Perform the following operations when replacing BCM. [For details, refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Work Procedure".] BEFORE REPLACEMENT D When replacing BCM, save or print current vehicle specification with CONSULT configuration before replacement. NOTE: If "Before Replace ECU" of "Read / Write Configuration" cannot be used, use the "Manual Configuration" after Е replacing BCM. AFTER REPLACEMENT F **CAUTION:** When replacing BCM, always perform "Read / Write Configuration" or "Manual Configuration" with CONSULT. Or not doing so, BCM control function does not operate normally. • Complete the procedure of "Read / Write Configuration" in order. Configuration is different for each vehicle model. Confirm configuration of each vehicle model. If you set incorrect "Read / Write Configuration" or "Manual Configuration", incidents might occur. NOTE: Н When replacing BCM, perform the system initialization (NATS). ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Work Procedure INFOID:0000000010594180 1. SAVING VEHICLE SPECIFICATION (BCM) CONSULT Configuration Perform "Before Replace ECU" of "Read / Write Configuration" to save or print current vehicle specification. Refer to BCS-4, "CONFIGURATION (BCM): Description". NOTE: If "Before Replace ECU" of "Read / Write Configuration" cannot be used, use the "Manual Configuration" after replacing BCM. L >> GO TO 2. 2.REPLACE BCM **BCS** Replace BCM. Refer to BCS-97, "Removal and Installation". >> GO TO 3. Ν f 3.WRITING VEHICLE SPECIFICATION (P)CONSULT Configuration Perform "After Replace ECU" of "Read / Write Configuration" or "Manual Configuration" to write vehicle specification. Refer to BCS-4, "CONFIGURATION (BCM): Work Procedure". Р >> GO TO 4. 4. INITIALIZE BCM (NATS) Perform BCM initialization. (NATS)

Revision: February 2015 BCS-3 2015 QX50

#### < BASIC INSPECTION >

## CONFIGURATION (BCM): Description

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Vehicle specification needs to be written with CONSULT because it is not written after replacing BCM. Configuration has three functions as follows. [For details, refer to <a href="BCS-4">BCS-4</a>, "CONFIGURATION (BCM): Work <a href="Procedure">Procedure</a>.]

Function		Description	
Read / Write Configuration	Before Replace ECU	Reads the vehicle configuration of current BCM.     Saves the read vehicle configuration.  Writes the vehicle configuration with saved data.	
	After Replace ECU	Writes the vehicle configuration with saved data.	
Manual Configuration		Writes the vehicle configuration with manual selection.	

#### NOTE:

Manual setting item: Items which need selection by vehicle specifications

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

For some models and specifications, the automatic setting item may not be displayed.

#### **CAUTION:**

When replacing BCM, always perform "Re/programming, Configuration" with CONSULT. Or not doing so, BCM control function does not operate normally.

- Complete the procedure of "Read / Write Configuration" in order.
- Configuration is different for each vehicle model. Confirm configuration of each vehicle model.
- Never perform "Read / Write Configuration" except for new BCM.
- If you set incorrect "Read / Write Configuration", incidents might occur.

## CONFIGURATION (BCM): Work Procedure

INFOID:0000000010594182

## 1. WRITING MODE SELECTION

## ① CONSULT Configuration

Select "Re/programming, Configuration" of BCM.

When writing saved data>>GO TO 2.

When writing manually>>GO TO 3.

## 2.PERFORM "AFTER REPLACE ECU" OF "READ / WRITE CONFIGURATION"

#### (P)CONSULT Configuration

Perform "After Replace ECU" of "Read / Write Configuration".

#### >> WORK END

# ${f 3.}$ PERFORM "MANUAL CONFIGURATION"

#### (P)CONSULT Configuration

- Select "Manual Configuration".
- 2. Identify the correct model and configuration list. Refer to BCS-5, "CONFIGURATION (BCM): Configuration list".
- 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.

#### NOTE:

If items are not displayed, touch "Next". Refer to <u>BCS-5</u>, "CONFIGURATION (<u>BCM</u>) : Configuration list" for written items and setting value.

- 4. Touch "Next".
- Touch "OK".

#### **CAUTION:**

Make sure to select "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.

6. Check that the configuration has been successfully written and touch "End".

#### < BASIC INSPECTION >

>> GO TO 4.

## 4. OPERATION CHECK

Confirm that each function controlled by BCM operates normally.

>> WORK END

## CONFIGURATION (BCM): Configuration list

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#### **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 than 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.)

#### NOTE:

Check the vehicle type according to the CONSULT display items.

#### TYPE A

MANUAL SETTING ITEM		NOTE	
Items	Setting value	NOTE	
BATTERY SAVER FUNCTION	MODE1	MODE1: With Intelligent Key system	
ACC BAT SAVE FUNC	MODE1	MODE1: With Intelligent Key system	
DTRL	WITH ⇔ WITHOUT	WITH: With daytime running light system     WITHOUT: Without daytime running light system	

: Items which confirm vehicle specifications

AUTO SETTING ITEM		NOTE		
Items	Setting value	NOTE		
UNLOCK WITH SHOCK	WITHOUT	_		
AUTO DOOR LOCK SPEED	MODE2	_		
P-POS WARN	MODE1	-		
ROOF FUNCTION	W/O REQ SW	-		
Trunk/Glass Hatch select	Glass Hatch	"Glass Hatch" is indicated also for vehicles without a glas hatch.		
PANIC ALM TYPE	MODE1	_		
TRANSIT MODE	WITH	_		
TR OPEN SW (INT)	MODE1	-		
H/L BULB	DEFAULT	_		
AUTO LIGHT	WITH	_		
FR FOG LAMP	WITH	_		
RR FOG LAMP	WITH	"WITH" is indicated also for vehicles without a rear fog lamp		
DI LMP VARIAT	MODE2	-		
LIGHT RECOG	MODE7	-		
TRANSMISSION	AT with ABS	_		
RAIN SENSOR CONFIG	WITHOUT	-		
REAR WIPER	WITH	-		
THEFT ALM AREA	MODE2	-		
H/L WASHER	MODE1	_		
TR CANCEL SW	WITHOUT	_		

Revision: February 2015 BCS-5 2015 QX50

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## < BASIC INSPECTION >

AUTO SETTING ITEM		NOTE
Items	Setting value	NOTE
BCM AC CONTROL	MODE1	_
WELCOME LIGHT TIMER2	MODE4	_
TPMS	WITH	_
TIRE PRESSURE	230kPa	_
FR FOG LOGIC	MODE1	_
AUTO LOCK&UNLOCK FUNC	WITH	_
AUTO DOOR LOCK SELECT	WITH	_
AUTO DOOR UNLOCK SELECT	WITH	_
FOG ON WITH AUTO LIGHT	WITHOUT	_
Key Fob Type	MODE9	_
DROP WIP FUNCTION	FR & RR	_
WELCOME LIGHT OP SET	WITH	_

## TYPE B

MANUAL SETTING ITEM		NOTE	
Items	Setting value	NOTE	
ACC BAT SAVE FUNC	MODE1	MODE1: With Intelligent Key system	
DTRL	WITH ⇔ WITHOUT	WITH: With daytime running light system     WITHOUT: Without daytime running light system	

### $\Leftrightarrow$ : Items which confirm vehicle specifications

AUTO SETTING ITEM		NOTE	
Items	Setting value	NOTE	
UNLOCK WITH SHOCK	WITHOUT	_	
AUTO DOOR LOCK SPEED	MODE2	_	
P-POS WARN	MODE1	_	
ROOF FUNCTION	W/O REQ SW	_	
ACC BATTERY SAVER	MODE1	_	
IGN BATTERY SAVER	MODE2	_	
BATTERY SAVER FUNCTION	MODE3	_	
Trunk/Glass Hatch select	Glass Hatch	"Glass Hatch" is indicated also for vehicles without a glass hatch.	
PANIC ALM TYPE	MODE1	_	
TRANSIT MODE	WITH	_	
SHIPPING MODE	MODE2	_	
TR OPEN SW (INT)	MODE1	_	
H/L BULB	DEFAULT	_	
AUTO LIGHT	WITH	_	
FR FOG LAMP	WITH	_	
RR FOG LAMP	WITH	"WITH" is indicated also for vehicles without a rear fog lamp.	
DI LMP VARIAT	MODE2	_	
LIGHT RECOG	MODE7	_	
TRANSMISSION	AT with ABS	_	
RAIN SENSOR CONFIG	WITHOUT	_	

## < BASIC INSPECTION >

AUTO SETTING ITEM		NOTE
Items	Setting value	NOTE
REAR WIPER	WITH	_
THEFT ALM AREA	MODE2	_
H/L WASHER	MODE1	_
TR CANCEL SW	WITHOUT	_
BCM AC CONTROL	MODE1	_
WELCOME LIGHT TIMER2	MODE4	_
TPMS	WITH	_
TIRE PRESSURE	230kPa	_
FR FOG LOGIC	MODE1	_
AUTO LOCK&UNLOCK FUNC	WITH	_
AUTO DOOR LOCK SELECT	WITH	_
AUTO DOOR UNLOCK SELECT	WITH	_
FOG ON WITH AUTO LIGHT	WITHOUT	_
Key Fob Type	MODE9	<del>-</del>
DROP WIP FUNCTION	FR & RR	<del>-</del>
WELCOME LIGHT OP SET	WITH	_

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## TRANSIT MODE CANCEL OPERATION

#### < BASIC INSPECTION >

## TRANSIT MODE CANCEL OPERATION

Description INFOID:000000010594184

• BCM is in transit mode if turn signal indicator on combination meter turns ON for 1 minute when ignition switch is turned from OFF to ON.

· In this case, cancel operation must be performed.

#### NOTE:

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

Work Procedure

# 1. TRANSIT MODE CANCEL OPERATION

- 1. Turn ignition switch OFF.
- 2. Turn and hold front wiper switch to HI, and then operate turn signal switch to RH or LH.

>> GO TO 2.

# 2. TRANSIT MODE CANCEL CHECK

- 1. Turn front wiper switch and turn signal switch OFF.
- 2. Turn ignition switch ON.
- 3. Check that turn signal indicator on combination meter does not turn ON.

>> WORK END

## **BODY CONTROL SYSTEM**

#### < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION

## **BODY CONTROL SYSTEM**

## System Description

#### **OUTLINE**

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

#### BCM CONTROL FUNCTION LIST

System	Reference
Combination switch reading system	BCS-11, "System Diagram"
Signal buffer system	BCS-15, "System Diagram"
Power consumption control system	BCS-16. "System Diagram"
Auto light system	<ul> <li><u>EXL-15, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-234, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Turn signal and hazard warning lamp system	<ul> <li><u>EXL-27, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-242, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Headlamp system	<ul> <li><u>EXL-12, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-231, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Parking, license plate and tail lamps system	<ul> <li><u>EXL-29, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-244, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Front fog lamp system	<ul> <li><u>EXL-25, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-240, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Exterior lamp battery saver system	<ul> <li><u>EXL-31, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-246, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Daytime running light system	<ul> <li><u>EXL-18, "System Diagram"</u> (Xenon type headlamp)</li> <li><u>EXL-237, "System Diagram"</u> (Halogen type headlamp)</li> </ul>
Interior room lamp control system	INL-6, "System Diagram"
Step lamp system	INL-0, System Diagram
Interior room lamp battery saver system	INL-10, "System Diagram"
Front wiper and washer system	WW-6, "System Diagram"
Rear wiper and washer system	WW-11, "System Diagram"
Warning chime system	WCS-5, "WARNING CHIME SYSTEM: System Diagram"
Door lock system	DLK-11, "System Diagram"
Infiniti Vehicle Immobilizer System (IVIS) - NATS	SEC-14. "System Diagram"
Vehicle security system	CEC 40 IICustom Diagramii
Panic alarm	SEC-18, "System Diagram"
Automatic drive positioner system	ADP-13, "AUTOMATIC DRIVE POSITIONER SYSTEM: System Diagram"
Rear window defogger system	DEF-4, "System Diagram"

Revision: February 2015 BCS-9 2015 QX50

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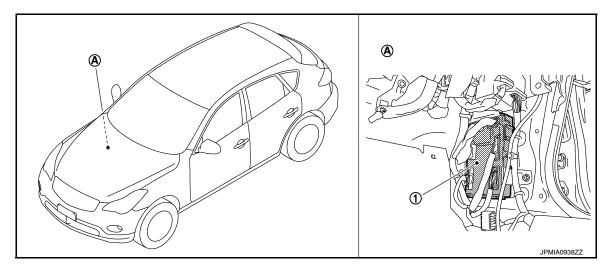
## **BODY CONTROL SYSTEM**

## < SYSTEM DESCRIPTION >

System		Reference	
Intelligent Key system/engine start system	Door lock unlock function		
	Remote keyless function		
	Back door open function	DLV 45 "INTELLICENT VEV CVCTEM - Cyctore Discress"	
	Warning function	DLK-15, "INTELLIGENT KEY SYSTEM : System Diagram"	
	Key reminder function		
	Engine start function		
Power window system		PWC-7, "System Diagram"	
Retained accessory power (RAP) system		PWC-7, "System Description"	
Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR		WT-8, "TIRE PRESSURE MONITORING SYSTEM : System Description"	

# **Component Parts Location**

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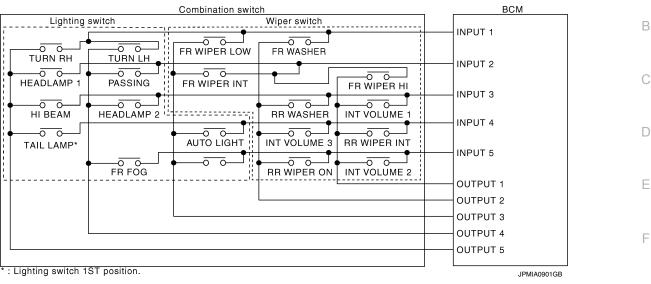


- 1. BCM
- A. Dash side lower (passenger side)

### < SYSTEM DESCRIPTION >

## COMBINATION SWITCH READING SYSTEM

## System Diagram



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## System Description

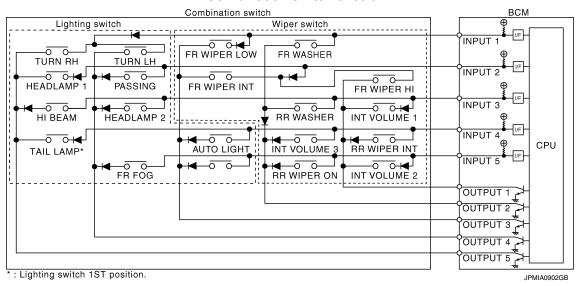
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#### OUTLINE

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

#### COMBINATION SWITCH MATRIX

#### Combination switch circuit



Combination switch INPUT-OUTPUT system list

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

**BCS-11 Revision: February 2015** 2015 QX50

### < SYSTEM DESCRIPTION >

System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5
INPUT 4	RR WIPER INT	INT VOLUME 3	AUTO LIGHT	_	TAIL LAMP
INPUT 5	INT VOLUME 2	RR WIPER ON	_	FR FOG	_

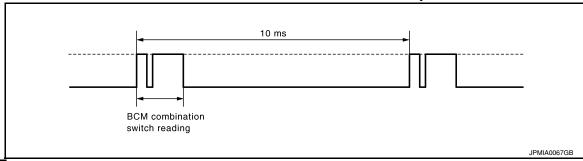
#### NOTE:

Headlamp has a dual system switch.

#### COMBINATION SWITCH READING FUNCTION

#### Description

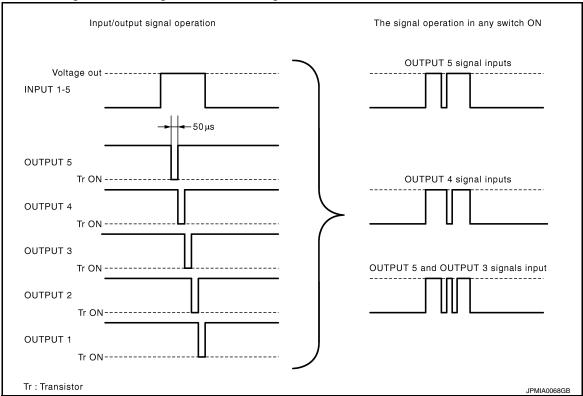
BCM reads the status of the combination switch at 10 ms interval normally.



#### NOTE:

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

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



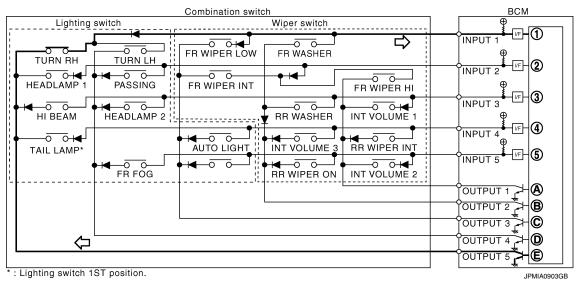
#### Operation Example

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

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

#### < SYSTEM DESCRIPTION >

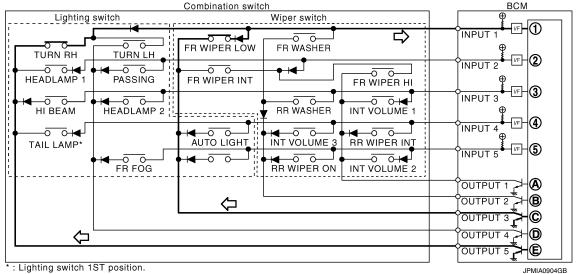
The circuit between INPUT 1 and OUTPUT 5 is formed when the TURN RH switch is turned ON.



- BCM detects the combination switch status signal "1E" when the signal of OUTPUT 5 is input to INPUT 1.
- BCM judges that the TURN RH switch is ON when the signal "1E" is detected.

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

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



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

## WIPER INTERMITTENT DIAL POSITION

BCM judges the wiper intermittent dial 1 - 7 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	ON	ON	ON	
2	ON	ON	OFF	
3	ON	OFF	OFF	
4	OFF	OFF	OFF	
5	OFF	OFF	ON	

**BCS-13 Revision: February 2015** 2015 QX50 **BCS** 

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## < SYSTEM DESCRIPTION >

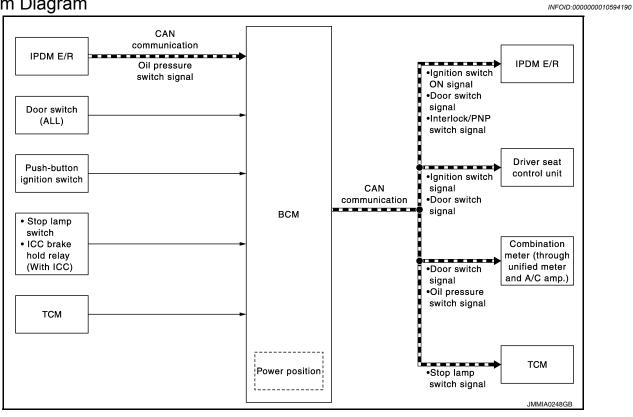
Wiper intermittent	Switch status		
dial position	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3
6	OFF	ON	ON
7	OFF	ON	OFF

#### NOTE:

For details of wiper intermittent dial position, refer to <u>WW-6</u>, "System Description".

## SIGNAL BUFFER SYSTEM

System Diagram



## **System Description**

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### **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	
Ignition switch ON signal     Ignition switch signal	Push-button ignition switch (Push switch)	IPDM E/R (CAN)     Driver seat control unit (CAN)	Inputs the push-button ignition switch (push switch) signal and transmits the ignition switch status judged with BCM via CAN communication.	BCS
Door switch signal	Any door switch	Combination meter (through unified meter and A/C amp.) (CAN) IPDM E/R (CAN) Driver seat control unit (CAN)	Inputs the door switch signal and transmits it via CAN communication.	N
Oil pressure switch signal	IPDM E/R (CAN)	Combination meter (through unified meter and A/C amp.) (CAN)	Transmits the received oil pressure switch signal via CAN communication.	0
Stop lamp switch signal	Stop lamp switch     ICC brake hold relay (With ICC)	TCM (CAN)	Inputs the stop lamp switch 1 signal, and stop lamp switch 2 signal or ICC brake hold relay (with ICC) signal, and transmits it via CAN communication.	Р
Interlock/PNP switch signal	ТСМ	IPDM E/R (CAN)	Inputs the selector lever P/N position signal, and transmits the interlock/PNP switch signal via CAN communication.	

Revision: February 2015 BCS-15 2015 QX50

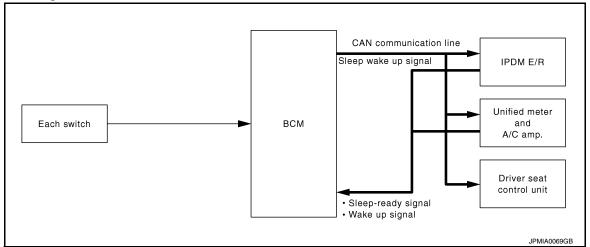
#### POWER CONSUMPTION CONTROL SYSTEM

### < SYSTEM DESCRIPTION >

## POWER CONSUMPTION CONTROL SYSTEM

## System Diagram

INFOID:0000000010594192



## System Description

INFOID:0000000010594193

#### **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, combination meter (unified meter and A/C amp.) and driver seat control unit] that operates with the ignition switch OFF.

#### Normal mode (wake-up)

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

#### CAN communication sleep mode (CAN sleep)

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

## Low power consumption mode (BCM sleep)

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

#### LOW POWER CONSUMPTION CONTROL WITH BCM

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

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

#### Sleep mode activation

- BCM receives the sleep-ready signal (ready) from IPDM E/R and unified meter and A/C amp. 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 perform the low power consumption control when all of the BCM sleep conditions are fulfilled with CAN sleep condition.

## POWER CONSUMPTION CONTROL SYSTEM

### < SYSTEM DESCRIPTION >

BCM sleep condition
<ul> <li>Interior room lamp battery saver: Time out</li> <li>RAP system: OFF</li> <li>Power window switch communication: No transmission</li> <li>Push-button ignition switch illumination: OFF</li> <li>Infiniti Vehicle Immobilizer System (IVIS) - NATS: Not operation</li> <li>Remote keyless entry receiver communication status: No communication</li> <li>Tire pressure monitor system (TPMS) - AIR PRESSURE MONITOR: Stop</li> <li>LOCK indicator lamp: OFF</li> <li>ACC indicator lamp: OFF</li> <li>ON indicator lamp: OFF</li> </ul>

#### Wake-up operation

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

Wake-up condition

BCM wake-up condition	CAN wake-up condition	
Power window switch communication: Receiving     Remote keyless entry receiver communication: Receiving	<ul> <li>Receiving the sleep-ready signal (Not-ready) from any units</li> <li>Key slot (key switch): OFF → ON, ON → OFF</li> <li>Push-button ignition switch (push switch): OFF → ON</li> <li>Hazard switch: OFF → ON</li> <li>PASSING switch: OFF → ON, ON → OFF</li> <li>TAIL LAMP switch: OFF → ON, ON → OFF</li> <li>Passenger door switch: OFF → ON, ON → OFF</li> <li>Passenger door switch: OFF → ON, ON → OFF</li> <li>Rear RH door switch: OFF → ON, ON → OFF</li> <li>Rear LH door switch: OFF → ON, ON → OFF</li> <li>Back door switch: OFF → ON, ON → OFF</li> <li>Driver door request switch: OFF → ON</li> <li>Passenger door request switch: OFF → ON</li> <li>Back door opener request switch: OFF → ON</li> <li>Stop lamp switch: ON</li> <li>ICC brake hold relay (with ICC): ON</li> </ul>	

Revision: February 2015 BCS-17 2015 QX50

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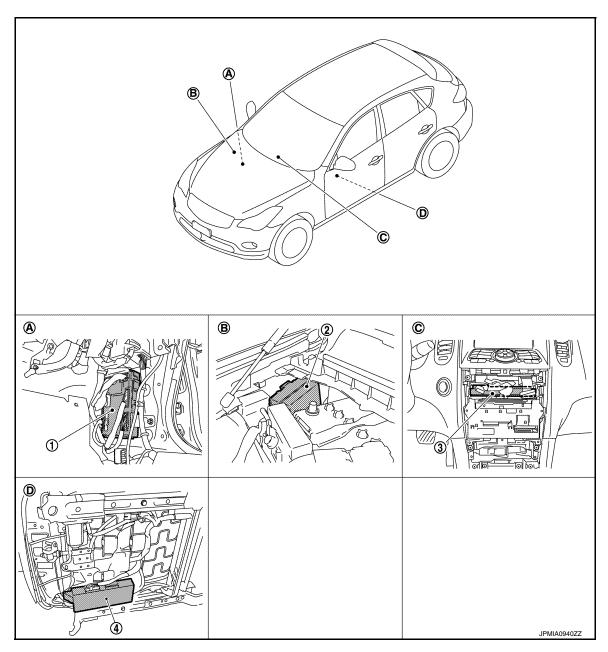
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# **Component Parts Location**

INFOID:0000000010594194



- 1. BCM
- 4. Driver seat control unit
- A. Dash side lower (passenger side)
- D. Backside of the seat cushion (driver seat)
- 2. IPDM E/R
- B. Engine room dash panel (RH)
- 3. Unified meter and A/C amp.
- C. Behind cluster lid C

#### < SYSTEM DESCRIPTION >

# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

×: Applicable item

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

#### NOTE:

### FREEZE FRAME DATA (FFD)

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

Revision: February 2015 BCS-19 2015 QX50

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<sup>\*:</sup> This item is displayed, but is not used.

#### < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK"* to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Except emergency stop operation)	
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)	
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	
	OFF>LOCK	Power supply position status of the moment a	While turning power supply position from "OFF" to "LOCK"*	
Vehicle Condition	OFF>ACC	particular DTC is de-	While turning power supply position from "OFF" to "ACC"	
	ON>CRANK	tected*	While turning power supply position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode	
	LOCK		Power supply position is "LOCK"*	
	OFF		Power supply position is "OFF" (Ignition switch OFF)	
	ACC		Power supply position is "ACC" (Ignition switch ACC)	
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)	
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)	
	CRANKING		Power supply position is "CRANKING" (At engine cranking)	
IGN Counter	0 - 39	<ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>		

#### NOTE:

- \*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- · Closing door
- · Opening door
- · Door is locked using door request switch
- · Door is locked using Intelligent Key

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

### DOOR LOCK

DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000011010975

#### **BCM CONSULT FUNCTION**

CONSULT performs the following functions via CAN communication with BCM.

### < SYSTEM DESCRIPTION >

Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
DATA MONITOR	The BCM input/output signals are displayed.	
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	

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## **WORK SUPPORT**

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
AUTOMATIC DOOR LOCK SE- LECT	Automatic door lock function mode can be selected from the following in this mode.  • VH SPD: All doors are locked when vehicle speed more than 24km/h (15MPH)  • P RANGE: All doors are locked when shifting the selector lever from P position to other than the P position
AUTOMATIC DOOR UNLOCK SELECT	<ul> <li>Automatic door unlock function mode can be selected from the following in the mode.</li> <li>MODE 1: All doors are unlocked when the power supply position is changed from ON to OFF</li> <li>MODE 2: All doors are unlocked when shifting the selector lever from any position other than the P to P position</li> <li>MODE 3: Driver side door is unlocked when the power supply position is changed from ON to OFF</li> <li>MODE 4: Driver side door is unlocked when shifting the selector lever from any position other than the P to P position</li> </ul>
AUTOMATIC LOCK/UNLOCK SET	Automatic door lock/unlock function mode can be selected from the following in this mode.  Off: non-operational  Unlock Only: door unlock operation only  Lock Only: door lock operation only  Lock/Unlock: lock/unlock operation

### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Contents
REQ SW-DR	Indicated [ON/OFF] condition of door request switch (driver side).
REQ SW-AS	Indicated [ON/OFF] condition of door request switch (passenger side).
REQ SW-BD/TR	Indicated [ON/OFF] condition of back door request switch.
DOOR SW-DR	Indicated [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicated [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicated [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicated [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	Indicated [ON/OFF] condition of back door switch.
CDL LOCK SW	Indicated [ON/OFF] condition of lock signal from door lock unlock switch.
CDL UNLOCK SW	Indicated [ON/OFF] condition of unlock signal from door lock unlock switch.
KEY CYL LK-SW	Indicated [ON/OFF] condition of lock signal from door key cylinder.
KEY CYL UN-SW	Indicated [ON/OFF] condition of unlock signal from door key cylinder.

ACTIVE TEST

Revision: February 2015 BCS-21 2015 QX50

### < SYSTEM DESCRIPTION >

Test item	Description		
DOOR LOCK	This test is able to check door lock/unlock operation.  The all door lock actuators are locked when "ALL LCK" on CONSULT screen is touched.  The all door lock actuators are unlocked when "ALL UNLK" on CONSULT screen is touched.  The door lock actuator (driver side) is unlocked when "DR UNLK" on CONSULT screen is touched.  The door lock actuator (passenger side) is unlocked when "AS UNLK" on CONSULT screen is touched.  The door lock actuator (rear LH and RH) is unlocked when "OTR ULK" on CONSULT screen is touched.		

## **REAR WINDOW DEFOGGER**

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

INFOID:0000000011010992

### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Description		
REAR DEF SW	This is displayed even when it is not equipped.		
PUSH SW	Indicates [ON/OFF] condition of push switch.		

#### **ACTIVE TEST**

Test Item	Description			
REAR DEFOGGER	Rear window defogger operates when "ON" on CONSULT screen is touched.			

## BUZZER

## BUZZER: CONSULT Function (BCM - BUZZER)

INFOID:0000000011010993

## **CONSULT APPLICATION ITEMS**

Test item	Diagnosis mode	Description	
BUZZER	Data Monitor	Displays BCM input data in real time.	
DOZZER	Active Test Operation of electrical loads can be checked by sending driving sign.		

### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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

## < SYSTEM DESCRIPTION >

Display item [Unit]	Description			
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM.			
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.			

## **ACTIVE TEST**

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

# INT LAMP

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

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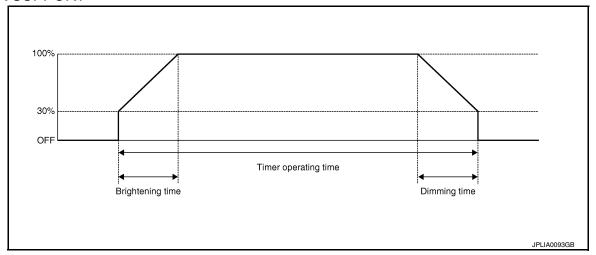
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## **WORK SUPPORT**



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

Revision: February 2015 BCS-23 2015 QX50

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## < SYSTEM DESCRIPTION >

Service item	Setting item	Setting	
R LAMP TIMER LOGIC SET	MODE 1*	DE 1* Interior room lamp timer activates with synchronizing all doors.	
K EAWF TIMEN LOGIC SET	MODE 2	Interior room lamp timer activates with synchronizing the driver door only.	

<sup>\*:</sup> Initial setting

## **DATA MONITOR**

### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description			
REQ SW-DR [On/Off]	Indicated [ON/OFF] condition of door request switch (driver side).			
REQ SW-AS [On/Off]	Indicated [ON/OFF] condition of door request switch (passenger side).			
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.			
KEY SW-SLOT [On/Off]	Indicates [ON/OFF] condition of key slot.			
DOOR SW-DR [On/Off]	Indicated [ON/OFF] condition of front door switch (driver side).			
DOOR SW-AS [On/Off]	Indicated [ON/OFF] condition of front door switch (passenger side).			
DOOR SW-RR [On/Off]	Indicated [ON/OFF] condition of rear door switch RH.			
DOOR SW- RL [On/Off]	Indicated [ON/OFF] condition of rear door switch LH.			
DOOR SW-BK [On/Off]	Indicated [ON/OFF] condition of back door switch.			
CDL LOCK SW [On/Off]	Indicated [ON/OFF] condition of lock signal from door lock unlock switch.			
CDL UNLOCK SW [On/Off]	Indicated [ON/OFF] condition of unlock signal from door lock unlock switch.			
KEY CYL LK-SW [On/Off]	Indicated [ON/OFF] condition of lock signal from door key cylinder.			
KEY CYL UN-SW [On/Off]	Indicated [ON/OFF] condition of unlock signal from door key cylinder.			
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored.			
RKE-LOCK [On/Off]	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.			
RKE-UNLOCK [On/Off]	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.			

### **ACTIVE TEST**

Test item	Operation	Description	
INT LAMP	On	Outputs the interior room lamp control signal.	
INT LAWF	Off	Stops the interior room lamp control signal.	
STEP LAMP TEST	On	Outputs the step lamp control signal.	
	Off	Stops the step lamp control signal.	
LUGGAGE LAMP TEST	On	Outputs the trunk room lamp control signal.	
	Off	Stops the trunk room lamp control signal.	

### < SYSTEM DESCRIPTION >

## HEADLAMP

## HEADLAMP: CONSULT Function (BCM - HEAD LAMP) (Xenon Type)

#### INFOID:0000000011010981

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### **WORK SUPPORT**

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

<sup>\*:</sup> Initial setting

## **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates [STOP/START/CRANK/RUN] condition of engine states.
VEH SPEED 1 [km/h]	Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].
KEY SW-SLOT [On/Off]	Indicates [ON/OFF] condition of key slot.

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## < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description		
TURN SIGNAL R [On/Off]			
TURN SIGNAL L [On/Off]			
TAIL LAMP SW [On/Off]			
HI BEAM SW [On/Off]			
HEAD LAMP SW1 [On/Off]	Each switch status that BCM judges from the combination switch reading function		
HEAD LAMP SW2 [On/Off]			
PASSING SW [On/Off]			
AUTO LIGHT SW [On/Off]			
FR FOG SW [On/Off]			
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored.		
DOOR SW-DR [On/Off]	Indicated [ON/OFF] condition of front door switch (driver side).		
DOOR SW-AS [On/Off]	Indicated [ON/OFF] condition of front door switch (passenger side).		
DOOR SW-RR [On/Off]	Indicated [ON/OFF] condition of rear door switch RH.		
DOOR SW- RL [On/Off]	Indicated [ON/OFF] condition of rear door switch LH.		
DOOR SW-BK [On/Off]	Indicated [ON/OFF] condition of back door switch.		
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor		

## **ACTIVE TEST**

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

## < SYSTEM DESCRIPTION >

Test item	Operation	Description	
	RH		
CORNERING LAMP	LH	NOTE: The item is indicated, but cannot be tested.	
	Off		
ILL DIM SIGNAL	On	NOTE:	
ILL DIN SIGNAL	Off	The item is indicated, but cannot be tested.	

# HEADLAMP: CONSULT Function (BCM - HEAD LAMP) (Halogen Type)

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### **WORK SUPPORT**

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

<sup>\*:</sup> Initial setting

## DATA MONITOR

## NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates [STOP/START/CRANK/RUN] condition of engine states.
VEH SPEED 1 [km/h]	Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].
KEY SW-SLOT [On/Off]	Indicates [ON/OFF] condition of key slot.

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Revision: February 2015 BCS-27 2015 QX50

## < SYSTEM DESCRIPTION >

Monitor item [Unit]	Description	
TURN SIGNAL R [On/Off]		
TURN SIGNAL L [On/Off]		
TAIL LAMP SW [On/Off]		
HI BEAM SW [On/Off]	Each switch status that BCM judges from the combination switch reading function	
HEAD LAMP SW1 [On/Off]		
HEAD LAMP SW2 [On/Off]		
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		
FR FOG SW [On/Off]		
RR FOG SW [On/Off]	NOTE: The item is indicated, but not monitored.	
DOOR SW-DR [On/Off]	Indicated [ON/OFF] condition of front door switch (driver side).	
DOOR SW-AS [On/Off]	Indicated [ON/OFF] condition of front door switch (passenger side).	
DOOR SW-RR [On/Off]	Indicated [ON/OFF] condition of rear door switch RH.	
DOOR SW- RL [On/Off]	Indicated [ON/OFF] condition of rear door switch LH.	
DOOR SW-BK [On/Off]	Indicated [ON/OFF] condition of back door switch.	
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor	

## **ACTIVE TEST**

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

### < SYSTEM DESCRIPTION >

Test item	Operation	Description	
	RH	NOTE: The item is indicated, but cannot be tested.	
CORNERING LAMP	LH		
	Off		
ILL DIM SIGNAL	On	NOTE:	
	Off	The item is indicated, but cannot be tested.	

# **WIPER**

## WIPER: CONSULT Function (BCM - WIPER)

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### **WORK SUPPORT**

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

<sup>\*:</sup>Factory setting

### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item [Unit]	Description
PUSH SW [Off/On]	The switch status input from push-button ignition switch.
VEHICLE SPEED 1 [km/h]	The value of the vehicle speed signal received from unified meter and A/C amp. with CAN communication.
FR WIPER HI [Off/On]	
FR WIPER LOW [Off/On]	Each quitab status that DCM judges from the combination quitab reading function
FR WASHER SW [Off/On]	Each switch status that BCM judges from the combination switch reading function.
FR WIPER INT [Off/On]	
FR WIPER STOP [Off/On]	Front wiper motor (stop position) status received from IPDM E/R with CAN communication.
INT VOLUME [1 – 7]	Each switch status that BCM judges from the combination switch reading function.
RR WIPER ON [Off/On]	
RR WIPER INT [Off/On]	Each switch status that BCM judges from the combination switch reading function.
RR WASHER SW [Off/On]	
RR WIPER STOP [Off/On]	Rear wiper motor (stop position) status input from the rear wiper motor.

## **ACTIVE TEST**

Revision: February 2015 BCS-29 2015 QX50

### < SYSTEM DESCRIPTION >

Test item	Operation	Description
	Hi	Transmits the front wiper request signal (HI) to IPDM E/R with CAN communication to operate the front wiper HI operation.
FR WIPER	Lo	Transmits the front wiper request signal (LO) to IPDM E/R with CAN communication to operate the front wiper LO operation.
	INT	Transmits the front wiper request signal (INT) to IPDM E/R with CAN communication to operate the front wiper INT operation.
	Off	Stops transmitting the front wiper request signal to stop the front wiper operation.
RR WIPFR	On	Outputs the voltage to operate the rear wiper motor.
Off		Stops the voltage to stop.

## **FLASHER**

## FLASHER: CONSULT Function (BCM - FLASHER) (Xenon Type)

INFOID:0000000011010983

### **WORK SUPPORT**

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

<sup>\*:</sup> Initial setting

### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description	
REQ SW-DR [On/Off]	Indicated [ON/OFF] condition of door request switch (driver side).	
REQ SW-AS [On/Off]	Indicated [ON/OFF] condition of door request switch (passenger side).	
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.	
TURN SIGNAL R [On/Off]		
TURN SIGNAL L [On/Off]	<ul> <li>Each switch condition that BCM judges from the combination switch reading functio</li> </ul>	
HAZARD SW [On/Off]	The switch status input from the hazard switch	
RKE-LOCK [On/Off]	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.	
RKE-UNLOCK [On/Off]	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.	
RKE-PANIC [On/Off]	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.	

#### **ACTIVE TEST**

#### < SYSTEM DESCRIPTION >

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

# FLASHER: CONSULT Function (BCM - FLASHER) (Halogen Type)

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### **WORK SUPPORT**

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

<sup>\*:</sup> Initial setting

### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	Indicated [ON/OFF] condition of door request switch (driver side).
REQ SW-AS [On/Off]	Indicated [ON/OFF] condition of door request switch (passenger side).
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.
TURN SIGNAL R [On/Off]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	The switch status input from the hazard switch
RKE-LOCK [On/Off]	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-PANIC [On/Off]	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.

### **ACTIVE TEST**

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

# INTELLIGENT KEY

INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000011010976

**WORK SUPPORT** 

Revision: February 2015 BCS-31 2015 QX50

Monitor item	Description
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode.
AUTO LOCK SET	Auto door lock time can be changed in this mode.  • MODE 1: 1 minute  • MODE 2: 5 minutes  • MODE 3: 30 seconds  • MODE 4: 2 minutes
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and back door) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode.  • MODE 1: 0.5 sec.  • MODE 2: Non-operation  • MODE 3: 1.5 sec.
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode.  • MODE 1: 3 sec.  • MODE 2: Non-operation  • MODE 3: 5 sec.
TAKE OUT FROM WIN WARN	NOTE: This item is displayed, but cannot be supported.
TRUNK OPEN DELAY	NOTE: This item is displayed, but cannot be supported.
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode.  • LOCK ONLY: Door lock operation only  • UNLOCK ONLY: Door unlock operation only  • LOCK/UNLOCK: Lock/unlock operation  • OFF: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode.  • Horn chirp: Sound horn  • Buzzer: Sound Intelligent Key warning buzzer  • OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below.  • 70 msec.  • 100 msec.  • 200 msec.
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following with this mode.  • Without room lamp  • With room lamp  • Without paddle lamp  • With paddle lamp

## < SYSTEM DESCRIPTION >

## SELF-DIAG RESULT

Refer to BCS-91, "DTC Index".

### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Condition
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	NOTE: This item is displayed, but cannot be monitored.
REQ SW -RL	NOTE: This item is displayed, but cannot be monitored.
REQ SW -BD/TR	Indicates [ON/OFF] condition of back door request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.
CLUCH SW	NOTE: This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch power supply.
BRAKE SW 2	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	NOTE: This item is displayed, but cannot be monitored.
S/L -UNLOCK	NOTE: This item is displayed, but cannot be monitored.
S/L RELAY -F/B	NOTE: This item is displayed, but cannot be monitored.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 -F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	NOTE: This item is displayed, but cannot be monitored.
S/L UNLK-IPDM	NOTE: This item is displayed, but cannot be monitored.
S/L RELAY-REQ	NOTE: This item is displayed, but cannot be monitored.
VEH SPEED 1	Display the vehicle speed signal received from unified meter and A/C amp. by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLOCK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLOCK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.

Revision: February 2015 BCS-33 2015 QX50

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## < SYSTEM DESCRIPTION >

Monitor Item	Condition
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.
TRNK/HAT MNTR	NOTE: This item is displayed, but cannot be monitored.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	NOTE: This item is displayed, but cannot be monitored.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.

## **ACTIVE TEST**

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT screen is touched.
INSIDE BUZZER	This test is able to check warning chime in combination meter operation.  Take away warning chime sounds when "TAKE OUT" on CONSULT screen is touched.  Key warning chime sounds when "KEY WARN" on CONSULT screen is touched.  Position warning chime sounds when "PRNG WARN" on CONSULT screen is touched.  ACC warning chime sounds when "ACC WARN" on CONSULT screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. The Intelligent Key warning buzzer will be activated after "ON" on CONSULT screen is touched.
INDICATOR	This test is able to check warning lamp operation.  • "KEY" Warning lamp illuminates when "KEY ON" on CONSULT screen is touched.  • "KEY" Warning lamp flashes when "KEY IND" on CONSULT screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT screen is touched.
LCD	This test is able to check meter display information  Engine start information displays when "BP N" on CONSULT screen is touched.  Engine start information displays when "BP I" on CONSULT screen is touched.  Key ID warning displays when "ID NG" on CONSULT screen is touched.  ROTAT: This item is displayed, but cannot be tested.  Position warning displays when "SFT P" on CONSULT screen is touched.  Intelligent Key insert information displays when "INSRT" on CONSULT screen is touched.  Intelligent Key low battery warning displays when "BATT" on CONSULT screen is touched.  Take away through window warning displays when "NO KY" on CONSULT screen is touched.  Take away warning display when "OUTKY" on CONSULT screen is touched.  OFF position warning display when "LK WN" on CONSULT screen is touched.
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation. This actuator opens when "ON" on CONSULT screen is touched.
FLASHER	This test is able to check hazard warning lamp operation. The hazard warning lamps will be activated after "ON" on CONSULT screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT screen is touched.
P RANGE	This test is able to check A/T shift selector power supply A/T shift selector power is supplied when "ON" on CONSULT screen is touched.

### < SYSTEM DESCRIPTION >

Test item	Description
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation.  Push-ignition switch illumination illuminates when "ON" on CONSULT screen is touched.
LOCK INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation.  LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched;
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation.  Indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched.
IGNITION ON IND	This test is able to check ON indicator in push-ignition switch operation.  Indicator in push-ignition switch illuminates when "ON" on CONSULT screen is touched.
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT screen is touched.
TRUNK/BACK DOOR	NOTE: This item is displayed, but cannot be tested.

## **COMB SW**

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

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### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [UNIT]	Description
FR WIPER HI [Off/On]	Displays the status of the FR WIPER HI switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER LOW [Off/On]	Displays the status of the FR WIPER LOW switch in combination switch judged by BCM with the combination switch reading function.
FR WASHER SW [Off/On]	Displays the status of the FR WASHER switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER INT [Off/On]	Displays the status of the FR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
FR WIPER STOP [Off/On]	Displays the status of the front wiper stop position signal received from IPDM E/R via CAN communication.
INT VOLUME [1 - 7]	Displays the status of wiper intermittent dial position judged by BCM with the combination switch reading function.
RR WIPER ON [Off/On]	Displays the status of the RR WIPER ON switch in combination switch judged by BCM with the combination switch reading function.
RR WIPER INT [Off/On]	Displays the status of the RR WIPER INT switch in combination switch judged by BCM with the combination switch reading function.
RR WASHER SW [Off/On]	Displays the status of the RR WASHER switch in combination switch judged by BCM with the combination switch reading function.
RR WIPER STOP [Off/On]	Displays the status of the rear wiper stop position signal received from rear wiper motor.
TURN SIGNAL R [Off/On]	Displays the status of the TURN RH switch in combination switch judged by BCM with the combination switch reading function.
TURN SIGNAL L [Off/On]	Displays the status of the TURN LH switch in combination switch judged by BCM with the combination switch reading function.
TAIL LAMP SW [Off/On]	Displays the status of the TAIL LAMP switch in combination switch judged by BCM with the combination switch reading function.
HI BEAM SW [Off/On]	Displays the status of the HI BEAM switch in combination switch judged by BCM with the combination switch reading function.
HEAD LAMP SW 1 [Off/On]	Displays the status of the HEADLAMP 1 switch in combination switch judged by BCM with the combination switch reading function.

Revision: February 2015 BCS-35 2015 QX50

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### < SYSTEM DESCRIPTION >

Monitor item [UNIT]	Description
HEAD LAMP SW 2 [Off/On]	Displays the status of the HEADLAMP 2 switch in combination switch judged by BCM with the combination switch reading function.
PASSING SW [Off/On]	Displays the status of the PASSING switch in combination switch judged by BCM with the combination switch reading function.
AUTO LIGHT SW [Off/On]	Displays the status of the AUTO LIGHT switch in combination switch judged by BCM with the combination switch reading function.
FR FOG SW [Off/On]	Displays the status of the FR FOG switch in combination switch judged by BCM with the combination switch reading function.
RR FOG SW [Off/On]	NOTE: The item is indicated, but not monitored.

## **BCM**

BCM : CONSULT Function (BCM - BCM)

INFOID:0000000010594207

### **WORK SUPPORT**

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

## **IMMU**

IMMU: CONSULT Function (BCM - IMMU)

INFOID:0000000011010979

#### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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

### **ACTIVE TEST**

Test item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when "ON" on CONSULT screen touched.

## **BATTERY SAVER**

BATTERY SAVER: CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000011010987

**WORK SUPPORT** 

Revision: February 2015 BCS-36 2015 QX50

#### < SYSTEM DESCRIPTION >

Service item	Setting item		Setting	
BATTERY SAVER SET	On*	With the e	With the exterior lamp battery saver function	
	Off	Without the exterior lamp battery saver function		
ROOM LAMP BAT SAV SET	On*	With the interior room lamp battery saver function		
	Off	Without the interior room lamp battery saver function		
	MODE 1	30 min.		
ROOM LAMP TIMER SET	MODE 2	60 min.	Sets the interior room lamp battery saver timer operating time.	
	MODE 3*	15 min.		

<sup>\*:</sup> Initial setting

#### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item [Unit]	Description
REQ SW-DR [On/Off]	Indicated [ON/OFF] condition of door request switch (driver side).
REQ SW-AS [On/Off]	Indicated [ON/OFF] condition of door request switch (passenger side).
PUSH SW [On/Off]	Indicates [ON/OFF] condition of push-button ignition switch.
KEY SW-SLOT [On/Off]	Indicates [ON/OFF] condition of key slot.
DOOR SW-DR [On/Off]	Indicated [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS [On/Off]	Indicated [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR [On/Off]	Indicated [ON/OFF] condition of rear door switch RH.
DOOR SW- RL [On/Off]	Indicated [ON/OFF] condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicated [ON/OFF] condition of back door switch.
CDL LOCK SW [On/Off]	Indicated [ON/OFF] condition of lock signal from door lock unlock switch.
CDL UNLOCK SW [On/Off]	Indicated [ON/OFF] condition of unlock signal from door lock unlock switch.
KEY CYL LK-SW [On/Off]	Indicated [ON/OFF] condition of lock signal from door key cylinder.
KEY CYL UN-SW [On/Off]	Indicated [ON/OFF] condition of unlock signal from door key cylinder.
TRNK/HAT MNTR [On/Off]	NOTE: The item is indicated, but not monitored.
RKE-LOCK [On/Off]	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.

#### **ACTIVE TEST**

Revision: February 2015 BCS-37 2015 QX50

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#### < SYSTEM DESCRIPTION >

Test item	Operation	Description
BATTERY SAVER	Off	Cuts the interior room lamp power supply.
	On	Outputs the interior room lamp power supply.

### **TRUNK**

### TRUNK: CONSULT Function (BCM - TRUNK)

INFOID:0000000011010977

#### **BCM CONSULT FUNCTION**

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

#### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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

#### **ACTIVE TEST**

Test item	Description
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation.  This actuator opens when ""

### THEFT ALM

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

INFOID:0000000011010978

#### DATA MONITOR

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitored Item	Description
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -RR	NOTE: This is displayed even when it is not equipped.

#### < SYSTEM DESCRIPTION >

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

#### WORK SUPPORT

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

#### **ACTIVE TEST**

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

**RETAIND PWR** 

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

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NOTE:

Revision: February 2015 BCS-39 2015 QX50

#### < SYSTEM DESCRIPTION >

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

#### SIGNAL BUFFER

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

INFOID:0000000010594213

#### **DATA MONITOR**

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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

#### **ACTIVE TEST**

Test item	Opera- tion	Description
	Off	OFF
OIL PRESSURE SW	On	BCM transmits the oil pressure switch signal to the unified meter and A/C amp. via CAN communication, which illuminates the oil pressure warning lamp in the combination meter.

#### AIR PRESSURE MONITOR

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

#### WORK SUPPORT MODE

**ID Read** 

The registered ID number is displayed.

**ID** Regist

Refer to WT-22, "Description".

SELF-DIAG RESULTS MODE

Operation Procedure

Refer to BCS-91, "DTC Index".

DATA MONITOR MODE

Screen of data monitor mode is displayed.

#### NOTE:

- When malfunction is detected, CONSULT perform REAL-TIME DIAGNOSIS.
- Also, any malfunction detected while in this mode will be displayed at real time.
- The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

#### < SYSTEM DESCRIPTION >

Monitor	Condition	Specification	
AIR PRESS FL AIR PRESS FR AIR PRESS RR AIR PRESS RL	Drive vehicle for a few minutes.     or     Ignition switch ON and tire pressure sensor tire pressure sensor activation tool is transmitting activation signals.	Tire pressure (kPa, kg/cm <sup>2</sup> or Psi)	
ID REGST FL1 ID REGST FR1 ID REGST RR1 ID REGST RL1		Registration ID: Green No registration: Red	
WARNING LAMP	Ignition switch ON	Low tire pressure warning lamp ON: on Low tire pressure warning lamp OFF: off	
BUZZER		Buzzer in combination meter ON: on Buzzer in combination meter OFF: off	

#### NOTE:

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

#### ACTIVE TEST MODE

#### NOTE:

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

#### **TEST ITEM LIST**

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

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Revision: February 2015 BCS-41 2015 QX50

#### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

Description INFOID:000000010594215

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to LAN-25, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT display description	DTC Detection Condition	Possible cause
U1000	CAN COMM	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system

### Diagnosis Procedure

INFOID:0000000010594217

### 1.PERFORM SELF DIAGNOSTIC

- 1. Turn ignition switch ON and wait for 2 seconds or more.
- 2. Check "Self Diagnostic Result".

#### Is DTC "U1000" displayed?

YES >> Refer to LAN-16, "Trouble Diagnosis Flow Chart".

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

### **U1010 CONTROL UNIT (CAN)**

### < DTC/CIRCUIT DIAGNOSIS >

# U1010 CONTROL UNIT (CAN)

DTC Logic

### DTC DETECTION LOGIC

DTC	CONSULT display de- scription	DTC Detection Condition	Possible cause
U1010	CONTROL UNIT(CAN)	BCM detected internal CAN communication circuit malfunction.	BCM

# Diagnosis Procedure

INFOID:0000000010594219

# 1.REPLACE BCM

When DTC "U1010" is detected, replace BCM.

>> Replace BCM. Refer to BCS-97. "Exploded View".

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#### **U0415 VEHICLE SPEED SIG**

#### < DTC/CIRCUIT DIAGNOSIS >

### U0415 VEHICLE SPEED SIG

Description INFOID:000000010594220

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

#### DTC DETECTION LOGIC

DTC	CONSULT display de- scription	DTC Detection Condition	Probable cause
U0415	VEHICLE SPEED	When the vehicle speed signal received from the ABS actuator and electric unit (control unit) remains abnormal for 2 seconds or more.	ABS actuator and electric unit (control unit)     BCM

#### DTC CONFIRMATION PROCEDURE

### 1.DTC CONFIRMATION

- 1. Erase the DTC.
- 2. Turn ignition switch OFF.
- Perform the "Self Diagnostic Result" of CONSULT, when passed 2 seconds or more after the ignition switch is turned ON.

#### Is any DTC detected?

YES >> Refer to BCS-44, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000010594222

# $1.\mathsf{abs}$ actuator and electric unit (control unit) self-diag results

Perform "Self-Diagnostic Result" of ABS actuator and electric unit (control unit) with CONSULT. Refer to <u>BRC-30</u>, "CONSULT Function".

#### Is any DTC detected?

YES >> Repair or replace the malfunctioning part.

NO >> Replace BCM. Refer to BCS-97, "Exploded View".

#### **B2562 LOW VOLTAGE**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B2562 LOW VOLTAGE**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT display de- scription	DTC Detection Condition	Possible cause
B2562	LOW VOLTAGE	When the power supply voltage to BCM remains less than 8.8 V for 120 seconds or more	Harness or connector (power supply circuit)

#### DTC CONFIRMATION PROCEDURE

# 1. DTC CONFIRMATION

- 1. Erase DTC.
- 2. Turn ignition switch OFF.
- Perform the "Self Diagnostic Result" of CONSULT, when passed 120 seconds or more after the ignition switch is turned ON.

#### Is any DTC detected?

YES >> Refer to BCS-45, "Diagnosis Procedure".

NO >> INSPECTION END

### Diagnosis Procedure

1. CHECK POWER SUPPLY CIRCUIT

Check BCM power supply circuit. Refer to BCS-46, "Diagnosis Procedure".

#### Is the circuit normal?

**Revision: February 2015** 

YES >> Replace BCM. Refer to BCS-97, "Exploded View".

NO >> Repair the malfunctioning part.

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BCS-45 2015 QX50

#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

### POWER SUPPLY AND GROUND CIRCUIT

### Diagnosis Procedure

INFOID:0000000010594225

### 1. CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.	
Battery power supply	К	
battery power suppry	10	

#### Is the fuse fusing?

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

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

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

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

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Connector Terminal		Continuity	
M119	13		Existed	

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### **COMBINATION SWITCH INPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

# **COMBINATION SWITCH INPUT CIRCUIT**

### Diagnosis Procedure

#### INFOID:0000000010594226

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# 1. CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

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

System	BCM		Combination switch		Continuity
System	Connector	Terminal	Connector	Terminal	Continuity
INPUT 1		107		11	
INPUT 2		109		9	
INPUT 3	M122	88	M33	7	Existed
INPUT 4		108		10	
INPUT 5		87		13	

#### Does continuity exist?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

# 2.CHECK INPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	CM		Continuity
System	Connector	Terminal		Continuity
INPUT 1		107		
INPUT 2		109	Ground	
INPUT 3	M122	88		Not existed
INPUT 4		108		
INPUT 5		87		

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 3.

# 3.CHECK BCM OUTPUT VOLTAGE

1. Connect the BCM connector.

2. Check voltage between BCM harness connector and ground.

System  INPUT 1 INPUT 2 INPUT 3	(+	+)	(-)	Voltage		
	BCM			(Approx.)		
	Connector	Terminal				
INPUT 1		107	_			
INPUT 2		109	Ground	Refer to BCS-		
INPUT 3	M122	88		51, "Refer-		
INPUT 4		108		ence Value".		
INPUT 5		87				

#### Is the measurement value normal?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-97, "Exploded View".

Revision: February 2015 BCS-47 2015 QX50

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### **COMBINATION SWITCH INPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

# 4. CHECK BCM INPUT SIGNAL

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

System	(+	-)	(-)	Voltage	
System	BCM			(Approx.)	
	Connector	Terminal			
INPUT 1		107	_		
INPUT 2		109	Ground	Refer to BCS-	
INPUT 3	M122	88		51, "Refer-	
INPUT 4		108		ence Value".	
INPUT 5		87			

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

YES >> Replace BCM. Refer to BCS-97, "Exploded View".

NO >> Replace the combination switch.

#### **COMBINATION SWITCH OUTPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

### COMBINATION SWITCH OUTPUT CIRCUIT

### Diagnosis Procedure

### INFOID:0000000010594227

# 1. CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR OPEN

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- 1. Turn the ignition switch OFF.
- 2. Disconnect the BCM and combination switch connectors.

#### NOTE:

- BCM connector disconnects M123 only.
- 3. Check continuity between BCM harness connector and combination switch harness connector.

System	BCM		Combination switch		Continuity
	Connector	Terminal	Connector	Terminal	Continuity
OUTPUT 1		143		12	
OUTPUT 2		144		14	
OUTPUT 3	M123	145	M33	5	Existed
OUTPUT 4		146		2	
OUTPUT 5		142		8	

#### Does continuity exist?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

# 2.CHECK OUTPUT 1 - 5 SYSTEM CIRCUIT FOR SHORT

Check for continuity between BCM harness connector and ground.

System	В	CM		Continuity	
System	Connector Terminal			Continuity	
OUTPUT 1		143			
OUTPUT 2	M123	144	Ground		
OUTPUT 3		145		Not existed	
OUTPUT 4		146			
OUTPUT 5		142			

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 3.

# 3.check combination switch internal circuit

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

#### NOTF:

Check that the combination switch outputs a signal from combination switch input system.

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Revision: February 2015 BCS-49 2015 QX50

### **COMBINATION SWITCH OUTPUT CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

		Terminals			
System	(+)		(-)	Value (Approx.)	
	Combination switch			Value (Approx.)	
	Connector Terminal				
OUTPUT 1		12			
OUTPUT 2		14	0	(V)	
OUTPUT 3		5	Ground	10	
OUTPUT 4	M33	2		0	
OUTPUT 5		8		2 ms JPMIA0041GB	

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

YES >> Replace BCM. Refer to BCS-97, "Exploded View".

NO >> Replace the combination switch.

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< ECU DIAGNOSIS INFORMATION >

# **ECU DIAGNOSIS INFORMATION**

# BCM (BODY CONTROL MODULE)

Reference Value INFOID:0000000010594228

#### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM
----------------------

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
I IX WII LIXIII	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
I IX WIF LIX LOW	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
FR WIFER IN	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
IN WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
RR WIPER INT	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
RR WIPER IN I	Rear wiper switch INT	On
	Rear washer switch OFF	Off
RK WASHER SW	Rear washer switch ON	On
DD WIDED STOD	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
TUDNI CIONAL D	Other than turn signal switch RH	Off
TORN SIGNAL K	Turn signal switch RH	On
RR WASHER SW  RR WIPER STOP  FURN SIGNAL R  FURN SIGNAL L	Other than turn signal switch LH	Off
TORN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAWIF OW	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
III DEAINI ONN	Lighting switch HI	On
HEAD I AMD SW/ 4	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
DACCING CW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ALITO LICHT SW	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

**BCS-51 Revision: February 2015** 2015 QX50

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
	Driver door closed	Off On
DOOR SW-DR	Driver door opened	
	Passenger door closed	Off On Off Off Off Off On Off
DOOR SW-AS	Passenger door opened	On
	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
	Back door closed	Off
DOOR SW-BK	Back door opened	On
OOR SW-DR OOR SW-AS OOR SW-RR OOR SW-RL OOR SW-BK DL LOCK SW DL UNLOCK SW EY CYL LK-SW EY CYL UN-SW EY CYL SW-TR AZARD SW EAR DEF SW R CANCEL SW R/BD OPEN SW RNK/HAT MNTR EVERSE SW KE-LOCK	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
	Other than power door lock switch UNLOCK	Off
ODL UNLOCK SW	Power door lock switch UNLOCK	On
VEV OVI LIK OW	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
(E) ( O) (   L  D) ( O) (	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZADD CW	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TD/DD ODEN SW	Back door opener switch OFF	Off
DOR SW-AS DOR SW-RR DOR SW-BK DOR SW-BK DO LOCK SW DO LUNLOCK SW DO LUNL	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off
DKE I OCK	LOCK button of the key is not pressed	Off
NNE-LOUN	LOCK button of the key is pressed	On
DKE TIMI OCK	UNLOCK button of the key is not pressed	Off
RNE-UNLUUK	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
DKE DANIC	PANIC button of the key is not pressed	Off
RNE-PAINIU	PANIC button of the key is pressed	On
	UNLOCK button of the key is not pressed	On Off Off Off On Off
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	
OPTICAL SENSOR	Bright outside of the vehicle	Off On Close to 5 V Close to 0 V Off On Off On Off Off Off Off On Off Off
JETICAL SENSOR	Dark outside of the vehicle	
DEO OW DD	Driver door request switch is not pressed	Off
REQ SW -DR	Driver door request switch is pressed	Off On Close to 5 V Close to 0 V Off On Off On Off Off Off Off On Off Off
350 0W AC	Passenger door request switch is not pressed	Off On Close to 5 V Close to 0 V Off On Off On Off Off Off Off Off Off O
REQ SW -AS	Passenger door request switch is pressed	
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
	Back door request switch is not pressed	Off
REQ SW -BD/TR	Back door request switch is pressed	On
	Push-button ignition switch (push switch) is not pressed	Off
PUSH SW	Push-button ignition switch (push switch) is pressed	On
GN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
	The brake pedal is not depressed	Off
BRAKE SW 2	The brake pedal is depressed	On
	Selector lever in P position	Off
DETE/CANCL SW	Selector lever in any position other than P	On
	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
INLICOEN DD	Driver door is unlocked	Off On Close to 5 V Close to 0 V Off On Off On Off Off Off Off Off Off O
JNLK SEN -DR	Driver door is locked	
	Push-button ignition switch (push-switch) is not pressed	Off
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On
ON DIVA 5/D	Ignition switch in OFF or ACC position	Off
GN RLY1 -F/B	Ignition switch in ON position	On
	Selector lever in any position other than P	Off
DETE SW -IPDM	Selector lever in P position	On
DET DN IDDI	Selector lever in any position other than P and N	Off
SFT PN -IPDM	Selector lever in P or N position	On

**BCS-53** 2015 QX50 **Revision: February 2015** 

Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
SFIF-WEI	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
SI I IN -IVIL I	Selector lever in N position	On
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
LINGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
PRIVIT ENGISTRI	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The key is not inserted into key slot	Off
KET SW -SLOT	The key is inserted into key slot	On
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet
CONFRIVI ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
CONTINI ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet

# < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done
CONFIDM ID4	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
CONFIRM ID1	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TD 4	The ID of fourth key is not registered to BCM	Yet
TP 4	The ID of fourth key is registered to BCM	Done
TD 2	The ID of third key is not registered to BCM	Yet
TP 3	The ID of third key is registered to BCM	Done
TD 0	The ID of second key is not registered to BCM	Yet
TP 2	The ID of second key is registered to BCM	Done
TD 4	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
ID REGOT FLT	ID of front LH tire transmitter is not registered	Yet
ID DECCT ED4	ID of front RH tire transmitter is registered	Done
ID REGST FR1	ID of front RH tire transmitter is not registered	Yet
ID DECCT DD4	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
ID DECCE DI 4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MADNING LAND	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
DUZZED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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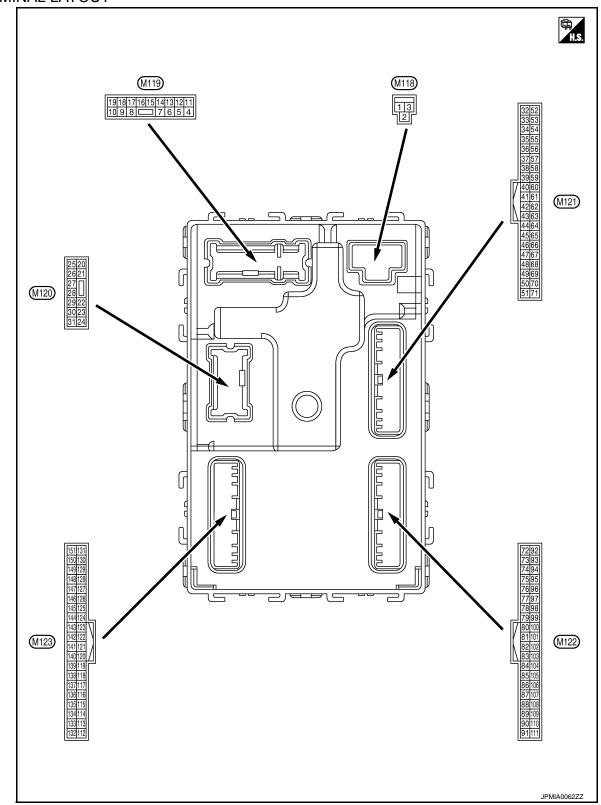
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### TERMINAL LAYOUT



PHYSICAL VALUES

Term	inal No.	Description					А		
	e color)	Signal name	Input/ Output		Condition	Value (Approx.)			
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	В		
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage	С		
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON	i	Battery voltage			
					o battery saver is activated. coom lamp power supply)	0 V	D		
4 (LG)	Ground	Interior room lamp power supply	Output	ed.	o battery saver is not activat- or room lamp power supply)	Battery voltage	E		
5	Cround	Passenger door UN-	Output		UNLOCK (Actuator is activated)	Battery voltage	F		
(L)	Ground	LOCK	Output	Passenger door	Other than UNLOCK (Actuator is not activated)	0 V	F		
7		0		G: I	ON	0 V	0		
(Y)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage	G		
8	(-round)		LOCK (Actuator is activated)	0.44	All de cas		Battery voltage	Н	
(V)			LOCK	LOCK	Output	All doors	Other than LOCK (Actuator is not activated)	0 V	
9	Ground	Driver door, fuel lid	Output Driver de	Outro : 4	Driver door	UNLOCK (Actuator is activated)	Battery voltage		
(G)	Giodila	UNLOCK	Output	Other than UNLO	Other than UNLOCK (Actuator is not activated)	0 V	. J		
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	Output	Output	UNLOCK (Actuator is activated)	Battery voltage	
(BR)	Giodila	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V	K		
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	ı		
13 (B)	Ground	Ground	_	Ignition switch ON	I	0 V			
					OFF	0 V	ВС		
14	Ground	Push-button ignition			Tail lamp		NOTE: When the illumination brightening/dimming level is in the neutral position	N	
(W)	Ground	switch illumination ground	Output	Tail lamp	ON	10 0 2 ms	C		
15					OFF or ON	Battery voltage			
(Y)	Ground	ACC indicator lamp	Output	Ignition switch	ACC	0 V			
							iı		

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
-					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
					Turn signal switch OFF	0 V
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(V)		control		lamp	ON	0 V 0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	(V) 15 10 5 0 PKID0926E 6.5 V
23	Ground	Back door open	Output	Back door	OPEN (Back door opener actuator is activated)	Battery voltage
(G)	Glound	Back door open	Output	Dack GOOI	Other than OPEN (Back door opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
26	Cround	Poor winer	Outout	Poor winer	OFF (Stopped)	0 V
(G)	Ground	Rear wiper	Output	Rear wiper	ON (Operated)	Battery voltage

	ninal No.	Description	1			Value	Λ
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	В
34 (SB)	Ground	Luggage room antenna (–)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	D E
35		Luggage room anten-		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	G H
(V)	Ground	na (+)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 1	J K L
38		Rack door antonna (		When the back	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	BCS N
38 (B)	Ground	Back door antenna (- )	Output	door opener request switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0063GB	O

Signal name Output		inal No. e color)	Description			Condition	Value
When Intelligent Key is in the antenna detection area  When Intelligent Key is in the antenna detection area  When Intelligent Key is in the antenna detection area  When Intelligent Key is in the antenna detection area  When Intelligent Key is not in the antenna detection area  When Intelligent Key is not in the antenna detection area  Ignition switch OFF  When Intelligent Key is not in the antenna detection area  When Intelligent Key is not in the antenna detection area  Ignition switch OFF  When Intelligent Key is not in the antenna detection area  Ignition switch ON  ON  OFF or ACC  Battery voltage  When selector lever is in P or N position  OV  When selector lever is not in P or N position  OV  Pressed  ON  ON  ON  OFF (Not pressed)  ON (Pressed)  ON (Pressed)  Intelligent Key is not in the antenna detection area  Is a constant in the antenna detection area  Is a constant in the antenna detection area  When Intelligent Key is not in the antenna detection area  Is a constant in the antenna detection area  When Intelligent Key is not in the antenna detection area  Is a constant in the antenna detection area  When Intelligent Key is not in the antenna detection area  Is a constant in the antenna detection area  Is a constant in the antenna detection area  When Intelligent Key is not in the antenna detection area  Is a constant in the antenna detect		-	Signal name	Input/ Output		Condition	(Approx.)
Ground   Ignition relay (IPDM (Y)   Ground (FR)   Ground		Ground	Back door antenna	Output			15 10 5 0
Ground   E/R) control   Coutput   Ignition switch   ON	(W)	Glound	(+)	Output	operated with ig-	in the antenna detection	15 10 5 0
Company   Comp		Ground		Output	lanition switch	OFF or ACC	Battery voltage
Starter relay control   Output   ON   ON   ON   ON   ON   ON   ON   O	(Y)	Orodria	E/R) control	Output	igintion switch		0 V
Ground   Push-button ignition switch (Push switch)   Input   Push-button ignition switch (Push switch)   Input   Push-button ignition switch (Push switch)   Input   Push-button ignition switch (Push switch)   Pressed   O V		Ground	Starter relay control	Output			Battery voltage
Ground (BR) Ground	(SB)	0.000	ctarior roley control	Carpar	ON		0 V
Switch (Fush switch)  ON (Pressed)  OV  OFF (Not pressed)  Sounding  OV  Intelligent Key warning buzzer (Engine room)  Not sounding  Battery voltage  1.0 V  Sounding  Not sounding  Battery voltage  In stop position	60	Cround	Push-button ignition	Innut		Pressed	0 V
Ground Back door opener request switch Input Back door opener request switch OFF (Not pressed)  64 (V) Ground ing buzzer (Engine room)  65 (BG) Ground Rear wiper stop position  Ground Rear wiper stop position  Rear wiper stop position  Back door opener request switch OFF (Not pressed)  OFF (Not pressed)  Sounding  O V  Not sounding  Battery voltage  In stop position  Output Rear wiper  In stop position  OFF (Not pressed)  In stop position  OFF (Not pressed)  In stop position  OFF (Not pressed)  In stop position	(BR)	Giouna	switch (Push switch)	input			
Ground Ground Back door opener request switch						ON (Pressed)	0 V
Ground Ground Rear wiper stop position    A		Ground		Input		OFF (Not pressed)	15 10 5 0
Ground ing buzzer (Engine room)  Output warning buzzer (Engine room)  Not sounding  Battery voltage  In stop position  Rear wiper stop position  Rear wiper stop position  Output warning buzzer (Engine room)  Not sounding  Battery voltage							
(V) room) (Engine room) Not sounding Battery voltage  (Engine room) Not sounding Battery voltage  (V) 15 10		Ground		Outnut		Sounding	0 V
Ground Rear wiper stop position  Rear wiper stop position  Rear wiper  Input  Rear wiper  In stop position  In stop position  JPMIA0016GE  1.0 V	(V)	Siddid		Carput		Not sounding	Battery voltage
		Ground		Input	Rear wiper	In stop position	15 10 5 0 10 ms JPMIA0016GB
Not in stop position 0 V						Not in stop position	

### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			0 10	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
					Pressed	0 V
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (Door open)	0 V

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	inal No.	Description	1			Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
74		Passenger door an-		When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S
(SB)	(SB) dround tenna (–) Output quest swite operated v	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB		
75	Ground	Passenger door an-	Output	When the pas- senger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S
(GR)	Glound	tenna (+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
76	Ground	Driver door antenna	Qutout	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   1   1   1   1   1   1   1   1   1
(V)	Sidding	(-)	Output	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB

	inal No.	Description				Value	Λ
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
77	0	Driver door antenna	0.4.1	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	С
(LG)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	E
78		Room antenna 1 (–)	0.4.4	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	G H
(Y)	Ground	(Instrument panel)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 1	J K
79	Cround	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	BC N
(BR)	Ground	(Instrument panel)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 1	O

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82	Ground	Ignition relay [Fuse Output Ignition switch	Ignition switch	OFF or ACC	0 V	
(R)	(R)   Glourid   block (J/B)] control		Output	ignition switch	ON	Battery voltage
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)		tion	Output	When operating e	ither button on the key	(V) 15 10 5 0 1 ms JMKIA0065GB

# < ECU DIAGNOSIS INFORMATION >

	ninal No.	Description				Value	
+	e color)	Signal name	Input/ Output	Condition		(Approx.)	А
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B
87		Combination switch		Combination	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	E
(BR)	Ground	INPUT 5	Input	switch	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	G H
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	J

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	inal No. e color)	Description	T		Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 2 ms 1.3 V
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 2 ms 1.3 V
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms 1.3 V
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
90 (P)	Ground	CAN-L	Input/ Output	_		_
91 (L)	Ground	CAN-H	Input/ Output	_		_

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					OFF	Battery voltage
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB
					ON	0 V
93					OFF or ACC	Battery voltage
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	0 V
94	0	5		5	OFF	Battery voltage
(Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V
95	Ground	ACC rolay control	Outout	Ignition switch	OFF	0 V
(BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	_		Battery voltage
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V
(R)	Giodila	tion switch	IIIput	Selector level	Any position other than P	Battery voltage
					ON (Pressed)	0 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
102		Blower fan motor ro			OFF or ACC	1.0 V 0 V
(BG)	Ground	Blower fan motor re- lay control	Output	Ignition switch	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF		Battery voltage

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Turn signal switch LH	(V) 15 10 0 2 ms JPMIA0037GB 1.3 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 2 ms JPMIA0036GB 1.3 V
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

### < ECU DIAGNOSIS INFORMATION >

Terminal I		Description				Value	
(Wire col	or) _	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB	
108 (R)	ound	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB	
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	

Revision: February 2015 BCS-69 2015 QX50

Terminal No.		Description				Value	
(Wire	color) Signal name		Input/ Output	Condition		(Approx.)	
	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	
109 (Y)					Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	
					ON	0 V	
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 10 ms JPMIA0012GB	

Terminal No.		Description				Mal.	
(Wire	e color)	Signal name	Input/ Output	Condition		Value (Approx.)	Α
113 (P)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V	В
					When dark outside of the vehicle	Close to 0 V	
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage	С
118 (P)	Ground -	Stop lamp switch 2 (Without ICC)	- Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	D
					ON (Brake pedal is depressed)	Battery voltage	•
		Stop lamp switch 2 (With ICC)		Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V	Е
				Stop lamp switch ON (Brake pedal is depressed) or ICC brake hold relay ON		Battery voltage	F
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB	G H
					UNLOCK status (Unlock switch sensor ON)	0 V	I
121	Ground	Key slot switch	Input	When the key is inserted into key slot		Battery voltage	•
(BR)	Ground	Rey slot switch	IIIput	When the key is not inserted into key slot		0 V	J
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V	
					ON	Battery voltage	K
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	ВС
					ON (Door open)	0 V	Ν
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms	O P
						10.2 V	
				Ignition switch OFF or ACC		Battery voltage	

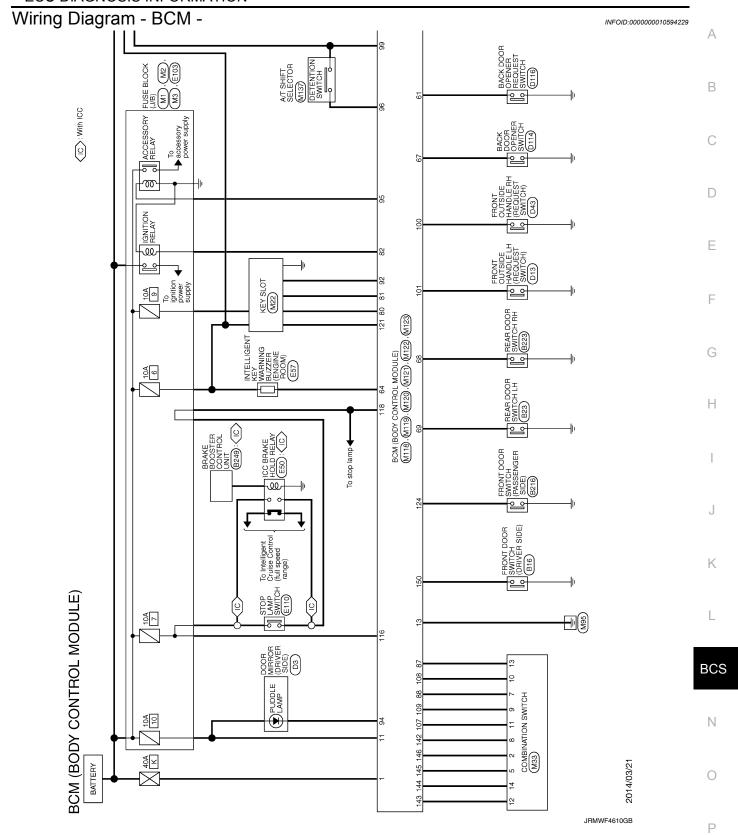
	inal No.	Description				Value	
+ (VVir	e color)	Signal name	Input/ Output	Condition		(Approx.)	
					ON (Tail lamps OFF)	9.5 V	
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5	
		l				JPMIA0159GB	
					OFF	0 V	
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF ON	Battery voltage 0 V	
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V	
138	0	Receiver and sensor	0	Lauritiana arritala	OFF	0 V	
(Y)	Ground	power supply	Output	Ignition switch	ACC or ON	5.0 V	
139 (L)	Ground	Tire pressure receiver communication	Input/ Output	Ignition switch ON	Standby state	(V) 6 4 2 0 	
					When receiving the signal from the transmitter	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	Battery voltage	
(GR)	2.00110	position		22.2.0.	Except P and N positions	0 V	
					ON	0 V	
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s JPMIA0014GB	
					OFF	11.3 V Battery voltage	
					J	Dattory voltage	

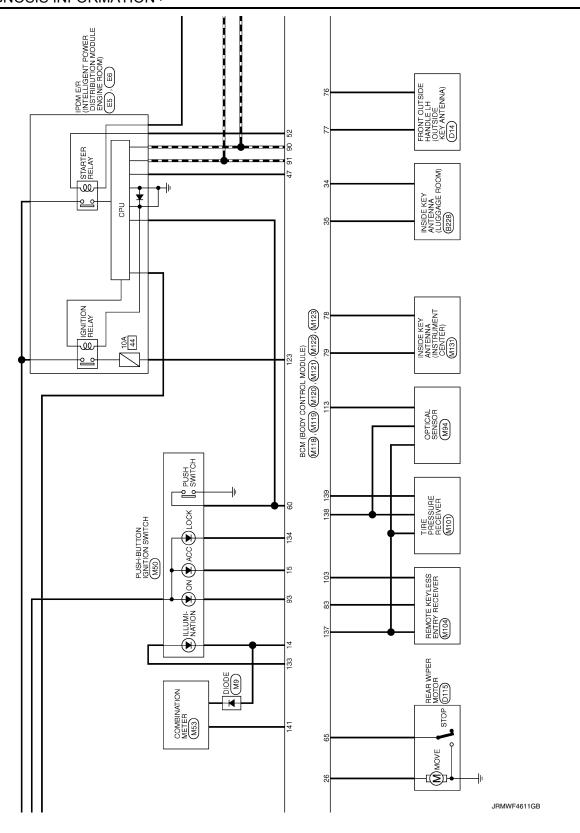
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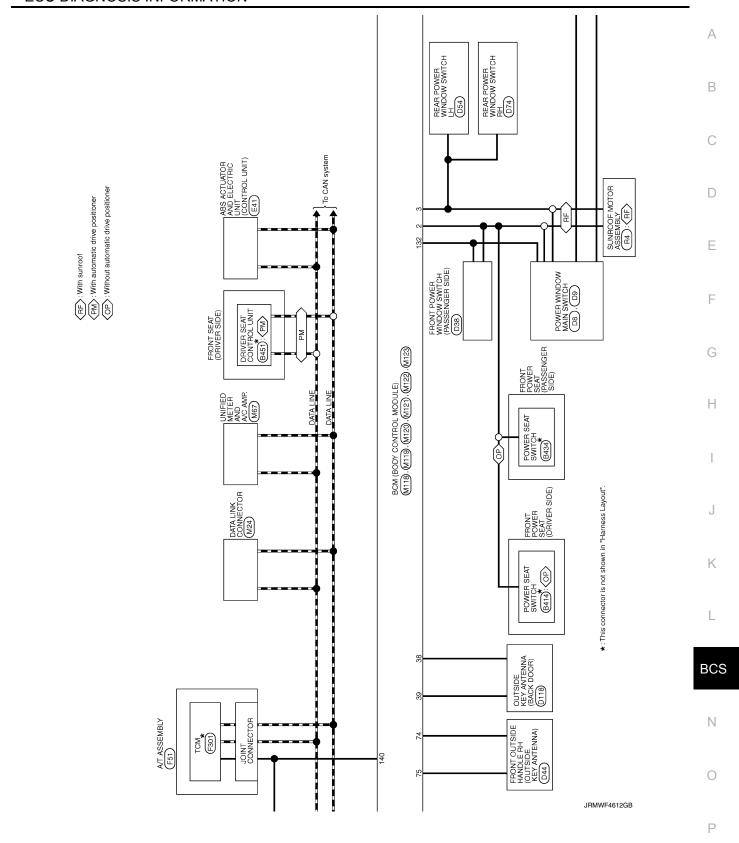
	inal No.	Description				Value	٨
	e color) –	Signal name	Input/ Output		Condition	(Approx.)	А
					All switches OFF Lighting switch 1ST	0 V	В
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch HI Lighting switch 2ND	15 10 5 0	С
		0011 01 0		tent diai 4)	Turn signal switch RH	2 ms JPMIA0031GB	D
					All switches OFF (Wiper intermittent dial 4)	0 V	Е
					Front wiper switch HI (Wiper intermittent dial 4)		_
143	Ground	Combination switch	Output	Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10	F
(P)	Giouna	OUTPUT 1	Output	switch	Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2	5 0 2 ms	G
					Wiper intermittent dial 2     Wiper intermittent dial 3     Wiper intermittent dial 6     Wiper intermittent dial 7	JPMIA0032GB 10.7 V	Н
					All switches OFF (Wiper intermittent dial 4)	0 V	I
					Front washer switch ON (Wiper intermittent dial 4)		
444		O subjective suitable		O a sala a a tia a	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15	J
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Rear washer switch ON (Wiper intermittent dial 4)	10 5 0	K
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	JPMIA0033GB 10.7 V	L
					All switches OFF	0 V	BCS
					Front wiper switch INT	(V)	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	Front wiper switch LO  Lighting switch AUTO	15 10 5 0	N O
						ЈРМIA0034GB 10.7 V	

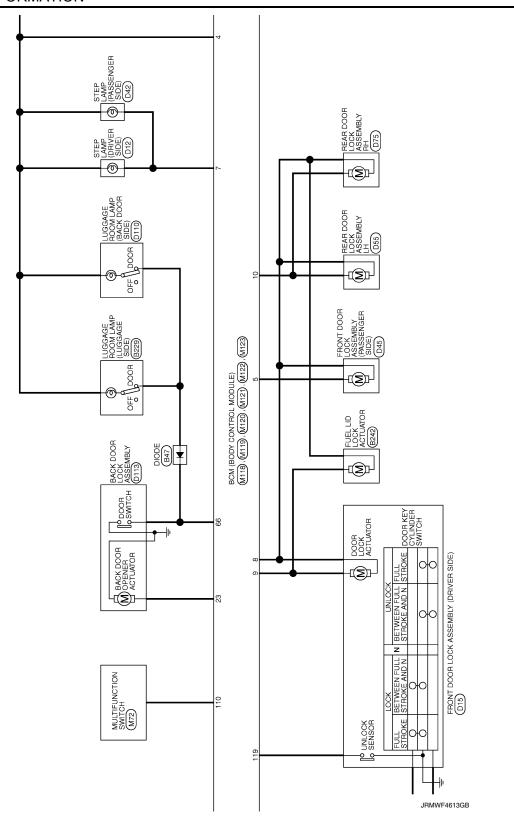
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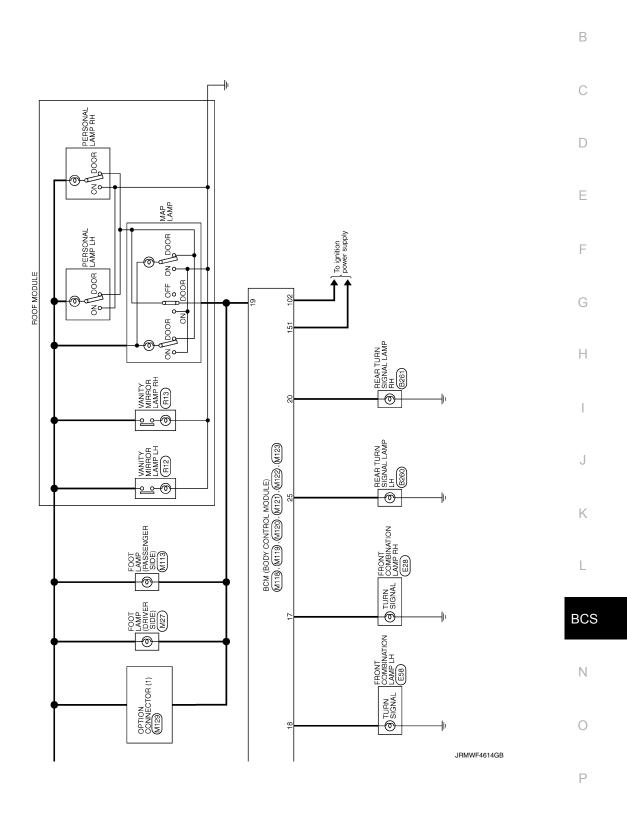
	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	0 V
					Front fog lamp switch ON	
				Combination	Lighting switch 2ND	(V) 15
146	Ground	Combination switch	Output	switch	Lighting switch PASS	10 5
(SB)		OUTPUT 4	Output	(Wiper intermit- tent dial 4)	Turn signal switch LH	2 ms JPMIA0035GI
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GE
					ON (Door open)	0 V
151	Craur d	Rear window defog-	Outout	Rear window de-	Active	0 V
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage



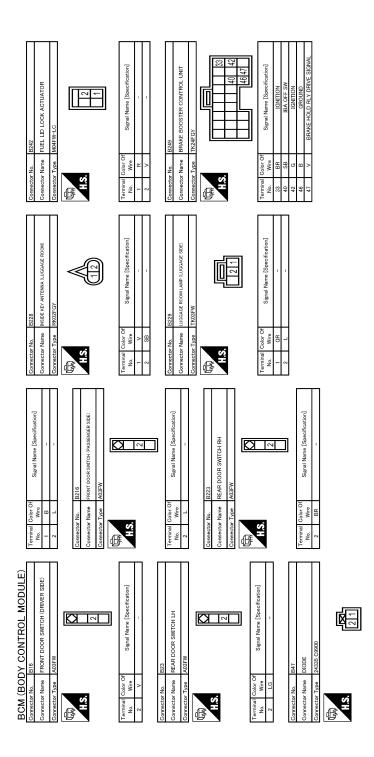








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Connector Nume D3  Connector Type INZAMW-NH    1211   10   7   6   5   3   2   4   23   22   1   19   18   17   14   14   14   14   14   14   14	Terminal Color Of Signal Nane (Specification)  No. Wire  2	
Corrector No. B461  Corrector Name DRIVER SEAT CONTROL UNIT  Corrector Type	Terminal   Color Of   Signal Name   Specification   No.   Wive   Control     1	
Connector No. 8414  Connector Name POWER SEAT SWITCH Connector Type NS10PW-CS  ##S. 2 1	Terminal Color Of No. Whee Signal Nane (Specification)  1	
BCM (BODY CONTROL MODULE)  Connector Nume REAR TURN SIGNAL LAMP LH  Connector Type HS02F1G-W  HS.	Terminal Color Of Signal Name [Specification]  1	

Revision: February 2015 BCS-81 2015 QX50

	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) FOREGY—RS	1234	Signal Name (Specification)	1038 FIRST PROMET WINDOW SWITCH EASSENGER SIDED INSTERFW-CS  3 4	8   9   10   11   12   15   15   15   15   15   15
T		Connector Type EG	p = []	Connector No. D3 Connector Type NS	Terminal   Color Of   No.   No.
	Connector Name FRONT OUTSIDE HANDLE LH (REQUEST SWITCH) Connector Tune RKO951	Commetter Type IRROSFI.	Terminal   Color Of   Signal Name [Specification]   1	H.S.	Terminal Color Of New Signal Name [Specification] No. Wire 1 0 2 SB -
BCM (BODY CONTROL MODULE)			D9 POWER WINDOW MAIN SWITCH NSGRW-CS	Signal Name [Specification]	D12 STEP LAMP (DRIVER SIDE) TB02FW
	- 88 -	8 8 8 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Corrector No. D9 Corrector Name POWER WINI Corrector Type INSOSPW-CS Corrector Type INSOSPW-CS LLS	Ferminal Color Of No. Wire 17 B 19 W	Connector No. Connector Name Connector Type

JRMWF4750GB

Corrector Name Lucadate Room LAWP (BACK DOOR SIDE)  Connector Type TROSFW  H.S.	Terminal   Color Of   Signal Name [Specification]   No. Wire   No. Wire   V
Connector No. D74 Connector Name REAR POWER WINDOW SWITCH RH Connector Type INSOBYW-CS  H.S.	Terminal   Color Of   Signal Name   Specification   1
Corrector No. D54 Corrector Name REAR POWER WINDOW SWITCH LH Gornector Type NSOBFW-CS  A.S. T.	Terminal   Color Of   Signal Name   Specification   1
BCM (BODY CONTROL MODULE)  Corrector No. D44  Corrector Name FRACEMIGY  Corrector Type RKCEMIGY  H.S.	Terminal Color Of Signal Name (Specification)  1

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E28 FRONT COMBINATION LAMP RH	RSOGFB-РЯ	Signal Name [Specification]	E41  BAA42FB-AH24-LH	Signal Name (Specification)  Signal Name (Specification)  CROUND  UBNR  GROUND  GROUND	DP RR DP RR DP FR DP FR DP FR VAC VAC
Connector No. E	Stor Type	ਂ	BR P P Ctor No. cctor Name cctor Type	H.S.   Color Of   Colo	<del>                                      </del>
Conne		Terminal No. 2 2 3 4 4 6 6 6	Conne	Termir No.01	12 10 9 7 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15
E5 FROM: (INTELLIGENT POWER DISTRIBUTION MODILLE ENGINE FROM)	114.68 PW-CS 12-MA4-1V	Signal Name [Specification]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 PC	Signal Name [Specification]
Connector No.	Stror Type	le Co	LG BG W W GG W W GG W W W W W W W W W W W	e e	Perminal   Color Of
So So		No. No. 12	25 27 27 28 28 28 38 38 38 38 38 38 38 38 38 38 38 38 38	Connection	No. No. 40 44 44 44
Connector No. D116 Connector Name BACK DOOR OPENER REQUEST SWITCH	Connector Type INCOMBR-P	Terminal Color Of   Signal Name [Specification]   No.   Wire     W	Corrector Name OUTSIDE KEY ANTENNA (BACK DOOR) Corrector Type INKOPFOY  (IN)  (IN)	Terminal Color Of New   Signal Name [Specification]   No. Wire   S   Signal Name [Specification]     S   S   S   S   S   S   S   S   S	
BCM (BODY CONTROL MODULE)  Connector No. D114  Connector Name BACK DOOR OPENER SWITCH	Тиодивян-р	Signal Name [Specification]	REAR WIPER MOTOR CLOMPWIN  2  4 3	Signal Name [Specification]	
Sonnector No.	Connector Type	Terminal Color Of Nice 1 GR 2 B	Connector Name REAR WIPEI CONNECTOR Type CLOMFIV-TV  CAMPA  LIS	No. Wire 2 G G 3 O A B B	

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BCM (BODY CONTROL MODULE)	Connector No. M9	Connector No. M24	Connector No. M33	
Commonder Name (ELICE DI OCA (1/D)	١,	1	L	T,
Connector Name FUSE BLOCK (J/ D)	$\overline{}$	Confrector Name DATA LINN CONNECTOR	Confector Name COMBINATION SWITCH	
Connector Type INSTORM-CS	Connector Type 24335,C9900	Connector Type BD18FW	Connector Type   IH16FW-NH	
4838		(4) 11 11 16 16 16 16 16 16 16 16 16 16 16		
	112	3 4 5 6 7 8	7 8 9 10	4 5 6 11 12 13 14
Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name No.	Signal Name [Specification]
t	H	t	t	HER(-)
H	2 W	- B	2 SB OUTI	OUTPUT 4
Н		5 B -	FRW	HER(+)
Y 89		- I 9	4 G IGN	_
+	Connector No. M22	+	7	UT 3
- R	Connector Name KEY SLOT	+		ONL
4	т	- SB	> 6	INPUT 3
	Connector Type THIZEW=NH	τ >		
Connection No.	4	- A Q	- a	INPULZ INDUT 4
Corniector No.	/		2 5	*
Connector Name FUSE BLOCK (J/B)		Connector No. M27	2 4	115
Connector Type NS12FW-CS	123 56		BR	T 5
	7 11	$\neg$	14 G OUTPUT	UT 2
		Connector Type A02FW		
	Terminal Color Of		Connector No. M50	
77 CB CT		E	C. POLICE	10110110
200		H.S.	Connector Name FUSH-BULLON IGNITION SWITCH	ON SWITCH
	Н	2 1	Connector Type TK08FBR	
Terminal Color Of	3 W DATA	]	4	
No. Wire Signal Name [Specification]	. 97		· · · · · · · · · · · · · · · · · · ·	E
Н	В	lal	II.S.	7.3
ш	11 BR KEY SWITCH SIGNAL	_	4 5 6	7 8
BG		1 R		]
		2 BR -		
7C B =			Townsian Colon Of	
4			Wire	Signal Name [Specification]
			1 B	
			2 W	
			M =	
			HB 40	
			0 GK	
			+	

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BCM	1 (BOI	BCM (BODY CONTROL MODULE)						
7	^	1	Connector No.	П	M67	Connector No.	M72	Connector No. M101
60	۵	1	Connector Name	Name	UNIFIED METER AND A/C AMP.	Connector Name	Connector Name MULTIFUNCTION SWITCH	Connector Name TIRE PRESSURE RECEIVER
			Connector Type	Т	TH32FW-NH	Connector Type	TH16FW-NH	Connector Type TK04FW
Connector No.	or No.	M53	(					ú
Connect	Connector Name	COMBINATION METER	厚			厚	[	
Connect	or Type	Connector Type TH40FW-NH	H.S.		22 23 23 C3   L2 27 37 17 10 C7 17	H.S.	91111	SH SH
4					63 65 69 70 71		± C	12 4
事								
Ţ	7	103 5 6 7 40						
	l	21 22 24 25 26 27 28 28 30 31 33 3 36 37 38 39 40	Terminal Color Of No. Wire	Color Of Wire	Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	Terminal Golor Of Signal Name [Specification] No. Wire
			41	>	ACC POWER SUPPLY	- B	GROUND	1 BG GROUND
			42	>	FUEL LEVEL SENSOR SIGNAL	3	ACC	
Terminal	)	Of Signal Name [Specification]	43	ď	INTAKE SENSOR SIGNAL	4 R	ורר	4 Y BATTERY
No.	Wire		44	LG	IN-VEHIOLE SENSOR SIGNAL	> ≺	ILL CONT	
-	GR	BATTERY POWER SUPPLY	45	Ь	AMBIENT SENSOR SIGNAL	e SB	AV COMM (H)	
2	LG	COMMUNICATION SIGNAL (METER->AMP.)	46	BG	SUNLOAD SENSOR SIGNAL	8 LG	AV COMM (L)	Connector No. M104
8	GR	COMMUNICATION SIGNAL (AMP>METER)	47	G	EXHAUST DAS / DUTSIDE DOOR DETECTING SENSOR SIGNAL.	9 B	SW GND	DEMOTE KEYLESS ENTEN DECENCED
2	В	GROUND	53	G	IGNITION POWER SUPPLY	14 Y	DISK EJECT SIGNAL	
9	Д	ALTERNATOR SIGNAL	54	٨	BATTERY POWER SUPPLY	16 G	HAZARD ON	Connector Type JAB04FB
7	BR	AIR BAG SIGNAL	55	В	GROUND			Ľ
10	g	SECURITY SIGNAL	56	7	CAN-H			
15	В	GROUND	57	W	BRAKE FLUID LEVEL SWITCH SIGNAL	Connector No.	M94	
16	В	METER CONTROL SWITCH GROUND	28	BR	FUEL LEVEL SENSOR GROUND		GOSINIS INCITAGO	[T] L
19	В	ILL GND	59	GR	INTAKE SENSOR GROUND	Collifector Hallie	OF HOSE SENSON	1 2 4
20	α	JIT.	09	٦	IN-VEHICLE SENSOR GROUND	Connector Type TK03FW	TK03FW	
21	BG	IGNITION SIGNAL	61	BR	AMBIENT SENSOR GROUND	(		
22	В	GROUND	62	SB	SUNLOAD SENSOR GROUND	TE		
24	BR	COMMUNICATION SIGNAL (LCD->AMP.)	63	ď	-			lal C
25	Υ	COMMUNICATION SIGNAL (AMP>LCD)	99	BG	ECV SIGNAL	S.F.		No. Wire Signal hame [Specification]
26	œ	VEHICLE SPEED SIGNAL (8-PULSE)	69	٦	A/C LAN SIGNAL		1 2 3	1 BG GROUND
27	>	PARKING BRAKE SWITCH SIGNAL	70	В	EACH DOOR MOTOR POWER SUPPLY		2 -	2 Y SIGNAL OUTPUT
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL	7.1	В	GROUND			4 LG BATTERY
59	SB	SEAT BELT BUCKLE SWTCH SIGNAL (DRIVER SIDE)	72	Ь	CAN-L			
30	9	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)				lal	Functional Name (Secretary)	
31	1	WASHER LEVEL SWITCH SIGNAL				No. Wire	olgnar Name Lopecinication	
33	В	ILLUMINATION CONTROL SIGNAL				۱ ۲	POWER	
36	LG	SELECT SWITCH SIGNAL				2 P	OUTPUT	
37	SB	ENTER SWITCH SIGNAL				3 B	GROUND	
38	٦	TRIP A/B RESET SWITCH SIGNAL						
39	Н	ILLUMINATION CONT						
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)						

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BCM (BODY CONTROL MODULE)	George et er No.	Connector No	M121	08	as	NATS ANT AMP
				2	3	NATS ANT AMP
Connector Name FOOT LAMP (PASSENGER SIDE)	Connector Name BCM (BODY CONTROL MODULE)	Connector Name	BCM (BODY CONTROL MODULE)	85	· œ	IGN RELAY (F/B) CONT
Connector Type A02FW	Connector Type NS16FW-CS	Connector Type	TH40FGY-NH	83	>	KEYLESS ENTRY RECEIVER COMM
1	1			87	BR	COMBI SW INPUT 5
		4		88	>	COMBI SW INPUT 3
K				06	А	CAN-L
2	4 5 7 8 9 10	\ <u>\</u>	80 00	91	٦	CAN-H
2 1	11 13 14 15 17 18 19		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	95	ΓC	KEY SLOT ILL CONT
	2			93	>	ON IND
				94	≻	PUDDLE LAMP CONT
				92	BG	ACC RELAY CONT
la C	lar	DE C	Signal Name [Specification]	96	뿝	A/T SHIFT SELECTOR POWER SUPPLY
	+	1		66	œ	SHIFT P
+	- 9	+	LUGGAGE ROOM ANT-	8	ر ا	PASSENGER DOOR REQUEST SW
2 BR =	5 L PASSENGER DOOR UNLOCK OUTPUT	+	LUGGAGE ROOM AN I +	101	95	DRIVER DOOR REQUEST SW
	> :	+	BACK DOOR ANT-	102	BG	BLOWER FAN MOTOR RELAY CONT
-	>	39 W	BACK DOOR ANT+	103	9	KEYLESS ENTRY RECEIVER POWER SUPPLY
Connector No. M118	G DRIV	+	IGN RELAY (IPDM E/R) CONT	107	P	COMBI SW INPUT 1
Connector Name BCM (BODY CONTROL MODILLE)	BR REAR DO	$\dashv$	STARTER RELAY CONT	108	œ	COMBI SW INPUT 4
	11 R BAT (FUSE)	60 BR	PUSH SW	109	>	COMBI SW INPUT 2
Connector Type M03FB-LC	В	61 W	BACK DOOR OPENER REQUEST SW	110	ŋ	HAZARD SW
(	14 W PUSH-BUTTON IGNITION SWILL GND	64 V	I-KEY WARN BUZZER (ENG ROOM)			
	15 Y ACC IND	65 BG	REAR WIPER STOP POSITION			
	17 W TURN SIGNAL RH (FRONT)	66 R	BACK DOOR SW	Connector No.	or No.	M123
1.3	18 BG TURN SIGNAL LH (FRONT)	67 GR	BACK DOOR OPENER SW	Jona	Connector Name	BCM (BODY CONTROL MODILIE)
	19 V INT ROOM LAMP CONT	68 BR	REAR RH DOOR SW			(30000000000000000000000000000000000000
7		69 R	REAR LH DOOR SW	Connect	Connector Type	TH40FG-NH
]	- 1			4		
	Connector No. M120			B	_	
a	Connector Name BCM (BODY CONTROL MODULE)	Connector No.	M122	•		K
No. Wire		Connector Name	BCM (BODY CONTROL MODILLE)	į	ر در	89 89 89 89
1 W BAT (F/L)	Connector Type NS12FW-CS	COLLECTOR HARING	DOM (BOD) CONTROL MODOLE)		l	
2 W POWER WINDOW POWER SUPPLY(BAT)	0	Connector Type	TH40FB-NH			
3 Y POWER WINDOW POWER SUPPLY(RAP)		ą				
		厚				
		ě		Terminal	0	Signal Name [Specification]
	[55   26	ē E	9190 8887 87828180 80 79 78 77 75 754	So.	Wire	
			56 95 96 96 96 96 96 96 96 95 96 96 96 96 96 96 96 96 96 96 96 96 96	113	۵	OPLICAL SENSOR
				116	SB	STOP LAMP SW 1
				118	۵	STOP LAMP SW 2
	Terminal Color Of Signal Name [Secretary]			119	SB	DR DOOR UNLOCK SENSOR
	No. Wire Signal valle Lopecinication	Terminal Color Of	[;+9;3] N  ;3	121	BR	KEY SLOT SW
	20 V TURN SIGNAL RH (REAR)	No. Wire	oignal ivame Lopecincanori	123	Μ	IGN F/B
	23 G BACK DOOR OPEN OUTPUT	74 SB	PASSENGER DOOR ANT-	124	FC	PASSENGER DOOR SW
	25 G TURN SIGNAL LH (REAR)	75 GR	PASSENGER DOOR ANT+	132	BR	POWER WINDOW SW COMM
	26 G REAR WIPER OUTPUT	۸ 92	DRIVER DOOR ANT-	133	W	PUSH-BUTTON IGNITION SWILL POWER
		77 LG	DRIVER DOOR ANT+	134	GR	LOCK IND
		78 Y	ROOM ANT1-	137	BG	RECEIVER/SENSOR GND
		79 BR	ROOM ANT1+	138	>	RECEIVER/SENSOR POWER SUPPLY

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CM (BOC 139 L 140 GR 141 G	BCM (BODY CONTROL MODULE)   138	Connector No. M137 Connector Name A.7 SHIFT SELECTOR Connector Type TH12FW-NH	ELECTOR	Connector No. Connector Name Connector Type	R12 VANITY MIRROR LAMP LH MCA02FW
9 S S C G P	COMBIS WO UITPUT I COMBIS WO UITPUT 3 COMBIS WO UITPUT 3 COMBIS WO UITPUT 4 COMBIS WO UITPUT 4 DRIVER DOOR SW REAR WINDOW DEFOCIGEN RELAY CONT	H.S.	8 9 10 11 2	₽ H.S.	
Connector No.	IM129 OPTION CONNECTOR (1) THORAW-N4H	Mire M W W W W W W W W W W W W W W W W W W	Signal Name [Specification]	Mire  Wire	Signal Name [Specification]
Color Of Wire G	Signal Name [Specification]	Connector No. R4 Connector Name SUNROOF M Connector Type YEA10FGY	RA SUNPOOF MOTOR ASSEMBLY YEARDEGY	H.S.	
Connector No. Connector Type	M131 PROZECY PROZECTY	1	1 7 8 9 10	Terminal Golor Of No. Wire 1 - 2 - 2	Signal Name [Specification]
Color Of Wire BR Y	Signal Name [Specification]	Terminal Golor Of Sign Wre No. Wre 5 P P P P P P P P P P P P P P P P P P	Signal Name [Specification] SW-BIT0 SW-BIT0 SW-BIT0 SPEED SENSOR(2P) TMERK-JGN/ GROUND		

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Fail-safe

## FAIL-SAFE CONTROL BY DTC

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

#### < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent  • Starter control relay signal  • Starter relay status signal
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)
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

#### REAR WIPER MOTOR PROTECTION

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

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

#### Condition of cancellation

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

### DTC Inspection Priority Chart

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

Priority	DTC
1	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 B2195: ANTI SCANNING

#### < ECU DIAGNOSIS INFORMATION >

Priority	DTC	
	B2553: IGNITION RELAY     B2555: STOP LAMP     B2556: PUSH-BTN IGN SW	/-
	B2557: VEHICLE SPEED     B2560: STARTER CONT RELAY     B2601: SHIFT POSITION     B2602: SHIFT POSITION	E
	<ul> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SW</li> <li>B2605: PNP SW</li> </ul>	(
4	<ul> <li>B2608: STARTER RELAY</li> <li>B260A: IGNITION RELAY</li> <li>B260F: ENG STATE SIG LOST</li> <li>B2614: ACC RELAY CIRC</li> </ul>	
	B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM	Е
	<ul> <li>B261A: PUSH-BTN IGN SW</li> <li>B261E: VEHICLE TYPE</li> <li>B26EA: KEY REGISTRATION</li> </ul>	F
	<ul> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>	(
	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL	
5	• C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1716: [PRESSDATA ERR] FL	I
	<ul> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RL</li> <li>C1734: CONTROL UNIT</li> </ul>	J
6	B2621: INSIDE ANTENNA     B2623: INSIDE ANTENNA	k

DTC Index

#### NOTE:

The details of time display are as follows.

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

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-19, "COM-MON ITEM"</u>.

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	_	BCS-42
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-43
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-44
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-40

Revision: February 2015 BCS-91 2015 QX50

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## < ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-43	
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-44	
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-45	
B2195: ANTI SCANNING	×	_	_	_	SEC-46	
B2553: IGNITION RELAY	_	×	_	_	PCS-51	
B2555: STOP LAMP	_	×	_	_	SEC-47	
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-49	
B2557: VEHICLE SPEED	×	×	×	_	SEC-51	
B2560: STARTER CONT RELAY	×	×	×	_	SEC-52	
B2562: LOW VOLTAGE	<del></del>	×	_	<del>_</del>	BCS-45	
B2601: SHIFT POSITION	×	×	×		SEC-53	
B2602: SHIFT POSITION	×	×	×	_	SEC-56	
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-59	
B2604: PNP SW	×	×	×	_	SEC-62	
B2605: PNP SW	×	×	×	_	SEC-64	
B2608: STARTER RELAY	×	×	×	_	SEC-66	
B260A: IGNITION RELAY	×	×	×	_	PCS-53	
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-68	
B2614: ACC RELAY CIRC	_	×	×	_	PCS-55	
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-58	
B2616: IGN RELAY CIRC	<del>_</del>	×	×	_	PCS-61	
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-71	
B2618: BCM	×	×	×	_	PCS-64	
B261A: PUSH-BTN IGN SW		×	×	_	SEC-73	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	SEC-76	
B2621: INSIDE ANTENNA	_	×	_	_	DLK-58	
B2623: INSIDE ANTENNA	<del>_</del>	×	_		DLK-60	
B26E1: ENG STATE NO RES	×	×	×	_	SEC-69	
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	SEC-70	
C1704: LOW PRESSURE FL		_	_	×		
C1705: LOW PRESSURE FR		_	_	×	,	
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-24</u>	
C1707: LOW PRESSURE RL	_	_	_	×	-	
C1708: [NO DATA] FL	_	_	_	×		
C1709: [NO DATA] FR	_	_	_	×		
C1710: [NO DATA] RR	_	_	_	×	<u>WT-26</u>	
C1711: [NO DATA] RL		_	_	×	-	

### < ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-29
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u>vv1-29</u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-31</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-33</u>	

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#### **COMBINATION SWITCH SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS

## COMBINATION SWITCH SYSTEM SYMPTOMS

Symptom Table

- 1. Perform "Data Monitor" of CONSULT to check for any malfunctioning item.
- 2. Check the malfunction combinations.

															Mal	function	item: ×
								Data	monito	r item							
Malfunction combination	FR WIPER HI	FR WIPER LOW	FR WASHER SW	FR WIPER INT	RR WIPER ON	RR WIPER INT	RR WASHER SW	INT VOLUME	TURN SIGNAL R	TURN SIGNAL L	TAIL LAMP SW	HI BEAM SW	HEAD LAMP SW 1	HEAD LAMP SW 2	PASSING SW	AUTO LIGHT SW	FR FOG SW
Α		×	×						×	×							
В	×			×									×		×		
С							×	×				×		×			
D						×		×			×					×	
Е					×			×									×
F	×					×		×									
G			×		×		×	×									
Н		×		×												×	
I										×				×	×		×
J									×		×	×	×				
K									All Item	is							
L		If only one item is detected or the item is not applicable to the combinations A to K															

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

Malfunction combination	Malfunctioning part	Repair or replace					
Α	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 BCS-47, "Diagnosis Procedure".					
D	Combination switch INPUT 4 circuit	part. Note: to <u>Doe 11. Blaghtone 1 todoute</u> .					
Е	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-49, "Diagnosis Procedure"</u> .					
I	Combination switch OUTPUT 4 circuit	ing part. Note: to <u>been to, blagheder recedule</u> .					
J	Combination switch OUTPUT 5 circuit						
K	ВСМ	Replace BCM. Refer to BCS-97, "Exploded View".					
L	Combination switch	Replace the combination switch.					

#### NORMAL OPERATING CONDITION

#### < SYMPTOM DIAGNOSIS >

### NORMAL OPERATING CONDITION

Description INFOID:000000010594234

#### TRANSIT MODE

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- Transit mode inhibits battery power consumption during transportation or storage of the vehicle.
- BCM is set to transit mode before delivery.
- In transit mode, remote keyless entry function, headlamp ON/OFF function, theft warning alarm function, and other BCM control functions do not operate normally.
- Therefore, cancel operation must be performed so that the vehicle is used in normal status.
- For transit mode cancel operation, refer to <u>BCS-8</u>, "<u>Description</u>".

#### NOTE:

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

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## **PRECAUTION**

#### **PRECAUTIONS**

### Precautions for Removing Battery Terminal

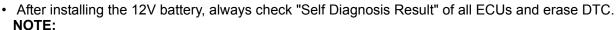
 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

#### NOTE:

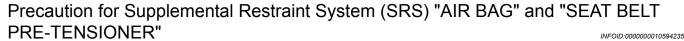
ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

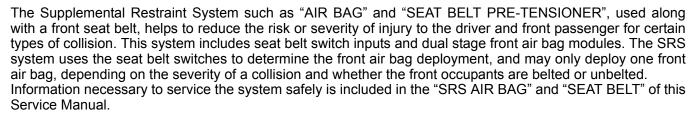
For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
 NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.



The removal of 12V battery may cause a DTC detection error.





#### **WARNING:**

Always observe the following items for preventing accidental activation.

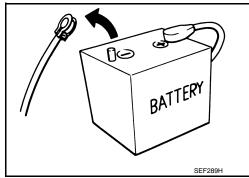
- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation 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 "SRS AIR BAG".
- Never 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:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.



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< REMOVAL AND INSTALLATION >

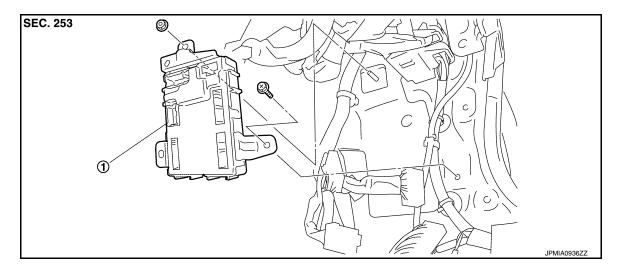
# REMOVAL AND INSTALLATION

## BCM (BODY CONTROL MODULE)

**Exploded View** 

#### **CAUTION:**

Before replacing BCM, perform "Before Replace ECU" of "Read / Write Configuration" to save or print current vehicle specification. Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL **UNIT (BCM): Description".** 



1. BCM

#### Removal and Installation

#### **CAUTION:**

Before replacing BCM, perform "Before Replace ECU" of "Read / Write Configuration" to save or print current vehicle specification. Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Description".

#### REMOVAL

- Remove dash side finisher (passenger side). Refer to INT-21, "Exploded View".
- Remove bolt and nut.
- Remove BCM and disconnect the connector.

#### **INSTALLATION**

Install in the reverse order of removal.

#### CAUTION:

Be sure to perform "After Replace ECU" of "Read / Write Configuration" or "Manual Configuration" when replacing BCM. Refer to BCS-3, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM) : Description".

#### NOTE:

Be sure to perform the system initialization (NATS) when replacing BCM.

**BCS** 

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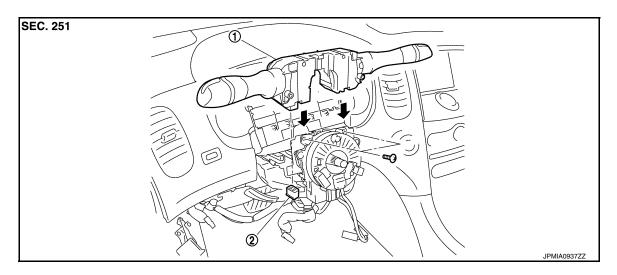
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**BCS-97 Revision: February 2015** 2015 QX50

### **COMBINATION SWITCH**

Exploded View



1. Combination switch

2. Combination switch connector

#### Removal and Installation

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#### **REMOVAL**

- 1. Remove steering column cover. Refer to IP-12, "Exploded View".
- 2. Remove screws.
- 3. Disconnect the connector.
- 4. Pull up the combination switch to remove it.

#### **INSTALLATION**

Install in the reverse order of removal.