

# SECTION **WCS**

## WARNING CHIME SYSTEM

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

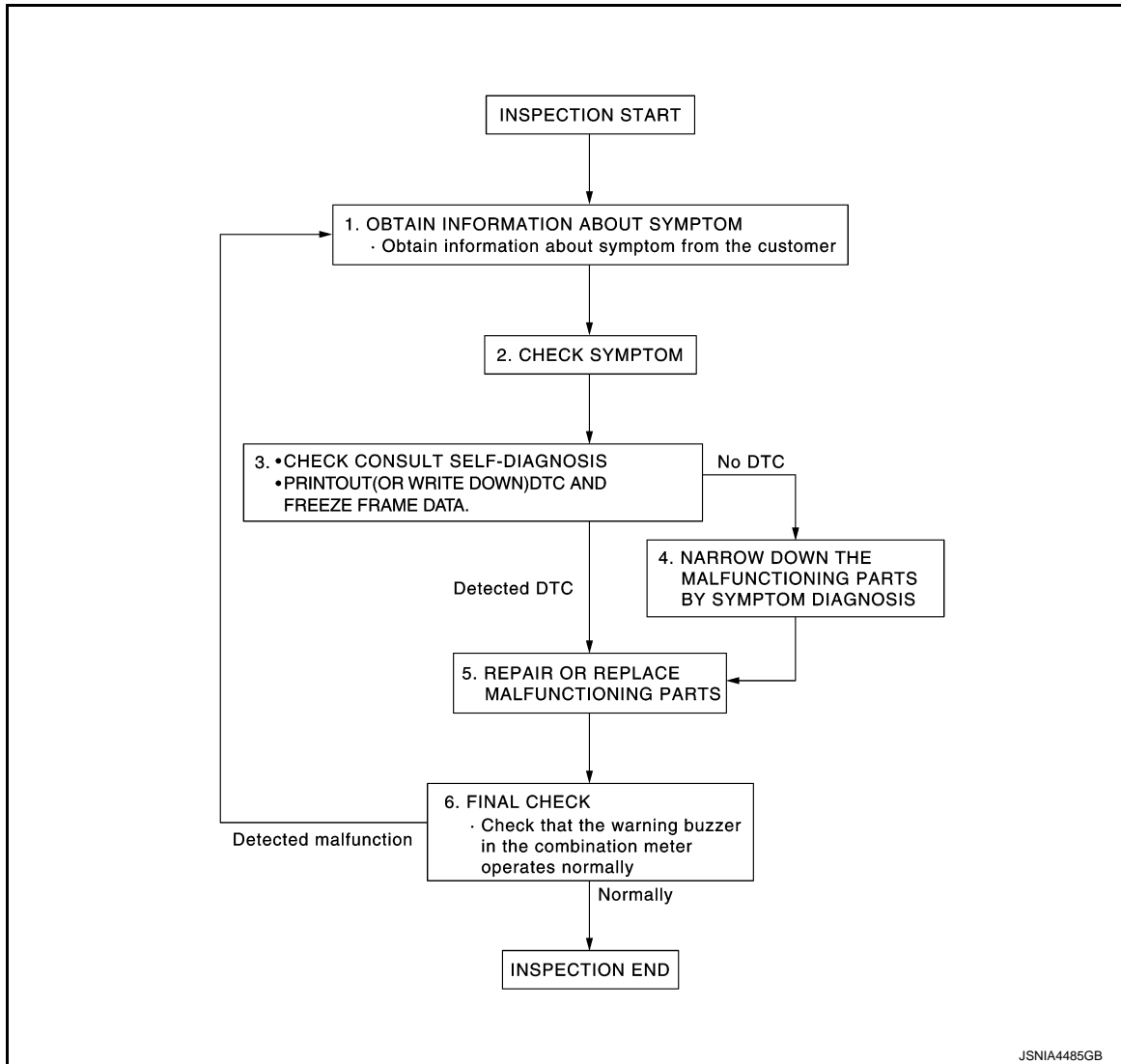
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000007773203

#### OVERALL SEQUENCE



#### DETAILED FLOW

##### 1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

>> GO TO 2.

##### 2.CHECK SYMPTOM

- Check the symptom based on the information obtained from the customer.
- Check if any other malfunctions are present.

>> GO TO 3.

##### 3.CHECK CONSULT SELF-DIAGNOSIS RESULTS

1. Connect CONSULT and perform self-diagnosis. Refer to [MWI-57, "DTC Index"](#).

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# DIAGNOSIS AND REPAIR WORKFLOW

## < BASIC INSPECTION >

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2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Are self-diagnosis results normal?

YES >> GO TO 4.

NO >> GO TO 5.

## 4.NARROW DOWN MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

---

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 5.

## 5.REPAIR OR REPLACE MALFUNCTIONING PARTS

---

Repair or replace malfunctioning parts.

**NOTE:**

If DTC is displayed, erase DTC after repairing or replacing malfunctioning parts.

>> GO TO 6.

## 6.FINAL CHECK

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Check that the warning buzzer in the combination meter operates normally.

Does it operate normally?

YES >> INSPECTION END

NO >> GO TO 1.

# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

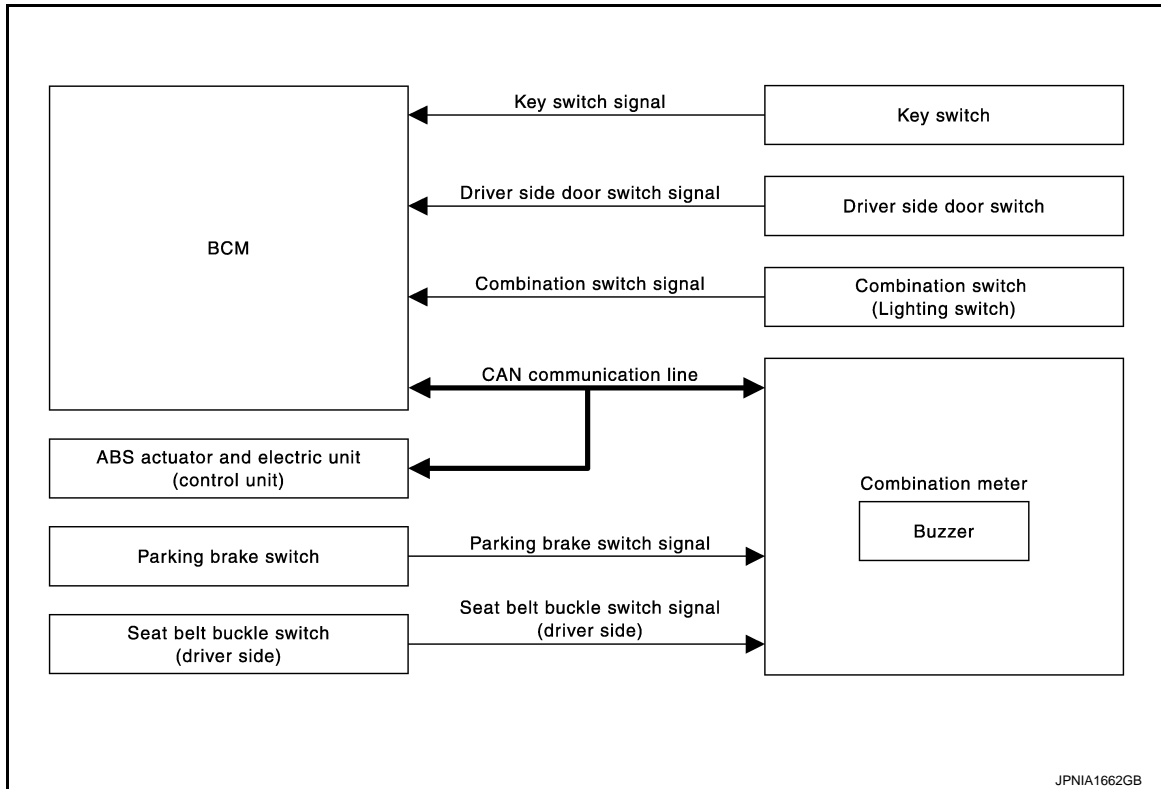
## SYSTEM DESCRIPTION

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram

INFOID:000000007773204

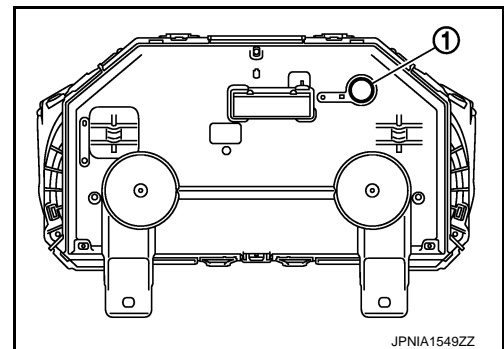


WARNING CHIME SYSTEM : System Description

INFOID:000000007773205

### COMBINATION METER

- The buzzer (1) for the warning chime system is integrated in the combination meter.
- The combination meter sounds the alarm buzzer installed in the combination meter when receiving the buzzer output signal transmitted from each unit.



### BCM

BCM receives signals from various units and transmits a buzzer output signal to the combination meter via CAN communication if it judges that the warning buzzer should be activated.

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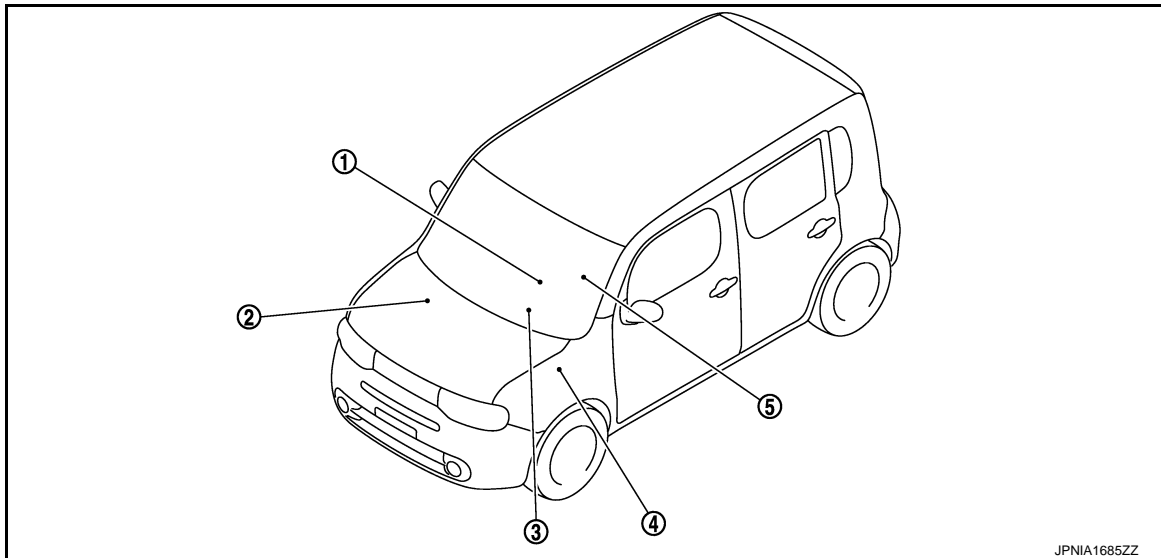
# WARNING CHIME SYSTEM

## < SYSTEM DESCRIPTION >

Warning functions	Out line	Warning judgment unit	Refer to
Parking brake release warning chime	With ignition switch in the ON position, when the during the parking brake operation and the vehicle speed is 7 km/h (4.3 MPH) or more, the parking brake release warning chime will sound.	Combination meter	<a href="#">WCS-10. "PARKING BRAKE RELEASE WARNING CHIME : System Description"</a>
Light reminder warning chime	With ignition switch in the OFF or ACC position, when the driver side door is open and the lighting switch is the 1st or 2nd position, the light reminder warning chime will sound.	BCM	<a href="#">WCS-7. "LIGHT REMINDER WARNING CHIME : System Description"</a>
Seat belt warning chime	With ignition switch turned ON and driver seat belt unfastened, seat belt warning chime will sound for approximately 6 seconds.	BCM	<a href="#">WCS-9. "SEAT BELT WARNING CHIME : System Description"</a>
Key warning chime	With the key inserted into the ignition key cylinder, and the ignition switch except in ON or START position, when driver side door open, the key warning chime will sound.	BCM	<a href="#">WCS-12. "KEY WARNING CHIME : System Description"</a>

## WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000007773206



JPNIA1685ZZ

1. Parking brake switch
2. ABS actuator and electric unit (control unit)  
Refer to [BRC-12. "Component Parts Location"](#).
3. Combination meter
4. Refer to [BCS-10. "Component Parts Location"](#).
5. Seat belt buckle switch (driver side)
- BCM

# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## WARNING CHIME SYSTEM : Component Description

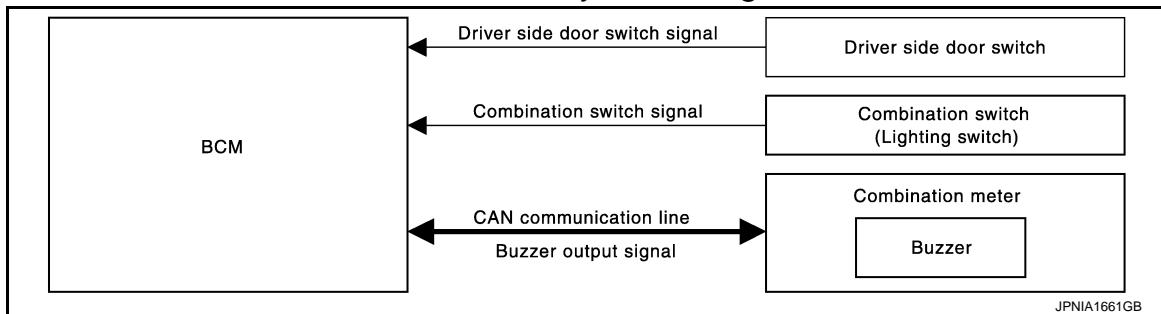
INFOID:000000007773207

Unit	Description
Combination meter	<ul style="list-style-type: none"> <li>Receives a buzzer output signal from the BCM with CAN communication line and sounds the buzzer.</li> <li>Judges whether the parking brake is released from the vehicle speed signal received from the ABS actuator and electric unit (control unit) with CAN communication line and the parking brake switch signal from the parking brake switch, and sounds the buzzer if necessary.</li> <li>Receives the seat belt buckle switch signal (driver side) from the seat belt buckle switch (driver side) and transmits it to BCM with CAN communication line.</li> </ul>
BCM	Based on the signals received from various units and switches, transmits the buzzer output signal to the combination meter via CAN communication.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to combination meter via CAN communication.
Seat belt buckle switch (driver side)	Transmits a seat belt buckle switch signal (driver side) to the combination meter.
Combination switch (Lighting switch)	Transmits the combination switch signal to BCM.
Driver side door switch	Transmits the driver side door switch signal to BCM.
Key switch	Transmits the key switch signal to BCM.
Parking brake switch	Transmits the parking brake switch signal to combination meter.

## LIGHT REMINDER WARNING CHIME

### LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000007773208



### LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000007773209

#### DESCRIPTION

With ignition switch in the OFF or ACC position, when the driver side door is open and the lighting switch is the 1st or 2nd position, the light reminder warning chime will sound.

#### WARNING CHIME OPERATION CONDITIONS

The BCM transmits the buzzer output signal to combination meter with CAN communication line when all of the following operation conditions are met. When combination meter receives buzzer output signal, it sounds the buzzer.

Operation conditions		Signal name	Signal source
Ignition switch	OFF or ACC position	Ignition switch signal	—
Combination switch (Lighting switch)	1st or 2nd position	Combination switch signal	Combination switch (Lighting switch)
Driver side door	Open (driver side door switch ON)	Driver side door switch signal	Driver side door switch

#### WARNING CHIME CANCEL CONDITIONS

Warning is canceled if any of the following conditions is fulfilled.

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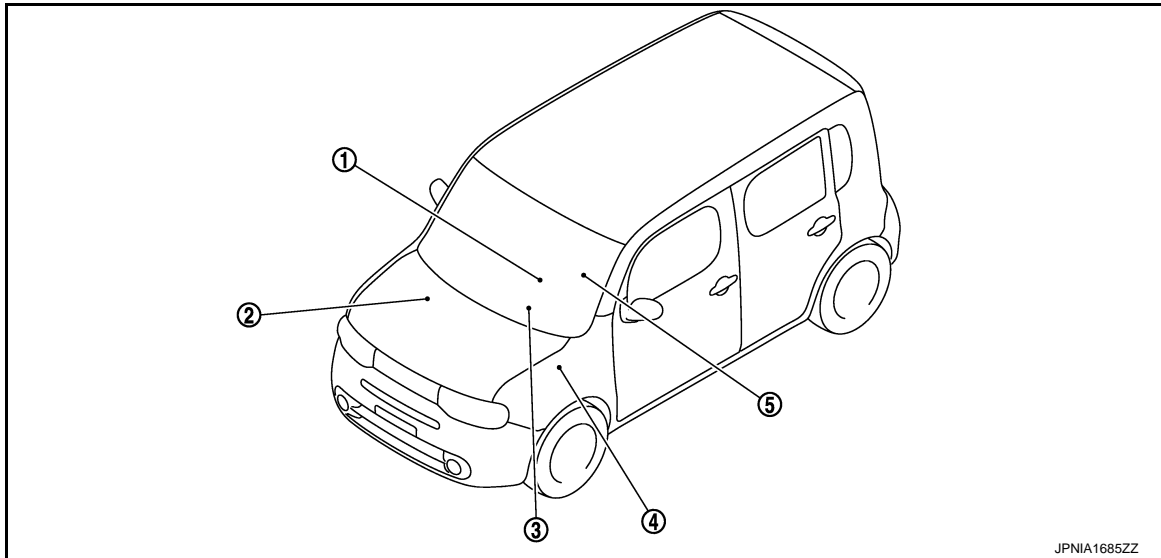
# WARNING CHIME SYSTEM

## < SYSTEM DESCRIPTION >

Operation conditions		Signal name	Signal source
Ignition switch	ON	Ignition switch signal	—
Combination switch (Lighting switch)	OFF	Combination switch signal	Combination switch (Lighting switch)
Driver side door	Close (driver side door switch OFF)	Driver side door switch signal	Driver side door switch

## LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000007773210



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1. Parking brake switch
2. ABS actuator and electric unit (control unit)  
Refer to [BRC-12, "Component Parts Location"](#).
3. Combination meter
4. Refer to [BCS-10, "Component Parts Location"](#).
5. Seat belt buckle switch (driver side)

BCM

## LIGHT REMINDER WARNING CHIME : Component Description

INFOID:000000007773211

Unit	Description
Combination meter	Receives a buzzer output signal from the BCM and sounds the buzzer.
BCM	Judges the light reminder warning conditions from the signals provided by various switches and transmits a buzzer output signal to the combination meter via CAN communication line if necessary.
Combination switch (Lighting switch)	Transmits the combination switch signal to BCM.
Driver side door switch	Transmits the driver side door switch signal to BCM.

## SEAT BELT WARNING CHIME

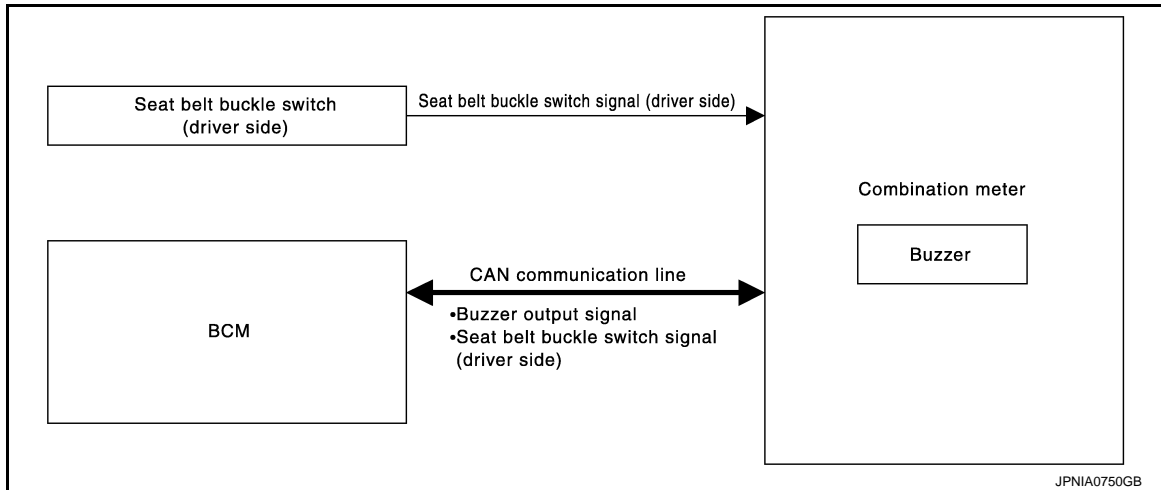


# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING CHIME : System Diagram

INFOID:000000007773212



## SEAT BELT WARNING CHIME : System Description

INFOID:000000007773213

### DESCRIPTION

With ignition switch turned ON and driver seat belt unfastened, seat belt warning chime will sound for approximately 6 seconds.

### WARNING OPERATION CONDITIONS

The BCM transmits the buzzer output signal to combination meter with CAN communication line when all of the following operation conditions are met. When combination meter receives buzzer output signal, it sounds the buzzer.

Operation conditions		Signal name	Signal source
Ignition switch	ON	Ignition switch signal	—
Seat belt (driver side)	Unfastened (driver side seat belt buckle switch ON)	Seat belt buckle switch signal (driver side) (CAN communication)	Seat belt buckle switch (driver side) via combination meter

### WARNING CANCEL CONDITIONS

Warning is canceled if any of the following conditions is fulfilled.

Operation conditions		Signal name	Signal source
Ignition switch	OFF	Ignition switch signal	—
Seat belt (driver side)	Fastened (driver side seat belt buckle switch OFF)	Seat belt buckle switch signal (driver side) (CAN communication)	Seat belt buckle switch (driver side) via combination meter
6 seconds after the start of warning sound		—	—

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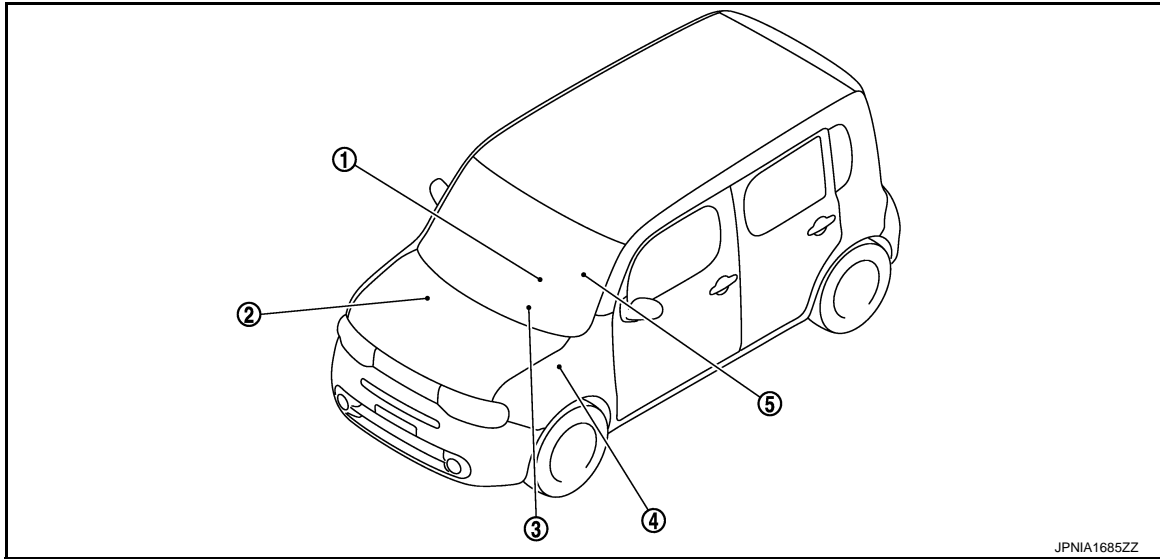
WCS

# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING CHIME : Component Parts Location

INFOID:000000007773214



1. Parking brake switch
  2. ABS actuator and electric unit (control unit)  
Refer to [BRC-12, "Component Parts Location"](#).
  3. Combination meter
  4. Refer to [BCS-10, "Component Parts Location"](#).
  5. Seat belt buckle switch (driver side)
- BCM

## SEAT BELT WARNING CHIME : Component Description

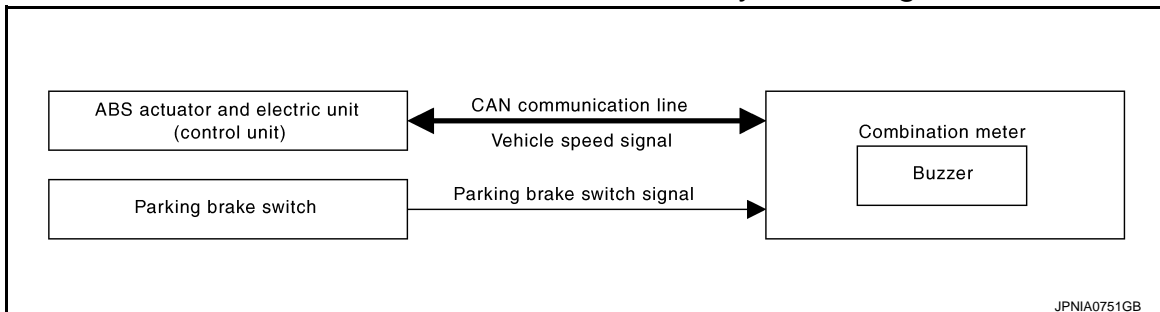
INFOID:000000007773215

Unit	Description
Combination meter	<ul style="list-style-type: none"> <li>Receives the seat belt buckle switch signal (driver side) from the seat belt buckle switch (driver side) and transmits it to BCM via CAN communication.</li> <li>Receives a buzzer output signal from the BCM and sounds the buzzer.</li> </ul>
BCM	Judges the seat belt warning condition according to the seat belt buckle switch signal (driver side) received from the combination meter via CAN communication and transmits a buzzer output signal to the combination meter via CAN communication if necessary.
Seat belt buckle switch (driver side)	Transmits the seat belt buckle switch signal (driver side) to the combination meter.

## PARKING BRAKE RELEASE WARNING CHIME

### PARKING BRAKE RELEASE WARNING CHIME : System Diagram

INFOID:000000007773216



### PARKING BRAKE RELEASE WARNING CHIME : System Description

INFOID:000000007773217

#### DESCRIPTION

# WARNING CHIME SYSTEM

## < SYSTEM DESCRIPTION >

Parking brake release warning chime judges the remaining parking brake according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the parking brake switch signal from parking brake switch to sound the warning buzzer.

## WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

Operation conditions		Signal name	Signal source
Ignition switch	ON	Ignition switch signal	—
Parking brake	During the operation (parking brake switch ON)	Parking brake switch signal	Parking brake switch
Vehicle speed	Approximately 7 km/h (4.3 MPH) or more	Vehicle speed signal (CAN communication)	ABS actuator and electric unit (control unit)

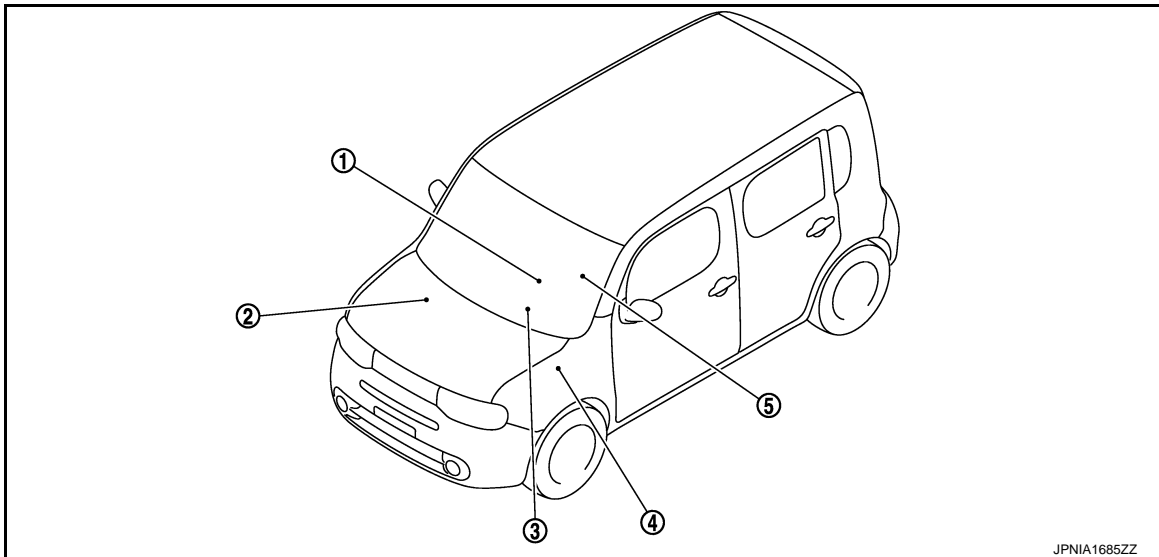
## WARNING CANCEL CONDITIONS

Warning is canceled if any of the following conditions are fulfilled.

Operation conditions		Signal name	Signal source
Ignition switch	OFF	Ignition switch signal	—
Parking brake	Release condition (parking brake switch OFF)	Parking brake switch signal	Parking brake switch
Vehicle speed	Approximately 3 km/h (1.9 MPH) or more	Vehicle speed signal (CAN communication)	ABS actuator and electric unit (control unit)

## PARKING BRAKE RELEASE WARNING CHIME : Component Parts Location

INFOID:000000007773218



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1. Parking brake switch
  2. BCM
  3. Combination meter
  4. Refer to [BCS-10, "Component Parts Location"](#).
  5. Seat belt buckle switch (driver side)
2. ABS actuator and electric unit (control unit)  
Refer to [BRC-12, "Component Parts Location"](#).

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# WARNING CHIME SYSTEM

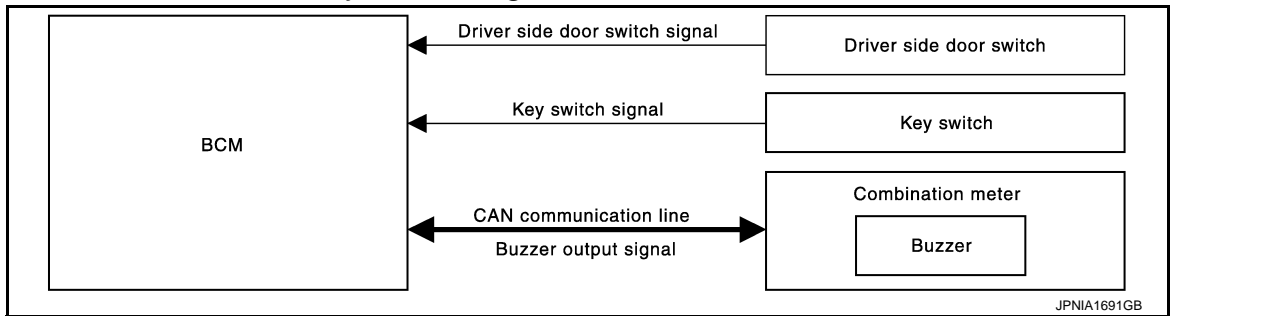
< SYSTEM DESCRIPTION >

## PARKING BRAKE RELEASE WARNING CHIME : Component Description INFOID:000000007773219

Unit	Description
Combination meter	Judges the remaining parking brake according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the parking brake switch signal from parking brake switch and sounds the warning buzzer.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication.
Parking brake switch	Transmits the parking brake switch signal to the combination meter.

## KEY WARNING CHIME

### KEY WARNING CHIME : System Diagram



### KEY WARNING CHIME : System Description

INFOID:000000007773221

#### DESCRIPTION

With ignition switch in the OFF or ACC position, when the driver side door is open (driver side door switch ON) and the key inserted into the ignition key cylinder (key switch ON), the warning chime will sound.

#### WARNING OPERATION CONDITIONS

The BCM transmits the buzzer output signal to combination meter with CAN communication line when all of the following operation conditions are met. When combination meter receives buzzer output signal, it sounds the buzzer.

Operation conditions		Signal name	Signal source
Ignition switch	OFF or ACC position	Ignition switch signal	—
Key switch	ON (state that inserted key in key cylinder)	Key switch signal	Key switch
Driver side door	Open (driver side door switch ON)	Driver side door switch signal	Driver side door switch

#### WARNING CANCEL CONDITIONS

Warning is canceled if any of the following conditions is fulfilled.

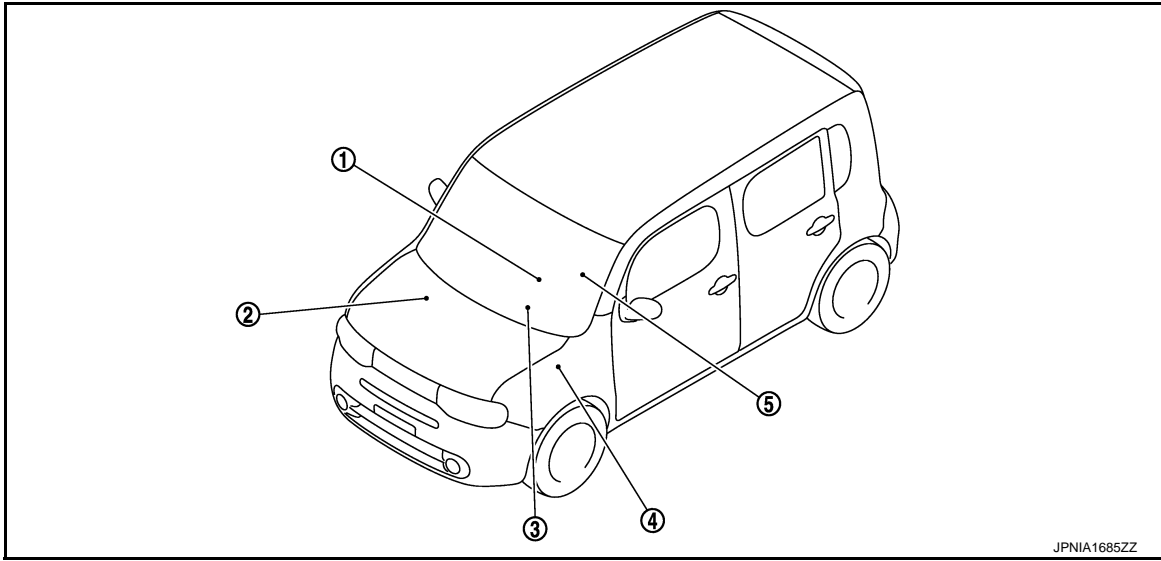
Operation conditions		Signal name	Signal source
Ignition switch	ON	Ignition switch signal	—
Key switch	OFF (state that removed key from key cylinder)	Key switch signal	Key switch
Driver side door	Close (driver side door switch OFF)	Driver side door switch signal	Driver side door switch

# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## KEY WARNING CHIME : Component Parts Location

INFOID:000000007773222



1. Parking brake switch
  2. Refer to [BCS-10, "Component Parts Location"](#).
  3. Combination meter
  4. Refer to [BCS-10, "Component Parts Location"](#).
  5. Seat belt buckle switch (driver side)
2. ABS actuator and electric unit (control unit)  
Refer to [BRC-12, "Component Parts Location"](#).
- BCM

## KEY WARNING CHIME : Component Description

INFOID:000000007773223

Unit	Description
Combination meter	Receives a buzzer output signal from the BCM and sounds the buzzer.
BCM	Judges the key warning conditions from the signals provided by various switches and transmits a buzzer output signal to the combination meter via CAN communication if necessary.
Key switch	Transmits the key switch signal to BCM.
Driver side door switch	Transmits the driver side door switch signal to BCM.

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# DIAGNOSIS SYSTEM (METER)

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (METER)

### CONSULT Function (METER/M&A)

INFOID:000000007970609

#### CONSULT APPLICATION ITEMS

CONSULT can perform the following diagnosis modes via CAN communication and the combination meter.

System	Diagnosis mode	Description
METER/M&A	Self Diagnostic Result	The combination meter checks the conditions and displays memorized errors.
	Data Monitor	Displays the combination meter input/output data in real time.
	W/L ON History	Lighting history of the warning lamp and indicator lamp can be checked.

#### SELF DIAG RESULT

Refer to [MWI-57, "DTC Index"](#).

#### DATA MONITOR

##### Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	Description
SPEED METER [km/h]	X	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication. <b>NOTE:</b> 655.35 is displayed when the malfunction signal is received.
SPEED OUTPUT [km/h]	X	Vehicle speed signal value transmitted to other units via CAN communication. <b>NOTE:</b> 655.35 is displayed when the malfunction signal is received.
ODO OUTPUT [km/h or mph]		Odometer signal value transmitted to other units via CAN communication.
TACHO METER [rpm]	X	Value of the engine speed signal received from ECM via CAN communication. <b>NOTE:</b> 8191.875 is displayed when the malfunction signal is received.
FUEL METER [L]	X	Fuel level indicated on combination meter.
W TEMP METER [°C]	X	Value of engine coolant temperature signal is received from ECM via CAN communication. <b>NOTE:</b> 215 is displayed when the malfunction signal is input.
FUEL CAP W/L [On/Off]		Status of fuel filler cap warning display detected from fuel filler cap warning display signal received from ECM via CAN communication.
ABS W/L [On/Off]		Status of ABS warning lamp detected from ABS warning lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication.
VDC/TCS IND [On/Off]		Status of VDC OFF indicator lamp detected from VDC OFF indicator lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication.
SLIP IND [On/Off]		Status of VDC warning lamp detected from VDC warning lamp signal received from ABS actuator and electric unit (control unit) via CAN communication.
BRAKE W/L [On/Off]		Status of brake warning lamp detected from brake warning lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication. <b>NOTE:</b> Displays "Off" if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.
DOOR W/L [On/Off]		Status of door warning detected from door switch signal received from BCM via CAN communication.
HI-BEAM IND [On/Off]		Status of high beam indicator lamp detected from high beam request signal is received from BCM via CAN communication.

## DIAGNOSIS SYSTEM (METER)

### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	A
TURN IND [On/Off]		Status of turn indicator lamp detected from turn indicator signal is received from BCM via CAN communication.	A
LIGHT IND [On/Off]		Status of light indicator lamp detected from position light request signal is received from BCM via CAN communication.	B
OIL W/L [On/Off]		Status of oil pressure warning lamp detected from oil pressure switch signal is received from BCM via CAN communication.	C
MIL [On/Off]		Status of malfunction indicator lamp detected from malfunctioning indicator lamp signal is received from ECM via CAN communication.	D
CRUISE IND [On/Off]		Status of CRUISE indicator lamp detected from CRUISE indicator lamp signal is received from ECM via CAN communication.	D
SPORT IND [On/Off]		Status of OD OFF indicator lamp detected from OD OFF indicator signal is received from TCM via can communication.	E
FUEL W/L [On/Off]		Low-fuel warning lamp status detected by the identified fuel level.	E
AIR PRES W/L [On/Off]		Status of low tire pressure warning lamp detected from tire pressure signal is received from BCM via CAN communication.	F
KEY G/Y W/L [On/Off]		Status of KEY warning lamp (G/Y) detected from KEY warning lamp signal is received from BCM via CAN communication.	G
KEY KNOB W/L [On/Off]		Status of shift P warning lamp detected from shift P warning lamp signal is received from BCM via CAN communication.	G
EPS W/L [On/Off]		Status of EPS warning lamp detected from EPS warning lamp signal is received from EPS control unit via CAN communication.	H
e-4WD W/L [Off]		This item is displayed, but cannot be monitored.	I
LCD [NIGN B&P, IGN B&P, SFT P, NO KY]		Status of engine start operation indicator lamp, shift P warning lamp and KEY warning lamp, detected from engine start operation indicator lamp signal, shift P warning lamp signal and KEY warning lamp signal are received from BCM via CAN communication.	I
SHIFT IND [P, R, N, D, L]		Status of shift position, detected from shift position signal received from TCM via CAN communication.	J
O/D OFF SW [On/Off]		Status of overdrive control switch detected from CVT shift selector.	K
PKB SW [On/Off]		Status of parking brake switch.	L
BUCKLE SW [On/Off]		Status of seat belt buckle switch (driver side).	L
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.	M
A/C AMP CONN [On/Off]		Status of A/C auto amp. connection recognition signal.	WCS
DISTANCE [km]		Value of possible driving distance calculated by combination meter.	WCS
OUTSIDE TEMP [°C or °F]		Ambient air temperature value converted from ambient sensor signal received from ambient sensor. <b>NOTE:</b> This may not match with the temperature value indicated on the information display. (Because the information display value is a corrected value from the ambient sensor input value.)	O
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit via CAN communication.	P

## DIAGNOSIS SYSTEM (METER)

### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
BUZZER [On/Off]	X	Buzzer status (in the combination meter) is detected from the buzzer output signal received from each unit via CAN communication and the warning output condition of the combination meter.
TPMS PRESS L [On/Off]		Status of low tire pressure warning judged from low tire pressure warning lamp signal received from BCM with CAN communication line.

**NOTE:**

Some items are not available according to vehicle specification.

### W/L ON HISTORY

- Stores histories when warning/indicator lamp is turned on.
- “W/L ON HISTORY” indicates the “TIME” when the warning/indicator lamp is turned on.
- The “TIME” above is:
  - 0: The condition that the warning/indicator lamp has been turned on 1 or more times after starting the engine and waiting for 30 seconds.
  - 1 - 39: The number of times the engine was restarted after the 0 condition.
  - NO W/L ON HISTORY: Stores NO (0) turning on history of warning/indicator lamp.

**NOTE:**

- W/L ON HISTORY is not stored for approximately 30 seconds after the engine starts.
- Brake warning lamp does not store any history when the parking brake is applied or the brake fluid level gets low.

### Display Item

Display item	Description
ABS W/L	Lighting history of ABS warning lamp.
VDC/TCS IND	Lighting history of VDC OFF indicator lamp.
SLIP IND	Lighting history of VDC warning lamp.
BRAKE W/L	Lighting history of brake warning lamp.
DOOR W/L	Lighting history of door warning lamp.
OIL W/L	Lighting history of oil pressure warning lamp.
C-ENG W/L	Lighting history of malfunction indicator lamp.
CRUISE IND	Lighting history of CRUISE indicator lamp.
SPORT IND	Lighting history of OD OFF indicator lamp.
FUEL W/L	Lighting history of low fuel level warning lamp.
WASHER W/L	Lighting history of washer warning lamp.
AIR PRES W/L	Lighting history of low tire pressure warning lamp.
KEY G/Y W/L	Lighting history of KEY warning lamp (G/Y).
EPS W/L	Lighting history of EPS warning lamp.
CHAGE W/L	Lighting history of charge warning lamp.

**NOTE:**

In items displayed on the CONSULT screen, only those listed in the above table are used.



# DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)

< SYSTEM DESCRIPTION >

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

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000007970610

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

\*: For models with automatic air conditioner, this model is not used.

### FREEZE FRAME DATA (FFD)

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

# DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)

## < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK"* to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*
	OFF>ACC		While turning power supply position from "OFF" to "ACC"
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*. ) to low power consumption mode
	LOCK		Power supply position is "LOCK"*
	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	The number of times that ignition switch is turned ON after DTC is detected <ul style="list-style-type: none"> <li>• The number is 0 when a malfunction is detected now.</li> <li>• The number increases like 1 → 2 → 3...38 → 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 position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position (CVT models), 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 position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

## BUZZER

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

INFOID:00000000773226

### CONSULT APPLICATION ITEMS

# DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)

## < SYSTEM DESCRIPTION >

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

### DATA MONITOR

Display item [Unit]	Description
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.
VEH SPEED 1 [km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.
TAIL LAMP SW [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM using the combination switch readout function.
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.
CDL LOCK SW [On/Off]	Status of door lock unlock switch judged by BCM.

### ACTIVE TEST

Display item [Unit]	Description
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).

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# DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM)

< SYSTEM DESCRIPTION >

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

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000007970611

### 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 style="list-style-type: none"> <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 selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Manual air conditioner	AIR CONDITONER		×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	×
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×
Panic alarm system	PANIC ALARM			×

### BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:000000007773228

### CONSULT APPLICATION ITEMS

# DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM)

## < SYSTEM DESCRIPTION >

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

### DATA MONITOR

Display item [Unit]	Description
IGN ON SW [On/Off]	Status of ignition switch judged by BCM.
KEY ON SW [On/Off]	Status of key switch judged by BCM.
DOOR SW-DR [km/h]	Status of driver side door switch judged by BCM.
REVERSE SW CAN [On/Off]	This item is displayed, but cannot be monitored.
TAIL LAMP SW [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM using the combination switch readout function.
BUCKLE SW [On/Off]	Status of seatbelt buckle switch (driver side) received from combination meter with CAN communication line.
VEHICLE SPEED [km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.

### 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).
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).

WCS

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

#### COMBINATION METER : Diagnosis Procedure

INFOID:000000007773229

#### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	11
Ignition switch ACC or ON	20
Ignition switch ON or START	3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

#### 2. CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector and ground.

Terminals		Ignition switch position	Voltage (Approx.)
(+)	(-)		
Combination meter		OFF ACC ON	Battery voltage
Connector	Terminal		
M34	27		
	15		
	28		
Ground			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between combination meter and fuse.

#### 3. CHECK GROUND CIRCUIT

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	22		Existed
	23		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM)

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

INFOID:000000007970617

#### 1. CHECK FUSE AND FUSIBLE LINK

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

# POWER SUPPLY AND GROUND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

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

### Is the fuse fusing?

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

NO >> GO TO 2.

## 2.CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground  Battery voltage
Connector	Terminal	
M70	70	
	57	

### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

## 3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		Existed
M70	67		Existed

### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

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

INFOID:000000007970619

## 1.CHECK FUSES AND FUSIBLE LINK

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

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

### Is the fuse fusing?

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

NO >> GO TO 2.

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# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## 2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		(-)	Ignition switch position		
(+)			OFF	ACC	ON
BCM					
Connector	Terminal	Ground			
M67	70	Ground	Battery voltage	Battery voltage	Battery voltage
	57				
M65	11		Approx. 0 V	Battery voltage	Battery voltage
	38		Approx. 0 V	Approx. 0 V	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.

BCM		Ground	Continuity
Connector	Terminal		
M67	67		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.



# METER BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## METER BUZZER CIRCUIT

### Description

INFOID:000000007773232

- The buzzer for warning chime system is installed in the combination meter.
- The combination meter sounds the alarm buzzer based on the signals transmitted from various units.

### Component Function Check

INFOID:000000007773233

#### 1.CHECK OPERATION OF METER BUZZER

1. Select "BUZZER" of "BCM" on CONSULT.
2. Perform "LIGHT WARN ALM" of "Active Test".

##### Does meter buzzer beep?

- YES >> INSPECTION END  
NO >> GO TO 2.

#### 2.CHECK COMBINATION METER INPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and check the "BUZZER" monitor value.

"BUZZER"

Under the condition of buzzer input : On

Except above : Off

##### Is the inspection result normal?

- YES >> Replace combination meter.  
NO >> Replace BCM. Refer to [BCS-81, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-142, "Removal and Installation"](#) (without Intelligent Key system).

### Diagnosis Procedure

INFOID:000000007773234

#### 1.CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to [WCS-22, "COMBINATION METER : Diagnosis Procedure"](#).

##### Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Repair power supply circuit of combination meter.

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# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

### Description

INFOID:000000007773235

Transmits a seat belt buckle switch signal (driver side) to the combination meter.

### Component Function Check

INFOID:000000007773236

#### 1.CHECK COMBINATION METER INPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and check the "BUCKLE SW" monitor value.

"BUCKLE SW"

When seat belt is fastened : Off

When seat belt is unfastened : On

>> INSPECTION END

### Diagnosis Procedure

INFOID:000000007773237

#### 1.CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector terminal and ground.

Terminals		Condition	Voltage (Pyrex.)
(+)	(-)		
Combination meter			
Connector	Terminal	Ground	
M34	9		
		When seat belt is unfastened	0 V

Is the inspection result normal?

YES >> Replace combination meter

NO >> GO TO 2.

#### 2.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and seat belt buckle switch (driver side) connector.
3. Check continuity between combination meter harness connector and seat belt buckle switch (driver side) harness connector.

Terminals				Continuity
Combination meter		Seat belt buckle switch (driver side)		
Connector	Terminal	Connector	Terminal	
M34	9	B22	1	Exist

4. Check harness continuity between combination meter harness connector and ground.

Terminals			Continuity
Combination meter		Ground	
Connector	Terminal		
M34	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## 3. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) GROUND CIRCUIT

Check harness continuity between seat belt buckle switch (driver side) harness connector and ground.

Terminals		Ground	Continuity
Seat belt buckle switch (driver side)			
Connector	Terminal		
B22	2		Exist

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

## Component Inspection

INFOID:000000007773238

## 1. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

1. Turn ignition switch OFF.
2. Disconnect the seat belt buckle switch (driver side) connector.
3. Check continuity between terminals.

Terminals		Condition	Continuity
Seat belt buckle switch (driver side)			
1	2	When seat belt is fastened	Not existed
		When seat belt is unfastened	Exist

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace seat belt buckle (driver side). Refer to [SB-8. "SEAT BELT BUCKLE : Removal and Installation"](#).

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# COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

## ECU DIAGNOSIS INFORMATION

### COMBINATION METER

Reference Value

INFOID:000000007970622

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
SPEED METER [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading <b>NOTE:</b> 655.35 is displayed when the malfunction signal is received
SPEED OUTPUT [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading <b>NOTE:</b> 655.35 is displayed when the malfunction signal is received
ODO OUTPUT [km/h or mph]	Ignition switch ON	—	Equivalent to odometer reading in combination meter
TACHO METER [rpm]	Ignition switch ON	Engine running	Equivalent to tachometer reading <b>NOTE:</b> 8191.875 is displayed when the malfunction signal is received
FUEL METER [L]	Ignition switch ON	—	Values according to fuel level
W TEMP METER [°C]	Ignition switch ON	—	Values according to engine coolant temperature <b>NOTE:</b> 215 is displayed when the malfunction signal is input
FUEL CAP W/L	Ignition switch ON	Fuel filler cap warning display ON	On
		Fuel filler cap warning display OFF	Off
ABS W/L	Ignition switch ON	ABS warning lamp ON	On
		ABS warning lamp OFF	Off
VDC/TCS IND	Ignition switch ON	VDC OFF indicator lamp ON	On
		VDC OFF indicator lamp OFF	Off
SLIP IND	Ignition switch ON	VDC warning lamp ON	On
		VDC warning lamp OFF	Off
BRAKE W/L	Ignition switch ON	Brake warning lamp ON	On
		Brake warning lamp OFF	Off
DOOR W/L	Ignition switch ON	Door warning lamp ON	On
		Door warning lamp OFF	Off
HI-BEAM IND	Ignition switch ON	High-beam indicator lamp ON	On
		High-beam indicator lamp OFF	Off
TURN IND	Ignition switch ON	Turn signal indicator lamp ON	On
		Turn signal indicator lamp OFF	Off
LIGHT IND	Ignition switch ON	Tail lamp indicator lamp ON	On
		Tail lamp indicator lamp OFF	Off
OIL W/L	Ignition switch ON	Oil pressure warning lamp ON	On
		Oil pressure warning lamp OFF	Off
MIL	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off

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# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status
CRUISE IND	Ignition switch ON	CRUISE indicator lamp ON	On
		CRUISE indicator lamp OFF	Off
SPORT IND	Ignition switch ON	OD OFF indicator lamp ON	On
		OD OFF indicator lamp OFF	Off
FUEL W/L	Ignition switch ON	Low-fuel warning displayed	On
		Low-fuel warning not displayed	Off
AIR PRES W/L	Ignition switch ON	Low tire pressure lamp ON	On
		Low tire pressure lamp OFF	Off
KEY G/Y W/L	Ignition switch ON	KEY warning lamp (G/Y) ON	On
		KEY warning lamp (G/Y) OFF	Off
KEY KNOB W/L	Ignition switch ON	Shift P warning lamp ON	On
		Shift P warning lamp OFF	Off
EPS W/L	Ignition switch ON	EPS warning lamp ON	On
		EPS warning lamp OFF	Off
e-4WD W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
LCD	Ignition switch LOCK or ACC	Engine start operation indicator lamp ON	NIGN B&P
	Ignition switch ON	Engine start operation indicator lamp ON	IGN B&P
	Ignition switch LOCK	Shift P warning lamp ON	SFT P
	Ignition switch ON	KEY warning lamp blinking	NO KY
SHIFT IND	Ignition switch ON	Shift position indicator P display	P
		Shift position indicator R display	R
		Shift position indicator N display	N
		Shift position indicator D display	D
		Shift position indicator L display	L
O/D OFF SW	Ignition switch ON	Overdrive control switch ON	On
		Overdrive control switch OFF	Off
PKB SW	Ignition switch ON	Parking brake switch ON	On
		Parking brake switch OFF	Off
BUCKLE SW	Ignition switch ON	Seat belt (driver side) not fastened	On
		Seat belt (driver side) fastened	Off
BRAKE OIL SW	Ignition switch ON	Brake fluid level switch ON	On
		Brake fluid level switch OFF	Off
A/C AMP CONN	Ignition switch ON	Other than the following	On
		Receives A/C auto amp. connection recognition signal	Off
DISTANCE [km]	Ignition switch ON	—	Possible driving distance calculated by combination meter
OUTSIDE TEMP [°C or °F]	Ignition switch ON	—	Equivalent to ambient temperature <b>NOTE:</b> This may not match the indicated value on the information display.

# COMBINATION METER

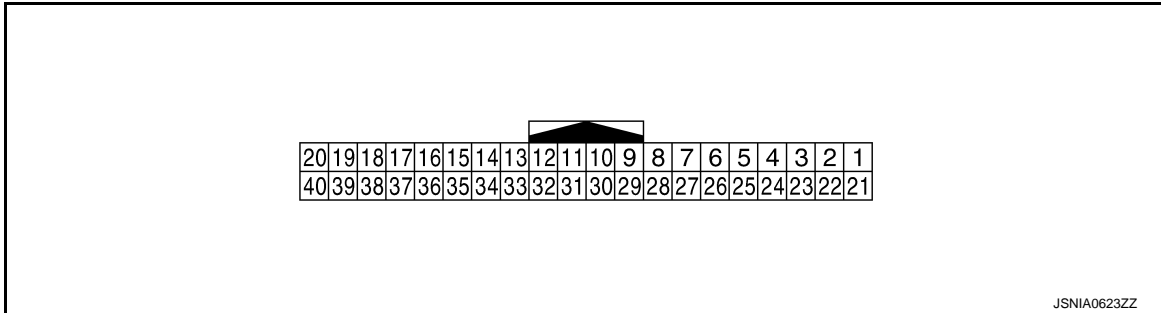
## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status
FUEL LOW SIG	Ignition switch ON	Low fuel warning displayed	On
		Low fuel warning not displayed	Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off
TPMS PRESS L	Ignition switch ON	Low tire pressure warning display ON	On
		Low tire pressure warning display OFF	Off

**NOTE:**

Some items are not available according to vehicle specification.

### TERMINAL LAYOUT



### PHYSICAL VALUES

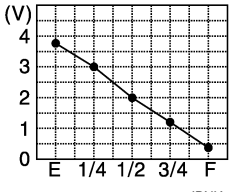
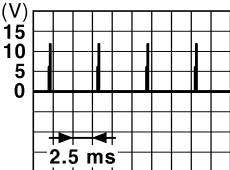

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (L)	—	CAN-H	—	—	—	—
2 (P)	—	CAN-L	—	—	—	—
3 (V)	Ground	Vehicle speed signal (2-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	<p><b>NOTE:</b> The maximum voltage varies depending on the specification (destination unit).</p> <p style="text-align: right;">JSNIA0015GB</p>
4 (V/R) <sup>*1</sup> (L) <sup>*2</sup>	Ground	Vehicle speed signal (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	<p><b>NOTE:</b> The maximum voltage varies depending on the specification (destination unit).</p> <p style="text-align: right;">JSNIA0012GB</p>

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# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
6 (BR/Y)	Ground	Fuel level sensor signal	Input	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">JPNIA1546ZZ</p>
7 (R/G)	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	5 V
					Air bag warning lamp OFF	0 V
8 (P)	Ground	Overdrive control switch signal	Input	Ignition switch ON	Overdrive control switch ON	4 V
					Overdrive control switch OFF	0 V
9 (O)	Ground	Seat belt buckle switch signal (driver side)	Input	Ignition switch ON	When driver seat belt is fastened.	12 V
					When driver seat belt is unfastened.	0 V
10 (SB)	Ground	Parking brake switch signal	Input	Engine idling	Parking brake applied.	0 V
					Parking brake released.	5 V
11 (G/R)	Ground	Brake fluid level switch signal	Input	Ignition switch ON	Brake fluid level is normal	12 V
					Brake fluid level is less than LOW level	0 V
13 (B/R)	Ground	Illumination control signal	Output	Ignition switch ON	<ul style="list-style-type: none"> <li>Lighting switch 1ST</li> <li>When meter illumination is maximum</li> </ul>	 <p style="text-align: right; font-size: small;">JPNIA1687GB</p>
					<ul style="list-style-type: none"> <li>Lighting switch 1ST</li> <li>When meter illumination is step 11</li> </ul>	 <p style="text-align: right; font-size: small;">JPNIA1686GB</p>
					<ul style="list-style-type: none"> <li>Lighting switch 1ST</li> <li>When meter illumination is minimum</li> </ul>	12 V
15 (L/Y)	Ground	ACC power supply	Input	Ignition switch ACC	—	Battery voltage
17 (G)	Ground	Washer level switch signal	Input	Ignition switch ON	Low washer fluid warning lamp ON	0 V
					Low washer fluid warning lamp OFF	12 V



# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

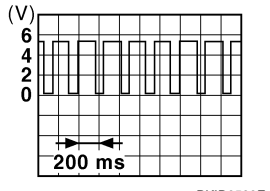
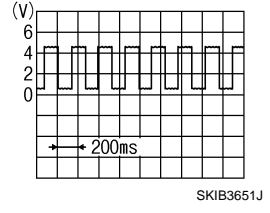
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
18 (R/Y)	Ground	Security signal	Input	Ignition switch ON	Security warning lamp ON	0 V
					Security warning lamp OFF	12 V
19 (PU/W)	Ground	Ambient sensor signal	Input	Ignition switch ON	Changes depending to am- bient temperature.	<p style="text-align: center;"> <small>JSNIA0014GB</small> </p>
20 (R/W)	Ground	Ambient sensor ground	—	Ignition switch ON	—	0 V
21 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
22 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
23 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
24 (PU)	Ground	Fuel level sensor signal ground	—	Ignition switch ON	—	0 V
25 (B)	Ground	VDC ground	—	Ignition switch ON	—	0 V
27 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
28 (GR)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
29 (BR)	Ground	Passenger seat belt warn- ing signal	Input	Ignition switch ON	<ul style="list-style-type: none"> <li>• When getting in the pas- senger seat.</li> <li>• When passenger seat belt is fastened.</li> </ul>	12 V
					<ul style="list-style-type: none"> <li>• When getting in the pas- senger seat.</li> <li>• When passenger seat belt is unfastened.</li> </ul>	0 V
31 (R)	Ground	A/C auto amp. connection recognition signal	Input	Ignition switch ON	—	5 V

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# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Input/ Output	Condition	Value (Approx.)
+	-	Signal name				
35 (BR)	Ground	Engine coolant temperature signal	Output	Ignition switch ON	Engine idling [Approximately 20°C (68°F)]	
					Engine idling [Approximately 80°C (176°F)]	<div style="text-align: center;">0 V</div> 
38 (GR)	Ground	Alternator signal	Input	Ignition switch ON	Charge warning lamp ON	0 V
					Charge warning lamp OFF	12 V


- \*1: With NAVI
- \*2: Without NAVI

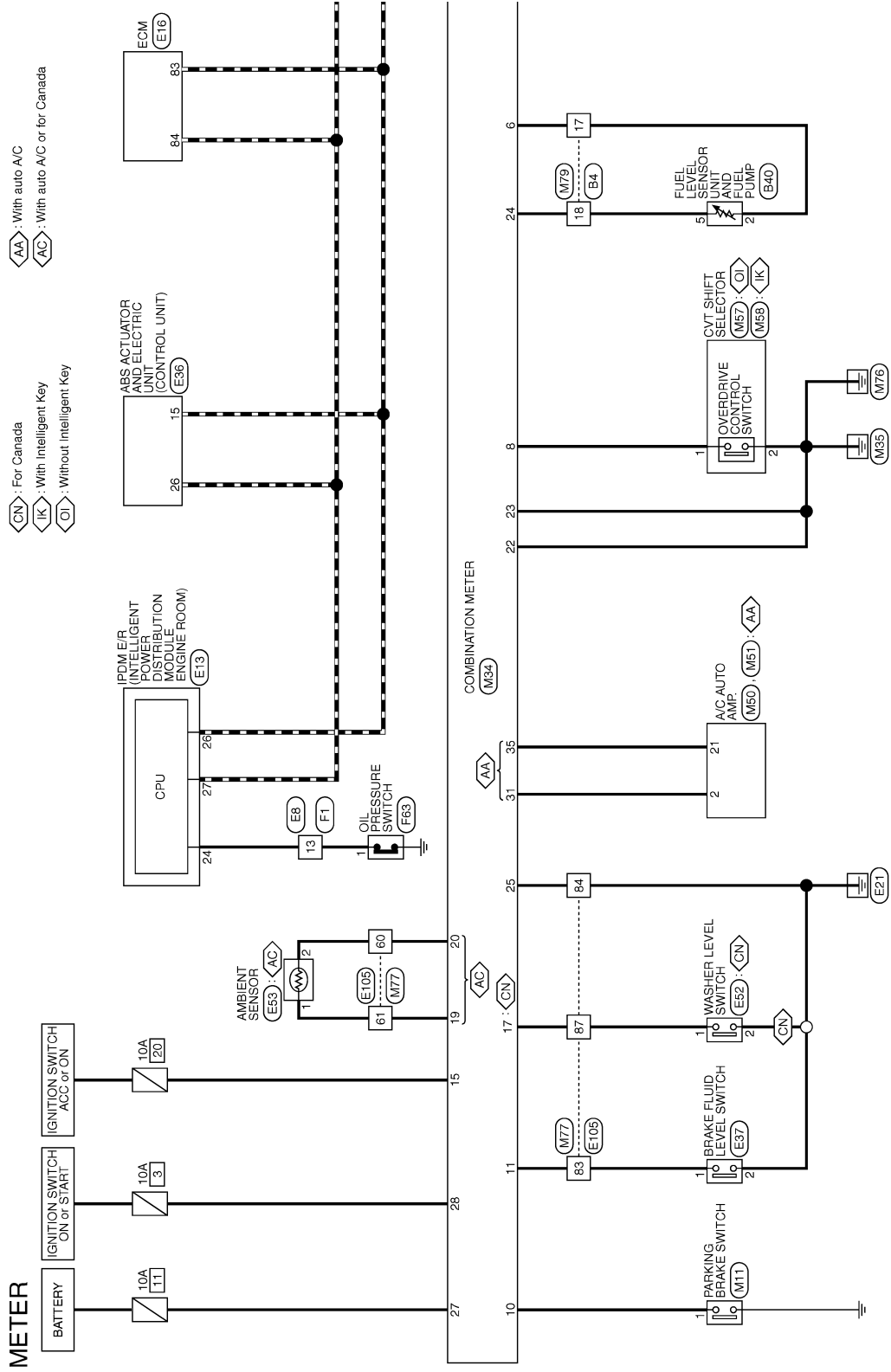
# COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

## Wiring Diagram - METER -

INFOID:000000007970623

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).



2010/10/14

JCNWM5618GB

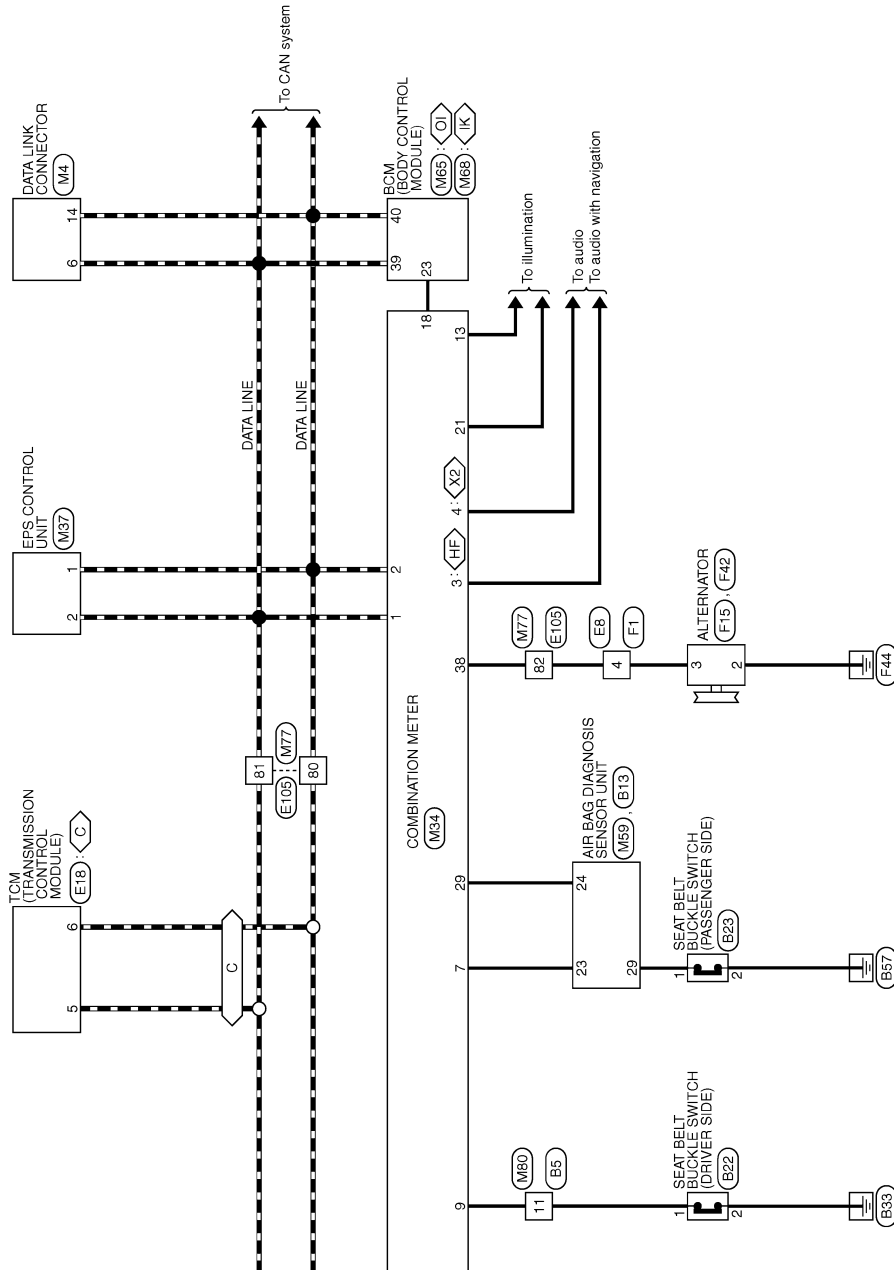
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WCS

# COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

- C : With CVT
- IK : With Intelligent Key
- OI : Without Intelligent Key
- HF : With telephone
- X2 : Except with 2-speakers



JCNWM5619GB

## Fail-Safe

INFOID:000000007970624

## FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Function		Specifications	
Speedometer		Reset to zero by suspending communication.	A
Tachometer			B
Engine coolant temperature gauge			C
Illumination control		When suspending communication, changes to nighttime mode.	
Shift position indicator		The indicator turns OFF by suspending communication.	
Information display	Instantaneous fuel warning	<ul style="list-style-type: none"> <li>When reception time of an abnormal signal is 2 seconds or less, the last received datum is used for calculation to indicate the result.</li> <li>When reception time of an abnormal signal is more than two seconds, the last result calculated during normal condition is indicated.</li> </ul>	D
	Average fuel consumption		E
	Possible driving distance	The display turns OFF by suspending communication.	
	Average vehicle speed		
	Low tire pressure warning		
Buzzer		The buzzer turns off by suspending communication.	
Warning lamp/indicator lamp	ABS warning lamp	The lamp turns ON by suspending communication.	F
	VDC warning lamp		G
	EPS warning lamp		H
	Brake warning lamp		I
	Malfunction indicator lamp		J
	Low tire pressure warning lamp	The lamp turns ON after flashing for 1 minute.	
	VDC OFF indicator lamp	The lamp turns OFF by suspending communication.	K
	High beam indicator lamp		L
	Turn signal indicator lamp		M
	Door warning lamp		
	Light indicator lamp		
	Engine start operation indicator lamp		
	Shift P warning lamp		
	Oil pressure warning lamp		
	CRUISE indicator lamp		
	O/D OFF indicator lamp		
Low washer fluid warning lamp			
Key warning lamp			

## DTC Index

INFOID:000000007970625

Display contents of CONSULT	Diagnostic item is detected when ...	Refer to	
CAN COMM CIRCUIT [U1000]	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	<a href="#">MWI-34. "Diagnosis Procedure"</a>	WCS
CONTROL UNIT (CAN) [U1010]	When detecting error during the initial diagnosis of the CAN controller of combination meter.	<a href="#">MWI-35. "Diagnosis Procedure"</a>	O
VEHICLE SPEED [B2205]	The abnormal vehicle speed signal is input from the ABS actuator and electric unit (control unit) for 2 seconds or more.	<a href="#">MWI-36. "Diagnosis Procedure"</a>	P

## COMBINATION METER

### < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Diagnostic item is detected when ...	Refer to
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	<a href="#">MWI-37.</a> <a href="#">"Diagnosis Procedure"</a>
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	<a href="#">MWI-38.</a> <a href="#">"Diagnosis Procedure"</a>

## BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

### BCM (BODY CONTROL MODULE)

WITH INTELLIGENT KEY

WITH INTELLIGENT KEY : Reference Value

INFOID:000000007970626

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

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

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## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
DOOR SW-BK	Back door closed	Off
	Back door opened	On
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
TR/BD OPEN SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
TRNK/HAT MNTR	<b>NOTE:</b> The item is indicated, but not monitored.	Off
FAN ON SIG	Blower fan OFF	Off
	Blower fan ON	On
AIR COND SW	Air conditioner OFF (A/C switch indicator OFF)	Off
	Air conditioner ON (A/C switch indicator ON)	On
RKE-LOCK	LOCK button of the key is not pressed	Off
	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed	On
RKE-TR/BD	BACK DOOR OPEN button of the key is not pressed	Off
	BACK DOOR OPEN button of the key is pressed	On
RKE-PANIC	PANIC button of the key is not pressed	Off
	PANIC button of the key is pressed	On
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	On
OPTI SEN (DTCT)	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V
OPTI SEN (FILT)	Bright outside of the vehicle (Lighting switch AUTO)	Close to 5 V
	Dark outside of the vehicle (Lighting switch AUTO)	Close to 1.50 V



## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status	
OPTICAL SENSOR	<b>NOTE:</b> The item is indicated, but not monitored.	Off	A
RAIN SENSOR	<b>NOTE:</b> The item is indicated, but not monitored.	Off	B
REQ SW -DR	Driver door request switch is not pressed	Off	C
	Driver door request switch is pressed	On	
REQ SW -AS	Passenger door request switch is not pressed	Off	D
	Passenger door request switch is pressed	On	
REQ SW -RR	<b>NOTE:</b> The item is indicated, but not monitored.	Off	E
REQ SW -RL	<b>NOTE:</b> The item is indicated, but not monitored.	Off	F
REQ SW -BD/TR	Back door request switch is not pressed	Off	G
	Back door request switch is pressed	On	
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off	H
	Push-button ignition switch (push switch) is pressed	On	
CLUCH SW	The clutch pedal is not depressed.	Off	I
	The clutch pedal is depressed	On	
BRAKE SW 1	The brake pedal is not depressed	Off	J
	The brake pedal is depressed	On	
BRAKE SW 2	The brake pedal is depressed when No. 9 fuse is blown	Off	K
	The brake pedal is not depressed when No. 9 fuse is blown, or No. 9 fuse is normal	On	
DETE/CANCL SW	Selector lever in P position	Off	L
	Selector lever in any position other than P	On	
SFT PN/N SW	Selector lever in any position other than P and N	Off	M
	Selector lever in P or N position	On	
S/L -LOCK	<b>NOTE:</b> The item is indicated, but not monitored.	Off	
S/L -UNLOCK	<b>NOTE:</b> The item is indicated, but not monitored.	Off	
S/L RELAY-F/B	<b>NOTE:</b> The item is indicated, but not monitored.	Off	
UNLK SEN -DR	Driver door is locked	Off	WCS
	Driver door is unlocked	On	
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off	O
	Push-button ignition switch (push-switch) is pressed	On	
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off	P
	Ignition switch in ON position	On	
DETE SW -IPDM	Selector lever in any position other than P	Off	
	Selector lever in P position	On	
SFT PN -IPDM	Selector lever in any position other than P and N	Off	
	Selector lever in P or N position	On	
SFT P -MET	Selector lever in any position other than P	Off	
	Selector lever in P position	On	
SFT N -MET	Selector lever in any position other than N	Off	
	Selector lever in N position	On	

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	<b>NOTE:</b> The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	<b>NOTE:</b> The item is indicated, but not monitored.	Off
S/L RELAY-REQ	<b>NOTE:</b> The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	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 (Selector lever is in the P position except for M/T models)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	<b>NOTE:</b> The item is indicated, but not monitored.	Reset
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	<b>NOTE:</b> The item is indicated, but not monitored.	—
CONFIRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

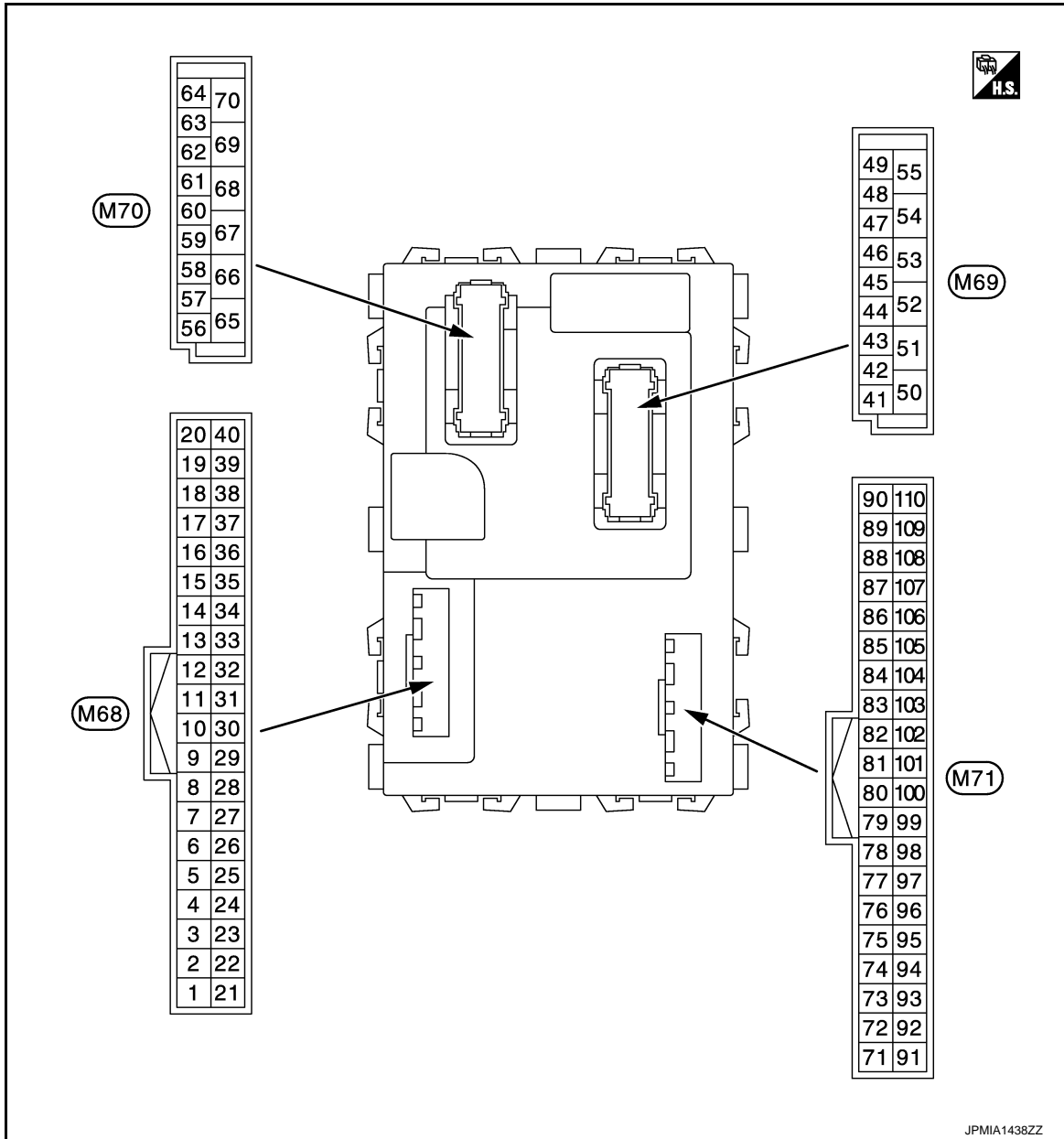
Monitor Item	Condition	Value/Status	
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet	A
	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done	B
NOT REGISTERED	BCM detects registered key ID, or BCM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

WCS

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

## TERMINAL LAYOUT



**NOTE:**

- Connector color
- M68, M70: Black
- M69, M71: White

**PHYSICAL VALUES**

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

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

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WCS

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

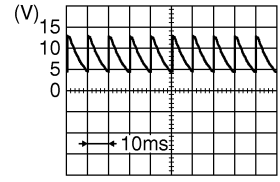
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch (Wiper intermittent dial 4)	
					Rear washer ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>	
Rear wiper switch ON (Wiper intermittent dial 4)		0.8 V				
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Wiper intermittent dial 3 (All switch OFF)	
					Any of the condition below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> </ul>	
Any of the condition below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>		0.8 V				

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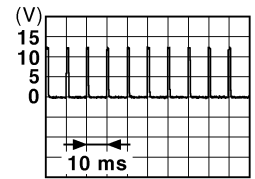
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylinder switch	NEUTRAL position
				UNLOCK position	8.0 - 8.5 V
8 (W/B)	Ground	Door key cylinder switch LOCK	Input	Door key cylinder switch	NEUTRAL position
				LOCK position	12 V
9 (R)	Ground	Stop lamp switch 1	Input	Stop lamp switch	OFF (Brake pedal is not depressed)
				ON (Brake pedal is de- pressed)	0 V
12 (GR)	Ground	Door lock and unlock switch LOCK	Input	Door lock and unlock switch	NEUTRAL position
				LOCK position	Battery voltage
13 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position
				UNLOCK position	1.0 - 1.5 V
14 (L/G)	Ground	Optical sensor	Input	Ignition switch ON	NEUTRAL position
				When bright outside of the vehicle	1.0 - 1.5 V
15 (W/L)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	NEUTRAL position
				When dark outside of the vehicle	1.0 - 1.5 V
17 (R/G)	Ground	Optical sensor pow- er supply	Output	Ignition switch	NEUTRAL position
				Not pressed	1.0 - 1.5 V
					Pressed
					OFF, ACC
					ON

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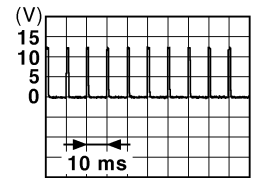
JPMIA0587GB

8.0 - 8.5 V



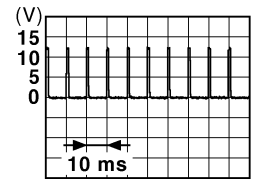
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1.0 - 1.5 V



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1.0 - 1.5 V



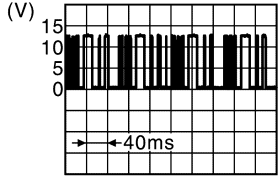
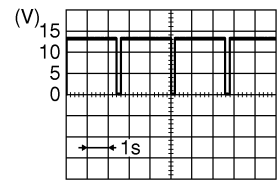
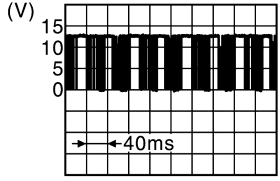
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1.0 - 1.5 V

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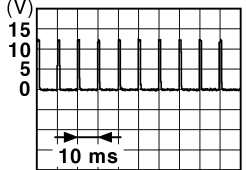
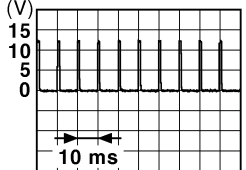
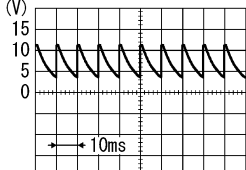
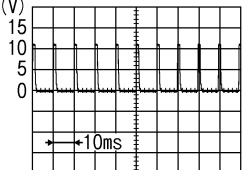
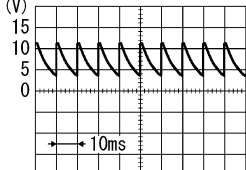
## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
18 (V)	Ground	Sensor ground	Input	Ignition switch ON	0 V	
21 (P/L)	Ground	NATS antenna amp.	Input/ Output	Intelligent Key: Intelligent Key battery is re- moved	Brake pedal: Depressed <b>NOTE:</b> Waveform varies each time when brake pedal is depressed  <small>JMKIA6232JP</small>	
				Brake pedal: Not de- pressed	12 V	
23 (R/Y)	Ground	Security indicator lamp	Output	Security indica- tor	ON	0 V
				Blinking (Ignition switch OFF)	 <small>JPMIA0590GB</small>	12.0 V
				OFF	Battery voltage	
24*1 (SB)	Ground	Dongle link	Input/ Output	Ignition switch OFF	5 V	
25 (LG)	Ground	NATS antenna amp.	Input/ Output	During waiting	Brake pedal: Depressed <b>NOTE:</b> Waveform varies each time when brake pedal is depressed  <small>JMKIA6233JP</small>	
				Brake pedal: Not de- pressed	12 V	
26*2 (GR)	Ground	Thermo control amp.	Input	Ignition switch ON	0 V	
				Evaporator is extremely low temperature	12 V	



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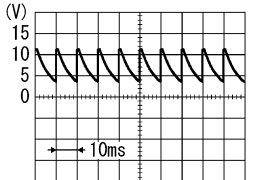
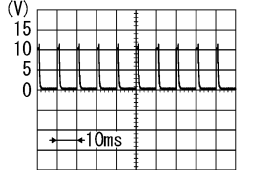
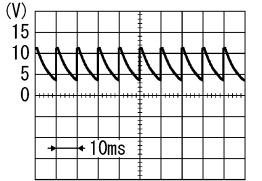
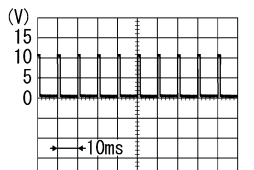
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
27 (O)	Ground	A/C ON (Automatic A/C)	Input	A/C	OFF (A/C switch indicator: OFF)	 <small>JPMIA0012GB</small> 1.0 - 1.5 V
					ON (A/C switch indicator: ON)	0 V
		A/C switch (Manual A/C)	A/C switch	OFF	 <small>JPMIA0012GB</small> 1.0 - 1.5 V	
				ON	0 V	
28 (G/W)	Ground	Blower fan switch (Automatic A/C)	Input	Fan switch	Blower fan switch OFF	0 V
					Blower fan switch ON	 <small>PKIB4960J</small> 7.0 - 8.0 V
		Blower fan switch (Manual A/C)	Fan switch	Blower fan switch OFF	 <small>PIIB7730J</small> 1.5 - 2.0 V	
				Blower fan switch ON	0 V	
29 (L/W)	Ground	Hazard switch	Input	Hazard switch	OFF	12 V
					ON	0 V
31 (G/B)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	 <small>PKIB4960J</small> 7.0 - 8.0 V
					UNLOCK status (Unlock sensor switch ON)	0 V

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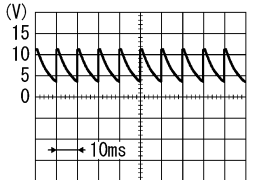
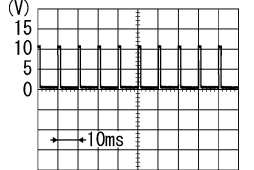
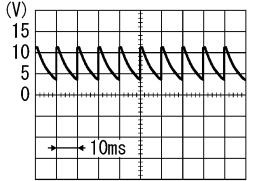
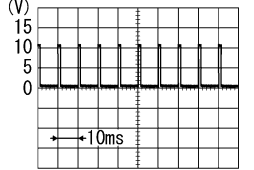
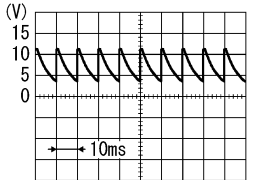
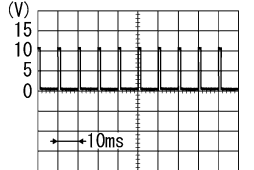
# BCM (BODY CONTROL MODULE)

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p>
					Front fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4966J</p> <p style="text-align: center;">1.0 V</p>
					Rear wiper switch ON (Wiper intermittent dial 4)	
Any of the condition below with all switch OFF						
<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>						
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p>
					Lighting switch 1ST (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4958J</p> <p style="text-align: center;">1.2 V</p>
					Lighting switch AUTO (Wiper intermittent dial 4)	
					Rear wiper switch INT (Wiper intermittent dial 4)	
Any of the condition below with all switch OFF						
<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>						

# BCM (BODY CONTROL MODULE)

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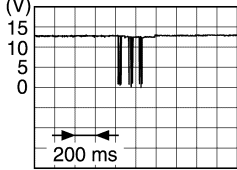
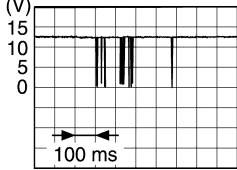
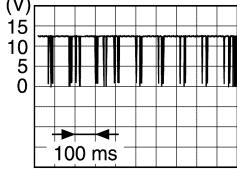
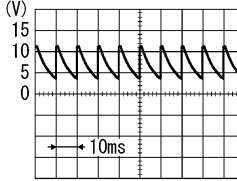
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
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34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p>
					Lighting switch 2ND (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4958J</p> <p style="text-align: center;">1.2 V</p>
					Lighting switch HI (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
Any of the condition below with all switch OFF						
<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 3</li> </ul>						
35 (R/L)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p>
					Lighting switch 2ND	 <p style="text-align: right; font-size: small;">PKIB4958J</p> <p style="text-align: center;">1.2 V</p>
					Lighting switch PASS	
					Front wiper switch INT	
Front wiper switch HI						
36 (L/O)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 <p style="text-align: right; font-size: small;">PKIB4960J</p> <p style="text-align: center;">7.0 - 8.0 V</p>
					Turn signal switch RH	 <p style="text-align: right; font-size: small;">PKIB4958J</p> <p style="text-align: center;">1.2 V</p>
					Turn signal switch LH	
					Front wiper switch LO (Front wiper switch MIST)	
Front washer switch ON						

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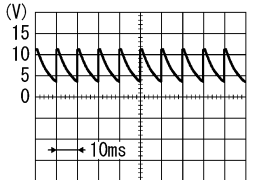
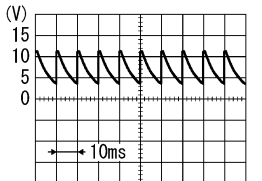
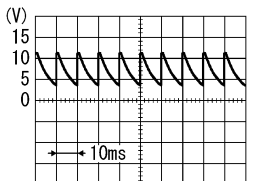
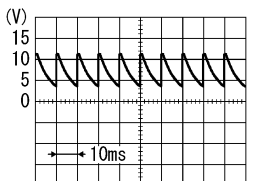
# BCM (BODY CONTROL MODULE)

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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
+	-					
37 (G/O)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	12 V
38 (G/Y)	Ground	Receiver communication	Input/ Output	Ignition switch OFF (Remote keyless entry communication)	Waiting	12 V
					When operating either button on Intelligent Key	 JMMIA0572GB
				Ignition switch ON (TPMS communication)	Waiting	 JMMIA0573GB
					When receiving signal from tire pressure sensor	 JMMIA0574GB
39 (L)	Ground	CAN-H	Input/ Output	—	—	
40 (P)	Ground	CAN-L	Input/ Output	—	—	
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 PKIB4960J 9.5 - 10.0 V
					ON (When back door opened)	0 V
44 (LG)	Ground	Rear wiper stop position	Input	Ignition switch ON	Rear wiper stop position	12 V
					Any position other than rear wiper stop position	0 V

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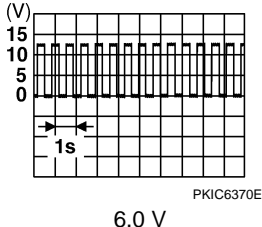
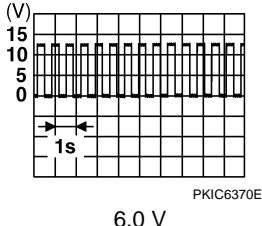
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
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45 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 <small>PKIB4960J</small> 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
46 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	 <small>PKIB4960J</small> 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 <small>PKIB4960J</small> 7.0 - 8.0 V
					ON (When driver door opened)	0 V
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	 <small>PKIB4960J</small> 7.0 - 8.0 V
					ON (When rear door LH opened)	0 V
50 (R/W)	Ground	Back door lock actuator relay control	Output	Back door	LOCK (Actuator is activated)	0 V
					Other than LOCK (Actuator is not activated)	Battery voltage
51 (W)	Ground	Back door request switch	Input	Back door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
54 (LG)	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V
					ON (Activated)	12 V

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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
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55 (G)	Ground	Rear door UNLOCK	Output	Rear door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
56 (L)	Ground	Interior room lamp power supply	Output		Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)	0 V
					Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)	12 V
57 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (G)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	
63 (BR)	Ground	Interior room lamp control signal	Output	Interior room lamp	OFF	12 V
					ON	0 V
65 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activated)	12 V
					Other then LOCK (Actuator is not activated)	0 V
66 (L/B)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	12 V
					Other then UNLOCK (Actuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON		0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		12 V
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		12 V

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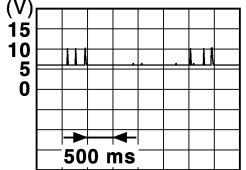
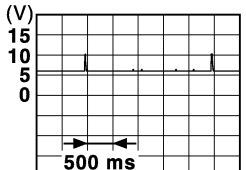
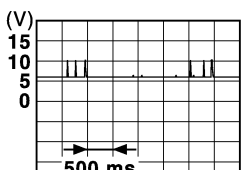
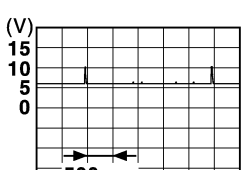
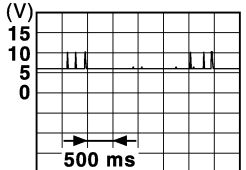
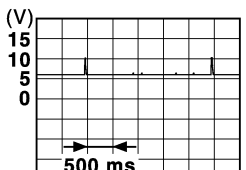
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
70 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
72*2 (SB)	Ground	A/C indicator	Output	A/C indicator	OFF	12 V
					ON	0 V
75 (SB)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
76 (L/O)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	12 V
78 (LG)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	<p style="text-align: right; font-size: small;">JMKIA5954GB</p>
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	<p style="text-align: right; font-size: small;">JMKIA5955GB</p>
79 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	<p style="text-align: right; font-size: small;">JMKIA5954GB</p>
					When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	<p style="text-align: right; font-size: small;">JMKIA5955GB</p>

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# BCM (BODY CONTROL MODULE)

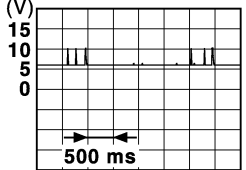
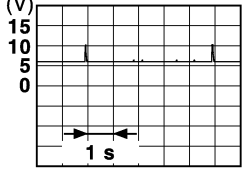
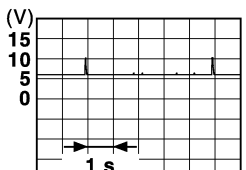
## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
80 (BR/Y)	Ground	Passenger door antenna (+)	Output	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 <p style="text-align: right; font-size: small;">JMkia5954GB</p>
				When the passenger door request switch is operated with ignition switch ON	 <p style="text-align: right; font-size: small;">JMkia5955GB</p>
81 (L/Y)	Ground	Passenger door antenna (-)	Output	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 <p style="text-align: right; font-size: small;">JMkia5954GB</p>
				When the passenger door request switch is operated with ignition switch ON	 <p style="text-align: right; font-size: small;">JMkia5955GB</p>
82 (W/B)	Ground	Back door antenna (+)	Output	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)	 <p style="text-align: right; font-size: small;">JMkia5954GB</p>
				When the back door request switch is operated with ignition switch ON	 <p style="text-align: right; font-size: small;">JMkia5955GB</p>



# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

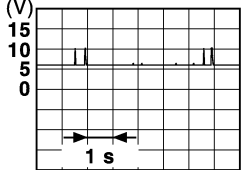
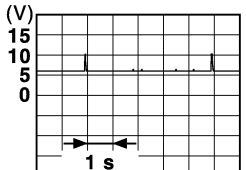
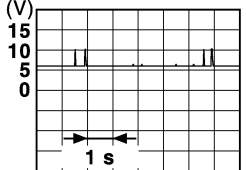
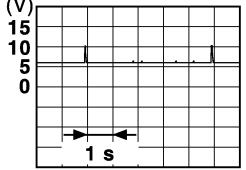
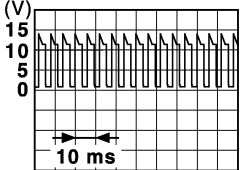
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
83 (B/W)	Ground	Back door antenna (-)	Output	When the back door request switch is operated with ignition switch ON	When Intelligent Key is not in the antenna detection area (The distance between Intelligent Key and antenna: Approx. 2 m)
				When Intelligent Key is in the antenna detection area (The distance between Intelligent Key and antenna: 80 cm or less)	 <small>JMKIA5954GB</small>
84 (Y/G)	Ground	Room antenna (+) (Instrument center)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area
				When Intelligent Key is in the antenna detection area	 <small>JMKIA3839GB</small>
85 (Y/L)	Ground	Room antenna (-) (Instrument center)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area
				When Intelligent Key is in the antenna detection area	 <small>JMKIA3839GB</small>

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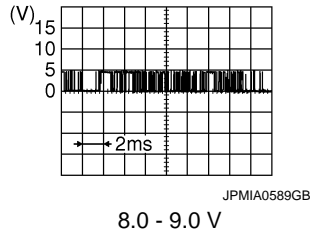
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
86 (P)	Ground	Luggage room antenna (+)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 <small>JMKIA5951GB</small>
					When Intelligent Key is in the antenna detection area	 <small>JMKIA3839GB</small>
87 (L)	Ground	Luggage room antenna (-)	Output	Ignition switch ON	When Intelligent Key is not in the antenna detection area	 <small>JMKIA5951GB</small>
					When Intelligent Key is in the antenna detection area	 <small>JMKIA3839GB</small>
90 (W/L)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON	12 V
					OFF	0 V
91 (Y)	Ground	ACC/ON indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0.5 V
92 (BR/R)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V
					ON	<p><b>NOTE:</b> When the illumination brightening/dimming level is in the neutral position</p>  <small>JPMIA1554GB</small> 6.0 - 7.0 V

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
93 (GR/W)	Ground	Intelligent Key warn- ing buzzer	Output	Intelligent Key warning buzzer	Sounding	0 V
					Not sounding	12 V
96 (BR/W)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	12 V
97 (L/R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0 V
98 (BR)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V
					ON	0 V
99 (W/R)	Ground	Ignition relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V
100 (G)	Ground	Passenger door re- quest switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	12 V
102 (G)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V
103*2 (G/Y)	Ground	Front defroster switch	Input	Ignition switch ON	A/C mode defroster ON position	0 V
					Other than A/C mode de- froster ON position	
104 (Y/R)	Ground	CVT shift selector (detention switch) power supply	Output	Ignition switch ON		12 V
105 (B/O)	Ground	Stop lamp switch 2	Input	Ignition switch OFF		Battery voltage
106 (Y/B)	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC	0 V
					ON	12 V

\*1: For Canada

\*2: Manual air conditioner


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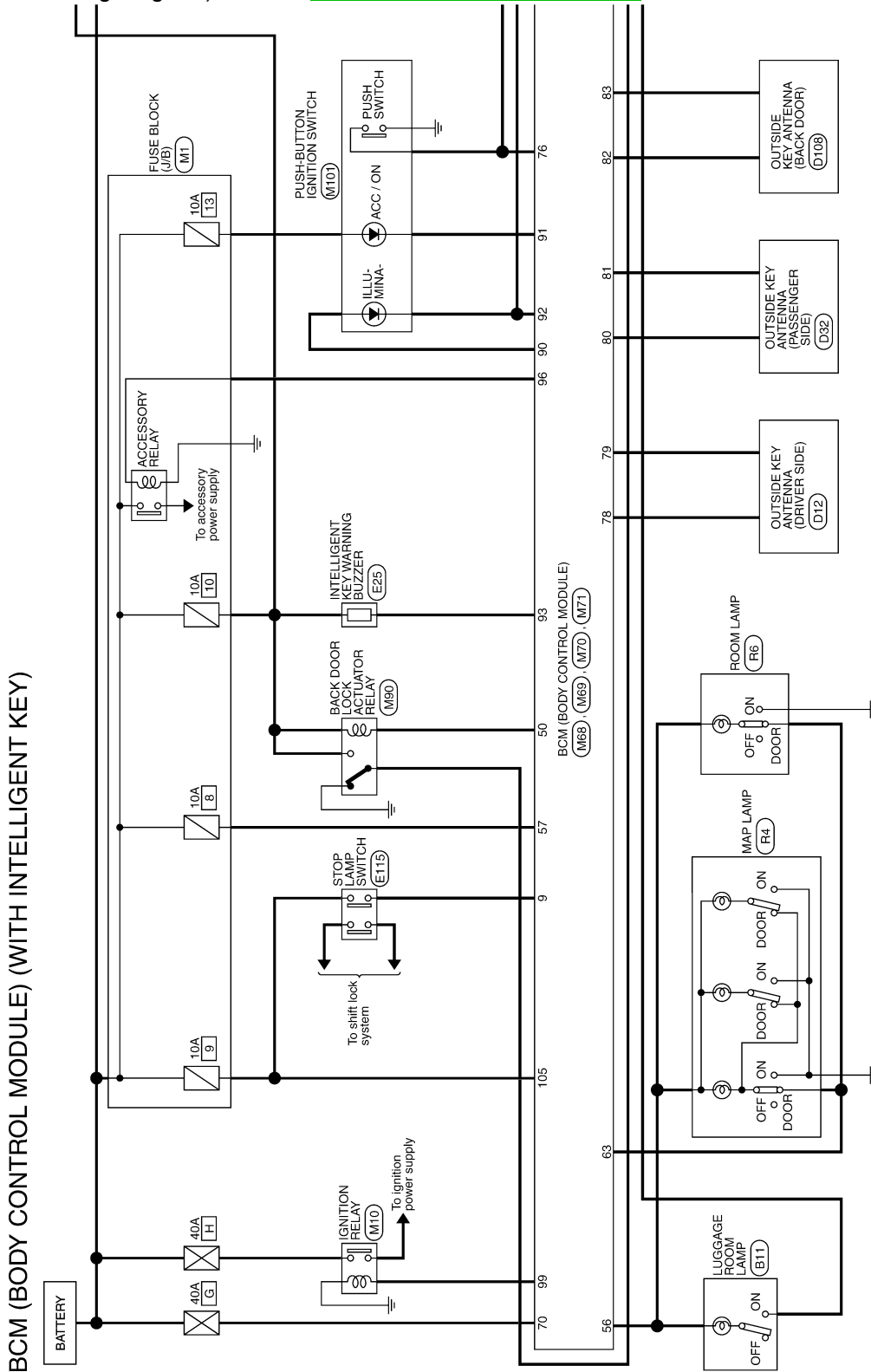
# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

## WITH INTELLIGENT KEY : Wiring Diagram - BCM -

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For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).

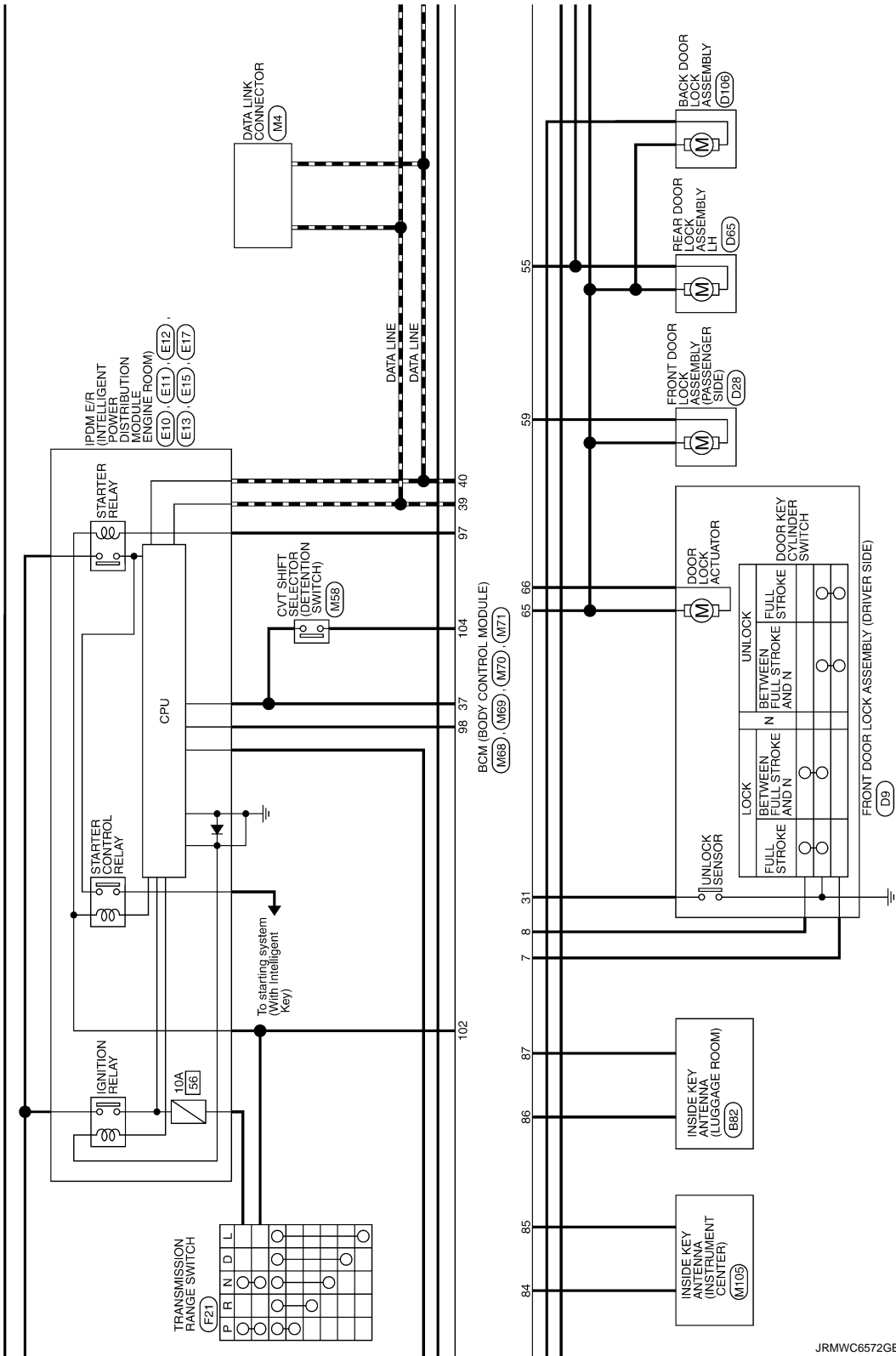


JRMWC6571GB

2011/10/07

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >



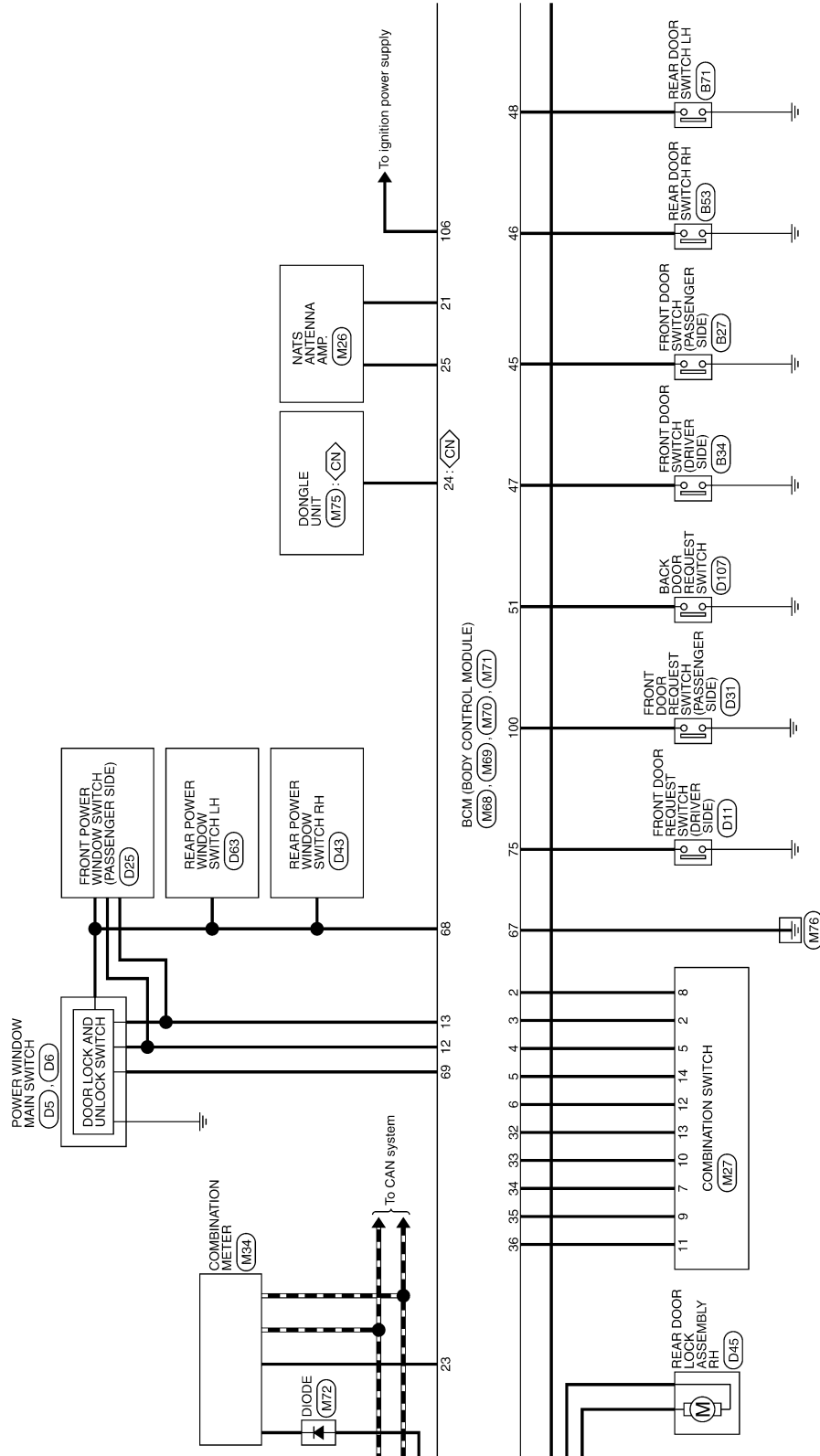
JRMWC6572GB

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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

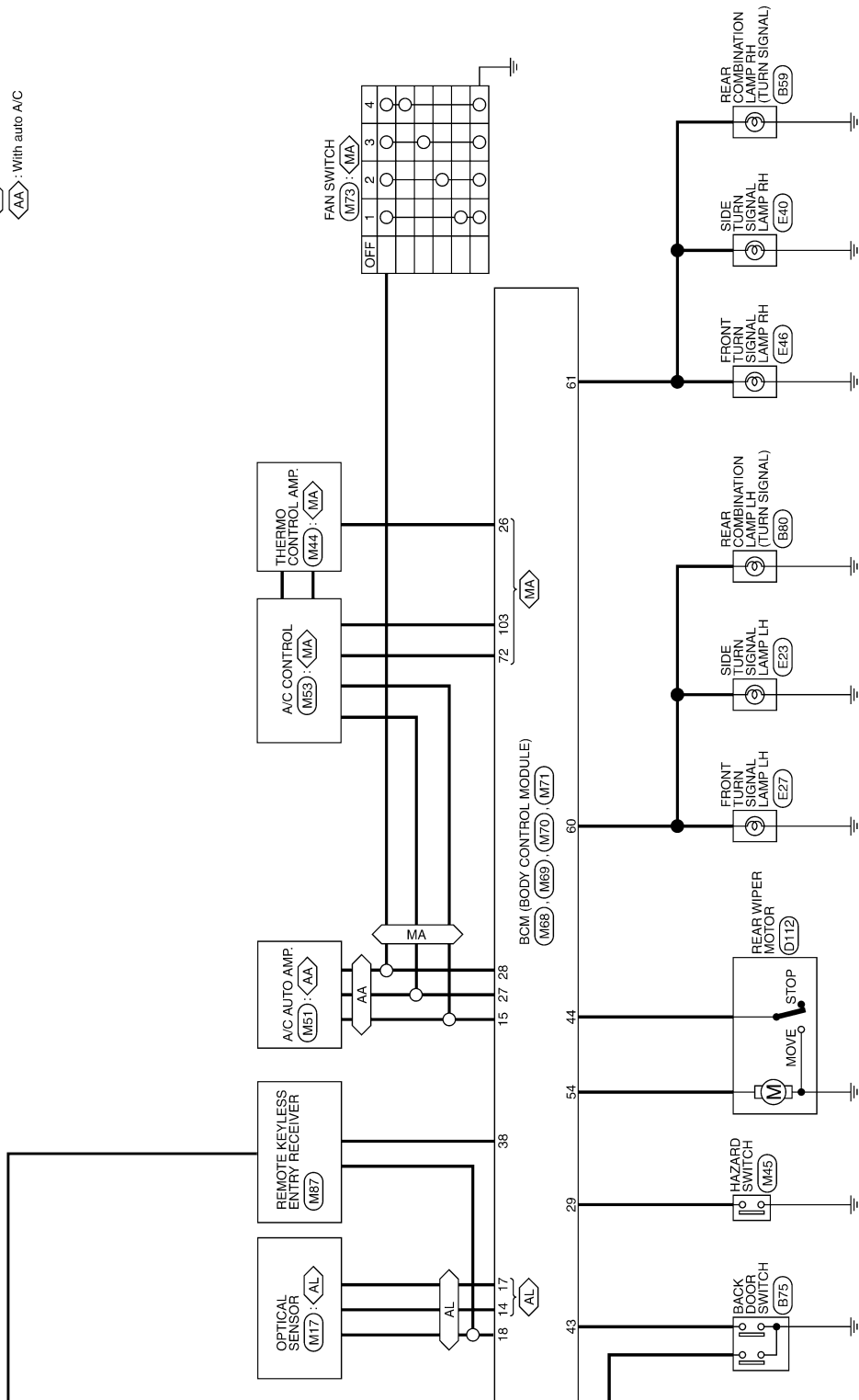


JRMWC6573GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

- ◊CN◊ : For Canada
- ◊MA◊ : With manual A/C
- ◊AL◊ : With autolight system
- ◊AA◊ : With auto A/C



WITH INTELLIGENT KEY : Fail-safe

FAIL-SAFE CONTROL BY DTC

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

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC
B2198: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> <li>Starter relay control signal</li> <li>Starter relay status signal (CAN)</li> </ul>
B260F: ENG STATE SIG LOST	Inhibit engine cranking	When any of the following conditions are fulfilled <ul style="list-style-type: none"> <li>Power position changes to ACC</li> <li>Receives engine status signal (CAN)</li> </ul>
B26F1: IGN RELAY OFF	Inhibit engine cranking	When the following conditions are fulfilled <ul style="list-style-type: none"> <li>Ignition switch ON signal (CAN: Transmitted from BCM): ON</li> <li>Ignition switch ON signal (CAN: Transmitted from IPDM E/R): ON</li> </ul>
B26F2: IGN RELAY ON	Inhibit engine cranking	When the following conditions are fulfilled <ul style="list-style-type: none"> <li>Ignition switch ON signal (CAN: Transmitted from BCM): OFF</li> <li>Ignition switch ON signal (CAN: Transmitted from IPDM E/R): OFF</li> </ul>
B26F3: START CONT RLY ON	Inhibit engine cranking	When the following conditions are fulfilled <ul style="list-style-type: none"> <li>Starter control relay signal (CAN: Transmitted from BCM): OFF</li> <li>Starter control relay signal (CAN: Transmitted from IPDM E/R): OFF</li> </ul>
B26F4: START CONT RLY OFF	Inhibit engine cranking	When the following conditions are fulfilled <ul style="list-style-type: none"> <li>Starter control relay signal (CAN: Transmitted from BCM): ON</li> <li>Starter control relay signal (CAN: Transmitted from IPDM E/R): ON</li> </ul>
B26F7: BCM	Inhibit engine cranking by Intelligent Key system	When room antenna and luggage room antenna functions normally

### REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation

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

### FAIL-SAFE CONTROL OF COMBINATION SWITCH READING FUNCTION CAUSED BY LOW POWER SUPPLY VOLTAGE

If voltage of battery power supply lower, BCM maintains combination switch reading to the status when input voltage is less than approximately 9 V.

#### NOTE:

When voltage of battery power supply is approximately 9 V or more, combination switch reading function returns to normal operation.

### WITH INTELLIGENT KEY : DTC Inspection Priority Chart

INFOID:000000007970629

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	<ul style="list-style-type: none"> <li>U1000: CAN COMM CIRCUIT</li> <li>U1010: CONTROL UNIT (CAN)</li> </ul>



# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Priority	DTC	A
3	<ul style="list-style-type: none"> <li>• B2192: ID DISCORD BCM-ECM</li> <li>• B2193: CHAIN OF BCM-ECM</li> <li>• B2195: ANTI-SCANNING</li> <li>• B2196: DONGLE NG</li> <li>• B2198: NATS ANTENNA AMP</li> </ul>	B
4	<ul style="list-style-type: none"> <li>• B2555: STOP LAMP</li> <li>• B2556: PUSH-BTN IGN SW</li> <li>• B2557: VEHICLE SPEED</li> <li>• B2601: SHIFT POSITION</li> <li>• B2602: SHIFT POSITION</li> <li>• B2603: SHIFT POSI STATUS</li> <li>• B2604: PNP/CLUTCH SW</li> <li>• B2605: PNP/CLUTCH SW</li> <li>• B2608: STARTER RELAY</li> <li>• B260F: ENG STATE SIG LOST</li> <li>• B2614: BCM</li> <li>• B2615: BCM</li> <li>• B2616: BCM</li> <li>• B2618: BCM</li> <li>• B261A: PUSH-BTN IGN SW</li> <li>• B26F1: IGN RELAY OFF</li> <li>• B26F2: IGN RELAY ON</li> <li>• B26F3: START CONT RLY ON</li> <li>• B26F4: START CONT RLY OFF</li> <li>• B26F6: BCM</li> <li>• B26F7: BCM</li> <li>• B26F8: BCM</li> <li>• B26FC: KEY REGISTRATION</li> <li>• C1729: VHCL SPEED SIG ERR</li> <li>• U0415: VEHICLE SPEED</li> </ul>	I
5	<ul style="list-style-type: none"> <li>• C1704: LOW PRESSURE FL</li> <li>• C1705: LOW PRESSURE FR</li> <li>• C1706: LOW PRESSURE RR</li> <li>• C1707: LOW PRESSURE RL</li> <li>• C1708: [NO DATA] FL</li> <li>• C1709: [NO DATA] FR</li> <li>• C1710: [NO DATA] RR</li> <li>• C1711: [NO DATA] RL</li> <li>• C1716: [PRESSDATA ERR] FL</li> <li>• C1717: [PRESSDATA ERR] FR</li> <li>• C1718: [PRESSDATA ERR] RR</li> <li>• C1719: [PRESSDATA ERR] RL</li> </ul>	J
6	<ul style="list-style-type: none"> <li>• B2621: INSIDE ANTENNA</li> <li>• B2622: INSIDE ANTENNA</li> </ul>	M
7	<ul style="list-style-type: none"> <li>• B2626: OUTSIDE ANTENNA</li> <li>• B2627: OUTSIDE ANTENNA</li> <li>• B2628: OUTSIDE ANTENNA</li> </ul>	N

WCS

### WITH INTELLIGENT KEY : DTC Index

INFOID:000000007970630

**NOTE:**

The details of time display are as follows.

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

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to [BCS-20. "COMMON ITEM : CONSULT Function \(BCM - COMMON ITEM\)".](#)

## BCM (BODY CONTROL MODULE)

### < 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
No DTC is detected. further testing may be required.	—	—	—	—	—
U1000: CAN COMM	—	—	—	—	<a href="#">BCS-40</a>
U1010: CONTROL UNIT (CAN)	—	—	—	—	<a href="#">BCS-41</a>
U0415: VEHICLE SPEED	—	—	×	—	<a href="#">BCS-42</a>
B2192: ID DISCORD BCM-ECM	×	—	—	—	<a href="#">SEC-38</a>
B2193: CHAIN OF BCM-ECM	×	—	—	—	<a href="#">SEC-40</a>
B2195: ANTI-SCANNING	×	—	—	—	<a href="#">SEC-41</a>
B2196: DONGLE NG	×	—	—	—	<a href="#">SEC-42</a>
B2198: NATS ANTENNA AMP	×	—	—	—	<a href="#">SEC-44</a>
B2555: STOP LAMP	—	×	×	—	<a href="#">SEC-48</a>
B2556: PUSH-BTN IGN SW	—	×	×	—	<a href="#">SEC-50</a>
B2557: VEHICLE SPEED	—	×	×	—	<a href="#">SEC-52</a>
B2562: LOW VOLTAGE	—	×	—	—	<a href="#">BCS-43</a>
B2601: SHIFT POSITION	—	×	×	—	<a href="#">SEC-53</a>
B2602: SHIFT POSITION	—	×	×	—	<a href="#">SEC-56</a>
B2603: SHIFT POSI STATUS	—	×	×	—	<a href="#">SEC-59</a>
B2604: PNP/CLUTCH SW	—	×	×	—	<a href="#">SEC-64</a>
B2605: PNP/CLUTCH SW	—	×	×	—	<a href="#">SEC-67</a>
B2608: STARTER RELAY	×	×	×	—	<a href="#">SEC-69</a>
B260F: ENG STATE SIG LOST	×	×	×	—	<a href="#">SEC-71</a>
B2614: BCM	—	×	×	—	<a href="#">PCS-75</a>
B2615: BCM	—	×	×	—	<a href="#">PCS-78</a>
B2616: BCM	—	×	×	—	<a href="#">PCS-81</a>
B2618: BCM	—	×	×	—	<a href="#">PCS-84</a>
B261A: PUSH-BTN IGN SW	—	×	×	—	<a href="#">PCS-85</a>
B2621: INSIDE ANTENNA	—	×	—	—	<a href="#">DLK-44</a>
B2622: INSIDE ANTENNA	—	×	—	—	<a href="#">DLK-46</a>
B2626: OUTSIDE ANTENNA	—	×	—	—	<a href="#">DLK-50</a>
B2627: OUTSIDE ANTENNA	—	×	—	—	<a href="#">DLK-48</a>
B2628: OUTSIDE ANTENNA	—	×	—	—	<a href="#">DLK-52</a>
B26F1: IGN RELAY OFF	×	×	×	—	<a href="#">PCS-87</a>
B26F2: IGN RELAY ON	×	×	×	—	<a href="#">PCS-89</a>
B26F3: START CONT RLY ON	×	×	×	—	<a href="#">SEC-72</a>
B26F4: START CONT RLY OFF	×	×	×	—	<a href="#">SEC-73</a>
B26F6: BCM	—	×	×	—	<a href="#">PCS-91</a>
B26F7: BCM	×	×	×	—	<a href="#">SEC-75</a>
B26F8: BCM	—	×	×	—	<a href="#">SEC-76</a>
B26FC: KEY REGISTRATION	—	×	×	—	<a href="#">SEC-77</a>

# BCM (BODY CONTROL MODULE)

## < 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
C1704: LOW PRESSURE FL	—	—	—	×	<a href="#">WT-22</a>
C1705: LOW PRESSURE FR	—	—	—	×	
C1706: LOW PRESSURE RR	—	—	—	×	
C1707: LOW PRESSURE RL	—	—	—	×	
C1708: [NO DATA] FL	—	—	—	×	<a href="#">WT-24</a>
C1709: [NO DATA] FR	—	—	—	×	
C1710: [NO DATA] RR	—	—	—	×	
C1711: [NO DATA] RL	—	—	—	×	
C1716: [PRESSDATA ERR] FL	—	—	—	×	<a href="#">WT-27</a>
C1717: [PRESSDATA ERR] FR	—	—	—	×	
C1718: [PRESSDATA ERR] RR	—	—	—	×	
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	<a href="#">WT-29</a>

### WITHOUT INTELLIGENT KEY

### WITHOUT INTELLIGENT KEY : Reference Value

INFOID:0000000007970634

### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the unlock side	On
DOOR SW-DR	Driver's door closed	Off
	Driver's door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
BACK DOOR SW	Back door closed	Off
	Back door opened	On
LOCK STATUS	<b>NOTE:</b> The item is indicated, but not monitored.	Off
ACC ON SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
KEYLESS LOCK	"LOCK" button of key fob is not pressed	Off
	"LOCK" button of key fob is pressed	On
KEYLESS UNLOCK	"UNLOCK" button of key fob is not pressed	Off
	"UNLOCK" button of key fob is pressed	On
SHOCK SENSOR	<b>NOTE:</b> The item is indicated, but not monitored.	NORMAL
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off
	Driver door key cylinder LOCK position	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off
	Driver door key cylinder UNLOCK position	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
REVERSE SW CAN	<b>NOTE:</b> The item is indicated, but not used.	Off
		On
TAIL LAMP SW	Lighting switch OFF	Off
	Lighting switch 1ST	On
FR FOG SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) OFF]	Off
	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) ON]	On
TRNK/HAT MNTR	<b>NOTE:</b> The item is indicated, but not monitored.	Off
ACC SW	Ignition switch OFF	Off
	Ignition switch ACC or ON	On
KYLS TRNK/HAT	<b>NOTE:</b> The item is indicated, but not monitored.	Off
KEYLESS PANIC	PANIC button of key fob is not pressed	Off
	PANIC button of key fob is pressed	On
HI BEAM SW	Lighting switch OFF	Off
	Lighting switch HI	On
HEAD LAMP SW 1	Lighting switch OFF	Off
	Lighting switch 2ND	On
HEAD LAMP SW 2	Lighting switch OFF	Off
	Lighting switch 2ND	On
AUTO LIGHT SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
RR FOG SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
TURN SIGNAL R	Turn signal switch OFF	Off
	Turn signal switch RH	On
TURN SIGNAL L	Turn signal switch OFF	Off
	Turn signal switch LH	On

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status	
PKB SW	Parking brake switch is OFF	Off	A
	Parking brake switch is ON	On	
ENGINE RUN	Engine stopped	Off	B
	Engine running	On	
OPTI SEN (DTCT)	<b>NOTE:</b> The item is indicated, but not monitored.	Close to 5 V	C
OPTI SEN (FILT)	<b>NOTE:</b> The item is indicated, but not monitored.	Close to 5 V	
LIG SEN COND	<b>NOTE:</b> The item is indicated, but not monitored.	OFF	D
IGN SW CAN	Ignition switch OFF or ACC	Off	
	Ignition switch ON	On	E
FR WIPER HI	Front wiper switch OFF	Off	
	Front wiper switch HI	On	F
FR WIPER LOW	Front wiper switch OFF	Off	
	Front wiper switch LO	On	
FR WIPER INT	Front wiper switch OFF	Off	G
	Front wiper switch INT	On	
FR WASHER SW	Front washer switch OFF	Off	
	Front washer switch ON	On	H
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7	
FR WIPER STOP	Any position other than front wiper stop position	Off	I
	Front wiper stop position	On	
RR WIPER ON	Rear wiper switch OFF	Off	
	Rear wiper switch ON	On	J
RR WIPER INT	Rear wiper switch OFF	Off	
	Rear wiper switch INT	On	K
RR WASHER SW	Rear washer switch OFF	Off	
	Rear washer switch ON	On	
RR WIPER STOP	Rear wiper stop position	Off	L
	Other than rear wiper stop position	On	
RAIN SENSOR	<b>NOTE:</b> The item is indicated, but not monitored.	Off	M
HAZARD SW	Hazard switch OFF	Off	
	Hazard switch ON	On	WCS
FAN ON SIG	Blower control dial OFF	Off	
	Other than blower control dial OFF	On	
AIR COND SW	A/C switch OFF	Off	O
	A/C switch ON	On	
THERMO AMP	Ignition switch ON	Off	P
	Evaporator is extremely low temperature	On	
FR DEF SW	Other than A/C mode defroster ON position	Off	
	A/C mode defroster ON position	On	
KEYLESS TRUNK	<b>NOTE:</b> The item is indicated, but not monitored.	Off	

## BCM (BODY CONTROL MODULE)

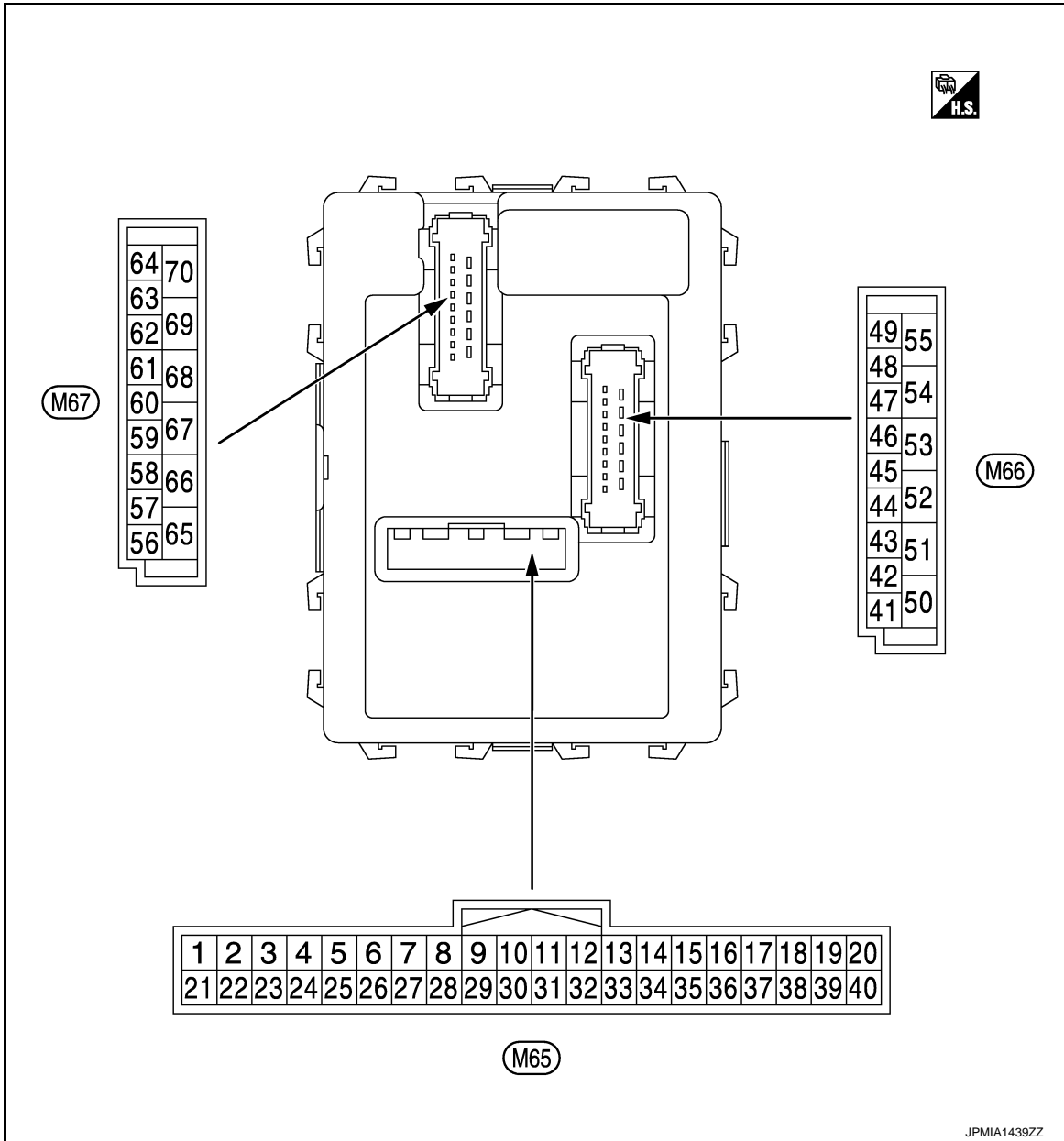
### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
TRNK OPNR SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
TRNK OPN MNTR	<b>NOTE:</b> The item is indicated, but not monitored.	Off
HOOD SW	Close the hood	Off
	Open the hood	On
TRANSPONDER	Other than the ignition switch is ON by key registered to BCM.	Off
	The ignition switch is ON by key registered to BCM.	On
INTELLI KEY	<b>NOTE:</b> The item is indicated, but not used.	Off
AUTO RELOCK	<b>NOTE:</b> The item is indicated, but not monitored.	Off
OIL PRESS SW	<ul style="list-style-type: none"> <li>• Ignition switch OFF or ACC</li> <li>• Engine running</li> </ul>	Off
	Ignition switch ON	On
BRAKE SW	Brake pedal is not depressed	Off
	Brake pedal is depressed	On

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

## TERMINAL LAYOUT



**NOTE:**

- M65, M66: White
- M67: Black

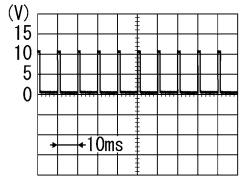
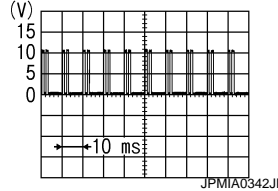
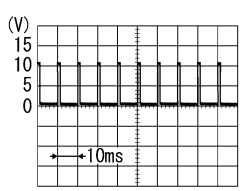
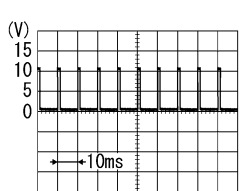
PHYSICAL VALUES

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)		
		Signal name	Input/ Output				
+	-						
2 (BR/W)	Ground	Combination switch INPUT 5	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V	
					Turn signal switch RH		
					Lighting switch HI		
					Lighting switch 1ST		1.0 V
					Lighting switch 2ND		2.0 V
3 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V	
					Turn signal switch LH		
					Lighting switch PASS		
					Lighting switch 2ND		1.0 V
4 (L/Y)	Ground	Combination switch INPUT 3	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V	
					Front wiper switch LO		
					Front wiper switch MIST		
					Front wiper switch INT		1.0 V



# BCM (BODY CONTROL MODULE)

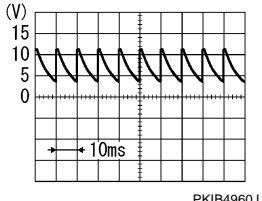
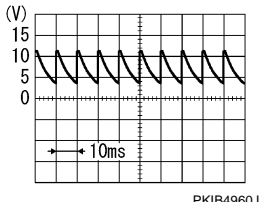
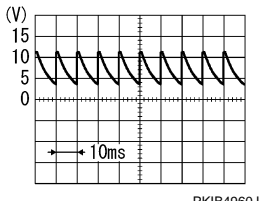
## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)		
+	-	Signal name	Input/ Output				
5 (G)	Ground	Combination switch INPUT 2	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V	A
					Front washer switch (Wiper intermittent dial 4)		B
					Rear washer switch ON (Wiper intermittent dial 4)		C
					Any of the condition below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>		1.0 V
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Rear wiper switch ON (Wiper intermittent dial 4)		E
					0.8 V	F	
					All switch OFF (Wiper intermittent dial 4)	0 V	G
					Front wiper switch HI (Wiper intermittent dial 4)		H
Rear wiper switch INT (Wiper intermittent dial 4)	I						
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Wiper intermittent dial 3 (All switch OFF)		J
					1.0 V	K	
					Any of the condition below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> </ul>		L
					1.9 V	M	
6 (L/R)	Ground	Combination switch INPUT 1	Input	Combination switch	Any of the condition below with all switch OFF <ul style="list-style-type: none"> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>		O
					0.8 V	P	

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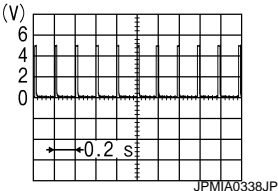
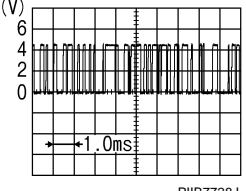
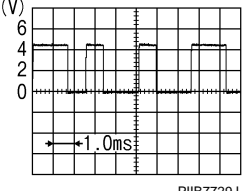
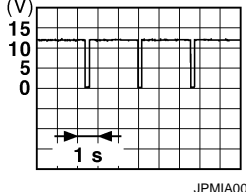
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
7 (W/R)	Ground	Door key cylinder switch UNLOCK	Input	Door key cylin- der switch	NEUTRAL position	 7.0 - 8.0 V
					UNLOCK position	0 V
8 (W/B)	Ground	Door key cylinder switch LOCK	Input	Door key cylin- der switch	NEUTRAL position	12 V
					LOCK position	0 V
9 (R)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
					ON (Brake pedal is de- pressed)	Battery voltage
10 (W/L)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	OFF (Not pressed)	12 V
					ON (Pressed)	0 V
11 (L/Y)	Ground	Ignition switch ACC	Input	Ignition switch OFF	0 V	
				Ignition switch ACC or ON	Battery voltage	
12 (SB)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 7.0 - 8.0 V
					ON (When passenger door opened)	0 V
13 (GR/L)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closed)	 7.0 - 8.0 V
					ON (When rear RH door opened)	0 V
18 (V)	Ground	Receiver ground	Input	Ignition switch ON	0 V	

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

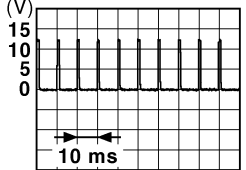
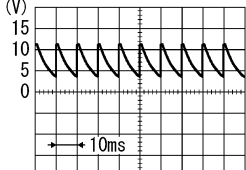
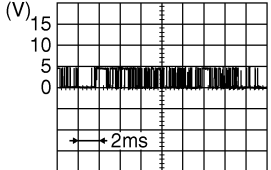
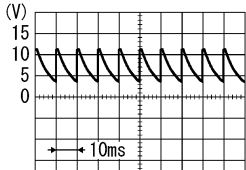
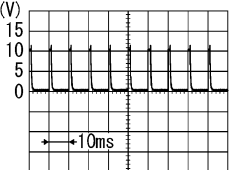
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
19 (BR)	Ground	Remote keyless entry receiver power supply	Input	Insert mechanical key into ignition key cylinder	0 V
				Remove mechanical key from ignition key cylinder (Any door opened)	5 V
				Remove mechanical key from ignition key cylinder (Any door closed)	 <p style="text-align: right; font-size: small;">JPMA0338JP</p>
20 (G/Y)	Ground	Remote keyless entry receiver communication	Input	Insert mechanical key into ignition key cylinder	0 V
				Waiting	 <p style="text-align: right; font-size: small;">PIIB7728J</p>
				Signal receiving	 <p style="text-align: right; font-size: small;">PIIB7729J</p>
21 (P/L)	Ground	NATS antenna amp.	Input/ Output	Just after inserting ignition key in key cylinder	Pointer of tester should move
				Other than above	0 V
23 (R/Y)	Ground	Security indicator	Input	ON	0 V
				Blinking (Ignition switch OFF)	 <p style="text-align: right; font-size: small;">JPMA0014GB</p>
				OFF	12 V
24* (GR/B)	Ground	Dongle link	Input/ Output	Ignition switch OFF	5 V
25 (LG)	Ground	NATS antenna amp.	Input/ Output	Just after inserting ignition key in key cylinder	Pointer of tester should move
				Other than above	0 V
26 (GR)	Ground	Thermo control amp.	Input	Ignition switch ON	0 V
				Evaporator is extremely low temperature	12 V

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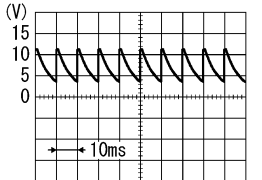
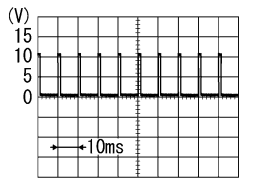
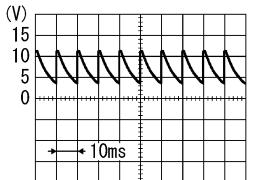
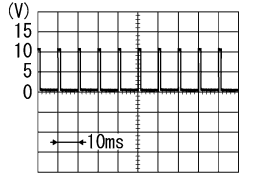
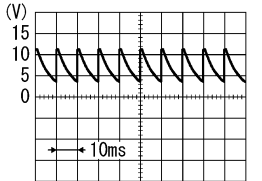
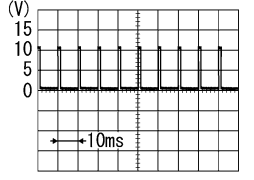
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
27 (Y/G)	Ground	A/C switch	Input	A/C switch	OFF	 <small>JPMIA0012GB</small> 1.0 - 1.5 V
				A/C switch	ON	0 V
28 (G/W)	Ground	Blower fan switch	Input	Fan switch	Blower fan switch OFF	 <small>PKIB4960J</small> 7.0 - 8.0 V
				Fan switch	Blower fan switch ON	0 V
29 (L/W)	Ground	Hazard switch	Input	Hazard switch	OFF	Battery voltage
				Hazard switch	ON	0 V
31 (G/Y)	Ground	Front defroster switch	Input	Ignition switch	ON	0 V
				Ignition switch	Other than A/C mode defroster ON position	 <small>JPMIA0589GB</small> 8.0 - 9.0 V
32 (LG)	Ground	Combination switch OUTPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <small>PKIB4960J</small> 7.0 - 8.0 V
				Combination switch	Rear wiper switch ON (Wiper intermittent dial 4)	 <small>PKIB4956J</small> 1.0 V
				Combination switch	Any of the condition below with all switch OFF	<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
33 (Y/L)	Ground	Combination switch OUTPUT 4	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4960J</p>
					Lighting switch 1ST (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4958J</p>
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF	
				<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>	7.0 - 8.0 V	
34 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4960J</p>
					Lighting switch 2ND (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">PKIB4958J</p>
					Lighting switch HI (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
				<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 3</li> </ul>	7.0 - 8.0 V	
35 (R/L)	Ground	Combination switch OUTPUT 2	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 <p style="text-align: right; font-size: small;">PKIB4960J</p>
					Lighting switch 2ND	 <p style="text-align: right; font-size: small;">PKIB4958J</p>
					Lighting switch PASS	
					Front wiper switch INT	
				Front wiper switch HI	7.0 - 8.0 V	

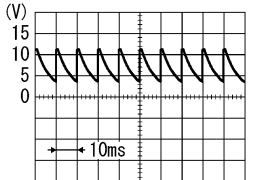
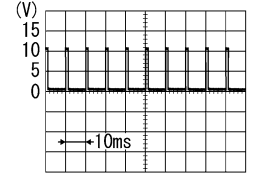
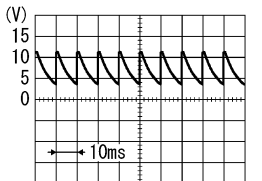
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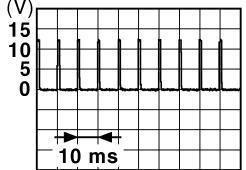
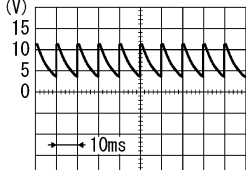
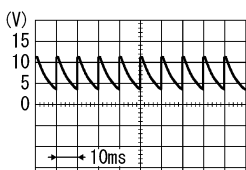
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
36 (L/O)	Ground	Combination switch OUTPUT 1	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 7.0 - 8.0 V
					Turn signal switch RH	 1.2 V
					Turn signal switch LH	
					Front wiper switch LO (Front wiper switch MIST)	
Front washer switch ON						
37 (R/W)	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder	Battery voltage	
				Remove mechanical key from ignition key cylinder	0 V	
38 (O)	Ground	Ignition switch ON	Input	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	Battery voltage	
39 (L)	Ground	CAN-H	Input/ Output	—	—	
40 (P)	Ground	CAN-L	Input/ Output	—	—	
43 (W)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)  ON (When back door opened)	 7.0 - 8.0 V  0 V
				Rear wiper stop position	Ignition switch ON	12 V
44 (LG)	Ground	Rear wiper stop po- sition	Input	Any position other than rear wiper stop position	0 V	
				Door lock and unlock switch LOCK	Input	Door lock and unlock switch
45 (GR)	Ground	Door lock and unlock switch LOCK	Input	NEUTRAL position	1.0 - 1.5 V	
				LOCK position	0 V	

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

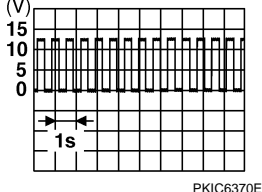
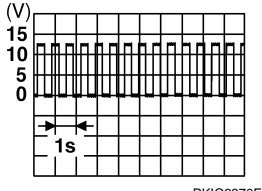
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
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46 (BR)	Ground	Door lock and unlock switch UNLOCK	Input	Door lock and unlock switch	NEUTRAL position	 1.0 - 1.5 V
				Door lock and unlock switch	UNLOCK position	0 V
47 (BR/Y)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 7.0 - 8.0 V
				Driver door switch	ON (When driver door opened)	0 V
48 (W/G)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closed)	 7.0 - 8.0 V
				Rear LH door switch	ON (When rear LH door opened)	0 V
50 (SB)	Ground	A/C indicator	Output	A/C indicator	OFF	12 V
					ON	0 V
54 (LG)	Ground	Rear wiper	Output	Ignition switch	Rear wiper switch OFF	0 V
				ON	Rear wiper switch ON	12 V
56 (L)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		12 V
57 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
59 (L/B)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	12 V
				Driver door	Other than UNLOCK (Actuator is not activated)	0 V

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
60 (W/B)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF 0 V
				Turn signal switch LH	 6.0 V
61 (W/L)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF 0 V
				Turn signal switch RH	 6.0 V
63 (BR)	Ground	Interior room lamp control signal	Output	Interior room lamp	OFF 12 V
				ON	0 V
65 (V)	Ground	All doors LOCK	Output	All doors	LOCK (Actuator is activat- ed) 12 V
				Other then LOCK (Actua- tor is not activated)	0 V
66 (G)	Ground	Passenger door and rear door UNLOCK	Output	Passenger door and rear door	UNLOCK (Actuator is acti- vated) 12 V
				Other then UNLOCK (Ac- tuator is not activated)	0 V
67 (B)	Ground	Ground	Output	Ignition switch ON	0 V
68 (L)	Ground	P/W power supply (IGN)	Output	Ignition switch ON	12 V
69 (P)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF	12 V
70 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF	Battery voltage

\*: For Canada




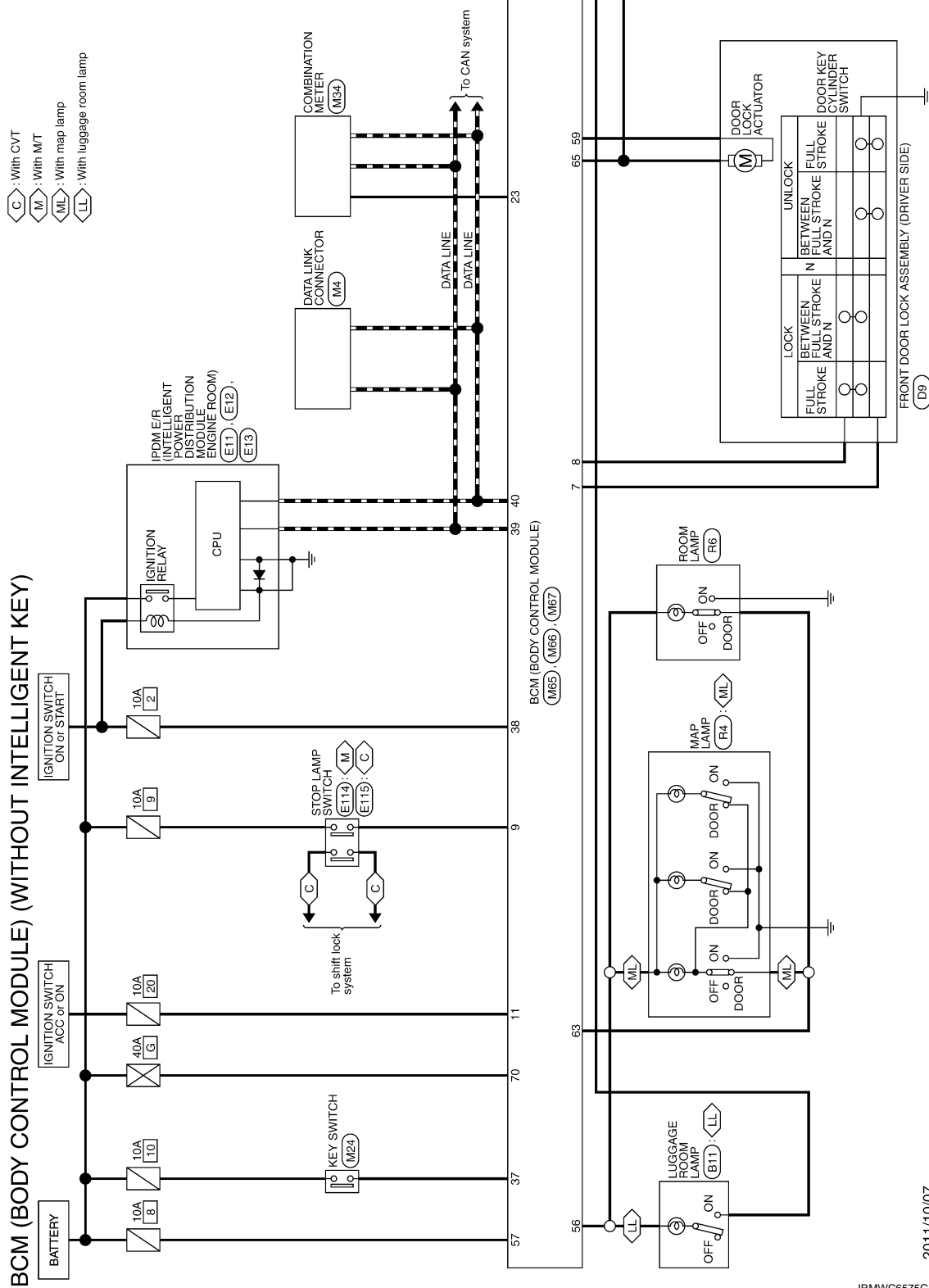
# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

## WITHOUT INTELLIGENT KEY : Wiring Diagram - BCM -

INFOID:000000007970635

For connector terminal arrangements, harness layouts, and alphabets in a  (option abbreviation; if not described in wiring diagram), refer to [GI-12, "Connector Information"](#).



2011/10/07

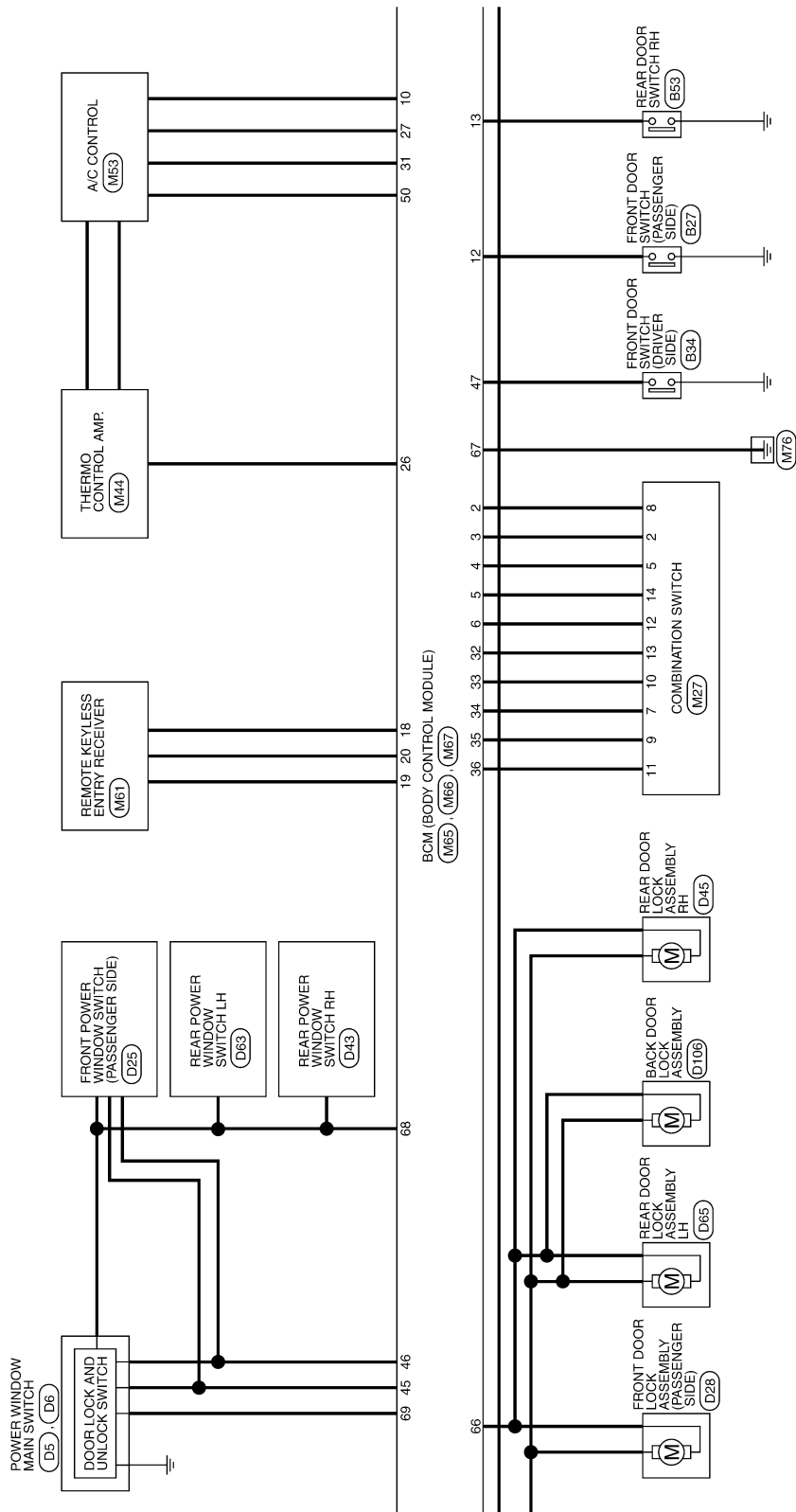
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# BCM (BODY CONTROL MODULE)

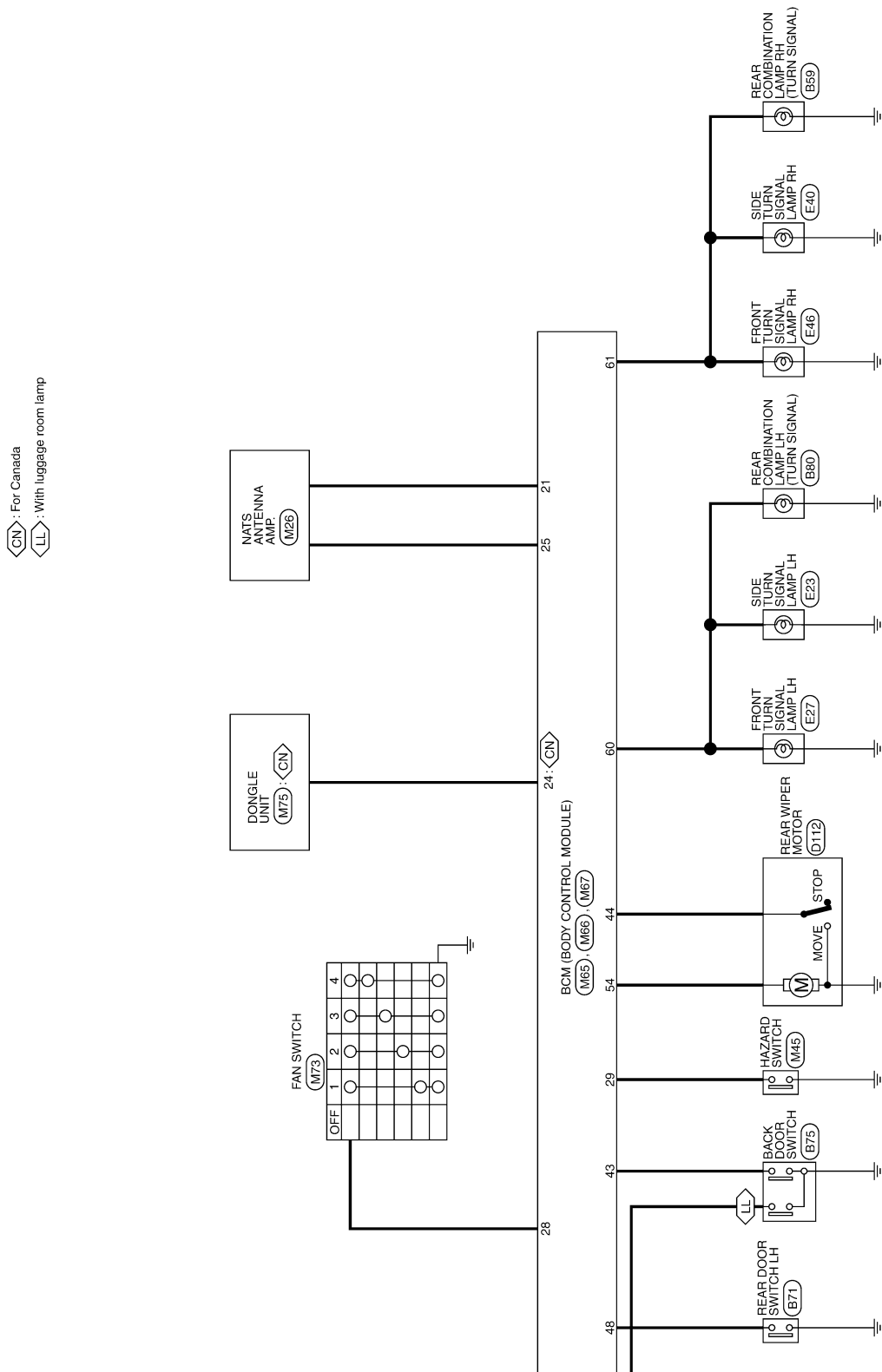
< ECU DIAGNOSIS INFORMATION >



JRMWC6576GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >



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WITHOUT INTELLIGENT KEY : Fail-safe

FAIL-SAFE CONTROL BY DTC

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

JRMWC6577GB

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch ON → OFF
B2196: DONGLE NG	Inhibit engine cranking	Erase DTC

### REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation

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

### WITHOUT INTELLIGENT KEY : DTC Inspection Priority Chart

INFOID:000000007970637

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

Priority	DTC
1	<ul style="list-style-type: none"> <li>• U1000: CAN COMM</li> <li>• U1010: CONTROL UNIT (CAN)</li> </ul>
2	<ul style="list-style-type: none"> <li>• B2190: NATS ANTENNA AMP</li> <li>• B2191: DIFFERENCE OF KEY</li> <li>• B2192: ID DISCORD BCM-ECM</li> <li>• B2193: CHAIN OF BCM-ECM</li> <li>• B2195: ANTI SCANNING</li> <li>• B2196: DONGLE NG</li> </ul>
3	C1735: IGN CIRCUIT OPEN
4	<ul style="list-style-type: none"> <li>• C1704: LOW PRESSURE FL</li> <li>• C1705: LOW PRESSURE FR</li> <li>• C1706: LOW PRESSURE RR</li> <li>• C1707: LOW PRESSURE RL</li> <li>• C1708: [NO DATA] FL</li> <li>• C1709: [NO DATA] FR</li> <li>• C1710: [NO DATA] RR</li> <li>• C1711: [NO DATA] RL</li> <li>• C1716: [PRESSDATA ERR] FL</li> <li>• C1717: [PRESSDATA ERR] FR</li> <li>• C1718: [PRESSDATA ERR] RR</li> <li>• C1719: [PRESSDATA ERR] RL</li> <li>• C1729: VHCL SPEED SIG ERR</li> </ul>

### WITHOUT INTELLIGENT KEY : DTC Index

INFOID:000000007970638

#### NOTE:

Details of time display

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

## BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Tire pressure monitor warn- ing lamp ON	Reference
U1000: CAN COMM	—	—	<a href="#">BCS-113</a>
U1010: CONTROL UNIT (CAN)	—	—	<a href="#">BCS-114</a>
B2190: NATS ANTENNA AMP	×	—	<a href="#">SEC-173</a>
B2191: DIFFERENCE OF KEY	×	—	<a href="#">SEC-176</a>
B2192: ID DISCORD BCM-ECM	×	—	<a href="#">SEC-177</a>
B2193: CHAIN OF BCM-ECM	×	—	<a href="#">SEC-178</a>
B2195: ANTI SCANNING	×	—	<a href="#">SEC-179</a>
B2196: DONGLE NG	×	—	<a href="#">SEC-180</a>
C1704: LOW PRESSURE FL	—	×	<a href="#">WT-22</a>
C1705: LOW PRESSURE FR	—	×	
C1706: LOW PRESSURE RR	—	×	
C1707: LOW PRESSURE RL	—	×	<a href="#">WT-24</a>
C1708: [NO DATA] FL	—	×	
C1709: [NO DATA] FR	—	×	
C1710: [NO DATA] RR	—	×	
C1711: [NO DATA] RL	—	×	<a href="#">WT-27</a>
C1716: [PRESS DATA ERR] FL	—	×	
C1717: [PRESS DATA ERR] FR	—	×	
C1718: [PRESS DATA ERR] RR	—	×	
C1719: [PRESS DATA ERR] RL	—	×	<a href="#">WT-29</a>
C1729: VHCL SPEED SIG ERR	—	×	
C1735: IGN CIRCUIT OPEN	—	—	<a href="#">BCS-115</a>

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# THE PARKING BRAKE RELEASE WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### THE PARKING BRAKE RELEASE WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

#### Description

INFOID:000000007773254

- The parking brake warning buzzer sounds continuously during vehicle travel though the parking brake is released.
- The parking brake warning buzzer does not sound at all even though driving the vehicle with the parking brake applied.

#### Diagnosis Procedure

INFOID:000000007773255

#### 1. CHECK PARKING BRAKE WARNING LAMP

1. Start the engine.
2. Check the operation of the brake warning lamp by operating the parking brake.

When parking brake is applied : ON

When parking brake is released : OFF

#### Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-90, "Removal and Installation"](#)  
NO >> GO TO 2.

#### 2. CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

Perform check for the parking brake switch signal circuit. Refer to [BRC-79, "Diagnosis Procedure"](#).

#### Is the inspection result normal?

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

#### 3. CHECK PARKING BRAKE SWITCH

Perform a unit check for the parking brake switch. Refer to [BRC-79, "Component Inspection"](#).

#### Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-90, "Removal and Installation"](#)  
NO >> Replace parking brake switch. Refer to [PB-4, "Exploded View"](#).

# THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## THE LIGHT REMINDER WARNING DOES NOT SOUND

### Description

INFOID:000000007773256

Light reminder warning chime does not sound even though headlamp is illuminated.

### Diagnosis Procedure

INFOID:000000007773257

#### 1. CHECK COMBINATION SWITCH (LIGHTING SWITCH) OPERATION

Check that the headlamps operate normally by operating the combination switch (lighting switch).

Do they operate normally?

YES >> GO TO 2.

NO >> Refer to [EXL-152, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#) (without daytime running light system) or [EXL-153, "WITH DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#) (with daytime running light system).

#### 2. CHECK DRIVER SIDE DOOR SWITCH SIGNAL CIRCUIT

Perform the check for the driver side door switch signal circuit. Refer to [DLK-55, "Diagnosis Procedure"](#) (with Intelligent Key system) or [DLK-222, "Diagnosis Procedure"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

#### 3. CHECK DRIVER SIDE DOOR SWITCH

Perform a unit check for the driver side door switch. Refer to [DLK-58, "Component Inspection"](#) (with Intelligent Key system) or [DLK-224, "Component Inspection"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-81, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-142, "Removal and Installation"](#) (without Intelligent Key system).

NO >> Replace driver side door switch. Refer to [DLK-200, "Removal and Installation"](#) (with Intelligent Key system) or [DLK-331, "Removal and Installation"](#) (without Intelligent Key system).

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# THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

### Description

INFOID:000000007773258

- Seat belt reminder warning does not sound.
- Seat belt reminder warning sounds continuously.

### Diagnosis Procedure

INFOID:000000007773259

#### 1. CHECK SEAT BELT WARNING LAMP

1. Turn ignition switch ON.
2. Check the operation of the seat belt warning lamp in the combination meter.

Seat belt (driver side) fastened : OFF

Seat belt (driver side) unfastened : ON

##### Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 4.

#### 2. CHECK BCM OUTPUT SIGNAL

Check if the seat belt reminder warning chime is activated by performing BCM active test. Refer to [WCS-18, "BUZZER : CONSULT Function \(BCM - BUZZER\)"](#).

##### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

#### 3. CHECK COMBINATION METER INPUT SIGNAL

Check if buzzer switches to proper condition (On/Off) on data monitor of combination meter. Refer to [MWI-30, "CONSULT Function \(METER/M&A\)"](#).

Buzzer active condition : On

Buzzer non-active condition : Off

##### Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-90, "Removal and Installation"](#).

NO >> Replace BCM. Refer to [BCS-81, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-142, "Removal and Installation"](#) (without Intelligent Key system).

#### 4. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) CIRCUIT

Perform the check for the seat belt buckle switch (driver side) circuit. Refer to [WCS-26, "Diagnosis Procedure"](#).

##### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair harness or connector.

#### 5. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

Perform a unit check for the seat belt buckle switch (driver side). Refer to [WCS-27, "Component Inspection"](#).

##### Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-90, "Removal and Installation"](#).

NO >> Replace seat belt buckle (driver side). Refer to [SB-8, "SEAT BELT BUCKLE : Removal and Installation"](#).



# THE KEY WARNING DOES NOT SOUND (WITHOUT INTELLIGENT KEY)

< SYMPTOM DIAGNOSIS >

## THE KEY WARNING DOES NOT SOUND (WITHOUT INTELLIGENT KEY)

### Description

INFOID:000000007773260

The key warning chime does not sound, when all of the following conditions are fulfilled.

- Key inserted into the key cylinder (key switch signal ON).
- Ignition switch is in ACC or OFF (ignition switch signal OFF).
- Driver side door is open (driver side door switch ON)

### Diagnosis Procedure

INFOID:000000007773261

#### 1. CHECK BCM INPUT SIGNAL

1. Connect CONSULT.
2. Select the "Data Monitor" of "BCM (BUZZER)" and check the "KEY ON SW" monitor value. Refer to [WCS-20. "BUZZER : CONSULT Function \(BCM - BUZZER\)".](#)

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-142. "Removal and Installation".](#)  
NO >> GO TO 2.

#### 2. CHECK KEY SWITCH SIGNAL CIRCUIT

Check the key switch signal circuit. Refer to [DLK-240. "Diagnosis Procedure".](#)

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-142. "Removal and Installation".](#)  
NO >> Check applicable parts, and repair or replace corresponding parts.

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# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000007773262

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

#### **WARNING:**

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.