

# SECTION **WCS**

## WARNING CHIME SYSTEM

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

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

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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.

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# COMPONENT PARTS

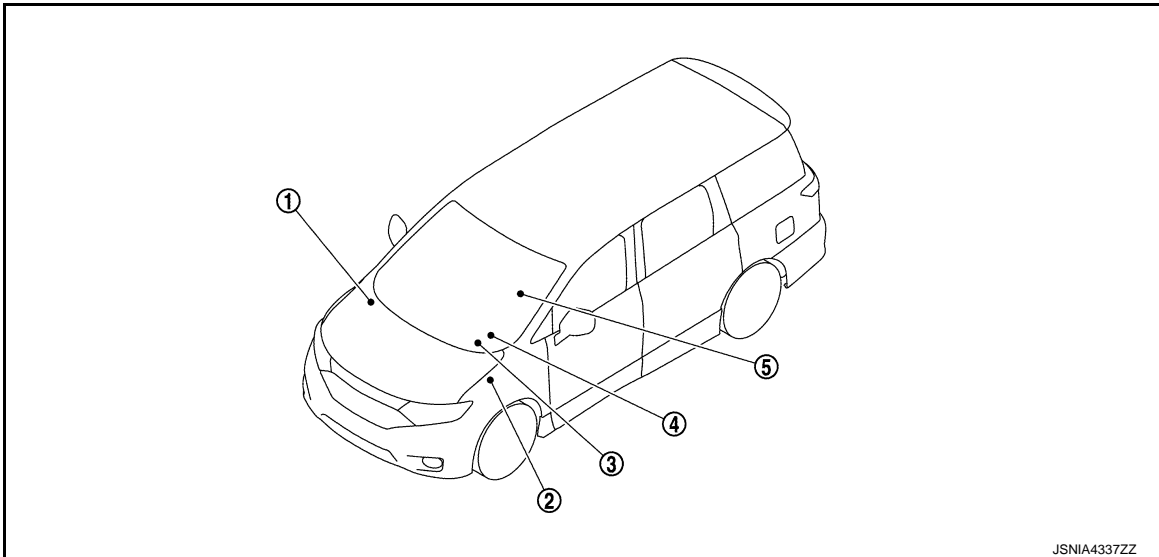
< SYSTEM DESCRIPTION >

## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

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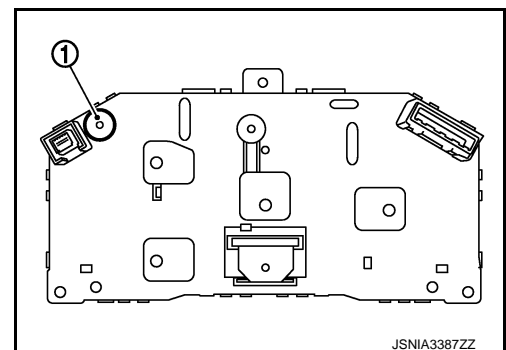
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	Component	Function
1.	ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication. Refer to <a href="#">BRC-8, "Component Parts Location"</a> for detailed installation location.
2.	Parking brake switch	Transmits the parking brake switch signal to the combination meter.
3.	BCM	Based on the signals received from various units and switches, transmits the buzzer output signal to the combination meter via CAN communication. Refer to <a href="#">BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.
4.	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> </ul>
5.	Seat belt buckle switch (driver side)	Transmits the seat belt buckle switch signal (driver side) to the combination meter.

#### Combination Meter

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The buzzer (1) for the warning chime system is integrated in the combination meter.



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# SYSTEM

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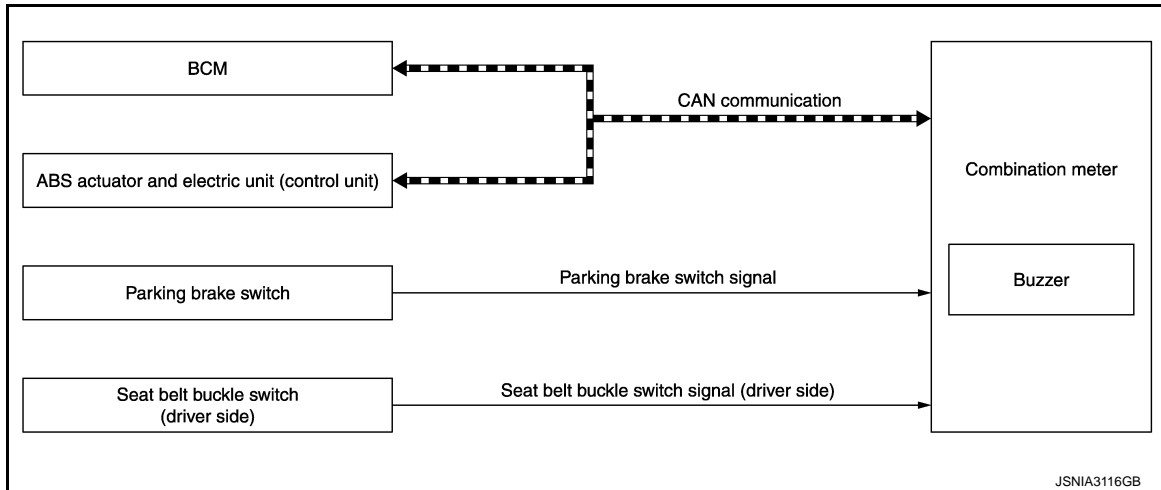
## SYSTEM

### WARNING CHIME SYSTEM

#### WARNING CHIME SYSTEM : System Description

INFOID:000000007495728

#### SYSTEM DIAGRAM



#### COMBINATION METER INPUT/OUTPUT SIGNAL (CAN COMMUNICATION SIGNAL)

Input signal

Signal name	Transmit unit
Vehicle speed signal	ABS actuator and electric unit (control unit)
Buzzer output signal	BCM

Output signal

Signal name	Reception unit
Vehicle speed signal	BCM

#### BCM INPUT/OUTPUT SIGNAL (CAN COMMUNICATION SIGNAL)

Input signal

Signal name	Transmit unit
Vehicle speed signal	Combination meter

Output signal

Signal name	Reception unit
Buzzer output signal	Combination meter

#### 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.

#### WARNING CHIME FUNCTION LIST

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# SYSTEM

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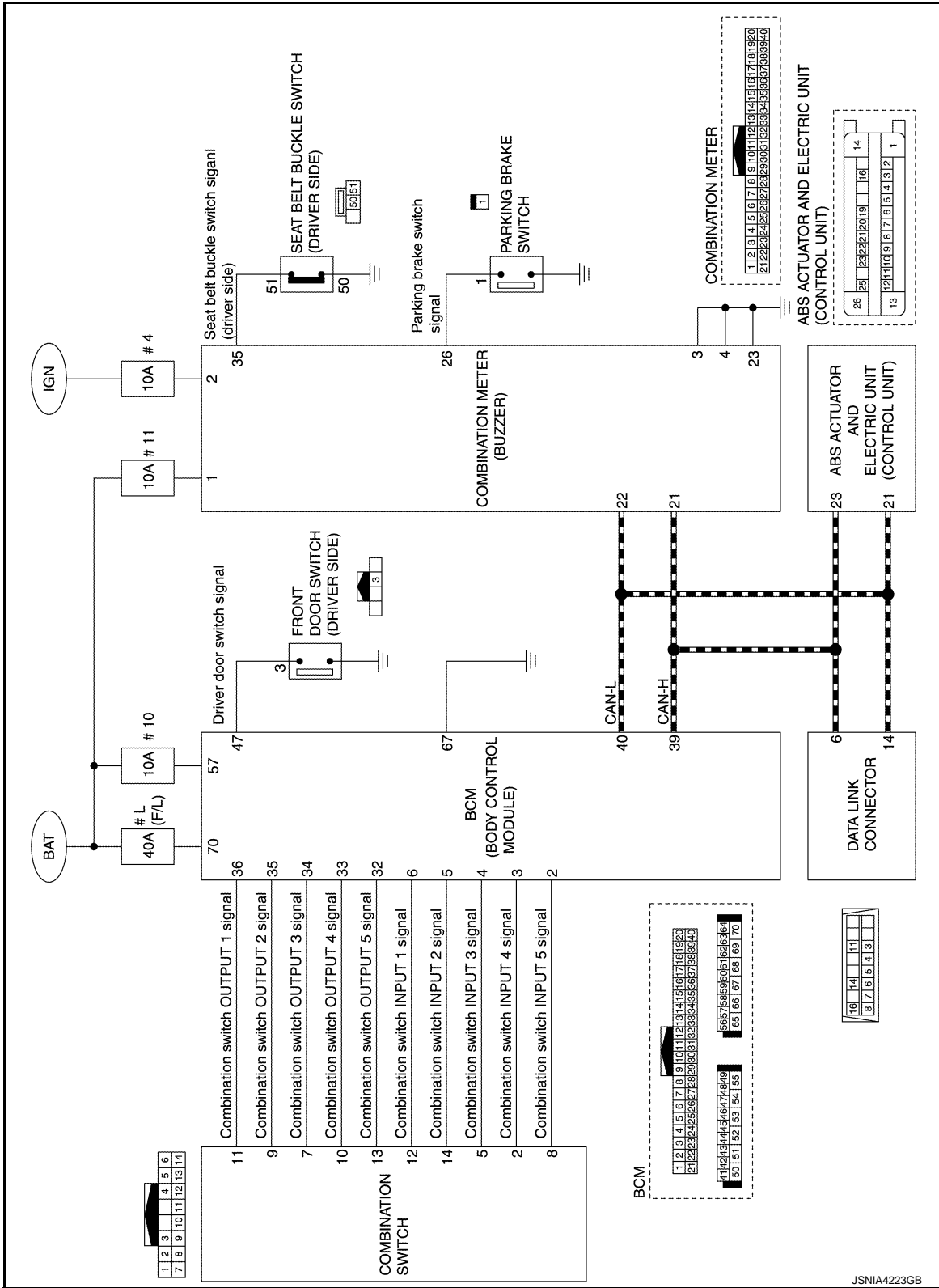
Warning functions	Out line	Warning judgment unit	Refer to
Light reminder warning chime	The warning chime sounds when the ignition switch is in OFF or ACC position with the combination switch (lighting switch) in the 1st or 2nd position and the driver side door open.	BCM	<a href="#">WCS-8. "LIGHT RE-MINDER WARNING CHIME : System Description"</a>
Front fog light reminder warning chime	The warning chime sounds when the ignition switch is turned to LOCK, OFF or ACC position from ON position, with combination switch (lighting switch) is in AUTO position and the front fog lamp switch in ON position.	BCM	<a href="#">WCS-9. "FRONT FOG LIGHT RE-MINDER WARNING CHIME : System Description"</a>
Seat belt warning chime	The warning chime sounds when the driver seat belt is unfastened with the ignition switch in ON position.	BCM	<a href="#">WCS-10. "SEAT BELT WARNING CHIME : System Description"</a>
Parking brake release warning chime	The warning chime sounds when the ignition switch is in ON position with the parking brake in operation and the vehicle speed 7 km/h (4.3 MPH) or more.	Combination meter	<a href="#">WCS-11. "PARKING BRAKE RELEASE WARNING CHIME : System Description"</a>

# SYSTEM

< SYSTEM DESCRIPTION >

## WARNING CHIME SYSTEM : Circuit Diagram

INFOID:000000007495729



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## WARNING CHIME SYSTEM : Fail-Safe

INFOID:000000007495730

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

Function	Specifications
Buzzer	The buzzer turns OFF by suspending communication.

# SYSTEM

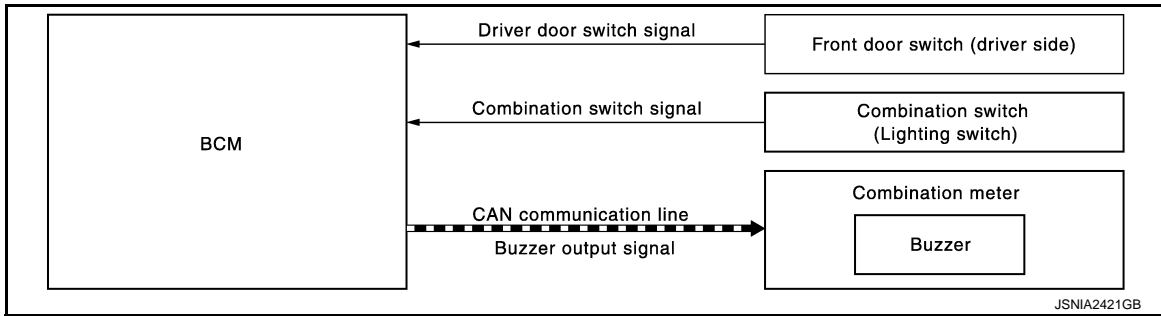
< SYSTEM DESCRIPTION >

## LIGHT REMINDER WARNING CHIME

### LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000007495731

#### SYSTEM DIAGRAM



#### WARNING CHIME OPERATION CONDITIONS

If all of the following conditions are fulfilled.

Operation conditions	
Ignition switch	OFF or ACC position
Combination switch (Lighting switch)	1st or 2nd position
Driver side door	Open [front door switch (driver side) ON]

#### WARNING CHIME CANCEL CONDITIONS

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

Operation conditions	
Ignition switch	ON
Combination switch (Lighting switch)	OFF or AUTO position
Driver side door	Close [front door switch (driver side) OFF]

#### SIGNAL PATH

1. BCM requires warning chime output to combination meter when it judges light reminder warning chime is necessary from signals below.

Signal name	Signal source
Ignition switch signal	—
Combination switch signal	Combination switch (Lighting switch) → BCM
Driver door switch signal	Front door switch (driver side) → BCM

2. Combination meter sounds integrated buzzer, following the warning chime output requirement (below signal) from BCM.

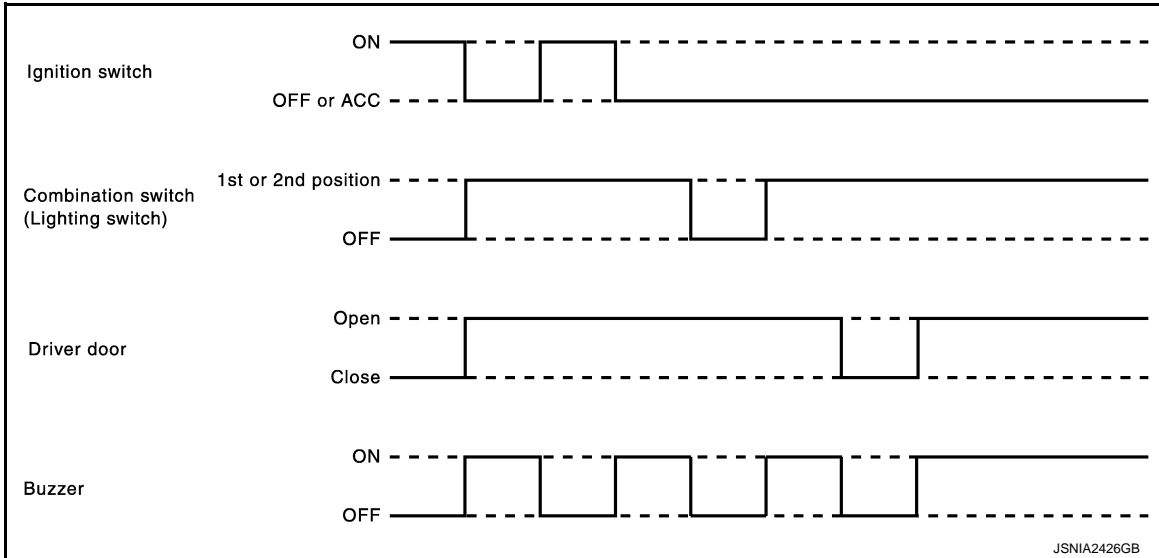
Signal name	Signal source
Buzzer output signal	BCM  → Combination meter



# SYSTEM

## < SYSTEM DESCRIPTION >

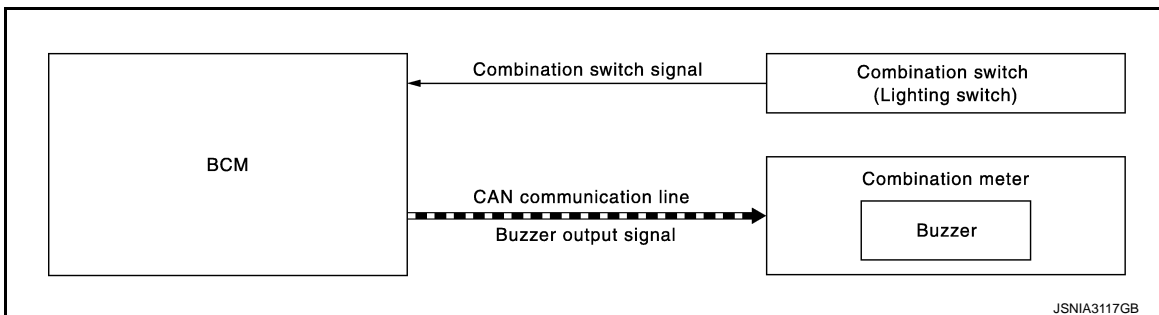
### TIMING CHART



### FRONT FOG LIGHT REMINDER WARNING CHIME

### FRONT FOG LIGHT REMINDER WARNING CHIME : System Description INFOID:000000007495732

### SYSTEM DIAGRAM



### WARNING CHIME OPERATION CONDITIONS

Warning chime sounds during 2 seconds when the ignition switch is in LOCK, OFF or ACC position, if all of below operation conditions is met.

Operation conditions	
Ignition switch	ON position
Combination switch (Lighting switch)	AUTO position and front fog lamp switch ON position

### SIGNAL PATH

1. BCM requires warning chime output to combination meter when it judges front fog light reminder warning chime is necessary from signals below.

Signal name	Signal source
Ignition switch signal	—
Combination switch signal	Combination switch (Lighting switch) → BCM


2. Combination meter sounds integrated buzzer, following the warning chime output requirement (below signal) from BCM.

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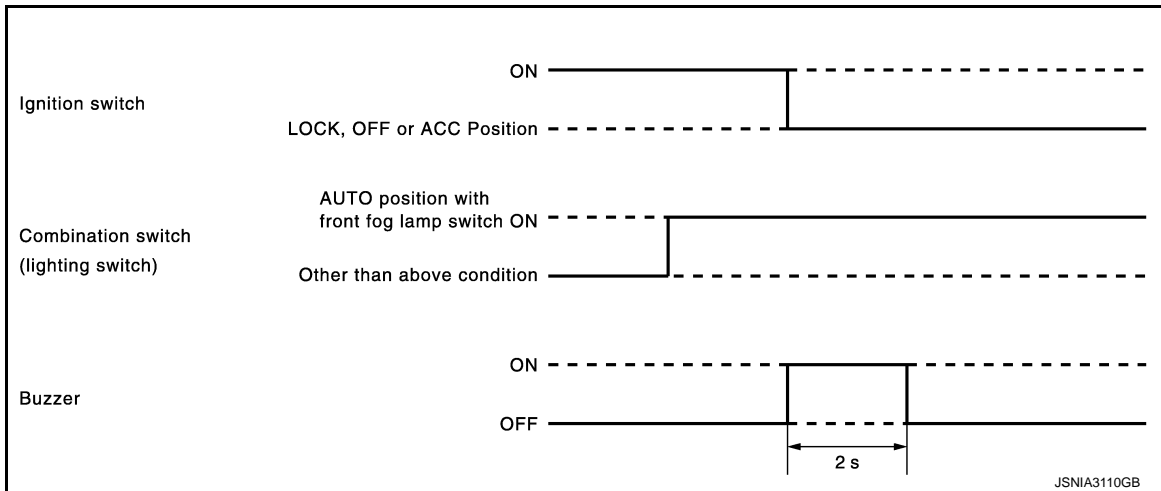
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# SYSTEM

## < SYSTEM DESCRIPTION >

Signal name	Signal source
Buzzer output signal	BCM  Combination meter

## TIMING CHART

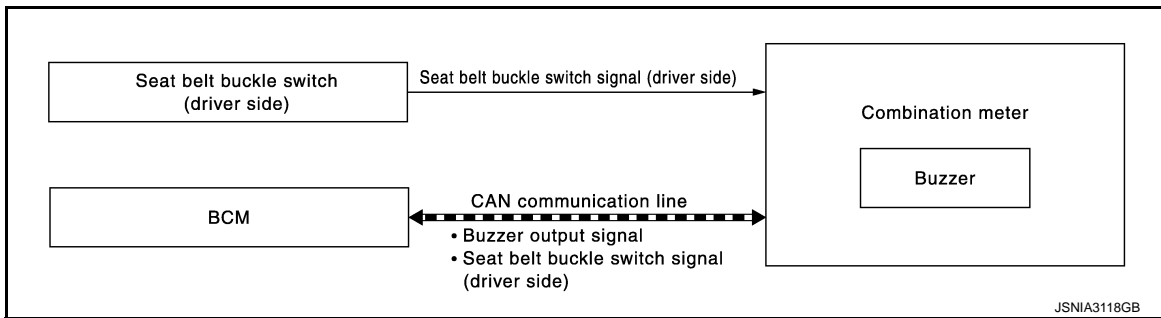


## SEAT BELT WARNING CHIME

### SEAT BELT WARNING CHIME : System Description

INFOID:000000007495733

## SYSTEM DIAGRAM



## WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

Operation conditions	
Ignition switch	ON
Driver seat belt	Unfastened [seat belt buckle switch (driver side) ON]

## WARNING CANCEL CONDITIONS

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

Operation conditions	
Ignition switch	OFF
Seat belt (driver side)	Fastened (driver side seat belt buckle switch OFF)
6 seconds after the start of warning sound	

## SIGNAL PATH

1. BCM requires warning chime output to combination meter when it judges seat belt warning chime is necessary from signals below.

# SYSTEM

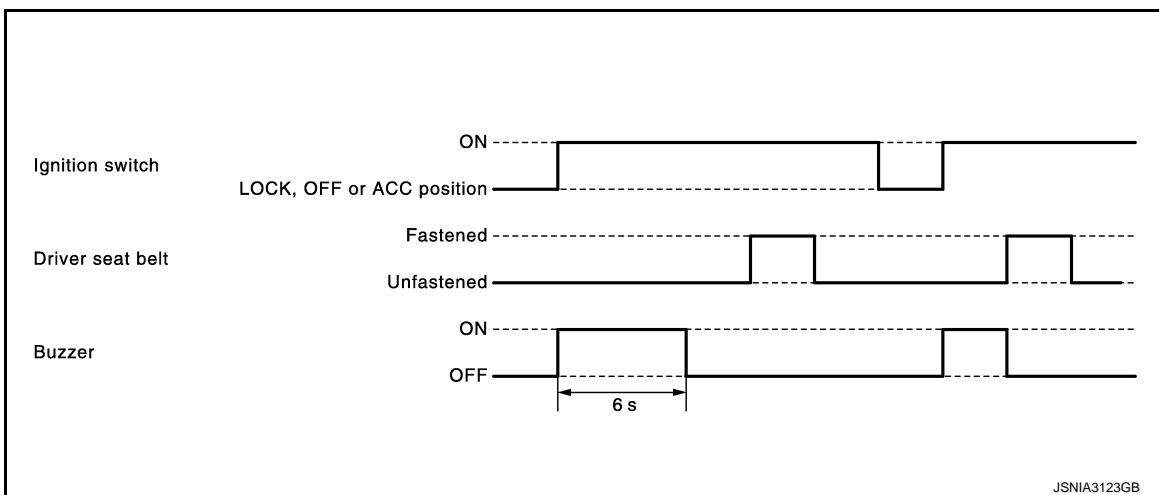
## < SYSTEM DESCRIPTION >

Signal name	Signal source
Ignition switch signal	—
Seat belt buckle switch signal (driver side)	Seat belt buckle switch (driver side) → Combination meter CAN → BCM

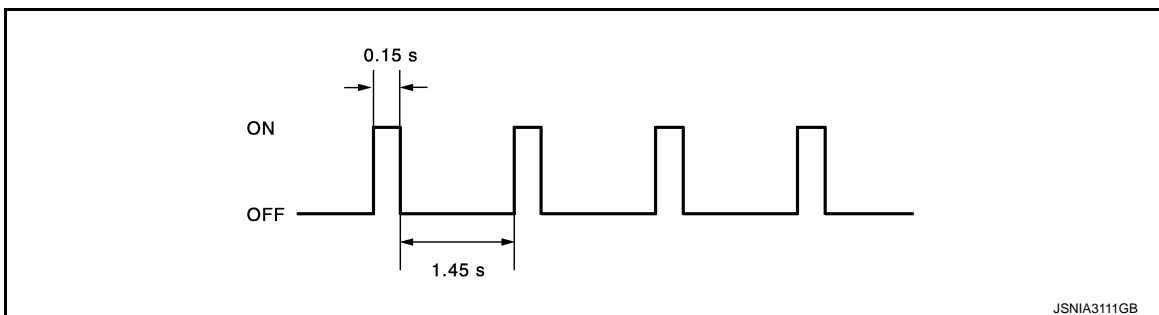
2. Combination meter sounds integrated buzzer, following the warning chime output requirement (below signal) from BCM.

Signal name	Signal source
Buzzer output signal	BCM → CAN → Combination meter

## TIMING CHART



## SOUND SPECIFICATION



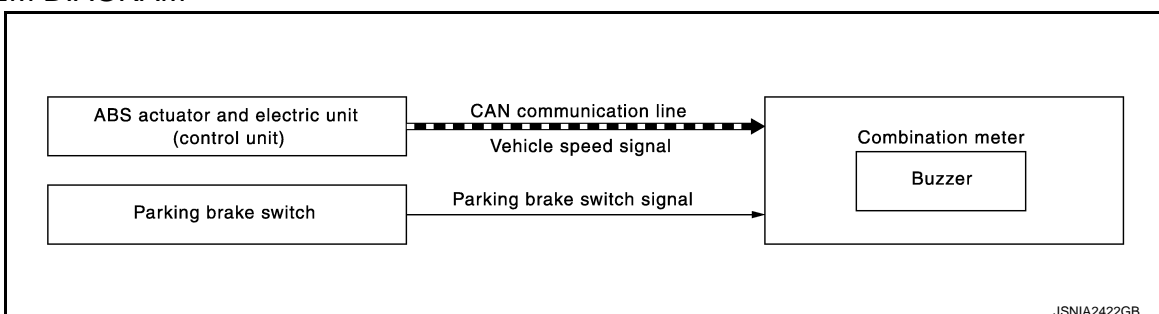
## PARKING BRAKE RELEASE WARNING CHIME

### PARKING BRAKE RELEASE WARNING CHIME : System Description

INFOID:000000007495734

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## SYSTEM DIAGRAM



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# SYSTEM

## < SYSTEM DESCRIPTION >

### WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

Operation conditions	
Ignition switch	ON
Parking brake	During the operation (parking brake switch ON)
Vehicle speed	Approximately 7 km/h (4.3 MPH) or more

### WARNING CANCEL CONDITIONS

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

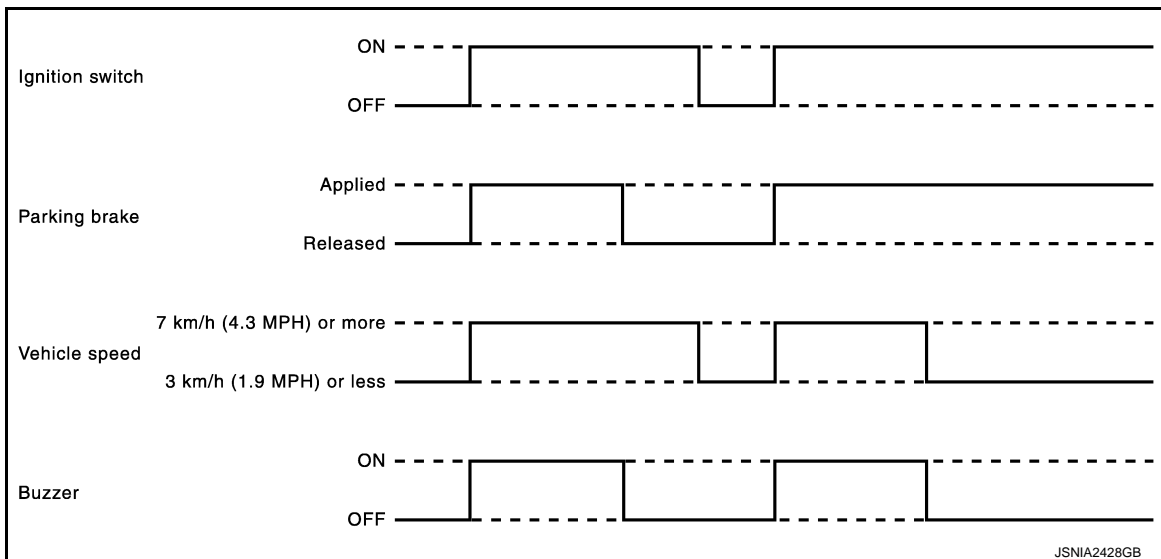
Operation conditions	
Ignition switch	OFF
Parking brake	Release condition (parking brake switch OFF)
Vehicle speed	Approximately 3 km/h (1.9 MPH) or less

### SIGNAL PATH

Combination meter sounds integrated buzzer when it judges that parking brake release warning chime is necessary from signals below.

Signal name	Signal source
Ignition switch signal	—
Parking brake switch signal	Parking brake switch → Combination meter
Vehicle speed signal	ABS actuator and electric unit (control unit) <sup>CAN</sup> → Combination meter

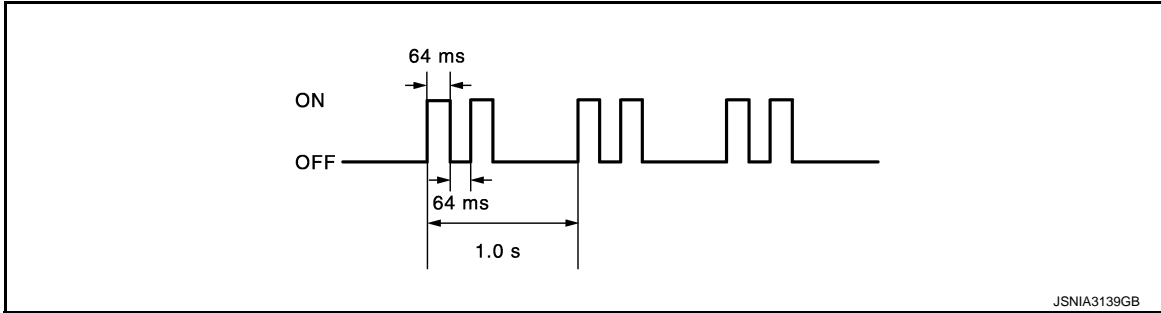
### TIMING CHART



# SYSTEM

< SYSTEM DESCRIPTION >

## SOUND SPECIFICATION



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# DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (COMBINATION METER)

### CONSULT Function

INFOID:000000007616395

### 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-48, "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.
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 open 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.
TURN IND [On/Off]		Status of turn indicator lamp detected from turn indicator signal is received from BCM via CAN communication.



## DIAGNOSIS SYSTEM (COMBINATION METER)

### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	
LIGHT IND [On/Off]		<ul style="list-style-type: none"> <li>• Status of light indicator lamp detected from dimmer signal is received from BCM via CAN communication. (For U.S.A)</li> <li>• Status of light indicator lamp detected from position light request signal is received from BCM via CAN communication. (For Canada)</li> </ul>	A
OIL W/L [On/Off]		Status of oil pressure warning lamp detected from oil pressure switch signal is received from BCM via CAN communication.	B
MIL [On/Off]		Status of malfunction indicator lamp detected from malfunctioning indicator lamp signal is received from ECM via CAN communication.	C
CRUISE IND [On/Off]		Status of CRUISE indicator detected from ASCD status signal is received from ECM via CAN communication.	D
SET IND [Off]		This item is displayed, but cannot be monitored.	E
CRUISE W/L [Off]		This item is displayed, but cannot be monitored.	F
BA W/L [Off]		This item is displayed, but cannot be monitored.	G
O/D OFF IND [On/Off]		Status of O/D OFF indicator detected from O/D OFF indicator signal is received from CVT shift selector.	H
4WD W/L [Off]		This item is displayed, but cannot be monitored.	I
4WD LOCK IND [Off]		This item is displayed, but cannot be monitored.	J
FUEL W/L [On/Off]		Low fuel warning status detected by the identified fuel level.	K
WASHER W/L [On/Off]		Status of low washer fluid warning judged from washer level switch input to combination meter.	L
AIR PRES W/L [On/Off]		Status of low tire pressure warning lamp judged from TPMS malfunction warning lamp signal received from BCM with CAN communication line.	M
KEY G/Y W/L [On/Off]		Status of Intelligent Key system malfunction detected from Intelligent Key warning display signal is received from BCM via CAN communication.	WCS
EPS W/L [On/Off]		Status of EPS warning lamp judged from EPS warning lamp signal received from EPS control unit with CAN communication line.	O
AFS OFF IND [Off]		This item is displayed, but cannot be monitored.	P
ECO MODE IND [Off]		This item is displayed, but cannot be monitored.	
LCD [B&P N, B&P I, ID NG, ROTAT, SFT P, INSRT, BATT, NO KY, OUTKY, LK WN, KY>PSW, Off]		Displays status of Intelligent Key system warning judged from meter display signal received from BCM with CAN communication line.	
ACC TARGET [Off]		This item is displayed, but cannot be monitored.	
ACC DISTANCE [Off]		This item is displayed, but cannot be monitored.	
ACC OWN VHL [Off]		This item is displayed, but cannot be monitored.	
ACC SET SPEED [Off]		This item is displayed, but cannot be monitored.	
ACC UNIT [Off]		This item is displayed, but cannot be monitored.	
SHIFT IND [P, R, N, D, L]		Status of shift position indicator judged from shift position signal received from TCM with CAN communication line.	

## DIAGNOSIS SYSTEM (COMBINATION METER)

### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
BSW IND [Off]		This item is displayed, but cannot be monitored.
BSW W/L [On/Off]		Status of BSW warning lamp judged from BSW warning lamp signal received from BSW control module with CAN communication line.
FUEL CAP W/L [On/Off]		Status of fuel filler cap warning detected from fuel filler cap warning display signal is received from ECM via CAN communication.
O/D OFF SW [On/Off]		Status of overdrive control switch.
M RANGE SW [Off]		This item is displayed, but cannot be monitored.
NM RANGE SW [Off]		This item is displayed, but cannot be monitored.
AT SFT UP SW [Off]		This item is displayed, but cannot be monitored.
AT SFT DWN SW [Off]		This item is displayed, but cannot be monitored.
COMP F/B SIG [On/Off]		A/C compressor activation condition that ECM judges according to the water temperature and the acceleration degree.
PKB SW [On/Off]		Status of parking brake switch.
BUCKLE SW [On/Off]		Status of seat belt buckle switch (driver side).
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.
A/C AMP CONN [On/Off]		Status of A/C auto amp. connection recognition signal.
ENTER SW [On/Off]		Status of  (ENTER) switch.
SELECT SW [On/Off]		Status of  (SELECT) switch.
ECO MODE SW [Off]		This item is displayed, but cannot be monitored.
DISTANCE [km]		Value of distance to empty calculated by combination meter.
OUTSIDE TEMP [°C or °F]		Ambient 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.)
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit via CAN communication.
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.
4WD AUTO IND [Off]		This item is displayed, but cannot be monitored.

**NOTE:**

Some items are not available according to vehicle specification.

#### W/L ON HISTORY

- Stores histories when warning/indicator lamp is turned on.



## DIAGNOSIS SYSTEM (COMBINATION METER)

### < SYSTEM DESCRIPTION >

- “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 open warning.
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.
O/D OFF IND	Lighting history of O/D OFF indicator lamp.
FUEL W/L	Lighting history of low fuel level warning.
WASHER W/L	Lighting history of low washer fluid warning.
AIR PRES W/L	Lighting history of low tire pressure warning lamp.
KEY G/Y W/L	Lighting history of Intelligent Key system malfunction.
EPS W/L	Lighting history of EPS warning lamp.
BSW W/L	Lighting history of BSW warning lamp.

**NOTE:**

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

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WCS

## DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

### DIAGNOSIS SYSTEM (BCM)

#### COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000007687416

#### 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 system	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning control system	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	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

##### NOTE:

\*: For models with automatic air conditioning control system, this diagnosis mode 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)

## < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		A
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 OFF (LOCK)]	B
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (OFF)]	C
	LOCK>ACC		While turning power supply position from OFF (LOCK) to ACC	
	ACC>ON		While turning power supply position from ACC to ON	D
	RUN>ACC		While turning power supply position from RUN to ACC (Except emergency stop operation)	
	CRANK>RUN		While turning power supply position from CRANK to RUN	E
	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)	F
	OFF>LOCK		While turning power supply position from OFF (OFF) to OFF (LOCK)	
	OFF>ACC		While turning power supply position from OFF (OFF) to ACC	G
	ON>CRANK		While turning power supply position from ON to CRANK	
	OFF>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (OFF)] to low power consumption mode	H
	LOCK>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (LOCK)] to low power consumption mode	
	LOCK		Power supply position is OFF (LOCK)	I
	OFF		Power supply position is OFF (OFF)	
	ACC		Power supply position is ACC	J
	ON		Power supply position is ON	
ENGINE RUN	Power supply position is RUN	K		
CRANKING	Power supply position is CRANK			
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>		L

### NOTE:

\*: Refer to the following for details of the power supply position.

- OFF (OFF, LOCK): Ignition switch OFF
- ACC: Ignition switch ACC
- IGN: Ignition switch ON with engine stopped
- RUN: Ignition switch ON with engine running
- CRANK: At engine cranking

Power supply position shifts to "OFF (LOCK)" from "OFF (OFF)", when ignition switch is in the OFF position, shift position is in the P position, and any of the following conditions are met.

- Closing door
- Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

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

## BUZZER

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# DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

## BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:000000007495737

### CONSULT APPLICATION ITEMS

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).

# COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

## ECU DIAGNOSIS INFORMATION

### COMBINATION METER

Reference Value

INFOID:000000007616396

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
SPEED METER [km/h]	Ignition switch ON	While driving	Input value of vehicle speed signal (CAN communication signal) <b>NOTE:</b> 655.35 is displayed when the malfunction signal is received
SPEED OUTPUT [km/h]	Ignition switch ON	While driving	Output value of vehicle speed signal (CAN communication signal) <b>NOTE:</b> 655.35 is displayed when the malfunction signal is received
ODO OUTPUT [km/h or mph]	Ignition switch ON	—	Output value of odometer signal (CAN communication signal)
TACHO METER [rpm]	Ignition switch ON	Engine running	Input value of engine speed signal (CAN communication signal) <b>NOTE:</b> 8191.875 is displayed when the malfunction signal is received
FUEL METER [L]	Ignition switch ON	—	Input value of fuel level sensor signal
W TEMP METER [°C]	Ignition switch ON	—	Input value of engine coolant temperature signal (CAN communication signal) <b>NOTE:</b> 215 is displayed when the malfunction signal is input
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 open warning ON	On
		Door open warning 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	Light indicator lamp ON	On
		Light indicator lamp OFF	Off
OIL W/L	Ignition switch ON	Oil pressure warning lamp ON	On
		Oil pressure warning lamp OFF	Off

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## COMBINATION METER

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status
MIL	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off
CRUISE IND	Ignition switch ON	CRUISE indicator ON	On
		CRUISE indicator OFF	Off
SET IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
CRUISE W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
BA W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
O/D OFF IND	Ignition switch ON	O/D OFF indicator lamp ON	On
		O/D OFF indicator lamp OFF	Off
4WD W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
4WD LOCK IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
FUEL W/L	Ignition switch ON	During low fuel warning indication	On
		Other than the above	Off
WASHER W/L	Ignition switch ON	During low washer fluid warning indication	On
		Other than the above	Off
AIR PRES W/L	Ignition switch ON	Low tire pressure warning lamp ON	On
		Low tire pressure warning lamp OFF	Off
KEY G/Y W/L	Ignition switch ON	During Intelligent Key system malfunction indication	On
		Other than the above	Off
EPS W/L	Ignition switch ON	EPS warning lamp ON	On
		EPS warning lamp OFF	Off
AFS OFF IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
ECO MODE IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off



# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status	
LCD	Ignition switch ON	During engine start information indication	B&P I	A
	Ignition switch ACC	During engine start information indication	B&P N	B
	Ignition switch LOCK	During key ID warning indication	ID NG	
	Ignition switch LOCK	During steering lock information indication	ROTAT	C
	Ignition switch LOCK	During P position warning indication	SFT P	D
	Ignition switch LOCK	During Intelligent Key insert information indication	INSRT	
	Ignition switch LOCK	During Intelligent Key low battery warning indication	BATT	E
	Ignition switch ON	During take away warning indication	NO KY	F
	Ignition switch LOCK	During key warning indication	OUTKY	
	Ignition switch ON	During ACC warning indication	LK WN	G
	Ignition switch LOCK	During Key ID verification information indication	KY>PSW	H
	Ignition switch ON	Other than above	Off	
ACC TARGET	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off	I
ACC DISTANCE	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off	J
ACC OWN VHL	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off	K
ACC SET SPEED	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off	L
ACC UNIT	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off	M
SHIFT IND	Ignition switch ON	During the indication of "P" by shift position indicator	P	WCS
		During the indication of "R" by shift position indicator	R	
		During the indication of "N" by shift position indicator	N	O
		During the indication of "D" by shift position indicator	D	
		During the indication of "L" by shift position indicator	L	P
BSW IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off	
BSW W/L	Ignition switch ON	BSW warning lamp ON	On	
		BSW warning lamp OFF	Off	

# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status
FUEL CAP W/L	Ignition switch ON	During fuel filler cap warning display indication	On
		Other than above	Off
O/D OFF SW	Ignition switch ON	Overdrive control switch ON	On
		Overdrive control switch OFF	Off
M RANGE SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
NM RANGE SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
AT SFT UP SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
AT SFT DWN SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
COMP F/B SIG	Ignition switch ON	A/C compressor activation condition	On
		A/C compressor deactivation condition	Off
PKB SW	Ignition switch ON	Parking brake switch ON	On
		Parking brake switch OFF	Off
BUCKLE SW	Ignition switch ON	Driver seat belt not fastened	On
		Driver seat belt 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 ambient sensor power signal	Off
ENTER SW	Ignition switch ON	When  switch (enter switch) is pressed	On
		Other than above	Off
SELECT SW	Ignition switch ON	When  switch (select switch) is pressed	On
		Other than above	Off
ECO MODE SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
DISTANCE [km]	Ignition switch ON	—	Distance to empty calculated by combination meter
OUTSIDE TEMP [°C or °F]	Ignition switch ON	—	Input value of ambient sensor signal (CAN communication signal) <b>NOTE:</b> This may not match the indicated value on the information display.
FUEL LOW SIG	Ignition switch ON	During low fuel warning indication	On
		Other than above	Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off



# COMBINATION METER

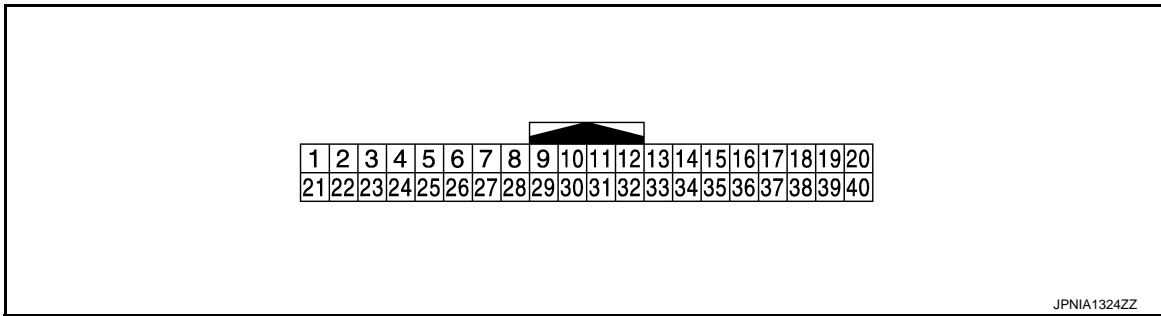
## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status
TPMS PRESS L	Ignition switch ON	During low tire pressure warning indication	On
		Other than above	Off
4WD AUTO IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off

**NOTE:**

Some items are not available according to vehicle specification.

### TERMINAL LAYOUT



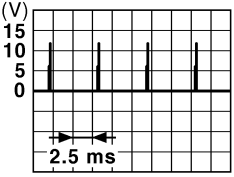
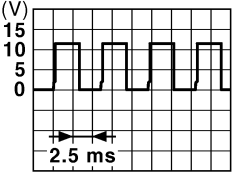




### PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (O)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (Y)	Ground	Ignition signal	Input	Ignition switch ON	—	Battery voltage
3 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
4 (B)	Ground	Ground	—	Ignition switch ON	—	0 V

WCS

# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
5 (B/P)	Ground	Illumination control signal	Output	Ignition switch ON	<ul style="list-style-type: none"> <li>Lighting switch 1ST position</li> <li>When meter illumination is maximum</li> </ul> 	
					<ul style="list-style-type: none"> <li>Lighting switch 1ST position</li> <li>When meter illumination is step 11</li> </ul> 	
					<ul style="list-style-type: none"> <li>Lighting switch 1ST position</li> <li>When meter illumination is minimum</li> </ul>	12 V
8 (SB)	10 (P)	Trip reset switch signal	Input	Ignition switch ON	When trip reset switch is pressed	0 V
					Other than the above	5 V
10 (P)	Ground	Meter control switch ground	—	Ignition switch ON	—	0 V
11 (G)	10 (P)	Enter switch signal	Input	Ignition switch ON	When  switch (enter switch) is pressed	0 V
					Other than the above	5 V
12 (BR)	10 (P)	Select switch signal	Input	Ignition switch ON	When  switch (select switch) is pressed	0 V
					Other than the above	5 V
13 (Y)	10 (P)	Illumination control switch signal (+)	Input	Ignition switch ON	When  switch [illumination control switch (+)] is pressed	0 V
					Other than the above	5 V
14 (V)	10 (P)	Illumination control switch signal (-)	Input	Ignition switch ON	When  switch [illumination control switch (-)] is pressed	0 V
					Other than the above	5 V
15 (BR)	—	Air bag signal	Input	—	—	—

# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

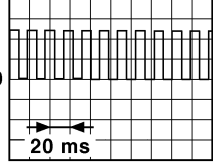
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
16 (L)	Ground	Engine coolant temperature signal	Output	Ignition switch ON	<p style="text-align: right; font-size: small;">JSNIA3528ZZ</p>	
				At idle [after warming up, approx. 80°C (176°F)]	<p style="text-align: right; font-size: small;">JSNIA3530ZZ</p>	
18 (LG)	Ground	Ambient sensor signal	Input	Ignition switch ON	<p style="text-align: right; font-size: small;">JSNIA0014GB</p>	
19 (R)	Ground	A/C auto amp. connection recognition signal	Input	Ignition switch ON	5 V	
20 (Y)	Ground	Ambient sensor ground	—	Ignition switch ON	0 V	
21 (L)	—	CAN-H	—	—	—	
22 (P)	—	CAN-L	—	—	—	
23 (B)	Ground	Ground	—	Ignition switch ON	0 V	
24 (B)	Ground	Fuel level sensor ground	—	Ignition switch ON	0 V	
25 (BR)	Ground	Alternator signal	Input	Ignition switch ON	Charge warning lamp ON	12 V
				Ignition switch ON	Charge warning lamp OFF	0 V
26 (BR)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake applied.	0 V
					Parking brake released.	12 V
27 (Y)	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
28 (V)	Ground	Security signal	Input	Ignition switch ON	Security indicator lamp ON	0 V
					Security indicator lamp OFF	12 V

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# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
29 (G)	Ground	Washer level switch signal	Input	Ignition switch ON	Washer level switch ON	0 V
					Washer level switch OFF	5 V
31 (SB)	Ground	Vehicle speed signal (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	<b>NOTE:</b> The maximum voltage varies de- pending on the specification (destination unit).  <small>JSNIA0012GB</small>
32 (P)	Ground	Overdrive control switch signal	Input	Ignition switch ON	When overdrive control switch is pressed	0 V
					Other than the above	5 V
34 (O)	24 (B)	Fuel level sensor signal	Input	Ignition switch ON	—	<a href="#">MWI-68. "Component Inspection"</a>
35 (P)	Ground	Seat belt buckle switch sig- nal (driver side)	Input	Ignition switch ON	When driver seat belt is fas- tened	5 V
					When driver seat belt is un- fastened	0 V
36 (BR)	—	Passenger seat belt warn- ing signal	Input	—	—	—

## Fail-Safe

INFOID:000000007616397

## FAIL-SAFE

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

Function	Specifications
Speedometer	Reset to zero by suspending communication.
Tachometer	
Engine coolant temperature gauge	
Illumination control	When suspending communication, changes to nighttime mode.

# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

Function		Specifications		
Information display	Odo/trip meter	An indicated value is maintained at communications blackout.	A	
	Shift position indicator	The display turns OFF by suspending communication.		
	Interrupt indication	Door open warning	The display turns OFF by suspending communication.	B
		Fuel filler cap warning		
		Low tire pressure warning		C
	Trip computer	Current fuel consumption	<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 calculation results are indicated.</li> </ul>	D
		Average fuel consumption		
Distance to empty		E		
Average vehicle speed				
Travel distance				
Buzzer		The buzzer turns OFF by suspending communication.	F	
Warning lamp/indicator lamp	ABS warning lamp	The lamp turns ON by suspending communication.	G	
	VDC warning lamp			
	Brake warning lamp			
	EPS warning lamp			
	Malfunction indicator lamp			
	Low tire pressure warning lamp	The lamp blinking caused by suspending communication.	H	
	High beam indicator lamp	The lamp turns OFF by suspending communication.	I	
	Turn signal indicator lamp			
	VDC OFF indicator lamp			
	O/D OFF indicator lamp			
	Tail lamp indicator lamp			
	CRUISE indicator lamp			
	Oil pressure warning lamp			
Key warning lamp				
BSW warning lamp	J			
		K		
		L		

## DTC Index

INFOID:000000007616398

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-58. "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-59. "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-60. "Diagnosis Procedure"</a>	P
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	<a href="#">MWI-61. "Diagnosis Procedure"</a>	
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	<a href="#">MWI-62. "Diagnosis Procedure"</a>	

# BCM

< ECU DIAGNOSIS INFORMATION >

## BCM

### List of ECU Reference

INFOID:000000007495741

ECU	Reference
BCM	<a href="#">BCS-36, "Reference Value"</a>
	<a href="#">BCS-58, "Fail-safe"</a>
	<a href="#">BCS-58, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-59, "DTC Index"</a>

# WARNING CHIME SYSTEM


< WIRING DIAGRAM >

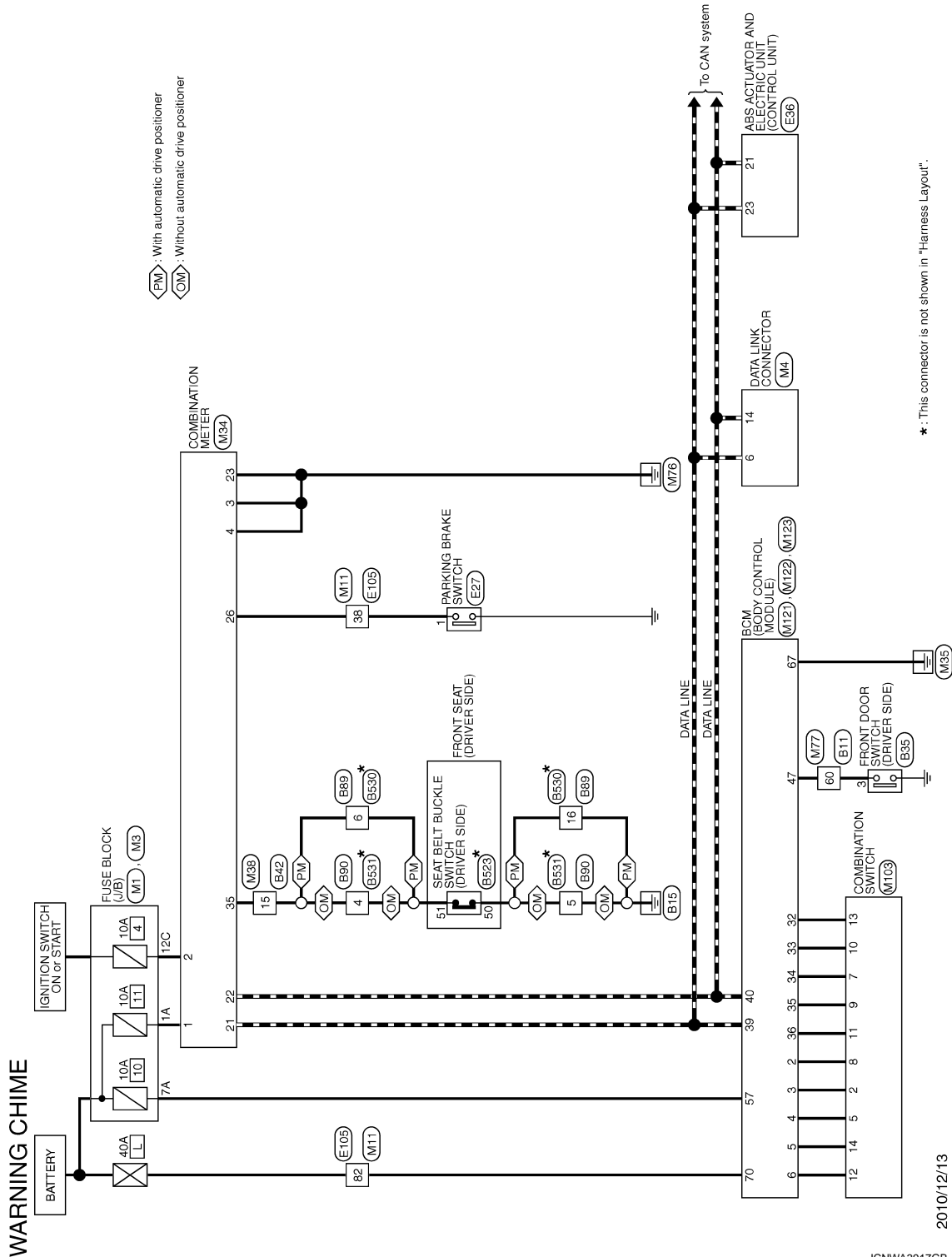
## WIRING DIAGRAM

### WARNING CHIME SYSTEM

#### Wiring Diagram

INFOID:000000007495742

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



# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

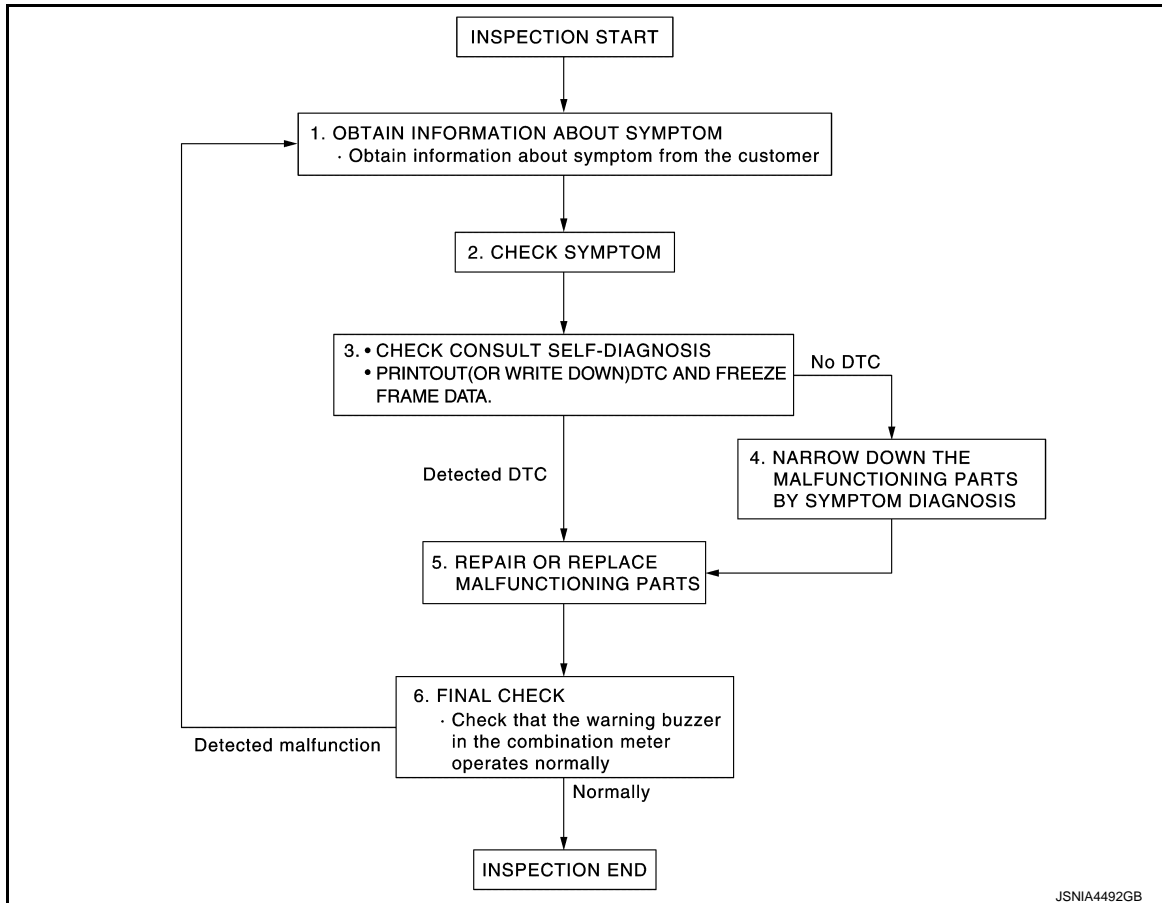
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000007495743

#### 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-48, "DTC Index"](#).
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.



# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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## 4.NARROW DOWN MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

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Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 5.

## 5.REPAIR OR REPLACE MALFUNCTIONING PARTS

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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.

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WCS

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

#### COMBINATION METER : Diagnosis Procedure

INFOID:000000007616401

#### 1. CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	11
Ignition switch ON or START	4

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	Battery voltage
Connector	Terminal		
M34	1		
	2		
Ground		ON	

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	3	Ground	Existed
	4		
	23		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

# METER BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## METER BUZZER CIRCUIT

### Component Function Check

INFOID:000000007495745

#### 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. Refer to [MWI-84. "Removal and Installation"](#).  
NO >> Replace BCM. Refer to [BCS-82. "Removal and Installation"](#).

### Diagnosis Procedure

INFOID:000000007495746

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

Check power supply of combination meter. Refer to [MWI-63. "COMBINATION METER : Diagnosis Procedure"](#).

Is the inspection result normal?

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

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WCS

# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

### Component Function Check

INFOID:000000007495747

#### 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:000000007495748

#### 1.CHECK COMBINATION METER INPUT SIGNAL

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

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
Combination meter		When driver seat belt is fastened When driver seat belt is unfastened	12 V 0 V
Connector	Terminal		
M34	35		

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-84, "Removal and Installation"](#).  
NO >> GO TO 2.

#### 2.CHECK SEAT BELT BUCKLE SWITCH 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.

Combination meter		Seat belt buckle switch (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
M34	35	B523	51	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	35		Not existed

Is the inspection result normal?

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

#### 3.CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

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

# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

Seat belt buckle switch (driver side)		Ground	Continuity
Connector	Terminal		
B523	50		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

## Component Inspection

INFOID:000000007495749

### 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.

Terminal		Condition	Continuity
51	50	When seat belt is fastened	Not existed
		When seat belt is unfastened	Existed

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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WCS

# PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## PARKING BRAKE SWITCH SIGNAL CIRCUIT

### Diagnosis Procedure

INFOID:000000007495750

#### 1. CHECK COMBINATION METER INPUT SIGNAL

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

(+)		(-)	Condition		Voltage (Approx.)
Combination meter		Ground			
Connector	Terminal		Ignition switch ON	When parking brake is applied	0 V
M34	26	When parking brake is released		12 V	

Is the inspection result normal?

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

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

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

Terminals				Continuity
Combination meter		Parking brake switch		
Connector	Terminal	Connector	Terminal	
M34	26	E27	1	Existed

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

Terminals			Continuity
Combination meter		Ground	
Connector	Terminal		
M34	26		Not existed

Is the inspection result normal?

- YES >> INSPECTION END  
NO >> Repair harness or connector.

### Component Inspection

INFOID:000000007495751

#### 1. CHECK PARKING BRAKE SWITCH

Check parking brake switch. Refer to [BRC-99, "Component Inspection"](#).

Is the inspection result normal?

- YES >> INSPECTION END.  
NO >> Replace parking brake switch. Refer to [PB-6, "Exploded View"](#).

# THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### THE LIGHT REMINDER WARNING DOES NOT SOUND

#### Description

INFOID:000000007495752

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

#### Diagnosis Procedure

INFOID:000000007495753

#### 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-75, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#) [XENON TYPE (without daytime running light system)], [EXL-77, "WITH DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#) [XENON TYPE (with daytime running light system)], [EXL-173, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#) [HALOGEN TYPE (without daytime running light system)], or [EXL-175, "WITH DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#) [HALOGEN TYPE (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-209, "Diagnosis Procedure"](#).

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-210, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).

NO >> Replace driver side door switch. Refer to [DLK-453, "Removal and Installation"](#).

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WCS

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

< SYMPTOM DIAGNOSIS >

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

### Description

INFOID:000000007495754

- 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:000000007495755

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#### 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-84, "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-99, "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-99, "Component Inspection"](#).

#### Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-84, "Removal and Installation"](#)  
NO >> Replace parking brake switch. Refer to [PB-6, "Exploded View"](#).



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

< SYMPTOM DIAGNOSIS >

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

### Description

INFOID:000000007495756

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

### Diagnosis Procedure

INFOID:000000007495757

#### 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 fastened	: OFF
Seat belt not fastened	: ON

#### Is the inspection result normal?

- YES >> GO TO 2.
- NO >> GO TO 4.

#### 2. CHECK BCM OUTPUT SIGNAL

Check if the seat belt warning chime is activated by performing BCM active test. Refer to [WCS-20, "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 [WCS-14, "CONSULT Function"](#).

Buzzer active condition	: On
Buzzer non-active condition	: Off

#### Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-84, "Removal and Installation"](#).
- NO >> Replace BCM. Refer to [BCS-82, "Removal and Installation"](#).

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

Perform the check for the seat belt buckle switch (driver side) circuit. Refer to [WCS-36, "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-37, "Component Inspection"](#).

#### Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-84, "Removal and Installation"](#).
- NO >> Replace seat belt buckle (driver side). Refer to [SB-8, "SEAT BELT BUCKLE : Removal and Installation"](#).

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