WCS В SECTION WARNING CHIME SYSTEM

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< PRECAUTION > PRECAUTION

PRECAUTIONS	A
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	В
The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.	С
WARNING:	D
 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 	F

- 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.

Precautions for Removing of Battery Terminal

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

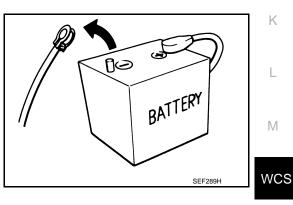
ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

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

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

 After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC. NOTE:

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



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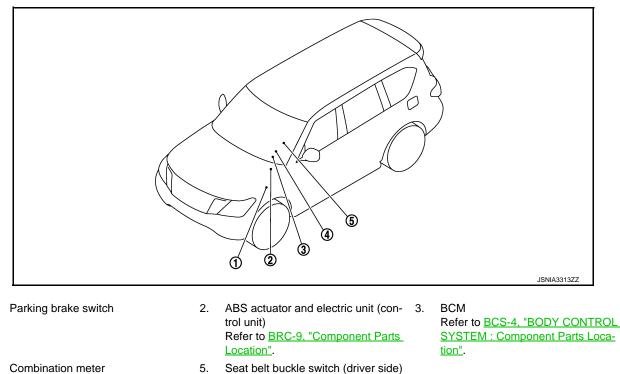
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< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION **COMPONENT PARTS**

Component Parts Location

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4. Combination meter

1.

Component Description

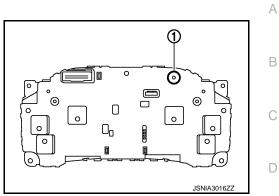
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Unit	Jnit Description	
Combination meter	 Receives a buzzer output signal from the BCM with CAN communication line and sounds the buzzer. Judges whether the parking brake is released from the vehicle speed signal received from the ABS actuator and 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. 	
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 the combination meter via CAN communication.	
Parking brake switch	Transmits the parking brake switch signal to the combination meter.	
Seat belt buckle switch (driver side)	Transmits the seat belt buckle switch signal (driver side) to the combination meter.	

Combination Meter

INFOID:000000009011996

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



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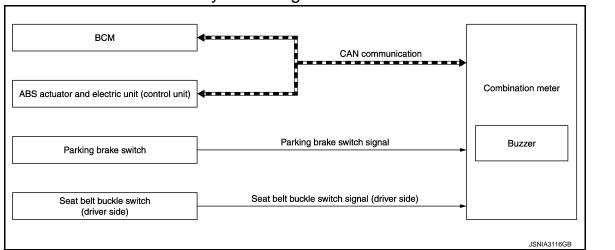
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SYSTEM WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram



WARNING CHIME SYSTEM : System Description

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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

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 com- bination switch (lighting switch) in the 1st or 2nd position and the driver side door open.	BCM	WCS-8, "LIGHT RE- MINDER WARNING CHIME : Sys- tem Descrip- tion"
Front fog light reminder warning chime	The warning chime sounds when the ignition switch is turned to LOCK, OFF or ACC posi- tion from ON position, with combination switch (lighting switch) is in AUTO position and the front fog lamp switch in ON position.	BCM	WCS-10, "FRONT FOG LIGHT RE- MINDER WARNING CHIME : Sys- tem Descrip- tion"

< SYSTEM DESCRIPTION >

Warning functions	Out line	Warning judgment unit	Refer to	^
Seat belt warning chime	The warning chime sounds when the driver seat belt is unfastened with the ignition switch in ON position.	BCM	WCS-11, "SEAT BELT WARNING CHIME : Sys- tem Descrip- tion"	B
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	WCS-12, "PARKING BRAKE RE- LEASE WARN- ING CHIME : System De- scription"	C

WARNING CHIME SYSTEM : Fail-Safe

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FAIL-SAFE

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

	Function	Specifications	
Speedometer			
Tachometer		Reset to zero by suspending communication.	
Engine coolant temperat	ure gauge		
Engine oil pressure gaug	ge		
Illumination control		When suspending communication, changes to nighttime mode.	
	Odo/trip meter	An indicated value is maintained at communications blackout.	
Information display	Shift position indicator	The display turns OFF by suspending communication.	
	Door open warning	The display turns OFF by suspending communication.	
Buzzer	·	The buzzer turns OFF by suspending communication.	

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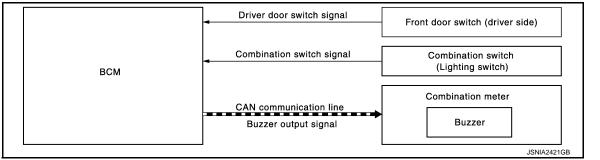
< SYSTEM DESCRIPTION >

	Function	Specifications	
	ABS warning lamp		
	VDC warning lamp		
	Brake warning lamp		
	IBA OFF indicator lamp		
	4WD warning lamp	— The lamp turns ON by suspending communication.	
	Malfunction indicator lamp		
	VDC OFF indicator lamp		
	CRUISE warning lamp		
	Low tire pressure warning lamp	The lamp blinking caused by suspending communication.	
	High beam indicator lamp		
	Turn signal indicator lamp		
Warning lamp/indicator lamp	Position lamp indicator lamp		
	A/T CHECK indicator lamp		
	Key warning lamp		
	ATP warning lamp		
	Lane departure warning lamp	 The lamp turns OFF by suspending communication. 	
	LDP ON indicator lamp		
	CRUISE indicator lamp		
	Oil pressure warning lamp		
	SNOW mode indicator lamp		
	TOW mode indicator lamp		
	CK SUSP indicator lamp		
	BSW indicator lamp		

LIGHT REMINDER WARNING CHIME

LIGHT REMINDER WARNING CHIME : System Diagram

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LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000009012001

WARNING CHIME OPERATION CONDITIONS

If all of the following conditions are fulfilled.

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

WARNING CHIME CANCEL CONDITIONS

< SYSTEM DESCRIPTION >

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 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 path
Ignition switch signal	_
Combination switch signal	Combination switch (Lighting switch)
Driver door switch signal	Front door switch (driver side) BCM

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

Signal name	Signal path
Buzzer output signal	BCM Combination meter

TIMING CHART

		—
Ignition switch	ON OFF or ACC	
Combination switch (Lighting switch)	1st or 2nd position OFF	
Driver door	Open	_
	Close	
Buzzer	ON	
		∂GB

FRONT FOG LIGHT REMINDER WARNING CHIME

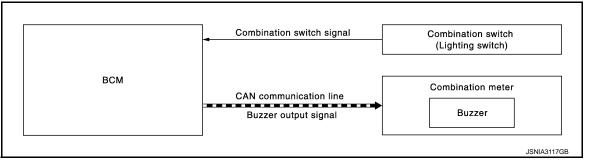
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< SYSTEM DESCRIPTION >

FRONT FOG LIGHT REMINDER WARNING CHIME : 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.

Оре	ration 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 path
Ignition switch signal	_
Combination switch signal	Combination switch (Lighting switch)

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

Signal name	Signal path
Buzzer output signal	BCM CAN Combination meter

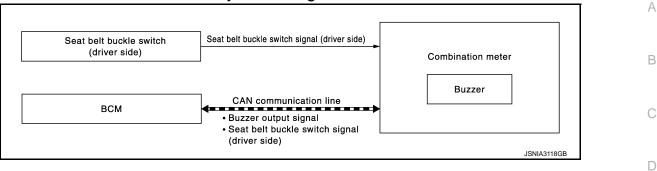
TIMING CHART

Ignition switch	LOCK, OFF or ACC Position	L	
Combination switch (lighting switch)	AUTO position with front fog lamp switch ON Other than above condition		
Buzzer	0N 0FF		

SEAT BELT WARNING CHIME

< SYSTEM DESCRIPTION >

SEAT BELT WARNING CHIME : System Diagram



SEAT BELT WARNING CHIME : System Description

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

Operation conditions	
Ignition switch	ON
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 Fastened [seat belt buckle switch (driver side) 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.

Signal name	Signal path
Ignition switch signal	—
Seat belt buckle switch signal (driver side)	Seat belt buckle switch (driver side) Combination meter

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

Signal name	Signal path	
Buzzer output signal	BCM CAN Combination meter	

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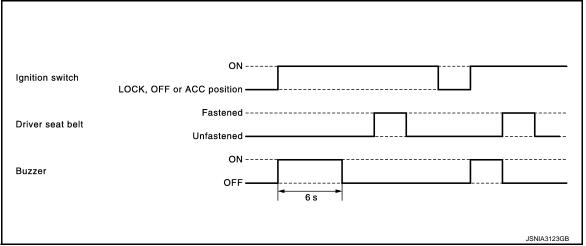
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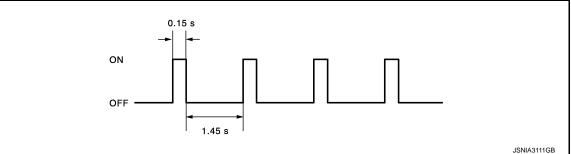
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TIMING CHART

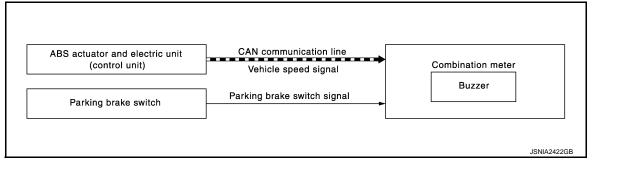


SOUND SPECIFICATION



PARKING BRAKE RELEASE WARNING CHIME

PARKING BRAKE RELEASE WARNING CHIME : System Diagram



PARKING BRAKE RELEASE WARNING CHIME : System Description

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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.

< SYSTEM DESCRIPTION >

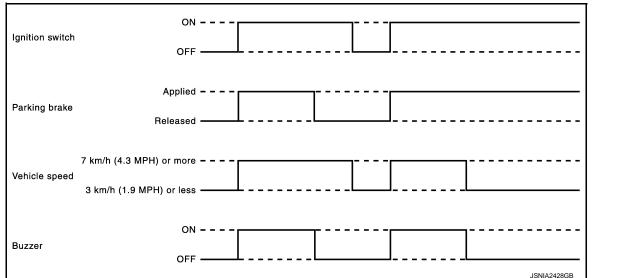
	Operation conditions
Ignition switch	OFF
Parking brake	Release condition (parking brake switch OFF)
Vehicle speed	Approximately 3 km/h (1.9 MPH) or less

SIGNAL PATH

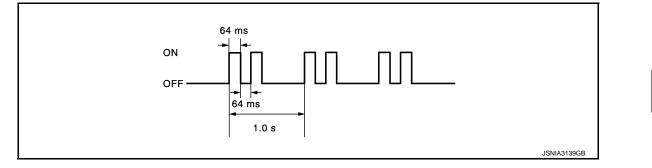
Combination meter sounds integrated buzzer when it judges that parking brake release warning chime is nec-

Signal name	Signal path	D
Ignition switch signal	—	
Parking brake switch signal	Parking brake switch	E
Vehicle speed signal	ABS actuator and electric unit (control unit)	F

TIMING CHART



SOUND SPECIFICATION



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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (COMBINATION METER)

CONSULT Function

INFOID:000000009313845

CONSULT APPLICATION ITEMS

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

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

SELF DIAG RESULT Refer to <u>WCS-30, "DTC Index"</u>.

DATA MONITOR **NOTE**:

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

Display Item 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. NOTE: 655.35 is displayed when the malfunction signal is received.
SPEED OUTPUT [km/h]	Х	Vehicle speed signal value transmitted to other units via CAN communication. NOTE: 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]	х	Value of the engine speed signal received from ECM via CAN communication. NOTE: 8191.875 is displayed when the malfunction signal is received.
FUEL METER [L]	Х	Fuel level indicated on combination meter.
W TEMP METER [°C]	x	Value of engine coolant temperature signal is received from ECM via CAN com- munication. NOTE: 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. NOTE: 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.

Revision: 2013 September

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
TURN IND [On/Off]		Status of turn indicator lamp detected from turn indicator signal is received from BCM via CAN communication.
FR FOG IND [Off]		This item is displayed, but cannot be monitored.
RR FOG IND [Off]		This item is displayed, but cannot be monitored.
LIGHT IND [On/Off]		Status of light indicator lamp detected from position light request signal is received from BCM via CAN communication.
OIL W/L [On/Off]		Status of oil pressure warning lamp detected from oil pressure switch signal is re- ceived from BCM via CAN communication.
MIL [On/Off]		Status of malfunction indicator lamp detected from malfunctioning indicator lamp signal is received from ECM via CAN communication.
GLOW IND [Off]		This item is displayed, but cannot be monitored.
CRUISE IND [On/Off]		 Status of CRUISE indicator detected from ASCD status signal is received from ECM via CAN communication. (ASCD models) Status of CRUISE indicator detected from meter display signal is received from ADAS control unit via CAN communication. (ICC models)
SET IND [On/Off]		Status of SET indicator detected from meter display signal is received from ADAS control unit via CAN communication.
CRUISE W/L [On/Off]		Status of CRUISE warning lamp judged from ICC warning lamp signal received from ADAS control unit with CAN communication line.
BA W/L [On/Off]		Status of IBA OFF indicator lamp judged from IBA OFF indicator lamp signal re- ceived from ADAS control unit with CAN communication line.
ATC/T-AMT W/L [On/Off]		Status of A/T CHECK warning lamp judged from A/T CHECK indicator lamp signal received from TCM with CAN communication line.
ATF TEMP W/L [Off]		This item is displayed, but cannot be monitored.
4WD W/L [On/Off]		Status of 4WD warning lamp judged from 4WD warning lamp signal received from 4WD control unit with CAN communication line.
FUEL W/L [On/Off]		Low-fuel warning lamp status detected by the identified fuel level.
WASHER W/L [On/Off]		Status of low washer fluid warning judged from washer level switch input to com- bination meter.
AIR PRES W/L [On/Off]		Status of low tire pressure warning lamp judged from low tire pressure warning lamp signal received from BCM with CAN communication line.
KEY G/Y W/L [On/Off]		Status of KEY warning lamp (Green/Yellow) detected from KEY warning lamp sig- nal is received from BCM via CAN communication.
KEY KNOB W/L [Off]		This item is displayed, but cannot be monitored.
AFS OFF IND [On/Off]		Status of AFS OFF indicator lamp judged from AFS OFF indicator lamp signal re- ceived from AFS control unit with CAN communication line.
DDS [*] W/L [Off]		This item is displayed, but cannot be monitored.
LANE W/L [On/Off]		Status of lane departure warning lamp judged from lane departure warning lamp signal received from ADAS control unit with CAN communication line.
LDP IND [On/Off]		Status of LDP ON indicator lamp judged from LDP ON indicator lamp signal re- ceived from ADAS control unit with CAN communication line.
ATP W/L [On/Off]		Status of ATP warning lamp judged from ATP warning lamp signal received from 4WD control unit with CAN communication line.
DCA IND [Off]		This item is displayed, but cannot be monitored.

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
CHECK SUS IND [On/Off]		Status of CK SUSP indicator lamp judged from CK SUSP indicator lamp signal received from E-SUS control unit with CAN communication line.
LCD [B&P N, B&P I, ID NG, ROTAT, SFT P, INSRT, BATT, NO KY, OUTKY, LK WN]		Displays status of Intelligent Key system warning judged from meter display signal received from BCM with CAN communication line.
ACC TARGET [On/Off]		Status of vehicle ahead detection indicator judged from meter display signal re- ceived from ADAS control unit with CAN communication line.
ACC DISTANCE [Off, Short, Middle, Long]		Status of set distance indicator judged from meter display signal received from ADAS control unit with CAN communication line.
ACC OWN VHL [On/Off]		Status of own vehicle indicator judged from meter display signal received from ADAS control unit with CAN communication line.
ACC SET SPEED [Off, km/h]		Status of set vehicle speed indicator judged from meter display signal received from ADAS control unit with CAN communication line.
ACC UNIT [On/Off]		Status of display unit judged from meter display signal received from ADAS con- trol unit with CAN communication line.
SHIFT IND [P, R, N, D, M1, M2, M3, M4, M5, M6, M7]		Status of shift position indicator judged from shift position signal and manual mode indicator signal received from TCM with CAN communication line.
4WD IND [AUTO, LOCK, 2W, 4Lo, HL1, HL2, MALF]		Status of 4WD indicator judged from 4WD indicator signal received from 4WD control unit with CAN communication line.
BSW IND [On/Off]		Status of Blind Spot Intervention ON indicator (green) judged from Blind Spot In- tervention ON indicator signal received from ADAS control unit with CAN commu- nication line.
BSW W/L [On/Off]		Status of Blind spot Warning/Blind Spot Intervention warning lamp (yellow) judged from Blind spot Warning/Blind Spot Intervention warning lamp signal received from ADAS control unit with CAN communication line.
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.
AT S MODE SW [On/Off]		Status of snow mode switch.
M RANGE SW [On/Off]		Status of manual mode switch.
NM RANGE SW [On/Off]		Status of non-manual mode switch.
AT SFT UP SW [On/Off]		Status of manual mode shift up switch.
AT SFT DWN SW [On/Off]		Status of manual mode shift down switch.
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 [Off]		This item is displayed, but cannot be monitored.
ENTER SW [On/Off]		Status of 📮 (ENTER) switch.
SELECT SW [On/Off]		Status of (SELECT) switch.

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	
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. NOTE: This may not match with the temperature value indicated on the information dis- play. (Because the information display value is a corrected value from the ambient sensor input value.)	B
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit via CAN com- munication.	D
TOW MODE IND [On/Off]		Status of TOW mode indicator lamp judged from TOW mode indicator lamp signal received from TCM with CAN communication line.	
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.	E

*: DDS (hill descent control)

NOTE:

Some items are not available according to vehicle specification.

WARNING HISTORY

- Stores histories when warning/indicator lamp is turned on.
- "Warning 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 Warning History: Stores NO (0) turning on history of warning/indicator lamp.

NOTE:

- Warning 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.	L
SLIP IND	Lighting history of VDC warning lamp.	
BRAKE W/L	Lighting history of brake warning lamp.	M
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.	WCS
CRUISE IND	Lighting history of CRUISE indicator lamp.	
SET IND	Lighting history of SET indicator lamp.	0
CRUISE W/L	Lighting history of CRUISE warning lamp.	
BA W/L	Lighting history of IBA OFF indicator lamp.	
ATC/T-AMT W/L	Lighting history of A/T CHECK warning lamp.	P
4WD W/L	Lighting history of 4WD warning 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.	

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< SYSTEM DESCRIPTION >

Display item	Description		
KEY G/Y W/L	Lighting history of KEY warning lamp.		
LANE W/L	Lighting history of lane departure warning lamp.		

NOTE:

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

< SYSTEM DESCRIPTION > DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

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APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	
Work Support	Changes the setting for each system function.	_
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-57, "DTC Index".	- D
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.	_
Data Monitor	The BCM input/output signals are displayed.	E
Active Test	The signals used to activate each device are forcibly supplied from BCM.	_
Ecu Identification	The BCM part number is displayed.	_
Configuration	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.	F

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.

				\times : Applicable item	
System	Sub system selection item	Diagnosis mode			
System	Sub System Selection liem	Work Support	Data Monitor	Active Test	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	
Interior room lamp timer	INT LAMP	×	×	×	
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×	×	×	
Turn signal and hazard warning lamps	FLASHER	×	×	×	
_	AIR CONDITONER*		×	×	
Intelligent Key systemEngine start system	INTELLIGENT KEY	×	×	×	
Combination switch	COMB SW		×		
Body control system	BCM	×			
IVIS	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		×	×	
	AIR PRESSURE MONITOR*	×	×	×	

*: This item is indicated, but 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		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (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" (Emer- gency stop operation)	
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"	
Vehicle Condition	OFF>ACC	Power position status of the moment a particular	While turning power supply position from "OFF" to "ACC"	
	ON>CRANK	DTC is detected	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" (Ignition switch OFF with steering is locked.)	
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)	
	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 The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 		

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:000000009012010

CONSULT APPLICATION ITEMS

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

DATA MONITOR

NOTE:

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

Display item [Unit]	Description		
PUSH SW Dn/Off]	Status of push-button ignition switch judged by BCM.		
JNLK SEN-DR On/Off]	Status of unlock sensor judged by BCM.		
/EH SPEED 1 km/h]	Value of vehicle speed signal received from combination meter with CAN communication line.		
AIL LAMP SW On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.		
R FOG SW On/Off]	tatus 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	G
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).	Н

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ECU DIAGNOSIS INFORMATION COMBINATION METER

Reference Value

INFOID:000000009313846

VALUES ON THE DIAGNOSIS TOOL

NOTE:

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

Monitor Item		Condition	Value/Status
SPEED METER [km/h]	Ignition switch ON	While driving	Input value of vehicle speed signal (CAN communication signal) NOTE: 655.35 is displayed when the malfunc- tion signal is received
SPEED OUTPUT [km/h]	Ignition switch ON	While driving	Output value of vehicle speed signal (CAN communication signal) NOTE: 655.35 is displayed when the malfunc- tion 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) NOTE: 8191.875 is displayed when the mal- function 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 tempera- ture signal (CAN communication sig- nal) NOTE: 215 is displayed when the malfunction signal is input
ABS W/L	Ignition switch	ABS warning lamp ON	On
	ON	ABS warning lamp OFF	Off
VDC/TCS IND	Ignition switch	VDC OFF indicator lamp ON	On
	ON	VDC OFF indicator lamp OFF	Off
SLIP IND	Ignition switch	VDC warning lamp ON	On
	ON	VDC warning lamp OFF	Off
BRAKE W/L	Ignition switch	Brake warning lamp ON	On
	ON	Brake warning lamp OFF	Off
DOOR W/L	Ignition switch	Door open warning ON	On
DOORWIE	ON	Other than the above	Off
HI-BEAM IND	Ignition switch	High-beam indicator lamp ON	On
	ON	High-beam indicator lamp OFF	Off
TURN IND	Ignition switch	Turn signal indicator lamp ON	On
	ON	Turn signal indicator lamp OFF	Off
FR FOG IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off

Monitor Item		Condition	Value/Status
RR FOG IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
	Ignition switch	Position lamp indicator lamp ON	On
LIGHT IND	ŎN	Position lamp indicator lamp OFF	Off
OII 14/4	Ignition switch	Oil pressure warning lamp ON	On
OIL W/L	ŎN	Oil pressure warning lamp OFF	Off
N 411	Ignition switch	Malfunction indicator lamp ON	On
MIL	ON	Malfunction indicator lamp OFF	Off
GLOW IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
	Ignition switch	CRUISE indicator ON	On
CRUISE IND	ŎN	CRUISE indicator OFF	Off
	Ignition switch	SET indicator ON	On
SET IND	ON	SET indicator OFF	Off
	Ignition switch	CRUISE warning lamp ON	On
CRUISE W/L	ON	CRUISE warning lamp OFF	Off
	Ignition switch	IBA OFF indicator lamp ON	On
BA W/L	ON	IBA OFF indicator lamp OFF	Off
	Ignition switch	A/T check warning lamp ON	On
ATC/T-AMT W/L	ON	A/T check warning lamp OFF	Off
ATF TEMP W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off
	Ignition switch	4WD warning lamp ON	On
4WD W/L	ON	4WD warning lamp OFF	Off
	Ignition switch	During low fuel warning indication	On
FUEL W/L	ON	Other than the above	Off
	Ignition switch	During low washer fluid warning indication	On
WASHER W/L	ON	Other than the above	Off
	Ignition switch	Low tire pressure warning lamp ON	On
AIR PRES W/L	ON	Low tire pressure warning lamp OFF	Off
	Ignition switch	KEY warning lamp (Green/Yellow) ON	On
KEY G/Y W/L	ON	KEY warning lamp (Green/Yellow) OFF	Off
KEY KNOB W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
	Ignition switch	AFS OFF indicator lamp ON	On
AFS OFF IND	ŎN	AFS OFF indicator lamp OFF	Off
DDS W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off
LANE W/L	Ignition switch	Lane departure warning lamp ON	On
LAINE W/L	ŌN	Lane departure warning lamp OFF	Off
	Ignition switch	LDP ON indicator lamp ON	On
LDP IND	ŎN	LDP ON indicator lamp OFF	Off

Monitor Item		Condition	Value/Status
ATP W/L	Ignition switch	ATP warning lamp ON	On
/	ON	ATP warning lamp OFF	Off
DCA IND	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off
CHECK SUS IND	Ignition switch	CK SUSP indicator lamp ON	On
CHECK 303 IND	ON	CK SUSP indicator lamp OFF	Off
	Ignition switch ON	During engine start information indication	B&P I
	Ignition switch ACC	During engine start information indication	B&P N
	Ignition switch LOCK	During key ID warning indication	ID NG
	Ignition switch LOCK	During steering lock information indication	ROTAT
LCD	Ignition switch LOCK	During P position warning indication	SFT P
	Ignition switch LOCK	During Intelligent Key insert information in- dication	INSRT
	Ignition switch LOCK	During Intelligent Key low battery warning indication	BATT
	Ignition switch ON	During take away warning indication	NO KY
	Ignition switch LOCK	During key warning indication	OUTKY
	Ignition switch ON	During ACC warning indication	LK WN
ACC TARGET	Ignition switch ON	During vehicle ahead detection indicator in- dication	On
	ON	Other than the above	Off
		When following distance set to "LONG"	LONG
ACC DISTANCE	Ignition switch	When following distance set to "MIDDLE"	MID
ACC DISTANCE	ON	When following distance set to "SHORT"	SHORT
		Set distance indicator not displayed	Off
ACC OWN VHL	Ignition switch	During own vehicle indicator indication	On
	ON	Other than the above	Off
	Ignition switch	During set vehicle speed indicator not dis- played	Off
ACC SET SPEED	ŎN	During set vehicle speed indicator dis- played	Indicates the set vehicle speed
ACC UNIT	Ignition switch	Set vehicle speed indicator unit display ON	On
	ON	Set vehicle speed indicator unit display OFF	Off

Monitor Item		Condition	Value/Status	
		During the indication of "P" by shift position indicator	Ρ	
		During the indication of "R" by shift position indicator	R	-
		During the indication of "N" by shift position indicator	Ν	-
		During the indication of "D" by shift position indicator	D	-
		During the indication of "M1" by shift posi- tion indicator	M1	-
SHIFT IND	Ignition switch ON	During the indication of "M2" by shift posi- tion indicator	M2	-
		During the indication of "M3" by shift posi- tion indicator	М3	
		During the indication of "M4" by shift posi- tion indicator	M4	
		During the indication of "M5" by shift posi- tion indicator	M5	-
		During the indication of "M6" by shift posi- tion indicator	M6	-
		During the indication of "M7" by shift posi- tion indicator	M7	-
		4WD shift switch in AUTO position	AUTO	•
IWD IND	Ignition switch ON	4WD shift switch in 4H position	LOCK	·
	ON	4WD shift switch in 4L position	LOCK/4Lo	-
	Ignition switch	Blind Spot Intervention ON indicator (green) ON	On	
BSW IND	ŎN	Blind Spot Intervention ON indicator (green) OFF	Off	-
	Ignition switch	Blind Spot Warning/Blind Spot Intervention warning lamp (yellow) ON	On	-
BSW W/L	ŎN	Blind Spot Warning/Blind Spot Intervention warning lamp (yellow) OFF	Off	-
	Ignition switch	Fuel filler cap warning display ON	On	•
FUEL CAP W/L	ŎN	Fuel filler cap warning display OFF	Off	-
	Ignition switch	Snow mode switch ON	On	-
AT S MODE SW	ŎN	Snow mode switch OFF	Off	-
	Ignition switch	Selector lever in manual mode position	On	
A RANGE SW	ON	Other than the above	Off	
	Ignition switch	Selector lever in manual mode position	Off	-
NM RANGE SW	ON	Other than the above	On	-
	Ignition switch	Selector lever in + position	On	-
AT SFT UP SW	ON	Other than the above	Off	-
	Ignition switch	Selector lever in – position	On	-
AT SFT DWN SW	ON	Other than the above	Off	-
	Ignition owitch	Parking brake switch ON	On	-
PKB SW	Ignition switch ON	Parking brake switch OFF	Off	-
BUCKLE SW	Ignition switch	Driver seat belt not fastened	On	-
	Ignition switch ON	Driver seat belt fastened	Off	-

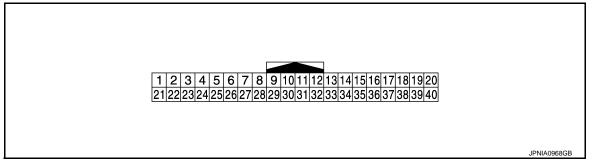
< ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Value/Status
BRAKE OIL SW	Ignition switch	Brake fluid level switch ON	On
BRARE OIL SW	ON	Brake fluid level switch OFF	Off
A/C AMP CONN	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
TOW MODE IND	Ignition switch	TOW mode indicator lamp ON	On
	ON	TOW mode indicator lamp OFF	Off
ENTER SW	Ignition switch	When 🗖 switch (enter switch) is pressed	On
	ON	Other than above	Off
SELECT SW	Ignition switch ON	When switch (select switch) is pressed	On
011101 011		Other than above	Off
DISTANCE [km]	Ignition switch ON	_	Distance to empty calculated by com- bination meter
OUTSIDE TEMP [°C or °F]	Ignition switch ON	_	Equivalent to ambient temperature NOTE: This may not match the indicated value on the information display.
FUEL LOW SIG	Ignition switch	During low fuel warning indication	On
FUEL LOW SIG	ŎN	Other than above	Off
BUZZER	Ignition switch	Buzzer ON	On
BUZZER	ON	Buzzer OFF	Off

NOTE:

Some items are not available according to vehicle specification.

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
2 (GR)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
3 (B)	Ground	Ground	_	Ignition switch ON	_	0 V

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description			Condition	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
7 (R)	Ground	TOW mode signal	Input	Ignition switch	When TOW mode switch is pressed	0 V	
(14)				ON	Other than the above	12 V	
8 (P/L)	Ground	Trip reset switch signal	Input	Ignition switch	When trip reset switch is pressed	0 V	
()				ON	Other than the above	5 V	
11 (G)	Ground	Enter switch signal	Input	Ignition switch	When 🖬 switch (enter switch) is pressed	0 V	
(0)				ON	Other than the above	5 V	
12 (O)	Ground	Select switch signal	Input	Ignition switch	When switch (select switch) is pressed	0 V	
(0)				ON	Other than the above	5 V	
13 (W/R)	Ground	Illumination control switch signal (+)	Input	Ignition switch ON	When C [*] + switch [illumi- nation control switch (+)] is pressed	0 V	
					Other than the above	5 V	
14 (R)	Ground	Illumination control switch signal (-)	Input	Ignition switch ON	When Source (illumi- nation control switch (–)] is pressed	0 V	
				ON	Other than the above	5 V	
15	Ground	Air bag signal	Input	Ignition switch	Air bag warning lamp ON	4 V	
(R/W)	Cround		input	ON	Air bag warning lamp OFF	0 V	
18 (W/R)	Ground	Ambient sensor signal	Input		_	(V) 4 3 2 1 0 -10 (14) (32) (50) (68) (86) (104) [(°F)] JSNIA0014GB	
19	Ground	A/C auto amp. connection	Input	_	When A/C auto amp. is connected	5 V	
(V/W)		recognition signal			Other than the above	0 V	
20 (B)	Ground	Ambient sensor ground	_	Ignition switch ON	_	0 V	ľ
21 (L)		CAN-H	_		_	_	
22 (P)		CAN-L	_		_	_	
23 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
24 (V)	Ground	Fuel level sensor ground	_	Ignition switch ON	_	0 V	

Revision: 2013 September

	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
25				Ignition	Charge warning lamp ON	2 V
(O/L)	Ground	Alternator signal	Input	switch ON	Charge warning lamp OFF	Battery voltage
26	Cround	Darking broke switch signal	lanut	Ignition	Parking brake applied	0 V
(W)	Ground	Parking brake switch signal	Input	switch ON	Parking brake released	12 V
28				Ignition	Security indicator lamp ON	0 V
(GR/R)	Ground	Security signal	Input	switch ON	Security indicator lamp OFF	12 V
29	Oneveral		lanut	Ignition	Washer level switch ON	0 V
(BR)	Ground	Washer level switch signal	Input	switch ON	Washer level switch OFF	5 V
30 (SB)	Ground	Vehicle speed signal (2-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).
31 (BR/W)	Ground	Vehicle speed signal (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies de- pending on the specification (destination unit). 0 0 0 20 ms JSNIA0012GB
33	Ground	SNOW mode signal	Input	Ignition switch	When SNOW mode switch is pressed	12 V
(W)	Cround		mput	ON	Other than the above	0 V
34 (BR/Y)	Ground	Fuel level sensor signal	Input	Ignition switch ON		(V) 9 8 7 6 0 1/4 1/2 3/4 1 JSNIA3013ZZ
35	0	Seat belt buckle switch sig-	1. <i>i</i>	Ignition	When driver side belts is fastened	12 V
(O/B)	Ground	nal (driver side)	Input	switch ON	When driver side belts is unfastened	0 V

< ECU DIAGNOSIS INFORMATION >

	nal No. e color)	Description			Condition	Value		
+	-	Signal name	Input/ Output		Condition	(Approx.)		
36	Ground	Passenger seat belt warn-	Input	Ignition	 When driver side seat belt fastened When getting in the pas- senger seat When passenger seat belt fastened 	12 V		
(G/Y)	Giound	ing signal	mput	ON	 When driver side seat belt fastened When getting in the pas- senger seat When passenger seat belt unfastened 	0 V		
37 (R/Y)	Ground	Non-manual mode signal	Input	Ignition switch	Selector manual mode po- sition	12 V		
(10/1)						ON	Other than the above	0 V
38 (L/W)	Ground	Manual mode shift down signal	Input	Ignition switch	Selector lever DOWN oper- ation	0 V		
(Ľ/٧٧)		Sigilai		ON	Other than the above	12 V		
39	_	Manual mode shift up sig-	_	Ignition	Selector lever UP operation	0 V		
(Y/B)	Ground	nal	Input	switch ON	Other than the above	12 V		
40 (G/W)	Ground	Manual mode signal	Input	Ignition switch	Selector manual mode po- sition	0 V		
(3/11)				ON	Other than the above	12 V		

Fail-Safe

INFOID:000000009313847

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FAIL-SAFE

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

	Function	Specifications	
Speedometer			
Tachometer		Reset to zero by suspending communication.	
Engine coolant temperate	ure gauge	Reset to zero by suspending communication.	
Engine oil pressure gauge			
Illumination control		When suspending communication, changes to nighttime mode.	
	Odo/trip meter	An indicated value is maintained at communications blackout.	
	Shift position indicator	The display turns OFF by suspending communication.	
Information display	Door open warning		
Fuel filler cap warning		The display turns OFF by suspending communication.	
	Low tire pressure warning		
Buzzer	· · ·	The buzzer turns OFF by suspending communication.	

< ECU DIAGNOSIS INFORMATION >

	Function	Specifications		
	ABS warning lamp			
	VDC warning lamp			
	Brake warning lamp			
	IBA OFF indicator lamp	The large terms ON because a diag a support of the		
	4WD warning lamp	The lamp turns ON by suspending communication.		
	Malfunction indicator lamp			
	VDC OFF indicator lamp			
	CRUISE warning lamp			
	Low tire pressure warning lamp	The lamp blinking caused by suspending communication.		
	High beam indicator lamp			
	Turn signal indicator lamp			
	Position lamp indicator lamp			
Warning lamp/indicator lamp	A/T CHECK indicator lamp			
	Key warning lamp			
	ATP warning lamp			
	Lane departure warning lamp			
	LDP ON indicator lamp	The lamp turns OFF by suspending communication.		
	CRUISE indicator lamp			
	Oil pressure warning lamp			
	SNOW mode indicator lamp			
	TOW mode indicator lamp			
	CK SUSP indicator lamp			
	Blind Spot Intervention ON indicator			
	Blind Spot Warning/Blind Spot Inter- vention warning lamp			

DTC Index

INFOID:000000009313848

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.	<u>MWI-61.</u> "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	When detecting error during the initial diagnosis of the CAN controller of combina- tion meter.	<u>MWI-62,</u> "Diagnosis Procedure"
VEHICLE SPEED [B2205]	The abnormal vehicle speed signal is input from the ABS actuator and electric unit (control unit) for 2 seconds or more.	<u>MWI-63.</u> "Diagnosis Procedure"
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	<u>MWI-64.</u> " <u>Diagnosis</u> <u>Procedure"</u>
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	<u>MWI-65.</u> "Diagnosis Procedure"

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:000000009012014

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Reference	
BCS-35, "Reference Value"	
BCS-56, "Fail-safe"	С
BCS-57, "DTC Inspection Priority Chart"	
BCS-57, "DTC Index"	D
	BCS-35, "Reference Value" BCS-56, "Fail-safe" BCS-57, "DTC Inspection Priority Chart"

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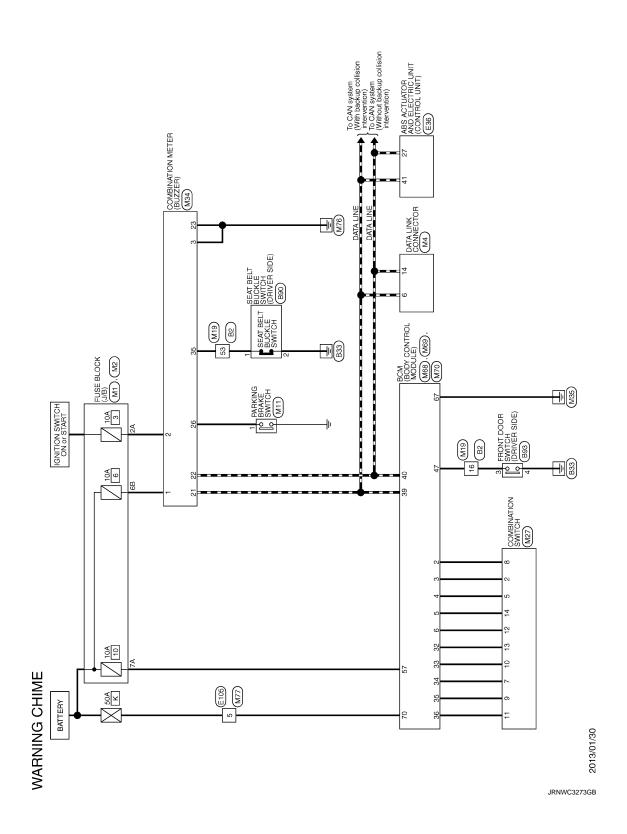
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WIRING DIAGRAM WARNING CHIME SYSTEM

Wiring Diagram

INFOID:000000009012015



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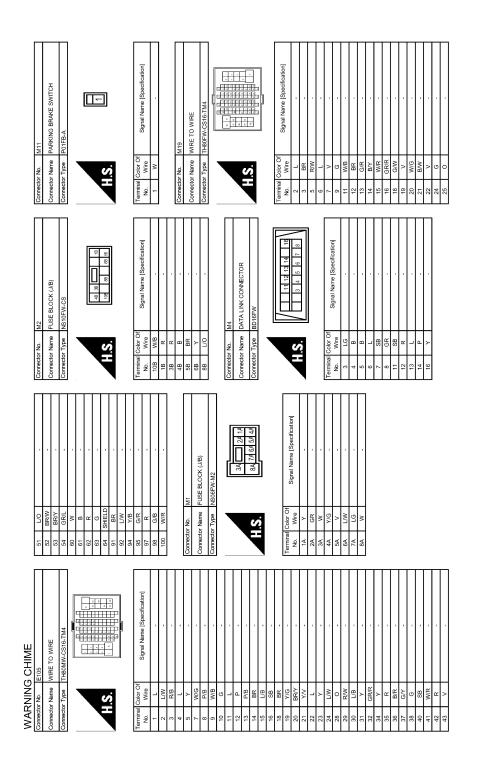
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JRNWC5790GB



JRNWC5791GB

M68 BCM (BODY CONTROL MODULE) TH40FB.NH (1400FB.NH	Signal Name (Speofication) COMBI SWI NPUT 5 COMBI SWI NPUT 2 COMBI SWI NPUT 1 PPOWER VINNOUV SWI COMM COMBI SWI NPUT 2 COMBI SWI NPUT 1 MITS ANT AMP WITS ANT AMP MITS ANT ANT AMP MITS ANT AMP ANT ANT ANT AMP MITS
etor No. M68 etor Name BCM (BOD) etor Type TrH0FB-NH	
Connector No. Connector Name Connector Type	Terminal Clar Ol Terminal Clar Ol Terminal Clar Ol Mine 2 B MVT Mine 2 1 1 2 3 3 3 3 3 3 3 3 3 3 3 3 3 4
M34 COMBINATION METER TH40PW-NH TH40PW-NH	Signal Name [Specification] BATTERY POWER SUPPLY IGNIDO SIGNAL ILL CONTROL UNFUT TOWNOS ISONAL ILL CONTROL UNFUT TOWNODE SIGNAL ILL CONTROL UNFUT TOWNODE SIGNAL ILL CONTROL SIGNAL ILLAMWICH SIGNAL AIBLENT SENSOR SIGNAL AIBLENT SENSOR SIGNAL AMBIENT SENSOR SIGNAL AMMULAL MODE SIGNAL MANALAL MODE SIGNAL
Connector No. Connector Name Connector Type	Terminal M. Color Of Ware Color Of Magnetic Color Of Magnetic Color Of Magnetic Color Of Magnetic Col
	4 4 1 2 3 3 3 3 3 3 3 3 3 3 3 3 3
	M27 COMBINATION SWITCH THIEPWATH Sgrati Name (Specification) CUTPUT 4 CUTPUT 5 NepUT 4 NepUT 4 NepUT 1 OUTPUT 5 NepUT 5 NepUT 5 NepUT 1 NepUT 5 NepUT 1 NepUT 5 NepUT 1 NepUT 1 NepUT 5 NepUT 1 NepUT 5 NepUT 1 NepUT
WIR WIL WIL WIR UW R R R R R R R R R R R R R R R R R R	
88 90 91 94 98 98 99 99 90 90 90 90 90 90 90 90 90 90 90	Commedia Commed
WARNING CHIME	
WAF 26 26 27 28 33 33 33 33 33 33 33 33 33 33 33 33 33	38 39 41 41 42 44 44 44 45 45 55 55 56 55 57 73 73 55 56 55 57 73 73 73 73 55 56 55 57 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 73 74 74 74 74 74 74 74 74 74 74 74 74 <

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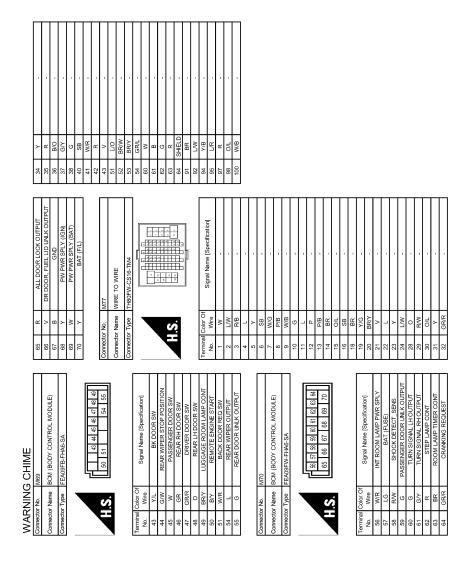
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WCS

< WIRING DIAGRAM >



JRNWC5793GB

< BASIC INSPECTION >

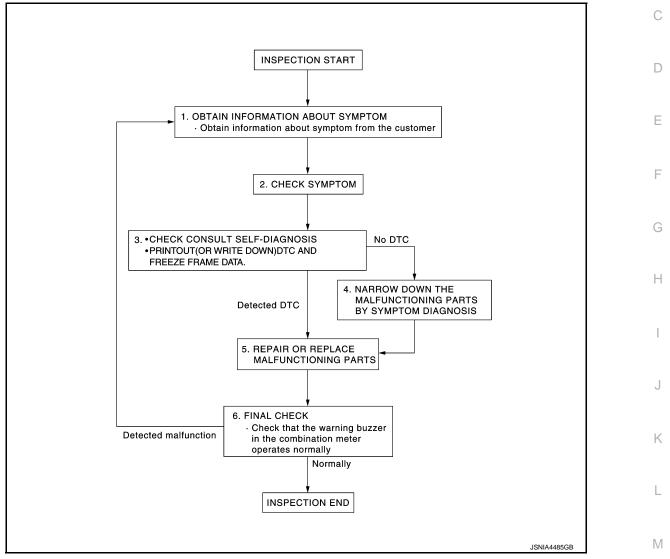
BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000000012016

А

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.

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-44, "DTC Index".

WCS

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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

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

Does it operate normally?

YES >> INSPECTION END NO >> GO TO 1.

< DTC/CIRCUIT	_	R SUPPLY	AND GROUN	D CIRCUIT	
		GNOSIS			
COMBINATI			Sincon		
	-	Nognacia Dr	aadura		
	ON METER : [Jagnosis Pro	ocedure		INFOID:000000009313849
1.CHECK FUSI	E				(
Check for blown	fuses.				
	Power source			Fuse No.	
	Battery			6	
Is the inspection	Ignition switch ON or	START		3	
YES >> GO NO >> Be s 2.CHECK POW	TO 2. sure to eliminate ca /ER SUPPLY CIR(CUIT	tion before installin		
		n meter names	s connector and g		(
	Terminals		_		
	(+) ation meter	(-)	Ignition switch po- sition	Voltage (Approx.)	
Connector	Terminal				
M34	1	Ground	OFF	Pottory voltage	
10134	2		ON	Battery voltage	
Is the inspection YES >> GO NO >> Che 3. CHECK GRO 1. Turn ignition	TO 3. ck harness betwee PUND CIRCUIT	en combination r	meter and fuse.		
 Disconnect of Check contin 	combination meter		narness connector	and ground.	
Connector	Terminal	-	Continuity		I
M34	3 23	Ground	Existed		V
	result normal? PECTION END air harness or con	nector.			

< DTC/CIRCUIT DIAGNOSIS >

METER BUZZER CIRCUIT

Component Function Check

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 <u>BCS-95, "Removal and Installation"</u>.

Diagnosis Procedure

INFOID:000000009012019

INFOID:000000009012018

1.CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to <u>MWI-66, "COMBINATION METER : Diagnosis Proce-</u> dure".

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair power supply circuit of combination meter.

DTC/CIRCL			тон с	GIGNAL CIRCU	ШΤ	
			10110		/11	
Componen	t Functio	on Check				INFOID:000000009012020
1.снеск со	OMBINATIC	N METER II	NPUT SIG	GNAL		
Select the "Da	ita Monitor"	for the "MET	ER/M&A	" and check the "BUC	CKLE SW" monitor va	lue.
BUCKLE	E SW					
	eat belt is faste eat belt is unfa					
>> IN	ISPECTION	NEND				
Diagnosis	Procedu	re				INFOID:00000000901202
1.снеск со	OMBINATIC	N METER II	NPUT SIG	GNAL		
	on switch C				un el europue el	
2. Check vol	tage betwe	en combinat	ion meter	harness connector a	ina grouna.	
	Terminals					-
(+)		(-)	-	Condition	Voltage (Approx.)	
Combinatio Connector	on meter Terminal				(Approx.)	
		Ground	When driv	ver seat belt is fastened	12 V	-
M34	M34 35 Whe		When driv	ver seat belt is unfastened	0 V	-
	eplace com O TO 2.	bination met		to <u>MWI-87, "Remova</u> CUIT	I and Installation".	
2. Disconneo	ntinuity betw	ion meter co			witch (driver side) con or and seat belt buckle	
Con	nbination mete		Seat be Conne	elt buckle switch (driver sid	Continuity	
M34		erminal 35	B90		Existed	
I. Check ha	rness conti	nuity betwee	n combina	ation meter harness of	connector and ground	
	Combinatior	meter				
Connector Terminal		Ground	Continuity			
M34		35			Not existed	
	<u>on result no</u> O TO 3. epair harne		tor			

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Seat belt buckle s	witch (driver side)		Continuity	
Connector	Terminal	Ground		
B90	2		Existed	
s the inspection result	normal?			
	_			

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

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
1	2	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 <u>SB-8</u>, "<u>SEAT BELT BUCKLE</u> : <u>Removal and Instal-</u> lation".

INFOID:000000009012022

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRC							
PARKIN	G BRAK	ESWI	ICH SIG	GNAL CIRCUIT			А
Diagnosis	Diagnosis Procedure					INFOID:000000009012023	
1. CHECK (COMBINATI	ON METE		SIGNAL			В
	hition switch he voltage b		ombination	meter harness connector a	and ground.		С
(-	+)	(–)	Voltage		Voltage		
	tion meter			Condition	(Approx.)		D
Connector	Terminal	Ground		M/han madium hasha is ann liad	0.1/		
M34	26		Ignition switch ON	When parking brake is applied When parking brake is released	0 V 12 V		Е
Is the inspec	ction result r	normal?		האונה אמוניו אימור וא ובובמשבע	12 V		
-	INSPECTIC						
-	GO TO 2.						F
2.CHECK	PARKING B	RAKE SW	ITCH SIG	NAL CIRCUIT			
	nition switch		roonnooto	r and parking brake awitch	aannaatar		G
				r and parking brake switch meter harness connector a		witch harness con-	
nector.							Н
	Termi						
Combinat	tion meter		brake switch	Continuity			
Connector	Terminal	Connector					I
M34	26	M11	1	Existed			
4. Check of	continuity be	tween cor	nbination r	neter harness connector an	d ground.		J
	Terminals	[_				Κ
	tion meter		Continuit	у			
Connector	Terminal	Ground	Not oviete				
M34 Is the inspec	26	ormal?	Not existe	ed			L
	INSPECTIC						
-	Repair harn		nnector.				M
Compone	ent Inspec	ction				INFOID:000000009012024	
	-		"TOL			V	٧C
			_	07.00			
-	-		r to <u>BRC-1</u>	27, "Component Inspection	<u></u>		~
<u>Is the inspection result normal?</u> YES >> INSPECTION END.				0			
			e switch. R	efer to PB-5, "Exploded Vie	<u>ew"</u> .		
							Ρ

THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:000000009012025

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

Diagnosis Procedure

INFOID:000000009012026

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 <u>EXL-112, "Symptom Table"</u>.

2.check driver side door switch signal circuit

Perform the check for the driver side door switch signal circuit. Refer to <u>DLK-119</u>, "<u>Diagnosis Procedure</u>". <u>Is the inspection result normal?</u>

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 <u>DLK-120, "Component Inspection"</u>. <u>Is the inspection result normal?</u>

YES >> Replace BCM. Refer to <u>BCS-95, "Removal and Installation"</u>.

NO >> Replace driver side door switch. Refer to <u>DLK-260, "Removal and Installation"</u>.

THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND < SYMPTOM DIAGNOSIS >

THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

SOUND	
Description INFOID:00000000012027	В
Seat belt warning chime does not sound.Seat belt warning chime sounds continuously.	
Diagnosis Procedure	С
1.CHECK SEAT BELT WARNING LAMP	
 Turn ignition switch ON. Check the operation of the seat belt warning lamp in the combination meter. 	D
Seat belt fastened : OFF Seat belt not fastened : ON	E
Is the inspection result normal? YES >> GO TO 2.	F
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 :	G
<u>CONSULT Function (BCM - BUZZER)"</u> . <u>Is the inspection result normal?</u> YES >> INSPECTION END	Н
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,	I
"CONSULT Function".	J
Buzzer active condition: OnBuzzer non-active condition: Off	IZ.
Is the inspection result normal?	K
YES >> Replace combination meter. Refer to <u>MWI-87, "Removal and Installation"</u> . NO >> Replace BCM. Refer to <u>BCS-95, "Removal and Installation"</u> .	L
4. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) CIRCUIT Perform the check for the seat belt buckle switch (driver side) circuit. Refer to WCS-41,	
"Diagnosis Procedure". Is the inspection result normal?	Μ
YES >> GO TO 5. NO >> Repair harness or connector.	WCS
5. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)	
Perform a unit check for the seat belt buckle switch (driver side). Refer to <u>WCS-42, "Component Inspection"</u> . Is the inspection result normal?	0
 YES >> Replace combination meter. Refer to <u>MWI-87, "Removal and Installation"</u>. NO >> Replace seat belt buckle (driver side). Refer to <u>SB-8, "SEAT BELT BUCKLE : Removal and Installation"</u>. 	Ρ

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

< SYMPTOM DIAGNOSIS >

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

Description

INFOID:000000009012029

- 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:000000009012030

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 <u>MWI-87, "Removal and Installation"</u>

NO >> GO TO 2.

2. CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

Perform check for the parking brake switch signal circuit. Refer to <u>WCS-43, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

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 <u>WCS-43, "Component Inspection"</u>. Is the inspection result normal?

YES >> Replace combination meter. Refer to <u>MWI-87, "Removal and Installation"</u>

NO >> Replace parking brake switch. Refer to <u>PB-5</u>, "Exploded View".