SECTION WCS
WARNING CHIME SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000010726641

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.

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:

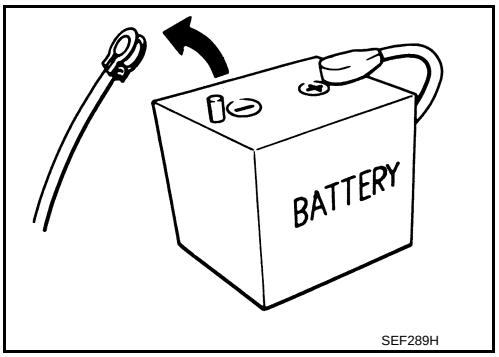
Always observe the following items for preventing accidental activation.

- **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.**

Precautions for Removing Battery Terminal

INFOID:0000000010726642

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  NOTE:
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage 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.



SEF289H

HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.
CAUTION:
After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
NOTE:
At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.
CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.
6. Remove 12V battery terminal.
CAUTION:
After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

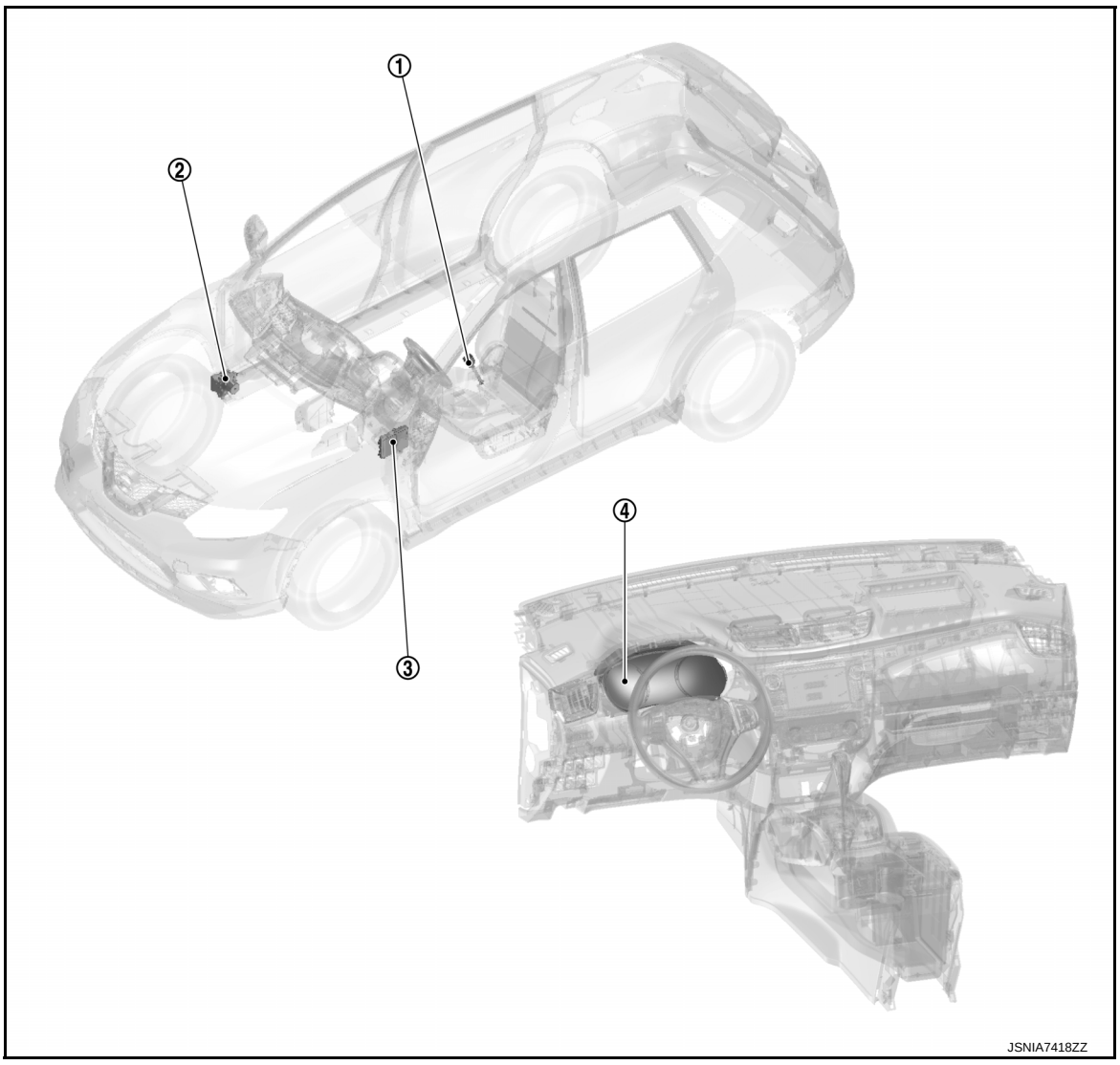
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

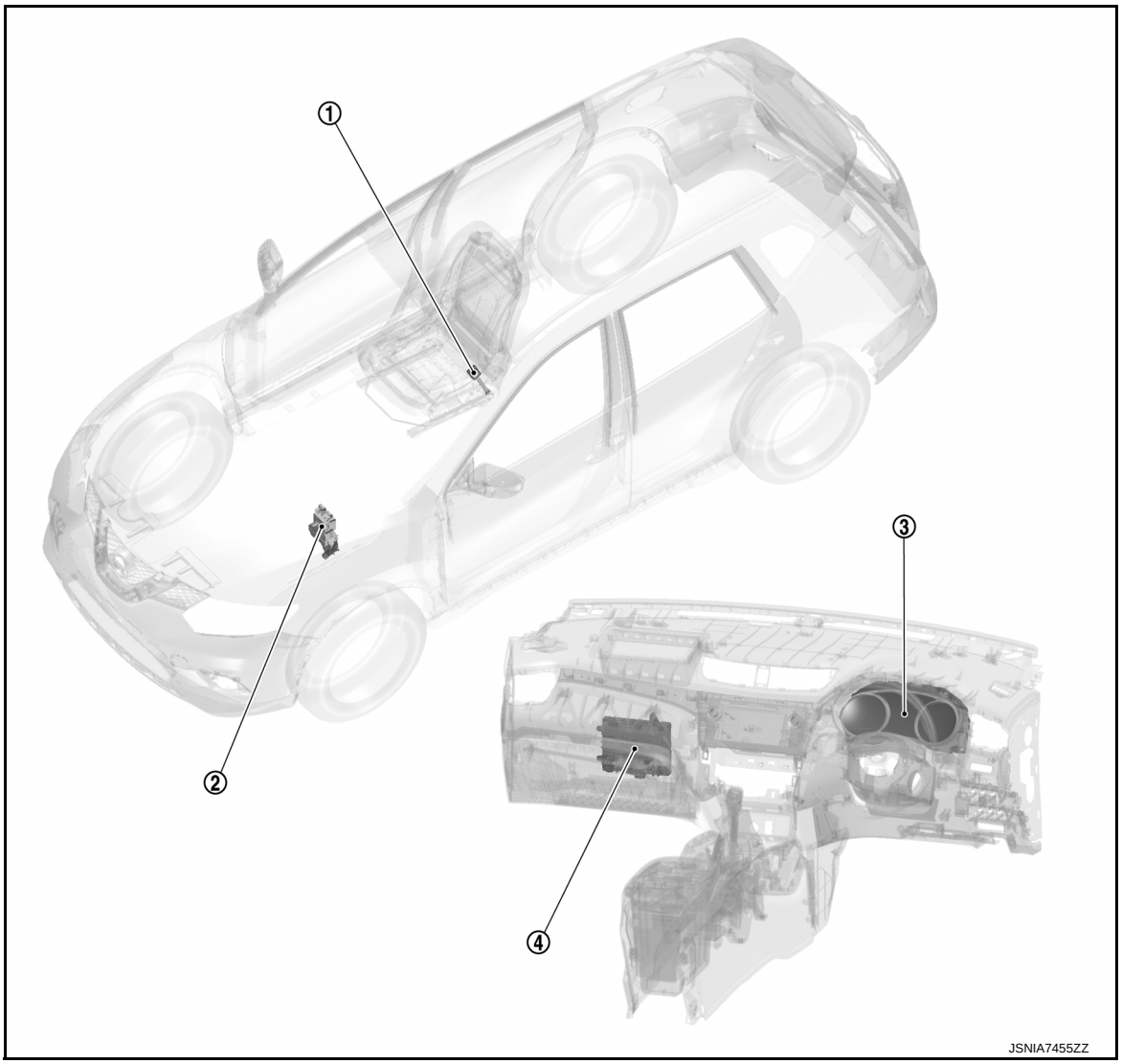
INFOID:0000000010726620

LHD MODELS



No.	Component	Function
①	Seat belt buckle switch (driver side)	Transmits a seat belt buckle switch signal (driver side) to the combination meter.
②	ABS actuator and electric unit (control unit)	• Transmits the vehicle speed signal to the combination meter via CAN communication. • Refer to BRC-14, "Component Parts Location" for detailed installation location.
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 BCS-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
④	Combination meter	Controls the seat belt warning chime with the vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication and the seat belt buckle switch signal (driver side) from seat belt buckle switch (driver side).

RHD MODELS



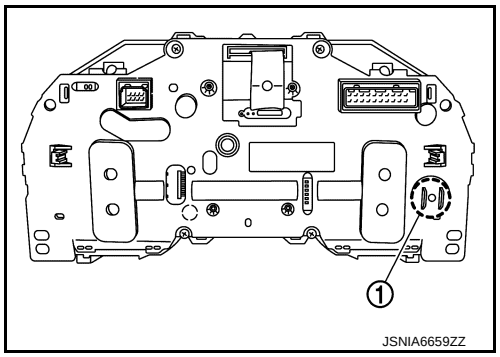
No.	Component	Function
①	Seat belt buckle switch (driver side)	Transmits a seat belt buckle switch signal (driver side) to the combination meter.
②	ABS actuator and electric unit (control unit)	• Transmits the vehicle speed signal to the combination meter via CAN communication. • Refer to BRC-14, "Component Parts Location" for detailed installation location.
③	Combination meter	Controls the seat belt warning chime with the vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication and the seat belt buckle switch signal (driver side) from seat belt buckle switch (driver side).
④	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 BCS-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.

Combination Meter

INFOID:0000000010726621

The combination meter has a built-in buzzer ① and sounds the following warnings, according to signals from each switch and unit.

- Door lock operation warning
- Key warning chime
- Light reminder warning
- OFF position warning
- P position warning
- Seat belt warning
- Stop/Start warning
- Take away warning



SYSTEM
WARNING CHIME SYSTEM
WARNING CHIME SYSTEM : System Description

INFOID:0000000010726622

DESCRIPTION

Combination Meter
The combination meter sounds the alarm buzzer installed in the combination meter when receiving the buzzer output signal transmitted from each unit.

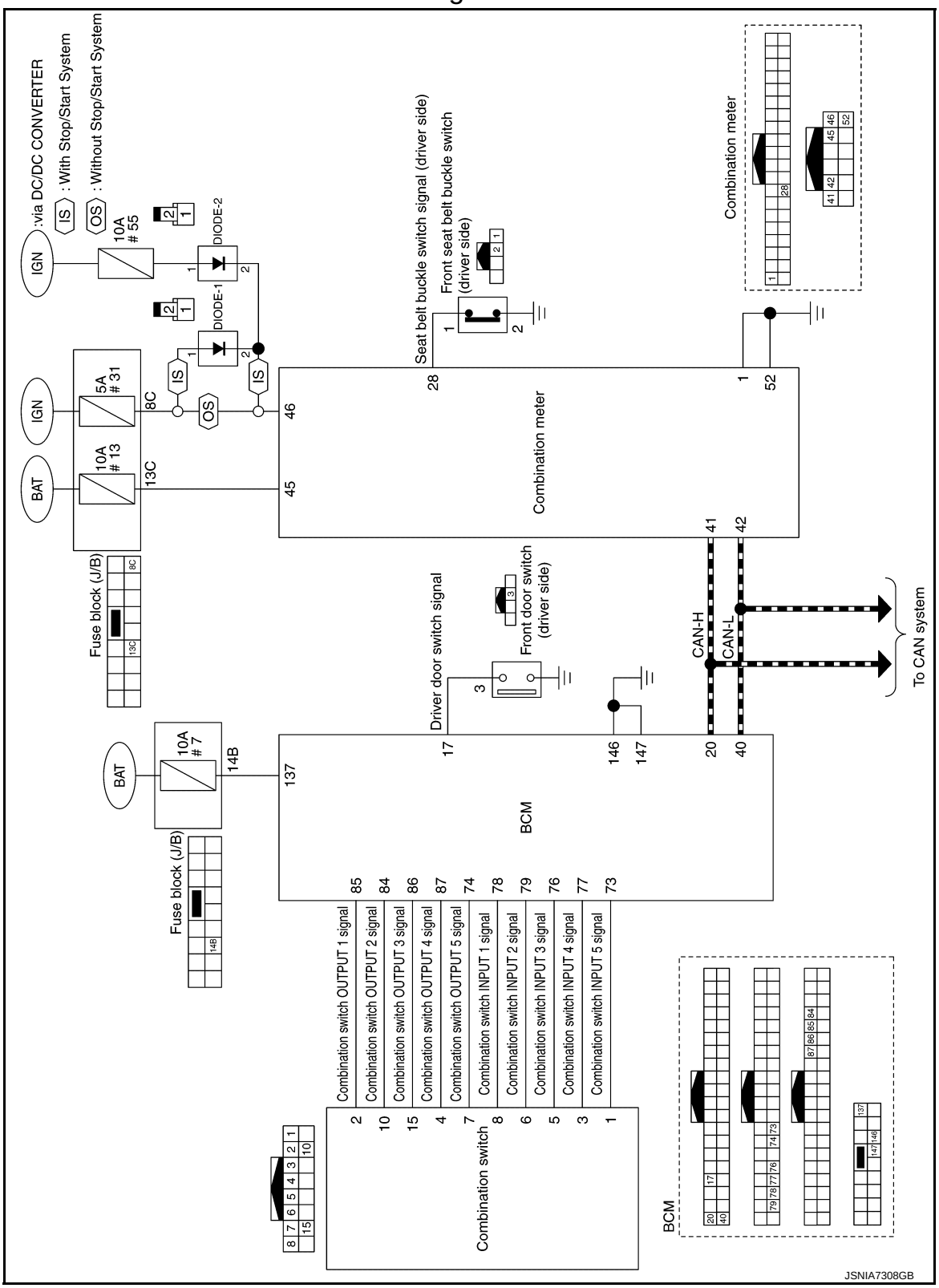
BCM
BCM receives signals from various units and transmits a buzzer output signal to the combination meter via CAN communication if it judges that the warning buzzer should be activated.

WARNING CHIME FUNCTION LIST

Warning functions	Reference
Door lock operation warning	WCS-10, "WARNING CHIME : Door Lock Operation Warning"
Key warning chime	WCS-11, "WARNING CHIME : Key Warning Chime (Without Intelligent Key System)"
Light reminder warning	WCS-12, "WARNING CHIME : Light Reminder Warning (Buzzer)"
OFF position warning	WCS-13, "WARNING CHIME : OFF Position Warning"
P position warning	WCS-15, "WARNING CHIME : P Position Warning (Buzzer)"
Seat belt warning	WCS-17, "WARNING CHIME : Seat Belt Warning"
Stop/Start warning	WCS-18, "WARNING CHIME : Stop/Start warning"
Take away warning	WCS-20, "WARNING CHIME : Take Away Warning (Buzzer)"

WARNING CHIME SYSTEM : Circuit Diagram

INFOID:0000000010726623



WARNING CHIME SYSTEM : Fail-Safe

INFOID:0000000010726624

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.

WARNING CHIME

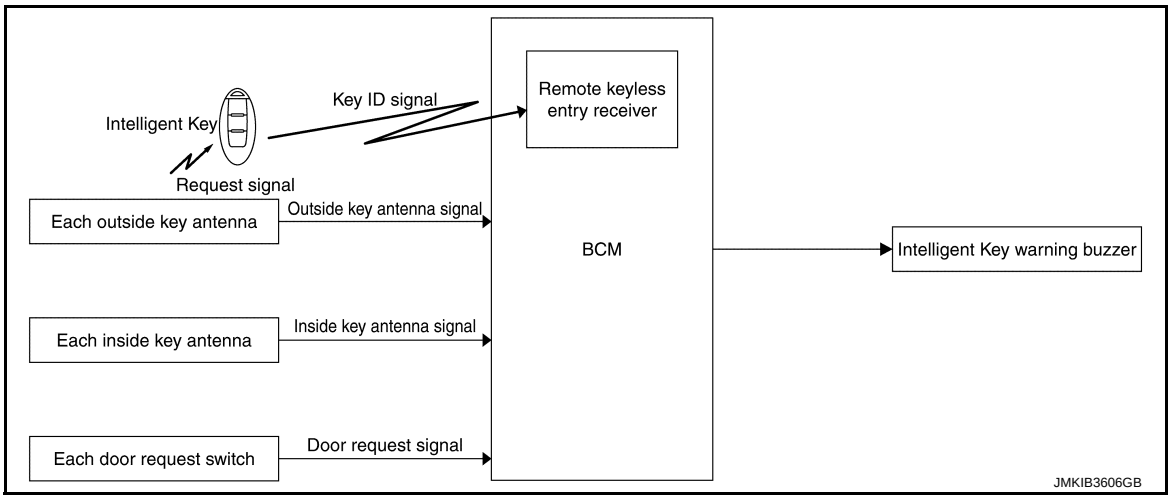
WARNING CHIME : Door Lock Operation Warning

INFOID:0000000010713024

PURPOSE

Door lock operation warning warns the driver that door cannot be locked because of inappropriate operation, when door lock operation using Intelligent Key button operation or door request switch is not performed normally.

SYSTEM DIAGRAM



SIGNAL PATH

- BCM judges whether or not warning the driver is required, according to each switch signal, inside key antenna signal and outside key antenna signal.
- When BCM judges that warning the driver is required, Intelligent Key warning buzzer operates.

WARNING OPERATING CONDITION

All doors do not lock using Intelligent Key or each door request switch.

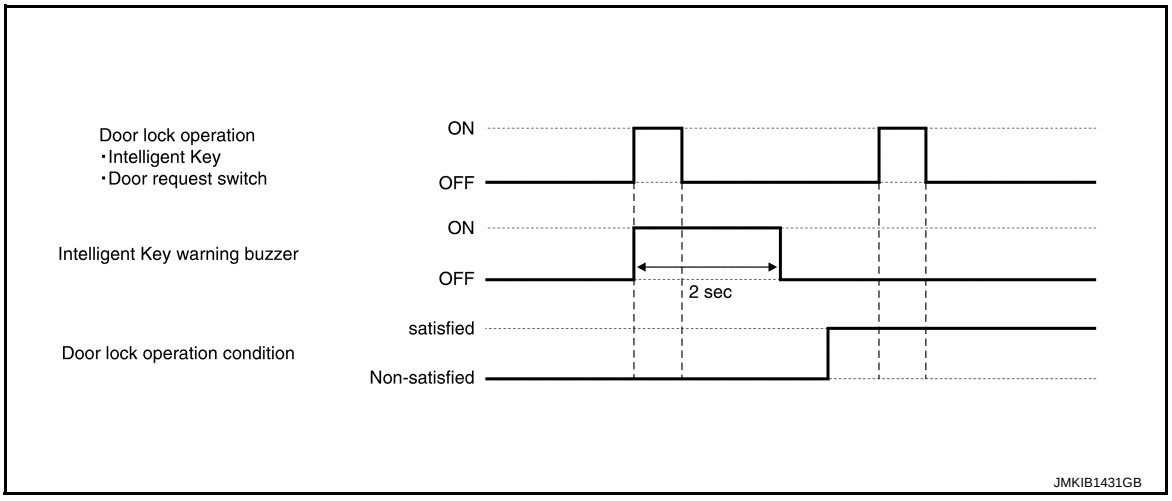
- Intelligent Key operation condition
  Refer to DLK-47, "REMOTE KEYLESS ENTRY FUNCTION : System Description".
- Door request switch operation condition
  Refer to DLK-42, "DOOR LOCK FUNCTION : System Description".

WARNING CANCEL CONDITION

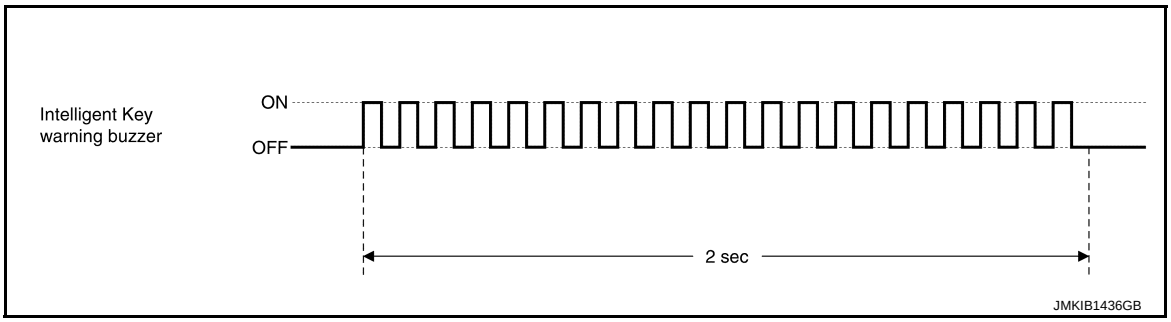
When any of the following conditions are satisfied.

- 2 seconds are passed.
- All doors are locked or unlocked by Intelligent Key or each door request switch

TIMING CHART



SOUND SPECIFICATION



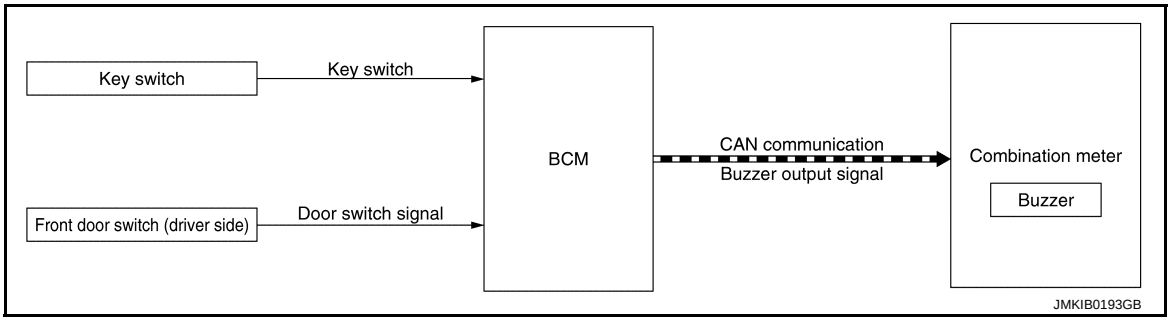
WARNING CHIME : Key Warning Chime (Without Intelligent Key System)

INFOID:0000000010713025

PURPOSE

Key warning chime warns the driver of egression from the vehicle while ignition key is inserted into ignition key cylinder.

SYSTEM DIAGRAM



SIGNAL PATH

- BCM judges whether or not warning the driver is required, according to key switch signal from key switch and door switch signal from front door switch (driver side).
- When BCM judges that warning the driver is required, buzzer output signal is transmitted by BCM to combination meter via CAN communication.
- When combination meter receives buzzer output signal, warning buzzer operates.

WARNING OPERATING CONDITION

When all of the following conditions are satisfied

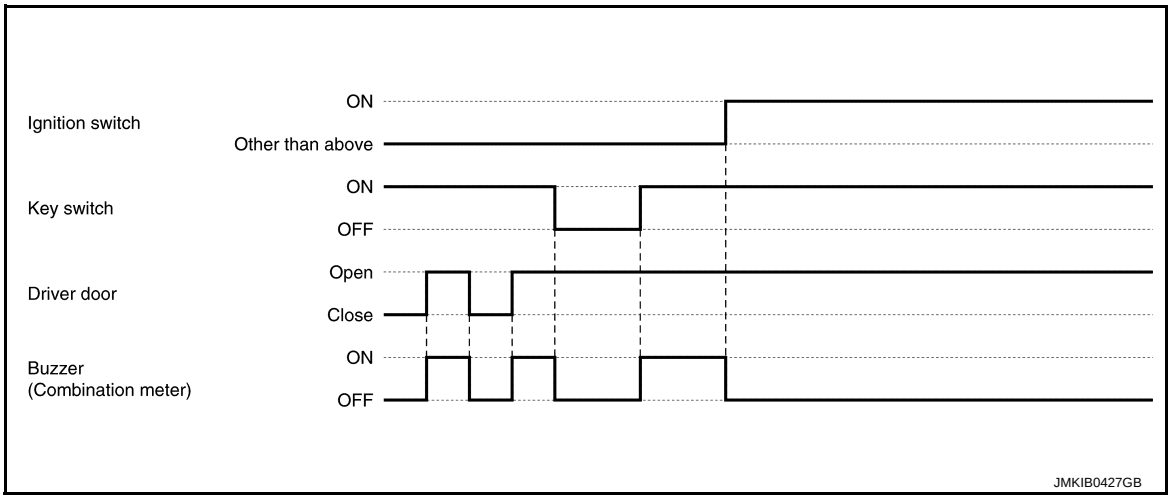
- Ignition switch is in a position other than ON.
- Key switch is ON (key is inserted in ignition key cylinder).
- Front door switch (driver side) is ON (door is open).

WARNING CANCEL CONDITION

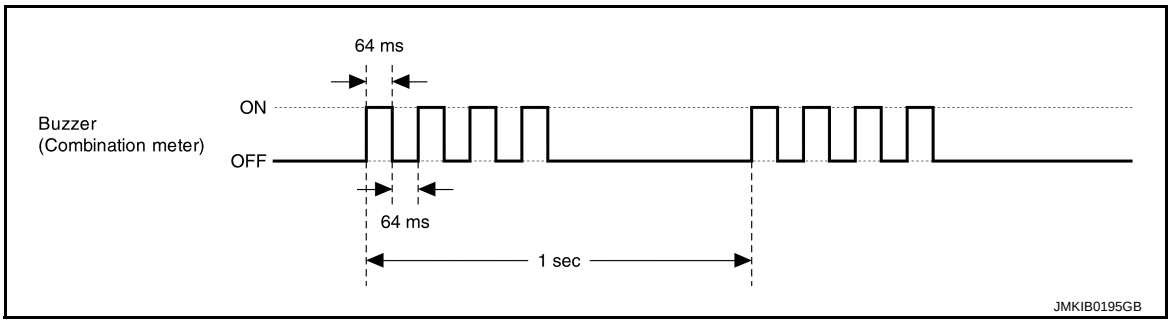
When any of the following conditions are satisfied.

- Ignition switch is ON.
- Key switch is OFF (key is removed from ignition key cylinder).
- Front door switch (driver side) is OFF (door is closed).

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : Light Reminder Warning (Buzzer)

INFOID:0000000010782917

PURPOSE

Light reminder warning (buzzer) warns the driver of egression from the vehicle while ignition switch is OFF and lamp is in ON status.

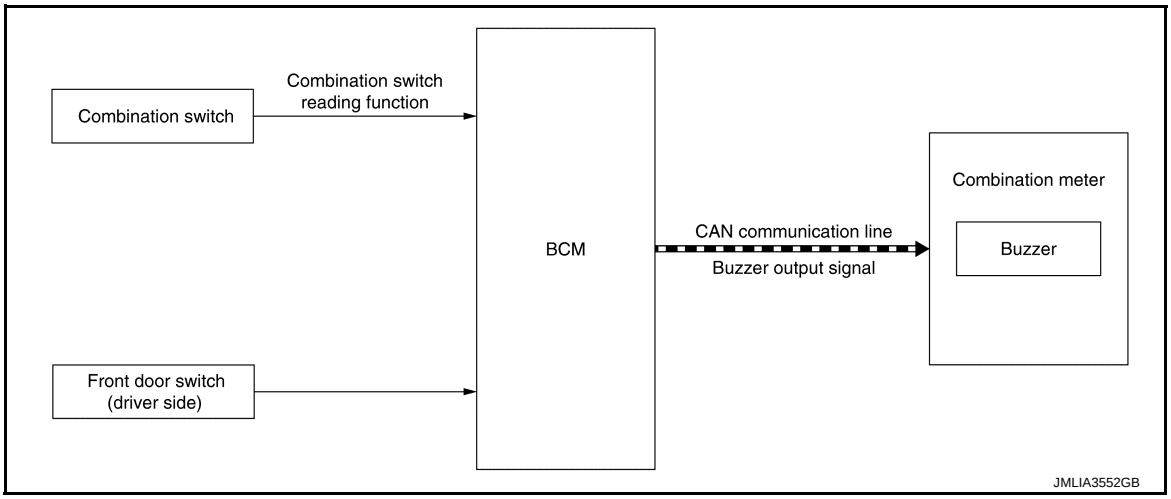
SYNCHRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

For warning/indicator (information display), refer to EXL-51, "INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)" (LED headlamp) or EXL-250, "INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)" (halogen headlamp).

OPERATION AT COMBINATION METER CAN COMMUNICATION CUT-OFF OR UNUSUAL SIGNAL

For actions on CAN communications blackout in the combination meter, refer to WCS-9, "WARNING CHIME SYSTEM : Fail-Safe".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM reads status of combination switch.
- BCM judges light reminder warning (buzzer) by lighting switch status and driver door switch (driver side) signal. BCM transmits buzzer output signal to combination meter via CAN communication.
- When combination meter receives buzzer output signal, combination meter sounds warning buzzer.

WARNING OPERATING CONDITION

When all of the following conditions are satisfied.

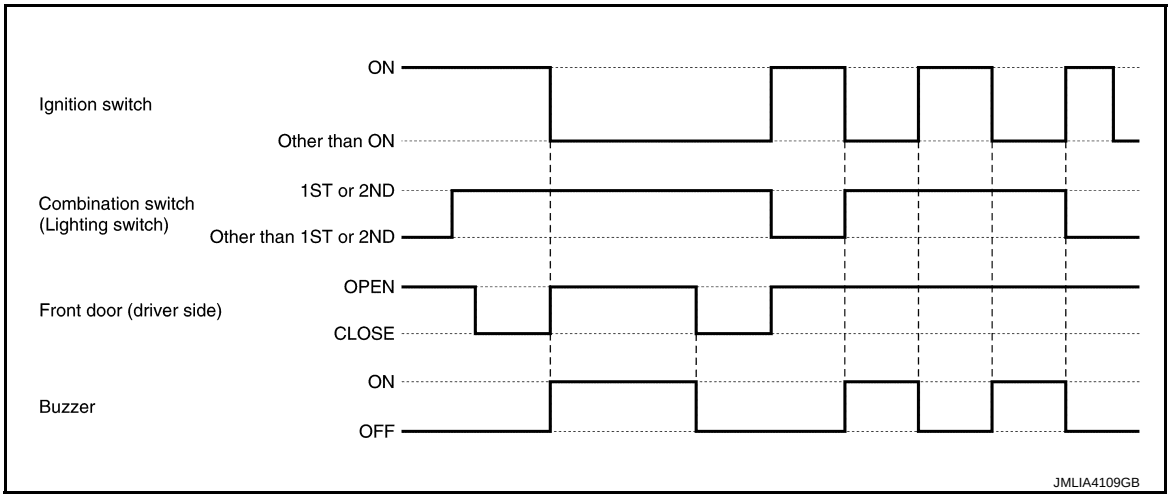
- Ignition switch other than ON
- Lighting switch 1ST or 2ND
- Front door (driver side) OPEN [front door switch (driver side) ON]

WARNING CANCEL CONDITION

When any of the following conditions are satisfied.

- Ignition switch ON
- Lighting switch other than 1ST or 2ND
- Front door (driver side) CLOSE [front door switch (driver side) OFF]

TIMING CHART



SOUND SPECIFICATION

Continuous sound

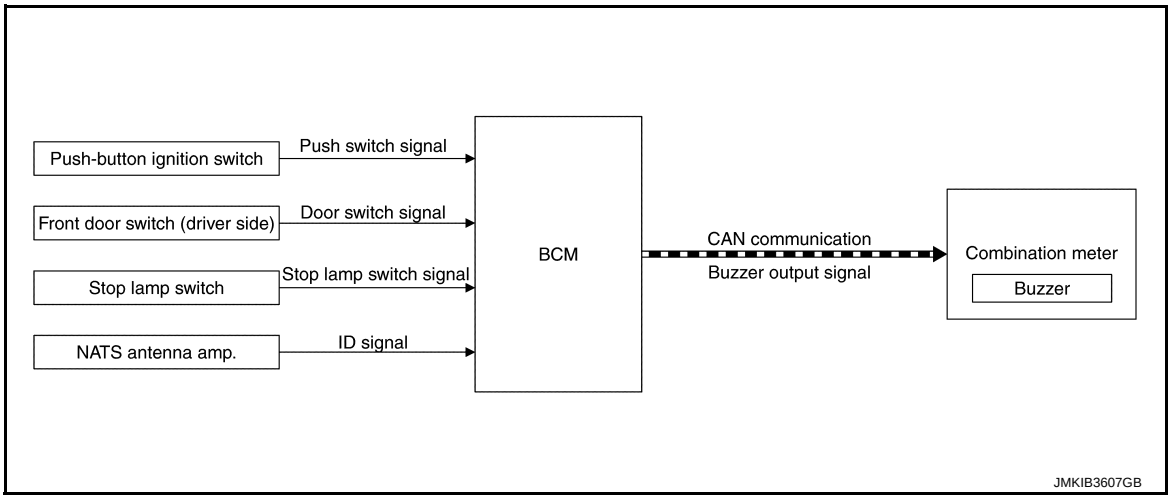
WARNING CHIME : OFF Position Warning

INFOID:0000000010713027

PURPOSE

OFF position warning warns the driver of egression from the vehicle while steering lock is not applied.

SYSTEM DIAGRAM



SIGNAL PATH

- BCM judges whether or not warning the driver is required, according to push switch signal from push-button ignition switch, door switch signal from front door switch (driver side), and ID verification result.
- BCM, when it judges that warning to the driver is required, transmits buzzer output signal to combination meter via CAN communication.
- When combination meter receives buzzer output signal, warning buzzer operates.

WARNING OPERATING CONDITION

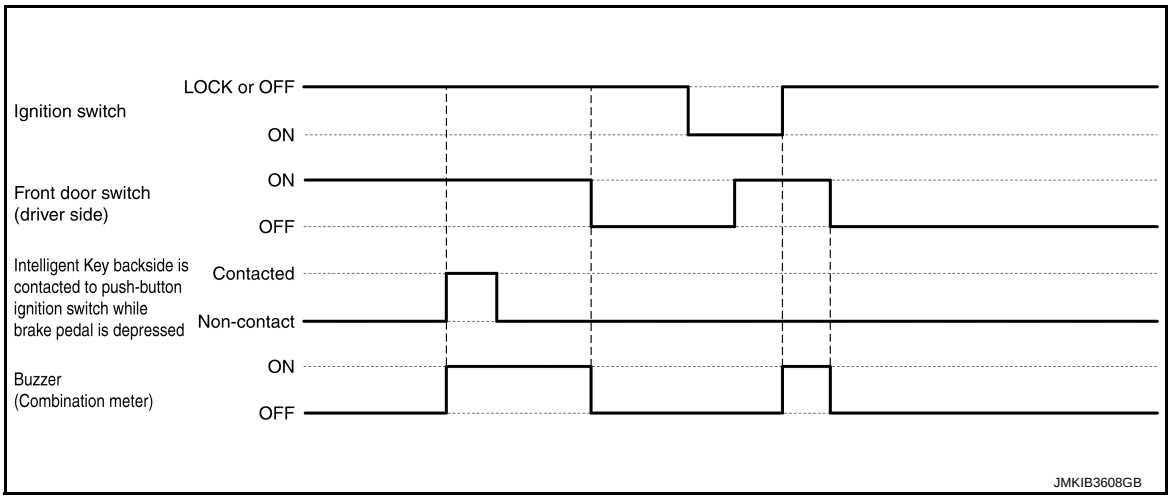
When any of the following conditions are satisfied.

- Condition A
- Ignition switch is turned from ON to OFF while driver door is open.
- Condition B
- When Ignition switch is in LOCK or OFF position, Intelligent Key backside is contacted to push-button ignition switch while brake pedal is depressed (when Intelligent Key battery is discharged).
- Front door switch (driver side) is ON (Driver door is open)

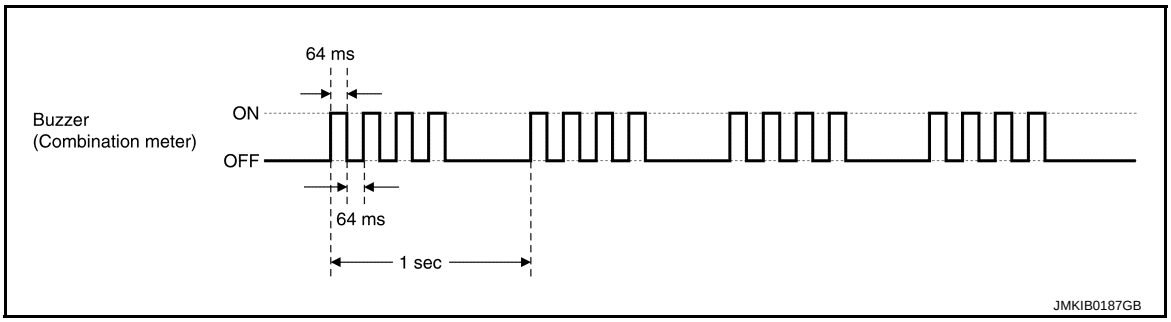
WARNING CANCEL CONDITION

Any of the warning operating conditions are no longer satisfied.

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : P Position Warning (Buzzer)

INFOID:0000000010713026

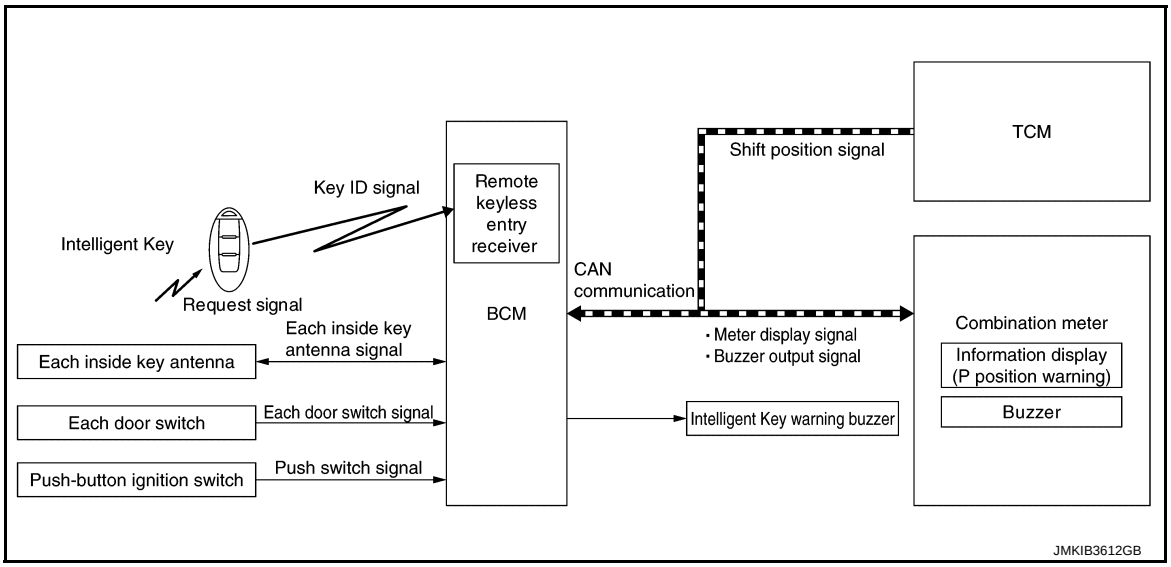
PURPOSE

P position warning warns the driver of egression from the vehicle while shift is other than P position.

SYNCRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

Synchronization is applied.
Refer to DLK-57, "INFORMATION DISPLAY (COMBINATION METER) : P Position Warning (Information Display)".

SYSTEM DIAGRAM



SIGNAL PATH

For internal

- BCM judges whether or not warning the driver is required, according to push switch signal from push-button ignition switch, inside key antenna signal from each inside key antenna, and shift position signal from TCM via CAN communication.
- When BCM judges that warning the driver is required, BCM transmits buzzer output signal and meter display signal to combination meter via CAN communication.
- When combination meter receives buzzer output signal and meter display signal, buzzer and information display operate.

For external

- BCM judges whether or not warning the driver is required, according to door switch signal from each door switch and inside key antenna signal from each inside key antenna while P position warning (for internal) is operated.
- When BCM judges that warning the driver is required, Intelligent Key buzzer operates.

WARNING OPERATING CONDITION

For internal

When all of the following conditions are satisfied.

- Shift position is other than P
- Ignition switch is turned from ON to OFF

For external
When all of the following conditions are satisfied.
- P position warning (for internal) is in operation
- A registered Intelligent Key is not detected in passenger room
- Door switch is switched from ON to OFF (Open door is closed)

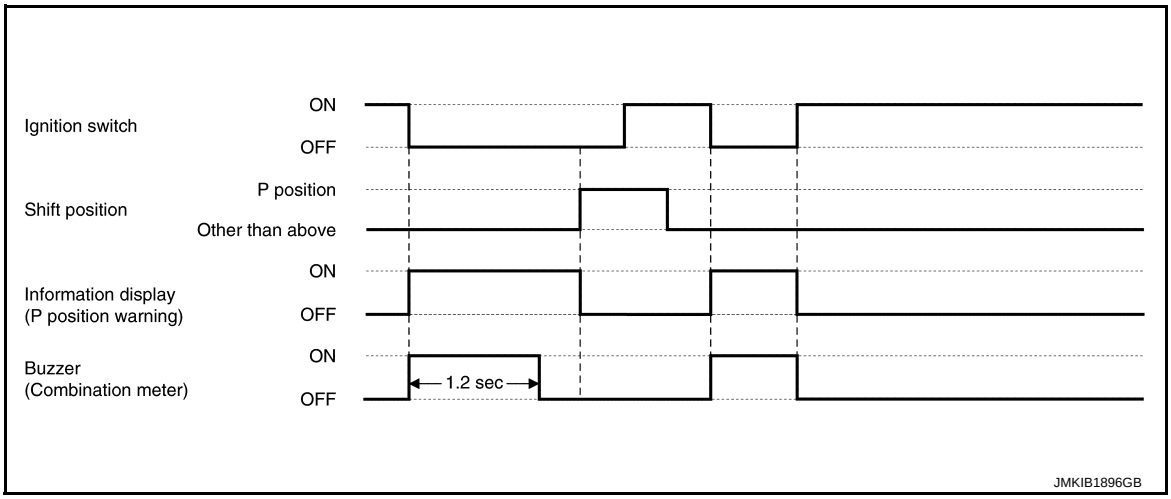
WARNING CANCEL CONDITION

For internal
- When any of the following conditions are satisfied.
- Shift position is P
- Ignition switch is ON

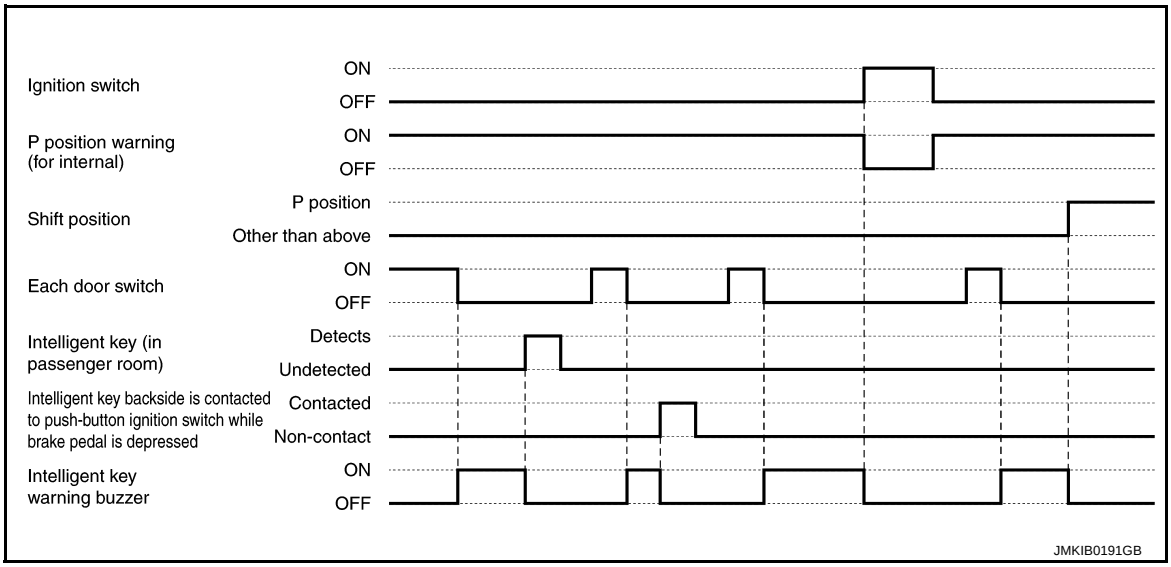
For external
- When any of the following conditions are satisfied.
- Ignition switch is ON
- Shift position is P
- A registered Intelligent Key is detected in passenger room
- When ignition switch is in LOCK or OFF position, Intelligent Key backside is contacted to engine switch while brake pedal is depressed (when Intelligent Key battery is discharged)

TIMING CHART

For internal

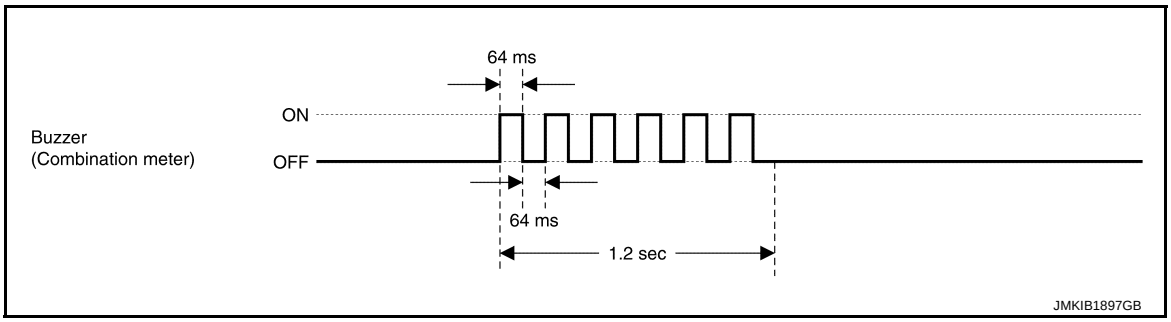


For external

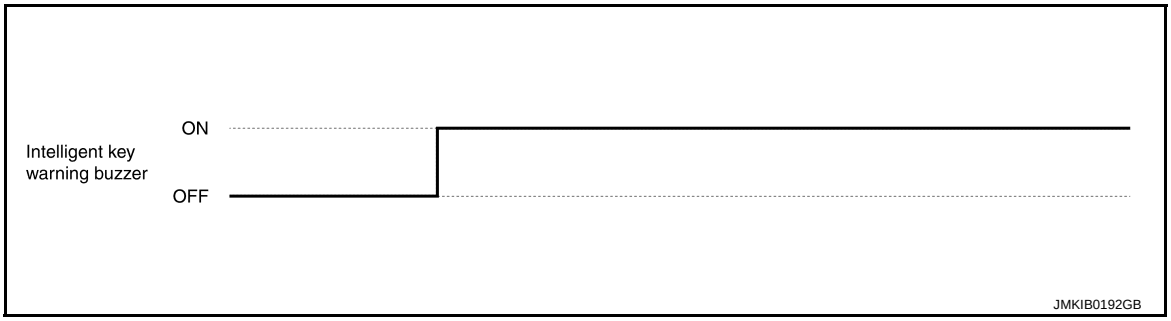


SOUND SPECIFICATION

For internal



For external



WARNING CHIME : Seat Belt Warning

INFOID:0000000010743090

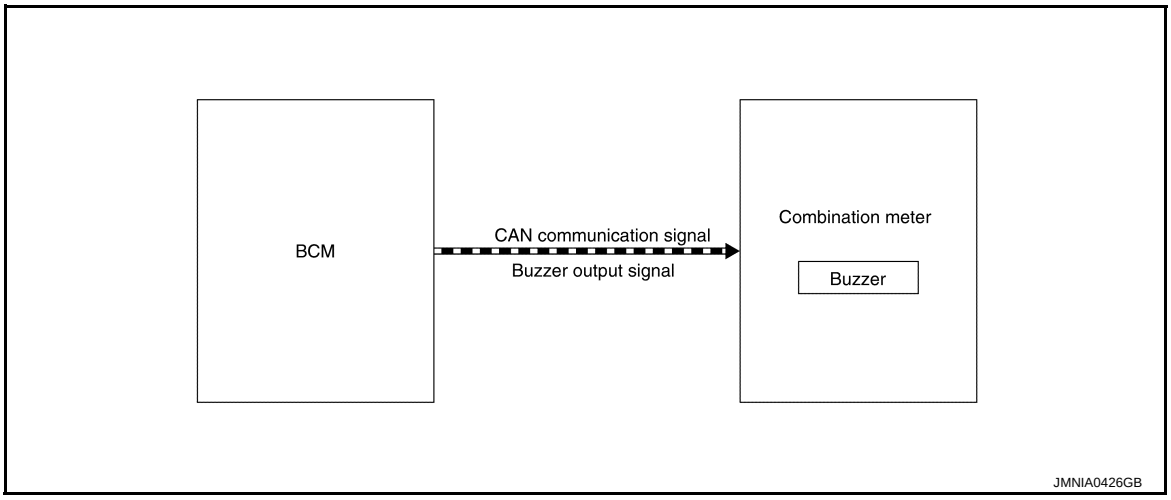
DESCRIPTION

Seat belt warning lamp warns the driver that driver seat belt is not fastened.

SYNCRONIZATION WITH WARNING LAMP/INDICATOR LAMP

For warning lamp, refer to

SYSTEM DIAGRAM



SIGNAL PATH

BCM judges seat belt reminder warning and transmits buzzer output signal to combination meter via CAN communication. Combination meter sounds buzzer when buzzer output signal is received.

WARNING OPERATION CONDITIONS

Combination meter operates seat belt reminder warning buzzer when all of the following conditions are satisfied.

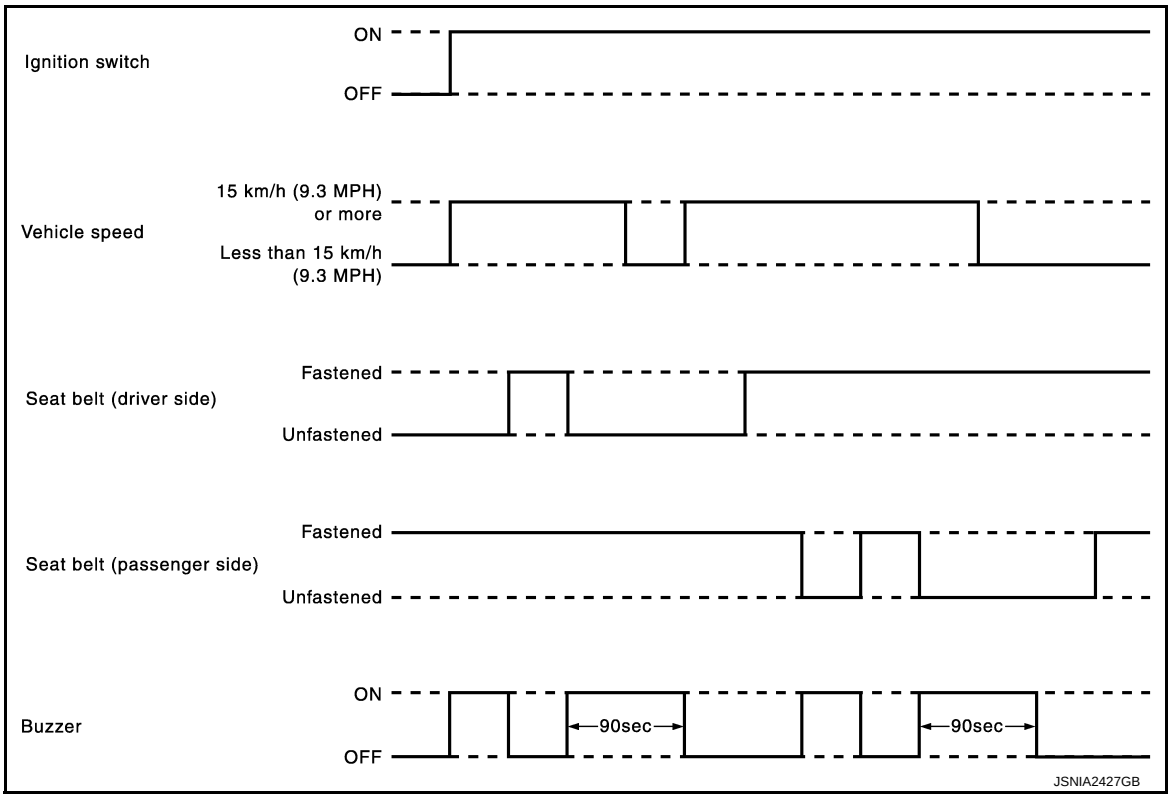
- Ignition switch is ON.
- Driver seat belt is not fastened. (Driver seat belt buckle switch is ON.)
- Passenger seat belt is not fastened. (Passenger seat belt buckle switch is ON.)
- Vehicle speed is approximately 15 km/h or more.

WARNING CANCEL CONDITIONS

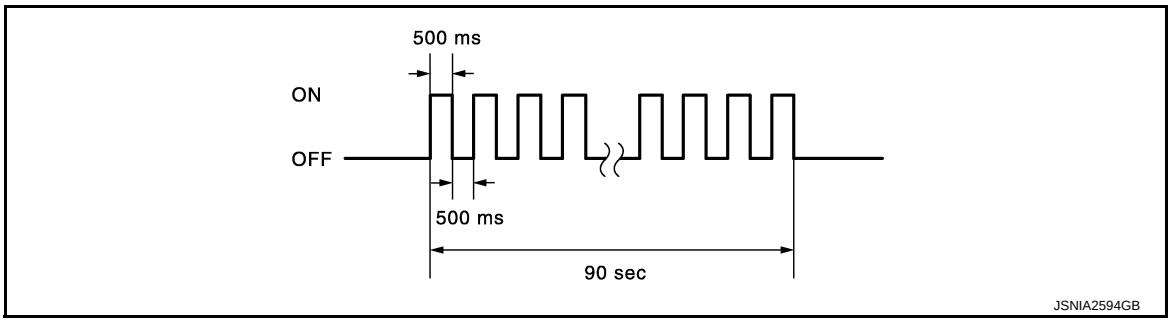
Combination meter cancels seat belt reminder warning buzzer when all of the following conditions are satisfied.

- Ignition switch is other than ON.
- Driver seat belt is fastened. (Driver seat belt buckle switch is OFF.)
- Passenger seat belt is fastened. (Passenger seat belt buckle switch is OFF.)
- Approximately 90 seconds are passed since warning start.

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : Stop/Start warning

INFOID:0000000011010024

PURPOSE

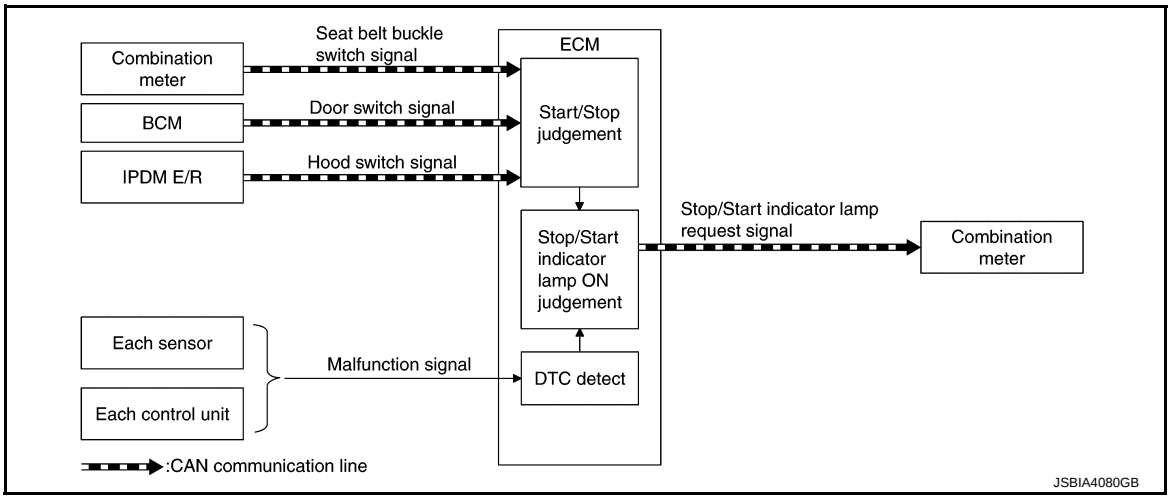
The combination meter alerts the driver by sounding the integrated buzzer and blinking the indicator lamp at high speed when the driver's operation is judged as improper operation while the stop/start system is operating.

SYNCHRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

Applicable

For warning/indicator (information display), refer to EC-864, "INFORMATION DISPLAY (COMBINATION METER) : Indicator/Information".

SYSTEM DIAGRAM



SIGNAL PATH

- IPDM E/R transmits a hood switch signal to ECM via CAN communication.
- BCM transmits a door switch signal to ECM via CAN communication.
- The combination meter transmits a seat belt buckle switch signal to ECM via CAN communication.
- ECM judges a stop/start system warning according to a received signal and transmits a stop/start indicator lamp request signal to the combination meter via CAN communication.
- The combination meter sounds the warning buzzer and blinks the indicator lamp when receiving a stop/start indicator lamp request signal.

WARNING OPERATING CONDITION

When the following conditions are satisfied during stop/start system operation:

- Hood is opened.
- Driver′s door is opened and driver′s seat belt is unbuckled. (M/T models)

NOTE:

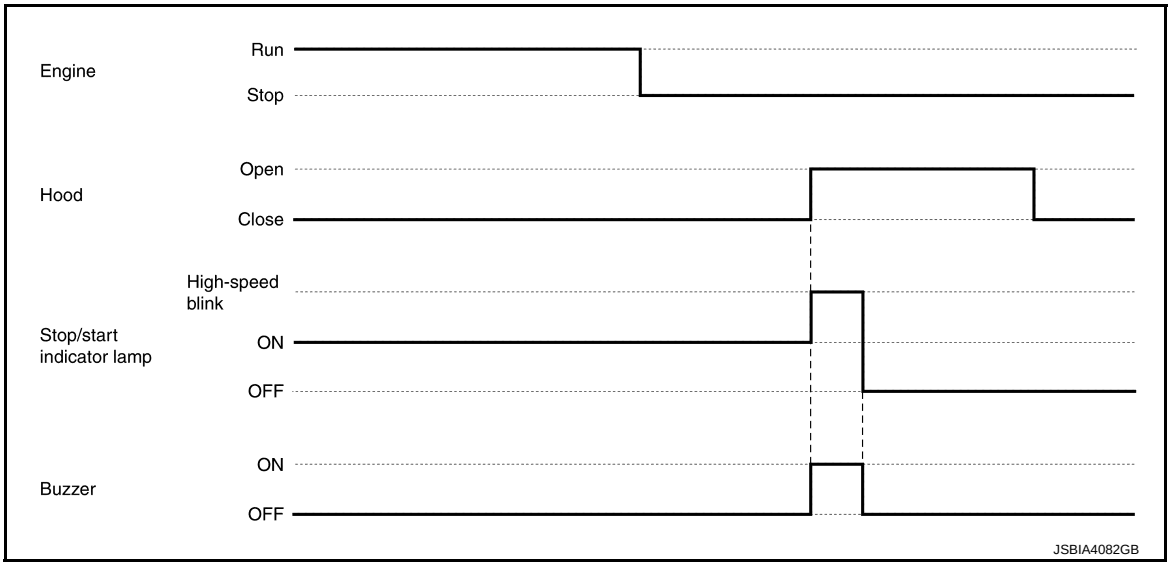
The stop/start system is cancelled and the engine stops when the hood is opened or driver′s door is opened*1 and driver′s seat belt is unbuckled*1. To restart the engine, use the key switch.

*1: M/T models

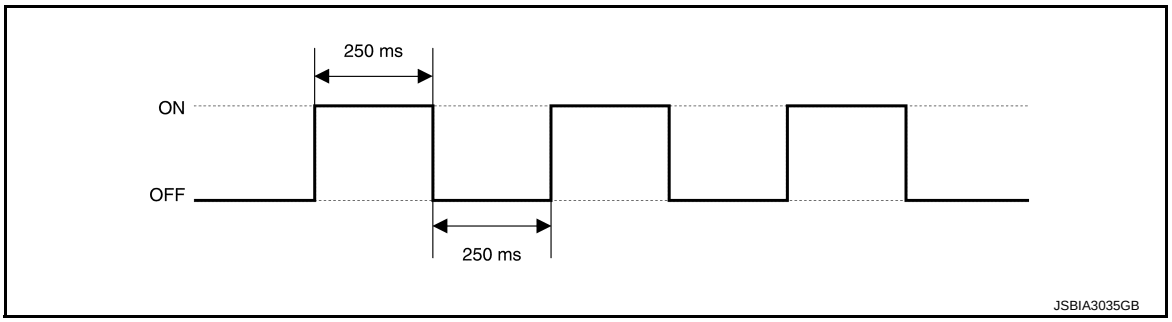
WARNING CANCEL CONDITION

- Stop/start system is cancelled after the hood is opened.
- Driver′s door is closed.
- Driver′s seat belt is buckled.

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : Take Away Warning (Buzzer)

INFOID:0000000010713028

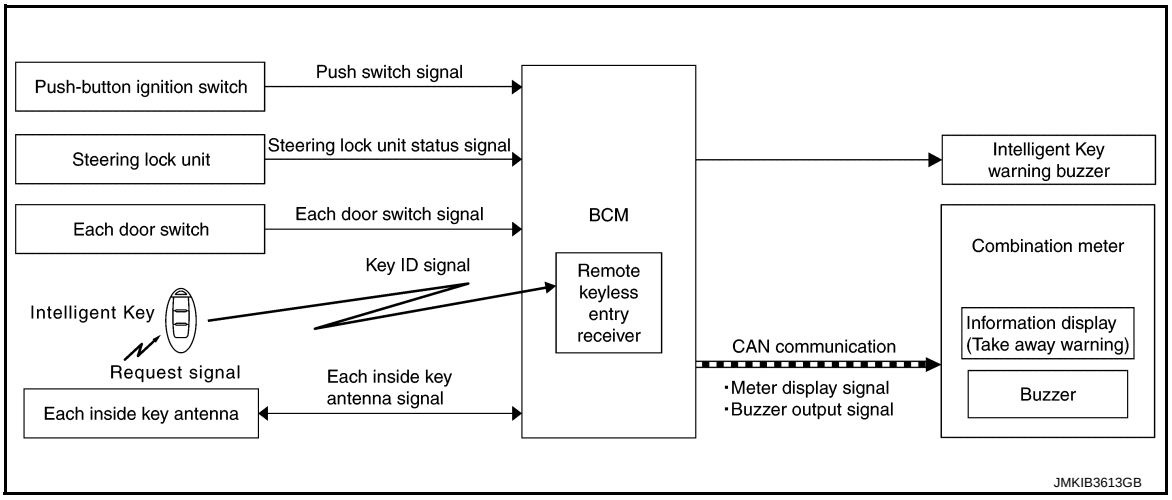
PURPOSE

Take away warning warns the driver that Intelligent Key is removed from passenger room, according to the vehicle status.

SYNCHROIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

Synchronization is applied.
Refer to DLK-60, "INFORMATION DISPLAY (COMBINATION METER) : Take Away Warning (Information Display)".

SYSTEM DIAGRAM



SIGNAL PATH

Door status changes from open to close

- BCM judges whether or not warning the driver is required, according to push switch signal from push-button ignition switch, door switch signal from each door switch, and inside key antenna signal from each inside key antenna.
- When BCM judges that warning the driver is required, buzzer output signal and meter display signal are transmitted by BCM to combination meter via CAN communication.
- Combination meter, when it receives buzzer output signal and meter display signal, operates buzzer and information display. BCM simultaneously operates Intelligent Key warning buzzer.

Door status is open

- BCM judges whether or not warning the driver is required, according to push switch signal from push-button ignition switch, door switch signal from each door switch, and inside key antenna signal from each inside key antenna.
- BCM, when it judges that warning to the driver is required, transmits meter display signal to combination meter via CAN communication.
- When combination meter receives meter display signal, information display operates.

Push-button ignition switch is pressed

- BCM judges whether or not warning the driver is required, according to push switch signal from push-button ignition switch, door switch signal from each door switch, steering lock unit status signal from steering lock unit, and inside key antenna signal from inside key antenna.
- When BCM judges that warning the driver is required, buzzer output signal and meter display signal are transmitted by BCM to combination meter via CAN communication.
- Combination meter, when it receives buzzer output signal and meter display signal, operates buzzer and information display.

WARNING OPRATING CONDITION

Door status changes from open to close
When all of the following conditions are satisfied
- Ignition switch is other than LOCK and OFF
- Door switch is switched from ON to OFF (Open door is closed)
- A registered Intelligent Key is not detected in passenger room

Door status is open
When all of the following conditions are satisfied
- Ignition switch is other than LOCK and OFF
- Door switch is ON (Door is open)
- A registered Intelligent Key is not detected in passenger room

Push-button ignition switch is pressed
When all of the following conditions are satisfied
- Steering lock is UNLOCK
- Ignition switch: OFF
- A registered Intelligent Key is not detected in passenger room
- Push-button ignition switch operation is performed

WARNING CANCEL CONDITION

Door status changes from open to close
- When any of the following conditions are satisfied
  - Ignition switch is in LOCK position
  - A registered Intelligent Key is detected in passenger room
  - Since warning start, 15 seconds are passed while battery saver system is in operation

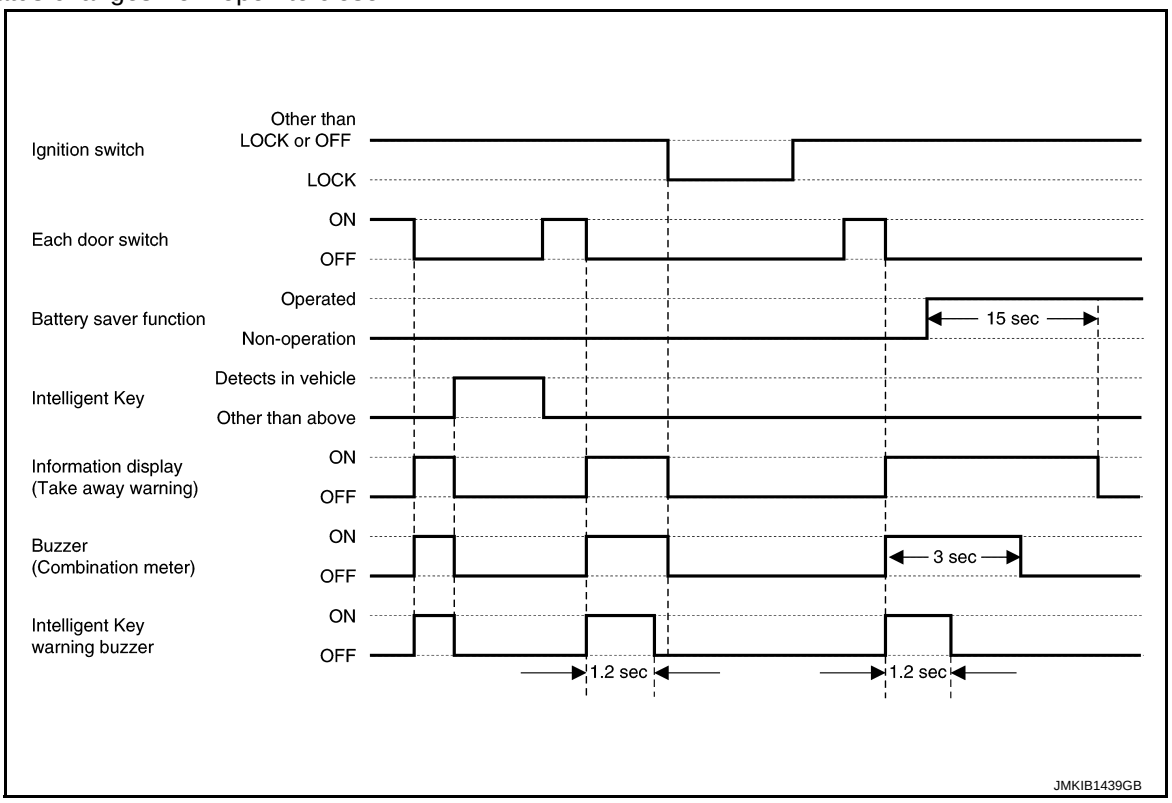
Door status is open
A registered Intelligent Key is detected in passenger room

Push-button ignition switch is pressed
- When any of the following conditions are satisfied
  - Ignition switch is in LOCK position
  - A registered Intelligent Key is detected in passenger room

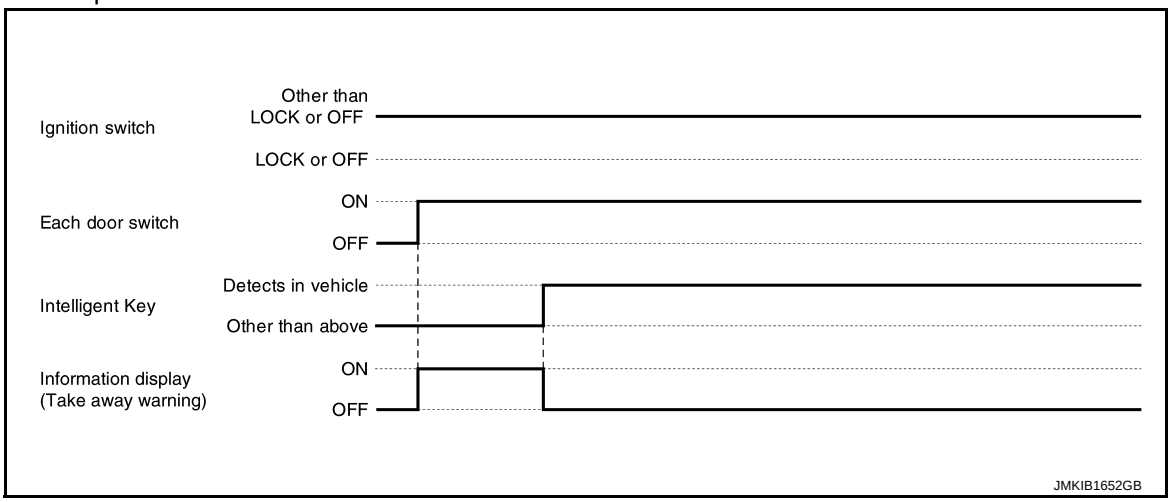
NOTE:
For battery saver system, refer to PCS-67, "POWER DISTRIBUTION SYSTEM : System Description".

TIMING CHART

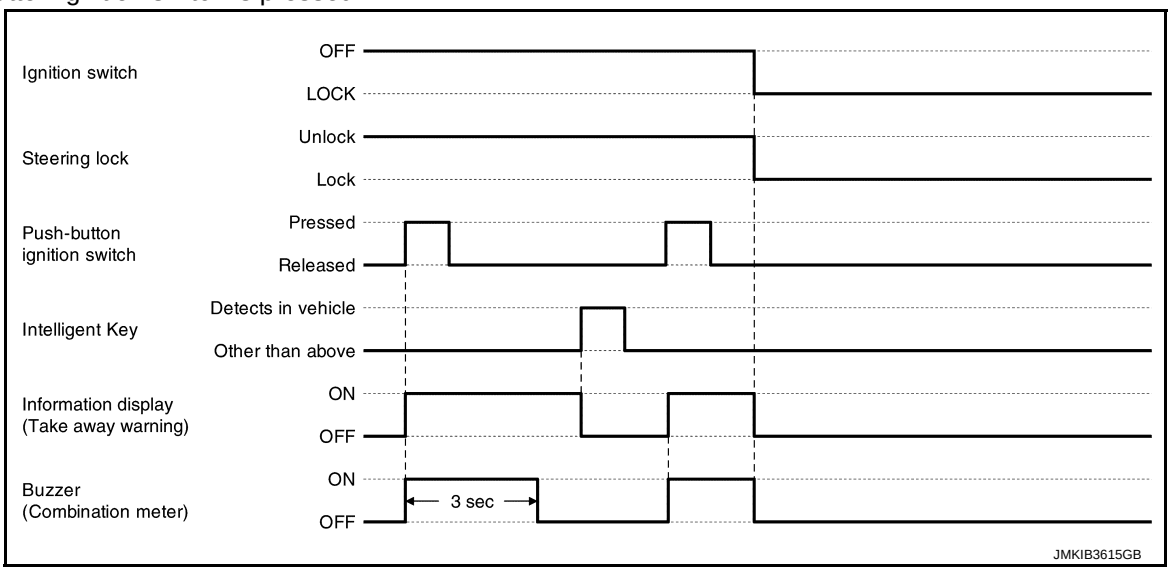
Door status changes from open to close



Door status is open

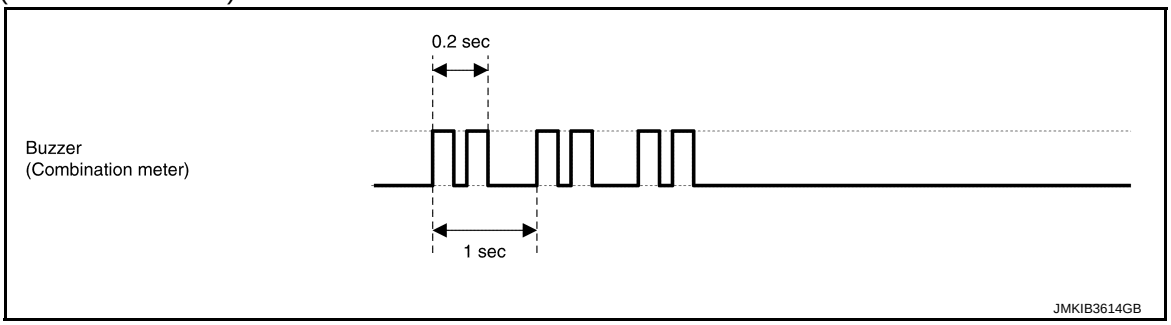


Push-button ignition switch is pressed

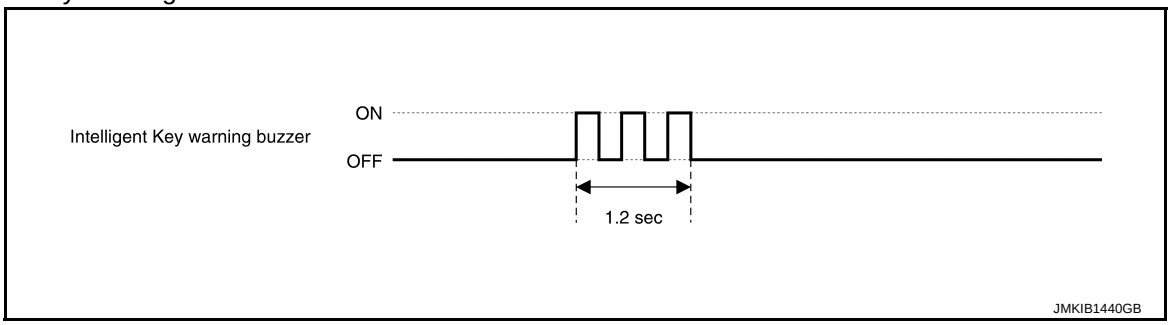


SOUND SPECIFICATION

Buzzer (combination meter)



Intelligent Key warning buzzer



DIAGNOSIS SYSTEM (COMBINATION METER)

CONSULT Function

INFOID:0000000010726699

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.
	Work Support	Displays diagnosis procedure of each work item.
	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 WCS-44, "DTC Index".

Freeze frame data (FFD)

When DTC is detected, the following vehicle condition is recorded and it is displayed on the CONSULT screen.

Item name	Display item
ODO/TRIP METER	Records an odometer value when DTC is detected. • Current odometer value is shown when the displayed DTC means a present malfunction. • Odometer value of the time of returning to normal is shown when the displayed DTC means a past malfunction.

WORK SUPPORT

Work support item	Description
Turn signal buzzer diagnosis	A possible malfunction can be narrowed down by following displayed instructions.
Outside air temperature diagnosis	
Fuel meter diagnosis (Analog pointer)*1	
Warning/Indicator lamp diagnosis	

*1: Although a segment type fuel gauge can display work items, it is not used.

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]	X	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]	X	Value of the engine speed signal received from TCM via CAN communication. **NOTE:** 8191.875 is displayed when the malfunction signal is received.

Display item [Unit]	MAIN SIGNALS	Description
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. **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 and brake fluid level switch signal from brake fluid level switch. **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.
TRUNK/GLAS-H [Off]		**NOTE:** This item is displayed, but cannot be monitored.
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 signal indicator lamp detected from turn indicator signal is received from BCM via CAN communication.
FR FOG IND [On/Off]		Status of front fog lamp indicator lamp detected from front fog light request signal is received from BCM via CAN communication.
RR FOG IND [On/Off]		Status of rear fog lamp indicator lamp detected from rear fog lamp status signal is received from BCM via CAN communication.
LIGHT IND [On/Off]		Status of position lamp indicator lamp detected from position light request signal is received from BCM via CAN communication.
OIL W/L [On/Off]		Status of engine oil pressure warning detected from engine oil pressure warning lamp signal is received from ECM via CAN communication.
MIL [On/Off]		Status of malfunction indicator lamp (yellow) detected from malfunctioning indicator signal is received from ECM via CAN communication.
GLOW IND [On/Off]		Status of glow indicator lamp detected from glow indicator lamp signal is received from ECM via CAN communication.
C-ENG2 W/L [On/Off]		Status of malfunction indicator lamp (red) detected from malfunctioning indicator signal is received from ECM via CAN communication.
BA W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
4WD W/L [On/Off]		Status of 4WD warning detected from 4WD warning signal is received from 4WD control unit via CAN communication.
4WD LOCK IND [On/Off]		Status of LOCK indicator lamp detected from LOCK indicator lamp signal is received from 4WD control unit via CAN communication.
FUEL W/L [On/Off]		Low fuel warning lamp status detected by the identified fuel level.
WASHER W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
KEY G/Y W/L [On/Off]		Status of Intelligent key system malfunction detected from meter display signal is received from BCM via CAN communication.

Display item [Unit]	MAIN SIGNALS	Description
EPS W/L [On/Off]		Status of electric power steering warning lamp detected from electric power steering warning lamp signal is received from EPS control unit via CAN communication.
DDS W/L [On/Off]		Status of hill descent control indicator lamp detected from hill descent control indicator lamp signal is received from chassis control module via CAN communication.
CHAGE W/L [On/Off]		Status of charge warning lamp detected from charge warning lamp signal is received from ECM via CAN communication.
4WD AUTO IND [On/Off]		Status of 4WD indicator lamp detected from 4WD indicator lamp signal is received from 4WD control unit via CAN communication.
TRAILER IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
FILTER W/L [On/Off]		Status of water-in-fuel-filter warning lamp detected from water-in-fuel-filter warning lamp signal is received from ECM via CAN communication.
LCD [B&P, C&P, ID NG, ROTAT, SFT P, NO KY,KY>PSW, IGN AUTO OFF, 3 min before IGN OFF, Off]		Status of engine start operation indicator lamp, shift P warning lamp and KEY warning lamp, detected from engine start operation indicator lamp signal, shift P warning lamp signal and key warning lamp signal are received from BCM via CAN communication.
SHIFT IND [P, R, N, D, M1, M2, M3, M4, M5, M6, M7]		Status of shift position indicator judged from shift position signal received from TCM with CAN communication line.
O/D OFF SW [Off]		**NOTE:** This item is displayed, but cannot be monitored.
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.
ST SFT UP SW [Off]		**NOTE:** This item is displayed, but cannot be monitored.
ST SFT DWN SW [Off]		**NOTE:** 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 engine coolant temperature and the acceleration degree.
PKB SW [Off]		**NOTE:** This item is displayed, but cannot be monitored.
BUCKLE SW [On/Off]		Status of front seat belt buckle switch (driver side).
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.
ECO MODE SW [On/Off]		Status of ECO mode switch.
CHG CONCT DET [Off]		**NOTE:** This item is displayed, but cannot be monitored.
DISTANCE [km] or [Mi]		Value of distance to empty calculated by combination meter.

Display item [Unit]	MAIN SIGNALS	Description
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 display. (Because the information display value is a corrected value from the ambient sensor input value.)
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.
ENG OIL TMP [Off]		**NOTE:** This item is displayed, but cannot be monitored.
TRQ DSTRBT [%]		**NOTE:** This item is displayed, but cannot be monitored.
AMT P SFT [Off]		**NOTE:** This item is displayed, but cannot be monitored.
AMT SYS CHCK [Off]		**NOTE:** This item is displayed, but cannot be monitored.
AMT SFT POSI [Off]		**NOTE:** This item is displayed, but cannot be monitored.
AMT OIL TMP H [Off]		**NOTE:** This item is displayed, but cannot be monitored.
AMT CHCK [Off]		**NOTE:** This item is displayed, but cannot be monitored.
AMT CL TMP H [Off]		**NOTE:** This item is displayed, but cannot be monitored.
AMT MALF [Off]		**NOTE:** This item is displayed, but cannot be monitored.
TPMS FLT TIRE [On/Off]		Status of flat tire detected from tire pressure data signal is received from BCM via CAN communication.
TPMS PRESS L [On/Off]		Status of tire pressure low from tire pressure data signal is received from BCM via CAN communication
ASCD SPD BLNK [On/Off]		Blinking status of ASCD or speed limiter set vehicle speed that is judged by the ASCD status signal received from ECM via CAN communication.
ASCD STATUS [Off, ASCD, CRUISE, SL ON, SL SET]		Display status of ASCD and speed limiter status display judged by the ASCD status signal received from ECM via CAN communication.
ASCD REQ SPD [km/h/Off]		ASCD set vehicle speed value judged by the ASCD status signal received from ECM via CAN communication.
E/O CHG TMNG RST [On/Off]		Resetting of a remaining distance to the engine oil change time.
ECO DRIVE NAVI [LEVEL 0 - 30]		Status of ECO pedal guide detected from ECO pedal guide signal received from ECM via CAN communication.
BATTRY CIRCUIT STATUS [NORMAL/OPEN]		Status of fuse for shipping mode from shipping mode status signal received from BCM via CAN communication.
STRG SW INPUT [SW1-SW10, NO INPUT]		Status of steering switch.
ITS SONAR SET OUTPUT [NO SW ST, LDW OFF, LDW ON, BSW OFF, BSW ON, P MV OFF, P MV ON, SONAR OFF, SONAR ON, P SEN OFF, P SEN ON, P SEN FRONT, P BUZ HIGH, P BUZ MED, P BUZ LOW, P RNG FAR, P RNG MED, P RNG NEAR]		Status of Driving Aids and Parking Aids set on the information display of the combination meter.

Display item [Unit]	MAIN SIGNALS	Description
SONAR DET STATUS [On/Off]		Activation status of sonar system received from sonar control unit via CAN communication.
SONAR WARN [Off/DEACT/ERROR]		Status of parking sensor error detected from parking sensor error signal is received from sonar control unit via CAN communication.
SONAR DET DSP RC [LEVEL1/LEVEL2/LEVEL3/LEVEL4]		Status of center sensor rear detection obstacle from sonar control unit via CAN communication.
SONAR DET DSP AREA RC [On/Off]		Activation status of center sensor rear judged from a sonar indicator signal received from the sonar control unit via CAN communication.
SONAR DET DSP RL [LEVEL1/LEVEL2/LEVEL3/LEVEL4]		Status of corner sensor rear LH detection obstacle from sonar control unit via CAN communication.
SONAR DET DSP AREA RL [On/Off]		Activation status of corner sensor rear LH judged from a sonar indicator signal received from the sonar control unit via CAN communication.
SONAR DET DSP RR [LEVEL1/LEVEL2/LEVEL3/LEVEL4]		Status of corner sensor rear RH detection obstacle from sonar control unit via CAN communication.
SONAR DET DSP AREA RR [On/Off]		Activation status of corner sensor rear RH judged from a sonar indicator signal received from the sonar control unit via CAN communication.
SONAR DET DSP FC [LEVEL1/LEVEL2/LEVEL3/LEVEL4]		Status of center sensor front detection obstacle from sonar control unit via CAN communication.
SONAR DET DSP AREA FC [On/Off]		Activation status of center sensor front judged from a sonar indicator signal received from the sonar control unit via CAN communication.
SONAR DET DSP FL [LEVEL1/LEVEL2/LEVEL3/LEVEL4]		Status of corner sensor front LH detection obstacle from sonar control unit via CAN communication.
SONAR DET DSP AREA FL [On/Off]		Activation status of corner sensor front LH judged from a sonar indicator signal received from the sonar control unit via CAN communication.
SONAR DET DSP FR [LEVEL1/LEVEL2/LEVEL3/LEVEL4]		Status of corner sensor front RH detection obstacle from sonar control unit via CAN communication.
SONAR DET DSP AREA FR [On/Off]		Activation status of corner sensor front RH judged from a sonar indicator signal received from the sonar control unit via CAN communication.
SONAR DIST DSP [Off/stop/30cm/40cm/50cm/60cm]		Sonar of information display of sonar sensor detection distance from sonar control unit via CAN communication.
FCW IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
LDW IND [On/Off]		Status of LDW system display detected from meter display signal is received from front camera unit via CAN communication.
TIRE PRESS FR [kPa, kg/cm2 or Psi]		The data of front RH tire pressure from BCM via CAN communication.
TIRE PRESS FL [kPa, kg/cm2 or Psi]		The data of front LH tire pressure from BCM via CAN communication.
TIRE PRESS RR [kPa, kg/cm2 or Psi]		The data of rear RH tire pressure from BCM via CAN communication.
TIRE PRESS RL [kPa, kg/cm2 or Psi]		The data of rear LH tire pressure from BCM via CAN communication.
BSW IND [On/Off]		Status of BSW system display detected from meter display signal is received from around view monitor control unit via CAN communication.
DIPPED BEAM IND [On/Off]		Status of dipped beam indicator lamp judged from low beam request signal received from BCM via CAN communication.
HI-BEAM ASST IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
CHASSIS CONTROL WARN [On/Off]		Status of chassis control display (warning) from chassis control malfunction signal is received from chassis control module via CAN communication.
LCD [Off]		**NOTE:** This item is displayed, but cannot be monitored.

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.
SLIP IND	Lighting history of VDC warning lamp.
BRAKE W/L	Lighting history of brake warning lamp.
DOOR W/L	Lighting history of door warning.
OIL W/L	Lighting history of engine oil pressure warning.
C-ENG W/L	Lighting history of malfunction indicator lamp (MIL) (yellow).
C-ENG2 W/L	Lighting history of malfunction indicator lamp (MIL) (red).
4WD W/L	Lighting history of 4WD warning.
FUEL W/L	Lighting history of low fuel 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 electric power steering warning lamp.
DDS W/L	Lighting history of hill descent control indicator lamp.
CHAGE W/L	Lighting history of charge warning.
FILTER W/L	Lighting history of water-in-fuel-filter warning lamp.

NOTE:

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

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010726697

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	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

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		×	×
Exterior lamp	HEAD LAMP	×	×	×
Interior room lamp control	INT LAMP		×	
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	
—	AIR CONDITONER*		×	×
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU		×	
Interior room lamp battery saver	BATTERY SAVER		×	
Back door open	TRUNK		×	
Vehicle security	THEFT ALM	×	×	
RAP	RETAINED PWR		×	
Remote keyless entry system	MULTI REMOTE ENT	×	×	
Signal buffer system	SIGNAL BUFFER		×	×

NOTE:
*: This item is displayed, 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.

CONSULT screen item	Indication/Unit	Description
BATTERY VOLTAGE	V	Battery voltage of the moment a particular DTC is detected.
VEHICLE SPEED	km/h	Vehicle speed of the moment a particular DTC is detected.
EXTERNAL TEMP	°C	External temperature of the moment a particular DTC is detected
VEHICLE COND	—	**NOTE:** This item is displayed, but cannot be use this item.
DOOR LOCK STATUS	—	**NOTE:** This item is displayed, but cannot be use this item.
POWER SUPPLY COUNTER	min	Displays the cumulative time from the time that the battery terminal is connected.

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:0000000010726627

DATA MONITOR

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

Display item [Unit]	Description
PUSH SW [On/Off]	Status of push-button ignition switch 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
IGN KEY WARN ALM	The key warning chime operation can be checked by operating the relevant function (On/Off).
SEAT BELT WARN TEST	This item is displayed, but cannot be monitored.
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).
REVERSE WARNING	This item is displayed, but cannot be monitored.

NOTE:
Some items are not available according to vehicle specification.

ECU DIAGNOSIS INFORMATION

COMBINATION METER

Reference Value

INFOID:0000000010726644

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 [mph or km/h]	Ignition switch ON	While driving	Input value of vehicle speed signal (CAN communication signal)
SPEED OUTPUT [mph or km/h]	Ignition switch ON	While driving	Output value of vehicle speed signal (CAN communication signal)
ODO OUTPUT [mph or km/h]	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)
FUEL METER [L]	Ignition switch ON	—	Input value of fuel level sensor signal
W TEMP METER [°F] or [°C]	Ignition switch ON	—	Input value of engine coolant temperature signal (CAN communication signal)
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	During door open warning indication	On
		Except during door open warning indication	Off
TRUNK/GLAS-H	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	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
FR FOG IND	Ignition switch ON	Front fog lamp indicator lamp ON	On
		Front fog lamp indicator lamp OFF	Off
RR FOG IND	Ignition switch ON	Rear fog lamp indicator lamp ON	On
		Rear fog lamp indicator lamp OFF	Off
LIGHT IND	Ignition switch ON	Position lamp indicator lamp ON	On
		Position lamp indicator lamp OFF	Off

Monitor Item	Condition		Value/Status
OIL W/L	Ignition switch ON	During engine oil pressure warning indication	On
		Except during engine oil pressure warning indication	Off
MIL	Ignition switch ON	Malfunction indicator lamp (yellow) ON	On
		Malfunction indicator lamp (yellow) OFF	Off
GLOW IND	Ignition switch ON	Glow indicator lamp ON	On
		Glow indicator lamp OFF	Off
C-ENG2 W/L	Ignition switch ON	Malfunction indicator lamp (red) ON	On
		Malfunction indicator lamp (red) OFF	Off
BA W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
4WD W/L	Ignition switch ON	During 4WD warning indication	On
		Except during 4WD warning indication	Off
4WD LOCK IND	Ignition switch ON	4WD LOCK indicator lamp ON	On
		4WD LOCK indicator lamp OFF	Off
FUEL W/L	Ignition switch ON	During low fuel warning indication	On
		Except during low fuel warning indication	Off
WASHER W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
KEY G/Y W/L	Ignition switch ON	During Intelligent Key system malfunction indication	On
		Except during Intelligent Key system malfunction indication	Off
EPS W/L	Ignition switch ON	Electric power steering warning lamp ON	On
		Electric power steering warning lamp OFF	Off
DDS W/L	Ignition switch ON	hill descent control indicator lamp ON	On
		hill descent control indicator lamp OFF	Off
CHAGE W/L	Ignition switch ON	Charge warning lamp ON	On
		Charge warning lamp OFF	Off
4WD AUTO IND	Ignition switch ON	4WD indicator lamp ON	On
		4WD indicator lamp OFF	Off
TRAILER IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
FILTER W/L	Ignition switch ON	Water-in-fuel-filter warning lamp ON	On
		Water-in-fuel-filter warning lamp OFF	Off

Monitor Item	Condition		Value/Status
LCD	Ignition switch ON	During engine start information indication (Except M/T models)	B&P
	Ignition switch ON	During engine start information indication (M/T models)	C&P
	Ignition switch LOCK	During key ID warning indication	ID NG
	Ignition switch LOCK	During steering lock information indication	ROTAT
	Ignition switch LOCK	During P position warning indication	SFT P
	Ignition switch ON	During take away warning indication	NO KY
	Ignition switch LOCK	During key ID verification information indication	KY>PSW
	Ignition switch ON	During ignition battery saver system information (after operation) indication	IGN AUTO OFF
	Ignition switch ON	During ignition battery saver system information (three minutes before operation) indication	3 min before IGN OFF
	Ignition switch ON	Other than the above	Off
SHIFT IND	Ignition switch ON	Position of shift selector	[P, R, N, D, M1, M2, M3, M4, M5, M6, M7]
O/D OFF SW	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
M RANGE SW	Ignition switch ON	Shift selector in manual mode position	On
		Other than the above	Off
NM RANGE SW	Ignition switch ON	Shift selector in manual mode position	Off
		Other than the above	On
AT SFT UP SW	Ignition switch ON	Shift selector operated in the up position	On
		Other than the above	Off
AT SFT DWN SW	Ignition switch ON	Shift selector operated in the down position	On
		Other than the above	Off
ST SFT UP SW	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
ST SFT DWN SW	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
COMP F/B SIG	Ignition switch ON	A/C compressor activation condition	On
		Other than the above	Off
PKB SW	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	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
ECO MODE SW	Ignition switch ON	ECO mode switch ON	On
		ECO mode switch OFF	Off

Monitor Item	Condition		Value/Status
CHG CONCT DET	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
DISTANCE [mile] or [km]	Ignition switch ON	—	Distance to empty
OUTSIDE TEMP [°F] or [°C]	Ignition switch ON	—	Displays the ambient air temperature which is input from the ambient sensor
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off
ENG OIL TMP	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
TRQ DSTRBT	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT P SFT	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT SYS CHCK	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT SFT POSI	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT OIL TMP H	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT CHCK	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT CL TMP H	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
AMT MALF	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
TPMS FLT TIRE	Ignition switch ON	Flat tire	On
		Other than above	Off
TPMS PRESS L	Ignition switch ON	Tire pressure is low	On
		Tire pressure is normal	Off
ASCD SPD BLNK	Ignition switch ON	Set vehicle speed indicator blinking	On
		Set vehicle speed indicator not blinking	Off
ASCD STATUS	Ignition switch ON	ASCD and speed limiter system OFF	Off
		ASCD system ON	ASCD
		ASCD set vehicle speed	CRUISE
		Speed limiter system ON	SL ON
		Speed limiter set vehicle speed	SL SET
ASCD REQ SPD	Ignition switch ON	While driving	Same value as ASCD or speed limiter set vehicle speed

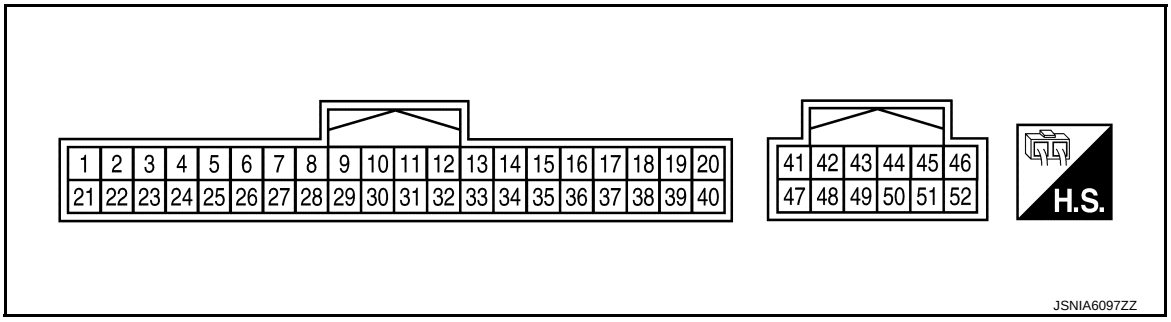
Monitor Item	Condition		Value/Status
E/O CHG TMNG RST	Ignition switch ON	Resetting of a remaining distance to the engine oil change time.	On
		Other than above	Off
ECO DRIVE NAVI	Ignition switch ON	—	ECO pedal guide status LEVEL0 - LEVEL30
BATTERY CIRCUIT STATUS	—	Shipping mode ON	On
		Other than shipping mode	Off
STRG SW INPUT	Ignition switch ON	BACK switch is pressed	SW1
		MENU UP switch is pressed	SW2
		MENU DOWN switch is pressed	SW3
		TEL switch is pressed	SW4
		ENTER switch is pressed	SW5
		VOL DOWN switch is pressed	SW6
		VOL UP switch is pressed	SW7
		TEL END switch is pressed	SW8
		SEEK UP switch is pressed	SW9
		SEEK DOWN switch is pressed	SW10
		Other than above	NOT INPUT

Monitor Item	Condition		Value/Status
ITS SONAR SET OUTPUT	Ignition switch ON	LDW status in combination meter selection ON	LDW On
		LDW status in combination meter selection OFF	LDW Off
		BSW status in combination meter selection ON	BSW On
		BSW status in combination meter selection OFF	BSW Off
		MOD status in combination meter selection ON	P MV ON
		MOD status in combination meter selection OFF	P MV OFF
		Display status in combination meter selection ON	SONAR ON
		Display status in combination meter selection OFF	SONAR OFF
		Front sensor status in combination meter selection ON	P SEN ON
		Rear sensor status in combination meter selection ON	P SEN FRONT
		Volume status in combination meter selection High	P BUZ HIGH
		Volume status in combination meter selection Med.	P BUZ MED
		Volume status in combination meter selection Low	P BUZ LOW
		Range status in combination meter selection Far	P RNG FAR
		Range status in combination meter selection Mid.	P RNG MED
		Range status in combination meter selection Near	P RNG NEAR
		Other than above	NO SW ST
SONAR DET STATUS	Ignition switch ON	Sonar control unit detected the obstacle	On
		Sonar control unit not detected the obstacle	Off
SONAR WARN	Ignition switch ON	Sonar sensor error ON	On
		Sonar sensor error OFF	Off
SONAR DET DSP RC	Ignition switch ON	Level of distance from center sensor rear to obstacle level1	LEVEL1
		Level of distance from center sensor rear to obstacle level2	LEVEL2
		Level of distance from center sensor rear to obstacle level3	LEVEL3
		Level of distance from center sensor rear to obstacle level4	LEVEL4
SONAR DET DSP AREA RC	Ignition switch ON	Obstacle is within the warning area of center sensor rear	On
		Other than above	Off

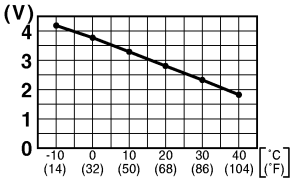
Monitor Item	Condition		Value/Status
SONAR DET DSP RL	Ignition switch ON	Level of distance from corner sensor rear LH to obstacle level1	LEVEL1
		Level of distance from corner sensor rear LH to obstacle level2	LEVEL2
		Level of distance from corner sensor rear LH to obstacle level3	LEVEL3
		Level of distance from corner sensor rear LH to obstacle level4	LEVEL4
SONAR DET DSP AREA RL	Ignition switch ON	Obstacle is within the warning area of corner sensor rear LH	On
		Other than above	Off
SONAR DET DSP RR	Ignition switch ON	Level of distance from corner sensor rear RH to obstacle level1	LEVEL1
		Level of distance from corner sensor rear RH to obstacle level2	LEVEL2
		Level of distance from corner sensor rear RH to obstacle level3	LEVEL3
		Level of distance from corner sensor rear RH to obstacle level4	LEVEL4
SONARDET DSP AREA RR	Ignition switch ON	Obstacle is within the warning area of corner sensor rear RH	On
		Other than above	Off
SONARDET DSP FC	Ignition switch ON	Level of distance from center sensor front to obstacle level1	LEVEL1
		Level of distance from center sensor front to obstacle level2	LEVEL2
		Level of distance from center sensor front to obstacle level3	LEVEL3
		Level of distance from center sensor front to obstacle level4	LEVEL4
SONARDET DSP AREA FC	Ignition switch ON	Obstacle is within the warning area of center sensor front	On
		Other than above	Off
SONAR DET DSP FL	Ignition switch ON	Level of distance from corner sensor front LH to obstacle level1	LEVEL1
		Level of distance from corner sensor front LH to obstacle level2	LEVEL2
		Level of distance from corner sensor front LH to obstacle level3	LEVEL3
		Level of distance from corner sensor front LH to obstacle level4	LEVEL4
SONAR DET DSP AREA FL	Ignition switch ON	Obstacle is within the warning area of corner sensor front LH	On
		Other than above	Off
SONAR DET DSP FR	Ignition switch ON	Level of distance from corner sensor front RH to obstacle level1	LEVEL1
		Level of distance from corner sensor front RH to obstacle level2	LEVEL2
		Level of distance from corner sensor front RH to obstacle level3	LEVEL3
		Level of distance from corner sensor front RH to obstacle level4	LEVEL4

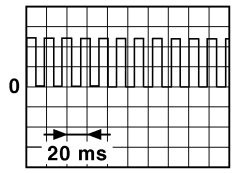
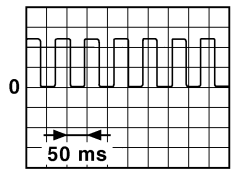
Monitor Item	Condition		Value/Status
SONAR DET DSP AREA FR	Ignition switch ON	Obstacle is within the warning area of corner sensor front RH	On
		Other than above	Off
SONAR DIST DSP	Ignition switch ON	Distance from obstacle to corner sensor is less than 30 cm	STOP
		Distance from obstacle to corner sensor is 30 cm or more and less than 40 cm	30
		Distance from obstacle to corner sensor is 40 cm or more and less than 50 cm	40
		Distance from obstacle to corner sensor is 50 cm or more and less than 60 cm	50
		Distance from obstacle to corner sensor is 60 cm or more and less than 70 cm	60
		Distance from obstacle to corner sensor is more than 70 cm	Off
FCW IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
LDW IND	Ignition switch ON	LDW system display ON	On
		LDW system display OFF	Off
TIRE PRESS FR	Ignition switch ON	—	0 - 63.75
TIRE PRESS FL	Ignition switch ON	—	0 - 63.75
TIRE PRESS RR	Ignition switch ON	—	0 - 63.75
TIRE PRESS RL	Ignition switch ON	—	0 - 63.75
BSW IND	Ignition switch ON	BSW system display ON	On
		BSW system display OFF	Off
DIPPED BEAM IND	Ignition switch ON	Dipped beam indicator lamp ON	On
		Dipped beam indicator lamp OFF	Off
HI-BEAM ASST IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
CHASSIS CONTROL WARN	Ignition switch ON	Chassis control display (warning) indication	On
		Other than above	Off
LCD	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	—	—	0 V
7 (BG)	Ground	Security signal	Input	Ignition switch ON	Security indicator ON	0 V
					Security indicator OFF	12 V
9 (GR)	Ground	ECO mode switch signal	Input	Ignition switch ON	ECO mode switch is pressed	0 V
					Other than the above	10.0 V
15 (L)	20 (Y)	Ambient sensor signal	Input	Ignition switch ON	Changes depending to ambient temperature.	 JSNIA0014GB
17 (BG)	Ground	Meter control switch ground	—	—	—	0 V
18 (SB)	17 (BG)	Trip reset switch signal	Input	Ignition switch ON	Trip reset switch is pressed	0 V
					Other than the above	5.0 V
20 (Y)	Ground	Ambient sensor ground	—	Ignition switch ON	—	0 V
21 (L)	Ground	Steering switch ground	—	Ignition switch ON	—	0 V
22 (Y)	21 (L)	Steering switch signal A	Input	Ignition switch ON	Keep pressing BACK switch	0 V
					Keep pressing MENU UP switch	0.5 V
					Keep pressing MENU DOWN switch	1.2 V
					Keep pressing TEL switch	2.1 V
					Keep pressing ENTER switch	3.3 V
23 (GR)	21 (L)	Steering switch signal B	Input	Ignition switch ON	Keep pressing VOLUME DOWN switch	0 V
					Keep pressing VOLUME UP switch	0.5 V
					Keep pressing TEL END switch	1.2 V
					Keep pressing SEEK DOWN switch	2.1 V
					Keep pressing SEEK UP switch	3.3 V
25 (V)	Ground	Brake fluid level switch signal	Input	Ignition switch ON	Brake fluid level low	0 V
					Brake fluid level normal	12 V
28 (Y)	Ground	Seat belt buckle switch signal (driver seat)	Input	Ignition switch ON	Fastened	12 V
					Unfastened	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
30 (LG)	Ground	Manual mode signal	Input	Ignition switch ON	Selector lever manual mode position	0 V
					Other than the above	12 V
31 (SB)	Ground	Non-manual mode signal	Input	Ignition switch ON	Selector lever manual mode position	12 V
					Other than the above	0 V
32 (BG)	Ground	Manual mode shift up signal	Input	Ignition switch ON	Selector lever UP operation	0 V
					Other than the above	12 V
33 (BR)	Ground	Manual mode shift down signal	Input	Ignition switch ON	Selector lever DOWN operation	0 V
					Other than the above	12 V
36 (GR)	17 (BG)	Illumination control switch signal (+)	Input	Ignition switch ON	Illumination control switch (+) is pressed	0 V
					Other than the above	4.8 V
37 (V)	17 (BG)	Illumination control switch signal (–)	Input	Ignition switch ON	Illumination switch control (-) is pressed	0 V
					Other than the above	4.8 V
38 (G)	Ground	Vehicle speed signal (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 25 MPH (40 km/h)]	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0012GB
39 (W)	Ground	Vehicle speed signal (2-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is approx. 25 MPH (40 km/h)]	**NOTE:** The maximum voltage varies depending on the specification (destination unit).  JSNIA0015GB
41 (L)	Ground	CAN-H	—	—	—	—
42 (P)	Ground	CAN-L	—	—	—	—
43 (W)	Ground	Illumination control signal	Output	Ignition switch ON	Lighting switch 1ST position	12 V
					Lighting switch OFF position	0 V
44 (LA/B)	Ground	Fuel level sensor ground	—	Ignition switch ON	—	0 V

Terminal No. (Wire color)		Description		Condition			Value (Approx.)
+	–	Signal name	Input/ Output				
45 (LA/G)	Ground	Battery power supply	Input	Ignition switch OFF	—		Battery voltage
46 (V)*1 (LA/BR)*2	Ground	Ignition signal	Input	Ignition switch ON	—		12 V
47 (SB)	Ground	AV communication signal (H)	—	—	—		—
48 (LG)	Ground	AV communication signal (L)	—	—	—		—
49 (Y)	50 (BG)	Oil level sensor signal	Input	Ignition switch ON	—		MWI-126, "Component Inspection"
50 (BG)	Ground	Oil level sensor ground	—	Ignition switch ON	—		0 V
51 (LA/L)	44 (LA/B)	Fuel level sensor signal	Input	Ignition switch ON	Fuel gauge indication position	Full	Less than 93 Ω
						3/4	140 Ω
						1/2	186 Ω
						1/4	—*3
						1/8	255 Ω
						Empty	More than 278 Ω
52 (B)	Ground	Ground	—	—	—		0 V

*1: With stop/start system
*2: Without stop/start system
*3: The inspection of 1/4 is not required.

Fail-Safe

INFOID:0000000010726645

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	• When reception time of an abnormal signal is 60 seconds or less, the last value received. • When reception time of an abnormal signal is more than 60 seconds, reset to zero.
Illumination control	When suspending communication, changes to nighttime mode.

Function			Specifications
Information display	Odo/trip meter		An indicated value is maintained at communications blackout.
	Shift position indicator		The display turns OFF by suspending communication.
	Chassis control display		The display turns no effect by suspending communication.
	4WD torque distribution display		The gauge displays 0% by suspending communication.
	Trip computer	Current fuel consumption	The last result calculated during normal condition is indicated.
		Average fuel consumption	
		Average vehicle speed	
		Distance to empty	
		ECO pedal guide	The indicator turns OFF by suspending communication.
	Warning/ Indicator	4WD warning	The display turns ON by suspending communication.
		Chassis control warning	
		Other than the above	The display turns OFF by suspending communication.
Buzzer			The buzzer turns OFF by suspending communication.
Warning lamp/indicator lamp	ABS warning lamp		The lamp turns ON by suspending communication.
	VDC warning lamp		
	Brake warning lamp		
	Electric power steering warning lamp		
	Malfunction indicator lamp (MIL) (yellow)		
	SRS air bag warning lamp		
	Brake system warning lamp		
	FEB warning lamp		
	Low tire pressure warning lamp		The lamp turns ON after flashing for 2 minutes.
	Electric parking brake indicator lamp		The lamp blinking caused by suspending communication.
	High beam indicator lamp		The lamp turns OFF by suspending communication.
	VDC OFF indicator lamp		
	Turn signal indicator lamp		
	Front fog lamp indicator lamp		
	Rear fog lamp indicator lamp		
	Position lamp indicator lamp		
	Charge warning lamp		
	ECO mode indicator lamp		
	4WD indicator lamp		
	LOCK indicator lamp		
	Dipped beam indicator lamp		
	hill descent control indicator lamp		
	Water-in-fuel-filter warning lamp		
	Glow indicator lamp		
	Malfunction indicator lamp (MIL) (red)		
	High beam assist indicator lamp		
	hill start assist indicator lamp		

DTC Inspection Priority Chart

INFOID:0000000010726646

If multiple DTCs are detected simultaneously, check them one by one depending on the following DTC inspection priority chart.

Priority	Detected items (DTC)
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• B2205: VEHICLE SPEED • B2267: ENGINE SPEED • B2268: WATER TEMP • B2321: OIL LEV SEN OPEN • B2322: OIL LEV SEN SHORT • B2323: ILLUMINATION OUTPUT CIRCUIT

DTC Index

INFOID:0000000010726647

DTC	CONSULT display	Refer to
U1000	CAN COMM CIRCUIT	MWI-121, "DTC Description"
U1010	CONTROL UNIT (CAN)	MWI-122, "DTC Description"
B2205	VEHICLE SPEED	MWI-123, "DTC Description"
B2267	ENGINE SPEED	MWI-124, "DTC Description"
B2268	WATER TEMP	MWI-125, "DTC Description"
B2321	OIL LEV SEN OPEN	MWI-126, "DTC Description"
B2322	OIL LEV SEN SHORT	MWI-126, "DTC Description"
B2323	ILLUMINATION OUTPUT CIRCUIT	MWI-128, "DTC Description"

BCM

List of ECU Reference

INFOID:0000000010726599

ECU	Reference
BCM	BCS-53, "Reference Value"
	BCS-76, "Fail-safe"
	BCS-77, "DTC Inspection Priority Chart"
	BCS-78, "DTC Index"

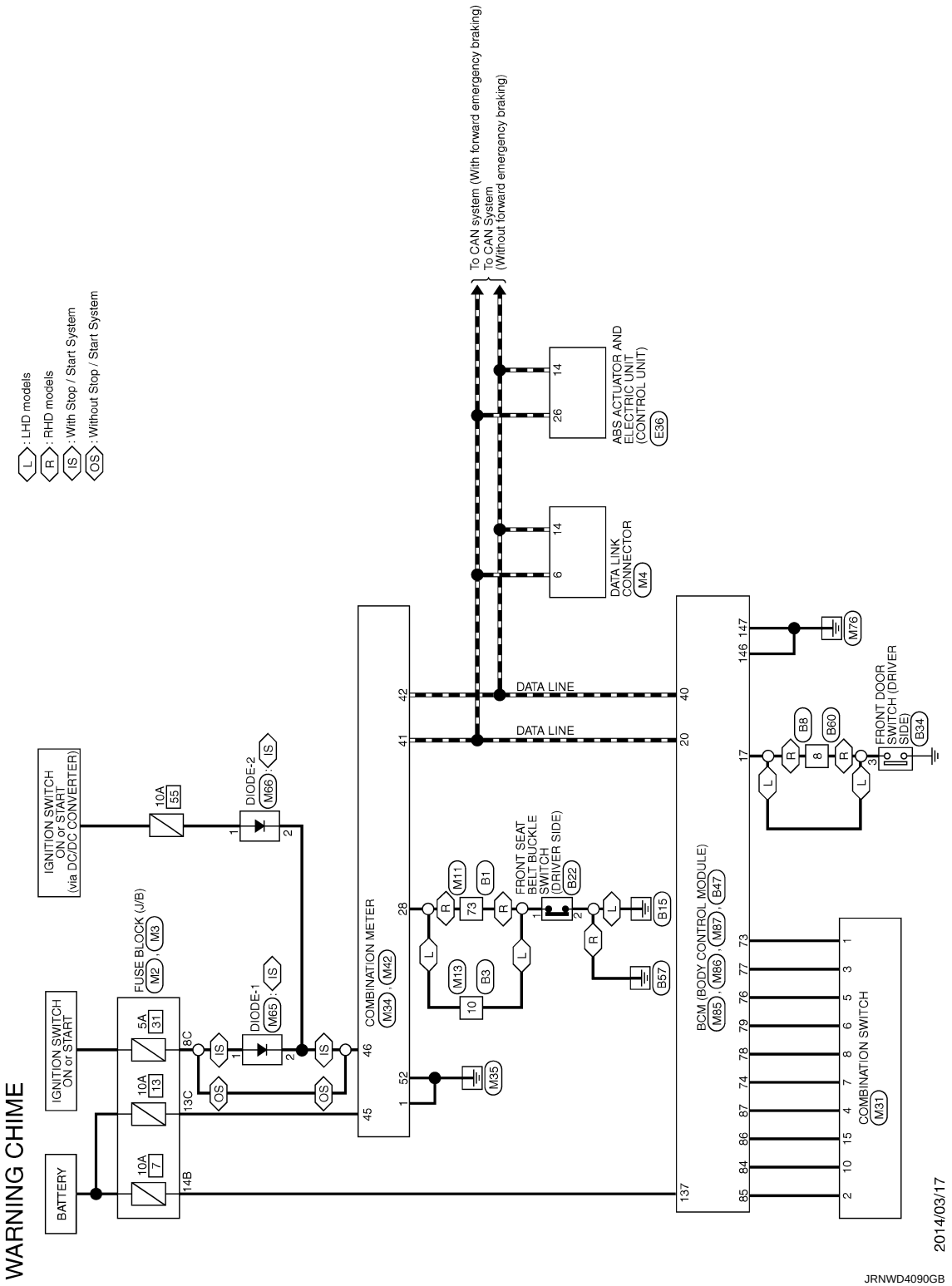
< WIRING DIAGRAM >

WIRING DIAGRAM

WARNING CHIME SYSTEM

Wiring Diagram

INFOID:0000000010726600



WARNING CHIME

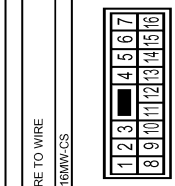
Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	LA/Y	-
6	V	-
7	LA/V	-
20	L	- [With diesel engine]
20	LA/L	- [With gasoline engine]
21	B	- [With diesel engine]
21	LA/B	- [With gasoline engine]
24	G	-
25	BR	-
73	LA/Y	-
74	R	-
75	R	-
84	L	-
85	L	-
92	LA/R	-
93	LA/L	-
95	LA/BR	-
97	L	-
98	Y	-
99	LA/P	-
100	GR	- [With diesel engine]
100	LA/GR	- [With gasoline engine]

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
1	SB	-
2	V	-
3	LA/R	-
4	V	-
5	GR	-
6	Y	-
7	LG	-
8	BG	-
9	W	-
10	LA/Y	-
11	BR	-
12	Y	-
13	W	-
14	V	-
15	L	-
16	BR	-
17	Y	-
18	LA/L	- [Without PSM]
18	SB	- [With PSM]
20	LG	-
21	G	-
22	V	-
23	BR	-
24	P	-
25	L	-
26	G	-
29	SHIELD	-
30	W	-
31	B	-
32	R	-

Connector No.	B8
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS

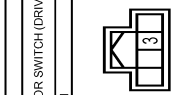


Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	G	-
3	P	-
6	L	-
7	L	-
8	SB	-
9	R	-
10	LA/W	-
11	LA/BR	-
12	W	-
13	P	-
14	R	-
15	P	-
16	P	-

Connector No.	B22
Connector Name	FRONT SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH

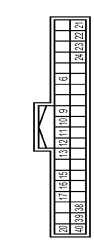
Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/Y	-
2	B	-

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
3	SB	-

Connector No.	B47
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



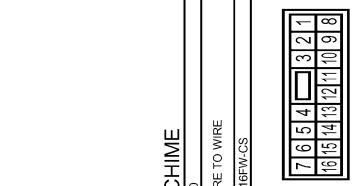
Terminal No.	Color Of Wire	Signal Name [Specification]
6	R	BACK DOOR OPENER REQUEST SW
9	G	HANDS FREE SENSOR
10	W	REAR RH DOOR SW
11	LG	BACK DOOR SW
12	R	REAR LH DOOR SW
13	SB	PASSENGER DOOR SW
15	LA/G	REAR WIPER AUTO STOP
16	Y	BACK DOOR OPENER SW
17	SB	DRIVER DOOR SW
20	L	CAN-H
21	BR	BUMPER ANTENNA(-)
22	Y	REAR ANTENNA(-)
23	L	REAR ANTENNA(+)
24	G	BUMPER ANTENNA(+)
38	V	SIREN
39	LA/W	HIGH-MOUNTED STOP LAMP
40	P	CAN-L

JRNWD4091GB

WARNING CHIME

Connector No.	B60
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/LG	-
2	LA/GR	-
3	P	-
6	L	-
7	L	-
8	GR	- [For LHD models]
8	SB	- [For RHD models]
9	LA/R	-
10	LA/Y	-
11	LA/BR	-
12	W	-
13	LA/V	-
14	R	-
15	P	-
16	P	-

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BEZ34FB-BHY2-BLZZ-RH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	MOTOR POWER SUPPLY
4	SB	FR RH WHEEL SENSOR SIGNAL
5	V	BRAKE VACUUM SENSOR POWER SUPPLY
8	P	FR LH WHEEL SENSOR SIGNAL
9	Y	hill decent control SWITCH SIGNAL

12	LG	BRAKE VACUUM SENSOR SIGNAL
13	B	GROUND (MOTOR)
14	P	CAN-L
15	BR	VDC OFF SWITCH SIGNAL
16	R	FR RH WHEEL SENSOR POWER SUPPLY
17	Y	RR RH WHEEL SENSOR POWER SUPPLY
18	G	RR LH WHEEL SENSOR SIGNAL
19	W	FR LH WHEEL SENSOR POWER SUPPLY
24	SHIELD	BRAKE VACUUM SENSOR GROUND
25	BR	VALVE POWER SUPPLY
26	L	CAN-H
28	GR	IGNITION POWER SUPPLY
29	LG	RR RH WHEEL SENSOR SIGNAL
31	BR	RR LH WHEEL SENSOR POWER SUPPLY
38	B	GROUND (VALVE)

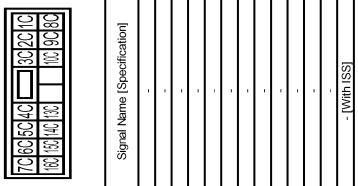
Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
10B	GR	- [With MR20 engine or R9M engine]
10B	LA/GR	- [With QR25 Engine]
12B	BR	-
14B	W	-
15B	GR	-
16B	G	-
1B	R	-
2B	V	-
3B	LA/L	-
6B	LA/V	-
7B	LA/V	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FW-CS

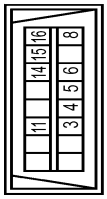
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
10C	LG	-
13C	LA/G	-
14C	R	-
15C	L	-
16C	LA/W	-
1C	R	-
2C	G	-
3C	Y	-
4C	LG	-
5C	GR	-
6C	LA/R	-
7C	Y	-
8C	BR	- [With ISS]
8C	LA/BR	- [Without ISS]
9C	L	-

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	B	-
5	B	-
6	L	-
8	Y	-

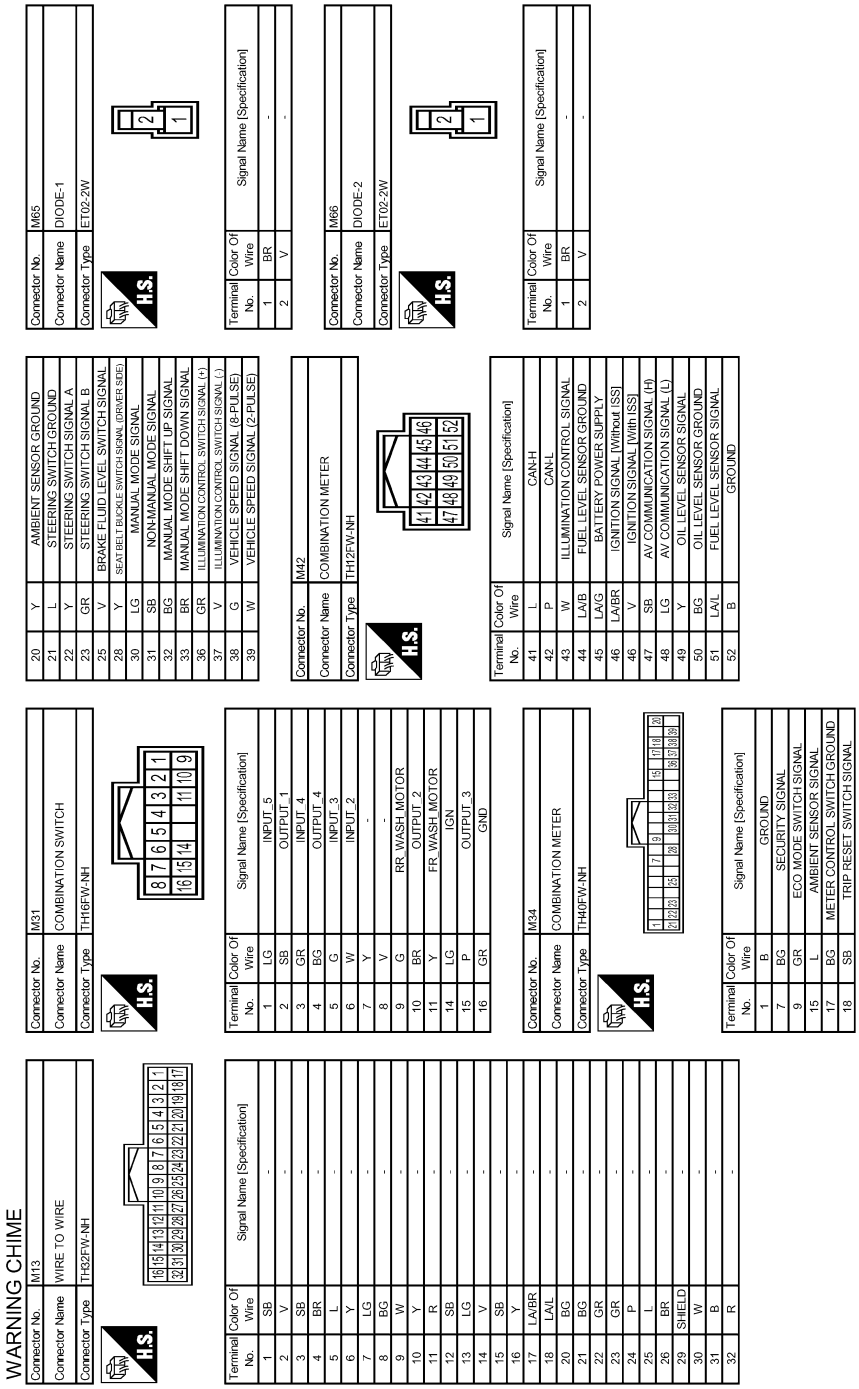
11	SB	-
14	P	-
15	BR	-
16	W	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	Y	-
6	GR	-
7	LG	-
20	LA/L	-
21	LA/B	-
24	G	-
25	BR	-
73	Y	-
74	R	-
75	R	-
84	L	-
85	L	-
92	LA/W	-
93	LA/Y	-
95	SB	-
97	B/G	-
98	Y	-
99	W	-
100	LA/R	-

JRNWD4092GB



JRNWD4093GB

WARNING CHIME

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FBR-CS

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
137	W	BAT POWER SUPPLY (FUSE)
138	SB	INT ROOM LAMP CONT
139	L	PASSENGER DOOR UNLOCK OUTPUT
141	V	FRONT DOOR LOCK OUTPUT
143	LA/V	POWER SUPPLY (ER DOOR LK ACT)
144	BG	POWER SUPPLY (TURN SIGNAL)
145	GR	POWER SUPPLY (STOP LAMP)
146	B	GROUND
147	B	GROUND
148	G	DRIVER DOOR UNLOCK OUTPUT
149	W	FRONT DOOR SUPERLOCK OUTPUT
151	R	POWER SUPPLY (REAR DOOR LK ACT)
152	LG	POWER SUPPLY (REAR WIPER)

Connector No.	M86
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
81	L	KEY SWITCH
82	LA/R	KEY SW (ST) [Without Intelligent key]
82	W	PASS DOOR REQ SW [With Intelligent key]
84	BR	COMBI SW OUTPUT 2
85	SB	COMBI SW OUTPUT 1
86	P	COMBI SW OUTPUT 3
87	BG	COMBI SW OUTPUT 4
88	W	PUSH-BTN IGN SW ILL CONT
90	Y	S/L CONDITION
94	G	DETENTION SW
95	V	EXTENDED STORAGE FUSE SW
99	R	STOP/START OFF SW
100	V	DRIVER DOOR ANT +
101	Y	PUSH SW
104	R	DR DOOR UNLK SENS
105	Y	DR DOOR REQ SW
106	W	ACC OUTPUT
107	V	SENSOR CANCEL SW
109	P	NATS ANTENNA AMP.
110	BG	DIMMER SIGNAL
111	R	DOOR LK STAT IND OUTPUT
112	SB	STOP/START OFF SW INDICATOR
113	LG	NATS ANTENNA AMP.
114	Y	NATS ANTENNA AMP.
115	W	NATS ANTENNA AMP.
116	BG	ROOM ANT 1 -
117	GR	ROOM ANT 1 +
118	SB	PASSENGER DOOR ANT -
119	P	PASSENGER DOOR ANT +
120	BR	RRIVER DOOR ANT +

Connector No.	M87
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
41	V	STEERING LOCK UNIT POWER SUPPLY
42	LA/G	TURN SIG LH (SIDE)
43	LA/Y	TURN SIG RH (SIDE)
44	P	INTERIOR ROOM LAMP RELAY CONT
45	R	CAN-L
46	L	CAN-H
47	G	LIGHT & RAIN SENSOR
48	L	CAN-H
49	R	CAN-L
50	BG	DOOR LOCK SW
51	Y	HAZARD SW
56	P	DONGLE
57	L	CVT SHIFT SELECT (DETENT SW) PWR
60	R	HEADLAMP WASHER SW
63	G	POWER WINDOW RELAY CON
64	LA/R	REAR WINDOW DEFOGGER RELAY CONT
65	BR	ACC RELAY CONT
67	Y	IGN RELAY (F/B) CONT OUTPUT
68	LA/W	BLOWER RELAY CONT
73	LG	COMBI SW INPUT 5
74	Y	COMBI SW OUTPUT 5
75	BG	SECURITY IND LAMP CONT
76	G	COMBI SW INPUT 3
77	GR	COMBI SW INPUT 4
78	V	COMBI SW INPUT 1
79	W	COMBI SW INPUT 2
80	SB	DOOR UNLOCK SW

JRNWD4094GB

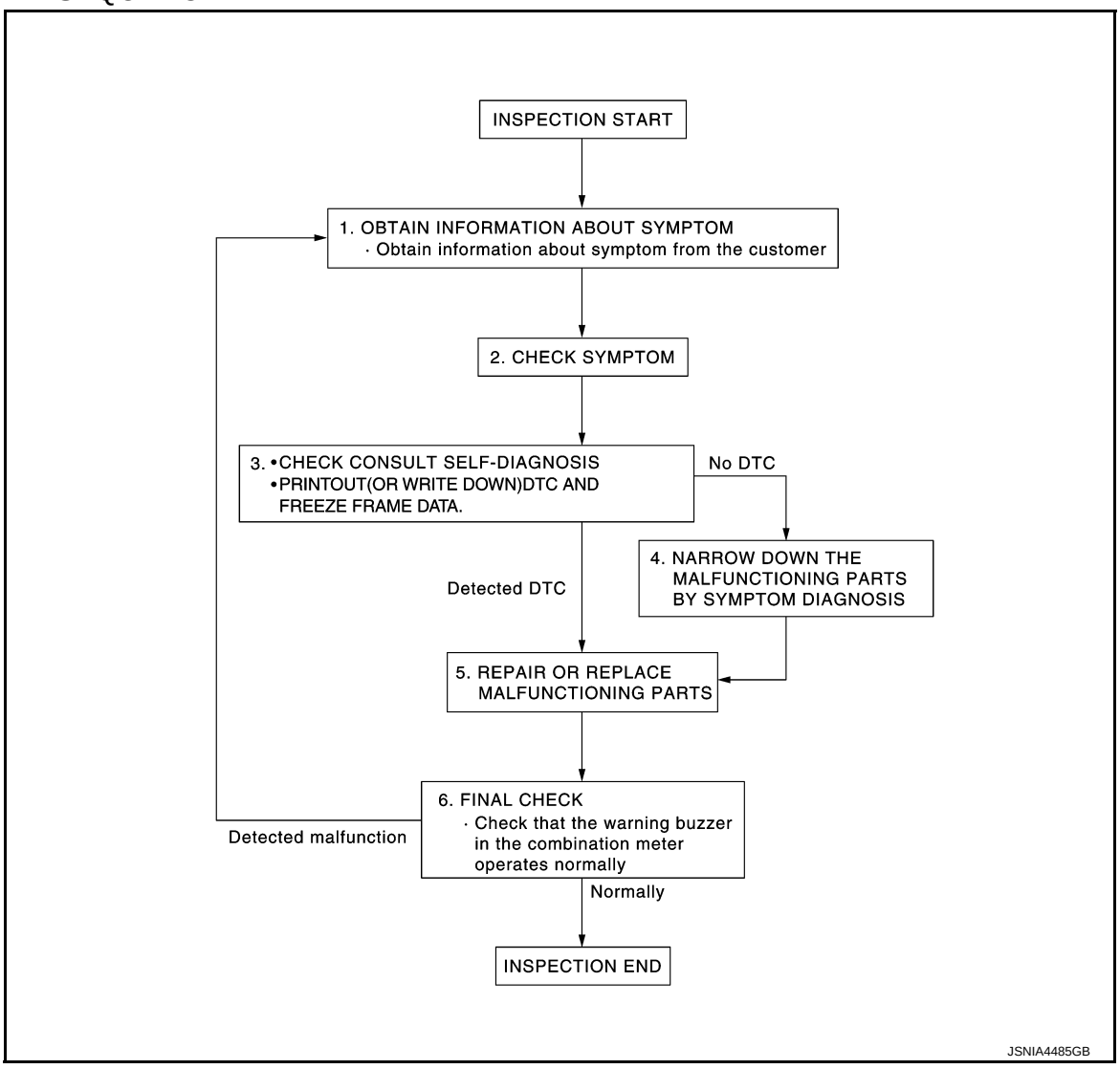
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000010726601

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-105, "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.

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 DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:0000000010726695

1.CHECK FUSE

Check for blown fuses.

Power source	Fuse No.
Battery	13
Ignition switch ON or START	31, 55*

*: With stop/start system

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		Ground		
Connector	Terminal			
M42	45		OFF	Battery voltage
	46		ON	12 V

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	1		Existed
M42	52		

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> Repair harness or connector.

METER BUZZER CIRCUIT

Component Function Check

INFOID:0000000010726603

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 >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
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-151, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-121, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000010726604

1.CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to WCS-53, "COMBINATION METER : Diagnosis Procedure".

Is the inspection result normal?

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

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT (DRIVER SIDE)

Component Function Check

INFOID:0000000010726608

1.CHECK COMBINATION METER INPUT SIGNAL

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

Monitor item	Condition	Indication
BUCKLE SW	When driver seat belt is fastened	Off
	When driver seat belt is unfastened	On

Is the inspection result normal?

YES >> INSPECTION END
NO >> Proceed to WCS-55, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000010726609

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		Ground		
Connector	Terminal			
M34	28		When driver seat belt is fastened	12 V
			When driver seat belt is unfastened	0 V

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-151, "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	28	B22	1	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M34	28		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 (driver side)		Ground	Continuity
Connector	Terminal		
B22	2		Existed

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> Repair harness or connector.

Component Inspection

INFOID:0000000010726610

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.

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace seat belt buckle (driver side). Refer to SB-14, "SEAT BELT BUCKLE : Removal and Installation".

SYMPTOM DIAGNOSIS

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

Description

INFOID:0000000010726613

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

Diagnosis Procedure

INFOID:0000000010726614

1.CHECK SEAT BELT WARNING LAMP

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

Seat belt (driver side) fastened	: OFF
Seat belt (driver side) unfastened	: ON
Seat belt (passenger side) fastened*	: OFF
Seat belt (passenger side) unfastened*	: ON

*: When getting in the passenger seat

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-151, "Removal and Installation".
NO >> GO TO 2.

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

Perform the check for the seat belt buckle switch (driver side) circuit. Refer to WCS-55, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace malfunctioning parts.

3.CHECK SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT (PASSENGER SIDE)

Perform the check for the seat belt buckle switch (passenger side) circuit. Refer to SBC-19, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-151, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:0000000010726615

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

Diagnosis Procedure

INFOID:0000000010726616

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-176, "Symptom Table" (LED HEADLAMP) or EXL-361, "Symptom Table" (HALOGEN HEADLAMP).

2.CHECK DRIVER SIDE DOOR SWITCH SIGNAL CIRCUIT

Perform the check for the driver side door switch signal circuit. Refer to DLK-186, "Diagnosis Procedure" (TYPE1), DLK-495, "Diagnosis Procedure" (TYPE2), DLK-695, "Diagnosis Procedure" (TYPE3), DLK-842, "Diagnosis Procedure" (TYPE4). To identify vehicle type, refer to DLK-22, "Information".

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-187, "Component Inspection" (TYPE1), DLK-496, "Component Inspection" (TYPE2), DLK-696, "Component Inspection" (TYPE3), DLK-843, "Component Inspection" (TYPE4). To identify vehicle type, refer to DLK-22, "Information".

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-121, "Removal and Installation".
NO >> Replace driver side door switch. Refer to DLK-319, "Removal and Installation" (TYPE1), DLK-626, "Removal and Installation" (TYPE2), DLK-787, "Removal and Installation" (TYPE3), DLK-929, "Removal and Installation" (TYPE4). To identify vehicle type, refer to DLK-22, "Information".