SECTION WCS
WARNING CHIME SYSTEM

CONTENTS

HOW TO USE THIS MANUAL

HOW TO USE THIS SECTION

Information

INFOID:0000000013480888

In this manual, “Idling Stop System” is referred to as “Stop / Start System”.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012789716

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

WARNING:

Always observe the following items for preventing accidental activation.

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, 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.

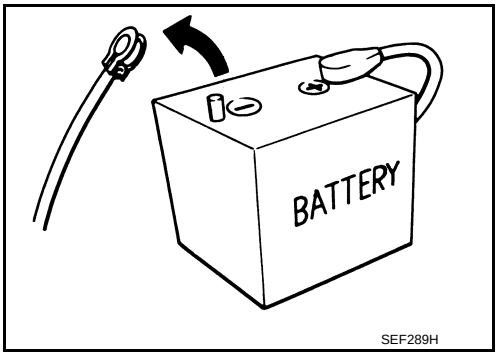
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious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

Precautions for Removing Battery Terminal

INFOID:0000000013447598

When disconnecting the battery terminal, pay attention to the following.

- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:



BR08DE	: 4 minutes	V9X engine	: 4 minutes
D4D engine	: 20 minutes	YD25DDTi	: 2 minutes
HR09DET	: 12 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		

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.

- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:

- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
  - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
  - Driving for 30 minutes or more on a steep slope.

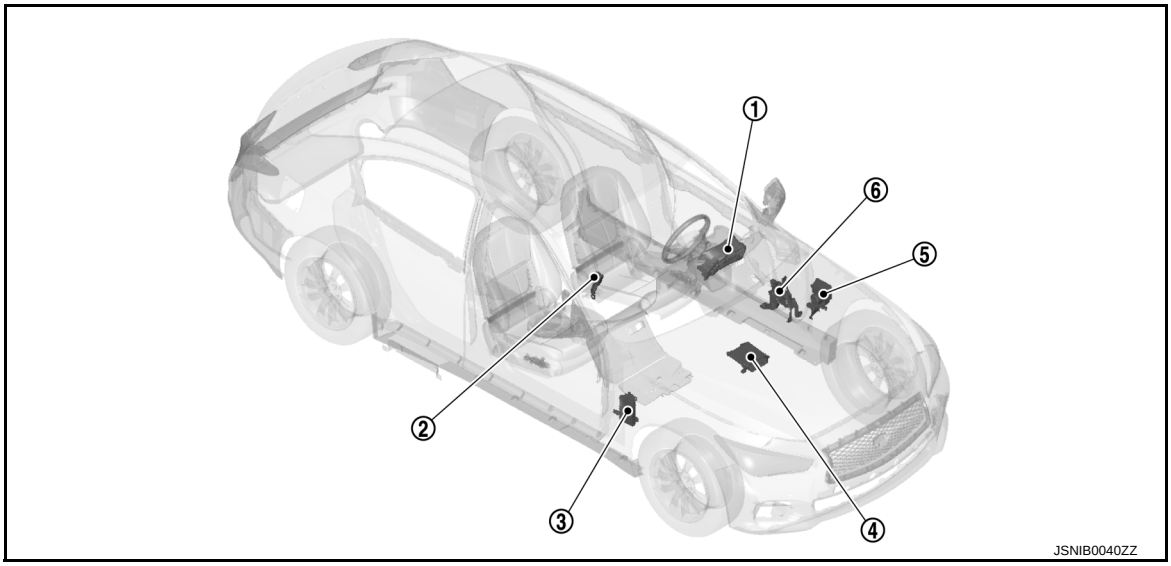
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 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.

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012789718



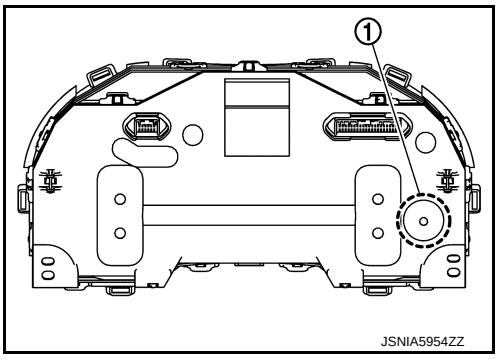
No.	Component	Function
①	Combination meter	Controls the parking brake release warning chime with the vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication and the signals from switches.
②	Seat belt buckle switch (driver side)	Transmits a seat belt buckle switch signal (driver side) to the combination meter.
③	BCM	• Based on the signals received from various units and switches, transmits the buzzer output signal to the combination meter via CAN communication. • Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
④	ECM (2.0L turbo gasoline engine models)	• Transmits a stop/start indicator lamp request signal to the combination meter via CAN communication. • Refer to EC4-25, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location.
⑤	ABS actuator and electric unit (control unit)	• Transmits the each signal to the combination meter via CAN communication. Refer to WCS-7, "WARNING CHIME SYSTEM : System Description". • Refer to BRC-10, "Component Parts Location" for detailed installation location.
⑥	Parking brake switch	Transmits a parking brake switch signal to the combination meter.

Combination Meter

INFOID:0000000012789719

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

- ACC warning (buzzer)
- Door lock operation warning
- Light reminder warning
- OFF position warning
- P position warning (buzzer)
- Parking brake release warning chime
- Seat belt warning
- Stop/start warning
- Take away warning (buzzer)



SYSTEM
WARNING CHIME SYSTEM
WARNING CHIME SYSTEM : System Description

INFOID:0000000012789720

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.

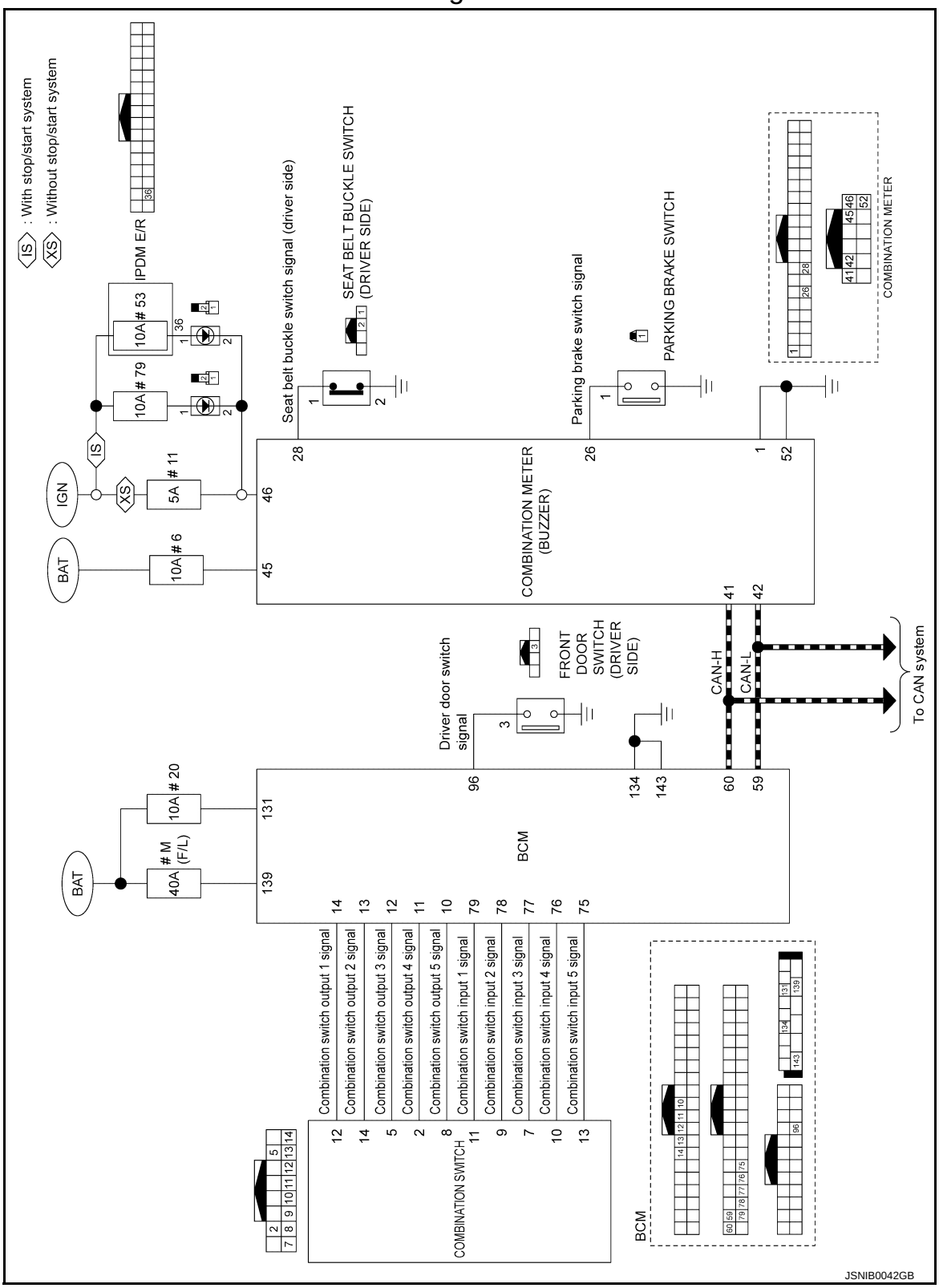
BCM
BCM receives signals from various units and transmits a buzzer output signal to the combination meter via CAN communication if it judges that the warning buzzer should be activated.

WARNING CHIME FUNCTION LIST

Warning functions	Reference
ACC warning (buzzer)	WCS-9, "WARNING CHIME : ACC Warning (Buzzer)"
Door lock operation warning	WCS-10, "WARNING CHIME : Door Lock Operation Warning"
Light reminder warning (buzzer)	WCS-11, "WARNING CHIME : Light Reminder Warning (Buzzer)"
OFF position warning	WCS-13, "WARNING CHIME : OFF Position Warning"
P position warning (buzzer)	WCS-15, "WARNING CHIME : P Position Warning (Buzzer)"
Parking brake release warning chime	WCS-17, "WARNING CHIME : Parking Brake Release Warning Chime"
Seat belt warning	WCS-19, "WARNING CHIME : Seat Belt Warning"
Stop/start warning	WCS-20, "WARNING CHIME : Stop/Start warning"
Take away warning (buzzer)	WCS-22, "WARNING CHIME : Take Away Warning (Buzzer)"

WARNING CHIME SYSTEM : Circuit Diagram

INFOID:0000000012789721



WARNING CHIME SYSTEM : Fail-Safe

INFOID:0000000012789722

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 : ACC Warning (Buzzer)

INFOID:0000000012789723

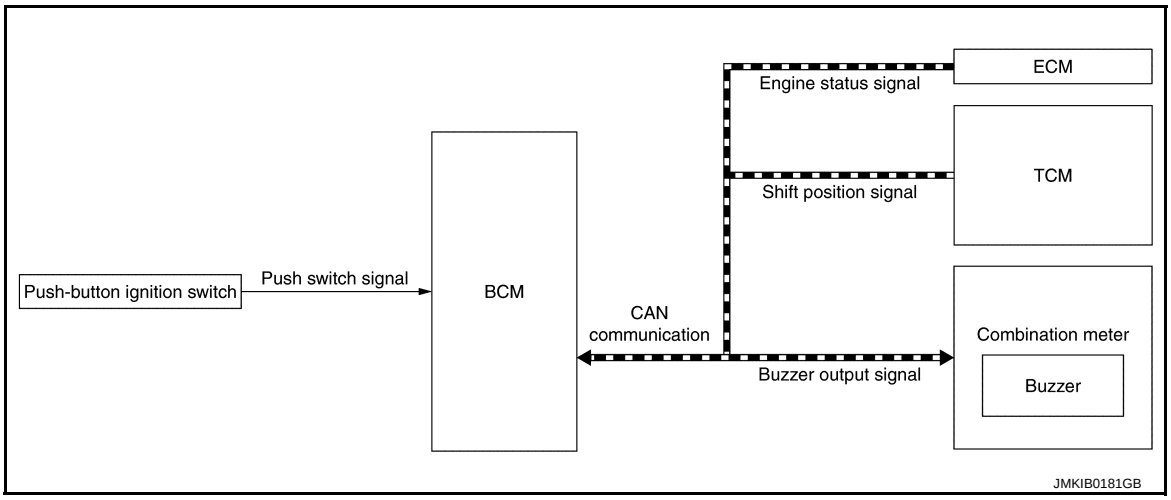
PURPOSE

When the P position warning is canceled, an alarm warns the driver that the ignition switch is in the ACC position.

SYNCHRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

Synchronization is applied.
Refer to DLK-34, "INFORMATION DISPLAY (COMBINATION METER) : ACC Warning (Information Display)".

SYSTEM DIAGRAM



SIGNAL PATH

- BCM judges whether or not warning the driver is required, according to push switch signal from push-button ignition switch, shift position signal from TCM via CAN communication, and engine status signal from ECM.
- 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

The following operations are performed while P position warning (for internal) is operated.

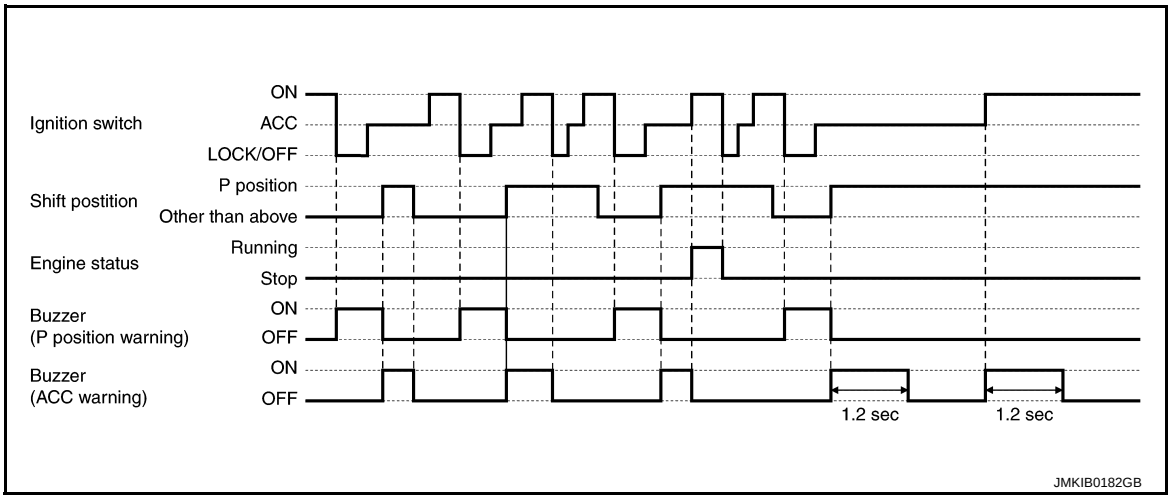
- Ignition switch is turned to ACC, and then shift position is shifted to P.
- Ignition switch is turned to ON after the above operation.

WARNING CANCEL CONDITION

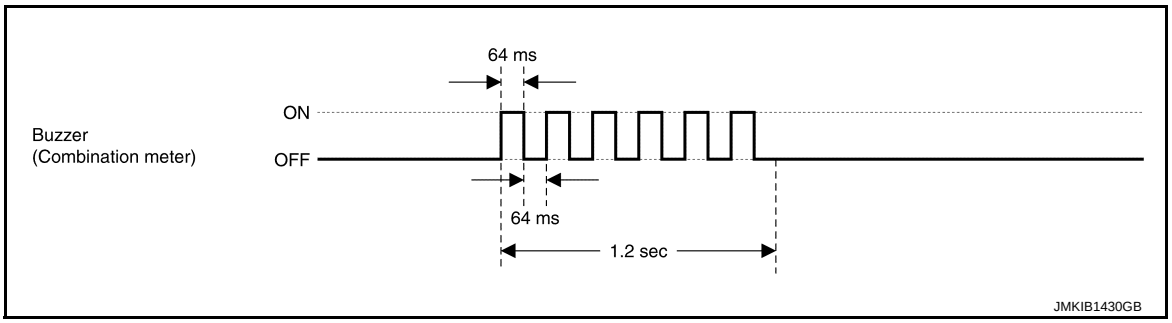
When any of the following conditions are satisfied.

- Shift position is shifted to a position other than P while ACC warning is operated.
- Ignition position is turned to OFF or LOCK.
- Start engine.

TIMING CHART



SOUND SPECIFICATION



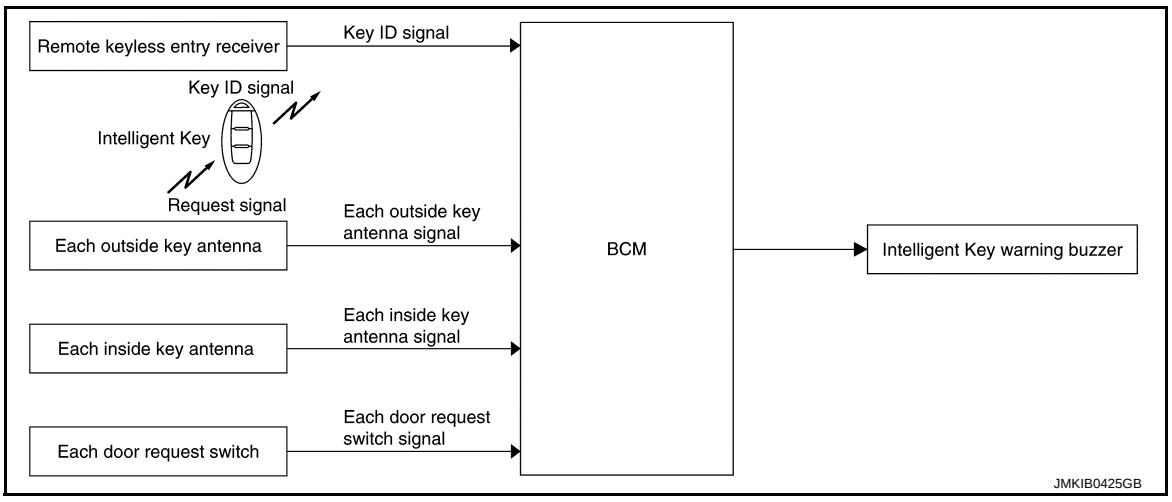
WARNING CHIME : Door Lock Operation Warning

INFOID:0000000012789724

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.

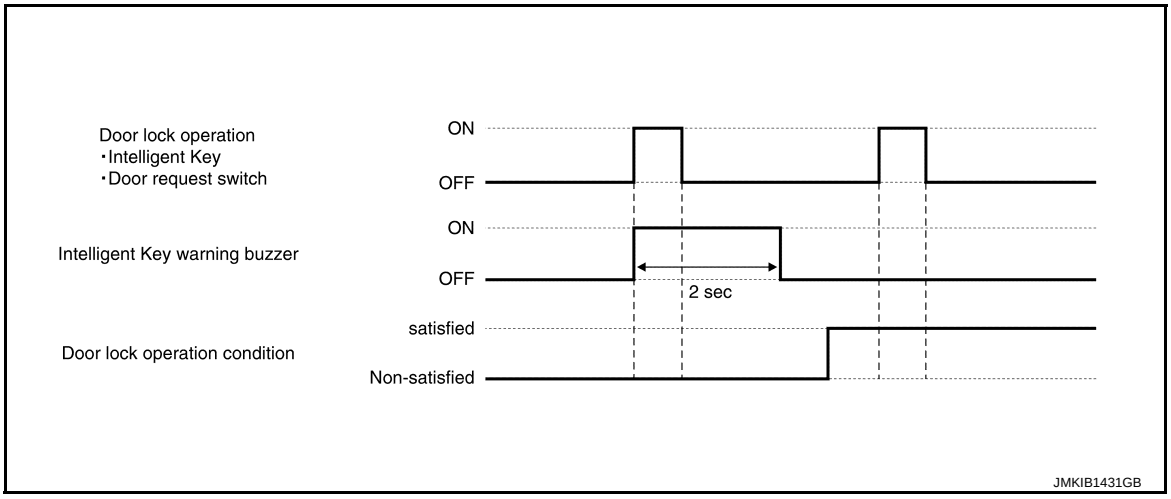
- Intelligent Key operation condition
  Refer to DLK-31, "REMOTE KEYLESS ENTRY FUNCTION : System Description".
- Door request switch operation condition
  Refer to DLK-23, "DOOR LOCK FUNCTION : System Description".

WARNING CANCEL CONDITION

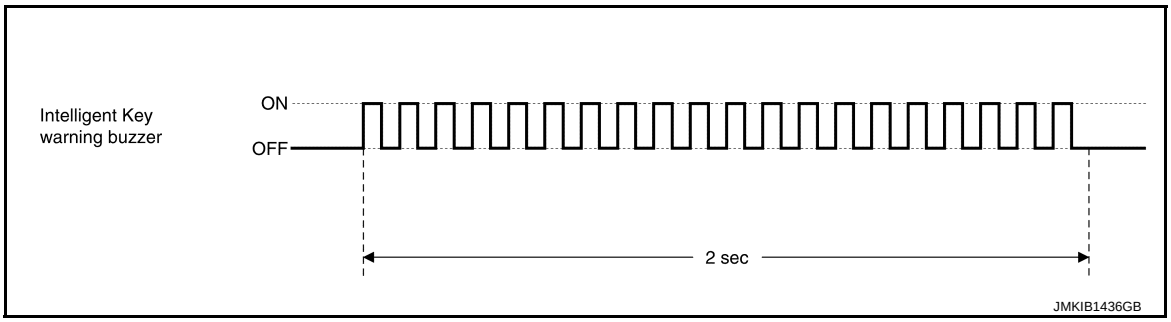
When any of the following conditions are satisfied.

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

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : Light Reminder Warning (Buzzer)

INFOID:0000000012789725

PURPOSE

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

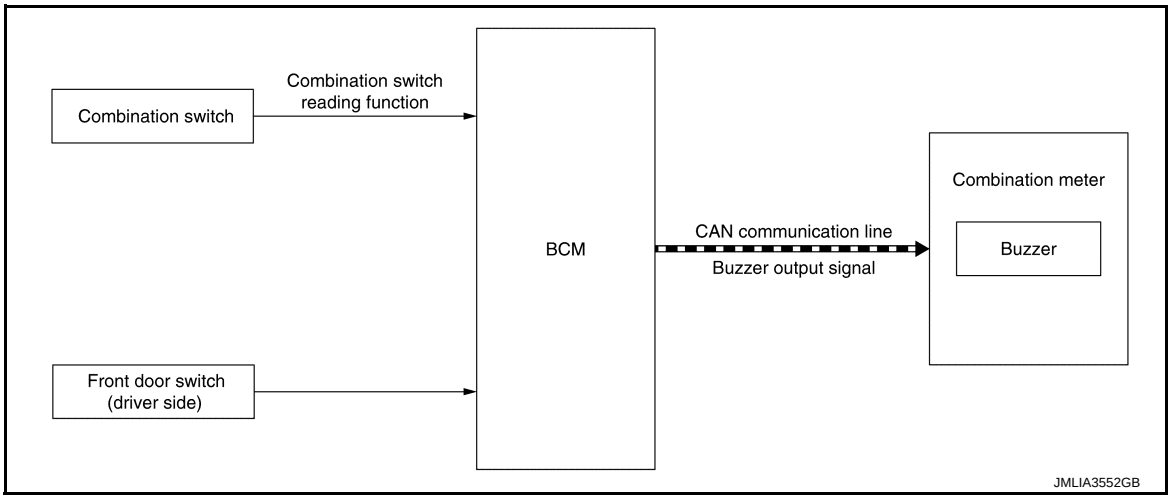
SYNCHRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

For warning/indicator (information display), refer to EXL-49, "INFORMATION DISPLAY (COMBINATION METER) : Light Reminder Warning (Information Display)".

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

For actions on CAN communications blackout in the combination meter, refer to WCS-8, "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.

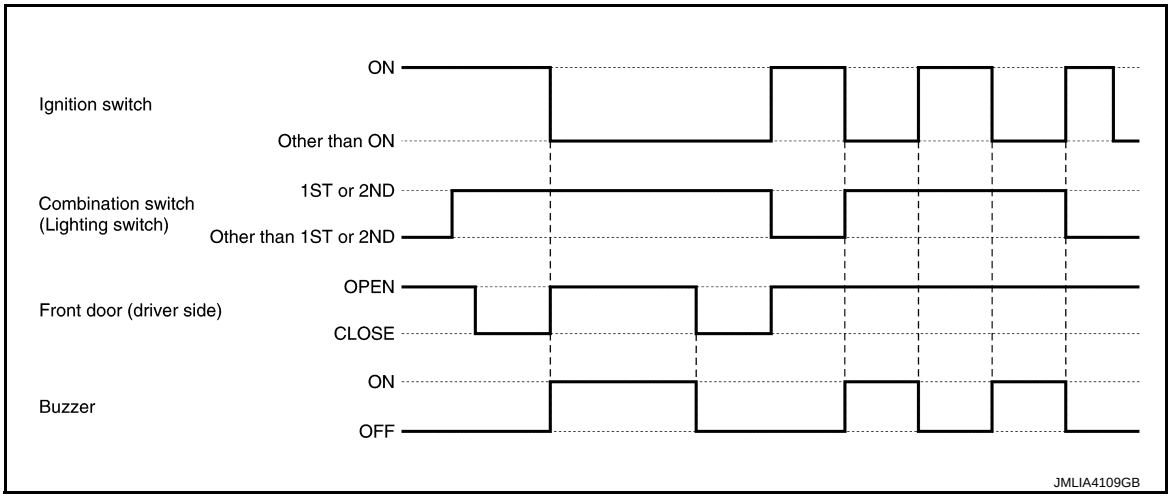
- Ignition switch other than ON
- Lighting switch 1ST or 2ND
- Front door (driver side) OPEN [front door switch (driver side) ON]

WARNING CANCEL CONDITION

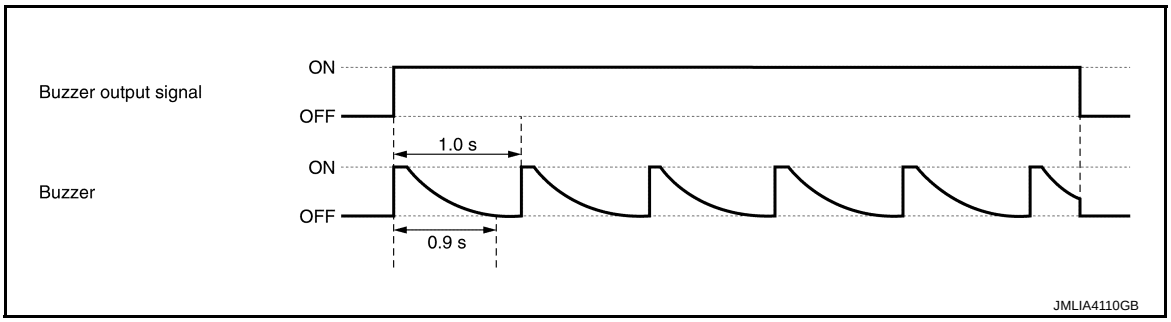
When any of the following conditions are satisfied.

- 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



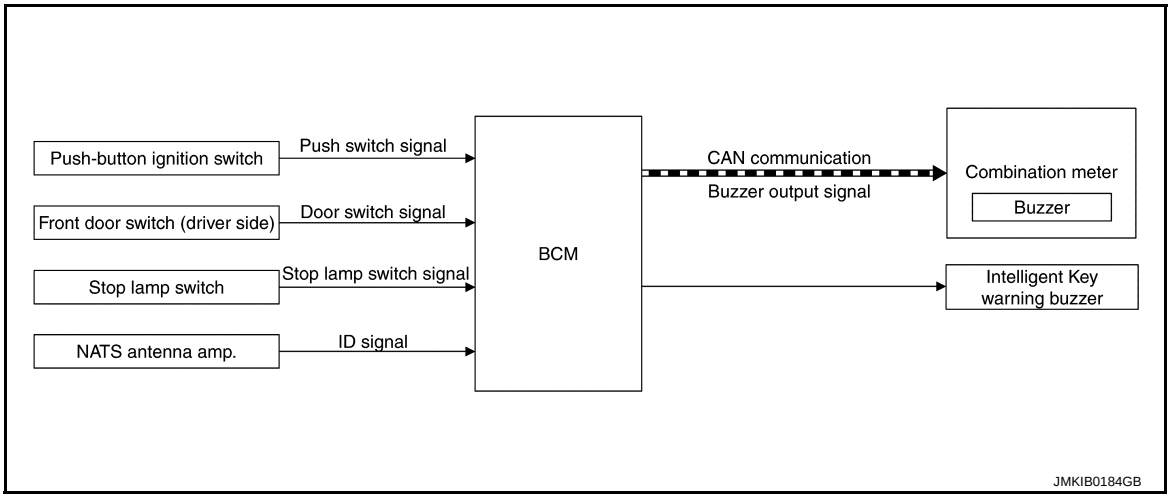
WARNING CHIME : OFF Position Warning

INFOID:0000000012789726

PURPOSE

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

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, 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.

For external

- BCM judges whether or not warning to the driver is required, according to door switch signal from front door switch (driver side) while OFF position warning (for internal) is operated.
- When BCM judges that warning the driver is required, Intelligent Key warning buzzer operates.

WARNING OPERATING CONDITION

For internal

When any of the following conditions are satisfied.

- Condition A
  - Ignition switch: ACC position
  - Front door switch (driver side) is ON (Driver door is open)
- Condition B
  - Ignition switch is turned from ON to OFF while driver door is open.
- Condition C
  - 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)

For external

- Driver door is closed while OFF position warning (for internal) is operated.
  NOTE:
  This warning only operates when driver door is closed after each warning is operated according to the sequential order of P position warning, ACC warning, and then OFF position warning (for internal).

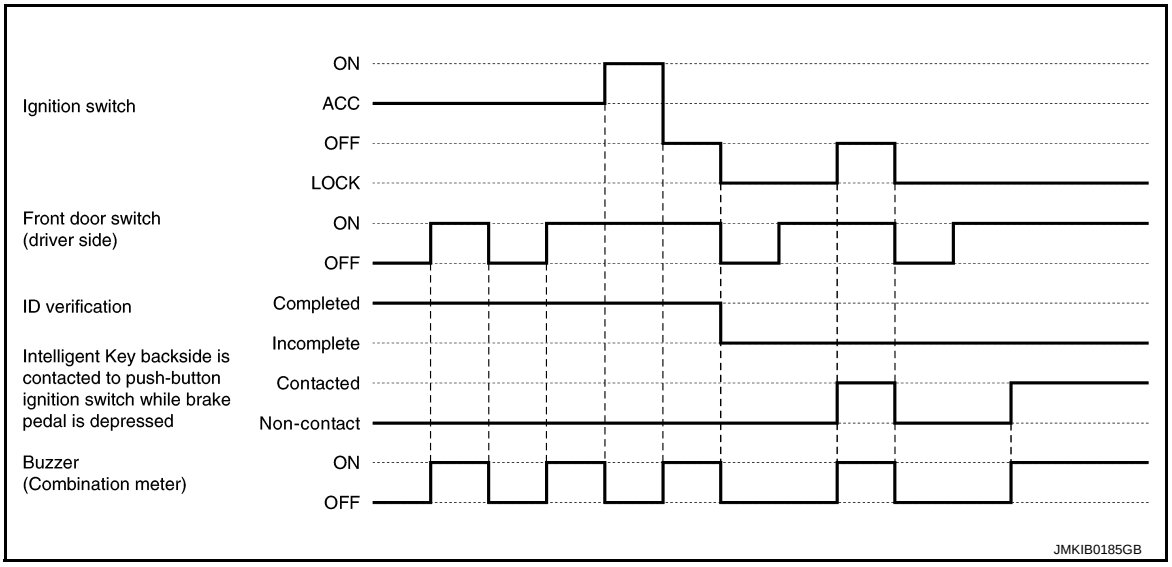
WARNING CANCEL CONDITION

For internal
- Any of the warning operating conditions are no longer satisfied.

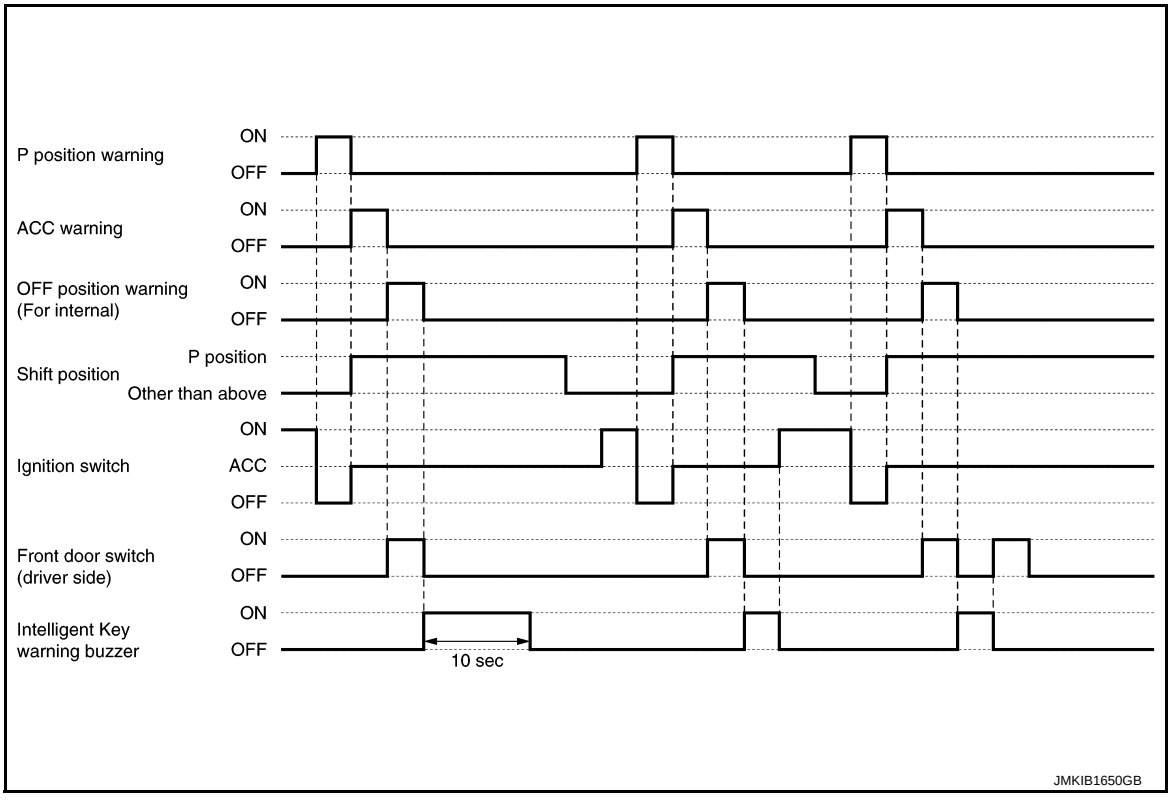
For external
- When any of the following conditions are satisfied.
- Ignition switch is ON
- Front door switch (driver side) is ON (Driver door is open)

TIMING CHART

For internal

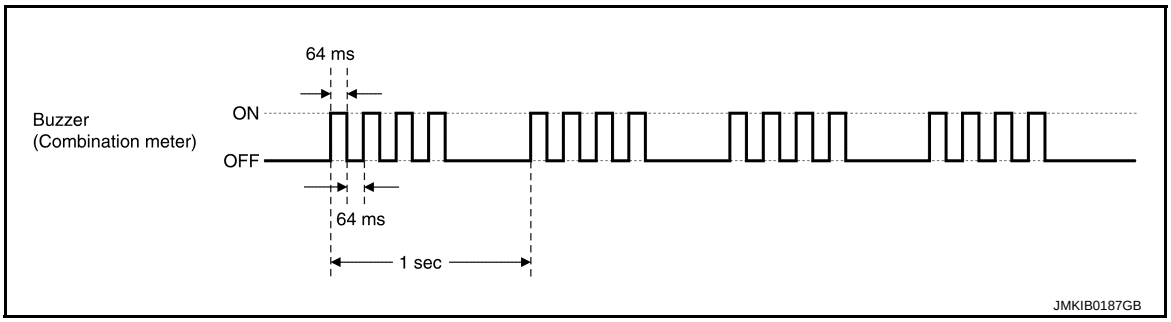


For external

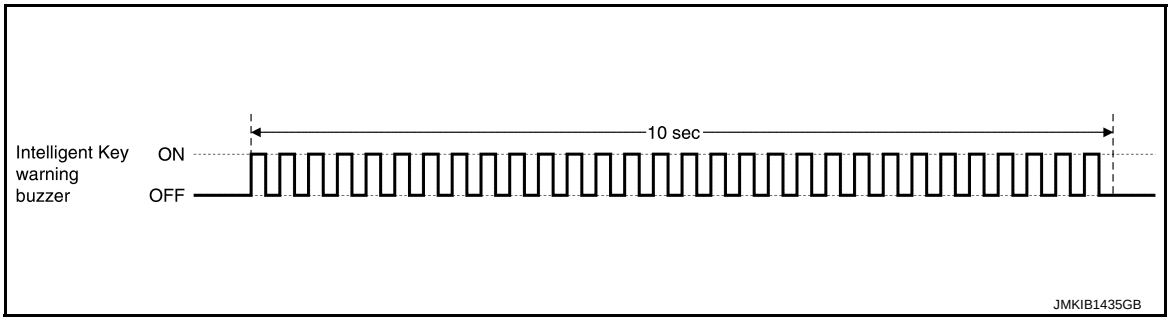


SOUND SPECIFICATION

For internal



For external



WARNING CHIME : P Position Warning (Buzzer)

INFOID:0000000012789727

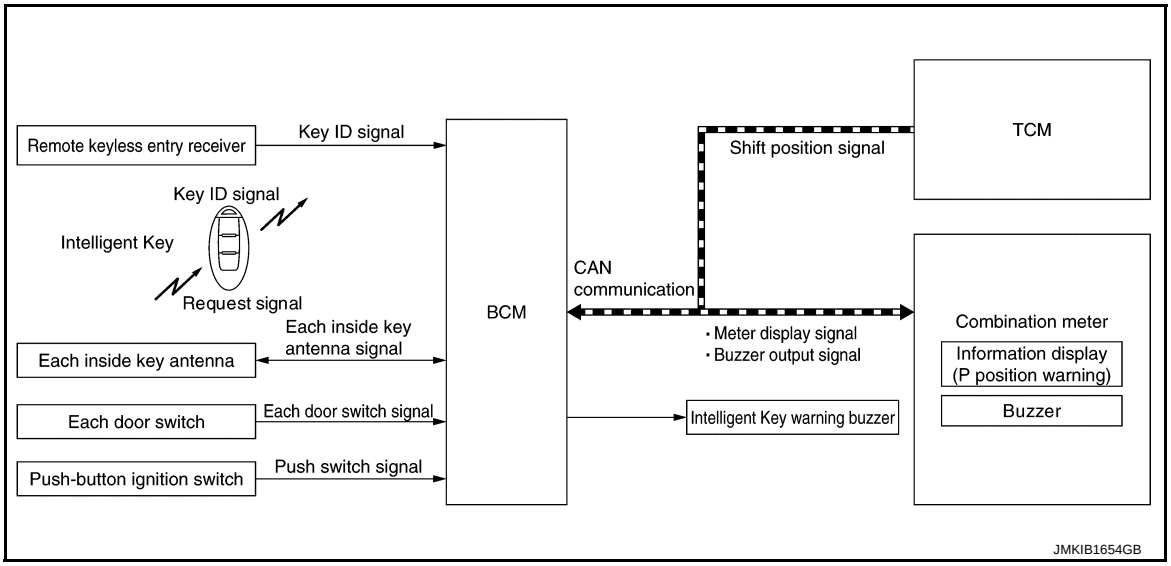
PURPOSE

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-42, "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)

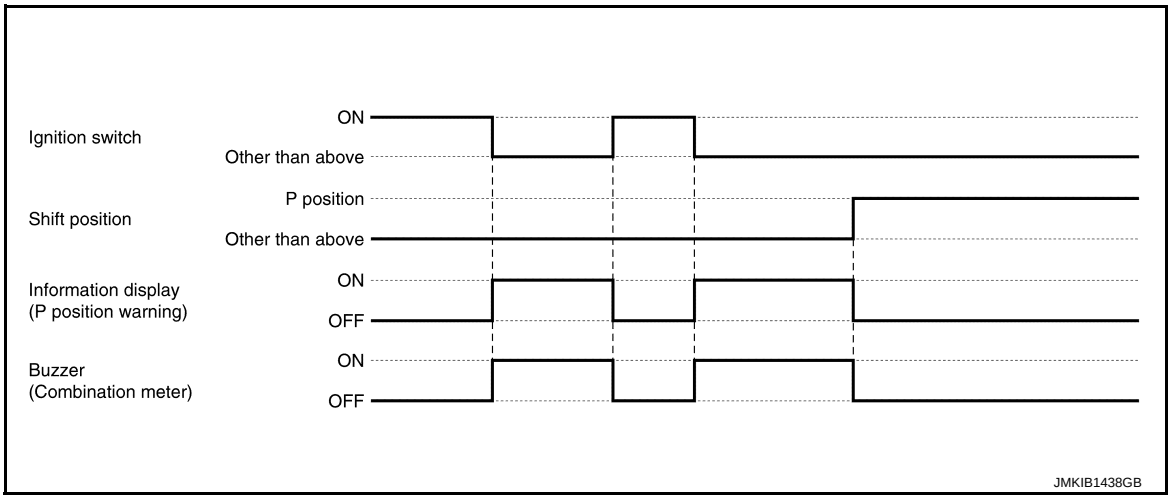
WARNING CANCEL CONDITION

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

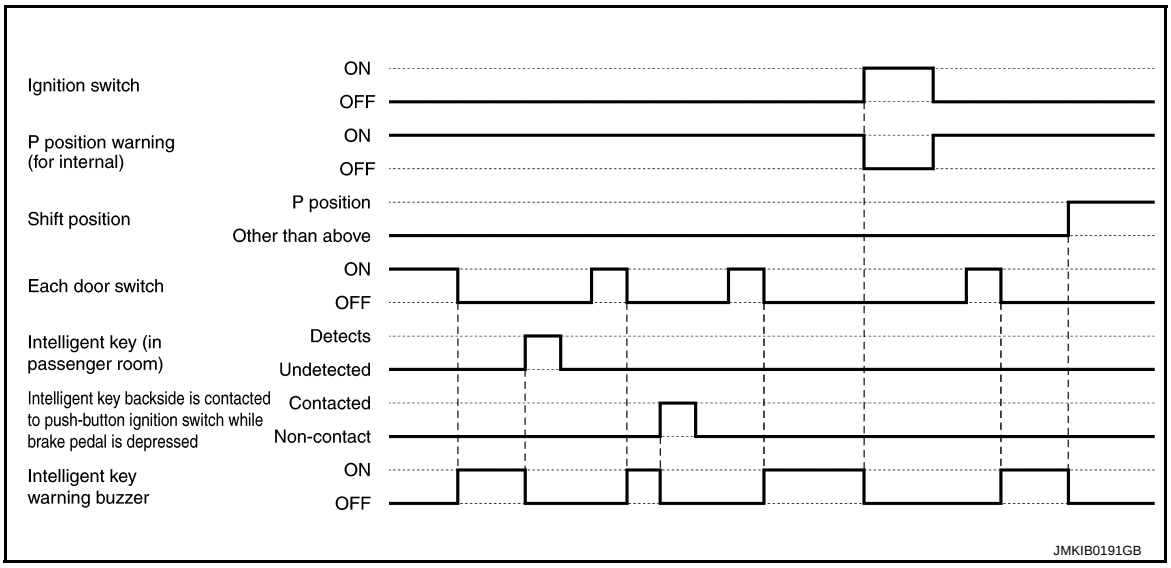
For external
- When any of the following conditions are satisfied.
- Ignition switch is ON
- Shift position is P
- A registered Intelligent Key is detected in passenger room
- When ignition switch is in LOCK or OFF position, Intelligent Key backside is contacted to engine switch while brake pedal is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

TIMING CHART

For internal

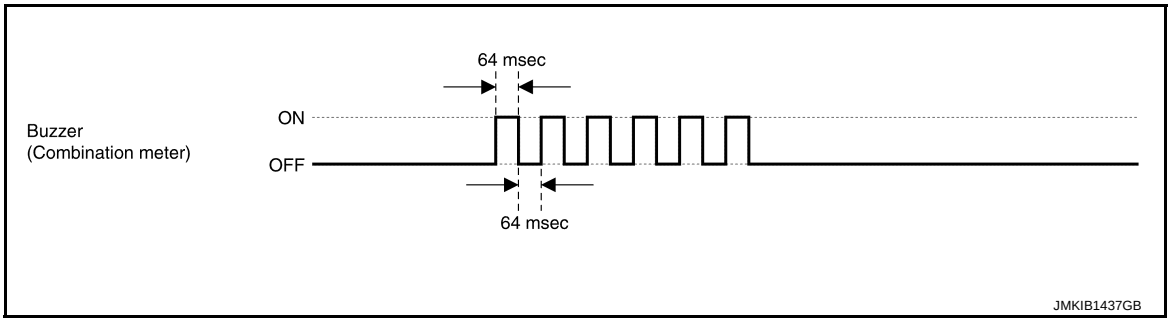


For external

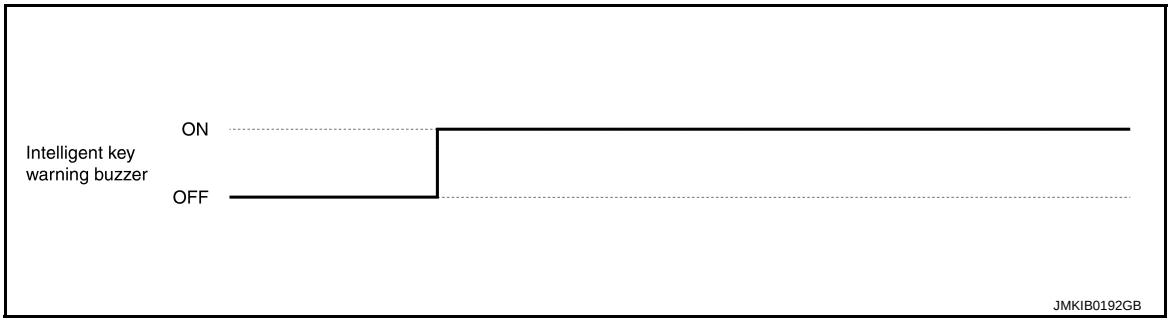


SOUND SPECIFICATION

For internal



For external



WARNING CHIME : Parking Brake Release Warning Chime

INFOID:0000000012789728

PURPOSE

Parking brake release warning chime warns the driver that the parking brake is left applied, by sounding the warning chime.

SYNCHRONIZATION WITH WARNING LAMP/INDICATOR LAMP

Applicable

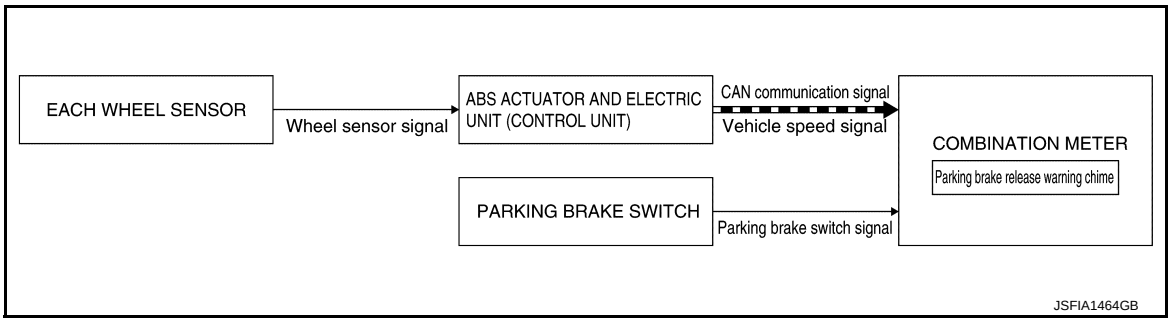
For warning lamp, refer to MWI-22, "WARNING LAMPS/INDICATOR LAMPS : Brake Warning Lamp".

SYNCHRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

Applicable

For warning (information display), refer to PB-4, "INFORMATION DISPLAY (COMBINATION METER) : Parking Brake Release Warning".

SYSTEM DIAGRAM



SIGNAL PATH

- The combination meter receives a vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication.
- The combination meter receives a parking brake signal from the parking brake switch.
- The combination meter judges that the parking brake is left applied according to the above signals, and sounds the parking brake release warning chime.

WARNING OPERATING CONDITION

When all of the conditions listed below are satisfied:

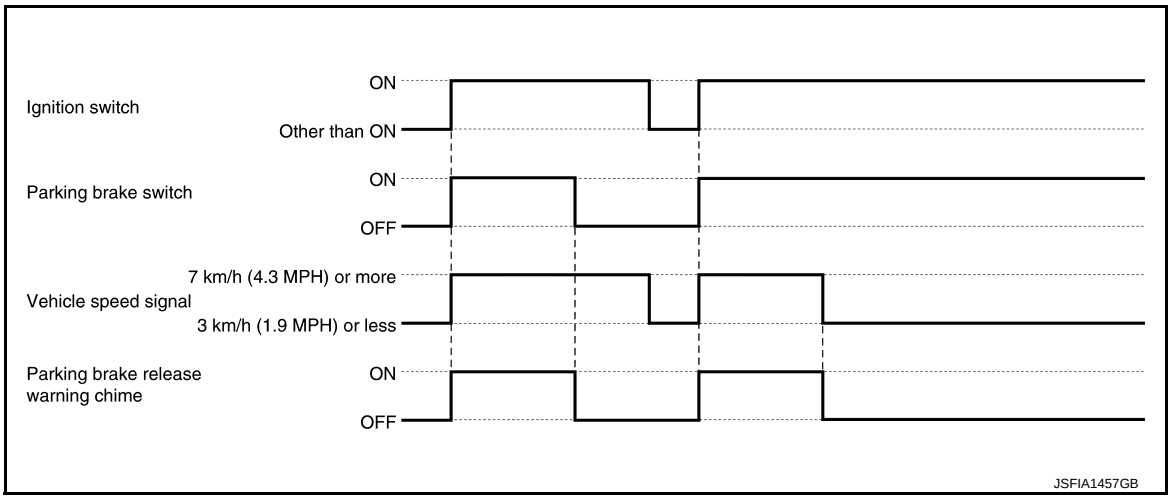
- Ignition switch is ON.
- Vehicle speed is 7 km/h (4.3 MPH) or more.
- Parking brake switch is ON. (Parking brake: applied.)

WARNING CANCEL CONDITION

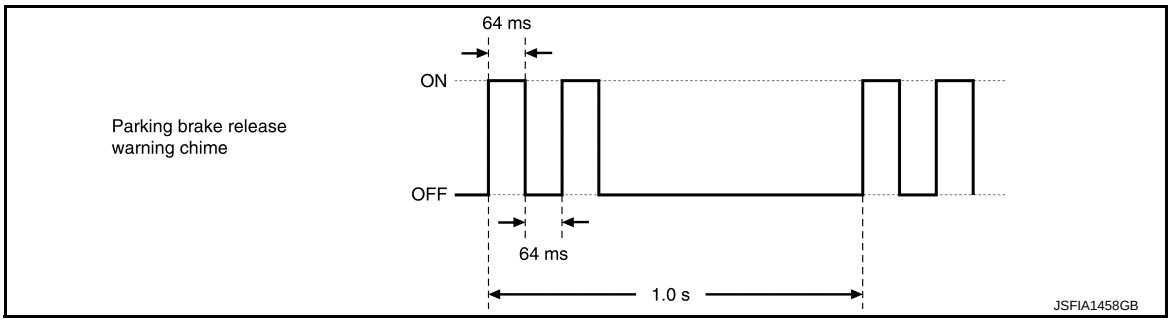
When any of the conditions listed below is satisfied:

- Ignition switch is in a position other than ON.
- Vehicle speed is 3 km/h (1.9 MPH) or less.
- Parking brake switch is OFF. (Parking brake: Released.)

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : Seat Belt Warning

INFOID:0000000012789729

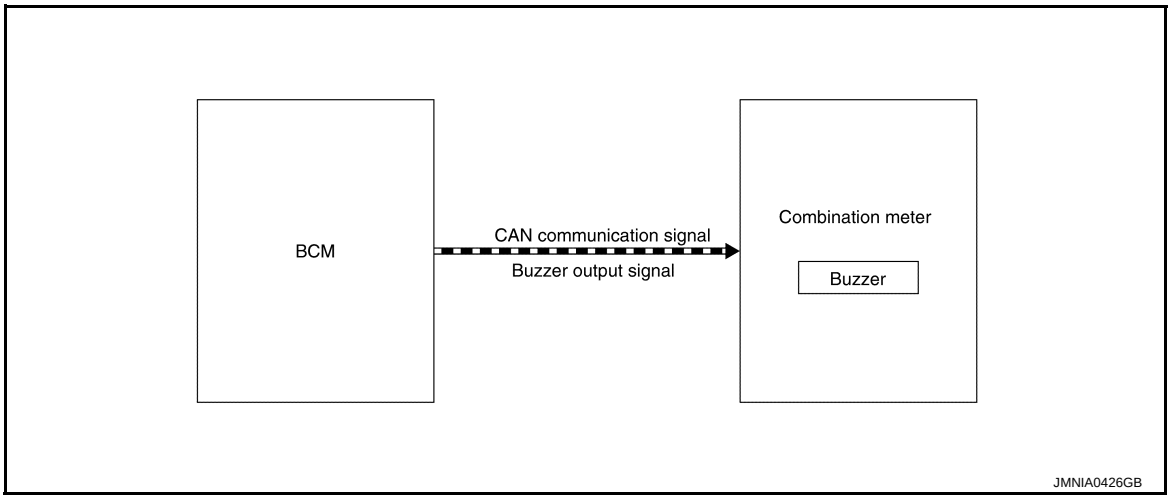
DESCRIPTION

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

SYNCRONIZATION WITH WARNING LAMP/INDICATOR LAMP

For warning lamp, refer to MWI-43, "WARNING LAMPS/INDICATOR LAMPS : Seat Belt Warning Lamp".

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.

Driver seat belt

- Ignition switch is ON.
- Driver seat belt is not fastened.

Passenger seat belt

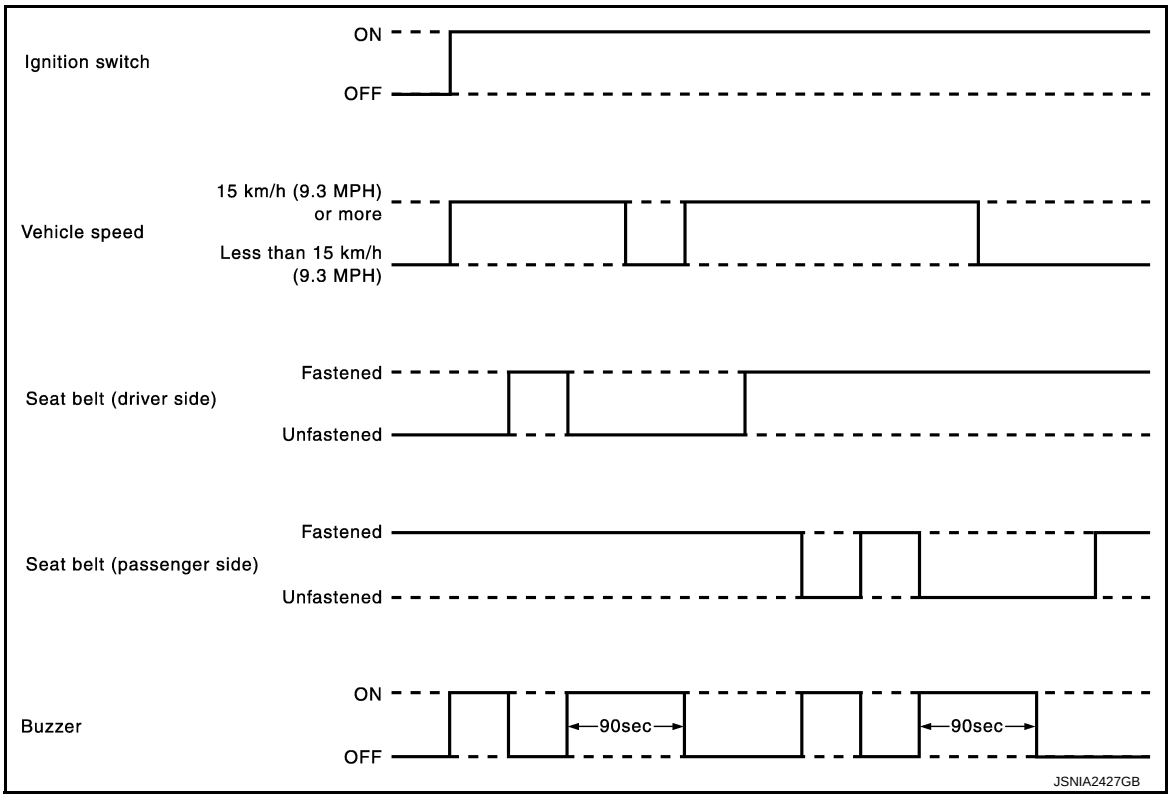
- Ignition switch is ON.
- A person sits in the passenger seat.
- Passenger seat belt is not fastened.

WARNING CANCEL CONDITIONS

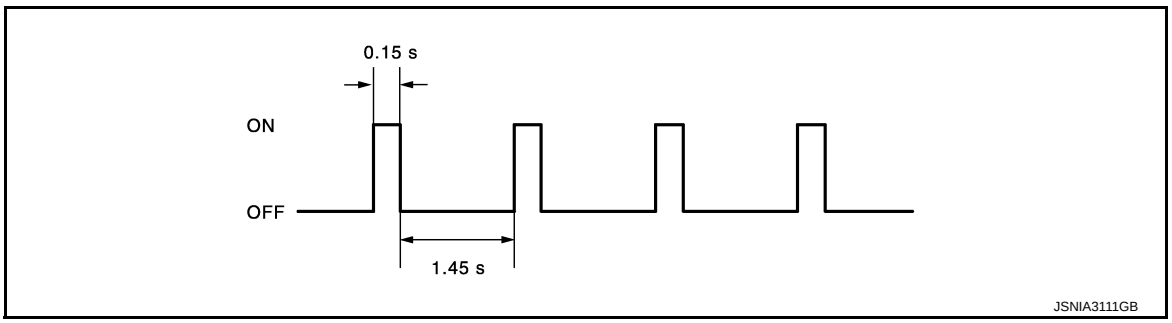
Combination meter cancels seat belt reminder warning buzzer when all of the following conditions are satisfied.

- Ignition switch is other than ON.
- Driver seat belt is fastened.
- Passenger seat belt is fastened or a person does not sit in the passenger seat.
- Approximately 6 seconds are passed since warning start.

TIMING CHART



SOUND SPECIFICATION



WARNING CHIME : Stop/Start warning

INFOID:0000000013448041

PURPOSE

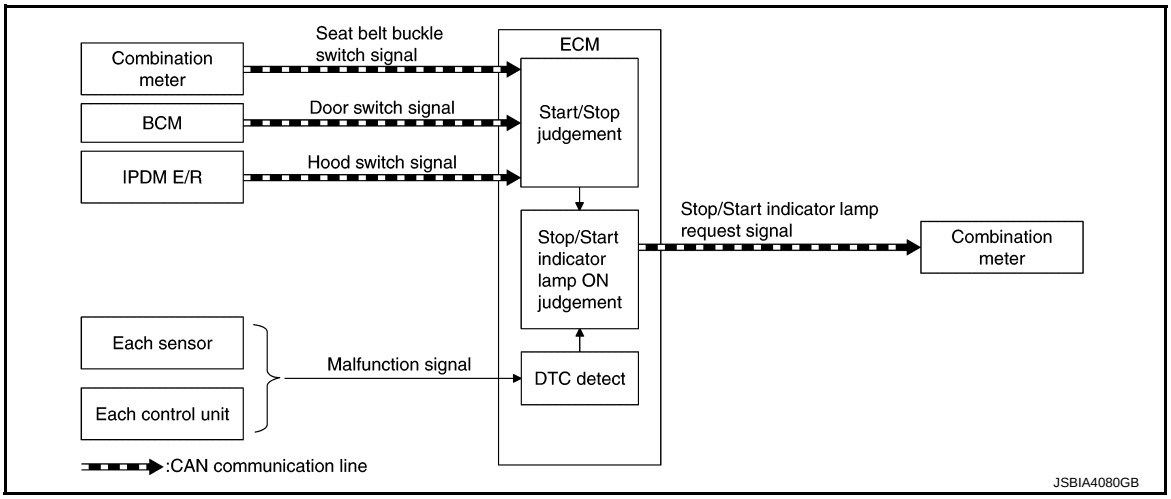
The combination meter alerts the driver by sounding the integrated buzzer and blinking the indicator lamp at high speed when the driver's operation is judged as improper operation while the stop/start system is operating.

SYNCHRONIZATION WITH WARNING/INDICATOR (INFORMATION DISPLAY)

Applicable

For warning/indicator (information display), refer to MWI-48, "WARNING LAMPS/INDICATOR LAMPS : Stop/Start Indicator Lamp".

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.

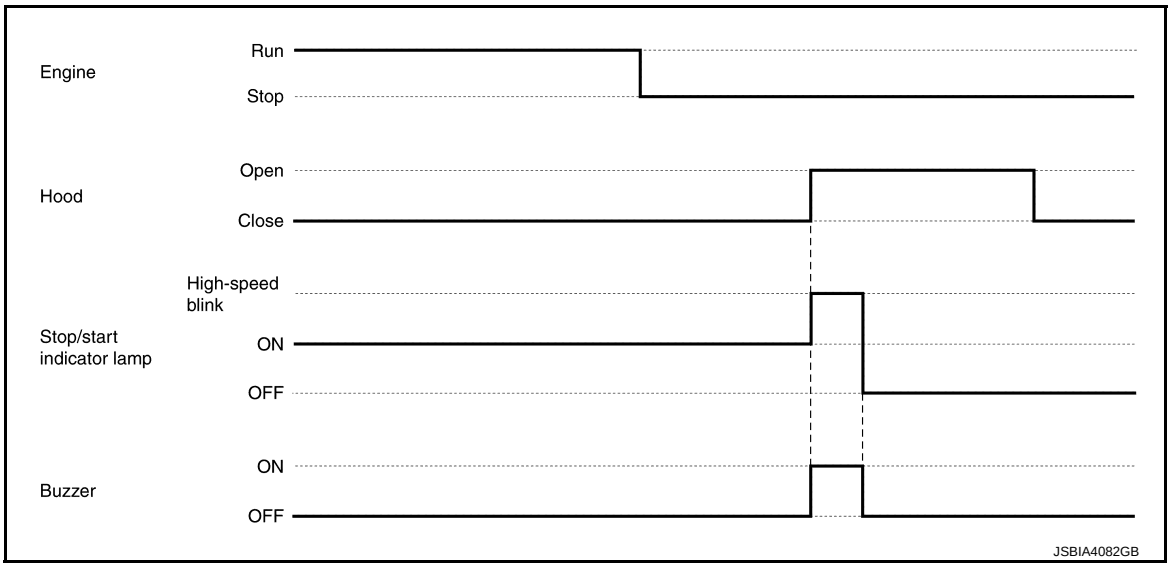
NOTE:

The stop/start system is cancelled and the engine stops when the hood is opened.To restart the engine, use the key switch.

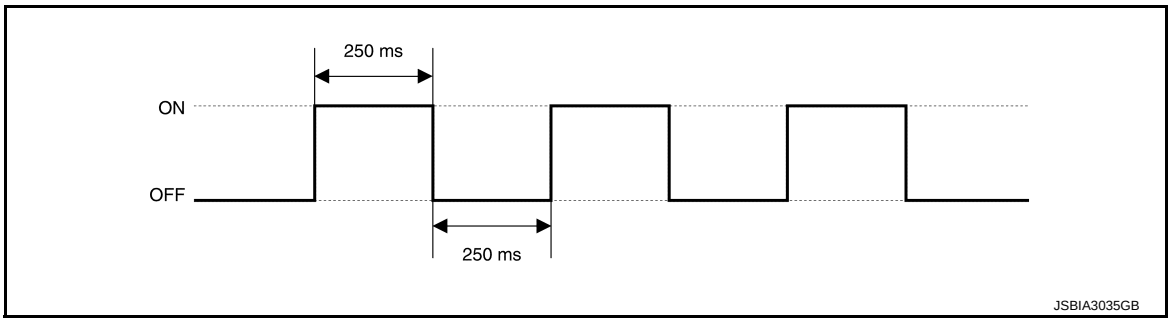
WARNING CANCEL CONDITION

- 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:0000000012789730

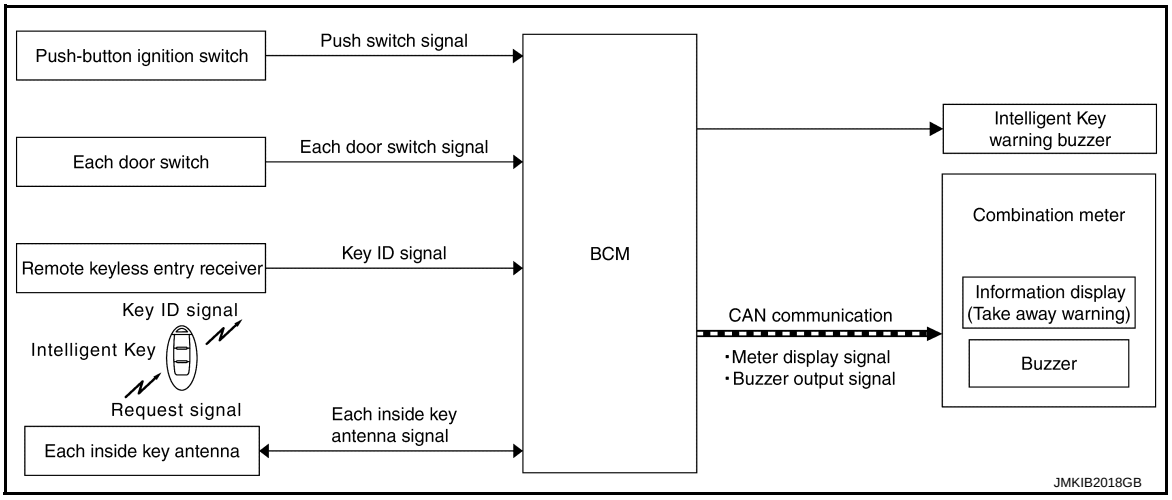
PURPOSE

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-43, "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 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
- Ignition switch is OFF or ACC
- 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

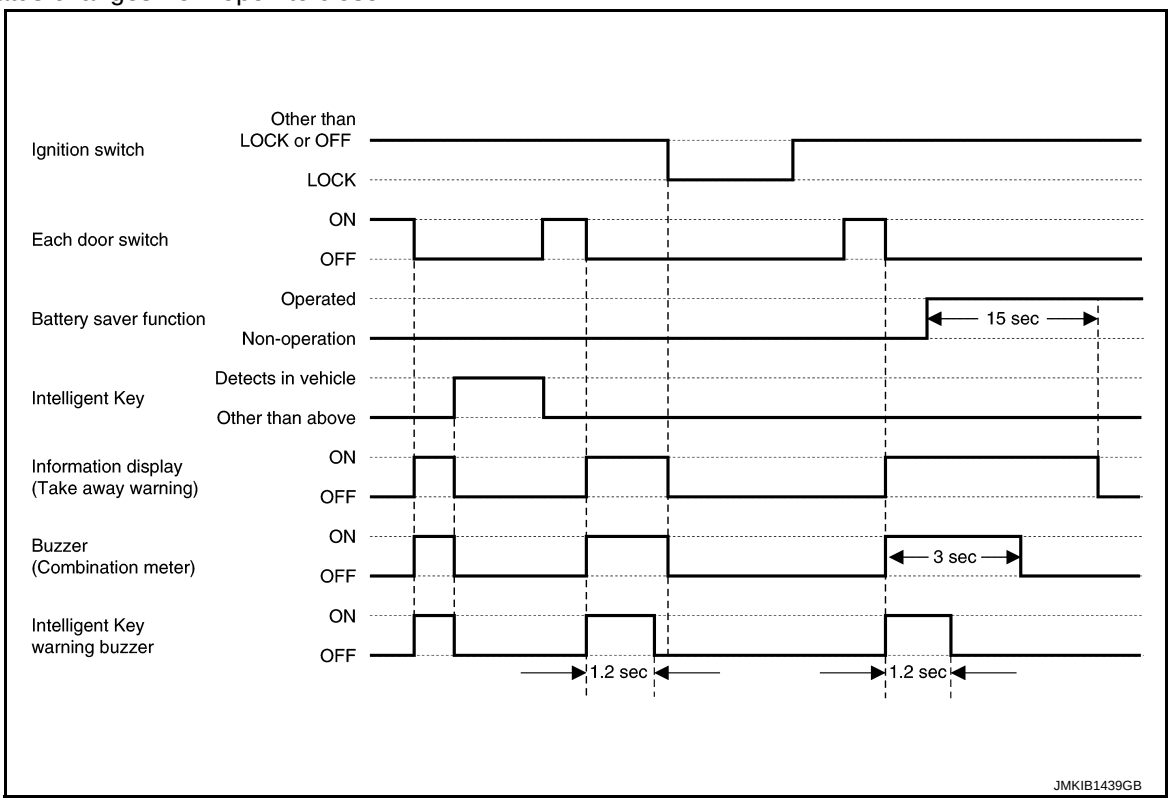
Door status is open
A registered Intelligent Key is detected in passenger room

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

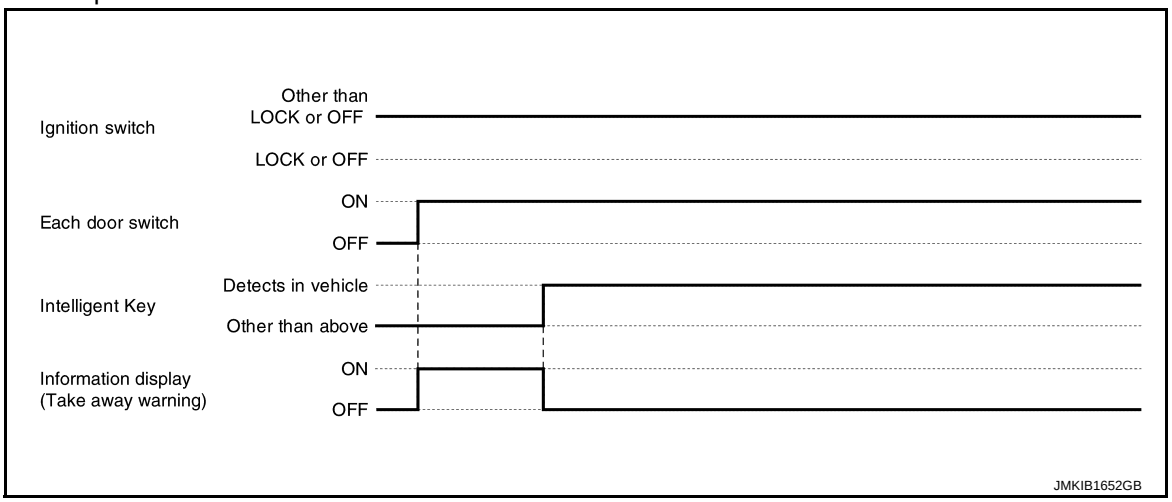
NOTE:
For battery saver system, refer to PCS-49, "POWER DISTRIBUTION SYSTEM : System Description".

TIMING CHART

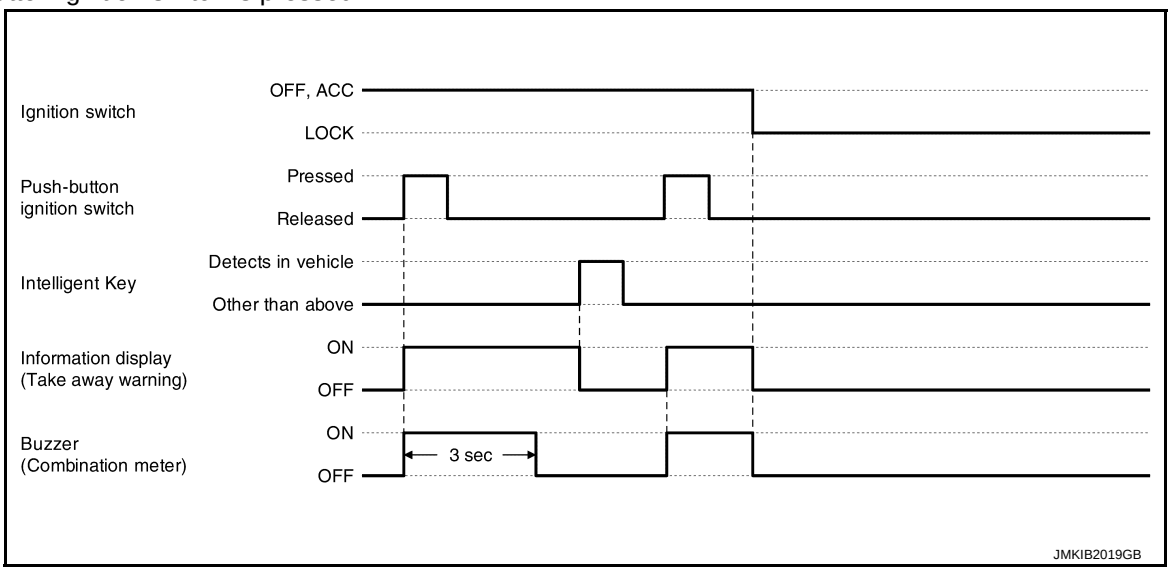
Door status changes from open to close



Door status is open

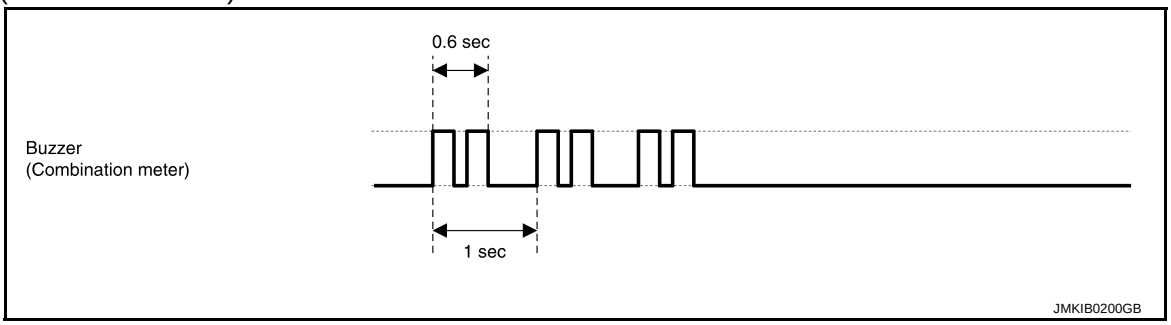


Push-button ignition switch is pressed

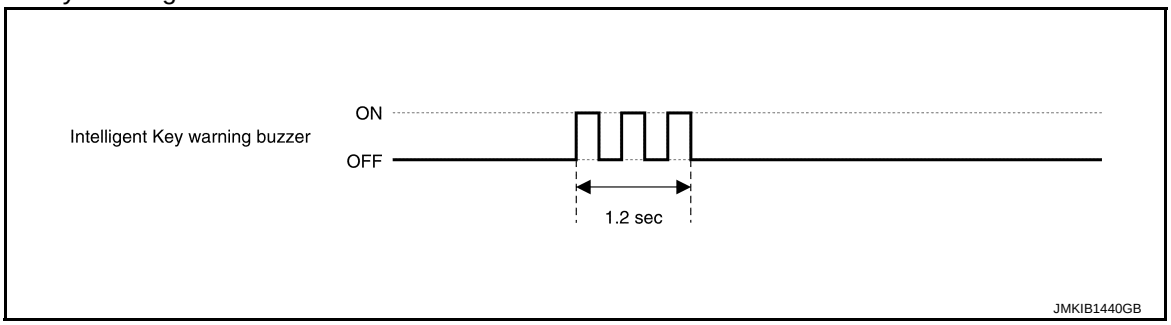


SOUND SPECIFICATION

Buzzer (combination meter)



Intelligent Key warning buzzer



DIAGNOSIS SYSTEM (COMBINATION METER)

CONSULT Function

INFOID:0000000013447599

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 Results	The combination meter checks the conditions and displays memorized errors.
	Data Monitor	Displays the combination meter input/output data in real time.
	Work Support	Displays diagnosis procedure of each work item.
	Ecu Identification	Displays combination meter part number.
	Warning History	Lighting history of the warning lamp and indicator lamp can be checked.

SELF-DIAGNOSTIC RESULTS

For details, refer to WCS-45, "DTC Index".

When “CRNT” is displayed on self-diagnosis result,
- The system is presently malfunctioning.

When “PAST” is displayed on self-diagnosis result,
- System malfunction in the past is detected, but the system is presently normal.

Freeze frame data (FFD)

Item name	Display item
IGN counter (0 – 39)	The number of times that ignition switch is turned ON after the DTC is detected is displayed. • When “0” is displayed: It indicates that the system is presently malfunctioning. • When except “0” is displayed: It indicates that system malfunction in the past is detected, but the system is presently normal. **NOTE:** Each time when ignition switch is turned OFF to ON, numerical number increases in 1 → 2 → 3...38 → 39. When the operation number of times exceeds 39, the number do not increase and “39” is displayed until self-diagnosis is erased.

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.

ECU IDENTIFICATION

Combination meter part number can be read.

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. (VR30DDTT engine models) • Value of the engine speed signal received from ECM via CAN communication. (Except for VR30DDTT engine models) **NOTE:** 8191.875 is displayed when the malfunction signal is received.
FUEL METER [L]	X	Fuel level indicated on combination meter.
W TEMP METER [°C]	X	Value of engine coolant temperature signal is received from ECM via CAN communication. **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 [On/Off]		Status of trunk open warning detected from trunk switch signal received from BCM via CAN communication.
HI-BEAM IND [On/Off]		Status of high beam indicator lamp detected from high beam request signal is received from BCM via CAN communication.
TURN IND [On/Off]		Status of turn 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 [Off]		**NOTE:** This item is displayed, but cannot be monitored.
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 oil pressure warning signal is received from ECM via CAN communication.
MIL [On/Off]		Status of malfunction indicator lamp detected from malfunctioning indicator signal is received from ECM via CAN communication.
BA W/L [On/Off]		Status of FEB warning lamp judged from FEB warning lamp signal received from ADAS control unit via CAN communication.

Display item [Unit]	MAIN SIGNALS	Description
ATC/T-AMT W/L [On/Off]		Status of A/T check warning judged from A/T CHECK indicator signal received from TCM via CAN communication.
GEAR SHIFT IND [Up, Down, Up/Dwn]		Status of gear shift indicator judged from gear shift indicator signal received from ECM via CAN communication.
4WD W/L [On/Off]		Status of AWD warning judged from AWD warning signal received from AWD control unit via CAN communication.
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 combination meter.
AIR PRES W/L [On/Off]		Status of low tire pressure warning lamp judged from low tire pressure lamp signal received from BCM via CAN communication.
KEY G/Y W/L [ON/Off]		Status of Intelligent Key system warning judged from meter display signal received from BCM via CAN communication.
EPS W/L [On/Off]		Status of power steering warning lamp judged from power steering warning lamp signal received from steering force control module via CAN communication.
AFS OFF IND [On/Off]		Status of AFS warning judged from AFS warning signal received from AFS control unit via CAN communication.
READY IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
SYS FAIL W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
SFT POSI W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
HEV BRAKE W/L [Off]		**NOTE:** This item is displayed, but cannot be monitored.
IDOL STOP IND [On/Off]		Status of stop/start indicator lamp judged from stop/start indicator lamp signal received from ECM via CAN communication.
CHAGE W/L [On/Off]		Status of charge warning lamp judged from charge warning lamp signal received from ECM via CAN communication.
ACC TARGET [On/Off]		Status of vehicle ahead detection indicator judged from meter display signal received from ADAS control unit via CAN communication.
ACC DISTANCE [Off, Short, Middle, Long]		Status of set distance indicator judged from meter display signal received from ADAS control unit via CAN communication.
ACC SET SPEED [On/Off]		Status of set vehicle speed indicator judged from meter display signal received from ADAS control unit via CAN communication.
ACC UNIT [On/Off]		Status of display unit judged from meter display signal received from ADAS control unit 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 via CAN communication.
ECO DRIVE IND G [On/Off]		Status of ECO drive indicator (green) judged from ECO drive indicator control signal received from ECM via CAN communication.
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.
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.

Display item [Unit]	MAIN SIGNALS	Description
AT SFT DWN SW [On/Off]		Status of manual mode shift down switch.
ST SFT UP SW [On/Off]		Status of paddle shifter up switch.
ST SFT DWN SW [On/Off]		Status of paddle shifter 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.
LED LMP R OPEN [On/Off]		Status of front combination lamp RH judged based on LED headlamp (RH) warning signal input from front combination lamp RH.
LED LMP L OPEN [On/Off]		Status of front combination lamp LH judged based on LED headlamp (LH) warning signal input from front combination lamp LH.
DISTANCE [km] or [Mi]		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 display. (Because the information display value is a corrected value from the ambient sensor input value.)
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to display control unit via AV communication.
CRANKING SIG [On/Off]		Status of cranking judged from engine status signal received from BCM via CAN communication line.
ST CNT SIG [On/Off]		Status of starter relay status signal received from BCM via 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.
BAT CIR STA [Normal/Open]		Status of battery power supply circuit.
TPMS FLT TIRE [On/Off]		Status of flat tire detected from tire pressure data signal is received form BCM via CAN communication.
TPMS PRESS L [On/Off]		Status of tire pressure low from tire pressure data signal is received form BCM via CAN communication
ASCD SPD BLINK [On/Off]		Blinking status of ASCD set vehicle speed judged by the ASCD status signal received from ECM via CAN communication.
ASCD STATUS [Off, ASCD, CRUISE]		Status of ASCD 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.
HILL HOLD WARNING [Off]		**NOTE:** This item is displayed, but cannot be monitored.
ASSIST/CHARGE GAUGE [%]		**NOTE:** This item is displayed, but cannot be monitored.
EV IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
ECO DRIVE NAVI [LEVEL 0]		**NOTE:** This item is displayed, but cannot be monitored.

Display item [Unit]	MAIN SIGNALS	Description
LCD [B&P N, B&P I, C&P N, C&P I, SFT P, BATT, NO KY, LK WN, IGN AUTO OFF, 3 min before IGN OFF, OFF]	X	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.
STRG SW INPUT [SW1-SW10, Off]		Status of steering switch.
ITS SONER SET OUTPUT [FCW ON/OFF, LDW ON/OFF, BSW ON/OFF, DCA ON/OFF/HIGH/MID/LOW, LDP ON/OFF/T MID/T LATE, BSI ON/BRIGHT/STD/DARK, BCI IGN ON/OFF, IBA ON/OFF, BCI AUTO ON/OFF, NO SW ST]		Status of warning systems indicator or dynamic driver assistance systems indicator judged by the meter display signal received from ADAS control unit via CAN communication.
CHASSIS CONTROL WARN [On/Off]		Status of chassis control warning from chassis control malfunction signal is received form chassis control module via CAN communication.
LOW LI-ION BAT CHG WARN [Off]		**NOTE:** This item is displayed, but cannot be monitored.
VSP OFF IND [Off]		**NOTE:** This item is displayed, but cannot be monitored.
HI-BEAM ASST IND [km/h/Off]		Status of high beam assist indicator lamp from high beam assist indicator lamp signal is received form BCM via CAN communication.
DIPPED BEAM IND [Off]	X	**NOTE:** This item is displayed, but cannot be monitored.
TIRE PRESS FR [kPa, kg/cm2 or Psi]		The data of front RH tire pressure form BCM via CAN communication.
TIRE PRESS FL [kPa, kg/cm2 or Psi]		The data of front LH tire pressure form BCM via CAN communication.
TIRE PRESS RR [kPa, kg/cm2 or Psi]		The data of rear RH tire pressure form BCM via CAN communication.
TIRE PRESS RL [kPa, kg/cm2 or Psi]		The data of rear LH tire pressure form BCM via CAN communication.
METER RAM [ERROR/NORMAL]		Status of ram error data.

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.
ATC/T-AMT W/L	Lighting history of A/T check warning.

Display item	Description
DOOR W/L	Lighting history of door open warning.
OIL W/L	Lighting history of engine oil pressure warning.
C-ENG W/L	Lighting history of malfunction indicator lamp (MIL).
BA W/L	Lighting history of FEB warning lamp.
4WD W/L	Lighting history of AWD warning.
FUEL W/L	Lighting history of low fuel warning lamp.
WASHER W/L	Lighting history of low washer fluid warning lamp.
AIR PRES W/L	Lighting history of low tire pressure warning lamp.
KEY G/Y W/L	Lighting history of Intelligent Key system warning.
EPS W/L	Lighting history of power steering warning lamp.
AFS OFF IND	Lighting history of AFS warning.
CHAGE W/L	Lighting history of charge warning lamp.

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

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

INFOID:0000000013447604

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		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*		×	×
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
—	AIR PRESSURE MONITOR*			×

*: This item is not used.

FREEZE FRAME DATA (FFD)
The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”*)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” *to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”*
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”*.) to low power consumption mode
	LOCK		Power supply position is “LOCK” (Ignition switch OFF)*
	OFF		Power supply position is “OFF” (Ignition switch OFF)
	ACC		Power supply position is “ACC” (Ignition switch ACC)
	ON		Power supply position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power supply position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 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.	

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

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

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:0000000012789733

CONSULT APPLICATION ITEMS

Test item	Diagnosis mode	Description
BUZZER	Self Diagnostic Result	Displays the diagnosis results judged by BCM.
	Data Monitor	Displays BCM input data in real time.
	Active Test	Operation of electrical loads can be checked by sending driving signal to them.
	Ecu Identification	The BCM part number is displayed.

SELF DIAG RESULT

Refer to BCS-63, "DTC Index".

DATA MONITOR

NOTE:

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

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

ACTIVE TEST

Display item [Unit]	Description
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
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:0000000013447600

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[*1]
		Brake warning lamp OFF	Off
DOOR W/L	Ignition switch ON	During door open warning indication	On
		Other than the above	Off
TRUNK/GLAS-H	Ignition switch ON	During trunk open warning indication	On
		Other than the above	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	**NOTE:** This item is displayed, but cannot be monitored.	Off
LIGHT IND	Ignition switch ON	Position lamp indicator lamp ON	On
		Position lamp indicator lamp OFF	Off
OIL W/L	Ignition switch ON	During engine oil pressure warning indication	On
		Other than the above	Off

Monitor Item	Condition		Value/Status
MIL	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off
BA W/L	Ignition switch ON	FEB warning lamp ON	On
		FEB warning lamp OFF	Off
ATC/T-AMT W/L	Ignition switch ON	A/T CHECK warning indication	On
		Other than the above	Off
GEAR SHIFT IND	Ignition switch ON	Gear shift indicator UP indication	Up
		Gear shift indicator DOWN indication	Down
		Other than the above	Up/Dwn
4WD W/L	Ignition switch ON	During AWD warning indication	On
		Other than the above	Off
FUEL W/L	Ignition switch ON	Low fuel warning lamp ON	On
		Low fuel warning lamp OFF	Off
WASHER W/L	Ignition switch ON	During low washer fluid warning indication	On
		Other than the above	Off
AIR PRES W/L	Ignition switch ON	Low tire pressure warning lamp ON	On
		Low tire pressure warning lamp OFF	Off
KEY G/Y W/L	Ignition switch ON	Intelligent Key system warning indication	On
		Other than the above	Off
EPS W/L	Ignition switch ON	Power steering warning lamp ON	On
		Power steering warning lamp OFF	Off
AFS OFF IND	Ignition switch ON	During AFS warning indication	On
		Other than the above	Off
READY IND	Power switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
SYS FAIL W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
SFT POSI W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
HEV BRAKE W/L	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
IDOL STOP IND	Ignition switch ON	Stop/start indicator lamp ON	On
		Stop/start indicator lamp OFF	Off
CHAGE W/L	Ignition switch ON	Charge warning lamp ON	On
		Charge warning lamp OFF	Off
ACC TARGET	Ignition switch ON	During vehicle ahead detection indicator indication	On
		Other than the above	Off
ACC DISTANCE	Ignition switch ON	When following distance set to “LONG”	LONG
		When following distance set to “MIDDLE”	MID
		When following distance set to “SHORT”	SHORT
		Set distance indicator not displayed	Off

Monitor Item	Condition		Value/Status
ACC SET SPEED	Ignition switch ON	During set vehicle speed indicator not displayed	Off
		During set vehicle speed indicator displayed	Indicates the set vehicle speed
ACC UNIT	Ignition switch ON	Set vehicle speed indicator unit display ON	On
		Set vehicle speed indicator unit display OFF	Off
SHIFT IND	Ignition switch ON	During the indication of “P” by shift position indicator	P
		During the indication of “R” by shift position indicator	R
		During the indication of “N” by shift position indicator	N
		During the indication of “D” by shift position indicator	D
		During the indication of “M1” by shift position indicator	M1
		During the indication of “M2” by shift position indicator	M2
		During the indication of “M3” by shift position indicator	M3
		During the indication of “M4” by shift position indicator	M4
		During the indication of “M5” by shift position indicator	M5
		During the indication of “M6” by shift position indicator	M6
		During the indication of “M7” by shift position indicator	M7
ECO DRIVE IND G	Ignition switch ON	ECO drive indicator (green) ON	On
		ECO drive indicator (green) OFF	Off
FUEL CAP W/L	Ignition switch ON	During fuel filler cap warning indication	On
		Other than the above	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	Paddle shifter operated in up position	On
		Shift selector is in non manual mode up position	Off
ST SFT DWN SW	Ignition switch ON	Paddle shifter operated in down position	On
		Other than the above	Off
PKB SW	Ignition switch ON	Parking brake switch ON	On
		Parking brake switch OFF	Off

Monitor Item	Condition		Value/Status
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
LED LMP R OPEN	Power switch ON	Front combination lamp RH malfunction	On
		Front combination lamp RH normal	Off
LED LMP L OPEN	Power switch ON	Front combination lamp LH malfunction	On
		Front combination lamp LH normal	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
FUEL LOW SIG	—	During low fuel level indication	On
		Except during low fuel level indication	Off
CRANKING SIG	Ignition switch ON		On
	At engine cranking		Off
ST CNT SIG	Ignition switch ON		On
	At engine cranking		Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off
BAT CIR STA	Ignition switch ON	Battery power supply circuit is normal	Normal
		Battery power supply circuit is open	Open
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
ASCD REQ SPD [km/h or Off]	Ignition switch ON	While driving	Same value as ASCD set vehicle speed
HILL HOLD WARNING	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
ASSIST/CHARGE GAUGE	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	0 %
EV IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
ECO DRIVE NAVI	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	LEVEL0

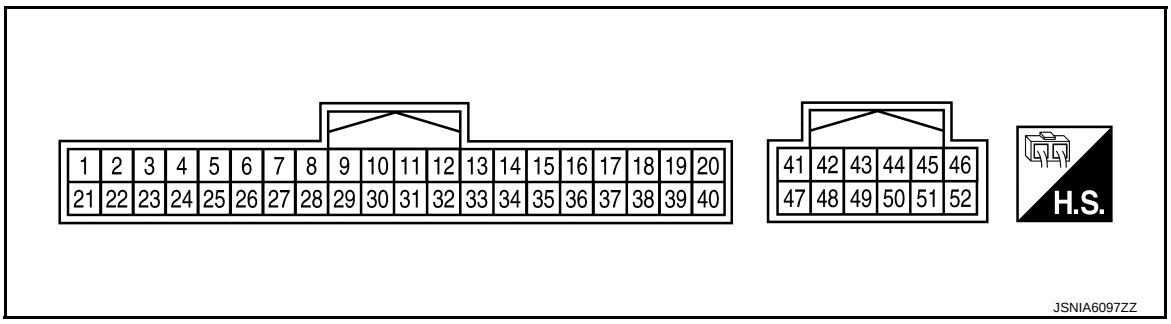
Monitor Item	Condition		Value/Status
LCD	Ignition switch ON	During engine start information indication	B&P I
	Ignition switch ACC	During engine start information indication	B&P N
	Ignition switch LOCK	During key ID warning indication	ID NG
	Ignition switch LOCK	During steering lock information indication	ROTAT
	Ignition switch LOCK	During P position warning indication	SFT P
	Ignition switch LOCK	During Intelligent Key insert information indication	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
	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 above	OFF
STRG SW INPUT	Ignition switch ON	BACK switch is pressed	SW1
		MENU UP switch is pressed	SW2
		MENU DOWN switch is pressed	SW3
		Voice recognition switch is pressed	SW4
		MENU OK switch is pressed	SW5
		VOL DOWN switch is pressed	SW6
		VOL UP switch is pressed	SW7
		TEL switch is pressed	SW8
		Display back switch is pressed	SW9
		Display next switch is pressed	SW10
		Other than above	NO INPUT

Monitor Item	Condition		Value/Status
ITS SONER SET OUTPUT	Ignition switch ON	FCW indicator indication	FCW ON
		FCW indicator is not indication	FCW OFF
		LDW indicator indication	LDW ON
		LDW indicator is not indication	LDW OFF
		Blind Spot Intervention indicator indication	BSW ON
		Blind Spot Intervention indicator is not indication	BSW OFF
		DCA indicator indication	DCA ON
		DCA indicator is not indication	DCA OFF
		LDP indicator indication	LDP ON
		LDP indicator is not indication	LDP OFF
		Blind Spot Warning/Blind Spot Intervention warning indication	BSI ON
		Blind Spot Warning/Blind Spot Intervention warning brightness control is bright	BSI BRIGHT
		Blind Spot Warning/Blind Spot Intervention warning brightness control is standard	BSI STD
		Blind Spot Warning/Blind Spot Intervention warning brightness control is dark	BSI DARK
		LDP timing control status is early	LDP T EARLY
		LDP timing control status is middle	LDP T MID
		LDP timing control status is late	LDP T LATE
		DCA pedal sensitivity control status is high	DCA HIGH
		DCA pedal sensitivity control status is middle	DCA MID
		DCA pedal sensitivity control status is low	DCA LOW
		BCI ignition on status is ON	BCI IGN ON
		BCI ignition on status is OFF	BCI IGN OFF
		FEB control status is ON	IBA ON
		FEB control status is OFF	IBA OFF
		BCI auto resume control status is ON	BCI AUTO ON
		BCI auto resume control status is OFF	BCI AUTO OFF
		Other than above	NO SW ST
CHASSIS CONTROL WARN	Ignition switch ON	Chassis control warning indication	On
		Other than above	Off
LOW LI-ION BAT CHG WARN	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
VSP OFF IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
HI-BEAM ASST IND	Ignition switch ON	High beam assist indicator lamp ON	On
		High beam assist indicator lamp OFF	Off
DIPPED BEAM IND	Ignition switch ON	**NOTE:** This item is displayed, but cannot be monitored.	Off
TIRE PRESS FR	Ignition switch ON	—	0 - 63.75
TIRE PRESS FL	Ignition switch ON	—	0 - 63.75

Monitor Item	Condition		Value/Status
TIRE PRESS RR	Ignition switch ON	—	0 - 63.75
TIRE PRESS RL	Ignition switch ON	—	0 - 63.75
METER RAM	Ignition switch ON	RAM error detected	ERROR
		Other than above	NORMAL

*1: 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.

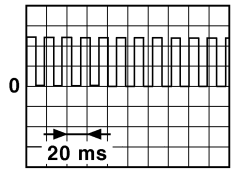
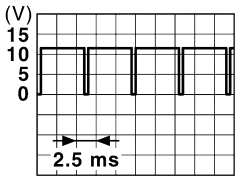
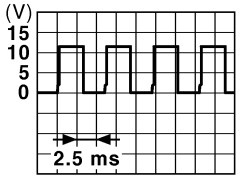
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
1 (B)	Ground	Ground	—	—	—	0 V
6 (GR)	Ground	Stop/start OFF switch indicator signal	—	Ignition switch ON	Stop/start OFF switch indicator ON	0 V
					Stop/start OFF switch indicator OFF	12 V
7 (G)	Ground	Security signal	Input	Ignition switch OFF	Security indicator ON	0 V
					Security indicator OFF	12 V
8*1 (B)	—	—	—	—	—	0 V
11 (W)	Ground	Alternator signal	—	Ignition switch ON	Charge warning lamp ON	2 V
					Charge warning lamp OFF	12 V
12 (G)	Ground	LED headlamp (RH) warning signal	Input	Ignition switch ON	Headlamp ON	1.0 V
					Headlamp OFF	12 V
13 (BR)	Ground	LED headlamp (LH) warning signal	Input	Ignition switch ON	Headlamp ON	1.0 V
					Headlamp OFF	12 V
14 (V)	Ground	ACC power supply	—	Ignition switch ACC	—	Battery voltage
16 (V)	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	—
					Air bag warning lamp OFF	—
17 (BR)	Ground	Meter control switch ground	—	—	—	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
18 (SB)	Ground	Trip/reset signal	Input	Ignition switch OFF or ON	Trip/Reset switch is pressed	0 V
					Other than the above	5.0 V
21 (B)	Ground	Steering switch signal ground	—	—	—	0 V
22 (P)	Ground	Steering switch signal A	Input	Ignition switch OFF or 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 Voice Recognition switch	2.1 V
					Keep pressing MENU OK switch	3.3 V
23 (W/B)	Ground	Steering switch signal B	Input	Ignition switch OFF or ON	Keep pressing VOLUME DOWN switch	0 V
					Keep pressing VOLUME UP switch	0.5 V
					Keep pressing TEL switch	1.2 V
					Keep pressing display back switch (◀)	2.1 V
					Keep pressing display next switch (▶)	3.3 V
24 (L)	Ground	Washer level switch signal	Input	Ignition switch ON	Washer level switch ON	0 V
					Washer level switch OFF	12 V
25 (LG)	Ground	Brake fluid level switch signal	Input	Ignition switch ON	Brake fluid level low	0 V
					Brake fluid level normal	12 V
26 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake applied	0 V
					Parking brake released	12 V
27 (G)	Ground	Passenger seat belt warning signal	Input	Ignition switch ON	• When getting in the passenger seat. • When passenger seat belt is fastened.	—
					• When getting in the passenger seat. • When passenger seat belt is unfastened.	—
28 (W)	Ground	Seat belt buckle switch signal (driver side)	Input	Ignition switch ON	When driver seat belt is fastened.	12 V
					When driver seat belt is unfastened.	0 V
30 (G)*2 (SB)*3	Ground	Manual mode signal	Input	Ignition switch ON	Selector lever manual mode position	0 V
					Other than the above	12 V
31 (L)*2 (G)*3	Ground	Non-manual mode signal	Input	Ignition switch ON	Selector lever manual mode position	12 V
					Other than the above	0 V

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
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 (P)*2 (GR)*3	Ground	Manual mode shift down signal	Input	Ignition switch ON	Selector lever DOWN operation	0 V
					Other than the above	12 V
34 (BG)	Ground	Paddle shifter up switch signal	Input	Ignition switch ON	Paddle shift up operated	0 V
					Other than the above	12 V
35 (G)	Ground	Paddle shifter down switch signal	Input	Ignition switch ON	Paddle shift down operated	0 V
					Other than the above	12 V
36 (V)	Ground	Illumination control switch signal (+)	Input	Ignition switch OFF or ON	When illumination control switch (+) is pressed	0 V
					Other than the above	5.0 V
37 (GR)	Ground	Illumination control switch signal (-)	Input	Ignition switch OFF or ON	When illumination control switch (-) is pressed	0 V
					Other than the above	5.0 V
38 (R)	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
41 (L)	Ground	CAN-H	—	—	—	—
42 (P)	Ground	CAN-L	—	—	—	—
43 (B)	Ground	Illumination control signal	Output	Ignition switch ON	• Lighting switch 1ST position • When meter illumination is minimum	 JSNIA5983GB
					• Lighting switch 1ST position • When meter illumination is step 11	 JPNIA1686GB
					• Lighting switch 1ST position • When meter illumination is maximum	0 V

Terminal No. (Wire color)		Description		Condition			Value (Approx.)
+	–	Signal name	Input/ Output				
44 (Y)	Ground	Fuel level sensor ground	—	Ignition switch ON	—		0 V
45 (W)	Ground	Battery power supply	—	—	—		Battery voltage
46 (BG)*4 (R)*5	Ground	Ignition signal	—	Ignition switch ON or START	—		12 V
47 (SB)	Ground	AV communication signal (H)	—	—	—		—
48 (LG)	Ground	AV communication signal (L)	—	—	—		—
51 (BR)	Ground	Fuel level sensor signal	—	Ignition switch ON	Fuel gauge indication position	Full	Less than 98 Ω
						1/2	186 Ω
						1/4	232 Ω
						1/8	255 Ω
						Empty	More than 275 Ω
52 (B)	Ground	Ground	—	—	—		0 V

*1: This harness is not used.
*2: 2.0L turbo gasoline engine
*3: VR30DDTT engine
*4: Except for VR30DDTT engine and without stop/start system
*5: VR30DDTT engine and without stop/start system

Fail-Safe

INFOID:0000000013447601

FAIL-SAFE

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

Function	Specifications
Speedometer	Reset to zero by suspending communication.
Tachometer	
Engine coolant temperature gauge	• 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.
	Clock		When suspending communication, internal clock time is indicated.
	Chassis control display		The display turns no effect by suspending communication.
	Trip computer	Current fuel consumption	The last result calculated during normal condition is indicated.
		Average fuel consumption	
		Average vehicle speed	
		Travel time	
		Travel distance	
		Distance to empty	
		Idling stop accumulated time	The last result calculated during normal condition is indicated by suspending communication.
	Warning/ indicator	AFS warning	The display turns ON by suspending communication.
		AWD warning	
		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		
	FEB warning lamp		
	Power steering warning lamp		
	Malfunction indicator lamp (MIL)		
	Low tire pressure warning lamp		• When reception time of an abnormal signal is 60 seconds or less, the lamp blinking. • When reception time of an abnormal signal is more than 60 seconds, the lamp turns ON.
	Stop/start indicator lamp		The lamp blinking caused by suspending communication.
	High beam indicator lamp		The lamp turns OFF by suspending communication.
	Turn signal indicator lamp		
	VDC OFF indicator lamp		
	Front fog lamp indicator lamp		
	Position lamp indicator lamp		
	High beam assist indicator lamp		
	Charge warning lamp		
	ECO drive indicator lamp		

DTC Index

INFOID:0000000013447602

DTC	CONSULT display	Reference
U1000	CAN COMM CIRCUIT	MWI-114, "DTC Description"
U1010	CONTROL UNIT (CAN)	MWI-115, "DTC Description"
B2205	VEHICLE SPEED	MWI-116, "DTC Description"

DTC	CONSULT display	Reference
B2267	ENGINE SPEED	MWI-117, "VR30DDTT : DTC Description"
B2268	WATER TEMP	MWI-119, "DTC Description"

BCM

List of ECU Reference

INFOID:0000000012789737

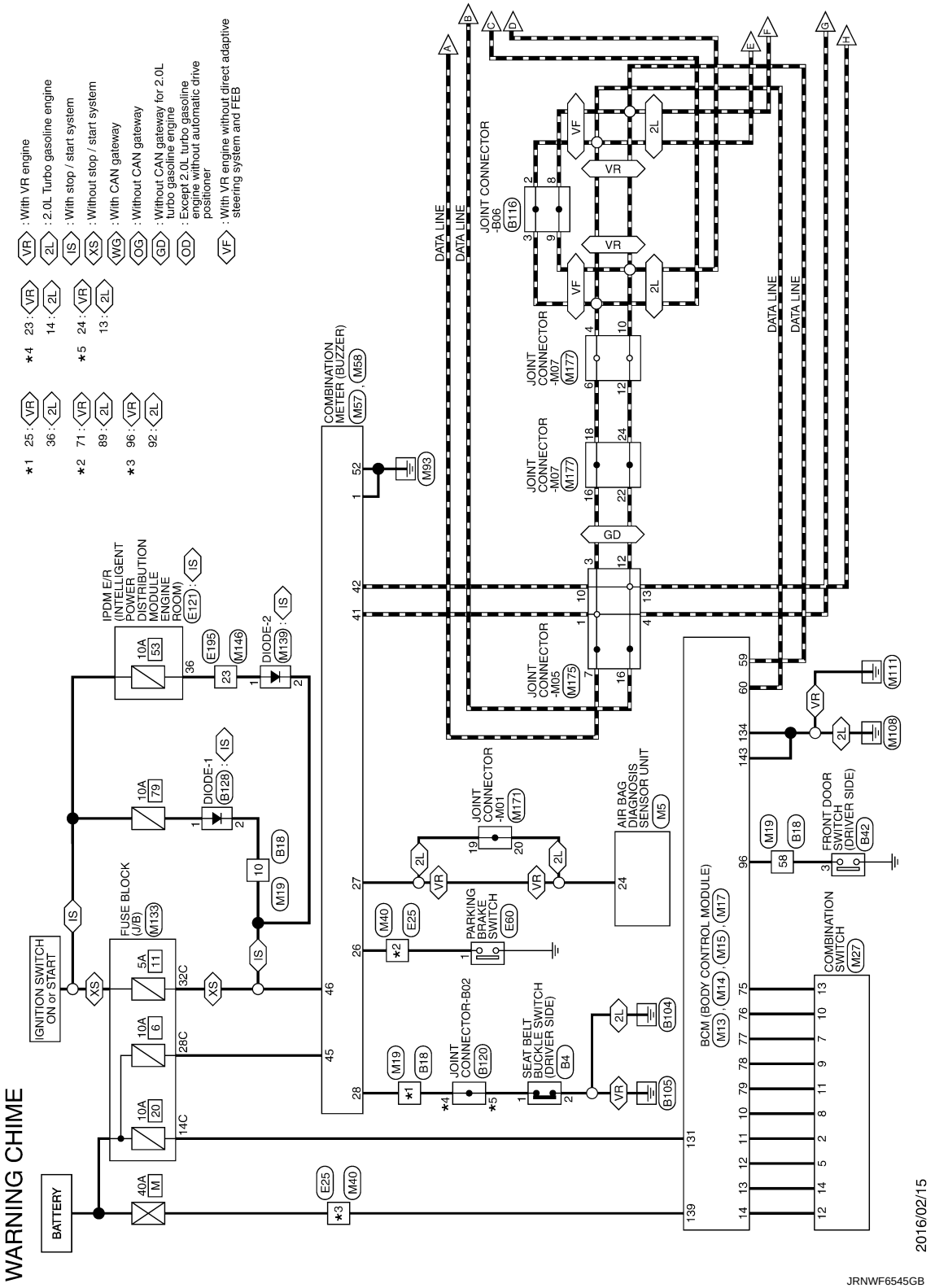
ECU	Reference
BCM	BCS-36, "Reference Value"
	BCS-61, "Fail-safe"
	BCS-62, "DTC Inspection Priority Chart"
	BCS-63, "DTC Index"

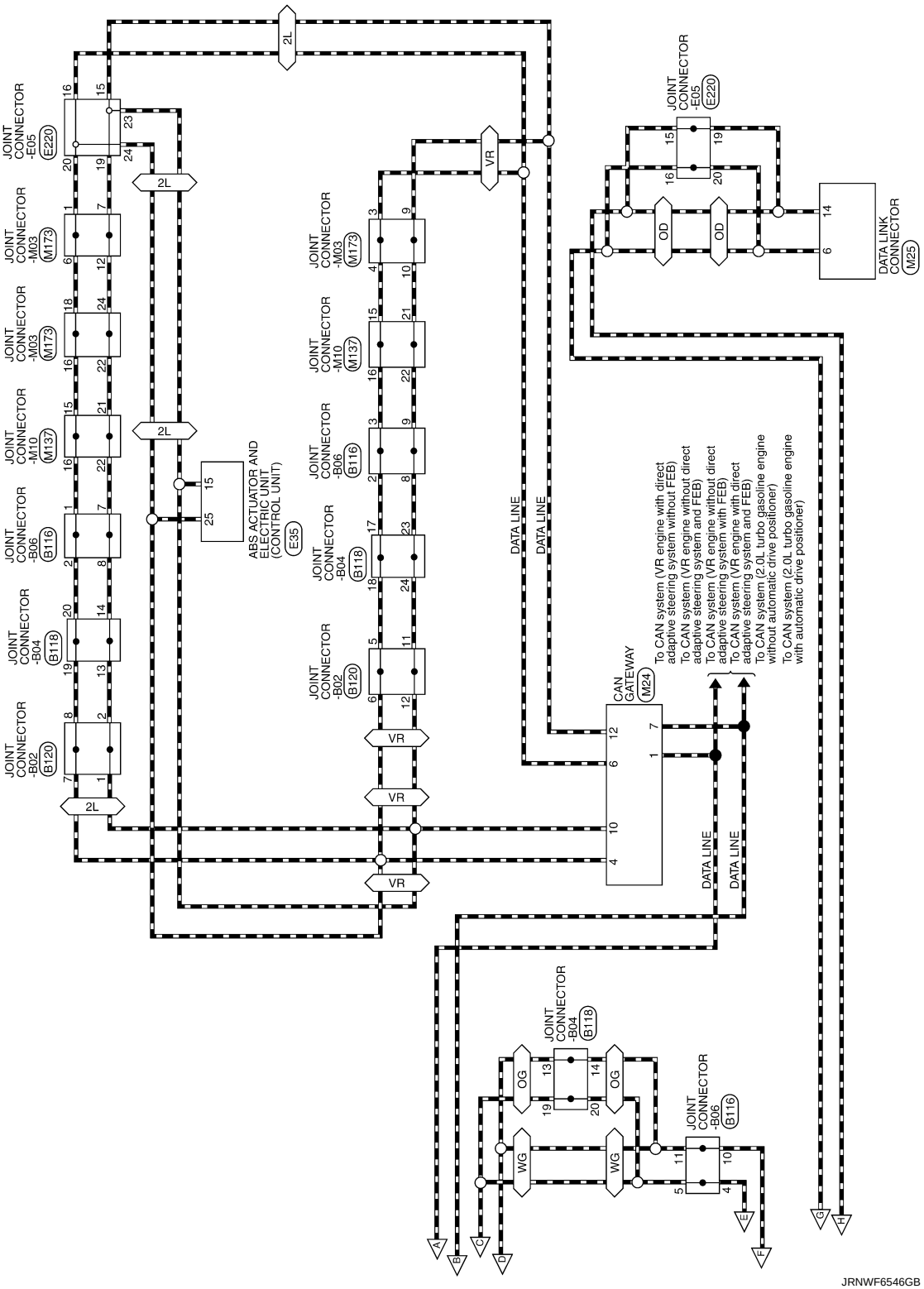
WIRING DIAGRAM

WARNING CHIME SYSTEM

Wiring Diagram

INFOID:0000000012789738

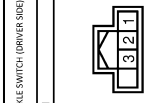



JOINT CONNECTOR -E05 E220
JOINT CONNECTOR -M03 M173
JOINT CONNECTOR -M10 M137
JOINT CONNECTOR -B06 B116
JOINT CONNECTOR -B04 B118
JOINT CONNECTOR -B02 B120
2L
VR
OD
DATA LINK CONNECTOR M25
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E35
DATA LINE
CAN GATEWAY M24
To CAN system (VR engine with direct adaptive steering system without FEB)
To CAN system (VR engine without direct adaptive steering system and FEB)
To CAN system (VR engine without direct adaptive steering system with FEB)
To CAN system (VR engine with direct adaptive steering system and FEB)
To CAN system (2.0L turbo gasoline engine without automatic drive positioner)
To CAN system (2.0L turbo gasoline engine with automatic drive positioner)
OG
WG
JRNWF6546GB

WARNING CHIME

Connector No.	B4
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	B	-
3	W	-

Connector No.	B18
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	L	-
4	LG	-
5	Y	-
6	R	-
7	V	-
8	LG	-
10	BG	-
11	BG	-
12	LG	-
13	GR	-
14	R	-
15	L	-
16	V	-
18	W	-

Terminal No.	Color Of Wire	Signal Name [Specification]
19	BR	-
20	W	-
22	R	-
23	V	-
24	R	- [With 2.0L turbo gasoline engine]
24	Y	- [With VR30 engine]
25	P	- [With 2.0L turbo gasoline engine and without gateway]
25	V	- [With 2.0L turbo gasoline engine and with gateway]
25	W	- [With VR30 engine]
26	G	-
27	R	-
28	R	-
31	B	- [With VR30 engine]
31	BR	- [With 2.0L turbo gasoline engine]
32	B	-
33	B	-
34	LG	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	SB	-
42	BR	-
43	BG	-
44	BG	-
46	R	-
50	W	-
51	SB	-
52	V	-
53	LG	-
54	R	-
55	R	-
57	W	-
58	V	-
59	GR	-
60	G	-
61	G	-
62	BG	-
63	BR	-
64	Y	-
66	R	-
70	R	-
71	W	-
72	B	-
73	W	-
74	L	-
75	R	- [Without paddle shift]
75	V	- [With paddle shift]

Terminal No.	Color Of Wire	Signal Name [Specification]
76	BR	-
77	B	-
78	SB	-
79	V	- [With VR30 engine]
79	W	- [With 2.0L turbo gasoline engine]
81	B	-
82	R	-
83	BG	-
84	L	-
85	R	- [Without paddle shift]
85	V	- [With paddle shift]
86	B	-
88	G	-
89	V	- [With 2.0L turbo gasoline engine]
89	W	- [With VR30 engine]
91	GR	-
94	GR	-
96	Y	-
97	V	-
98	BR	- [With VR30 engine and with BOSE system]
98	Y	- [Except with VR30 engine and with BOSE system]

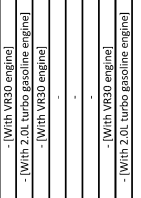
Connector No.	B42
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	TH04FW-NH

H.S.

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

Connector No.	B116
Connector Name	JOINT CONNECTOR-B06
Connector Type	24342_4GA2A

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	L	-
7	R	-
8	R	- [With Gateway]
8	V	- [Without Gateway]
9	R	- [With Gateway]
9	V	- [Without Gateway]
10	R	- [With VR30 engine]
10	V	- [With 2.0L turbo gasoline engine]
11	V	-
12	P	- [With Gateway]
12	R	- [Without Gateway]
13	SHIELD	-
14	SHIELD	-
15	B	- [With 2.0L turbo gasoline engine]
15	SHIELD	- [With VR30 engine]
16	L	- [With VR30 engine]
16	SHIELD	- [With 2.0L turbo gasoline engine]
17	L	- [With VR30 engine]
17	SHIELD	- [With 2.0L turbo gasoline engine]
18	L	- [With VR30 engine]
18	SHIELD	- [With 2.0L turbo gasoline engine]
19	L	- [With 2.0L turbo gasoline engine]
19	SHIELD	- [With VR30 engine]
20	L	- [With 2.0L turbo gasoline engine]
20	SHIELD	- [With VR30 engine]
21	L	-
22	P	-
23	P	-
24	P	- [With VR30 engine]
24	Y	- [With 2.0L turbo gasoline engine]

JRNWF6547GB

WARNING CHIME

Connector No.	B118
Connector Name	JOINT CONNECTOR-B04
Connector Type	24342_4GA2A

H.S.

6	5	4	3	2	1
12	11	10	9	8	7
18	17	16	15	14	13
24	23	22	21	20	19

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	- [With VR30 engine]
1	SHIELD	- [With 2.0L turbo gasoline engine]
2	LG	- [With VR30 engine]
2	SHIELD	- [With 2.0L turbo gasoline engine]
3	SHIELD	-
4	LG	- [With VR30 engine]
4	SHIELD	- [With 2.0L turbo gasoline engine]
5	LG	- [With VR30 engine]
5	SHIELD	- [With 2.0L turbo gasoline engine]
6	LG	- [With VR30 engine]
6	SHIELD	- [With 2.0L turbo gasoline engine]
7	R	- [Color of wire differs depending on production]
7	V	- [Color of wire differs depending on production]
8	LG	- [With 2.0L turbo gasoline engine]
8	R	- [With VR30 engine and without paddle shift]
8	V	- [With VR30 engine and with paddle shift]
9	LG	- [With 2.0L turbo gasoline engine]
9	R	- [With VR30 engine and without paddle shift]
9	V	- [With VR30 engine and with paddle shift]
10	LG	- [With 2.0L turbo gasoline engine]
10	SHIELD	- [With VR30 engine]
11	LG	- [With 2.0L turbo gasoline engine]
11	SHIELD	- [With VR30 engine]
12	LG	- [With 2.0L turbo gasoline engine]
12	SHIELD	- [With VR30 engine]
13	L	- [With VR30 engine]
13	P	- [With 2.0L turbo gasoline engine and without gateway]
13	R	- [With 2.0L turbo gasoline engine and with gateway]
14	L	- [With VR30 engine]
14	P	- [With 2.0L turbo gasoline engine and without gateway]
14	R	- [With 2.0L turbo gasoline engine and with gateway]
15	L	- [With VR30 engine]
15	R	- [With 2.0L turbo gasoline engine]
16	L	-
17	L	-
18	L	-
19	L	- [With 2.0L turbo gasoline engine]
19	SHIELD	- [With VR30 engine]
20	L	- [With 2.0L turbo gasoline engine]
20	SHIELD	- [With VR30 engine]
21	L	- [With 2.0L turbo gasoline engine]
21	SHIELD	- [With VR30 engine]
22	R	-
23	R	-
24	R	-

Connector No.	B120
Connector Name	JOINT CONNECTOR-B02
Connector Type	24342_4GA2A

H.S.

6	5	4	3	2	1
12	11	10	9	8	7
18	17		15	14	13
24	23	22	21	20	19

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	L	- [With VR30 engine]
3	R	- [With 2.0L turbo gasoline engine]
4	L	- [With VR30 engine]
4	R	- [With 2.0L turbo gasoline engine]
5	L	-
6	L	-
7	L	-
8	L	-
9	L	- [With 2.0L turbo gasoline engine]
9	R	- [With VR30 engine]
10	L	- [With 2.0L turbo gasoline engine]
10	R	- [With VR30 engine]
11	R	-
12	R	-
13	W	-
14	W	-
15	W	-
17	SHIELD	-
18	B	-
19	B	- [With 2.0L turbo gasoline engine]
19	GR	- [With VR30 engine]
20	GR	- [With VR30 engine]
20	SHIELD	- [With 2.0L turbo gasoline engine]
21	B	- [With 2.0L turbo gasoline engine]
21	GR	- [With VR30 engine]
22	W	-
23	W	-
24	W	-

Connector No.	B128
Connector Name	DIODE-1
Connector Type	ET02-2W

H.S.

2	1

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	BG	-

Connector No.	E25
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	-
6	V	-
7	L	-
8	BG	- [With VR30 engine]
8	BR	- [With 2.0L turbo gasoline engine]
9	B	- [With 2.0L turbo gasoline engine]
9	GR	- [With VR30 engine] [Color of wire differs depending on production]
9	LG	[With VR30 engine] [Color of wire differs depending on production]
10	BR	-
11	L	-
12	GR	- [With VR30 engine]
12	P	- [With 2.0L turbo gasoline engine]
13	SHIELD	- [With 2.0L turbo gasoline engine]
13	W	- [With VR30 engine]
14	B	-
15	GR	- [With VR30 engine]
15	SB	- [With VR30 engine]
16	BR	- [With 2.0L turbo gasoline engine]
16	Y	- [With VR30 engine]
17	BR	- [With VR30 engine]
17	GR	- [With 2.0L turbo gasoline engine]
18	G	- [With 2.0L turbo gasoline engine]
18	P	- [With VR30 engine]
19	Y	-
31	W	- [With 2.0L turbo gasoline engine]
31	Y	- [With VR30 engine]
32	G	- [With 2.0L turbo gasoline engine]
32	GR	- [With VR30 engine]
33	L	- [With VR30 engine]
33	Y	- [With 2.0L turbo gasoline engine]
34	P	-
35	GR	-
36	R	-
37	L	- [With 2.0L turbo gasoline engine]
37	V	- [With VR30 engine]
38	L	- [With VR30 engine]
38	P	- [With 2.0L turbo gasoline engine and without gateway]
38	R	- [With 2.0L turbo gasoline engine and with gateway]
39	BR	- [With 2.0L turbo gasoline engine]
39	Y	- [With VR30 engine]
40	SB	-
41	LG	-
44	Y	-
45	L	- [With 2.0L turbo gasoline engine]
45	W	- [With VR30 engine]
46	B	- [With VR30 engine]
46	Y	- [With 2.0L turbo gasoline engine]
47	G	-
48	SHIELD	-
49	R	- [With VR30 engine]
50	BR	-
50	GR	- [With 2.0L turbo gasoline engine]
51	L	-
52	W	-
53	V	-
54	P	- [With VR30 engine]
54	W	- [With 2.0L turbo gasoline engine]
55	B	- [With 2.0L turbo gasoline engine]
55	W	- [With VR30 engine]
56	BG	- [With 2.0L turbo gasoline engine]
56	SB	- [With VR30 engine]

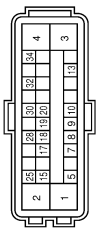
JRNWF6548GB

WARNING CHIME

57	BG	- [With VR30 engine]
57	W	- [With 2.0L turbo gasoline engine]
58	B	- [Color of wire differs depending on production]
58	B/W	- [Color of wire differs depending on production]
59	W	-
61	R	-
64	Y	-
65	BR	- [Color of wire differs depending on production]
65	GR	- [Color of wire differs depending on production]
66	GR	-
67	LG	-
68	BG	-
69	L	-
70	R	-
71	G	- [With 2.0L turbo gasoline engine]
71	LG	- [With VR30 engine]
72	L	- [With 2.0L turbo gasoline engine]
72	V	- [With VR30 engine]
73	G	- [With VR30 engine]
73	W	- [With 2.0L turbo gasoline engine]
74	BR	- [With VR30 engine]
74	L	- [With 2.0L turbo gasoline engine]
75	P	- [With 2.0L turbo gasoline engine and without gateway]
75	R	- [With 2.0L turbo gasoline engine and with gateway]
75	V	- [With VR30 engine]
76	G	-
77	Y	-
78	LG	- [With 2.0L turbo gasoline engine and with ADAS]
78	P	- [With VR30 engine]
78	V	- [With 2.0L turbo gasoline engine and without ADAS]
79	SB	-
80	G	-
81	R	-
82	V	-
83	BR	- [With 2.0L turbo gasoline engine]
83	R	- [With VR30 engine]
84	LG	-
86	BG	-
87	G	-
89	LG	-
90	G	- [With VR30 engine]
90	GR	- [With 2.0L turbo gasoline engine]
91	G	-
93	BG	-
94	GR	- [With VR30 engine]
94	L	- [With 2.0L turbo gasoline engine]
95	BG	- [With VR30 engine]
95	P	[With 2.0L turbo gasoline engine and without gateway]
95	R	- [With 2.0L turbo gasoline engine and with gateway]
96	W	-
97	LG	-
98	L	-
99	LG	- [With 2.0L turbo gasoline engine]
99	P	- [With VR30 engine]
100	SHIELD	-

Connector No. E35
Connector Name ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type SAZ30FB-SZ24-U

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GND
2	B	GND
3	G	VALVE BATTERY [With VR30 engine]
3	P	VALVE BATTERY [With 2.0L turbo gasoline engine]
4	Y	MOTOR BATTERY
5	LG	STOP LAMP SW SIGNAL [With ADAS]
5	V	STOP LAMP SW SIGNAL [With ASCD]
7	GR	RR LH WHEEL SENSOR SIGNAL
8	G	RR LH WHEEL SENSOR POWER SUPPLY
9	BR	FR RH WHEEL SENSOR SIGNAL
10	GR	FR RH WHEEL SENSOR POWER SUPPLY
13	R	VACUUM SENSOR SIGNAL
15	P	CAN-L [Without Gateway]
15	R	CAN-L [With gateway]
17	Y	RR RH WHEEL SENSOR SIGNAL
18	LG	RR RH WHEEL SENSOR POWER SUPPLY [With 2.0L turbo gasoline engine]
18	V	RR RH WHEEL SENSOR POWER SUPPLY [With VR30 engine]
19	SB	FR LH WHEEL SENSOR SIGNAL
20	BG	FR LH WHEEL SENSOR POWER SUPPLY
25	L	CAN-H
28	G	VACUUM SENSOR POWER SUPPLY
30	R	VDC OFF SW SIGNAL
32	SHIELD	VACUUM SENSOR GROUND
34	G	IGN

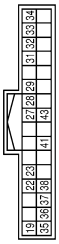
Connector No. E60
Connector Name PARKING BRAKE SWITCH
Connector Type T8D1FW-LC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	-

Connector No. E121
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type TH32FW-NH

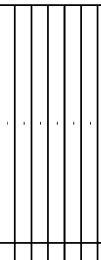
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
19	L	- [With 2.0L turbo gasoline engine]
19	P	- [With VR30 engine]
22	BG	-
23	GR	- [With VR30 engine]
23	LG	[With 2.0L turbo gasoline engine and without Anti-theft diode]
23	P	- [With 2.0L turbo gasoline engine and with Anti-theft diode]
27	GR	-
28	P	-
29	L	-
31	G	-
32	SB	-
33	G	-
34	Y	-
35	G	-
36	SB	- [With VR30 engine]
36	W	- [With 2.0L turbo gasoline engine]
37	GR	-
38	BR	-
41	GR	-
43	V	-

Connector No. E195
Connector Name WIRE TO WIRE
Connector Type TK36FW-NS10

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
5	BR	-
8	GR	-
9	P	-
10	R	-
11	L	-
12	P	-
13	GR	-
14	Y	-
15	G	-
16	W	-
17	L	-
18	R	-
19	BR	-
20	SHIELD	-
21	BR	-
22	V	-
23	W	-
24	L	-
25	G	-
26	G	-
30	Y	-
31	GR	-
32	SB	-
33	W	-
34	W	-
35	B	-
36	G	-
37	SHIELD	-
38	R	-
39	L	-
40	GR	-
41	W	-
42	B	-

JRNWF6549GB

WARNING CHIME

43	BR	-
44	P	-
45	SB	-
46	Y	-

Connector No.	E220
Connector Name	JOINT CONNECTOR-E05
Connector Type	NH24FB-J

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
3	W	-
4	L	-
7	W	-
8	L	-
11	W	-
12	L	-
15	P	- [Without Gateway]
15	R	- [With Gateway]
16	L	-
19	P	- [Without Gateway]
19	R	- [With Gateway]
20	L	-
23	P	- [Without Gateway]
23	R	- [With Gateway]
24	L	-

Connector No.	M5
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	NH28FY-EX

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	LG	IGN
2	B	GND
3	Y/R	DR1 (+)
4	Y/B	DR1 (-)
5	Y	DR2 (+)
6	Y/R	AS1 (+)
7	Y/B	AS1 (-)
8	Y/G	AS2 (+)
9	Y	AS2 (-)
18	Y	ECZS+
19	BR	ECZS-
20	Y/R	ACT_VENT+
21	Y/B	ACT_VENT-
22	SHIELD	GND
23	V	AIRBAG W/L
24	G	-
25	GR	A/B_OFF_IND
51	G	SATELLITE RH2 (+)
52	R	SIDE_SENS_RH2-
53	V	SIDE_SENS_LH2+
54	L	SIDE_SENS_LH2-
57	LG	IVCS
59	L	CAN-H
60	P	CAN-L

Connector No.	M13
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	PUSH SW
3	Y	SENS PWR SPLY
4	BG	OPTICAL SENSOR
5	LG	-
10	W	COMBI SW OUTPUT 5
11	SB	COMBI SW OUTPUT 4
12	L	COMBI SW OUTPUT 3
13	G	COMBI SW OUTPUT 2
14	P	COMBI SW OUTPUT 1
15	G	ONE TOUCH UNLK SENS (DR)
16	G	ONE TOUCH UNLK SENS (PASS)
17	P	RECEIVER/SENSOR GND
18	L	SECURITY IND LAMP CONT
20	R	DETENT SW
21	SB	STEP LAMP CONT
25	R	STOP LAMP SW2
26	R	EXTENDED STORAGE FUSE SW
27	P	STOP LAMP SW
30	W	DR DOOR UNLK SENS
33	V	TR LID OP CANCEL SW
36	G	HAZARD SW
39	BR	P/N POSITION

Connector No.	M14
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH

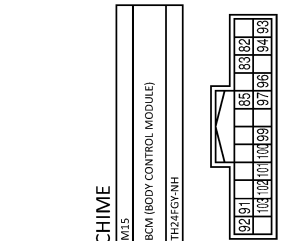
H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
48	R	PUSH-BTN IGN SW ILL PWR
52	G	DONGLE LINK
54	V	COMM LINE
55	R	RAIN SENSOR
59	P	CAN-L
60	L	CAN-H
61	G	REAR WINDOW DEF RLY CONT
62	R	STARTER RLY CONT
64	V	I-KEY WARN BUZZER
65	B	OUTS HD LAMP CONT
66	B	BLOWER FAN RLY CONT [With VR30 engine]
66	Y	BLOWER FAN RLY CONT [With 2.0L turbo gasoline engine]
67	W/B	IGN RLYAY (F/B) CONT
68	R	DIMMER
69	GR	A/T SHIFT SELECT PWR SPLY
70	B	IGN RLYAY (IPDM E/R) CONT
71	G	DR DOOR REQ SW
72	SB	PASS DOOR REQ SW
75	BR	COMBI SW INPUT 5
76	BG	COMBI SW INPUT 4
77	V	COMBI SW INPUT 3
78	Y	COMBI SW INPUT 2
79	LG	COMBI SW INPUT 1
80	L	TR LID OPNR SW

JRNWF6550GB

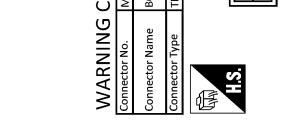
WARNING CHIME

Connector No.	M15
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH24FGY-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
82	W	REAR LH DOOR SW
83	L	TR LID OPEN REQ SW
85	P	TR ROOM LAMP CONT
91	GR	TRUNK LID OPEN
92	W	TURN SIG RH OUTPUT [SIDE, REAR]
93	G	REAR RH DOOR SW
94	GR	PASSENGER DOOR SW
96	V	DRIVER DOOR SW
97	R	TR ROOM LAMP SW
99	GR	INSIDE KEY ANT (TRUNK) -
100	W	INSIDE KEY ANT (TRUNK) +
101	BG	REAR BMPR ANT -
102	LG	REAR BMPR ANT +
103	Y	TURN SIG LH OUTPUT [SIDE, REAR]

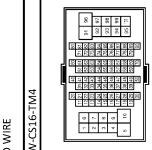
Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA



Terminal No.	Color Of Wire	Signal Name [Specification]
129	LG	INT ROOM LAMP PWR SPLY
130	P	PASS DOOR UNLK OUTPUT
131	Y	BAT [FUSE]
132	V	RR, RL DOOR LK OUTPUT
133	BR	RR, RL DOOR UNLK OUTPUT
134	B	GND

135	V	FRONT DOOR, FL LID LK OUTPUT
136	V	INT ROOM LAMP CONT
137	LG	FRONT DOOR, FL LID UNLK OUTPUT
138	P	REAR DOORS ACT PWR SPLY [With VR30 engine]
138	R	REAR DOORS ACT PWR SPLY [With 2.0L turbo gasoline engine]
139	W	BAT (F/L)
140	BR	IGN ON
141	R	PWR SPLY (BAT)
142	R	FRONT DOORS, FL LID ACT PWR SPLY
143	B	GND

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

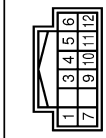


Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	G	-
3	SB	-
4	BR	-
5	Y	-
6	R	-
7	W	-
8	V	-
10	BG	-
11	BR	-
12	LG	-
13	GR	-
14	R	-
15	L	-
16	V	-
18	W	-
19	BR	-
20	W	-
22	SB	-
23	R	-
24	R	- [With 2.0L turbo gasoline engine]
24	Y	- [With VR30 engine]
25	P	- [With 2.0L turbo gasoline engine]
25	W	- [With VR30 engine]

26	G	-
27	R	-
28	R	-
31	BR	-
32	B	-
33	B	-
34	V	-
35	P	-
36	W	-
37	SB	-
38	LG	-
40	P	-
41	G	-
42	BR	-
43	BR	-
44	BR	-
46	BG	-
50	W	-
51	Y	-
52	V	-
53	LG	-
54	R	-
55	R	-
57	W	-
58	V	-
59	BG	-
60	G	-
61	G	-
62	BG	-
63	BR	-
64	Y	-
66	R	-
70	LG	-
71	W	-
72	B	-
73	W	-
74	L	-
75	W	-
76	BR	-
77	B	-
78	SB	-
79	P	- [With VR30 engine]
79	W	- [With 2.0L turbo gasoline engine]
81	B	-
82	R	-
83	BG	-
84	L	-
85	W	-
86	B	-
88	G	-

89	V	- [With 2.0L turbo gasoline engine]
89	W	- [With VR30 engine]
91	GR	-
94	GR	-
96	W	-
97	V	-
98	BR	- [With VR30 engine and with BOSE system]
98	Y	- [Except with VR30 engine and with BOSE system]

Connector No.	M24
Connector Name	CAN GATEWAY
Connector Type	TH12FW-NH



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	CAN-H (CAN COMMUNICATION CIRCUIT 1)
3	W	BATTERY POWER SUPPLY
4	L	CAN-H (CAN COMMUNICATION CIRCUIT 2)
5	B	GROUND
6	L	CAN-H (CAN COMMUNICATION CIRCUIT 2)
7	P	CAN-L (CAN COMMUNICATION CIRCUIT 1)
9	R	IGNITION POWER SUPPLY [With VR30 engine and without ISS]
9	W	IGNITION POWER SUPPLY [Except with VR30 engine and without ISS]
10	R	CAN-L (CAN COMMUNICATION CIRCUIT 2)
11	B	GROUND
12	R	CAN-L (CAN COMMUNICATION CIRCUIT 2)

JRNWF6551GB

WARNING CHIME

Connector No.	M25
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW

Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	M_CAN_L
4	B	EARTH
5	B	EARTH
6	L	CAN-H
7	V	K-LINE [With 2.0L turbo gasoline engine]
7	W	K-LINE [With VR30 engine]
8	W	IGN_SW
11	SB	M_CAN_H
12	R	CAN-L
13	L	CAN-H
14	P	CAN-L
16	W	POWER

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH

Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	FR WASH MOTOR
2	SB	OUTPUT 4
5	L	OUTPUT 3
6	B	GND
7	V	INPUT 3
8	W	OUTPUT 5
9	Y	INPUT 2
10	BG	INPUT 4
11	LG	INPUT 1
12	P	OUTPUT 1
13	BR	INPUT 5
14	G	OUTPUT 2

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

Terminal No.	Color Of Wire	Signal Name [Specification]
1	BG	-
6	W/B	-
7	V	-
8	BG	- [With VR30 engine]
8	BR	- [With 2.0L turbo gasoline engine]
9	LG	- [With VR30 engine]
9	P	- [With 2.0L turbo gasoline engine]
10	W	-
11	W	- [With VR30 engine]
11	Y	- [With 2.0L turbo gasoline engine]
12	B	- [With VR30 engine]
12	BR	- [With 2.0L turbo gasoline engine]
13	GR	- [With VR30 engine]
13	SHIELD	- [With 2.0L turbo gasoline engine]
14	B	-
15	BG	- [With 2.0L turbo gasoline engine]
15	SB	- [With VR30 engine]
16	B	- [With VR30 engine]
16	BR	- [With 2.0L turbo gasoline engine]
17	LG	-
18	B	- [With VR30 engine]
18	W/B	- [With 2.0L turbo gasoline engine]
19	Y	-
31	W	-
32	G	- [With 2.0L turbo gasoline engine]
32	V	- [With VR30 engine]
33	L	- [With VR30 engine]
33	Y	- [With 2.0L turbo gasoline engine]
34	P	-
35	BG	-
36	G	-
37	B	- [With VR30 engine]
37	L	- [With 2.0L turbo gasoline engine]
38	L	- [With VR30 engine]
38	P	- [With 2.0L turbo gasoline engine and without gateway]
38	R	- [With 2.0L turbo gasoline engine and with gateway]
39	R	- [With 2.0L turbo gasoline engine]
39	Y	- [With VR30 engine]
40	GR	-
41	L	-
44	BR	-
45	L	- [With 2.0L turbo gasoline engine]
45	W	- [With VR30 engine]
46	G	- [With VR30 engine]
46	Y	- [With 2.0L turbo gasoline engine]
47	BG	- [With 2.0L turbo gasoline engine]
47	R	- [With VR30 engine]
48	SHIELD	-
49	B	- [With VR30 engine]
49	G	- [With 2.0L turbo gasoline engine]
50	B	- [With 2.0L turbo gasoline engine]
50	BR	- [With VR30 engine]
51	L	-
52	W	-
53	G	-
54	SB	- [With 2.0L turbo gasoline engine]
54	Y	- [With VR30 engine]
55	B	- [With 2.0L turbo gasoline engine]
55	P	- [With VR30 engine]
56	BG	- [With VR30 engine]
56	GR	- [With 2.0L turbo gasoline engine]
57	GR	- [With VR30 engine]
57	P	- [With 2.0L turbo gasoline engine]
58	B	-
59	SB	-
61	W/B	-
64	Y	-
65	R	-
66	P	- [Color of wire differs depending on production]
66	V	- [Color of wire differs depending on production]
67	LG	-
68	BG	-
69	L	-
70	R	-
71	V	- [With VR30 engine]
71	W	- [With 2.0L turbo gasoline engine]
72	L	- [With 2.0L turbo gasoline engine]
72	LG	- [With VR30 engine]
73	R	- [With VR30 engine]
73	W	- [With 2.0L turbo gasoline engine]
74	BR	- [With VR30 engine]
74	L	- [With 2.0L turbo gasoline engine]
75	B	- [With VR30 engine]
75	P	- [With 2.0L turbo gasoline engine and without gateway]
75	R	- [With 2.0L turbo gasoline engine and with gateway]
76	W/B	-
77	SB	-
78	G	- [With VR30 engine]
78	LG	- [With 2.0L turbo gasoline engine]
79	R	-
80	G	-
81	R	-
82	LG	-
83	BR	- [With 2.0L turbo gasoline engine]
83	R	- [With VR30 engine]
84	V	-
86	V	-
87	G	-
89	V	-
90	G	- [With VR30 engine]
90	V	- [With 2.0L turbo gasoline engine]
91	W	-
92	G	-
93	BR	-
94	GR	- [With VR30 engine]
94	L	- [With 2.0L turbo gasoline engine]
95	BR	- [With VR30 engine]
95	P	- [With 2.0L turbo gasoline engine and without gateway]
95	R	- [With 2.0L turbo gasoline engine and with gateway]
96	W	-
97	LG	-
98	Y	-
99	BR	- [With VR30 engine]
99	LG	- [With 2.0L turbo gasoline engine]
100	SHIELD	-

JRNWF6552GB

WARNING CHIME

Connector No.	M57
Connector Name	COMBINATION METER
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
6	GR	STOP/START OFF SWITCH INDICATOR SIGNAL
7	G	SECURITY SIGNAL
8	B	-
11	W	ALTERNATOR SIGNAL
12	G	LED HEADLAMP (RH) WARNING SIGNAL
13	BR	LED HEADLAMP (LH) WARNING SIGNAL
14	V	ACC POWER SUPPLY
16	V	AIR BAG SIGNAL
17	BR	METER CONTROL SWITCH GROUND
18	SB	TRIP/RESET SIGNAL
21	B	STEERING SWITCH SIGNAL GROUND
22	P	STEERING SWITCH SIGNAL A
23	W/B	STEERING SWITCH SIGNAL B
24	L	WASHER LEVEL SWITCH SIGNAL
25	LG	BRAKE FLUID LEVEL SWITCH SIGNAL
26	V	PARKING BRAKE SWITCH SIGNAL
27	G	PASSENGER SEAT BELT WARNING SIGNAL
28	W	SEAT BELT BUCKLE SWITCH SIGNAL [DRIVER SIDE]
30	G	MANUAL MODE SIGNAL [With 2.0L turbo gasoline engine]
30	SB	MANUAL MODE SIGNAL [With VR30 engine]
31	G	NON-MANUAL MODE SIGNAL [With VR30 engine]
31	L	NON-MANUAL MODE SIGNAL [With 2.0L turbo gasoline engine]
32	BG	MANUAL MODE SHIFT UP SIGNAL
33	GR	MANUAL MODE SHIFT DOWN SIGNAL [With VR30 engine]
33	P	MANUAL MODE SHIFT DOWN SIGNAL [With 2.0L turbo gasoline engine]
34	BG	PADDLE SHIFTER UP SWITCH SIGNAL
35	G	PADDLE SHIFTER DOWN SWITCH SIGNAL
36	V	ILLUMINATION CONTROL SWITCH SIGNAL (+)
37	GR	ILLUMINATION CONTROL SWITCH SIGNAL (-)
38	R	VEHICLE SPEED SIGNAL [8-PULSE]

Connector No.	M58
Connector Name	COMBINATION METER
Connector Type	TH12FW-NH

H.S.

41	42	43	44	45	46
47	48			51	52

Terminal No.	Color Of Wire	Signal Name [Specification]
41	L	CAN-H
42	P	CAN-L
43	B	ILLUMINATION CONTROL SIGNAL
44	Y	FUEL LEVEL SENSOR GROUND
45	W	BATTERY POWER SUPPLY
46	BG	IGNITION SIGNAL [Except with VR30 engine and without ISS]
46	R	IGNITION SIGNAL [With VR30 engine and without ISS]
47	SB	AV COMMUNICATION SIGNAL (H)
48	LG	AV COMMUNICATION SIGNAL (L)
51	BR	FUEL LEVEL SENSOR SIGNAL
52	B	GROUND

Connector No.	M133
Connector Name	FUSE BLOCK (J/B)
Connector Type	TH40FW-NH

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color Of Wire	Signal Name [Specification]
10C	V	-
12C	L	-
13C	L	-
14C	Y	-
15C	R	-
16C	R	-
17C	L	-
18C	BG	- [Without DRPO]
18C	P	- [With DRPO]

19C	B	-
1C	R	-
20C	W	-
21C	L	-
22C	L	-
23C	L	-
25C	LG	-
26C	SB	-
27C	P	-
28C	W	-
29C	W	-
2C	R	-
30C	R	-
31C	W	-
32C	R	-
33C	B	- [With VR30 engine]
33C	R	- [With 2.0L turbo gasoline engine]
34C	W/B	-
35C	SB	-
36C	R	-
37C	W	-
38C	SB	-
39C	V	-
3C	P	-
40C	G	-
4C	P	-
5C	P	-
6C	G	-
7C	G	-
8C	G	-
9C	V	-

Connector No.	M137
Connector Name	JOINT CONNECTOR-M10
Connector Type	24342_4G42A

H.S.

5	4	3	2	1
11	10	9	8	7
	16	15	14	13
	22	21	20	19

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	B	-
3	B	-

4	B	-
5	B	-
7	B	-
8	B	-
9	B	-
10	B	-
11	B	-
13	L	-
14	L	-
15	L	-
16	L	-
19	R	-
20	R	-
21	R	-
22	R	-

Connector No.	M139
Connector Name	DIODE-2
Connector Type	ET02-2W

H.S.

2	1

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	BG	-

Connector No.	M146
Connector Name	WIRE TO WIRE
Connector Type	TK36MW-NS10

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72

JRNWF6553GB

WARNING CHIME

Terminal No.	Color Of Wire	Signal Name [Specification]
5	R	-
8	GR	-
9	V	-
10	BG	-
11	L	-
12	P	-
13	SB	-
14	Y	-
15	G	-
16	BR	-
17	W	-
18	R	-
19	L	-
20	SHIELD	-
21	BR	-
22	B	-
23	G	-
24	L	-
25	R	-
26	G	-
30	Y	-
31	GR	-
32	SB	-
33	BG	-
34	W	-
35	G	-
36	R	-
37	SHIELD	-
38	B	-
39	W	-
40	B	-
41	GR	-
42	B	-
43	LG	-
44	B	-
45	SB	-
46	B	-

Connector No.	M171
Connector Name	JOINT CONNECTOR-M01
Connector Type	24342_4GA2A

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	B	-
3	B	-
4	B	-
5	B	-
6	B	-
7	B	-
8	B	-
9	B	-
10	G	-
11	G	-
14	B	-
15	B	-
16	SB	- [With VR30 engine]
16	Y	- [With 2.0L turbo gasoline engine]
17	SB	- [With VR30 engine]
17	Y	- [With 2.0L turbo gasoline engine]
18	SB	- [With VR30 engine]
18	Y	- [With 2.0L turbo gasoline engine]
19	G	-
20	G	-
22	LG	- [With VR30 engine]
22	SB	- [With 2.0L turbo gasoline engine]
23	LG	- [With VR30 engine]
23	SB	- [With 2.0L turbo gasoline engine]
24	LG	- [With VR30 engine]
24	SB	- [With 2.0L turbo gasoline engine]

Connector No.	M173
Connector Name	JOINT CONNECTOR-M03
Connector Type	24342_4GA2A

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	L	-
7	R	-
8	R	-
9	R	-
10	R	-
11	R	-
12	R	-
13	SB	-
14	SB	-
15	SB	-
16	L	- [With 2.0L turbo gasoline engine]
16	SB	- [With VR30 engine]
17	L	- [With 2.0L turbo gasoline engine]
17	SB	- [With VR30 engine]
18	L	- [With 2.0L turbo gasoline engine]
18	SB	- [With VR30 engine]
19	BR	- [With VR30 engine]
19	LG	- [With 2.0L turbo gasoline engine]
20	BR	- [With VR30 engine]
20	LG	- [With 2.0L turbo gasoline engine]
21	BR	- [With VR30 engine]
21	LG	- [With 2.0L turbo gasoline engine]
22	R	- [With 2.0L turbo gasoline engine]
22	SB	- [With VR30 engine and without ISS]
22	V	- [With VR30 engine and with ISS]
23	R	- [With 2.0L turbo gasoline engine]
23	SB	- [With VR30 engine and without ISS]
23	V	- [With VR30 engine and with ISS]
24	R	- [With 2.0L turbo gasoline engine]
24	SB	- [With VR30 engine and without ISS]
24	V	- [With VR30 engine and with ISS]

Connector No.	M175
Connector Name	JOINT CONNECTOR-M05
Connector Type	NH20FL-DC

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	L	-
7	L	-
8	L	-
10	P	-
11	P	-
12	P	-
13	P	-
14	P	-
15	P	-
16	P	- [With VR30 engine]
16	R	- [With 2.0L turbo gasoline engine]
17	P	- [With VR30 engine]
17	R	- [With 2.0L turbo gasoline engine]
19	R	- [With VR30 engine and with ISS]
19	W	- [Except with VR30 engine and with ISS]
20	R	- [With VR30 engine and with ISS]
20	W	- [Except with VR30 engine and with ISS]

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WARNING CHIME

Connector No.	M177
Connector Name	JOINT CONNECTOR-M07
Connector Type	24342_4GA2A

H.S.

6	5	4	3	2	1
12	11	10	9	8	7
18	17	16	15	14	13
24	23	22	21	20	19

Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	L	-
7	P	-
8	P	-
9	P	-
10	P	-
11	P	-
12	P	-
13	L	-
14	L	-
15	L	-
16	L	-
17	L	-
18	L	-
19	W	-
20	W	-
21	W	-
22	P	-
23	P	-
24	P	-

JRNWF6555GB

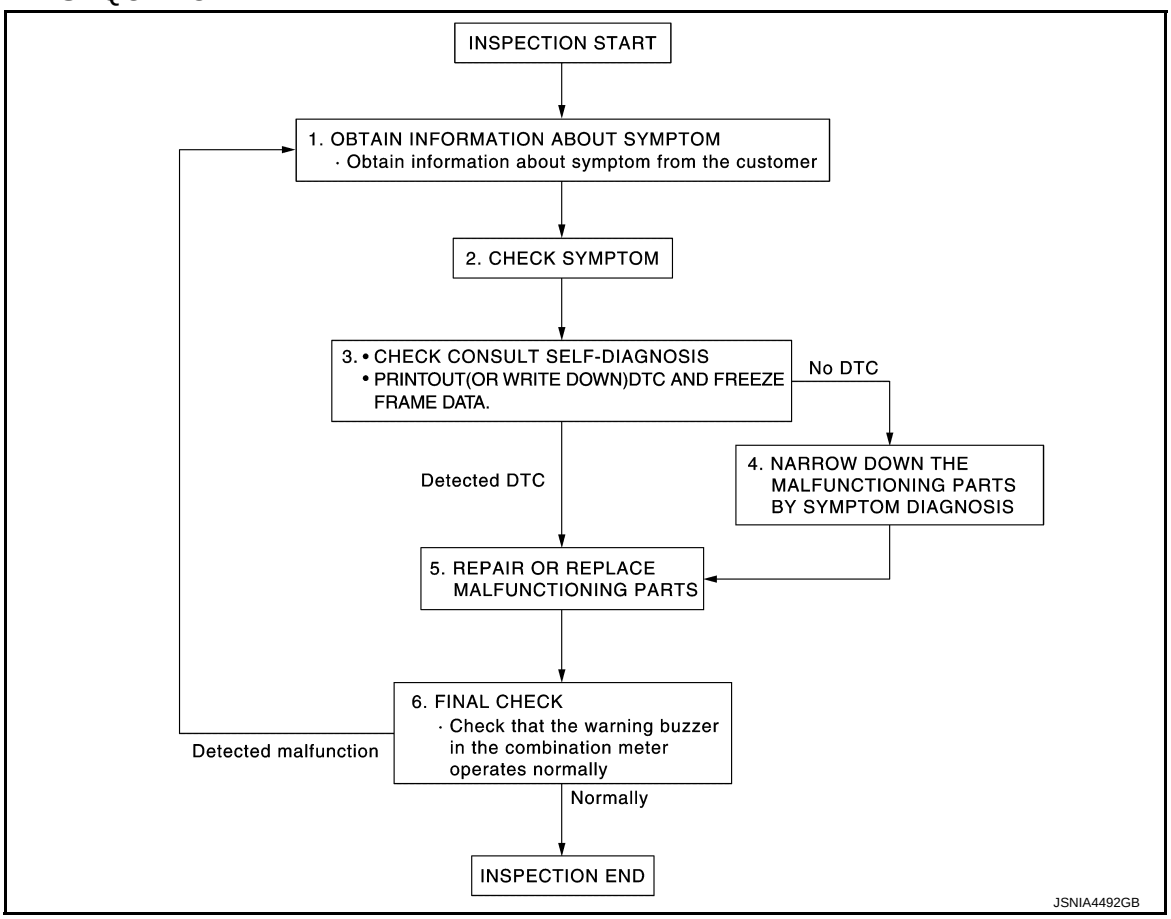
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000012789739

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-87, "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:0000000013447603

1.CHECK FUSE

Check for blown fuses.

Power source		Fuse No.
Battery		6
Ignition switch ON or START	With stop/start system	53
		79
	Without stop/start system	11
Ignition switch ON or ACC		1

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				
Connector	Terminal			
M58	45	Ground	OFF	Battery voltage
M57	14		ACC	
M58	46		ON	

Is the inspection result normal?

YES >> GO TO 3.
NO >> Check harness between combination meter and fuse.

3.CHECK GROUND CIRCUIT

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

Combination meter			
Connector	Terminal	Ground	Continuity
M57	1		Existed
M58	52		

Is the inspection result normal?

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

METER BUZZER CIRCUIT

Component Function Check

INFOID:0000000012789741

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 >> Refer to WCS-62, "Diagnosis Procedure".
NO >> Replace BCM. Refer to BCS-99, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000012789742

1.CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to MWI-120, "COMBINATION METER : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair power supply circuit of combination meter.

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT (DRIVER SIDE)

Component Function Check

INFOID:0000000012789743

1.CHECK COMBINATION METER INPUT SIGNAL

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

BUCKLE SW
When seat belt is fastened. : Off
When seat belt is unfastened. : On

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to WCS-63, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012789744

1.CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

1. Disconnect combination meter connector and seat belt buckle switch (driver side) connector.
2. 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	
M57	28	B4	1	Existed

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

Combination meter		Ground	Continuity
Connector	Terminal		
M57	28		Not existed

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair harness or connector.

2.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		
B4	2		Existed

Is the inspection result normal?

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

3.CHECK SEAT BELT BUCKLE SWITCH

Check seat belt buckle switch. Refer to WCS-63, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace seat belt buckle (driver side). Refer to SB-12, "SEAT BELT BUCKLE : Removal and Installation".

Component Inspection

INFOID:0000000012789745

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 SB-12, "SEAT BELT BUCKLE : Removal and Installation".

PARKING BRAKE SWITCH SIGNAL CIRCUIT

Component Function Check

INFOID:0000000012789746

1.CHECK COMBINATION METER INPUT SIGNAL

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

PKB SW
When parking brake is applied. : On
When parking brake is released. : Off

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to WCS-65, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012789747

1.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

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

Terminals				Continuity
Combination meter		Parking brake switch		
Connector	Terminal	Connector	Terminal	
M57	26	E60	1	Existed

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

Terminals			Continuity
Combination meter		Ground	
Connector	Terminal		
M57	26		Not existed

Is the inspection result normal?

YES >> Refer to WCS-65, "Component Inspection".
NO >> Repair harness or connector.

Component Inspection

INFOID:0000000012789748

1.CHECK PARKING BRAKE SWITCH

Check parking brake switch. Refer to BRC-175, "Component Inspection".

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace parking brake switch. Refer to PB-9, "Exploded View".

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:0000000012789749

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

Diagnosis Procedure

INFOID:0000000012789750

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-198, "Symptom Table".

2.CHECK DRIVER SIDE DOOR SWITCH SIGNAL CIRCUIT

Perform the check for the driver side door switch signal circuit. Refer to DLK-117, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-99, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

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

Description

INFOID:0000000012789751

- While traveling at 7 km/h or more, the parking brake warning buzzer sounds continuously even when the parking brake is released.
- The parking brake warning buzzer does not sound even when the parking brake is applied while traveling at 7 km/h or more.

Diagnosis Procedure

INFOID:0000000012789752

1.CHECK PARKING BRAKE WARNING LAMP

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

When parking brake is applied.	: ON
When parking brake is released.	: OFF

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> GO TO 2.

2.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

Check for the parking brake switch signal circuit. Refer to WCS-65, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.

THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

Description

INFOID:0000000012789753

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

Diagnosis Procedure

INFOID:0000000012789754

1.CHECK SEAT BELT WARNING LAMP

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

Seat belt fastened	: OFF
Seat belt not fastened	: ON

Is the inspection result normal?

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

2.CHECK BCM OUTPUT SIGNAL

Check if the seat belt warning chime is activated by performing BCM active test. Refer to WCS-33, "BUZZER : CONSULT Function (BCM - BUZZER)".

Is the inspection result normal?

YES >> INSPECTION END
NO >> GO TO 3.

3.CHECK COMBINATION METER INPUT SIGNAL

Check if buzzer switches to proper condition (On/Off) on data monitor of combination meter. Refer to WCS-26, "CONSULT Function".

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

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-99, "Removal and Installation".

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

Perform the check for the seat belt buckle switch (driver side) circuit. Refer to WCS-63, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-141, "Removal and Installation".
NO >> Repair or replace malfunctioning parts.