# SECTION WCS В WARNING CHIME SYSTEM

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< BASIC INSPECTION >

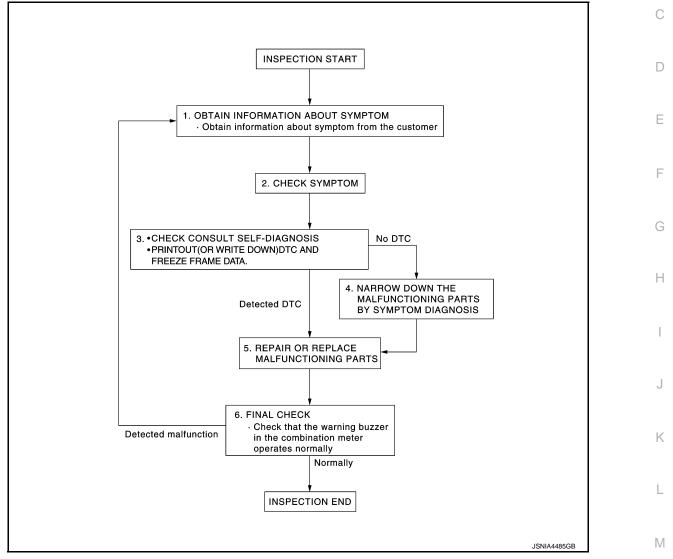
# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

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#### 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 that any other malfunctions are present.

#### >> GO TO 3.

3. CHECK CONSULT SELF-DIAGNOSIS RESULTS

1. Connect CONSULT and perform self-diagnosis. Refer to WCS-65, "DTC Index".

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## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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

- Record DTC and Freeze Frame Data.

Are self-diagnosis results normal?

YES >> GO TO 4. NO >> GO TO 5.

4.NARROW DOWN MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 5.

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts. **NOTE:** 

If DTC is displayed, erase DTC after repair or replace 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.

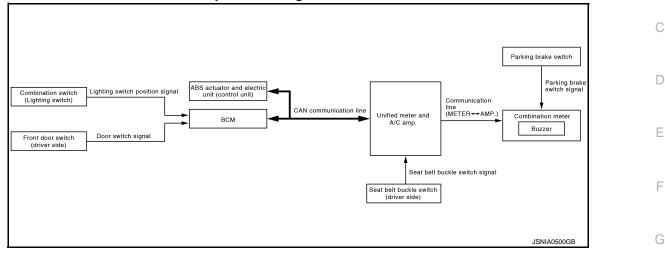
#### < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

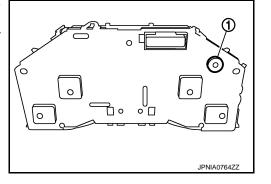
## WARNING CHIME SYSTEM : System Diagram



## WARNING CHIME SYSTEM : System Description

#### COMBINATION METER

- The buzzer (1) for warning chime system is installed in the combination meter.
- The buzzer sounds when the combination meter receives buzzer output signal from each unit through unified meter and A/C amp.



#### UNIFIED METER AND A/C AMP.

The unified meter and A/C amp. transmits the buzzer output signal received from BCM with CAN communication line to the combination meter.

#### BCM

BCM receives signals from various units and transmits a buzzer output signal to the unified meter and A/C amp. with CAN communication line if it judges that the warning buzzer should be activated.

BCM warning function list

Warning functions	Signal name	
Light reminder warning chime	<ul><li>Lighting switch position signal</li><li>Door switch signal</li></ul>	0
Seat belt warning chime	Seat belt buckle switch signal	
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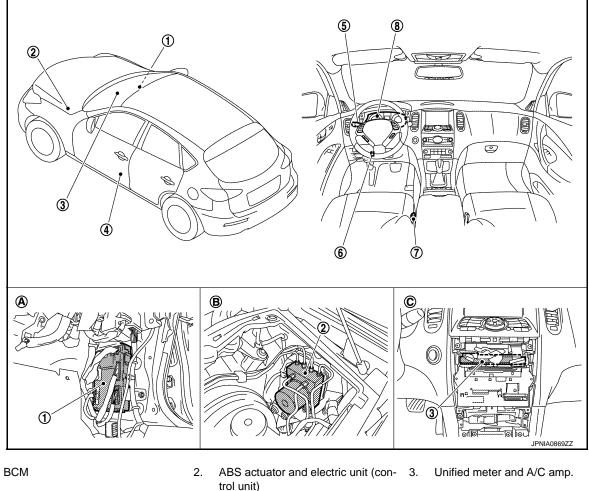
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INFOID:000000007455751

#### < SYSTEM DESCRIPTION >

## WARNING CHIME SYSTEM : Component Parts Location

#### INFOID:000000007455752



4. Front door switch (driver side)

1.

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- 5. Combination switch (lighting switch)
- 8. Combination meter
- Seat belt buckle switch (driver side) Dash side lower (passenger side) Α.
  - Hoodledge cover (LH) В.
- 6. Parking brake switch
- Behind cluster lid C C.

INFOID:000000007455753

## WARNING CHIME SYSTEM : Component Description

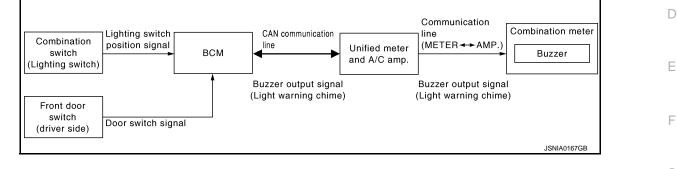
Unit	Description	
Combination meter	<ul> <li>Receives a buzzer output signal from the unified meter and A/C amp. and sounds the buzzer.</li> <li>Judges whether the parking brake is released from the vehicle speed signal received from the unified meter and A/C amp. with CAN communication line and the parking brake switch signal from the parking brake switch, and sounds the buzzer if necessary.</li> </ul>	
Unified meter and A/C amp.	<ul> <li>Receives the seat belt buckle switch signal from the seat belt buckle switch and transmits it to BCM with CAN communication line.</li> <li>Receives a buzzer output signal from BCM with CAN communication line and transmits it to the combination meter by means of communication line.</li> </ul>	
BCM	Transmits signals provided by various units to the unified meter and A/C amp. with CAN co munication line.	
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to unified meter and A/C amp. with CAN communication line.	
Seat belt buckle switch (driver side)	Transmits a seat belt buckle switch signal to the unified meter and A/C amp.	

#### < SYSTEM DESCRIPTION >

Unit	Description	
Combination switch (lighting switch)	Transmits the lighting switch position signal to BCM.	A
Front door switch (driver side)	Transmits the door switch signal to BCM.	В
Parking brake switch	Refer to <u>MWI-67, "Description"</u> .	

## LIGHT REMINDER WARNING CHIME

## LIGHT REMINDER WARNING CHIME : System Diagram



## LIGHT REMINDER WARNING CHIME : System Description

#### DESCRIPTION

With ignition switch in OFF or ACC position, driver door open, and lighting switch in 1ST or 2ND position, the light reminder warning chime will sound.

- BCM detects ignition switch in OFF or ACC position, front door switch (driver side) ON, and lighting switch in 1ST or 2ND position. And then transmits buzzer output signal (light reminder warning chime) to unified meter and A/C amp. with CAN communication line.
- Unified meter and A/C amp. transmits buzzer output signal (light reminder warning chime) to combination meter with communication line.
- When combination meter receives buzzer output signal (light reminder warning chime), it sounds the buzzer.

#### WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

- Lighting switch is at 1ST or 2ND position
- Ignition switch is at OFF or ACC
- Front door switch (driver side) is ON

#### WARNING CANCEL CONDITIONS

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

- Lighting switch OFF
- Ignition switch ON
- Front door switch (driver side) is OFF

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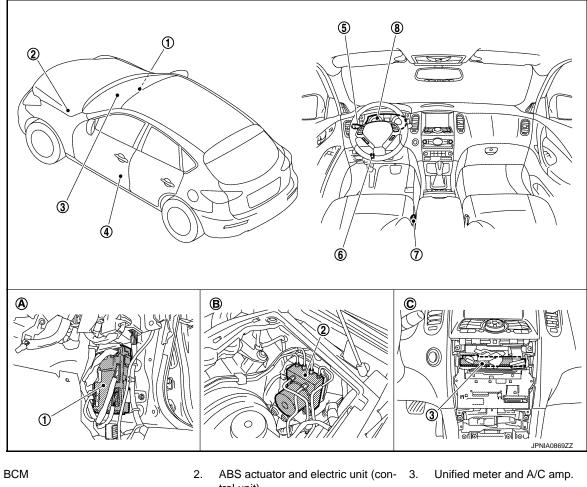
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#### < SYSTEM DESCRIPTION >

## LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000007583990



4. Front door switch (driver side)

1.

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- trol unit)
- 5. Combination switch (lighting switch)
- Seat belt buckle switch (driver side) 8. Combination meter
- Dash side lower (passenger side) Hoodledge cover (LH) Β.
- 6. Parking brake switch
- C. Behind cluster lid C

## LIGHT REMINDER WARNING CHIME : Component Description

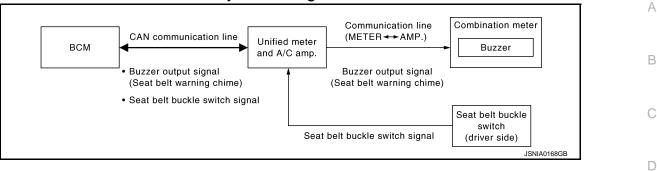
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Unit	Description
Combination meter	Receives a buzzer output signal from the unified meter and A/C amp. and sounds the buzzer.
Unified meter and A/C amp.	Receives a buzzer output signal from BCM via CAN communication line and transmits it to the com- bination meter by means of communication line.
BCM	Judges the light warning conditions from the signals provided by various switches and transmits a buzzer output signal to the unified meter and A/C amp. via CAN communication line if necessary.
Combination switch (Lighting switch)	Transmits the lighting switch position signal to BCM.
Front door switch (driver side)	Transmits the door switch signal to BCM.

## SEAT BELT WARNING CHIME

#### < SYSTEM DESCRIPTION >

## SEAT BELT WARNING CHIME : System Diagram



## SEAT BELT WARNING CHIME : System Description

#### DESCRIPTION

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

- BCM receives seat belt buckle switch signal from unified meter and A/C amp. with CAN communication line.
- BCM detects ignition switch turned ON and seat belt buckle switch (driver side) ON. And then transmits
- buzzer output signal (seat belt warning chime) to unified meter and A/C amp. with CAN communication line.
   Unified meter and A/C amp. transmits buzzer output signal (seat belt warning chime) to combination meter with communication line.
- When combination meter receives buzzer output signal (seat belt warning chime), it sounds the buzzer.

#### WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled. • Ignition switch OFF→ON • Seat belt buckle switch (driver side) is ON (driver seat belt not fastened)

#### WARNING CANCEL CONDITIONS

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

- Ignition switch OFF
- Seat belt buckle switch (driver side) is OFF (driver seat belt fastened)

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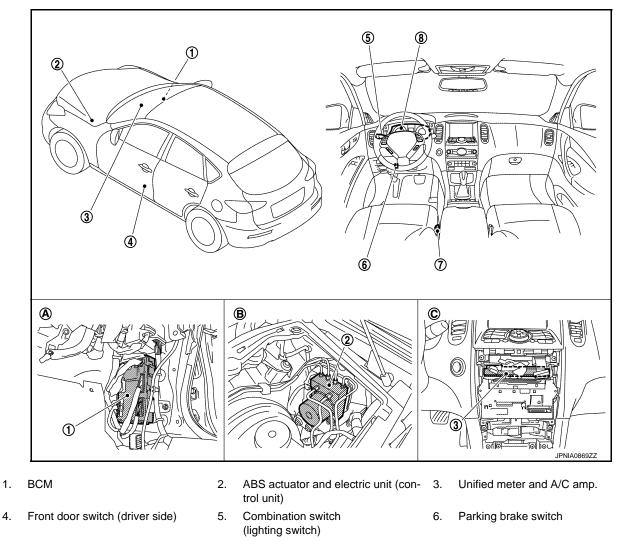
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#### < SYSTEM DESCRIPTION >

## SEAT BELT WARNING CHIME : Component Parts Location

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7. Seat belt buckle switch (driver side) 8. Dash side lower (passenger side)

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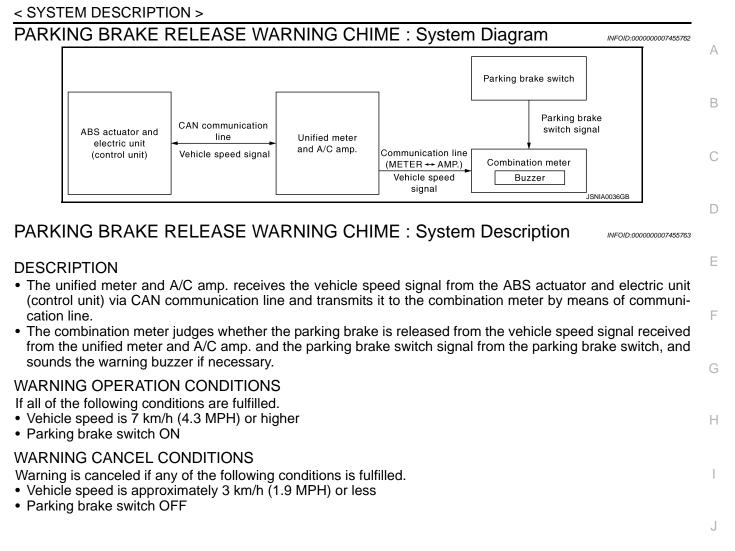
- Combination meter Hoodledge cover (LH) Β.
- Behind cluster lid C C.

INFOID:000000007455761

## SEAT BELT WARNING CHIME : Component Description

Unit	Description
Combination meter	Receives a buzzer output signal from the unified meter and A/C amp. and sounds the buzzer.
Unified meter and A/C amp.	<ul> <li>Receives the seat belt buckle switch signal from the seat belt buckle switch and transmits it to BCM via CAN communication line.</li> <li>Receives a buzzer output signal from BCM via CAN communication line and transmits it to the combination meter by means of communication line.</li> </ul>
BCM	Judges the seat belt warning condition from the seat belt buckle switch signal received from the uni- fied meter and A/C amp. and transmits a buzzer output signal to the unified meter and A/C amp. via CAN communication line if necessary.
Seat belt buckle switch (driver side)	Refer to WCS-24, "Description".

## PARKING BRAKE RELEASE WARNING CHIME



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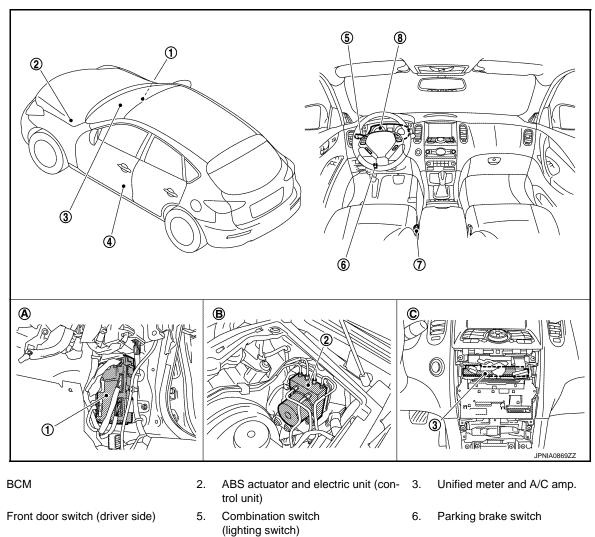
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#### < SYSTEM DESCRIPTION >

PARKING BRAKE RELEASE WARNING CHIME : Component Parts Location

INFOID:000000007584046



Seat belt buckle switch (driver side) 7. Dash side lower (passenger side)

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- Combination meter 8.
- В. Hoodledge cover (LH)
- C. Behind cluster lid C

PARKING BRAKE RELEASE WARNING CHIME : Component Description INFOLD:00000007455765

Unit	Description
Combination meter	Judges whether the parking brake is released from the vehicle speed signal received from the unified meter and A/C amp. via communication line and the parking brake switch signal from the parking brake switch, and sounds the buzzer if necessary.
Unified meter and A/C amp.	Receives a vehicle speed signal from ABS actuator and electric unit (control unit) via CAN com- munication line and transmits it to the combination meter by means of communication line.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to unified meter and A/C amp. via CAN communication line.
Parking brake switch	Refer to <u>MWI-67, "Description"</u> .

#### < SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (UNIFIED METER AND A/C AMP.)

## CONSULT Function (METER/M&A)

#### CONSULT APPLICATION ITEMS

CONSULT can perform the following diagnosis modes with CAN communication with the unified meter and A/C amp.

			C
System	Diagnosis mode	Description	
	Self Diagnostic Result	Unified meter and A/C amp. checks the conditions and displays memorized error.	_
METER/M&A	Data Monitor	Displays unified meter and A/C amp. input/output data in real time.	D
	Ecu Identification	The unified meter and A/C amp. part number is displayed.	_

#### SELF DIAG RESULT

Refer to MWI-107, "DTC Index".

#### DATA MONITOR

**Display Item List** 

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

#### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description		
HI-BEAM IND [On/Off]		Status of high beam indicator lamp judged from high beam request signal received from BCM with CAN communication line.		
TURN IND [On/Off]		Status of turn indicator lamp judged from turn indicator signal received from BC with CAN communication line.		
FR FOG IND [Off]		Status of front fog light indicator lamp detected from front fog light request signal is received from BCM via CAN communication.		
RR FOG IND [Off]		This item is displayed, but cannot be monitored.		
LIGHT IND [On/Off]		Status of tail lamp indicator lamp judged from position light request signal received from BCM with CAN communication line.		
OIL W/L [On/Off]		Status of oil pressure warning lamp judged from oil pressure switch signal re- ceived from IPDM E/R with CAN communication line.		
MIL [On/Off]		Status of malfunction indicator lamp judged from malfunctioning indicator lamp signal received from ECM with CAN communication line.		
GLOW IND [Off]		This item is displayed, but cannot be monitored.		
C-ENG2 W/L [Off]		This item is displayed, but cannot be monitored.		
CRUISE IND [On/Off]		Status of CRUISE indicator judged from ASCD status signal received from ECM with CAN communication line.		
SET IND [On/Off]		<ul> <li>Status of SET indicator judged from ASCD status signal received from ECI with CAN communication line.</li> <li>Status of SET indicator judged from meter display signal received from ICC s sor integrated unit with CAN communication line.</li> </ul>		
CRUISE W/L [On/Off]		Status of CRUISE warning lamp judged from ICC warning lamp signal receiv from ICC sensor integrated unit with CAN communication line.		
BA W/L [Off]		Status of IBA OFF indicator lamp judged from IBA OFF indicator lamp signal ceived ICC sensor integrated unit with CAN communication line.		
ATC/T-AMT W/L [On/Off]		Status of A/T check warning lamp judged from A/T check indicator signal receit from TCM with CAN communication line.		
4WD W/L [On/Off]		Status of AWD warning lamp judged from AWD warning lamp signal received a AWD control unit with CAN communication line.		
4WD LOCK IND [Off]		This item is displayed, but cannot be monitored.		
FUEL W/L [On/Off]		Low-fuel warning status judged by the identified fuel level.		
WASHER W/L [On/Off]		Status of washer 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 TPMS malfunction warning lamp signal received from BCM with CAN communication line.		
KEY G/Y W/L [On/Off]		Status of key warning lamp (G/Y) judged from key warning signal received from BCM with CAN communication line.		
AFS OFF IND [On/Off]		Status of AFS OFF indicator lamp judged from AFS OFF indicator lamp signal re- ceived from AFS control unit with CAN communication line.		
4WAS/RAS W/L [Off]		This item is displayed, but cannot be monitored.		
DDS W/L [Off]		This item is displayed, but cannot be monitored.		
LANE W/L [On/Off]		Status of lane departure warning lamp judged from lane departure warning lamp signal received from lane camera unit with CAN communication line.		
LDP IND [On/Off]		Status of LDP ON indicator lamp judged from LDP ON indicator lamp signal re- ceived from lane camera unit with CAN communication line.		

#### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description		
DCA IND [On/Off]		Status of DCA switch indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.		
BSW W/L [On/Off]		Status of BSW warning lamp judged from BSW warning lamp signal received from BSW control module with CAN communication line.	В	
LCD [B&P N, B&P I, ID NG, ROTAT, SFT P, INSRT, BATT, NO KY, OUTKY, LK WN]		Displays status of Intelligent Key system warning judged from meter display signal received from BCM with CAN communication line.	С	
ACC TARGET [On/Off]		Status of vehicle ahead detection indicator judged from meter display signal re- ceived from ICC sensor integrated unit with CAN communication line.	D	
ACC DISTANCE [Off, SHORT, MID, LONG]		Status of set distance indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	F	
ACC OWN VHL [On/Off]		Status of own vehicle indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.		
ACC SET SPEED		Status of set vehicle speed indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.	F	
ACC UNIT [On/Off]		Status of display unit judged from meter display signal received from ICC sensor integrated unit with CAN communication line.		
SHIFT IND [P, R, N, D, L, M1, M2, M3, M4, M5, M6, M7]		Status of shift position indicator judged from shift position signal and manual mode indicator signal received from TCM with CAN communication line.	G	
O/D OFF SW [Off]		This item is displayed, but cannot be monitored.	Н	
AT S MODE SW [On/Off]		Status of snow mode switch.	I	
AT P MODE SW [Off]		This item is displayed, but cannot be monitored.		
M RANGE SW [On/Off]		Status of manual mode switch.	J	
NM RANGE SW [On/Off]		Status of non-manual mode switch.	K	
AT SFT UP SW [On/Off]		Status of manual mode shift up switch.		
AT SFT DWN SW [On/Off]		Status of manual mode shift down switch.	L	
ST SFT UP SW [Off]		This item is displayed, but cannot be monitored.	M	
ST SFT DWN SW [Off]		This item is displayed, but cannot be monitored.		
COMP F/B SIG [On/Off]		A/C compressor activation condition that ECM judges according to the water tem- perature and the acceleration degree.	WCS	
4WD LOCK SW [Off]		This item is displayed, but cannot be monitored.	0	
PKB SW [On/Off]		Status of parking brake switch.		
BUCKLE SW [On/Off]		Status of seat belt buckle switch (driver side).	Ρ	
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.		
DISTANCE [km]		Value of possible driving distance calculated by unified meter and A/C amp.		

#### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
OUTSIDE TEMP [°C] or [°F]		Ambient air temperature value converted from ambient sensor signal received from ambient sensor. <b>NOTE:</b> This may not match with the temperature value indicated on the information display. (Because the information display value is a corrected value from the ambient sensor input value.)
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit with CAN com- munication line.
BUZZER [On/Off]	x	Buzzer status (in the combination meter) is judged with the buzzer output signal received from each unit with CAN communication line and the warning output condition of the combination meter.

#### NOTE:

Some items are not available according to vehicle specification.

## **DIAGNOSIS SYSTEM (BCM)**

# <u>< SYSTEM DESCRIPTION ></u> DIAGNOSIS SYSTEM (BCM) COMMON ITEM

## COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000007671904

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#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

Quarterra	Out and a start and a time it and	Diagnosis mode			
System	Sub system selection item	Work Support	Data Monitor	Active Test	
Door lock	DOOR LOCK	×	×	Х	
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*				
<ul><li>Intelligent Key system</li><li>Engine start system</li></ul>	INTELLIGENT KEY	×	×	×	
Combination switch	COMB SW		×		
Body control system	BCM	×			
IVIS - NATS	IMMU		×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	
Back door open system	TRUNK		×	×	
Vehicle security system	THEFT ALM	×	×	×	
RAP system	RETAINED PWR		×		
Signal buffer system	SIGNAL BUFFER		×	×	
TPMS	AIR PRESSURE MONITOR	×	×	×	

#### NOTE:

\*: This item is displayed, but 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.

## **WCS-17**

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit	Description			
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected			
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected			
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)		
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)		
	LOCK>ACC		While turning power supply position from "LOCK"* to "ACC"		
	ACC>ON		While turning power supply position from "ACC" to "IGN"		
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Except emergency stop operation)		
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)		
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)		
	ACC>OFF		While turning power supply position from "ACC" to "OFF"		
	OFF>LOCK	Power supply position status of the moment a particular DTC is de- tected*	While turning power supply position from "OFF" to "LOCK"*		
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"		
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"		
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode		
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode		
	LOCK		Power supply position is "LOCK"*		
	OFF		Power supply position is "OFF" (Ignition switch OFF)		
	ACC		Power supply position is "ACC" (Ignition switch ACC)		
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)		
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)		
	CRANKING		Power supply position is "CRANKING" (At engine cranking)		
IGN Counter	0 - 39	<ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>			

#### NOTE:

\*: Power 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)

#### CONSULT APPLICATION ITEMS

INFOID:000000007455768

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

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

#### DATA MONITOR

Display item [Unit]	Description		
VEH SPEED 1 [Km/h]	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication line.		
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.		
KEY SW-SLOT [On/Off]	Status of key slot judged by BCM.		
TAIL LAMP SW [On/Off]	Status of each switch judged by BCM using the combination switch readout function.		
FR FOG SW [On/Off]	Status of front fog lamp switch judged by BCM.		
DOOR SW-DR [On/Off]	Status of driver side door switch judged by BCM.		

#### ACTIVE TEST

Display item [Unit]	Description	
IGN KEY WARN ALM	The key warning chime operation can be checked by operating the relevant function (On/Off).	-
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).	J
ID REGIST WARNING	The ID regist warning chime operation can be checked by operating the relevant function (On/Off).	-
LIGHT WARN ALM	The light warning chime operation can be checked by operating the relevant function (On/Off).	-
		- K

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#### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

#### **COMBINATION METER : Diagnosis Procedure**

#### **1.**CHECK FUSE

Check for blown fuses.

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

## 2.CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector and ground.

Terminals					
(+)			()	Ignition switch position	Value (Approx.)
Combination meter	Terminal	Signal name	(-)		
M53	1	Battery power supply	Ground	OFF	Battery voltage
MISS	21	Ignition signal	Ground	ON	Dattery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between combination meter and fuse.

## ${\it 3.}$ check ground circuit

1. Turn ignition switch OFF.

2. Disconnect combination meter connector.

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

Combina	tion meter		Continuity
Connector	Terminal		Continuity
	5	Ground	
M53	15		Existed
	22		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

UNIFIED METER AND A/C AMP.

## UNIFIED METER AND A/C AMP. : Diagnosis Procedure

INFOID:000000007584192

INFOID:000000007584191

1.CHECK FUSE

Check for blown fuses.

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

	ower source			Fuse No.	
	Battery			11	
Ignition	switch ACC of	or ON		19	
Ignition s	switch ON or	START		3	
s the inspection result n YES >> GO TO 2. NO >> Be sure to e CHECK POWER SUP	liminate ca PPLY CIRC				
Sheek voltage between t					
	Termi	inals			
۰ ۱	(+)		(-)	Ignition switch position	Value (Approx.)
Unified meter and A/C amp.	Terminal	Signal name	~ / /		
	54	Battery power supply	_	OFF	
M67	41	ACC power supply	Ground	ACC	Battery voltage
s the inspection result n	53	Ignition signal		ON	
<ol> <li>Disconnect unified n</li> <li>Check continuity bet</li> <li>Unified meter and A</li> </ol>	tween unifi		o. harness c	connector and ground.	
Connector	Terminal		Co	ontinuity	
	55	Ground			
M67	71		E	Existed	
Is the inspection result n YES >> INSPECTIO NO >> Repair harne BCM (BODY CON	N END ess or conr TROL N	10DULE)			
BCM (BODY CONT 1.check fuse and f		, -	ISIS Proce	eaure	INFOID:000000007671905
Check that the following	iuse and fi	usidie link are not blov	vr).		
	gnal name			Fuse and fusible link N	0.
Sig					
	v power suppl	у —		K 10	
	/ power suppl	у		К 10	

1. Turn ignition switch OFF.

2. Disconnect BCM connectors.

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

#### 3. Check voltage between BCM harness connector and ground.

	Terminals		
(·	+)	(-)	Voltage (Approx.)
BC	CM		(Approx.)
Connector	Terminal	Ground	
M118	1	Giouna	Pottony voltago
M119	11		Battery voltage

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

 $3. {\sf CHECK} \, {\sf GROUND} \, {\sf CIRCUIT}$ 

Check continuity between BCM harness connector and ground.

B	CM		Continuity
Connector	Terminal	Ground	Continuity
M119	13	Ť	Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

## **METER BUZZER CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >	
METER BUZZER CIRCUIT	А
Description INFOID:000000007455772	
<ul> <li>The buzzer for warning chime system is installed in the combination meter.</li> <li>The combination meter sounds the alarm buzzer based on the signals transmitted from various units.</li> </ul>	В
Component Function Check	-
1. CHECK OPERATION OF METER BUZZER	С
<ol> <li>Select "BUZZER" of "BCM" on CONSULT.</li> <li>Perform "LIGHT WARN ALM" of "ACTIVE TEST".</li> </ol>	D
Does meter buzzer beep?	
YES >> INSPECTION END NO >> GO TO 2.	Е
2. CHECK UNIFIED METER AND A/C AMP. INPUT SIGNAL	
Select the "Data Monitor" for the "METER/M&A" and check the "BUZZER" monitor value.	F
	Γ
BUZZER Under the condition of buzzer input : On	
Except above : Off	G
Is the inspection result normal?	
YES >> Replace combination meter.	Н
NO >> Replace BCM. Refer to <u>BCS-92, "Removal and Installation"</u> .	
Diagnosis Procedure	I
1. CHECK POWER SUPPLY OF COMBINATION METER	
Check power supply of combination meter. Refer to MWI-55, "COMBINATION METER : Diagnosis Proce-	
<u>dure"</u> .	J
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair power supply circuit of combination meter.	Κ
2. CHECK POWER SUPPLY OF UNIFIED METER AND A/C AMP.	
Check power supply of unified meter and A/C amp. Refer to <u>MWI-55, "UNIFIED METER AND A/C AMP.</u> : <u>Diagnosis Procedure</u> ".	L
Is the inspection result normal?	
YES >> INSPECTION END	M
NO >> Repair power supply circuit of unified meter and A/C amp.	
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## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

#### Description

Transmits a seat belt buckle switch signal to the unified meter and A/C amp.

#### Component Function Check

**1.**CHECK UNIFIED METER AND A/C AMP. INPUT SIGNAL

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

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

>> INSPECTION END

#### Diagnosis Procedure

## 1. CHECK UNIFIED METER AND A/C AMP. INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between unified meter and A/C amp. harness connector and ground.

	Terminals			
(·	+)	(-)	Condition	Voltage
Unified meter	and A/C amp.		Condition	(Approx.)
Connector	Terminal	Oneveral		
M66	9	Ground	When driver seat belt is fastened	12 V
IVIOO	9		When driver seat belt is unfastened	0 V

#### Is the inspection result normal?

YES >> Replace unified meter and A/C amp.

NO >> GO TO 2.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect unified meter and A/C amp. connector and seat belt buckle switch (driver side) connector.
- 3. Check continuity between unified meter and A/C amp. harness connector and seat belt buckle switch (driver side) harness connector.

Unified meter	and A/C amp.	Seat belt buckle	switch (driver side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	9	B13	1	Existed

4. Check harness continuity between unified meter and A/C amp. harness connector and ground.

Unified meter	and A/C amp.		Continuity
Connector	Terminal	Ground	Continuity
M66	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

 ${f 3.}$ CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

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

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INFOID:000000007455776

INFOID:000000007455777

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

Se	eat belt buckle	switch (driver side)			-
Cor	nnector	Terminal	Ground	Continuity	
ſ	B13	2		Existed	-
the insp	ection result	normal?			•
NO >:		ness or connector.			
ompon	ent Inspe	ction			INFOID:000000007455778
.CHECK	K SEAT BEL	T BUCKLE SWITCH UN	NIT		
Discor		h OFF. at belt buckle switch co etween terminals.	nnector.		
Тег	rminal	Condition	Continuity	1	
		When seat belt is fastened	Not existed	4	
1	2			u	
the insp	ection result	When seat belt is unfasten normal?			
the insp YES >:	ection result	When seat belt is unfasten normal?	ed Existed		Installation".
the insp YES >:	ection result	When seat belt is unfasten normal? ON END	ed Existed		Installation".
the insp YES >:	ection result	When seat belt is unfasten normal? ON END	ed Existed		Installation".
the insp YES >:	ection result	When seat belt is unfasten normal? ON END	ed Existed		Installation".

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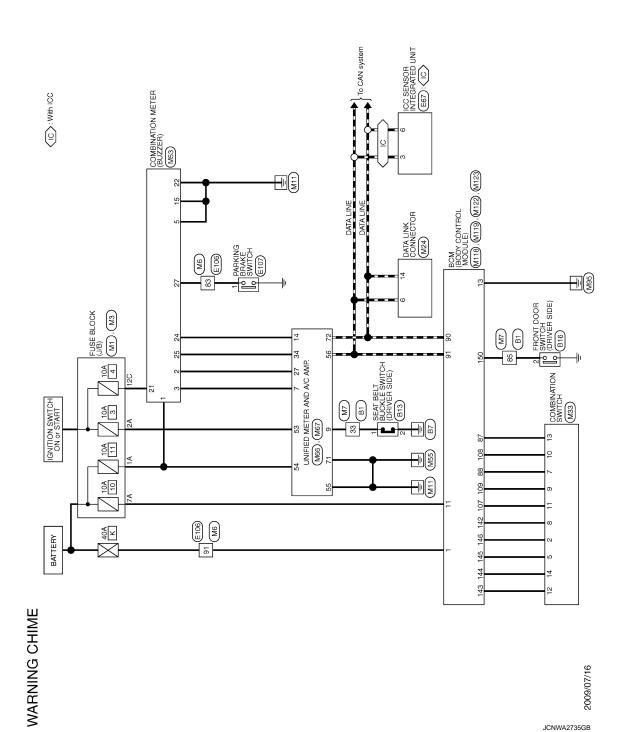
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< DTC/CIRCUIT DIAGNOSIS >

## WARNING CHIME SYSTEM

Wiring Diagram - WARNING CHIME -

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#### < DTC/CIRCUIT DIAGNOSIS >

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Et Inc. Serveore INTEGRATED UNIT Inc. CC. SERVEOR INTEGRATED UNIT INT. CC. SERVER INC. SERVEOR INTEGRATED UNIT INC. CC. SERVEOR INTEGRATE	С
Connector No.         E57           Connector Name         ICC51           Connector Name         ICC51           Connector Name         ICC51           No.         U           1         1           2         L           3         L           4         B           5         L           1         L           1         L           1         L           1         L           1         L           1         L           1         N/H           1         N/H           1         L           1         L           1         L           1         N/H           1         S           1         S           1         S           1         S           1         S           1         S           1         S           1         S           1         S           1         S           1         S           1         S           1	D
	E
B13       Sar RELT BLOCKE SWITCH (JOINTER SIDE)       FIDETWICK       Signal Name (Specification)       Signal Name (Specification)	F
e of 100 000 000 000 000 000 000 000 000 00	G
Connector Mane       Connector Mane       Connector Mane       Image: Second Sec	Н
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60         P           61         1           62         34161.0           63         34161.0           65         53           66         53           73         24           73         24           73         94           73         94           73         94           74         7           75         4           73         94           74         7           75         4           75         4           75         4           75         4           75         4           75         4           75         4           75         4           75         4           75         4           75         4           76         7           77         7           78         7           74         7           75         7           76         7           77         7           77         7           76         7	К
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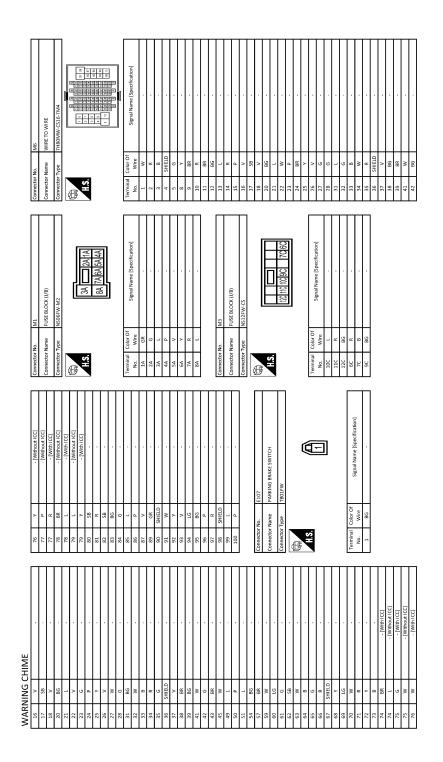
WARNING CHIME SYSTEM

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#### < DTC/CIRCUIT DIAGNOSIS >



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	А
1     1 <td>В</td>	В
INV CONNECTOR W W Sgnal Name [Spanter] Sgnal Name [Spanter] F MARHI F	С
Connector No.         MA1           connector No.         DA1AA           connector Name         Connector Name           a         a         a           a         a         b           a         a         b           a         b         color or           ja         connector Name         M03           connector Name         Color or         M03           ja         connector Name         Color or           in         p         p         p           ja         a         a         connector Name           connector Name         connector Name         connector Name           ja         p         p         p           ja         a         a         b           ja         p         p         p           ja         p         p         p           ja         p         p         p           ja         p	D
	E
	F
R         K	G
45 46 47 49 49 50 51 73 73 73 73 73 73 73 73 73 73 73 73 73	Н
City       · · · · · · · · · · · · · · · · · · ·	I
	J
98         541ELD           99         24           100         29           50         50           50         50           50         50           50         50           50         50           51         50           53         50           53         50           53         1           53         1           53         1           53         1           53         1           53         1           53         1           53         1           53         1           53         1           54         1	K
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MAF 4.4 5.4 5.4 5.4 5.4 5.4 5.4 5.4	0

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#### < DTC/CIRCUIT DIAGNOSIS >

WARNING CHIME	G CHIME	Connector No.	M66		46 BG	SUNLOAD SENSOR SIGNAL	Conne	Connector No.	M119
H		Connector Name	UNIFIED METER AND A/C AMP.		H	EXHAUST GA		Connector Name	BCM (BODY CONTROL MODULE)
14 G	OUTPUT 2				53 G	IGNITION POWER SUPPLY			
		Connector Type	TH40FW-NH			BATTER	Conne	Connector Type	NS16FW-CS
		ą			22 i	_	1		
Connector No.	M53	(Here)		-	292	DDAKE FULID LEVEL SWITCH SICHAL	多		
Connector Name	COMBINATION METER	HS.		-	+		T	5	
Connector Type	TH40FW-NH	ļ	5 7 8 9 10 11 14	20	╀		ļ _	1	11 13 11 15 17 18 10
			23 25 27 28 30 34 1	8	+	=	T		14 13 11
ſ					61 BR				
ě L	K	- H			62 SB	SUNLOAD SENSOR GROUND		- H	
2	1 2 3 5 6 7 10 10 15 16 19 20	Terminal Color Of No Wire	olor Of Signal Name [Specification]		63 65 R	ECV SIGNAL	Terminal	inal Color Of Wire	Signal Name [Specification]
	21 22 24 25 25 27 28 29 30 31 33 153 26 37 38 39 40		L MANUAL MODE SHIFT UP SIGNAL			×	4	+	INTERIOR ROOM LAMP POWER SUPPLY
		7 6	GR COMMUNICATION SIGNAL (AMP>METER)	IETER)	70 R	EACH DOOR I	ŝ	-	PASSENGER DOOR UNLOCK OUTPUT
		8	L VEHICLE SPEED SIGNAL (2-PULSE)		71 B	0	~	٨	STEP LAMP CONT
a	Of Signal Name (Specification)		SEAT BELT 6	ER SIDE)	72 P	CAN-L	∞	>	ALL DOOR, FUEL LID LOCK OUTPUT
No. Wire		_		T			σ,	+	DRIVER DOOR, FUEL LID UNLOCK OUTPUT
	COAAAA		D COMMUNICATION SIGNAL (CD - AMAD)	Т	Connector No	14110	ן ב	6	
2 F	COMMUNICATIO			T		OTTIM	‡  #	+	GROUND
┢	┝	23	Y AT SNOW SWITCH SIGNAL	T	Connector Name	BCM (BODY CONTROL MODULE)	14	-	PUSH-BUTTON IGNITION SWITL GND
╞	ALTER	25	V MANUAL MODE SHIFT DOWN SIGNAL	T.	Connector Type	M03FB-LC	15	+	ACCIND
7 BR	AIR BAG SIGNAL	27 LG	LG COMMUNICATION SIGNAL (METER->AMP	- -			17	>	TURN SIGNAL RH (FRONT)
10 G	SECURITY SIGNAL	28 F	R VEHICLE SPEED SIGNAL (8-PULSE)		B		18	BG	TURN SIGNAL LH (FRONT)
15 B		30	V PARKING BRAKE SWITCH SIGNAL		ů.	ŀ	19	>	INT ROOM LAMP CONT
+	METER CONTROL SWITCH GROUND	_	Y COMMUNICATION SIGNAL (AMP>LCD)	(co)	2	1 3			
+		28		4L					1110
21 RG	ILL.					]		CTOF IND.	771M
+		Connector No.	M67	Γ			Conne	Connector Name	BCM (BODY CONTROL MODULE)
╞	╞		Г		Terminal Color Of	of contraction of the second se	Cone	Connector Type	TH40FB-NH
25 Y	0 U	CONTRECTOR INAME			No. Wire				
26 R		Connector Type	TH32FW-NH		1 W		ß		
_	_	ą			2 W			N I	K
+	╉				3	POWER WINDOW POWER SUPPLY(RAP)		5	91 90 189 1 1 83 82 81 80 73 73 73 75 174 73 72
_		SH	7						110 109 109 107 107 108 109 109 109 85 54 53 92
			41 42 43 44 45 46 47 53 5	54 55 56					
+	Т		57 58 59 60 61 62 63 65 65 69 70	69 70 71 72					
35 B	+						Torm	Color Of	
00							No	_	Signal Name [Specification]
00 -	TDI	Torminal Color Of	r 0f	Γ			-041 C.F.	╉	POON ANT?
	$^{+}$	_	Wire Signal Name [Specification]				2 F	╀	POOM ANT -
	ILLINGING CONTROL SWITCH SIGNAL (+)		V ACC POWER SLIPPLY				47		PASSENGER DOOR ANT.
		; ;	v Elici Levici Cencol Sicolari	Τ				╞	DASSERICED POOD ANT
			INITAKE CENSOR SIGNAL				34	+	DENCE DODE ANT
		+	4				77	2	DRIVER DOOR ANT+
		╀		Γ			78	╀	ROOMANT1-
				]			]		*******

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#### < DTC/CIRCUIT DIAGNOSIS >

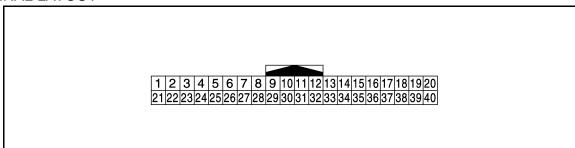
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# ECU DIAGNOSIS INFORMATION COMBINATION METER

## **Reference Value**

VALUES ON THE DIAGNOSIS TOOL Refer to <u>WCS-47. "Reference Value"</u>.

## TERMINAL LAYOUT



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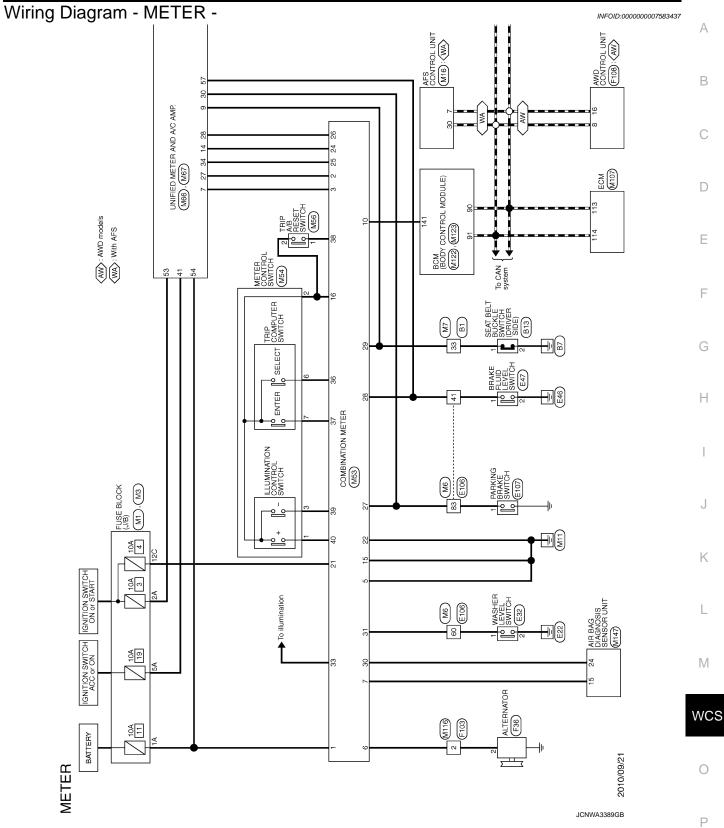
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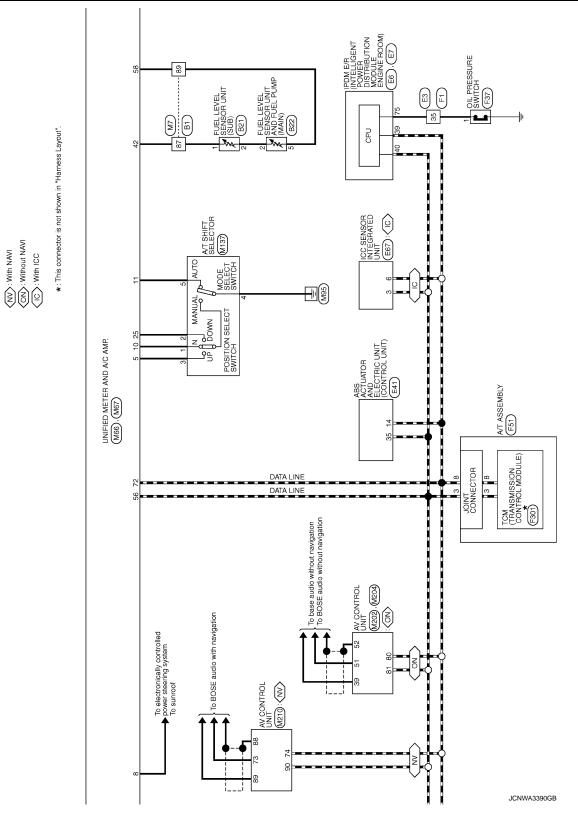
#### PHYSICAL VALUES

Terminal No. (Wire color)		Description				Value	
+	_	Signal name	Input/ Output	-	Condition	(Approx.)	
1 (GR)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage	
2 (LG)	Ground	Communication signal (METER $\rightarrow$ AMP.)	Output	Ignition switch ON		(V) 6 2 0 2 2 0 4 2 0 4 2 0 4 2 0 4 5 5 5 5 5 5 5 5 5 5 5 5 5	
3 (GR)	Ground	Communication signal (AMP.→ METER)	Input	Ignition switch ON	_	(V) 6 2 0 2 2 0 2 0 2 0 0 2 0 0 5 5 5 5 5 5 5	
5 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
6	Ground	d Alternator signal	Input	Ignition switch	Charge warning lamp ON	0 V	
(P)	Ground		input	ON	Charge warning lamp OFF	Battery voltage	
7	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	4 V	
(BR)					Air bag warning lamp OFF	0 V	
10	Ground	Security signal	Input	Ignition switch OFF	Security warning lamp ON	0 V	
(G)			input		Security warning lamp OFF	12 V	

Terminal No. (Wire color)		Description		Condition		Value	
+	-	Signal name	Input/ Output	Condition		(Approx.)	
15 (B)	Ground	Ground	_	Ignition switch ON	—	0 V	
16 (B)	Ground	Meter control switch ground		Ignition switch ON	_	0 V	
21 (BG)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage	
22 (B)	Ground	Ground	_	Ignition switch ON	_	0 V	
24 (BR)	Ground	Communication signal (LCD→ AMP.)	Output	Ignition switch ON		(V) 15 10 5 0 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	
25 (Y)	Ground	Communication signal (AMP. $\rightarrow$ LCD)	Input	Ignition switch ON	_	(V) 6 4 2 0 2 2 0 2 2 0 2 2 0 0 2 2 0 0 5 5 5 5	
26 (R)	Ground	Vehicle speed signal (8-pulse)	Input	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).	
					Parking brake is applied	0 V	
27 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake is released	(V) 8 4 0 10 ms	
28	Ground	Brake fluid level switch sig-	Input	Ignition switch	Brake fluid level is normal.	JSNIA0007GB	
(W)	Ground	nal	mput	ON	The brake fluid level is low- er than the low level	0 V	

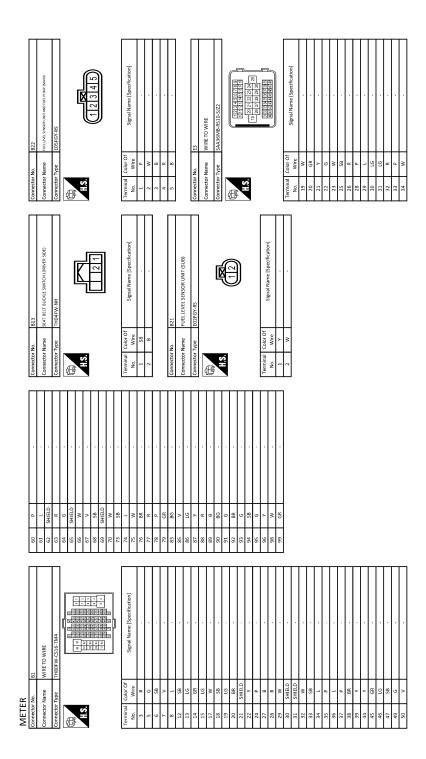
Terminal No. (Wire color)		Description		Condition		Value					
+	-	Signal name	Input/ Output		Condition	(Approx.)					
29	Ground	Seat belt buckle switch sig- nal (driver side)	Input	Ignition nput switch ON	When driver seat belt is fas- tened	12 V					
(SB)					When driver seat belt is un- fastened	0 V					
30	Ground	nd Seat belt buckle switch sig- nal (passenger side)	Input	Ignition switch	<ul><li>When getting in the passenger seat</li><li>When passenger seat belt is fastened</li></ul>	12 V					
(G)				mput	mput	mput	mput	input	Πραι	input	ON
31	Cround	Weeher level switch signal	loout	Ignition switch ON	Washer level switch ON	0 V					
(L)	Ground	Washer level switch signal	Input		Washer level switch OFF	5 V					
33 (B)	Ground	Illumination control signal	Output	Ignition switch ON	Lighting switch ON, then operate the illumination control switch.	NOTE: When brightness level is midway					
36	16 (D)	Select switch signal	Input	Input	Ignition switch	When is pressed	0 V				
(LG)	(B)				•	•					ON
37	16 (B)	Enter switch signal	Input	Ignition switch	When 🖵 is pressed	0 V					
(SB)		Ŭ	·	ON	Other than the above	5 V					
38 (L)	16 (B)		Input	Ignition switch ON	When trip A/B reset switch is pressed	0 V					
(Ľ)					Other than the above	5 V					
39 (P)	16 (B)	Illumination control switch signal (–)	Input	Ignition switch ON	When 💏 switch is pressed	0 V					
\ /					Other than the above	5 V					
40 (BG)	16 (B)	16 Illumination control switch (B) signal (+)	Input	Ignition switch ON	When 💏 + switch is pressed	0 V					
. ,	. ,				Other than the above	5 V					





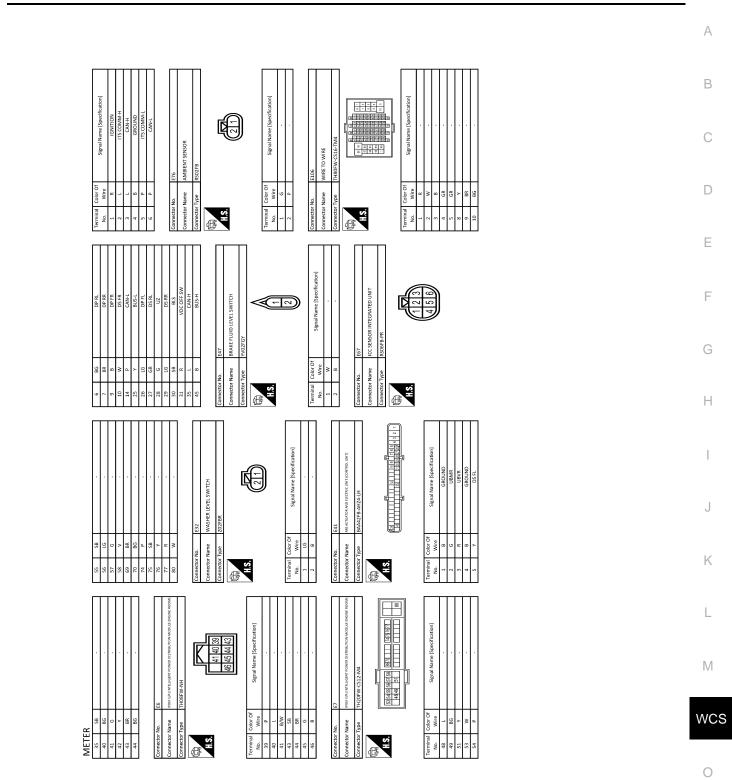
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#### < ECU DIAGNOSIS INFORMATION >



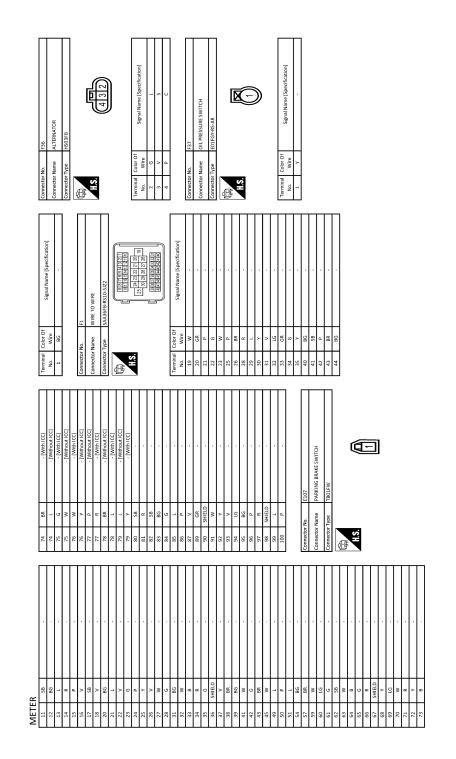
JRNWE1245GB

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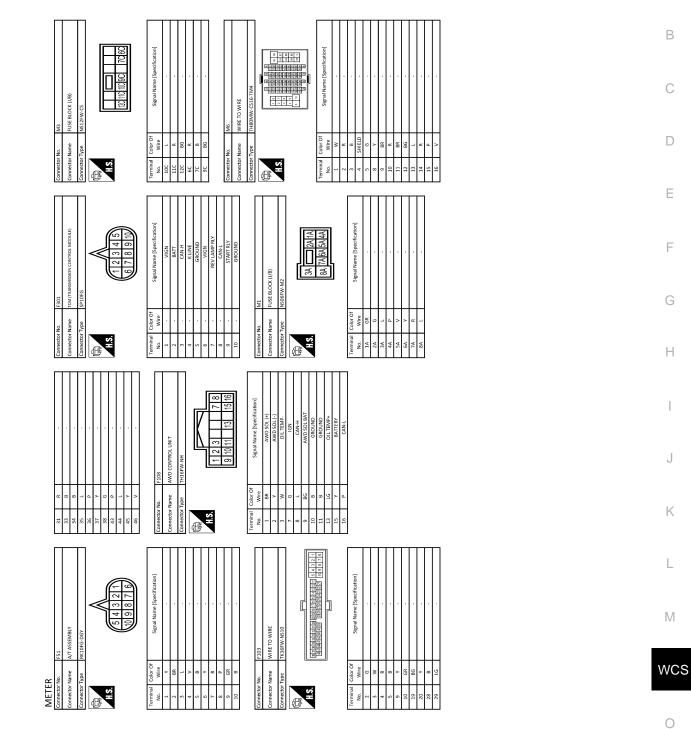
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< ECU DIAGNOSIS INFORMATION >	

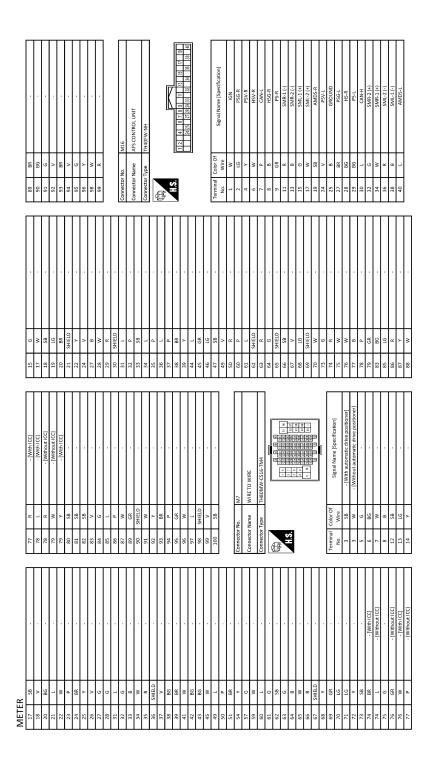


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#### < ECU DIAGNOSIS INFORMATION >



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	$\overline{a}$
Connector No. Me6 Connector Nume UNIFED METER AND A/C AMP. Connector Type In407W MH	Terminal         Color Of wree         Signal Name (Specification)           No.         Wree         MANUAL MODE SHIFT UP STGAL           2         CR         COMMUNICATIONS SIGNAL (AMP:-SMER)           9         Star         Star         Star           11         W         MOLE         MANUAL MODE SIGNAL           12         V         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL           13         W         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL           14         B         COMMUNICATIONS SIGNAL         MANUAL MODE SIGNAL           13         V         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL           14         B         COMMUNICATIONS SIGNAL         MANUAL MODE SIGNAL           15         V         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL           15         V         COMMUNICATIONS SIGNAL (LICE-MANE)         MANUAL MODE SIGNAL           16         V         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL           17         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL         MANUAL MODE SIGNAL           16         V         COMMUNICATIONS SIGNAL (LICE-MANE)         MANUAL MODE SIGNAL           16         V         COMMUNICATIONS SIGNAL         MANUAL MODE SIGNAL
Connector No. M54 Connector Name METER CONTROL SWITCH Connector Type In1.2.0.00 40H	Terminal     Color Of Num     Signal Name (Specification)       2     8     -       3     P     -       4     P     -       5     10     -       6     10     -       7     34     -       7     10     -       7     10     -       10     10     -       11     10     -
METER <u>connector Nun</u> <u>connector Nune</u> <u>connector Type</u> <u>H401W-WN</u> <u>F121 5617 601 801 881 E122 5617 601 801 881 881 E123 5617 601 881 881 881 881 881 881 881 881 881 8</u>	Terminal         Color Of No.         Signal Name [Specification]           1         6.0         BATTERY POWER SUPPY           2         1.0         Color Of Signal Name [Specification]           3         6.0         COMMUNICATION SIGNAL (MMP:::AMR)           4         P         ALTERN POWER SUPPY           5         9         ComMUNICATION SIGNAL (MMP:::AMR)           6         P         ALTERNATOR SIGNAL           10         6         Stocome Signal (MMP::Second)           11         6         ALTERNATOR SIGNAL           12         9         METER CONTROL VANTCH GIOLUND           13         6         Stocome Signal (MMP::Second)           14         11         ILG           15         9         METER CONTROL VANTCH GIOLUND           16         9         METER CONTROL VANTCH GIOLUND           17         1         ILG           18         COMMUNICATION SIGNAL (MMP::ACD)           19         1         ILG           11         GIOLUND           123         1         ILG           133         1         L           14         X         Stocome Suppert           1         1         MER

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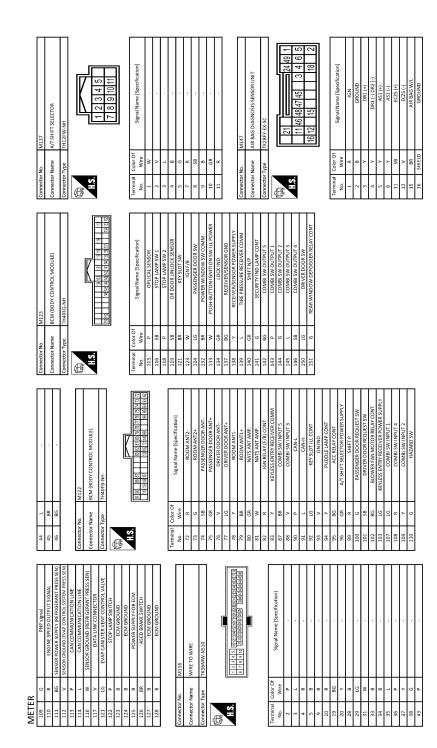
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COMBINATION METER



# COMBINATION METER < ECU DIAGNOSIS INFORMATION >

Revision: 2014 October

2012 EX

JRNWE1251GB

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		J
Connector Name     Indicator       Total     Indicator <t< td=""><td></td><td>K</td></t<>		K
Ate 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		L
CUTOFF TELLTALE CUTOFF TELLTALE EAN ELT DRAVE CAN -1 AS3 (-) AS3 (-) AS4 (-)		Μ
ITER		WCS
$\mathbf{X} = \begin{bmatrix} \mathbf{X} \\ \mathbf{X} \\ \mathbf{Y} $		0
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Sofo		Γ.

Fail-Safe

INFOID:000000007583438

### FAIL-SAFE

Combination meter performs fail-safe operation when unified meter and A/C amp. communication is malfunction.

Solution for communication error between the unified meter and A/C amp. and combination meter.

# < ECU DIAGNOSIS INFORMATION >

**COMBINATION METER** 

## **WCS-45**

### < ECU DIAGNOSIS INFORMATION >

	Function	Specifications
Speedometer		
Tachometer		Deset to zero by over andia a communication
Fuel gauge		<ul> <li>Reset to zero by suspending communication.</li> </ul>
Water temperature gauge		
Illumination control		When suspending communication, change to nighttime mode.
Information display		The display turns off by suspending communication.
Buzzer		The buzzer turns off by suspending communication.
	ABS warning lamp	
	VDC warning lamp	
	Brake warning lamp	The lower turns on hu successful a communication
	CRUISE warning lamp	— The lamp turns on by suspending communication.
	IBA OFF indicator lamp	
	Malfunction indicator lamp	
	High beam indicator	
	Turn signal indicator lamp	
	Tail lamp indicator lamp	
Warning lamp/indicator	Oil pressure warning lamp	
lamp	A/T CHECK warning lamp	
	AWD warning lamp	
	Low tire pressure warning lamp	<ul> <li>The lamp turns off by suspending communication.</li> </ul>
	Key warning lamp	
	VDC OFF indicator lamp	
	BSW warning lamp	
	AFS OFF indicator lamp	
	Lane departure warning lamp	
	LDP ON indicator lamp	
	Master warning lamp	

# DTC Index

Refer to <u>MWI-107, "DTC Index"</u>.

INFOID:000000007583439

### < ECU DIAGNOSIS INFORMATION >

# UNIFIED METER AND A/C AMP.

# **Reference Value**

### VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item		Condition	Value/Status		
SPEED METER [km/h] or [mph]	Ignition switch ON	While driving	Equivalent to speedometer reading <b>NOTE:</b> 655.35 is displayed when the malfunc- tion signal is received		
SPEED OUTPUT [km/h] or [mph]	Ignition switch ON	While driving	Equivalent to speedometer reading <b>NOTE:</b> 655.35 is displayed when the malfunc- tion signal is received		
ODO OUTPUT [km/h] or [mph]	Ignition switch ON	_	Equivalent to odometer reading in combination meter		
TACHO METER [rpm]	Ignition switch ON	While driving	Equivalent to tachometer reading <b>NOTE:</b> 8191.875 is displayed when the mal- function signal is received		
FUEL METER [L]	Ignition switch ON	_	Values according to fuel level		
W TEMP METER [°C] or [°F]	Ignition switch ON	_	Values according to engine coolant temperature <b>NOTE:</b> 215 is displayed when the malfunction signal is input		
FUEL CAP W/L	Ignition switch	Fuel filler cap warning display ON	On		
FUEL CAP W/L	ON	Fuel filler cap warning display OFF	Off		
ABS W/L	Ignition switch ON	ABS warning lamp ON	On		
		ABS warning lamp OFF	Off		
VDC/TCS IND	Ignition switch	VDC OFF indicator lamp ON	On		
	ON	VDC OFF indicator lamp OFF	Off		
SLIP IND	Ignition switch VDC warning lamp ON		On		
	ON	VDC warning lamp OFF	Off		
BRAKE W/L	Ignition switch	Brake warning lamp ON	On		
	ON	Brake warning lamp OFF	Off		
DOOR W/L	Ignition switch Door warning displayed		On		
	ON	Door warning not displayed	Off		
HI-BEAM IND	Ignition switch	Hi-beam indicator lamp ON	On		
	ON	Hi-beam indicator lamp OFF	Off		
TURN IND	Ignition switch	Turn indicator lamp ON	On		
	ON	Turn indicator lamp OFF	Off		
FR FOG IND	Ignition switch	Front fog light indicator lamp ON	On		
	ON	Front fog light indicator lamp OFF	Off		
RR FOG IND	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off		
	Ignition switch	Tail lamp indicator lamp ON	On		
LIGHT IND	ON	Tail lamp indicator lamp OFF	Off		

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Monitor Item		Condition	Value/Status	
OIL W/L	Ignition switch	Oil pressure warning lamp ON	On	
	ON	Oil pressure warning lamp OFF	Off	
N ALL	Ignition switch	Malfunction warning lamp ON	On	
MIL	ON	Malfunction warning lamp OFF	Off	
GLOW IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off	
C-ENG2 W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off	
CRUISE IND	Ignition switch	CRUISE indicator displayed	On	
	ON	CRUISE indicator not displayed	Off	
SET IND	Ignition switch	SET indicator lamp ON	On	
SET IND	ŌN	SET indicator lamp OFF	Off	
	Ignition switch	CRUISE warning lamp ON	On	
CRUISE W/L	ÖN	CRUISE warning lamp OFF	Off	
	Ignition switch	IBA OFF indicator lamp ON	On	
BA W/L	ÖN	IBA OFF indicator lamp ON	Off	
	Ignition switch	A/T check warning lamp ON	On	
ATC/T-AMT W/L	ÖN	A/T check warning lamp OFF	Off	
	Ignition switch	AWD warning lamp ON	On	
4WD W/L	ON	AWD warning lamp OFF	Off	
4WD LOCK IND	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off	
	Ignition switch	Low-fuel warning lamp displayed	On	
FUEL W/L ON		Low-fuel warning lamp not displayed	Off	
	Ignition switch	Washer warning displayed	On	
WASHER W/L	ON	Washer warning not displayed	Off	
	Ignition switch	Low tire pressure warning lamp ON	On	
AIR PRES W/L	ON	Low tire pressure warning lamp OFF	Off	
	Ignition switch	Key warning lamp ON	On	
KEY G/Y W/L	ON	Key warning lamp OFF	Off	
	Ignition switch	AFS OFF indicator lamp ON	On	
AFS OFF IND	ON	AFS OFF indicator lamp OFF	Off	
4WAS/RAS W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off	
DDS W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off	
	Ignition switch	Lane departure warning lamp ON	On	
LANE W/L	ÖN	Lane departure warning lamp OFF	Off	
	Ignition switch	LDP ON indicator lamp ON	On	
LDP IND	ON	LDP ON indicator lamp OFF	Off	
	Ignition switch	DCA switch indicator displayed	On	
DCA IND	ON	DCA switch indicator not displayed	Off	

Monitor Item		Condition	Value/Status	Λ
BSW W/L	Ignition switch	BSW warning lamp ON	On	- A
	ON	BSW warning lamp OFF	Off	_
	Ignition switch ON	Engine start information display	B&P I	В
	Ignition switch ACC	Engine start information display	B&P N	C
	Ignition switch LOCK	Key ID warning display	ID NG	
	Ignition switch LOCK	Steering lock information display	ROTAT	D
LCD	Ignition switch LOCK	P position warning display	SFT P	_ E
	Ignition switch LOCK	Intelligent Key insert information display	INSRT	- L
	Ignition switch LOCK	Intelligent Key low battery warning display	BATT	F
	Ignition switch ON	Take away warning display	NO KY	_
	Ignition switch LOCK	Key warning display	OUTKY	- G
	Ignition switch ON	ACC warning display	LK WN	Н
	Ignition switch	Vehicle ahead detection indicator displayed	On	_
ACC TARGET	ON	Vehicle ahead detection indicator not dis- played	Off	
	Ignition switch	When following distance set to "LONG"	LONG	
ACC DISTANCE		When following distance set to "MIDDLE"	MID	J
	ON	When following distance set to "SHORT"	SHORT	
		Set distance indicator not displayed	Off	
ACC OWN VHL	Ignition switch	Own vehicle indicator displayed	On	K
	ON	Own vehicle indicator not displayed	Off	
ACC SET SPEED	Ignition switch	Set vehicle speed indicator not displayed	Off	L
ACC SET SPEED	ON	Set vehicle speed indicator displayed	Indicates the set vehicle speed	
ACC UNIT	Ignition switch	Set vehicle speed indicator unit display ON	On	_
	ON	Set vehicle speed indicator unit display OFF	Off	M
		Shift position indicator P display	Р	_
		Shift position indicator R display	R	
		Shift position indicator N display	Ν	– WC
		Shift position indicator D display	D	
		Shift position indicator DS display	L	0
	Ignition switch	Shift position indicator M1 display	M1	
SHIFT IND	ON	Shift position indicator M2 display	M2	_
		Shift position indicator M3 display	M3	P
		Shift position indicator M4 display	M4	
		Shift position indicator M5 display	M5	_
		Shift position indicator M6 display	M6	_
		Shift position indicator M7 display	M7	

### < ECU DIAGNOSIS INFORMATION >

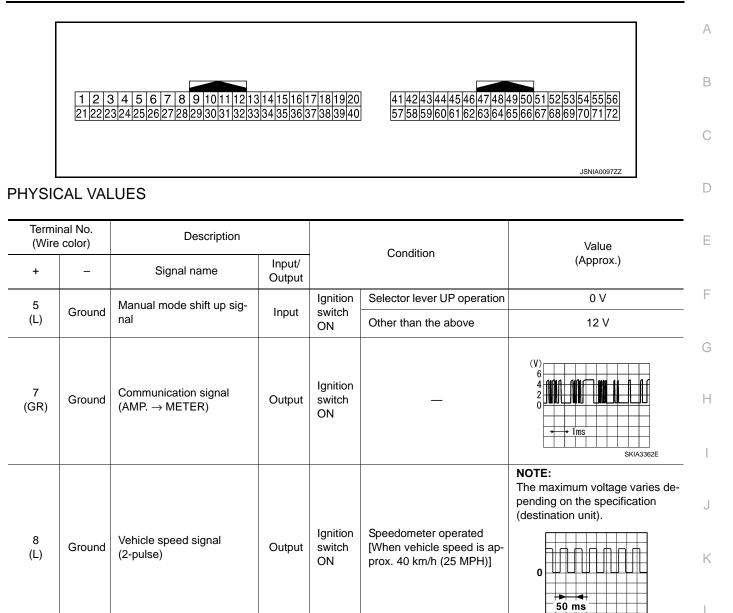
Monitor Item		Condition	Value/Status
O/D OFF SW	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off
AT S MODE SW	Ignition switch	Snow mode switch ON	On
AT 3 MODE 3W	ON	Snow mode switch OFF	Off
AT P MODE SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
M RANGE SW	Ignition switch	Selector lever manual mode position	On
IN RANGE SW	ŌN	Other than the above	Off
	Ignition switch	Selector lever manual mode position	Off
NM RANGE SW	ŌN	Other than the above	On
AT SFT UP SW	Ignition switch	Selector lever + position	On
AT SET UP SW	<b>ON</b>	Other than the above	Off
	Ignition switch	Selector lever – position	On
AT SFT DWN SW	<b>ON</b>	Other than the above	Off
ST SFT UP SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
ST SFT DWN SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off
	Ignition switch	A/C compressor activation condition	On
COMP F/B SIG	<b>ON</b>	A/C compressor deactivation condition	Off
4WD LOCK SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off
	Ignition switch	Parking brake switch ON	On
PKB SW	ŌN	Parking brake switch OFF	Off
BUCKLE SW	Ignition switch	Driver seat belt not fastened	On
BUCKLE SW	ON	Driver seat belt fastened	Off
BRAKE OIL SW	Ignition switch	Brake fluid level switch ON	On
BRARE OIL SW	ON	Brake fluid level switch OFF	Off
DISTANCE [km]	Ignition switch ON	_	Possible driving distance calculated b unified meter and A/C amp.
OUTSIDE TEMP [°C] or [°F]	Ignition switch ON	_	Equivalent to ambient temperature <b>NOTE:</b> This may not match the indicated value on the information display.
	Ignition switch	Low-fuel warning signal output	On
FUEL LOW SIG	ŎN	Low-fuel warning signal not output	Off
	Ignition switch	Buzzer ON	On
BUZZER	ŎN	Buzzer OFF	Off

#### NOTE:

Some items are not available according to vehicle specification.

**TERMINAL LAYOUT** 

### < ECU DIAGNOSIS INFORMATION >



When seat belt is fastened

When seat belt is not fas-

Selector lever DS position

Selector lever DS position

Other than the above

Other than the above

tened

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(G)

14

(BR)

Ground

Ground

Ground

Ground

Seat belt buckle switch sig-

nal (driver side)

Manual mode signal

Non-manual mode signal

Communication signal

 $(LCD \rightarrow AMP.)$ 

Ignition

switch

Ignition

switch

Ignition

switch

Ignition

switch

ON

ON

ON

ON

Input

Input

Input

Input

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12 V

0 V

0 V

12 V

12 V

0 V

	nal No. e color)	Description	Description		Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
25 (V)	Ground	Manual mode shift down signal	Input	Ignition switch ON	Selector lever down opera- tion Other than the above	0 V 12 V
27 (LG)	Ground	Communication signal (METER → AMP.)	Input	lgnition switch ON	_	(V) 6 4 2 0 • • 1 ms SKIA3361E
28 (R)	Ground	Vehicle speed signal (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).
					Parking brake is applied	0 V
30 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake is released	(V) 8 4 0 10 ms JSNIA0007GB
34 (Y)	Ground	Communication signal (AMP. $\rightarrow$ LCD)	Output	Ignition switch ON		(V) 6 4 2 0 ▲ 200 µs J\$NIA0027GB
41 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage
42 (Y)	Ground	Fuel level sensor signal	Input	Ignition switch ON		(V) 4 3 2 1 0 E 1/4 1/2 3/4 F JSNIA0013GB

### < ECU DIAGNOSIS INFORMATION >

	nal No. e color)	Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
45 (P)	Ground	Ambient sensor signal	Input	_		(V) 4 3 2 1 0 -10 (14) (32) (50) (68) (68) (68) (76) (7F) JSNIA0014GB
53 (G)	Ground	Ignition signal	Input	Ignition switch ON	_	Battery voltage
54 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	_	Battery voltage
55 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
56 (L)	Ground	CAN-H	_	_	_	_
57		Brake fluid level switch sig-		Ignition	Brake fluid level is normal.	5 V
(W)	Ground	nal	Input	switch ON	The brake fluid level is low- er than the low level	0 V
58 (BR)	Ground	Fuel level sensor ground		Ignition switch ON	_	0 V
61 (BR)	Ground	Ambient sensor signal ground	_	Ignition switch ON	_	0 V
71 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
72 (P)	Ground	CAN-L	—	_	_	_

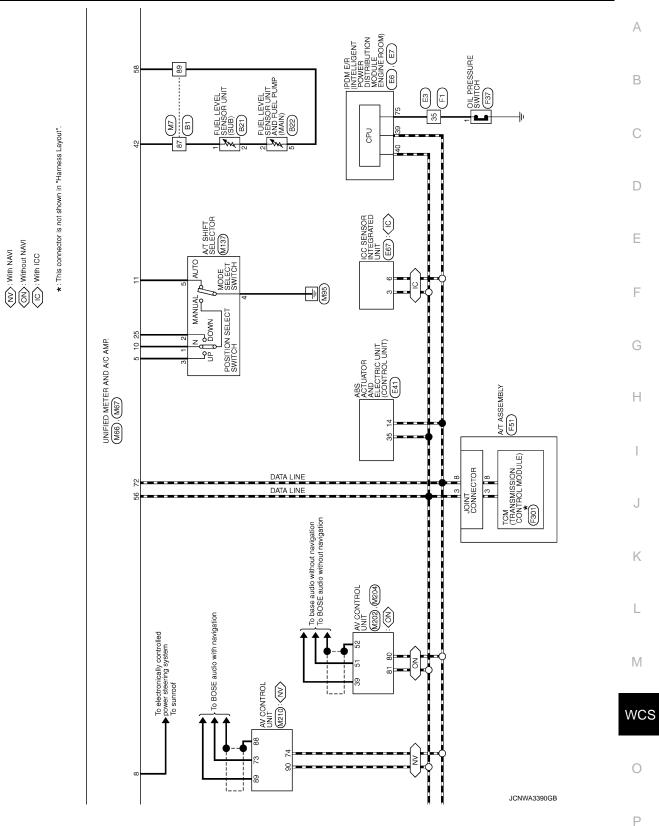
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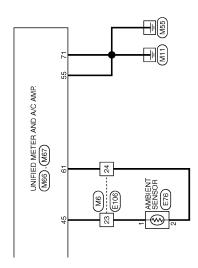
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#### < ECU DIAGNOSIS INFORMATION > Wiring Diagram - METER -INFOID:000000007583441 AFS CONTROL UNIT M16): (WA) ETOB: AW 57 8 UNIFIED METER AND A/C AMP. ≸ ≶ 26 8 24 25 34 ECM M107 27 BCM (BODY CONTROL MODULE) (M122) . (M123) M56 M56 AWD models WA>: With AFS 0 Б To CAN 1 METER CONTROL SWITCH M54 53 41 54 TRIP COMPUTER SWITCH SEAT BELT BUCKLE SWITCH (DRIVER SIDE) B13 LM E 33 SELECT BRAKE FLUID LEVEL SWITCH ല ا 🖒 ENTER 41 80 COMBINATION METER (M53) ILLUMINATION CONTROL SWITCH PARKING BRAKE SWITCH E107 We lite FUSE BLOCK (J/B) M1 , M3 83 ഘ + 4 10A IGNITION SWITCH ON or START 10A WASHER LEVEL SWITCH E32 To illumination $\overline{\ }$ AIR BAG DIAGNOSIS SENSOR UNIT (M147) E100 9W 60 • IGNITION SWITCH ACC or ON 10A 24 15 ALTERNATOR F36 M110 E103 10Å BATTERY N 2010/09/21 METER JCNWA3389GB

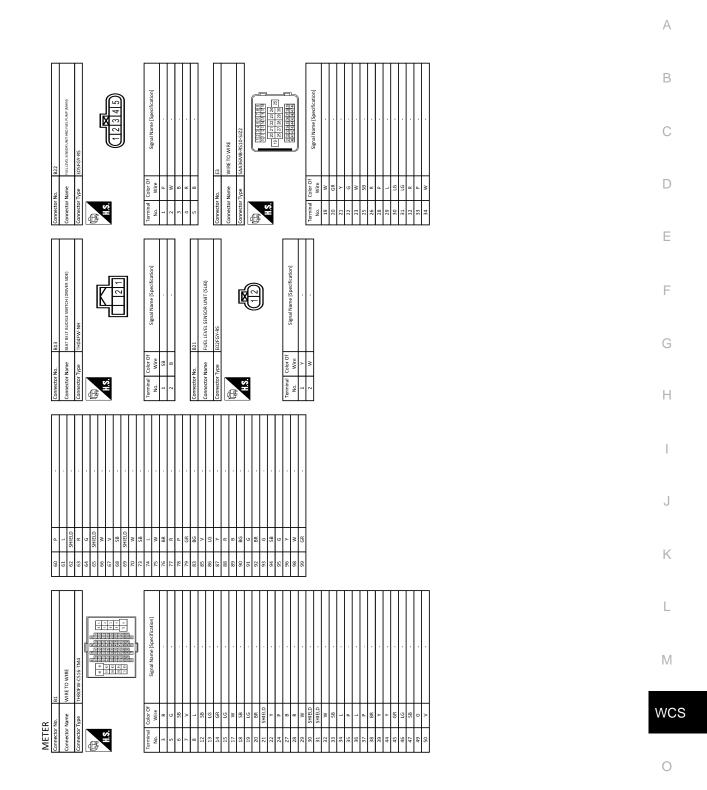


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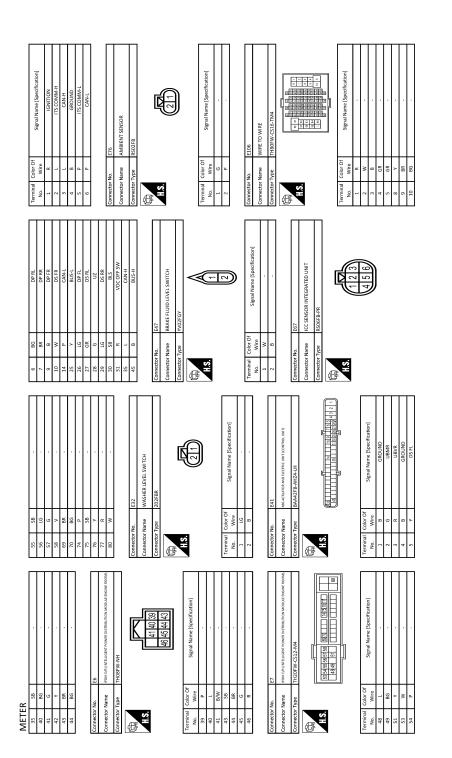
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#### < ECU DIAGNOSIS INFORMATION >



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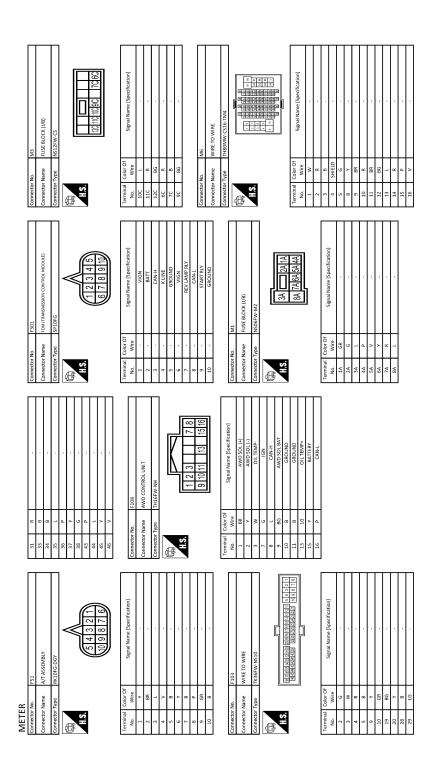
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#### А В cation] Signal Name [Specification] Signal Name [Spec. Ø PRESSURE SWITCH С **FERNATOR** D Vire Vire Name . EH H.S. Terminal No. Connector Connector Connector Е Signal Name [Specification] 20 26 19 उन्न का जन्म का जन्म का प्रदार का का बाह्य हो। बहा बहा का का बडा बडा का F 987 VIRE TO WIRE G Color Of Wire Wire connector Name E HS. Terminal No. 26 26 29 30 31 33 33 33 34 34 35 41 Н Ð /ithout PARKING BRAKE SWITCH J BOTEV F 8 S G Connector Name Connector No. Κ HS. Connector L Μ WCS SHIELD - B > g . BG V ¤ 8 ≥ BR ≥ ∂ ଥ ≥ ∝ METER Ο

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#### < ECU DIAGNOSIS INFORMATION >



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### < ECU DIAGNOSIS INFORMATION >

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	E
	F
	G
15         6           13         13         5         6           14         5         6         5         5           19         5         6         6         6           19         5         6         6         6           19         5         6         6         6           10         6         6         6         6         6           11         6         6         6         6         6         6           11         6         6         7         9         6         6           12         13         3         3         5         6         7           13         14         1         1         1         1         1         1           13         3         3         1	
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BG         C           G         G         C           Partial         B         Partial           W         Y         Y           B         B         B           B         B         B           C         C         B           B         B         B           B         C         B           B         B         B           B         B         B           B         B         B           B         B         B           B         B         B           B         B         B           B         B         B           B         B         B           B         B         B		e [0 28 ≪ ⊢ 0 ≺ ⊾	I SERGR POWER SUPPY (APP SEA 2) IWIN ICC]     ER SERGR 680-UMD (APP SEA 2) IWIN ICC]     GR SERGR 680-UMD (APP SEA 2) IWIN-INT ICC]     CR SERGR 680-UMD (APP SEA 2) IWIN-INT ICC]     RETRIGEMANT PRESS SEA 1000     EVENT PRESS SEA 10000     E
46 55 55 56 56 56 56 56 56 56 56 56 56 56	Commeton     Commeton	98 99 99 99 99 101 101 102 103	103 104 105 105
M66 UNIFED METER AND A/C AMP. TH40P/W NH TH40P/W NH TH40P/W NH	PI         Signal Nume (Specification)           MANUAL MODE SHIFTUP SIGNAL           OMMULATION CONTRIPUTED SIGNAL           OWINICATION SOLIDARE-AMETEN           OWINICATION SOLIDARE-AMETEN           OWINICATION SOLIDARE-AMETEN           SEAT BLIT BUCKLESMICH SIGNAL           MANUAL MODE SIGNAL           COMMUNICATION SIGNAL           MANUAL MODE SIGNAL (AWP - SLOD)           YARIONE BARE SUTTON SIGNAL           MANUAL MOTOR CONTROL SIGNAL           MANUAL MOTOR CONTROL SIGNAL           MANUAL MOTOR CONTROL SIGNAL           MANUEL SIGNAL           MANUAL MOTOR CONTROL SIGNAL           MANUAL MOTOR CONTROL SIGNAL           MANUEL MOTOR CONTROL SIGNAL           MANUEL MOTOR CONTROL SIGNAL           MANUEL MOTOR CONTROL SIGNAL	112434445461	5f Signal Name [Specification] ACC FOWER SUPPLY ACC FOWER SUPPLY FUEL LEVEL SENSOR SIGNAL INTAKE SENSOR SIGNAL INTAKET COND SIGNAL
Connector Name Connector Type	Terminal         Color Of No.         Wire           No.         N         Vire           S         1         V         V           9         9         58         1         V           10         11         G         V         V         23         V         V         23         V         V         3         3         V         V         3         3         V         V         3         V         V         3         3         V         V         3         V         V         3         3         V         V         V         A         V         V         A         V         <		Terminal         Color Of           No.         Wire           41         V           42         Y           43         R           43         R           44         R
Connector No. M54 Connector Name MFTR CONTROL SWITCH Connector Type H112AW-NH 12 3 4 5 6 12 3 4 5 6		Terminal Color Of No.         Signal Name [Specification]           1         L           2         B	
M54 METER CONTROL SWITCH TH12MW-NH	Terminal         Color of terminal           MAD         Non.         Non.           MAD         Connector Non.         Non.           MAD         Connector Non.         MAD           MAD         Connector Non.         MAD           MAD         Connector Non.         MAD           MAD         MAD         MAD	Color Of Wire B	

JRNWE1250GB

# UNIFIED METER AND A/C AMP.

Connector No. M137 Connector Name Arf Sti.ECTOR Connector Type TH125W.NH	His. 7 8 9 10111	Terminal Color Of Signal Name (Specification) No. Wire Signal Name (Specification) 1 W	2 4 10 17 10 10 10 10 10 10 10 10 10 10 10 10 10	9 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10	tor No	he	Connector Type TK28FY-EX-SC	1111	11 46 48 47 45 3 4 6	16/12 15 1 1 18 12	Tarminal Color Of		1 K IGN 2 B GROUND	3 Y DR1 (+) 4 Y DR1 (-) DR2 (-)	5 Y ASI (+)	6         γ         AS1 (-)           11         SB         ECZS (+)		SHIELD
Gomector No. M1133 Connector Name BCM (BODY CONTROL MODULE) Connector Type []1440H6 ANH	H.S.	al Color Of Wire P SB	110         5         D.R. DOLOGIN UNCOK SENSOR           111         58         D.R. DOOR UNLOCK SENSOR           121         B.R         KEY SLOT SW           123         W         IGN FØ	W PUSH-B	BG RECEIVER/S		142         BG         COMBI SW OUTPUT 5           143         P         COMBI SW OUTPUT 1	. 0	SB LG	υ								
44 L	No. M112 Name BCM (BODY COYTROL MODULE) Type T1400Fb-WH	4.5%	Terminal Color Of Signal Mame [Specification] No. Write Signal Mame [Specification] 72 R ROM ANT2-	SB PASS GR PASS		K GR		RK >	90 P CAN-L 91 L CAN-H	Pl v	> 9	++	+	SB BG	PG 9	107         LG         COMBI SW INPUT 1           108         R         COMBI SW INPUT 4		,
METER 109 G NAME AND A RAPE Agenal 110 R EXCONFIGNATION OF A RAPE AGENAL TREAS GAN 111 B S RECOMPENSATION PERSONAL AND A TO A RAPES AGENAL 112 V SERSONAL DURING AND A TO A RAPES AGENAL	CONTRONATION OF CONTROLINGUES OF CONTROLATION OF CONTROLA	a « 8 a a	Connector No. M116 Connector Name Wife TO WIRE	Connector Type TK36MW-NS10	HAN 12345 REPRESENTATION 1122204050001313 (19444644	]	Terminal Color Of Signal Name (Specification)	P	3 L L	ъ в в и и и и и и и и и и и и и и и и и	$\prod$		28 B		+	35 L	$\square$	43 P .

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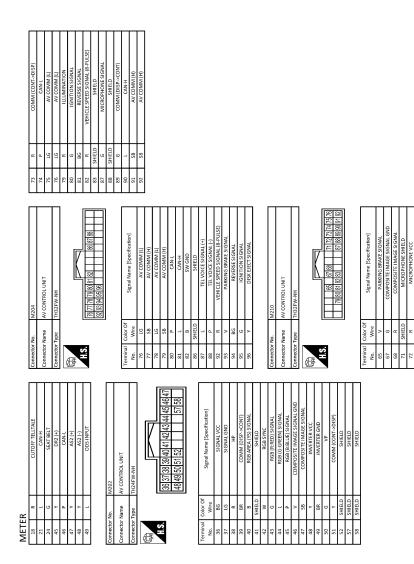
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# UNIFIED METER AND A/C AMP. < ECU DIAGNOSIS INFORMATION >



JRNWE1252GB

INFOID:000000007585290

# Fail-Safe

#### FAIL-SAFE

The unified meter and A/C amp. activates the fail-safe control if CAN communication with each unit is malfunctioning.

### < ECU DIAGNOSIS INFORMATION >

	Function	Specifications		
Speedometer				
Tachometer		Depart to your by over anding communication		
Fuel gauge		Reset to zero by suspending communication.		
Water temperature gauge				
Illumination control		When suspending communication, change to nighttime mode		
Information display		The display turns off by suspending communication.		
Buzzer		The buzzer turns off by suspending communication.		
	ABS warning lamp			
	VDC warning lamp			
	Brake warning lamp			
	CRUISE warning lamp	The lamp turns on by suspending communication.		
	IBA OFF indicator lamp			
	AWD warning lamp			
	Low tire pressure warning lamp			
	Master warning lamp			
	AFS OFF indicator lamp	The lamp blinking caused by communication malfunction		
Warning lamp/indicator	High beam indicator			
lamp	Turn signal indicator lamp			
	Tail lamp indicator lamp			
	Oil pressure warning lamp			
	VDC OFF indicator lamp			
	BSW warning lamp	The lamp turns off by suspending communication.		
	Malfunction indicator lamp	1		
	A/T CHECK warning lamp			
	Key warning lamp			
	Lane departure warning lamp			
	LDP ON indicator lamp			

# DTC Index

INFOID:000000007583443

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Display contents of CON- SULT	Time	Diagnostic item is detected when	Refer to	Μ
CAN COMM CIRCUIT [U1000]	CRNT, 1 - 39	When unified meter and A/C amp. is not transmitting or receiving CAN communication signal for 2 seconds or more.	<u>MWI-46</u>	wcs
CONTROL UNIT (CAN) [U1010]	CRNT, 1 - 39	When detecting error during the initial diagnosis of CAN controller of unified meter and A/C amp.	<u>MWI-47</u>	
COMM ERROR 1 [B2201]	CRNT, 1 - 39	If a communication error is present in the communication line between unified meter and A/C amp. and combination meter for 2 seconds or more.	<u>MWI-48</u>	0
COMM ERROR 2 [B2202]	CRNT, 1 - 39	If a communication error is present in the communication line between unified meter and A/C amp. and combination meter for 2 seconds or more.	<u>MWI-50</u>	P
VEHICLE SPEED [B2205]	CRNT, 1 - 39	The abnormal vehicle speed signal is input from ABS actuator and elec- tric unit (control unit) for 2 seconds or more.	<u>MWI-52</u>	_

Display contents of CON- SULT	Time	Diagnostic item is detected when	Refer to
ENGINE SPEED [B2267]	CRNT, 1 - 39	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	<u>MWI-53</u>
WATER TEMP [B2268]	CRNT, 1 - 39	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	<u>MWI-54</u>

### < ECU DIAGNOSIS INFORMATION >

# BCM (BODY CONTROL MODULE)

# **Reference Value**

# VALUES ON THE DIAGNOSIS TOOL

### CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status	-
FR WIPER HI	Other than front wiper switch HI	Off	С
	Front wiper switch HI	On	
FR WIPER LOW	Other than front wiper switch LO	Off	D
FR WIPER LOW	Front wiper switch LO	On	
FR WASHER SW	Front washer switch OFF	Off	
FR WASHER SW	Front washer switch ON	On	E
FR WIPER INT	Other than front wiper switch INT	Off	
	Front wiper switch INT	On	F
FR WIPER STOP	Front wiper is not in STOP position	Off	
FR WIPER STOP	Front wiper is in STOP position	On	
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position	G
	Other than rear wiper switch ON	Off	
RR WIPER ON	Rear wiper switch ON	On	Н
	Other than rear wiper switch INT	Off	
RR WIPER INT	Rear wiper switch INT	On	I
	Rear washer switch OFF	Off	1
RR WASHER SW	Rear washer switch ON	On	
	Rear wiper is in STOP position	Off	J
RR WIPER STOP	Rear wiper is not in STOP position	On	
	Other than turn signal switch RH	Off	K
TURN SIGNAL R	Turn signal switch RH	On	N
	Other than turn signal switch LH	Off	
TURN SIGNAL L	Turn signal switch LH	On	L
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off	
TAIL LAWP SVV	Lighting switch 1ST or 2ND	On	в.4
	Other than lighting switch HI	Off	M
HI BEAM SW	Lighting switch HI	On	
	Other than lighting switch 2ND	Off	WC
HEAD LAMP SW 1	Lighting switch 2ND	On	
	Other than lighting switch 2ND	Off	
HEAD LAMP SW 2	Lighting switch 2ND	On	0
PASSING SW	Other than lighting switch PASS	Off	
PASSING SW	Lighting switch PASS	On	Р
	Other than lighting switch AUTO	Off	
AUTO LIGHT SW	Lighting switch AUTO	On	
	Front fog lamp switch OFF	Off	
FR FOG SW	Front fog lamp switch ON	On	
RR FOG SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off	

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### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
DOOR SW-DR	Driver door closed	Off
	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
DOOK SW-AS	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
DOOK SW-KK	Rear RH door opened	On
	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
	Back door closed	Off
DOOR SW-BK	Back door opened	On
	Other than power door lock switch LOCK	Off
CDL LOCK SW	Power door lock switch LOCK	On
	Other than power door lock switch UNLOCK	Off
CDL UNLOCK SW	Power door lock switch UNLOCK	On
	Other than driver door key cylinder LOCK position	Off
KEY CYL LK-SW	Driver door key cylinder LOCK position	On
	Other than driver door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TR/BD OPEN SW	Back door opener switch OFF	Off
	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off
RKE-LOCK	LOCK button of the key is not pressed	Off
	LOCK button of the key is pressed	On
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed	On
RKE-TR/BD	<b>NOTE:</b> The item is indicated, but not monitored.	Off
RKE-PANIC	PANIC button of the key is not pressed	Off
	PANIC button of the key is pressed	On
RKE-P/W OPEN	UNLOCK button of the key is not pressed	Off
	UNLOCK button of the key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneous- ly	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
	Dark outside of the vehicle	Close to 0 V

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Monitor Item	Condition	Value/Status
REQ SW -DR	Driver door request switch is not pressed	Off
	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
038 300	Push-button ignition switch (push switch) is pressed	On
GN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
	The brake pedal is not depressed	Off
BRAKE SW 2	The brake pedal is depressed	On
	Selector lever in P position	Off
DETE/CANCL SW	Selector lever in any position other than P	On
	Selector lever in any position other than P and N	Off
SFT PN/N SW	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
JNLK SEN -DR	Driver door is unlocked	Off
JNLK SEN -DK	Driver door is locked	On
	Push-button ignition switch (push-switch) is not pressed	Off
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On
	Ignition switch in OFF or ACC position	Off
GN RLY1 -F/B	Ignition switch in ON position	On
	Selector lever in any position other than P	Off
DETE SW -IPDM	Selector lever in P position	On
	Selector lever in any position other than P and N	Off
SFT PN -IPDM	Selector lever in P or N position	On
	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On

Monitor Item	Condition	Value/Status
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
ENGINE STATE	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	<b>NOTE:</b> The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
ID OK FLAG	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
PRIVITEINGSTRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SWI SLOT	The key is not inserted into key slot	Off
KEY SW -SLOT	The key is inserted into key slot	On
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	<b>NOTE:</b> The item is indicated, but not monitored.	
	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet
CONFRM ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID reg- istered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with the third key ID registered to BCM.	Done
	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives accords with the second key ID reg- istered to BCM.	Done

### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
CONFIRMIDI	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TP 4	The ID of fourth key is not registered to BCM	Yet
1 1 4	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
1 - 5	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
IP 2	The ID of second key is registered to BCM	Done
TD 4	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
	ID of front LH tire transmitter is registered	Done
D REGST FL1	ID of front LH tire transmitter is not registered	Yet
	ID of front RH tire transmitter is registered	Done
D REGST FR1	ID of front RH tire transmitter is not registered	Yet
	ID of rear RH tire transmitter is registered	Done
D REGST RR1	ID of rear RH tire transmitter is not registered	Yet
	ID of rear LH tire transmitter is registered	Done
D REGST RL1	ID of rear LH tire transmitter is not registered	Yet
	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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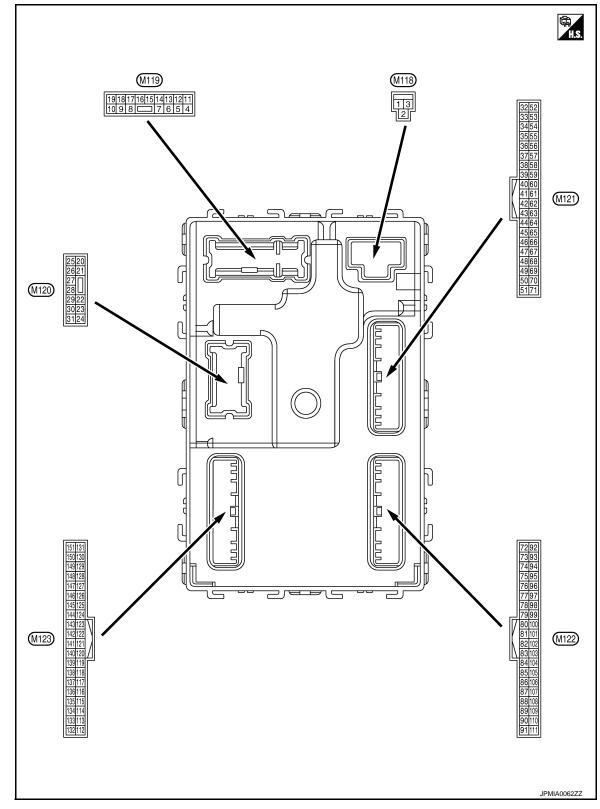
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< ECU DIAGNOSIS INFORMATION >

**TERMINAL LAYOUT** 



PHYSICAL VALUES

	inal No. e color)	Description	r			Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (W)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage
3 (Y)	Ground	P/W power supply (RAP)	Output	Ignition switch ON	l	Battery voltage
4		Interior room lown			b battery saver is activated. room lamp power supply)	0 V
4 (LG)	Ground	Interior room lamp power supply	Output	ed.	b battery saver is not activat- ior room lamp power supply)	Battery voltage
5	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
(L)	Ground	LOCK	σαιραί	assenger uoor	Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(Y)					OFF	Battery voltage
8	8 (V) Ground All doors, fuel lid LOCK		Output	All doors	LOCK (Actuator is activated)	Battery voltage
(V)		LUCK			Other than LOCK (Actuator is not activated)	0 V
9	Ground	Driver door, fuel lid		Output Driver door	UNLOCK (Actuator is activated)	Battery voltage
(G)		UNLOCK	- upur		Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
(BR)	Cround	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground		Ignition switch ON	1	0 V
					OFF	0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brighten- ing/dimming level is in the neutral position
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF or ON	Battery voltage
(Y)	Cround		Caiput	Sincon Switch	ACC	0 V

	inal No.	Description				
(Wire	e color)	Cignal name	Input/		Condition	Value (Approx.)
+	-	Signal name	Output			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 0 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s
					Turn signal switch OFF	0 V
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s 1 s FKID0926E 6.5 V
19	Cround	Room lamp timer	Output	Interior room	OFF	Battery voltage
(V)	Ground	control	Output	lamp	ON	0 V
					Turn signal switch OFF	0 V
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 Fillo 15 10 10 10 10 10 10 10 10 10 10
23	Oracia	Daala daar ay ay	Output	De ale de ar	OPEN (Back door opener actuator is activated)	Battery voltage
(G)	Ground	Back door open	Output	Back door	Other than OPEN (Back door opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s
26	Ground	Rear wiper	per Output Rear wiper	Rear wiper	OFF (Stopped)	0 V
(G)	Ground		Juipui		ON (Operated)	Battery voltage

	inal No.	Description				Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	А
34	0	Luggage room anten- na (-)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	B C D
(SB)	Ground			ÕFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	E
35	Ground	Luggage room anten- na (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	G H
(V)	Ground				When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	J K L
38	Ground	Back door antenna (– )	Output	When the back door opener re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1	M WC
(B)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	P

	nal No.	Description				Value
(vvire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)
39	Ground	Back door antenna	Output	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
(W)	Cround	(+)	Guipur	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC ON	Battery voltage 0 V
52				Ignition switch	When selector lever is in P or N position	Battery voltage
(SB)	Ground	Starter relay control	Output	ON	When selector lever is not in P or N position	0 V
60		Push-button ignition		Push-button igni-	Pressed	0 V
(BR)	Ground	switch (Push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage
					ON (Pressed)	0 V
61 (W)	Ground	Back door opener re- quest switch	Input	Back door opener request switch	OFF (Not pressed)	(V) 15 10 10 ms JPMIA0016GB 1.0 V
64	Oround	Intelligent Key warn-	Output	Intelligent Key	Sounding	0 V
(V)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	Battery voltage
65 (BG)	Ground	Rear wiper stop posi- tion	Input	Rear wiper	In stop position	(V) 15 10 10 ms JPMIA0016GB 1.0 V
					Not in stop position	0 V

## < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description				Value	
+		Signal name	Input/ Output		Condition	(Approx.)	
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 0 10 10 10 10 11.8 V	
					ON (Door open)	0 V	
					Pressed	0 V	
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 0 10 10 ms JPMIA0011GB 11.8 V	
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close) ON (Door open)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V 0 V	
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 0 10 10 ms JPMIA0011GB 11.8 V	
		1	1		ON (Door open)	0 V	

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	ninal No.	Description				Value
+	re color)	Signal name	Input/ Output		Condition	(Approx.)
72	Ground	d Room antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(R)		(Center console)			When Intelligent Key is not in the passenger compart- ment	(V) 15 0 15 0 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 15 15 15 15 15 15 15 15 15
73	Ground	Ind Room antenna 2 (+) (Center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 5 0 1 s JMKIA0062GB
(G)					When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB
74	Ground	und Passenger door an- tenna (−)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

	inal No.	Description				Malua	
(Wire +	e color) –	Signal name	Input/ Output		Condition	Value (Approx.)	A
75	0	Passenger door an-	0.444	When the pas- senger door re-	When Intelligent Key is in the antenna detection area	(V) 15 0 1 s JMKIA0062GB	B C D
(GR)	Ground	tenna (+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	E
76	Ground	Bround Driver door antenna (-) Output door rec switch is ed with	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	G H I	
(V)	Giouna			switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	J K L
77	Ground	Driver door antenna	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	M WC
(LG)	Sitund	(+)			When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	P

	inal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
78 (Y) Ground	, Room antenna 1 (–)		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	
	Clound	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1
79	Gaund	Room antenna 1 (+)	0.454	put Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
79 (BR)	Ground	(Instrument panel)	Output		When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
(13)					ON	Battery voltage

	inal No.	Description				Value	
(VVire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	
83	0	Remote keyless entry	Input/	During waiting		(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1	(
(Y) Ground		receiver communica- tion	Output	When operating e	ither button on the key	(V) 15 10 5 0 1 1 ms JMKIA0065GB	
		d Combination switch INPUT 5	Input	Combination switch	All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	I
87	Ground				Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 2.ms JPMIA0037GB 1.3 V	
(BR)	Glound				Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0039GB 1.3 V	ľ
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 0 2.ms JPMIA0040GB 1.3 V	(

	iinal No. e color)	Description				Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3 V	
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3 V	
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0039GB 1.3 V	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 2 ms JPMIA0040GB 1.3 V	
90 (P)	Ground	CAN-L	Input/ Output	_	1	_	
91 (L)	Ground	CAN-H	Input/ Output				

	inal No.	Description				Value
(Wire +	e color)	Signal name	Input/ Output		Condition	(Approx.)
Ŧ	_		Output		OFF	Battery voltage
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 15 15 15 15 15 15 15 15 15 15 15 15 15
					ON	0 V
93	<u> </u>		<b>.</b>		OFF or ACC	Battery voltage
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	0 V
94	Crowner	Duddlo lomo control	0	Duddle low-	OFF	Battery voltage
(Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V
95	Ground		Outrout	Ignition outtob	OFF	0 V
(BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T shift selector (De- tention switch) power supply	Output	_		Battery voltage
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V
(R)	Cround	tion switch	mpat		Any position other than P	Battery voltage
100 (G)	Ground	Passenger door re- quest switch	Input	Passenger door request switch	ON (Pressed) OFF (Not pressed)	0 V (V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 15 0 0 10 ms JPMIA0016GB 1.0 V
102 (BG)	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC ON	0 V Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OF	F	Battery voltage

	inal No. e color)	Description				Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 0 2 ms JPMIA0041GB 1.4 V
					Turn signal switch LH	(V) 15 0 2 ms JPMIA0037GB 1.3 V
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch LO	(V) 15 0 2 ms JPMIA0038GB 1.3 V
					Front washer switch ON	(V) 15 0 2 ms JPMIA0039GB 1.3 V

### < ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	0
(Wire +	e color) –	Signal name	Input/ Output	Condition		(Approx.)	А
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C D
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0038GB 1.3 V	E
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0036GB 1.3 V	G H
					Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	J K
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	M

Ρ

	inal No.	Description				Value	
	e color)	Signal name	Input/ Output	Condition		(Approx.)	
+	_				All switches OFF	(V) 15 0 2 ms JPMIA0041GB 1.4 V	
	109 (Y) Ground Combination switch Input Switch (Wiper i		Lighting switch PASS	(V) 15 10 2 ms JPMIA0037GB 1.3 V			
109 (Y)			Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 0 2 ms JPMIA0036GB 1.3 V	
					Front wiper switch INT	(V) 15 0 2 ms JPMIA0038GB 1.3 V	
					Front wiper switch HI	(V) 15 0 2 ms JPMIA0040GB 1.3 V	
					ON	0 V	
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 10 10 10 10 10 11 10 11 10 10	

Terminal No.		Description				Value	٨
(VVire +	e color) –	Signal name	Input/ Output	Condition		(Approx.)	A
113	Ground	Optical sensor	Innut	Ignition switch         When bright outside of the vehicle         Close to 5 V		Close to 5 V	В
(P)	Ground	Optical sensor	Input	ON	When dark outside of the vehicle	Close to 0 V	
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage	С
		Stop lamp switch 2		Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	D
118	Ground	(Without ICC)	Input		ON (Brake pedal is de- pressed)	Battery voltage	
(P)	Cround	Stop lamp switch 2	input		OFF (Brake pedal is not de- brake hold relay OFF	0 V	E
		(With ICC)			ON (Brake pedal is de- rake hold relay ON	Battery voltage	F
119 (SB)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 10 10 ms JPMIA0012GB 1.1 V	G H
				UNLOCK status (Unlock switch sensor ON)		0 V	I
121	Ground	Key slot switch	Input	-	nserted into key slot	Battery voltage	
(BR)	0.00.00		put	When the key is n	ot inserted into key slot	0 V	J
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V	
(W)					ON	Battery voltage	K
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 14 0 V	L
					ON (Door open)	11.8 V 0 V	WC
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1	O
				Ignition switch OFF or ACC		10.2 V Battery voltage	1

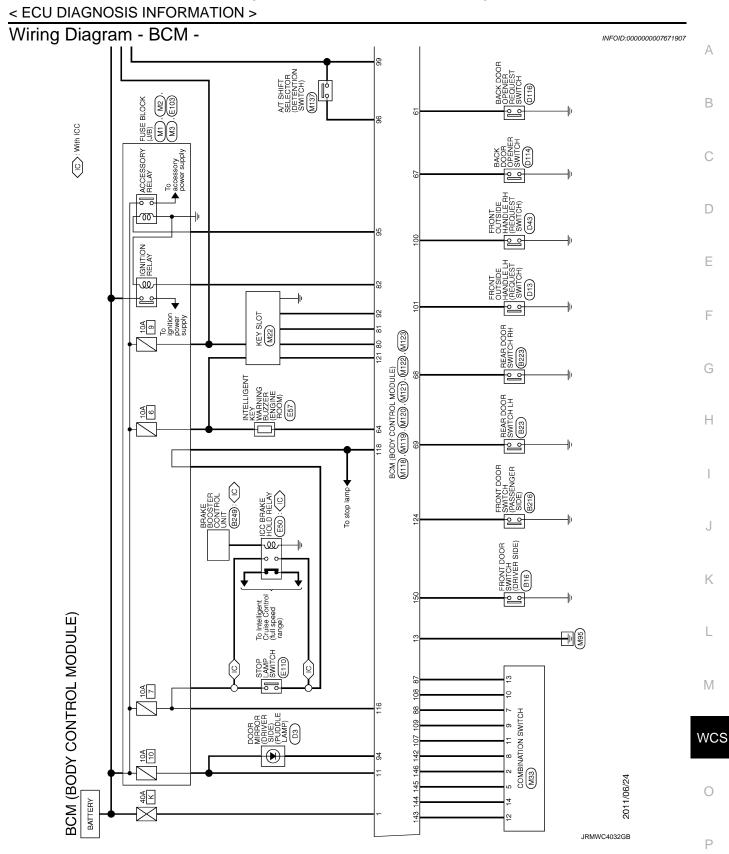
Wire olor)         Signal name         Input/ Output         Condition         Wile (Approx)           133 (W)         Groud         Push-button ignition switch illumination         Output         Push-button ignition switch illumination         Output         Push-button ignition switch illumination bright- eningdimming level.         ON (Tail lamps OFF)         5.5 V           133 (W)         Groud         Push-button ignition switch illumination         Output         Push-button ignition switch illumination         ON (Tail lamps ON)         Push-button ignition switch illumination bright- eningdimming level.           134 (W)         Groud         LOCK indicator lamp         Output         LOCK indicator lamp         OFF         0 V           137 (BG)         Groud         LOCK indicator lamp         Output         LOCK indicator lamp         OFF         0 V           138 (W)         Groud         CoCK indicator lamp         Output         Ignition switch ON         0 V         0 V           139 (L)         Groud         Receiver and sensor ground         Ignition switch         OFF         0 V         0 V           139 (L)         Groud         Tre pressure receiv- er communication         Ignition switch         OFF         0 V         0 V           139 (L)         Groud         Selector lever         Por N position	Terminal No.		Description				Value	
133 (W)     Ground     Push-button ignition switch illumination     Output     Push-button ignition tion switch illumin tion switch illumin ation     ON (Tail lamps ON)     NTE: The puse width of this wave is variable by the flumination bright- ening dimming level.       134 (K)     Ground     LOCK indicator lamp ground     Output     Push-button ignition ton switch illumin ation     ON (Tail lamps ON)     Imput Push-button ignition       134 (K)     Ground     LOCK indicator lamp ground     Output     LOCK indicator lamp     OFF     0 V       137 (BO)     Ground     Receiver and sensor ground     Input     Ignition switch ON     0 V       136 (L)     Ground     Receiver and sensor ground     Output     Ignition switch ON     0 V       139 (L)     Ground     Receiver and sensor ground     Output     Ignition switch ON     OFF     0 V       139 (L)     Ground     Tre pressure receiv- er communication     Input/ Output     Ignition switch ON     ON     OFF     0 V       139 (L)     Ground     Selector lever P/N opsition     Input/ Selector lever P/N     Input/ Selector lever     P or N position     Battery voltage Security indicator       140 (G)     Ground     Security indicator     Output     Security indicator     Output     Security indicator       141 (G)     Ground     Security indicator     Output <td></td> <td>-</td> <td>Signal name</td> <td></td> <td colspan="2">Condition</td> <td></td>		-	Signal name		Condition			
133     Ground     Push-button ignition switch illumination     Output     Push-button ignition nation     ON (Tail lamps ON)     The pushes witch of this wave is varied by the illumination bright- enngdmming level.       134     Ground     LOCK indicator lamp     Output     LOCK indicator lamp     OFF     0 V       136     Ground     Receiver and sensor ground     Output     LOCK indicator lamp     OFF     0 V       138     Ground     Receiver and sensor ground     Output     Ignition switch     OFF     0 V       138     Ground     Receiver and sensor ground     Output     Ignition switch     OFF     0 V       139     Ground     The pressure receiv- er communication     Output     Ignition switch     OFF     0 V       140     Ground     Selector lever PN position     Input     Ignition switch     Standby state     Imput       141     Ground     Selector lever PN position     Input     Selector lever     P or N position Except P and N positions     O V       141     Ground     Security indicator     Output     Security indicator     Output     Blinking     Imput       141     Ground     Security indicator     Output     Security indicator     Output     ON     ON     OV						ON (Tail lamps OFF)	9.5 V	
$ \begin{array}{ c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Ground		Output	tion switch illumi-	ON (Tail lamps ON)	The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 10 5	
134 (GR)       Ground       LOCK indicator lamp       Output       LOCK indicator lamp       OFF       Battery voltage         137 (BG)       Ground       Receiver and sensor ground       Input       Ignition switch ON       0 V         138 (Y)       Ground       Receiver and sensor power supply       Output       Ignition switch       OFF       0 V         138 (Y)       Ground       Receiver and sensor power supply       Output       Ignition switch       OFF       0 V         138 (L)       Ground       The pressure receiv- er communication       Input/ Output       Ignition switch Output       Standby state       Imput/ occosero       Imput/ occosero         139 (L)       Ground       The pressure receiv- er communication       Input/ Output       Ignition switch ON       Standby state       Imput/ occosero       Imput/ occosero         140 (GR)       Ground       Selector lever P/N position       Input       Selector lever       P or N position       Battery voltage         141 (G)       Ground       Security indicator       Output       Security indicator       Output       Security indicator       ON       OV         141 (G)       Ground       Security indicator       Output       Security indicator       Binking       Imput       Security indicator     <						OFF		
(GR)       Ground       LOCK indicator lamp       Output       lamp       ON       OV         137 (B)       Ground       Receiver and sensor ground       Input       Ignition switch ON       0 V         138 (Y)       Ground       Receiver and sensor power supply       Output       Ignition switch ON       0 V         138 (Y)       Ground       Receiver and sensor power supply       Output       Ignition switch       OFF       0 V         139 (L)       Ground       Tire pressure receiv- er communication       Input/ Output       Ignition switch ON       Standby state       Imput/ Standby state								
137 (BG)     Ground     Receiver and sensor ground     Input     Ignition switch ON     0 V       138 (Y)     Ground     Receiver and sensor power supply     Output     Ignition switch ON     0FF     0 V       139 (Y)     Ground     Receiver and sensor power supply     Output     Ignition switch     0FF     0 V       139 (L)     Ground     Tre pressure receiv- er communication     Input/ Output     Ignition switch ON     Standby state     Imput/ Standby state<		Ground	LOCK indicator lamp	Output				
(BG)     Ground     Receiver and sensor power supply     Output     Ignition switch     OFF     0 V       138 (Y)     Ground     Receiver and sensor power supply     Output     Ignition switch     OFF     0 V       139 (L)     Ground     Tire pressure receiv- er communication     Input/ Output     Ignition switch ON     Standby state     Imput/ Standby state     Imput/ Standby state     Imput/ Standby state     Imput/ Standby state       139 (L)     Ground     Tire pressure receiv- er communication     Input/ Output     Ignition switch ON     Imput/ Standby state     Imput/ Standby state     Imput/ Standby state     Imput/ Standby state       140 (GR)     Ground     Selector lever P/N position     Input     Selector lever     P or N position     Battery voltage       141 (G)     Ground     Security indicator     Output     Security indicator     Output     Security indicator       141 (G)     Ground     Security indicator     Output     Security indicator     Blinking     Imput/ Impu	-		Pacaivar and concer					
Coround (Y)       Ground power supply       Receiver and density power supply       Output       Ignition switch       ACC or ON       5.0 V         ACC or ON       5.0 V       ACC or ON       5.0 V       ACC or ON       5.0 V         Image: Accord on the supply         Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply         Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply         Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply         Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply         Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply         Image: Accord on the supply       Image: Accord on the supply       Image: Accord on the supply       Image: Acc		Ground		Input	Ignition switch ON	F	0 V	
$\begin{array}{c c c c c c }\hline (1) & power supply & V & ACC or ON & 5.0 V \\ \hline \\ \hline \\ 139 \\ (L) \\ \hline \\ (L) \\ (L$		Ground		Output	Ignition switch			
$ \begin{array}{ c c c c } 139 \\ (L) \\ (L$	(Y)		power supply			ACC or ON	5.0 V	
(L)       er communication       Output       ON         (L)       er communication       Output       ON         When receiving the signal from the transmitter       er output       er output         (GR)       Ground       Selector lever P/N position       Input       Selector lever         (GR)       Ground       Selector lever P/N position       Input       Selector lever         (G)       Ground       Security indicator       Output       Security indicator       ON         141       (G)       Ground       Security indicator       Output       Security indicator       Output         141       (G)       Ground       Security indicator       Output       Security indicator       ON       OV         141       (G)       Ground       Security indicator       Output       Security indicator       Output       Security indicator		Ground				Standby state	4 2 0 • • • 0.2s	
(GR)     Ground     Output     Selector lever     Except P and N positions     0 V       141 (G)     Ground     Security indicator     Output     Security indicator     ON     0 V       141 (G)     Ground     Security indicator     Output     Security indicator     Blinking     Imput     Imput	(L)		er communication	Output	ON			
(GR)     Ground     position     Input     Selector lever     Except P and N positions     0 V       141 (G)     Ground     Security indicator     Output     Security indicator     ON     0 V       141 (G)     Ground     Security indicator     Output     Security indicator     Blinking     Imput     Imput	140		Selector lever P/N	1		P or N position	Battery voltage	
141 (G)     Ground     Security indicator     Output     Security indicator     Blinking       Image: Blinking     Image: Blinking     Image: Blinking     Image: Blinking		Ground		input	Selector lever	Except P and N positions	0 V	
141 (G)     Ground     Security indicator     Output     Security indicator     Blinking       10     10       11.3 V						ON	0 V	
OFF Battery voltage		Ground	Security indicator	Output	Security indicator	Blinking	10 0 1 s JPMIA0014GB	
						OFF	Battery voltage	

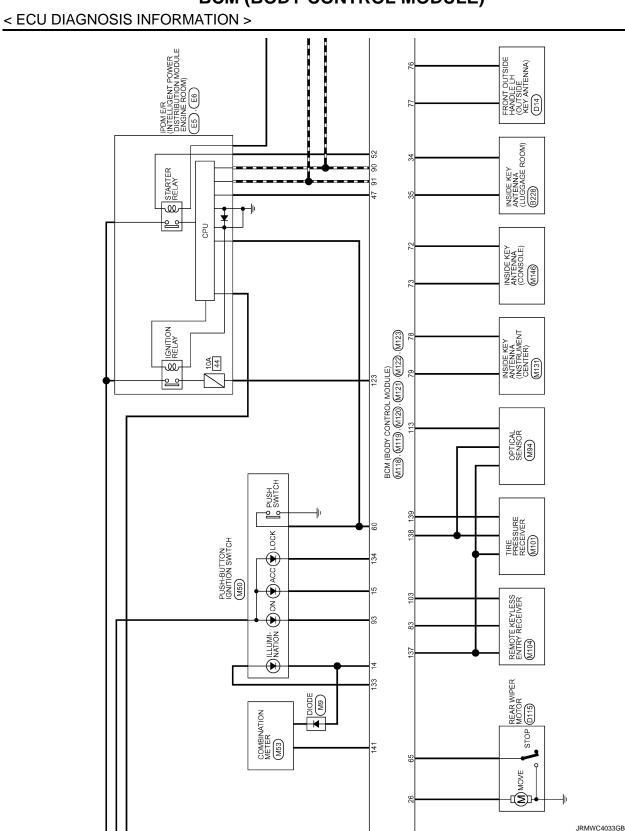
### < ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	0 V	
					All switches OFF (Wiper intermittent dial 4) Front wiper switch HI (Wiper intermittent dial 4)	10.7 V 0 V	
143	Ground	Combination switch OUTPUT 1	Output	Combination switch	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10	
(P)					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	о 2 ms 10.7 V	
					All switches OFF (Wiper intermittent dial 4)	0 V	
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Front washer switch ON (Wiper intermittent dial 4) Rear wiper switch ON (Wiper intermittent dial 4) Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0	
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	2 ms JPMIA0033GB 10.7 V	
					All switches OFF	0 V	
					Front wiper switch INT	(V)	
145 Grour (L)	Ground	Ground Combination switch OUTPUT 3 Output	Combination switch (Wiper intermit- tent dial 4)	Front wiper switch LO	15 10 5 0 2 ms JPMIA0034GB 10.7 V		

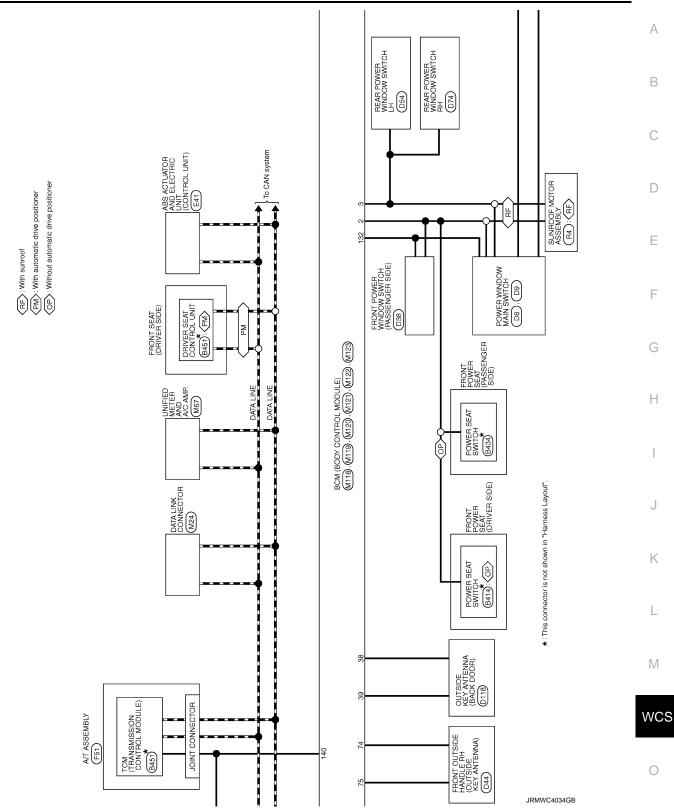
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Terminal No.		Description				Value
(Wire +	e color) -	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	0 V
					Front fog lamp switch ON	
				Combination	Lighting switch 2ND	(V) 15
146	Ground	Combination switch	Output	switch	Lighting switch PASS	
(SB)	Ground	OUTPUT 4	Output	(Wiper intermit- tent dial 4)	Turn signal switch LH	0 2 ms JPMIA0035GB 10.7 V
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 0 10 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
151	Ground	Rear window defog-	Output	Rear window de-	Active	0 V
(G)	2.54.14	ger relay control		fogger	Not activated	Battery voltage





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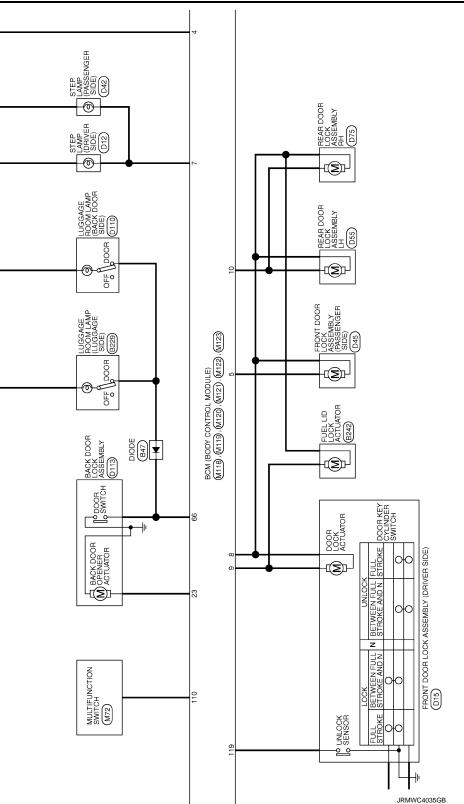


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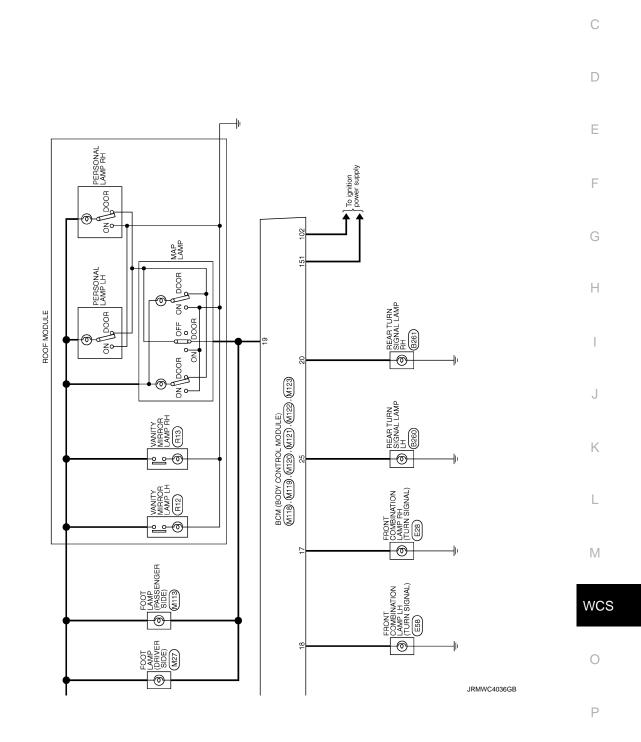
# BCM (BODY CONTROL MODULE)

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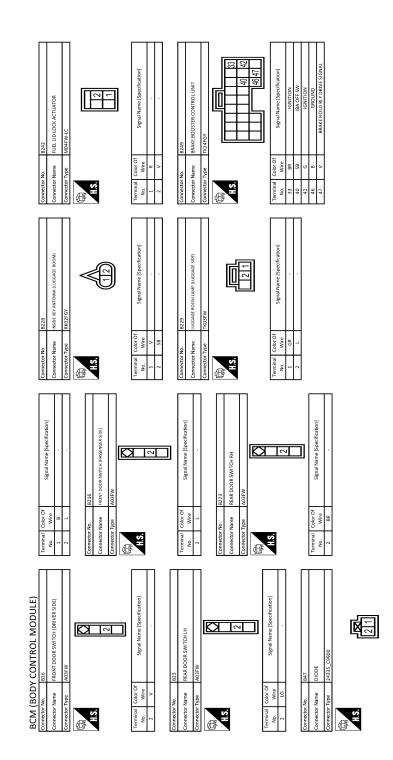


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В



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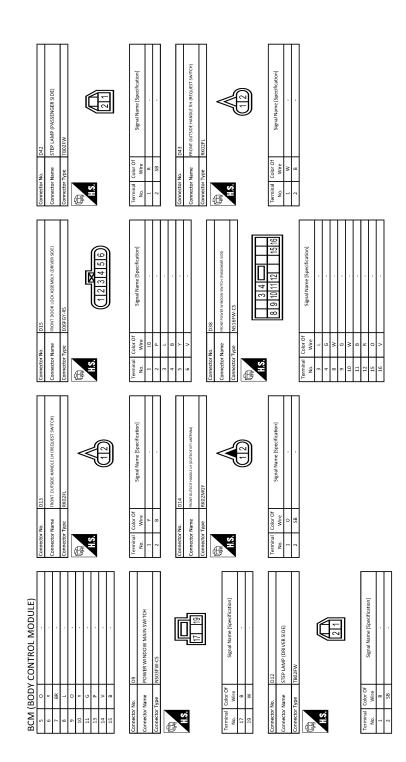
# BCM (BODY CONTROL MODULE) < ECU DIAGNOSIS INFORMATION >

#### А В 1 2 3 4 5 6 7 8 9 10 11 13 14 15 Signal Name [Specification] cation POWER WINDOW MAIN SWITCH DOOR MIRROR (DRIVER SIDE) Signal Name [Speci С 24 23 Color Of Wire D Color Of Wire BR Connector No. Connector Name Name Connector Type H.S. ALS. rminal ß Ŧ Ε Signal Name [Specification] F 1 3 9 10 17 19 21 24 25 26 DRIVER SEAT CONTROL UNIT G P/L GR B/W Color Of Wire n R/G W/B 6/B 6/B ector Name H.S. erminal No. 31 14 13 Œ Н Signal Name [Specification] Signal Name [Specification] 4 2 78 1 2 6591034 2 1 - 8 7 4 3 6 5 10 9 POWER SEAT SWITCH POWER SEAT SWITCH J L/R Color Of Wire Wire ¥}§ > ≤ nnector Name onnector Name Κ H.S. Terminal No. H.S. 9 01 ß ß L Signal Name [Specification] Signal Name [Specification] BCM (BODY CONTROL MODULE) Ð Ð REAR TURN SIGNAL LAMP RH REAR TURN SIGNAL LAMP LH Μ B261 WCS olor Of Wire innector Name nnector Name Connector No. H.S. ALS. 倨 E 0

JRMWG8099GB

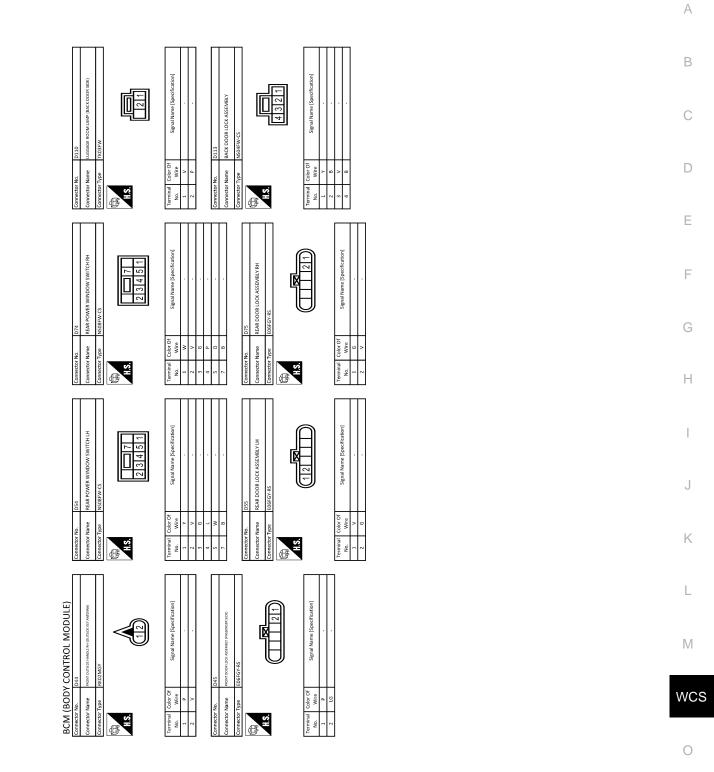
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BCM (BODY CONTROL MODULE)	
DIAGNOSIS INFORMATION >	



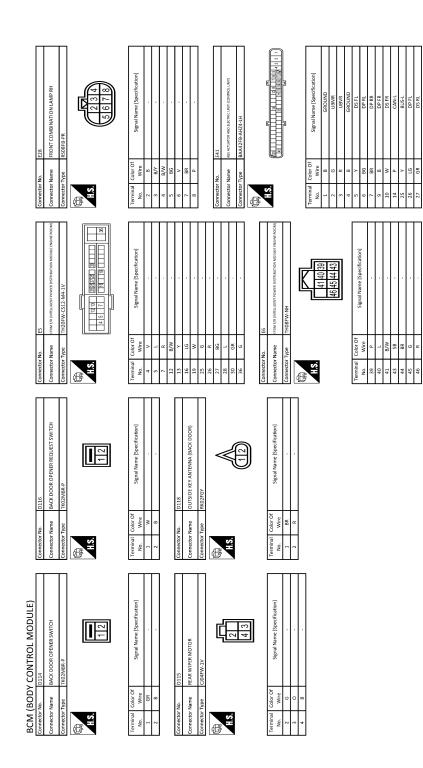
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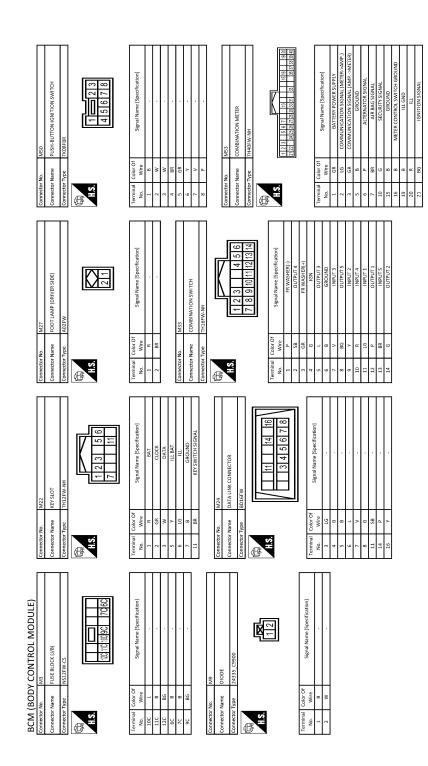
## **BCM (BODY CONTROL MODULE)** < ECU DIAGNOSIS INFORMATION >

А В Signal Name [Specification Signal Name [Specification] 3A 0 С FUSE BLOCK (J/B) FUSE BLOCK (J/B) Color Of Wire D olor C Wire Connector Name HS. Connector 7 Terminal No. H.S. erminal No. Connector 58 48 ß Ε Signal Name [Specification] Signal Name [Specification F 3 4 1 2 8 0 STOP LAMP SWITCH A/T ASSEMBLY G Color Of Wire Color O Wire Connector Name Name Connector Type Connector No. H.S. H.S. erminal No. erminal No. Ē E Н Signal Name [Specification] Signal Name [Specification] RONT COMBINATION LAMP LH 4F FUSE BLOCK (J/B) 96 J onnector Name s ۳ Name Connector No. Κ H.S. **I**IS. 9 đ E L Signal Name [Specification] BCM (BODY CONTROL MODULE) Signal Name [Specification] 2 67 4 3 **₹**-ICC BRAKE HOLD RELAY Μ ESO WCS nector No. nector Name nnector Name Connector No. H.S. H.S. Æ 倨 0

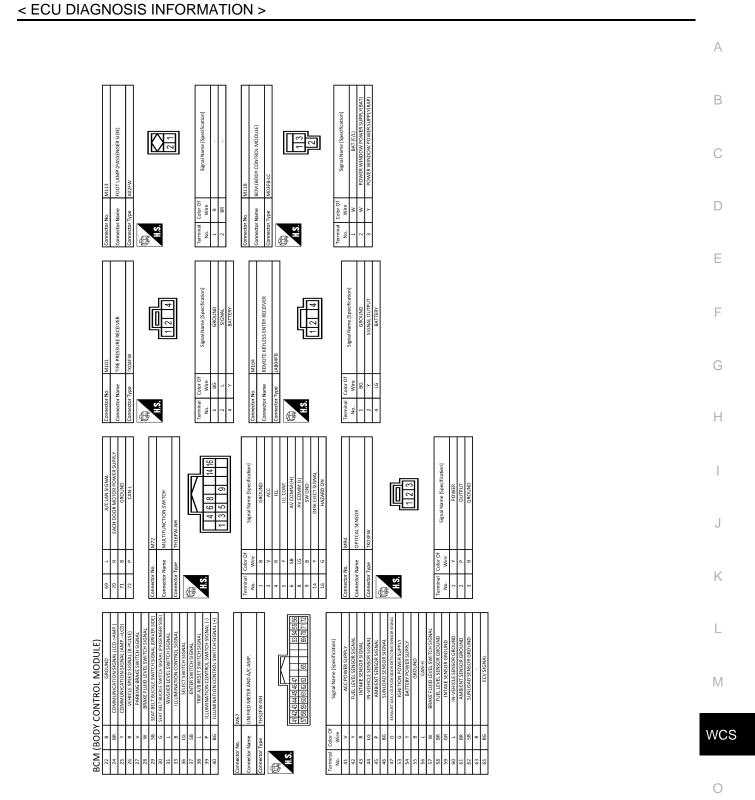
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### < ECU DIAGNOSIS INFORMATION >



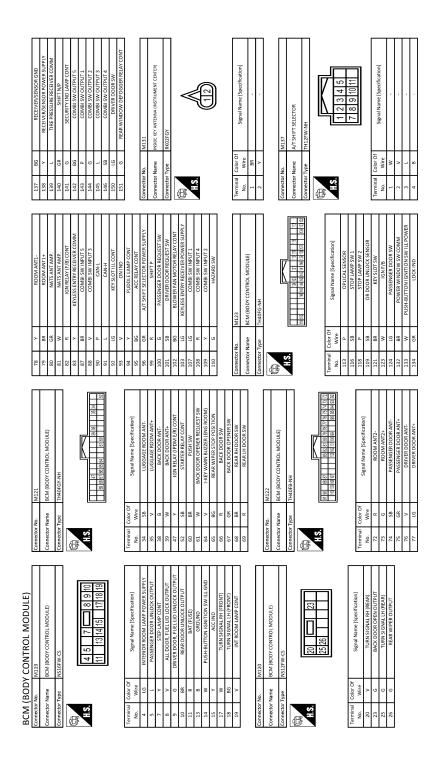
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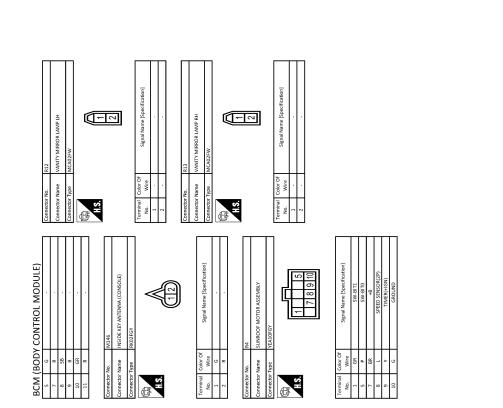
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# ECU DIAGNOSIS INFORMATION >



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### < ECU DIAGNOSIS INFORMATION >



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INFOID:000000007671908

# Fail-safe

### FAIL-SAFE CONTROL BY DTC

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

### < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch $ON \rightarrow OFF$
B2560: STARTER CONT RELAY	Inhibit engine cranking	<ul><li>500 ms after the following CAN signal communication status becomes consistent</li><li>Starter control relay signal</li><li>Starter relay status signal</li></ul>
B2608: STARTER RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following signal communication status becomes consistent</li> <li>Starter motor relay control signal</li> <li>Starter relay status signal (CAN)</li> </ul>
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	<ul><li>When any of the following conditions are fulfilled</li><li>Power position changes to ACC</li><li>Receives engine status signal (CAN)</li></ul>
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

### REAR WIPER MOTOR PROTECTION

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

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

Condition of cancellation

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

### DTC Inspection Priority Chart

INFOID:000000007671909

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	U1000: CAN COMM CIRCUIT     U1010: CONTROL UNIT (CAN)
3	<ul> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERENCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2195: ANTI SCANNING</li> </ul>

# < ECU DIAGNOSIS INFORMATION >

Priority	DTC	
	B2553: IGNITION RELAY	
	• B2555: STOP LAMP	
	B2556: PUSH-BTN IGN SW	
	B2557: VEHICLE SPEED	
	B2560: STARTER CONT RELAY	
	B2601: SHIFT POSITION	
	B2602: SHIFT POSITION	
	B2603: SHIFT POSI STATUS	
	• B2604: PNP SW	
	• B2605: PNP SW	
	B2608: STARTER RELAY	
4	B260A: IGNITION RELAY	
	B260F: ENG STATE SIG LOST	
	B2614: ACC RELAY CIRC     B2615: BLOWER RELAY CIRC	
	B2615: BLOWER RELAT CIRC     B2616: IGN RELAY CIRC	
	B2617: STARTER RELAY CIRC	
	• B2618: BCM	
	B261A: PUSH-BTN IGN SW	
	B261E: VEHICLE TYPE	
	B26EA: KEY REGISTRATION	
	C1729: VHCL SPEED SIG ERR	
	U0415: VEHICLE SPEED SIG	
	C1704: LOW PRESSURE FL	
	C1705: LOW PRESSURE FR	
	C1706: LOW PRESSURE RR	
	C1707: LOW PRESSURE RL	
	<ul> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> </ul>	
5	• C1710: [NO DATA] PR • C1710: [NO DATA] RR	
5	• C1711: [NO DATA] RL	
	C1716: [PRESSDATA ERR] FL	
	C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	C1734: CONTROL UNIT	
	B2621: INSIDE ANTENNA	
6	B2622: INSIDE ANTENNA	
	B2623: INSIDE ANTENNA	

# DTC Index

### NOTE:

The details of time display are as follows.

• CRNT: A malfunction is detected now.

• PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-18, "COM-MON ITEM : CONSULT Function (BCM - COMMON ITEM)"</u>.

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	O
No DTC is detected. further testing may be required.	_	_	_	_	_	
U1000: CAN COMM CIRCUIT	—	—	_	—	BCS-37	
U1010: CONTROL UNIT (CAN)	—	—	—	—	BCS-38	
U0415: VEHICLE SPEED SIG	—	—	—	—	BCS-39	

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CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2190: NATS ANTENNA AMP	×	_	_	_	<u>SEC-40</u>
B2191: DIFFERENCE OF KEY	×			_	SEC-43
B2192: ID DISCORD BCM-ECM	×	_	_	_	<u>SEC-44</u>
B2193: CHAIN OF BCM-ECM	×	_			<u>SEC-45</u>
B2195: ANTI SCANNING	×	_	_	_	<u>SEC-46</u>
B2553: IGNITION RELAY	—	×	—	—	PCS-48
B2555: STOP LAMP	_	×			<u>SEC-47</u>
B2556: PUSH-BTN IGN SW	_	×	×	_	<u>SEC-49</u>
B2557: VEHICLE SPEED	×	×	×	—	<u>SEC-51</u>
B2560: STARTER CONT RELAY	×	×	×	—	<u>SEC-52</u>
B2562: LOW VOLTAGE	_	×			BCS-40
B2601: SHIFT POSITION	×	×	×	_	<u>SEC-53</u>
B2602: SHIFT POSITION	×	×	×	_	<u>SEC-56</u>
B2603: SHIFT POSI STATUS	×	×	×		<u>SEC-59</u>
B2604: PNP SW	×	×	×	_	<u>SEC-62</u>
B2605: PNP SW	×	×	×	—	<u>SEC-64</u>
B2608: STARTER RELAY	×	×	×	_	<u>SEC-66</u>
B260A: IGNITION RELAY	×	×	×	_	PCS-50
B260F: ENG STATE SIG LOST	×	×	×	—	<u>SEC-68</u>
B2614: ACC RELAY CIRC	—	×	×	—	PCS-52
B2615: BLOWER RELAY CIRC	_	×	×		PCS-55
B2616: IGN RELAY CIRC	—	×	×	—	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	—	<u>SEC-71</u>
B2618: BCM	×	×	×	—	PCS-61
B261A: PUSH-BTN IGN SW	_	×	×	—	<u>SEC-73</u>
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-76</u>
B2621: INSIDE ANTENNA	_	×	—	—	DLK-60
B2622: INSIDE ANTENNA	—	×	—	—	DLK-62
B2623: INSIDE ANTENNA	_	×	—		DLK-64
B26E1: ENG STATE NO RES	×	×	×	_	<u>SEC-69</u>
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-70</u>
C1704: LOW PRESSURE FL	—	—	—	×	
C1705: LOW PRESSURE FR	_	_	_	×	
C1706: LOW PRESSURE RR	_	—	—	×	<u>WT-23</u>
C1707: LOW PRESSURE RL	_	—	_	×	
C1708: [NO DATA] FL	_	_	_	×	
C1709: [NO DATA] FR	_	_	_	×	W/T 05
C1710: [NO DATA] RR	_	—	—	×	<u>WT-25</u>
C1711: [NO DATA] RL	—	_	—	×	

### < ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi- tion	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	A
C1716: [PRESSDATA ERR] FL	—			×		
C1717: [PRESSDATA ERR] FR	—	—	—	×		С
C1718: [PRESSDATA ERR] RR	—	—	—	×	<u>- WT-28</u>	0
C1719: [PRESSDATA ERR] RL	—	—		×		
C1729: VHCL SPEED SIG ERR	—	—	—	×	<u>WT-30</u>	D
C1734: CONTROL UNIT	—	_		×	<u>WT-32</u>	

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

### < SYMPTOM DIAGNOSIS >

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

## Description

INFOID:000000007455793

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

# Diagnosis Procedure

INFOID:000000007455794

# 1. CHECK PARKING BRAKE WARNING LAMP

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

Parking brake is applied	: ON
Parking brake is released	: OFF

Is the inspection result normal?

YES >> Replace combination meter.

NO >> GO TO 2.

2. CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

Perform a check for the parking brake switch signal circuit. Refer to <u>MWI-67. "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

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

**3.**CHECK PARKING BRAKE SWITCH UNIT

Perform a unit check for the parking brake switch. Refer to MWI-67, "Component Inspection".

Is the inspection result normal?

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

# THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >	
THE LIGHT REMINDER WARNING DOES NOT SOUND	А
Description INFOID:00000007455795	~
Light reminder warning chime does not sound even though headlamp is illuminated.	В
Diagnosis Procedure	
<b>1.</b> CHECK COMBINATION SWITCH (LIGHTING SWITCH) OPERATION	С
Check that the headlamps operate normally by operating the combination switch (lighting switch).	
<u>Do they operate normally?</u> YES >> GO TO 2.	D
NO >> Refer to <u>EXL-197, "Symptom Table"</u> (xenon type) or <u>EXL-373, "Symptom Table"</u> (halogen type).	
<b>2.</b> CHECK FRONT DOOR SWITCH (DRIVER SIDE) SIGNAL CIRCUIT	Е
Perform the check for the front door switch (driver side) signal circuit. Refer to <u>DLK-67, "Diagnosis Procedure"</u> . Is the inspection result normal?	
YES >> Replace BCM. Refer to <u>BCS-92, "Removal and Installation"</u> . NO >> Repair or replace malfunctioning parts.	F
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# THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND < SYMPTOM DIAGNOSIS >

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

Description	:000000007455797
<ul> <li>Seat belt warning does not sound even though driver seat belt is not fastened.</li> <li>Seat belt warning sounds even though driver seat belt is fastened.</li> </ul>	
Diagnosis Procedure	:0000000007455798
1.CHECK SEAT BELT WARNING LAMP	
<ol> <li>Turn ignition switch ON.</li> <li>Check the operation of the seat belt warning lamp in the combination meter.</li> </ol>	
Seat belt fastened : OFF Seat belt not fastened : ON	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	
Check the buckle switch input signal with the "Data Monitor". Refer to "Component Function Check".         Is the inspection result normal?         YES       >> Replace unified meter and A/C amp.         NO       >> GO TO 3. <b>3.</b> CHECK SEAT BELT BUCKLE SWITCH CIRCUIT	<u>WCS-24,</u>
Perform the check for the seat belt buckle switch circuit. Refer to <u>WCS-24</u> , "Diagnosis Procedure". <u>Is the inspection result normal?</u> YES >> Replace unified meter and A/C amp. NO >> Repair harness or connector. <b>4.</b> CHECK SEAT BELT BUCKLE SWITCH UNIT Perform a unit check for the seat belt buckle switch. Refer to WCS-25. "Component Inspection."	

Perform a unit check for the seat belt buckle switch. Refer to <u>WCS-25, "Component Inspection"</u>. <u>Is the inspection result normal?</u>

YES >> Replace combination meter.

NO >> Replace seat belt buckle. Refer to <u>SB-8. "SEAT BELT BUCKLE : Removal and Installation"</u>.

# < PRECAUTION > PRECAUTION PRECAUTIONS

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

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

### WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

### WARNING:

Always observe the following items for preventing accidental activation.

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

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