# SECTION WCS WARNING CHIME SYSTEM

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# **CONTENTS**

BASIC INSPECTION 3
DIAGNOSIS AND REPAIR WORKFLOW
SYSTEM DESCRIPTION5
WARNING CHIME SYSTEM5
WARNING CHIME SYSTEM
WARNING CHIME SYSTEM : Component Parts Location6 WARNING CHIME SYSTEM : Component De- scription6
LIGHT REMINDER WARNING CHIME       7         LIGHT REMINDER WARNING CHIME : System       7         Diagram       7         LIGHT REMINDER WARNING CHIME : System       7         Description       7         LIGHT REMINDER WARNING CHIME : System       7         LIGHT REMINDER WARNING CHIME : Component Parts Location       8         LIGHT REMINDER WARNING CHIME : Component Description       8
SEAT BELT WARNING CHIME
SEAT BELT WARNING CHIME : System Descrip- tion
PARKING BRAKE RELEASE WARNING CHIME 10 PARKING BRAKE RELEASE WARNING CHIME : System Diagram

PARKING BRAKE RELEASE WARNING CHIME : System Description	F
DIAGNOSIS SYSTEM (UNIFIED METER AND A/C AMP.)13	Н
CONSULT Function (METER/M&A)13	1
DIAGNOSIS SYSTEM (BCM)17	
COMMON ITEM	J
BUZZER18 BUZZER : CONSULT Function (BCM - BUZZER)18	K
DTC/CIRCUIT DIAGNOSIS20	
POWER SUPPLY AND GROUND CIRCUIT 20	L
COMBINATION METER20 COMBINATION METER : Diagnosis Procedure20	M
	M WC
COMBINATION METER : Diagnosis Procedure20 UNIFIED METER AND A/C AMP	
COMBINATION METER : Diagnosis Procedure20 UNIFIED METER AND A/C AMP	WC
COMBINATION METER : Diagnosis Procedure20 UNIFIED METER AND A/C AMP	W <b>C</b>

	_
Component Function Check 24	
Diagnosis Procedure 24	
Component Inspection 25	
WARNING CHIME SYSTEM 26	
Wiring Diagram - WARNING CHIME 26	
ECU DIAGNOSIS INFORMATION 32	
COMBINATION METER	
Reference Value	
Wiring Diagram - METER	
Fail-Safe	
DTC Index	
UNIFIED METER AND A/C AMP48	
Reference Value 48	
Wiring Diagram - METER 55	
Fail-Safe	
DTC Index67	
BCM (BODY CONTROL MODULE) 69	
Reference Value 69	
Wiring Diagram - BCM 93	
Fail-safe107	
DTC Inspection Priority Chart108	
DTC Index109	

SYMPTOM DIAGNOSIS	.112
THE PARKING BRAKE RELEASE WARNING CONTINUES SOUNDING, OR DOES NOT	
SOUND	
Description Diagnosis Procedure	
THE LIGHT REMINDER WARNING DOES	
NOT SOUND	
Description	
Diagnosis Procedure	. 113
THE SEAT BELT WARNING CONTINUES	
SOUNDING, OR DOES NOT SOUND	.114
Description	. 114
Diagnosis Procedure	. 114
PRECAUTION	.115
PRECAUTIONS	115
Precaution for Supplemental Restraint System	.115
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	
SIONER"	. 115

< BASIC INSPECTION >

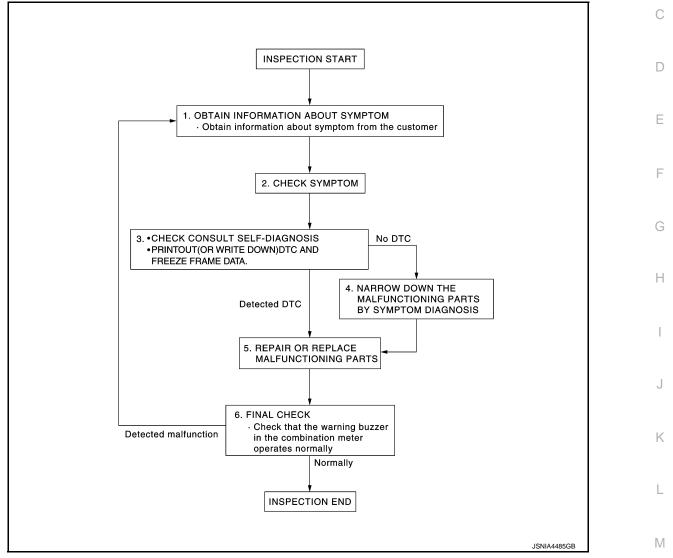
# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

#### 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 MWI-109, "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.

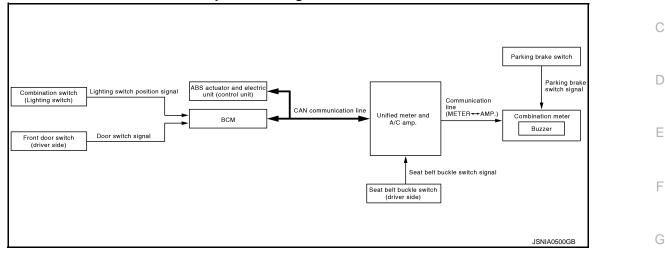
#### < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

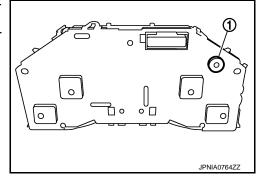
## WARNING CHIME SYSTEM : System Diagram



## 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>	
Seat belt warning chime	Seat belt buckle switch signal	

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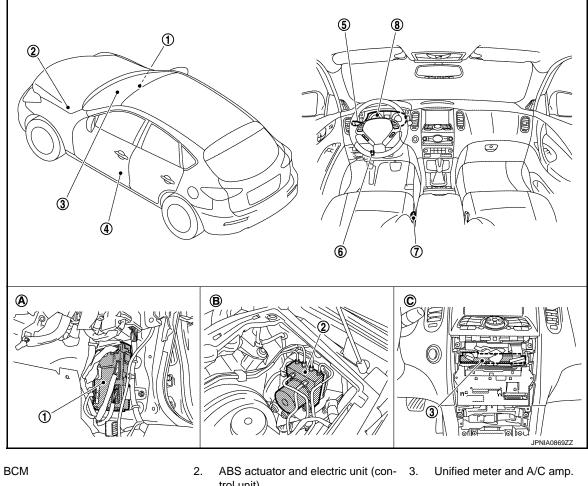
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#### < SYSTEM DESCRIPTION >

## WARNING CHIME SYSTEM : Component Parts Location

#### INFOID:000000009064515



4. Front door switch (driver side)

1.

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

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## WARNING CHIME SYSTEM : Component Description

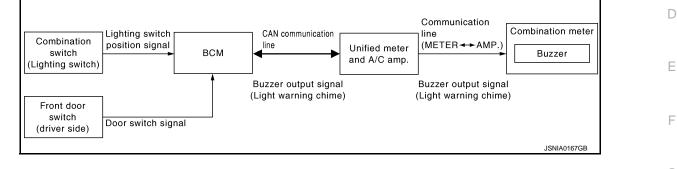
Unit	Description		
Combination meter	<ul> <li>Receives a buzzer output signal from the unified meter and A/C amp. and sounds the buzzer.</li> <li>Judges whether the parking brake is released from the vehicle speed signal received from the unified meter and A/C amp. with CAN communication line and the 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 com- 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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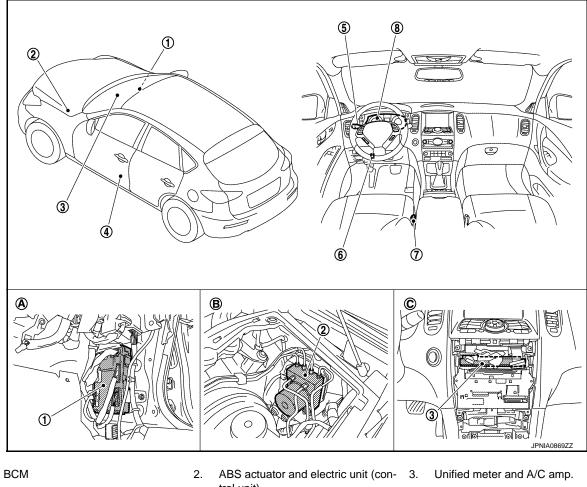
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#### < SYSTEM DESCRIPTION >

## LIGHT REMINDER WARNING CHIME : Component Parts Location

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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

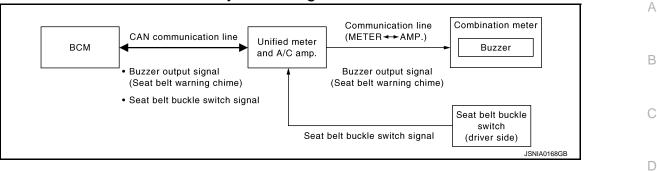
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Unit	Description
Combination meter	Receives a buzzer output signal from the unified meter and A/C amp. and sounds the buzzer.
Unified meter and A/C amp.	Receives a buzzer output signal from BCM via CAN communication line and transmits it to the com- 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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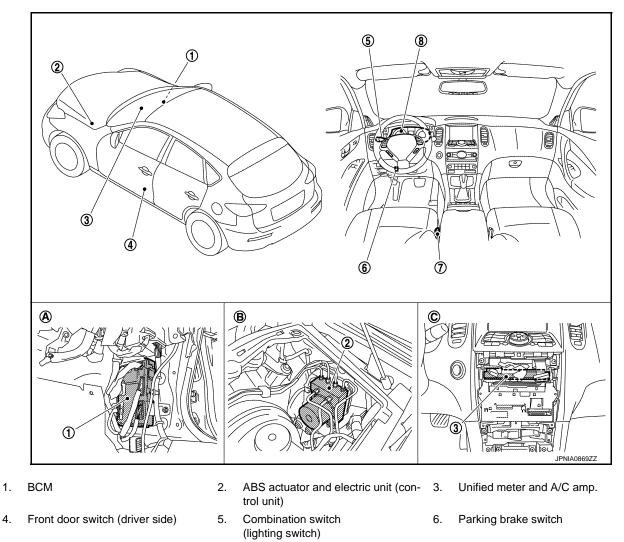
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#### < SYSTEM DESCRIPTION >

## 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.

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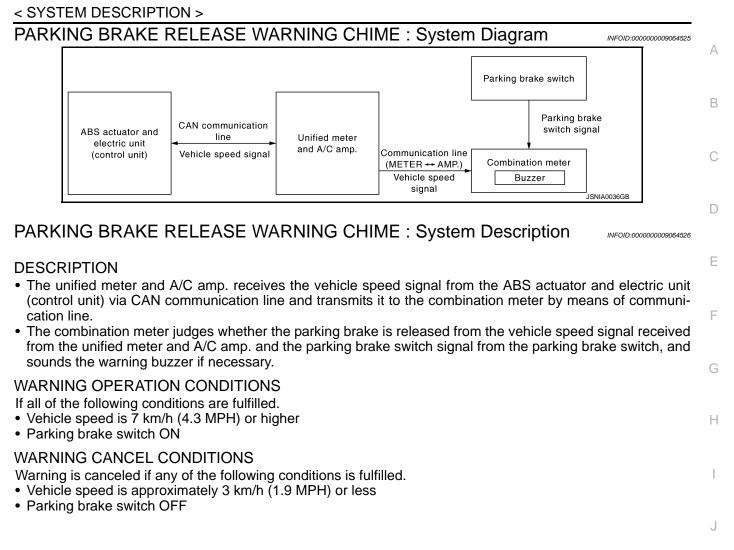
Behind cluster lid C

C.

## 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>
ВСМ	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 <u>WCS-24, "Description"</u> .

## PARKING BRAKE RELEASE WARNING CHIME



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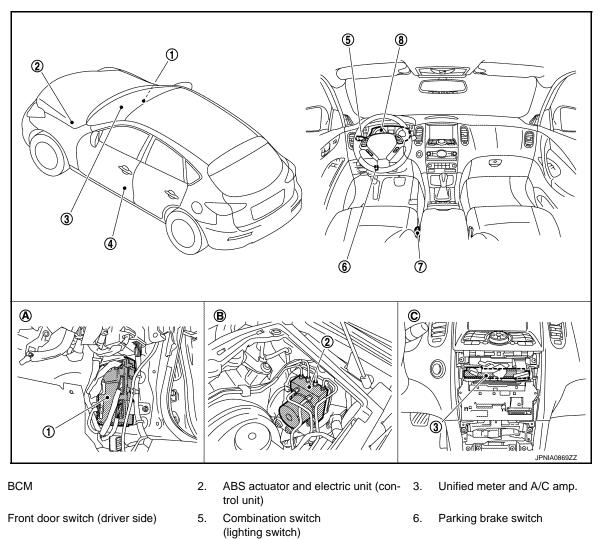
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#### < SYSTEM DESCRIPTION >

PARKING BRAKE RELEASE WARNING CHIME : Component Parts Location

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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

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.

System	Diagnosis mode	Description	0
	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-109, "DTC Index".

#### DATA MONITOR

#### NOTE:

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

**Display Item List** 

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. <b>NOTE:</b> 8191.875 is displayed when the malfunction signal is received.
FUEL METER [L]	х	Fuel level indicated on combination meter.
W TEMP METER [°C] or [°F]	x	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.

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#### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
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,
DOOR W/L		the parking brake switch is turned ON or the brake fluid level switch is turned ON. Status of door warning judged from door switch signal received from BCM with
[On/Off] HI-BEAM IND		CAN communication line.
[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 BCM 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 ECM with CAN communication line.</li> <li>Status of SET indicator judged from meter display signal received from ICC sensor integrated unit with CAN communication line.</li> </ul>
CRUISE W/L [On/Off]		Status of CRUISE warning lamp judged from ICC warning lamp signal received 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 re- 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 received from TCM with CAN communication line.
4WD W/L [On/Off]		Status of AWD warning lamp judged from AWD warning lamp signal received from 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.

#### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description		
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.		
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.		
LCD [B&P N, B&P I, ID NG, ROTAT, SFT P, INSRT, BATT, NO KY, OUTKY, LK WN]		Displays status of Intelligent Key system warning judged from meter display signal received from BCM with CAN communication line.		
ACC TARGET [On/Off]		Status of vehicle ahead detection indicator judged from meter display signal re- ceived from ICC sensor integrated unit with CAN communication line.		
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.		
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.		
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.		
O/D OFF SW [Off]		This item is displayed, but cannot be monitored.		
AT S MODE SW [On/Off]		Status of snow mode switch.		
AT P MODE SW [Off]		This item is displayed, but cannot be monitored.		
M RANGE SW [On/Off]		Status of manual mode switch.		
NM RANGE SW [On/Off]		Status of non-manual mode switch.		
AT SFT UP SW [On/Off]		Status of manual mode shift up switch.		
AT SFT DWN SW [On/Off]		Status of manual mode shift down switch.		
ST SFT UP SW [Off]		This item is displayed, but cannot be monitored.		
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.		
4WD LOCK SW [Off]		This item is displayed, but cannot be monitored.		
PKB SW [On/Off]		Status of parking brake switch.		
BUCKLE SW [On/Off]		Status of seat belt buckle switch (driver side).		

Revision: 2013 March

#### < SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description	
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.	
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]	х	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.	

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

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

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#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	_
Work Support	Changes the setting for each system function.	_
Self Diagnostic Result	Displays the diagnosis results judged by BCM.	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.

				$\times$ : Applicable item	_
System	Sub system selection item	Diagnosis mode			
	Sub system selection tem	Work Support	Data Monitor	Active Test	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	
Interior room lamp timer	INT LAMP	×	×	×	
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×	×	×	
Turn signal and hazard warning lamps	FLASHER	×	×	×	
	AIR CONDITONER*				
<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	×	×	×	ľ
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:000000009064531

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

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

## DATA MONITOR

#### NOTE:

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

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	J
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).	ĸ
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).	_
		L

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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	Ballery vollage

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	
M53	5	Ground		
	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:000000009290875

INFOID:000000009290874

1.CHECK FUSE

Check for blown fuses.

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

P	ower source			Fuse No.	
	Battery			11	
Ignition	switch ACC	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 CIR(				
0		•			
	Term	inals			
Unified meter and A/C amp.	(+) Terminal	Signal name	(-)	Ignition switch position	Value (Approx.)
	54	Battery power supply		OFF	
M67	41	ACC power supply	Ground	ACC	Battery voltage
	53	Ignition signal		ON	
. Check continuity bet Unified meter and				connector and ground.	
Connector	Terminal	Crowned	Co	ontinuity	
M67	55 71	Ground	E	Existed	
<u>s the inspection result n</u> YES >> INSPECTIO NO >> Repair harne BCM (BODY CON BCM (BODY CON	N END ess or con TROL N	IODULE)	osis Proce	edure	INF01D:000000009354965
<b>1.</b> CHECK FUSE AND F	USIBLE L	INK			
Check that the following	fuse and f	usible link are not blov	wn.		
Sig	gnal name			Fuse and fusible link N	0.
Battery	power supp	ly		K 10	
s the fuse fusing?				10	
-	blown fus	e or fusible link after	repairing the	e affected circuit if a fu	se or fusible link is

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:00000000064535	A
<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
	I
BUZZER Under the condition of buzzer input : On	0
Except above : Off	G
Is the inspection result normal?	
YES >> Replace combination meter. NO >> Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u> .	Н
Diagnosis Procedure	
1. CHECK POWER SUPPLY OF COMBINATION METER	I
Check power supply of combination meter. Refer to <u>MWI-55, "COMBINATION METER : Diagnosis Proce-</u>	
dure".	J
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair power supply circuit of combination meter.	K
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> : Diagnosis Procedure".	L
Is the inspection result normal?	
YES >> INSPECTION END	$\mathbb{M}$
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	Ground		
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.

 ${
m 3.}$ 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:000000009064539

INFOID:000000009064540

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

56	eat belt buckles	switch (driver side)			-
	nector	Terminal	Ground	Continuity	
	B13	2		Existed	-
the inspe	ection result	normal?			
	> INSPECTI > Repair har	ON END ness or connector.			
;ompon	ent Inspe	ction			INFOID:000000009064541
.CHECK	SEAT BELT	T BUCKLE SWITCH UN	ЛТ		
. Discor		h OFF. at belt buckle switch co etween terminals.	nnector.		
Ter	rminal	Condition	Continuity	,	
		When seat belt is fastened	Not existed	4	
1	2				
1	2	When seat belt is unfasten			
the inspe	ection result	When seat belt is unfasten normal?			
<u>s the inspe</u> YES >:	ection result	When seat belt is unfasten normal?	ed Existed		Installation".
<u>s the inspe</u> YES >:	ection result	When seat belt is unfasten normal? ON END	ed Existed		Installation".
<u>s the inspe</u> YES >:	ection result	When seat belt is unfasten normal? ON END	ed Existed		Installation".
<u>s the inspe</u> YES >:	ection result	When seat belt is unfasten normal? ON END	ed Existed		Installation".

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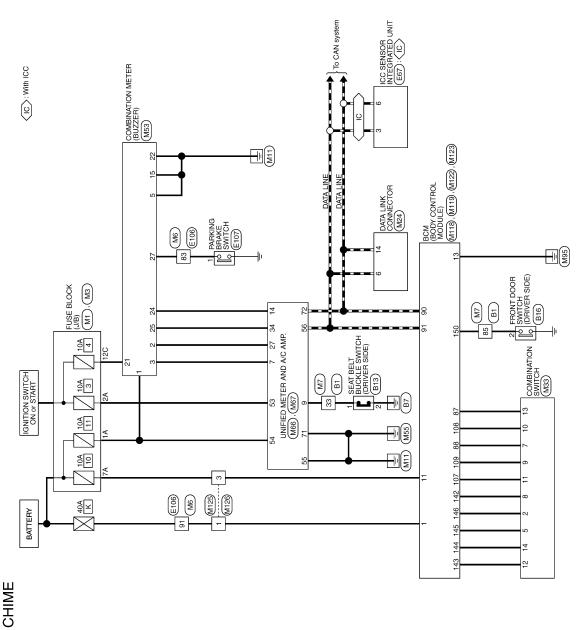
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#### < DTC/CIRCUIT DIAGNOSIS >

## WARNING CHIME SYSTEM

Wiring Diagram - WARNING CHIME -

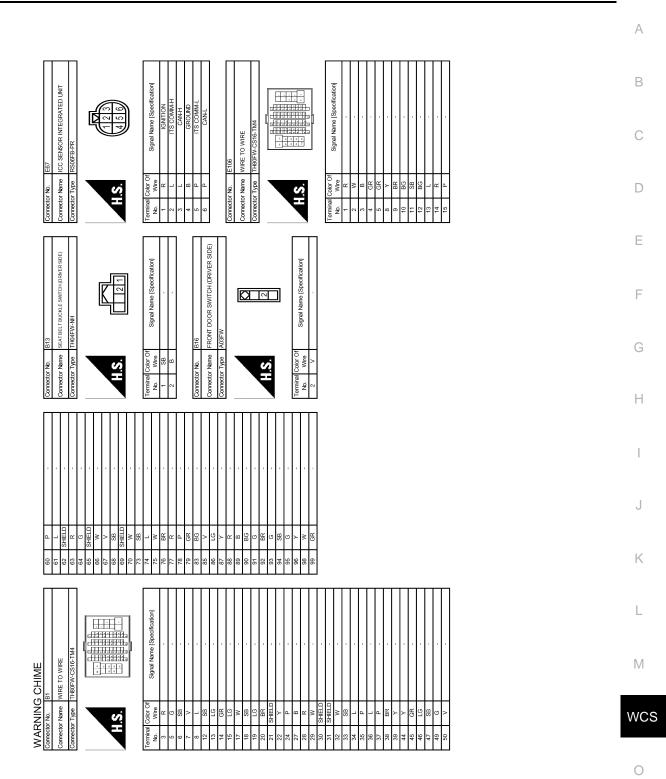
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WARNING CHIME

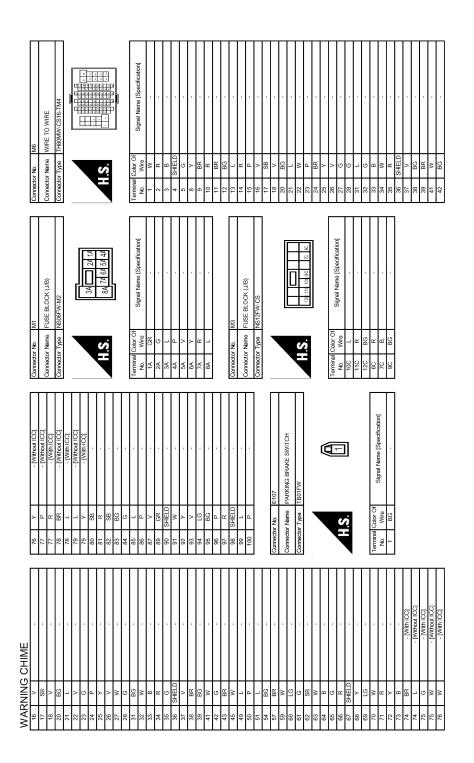
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#### < DTC/CIRCUIT DIAGNOSIS > 11 14 16 3 4 5 6 7 8 Signal Name [Specification] Signal Name [Specification] DATA LINK CONNECTOR COMBINATION SWITCH TH16FW-NF olor Of Wire Connector Name onnector Name Connector Type olor C Wire rector Type H.S.H പ≻ nnector No. H.S.H SB Ś 9

LC BG ≷ଞ୍ଞରିର BR

-	-		MZ	WIRE TO WIRE	TH80MW-CS16-TM4					Signal Name [Specification]	<ul> <li>IWith automatic drive positioner]</li> </ul>	- [Without automatic drive positioner]	ľ	-	-	-	-				-				-	-	-	-	-	-	-	-		ŧ.	1	-	-		-	
SHIELD	SB		No.	r Name	r Type	•		Ч.S.H		Color Of Wire	BB	M	U	BG	W	8	SB	LG	≻	U	> 8	99 S	28	SHELD	≻	>	в	W	۳	SHIELD	_	۹.	33	_	٩	_	٩	BR	Y	-
86 66	100		Connector No.	Connector Name	Connector Type					Terminal	i n	e	2	9	7	8	12	13	14	15	1	18	2	21	22	24	27	28	29	30	31	32	8	¥.	35	36	37	38	39	44
		Г	П	Т	П		П	Т	П	П	Т	Т	Г						Т		Т	Т	Т	Т	Г	Г						Т	Т	Т	Т			Т		

CHIME			-		ı			-		-		-			-						-	- [With ICC]	- [Without ICC]		- [Without ICC]	Ľ	- [Without ICC]	- [With ICC]	- [With ICC]	<ul> <li>[Without ICC]</li> </ul>	- [Without ICC]	- [With ICC]													·					
	23	٦	٩	BR	≻	σ	>	_	U	SB	9	8	M	æ	SHIELD	Y	GR	ŋ	g	≻	ß	BR	-	0	GR	M	۵.	æ	-	ч	M	≻	BS	BS	SB	^	9	T	۵.	W	GR	SHIELD	N	≻	BR	۵.	ЯÐ	M	-	
WAR	45	49	50	51															71	72	73	74	74	75	76	76	17	22	78	78	62	52	08	81	82						L	L		L				96	26	

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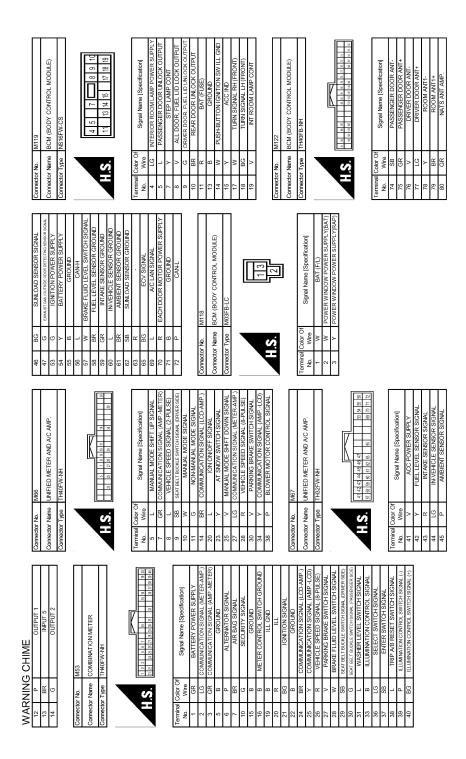
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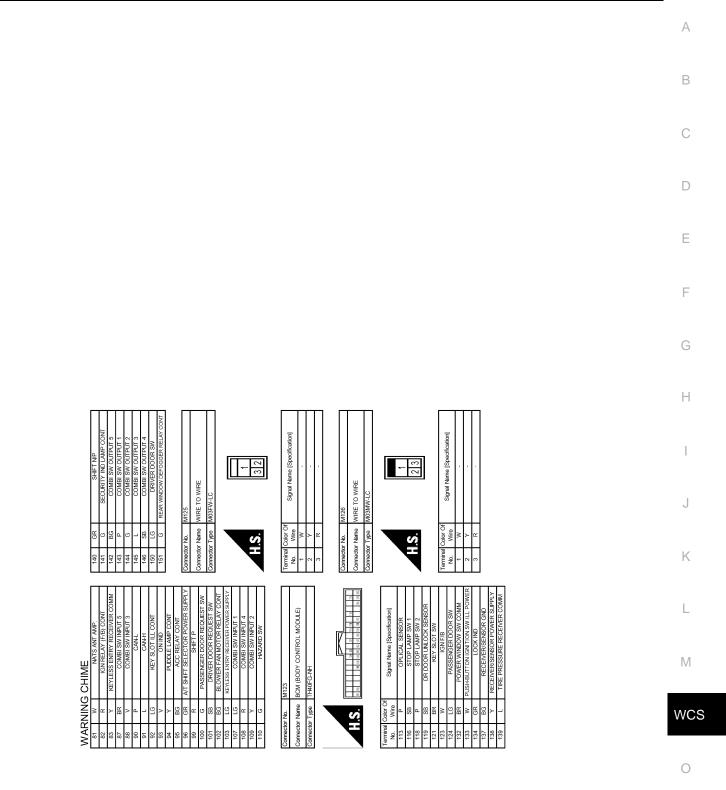
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#### < DTC/CIRCUIT DIAGNOSIS >



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#### < DTC/CIRCUIT DIAGNOSIS >



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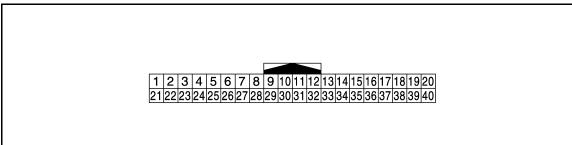
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# ECU DIAGNOSIS INFORMATION COMBINATION METER

## **Reference Value**

VALUES ON THE DIAGNOSIS TOOL Refer to <u>WCS-48. "Reference Value"</u>.

## **TERMINAL LAYOUT**



JPNIA1324ZZ

INFOID:000000009290877

## PHYSICAL VALUES

	nal No. color)	Description			Condition	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→ AMP.)	Output	Ignition switch ON		(V) 6 2 0 4 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 5 5 5 5 5
3 (GR)	Ground	Communication signal (AMP.→ METER)	Input	Ignition switch ON		(V) 0 0 0 0 0 0 0 0 0 0 0 0 0
5 (B)	Ground	Ground	_	Ignition switch ON	_	0 V
6	Orrest		المحدية	Ignition	Charge warning lamp ON	0 V
(P)	Ground	Alternator signal	Input	switch ON	Charge warning lamp OFF	Battery voltage
7		A. I		Ignition	Air bag warning lamp ON	4 V
(BR)	Ground	Air bag signal	Input	switch ON	Air bag warning lamp OFF	0 V
10				Ignition	Security warning lamp ON	0 V
(G)	Ground	Security signal	Input	switch OFF	Security warning lamp OFF	12 V

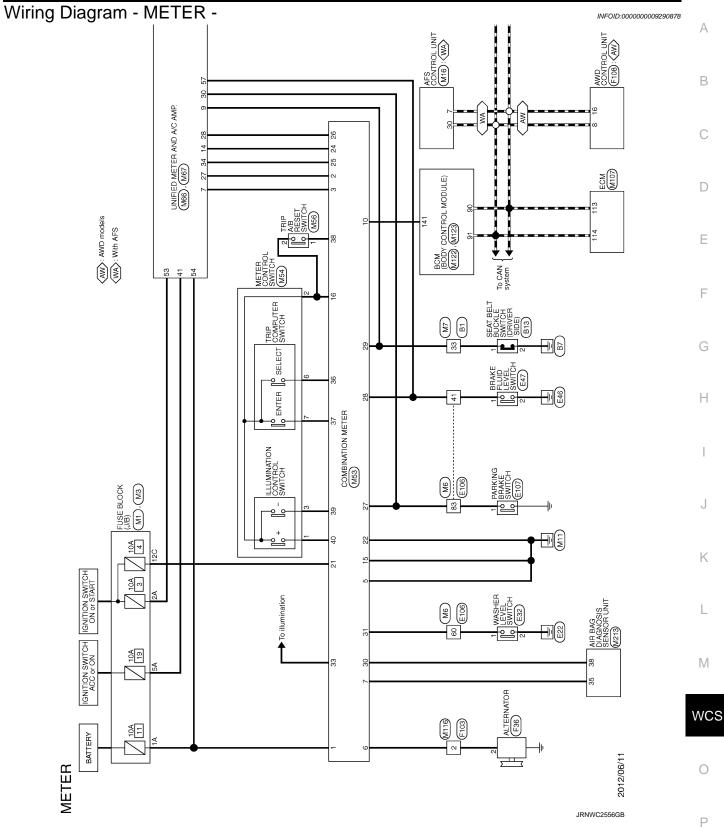
#### < ECU DIAGNOSIS INFORMATION >

	nal No. 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	lgnition switch ON		(V) 15 10 50 ■ ■ ■ 400 µs JSNIA0028GB
25 (Y)	Ground	Communication signal (AMP. $\rightarrow$ LCD)	Input	Ignition switch ON		(V) 6 2 0 2 2 2 0 2 2 0 2 2 0 4 2 0 2 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 2 0 4 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 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	lgnition switch ON	Parking brake is released	(V) 8 4 0 10 ms JSNIA0007GB
28 (W)	Ground	Brake fluid level switch sig- nal	Input	Ignition switch ON	Brake fluid level is normal. The brake fluid level is low- er than the low level	5 V 0 V

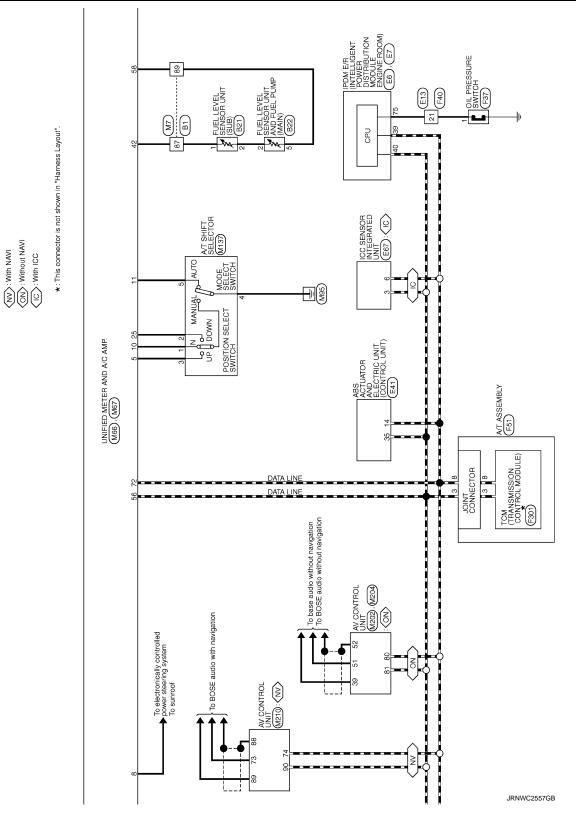
#### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value
+	_	Signal name	Input/ Output	Condition		(Approx.)
29 (SB)	Ground	Seat belt buckle switch sig- nal (driver side)	Input	Ignition switch ON	When driver seat belt is fas- tened	12 V
					When driver seat belt is un- fastened	0 V
30 (G)	Ground	Seat belt buckle switch sig- nal (passenger side)	Input	Ignition switch ON	<ul><li>When getting in the passenger seat</li><li>When passenger seat belt is fastened</li></ul>	12 V
					<ul><li>When getting in the passenger seat</li><li>When passenger seat belt is unfastened</li></ul>	0 V
31	Crownd	Mashar loval awitch aignal	lanut	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 (B)	Select switch signal	Input	Ignition switch ON	When 🛑 is pressed	0 V
(LG)					Other than the above	5 V
37 (SB)	16 (B)	Enter switch signal	Input	Ignition switch ON	When 🖵 is pressed	0 V
					Other than the above	5 V
38	16 (B)	Trip A/B reset switch signal	Input	Ignition switch ON	When trip A/B reset switch is pressed	0 V
(L)					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)	Illumination control switch signal (+)	Input	Ignition switch ON	When 🛷 + switch is pressed	0 V
(/					Other than the above	5 V

## < ECU DIAGNOSIS INFORMATION >

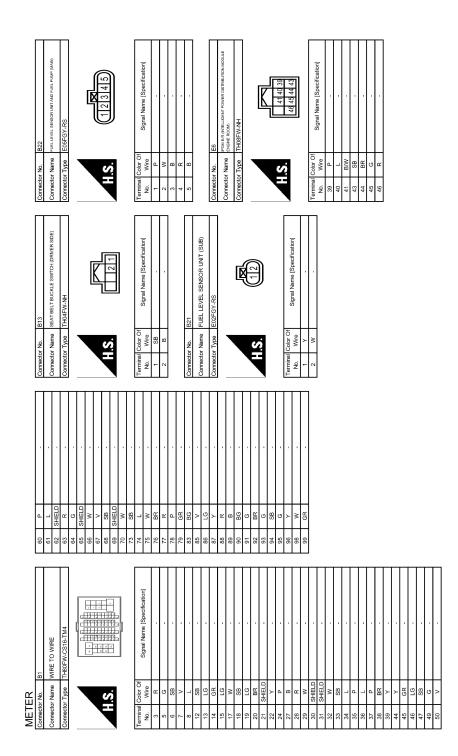


## < ECU DIAGNOSIS INFORMATION >



Revision: 2013 March

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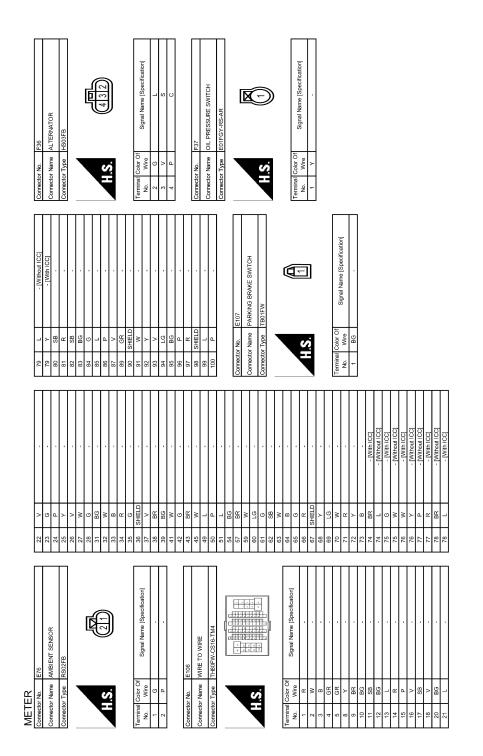
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Specification HH HH HH HH HH HH HH HH HH H	В
BLS       VUD OFF SW       VUD OFF SW       CANH       BRAKE FLUID LEVEL SWITCH       VUDEGV       VUDEGV       Sgnal Name [Specification]	С
30     5B       31     1       33     1       45     1       1     W       1     W       2     B       3     1       3     1       1     W       0     Connector Name       0     Connector Name       0     Connector Name       1     W       0     Connector Name       1     W       0     Connector Name       1     W       2     1       3     1       5     1       6     1	D
Interaction frequencies out the second secon	E
E22 WASHER LEVEL SWITCH ZOPEBR E11 ALE ACTIVATION BANATER ATTACH ALE ACTIVATION BANATER ATTACH BANATER ATTACH B	F
tor No. Color Name color Nam	G
Comme         Comme           0         0           10         1           23         2           23         2	Н
	I
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	K
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E7 State and state out state to out state to out and the state ou	Μ
METER Connector Name Connector Name Connect	WCS

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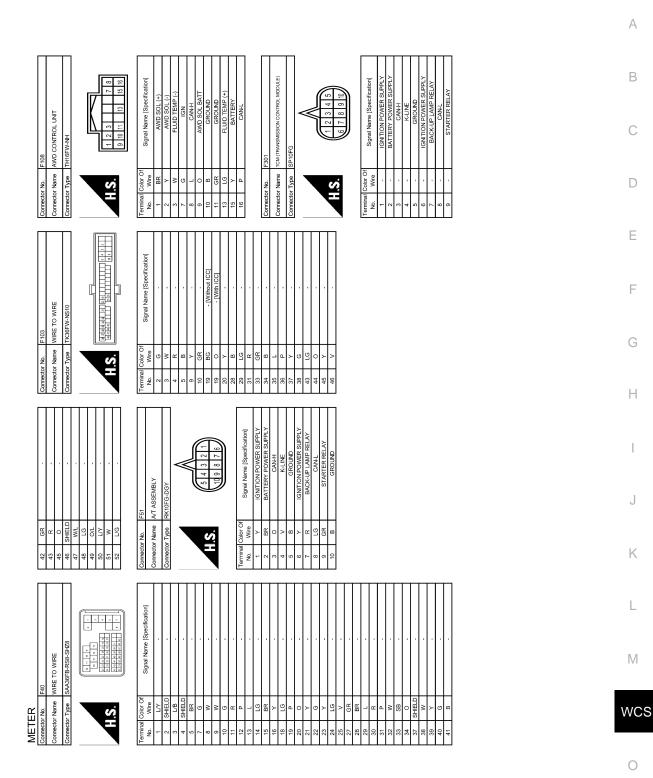
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# < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >

METER									
10 - GROUND	Connector No.	· No. M6		43	BG		98	SHIELD	
				45	M		đ	>	
	Connector Name	Name WIRE TO WIRE		49	-	,	100	8	,
Connector No M1	Connector Tyne	TVne THROMW.CS16.TM4		ç,					
		and a second sec		6	8				
Connector Name FUSE BLOCK (J/B)				5	; >		Connector No	tor No	MZ
Connector Type NS06FW-M2			×	22	. c			-	
			1	269	>		Connec	Connector Name	WIRE TO WIRE
	Ę		8 8 8	99	-		Connec	Connector Type	TH80MW-CS16-TM4
		<u>.</u>	00 H	61	U				
3A				62	ß				9
				63	σ				
DA 11 DO	Terminal	Color Of Simulation Control	addaad aad	64	m				111
	Ö N	Wire olymai name jop	concentral	65	M			ý	
	-	- _		99	æ	,		į	
a	2	к,		67	SHIELD				
Wire Jugual Walle	e	- 8		68	≻				
-	4	SHIELD -		69	В		Terminal	al Color Of	Cinnel Name (Consideration)
σ	5	0		20	C		N	Wire	
-	80	- -		71	P		m	ß	<ul> <li>[With automatic drive positioner]</li> </ul>
4A P -	6	BR -		72	Y		е	N	<ul> <li>[Without automatic drive positioner]</li> </ul>
5A V -	10			73	89	,	2	U	-
6A Y	11	BR -		74	BR	- [With ICC]	9	BG	
×	12	BG		74	-	- [Without ICC]	2	>	,
	10			75	0	-	~ ~		
	14			76	a C	- [Without ICC]	4	a.	
	t 4			92	5 ≥	- [With ICC]	4 5	3 9	
Connector No M3	16			12	•	- [Without ICC]	14	>	
	17	• <del>.</del>			- ~	- [With ICC]	t fé	. c	
Connector Name FUSE BLOCK (J/B)	e e			42	-	- rwith ICCI	2	> >	
Connector Type NS12FW-CS	20			78	· ~	- [Without ICC]	9	5	
	21			79	>	- [Without ICC]	6	P	
	22	~ _		62	≻	- [With ICC]	20	BR	
	23	۰ ط		80	ß		21	SHIELD	
	24	BR -		81	SB		22	×	
	25	۲ -		82	SB		24	^	
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	27	- 9		84	σ		28	N	
	28			85	L		29	ч	
al	31			86	٩		30	SHIELD	
Wire Jighan wante	32			87	M		31	_	
L L	33	- 8		68	В	,	32	٩	
_	34	- M		6	SHIELD		33	SB	
BG	35	ч.		91	M		34	_	
Я	36	SHIELD -		92	Y		35	٩.	
7C B -	37	- ·		93	BR		36	L	
9C BG -	38	BG -		94	٩		37	٩	
	39	BR -		95	GR		38	BR	
	41			96	N		39	۲	
	42	BG		67	٦		44	L	

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TCH CH C	В
M64 METER CONTROL SWITCH TH127MW-NH TH127MW-NH R166 R171 Signal Name [Specification] Signal Name	С
Connector No. Connector No. Connec	D
Image: Constraint of the image of the im	E
M53 COMBINATION METER THAGPKWAH THAGPKWAH THAGPKWAH THAGPKWAH THAGPKWAH THAGPKWAH THAGPKWAH THAGPKATION SIGNAL THAGPKATION SIGNAL THERWATION SIGNAL THUMMATION SIGNAL THUMMATI	F
	G
	Н
M16 AFS CONTROL UNT THUGFWANH Signal Name [Speaffraction] Signal Name	I
	J
Connector No.         Connector Name           Connector Name         Connector Name           Connector Name         Connector Name           Connector Name         Connector Name           No.         No.           No.         No.      <	K
Connecton Connec	TX
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A       A	WCS
A 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	

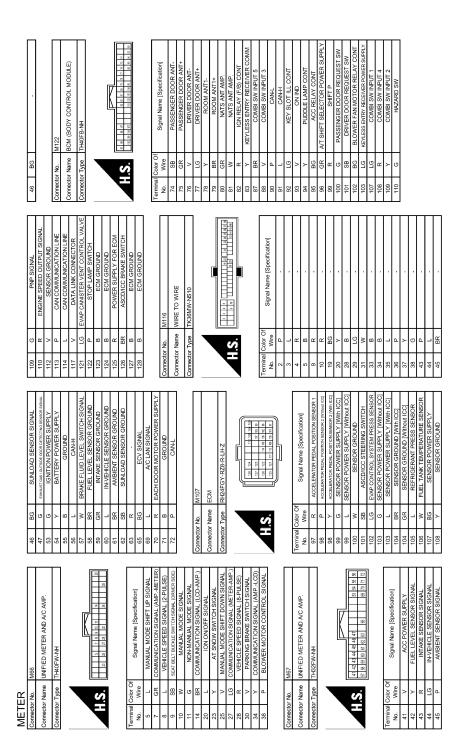
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## **COMBINATION METER**

#### < ECU DIAGNOSIS INFORMATION >



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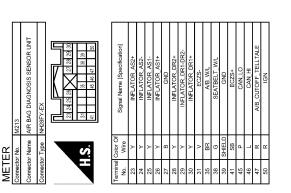
	А
NTROL UNIT       ANH       ANH       Baller Ball       Baller Baller Baller       Baller Baller       Baller Baller       MicRophone StateL       MicRophone StateL       MicRophone StateL       MicRophone StateL       MicRophone StateL       Av colomit       Av colomit       Av colomit	В
M210 AV CONTROL LWIT TH2EFWAH TH2EFWAH Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] Signal Name [Specification] PARKING BRAKE SIGNAL MICROPHONE SHELD MICROPHONE SHELD MICROPHONE SIGNAL VEHICLE STEEPES SIGNAL VEHICLE STEEPES SIGNAL MICROPHONE SHELD MICROPHONE SIGNAL VEHICLE STEEPES SIGNAL MICROPHONE SIGNAL	С
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CouPosite Invice Storut GND Couposite Invice Storut GND Couposite Invice Storut GND Couposite Invice Storut GND NETER VCC NETER GND MICONTOSP) SHELD S	F
46         V         00           47         3         8           47         5         9           51         51         7           55         51         7           57         52         9           57         52         9           58         54         10           77         52         10           78         10         10           79         26         14           70         26         14           73         10         10           73         10         10           73         10         10           73         10         10           81         1         10           93         7         10           93         7         10           96         7         10           96         7         10	G
	Н
Infr Selector     MANH       MANH     1       Infr Selector     1       Signal Name [Specification]     1       Signal Name [Speci	Ι
M137           17H12F           17H2F           17H2F	J
Connector         Connector           Connector         Connector           No.         1           10         1           11         1           10         1           11         1           10         1           11         1           11         1           12         3           13         1           13         1           14         1           13         1           14         1           15         1           16         1           17         1           17         1           18         1           19         1           10         1           11         1           12         1           13         1           14         1           15         1           16         1           17         1           18         1           19         1           10         1           10         1           11	К
N0L MODULE)	L
M123 BCM (BODY CONTROL MODULE) THADFG-MH THADFG-MH Signal Name (Specification) OPICICAL SENSOR Signal Name (Specification) OPICICAL SENSOR Signal Name (Specification) OPICICAL SENSOR Signal Name (Specification) OPICICAL SENSOR Signal Name (Specification) OPICICAL SENSOR POWER SINDOR SU PLANE NO OPICICAL SENSOR Name (Specification) OPICICAL SENSOR Signal Name (Specification) COMBI SW OUTPUT 1 COMBI SW OUTP	Μ
METER Connector Name Connector Name Connector Name Connector Name Connector Name 116 123 124 124 123 129 124 129 129 129 137 137 137 138 138 138 138 138 138 138 138	WCS
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# COMBINATION METER < ECU DIAGNOSIS INFORMATION >

< ECU DIAGNOSIS INFORMATION >



JRNWC3634GB

INFOID:000000009290879

# Fail-Safe

#### 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.

## **WCS-46**

#### < ECU DIAGNOSIS INFORMATION >

	Function	Specifications	
Speedometer			
Tachometer		Reset to zero by suspending 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	The lamp turns on by suspending communication	
	CRUISE warning lamp	<ul> <li>The lamp turns on by suspending communication.</li> </ul>	
	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 WCS-67, "DTC Index".

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### < ECU DIAGNOSIS INFORMATION >

# UNIFIED METER AND A/C AMP.

## **Reference Value**

INFOID:000000009290881

### VALUES ON THE DIAGNOSIS TOOL

#### NOTE:

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

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
	ON	Fuel filler cap warning display OFF	Off
ABS W/L	Ignition switch	ABS warning lamp ON	On
ABS W/L	ON	ABS warning lamp OFF	Off
	Ignition switch	VDC OFF indicator lamp ON	On
VDC/TCS IND ON		VDC OFF indicator lamp OFF	Off
SLIP IND	Ignition switch	VDC warning lamp ON	On
	ON	VDC warning lamp OFF	Off
RAKE W/L	Ignition switch	Brake warning lamp ON	On
	ON	Brake warning lamp OFF	Off
DOOR W/L	Ignition switch	Door warning displayed	On
DOORWE	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	<b>NOTE:</b> This item is displayed, but cannot be monitored.	Off

Monitor Item		Condition	Value/Status	^
LIGHT IND	Ignition switch	Tail lamp indicator lamp ON	On	- A
	ŌN	Tail lamp indicator lamp OFF	Off	-
	Ignition switch	Oil pressure warning lamp ON	On	В
OIL W/L	<b>ON</b>	Oil pressure warning lamp OFF	Off	-
	Ignition switch	Malfunction warning lamp ON	On	-
MIL	ŎN	Malfunction warning lamp OFF	Off	С
GLOW IND	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off	D
C-ENG2 W/L	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off	E
	Ignition switch	CRUISE indicator displayed	On	-
CRUISE IND	ŎN	CRUISE indicator not displayed	Off	-
	Ignition switch	SET indicator lamp ON	On	F
SET IND	ÖN	SET indicator lamp OFF	Off	-
	Ignition switch	CRUISE warning lamp ON	On	G
CRUISE W/L	ÖN	CRUISE warning lamp OFF	Off	_ 0
	Ignition switch	IBA OFF indicator lamp ON	On	-
3A W/L	ŎN	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	ÖN	AWD warning lamp OFF	Off	-
4WD LOCK IND	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off	J
	Ignition switch	Low-fuel warning lamp displayed	On	- K
FUEL W/L	ŎN	Low-fuel warning lamp not displayed	Off	-
	Ignition switch	Washer warning displayed	On	-
WASHER W/L	ÖN	Washer warning not displayed	Off	- L
AIR PRES W/I Ignition switch		Low tire pressure warning lamp ON	On	-
AIR PRES W/L ON		Low tire pressure warning lamp OFF	Off	N
	Ignition switch	Key warning lamp ON	On	
KEY G/Y W/L	ŎN	Key warning lamp OFF	Off	-
	Ignition switch	AFS OFF indicator lamp ON	On	W
AFS OFF IND	ÖN	AFS OFF indicator lamp OFF	Off	-
WAS/RAS W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off	C
DDS W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off	P
	Ignition switch	Lane departure warning lamp ON	On	-
_ANE W/L	ON	Lane departure warning lamp OFF	Off	-
	Ignition switch	LDP ON indicator lamp ON	On	-
LDP IND	ON	LDP ON indicator lamp OFF	Off	-

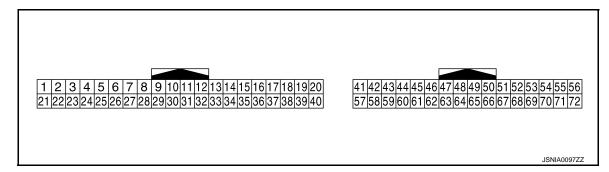
Monitor Item		Condition	Value/Status
DCA IND	Ignition switch	DCA switch indicator displayed	On
DCAIND	ON	DCA switch indicator not displayed	Off
BSW W/L	Ignition switch	BSW warning lamp ON	On
B3W W/L	ON	BSW warning lamp OFF	Off
	Ignition switch ON	Engine start information display	B&P I
	Ignition switch ACC	Engine start information display	B&P N
	Ignition switch LOCK	Key ID warning display	ID NG
	Ignition switch LOCK	Steering lock information display	ROTAT
LCD	Ignition switch LOCK	P position warning display	SFT P
	Ignition switch LOCK	Intelligent Key insert information display	INSRT
	Ignition switch LOCK	Intelligent Key low battery warning display	BATT
	Ignition switch ON	Take away warning display	NO KY
	Ignition switch LOCK	Key warning display	OUTKY
	Ignition switch ON	ACC warning display	LK WN
	Ignition switch	Vehicle ahead detection indicator displayed	On
ACC TARGET	ON	Vehicle ahead detection indicator not dis- played	Off
		When following distance set to "LONG"	LONG
ACC DISTANCE	Ignition switch	When following distance set to "MIDDLE"	MID
ACC DISTANCE	ON	When following distance set to "SHORT"	SHORT
		Set distance indicator not displayed	Off
ACC OWN VHL	Ignition switch	Own vehicle indicator displayed	On
	<b>ON</b>	Own vehicle indicator not displayed	Off
	Ignition switch	Set vehicle speed indicator not displayed	Off
ACC SET SPEED	ŎN	Set vehicle speed indicator displayed	Indicates the set vehicle speed
	Ignition switch	Set vehicle speed indicator unit display ON	On
ACC UNIT	<b>ON</b>	Set vehicle speed indicator unit display OFF	Off

Monitor Item		Condition	Value/Status
		Shift position indicator P display	Р
		Shift position indicator R display	R
		Shift position indicator N display	N
		Shift position indicator D display	D
		Shift position indicator DS display	L
	Ignition switch	Shift position indicator M1 display	M1
SHIFT IND	<b>ON</b>	Shift position indicator M2 display	M2
		Shift position indicator M3 display	M3
		Shift position indicator M4 display	M4
		Shift position indicator M5 display	M5
		Shift position indicator M6 display	M6
		Shift position indicator M7 display	M7
O/D OFF SW	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off
	Ignition switch	Snow mode switch ON	On
AT S MODE SW	ON	Snow mode switch OFF	Off
AT P MODE SW	Ignition switch ON	NOTE: This item is displayed, but cannot be moni- tored.	Off
	Ignition switch	Selector lever manual mode position	On
M RANGE SW	ŎN	Other than the above	Off
	Ignition switch	Selector lever manual mode position	Off
NM RANGE SW	ŎN	Other than the above	On
	Ignition switch	Selector lever + position	On
AT SFT UP SW	ŎN	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	NOTE: This item is displayed, but cannot be moni- tored.	Off
ST SFT DWN SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off
COMP F/B SIG		A/C compressor activation condition	On
	ŌN	A/C compressor deactivation condition	Off
4WD LOCK SW	Ignition switch ON	<b>NOTE:</b> This item is displayed, but cannot be moni- tored.	Off
	Ignition switch	Parking brake switch ON	On
PKB SW	<b>ON</b>	Parking brake switch OFF	Off
	Ignition switch	Driver seat belt not fastened	On
BUCKLE SW	ON	Driver seat belt fastened	Off
	Ignition switch	Brake fluid level switch ON	On
BRAKE OIL SW	ON	Brake fluid level switch OFF	Off
DISTANCE [km]	Ignition switch ON	_	Possible driving distance calculated by unified meter and A/C amp.

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item		Condition	Value/Status
OUTSIDE TEMP [°C] or [°F]	Ignition switch ON		Equivalent to ambient temperature <b>NOTE:</b> This may not match the indicated val- ue on the information display.
FUEL LOW SIG	Ignition switch ON	Low-fuel warning signal output	On
FUEL LOW SIG		Low-fuel warning signal not output	Off
BUZZER	Ignition switch	Buzzer ON	On
DUZZER	ON	Buzzer OFF	Off

### TERMINAL LAYOUT



## PHYSICAL VALUES

	nal No. color)	Description			Condition	Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
5	Oneveral	Manual mode shift up sig-	la sut	Ignition	Selector lever UP operation	0 V
(L)	Ground	nal	Input	switch ON	Other than the above	12 V
7 (GR)	Ground	Communication signal (AMP. $\rightarrow$ METER)	Output	Ignition switch ON		(V) 6 4 2 0 • • • 1ms SKIA3362E
8 (L)	Ground	Vehicle speed signal (2-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies depending on the specification (destination unit).
9		Seat belt buckle switch sig-		Ignition	When seat belt is fastened	12 V
(SB)	Ground	nal (driver side)	Input	switch ON	When seat belt is not fas- tened	0 V
10	Orour -	Manual made signal	lanut	Ignition	Selector lever DS position	0 V
(W)	Ground	Manual mode signal	Input	switch ON	Other than the above	12 V

	nal No. e color)	Description		Condition		Value	А
+	-	Signal name	Input/ Output		Condition	(Approx.)	
11 (G)	Ground	Non-manual mode signal	Input	Ignition switch ON	Selector lever DS position Other than the above	12 V 0 V	В
14 (BR)	Ground	Communication signal (LCD $\rightarrow$ AMP.)	Input	Ignition switch ON		(V) 15 10 5 0 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	C D E
25 (V)	Ground	Manual mode shift down signal	Input	Ignition switch	Selector lever down opera- tion	0 V	
(V)				ON	Other than the above	12 V	F
27 (LG)	Ground	Communication signal (METER $\rightarrow$ AMP.)	Input	Ignition switch ON		(V) 6 4 2 0 • • • 1ms SKIA3361E	G H
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 de- pending on the specification (destination unit).	I J K
					Parking brake is applied	0 V	L
30 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake is released	(V) 8 4 0 10 ms JSNIA0007GB	M WCS
34 (Y)	Ground	Communication signal (AMP. $\rightarrow$ LCD)	Output	Ignition switch ON		(V) 6 4 2 0 ► 200 µs JSNIA0027GB	O P
41 (V)	Ground	ACC power supply	Input	Ignition switch ACC	_	Battery voltage	

	nal No. e color)	Description		Condition		Value
+	_	Signal name	Input/ Output		Condition	(Approx.)
42 (Y)	Ground	Fuel level sensor signal	Input	lgnition switch ON		(V) 4 3 2 1 0 E 1/4 1/2 3/4 F JSNIA0013GB
45 (P)	Ground	Ambient sensor signal	Input	_		(V) 3 4 0 -10 -10 (14) (32) (50) (68)
53 (G)	Ground	Ignition power supply	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		Proko fluid loval awitch aig		Ignition	Brake fluid level is normal.	5 V
(W)	Ground	Brake fluid level switch sig- 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	_		_	_

#### < ECU DIAGNOSIS INFORMATION > Wiring Diagram - METER -INFOID:000000009290882 AFS CONTROL UNIT (M16): (WA) ETOB: AWD 8 UNIFIED METER AND A/C AMP. ≸ , ₹ g 26 7 24 25 34 ECM M107 27 ŝ CONTROL MODULE) 5 AWD models WA>: With AFS RESE SWITC (M56) 2 4 To CAN System BCM (BODY M122) METER CONTROL SWITCH (M54) 53 4 54 TRIP COMPUTER SWITCH SEAT BELT BUCKLE SWITCH 33 M7 Ē B13 B13 -**I**(6) g SELECT FLUID FLUID SWITCH E47 20 38 ENTER 41 28 lo lo COMBINATION METER ല ILLUMINATION CONTROL SWITCH PARKING BRAKE SWITCH E107 FUSE BLOCK (J/B) M1), M3 83 5 8 <u>\_\_</u> + 40 2 10A SC IGNITION SWITCH ON or START 10A WASHER LEVEL SWITCH E32 To illumination 60 ( E106) AIR BAG DIAGNOSIS SENSOR UNIT (M213) We We 9 IGNITION SWITCH ACC or ON 10A 38 ŝ 35 ALTERNATOR F36 M110 10A BATTERY 2012/06/11 METER Σ

Revision: 2013 March

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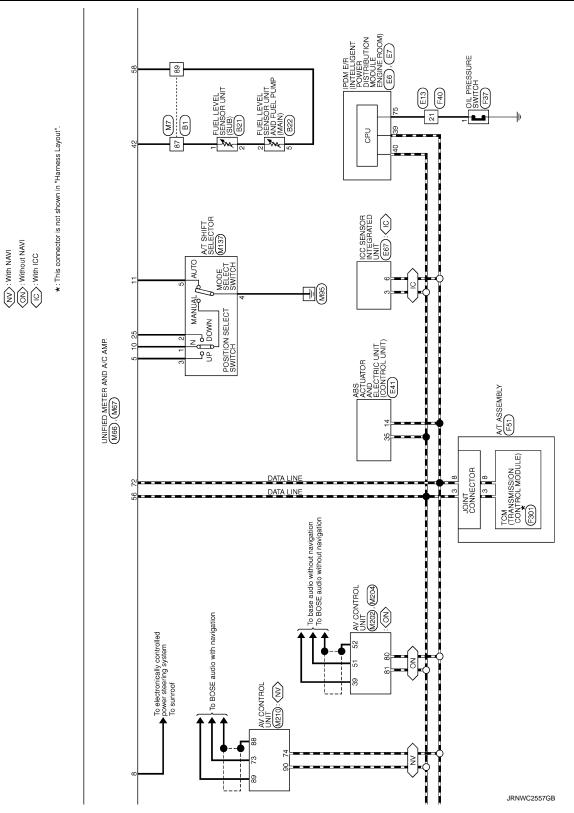
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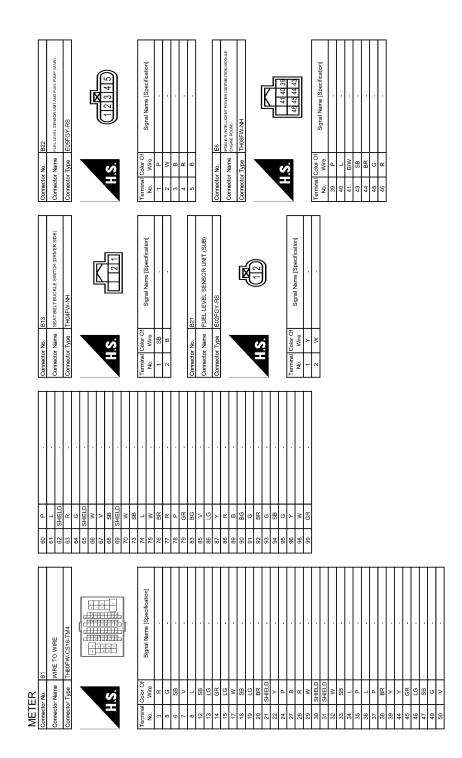
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#### < ECU DIAGNOSIS INFORMATION >



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

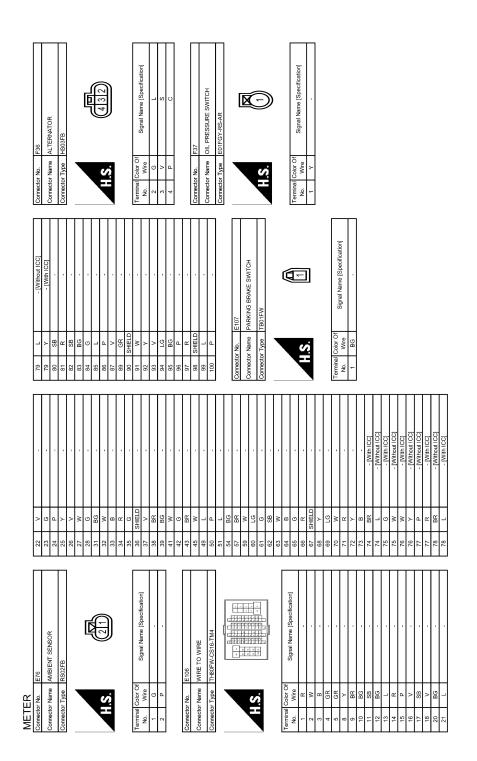
А В Signal Name [Specification] Signal Name [Specification] ICC SENSOR INTEGRATED UNIT BRAKE FLUID LEVEL SWITCH 4 2 3 4 2 3 4 2 3 CAN-H CAN-H BLS VDC OFF 5 GNITIC ≪−¬> С E67 Connector No. 1 Connector Name 1 Connector Type Color Of Wire Connector Name Connector Type P P P Connector No. 既ピ œ 8 8 D H.S. H.S. 33 45 Terminal No. Ε CONTROL UNIT) Signal Name [Specification] Signal Name [Specification] WASHER LEVEL SWITCH UNIT F AND ELECTRIC BAA42FB-AHZ4-LF E32 E41 ABS G Terminal Color Of No. Wire 1 LG 2 B Color Of Wire B Connector Type SHIELD Connector Name Connector No. Connector Name Connector Type H.S. H.S. SBRB≥ ≻⊇B Ľا Connector No. Ferminal No. 15 12 12 9 25 26 27 9 R Н J א <sup>SB</sup> ש ט <del>SHELD</del> מ כ <sup>L</sup>G ≤ ≤ 28 B 20 < C 20 L 20 L 20 L < ≤ Ж, œ 23 27 28 29 28 29 28 Κ 8 L Signal Name [Specification] Signal Name [Specification] 
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 nmector Type SAA36MB-RS8-SHZ8 WIRE TO WIRE Μ TH20FW Connector No. E13 L. Color Of Wire × ≥ ⊂ © C S a ~ × < L/B SHIELD Color Of Wire L/Y SHIELD Connector Type Connector Name Connector Name H.S. - 8 - ∝ ≥ H.S. METER Connector No. WCS nnector No. Terminal ( No. erminal No. 51 53 54 55 56 57 58 58 69 69 70 74 75 œ o 2 2 8

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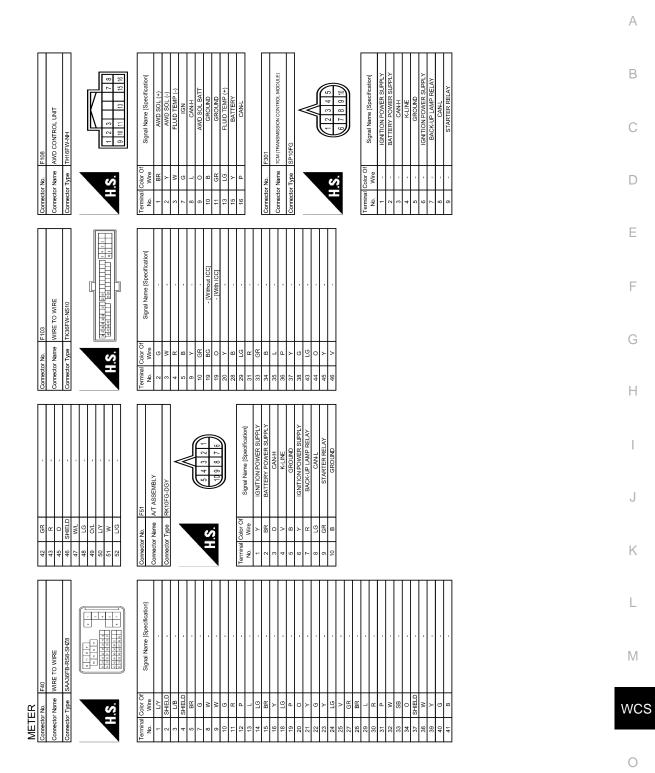
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#### < ECU DIAGNOSIS INFORMATION >



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#### < ECU DIAGNOSIS INFORMATION >

	METER						
	GROUND	Connecto	. M6 43		86	SHIELD	
		Connecto	WIRE TO WIRE 45 W		60	> 0	
(10)       (11)	M1	Connecto	TH80MW-CS16-TM4 50 P		2	3	
	FLISE BLOCK / UB)		51				
Image: Specification i       I			54 54		Connecti		M7
			57 G		Connect		WIRE TO WIRE
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JRNWC3630GB

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M64 METER CONTROL SWITCH METER CONTROL SWITCH TH12MW-NH Signal Name [Specification] Signal Name [Specification] Signal Name [Specification]	С
Connector No.     No.       Connector No.     No.       Connector No.     No.	D
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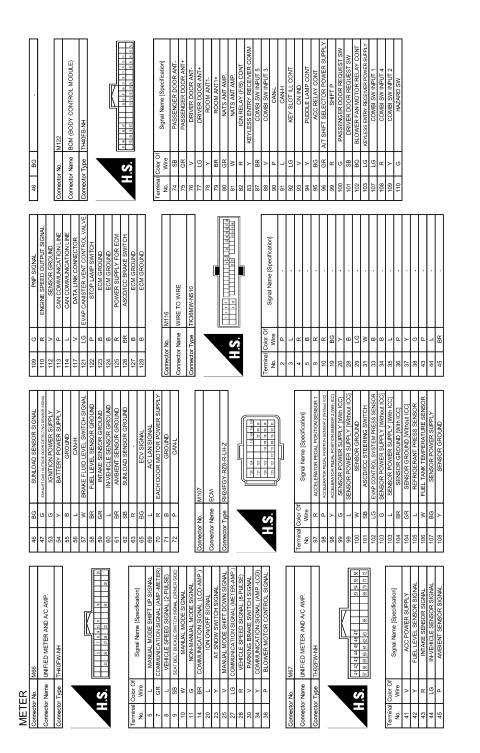
JRNWC3631GB

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## UNIFIED METER AND A/C AMP.

#### < ECU DIAGNOSIS INFORMATION >



JRNWC3632GB

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M210 W CONTROL UNT TR22FWAH TR22FWAH Signal Name (Specification) Signal Name (Specification) PARKING BAAKE SIGNAL COMPOSITE IMAGE SIGNAL COMPOSITE IMAGE SIGNAL COMPOSITE IMAGE SIGNAL COMPOSITE IMAGE SIGNAL MICROPHONE SIGNAL AV COMM (1) MICROPHONE SIGNAL MICROPHONE SIGNAL AV COMM (1) AV C	В
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IFT SELECTOR           WVAHI           VVAHI           IFT SELECTOR           Signal Name	J
Connector No.         M137           Connector No.         M137           Connector Non.         M137           Connector Non.         M137           Connector Non.         M137           Connector Non.         M137           No.         United           No.         United           Si         Si           Si         Si           Si         Si           None         M102           Connector Non         M202           Connector Non         M203           Si         Si         Si           Mine         Mine         M203           Mine         M203         M203           Mine         M303         M303           M31         M303         M303           M32         M304         M303           M33         M304         M303           M33         M304         M303           M33         M304         M304	K
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M123 BCM (BODY CONTROL MODULE) THOFG-NH THOFG-NH Signal Name (Specification) Signal Name (Specification) OPLICAL SENSOR OPLICAL SENSOR DOR SIN OPLICAL SENSOR DOR SIN OPLICAL SENSOR EXCEPTION SIN LI DOR DOOR SIN OPLICAL SENSOR DONER NUIDUR SIN OPLICAL SENSOR NUIDUR SIN OPLICAL SENSOR NUIDUR SIN OPLICAL DOR SIN OLITICAL SENSOR SIN OLITICAL SENSOR SIN OLITICAL SENSOR SIN OLITICAL SENSOR SIN OLITICAL SENSOR SIN OLITICAL SENSOR SIN OLITICAL DOR SIN OLITICAL SENSOR SI	Μ
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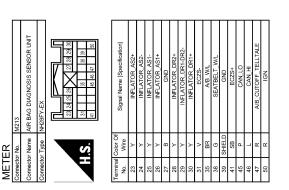
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## UNIFIED METER AND A/C AMP. < ECU DIAGNOSIS INFORMATION >

Revision: 2013 March

< ECU DIAGNOSIS INFORMATION >



JRNWC3634GB

INFOID:000000009290883

## 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		<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 lamp turns on by suspending communication.	
	CRUISE warning lamp		
	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	The lamp turns off by suspending communication.	
	Tail lamp indicator lamp		
	Oil pressure warning lamp		
	VDC OFF indicator lamp		
	BSW warning lamp		
	Malfunction indicator lamp		
	A/T CHECK warning lamp		
	Key warning lamp		
	Lane departure warning lamp		
	LDP ON indicator lamp		

## DTC Index

INFOID:000000009290884

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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>	Ρ
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

#### NOTE:

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

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status	
FR WIPER HI	Other than front wiper switch HI	Off	D
	Front wiper switch HI	On	
FR WIPER LOW	Other than front wiper switch LO	Off	E
	Front wiper switch LO	On	
FR WASHER SW	Front washer switch OFF	Off	
TR WASHER SW	Front washer switch ON	On	F
FR WIPER INT	Other than front wiper switch INT	Off	
	Front wiper switch INT	On	
FR WIPER STOP	Front wiper is not in STOP position	Off	C
-R WIFER STOP	Front wiper is in STOP position	On	
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position	ŀ
RR WIPER ON	Other than rear wiper switch ON	Off	
	Rear wiper switch ON	On	
RR WIPER INT	Other than rear wiper switch INT	Off	
	Rear wiper switch INT	On	
RR WASHER SW	Rear washer switch OFF	Off	
KR WASHER SW	Rear washer switch ON	On	
RR WIPER STOP	Rear wiper is in STOP position	Off	k
KR WIPER STOP	Rear wiper is not in STOP position	On	
URN SIGNAL R	Other than turn signal switch RH	Off	
URN SIGNAL R	Turn signal switch RH	On	
TURN SIGNAL L	Other than turn signal switch LH	Off	
IORN SIGNAL L	Turn signal switch LH	On	Ν
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off	
	Lighting switch 1ST or 2ND	On	
HI BEAM SW	Other than lighting switch HI	Off	W
II DEANI SVI	Lighting switch HI	On	
HEAD LAMP SW 1	Other than lighting switch 2ND	Off	(
ILAD LAWF SW I	Lighting switch 2ND	On	
	Other than lighting switch 2ND	Off	
HEAD LAMP SW 2	Lighting switch 2ND	On	F
PASSING SW	Other than lighting switch PASS	Off	
	Lighting switch PASS	On	
	Other than lighting switch AUTO	Off	
AUTO LIGHT SW	Lighting switch AUTO	On	

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## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
DOOR SW-DR	Driver door opened	On
DOOR SW-AS	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
	Rear RH door closed	Off
DOOR SW-RR	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	<b>NOTE:</b> The item is indicated, but not monitored.	Off
	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
TR CANCEL SW	<b>NOTE:</b> The item is indicated, but not monitored.	Off
	Back door opener switch OFF	Off
TR/BD OPEN SW	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	<b>NOTE:</b> The item is indicated, but not monitored.	Off
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off
PKELOCK	LOCK button of the key is not pressed	Off
RKE-LOCK	LOCK button of the key is pressed	On
	UNLOCK button of the key is not pressed	Off
RKE-UNLOCK	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
	PANIC button of the key is not pressed	Off
RKE-PANIC	PANIC button of the key is pressed	On
	UNLOCK button of the key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	On

Revision: 2013 March

## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
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
JPHCAL SENSOR	Dark outside of the vehicle	Close to 0 V
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	<b>NOTE:</b> The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
	Back door request switch is not pressed	Off
REQ SW -BD/TR	Back door request switch is pressed	On
	Push-button ignition switch (push switch) is not pressed	Off
PUSH SW	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
	Driver door is unlocked	Off
JNLK SEN -DR	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

Revision: 2013 March

**WCS-71** 

Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever in N position	On
ENGINE STATE	Engine stopped	Stop
	While the engine stalls	Stall
	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	NOTE: 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
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
DOOR STAT-AS	Passenger door is locked	LOCK
	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
	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The key is not inserted into key slot	Off
	The key is inserted into key slot	On
RKE OPE COUN1	During the operation of the key	Operation frequency o the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
	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

### < ECU DIAGNOSIS INFORMATION >

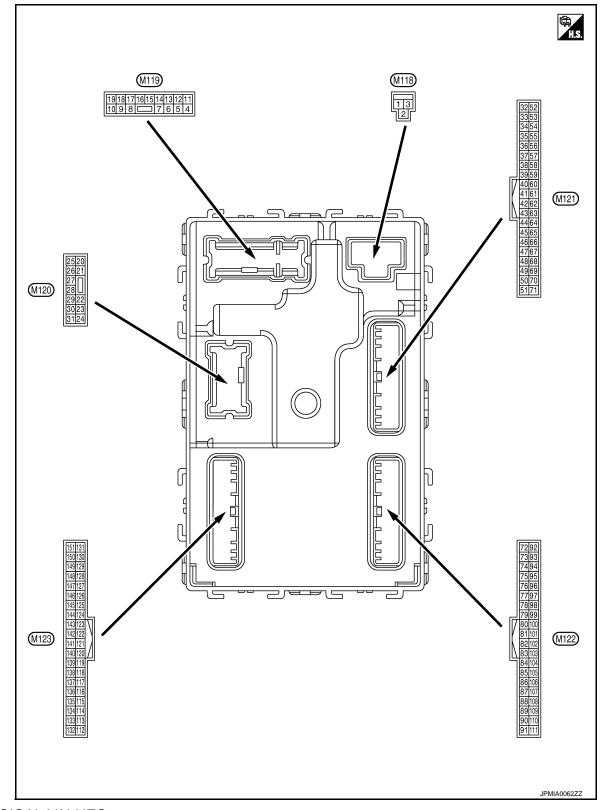
Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
	The key ID that the key slot receives accords with the second key ID reg- istered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
	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
ורט	The ID of third key is registered to BCM	Done
TP 2	The ID of second key is not registered to BCM	Yet
	The ID of second key is registered to BCM	Done
TP 1	The ID of first key is not registered to BCM	Yet
IFI	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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< ECU DIAGNOSIS INFORMATION >

**TERMINAL LAYOUT** 



PHYSICAL VALUES

	inal No.	Description				Value
(VVire +	e color) –	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		Battery voltage
4		Interior room lamp			battery saver is activated. oom lamp power supply)	0 V
(LG)	Ground	power supply	Output	ed.	battery saver is not activat- or room lamp power supply)	Battery voltage
5	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
(L)	Ground	LOCK	Juiput	rassenger uour	Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(Y)	Ground		Juiput		OFF	Battery voltage
8	Ground	All doors, fuel lid	Output	All doors	LOCK (Actuator is activated)	Battery voltage
(V)	Giouna	LOCK	Output		Other than LOCK (Actuator is not activated)	0 V
9	Ground	Driver door, fuel lid	Output	Output Driver door	UNLOCK (Actuator is activated)	Battery voltage
(G)	Cround	UNLOCK	Output		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)		LOCK		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		0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	OFF	0 V NOTE: When the illumination brighten- ing/dimming level is in the neutral position (V) 10 0 2 ms
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF or ON	JSNIA0010GB Battery voltage
(Y)			-		ACC	0 V

	Terminal No. Description				Value	
(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 10 5 0 1 s FKID0926E 6.5 V
					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 FXID
19		Room lamp timer		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 10 10 10 10 10 10 10 10 10 10
23	Ground	Back door open	Output	Pack door	OPEN (Back door opener actuator is activated)	Battery voltage
(G)	Ground	васк цоог орен	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	Output	Rear wiper	OFF (Stopped)	0 V
(G)	Cround		Calput		ON (Operated)	Battery voltage

	inal No.	Description				Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	A
34	Ground	Luggage room anten-	Outeut	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 s JMKIA0062GB	B C D
(SB)	Ground	na (–)	Output	ŎFF -	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	E
35	Ground	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	G H I
(V)	Ground	na (+)	Output	ŎFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 10 1 1 1 1 J J MKIA0063GB	J K L
38	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 s JMKIA0062GB	M
(B)	Ground	)	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	Ρ

(Wire co	olor) E					Value	
	-	Signal name	Input/ Output		Condition	(Approx.)	
<sup>39</sup> G	Ground	Back door antenna	Output	When the back door opener re- quest switch is	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) G		(+)	Guput	OFF or AC	When Intelligent Key is not in the antenna detection area	(V) 15 0 1 s JMKIA0063GB	
47 G	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage	
(Y) 01	bround	E/R) control	Output	Ignition Switch	ON	0 V	
52 G	Ground	Starter relay control	Output	Ignition switch	When selector lever is in P or N position	Battery voltage	
(SB)	Sibulia	olarici 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) Gi	Ground	switch (Push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage	
					ON (Pressed)	0 V	
61 (W) Gi	Ground	Back door opener re- quest switch	Input	Back door opener request switch	OFF (Not pressed)	(V) 15 10 10 10 ms JPMIA0016GB 1.0 V	
64	Ground	Intelligent Key warn- ing buzzer (Engine	Output	Intelligent Key warning buzzer	Sounding	0 V	
(V) G		room)	Output	(Engine room)	Not sounding	Battery voltage	
65 (BG) Gi	Ground	Rear wiper stop posi- tion	Input	Rear wiper	In stop position	(V) 15 0 10 ms 10 ms JPMIA0016GB 1.0 V	
1					Not in stop position	0 V	

### < ECU DIAGNOSIS INFORMATION >

	Terminal No. Description (Wire color)				Value	
(VVir +	e color) –	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 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
					× 1-7	
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
						11.8 V

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	inal No.	Description				Value	
(VVire +	e color)	Signal name	Input/ Output		Condition	(Approx.)	
74	Ground	Passenger door an-	Output	When the pas- senger door re-	When Intelligent Key is in the antenna detection area	(V) 15 0 10 1 1 1 JMKIA0062GB	
(SB)		tenna ()		quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 5 0 15 10 15 10 15 10 15 10 15 10 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	
75	Ground	Passenger door an-	Output	When the pas- senger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(GR)		tenna (+)		quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 5 0 1 s JMKIA0063GB	
76	Ground	Driver door antenna	Output	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(V)		(-)	Saiput	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10 10 10 10	

	inal No.	Description				Malua	
(Wire +	e color) –	Signal name	Input/ Output		Condition	Value (Approx.)	А
77		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 0 0 1 s JMKIA0062GB	B C D
(LG)	Ground	(+)	Output	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	E
78	Ground	Room antenna 1 (-)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	G H
(Y)	Ground	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	J K L
79	Ground	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	M
(BR)		(Instrument panel)	Suput	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1	P

	inal No.	Description				Value
(Wire +	e color) -	Signal name	Input/ Output		Condition	(Approx.)
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	Ground	Ignition relay [Fuse	Output	Ignition switch	OFF or ACC	0 V
(R)	Croana	block (J/B)] control	Output	Ignition Switch	ON	Battery voltage
83	Remote keyless entry		emote keyless entry ceiver communica-			(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)		tion	Output	When operating e	ither button on the key	(V) 15 10 5 0 1 1 1 1 ms JMKIA0065GB

### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
(Wir +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper intermittent dial 4)	(V) 15 0 5 0 2 ms JPMIA0041GB 1.4 V	
87		Combination switch		Combination	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3 V	
(BR)	Ground	INPUT 5	Input	switch	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 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 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	

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	inal No.	Description				Value	
(Wire +	e color) -	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper intermittent dial 4)	(V) 15 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 0 2 ms JPMIA0040GB 1.3 V	
90 (P)	Ground	CAN-L	Input/ Output			_	
91 (L)	Ground	CAN-H	Input/ Output	_		_	

	inal No.	Description				Value
(Wir +	e color) –	Signal name	Input/ Output		Condition	(Approx.)
					OFF	Battery voltage
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB 6.5 V
					ON	0 V
93					OFF or ACC	Battery voltage
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	0 V
94					OFF	Battery voltage
(Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V
95			<b>A</b> :		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	mput		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
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 15 10 5 10 10 ms JPMIA0016GB 1.0 V
102		Blower fan motor re-			OFF or ACC	0 V
(BG)	Ground	lay control	Output	Ignition switch	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OF	F	Battery voltage

Terminal No. Description (Wire color)		Condition		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 10 2 ms 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 10 0 2 ms JPMIA0038GB 1.3 V
					Front washer switch ON	(V) 15 0 2 ms JPMIA0039GB 1.3 V

### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	^
(Wire +	e color) -	Signal name	Input/ Output		Condition	(Approx.)	A
					All switches OFF (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0041GB 1.4 V	B C D
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 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 0 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 WC:

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	inal No.	Description				Value
	e color)	Signal name	Input/		Condition	(Approx.)
+	_		Output		All switches OFF	(V) 15 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V
109 (Y)	Ground	Combination switch INPUT 2	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 0 10 10 ms JPMIA0012GB 1.1 V

	inal No.	Description				Value	Δ
(VVir +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	A
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V	В
(P)	Giouna	Oplical 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)	Ground	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 0 10 ms JPMIA0012GB 1.1 V	G
					UNLOCK status (Unlock switch sensor ON)	0 V	I
121 (BR)	Ground	Key slot switch	Input	-	nserted into key slot	Battery voltage	.1
				vvnen the key is h	ot inserted into key slot OFF or ACC	0 V 0 V	0
123 (W)	Ground	IGN feedback	Input	Ignition switch	ON	Battery voltage	
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 50 10 ms JPMIA0011GB 11.8 V	K L M
					ON (Door open)	0 V	W
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 10 10 10 10 10 10 10 10 10 10	C
				Ignition switch OF	F or ACC	Battery voltage	
				ignition switch OF		Dattery voltage	

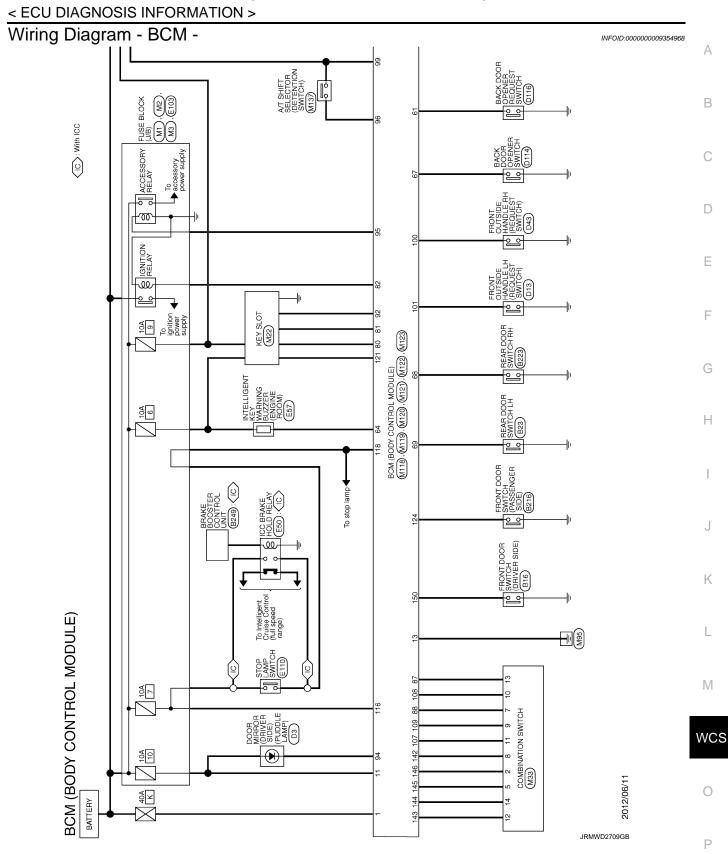
	nal No.	Description				
(Wire +	e color) -	Signal name	Input/ Output		Condition	Value (Approx.)
					ON (Tail lamps OFF)	9.5 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button igni- tion switch illumi- nation	ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 10 5 0
					OFF	JPMIA0159GB
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF ON	Battery voltage
137		Receiver and sensor				
(BG)	Ground	ground	Input	Ignition switch ON		0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(Y)	Ground	power supply	Output	Ignition switch	ACC or ON	5.0 V
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 +++ 0.2s OCC3881D
(L)	Cicana	er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 + 0.2s OCC3880D
140	Cround	Selector lever P/N	lanut	Colostar lavor	P or N position	Battery voltage
(GR)	Ground	position	Input	Selector lever	Except P and N positions	0 V
					ON	0 V
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 0 5 0 JPMIA0014GB 11.3 V
					OFF	Battery voltage

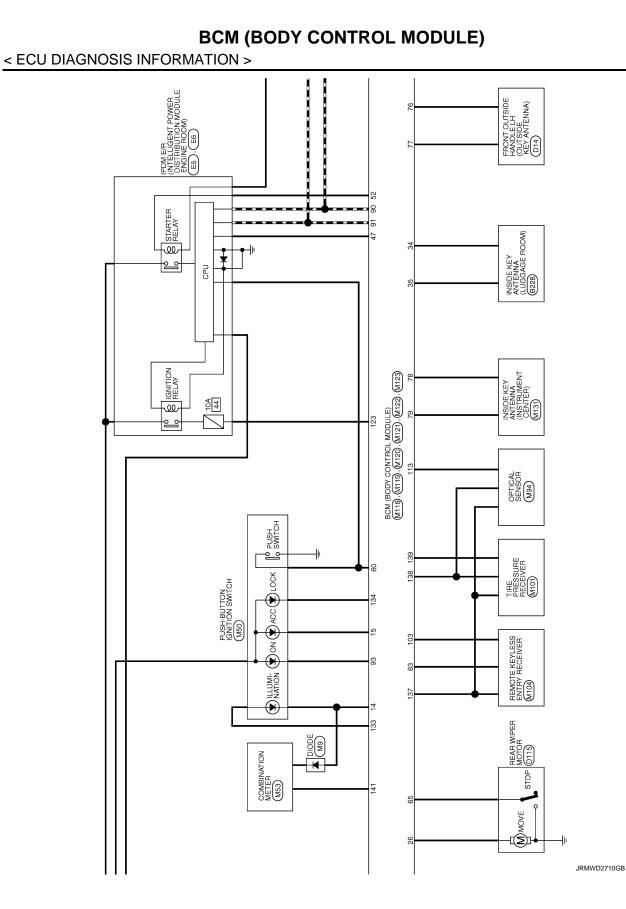
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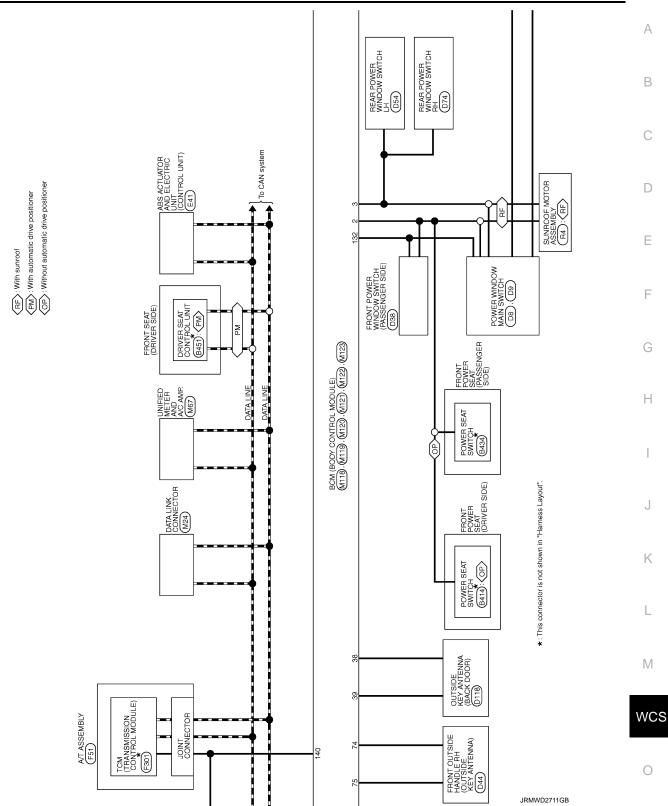
Terminal No. (Wire color)		Description		Condition		Value	
(Wire +	e color) –	Signal name	Input/ Output		Condition	(Approx.)	
142 (BG)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND 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 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	(Wiper intermittent dial 4) Rear wiper switch INT (Wiper intermittent dial 4)		
(P)				SWITCH	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   _	
					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	<u>2 ms</u> JPMIA0033GB 10.7 V	
					All switches OFF Front wiper switch INT	0 V	
				Ormahimati	Front wiper switch LO	(V) 15	
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 0 2 ms 10 2 ms 10 10 10 10 10 10 10 10 10 10 10 10 10	

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Terminal No. (Wire color)		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 inte		(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





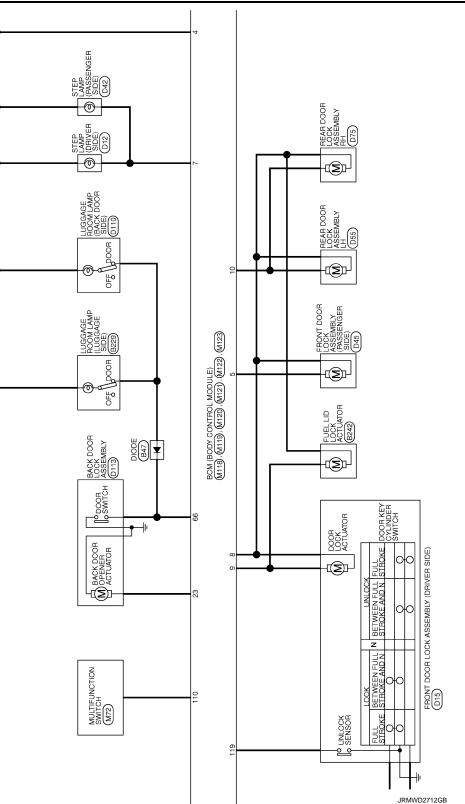


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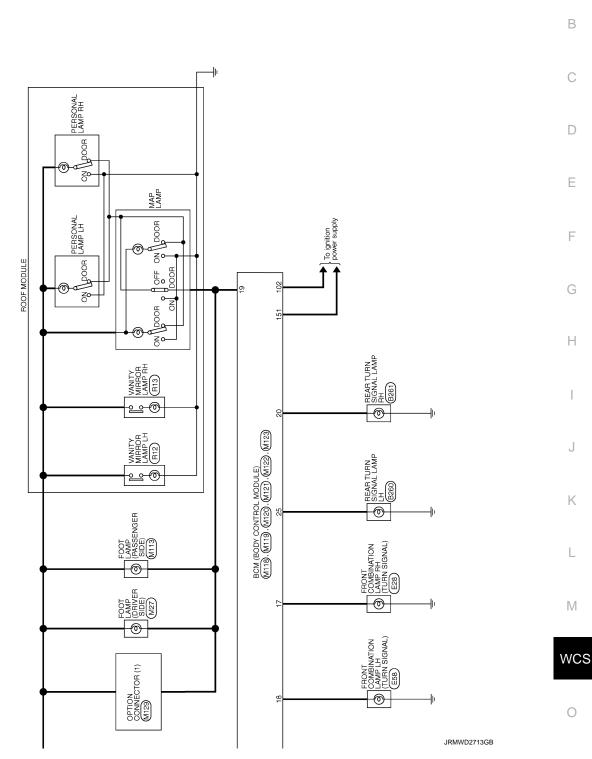
Revision: 2013 March

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Revision: 2013 March

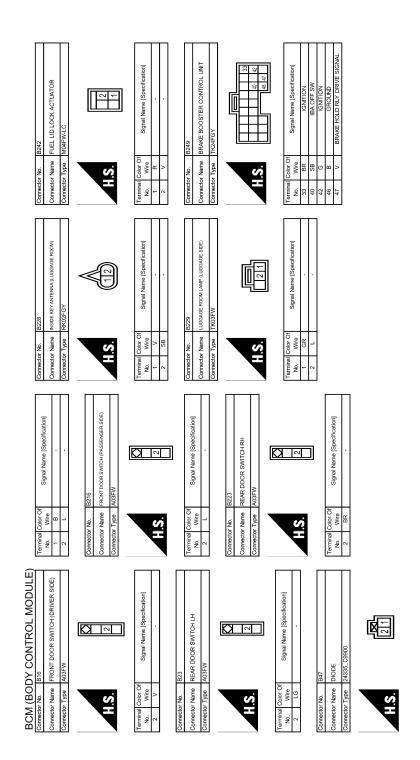
# **BCM (BODY CONTROL MODULE)** < ECU DIAGNOSIS INFORMATION >



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JRMWD8153GB

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А В SIDE CAMERA LH POWER SUPPI Signal Name [Specification] Signal Name [Specification] POWER WINDOW MAIN SWITCH 9 DOOR MIRROR (DRIVER SIDE) 5 
 1
 2
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 8
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 17 С 12 11 10 24 23 22 21 21 NS16FW-CS D8 ä Color Of Wire Connector Name Connector Type winal Color Of Vo. Wire 2 BR 3 GR Connector Type Connector No. Connector Name  $<\prec \overset{}_{\mathbb{H}} \overset{}_{\mathbb{Q}} \overset{}_{\mathbb{Q}} \overset{}_{\mathbb{D}} \overset{}_{\mathbb{Q}} \overset{}_{\mathbb$ H.S. 0 🚥 H.S.H D Connector No. - 2 4 31 19 Ś Е 
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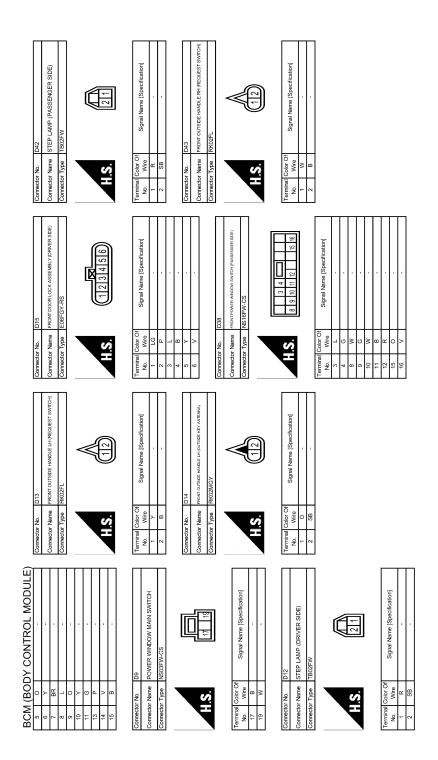
 17
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 32
 Signal Name [Specification] REAR LIFTING SWI (DC REAR LIFTING SWI (DC) VCC TX CANL PLLSE SWI PLLSE SWI PLLSE SWI PLLSE SWI PLLSE SWI FORWAR ECLINING SWI (FORWAR ARI LIFTING ARI LIFTING SWI (FORWAR ARI LIFTING SWI (FORWAR) DRIVER SEAT CONTROL UNIT LIFTING SW (UPM SENSOR GND GND (SIGNAL) SLIDING SW (BACK XN A F PULSE (RR Color Of Wire L/W R/Y P/L GR Connector Name Connector Type H.S. BR BR SB 影〉칭 Connector No. Terminal ( No. 32 2 5 12 2 2 9 Н Signal Name [Specification] Signal Name [Specification] 2 1 8 7 4 3 6 5 109 2 9 10 3 4 POWER SEAT SWITCH POWER SEAT SWITCH 7 8 5 J B414 Connector No. B434 Connector Type Connector Name Color Of Wire R Connector Name Connector No. Type ∞ ≿ ≥ > ≿ – ≚ § H.S. H.S. Terminal No. 9 8 4 erminal No. Κ BCM (BODY CONTROL MODULE) Commentor No.... | 12260 L Signal Name [Specification] Signal Name [Specification] REAR TURN SIGNAL LAMP LH REAR TURN SIGNAL LAMP RH Ð Ð Μ B261 Terminal Color Of No. Wire 1 G 2 B Color Of Wire V B Connector Type Connector Name Connector Name Connector No. onnector Type H.S. H.S. WCS erminal No. 2

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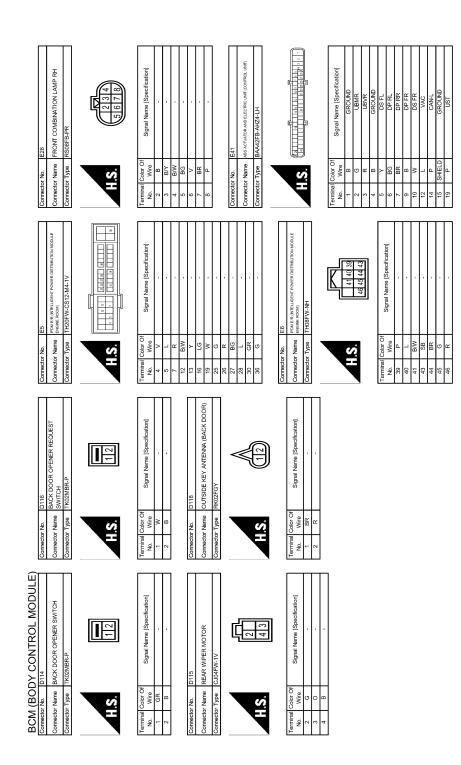
	А
ck book sbei beoficiation beoficiation beoficiation	В
0110     110       Lucassie Room Lawe Back Door Brb.     10000 BBL       Totasher     1013       Signal Name [Specification]     1013       Signal Name [Specification]     1013	С
Connector No. Connector No. Connector No. Connector Name La Connector Name La Connector Type A. Connec	D
W SWITCH RH	E
R POWER WINDO	F
Corrector Name REA Connector Name REA Connector Name REA No. Wree 2 V V 7 B 8 Connector Name REA 2 V V 0 0 0 1 V 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	G
W SWITCH LH	I
Signal Name [5]	J
Terminal Connector Name     Dist       Connector Name     REA       Connector Name     REA       Connector Name     REA       A     C       2     V       3     C       Connector Name     REA       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C       A     C	K
	L
BCM (BODY CONTROL MODULE) Comeder Name Connector Name Connector Name Connector Name Name Connector Name Nam	Μ
BCM (BOD Connector Name Connector Name Conn	WCS
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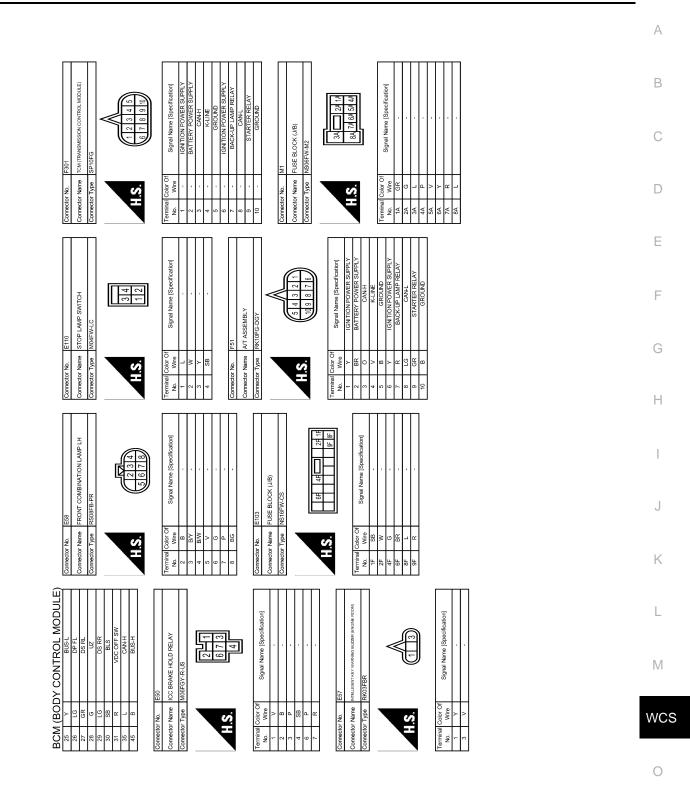
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## BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

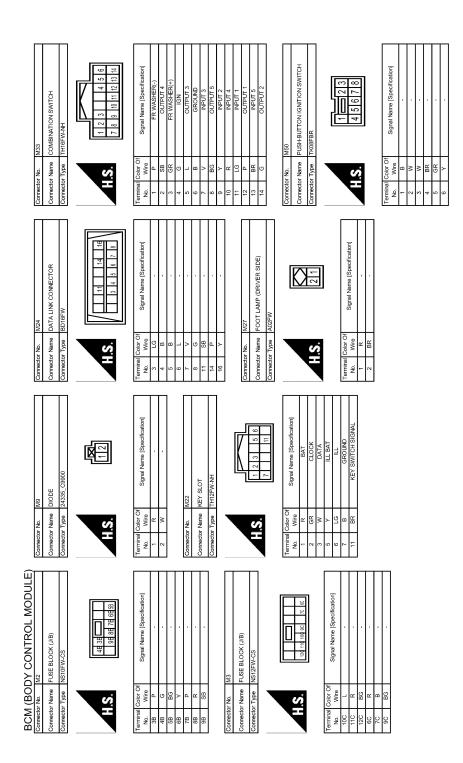


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< ECU DIAGNOSIS INFORMATION >



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EIVER Specification UND DUFUT EEV EEV UND DUFUT EEV	В
MIOI THE PRESSURE RECEIVER TRAFTW Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification) Signal Name (Specification)	С
Corrrector No. In Corrector Type 1 Corrector Type 1 Corrector Name 1 Corrector Na	D
	E
2     ILTELNICTION SWITHING       ILTELNICTION SWITHING     ILTELNICTION SWITHING       Signal Name IS     Signal Name IS       Signal Name IS     DISK ELECT       DISK ELECT     DISK ELECT       OROU     DISK ELECT       OPOWING     OPOWING	F
Corrector Name Connector Name Connector Name III Connector Type III Connector Name III Connector Name III Connector Name III III Connector Name III III Connector Name III III III III III III III I	G
AC AMP.	1
PHED METER AND       2FW-NH       SPW-NH       Spinal Mame [1]       Signal Mame [1]       Signal Mame [1]       ALC FOWE       ETEL LEVEL SET       INTER ESEME       INTER ESEME       INTER ESEME       INTER ESEME       Signal Mame [1]       Signal Mame [1]       ALC FOWE       ETEL LEVEL SET       INTERIAL ESEME       SILLO AD SET       SILLO AD SET       ALDOR MOTIOL       GANDOR SET       CHOOR MOTIOL       CANDOR SET	J
Connector No.         Mill           Connector Name         Mill           Connector Name         Mill           Connector Name         Mill           Mill	K
	L
DY CONTROL MODULE Mass	Μ
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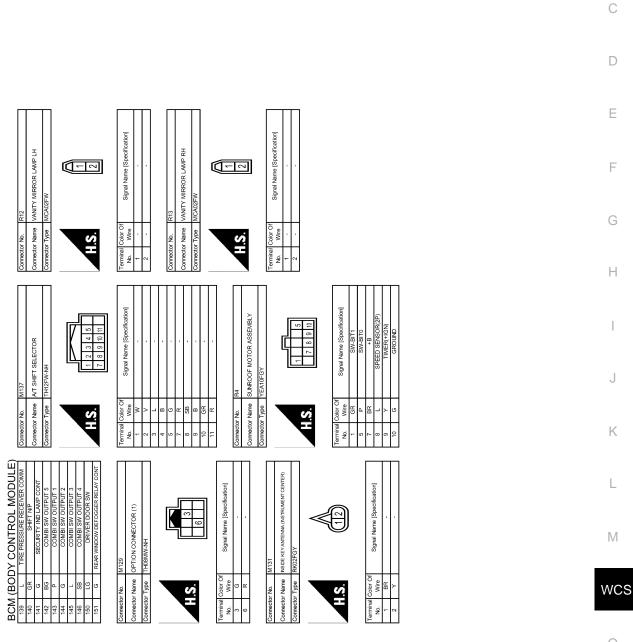
# **BCM (BODY CONTROL MODULE)** < ECU DIAGNOSIS INFORMATION >

BCM (BODY CONTROL MODULE)	Connector No. M119	Connector No.	M121	80	GR	NATS ANT AMP.
	Г	:	Г	81	N	NATS ANT AMP.
Connector Name FOUT LAMP (PASSENGER SIDE)	Connector Name BCM (BUDY CONTROL MODULE)	Connector Name		82	æ	IGN RELAY (F/B) CONT
Connector Type A02FW	Connector Type NS16FW-CS	Connector Type	TH40FGY-NH	83	≻	KEYLESS ENTRY RECEIVER COMM
				87	BR	COMBI SW INPUT 5
				88	>	COMBI SW INPUT 3
K				06	٩	CANFL
				91	_	CANH
	14 13 14 15 17 18 10		88 88 35 24	92	ГG	KEY SLOT ILL CONT
	1 10		88 68 61 68 64 61 60 5	93	^	ON IND
				94	٢	PUDDLE LAMP CONT
				95	BG	ACC RELAY CONT
Terminal Color Of Signal Name [Specification]	Terminal Color Of Signal Name [Specification]	Terminal Color Of	Of Signal Name [Specification]	96	Ч.	A/T SHIFT SELECTOR POWER SUPPLY
╈	Alle	╉		88	r (	
- ·	י פ	-	LUGGAGE RUOM ANI-	100	9 E	PASSENGER DOOR REQUEST SW
		+	LUGGAGE ROOM ANI +	101	8	
	> :	-	BACK DOOR ANT-	102	BG	BLOWER FAN MOTOR RELAY CONT
	>	39 W	BACK DOOR ANT+	103	ГG	KEYLESS ENTRY RECEIVER POWER SUPPLY
Connector No. M118	G	┥	IGN RELAY (IPDM E/R) CONT	107	g	COMBI SW INPUT 1
	10 BR REAR DOOR UNLOCK OUTPUT	_	STARTER RELAY CONT	108	æ	COMBI SW INPUT 4
	11 R BAT (FUSE)	60 BR	MS HSN4	109	λ	COMBI SW INPUT 2
Connector Type M03FB-LC	13 B GROUND	61 W	BACK DOOR OPENER REQUEST SW	110	g	HAZARD SW
	14 W PUSH-BUTTON IGNITION SW ILL GND	_	I-KEY WARN BUZZER (ENG ROOM)			
	15 Y ACCIND	_	REAR WIPER STOP POSITION			
	17 W TURN SIGNAL RH (FRONT)	66 R	BACK DOOR SW	Connector No.		M123
13	18 BG TURN SIGNAL LH (FRONT)	67 GR	BACK DOOR OPENER SW	Connocto	r Nomo	BCM (BOBY CONTROL MODULE)
	19 V INT ROOM LAMP CONT	_	REAR RH DOOR SW	COTTIECTOR NAILIE	r Name	
7		69 R	REAR LH DOOR SW	Connecto	Connector Type	TH40FG-NH
]				_	•	
	Connector No. M120	:	00110			
g	Connector Name BCM (BODY CONTROL MODULE)	Connector No.	M122			R
		Connector Name	BCM (BODY CONTROL MODULE)	•		
3	Connector Type NS12FW-CS				4	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 W POWER WINDOW POWER SUPPLY(BAT) 3 V DOWER WINDOW POWER SUPPLY(BAT)	•	Connector Type	TH40FB-NH			
		_				
		-		Terminal	Terminal Color Of	
				Ő	Wire	Signal Name [Specification]
	25 26	ί Ξ		113	٩	OPLICAL SENSOR
			25 12 13 20 05 13 20 03 20 20 20 20 20 20 20 20 20 20 20 20 20	116	SB	STOP LAMP SW 1
				118	٩.	STOP LAMP SW 2
	Terminal Color Of Similar Providence			119	SB	DR DOOR UNLOCK SENSOR
	No. Wire olynai Name opecinication	Terminal Color Of	Of Simul Name (Succellination)	121	BR	KEY SLOT SW
	^	No. Wire		123	M	IGN F/B
	а 0		PASSENGER DOOR ANT-	124	ГG	PASSENGER DOOR SW
	۔ ع	75 GR	PASSENGER DOOR ANT+	132	BR	POWER WINDOW SW COMM
	26 G REAR WIPER OUTPUT	76 V	DRIVER DOOR ANT-	133	W	PUSH-BUTTON IGNITION SW ILL POWER
		17 LG	DRIVER DOOR ANT+	134	GR	LOCK IND
		78 Y	ROOM ANT1-	137	BG	RECEIVER/SENSOR GND
		79 BR		138	>	RECEIVER/SENSOR POWER SUPPLY

< ECU DIAGNOSIS INFORMATION >

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### < ECU DIAGNOSIS INFORMATION >



Fail-safe

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#### 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:000000009354970

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	
	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	
	B2616: IGN RELAY CIRC	
	B2617: STARTER RELAY CIRC     B2618: BCM	
	<ul> <li>B2618: BCM</li> <li>B261A: PUSH-BTN IGN SW</li> </ul>	
	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	<ul> <li>C1709. [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> </ul>	
5	C1710: [NO DATA] RL     C1711: [NO DATA] RL	
	C1716: [PRESSDATA ERR] FL	
	C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	C1734: CONTROL UNIT	
6	B2621: INSIDE ANTENNA	
0	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	0
No DTC is detected. further testing may be required.	_	_	_	_	_	Ρ
U1000: CAN COMM CIRCUIT	_	—			<u>BCS-41</u>	
U1010: CONTROL UNIT (CAN)	_	—	—	—	<u>BCS-42</u>	
U0415: VEHICLE SPEED SIG	_				<u>BCS-43</u>	
B2190: NATS ANTENNA AMP	×	—	—	—	<u>SEC-40</u>	

Revision: 2013 March

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INFOID:000000009354971

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	
B2191: DIFFERENCE OF KEY	×	_	_	_	<u>SEC-43</u>	
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-44	
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-58	
B2623: INSIDE ANTENNA	_	×	—	_	DLK-60	
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	_	-	—	×	<u> </u>	
C1709: [NO DATA] FR	_	_	—	×		
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	—		—	×	W/T 20	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:000000009064556

- 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:000000009064557

## 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:000000000064558	~
Light reminder warning chime does not sound even though headlamp is illuminated.	В
Diagnosis Procedure	
1. CHECK COMBINATION SWITCH (LIGHTING SWITCH) OPERATION	С
Check that the headlamps operate normally by operating the combination switch (lighting switch).	
Do they operate normally?	D
YES >> GO TO 2. 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	Ε
Perform the check for the front door switch (driver side) signal circuit. Refer to DLK-63. "Diagnosis Procedure".	
Is the inspection result normal?	
<ul> <li>YES &gt;&gt; Replace BCM. Refer to <u>BCS-96, "Removal and Installation"</u>.</li> <li>NO &gt;&gt; Repair or replace malfunctioning parts.</li> </ul>	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
<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
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 WCS-24         "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
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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