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HOW TO USE THIS MANUAL

APPLICATION NOTICE

Information INFOID:0000000007206054

Service information	Design of	of combination meter
TYPE A		JSNIA3947ZZ
TYPE B	With Tachometer	JSNIA3946ZZ
	Without Tachometer	AWNIA2471ZZ

PRECAUTIONS

< PRECAUTION > [TYPE A]

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 SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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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< PREPARATION > [TYPE A]

PREPARATION

PREPARATION

Commercial Service Tools

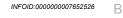
INFOID:0000000007747581

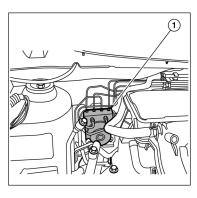
Tool name		Description
Power tool		Loosening bolts and nuts
	PBIC0191E	

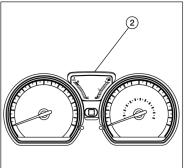
SYSTEM DESCRIPTION

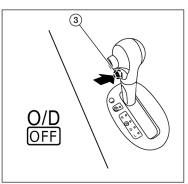
COMPONENT PARTS

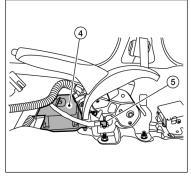
Component Parts Location

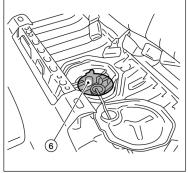


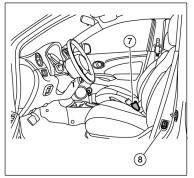


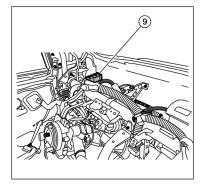


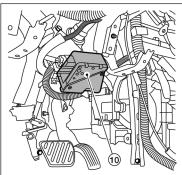


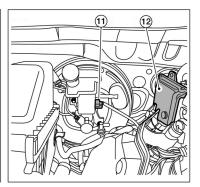


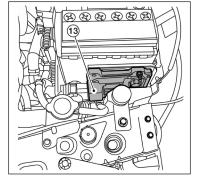


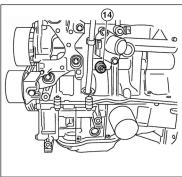












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< SYSTEM DESCRIPTION >

- 1. ABS actuator and electric unit (control 2. Combination meter
- Air bag diagnosis sensor unit (view with center console removed)
- Seat belt buckle switch LH
- 10. EPS control unit (view with instrument lower panel removed)
- 13. TCM

- Parking brake switch (view with center console removed)
- Front door switch LH
- 11. Brake fluid level switch (view with IPDM E/R removed)
- 14. Oil pressure switch

- CVT shift selector (O/D OFF switch)
- Fuel level sensor unit and fuel pump (view with rear seat and access cover removed)
- 9. **BCM** (view with instrument panel removed)
- 12. ECM (view with IPDM E/R removed)

Component Description

INFOID:0000000007652527

Unit	Description		
Combination meter	The combination meter controls the following items according to the signals received from each unit. Speedometer Engine coolant temperature gauge Warning lamps Information display Tachometer Fuel gauge Indicator lamps Warning chime Illumination control		
CVT shift selector switch	Transmits the overdrive off switch signal to the combination meter.		
Seat belt buckle switch (LH)	Transmits the seat belt buckle switch (LH) signal to the combination meter.		
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication.		
Air bag diagnosis sensor unit	Transmits the air bag signal and seat belt buckle switch (RH) signal to the combination meter.		
EPS Control unit	Transmits the EPS signal to the combination meter via CAN communication.		
TCM	Transmits the shift position signal to the combination meter via CAN communication.		
ECM	Transmits the following signals to the combination meter via CAN communication. • Engine speed signal • Engine coolant temperature signal • Fuel consumption monitor signal • Oil pressure sensor signal		
BCM	Transmits the security signal to the combination meter. Transmits the following signals to the combination meter via CAN communication. • Low tire pressure warning signal • Door open switch signal		
Washer fluid level switch (if equipped)	Transmits the washer fluid level switch signal to the combination meter.		
Fuel level sensor unit	Transmits the fuel level sensor signal to the combination meter.		
Parking brake switch	Transmits the parking brake switch signal to the combination meter.		
Brake fluid level switch	Transmits the brake fluid level switch signal to the combination meter.		
Oil pressure sensor	Transmits the oil pressure sensor signal to the ECM.		

SYSTEM

METER SYSTEM

METER SYSTEM : System Diagram

INFOID:0000000007678399

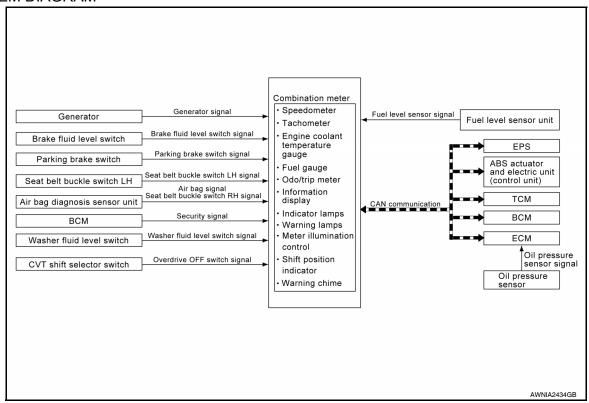
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SYSTEM DIAGRAM



METER SYSTEM: System Description

INFOID:0000000007652525

COMBINATION METER

Combination Meter

- The combination meter monitors signals from switches, sensors and modules to control the following functions:
- Speedometer/Tachometer
- Shift position indicator
- Warning lamps
- Indicator lamps
- Meter illumination control
- Information display
- The combination meter has an integrated buzzer that is activated when it receives a signal from the BCM via CAN communication. Refer to <u>WCS-7</u>, "WARNING CHIME SYSTEM: System Description" for further details.
- · The combination meter includes a self diagnosis function.
- The combination meter can be diagnosed with CONSULT.

METER CONTROL FUNCTION LIST

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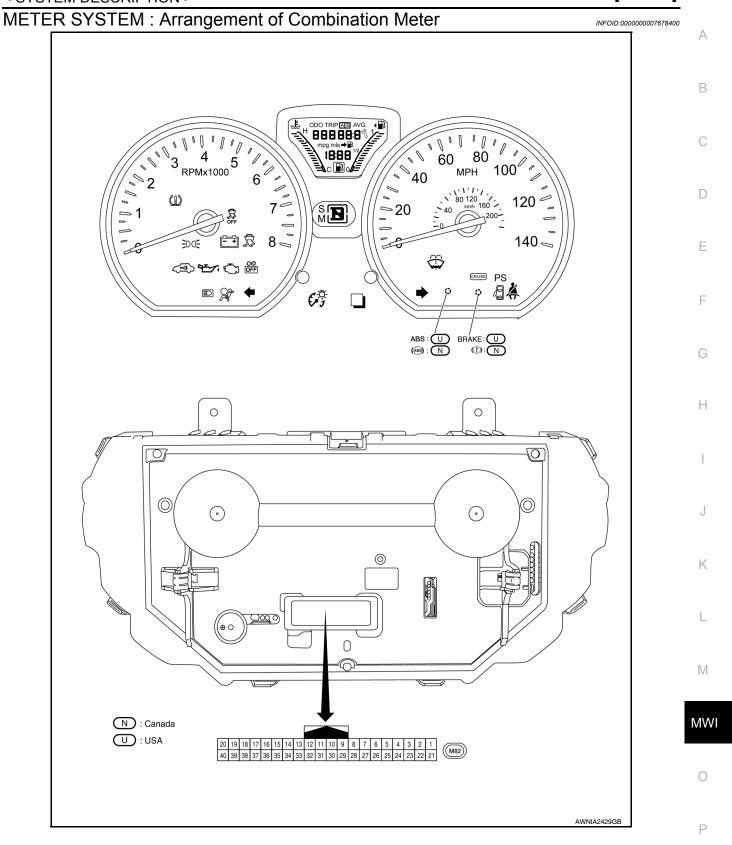
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Cystem Description Deference			Deference		
System		Description	Reference		
Speedometer			Indicates vehicle speed.	MWI-12. "SPEEDOME- TER: System De- scription"	
Tachometer		Indicates engine speed.	MWI-13. "TA- CHOMETER: System Descrip- tion"		
Shift position in	dicator (CVT mo	dels)	Display shift position.	MWI-13. "SHIFT POSITION INDI- CATOR : System Description"	
Warning lamp/	Oil pressure warning lamp		The warning lamp turns ON when it receives the oil pressure warning signal.	MWI-13. "OIL PRESSURE WARNING LAMP : System Descrip- tion"	
indicator lamp	Seat belt warning lamp		The warning lamp turns ON when the LH seat belt is unfastened and the vehicle is moving, and turns OFF when the seat belt is fastened.	SRC-12. "SEAT BELT WARNING LAMP SYSTEM: System Descrip- tion"	
Meter illumi-			Illumination control is enabled when the combination switch (lighting switch) is in the 1st or 2nd position changing from daytime mode to nighttime mode.	MWI-14, "METER ILLUMINATION CONTROL : Sys-	
Hation Control	Meter illumination control switch		The operation of the illumination control switch changes the brightness of meter illumination.	tem Description"	
Engine coolant temperature gauge		temperature gauge	Indicates engine coolant temperature.		
Information	Fuel gauge		Indicates fuel level.	MWI-14. "INFOR- MATION DIS-	
	Odo/trip meter		Displays mileage.		
display	Trip computer	Instant fuel consumption	Displays current fuel consumption.	PLAY: System Description"	
		Average fuel consumption	Displays average fuel consumption.		
		Distance to empty	Displays distance to empty.		

[TYPE A]



METER SYSTEM: Fail-Safe

INFOID:0000000007733853

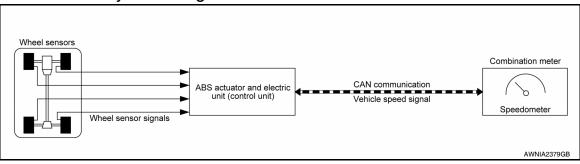
The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

Function			Specifications	
Speedometer				
Tachometer			Reset to zero by suspending communication.	
Illumination control			When suspending communication, changes to nighttime mode.	
Shift position indicator			When suspending communication, not indicate.	
		Current fuel consumption	When reception time of an abnormal signal is 2 seconds or less, the last received datum is used for calculation to indi-	
Information display	Trip com- puter	Average fuel consumption	 cate the result. When reception time of an abnormal signal is more than two seconds, the last result calculated during normal condition is 	
,		Distance to empty	indicated.	
	Engine coo	lant temperature gauge	Reset to zero by suspending communication.	
	Odo/trip meter		An indicated value is maintained at communications blackout.	
Buzzer			The buzzer turns OFF by suspending communication.	
	ABS warning lamp		The lamp turns ON by suspending communication.	
	Malfunction indicator lamp (MIL)			
	EPS warning lamp			
	Brake warning lamp			
	High beam indicator lamp			
Warning lamp/indicator lamp	Turn signal indicator lamp		1	
	Door warning lamp			
	Light indicator lamp		The lamp turns OFF by suspending communication.	
	Oil pressure warning lamp			
	Key warning lamp			
	O/D OFF indicator lamp			

SPEEDOMETER

SPEEDOMETER : System Diagram

INFOID:0000000007678401



SPEEDOMETER: System Description

INFOID:0000000007206061

The ABS actuator and electric unit (control unit) receives each wheel speed sensor signal and provides a vehicle speed signal to the combination meter via CAN communication.

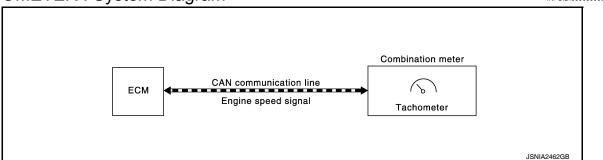
TACHOMETER

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TACHOMETER: System Diagram



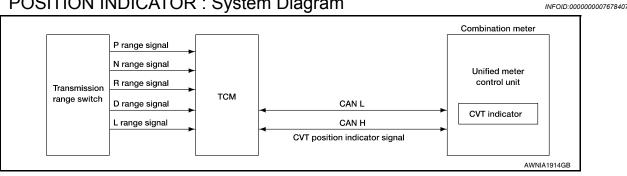
TACHOMETER: System Description

INFOID:0000000007678463

The crank position sensor sends a crankshaft position signal to the ECM. The ECM provides an engine speed signal to the combination meter via CAN communication lines. The tachometer indicates engine speed in revolutions per minute (rpm).

SHIFT POSITION INDICATOR

SHIFT POSITION INDICATOR: System Diagram



SHIFT POSITION INDICATOR: System Description

INFOID:0000000007206063

DESCRIPTION

The combination meter receives the shift position signal from TCM via CAN communication, and displays the position of the shift indicator.

OIL PRESSURE WARNING LAMP

OIL PRESSURE WARNING LAMP: System Diagram

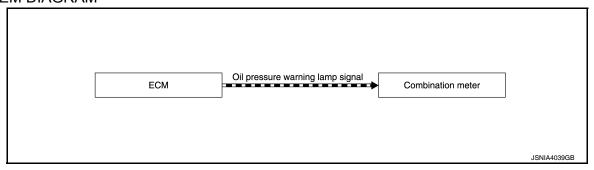
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SYSTEM DIAGRAM



OIL PRESSURE WARNING LAMP: System Description

INFOID:0000000007206064

DESCRIPTION

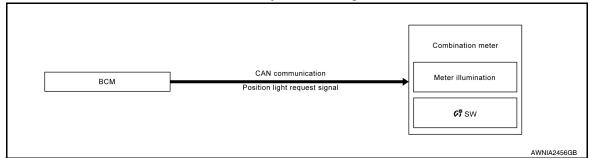
The combination meter turns the oil pressure warning lamp ON when receiving a signal from the ECM via CAN communication.

METER ILLUMINATION CONTROL

[TYPE A]

METER ILLUMINATION CONTROL: System Diagram

INFOID:0000000007697696



METER ILLUMINATION CONTROL: System Description

INFOID:0000000007697692

DESCRIPTION

Meter Illumination Control Function

 Meter illumination control is enabled when the meter receives a signal from the BCM that the combination switch is in the 1st or 2nd position and the meter switches from Daytime mode to Nighttime mode.

Condition Meter illuminat		Meter illumination
Combination switch	1ST or 2ND position	Nighttime mode
(lighting switch)	Off	Daytime mode

Meter Illumination Control Switch

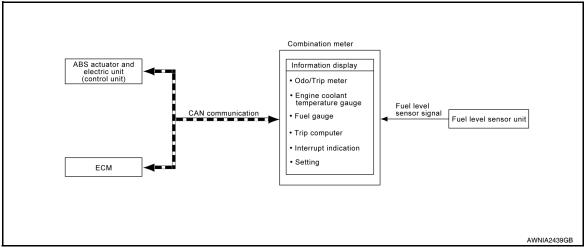
The operation of the illumination control switch changes brightness of the meter illumination.

Meter illumination	The number of adjustable steps
Daytime	12 step
Nighttime	12 step

INFORMATION DISPLAY

INFORMATION DISPLAY: System Diagram

INFOID:0000000007678406



INFORMATION DISPLAY: System Description

INFOID:0000000007678464

DESCRIPTION

- The combination meter receives signals from switches, sensors and modules for operating the following functions on the information display.
- Odo/trip meter

[TYPE A]

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- Engine coolant temperature gauge
- Fuel gauge
- Trip computer
- Interrupt indication
- Meter illumination level
- Setting
- Low fuel warning
- Loose fuel cap warning

ODO/TRIP METER

The combination meter calculates mileage using the vehicle speed signal from the ABS actuator and electric unit (control unit) and displays the mileage on the information display.

ENGINE COOLANT TEMPERATURE GAUGE

The engine coolant temperature gauge indicates the engine coolant temperature.

The ECM provides an engine coolant temperature signal to the combination meter via CAN communication.

FUEL GAUGE

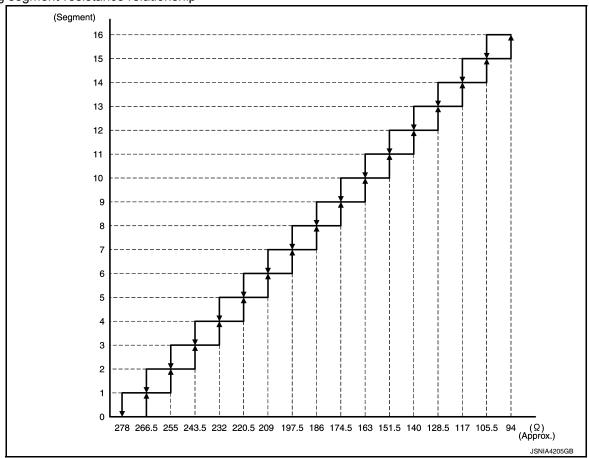
Control Outline

The fuel level sensor unit sends a variable resistor signal to the combination meter. The fuel gauge indicates the approximate fuel level in the fuel tank.

Refuel Control

The unit detects the driver is refueling the vehicle and accelerates the fuel gauge segment movement if the fuel level changes by 9 ℓ (2-3/8 US, 2 Imp gal) or more.

Lighting segment-resistance relationship



INTERRUPT INDICATION

Low Fuel Warning

The low fuel warning turns ON when the fuel level in the fuel tank reaches approximately 7 ℓ (1-7/8 US gal, 1-1/2 Imp gal).

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SYSTEM

< SYSTEM DESCRIPTION >

[TYPE A]

LOOSE FUEL CAP WARNING

The LOOSE FUEL CAP message will display in the information display when the fuel-filler cap is not tightened correctly. The message will turn off as soon as the ECM detects the fuel-filler cap is properly tightened. The ECM provides a loose fuel cap signal to the combination meter via CAN communication lines.

< SYSTEM DESCRIPTION >

[TYPE A]

DIAGNOSIS SYSTEM (COMBINATION METER)

Diagnosis Description

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COMBINATION METER SELF-DIAGNOSIS MODE

The information display, speedometer and tachometer can be checked in self-diagnosis mode.

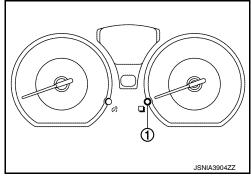
STARTING COMBINATION METER SELF-DIAGNOSIS MODE

NOTE:

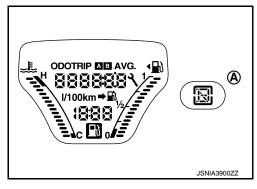
- Check combination meter power supply and ground circuits if self-diagnosis mode does not start. Refer to
 <u>MWI-43, "COMBINATION METER: Diagnosis Procedure"</u>. Replace combination meter if power supply and
 ground circuits are found to be normal and self-diagnosis mode does not start. Refer to <u>MWI-52, "Removal</u>
 and Installation".
- Combination meter self-diagnosis mode will function with the ignition switch in ON. Combination meter selfdiagnosis mode will exit upon turning the ignition switch to OFF.

How to Initiate Self-Diagnosis Mode

- Turn ignition switch ON, press the odo/trip meter switch (1) to "trip A" or "trip B".
- 2. Turn ignition switch to OFF.
- 3. Continue holding the odo/trip meter switch (1) and turn the ignition switch ON.
- 4. Verify the trip meter displays "0000.0".
- 5. Press the meter control switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON).



- The combination meter self-diagnosis mode is activated.
 - Verify all segments of the information display and shift position indicator (A) for CVT models are displayed.



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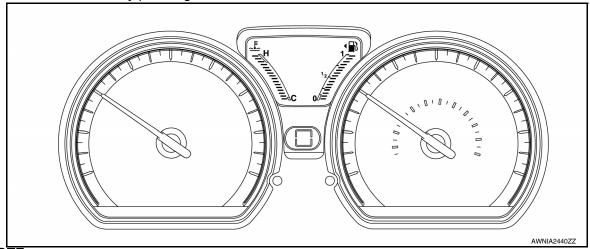
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< SYSTEM DESCRIPTION >

[TYPE A]

7. Each meter activates by pressing the meter control switch.



NOTE:

- If any of the meters or gauges is not activated, replace combination meter.
- The figure is reference.

CONSULT Function

INFOID:0000000007206070

APPLICATION ITEMS

CONSULT can display each diagnostic item using the diagnostic test modes shown.

METER/M&A Diagnosis mode	Description
SELF DIAGNOSTIC RESULT	The combination meter self-diagnosis results.
DATA MONITOR	Displays combination meter input/output data in real time.
SPECIAL FUNCTION	Lighting history of the warning lamp and indicator lamp can be checked.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.

SELF DIAG RESULT

Refer to MWI-24, "DTC Index".

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	Description
SPEED METER [km/h] or [mph]	Х	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	Х	Displays the value of vehicle speed signal, which is transmitted to each unit with CAN communication.
ODO OUTPUT [km/h or mph]		Displays odometer signal value transmitted to other units via CAN communication.
TACHO METER [rpm]	х	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [L]	х	Displays the fuel level.
W TEMP METER [°C] or [°F]	х	Displays the value of engine coolant temperature signal, which is input from ECM.
ABS W/L [ON/OFF]		Displays [ON/OFF] condition of ABS warning indicator
BRAKE W/L [ON/OFF]		Displays [ON/OFF] condition of brake warning indicator.

< SYSTEM DESCRIPTION >

[TYPE A]

Display item [Unit]	MAIN SIGNALS	Description		
DOOR W/L [ON/OFF]		Displays [ON/OFF] condition of door warning indicator.		
HI-BEAM IND [ON/OFF]		Displays [ON/OFF] condition of high beam indicator.		
TURN IND [ON/OFF]		Displays [ON/OFF] condition of turn indicator.	(
LIGHT IND [ON/OFF]		Displays [ON/OFF] condition of light indicator.		
OIL W/L [ON/OFF]		Displays [ON/OFF] condition of oil pressure warning indicator.		
MIL [ON/OFF]		Displays [ON/OFF] condition of malfunction indicator.		
CRUISE IND [Off]		Displays [ON/OFF] condition of CRUISE indicator.		
O/D OFF IND [ON/OFF]		Displays [ON/OFF] condition of O/D OFF indicator.		
FUEL W/L [ON/OFF]		Displays [ON/OFF] condition of low-fuel warning indicator.	(
O/D OFF SW [ON/OFF]		Displays [ON/OFF] condition of O/D OFF switch.		
REAR DEF SW [ON/OFF]		Displays [ON/OFF] condition of rear window defogger switch.		
BRAKE SW [ON/OFF]		Displays [ON/OFF] condition of brake switch.		
EPS W/L [ON/OFF]		Displays [ON/OFF] condition of EPS indicator.		
CHAGE W/L [Off]		Displays [ON/OFF] condition of charge warning indicator.		
SHIFT IND [P, R, N, D, L]		Displays shift selector position.		
FUEL CAP W/L [Off]		Displays [ON/OFF] condition of loose fuel cap warning message.		
AIR PRES W/L [ON/OFF]		Displays [ON/OFF] condition of tire pressure warning lamp.		
PKB SW [ON/OFF]		Status of parking brake switch.		
BUCKLE SW [ON/OFF]		Status of seat belt buckle switch (LH).	N	
PASS BUCKLE SW [ON/OFF]		Status of passenger seat belt buckle switch (RH).	M	
BRAKE OIL SW [ON/OFF]		Status of brake fluid level switch.		
DISTANCE [km] or [Mi]		Displays distance to empty.		
BUZZER [ON/OFF]	Х	Displays [ON/OFF] condition of buzzer.		
SLIP IND [ON/OFF]		Displays [ON/OFF] condition of SLIP indicator lamp.		
VDC/TCS IND [ON/OFF]		Displays [ON/OFF] condition of VDC OFF indicator lamp.		

NOTE:

Some items are not available according to vehicle specification.

< SYSTEM DESCRIPTION >

[TYPE A]

SPECIAL FUNCTION

Special menu

Display item	Description
W/L ON HISTORY	Lighting history of warning lamp and indicator lamp can be checked.

W/L ON HISTORY

- Stores histories when warning/indicator lamp is turned on.
- "W/L ON HISTORY" indicates the "TIME" when the warning/ indicator lamp is turned on.
- The "TIME" above is:
- 0: The condition that the warning/indicator lamp has been turned on 1 or more times after starting the engine and waiting for 30 seconds.
- 1 39: The number of times the engine was restarted after the 0 condition.
- NO W/L ON HISTORY: Stores NO (0) turning on history of warning/indicator lamp.

NOTE:

- W/L ON HISTORY is not stored for approximately 30 seconds after the engine starts.
- Brake warning lamp does not store any history when the parking brake is applied or the brake fluid level gets low.

Display Item

Display item	Description
ABS W/L	Lighting history of ABS warning lamp.
VDC/TCS IND	Lighting history of VDC warning lamp.
SLIP IND	Lighting history of SLIP warning lamp.
BRAKE W/L	Lighting history of brake warning lamp.
OIL W/L	Lighting history of oil pressure warning lamp.
C-ENG W/L	Lighting history of malfunction indicator lamp (MIL).
AIR PRES W/L	Lighting history of tire pressure warning lamp.
EPS W/L	Lighting history of EPS warning lamp.
CHAGE W/L	Lighting history of charging warning lamp.
DOOR W/L	Lighting history of door warning lamp.
CRUISE W/L	Lighting history of cruise warning lamp.
O/D OFF IND	Lighting history of O/D OFF indicator lamp.
FUEL W/L	Lighting history of fuel warning lamp.
WASHER W/L	Lighting history of washer warning lamp.

COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

[TYPE A]

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ECU DIAGNOSIS INFORMATION

COMBINATION METER

Reference Value INFOID:0000000007206071

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Display content	Data monitor				
Wioriitor Itom	Diopidy content	Condition	Reference value in normal operation	_		
SPEED METER [km/h or mph]	Speed meter operation	While driving	Vehicle speed matches speed meter	D		
SPEED OUTPUT [km/h or mph]	Vehicle speed	While driving	The speed output signal value via CAN communication is approx. value of vehicle speed.	E		
ODO OUTPUT [km/h or mph]	ODO meter operation	Driving	Distance driven	F		
TACHO METER [rpm]	Tacho meter operation	Engine running	The tacho meter is approx. value of engine speed via CAN communication.	- 1		
FUEL METER [L]	Fuel level	Ignition ON	Fuel level is approx. value of fuel gauge.	G		
W TEMP METER [°C] or [°F]	Engine coolant temperature	Engine running	Input value of engine coolant temperature signal via CAN communication.			
ADC W/I	ABS warning	When ABS warning lamp is ON	On	- H		
ABS W/L	lamp	When ABS warning lamp is OFF	Off	=		
DDAKE W//	Brake warning	When Brake warning lamp is ON	On [*]			
BRAKE W/L	lamp	When Brake warning lamp is OFF	Off	_		
DOOD W/I	Door open	When Door warning lamp is ON	On	-		
DOOR W/L	warning lamp	When Door warning lamp is OFF	Off	_ J		
LII DEAM IND	HI-Beam indi-	When High-beam indicator lamp is ON	On	=		
HI-BEAM IND	cator lamp	When High-beam indicator lamp is OFF	Off	K		
TURN IND	Turn signal in- When Turn signal indic		On	_		
TORNIND	dicator	When Turn signal indicator lamp is OFF	Off	-		
LIGHT IND	Light indicator	When Tail lamp indicator lamp is ON	On	- L		
LIGITI IND	Light indicator	When Tail lamp indicator lamp is OFF	Off			
OIL W/L	Oil pressure	When Oil pressure warning lamp is ON	On	M		
OIL W/L	warning light	When Oil pressure warning lamp is OFF	Off			
MII	MIL warning	When Malfunction indicator lamp (MIL) is ON	On	MV		
MIL	lamp	When Malfunction indicator lamp (MIL) is OFF	Off			
CDUISE IND	Cruise indicator	When cruise indicator lamp is ON.	ON	0		
CRUISE IND	lamp	When cruise indicator lamp is OFF.	Off	=-		
O/D OFF IND	O/D OFF indi-	When O/D OFF indicator lamp is OFF.	Off	- - P		
	cator	When O/D OFF indicator lamp is ON.	On	- 7		
O/D OFF SW	O/D OFF	When O/D OFF switch is pressed to OFF.	Off	_		
	switch	When O/D OFF switch is pressed to ON.	On	_		
REAR DEF SW	Rear defogger	When rear defogger switch is pressed to ON	On	-		
	switch	When rear defogger is pressed to Off	Off	_		

< ECU DIAGNOSIS INFORMATION >

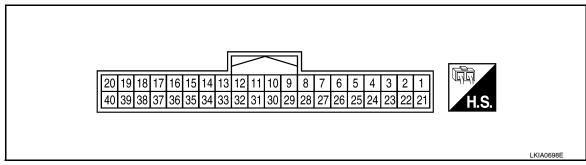
Monitor Item	Display content	Data monitor				
Worldor Rem	Display content	Condition	Reference value in normal operation			
BRAKE SW	Brake switch	When brake pedal is applied	On			
DIVINE OW	DIAKE SWILCH	When brake pedal is released	Off			
FUEL W/L	Low fuel warn-	When low fuel warning is ON	On			
FOEL W/L	ing	When low fuel warning is Off	Off			
EPS W/L	EPS warning	EPS warning lamp ON	On			
LF3 W/L	lamp	EPS warning lamp OFF	Off			
CHAGE W/L	Charge warn- ing lamp	Engine running	Off			
SHIFT IND	Shift position indicator	The position of the shift position selector.	[P, R, N, D, L]			
FUEL CAP W/L	Loose fuel cap	When the fuel-filler cap is installed incorrectly.	On			
	warning	When the fuel-filler cap is installed correctly.	Off			
AIR PRES W/L	Tire pressure	When tire pressure warning lamp is ON	ON			
	warning lamp operation	When tire pressure warning lamp is OFF	Off			
PKB SW	Parking brake	When parking brake is active	On			
TREOW	switch	When parking brake is inactive	Off			
BUCKLE SW	Seat belt buck-	When seat belt buckle is unfastened (LH).				
BOOKLE OVV	le switch LH	When seat belt buckle is fastened (LH).	Off			
BRAKE OIL SW	Brake fluid level	When brake fluid level switch ON	On			
DIVINE OIL OV	switch	When brake fluid level switch OFF	Off			
PASS BUCKLE SW	Seat belt buck-	When passenger seat is occupied and seat belt buckle is unfastened (RH).	On			
TAGG BOOKLE GW	le switch RH	When passenger seat is unoccupied and seat belt buckle is unfastened (RH).	Off			
DISTANCE	Distance to empty	While driving	[km/h or mph]			
DI 177ED	Buzzer opera-	When Buzzer is ON	On			
BUZZER	tion	When Buzzer is OFF	Off			
SLIP IND	Slip indicator	When SLIP indicator lamp is ON.	On			
	lamp	When SLIP indicator lamp is ON.	Off			
VDC/TCS IND	VDC indicator	When VDC indicator lamp is ON.	ON			
	lamp	When VDC indicator lamp is Off	OFF			

^{*:} Displays "Off" if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.

NOTE:

Some items are not available according to vehicle specification.

TERMINAL LAYOUT



COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

[TYPE A]

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PHYSICAL VALUES

Ter-			Condition			
mi- nal No.	Wire color	Item	Ignition switch	Operation or condition	Reference value (V) (Approx.)	
1	L	CAN-H		_		
2	Р	CAN-L	_	_	_	
4	Р	8P/R		_		
6	W	Fuel level sensor signal (+)	_	_	Refer to MWI-46, "Component Inspection".	
7	V	Air bag	_	_	_	
8	Р	O/D OFF switch	ON	O/D OFF switch pressed	0	
O	'	O/D OIT SWIGH	OIV	O/D OFF switch released	Battery voltage	
9	V	Seat belt buckle switch LH	ON	Unfastened (ON)	0	
3	V	Seat belt buckle switch Life	OIV	Fastened (OFF)	Battery voltage	
10	SB	Parking Brake switch	ON	Parking brake is inactive	0	
10	OD	Tarking brake switch	OIV	Parking brake is active	Battery voltage	
11	LG	Brake fluid level switch	ON	Brake fluid level low	0	
		Diane liulu level Switch		Brake fluid level normal	Battery voltage	
13	В	Illumination control switch (-)		_	_	
15	R	Ignition switch ON or ACC	_	_	Battery voltage	
17	V	Washer fluid level switch	ON	Washer fluid level low	0	
- 17		(Canada models)		Washer fluid level normal	Battery voltage	
21	B/W					
22	В	Ground	_	_	0	
23	В					
24	GR	Fuel level sensor ground (-)	ON	_	0	
25	B/W	VDC ground	ON	_	0	
27	R	Battery power supply	OFF	_	Battery voltage	
28	GR	Ignition switch ON or START	ON	_	Battery voltage	
29	20 C Soot holt buoklo oviitch DLL	ON	Unfastened (ON)	0		
23	G	Seat belt buckle switch RH	ON	Fastened (OFF)	Battery voltage	
20	1.0	Ctor John quitab	ON	Brake pedal depressed	Battery voltage	
30	30 LG Stop lamp switch		ON	Brake pedal released	0	
20	38 Y Generator		ON	Generator voltage low	0	
38			ON	Generator voltage normal	Battery voltage	

Fail-Safe

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

Function	Specifications		
Speedometer	Reset to zero by suspending communication.		
Tachometer	Reset to zero by suspending communication.		
Illumination control	When suspending communication, changes to nighttime mode.		
Shift position indicator	When suspending communication, not indicate.		

< ECU DIAGNOSIS INFORMATION >

	Function		Specifications		
		Current fuel consumption	When reception time of an abnormal signal is 2 seconds or less, the last received datum is used for calculation to indi-		
Information display	Trip com- puter	Average fuel consumption	 cate the result. When reception time of an abnormal signal is more than two seconds, the last result calculated during normal condition is 		
oa.c a.op.a.y		Distance to empty	indicated.		
	Engine coo	lant temperature gauge	Reset to zero by suspending communication.		
	Odo/trip me	eter	An indicated value is maintained at communications blackout.		
Buzzer			The buzzer turns OFF by suspending communication.		
	ABS warning lamp				
	Malfunction indicator lamp (MIL)		The lamp turns ON by suspending communication.		
	EPS warning lamp		The lamp turns on by suspending communication.		
	Brake warning lamp				
	High beam indicator lamp				
Warning lamp/indicator lamp	Turn signal indicator lamp				
	Door warning lamp				
	Light indicator lamp		The lamp turns OFF by suspending communication.		
	Oil pressure warning lamp				
	Key warning lamp				
	O/D OFF indicator lamp				

DTC Index

Display contents of CONSULT	Diagnostic item is detected when	Refer to
CAN COMM CIRCUIT [U1000]	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	MWI-38, "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	When detecting error during the initial diagnosis of the CAN controller of combination meter.	MWI-39, "Diagnosis Procedure"
VEHICLE SPEED [B2205]	The abnormal vehicle speed signal is input from the ABS actuator and electric unit (control unit) for 2 seconds or more.	MWI-40, "Diagnosis Procedure"
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	MWI-41. "Diagnosis Procedure"
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	MWI-42. "Diagnosis Procedure"

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[TYPE A]

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000007733002

ECU	Reference
	BCS-24, "Reference Value"
	BCS-37, "Wiring Diagram"
BCM	BCS-35, "Fail-safe"
	BCS-35, "DTC Inspection Priority Chart"
	BCS-36, "DTC Index"

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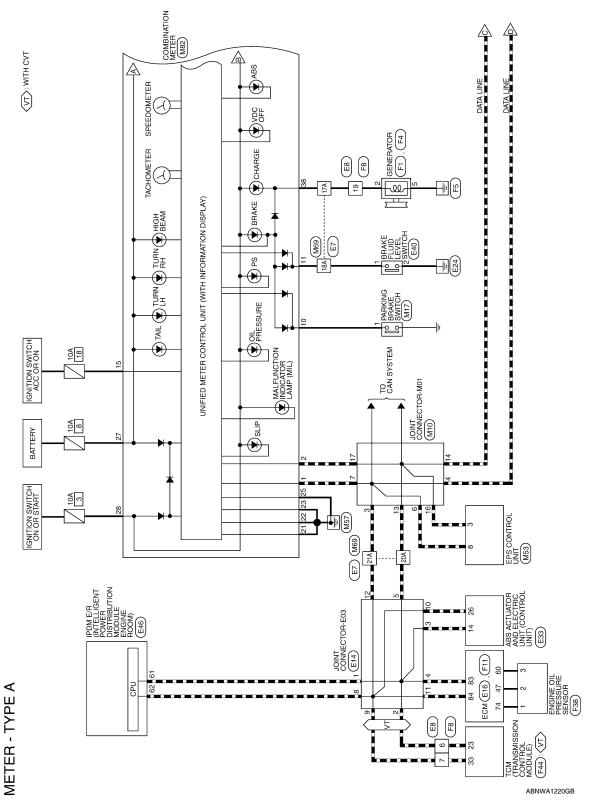
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< WIRING DIAGRAM > [TYPE A]

WIRING DIAGRAM

METER SYSTEM

Wiring Diagram

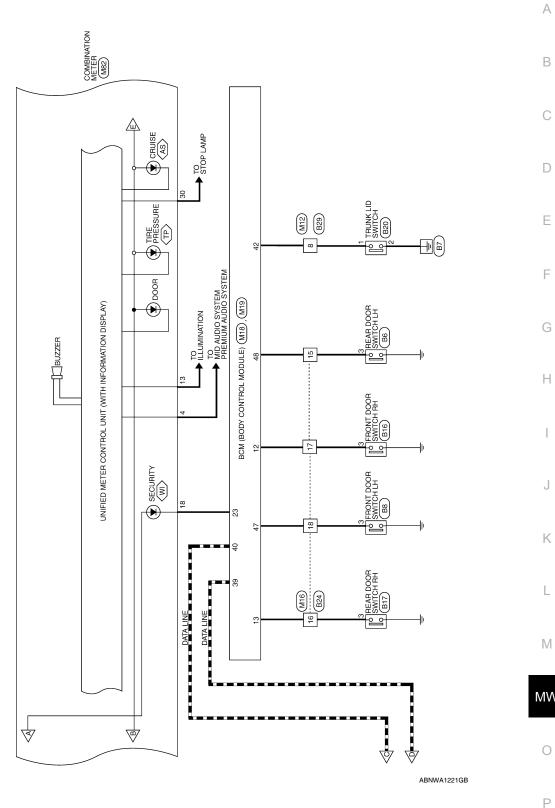


(AS): WITH ASCD

(TP): WITH TIRE PRESSURE

MONITORING SYSTEM

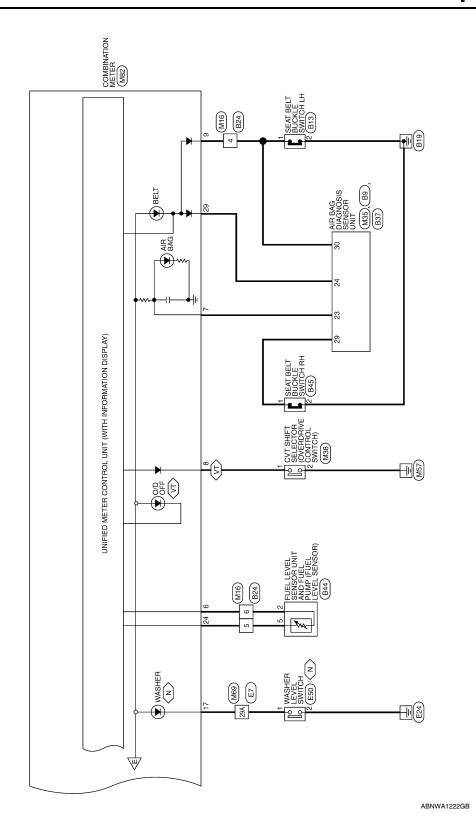
(WI): WITH IMMOBILIZER



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Connector Name | WIRE TO WIRE

Connector No. M16

Connector Color WHITE

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire ۵

Terminal No.

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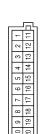
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METER CONNECTORS - TYPE A

M12	onnector Name WIRE TO WIRE	WHITE
Connector No.	Connector Name	Connector Color
M10	onnector Name JOINT CONNECTOR-M01	GRAY
Connector No.	Connector Name	Connector Color





Signal Name	ı	-	-	ı	-	ı	ı	_
Color of Wire	٦	Γ	٦	٦	Ь	Ь	Д	Ь
Terminal No. Wire	က	4	9	7	13	14	16	17

Connector No.	M18
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE

Connector Name | PARKING BRAKE SWITCH

M17

Connector No.

Connector Color BLACK

Connector No. M19



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-	2	က	4	5	9	_	0	6	9	Ξ	12	12 13 14	4	15 1
21 22		23	24 25	25	26	27	28 29	29	98	31	32	33	34 35	35

Signal Name

Color of Wire SB

Terminal No.

37				⊊	ΑT		
36		Je	AS	胎	일.		
35		lan	ν	>	25	ĮΨ	_
34		=	S	8	₹ 🖺	CAN-H	CANL
33		Signal Name	DOOR SW (AS)	DOOR SW (RR)	RITY IND OUTPUT	ပြ	2
32		Sić	8	18	150		
31			D		SECURITY INDICAT OUTPUT		
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37					SS		
29		-					
28		e i	_	٦,			_
27		olor c Wire	Ь	ا ا	G	-	۵
26		S					
25		0.					
24		=					
23		ine	12	13	23	33	40
22		E					
21		Terminal No. Wire					
	_						

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١	9	33				_		_	
١	10 11 12 13 14 15 16 17 18 19 20	88					ш		
١	17	37			(ΑT		
١	16	36 37		<u>e</u>	AS	l #	일.		
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١	7	34 35		Z	SV	S	7	ż	CAN-L
	5	33		Signal Name	DOOR SW (AS)	DOOR SW (RR)	SECURITY INDICATE OUTPUT	CAN-H	C
/	12	32		Sic	8	18	150		
	Ξ	31			Ω	△	ᄗ		
	9	ဗ္ဂ					SS		
١	6	29			_				
Ī	8	28		Color of Wire		٦,			
١	7	26 27		응흥	Ь	ក្ន	Q		Д
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١	5	25		<u>o</u>					
	4	23 24							
١	က	23		minal No.	12	13	23	33	40
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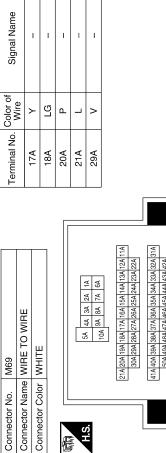
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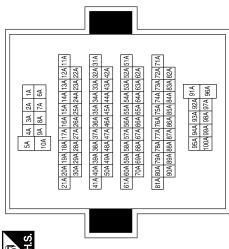
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MWI-29 Revision: July 2011 2012 Versa Sedan

Connector No.	o. M35		Connector No.	o. M38		Connector No.	No. M53	53
Connector Name AIR BAG DIAC	ame AIR	BAG DIAGNOSIS	Connector Na	ame CVT S	Connector Name CVT SHIFT SELECTOR	Connector	Name EF	Connector Name EPS CONTROL UNIT
	SE	SENSOR UNIT	Connector Color WHITE	olor WHITE	ш	Connector Color BLACK	Color BL	ACK
Connector Color YELLOW	olor YEL	LOW						
H.S.	9 9 7	2 5 4 3 24 22 24 22 4 3	H.S.		1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	f南 H.S.		8 7 8 7 5 1 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1
<u> </u>	18 51	53 60 59 25 1	Terminal No Color of	Color of	Signal	Terminal No Color of	Color o	Signal Name
				Wire	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Wire	
	Color of	i	-	Д	ı	က	Д.	CAN-L
l erminal No. Wire	Wire	Signal Name	2	B/W	ı	8	٦	CAN-H
23	^	AIRBAG W/L						
24	9	SEATBELT REMINDER						



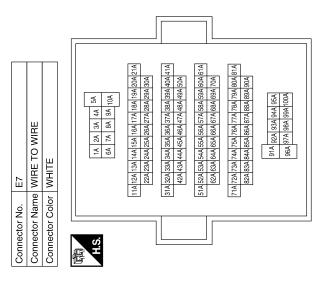


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Connector Color WHITE

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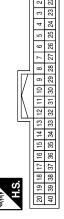
Connector No.



Signal Name	ı	1	I	I	1
Color of Wire	^	ГG	Ь	Т	Λ
Terminal No. Wire	17A	18A	20A	21A	29A

	Signal Name	VDC GND	1	BAT	IGN	AS BELT	BRAKE SW	ı	ı	I	ı	ı	1	ı	CHG	1	1
-	Color of Wire	B/W	1	ш	GR	ŋ	P. P.	1	1	ı	ı	1	1	ı	>	1	1
	Terminal No.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Connector No.	M82
Connector Name	Connector Name COMBINATION METER (WITH TYPE A)
Connector Color WHITE	WHITE



Signal Name	Olginal Ivalille	CAN-H	CAN-L	_	8P/R	-	FM SIG	AIR BAG	O/D OFF	BELT	PKB SW	BRAKE OIL SW	1	OUTSIDE ILL OUTPUT	_	ACC SW	ı	WASHER SW	_	I	-	GND (ILL)	GND (POWER)	GND (CIRCUIT)	FM GND
Color of	Wire	_	Ь	ı	Ь	1	Μ	^	Ь	>	SB	LG	1	В	ı	Я	1	>	В	1	-	B/W	В	В	GR
Terminal No		-	2	3	4	5	9	7	8	6	10	÷	12	13	14	15	16	17	18	19	20	21	22	23	24

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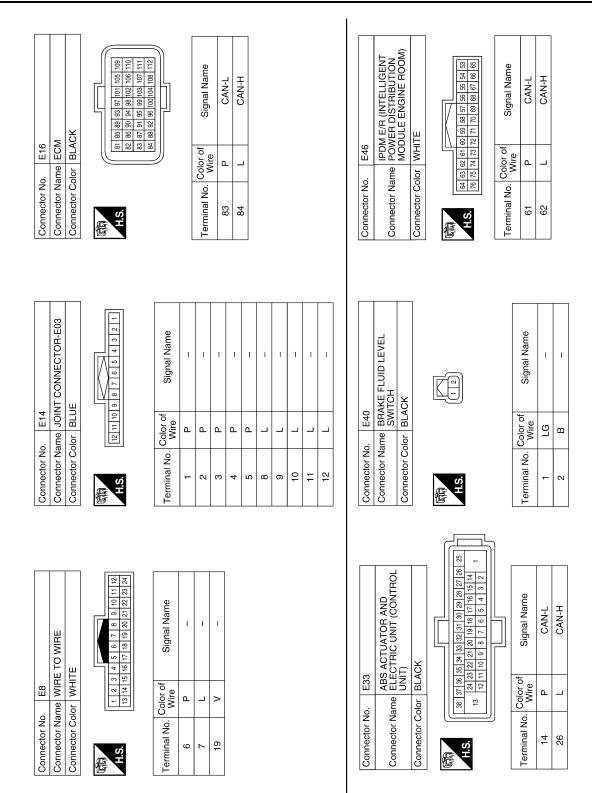
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TOB		u)	Signal Name		I	
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RATOR	Y	4 8 3 2	Signal Name	ı		
Connector No. F1	Connector Color BLACK		Color of Wire	N/		
Connector No. F1	Connector C	H.S.	Terminal No. Wire	2		
HER I EVEL SWITCH			Signal Name	I	1	
). E50	olor BRO		Color of Wire	œ	В	
Connector No. E50	Connector Color BROWN	H.S.	Terminal No. Color of Wire	-	2	

	ENGINE OIL PRESSURE SENSOR	BLACK	3 S S S S S S S S S S S S S S S S S S S	Signal Name	ı	1	_
. F38				Color of Wire	0	>	٦
Connector No.	Connector Name	Connector Color	崎南 H.S.	Terminal No. Wire	1	2	ε

				57 61 65 69 73 77	58 62 66 70 74 78	59 63 67 71 75 79	56 60 64 68 72 76 80			Signal Name	OILPRES	GNDA - OILPRES	AVCC1 - OILPRES
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F11	ECM	BRO		41 45 49 53	42 46 50 54	43 47 51	44 48 52			olor of Wire		_	0
Э.		olor		33 37	34 38	35 39	36 40			0	_		
Connector No.	Connector Name	Connector Color BROWN	\			H.S.		ソ	,	Terminal No.	47	09	74

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	-	13	Ш
	2	14	
	က	15	
$ \square $	4	16	
117	2	17	
IV	9	18	
II.	7	19	
	ω	20	
5	6	21	
	9	22	
	Ξ	23	
	12	24	

Signal Name	I	1	1
Color of Wire	Ь	_	L/W
Terminal No. Wire	9	7	19

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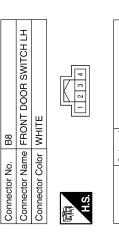
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Revision: July 2011 MWI-33 2012 Versa Sedan

Connector No. F8
Connector Name WIRE TO WIRE
Connector Color WHITE

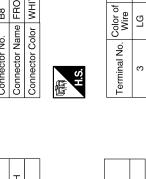
METER SYSTEM

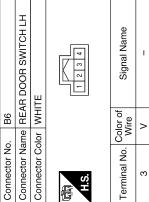
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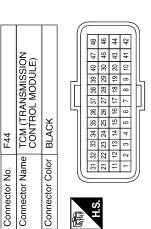


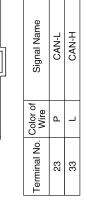
Signal Name

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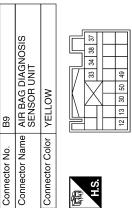




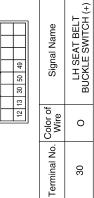


Connector No.	B16
Name	Connector Name FRONT DOOR SWITCH RH Connector Color WHITE
	1 2 3 4
Terminal No. Wire	color of Signal Name Wire
	1

]			
SEAT BELT BUCKLE SWITCH LH	WHITE	321	Signal Name	SIGNAL	GND
			Color of Wire	0	В
Connector Name	Connector Color	H.S.	Terminal No. Wire	1	2







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B3

Connector No.	o. B17		Connector No.	No. B20		Connector No.	No. B24	
Connector Na	ame REAR	Connector Name REAR DOOR SWITCH RH	Connector	Name TRUI	Connector Name TRUNK LID SWITCH	Connector Name WIRE TO WIRE	Name WIR	E TO WIRE
Connector Color WHITE	olor WHITE	ш	Connector (Connector Color WHITE	Щ	Connector Color WHITE	Solor WHI	12
H.S.		1 2 3 4 4	哥 H.S.		(C C C C C C C C C C C C C C C C C C C	E H.S.	13 14 15 16	4 5 6 7 8 9 10 11 12 16 17 18 19 20 21 22 23 24
Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Color of Terminal No. Wire	Color of Wire	Signal Name
3	Ж	1	-	۵	ı	4	0	1
			2	В	ı	ß	۵	1
						9	æ	ı
						15	>	ı
						16	æ	I
						17	_	I
						18	ഉ	I

4	Connector Name FUEL LEVEL SENSOR UNIT AND FUEL PUMP	IAY	1 2 3 4 5	f Signal Name	ı	1
. B44	me FU	lor GF		Color o Wire	æ	۵
Connector No.	Connector Na	Connector Color GRAY	高 H.S.	Terminal No. Wire	2	5

Connector No.). B37	
Sonnector Na	ame SEN	Connector Name AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color YELLOW	olor YEL	LOW
H.S.		35 36 26 37 26 47 48 29 11 10
Terminal No.	Color of Wire	Signal Name
59	0	RH SEAT BELT BUCKLE SWITCH (+)

Signal Nan	_	
Color of Wire	Ь	
Terminal No.	8	

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B45	Connector Name SEAT BELT BUCKLE SWITCH RH	WHITE
Connector No.	Connector Name	Connector Color WHITE



Signal Name	SIGNAL	GND	
Color of Wire	0	В	
erminal No.	-	2	

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DIAGNOSIS AND REPAIR WORKFLOW

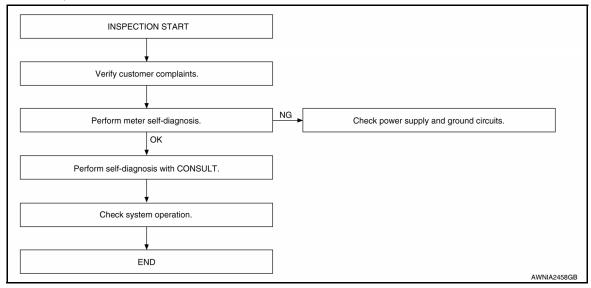
[TYPE A] < BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000007678391

OVERALL SEQUENCE



DETAILED FLOW

1.CONFIRM SYMPTOM

Confirm symptom or customer complaint.

>> GO TO 2

2.self-diagnosis of combination meter

Perform self-diagnosis of combination meter. Refer to MWI-17, "Diagnosis Description".

Is the inspection result normal?

YES >> GO TO 3

NO

>> If self-diagnosis will not start, check power supply and ground circuit of combination meter. Refer to MWI-43, "COMBINATION METER: Diagnosis Procedure". If power supply and ground circuits are OK, replace combination meter. Refer to MWI-52, "Removal and Installation".

3.CHECK COMBINATION METER WITH CONSULT

Select "METER/M&A" on CONSULT and perform self-diagnosis of combination meter. Refer to MWI-18, "CONSULT Function".

Is the inspection result normal?

YES >> Check symptom. GO TO 4.

NO >> Refer to MWI-24, "DTC Index".

4. CHECK SYSTEM OPERATION

Check the combination meter to verify that the repair has been completed successfully.

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 1

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U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
U1000	CAN COMM CIRCUIT	When CAN communication signal is not continuously received for 2 seconds or more	CAN communication system mal- function

Diagnosis Procedure

INFOID:0000000007705938

1. CHECK DTC DETECTION

With CONSULT.

- 1. Turn ignition switch OFF to ON.
- 2. Perform self diagnostic result.

Is DTC U1000 detected?

YES >> Proceed to diagnosis procedure. Refer to <u>LAN-14</u>, "Trouble <u>Diagnosis Flow Chart"</u>.

NO >> Refer to GI-38, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

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U1010 CONTROL UNIT (CAN)

Description INFOID:000000007687567

Initial diagnosis of combination meter.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT	Description	Probable malfunction location
U1010	CONTROL UNIT (CAN)	Error detected during the initial diagnosis of the CAN controller of combination meter.	Combination meter

Diagnosis Procedure

INFOID:0000000007687569

1. REPLACE COMBINATION METER

Replace combination meter. Refer to MWI-52, "Removal and Installation".

>> Inspection End.

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DTC B2205 VEHICLE SPEED CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

DTC B2205 VEHICLE SPEED CIRCUIT

Description INFOID:0000000007687570

The ABS actuator and electric unit (control unit) provides a vehicle speed signal to the combination meter via CAN communication lines.

DTC Logic

DTC	CONSULT	Detection condition	Possible malfunction location
B2205	VEHICLE SPEED CIRC [B2205]	Malfunction is detected when an erroneous speed signal is received for 2 seconds or more.	Combination meter ABS actuator and electric unit (control unit)

Diagnosis Procedure

INFOID:0000000007687572

1. CHECK COMBINATION METER INPUT SIGNAL

- 1. Start engine and select METER/M&A on CONSULT.
- Using SPEED METER on DATA MONITOR, compare the DATA MONITOR value with the combination meter speedometer. Speedometer and DATA MONITOR indications should be close.

Is the inspection result normal?

- YES >> Perform ABS actuator and electric unit (control unit) self-diagnosis. Refer to BRC-32, "CONSULT Function (ABS)".
- NO >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

B2267 ENGINE SPEED

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

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B2267 ENGINE SPEED

Description INFOID:000000007206085

The engine speed signal is transmitted from ECM to the combination meter via CAN communication.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT	Diagnostic item is detected when	Probable malfunction location
B2267	ENGINE SPEED	Malfunction is detected when an erroneous engine speed signal is recieved for 2 seconds or more.	Crankshaft position sensor (POS) ECM

Diagnosis Procedure

INFOID:0000000007206087

1. CHECK COMBINATION METER INPUT SIGNAL

- Start engine and select METER/M&A on CONSULT.
- Using TACHO METER on DATA MONITOR, compare the value of DATA MONITOR with tachometer of combination meter. Tachometer and DATA MONITOR indications should be close.

Is the inspection result normal?

- YES >> Perform ECM self-diagnosis. Refer to EC-59, "CONSULT Function".
- NO >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

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B2268 WATER TEMP

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

B2268 WATER TEMP

Description INFOID:000000007206088

The engine coolant temperature signal is transmitted from ECM to the combination meter via CAN communication.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT	Detection Condition	Possible malfunction location
B2268	WATER TEMP	ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more	Engine coolant temperature sensor ECM

Diagnosis Procedure

INFOID:0000000007206090

1. PERFORM SELF-DIAGNOSIS OF ECM

Perform "Self Diagnosis Result" of "ENGINE", and repair or replace malfunctioning parts.

>> Refer to EC-59, "CONSULT Function".

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

INFOID:0000000007206091

COMBINATION METER: Diagnosis Procedure

Regarding Wiring Diagram information, refer to MWI-26, "Wiring Diagram".

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1.CHECK FUSE

Check for blown combination meter fuses.

Power source	Fuse No.
Battery	8
Ignition switch ON or START	3
Ignition switch ACC or ON	18

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the fuse after repairing the affected circuit.

2.POWER SUPPLY CIRCUIT CHECK

- Disconnect combination meter connector.
- Check voltage between combination meter harness connector M82, terminals 27, 28, 15 and ground.

Terminals			Ignition switch position			
(+)		()	OFF	ACC	ON	START
Connector	Terminal	(–)	OFF	ACC	ON	SIARI
	27		Battery voltage	Battery voltage	Battery voltage	Battery voltage
M82	28	Ground	0V	0V	Battery voltage	Battery voltage
	15		0V	Battery voltage	Battery voltage	0V

Is the inspection result normal?

YES >> GO TO 3

NO >> Check harness for open between combination meter and fuse.

3. GROUND CIRCUIT CHECK

Turn ignition switch OFF.

- 2. Disconnect combination meter connector.
- Check continuity between combination meter harness connector M82, terminals 22, 23, 24 and ground.

	Termin			
	(+)	()	Continuity	
Connector	Terminal	(-)		
	21	Ground	Yes	
M82	22			
	23			

Is the inspection result normal?

YES >> Inspection End.

NO >> Check ground harness.

BCM (BODY CONTROL MODULE)

MWI-43 Revision: July 2011 2012 Versa Sedan

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE A]

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000007732999

Regarding Wiring Diagram information, refer to BCS-37, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.
57	Pottory power cumply	12 (10A)
70	Battery power supply	G (40A)
11	Ignition switch ACC or ON	18 (10A)
38	Ignition switch ON or START	2 (10A)

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connectors.
- 3. Check voltage between BCM connector and ground.

В	CM		Ignition switch position		
Connector	Terminal		OFF	ACC	ON
M20	57	Ground	Battery voltage	Battery voltage	Battery voltage
IVIZU	70				
M18	11	Ground	0 V	Battery voltage	Battery voltage
IVI IO	38		0 V	0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

CHECK GROUND CIRCUIT

Check continuity between BCM connector and ground.

В	CM		Continuity
Connector Terminal			Continuity
M20	67	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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FUEL LEVEL SENSOR SIGNAL CIRCUIT

Description INFOID:0000000007678409

The fuel level sensor unit and fuel pump detects the approximate fuel level in the fuel tank and transmits the fuel level signal to the combination meter.

Component Function Check

INFOID:0000000007206092

${f 1}$. COMBINATION METER INPUT SIGNAL

- Select METER/M&A on CONSULT.
- Using FUEL METER of DATA MONITOR, compare the DATA MONITOR value with the fuel gauge position.

Fuel gauge indication position	Reference value of data monitor [L]
1	Approx. 41.1
3/4	Approx. 30.8
1/2	Approx. 20.5
1/4	Approx. 10.2
0	Approx. 2.5

Does monitor value match fuel gauge reading?

YES >> Inspection End.

NO >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000007206093

Regarding Wiring Diagram information, refer to MWI-26, "Wiring Diagram".

1. CHECK HARNESS CONNECTOR

- Turn ignition switch OFF.
- Check combination meter and fuel level sensor unit terminals (meter-side and harness-side) for poor connection.

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace terminals or connectors.

2.check fuel level sensor unit circuit

Disconnect combination meter harness connector M82 and fuel level sensor unit and fuel pump harness connector B44.

Check continuity between combination meter harness connector M82 terminal 6 and fuel level sensor unit and fuel pump harness connector B44 terminal 2.

Connector	Terminal	Connector	Terminal	Continuity
M82	6	B44	2	Yes

Check continuity between fuel level sensor unit and fuel pump harness connector B44 terminal 2 and ground.

Connector	Terminal	Ground	Continuity
B44	2	Ground	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

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$\overline{3}$.check fuel level sensor ground circuit

Check continuity between combination meter harness connector M82 terminal 24 and fuel level sensor unit and fuel pump harness connector B44 terminal 5.

Connector	Terminal	Connector	Terminal	Continuity
M82	24	B44	5	Yes

Check continuity between fuel level sensor unit and fuel pump harness connector B44 terminal 5 and ground.

Connector	Terminal	Ground	Continuity
B44	5	Oround	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4. CHECK INSTALLATION CONDITION

Check fuel level sensor unit installation, and verify the float arm does not interfere or bind with the internal components in the fuel tank.

Is the inspection result normal?

YES >> Inspection End.

>> Install the fuel level sensor unit properly. NO

Component Inspection

INFOID:0000000007206094

$1.\mathsf{REMOVE}$ FUEL LEVEL SENSOR UNIT

Remove the fuel level sensor unit. Refer to FL-5, "Removal and Installation".

>> GO TO 2.

2.CHECK FUEL LEVEL SENSOR UNIT

Check the resistance between fuel level sensor unit and fuel pump.

Terminals		Condition	Resistance (Ω)	Height [mm (in)]
Fuel level sensor unit		Condition	(Approx.)	r leight [min (m)]
2	5	Full [*] (2)	91	177 (6.97)
		Empty* (1)	283	15 (0.59)

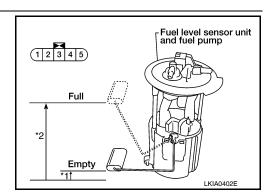
^{*:} When float rod is in contact with stopper.

Is inspection result OK?

YES >> Inspection End.

NO

>> Replace fuel level sensor unit and fuel pump. Refer to FL-5, "Removal and Installation".



WASHER LEVEL SWITCH SIGNAL CIRCUIT ITYPE A1 < DTC/CIRCUIT DIAGNOSIS > WASHER LEVEL SWITCH SIGNAL CIRCUIT Α Description INFOID:0000000007733004 Transmits the washer level switch signal to the combination meter. В Diagnosis Procedure INFOID:0000000007733005 Regarding Wiring Diagram information, refer to MWI-26, "Wiring Diagram". D 1. CHECK WASHER FLUID LEVEL SWITCH SIGNAL CIRCUIT Turn ignition switch OFF. Е Disconnect combination meter connector M82 and washer fluid level switch connector E50. 3. Check continuity between combination meter harness connector M82 terminal 17 and washer fluid level switch harness connector E50 terminal 1. F 17 - 1: Continuity should exist. Check continuity between combination meter harness connector M82 terminal 17 and ground. 17 - Ground : Continuity should not exist. Is the inspection result normal? Н YES >> GO TO 2 NO >> Repair harness or connector. 2.CHECK WASHER FLUID LEVEL SWITCH GROUND CIRCUIT Check continuity between washer fluid level switch harness connector E50 terminal 2 and ground. 2 - Ground : Continuity should exist. Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

Component Inspection

1. CHECK WASHER FLUID LEVEL SWITCH

Check continuity between washer fluid level switch terminals 1 and 2.

Terminal	Washer fluid level	Continuity
1 - 2	Low	Yes
1 - 2	High	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace washer fluid level switch.

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THE FUEL GAUGE INDICATOR DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[TYPE A]

SYMPTOM DIAGNOSIS

THE FUEL GAUGE INDICATOR DOES NOT OPERATE

Description INFOID:0000000007206102

Fuel gauge will not indicate from a certain position.

Diagnosis Procedure

INFOID:0000000007206103

1. CHECK COMBINATION METER INPUT SIGNAL

- 1. Select METER/M&A on CONSULT.
- 2. Using "DATA MONITOR, compare the monitor value with the fuel gauge reading on the combination meter. Refer to MWI-45, "Component Function Check".

Does monitor value match fuel gauge reading?

YES >> GO TO 2.

NO >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

2.CHECK FUEL LEVEL SENSOR SIGNAL CIRCUIT

Check the fuel level sensor signal circuit. Refer to MWI-45, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. COMPONENT INSPECTION

Perform a component inspection on the fuel level sensor unit. Refer to MWI-46, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace fuel level sensor unit. Refer to FL-5, "Removal and Installation".

4. CHECK FLOAT INTERFERENCE

Check that the float arm does not interfere or bind with components in the fuel tank.

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

NO >> Repair or replace malfunctioning parts.

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS > [TYPE A]

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

Description INFOID:000000007206104

The oil pressure warning lamp stays of when the ignition switch is turned ON.

Diagnosis Procedure 1. CHECK COMBINATION METER OIL PRESSURE WARNING LIGHT

- 1. Select METER/M&A on CONSULT.
- 2. Observe OIL W/L DATA MONITOR while operating the ignition switch.

Component	Condition	CONSULT
Oil pressure warning light	Ignition ON	ON
	Ignition OFF	OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

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THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

[TYPE A]

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

Description INFOID:0000000007206106

The oil pressure warning lamp remains on while the engine is running (normal oil pressure).

Diagnosis Procedure

INFOID:0000000007206107

1. CHECK COMBINATION METER INPUT SIGNAL

- 1. Start the engine and select METER/M&A on CONSULT.
- Observe OIL W/L DATA MONITOR and the operation of the oil pressure warning lamp on the combination meter.

Component	Condition	CONSULT
Oil pressure warning light	Engine running	OFF

Is the inspection result normal?

YES >> Perform ECM self-diagnosis. Refer to EC-59, "CONSULT Function".

NO >> Replace combination meter. Refer to MWI-52, "Removal and Installation".

THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS > [TYPE A]

THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description INFOID:0000000007733010

- The warning is still displayed even after washer fluid is added.
- · The warning is not displayed even though the washer tank is empty.

Diagnosis Procedure

1. CHECK WASHER FLUID LEVEL SWITCH

Perform a unit check for the washer fluid level switch. Refer to MWI-47, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 2

NO >> Replace washer level switch.

2.CHECK WASHER FLUID LEVEL SWITCH SIGNAL CIRCUIT

Check the washer fluid level switch signal circuit. Refer to MWI-47, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-52. "Removal and Installation".

NO >> Repair harness or connector.

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REMOVAL AND INSTALLATION

COMBINATION METER

Removal and Installation

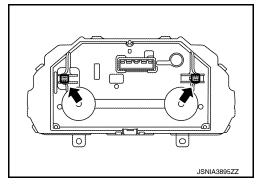
INFOID:0000000007206114

REMOVAL

- 1. Disconnect the negative battery terminal. Refer to PG-61. "Removal and Installation".
- 2. Remove the cluster lid A. Refer to IP-19, "Removal and Installation".
- 3. Remove the screws of the combination meter.
- 4. Pull the combination meter straight to disengage resin clips. (The figure shows the clip positions on the back of the combination meter.)

CAUTION:

Never damage the front cover.



5. Remove connector to remove the combination meter.

CAUTION:

Never damage the front cover.

INSTALLATION

Installation is in the reverse order of removal.

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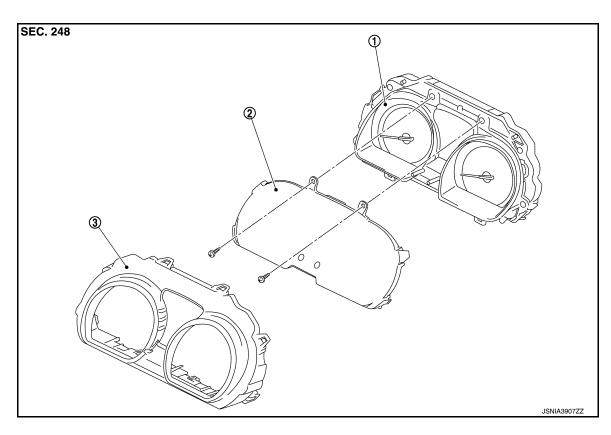
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UNIT DISASSEMBLY AND ASSEMBLY

COMBINATION METER

Exploded View



1. Unified meter control unit

Front cover

Finisher

Disassembly and Assembly

DISASSEMBLY

Disengage the pawls of the finisher, using suitable tool and remove the finisher.
 CAUTION:

Wrap the removal tools with protective tape to prevent scratches.

- Remove the screws of the front cover.
- 3. Disengage the pawls of the front cover, using suitable tool.

CAUTION:

Wrap the removal tools with protective tape to prevent scratches.

4. Pull the front cover straight to remove it from the unified meter control unit.

CAUTION:

- Never touch the display, pointer, the inside of front cover and the printed area of the dial during the work.
- · Keep away from magnetic sources.
- Never damage the front cover.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

- Never touch the display, pointer, the inside of front cover and the printed area of the dial during the work.
- Keep away from magnetic sources.
- Never damage the front cover.

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HOW TO USE THIS MANUAL

APPLICATION NOTICE

Information INFOID:0000000007206116

Service information	Design of	of combination meter
TYPE A		JSNIA3947ZZ
TYPE B	With Tachometer	JSNIA3946ZZ
	Without Tachometer	AWNIA2471ZZ

PRECAUTIONS

[TYPE B] < PRECAUTION >

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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 SR and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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
- 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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MWI-55 Revision: July 2011 2012 Versa Sedan Α

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PREPARATION

< PREPARATION > [TYPE B]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000007747582

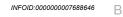
Tool name		Description
		Loosening bolts and nuts
Power tool		
	PBIC0191E	

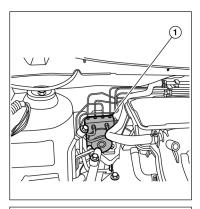
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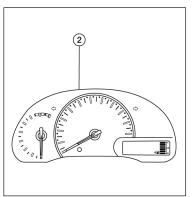
SYSTEM DESCRIPTION

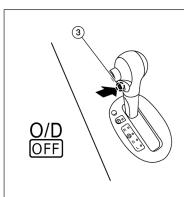
COMPONENT PARTS

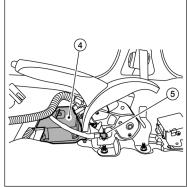
Component Parts Location

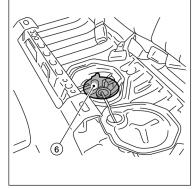


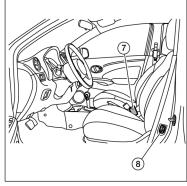


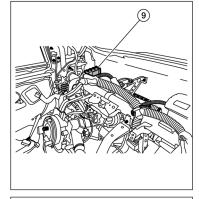


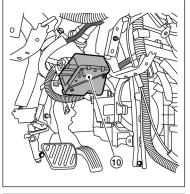


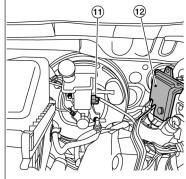


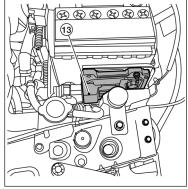


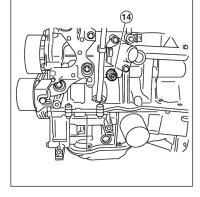












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< SYSTEM DESCRIPTION >

- 1. ABS actuator and electric unit (control 2. unit)
- 4. Air bag diagnosis sensor unit (view with center console removed)
- Fuel level sensor unit and fuel pump (view with rear seat and access cover removed)
- EPS control unit (view with instrument lower panel removed)
- 13. TCM

- 2. Combination meter
- Parking brake switch (view with center console removed)
- 8. Front door switch LH
- 11. Brake fluid level switch (view with IPDM E/R removed)
- 14. Oil pressure switch

- 3. CVT shift selector (O/D OFF switch)
- 6. Seat belt buckle switch LH
- 9. BCM (view with instrument panel removed)
- 12. ECM (view with IPDM E/R removed)

Component Description

INFOID:0000000007688647

Unit	Description
Combination meter	The combination meter controls the following items according to the signals received from each unit. Speedometer Engine oil pressure gauge Warning lamps Information display Oil pressure sensor signal Tachometer (if equipped) Fuel gauge Indicator lamps Warning chime
CVT shift selector switch	Transmits the overdrive off switch signal to the combination meter.
Seat belt buckle switch (LH)	Transmits the seat belt buckle switch (LH) signal to the combination meter.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication.
Air bag diagnosis sensor unit	Transmits the air bag signal and seat belt buckle switch (RH) signal to the combination meter.
EPS Control unit	Transmits the EPS signal to the combination meter via CAN communication.
TCM	Transmits the shift position signal to the combination meter via CAN communication.
ECM	Transmits the following signals to the combination meter via CAN communication. • Engine speed signal • Engine coolant temperature signal • Fuel consumption monitor signal • Oil pressure sensor signal
ВСМ	Transmits the security signal to the combination meter. Transmits the following signals to the combination meter via CAN communication. • Low tire pressure warning signal • Door open switch signal
Washer fluid level switch (if equipped)	Transmits the washer fluid level switch signal to the combination meter.
Fuel level sensor unit	Transmits the fuel level sensor signal to the combination meter.
Parking brake switch	Transmits the parking brake switch signal to the combination meter.
Brake fluid level switch	Transmits the brake fluid level switch signal to the combination meter.
TCM	Transmits the shift position signal to the combination meter via CAN communication.
Oil pressure sensor	Transmits the oil pressure sensor signal to the ECM.

SYSTEM

METER SYSTEM

METER SYSTEM : System Diagram

INFOID:0000000007688649

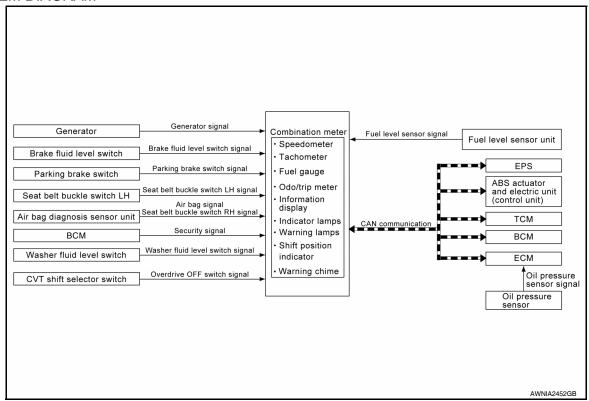
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SYSTEM DIAGRAM



METER SYSTEM: System Description

INFOID:0000000007688852

COMBINATION METER

Combination Meter

- The combination meter monitors signals from switches, sensors and modules to control the following functions:
- Speedometer/Tachometer
- Shift position indicator
- Warning lamps
- Indicator lamps
- Meter illumination control
- Information display
- The combination meter has an integrated buzzer that is activated when it receives a signal from the BCM via CAN communication. Refer to <u>WCS-7</u>, "WARNING CHIME SYSTEM: System Description" for further details.
- · The combination meter includes a self diagnosis function.
- The combination meter can be diagnosed with CONSULT.

METER CONTROL FUNCTION LIST

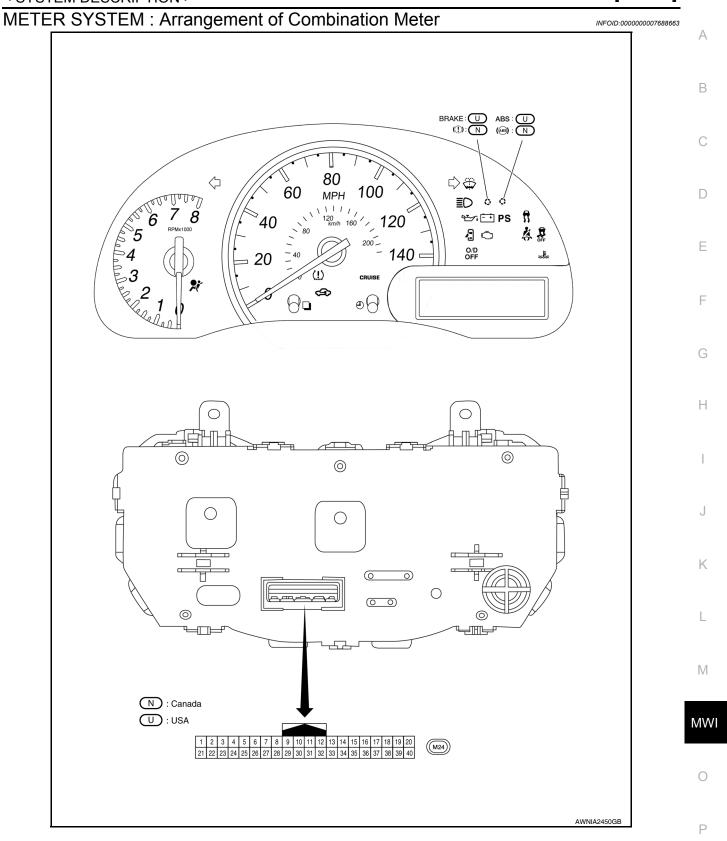
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Revision: July 2011 MWI-59 2012 Versa Sedan

	S	ystem	Description	Reference
Speedometer		Indicates vehicle speed.	MWI-12. "SPEEDOME- TER: System De- scription"	
Tachometer			Indicates engine speed.	MWI-13, "TA- CHOMETER: System Descrip- tion"
Shift position in	dicator (CVT mo	odels)	Display shift position.	MWI-13, "SHIFT POSITION INDI- CATOR : System Description"
Oil pressure warning lamp		arning lamp	The warning lamp turns ON when it receives the oil pressure warning signal.	MWI-13. "OIL PRESSURE WARNING LAMP : System Descrip- tion"
Warning lamp/ indicator lamp	Seat belt warning lamp		The warning lamp turns ON when the LH seat belt is unfastened and the vehicle is moving, and turns OFF when the seat belt is fastened.	SRC-12. "SEAT BELT WARNING LAMP SYSTEM: System Descrip- tion"
	High temperature warning lamp		The ECM monitors the engine coolant temperature sensor and sends a signal to the combination meter to turn on the high temperature warning lamp via CAN communication.	MWI-63, "HIGH WATER TEM- PERATURE WARNING LAMP : System Descrip- tion"
Meter illumi- nation control	Meter illuminat	ion control function	Illumination control is enabled when the combination switch (lighting switch) is in the 1st or 2nd position changing from daytime mode to nighttime mode.	MWI-14, "METER ILLUMINATION CONTROL: Sys-
nauon control	Meter illumination control switch		The operation of the illumination control switch changes the brightness of meter illumination.	
	Fuel gauge		Indicates fuel level.	
	Odo/trip meter		Displays mileage.	MWI-14, "INFOR-
Information display	Trip computer	Instant fuel consumption	Displays current fuel consumption.	MATION DIS- PLAY : System
, ,		Average fuel consumption	Displays average fuel consumption.	Description"
		Distance to empty	Displays distance to empty.	



METER SYSTEM: Fail-Safe

INFOID:0000000007688661

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

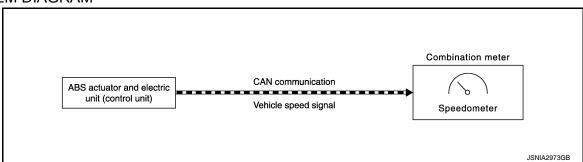
Function			Specifications	
Speedometer			Reset to zero by suspending communication.	
Tachometer				
Meter Illumination			When suspending communication, changes to nighttime mode.	
		Instant fuel consumption	0 km/h is displayed.	
		Average fuel consumption	When reception time of an abnormal signal is 2 sec-	
Information display	Trip computer	Distance to empty	 onds or less, the last received datum is used for calculation to indicate the result. When reception time of an abnormal signal is more than 2 seconds, the last result calculated during normal condition is indicated. 	
	Odo/trip meter		An indicated value is maintained at communications blackout.	
	Shift position indicator		The indicator turns OFF by suspending communication	
Buzzer			The buzzer turns off by suspending communication.	
	ABS warning lamp			
	EPS warning lamp		The lamp turns ON by suspending communication.	
	Brake warning lamp		The lamp turns on by suspending communication.	
	Malfunction indicator lamp (MIL)			
Warning lamp/in-	High water temperature warning lamp			
dicator lamp	High beam indicator lamp			
	Turn signal indicator lamp		The least turns OFF by even and increase unication	
	Door warning lamp		The lamp turns OFF by suspending communication.	
	Oil pressure warning lamp			
	O/D OFF indicat	tor lamp		

SPEEDOMETER

SPEEDOMETER : System Description

INFOID:0000000007206123

SYSTEM DIAGRAM



DESCRIPTION

The ABS actuator and electric unit (control unit) receives each wheel speed sensor signal and provides a vehicle speed signal to the combination meter via CAN communication.

TACHOMETER

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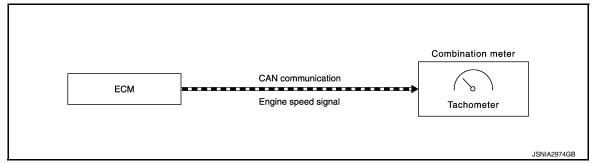
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TACHOMETER: System Description

INFOID:0000000007206124

SYSTEM DIAGRAM



DESCRIPTION

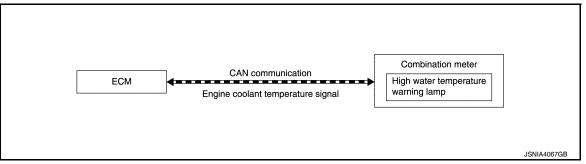
The crank position sensor sends a crankshaft position signal to the ECM. The ECM provides an engine speed signal to the combination meter via CAN communication lines. The tachometer indicates engine speed in revolutions per minute (rpm).

HIGH WATER TEMPERATURE WARNING LAMP

HIGH WATER TEMPERATURE WARNING LAMP: System Description

INFOID:0000000007206125

SYSTEM DIAGRAM



DESCRIPTION

The ECM monitors the engine coolant temperature from the engine coolant temperature sensor. When the coolant temperature is above the specified value, the ECM sends a CAN communication signal to the combination meter turning on the high temperature warning lamp.

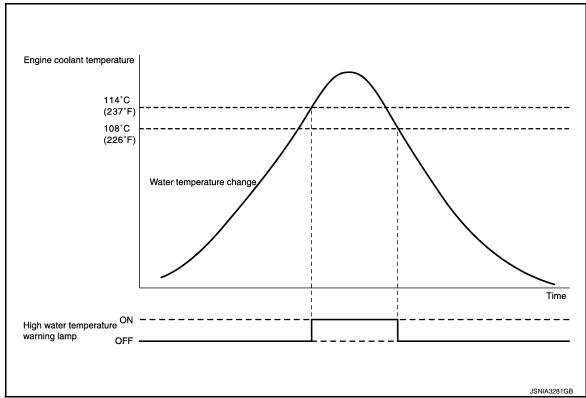
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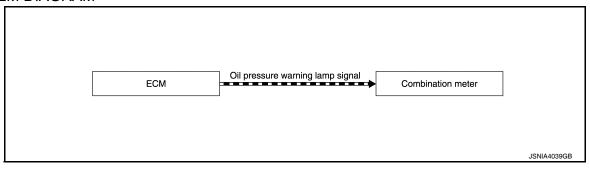


OIL PRESSURE WARNING LAMP

OIL PRESSURE WARNING LAMP: System Diagram

INFOID:0000000007705092

SYSTEM DIAGRAM



OIL PRESSURE WARNING LAMP: System Description

INFOID:0000000007705093

DESCRIPTION

The combination meter turns the oil pressure warning lamp ON when receiving a signal from the ECM via CAN communication.

METER ILLUMINATION

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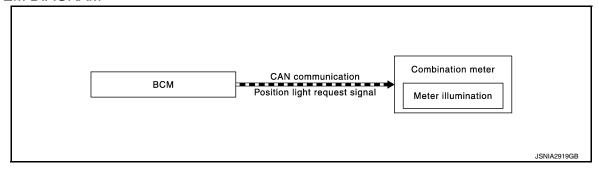
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METER ILLUMINATION: System Description

INFOID:0000000007206128

SYSTEM DIAGRAM



DESCRIPTION

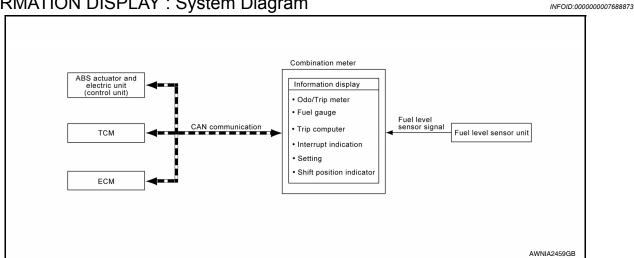
Meter Illumination Control Function

Meter illumination control is enabled when the meter receives a signal from the BCM that the combination switch is in the 1st or 2nd position, the meter switches from Daytime mode to Nighttime mode.

	Meter illumination	
Combination	1ST or 2ND position	Nighttime mode
switch (lighting switch)	Off	Daytime mode

INFORMATION DISPLAY

INFORMATION DISPLAY: System Diagram



INFORMATION DISPLAY: System Description

INFOID:0000000007206129

DESCRIPTION

- The combination meter receives signals from switches, sensors and modules for operating the following functions on the information display.
- Odo/trip meter
- Shift position indicator
- Fuel gauge
- Trip computer
- Interrupt indication
- Meter illumination level
- Setting
- Low fuel warning
- Loose fuel cap warning

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MWI-65 2012 Versa Sedan Revision: July 2011

ODO/TRIP METER

The combination meter calculates mileage using the vehicle speed signal from the ABS actuator and electric unit (control unit) and displays the mileage on the information display.

SHIFT POSITION INDICATOR

The combination meter displays the location of the shift position selector on the vehicle information display.

FUEL GAUGE

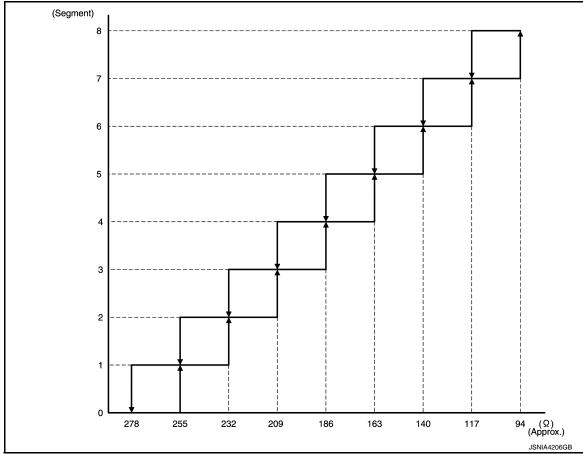
Control Outline

The fuel level sensor unit sends a variable resistor signal to the combination meter. The fuel gauge indicates the approximate fuel level in the fuel tank.

Refuel Control

The unit detects the driver is refueling the vehicle and accelerates the fuel gauge segment movement if the fuel level changes by 9 ℓ (2-3/8 US, 2 Imp gal) or more.

Lighting segment-resistance relationship



INTERRUPT INDICATION

The combination meter may interrupt the current information display with a warning, alert or maintenance reminder on the information display, based on signals received from each unit and switch.

Low Fuel Warning

The low fuel warning turns ON when the fuel level in the fuel tank reaches approximately 6.3 ℓ (1-5/8 US gal, 1-3/8 Imp gal).

LOOSE FUEL CAP WARNING

The LOOSE FUEL CAP message will display in the information display when the fuel-filler cap is not tightened correctly. The message will turn off as soon as the ECM detects the fuel-filler cap is properly tightened. The ECM provides a loose fuel cap signal to the combination meter via CAN communication lines.

< SYSTEM DESCRIPTION >

[TYPE B]

DIAGNOSIS SYSTEM (COMBINATION METER)

Diagnosis Description

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ON BOARD DIAGNOSIS ITEM

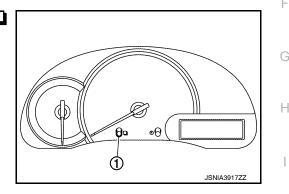
The information display, speedometer and tachometer can be checked in self-diagnosis mode.

NOTE:

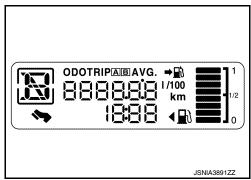
- · Check combination meter power supply and ground circuits if self-diagnosis mode does not start. Refer to MWI-43, "COMBINATION METER: Diagnosis Procedure". Replace combination meter if power supply and ground circuits are found to be normal and self-diagnosis mode does not start. Refer to MWI-52, "Removal and Installation".
- · Combination meter self-diagnosis mode will function with the ignition switch in ON. Combination meter selfdiagnosis mode will exit upon turning the ignition switch to OFF.

METHOD OF STARTING

- Turn the ignition switch OFF.
- 2. Turn the ignition switch ON while pressing and holding the switch (1) for 0.8 seconds or more.



- 3. Press the switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON.)
- The combination meter is turned to self-diagnosis mode.
 - All segments of the information display are displayed.



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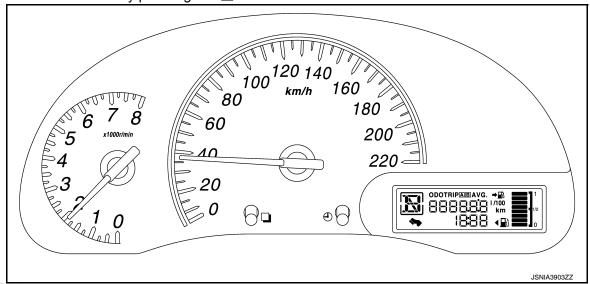
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< SYSTEM DESCRIPTION >

[TYPE B]

5. Each meter activates by pressing the \square switch.



NOTE:

- If any of the meters or gauges is not activated, replace combination meter.
- · The figure is reference.

CONSULT Function

INFOID:0000000007758012

APPLICATION ITEMS

CONSULT can display each diagnostic item using the diagnostic test modes shown.

METER/M&A Diagnosis mode	Description	
SELF DIAGNOSTIC RESULT	The combination meter self-diagnosis results.	
DATA MONITOR	Displays combination meter input/output data in real time.	
SPECIAL FUNCTION	Lighting history of the warning lamp and indicator lamp can be checked.	
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.	

SELF DIAG RESULT

Refer to MWI-24, "DTC Index".

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	Description	
SPEED METER [km/h] or [mph]	Х	Displays the value of vehicle speed signal.	
SPEED OUTPUT [km/h] or [mph]	Х	Displays the value of vehicle speed signal, which is transmitted to each unit with CAN communication.	
ODO OUTPUT [km/h or mph]		Displays odometer signal value transmitted to other units via CAN communication.	
TACHO METER [rpm]	Х	Displays the value of engine speed signal, which is input from ECM.	
FUEL METER [L]	Х	Displays the fuel level.	
W TEMP METER [°C] or [°F]	Х	Displays the value of engine coolant temperature signal, which is input from ECM.	
ABS W/L [ON/OFF]		Displays [ON/OFF] condition of ABS warning indicator	

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[TYPE B]

Display item [Unit]	MAIN SIGNALS	Description	Α
BRAKE W/L [ON/OFF]		Displays [ON/OFF] condition of brake warning indicator.	
DOOR W/L [ON/OFF]		Displays [ON/OFF] condition of door warning indicator.	
HI-BEAM IND [ON/OFF]		Displays [ON/OFF] condition of high beam indicator.	C
TURN IND [ON/OFF]		Displays [ON/OFF] condition of turn indicator.	
LIGHT IND [ON/OFF]		Displays [ON/OFF] condition of light indicator.	
OIL W/L [ON/OFF]		Displays [ON/OFF] condition of oil pressure warning indicator.	E
MIL [ON/OFF]		Displays [ON/OFF] condition of malfunction indicator.	
CRUISE IND [Off]		Displays [ON/OFF] condition of CRUISE indicator.	F
O/D OFF IND [ON/OFF]		Displays [ON/OFF] condition of O/D OFF indicator.	(-
FUEL W/L [ON/OFF]		Displays [ON/OFF] condition of low-fuel warning indicator.	
O/D OFF SW [ON/OFF]		Displays [ON/OFF] condition of O/D OFF switch.	F
REAR DEF SW [ON/OFF]		Displays [ON/OFF] condition of rear window defogger switch.	
BRAKE SW [ON/OFF]		Displays [ON/OFF] condition of brake switch.	
EPS W/L [ON/OFF]		Displays [ON/OFF] condition of EPS indicator.	
CHAGE W/L [Off]		Displays [ON/OFF] condition of charge warning indicator.	
SHIFT IND [P, R, N, D, L]		Displays shift selector position.	
FUEL CAP W/L [Off]		Displays [ON/OFF] condition of loose fuel cap warning message.	
AIR PRES W/L [ON/OFF]		Displays [ON/OFF] condition of tire pressure warning lamp.	
PKB SW [ON/OFF]		Status of parking brake switch.	
BUCKLE SW [ON/OFF]		Status of seat belt buckle switch (LH).	
PASS BUCKLE SW [ON/OFF]		Status of passenger seat belt buckle switch (RH).	
BRAKE OIL SW [ON/OFF]		Status of brake fluid level switch.	
DISTANCE [km] or [Mi]		Displays distance to empty.	F
BUZZER [ON/OFF]	Х	Displays [ON/OFF] condition of buzzer.	
SLIP IND [ON/OFF]		Displays [ON/OFF] condition of SLIP indicator lamp.	
VDC/TCS IND [ON/OFF]		Displays [ON/OFF] condition of VDC OFF indicator lamp.	

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[TYPE B]

NOTE:

Some items are not available according to vehicle specification.

SPECIAL FUNCTION

Special menu

Display item	Description
W/L ON HISTORY	Lighting history of warning lamp and indicator lamp can be checked.

W/L ON HISTORY

- Stores histories when warning/indicator lamp is turned on.
- "W/L ON HISTORY" indicates the "TIME" when the warning/ indicator lamp is turned on.
- The "TIME" above is:
- 0: The condition that the warning/indicator lamp has been turned on 1 or more times after starting the engine and waiting for 30 seconds.
- 1 39: The number of times the engine was restarted after the 0 condition.
- NO W/L ON HISTORY: Stores NO (0) turning on history of warning/indicator lamp.

NOTE:

- W/L ON HISTORY is not stored for approximately 30 seconds after the engine starts.
- Brake warning lamp does not store any history when the parking brake is applied or the brake fluid level gets low.

Display Item

Display item	Description		
ABS W/L	Lighting history of ABS warning lamp.		
VDC/TCS IND	Lighting history of VDC warning lamp.		
SLIP IND	Lighting history of SLIP warning lamp.		
BRAKE W/L	Lighting history of brake warning lamp.		
OIL W/L	Lighting history of oil pressure warning lamp.		
C-ENG W/L	Lighting history of malfunction indicator lamp (MIL).		
AIR PRES W/L	Lighting history of tire pressure warning lamp.		
EPS W/L	Lighting history of EPS warning lamp.		
CHAGE W/L	Lighting history of charging warning lamp.		
DOOR W/L	Lighting history of door warning lamp.		
CRUISE W/L	Lighting history of cruise warning lamp.		
O/D OFF IND	Lighting history of O/D OFF indicator lamp.		
FUEL W/L	Lighting history of fuel warning lamp.		
WASHER W/L	Lighting history of washer warning lamp.		

COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

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ECU DIAGNOSIS INFORMATION

COMBINATION METER

Reference Value INFOID:0000000007206133

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Display content	Data monitor		
Monitor item	Display Content	Condition	Reference value in normal operation	
SPEED METER [km/h or mph]	Speed meter operation	While driving	Vehicle speed matches speed meter	
SPEED OUTPUT [km/h or mph]	Vehicle speed	While driving	The speed output signal value matches speed meter via CAN communication.	E
ODO OUTPUT [km/h or mph]	ODO meter op- eration	Driving	Distance driven	- F
TACHO METER [rpm]	Tacho meter operation	Engine running	The tacho meter is approx. value of engine speed via CAN communication.	
FUEL METER [L]	Fuel level	Ignition ON	Fuel level in fuel tank is approx.	
W TEMP METER [°C] or [°F]	Engine coolant temperature	Engine running	Input value of engine coolant temperature signal via CAN communication.	
ADC W/I	ABS warning	When ABS warning lamp is ON	On	- F
ABS W/L	lamp	When ABS warning lamp is OFF	Off	=
	Brake warning	When Brake warning lamp is ON	On [*]	_
BRAKE W/L	lamp	When Brake warning lamp is OFF	Off	_
DOOD W/I	Door open	When Door warning lamp is ON	On	-
DOOR W/L	warning lamp	When Door warning lamp is OFF	Off	- (
	HI-Beam indi-	When High-beam indicator lamp is ON	On	=
HI-BEAM IND	cator lamp	When High-beam indicator lamp is OFF	Off	ŀ
TURN IND	Turn signal in-	When Turn signal indicator lamp is ON	On	_
ו טאוו וואט	dicator	When Turn signal indicator lamp is OFF	Off	-
LIGHT IND	Light indicator	When Tail lamp indicator lamp is ON	On	- [
LIGHT IND		When Tail lamp indicator lamp is OFF	Off	=
OIL W/L	Oil pressure warning light	When Oil pressure warning lamp is ON	On	
OIL VV/L		When Oil pressure warning lamp is OFF	Off	_
MIL	MIL warning lamp	When Malfunction indicator lamp (MIL) is ON	On	M
		When Malfunction indicator lamp (MIL) is OFF	Off	
CRUISE IND	Cruise indicator	When cruise indicator lamp is ON.	On	(
	lamp	When cruise indicator lamp is OFF.	Off	_
O/D OFF IND	O/D OFF indi-	When the O/D OFF indicator lamp is OFF.	Off	- - F
	cator	When the O/D OFF indicator lamp is OFF.	On	
O/D OFF SW	O/D OFF	When the O/D OFF switch is pressed to OFF.	Off	_
	switch	When the O/D OFF switch is pressed to ON.	On	_

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Display content	Data monitor		
		Condition	Reference value in normal operation	
REAR DEF SW	Rear defogger	When rear defogger switch is pressed to ON	On	
	switch	When rear defogger switch is pressed to Off	Off	
BRAKE SW	Droke ewitch	When brake pedal is applied	On	
	Brake switch	When brake pedal is released	Off	
FUEL W/L	Low fuel warn-	When low fuel warning is ON	On	
FOEL W/L	ing	When low fuel warning is OFF	Off	
EPS W/L	EPS warning	EPS warning lamp ON	On	
EPS W/L	lamp	EPS warning lamp OFF	Off	
CHAGE W/L	Charge warn- ing lamp	Engine running	Off	
SHIFT IND	Shift position indicator	The shift position indicator displayed.	[P, R, N, D, L]	
FUEL CAP W/L	Loose fuel cap	When the fuel-filler cap is installed incorrectly.	On	
	warning	When the fuel-filler cap is installed correctly.	Off	
	Tire pressure	When tire pressure warning lamp is ON	On	
AIR PRES W/L	warning lamp operation	When tire pressure warning lamp is OFF	Off	
DKD C/W	Parking brake	When parking brake is active	On	
PKB SW	switch	When parking brake is inactive	Off	
BUCKLE SW	Seat belt buck-	When seat belt buckle is unfastened (LH).	On	
BUCKLE SW	le switch LH	When seat belt buckle is fastened (LH).	Off	
BRAKE OIL SW	Brake fluid level	When brake fluid level switch ON	On	
BRAKE OIL SW	switch	When brake fluid level switch OFF	Off	
PASS BUCKLE SW	Seat belt buck- le switch RH	When passenger seat is occupied and seat belt buckle is unfastened (RH).	On	
		When passenger seat is unoccupied and seat belt buckle is unfastened (RH).	Off	
DISTANCE	Distance to empty	While driving	[km/h or mph]	
BUZZER	Buzzer opera- tion	When Buzzer is ON	On	
		When Buzzer is OFF	Off	
SLIP IND	Slip indicator	When SLIP indicator lamp is ON.	On	
	lamp	When SLIP indicator lamp is OFF.	Off	
VDC/TCS IND	VDC indicator lamp	When VDC indicator lamp is ON.	On	
		When VDC indicator lamp is OFF	Off	

^{*:} Displays "OFF" if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.

Some items are not available according to vehicle specification.

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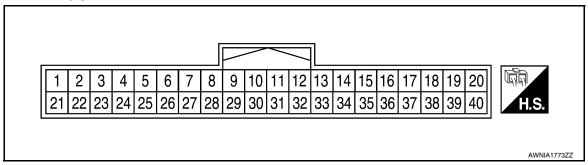
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TERMINAL LAYOUT



PHYSICAL VALUES

Ter-	145			Condition	5.6		
mi- nal No.	Wire color	Item	Ignition switch	Operation or condition	Reference value (V) (Approx.)		
1	R	Battery power supply	OFF		Battery voltage		
2	1.0	Ctan lama avvitah	ON	Brake pedal pressed	Battery voltage		
2	LG	Stop lamp switch	ON	Brake pedal released	0		
3	GR	Ignition switch ON or START	ON	_	Battery voltage		
4	W	Fuel level sensor signal (+)	_	_	Refer to MWI-46, "Component Inspection".		
8	L	CAN-H	_	_	_		
10	Р	CAN-L	_	_	_		
11	V	Washer fluid level switch	ON	Washer fluid level low	0		
	V	(Canada models)	ON	Washer fluid level normal	Battery voltage		
17	Р	8P/R	_	_	_		
19	В	Illumination control output	_	_	_		
21	В						
22	В	Ground	_		0		
23	B/W						
26	GR	Fuel level sensor ground (-)	_	_	0		
28	Р	O/D OFF switch	ON	O/D OFF switch pressed	0		
20	P	O/D OFF SWILCH	ON	O/D OFF switch released	Battery voltage		
31	G	Security	_	_	_		
32	V	Air bag	ON	_	0		
22	G	Coot holt hughlo quitab DLI	ON	Fastened (OFF)	Battery voltage		
33	G	Seat belt buckle switch RH	ON	Unfastened (ON)	0		
34	V	Coat halt hualds quitab I I I	ON	Fastened (OFF)	Battery voltage		
34	V	Seat belt buckle switch LH	ON	Unfastened (ON)	0		
35	Y	Generator	ON	Generator voltage low	0		
	Ť			Generator voltage normal	Battery voltage		
26	LG	Brake fluid level switch	ON	Brake fluid level is normal	Battery voltage		
36	LG	DI AKE IIUIU IEVEI SWILCII	ON	Brake fluid level low	0		
37	SB	Parking broke switch	ON	Parking brake pedal applied	0		
31	SD	Parking brake switch	ON	Parking brake pedal released	Battery voltage		

Fail-Safe

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

Revision: July 2011 MWI-73 2012 Versa Sedan

< ECU DIAGNOSIS INFORMATION >

	Fu	unction	Specifications		
Speedometer			Poset to zero by avananding communication		
Tachometer			Reset to zero by suspending communication.		
Tachometer Meter Illumination Instant fuel consumption			When suspending communication, changes to nighttime mode.		
Meter Illumination	Instant fuel consumption		0 km/h is displayed.		
		Average fuel consumption	When reception time of an abnormal signal is 2 sec-		
Information display	Trip computer	Distance to empty	 onds or less, the last received datum is used for calculation to indicate the result. When reception time of an abnormal signal is more than 2 seconds, the last result calculated during normal condition is indicated. 		
	Odo/trip meter		An indicated value is maintained at communications blackout.		
	Shift position inc	licator	The indicator turns OFF by suspending communication		
Buzzer			The buzzer turns off by suspending communication.		
	ABS warning lar	mp			
	EPS warning lar	mp	The lamp turns ON by supporting communication		
	Brake warning la	amp	The lamp turns ON by suspending communication.		
	Malfunction indi	cator lamp (MIL)			
Warning lamp/in-	High water temp	perature warning lamp			
dicator lamp	High beam indic	ator lamp			
	Turn signal indic	ator lamp	The large turns OFF by even and in a communication		
	Door warning la	mp	The lamp turns OFF by suspending communication.		
	Oil pressure wa	rning lamp			
	O/D OFF indicate	tor lamp			

DTC Index

Display contents of CONSULT	Diagnostic item is detected when	Refer to
CAN COMM CIRCUIT [U1000]	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	<u>MWI-87</u>
CONTROL UNIT (CAN) [U1010]	When detecting error during the initial diagnosis of the CAN controller of combination meter.	MWI-88
VEHICLE SPEED [B2205]	The abnormal vehicle speed signal is input from the ABS actuator and electric unit (control unit) for 2 seconds or more.	MWI-89
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	MWI-90
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	<u>MWI-91</u>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[TYPE B]

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000007733003	

ECU	Reference
	BCS-24, "Reference Value"
	BCS-37, "Wiring Diagram"
BCM	BCS-35, "Fail-safe"
	BCS-35, "DTC Inspection Priority Chart"
	BCS-36, "DTC_Index"

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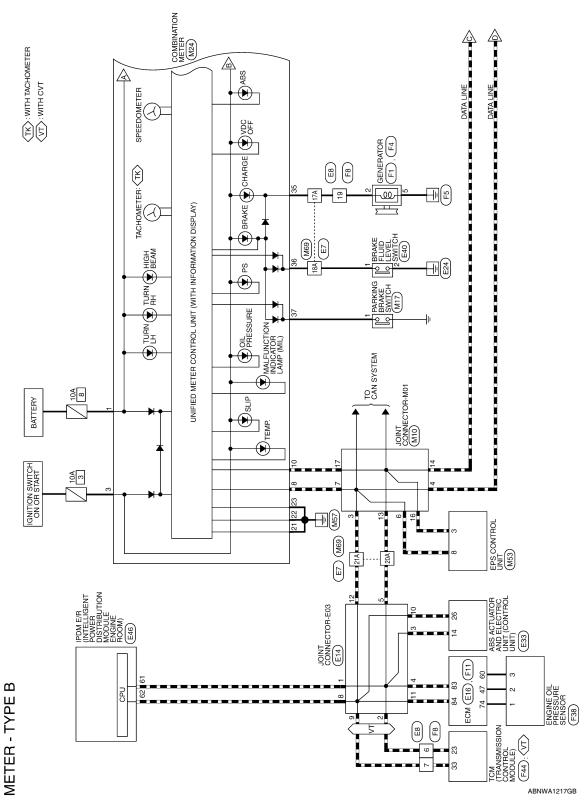
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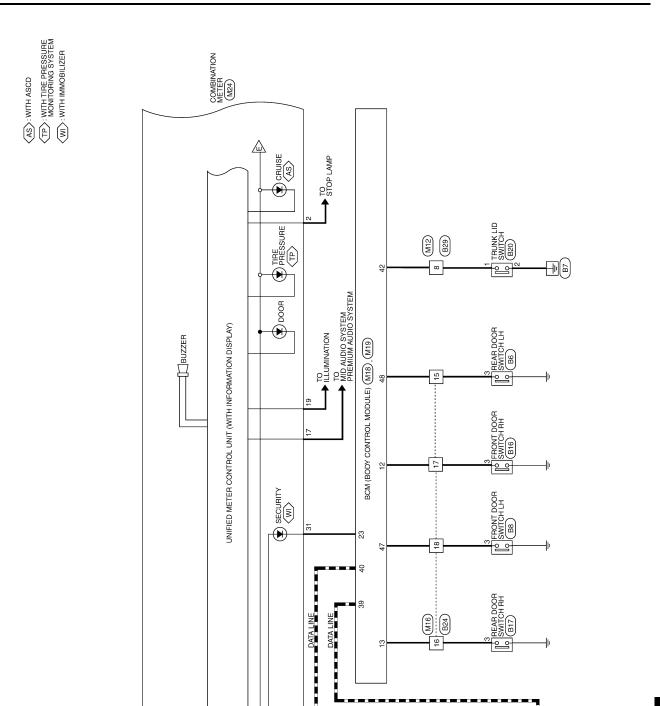
< WIRING DIAGRAM > [TYPE B]

WIRING DIAGRAM

METER SYSTEM

Wiring Diagram





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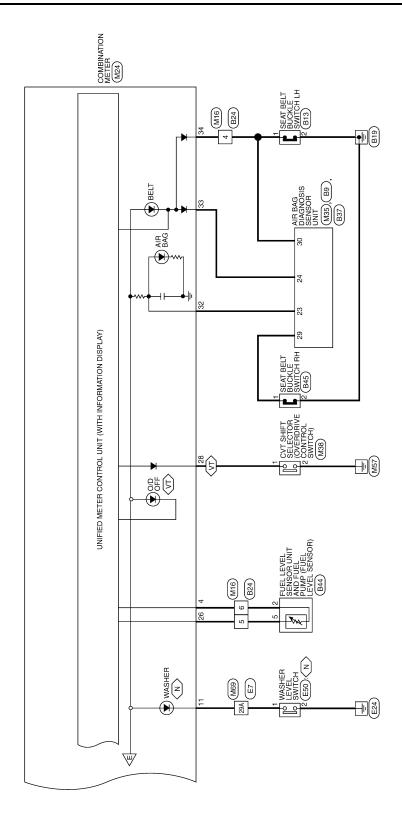
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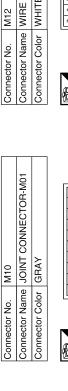
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METER SYSTEM

METER CONNECTORS -TYPE B



	RE TO WIRE	믵	12 11 10 9 8 7 6 5 24 23 22 21 20 19 18 17		Jenois		ı	
M16	e WIF	r WH	12 11 10 9 24 23 22 21		olor of	Wire	>	9
Connector No. M16	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.		Terminal No Color of	- G	4	ц
							7	
2	RE TO WIRE	ITE	7 6 5 4 6 7 1 10 9 8		Signal Name	1		
M1	me WIF	or WH	16	Color of	Wire	۵		
Connector No. M12	Connector Name WIRE TO WIRE	Connector Color WHITE	间 H.S.		l erminal No. Wire	8		

Signal Name

me								
Signal Name	ı	1	1	ı	1	_	_	1
Color of Wire	_	_	٦	_	Ь	Ь	Ь	Д
Terminal No. Wire	8	4	9	7	13	14	16	17

I	ı	ı	-	ı	ı	
GR	Μ	Μ	LG	Ь	SB	
5	9	15	16	17	18	

Γ	011
Connector No.	M19
Connector Name	Connector Name BCM (BODY CONT
	MODULE)
Connector Color WHITE	WHITE

BCM (BODY CONTROL MODULE)

Connector Name Connector Color

Connector Name PARKING BRAKE SWITCH

M17

Connector No.

BLACK

Connector Color

M18

Connector No.

WHITE

## ##	41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	Signal Name	TRUNK/GLASS HATCH SW	DOOR SW (DR)	DOOR SW (RL)
No.		Color of Wire	Р	SB	W
Connector Color WHIIE	画动 H.S.	Terminal No.	42	47	48

Signal Name

Color of Wire SB

Terminal No.

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	20	40						
	19	88						
	8	88				111		
	14 15 16 17 18 19	37		_	_	Ë		
	16	38	_ n	(S)	3E)	C/		
	15	34 35 36 37	Ĕ	2	F)	ᅙᆫ	т	
	4	34	Ž	%	l ≷	(= 1	ż	CAN-L
	10 11 12 13	30 31 32 33	Signal Name	DOOR SW (AS)	æ	<u>₹</u> 5	CAN-H	18
\int	12	32	ğ	8	DOOR SW (RR)	SECURITY INDICATE OUTPUT		
	Ξ	31	(0)	ă				
	9	8						
П	6	83	_					
\exists	8	28	Color of Wire		(T			
	7	27	응통	□	LG	g	Τ	₾
	9	25 26						
	5	22	ું					
1	4	22 23 24						
	က	23	.≌	12	13	23	39	40
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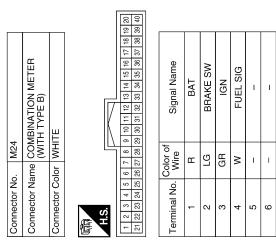
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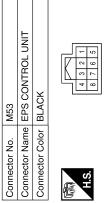
MWI-79 Revision: July 2011 2012 Versa Sedan Ρ

CAN-H CAN-L

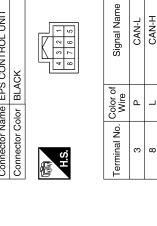
Signal Name	ı	FUEL GND	1	O/D OFF	I	1	SECURITY	A/BAG	AS BUCKLE SW	DR BUCKEL SW	CHG	BRAKE OIL SW	PKB	-	-	1
Color of Wire	ı	GR	-	Ь	I	1	g	>	5	>	\	ГG	SB	1	_	1
Terminal No.	25	26	27	28	59	30	31	32	33	34	35	36	37	38	39	40

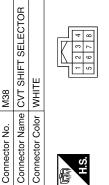
Signal Name	CAN-H	ı	CAN-L	WASHER SW	I	I	Î	ı	1	8P/R	ı	ILL CONT OUTPUT	ı	GND (POWER)	GND (CIRCUIT)	GND (ILL)	1
Color of Wire	_	1	۵	>	ı	ı	1	ı	1	Ь	ı	В	-	В	В	B/W	ı
Terminal No.	8	6	10	Ξ	12	13	14	15	16	17	18	19	20	21	22	23	24





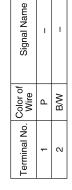








Connector No.



Connector No.	9	_	M35								
Connector Name AIR BAG DIAGNOSIS SENSOR UNIT	lam	e 6	NEN I	BA SC	g H	급등	91	9	SIS	٠,	
Connector Color YELLOW	99			19	≥						
					- 11	- 17	-117				
H.S.	8	တ	1 -	9	IX		2	2	4	m	
	19	25	u,	54	ន			24	22		
	18	51	u)	23	99	29	55		П	-	
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Signal Name	AIRBAG W/L	SEATBELT REMINDER
Color of Wire	Λ	G
Terminal No.	23	24

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Troolor WHITE Connector Color WHITE Color of	Connector No.	Connector No. M69 Connector Name WIRE TO WIRE	TO WIRE		Connector No.	tor No.	Connector No. E7 Connector Name WIRE TO WIRE) WIRE		Connector No.	r No.	Connector No. E8 Connector Name WIRE TO WIRE	WIRE
State Stat	Connector (Solor WHIT	Щ		Connec	tor Color	WHITE			Connector	Color	WHITE	
Triangland Sand S	H.S.	8 2	4A 3A 2A 9A 8A 7A		H.S.		1A 6A	8 8 8		品.S.	13 -	3 3	
114 104 394		21A 20A 19A 30A 29A	18A 17A 16A 15A 14A 13A 12A 11A 28A 27A 26A 25A 24A 23A 22A			111	22A 23A 24A	15A 16A 17A 18A 19A 2 25A 26A 27A 28A 29A 3	00A 21A	Terminal D		or of	Signal Name
STA SCA SCA		41A 40A 39A 50A 49A	1384 374 364 354 344 334 324 314 1484 474 464 454 444 434 424			317	42A 43A 44A	35A 36A 37A 38A 39A 4 45A 46A 47A 48A 49A 5	004114	9 1			1 1
Siza Siza Tza Tz		61A 60A 59A 70A 69A	584 574 564 554 544 534 524 514 884 674 664 654 634 634 624			115	152A 53A 54A 62A 63A 64A	55A 56A 57A 58A 59A 6 65A 66A 67A 68A 69A 7	0A 0A	19			1
Signal Name 17A V Color of Vire Color of		81A 80A 79A 90A 89A	788 778 768 758 748 738 728 718 888 878 868 858 848 838 828			417	N 72A 73A 74A 82A 83A 84A	754 764 774 784 794 8 854 864 874 884 894 9	00A 81A 0A				
Color of Wire Signal Name Terminal No. Wire Y - 17A V LG - 18A LG P - 20A P L - 21A L V - 20A V		[<u>4</u> 8] [<u>5</u>]	5A 94A 93A 92A 91A 0A 99A 98A 97A 96A				91/	92A 93A 94A 95A 97A 98A 99A100A					
Color of Wire Signal Name Terminal No. Color of Wire Y - 17A V LG - 18A LG P - 20A P L - 21A L V V V V	1			ī]									
Y	Terminal No		Signal Name		Termina		lor of Vire	Signal Name					
LG	17A	>	1		17,		>	1					
P - 20A P	18A	LG	1		18/		5	I					
L - 21A L	20A	а.	1		207		Д	1					
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	21A		1		214	_		ı					
, V62	29A	^	1		29A		^	1					

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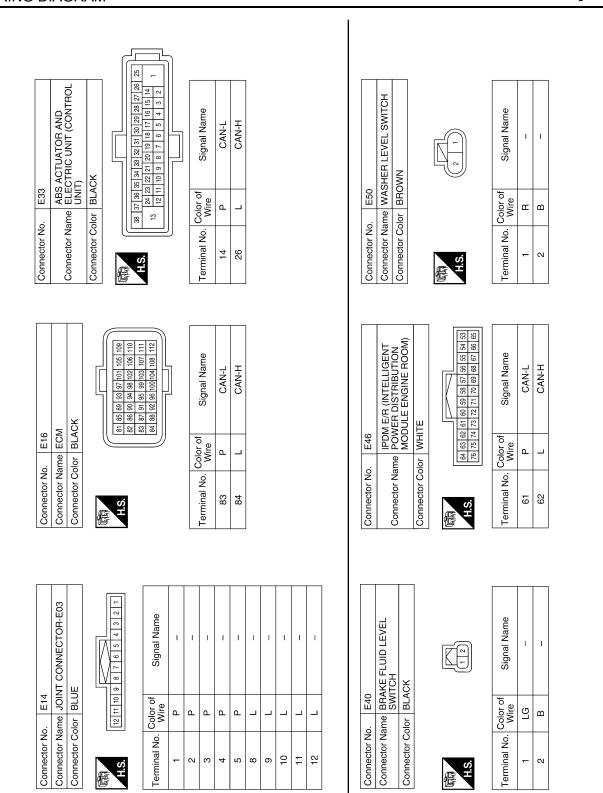
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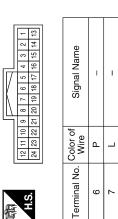
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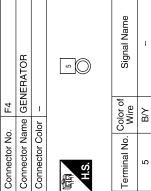
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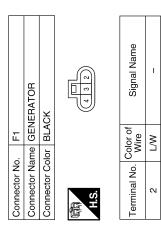
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	Connector No.	F8
ATOR .	Connector Name	connector Name WIRE TO WIRE
	Connector Color WHITE	WHITE









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Signal Name

Color of Wire

Terminal No.

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CAN-L

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8	ENGINE OIL PRESSURE SENSOR	BLACK	3 2 1	Signal Name	ı	I	
F38				Color of Wire	0	>	-
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	F	2	c

Connector No.	Š.		F11	Ξ										
Connector Name	Nan	e	ECM	증	_									
Connector Color	Ö	'n	<u> </u>	유	BROWN	2								
	J) [- 51							(1	
٦٥	88	37	41	45	41 45 49 53	53	27	19	59	69	73	77		
	34	38	42	46	20	24	28	62	99	2	74	78		
	35	33	43 47	47	51	22	59	ಜ	67	7	75	6/		
	98	40	40 44 48 52 56 60	48	52	26	99	64	89	72	9/	80		
						H		ПП	ΙЦ,				9	

Signal Name	OILPRES	GNDA - OILPRES	AVCC1 - OILPRES	
Color of Wire	\	٦	0	
Terminal No. Wire	47	09	74	

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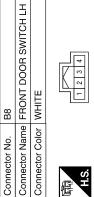
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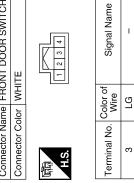
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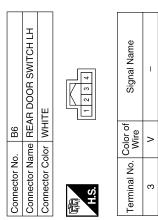
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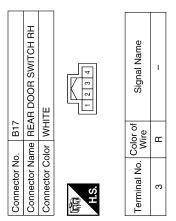


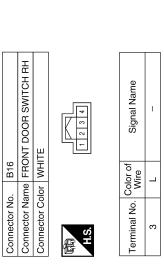
30 8 93	Signal Name	LH SEAT BELT BUCKLE SWITCH (+)
12 13 30	Color of Wire	0
H.S.	Terminal No. Wire	30











Connector No.		B13
Connector Name		SEAT BELT BUCKLE SWITCH LH
Connector Color		WHITE
间 H.S.		3 2 1
Terminal No. Wire	Color o Wire	of Signal Name
-	0	SIGNAL
2	В	GND

ABNIA3100GB

SEAT BELT BUCKLE SWITCH RH

Connector Name

Connector No.

Connector Color WHITE

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Connector No.). B29	
Connector Name WIRE TO WIRE	ame WIF	E TO WIRE
Connector Color WHITE	olor WH	TE TE
所 H.S.		1 2 3
Terminal No. Wire	Color of Wire	Signal Name
8	۵	1

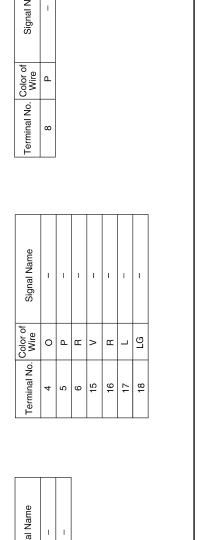
H.S.

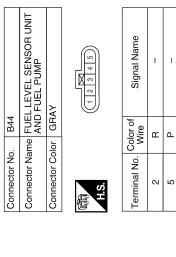
Connector Name WIRE TO WIRE

Connector No. | B24

Connector Color | WHITE

	Signal Name	1	
	Color of Wire	Д	
	Terminal No. Wire	8	
-			Γ





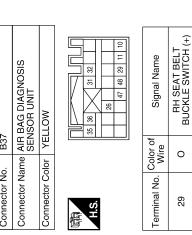
Signal Name

Color of Wire 0 В

Terminal No.

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SIGNAL GND



K RH SEAT BELT BUCKLE SWITCH (+) Signal Name L Connector Name TRUNK LID SWITCH M WHITE B20 B37 Color of Wire ۵ ш Connector Color MWI Connector No. Connector No. Terminal No. N H.S. 0 ABNIA3101GB Ρ

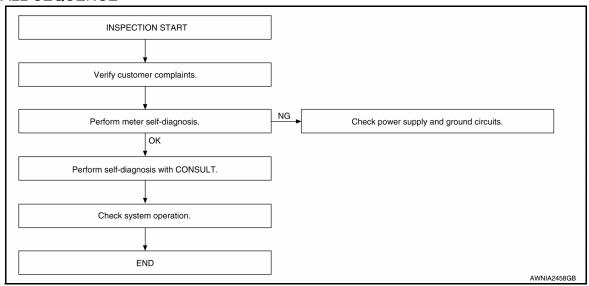
< BASIC INSPECTION > [TYPE B]

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DETAILED FLOW

1.CONFIRM SYMPTOM

Confirm symptom or customer complaint.

>> GO TO 2

2. SELF-DIAGNOSIS OF COMBINATION METER

Perform self-diagnosis of combination meter. Refer to MWI-67, "Diagnosis Description".

Is the inspection result normal?

YES >> GO TO 3

NO >> If self-diagnosis will not start, check power supply and ground circuit of combination meter. Refer to MWI-92, "COMBINATION METER: Diagnosis Procedure". If power supply and ground circuits are OK, replace combination meter. Refer to MWI-101, "Removal and Installation".

3. CHECK COMBINATION METER WITH CONSULT

Select "METER/M&A" on CONSULT and perform self-diagnosis of combination meter. Refer to <u>MWI-68</u>, "CONSULT Function".

Is the inspection result normal?

YES >> Check symptom. GO TO 4.

NO >> Refer to MWI-74, "DTC Index".

4. CHECK SYSTEM OPERATION

Check the combination meter to verify that the repair has been completed successfully.

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 1

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

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DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

DTC Logic

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
U1000	CAN COMM CIRCUIT	When CAN communication signal is not continuously received for 2 seconds or more	CAN communication system mal- function

Diagnosis Procedure

INFOID:0000000007738559

1. CHECK DTC DETECTION

(E)With CONSULT.

- 1. Turn ignition switch OFF to ON.
- 2. Perform self diagnostic result.

Is DTC U1000 detected?

YES >> Proceed to diagnosis procedure. Refer to <u>LAN-14</u>, "Trouble <u>Diagnosis Flow Chart"</u>.

NO >> Refer to GI-38, "Intermittent Incident".

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U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

U1010 CONTROL UNIT (CAN)

Description INFOID:0000000007733856

Initial diagnosis of combination meter.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT	Description	Probable malfunction location
U1010	CONTROL UNIT (CAN)	Error detected during the initial diagnosis of the CAN controller of combination meter.	Combination meter

Diagnosis Procedure

INFOID:0000000007733858

1. REPLACE COMBINATION METER

Replace combination meter. Refer to MWI-101, "Removal and Installation".

>> Inspection End.

DTC B2205 VEHICLE SPEED CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

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DTC B2205 VEHICLE SPEED CIRCUIT

Description INFOID:0000000007733859

The ABS actuator and electric unit (control unit) provides a vehicle speed signal to the combination meter via CAN communication lines.

DTC Logic

DTC	CONSULT	Detection condition	Possible malfunction location
B2205	VEHICLE SPEED CIRC [B2205]	Malfunction is detected when an erroneous speed signal is received for 2 seconds or more.	Combination meter ABS actuator and electric unit (control unit)

Diagnosis Procedure

INFOID:0000000007733861

1. CHECK COMBINATION METER INPUT SIGNAL

- Start engine and select METER/M&A on CONSULT.
- 2. Using SPEED METER on DATA MONITOR, compare the DATA MONITOR value with the combination meter speedometer. Speedometer and DATA MONITOR indications should be close.

Is the inspection result normal?

- YES >> Perform ABS actuator and electric unit (control unit) self-diagnosis. Refer to BRC-32, "CONSULT Function (ABS)".
- NO >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

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B2267 ENGINE SPEED

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

B2267 ENGINE SPEED

Description

The engine speed signal is transmitted from ECM to the combination meter via CAN communication.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT	Diagnostic item is detected when	Probable malfunction location
B2267	ENGINE SPEED	Malfunction is detected when an erroneous engine speed signal is recieved for 2 seconds or more.	Crankshaft position sensor (POS) ECM

Diagnosis Procedure

INFOID:0000000007733864

1. CHECK COMBINATION METER INPUT SIGNAL

- 1. Start engine and select METER/M&A on CONSULT.
- Using TACHO METER on DATA MONITOR, compare the value of DATA MONITOR with tachometer of combination meter. Tachometer and DATA MONITOR indications should be close.

Is the inspection result normal?

- YES >> Perform ECM self-diagnosis. Refer to EC-59, "CONSULT Function".
- NO >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

B2268 WATER TEMP

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

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B2268 WATER TEMP

Description

The engine coolant temperature signal is transmitted from ECM to the combination meter via CAN communication.

DTC Logic

DTC DETECTION LOGIC

DTC	CONSULT	Detection Condition	Possible malfunction location
B2268	WATER TEMP	ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more	Engine coolant temperature sensor ECM

Diagnosis Procedure

INFOID:0000000007733867

1.PERFORM SELF-DIAGNOSIS OF ECM

Perform "Self Diagnosis Result" of "ENGINE", and repair or replace malfunctioning parts.

>> Refer to EC-59, "CONSULT Function".

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

COMBINATION METER: Diagnosis Procedure

INFOID:0000000007206153

Regarding Wiring Diagram information, refer to MWI-26, "Wiring Diagram".

1.CHECK FUSE

Check for blown combination meter fuses.

Power source	Fuse No.
Battery	8
Ignition switch ON or START	3

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the fuse after repairing the affected circuit.

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector and ground.

- 1. Turn ignition switch to OFF.
- 2. Disconnect combination meter connector.
- 3. Check voltage between combination meter harness connector M24 terminals 1, 3 and ground.

Terminals				
(+)		(-)	Ignition switch position	Voltage
Combina	tion meter	ignition switch position	(Approx.)	
Connector	Terminal			
1 Ground		ON	Battery voltage	
M24	M24 Ground		OFF	Battery voltage
IVI24	3		ON	Battery voltage
			OFF	0

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between combination meter and fuse.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Check continuity between combination meter harness connector M24 terminals 21, 22, 23 and ground.

Combina	tion meter		Continuity
Connector	Terminal		Continuity
	21	Ground	
M24	22		Yes
	23		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BCM (BODY CONTROL MODULE)

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000007733000

Regarding Wiring Diagram information, refer to BCS-37, "Wiring Diagram".

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1. CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not blown.

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Terminal No.	Signal name	Fuses and fusible link No.
57	Pattery power supply	12 (10A)
70	Battery power supply	G (40A)
11	Ignition switch ACC or ON	18 (10A)
38	Ignition switch ON or START	2 (10A)

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

Turn ignition switch OFF.

Disconnect BCM connectors.

3. Check voltage between BCM connector and ground.

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BCM			Ignition switch position		n
Connector	Terminal		OFF	ACC	ON
M20	M20		Battery voltage	Battery voltage	Battery voltage
IVIZU	70	Ground	battery voltage	battery voltage	Dattery Voltage
M18	11		0 V	Battery voltage	Battery voltage
	38		0 V	0 V	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between BCM connector and ground.

ВСМ			Continuity
Connector	Terminal	Continu	
M20	67	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

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Revision: July 2011 MWI-93 2012 Versa Sedan

[TYPE B]

FUEL LEVEL SENSOR SIGNAL CIRCUIT

Description INFOID:000000007705971

The fuel level sensor unit and fuel pump detects the approximate fuel level in the fuel tank and transmits the fuel level signal to the combination meter.

Component Function Check

INFOID:0000000007705972

1. COMBINATION METER INPUT SIGNAL

- Select METER/M&A on CONSULT.
- Using FUEL METER of DATA MONITOR, compare the DATA MONITOR value with the fuel gauge position.

Fuel gauge indication position	Reference value of data monitor [L]
1	Approx. 41.1
3/4	Approx. 30.8
1/2	Approx. 20.5
1/4	Approx. 10.2
0	Approx. 2.5

Does monitor value match fuel gauge reading?

YES >> Inspection End.

NO >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000007705973

Regarding Wiring Diagram information, refer to MWI-76, "Wiring Diagram".

1. CHECK HARNESS CONNECTOR

- 1. Turn ignition switch OFF.
- Check combination meter and fuel level sensor unit terminals (meter-side and harness-side) for poor connection.

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace terminals or connectors.

2.CHECK FUEL LEVEL SENSOR UNIT CIRCUIT

- 1. Disconnect combination meter harness connector M24 and fuel level sensor unit and fuel pump harness connector B44.
- 2. Check continuity between combination meter harness connector M24 terminal 4 and fuel level sensor unit and fuel pump harness connector B44 terminal 2.

Connector	Terminal	Connector	Terminal	Continuity
M24	4	B44	2	Yes

Check continuity between fuel level sensor unit and fuel pump harness connector B44 terminal 2 and ground.

Connector	Terminal	Ground	Continuity
B44	2	Oround	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

3.CHECK FUEL LEVEL SENSOR GROUND CIRCUIT

1. Check continuity between combination meter harness connector M24 terminal 26 and fuel level sensor unit and fuel pump harness connector B44 terminal 5.

Connector	Terminal	Connector	Terminal	Continuity
M24	26	B44	5	Yes

Check continuity between fuel level sensor unit and fuel pump harness connector B44 terminal 5 and ground.

Connector	Terminal	Ground	Continuity
B44	5	Oround	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4. CHECK INSTALLATION CONDITION

Check fuel level sensor unit installation, and verify the float arm does not interfere or bind with the internal components in the fuel tank.

Is the inspection result normal?

YES >> Inspection End.

NO >> Install the fuel level sensor unit properly.

Component Inspection

1. REMOVE FUEL LEVEL SENSOR UNIT

Remove the fuel level sensor unit. Refer to FL-5, "Removal and Installation".

>> GO TO 2.

2. CHECK FUEL LEVEL SENSOR UNIT

Check the resistance between fuel level sensor unit and fuel pump.

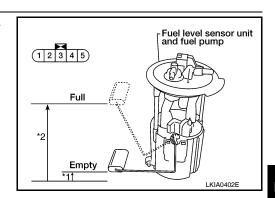
Terminals		Condition	Resistance (Ω)	Height [mm (in)]
Fuel level sensor unit		Condition	(Approx.)	rieigiit [iiiiii (iii)]
2 5	Full [*] (2)	91	177 (6.97)	
	Empty* (1)	283	15 (0.59)	

^{*:} When float rod is in contact with stopper.

Is inspection result OK?

YES >> Inspection End.

NO >> Replace fuel level sensor unit and fuel pump. Refer to FL-5, "Removal and Installation".



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WASHER LEVEL SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[TYPE B]

WASHER LEVEL SWITCH SIGNAL CIRCUIT

Description INFOID:0000000007733007

Transmits the washer level switch signal to the combination meter.

Diagnosis Procedure

INFOID:0000000007733008

Regarding Wiring Diagram information, refer to MWI-76, "Wiring Diagram".

1. CHECK WASHER FLUID LEVEL SWITCH SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect combination meter connector and washer fluid level switch connector.
- 3. Check continuity between combination meter harness connector M24 terminal 11 and washer fluid level switch harness connector E50 terminal 1.

11 - 1 : Continuity should exist.

Check continuity between combination meter harness connector M24 terminal 11 and ground.

11 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK WASHER FLUID LEVEL SWITCH GROUND CIRCUIT

Check continuity between washer fluid level switch harness connector E50 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

Component Inspection

INFOID:0000000007733009

1. CHECK WASHER FLUID LEVEL SWITCH

Check continuity between washer fluid level switch terminals 1 and 2.

Terminal Washer fluid level		Continuity
1 - 2	Low	Yes
	High	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace washer fluid level switch.

THE FUEL GAUGE INDICATOR DOES NOT OPERATE [TYPE B] < SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α THE FUEL GAUGE INDICATOR DOES NOT OPERATE Description INFOID:0000000007705975 Fuel gauge will not indicate from a certain position. Diagnosis Procedure INFOID:0000000007705976 1. CHECK COMBINATION METER INPUT SIGNAL Select METER/M&A on CONSULT. D 2. Using "DATA MONITOR, compare the monitor value with the fuel gauge reading on the combination meter. Refer to MWI-94, "Component Function Check". Does monitor value match fuel gauge reading? Е YES >> GO TO 2. NO >> Replace combination meter. Refer to MWI-101, "Removal and Installation". 2.CHECK FUEL LEVEL SENSOR SIGNAL CIRCUIT F Check the fuel level sensor signal circuit. Refer to MWI-94, "Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 3. NO >> Repair harness or connector. ${f 3.}$ COMPONENT INSPECTION Н Perform a component inspection on the fuel level sensor unit. Refer to MWI-95, "Component Inspection". Is the inspection result normal? YES >> GO TO 4. NO >> Replace fuel level sensor unit. Refer to FL-5, "Removal and Installation". 4. CHECK FLOAT INTERFERENCE Check that the float arm does not interfere or bind with components in the fuel tank.

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

NO >> Repair or replace malfunctioning parts.

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THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

[TYPE B]

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

Description INFOID:0000000007705977

The oil pressure warning lamp stays OFF when the ignition switch is turned ON.

Diagnosis Procedure

INFOID:0000000007705978

1. CHECK COMBINATION METER OIL PRESSURE WARNING LIGHT

- Select METER/M&A on CONSULT.
- 2. Observe OIL W/L DATA MONITOR while operating the ignition switch.

Component	Condition	CONSULT
Oil pressure warning light	Ignition ON	ON
	Ignition OFF	OFF

Is the inspection result normal?

YES >> Inspection end.

NO >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS > [TYPE B]

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

Description INFOID:0000000007705980

The oil pressure warning lamp remains on while the engine is running (normal oil pressure).

Diagnosis Procedure

INFOID:0000000007705981

1. CHECK COMBINATION METER INPUT SIGNAL

- 1. Start the engine and select METER/M&A on CONSULT.
- Observe OIL W/L DATA MONITOR and the operation of the oil pressure warning lamp on the combination meter.

Component	Condition	CONSULT
Oil pressure warning light	Engine running	OFF

Is the inspection result normal?

YES >> Perform ECM self-diagnosis. Refer to <u>HAC-42</u>, "<u>Diagnosis Procedure</u>".

NO >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

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THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS > [TYPE B]

THE LOW WASHER FLUID WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description INFOID:0000000007733012

- The warning is still displayed even after washer fluid is added.
- The warning is not displayed even though the washer tank is empty.

Diagnosis Procedure

INFOID:0000000007733013

1. CHECK WASHER FLUID LEVEL SWITCH

Perform a unit check for the washer fluid level switch. Refer to <u>MWI-96, "Component Inspection"</u>. <u>Is the inspection result normal?</u>

YES >> GO TO 2

NO >> Replace washer level switch.

2. CHECK WASHER FLUID LEVEL SWITCH SIGNAL CIRCUIT

Check the washer fluid level switch signal circuit. Refer to MWI-96, "Diagnosis Procedure". Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-101, "Removal and Installation".

NO >> Repair harness or connector.

[TYPE B]

INFOID:0000000007206170

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REMOVAL AND INSTALLATION

COMBINATION METER

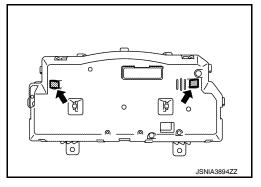
Removal and Installation

REMOVAL

- 1. Disconnect the negative battery terminal. Refer to PG-61, "Removal and Installation".
- 2. Remove the cluster lid A. Refer to IP-19, "Removal and Installation".
- 3. Remove the screws of the combination meter.
- Pull the combination meter straight to disengage resin clips. (The figure shows the clip positions on the back of the combination meter.)

CAUTION:

Never damage the front cover.



5. Remove connector to remove the combination meter.

CAUTION:

Never damage the front cover.

INSTALLATION

Installation is in the reverse order of removal.

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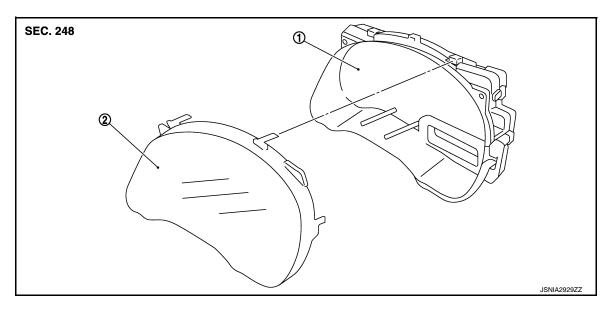
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UNIT DISASSEMBLY AND ASSEMBLY

COMBINATION METER

Exploded View



1. Unified meter control unit

Front cover

Disassembly and Assembly

INFOID:0000000007206171

DISASSEMBLY

- 1. Disengage the tabs to separate front cover, using suitable tool.
- Pull the front cover straight to remove it from the unified meter control unit.

CAUTION:

- Never touch the display, pointer, the inside of front cover and the printed area of the dial during the work.
- Keep away from magnetic sources.
- · Never damage the front cover.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

- Never touch the display, pointer, the inside of front cover and the printed area of the dial during the work.
- Keep away from magnetic sources.
- Never damage the front cover.