

SECTION WCS

WARNING CHIME SYSTEM

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

CONTENTS

HOW TO USE THIS MANUAL	3	PARKING BRAKE RELEASE WARNING CHIME : System Diagram	9
APPLICATION NOTICE	3	PARKING BRAKE RELEASE WARNING CHIME : System Description	9
Information	3		
PRECAUTION	4	DIAGNOSIS SYSTEM (COMBINATION METER)	10
PRECAUTIONS	4	TYPE A	10
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN- SIONER"	4	TYPE A : Diagnosis Description	10
		TYPE A : CONSULT Function	11
SYSTEM DESCRIPTION	5	TYPE B	13
COMPONENT PARTS	5	TYPE B : Diagnosis Description	13
Component Parts Location	5	TYPE B : CONSULT Function	14
Component Description	5	DIAGNOSIS SYSTEM (BCM)	18
SYSTEM	7	COMMON ITEM	18
WARNING CHIME SYSTEM	7	COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)	18
WARNING CHIME SYSTEM : System Diagram	7	BUZZER	19
WARNING CHIME SYSTEM : System Description	7	BUZZER : CONSULT Function (BCM - BUZZER)...	19
LIGHT REMINDER WARNING CHIME	7	ECU DIAGNOSIS INFORMATION	20
LIGHT REMINDER WARNING CHIME : System Diagram	7	BCM, COMBINATION METER	20
LIGHT REMINDER WARNING CHIME : System Description	7	List of ECU Reference	20
SEAT BELT WARNING CHIME	8	WIRING DIAGRAM	21
SEAT BELT WARNING CHIME : System Diagram	8	WARNING CHIME SYSTEM	21
SEAT BELT WARNING CHIME : System Descrip- tion	8	Wiring Diagram	21
KEY WARNING CHIME	8	BASIC INSPECTION	25
KEY WARNING CHIME : System Diagram	8	DIAGNOSIS AND REPAIR WORKFLOW	25
KEY WARNING CHIME : System Description	8	Work Flow	25
PARKING BRAKE RELEASE WARNING CHIME	9	DTC/CIRCUIT DIAGNOSIS	27
		POWER SUPPLY AND GROUND CIRCUIT	27

WCS

COMBINATION METER (TYPE A)	27	PARKING BRAKE SWITCH SIGNAL CIR-	
COMBINATION METER (TYPE A) : Diagnosis		CUIT	36
Procedure	27	TYPE A	36
COMBINATION METER (TYPE B)	28	TYPE A : Description	36
COMBINATION METER (TYPE B) : Diagnosis		TYPE A : Component Function Check	36
Procedure	28	TYPE A : Diagnosis Procedure	36
BCM (BODY CONTROL MODULE)	28	TYPE A : Component Inspection	37
BCM (BODY CONTROL MODULE) : Diagnosis		TYPE B	37
Procedure	29	TYPE B : Description	37
METER BUZZER CIRCUIT	30	TYPE B : Component Function Check	37
Component Function Check	30	TYPE B : Diagnosis Procedure	37
Diagnosis Procedure	30	TYPE B : Component Inspection	38
SEAT BELT BUCKLE SWITCH SIGNAL CIR-		SYMPTOM DIAGNOSIS	39
CUIT	31	THE PARKING BRAKE RELEASE WARNING	
TYPE A	31	CONTINUES SOUNDING, OR DOES NOT	
TYPE A : Description	31	SOUND	39
TYPE A : Component Function Check	31	Description	39
TYPE A : Diagnosis Procedure	31	Diagnosis Procedure	39
TYPE A : Component Inspection	32	THE SEAT BELT REMINDER WARNING	
TYPE B	32	CONTINUES SOUNDING, OR DOES NOT	
TYPE B : Description	32	SOUND	40
TYPE B : Component Function Check	32	Description	40
TYPE B : Diagnosis Procedure	32	Diagnosis Procedure	40
TYPE B : Component Inspection	33	THE LIGHT REMINDER WARNING DOES	
KEY SWITCH SIGNAL CIRCUIT	34	NOT SOUND	41
Description	34	Description	41
Component Function Check	34	Diagnosis Procedure	41
Diagnosis Procedure	34	THE KEY WARNING DOES NOT SOUND	42
Component Inspection	35	Description	42
		Diagnosis Procedure	42

APPLICATION NOTICE

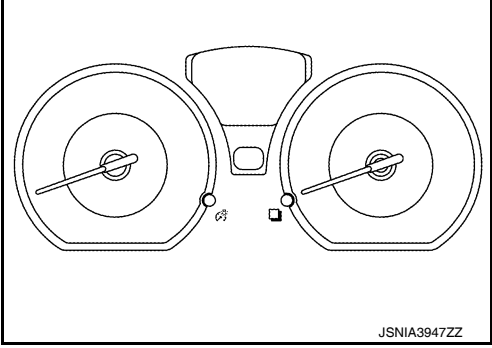
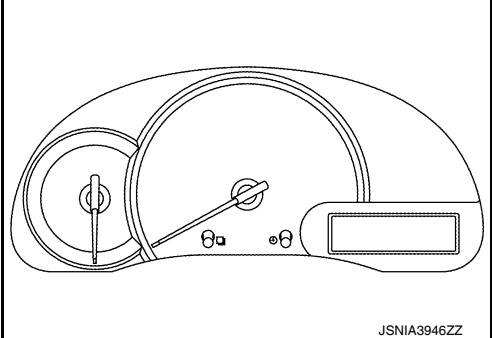
< HOW TO USE THIS MANUAL >

HOW TO USE THIS MANUAL

APPLICATION NOTICE

Information

INFOID:000000007206172

Service information	Design of combination meter
TYPE A	 <p>JSNIA3947ZZ</p>
TYPE B	 <p>JSNIA3946ZZ</p>

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000007794905

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.

COMPONENT PARTS

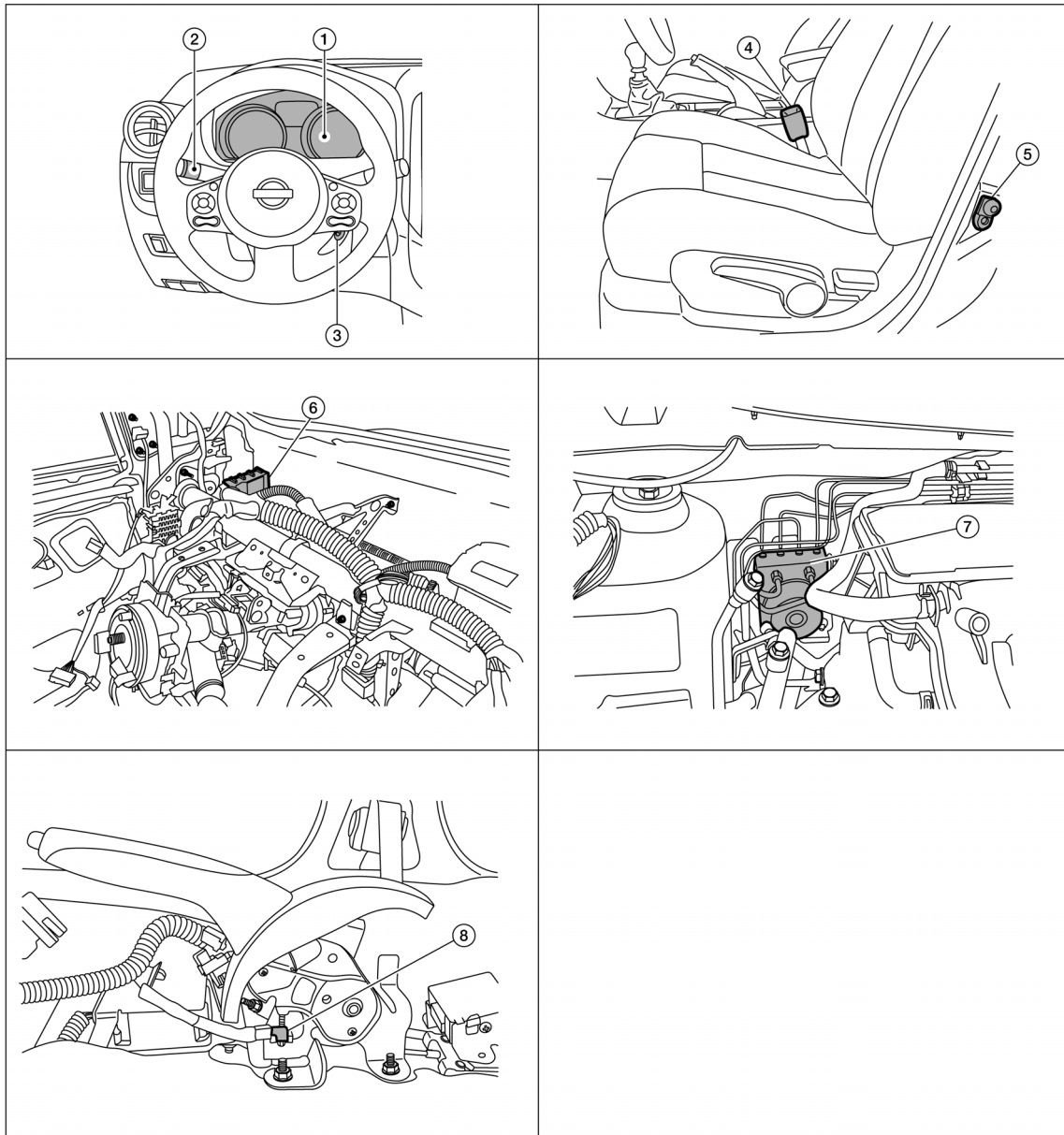
< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000007631270



ALNIA1292ZZ

- | | | |
|--|---|---|
| 1. Combination meter | 2. Combination switch (lighting and turn signal switch) | 3. Key switch |
| 4. Seat belt buckle switch LH | 5. Front door switch LH | 6. BCM (view with instrument panel removed) |
| 7. ABS actuator and electric unit (control unit) | 8. Parking brake switch (view with console removed) | |

Component Description

INFOID:000000007631271

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

COMPONENT PARTS

< SYSTEM DESCRIPTION >

Unit	Description
Combination meter	<ul style="list-style-type: none">• Judges whether the parking brake is released using the vehicle speed signal and the parking brake switch signal, and sounds the buzzer if necessary.• Receives the seat belt buckle switch signal from the seat belt buckle switch and transmits it to BCM with CAN communication line.• Receives a buzzer output signal from BCM with CAN communication line.
Lighting switch	Transmits lighting switch status signal to the BCM.
BCM	Transmits signals provided by various units to the combination meter with CAN communication line.
Front door switch LH	Transmits door switch signal to BCM.
Key switch	Transmits key switch signal to BCM.
Seat belt buckle switch LH	Transmits seat belt buckle switch LH signal to the combination meter.
Parking brake switch	Transmits parking brake switch signal to the combination meter.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to combination meter with CAN communication line.

SYSTEM

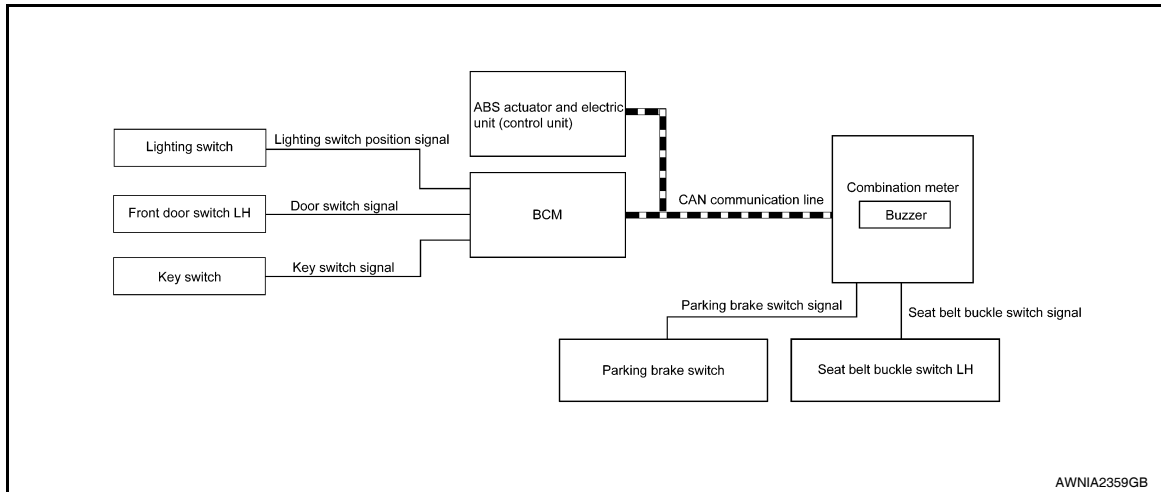
< SYSTEM DESCRIPTION >

SYSTEM

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram

INFOID:000000007631272



WARNING CHIME SYSTEM : System Description

INFOID:000000007631273

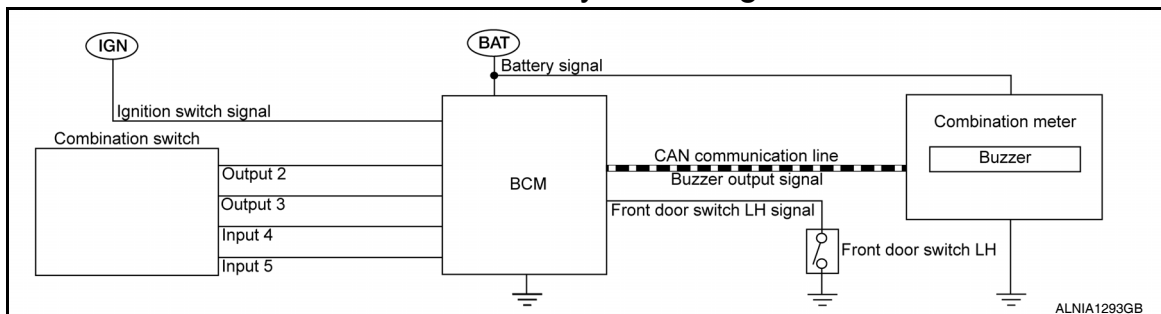
DESCRIPTION

- The buzzer for warning chime system is installed in the combination meter.
- The buzzer sounds when the combination meter receives a buzzer output signal from the BCM.
- The BCM receives signals from various units and transmits a buzzer output signal to the combination meter with CAN communication line if it judges that the warning buzzer should be activated.

LIGHT REMINDER WARNING CHIME

LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000007631274



LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000007631275

DESCRIPTION

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

- BCM detects ignition switch in OFF or ACC position, front door switch LH ON, and lighting switch in 1st or 2nd position, and then transmits buzzer output signal (light reminder warning chime) to combination meter with CAN communication line.
- When combination meter receives buzzer output signal (light reminder warning chime), it sounds the buzzer.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled

- Lighting switch is in 1st or 2nd position
- Ignition switch is in OFF or ACC
- Front door switch LH is ON

A
B
C
D
E
F
G
H
I
J
K
L
M

WCS

O
P

SYSTEM

< SYSTEM DESCRIPTION >

WARNING CANCEL CONDITIONS

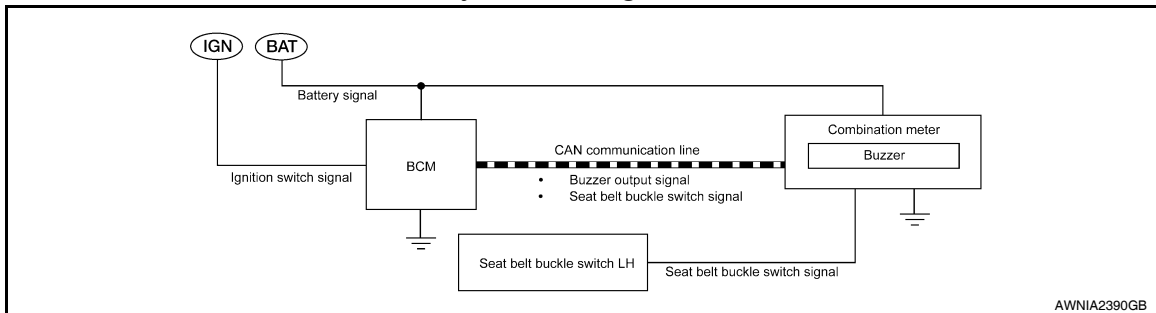
Warning is canceled if any of the following conditions is fulfilled.

- Lighting switch OFF
- Ignition switch ON
- Front door switch LH is OFF

SEAT BELT WARNING CHIME

SEAT BELT WARNING CHIME : System Diagram

INFOID:000000007631276



SEAT BELT WARNING CHIME : System Description

INFOID:000000007631277

DESCRIPTION

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

- BCM receives seat belt buckle switch signal from combination meter with CAN communication line.
- BCM detects ignition switch turned ON and seat belt buckle switch LH ON, and then transmits buzzer output signal (seat belt warning chime) to combination meter with CAN communication line.
- When combination meter receives buzzer output signal (seat belt warning chime), it sounds the buzzer.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled

- Ignition switch OFF→ON
- Seat belt buckle switch LH is ON (driver seat belt not fastened)

WARNING CANCEL CONDITIONS

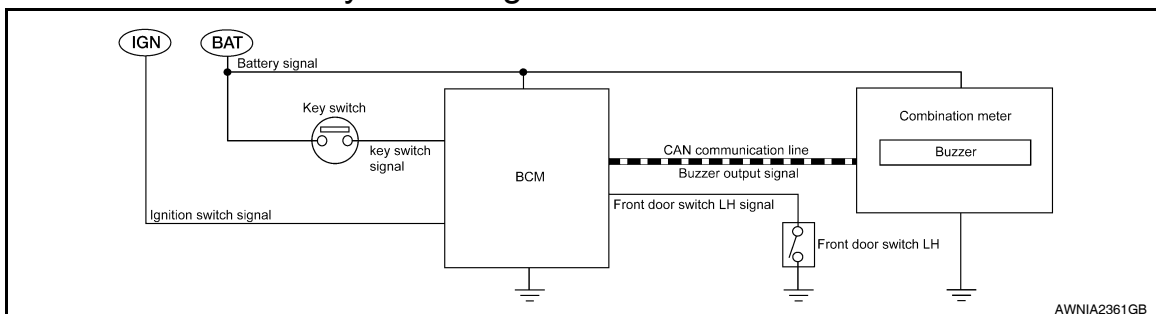
Cancels the warning if any of the following conditions is fulfilled.

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

KEY WARNING CHIME

KEY WARNING CHIME : System Diagram

INFOID:000000007631278



KEY WARNING CHIME : System Description

INFOID:000000007631279

With the key inserted into the key switch, and the ignition switch in the OFF or ACC position, when driver's door is opened, the warning chime will sound.

SYSTEM

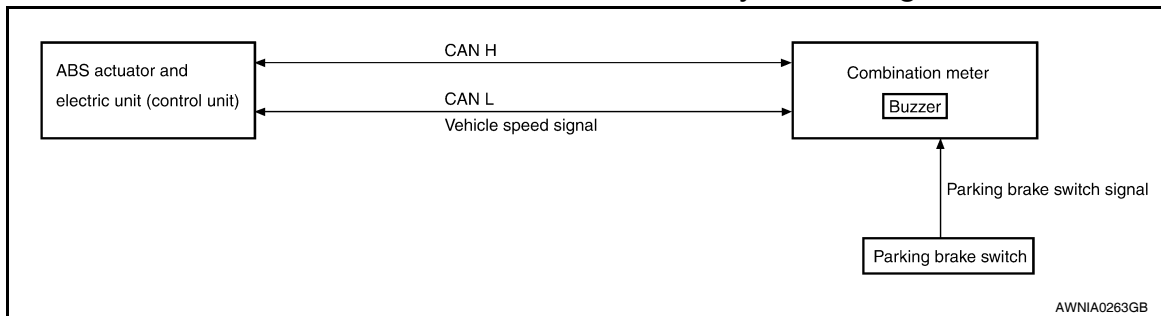
< SYSTEM DESCRIPTION >

- BCM detects key inserted into the ignition switch, and sends key warning signal to combination meter with CAN communication line.
- When combination meter receives key warning signal, it sounds warning chime.

PARKING BRAKE RELEASE WARNING CHIME

PARKING BRAKE RELEASE WARNING CHIME : System Diagram

INFOID:0000000007631280



PARKING BRAKE RELEASE WARNING CHIME : System Description

INFOID:0000000007631281

DESCRIPTION

- The combination meter receives the vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication line.
- The combination meter judges whether the parking brake is released using the parking brake switch signal from the parking brake switch, and sounds the warning buzzer if necessary.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled:

- Vehicle speed is approximately 7 km/h (4.3 MPH) or higher
- Parking brake switch ON

WARNING CANCEL CONDITIONS

Warning is canceled if any of the following conditions are fulfilled:

- Vehicle speed is approximately 3 km/h (1.9 MPH) or less
- Parking brake switch OFF

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (COMBINATION METER)

TYPE A

TYPE A : Diagnosis Description

INFOID:000000007687121

COMBINATION METER SELF-DIAGNOSIS MODE

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

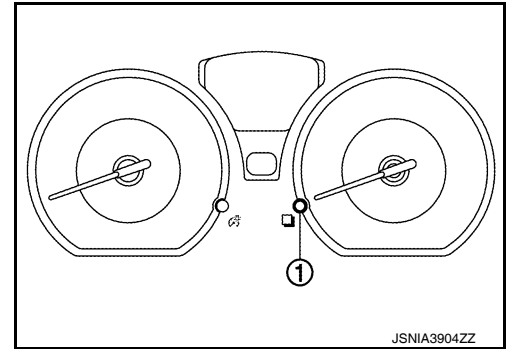
STARTING COMBINATION METER SELF-DIAGNOSIS MODE

NOTE:

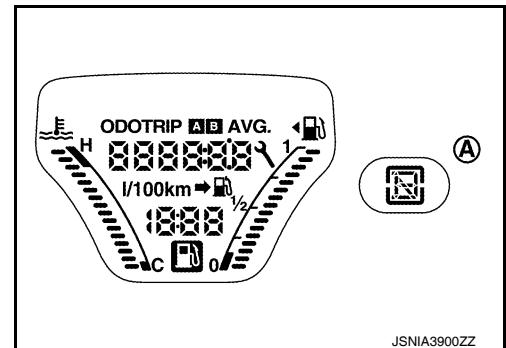
- Check combination meter power supply and ground circuits if self-diagnosis mode does not start. Refer to [MWI-43, "COMBINATION METER : Diagnosis Procedure"](#). Replace combination meter if power supply and ground circuits are found to be normal and self-diagnosis mode does not start. Refer to [MWI-52,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

How to Initiate Self-Diagnosis Mode

1. 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).



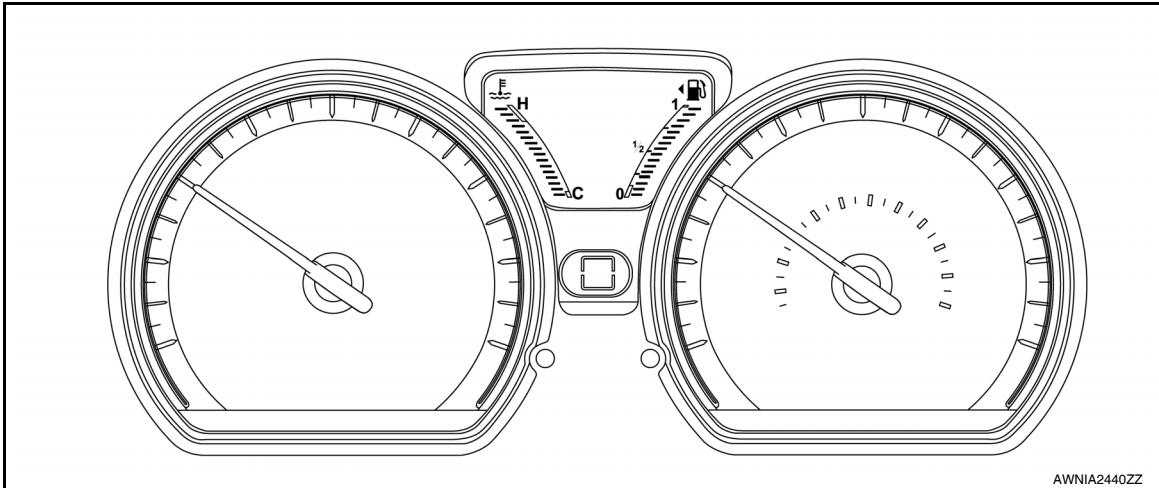
6. The combination meter self-diagnosis mode is activated.
 - Verify all segments of the information display and shift position indicator (A) for CVT models are displayed.



DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

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.

TYPE A : CONSULT Function

INFOID:000000007687122

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]	X	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	X	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]	X	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [L]	X	Displays the fuel level.
W TEMP METER [°C] or [°F]	X	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.

DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

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).
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.
BUZZER [ON/OFF]	X	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.

DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

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.

TYPE B

TYPE B : Diagnosis Description

INFOID:000000007705899

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 self-diagnosis mode will exit upon turning the ignition switch to OFF.

METHOD OF STARTING

1. Turn the ignition switch OFF.

A

B

C

D

E

F

G

H

I

J

K

L

M


WCS

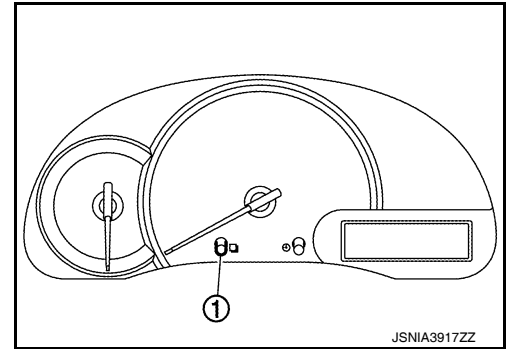
O


P

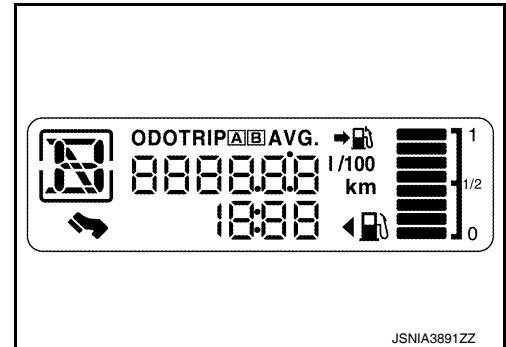
DIAGNOSIS SYSTEM (COMBINATION METER)


< SYSTEM DESCRIPTION >

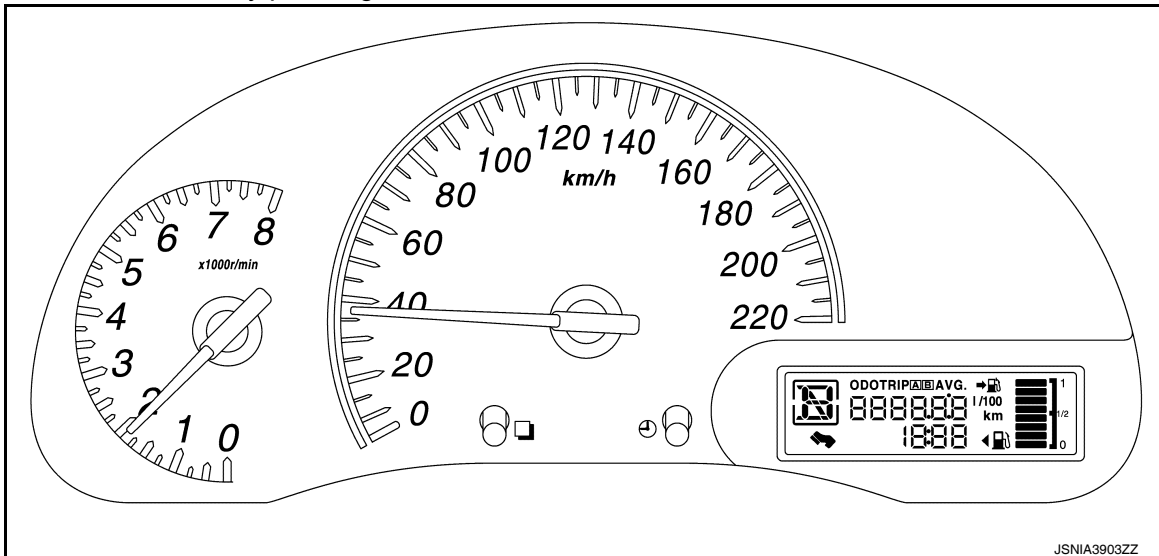
- Turn the ignition switch ON while pressing and holding the  switch (1) for 0.8 seconds or more.



- 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.



- Each meter activates by pressing the  switch.



NOTE:

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

TYPE B : CONSULT Function

INFOID:000000007689760

APPLICATION ITEMS

CONSULT can perform the following diagnosis modes via CAN communication and the combination meter.

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.

DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

SELF DIAG RESULT

Refer to [MWI-74, "DTC Index"](#).

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	Description
SPEED METER [km/h] or [mph]	X	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	X	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]	X	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [L]	X	Displays the fuel level.
W TEMP METER [°C] or [°F]	X	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.
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 [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 [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.

A

B

C

D

E

F

G

H

I

J

K

L

M

WCS

O

P

DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

Display item [Unit]	MAIN SIGNALS	Description
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 seat belt buckle switch (RH).
BRAKE OIL SW [ON/OFF]		Status of brake fluid level switch.
DISTANCE [km] or [Mi]		Displays distance to empty.
BUZZER [ON/OFF]	X	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.

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.

DIAGNOSIS SYSTEM (COMBINATION METER)

< SYSTEM DESCRIPTION >

Display item	Description	
CHAGE W/L	Lighting history of Charging warning lamp.	A
DOOR W/L	Lighting history of door warning lamp.	
CRUISE W/L	Lighting history of cruise warning lamp.	B
O/D OFF IND	Lighting history of O/D OFF indicator lamp.	
FUEL W/L	Lighting history of fuel warning lamp.	C
WASHER W/L	Lighting history of washer warning lamp.	

D

E

F

G

H

I

J

K

L

M

WCS

O

P

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000007631254

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> • The vehicle specification can be read and saved. • The vehicle specification can be written when replacing BCM.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN DIAG SUPPORT MNTR
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEAD LAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×		×	×		
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Trunk open	TRUNK			×				
RAP system	RETAINED PWR			×		×		
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

INFOID:000000007631255

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
KEY ON SW [On/Off]	Indicates condition of key switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
REVERSE SW CAN [On/Off]	Indicates reverse switch signal received from TCM on CAN communication line.
TAIL LAMP SW [On/Off]	Indicates condition of combination switch.
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch.
BUCKLE SW [On/Off]	Indicates condition of seat belt buckle switch.
VEHICLE SPEED [km/h/mph]	Indicates vehicle speed signal received from combination meter on CAN communication line.

ACTIVE TEST

Test Item	Description
IGN KEY WARN ALM	This test is able to check key warning chime operation [On/Off].
SEAT BELT WARN TEST	This test is able to check seat belt warning chime operation [On/Off].
LIGHT WARN ALM	This test is able to check light warning chime operation [On/Off].

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

BCM, COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM, COMBINATION METER

List of ECU Reference

INFOID:000000007631269

ECU	Reference
BCM	BCS-24, "Reference Value"
	BCS-35, "Fail-safe"
	BCS-35, "DTC Inspection Priority Chart"
	BCS-36, "DTC Index"
COMBINATION METER (TYPE A)	MWI-21, "Reference Value"
	MWI-23, "Fail-Safe"
	MWI-23, "Fail-Safe"
COMBINATION METER (TYPE B)	MWI-71, "Reference Value"
	MWI-73, "Fail-Safe"
	MWI-74, "DTC Index"

WARNING CHIME SYSTEM

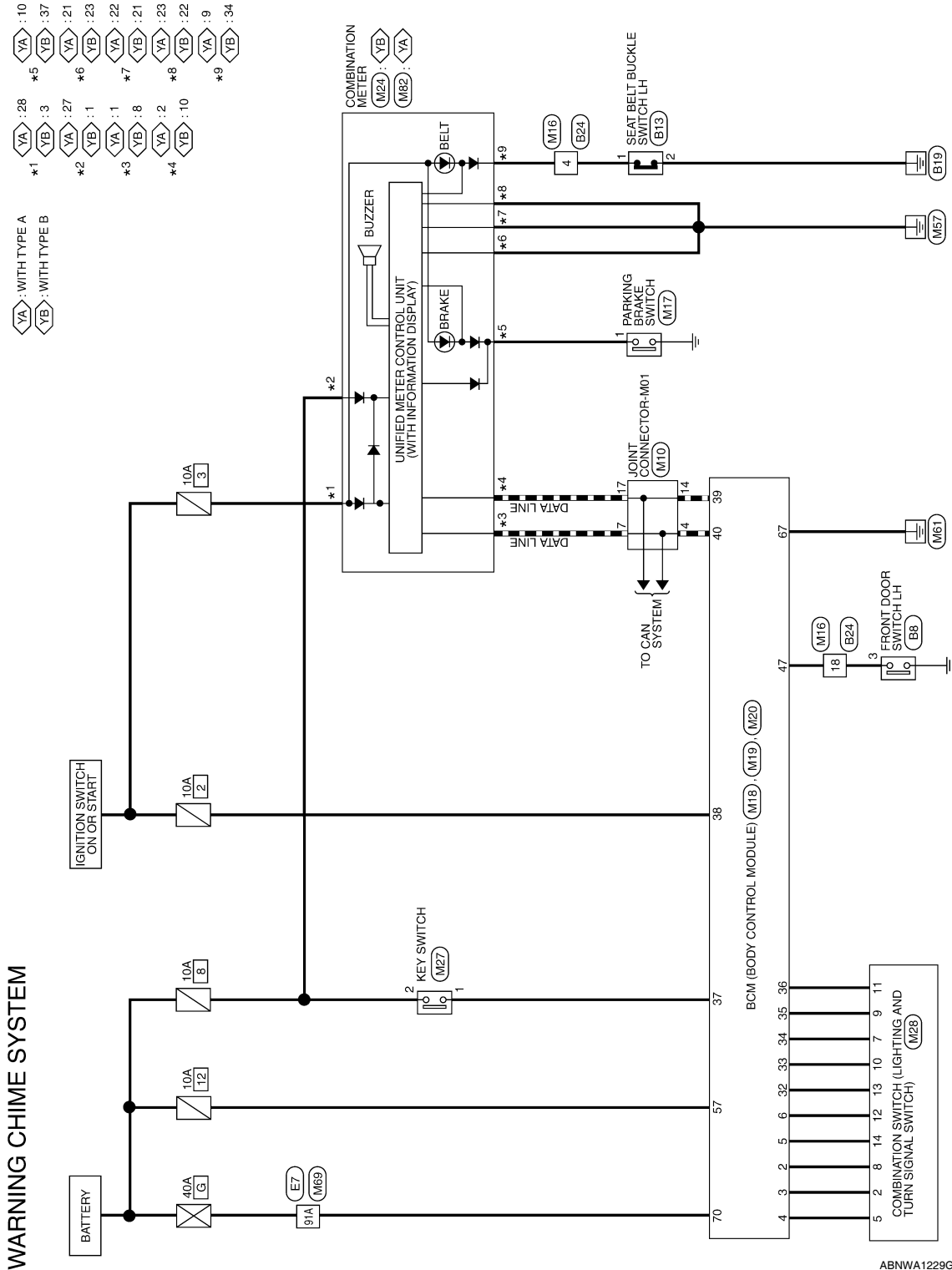
< WIRING DIAGRAM >

WIRING DIAGRAM

WARNING CHIME SYSTEM

Wiring Diagram

INFOID:000000007631259



ABNWA1229GB

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P

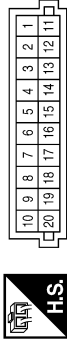
WCS

WARNING CHIME SYSTEM

< WIRING DIAGRAM >

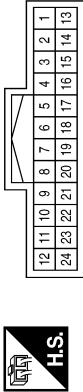
WARNING CHIME SYSTEM CONNECTORS

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
4	L	-
7	L	-
14	P	-
17	P	-

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



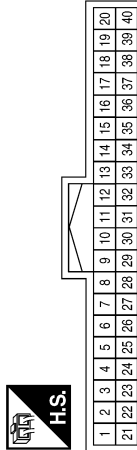
Terminal No.	Color of Wire	Signal Name
4	V	-
18	SB	-

Connector No.	M17
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	SB	-

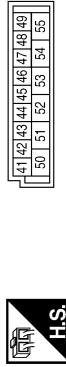
Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	BR	INPUT 5
3	Y	INPUT 4
4	L	INPUT 3
5	G	INPUT 2
6	R	INPUT 1
32	P	OUTPUT 5
33	V	OUTPUT 4
34	W	OUTPUT 3

Terminal No.	Color of Wire	Signal Name
35	GR	OUTPUT 2
36	LG	OUTPUT 1
37	Y	KEY SW
38	O	IGN SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



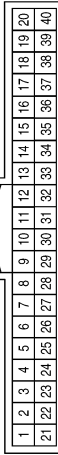
Terminal No.	Color of Wire	Signal Name
47	SB	DOOR SW (DR)

WARNING CHIME SYSTEM

< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
10	P	CAN-L
21	B	GND (POWER)
22	B	GND (CIRCUIT)
23	B	GND (ILL)
35	Y	CHG
37	SB	PKB

Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE



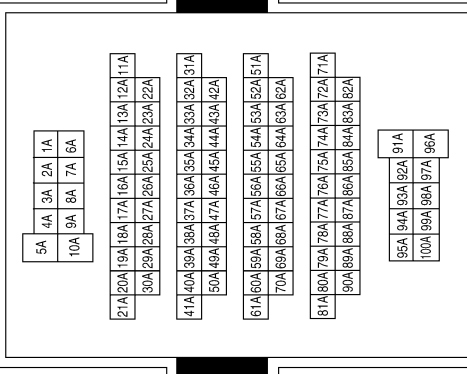
Terminal No.	Color of Wire	Signal Name
1	R	BAT
3	GR	IGN
8	L	CAN-H

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



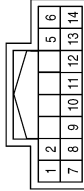
Terminal No.	Color of Wire	Signal Name
57	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
91A	G	-

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	Y	OUTPUT 4
5	L	OUTPUT 3
7	W	INPUT 3
8	BR	OUTPUT 5
9	GR	INPUT 2
10	V	INPUT 4
11	LG	INPUT 1
12	R	OUTPUT 1
13	P	INPUT 5
14	G	OUTPUT 2

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	LG	-

ABNIA3133GB

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

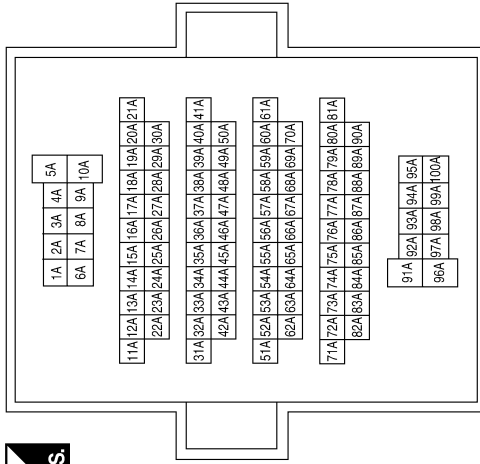
WCS

WARNING CHIME SYSTEM

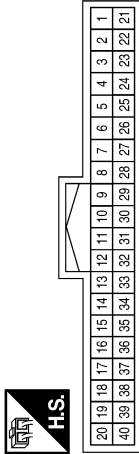
< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
91A	Y	-

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

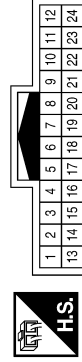


Connector No.	M82
Connector Name	COMBINATION METER (WITH TYPE A)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	P	CAN-L
9	V	BELT
10	SB	PKB SW
21	B	GND (ILL)
22	B	GND (PWOER)
23	B	GND (CIRCUIT)
27	R	BAT
28	GR	IGN

Connector No.	B24
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	B13
Connector Name	SEAT BELT BUCKLE SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	O	-
18	LG	-

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	LG	-

ABNIA3134GB

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

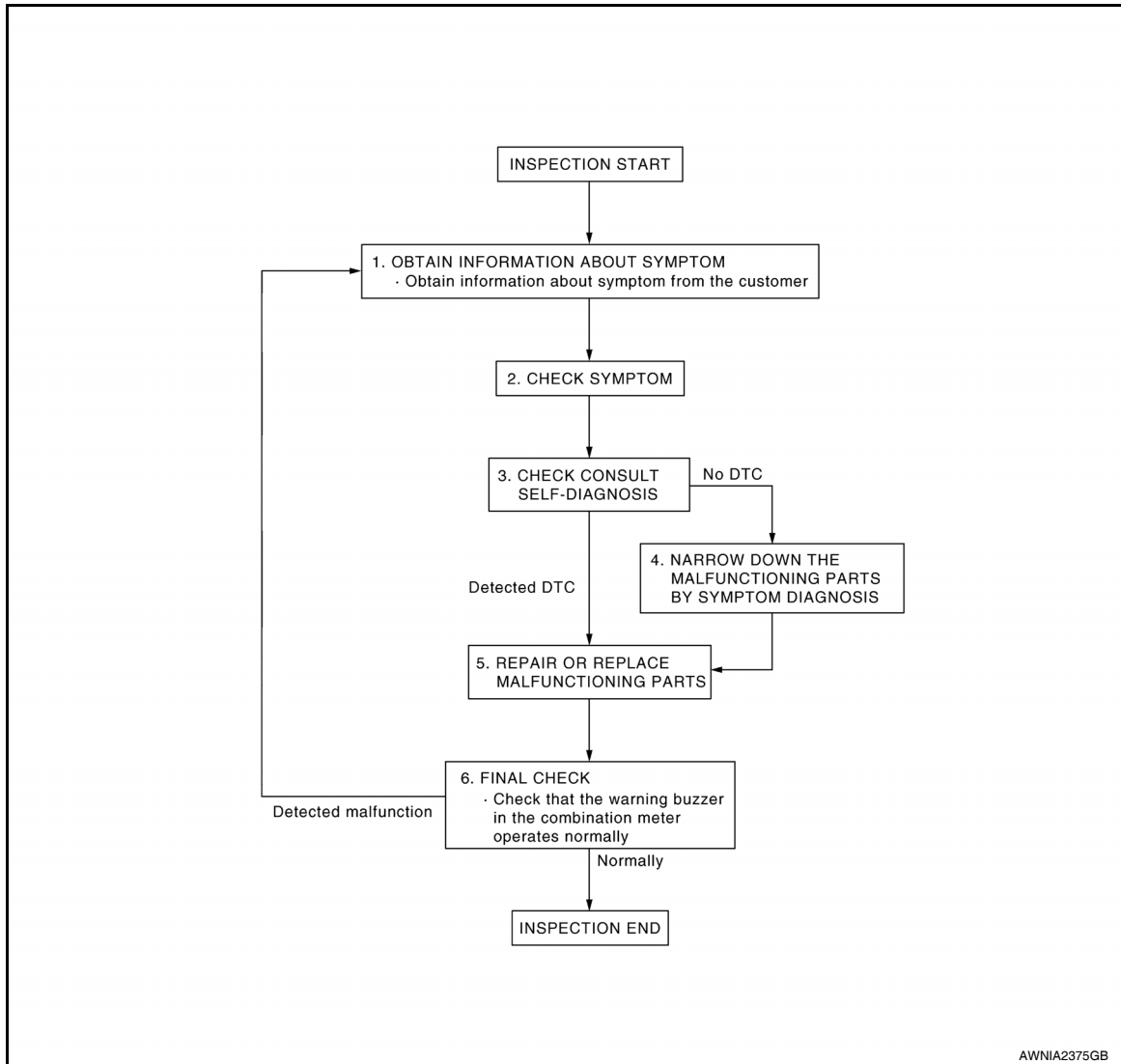
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000007631268

OVERALL SEQUENCE



DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

>> GO TO 2.

2. CHECK SYMPTOM

- Check the symptom based on the information obtained from the customer.
- Check if any other malfunctions are present.

>> GO TO 3.

3. CHECK CONSULT SELF-DIAGNOSIS RESULTS

A
B
C
D
E
F
G
H
I
J
K
L
M

WCS

O
P

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

Connect CONSULT and perform self-diagnosis. Refer to [MWI-18. "CONSULT Function"](#) (Type A) or [MWI-68. "CONSULT Function"](#) (Type B).

Are self-diagnosis results normal?

YES >> GO TO 4.

NO >> GO TO 5.

4. NARROW DOWN MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 5.

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts.

NOTE:

If DTC is displayed, erase DTC after repairing or replacing malfunctioning parts.

>> GO TO 6.

6. FINAL CHECK

Check that the warning buzzer in the combination meter operates normally.

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 1.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER (TYPE A)

COMBINATION METER (TYPE A) : Diagnosis Procedure

INFOID:000000007705902

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
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

1. Disconnect combination meter connector.
2. 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	START
M82	27	Ground	Battery voltage	Battery voltage	Battery voltage	Battery voltage
	28		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

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector M82, terminals 22, 23, 24 and ground.

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

Is the inspection result normal?

YES >> Inspection End.

A

B

C

D

E

F

G

H

I

J

K

L

M

WCS

O

P

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

NO >> Check ground harness.

COMBINATION METER (TYPE B)

COMBINATION METER (TYPE B) : Diagnosis Procedure

INFOID:000000007705903

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 (Approx.)
(+)	(-)		
Combination meter		Ground	Battery voltage
Connector	Terminal		
M24	1		ON
	3		OFF
		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.

Combination meter		Ground	Continuity
Connector	Terminal		
M24	21	Ground	Yes
	22		
	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 >

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000007724086

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	Battery power supply	12 (10A)
70		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.

BCM			Ignition switch position		
Connector	Terminal		OFF	ACC	ON
M20	57	Ground	Battery voltage	Battery voltage	Battery voltage
	70		0 V	Battery voltage	Battery voltage
M18	11		0 V	0 V	Battery voltage
	38				

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.

BCM			Continuity
Connector	Terminal		
M20	67	Ground	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.

A
B
C
D
E
F
G
H
I
J
K
L
M
WCS
O
P

METER BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

METER BUZZER CIRCUIT

Component Function Check

INFOID:000000007206200

1. CHECK OPERATION OF METER BUZZER

1. Select "BUZZER" of "BCM" on CONSULT.
2. Perform "LIGHT WARN ALM" of "Active Test".

Does meter buzzer beep?

- YES >> Inspection End.
NO >> GO TO 2.

2. CHECK COMBINATION METER INPUT SIGNAL

Select the "DATA MONITOR" for the "METER/M&A" and check the "BUZZER" monitor value.

BUZZER
Under the condition of buzzer input : On
Except above : Off

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-52. "Removal and Installation"](#) (Type A) or [MWI-101. "Removal and Installation"](#) (Type B).
NO >> Replace BCM. Refer to [BCS-52. "Removal and Installation"](#).

Diagnosis Procedure

INFOID:000000007206201

Regarding Wiring Diagram information, refer to [WCS-21. "Wiring Diagram"](#).

1. CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to [WCS-27. "COMBINATION METER \(TYPE A\) : Diagnosis Procedure"](#) or [WCS-28. "COMBINATION METER \(TYPE B\) : Diagnosis Procedure"](#).

NOTE:

To identify combination meter type, refer to [WCS-3. "Information"](#).

Is the inspection result normal?

- YES >> Inspection End.
NO >> Repair power supply circuit of combination meter.

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

TYPE A

TYPE A : Description

INFOID:000000007631260

Transmits a seat belt buckle switch LH signal to the combination meter.

TYPE A : Component Function Check

INFOID:000000007631261

1. CHECK COMBINATION METER INPUT SIGNAL

Select "DATA MONITOR" for "METER/M&A" and check the "SEAT BELT W/L" monitor value.

SEAT BELT W/L

When seat belt is fastened : OFF

When seat belt is unfastened : ON

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to [WCS-31, "TYPE A : Diagnosis Procedure"](#).

TYPE A : Diagnosis Procedure

INFOID:000000007631262

Regarding Wiring Diagram information, refer to [WCS-21, "Wiring Diagram"](#).

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector M82 terminal 9 and ground.

9 - Ground

When driver seat belt is fastened : Approx. 12V

When driver seat belt is unfastened : Approx. 0V

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-52, "Removal and Installation"](#).

NO >> GO TO 2

2. CHECK SEAT BELT BUCKLE SWITCH LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter and seat belt buckle switch LH.
3. Check continuity between combination meter harness connector M82 terminal 9 and seat belt buckle switch LH harness connector B13 terminal 1.

9 - 1 : Continuity should exist.

4. Check continuity between combination meter harness connector M82 terminal 9 and ground.

9 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK SEAT BELT BUCKLE SWITCH LH GROUND CIRCUIT

Check continuity between seat belt buckle switch LH harness connector B13 terminal 2 and ground.

2 - Ground : Continuity should exist.

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Repair or replace harness.

TYPE A : Component Inspection

INFOID:000000007631263

1. CHECK SEAT BELT BUCKLE SWITCH LH

1. Turn ignition switch OFF.
2. Disconnect the seat belt buckle switch LH.
3. Check continuity between the seat belt buckle switch LH terminals 1 and 2.

1- 2

When seat belt is fastened : Continuity should not exist.

When seat belt is unfastened : Continuity should exist.

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace the seat belt buckle switch LH.

TYPE B

TYPE B : Description

INFOID:000000007631308

Transmits a seat belt buckle switch LH signal to the combination meter.

TYPE B : Component Function Check

INFOID:000000007631309

1. CHECK COMBINATION METER INPUT SIGNAL

Select "DATA MONITOR" for "METER/M&A" and check the "SEAT BELT W/L" monitor value.

SEAT BELT W/L

When seat belt is fastened : OFF

When seat belt is unfastened : ON

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Refer to [WCS-32, "TYPE B : Diagnosis Procedure"](#).

TYPE B : Diagnosis Procedure

INFOID:000000007631288

Regarding Wiring Diagram information, refer to [WCS-21, "Wiring Diagram"](#).

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector M24 terminal 34 and ground.

34 - Ground

When driver seat belt is fastened : Approx. 12V

When driver seat belt is unfastened : Approx. 0V

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-101, "Removal and Installation"](#).
- NO >> GO TO 2

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

2. CHECK SEAT BELT BUCKLE SWITCH LH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter and seat belt buckle switch LH.
3. Check continuity between combination meter harness connector M24 terminal 34 and seat belt buckle switch LH harness connector B13 terminal 1.

34 - 1 : Continuity should exist.

4. Check continuity between combination meter harness connector M24 terminal 34 and ground.

34 - Ground : Continuity should not exist.

Is the inspection result normal?

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

3. CHECK SEAT BELT BUCKLE SWITCH LH GROUND CIRCUIT

Check continuity between seat belt buckle switch LH harness connector B13 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

- YES >> Inspection End.
NO >> Repair or replace harness.

TYPE B : Component Inspection

INFOID:000000007631310

1. CHECK SEAT BELT BUCKLE SWITCH LH

1. Turn ignition switch OFF.
2. Disconnect the seat belt buckle switch LH.
3. Check continuity between the seat belt buckle switch LH terminals 1 and 2.

1- 2

When seat belt is fastened : Continuity should not exist.

When seat belt is unfastened : Continuity should exist.

Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace the seat belt buckle switch LH.

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

KEY SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

KEY SWITCH SIGNAL CIRCUIT

Description

INFOID:000000007631264

Transmits a key switch signal to the BCM.

Component Function Check

INFOID:000000007631265

1. CHECK BCM INPUT SIGNAL

Select "DATA MONITOR" for "BCM" and check the "KEY ON SW" monitor value.

KEY ON SW

When key is inserted into key cylinder : ON

When key is removed from key cylinder : OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to [WCS-34, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000007631266

Regarding Wiring Diagram information, refer to [WCS-21, "Wiring Diagram"](#).

1. CHECK FUSE

Check if the key switch 10A fuse [No. 8, located in the fuse block (J/B)] is blown.

Is the fuse blown?

YES >> Replace the fuse after repairing the affected circuit.

NO >> GO TO 2

2. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector M18 terminal 37 and ground.

Terminals			Condition	Voltage (Approx.)
(+)		(-)		
BCM connector	Terminal			
M18	37	Ground	Key is inserted	Battery voltage
			Key is removed	0V

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 3

3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector M18 and key switch.
2. Check continuity between BCM harness connector M18 terminal 37 and key switch harness connector M27 terminal 1.

BCM		Key switch		Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M27	1	Yes

3. Check continuity between BCM harness connector M18 terminal 37 and ground.

KEY SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

BCM		Ground	Continuity
Connector	Terminal		
M18	37		No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

Check voltage between key switch harness connector M27 terminal 2 and ground.

Terminals			Voltage (Approx.)
(+)		(-)	
Key switch	Terminal		
M27	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Replace key switch.

NO >> Repair or replace harness.

Component Inspection

INFOID:000000007631267

1. CHECK KEY SWITCH

1. Turn ignition switch OFF.
2. Disconnect key switch.
3. Check continuity between key switch terminals 1 and 2.

1-2

When key is inserted into key cylinder : Continuity should exist.

When key is removed from key cylinder : Continuity should not exist.

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace key switch.

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

PARKING BRAKE SWITCH SIGNAL CIRCUIT

TYPE A

TYPE A : Description

INFOID:000000007631304

Transmits the parking brake switch signal to the combination meter.

TYPE A : Component Function Check

INFOID:000000007631306

1. COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT.
2. Monitor "PKB SW" of "DATA MONITOR" while applying and releasing the parking brake.

PKB SW

Parking brake depressed : ON

Parking brake released : OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to [WCS-36, "TYPE A : Diagnosis Procedure"](#).

TYPE A : Diagnosis Procedure

INFOID:000000007206202

Regarding Wiring Diagram information, refer to [WCS-21, "Wiring Diagram"](#).

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check the voltage between combination meter harness connector and ground.

(+)		(-)	Condition		Voltage (Approx.)
Combination meter		Ground			
Connector	Terminal				
M82	10		Ignition switch ON	When parking brake is applied	0 V
			When parking brake is released	12 V	

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

2. CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

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

Terminals				Continuity	
Combination meter		Parking brake switch			
Connector	Terminal	Connector	Terminal		
M82	10	M17	1	Yes	

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

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Terminals		Ground	Continuity
Combination meter			
Connector	Terminal		No
M82	10		

Is the inspection result normal?

- YES >> Inspection End.
NO >> Repair harness or connector.

TYPE A : Component Inspection

INFOID:000000007631302

1. CHECK PARKING BRAKE SWITCH

Check continuity between parking brake switch terminal 1 and switch case ground.

Component	Terminal	Condition	Continuity
Parking brake switch	1	Parking brake depressed	Yes
		Parking brake released	No

Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace parking brake switch.

TYPE B

TYPE B : Description

INFOID:000000007631305

Transmits the parking brake switch signal to the combination meter.

TYPE B : Component Function Check

INFOID:000000007631307

1. COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT.
2. Monitor "PKB SW" of "DATA MONITOR" while applying and releasing the parking brake.

PKB SW

Parking brake depressed : ON

Parking brake released : OFF

Is the inspection result normal?

- YES >> Inspection End.
NO >> Refer to [WCS-37, "TYPE B : Diagnosis Procedure"](#).

TYPE B : Diagnosis Procedure

INFOID:000000007206204

WCS

Regarding Wiring Diagram information, refer to [WCS-21, "Wiring Diagram"](#).

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check the voltage between combination meter harness connector and ground.

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Condition		Voltage (Approx.)
Combination meter		Ground			
Connector	Terminal				
M24	37			Ignition switch ON	When parking brake is applied
				When parking brake is released	12 V

Is the inspection result normal?

- YES >> Inspection End.
 NO >> GO TO 2.

2.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

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

Terminals				Continuity
Combination meter		Parking brake switch		
Connector	Terminal	Connector	Terminal	
M24	37	M17	1	Yes

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

Terminals			Continuity
Combination meter		Ground	
Connector	Terminal		
M24	37		No

Is the inspection result normal?

- YES >> Inspection End.
 NO >> Repair harness or connector.

TYPE B : Component Inspection

INFOID:000000007631303

1.CHECK PARKING BRAKE SWITCH

Check continuity between parking brake switch terminal 1 and switch case ground.

Component	Terminal	Condition	Continuity
Parking brake switch	1	Parking brake depressed	Yes
		Parking brake released	No

Is the inspection result normal?

- YES >> Inspection End.
 NO >> Replace parking brake switch.

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

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

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

Description

INFOID:000000007206206

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

Diagnosis Procedure

INFOID:000000007206207

NOTE:

To identify combination meter type, refer to [WCS-3, "Information"](#).

1. CHECK PARKING BRAKE WARNING LAMP

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

When parking brake is applied : ON

When parking brake is released : OFF

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-52, "Removal and Installation"](#) (Type A) or [MWI-101, "Removal and Installation"](#) (Type B).

NO >> GO TO 2.

2. CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

Perform check for the parking brake switch signal circuit. Refer to [WCS-36, "TYPE A : Diagnosis Procedure"](#) or [WCS-37, "TYPE B : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK PARKING BRAKE SWITCH

Perform a component inspection of the parking brake switch. Refer to [WCS-37, "TYPE A : Component Inspection"](#) or [WCS-38, "TYPE B : Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-52, "Removal and Installation"](#) (Type A) or [MWI-101, "Removal and Installation"](#) (Type B).

NO >> Replace parking brake switch. Refer to [PB-6, "Exploded View"](#).

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

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

< SYMPTOM DIAGNOSIS >

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

Description

INFOID:000000007206208

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

Diagnosis Procedure

INFOID:000000007206209

NOTE:

To identify combination meter type, refer to [WCS-3, "Information"](#).

1. CHECK SEAT BELT WARNING LAMP

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

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

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-52, "Removal and Installation"](#) (TYPE A) or [MWI-101, "Removal and Installation"](#) (TYPE B).
- NO >> GO TO 2.

2. CHECK SEAT BELT BUCKLE SWITCH (LH) SIGNAL CIRCUIT

Perform check for seat belt buckle switch (LH) signal circuit. Refer to [WCS-31, "TYPE A : Diagnosis Procedure"](#) (TYPE A) or [WCS-32, "TYPE B : Diagnosis Procedure"](#) (TYPE B).

Is the inspection result normal?

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

3. CHECK SEAT BELT BUCKLE SWITCH (LH)

Perform check for seat belt buckle switch (LH). Refer to [WCS-32, "TYPE A : Component Inspection"](#) (TYPE A) or [WCS-33, "TYPE B : Component Inspection"](#) (TYPE B).

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-52, "Removal and Installation"](#) (TYPE A) or [MWI-101, "Removal and Installation"](#) (TYPE B).
- NO >> Replace seat belt buckle (LH). Refer to [SB-7, "SEAT BELT BUCKLE : Removal and Installation"](#).

THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:000000007206210

Light reminder warning chime does not sound even though headlamps are illuminated.

Diagnosis Procedure

INFOID:000000007206211

1. CHECK COMBINATION SWITCH (LIGHTING SWITCH) OPERATION

Check that the headlamps operate normally by operating the combination switch (lighting switch).

Do they operate normally?

YES >> GO TO 2.

NO >> Refer to [WCS-25, "Work Flow"](#).

2. CHECK DRIVER SIDE DOOR SWITCH SIGNAL CIRCUIT

Perform the check for the driver side door switch signal circuit. Refer to [DLK-44, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK DRIVER SIDE DOOR SWITCH

Perform a unit check for the driver side door switch. Refer to [DLK-46, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-52, "Removal and Installation"](#).

NO >> Replace driver side door switch. Refer to [DLK-123, "Removal and Installation"](#).

A
B
C
D
E
F
G
H
I
J
K
L
M
O
P

WCS

THE KEY WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE KEY WARNING DOES NOT SOUND

Description

INFOID:000000007206212

The key warning chime does not sound, when all of the following conditions are fulfilled.

- Key inserted into the key cylinder (key switch signal ON).
- Ignition switch is in ACC or OFF (ignition switch signal OFF).
- Driver side door is open (driver side door switch ON)

Diagnosis Procedure

INFOID:000000007206213

1. CHECK BCM INPUT SIGNAL

1. Connect CONSULT.
2. Select the "DATA MONITOR" of "BCM (BUZZER)" and check the "KEY ON SW" monitor value. Refer to [BCS-15. "BUZZER : CONSULT Function \(BCM - BUZZER\)".](#)

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-52. "Removal and Installation".](#)
NO >> GO TO 2.

2. CHECK KEY SWITCH SIGNAL CIRCUIT

Check the key switch signal circuit. Refer to [WCS-34. "Diagnosis Procedure".](#)

Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-52. "Removal and Installation".](#)
NO >> Check applicable parts, and repair or replace corresponding parts.