

# SECTION **WCS**

## WARNING CHIME SYSTEM

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

### CONTENTS

<p><b>BASIC INSPECTION</b> ..... 3</p> <p><b>DIAGNOSIS AND REPAIR WORKFLOW</b> ..... 3</p> <p style="padding-left: 20px;">Work Flow .....3</p> <p><b>FUNCTION DIAGNOSIS</b> ..... 4</p> <p><b>WARNING CHIME SYSTEM</b> ..... 4</p> <p><b>WARNING CHIME SYSTEM</b> .....4</p> <p style="padding-left: 20px;">WARNING CHIME SYSTEM : System Diagram .....4</p> <p style="padding-left: 20px;">WARNING CHIME SYSTEM : System Description .....4</p> <p style="padding-left: 20px;">WARNING CHIME SYSTEM : Component Parts Location .....5</p> <p style="padding-left: 20px;">WARNING CHIME SYSTEM : Component Description .....5</p> <p><b>LIGHT REMINDER WARNING CHIME</b> .....6</p> <p style="padding-left: 20px;">LIGHT REMINDER WARNING CHIME : System Diagram .....6</p> <p style="padding-left: 20px;">LIGHT REMINDER WARNING CHIME : System Description .....6</p> <p style="padding-left: 20px;">LIGHT REMINDER WARNING CHIME : Component Parts Location .....7</p> <p style="padding-left: 20px;">LIGHT REMINDER WARNING CHIME : Component Description .....7</p> <p><b>SEAT BELT WARNING CHIME</b> .....8</p> <p style="padding-left: 20px;">SEAT BELT WARNING CHIME : System Diagram .....8</p> <p style="padding-left: 20px;">SEAT BELT WARNING CHIME : System Description .....8</p> <p style="padding-left: 20px;">SEAT BELT WARNING CHIME : Component Parts Location .....9</p> <p style="padding-left: 20px;">SEAT BELT WARNING CHIME : Component Description .....9</p> <p><b>KEY WARNING CHIME (WITH INTELLIGENT KEY)</b> .....10</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Diagram .....10</p>	<p style="padding-left: 20px;">KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Description .....10</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Parts Location .....11</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Description .....11</p> <p><b>KEY WARNING CHIME (WITHOUT INTELLIGENT KEY)</b> .....12</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Diagram .....12</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Description .....12</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Parts Location .....13</p> <p style="padding-left: 20px;">KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Description .....13</p> <p><b>DIAGNOSIS SYSTEM (METER)</b> .....15</p> <p style="padding-left: 20px;">CONSULT-III Function (METER/M&amp;A) .....15</p> <p><b>DIAGNOSIS SYSTEM (BCM)</b> .....17</p> <p><b>BUZZER</b> .....17</p> <p style="padding-left: 20px;">BUZZER : CONSULT-III Function (BCM - BUZZER) .....17</p> <p><b>COMPONENT DIAGNOSIS</b> .....18</p> <p><b>POWER SUPPLY AND GROUND CIRCUIT</b> ....18</p> <p><b>COMBINATION METER</b> .....18</p> <p style="padding-left: 20px;">COMBINATION METER : Diagnosis Procedure ....18</p> <p><b>BCM (BODY CONTROL MODULE)</b> .....18</p> <p style="padding-left: 20px;">BCM (BODY CONTROL MODULE) : Diagnosis Procedure .....19</p> <p style="padding-left: 20px;">BCM (BODY CONTROL MODULE) : Special Repair Requirement .....19</p> <p><b>METER BUZZER CIRCUIT</b> .....20</p> <p style="padding-left: 20px;">Description .....20</p> <p style="padding-left: 20px;">Component Function Check .....20</p>
--	---

WCS

Diagnosis Procedure .....	20	DTC Index .....	52
<b>SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT</b> .....	<b>21</b>	<b>BCM (BODY CONTROL MODULE)</b> .....	<b>54</b>
Description .....	21	Reference Value .....	54
Component Function Check .....	21	Terminal Layout .....	57
Diagnosis Procedure .....	21	Physical Values .....	57
Component Inspection .....	22	Wiring Diagram .....	63
<b>KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)</b> .....	<b>23</b>	Fail Safe .....	66
Description .....	23	DTC Inspection Priority Chart .....	68
Component Function Check .....	23	DTC Index .....	69
Diagnosis Procedure .....	23	<b>SYMPTOM DIAGNOSIS</b> .....	<b>71</b>
Component Inspection .....	24	<b>THE LIGHT REMINDER WARNING DOES NOT SOUND</b> .....	<b>71</b>
<b>KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)</b> .....	<b>25</b>	Description .....	71
Description .....	25	Diagnosis Procedure .....	71
Component Function Check .....	25	<b>THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND</b> .....	<b>72</b>
Diagnosis Procedure .....	25	Description .....	72
Component Inspection .....	26	Diagnosis Procedure .....	72
<b>WARNING CHIME SYSTEM</b> .....	<b>27</b>	<b>THE KEY WARNING DOES NOT SOUND</b> .....	<b>73</b>
Wiring Diagram .....	27	Description .....	73
<b>ECU DIAGNOSIS</b> .....	<b>32</b>	Diagnosis Procedure .....	73
<b>COMBINATION METER</b> .....	<b>32</b>	<b>PRECAUTION</b> .....	<b>74</b>
Reference Value .....	32	<b>PRECAUTIONS</b> .....	<b>74</b>
Wiring Diagram .....	34	Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" .....	74
Fail Safe .....	51		

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:000000001316417

#### 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 to see if any other malfunctions are present.

>> GO TO 3

#### 3.CHECK CONSULT-III SELF-DIAGNOSIS RESULTS

Connect CONSULT-III and perform "SELF-DIAGNOSIS". Refer to [MWI-27. "CONSULT-III Function \(METER/M&A\)".](#)

Are self-diagnosis results normal?

YES >> GO TO 4

NO >> Repair or replace the malfunctioning parts, GO TO 5

#### 4.NARROW DOWN MALFUNCTIONING PARTS THROUGH SYMPTOM DIAGNOSIS

Perform symptom diagnosis and repair or replace the identified malfunctioning parts.

>> GO TO 5

#### 5.FINAL CHECK

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

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 1

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

WCS

# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

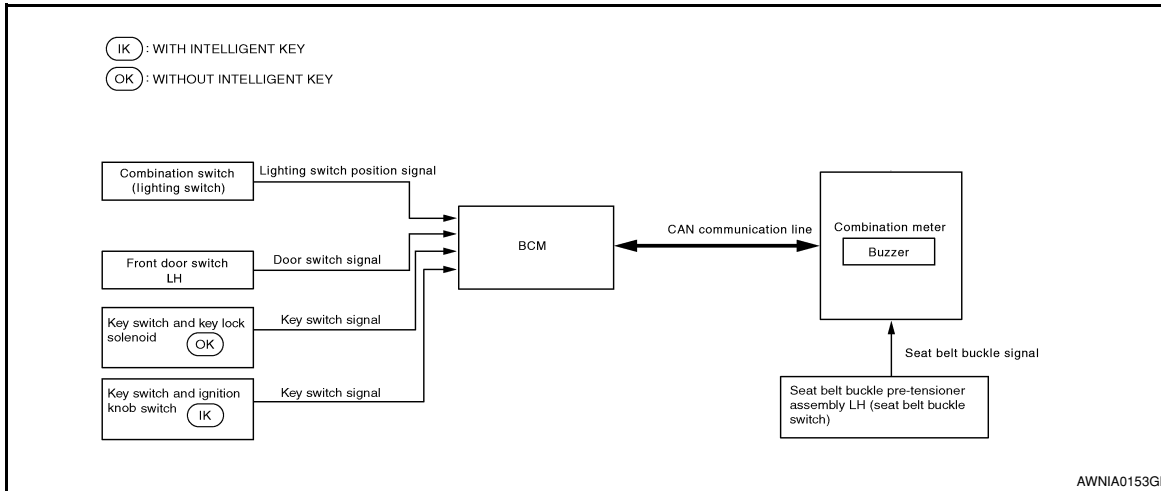
## FUNCTION DIAGNOSIS

### WARNING CHIME SYSTEM

### WARNING CHIME SYSTEM

### WARNING CHIME SYSTEM : System Diagram

INFOID:000000001316418



### WARNING CHIME SYSTEM : System Description

INFOID:000000001316419

#### COMBINATION METER

- 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 each unit.

#### BCM

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.

#### BCM warning function list

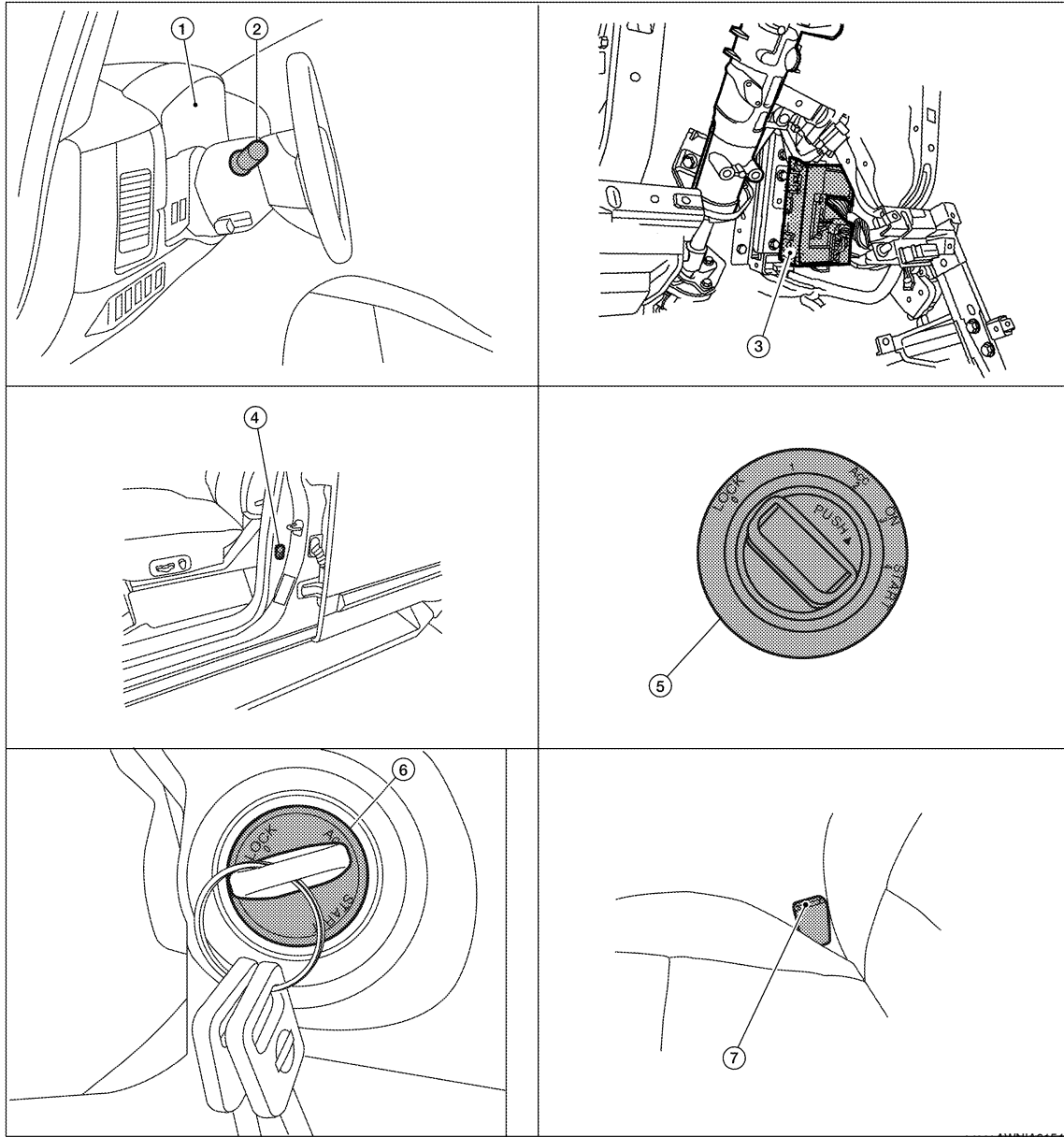
Warning functions	Signal name
Light reminder warning chime	<ul style="list-style-type: none"> <li>• Lighting switch position signal</li> <li>• Door switch signal</li> </ul>
Seat belt warning chime	Seat belt buckle switch signal
Key warning chime	<ul style="list-style-type: none"> <li>• Key switch signal</li> <li>• Door switch signal</li> </ul>

# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

## WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000001316420



AWNIA0154ZZ

- |   |   |  |
|---|---|--|
| 1. Combination meter M24  | 2. Combination switch (lighting switch) M28                       | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8  | 5. Key switch and ignition knob switch M12 (with Intelligent Key) | 6. Key switch and key lock solenoid M27 (without Intelligent Key)  |
| 7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74 |   |  |

## WARNING CHIME SYSTEM : Component Description

INFOID:000000001316421

Unit	Description
Combination meter	<ul style="list-style-type: none"> <li>• Receives the seat belt buckle switch signal from the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) and transmits it to BCM with CAN communication line.</li> <li>• Receives a buzzer output signal from BCM with CAN communication line.</li> </ul>
BCM	Transmits signals provided by various units to the combination meter with CAN communication line.

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

# WARNING CHIME SYSTEM

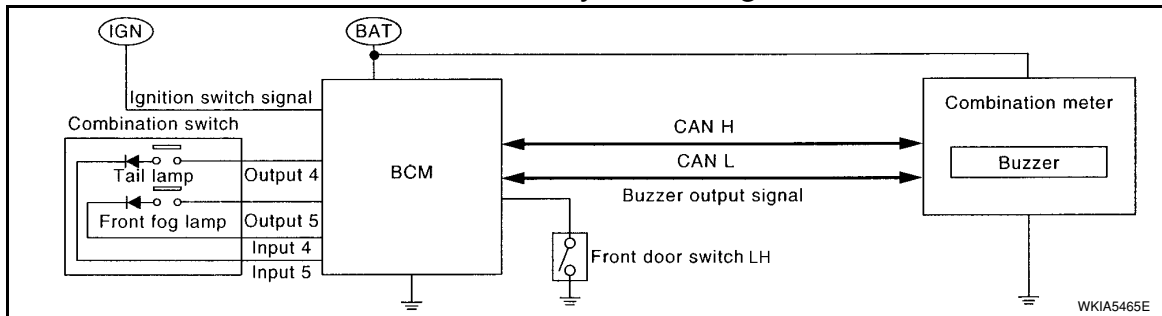
## < FUNCTION DIAGNOSIS >

Unit	Description
Key switch and ignition knob switch (with Intelligent Key)	Transmits key switch signal to BCM.
Key switch and key lock solenoid (without Intelligent Key)	Transmits key switch signal to BCM.
Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch)	Transmits a seat belt buckle switch signal to the combination meter.
Combination switch (Lighting switch)	Transmits the lighting switch position signal to BCM.
Front door switch LH	Transmits the door switch signal to BCM.

## LIGHT REMINDER WARNING CHIME

### LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000001316422



### LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000001316423

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

#### WARNING CANCEL CONDITIONS

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

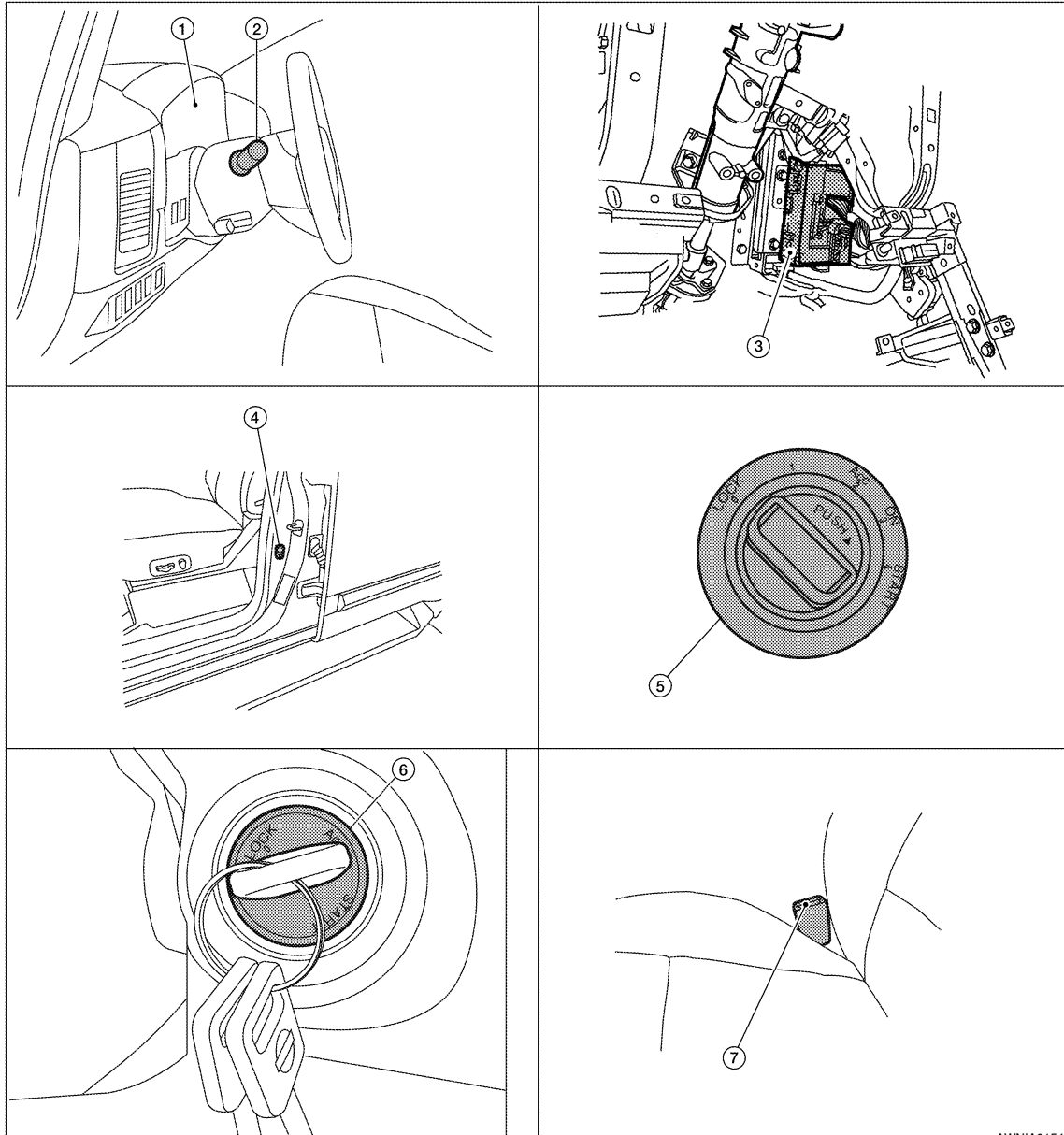
- Lighting switch OFF
- Ignition switch ON
- Front door switch LH is OFF

# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

## LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000001532030



AWNIA0154ZZ

- |   |   |  |
|---|---|--|
| 1. Combination meter M24  | 2. Combination switch (lighting switch) M28                       | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8  | 5. Key switch and ignition knob switch M12 (with Intelligent Key) | 6. Key switch and key lock solenoid M27 (without Intelligent Key)  |
| 7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74 |   |  |

## LIGHT REMINDER WARNING CHIME : Component Description

INFOID:0000000001316425

Unit	Description
Combination meter	Receives a buzzer output signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the light warning conditions from the signals provided by various switches and transmits a buzzer output signal to the combination meter via CAN communication line if necessary.
Combination switch (Lighting switch)	Transmits the lighting switch position signal to BCM.
Front door switch LH	Transmits the door switch signal to BCM.

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

M

WCS

O

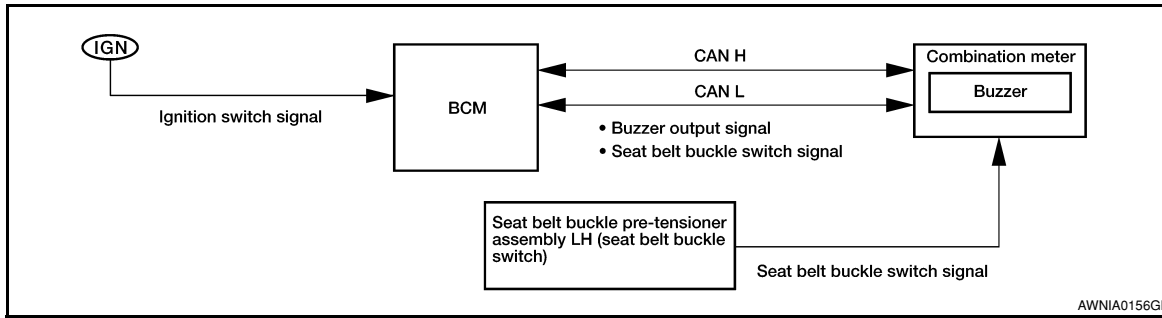
P

# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

## SEAT BELT WARNING CHIME

### SEAT BELT WARNING CHIME : System Diagram



### SEAT BELT WARNING CHIME : System Description

INFOID:000000001316427

#### 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)

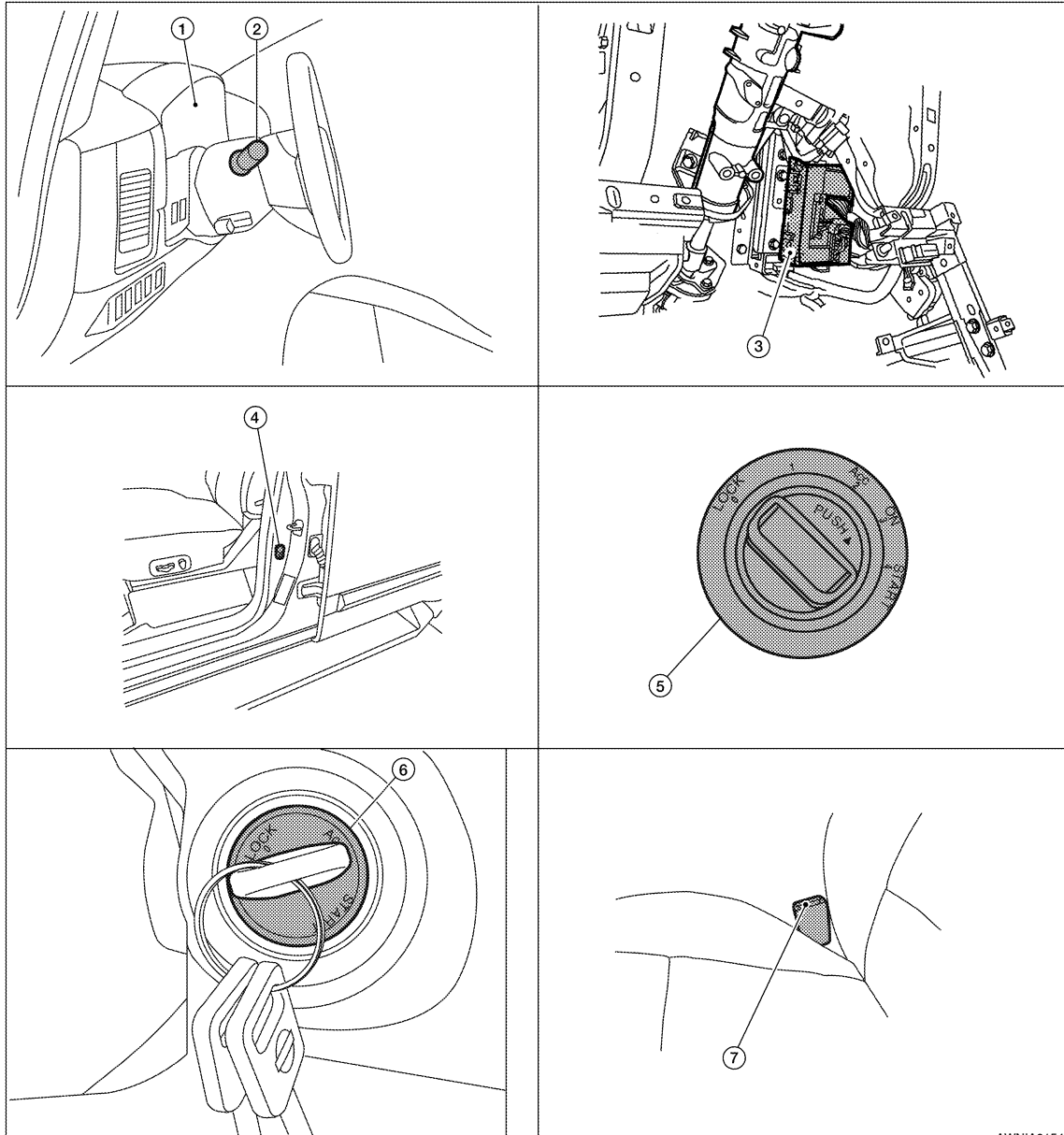


# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

## SEAT BELT WARNING CHIME : Component Parts Location

INFOID:000000001532031



AWNIA0154ZZ

- |   |   |  |
|---|---|--|
| 1. Combination meter M24  | 2. Combination switch (lighting switch) M28                       | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8  | 5. Key switch and ignition knob switch M12 (with Intelligent Key) | 6. Key switch and key lock solenoid M27 (without Intelligent Key)  |
| 7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74 |   |  |

## SEAT BELT WARNING CHIME : Component Description

INFOID:000000001316429

Unit	Description
Combination meter	<ul style="list-style-type: none"> <li>• Receives the seat belt buckle switch signal from the seat belt buckle switch and transmits it to BCM via CAN communication line.</li> <li>• Receives a buzzer output signal from BCM via CAN communication line and sounds the buzzer.</li> </ul>

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

WCS

# WARNING CHIME SYSTEM

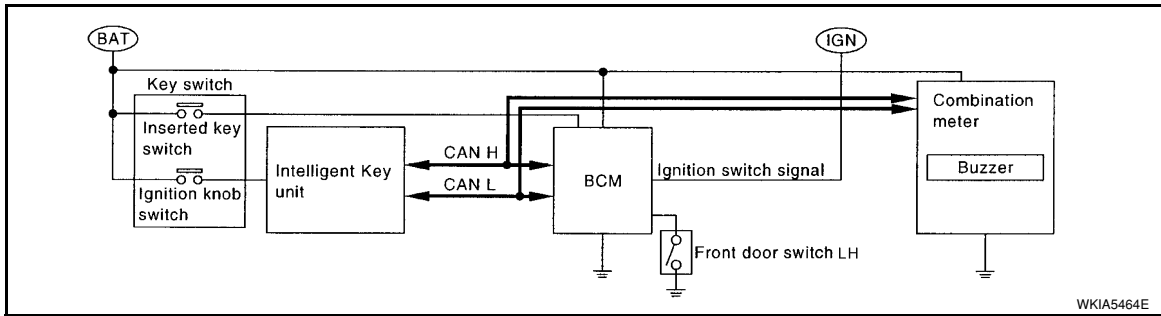
## < FUNCTION DIAGNOSIS >

Unit	Description
BCM	Judges the seat belt warning condition from the seat belt buckle switch signal received from the combination meter and transmits a buzzer output signal to the combination meter via CAN communication line if necessary.
Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch)	Transmits seat belt buckle switch signal to combination meter.

## KEY WARNING CHIME (WITH INTELLIGENT KEY)

### KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Diagram

INFOID:000000001528992



### KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Description

INFOID:000000001528993

#### WHEN MECHANICAL KEY IS USED

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

- 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 the warning chime.

#### WHEN INTELLIGENT KEY IS CARRIED WITH THE DRIVER

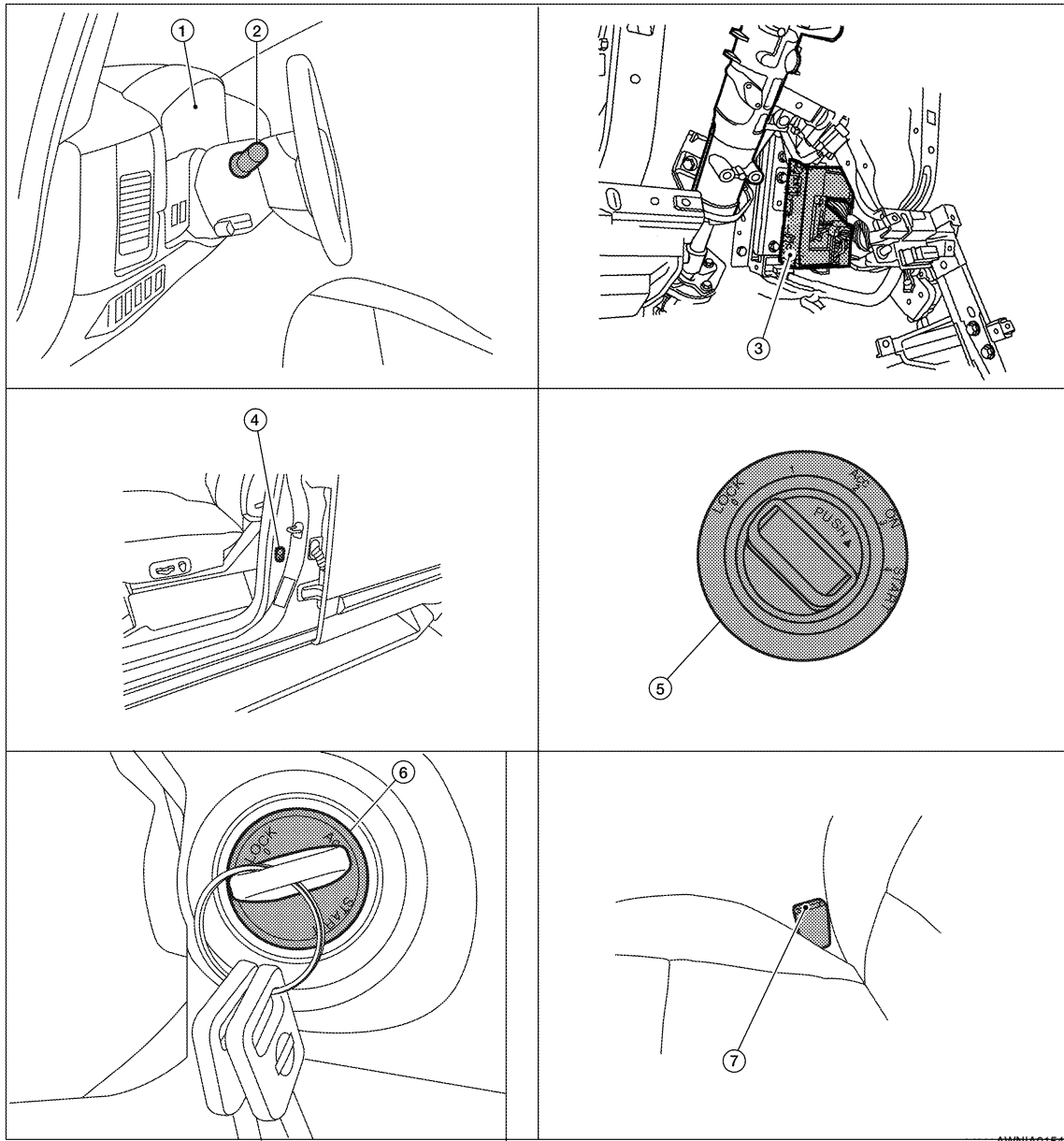
Refer to [DLK-8. "Work Flow"](#).

# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

## KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Parts Location

INFOID:000000001532062



AWNIA015ZZ

- |   |   |  |
|---|---|--|
| 1. Combination meter M24  | 2. Combination switch (lighting switch) M28                       | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8  | 5. Key switch and ignition knob switch M12 (with Intelligent Key) | 6. Key switch and key lock solenoid M27 (without Intelligent Key)  |
| 7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74 |   |  |

## KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Description

INFOID:000000001528995

Unit	Description
Combination meter	Receives key warning signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the key warning condition using the door switch signal received from the front door switch LH, and the key switch signal received from the key switch and ignition knob switch. It then transmits a buzzer output signal to the combination meter via CAN communication line if necessary.

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

WCS

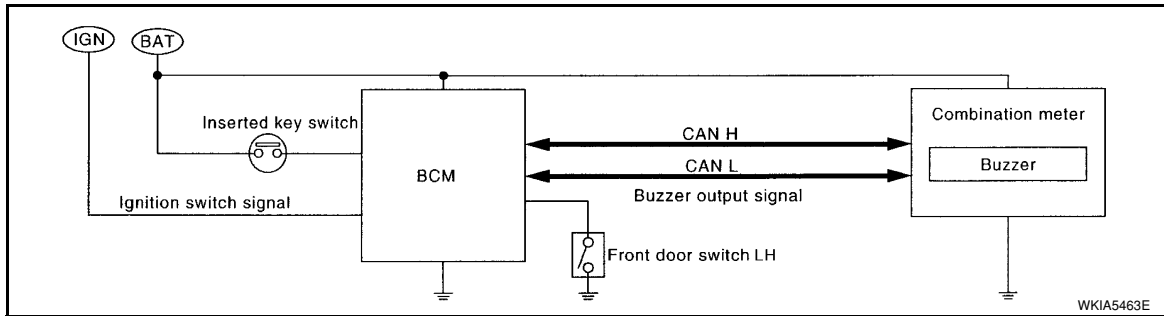
# WARNING CHIME SYSTEM

## < FUNCTION DIAGNOSIS >

Unit	Description
Front door switch LH	Transmits door switch signal to BCM.
Key switch and ignition knob switch	Transmits key switch signal to BCM.

## KEY WARNING CHIME (WITHOUT INTELLIGENT KEY)

### KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Diagram



### KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Description

INFOID:000000001528989

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.

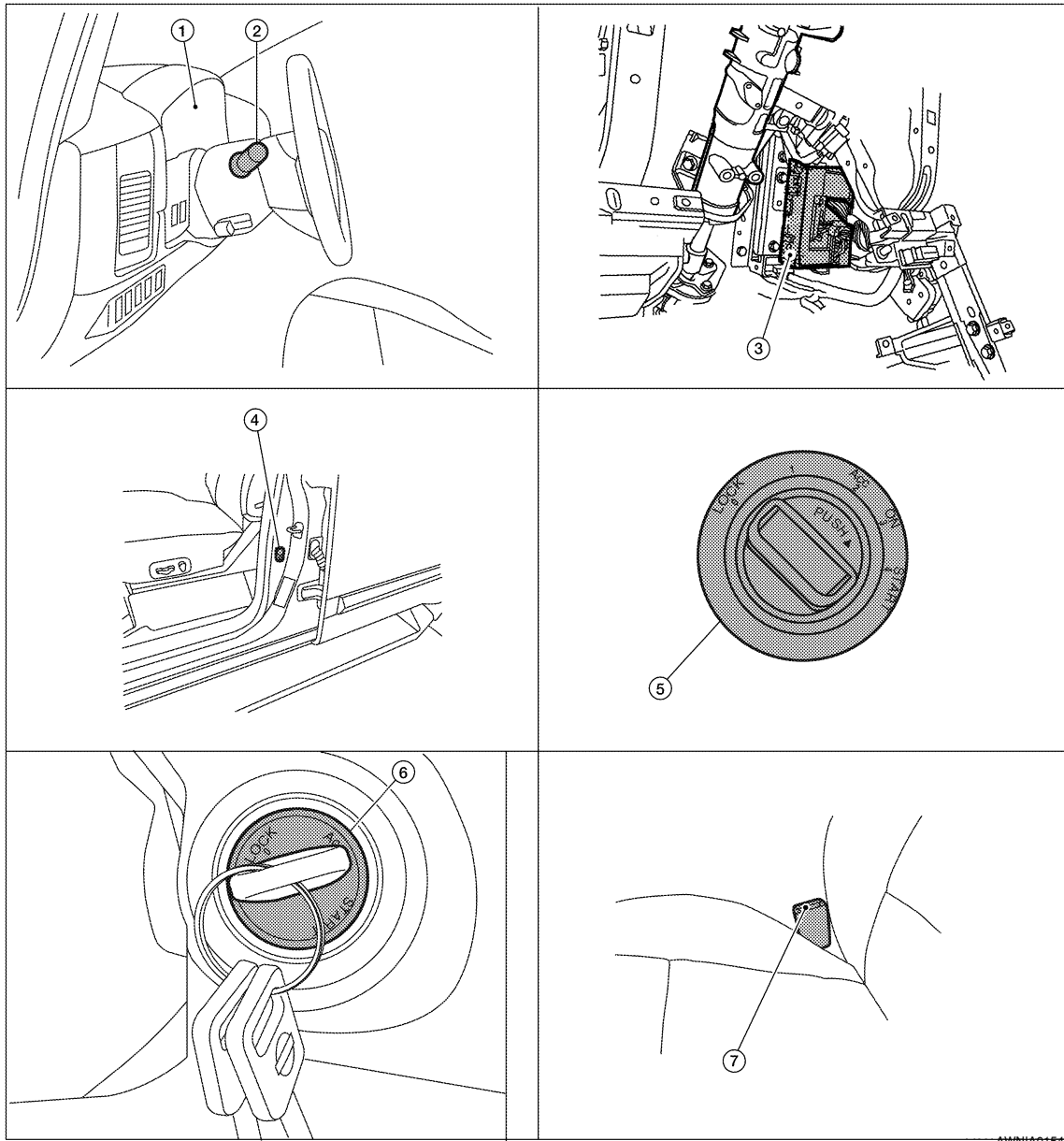
- BCM detects key inserted into the ignition switch, and sends key warning signal to combination meter with CAN communication line.
- When combination meter receives key warning signal, it sounds warning chime.

# WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

## KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Parts Location

INFOID:000000001532063



AWNIA015ZZ

- |   |   |  |
|---|---|--|
| 1. Combination meter M24  | 2. Combination switch (lighting switch) M28                       | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8  | 5. Key switch and ignition knob switch M12 (with Intelligent Key) | 6. Key switch and key lock solenoid M27 (without Intelligent Key)  |
| 7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74 |   |  |

## KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Description

INFOID:000000001528991

Unit	Description
Combination meter	Receives key warning signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the key warning condition from the door switch signal received from the front door switch LH, and the key switch signal received from the key switch and key lock solenoid. It then transmits a buzzer output signal to the combination meter via CAN communication line if necessary.

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

WCS

## WARNING CHIME SYSTEM

### < FUNCTION DIAGNOSIS >

Unit	Description
Front door switch LH	Transmits door switch signal to BCM.
Key switch and key lock solenoid	Transmits key switch signal to BCM.

# DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

## DIAGNOSIS SYSTEM (METER)

### CONSULT-III Function (METER/M&A)

INFOID:000000001532048

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

METER/M&A diagnosis mode	Description
SELF-DIAG RESULTS	Displays combination meter self-diagnosis results.
DATA MONITOR	Displays combination meter input/output data in real time.
CAN DIAG SUPPORT MNTR	The result of transmit/receive diagnosis of CAN communication can be read.

### SELF-DIAG RESULTS

Display Item List

Refer to [MWI-62, "DTC Index"](#).

### DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
SPEED METER [km/h] or [mph]	X	X	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	X	X	Displays the value of vehicle speed signal, which is transmitted to each unit with CAN communication.
TACHO METER [rpm]	X	X	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [lit.]	X	X	Displays the value, which processes a resistance signal from fuel gauge.
W TEMP METER [°C] or [°F]	X	X	Displays the value of engine coolant temperature signal, which is input from ECM.
ABS W/L [ON/OFF]		X	Displays [ON/OFF] condition of ABS warning lamp.
VDC/TCS IND [ON/OFF]		X	Displays [ON/OFF] condition of VDC OFF indicator lamp.
SLIP IND [ON/OFF]		X	Displays [ON/OFF] condition of SLIP indicator lamp.
BRAKE W/L [ON/OFF]		X	Displays [ON/OFF] condition of brake warning lamp.*
DOOR W/L [ON/OFF]		X	Displays [ON/OFF] condition of door warning lamp.
TRUNK W/L [ON/OFF]		X	Displays [ON/OFF] condition of glass hatch warning lamp.
HI-BEAM IND [ON/OFF]		X	Displays [ON/OFF] condition of high beam indicator.
TURN IND [ON/OFF]		X	Displays [ON/OFF] condition of turn indicator.
OIL W/L [ON/OFF]		X	Displays [ON/OFF] condition of oil pressure warning lamp.
C-ENG W/L [ON/OFF]		X	Displays [ON/OFF] condition of malfunction indicator lamp.
CRUISE IND [ON/OFF]		X	Displays [ON/OFF] condition of CRUISE indicator.
SET IND [ON/OFF]		X	Displays [ON/OFF] condition of SET indicator.
AT CHECK W/L [ON/OFF]		X	Displays [ON/OFF] condition of AT CHECK warning lamp.
FUEL W/L [ON/OFF]	X	X	Displays [ON/OFF] condition of low-fuel warning lamp.
AIR PRES W/L [ON/OFF]		X	Displays [ON/OFF] condition of tire pressure warning lamp.
KEY G W/L [ON/OFF]		X	Displays [ON/OFF] condition of key green warning lamp.
KEY R W/L [ON/OFF]		X	Displays [ON/OFF] condition of key red warning lamp.
KEY KNOB W/L [ON/OFF]		X	Displays [ON/OFF] condition of key knob warning lamp.
M RANGE SW [ON/OFF]	X	X	Displays [ON/OFF] condition of manual mode range switch.
NM RANGE SW [ON/OFF]	X	X	Displays [ON/OFF] condition of except for manual mode range switch.
AT SFT UP SW [ON/OFF]	X	X	Displays [ON/OFF] condition of A/T shift-up switch.

## DIAGNOSIS SYSTEM (METER)

### < FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
AT SFT DWN SW [ON/OFF]	X	X	Displays [ON/OFF] condition of A/T shift-down switch.
DISTANCE [km] or [mile]	X	X	Displays the value, which is calculated by vehicle speed signal, fuel gauge and fuel consumption from ECM.
BUZZER [ON/OFF]	X	X	Displays [ON/OFF] condition of buzzer.
BRAKE SW [ON/OFF]		X	Indicates [ON/OFF] condition of parking brake switch.
AT-M GEAR [1, 2, 3, 4, 5]	X	X	Indicates [1, 2, 3, 4, 5] condition of A/T manual mode gear position.
P RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift P range indicator.
R RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift R range indicator.
N RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift N range indicator.
D RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift D range indicator.
4 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 4 range indicator.
3 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 3 range indicator.
2 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 2 range indicator.
1 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 1 range indicator.
CRUISE W/L [ON/OFF]		X	Indicates [ON/OFF] condition of CRUISE warning lamp.
4WD LOCK SW [ON/OFF]		X	Indicates [ON/OFF] condition of 4WD lock switch.
4WD LOCK IND [ON/OFF]		X	Indicates [ON/OFF] condition of 4WD lock indicator.
SEAT BELT W/L [ON/OFF]		X	Indicates [ON/OFF] condition of seat belt warning lamp.

**NOTE:**

Some items are not available due to vehicle specification.

\*: The monitor will indicate "OFF" even though the brake warning lamp is on if either of the following conditions exist.

- The parking brake is engaged
- The brake fluid level is low



# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

## DIAGNOSIS SYSTEM (BCM)

### BUZZER

BUZZER : CONSULT-III Function (BCM - BUZZER)

INFOID:000000001316435

### CONSULT-III APPLICATION ITEMS

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

### DATA MONITOR

Display item [Unit]	Description
IGN ON SW [On/Off]	Status of ignition switch judged by BCM.
KEY ON SW [On/Off]	Status of key switch judged by BCM.
DOOR SW-DR [On/Off]	Status of front door switch LH judged by BCM.
LIGHT SW 1ST [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.
BUCKLE SW [On/Off]	Status of seat belt buckle switch judged by BCM.

### ACTIVE TEST

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

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

WCS

# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

## COMPONENT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

#### COMBINATION METER : Diagnosis Procedure

INFOID:000000001532064

#### 1. CHECK FUSES

Check for blown combination meter fuses.

Unit	Power source	Fuse No.
Combination meter	Battery	19
	Ignition switch ON or START	14
	Ignition switch ACC or ON	4

Is the inspection result normal?

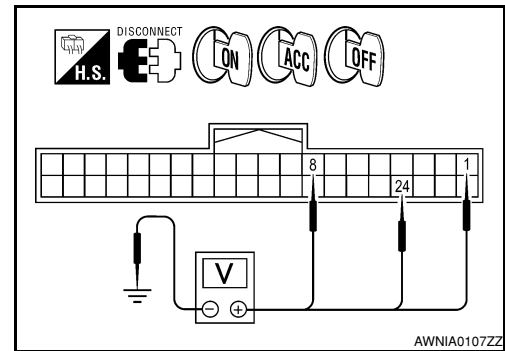
YES >> GO TO 2

NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

#### 2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect combination meter connector M24.
2. Check voltage between combination meter harness connector M24 terminals 1, 8, 24 and ground.

Terminals		(-)	Ignition switch position			
(+)	Connector		Terminal	OFF	ACC	ON
M24	Ground	1	0V	Battery voltage	Battery voltage	0V
		8	Battery voltage	Battery voltage	Battery voltage	Battery voltage
		24	0V	0V	Battery voltage	Battery voltage



Is the inspection result normal?

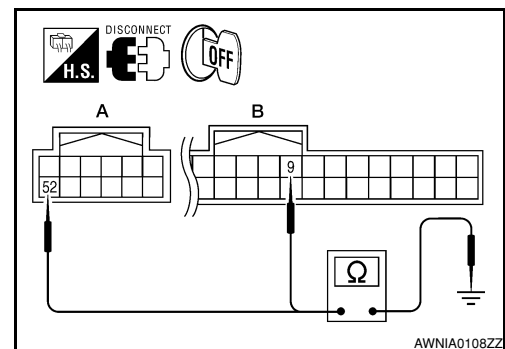
YES >> GO TO 3

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

#### 3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect combination meter connector M23.
3. Check continuity between combination meter harness connector M23 terminal 52 and ground, and connector M24 terminal 9 and ground.

Terminals		(-)	Continuity
(+)	Connector		
A: M23	52	Ground	Yes



Is the inspection result normal?

YES >> Inspection End.

NO >> Check ground harness.

#### BCM (BODY CONTROL MODULE)

# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

## BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000001546980

### 1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	J
11		10

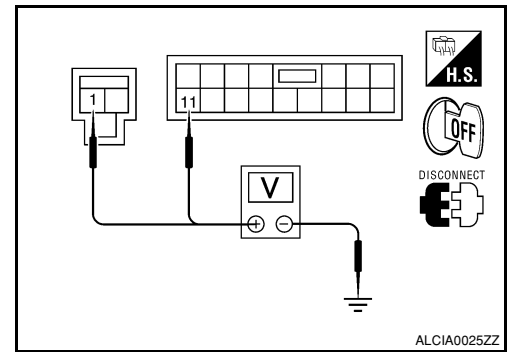
Is the fuse or fusible link blown?

- 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.
- Check voltage between BCM harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground
Connector	Terminal	
M16	1	
M17	11	
		Battery voltage



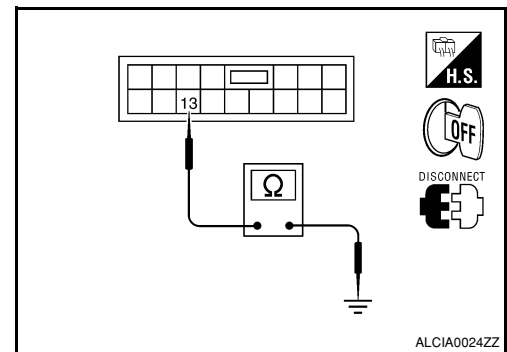
Is the measurement normal?

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

### 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		Yes
M17	13		Yes



Does continuity exist?

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

## BCM (BODY CONTROL MODULE) : Special Repair Requirement

INFOID:000000001546981

### 1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

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

# METER BUZZER CIRCUIT

< COMPONENT DIAGNOSIS >

---

## METER BUZZER CIRCUIT

### Description

INFOID:000000001316438

- The buzzer for warning chime system is installed in the combination meter.
- The combination meter sounds the alarm buzzer based on the signals transmitted from various units.

### Component Function Check

INFOID:000000001316439

#### 1.CHECK OPERATION OF METER BUZZER

---

1. Select "BUZZER" of "BCM" on CONSULT-III.
2. Perform "LIGHT WARN ALM" of "ACTIVE TEST".

#### Does meter buzzer activate?

- YES >> Inspection End.  
NO >> Replace combination meter. Refer to [MWI-104. "Removal and Installation"](#).

### Diagnosis Procedure

INFOID:000000001316440

#### 1.CHECK POWER SUPPLY OF COMBINATION METER

---

Check power supply of combination meter. Refer to [MWI-32. "COMBINATION METER : Diagnosis Procedure"](#).

#### Is the inspection result normal?

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

# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

### Description

INFOID:000000001316441

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

### Component Function Check

INFOID:000000001316442

#### 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

>> Inspection End.

### Diagnosis Procedure

INFOID:000000001316443

#### 1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector M24 terminal 27 and ground.

##### 27 - Ground

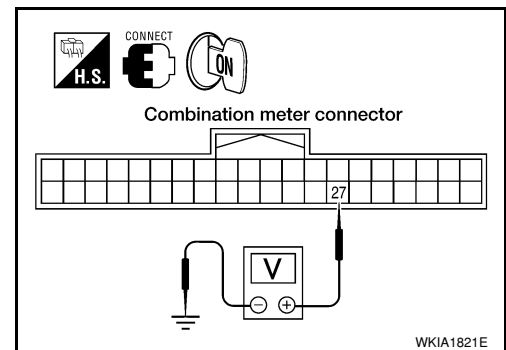
When driver seat belt is fastened : Approx. 12V

When driver seat belt is unfastened : Approx. 0V

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-104](#), "Removal and Installation".

NO >> GO TO 2



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

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) connector.
3. Check continuity between combination meter harness connector M24 (B) terminal 27 and seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) harness connector B74 (A) terminal 4.

27 - 4 : Continuity should exist.

4. Check continuity between combination meter harness connector M24 (B) terminal 27 and ground.

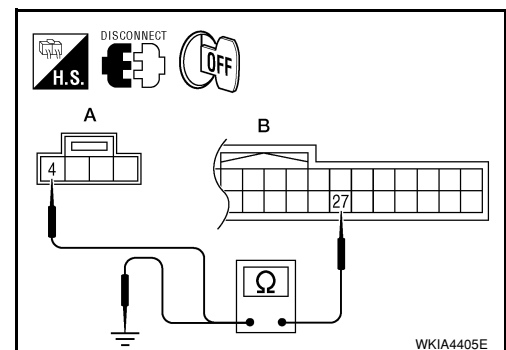
27 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

#### 3. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT



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

WCS

# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

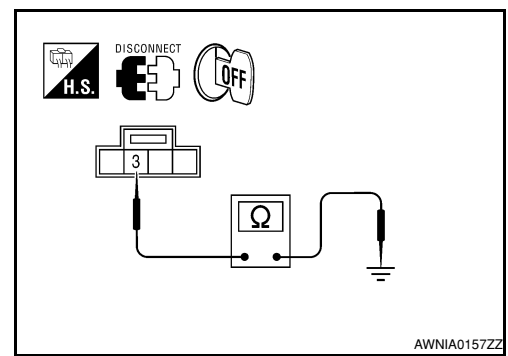
## < COMPONENT DIAGNOSIS >

Check continuity between seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) harness connector B74 terminal 3 and ground.

**3 - Ground : Continuity should exist.**

Is the inspection result normal?

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



## Component Inspection

INFOID:000000001316444

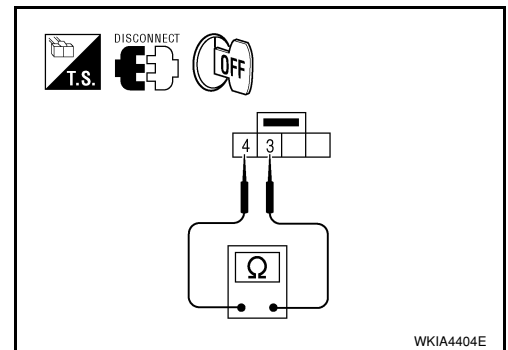
### 1. CHECK SEAT BELT BUCKLE SWITCH

1. Turn ignition switch OFF.
2. Disconnect the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) connector.
3. Check continuity between terminals 3 and 4.

**3- 4**  
**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 pre-tensioner assembly LH (seat belt buckle switch).



# KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

## KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

### Description

INFOID:000000001532065

Transmits a key switch signal to the BCM.

### Component Function Check

INFOID:000000001532066

#### 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

>> Inspection End.

### Diagnosis Procedure

INFOID:000000001532067

#### 1.CHECK FUSE

Check if the key switch and ignition knob switch 10A fuse (No. 62, located in the fuse and relay box) is blown.

Is the fuse blown?

YES >> Be sure to repair the cause of malfunction before installing new fuse.

NO >> GO TO 2

#### 2.CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

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

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 3

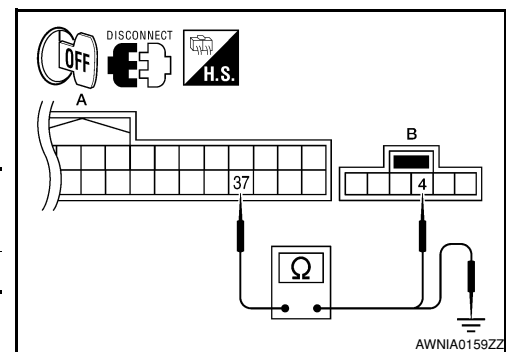
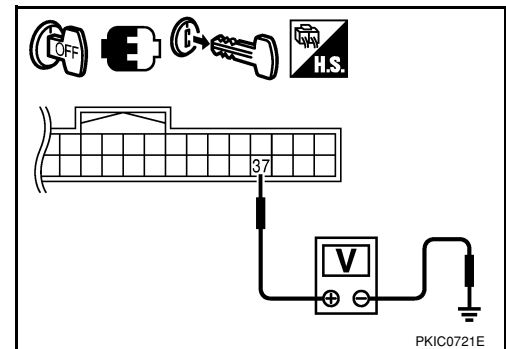
#### 3.CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM and key switch and ignition knob switch connectors.
2. Check continuity between BCM harness connector M18 (A) and key switch and ignition knob switch harness connector M12 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M12	4	Yes

3. Check continuity between BCM harness connector M18 (A) and ground.

A		Ground	Continuity
Connector	Terminal		
M18	37		No



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

WCS

O  
P

# KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

## < COMPONENT DIAGNOSIS >

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair harness or connector.

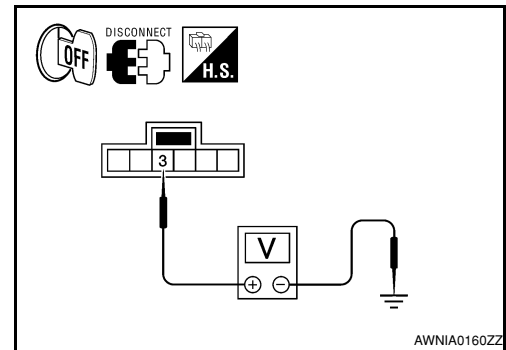
### 4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

Check voltage between key switch and ignition knob switch harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(-)	
Key switch and ignition knob switch connector	Terminal		
M12	3	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace key switch and ignition knob switch.
- NO >> Repair harness or connector.



INFOID:000000001532068

## Component Inspection

### 1. CHECK KEY SWITCH

1. Turn ignition switch OFF.
2. Disconnect key switch and ignition knob switch connector.
3. Check continuity between key switch and ignition knob switch terminals 3 and 4.

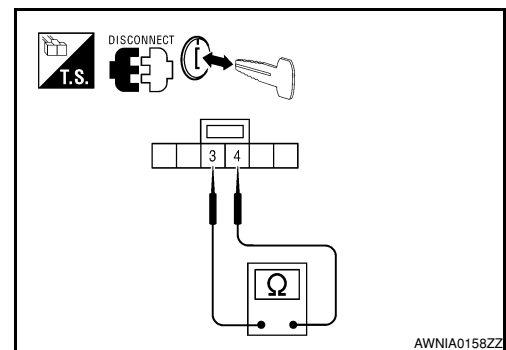
**3 – 4**

**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 and ignition knob switch.





# KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

## KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

### Description

INFOID:000000001532080

Transmits a key switch signal to the BCM.

### Component Function Check

INFOID:000000001532081

#### 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

>> Inspection End.

### Diagnosis Procedure

INFOID:000000001532082

#### 1. CHECK FUSE

Check if the key switch and key lock solenoid 10A fuse [No. 19, located in the fuse block (J/B)] is blown.

Is the fuse blown?

YES >> Be sure to repair the cause of malfunction before installing new fuse.

NO >> GO TO 2

#### 2. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

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

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 3

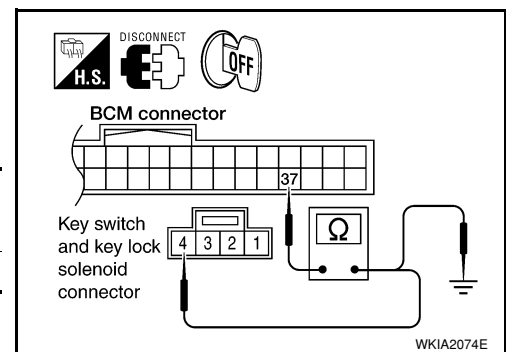
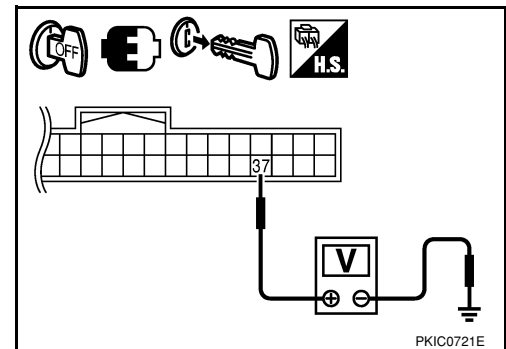
#### 3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM and key switch and key lock solenoid connectors.
2. Check continuity between BCM harness connector M18 (A) and key switch and key lock solenoid harness connector M27 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M27	4	Yes

3. Check continuity between BCM harness connector M18 (A) and ground.

A		Ground	Continuity
Connector	Terminal		
M18	37		No



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

WCS

# KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

## < COMPONENT DIAGNOSIS >

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair harness or connector.

### 4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

Check voltage between key switch and key lock solenoid harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
Key switch and key lock solenoid	Terminal	
M27	3	Ground
		Battery voltage

Is the inspection result normal?

- YES >> Replace key switch and key lock solenoid.
- NO >> Repair harness or connector.

## Component Inspection

INFOID:000000001532083

### 1. CHECK KEY SWITCH

1. Turn ignition switch OFF.
2. Disconnect key switch and key lock solenoid connector.
3. Check continuity between key switch and key lock solenoid terminals 3 and 4.

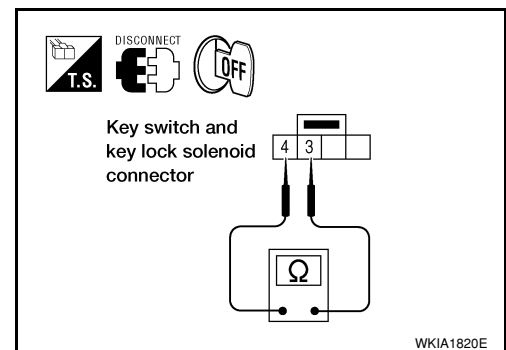
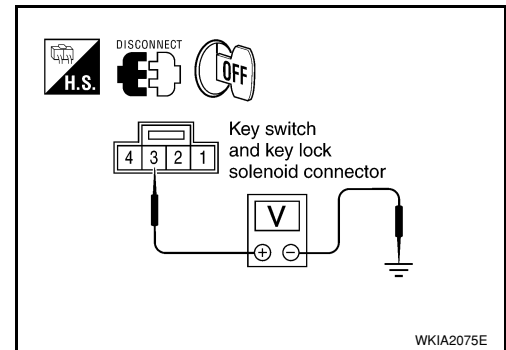
**3 – 4**

**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 and key lock solenoid.



# WARNING CHIME SYSTEM

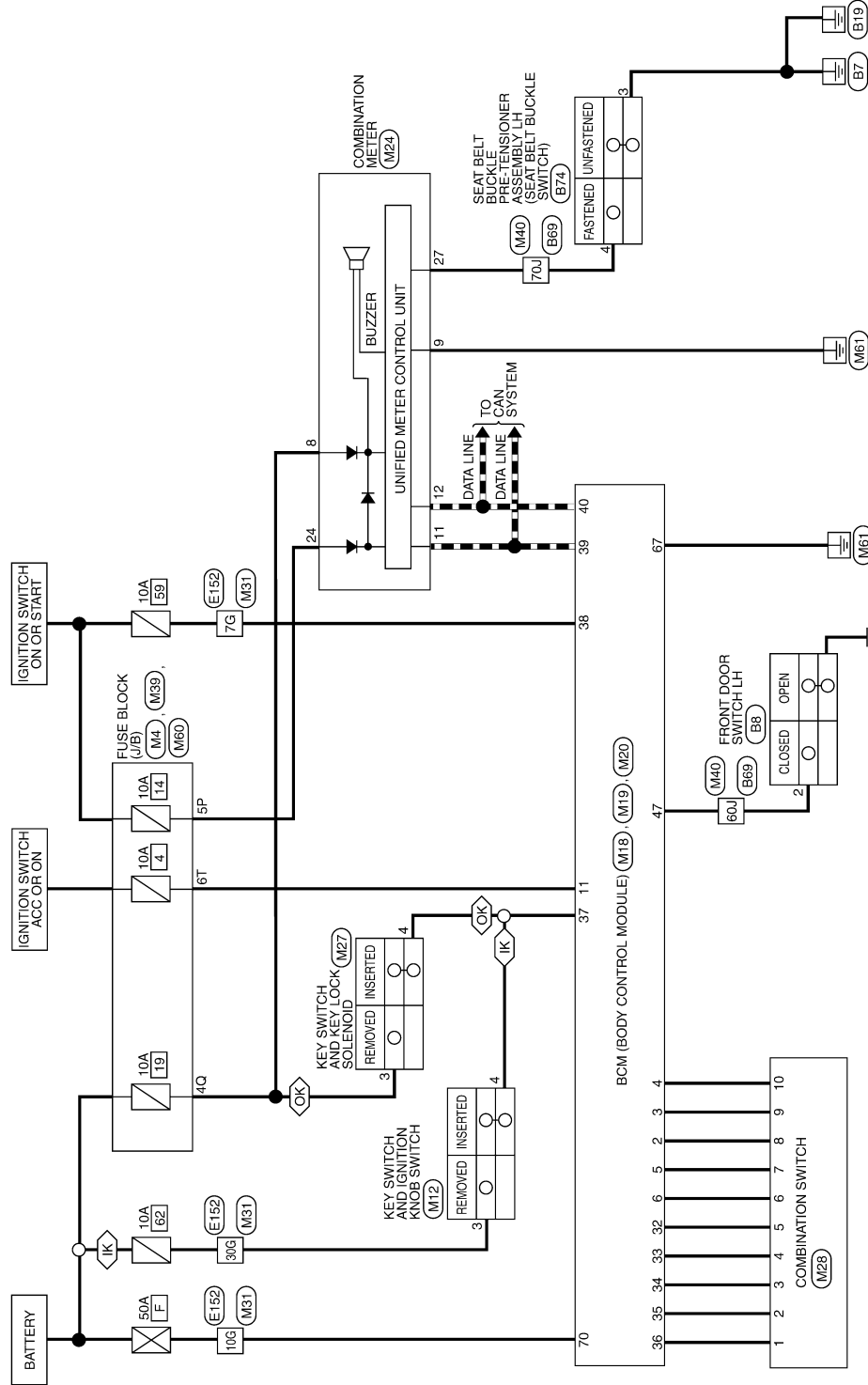
< COMPONENT DIAGNOSIS >

## WARNING CHIME SYSTEM

### Wiring Diagram

INFOID:000000001316544

○K : WITHOUT KEY  
 ○IK : WITH KEY  
 - - - : DATA LINE



WARNING CHIME

ALNWA0100GE

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

# WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

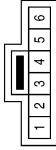
## WARNING CHIME CONNECTORS

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



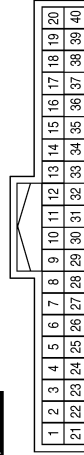
Terminal No.	Color of Wire	Signal Name
5P	O/L	-

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



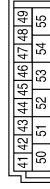
Terminal No.	Color of Wire	Signal Name
3	Y	-
4	B/R	-

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



Terminal No.	Color of Wire	Signal Name
2	SB	INPUT-5
3	G/Y	INPUT-4
4	Y	INPUT-3
5	G/B	INPUT-2
6	V	INPUT-1
11	O	ACC SW
32	R/G	OUTPUT-5
33	R/Y	OUTPUT-4
34	L	OUTPUT-3
35	O/B	OUTPUT-2
36	R/W	OUTPUT-1
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



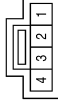
Terminal No.	Color of Wire	Signal Name
47	SB	DOOR SW (DR)

ALNIA0651GB

# WARNING CHIME SYSTEM

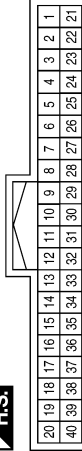
## < COMPONENT DIAGNOSIS >

Connector No.	M27
Connector Name	KEY SWITCH AND KEY LOCK SOLENOID
Connector Color	WHITE



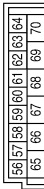
Terminal No.	Color of Wire	Signal Name
3	Y/R	-
4	B/R	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	Y/R	-
9	B	-
11	L	CAN-H
12	P	CAN-L
24	O/L	-
27	O/B	BELT_IND

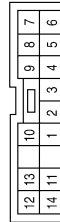
Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (FL)

Terminal No.	Color of Wire	Signal Name
1	R/W	-
2	O/B	-
3	L	-
4	R/L	-
5	R/G	-
6	V	-
7	G/B	-
8	SB	-
9	G/Y	-
10	Y	-

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

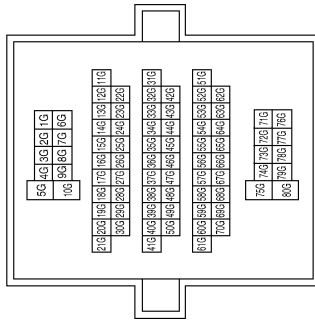
WCS

ALNIA0652GB

# WARNING CHIME SYSTEM

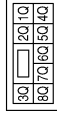
## < COMPONENT DIAGNOSIS >

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



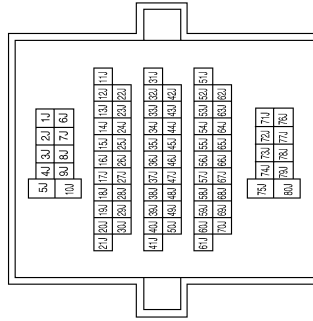
Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
30G	Y	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

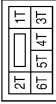


Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6T	O	-

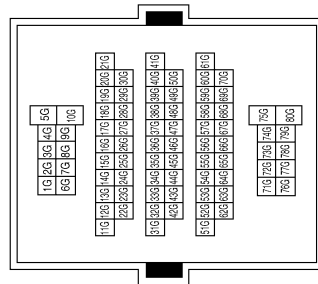
Terminal No.	Color of Wire	Signal Name
60J	SB	-
70J	O/B	-

ALNIA0653GB

# WARNING CHIME SYSTEM

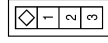
## < COMPONENT DIAGNOSIS >

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



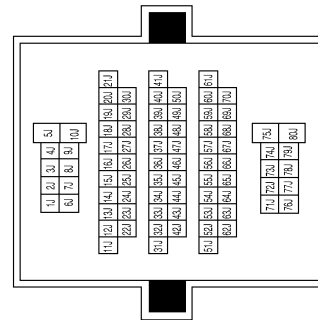
Terminal No.	Color of Wire	Signal Name
7G	L/W	-
10G	W/B	-
30G	Y	-

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



Terminal No.	Color of Wire	Signal Name
2	SB	-

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
60J	SB	-
70J	O/B	-

Connector No.	B74
Connector Name	SEAT BELT BUCKLE PRE-TENSIONER ASSEMBLY LH (SEAT BELT BUCKLE SWITCH)
Connector Color	YELLOW



Terminal No.	Color of Wire	Signal Name
3	BR/Y	-
4	R/Y	-

ALNIA0654GB

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

# COMBINATION METER

< ECU DIAGNOSIS >

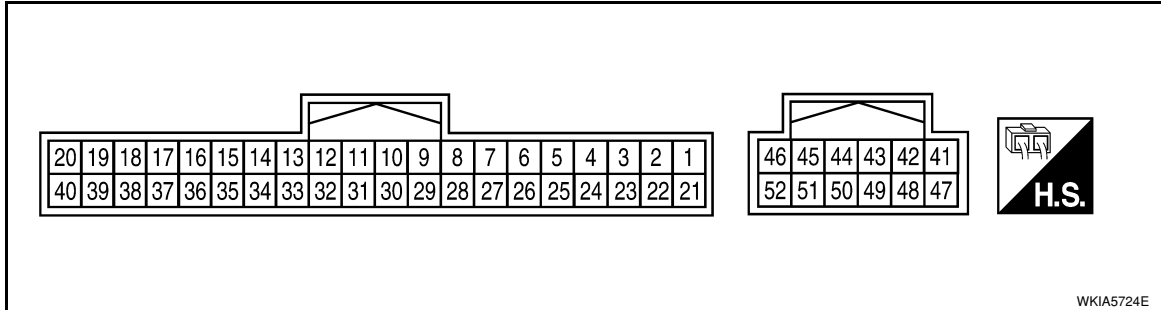
## ECU DIAGNOSIS

### COMBINATION METER

Reference Value

INFOID:000000001532085

#### TERMINAL LAYOUT



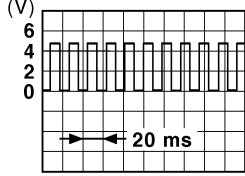
#### PHYSICAL VALUES

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
1	O	Ignition switch ACC or ON	—	—	Battery voltage
2	P	Air bag warning lamp input	ON	Air bag warning lamp ON	4
				Air bag warning lamp OFF	0
3	BR	CK SUSP warning lamp input	—	CK SUSP warning lamp ON	0
				CK SUSP warning lamp OFF	Battery voltage
8	Y/R	Battery power supply	—	—	Battery voltage
9	B	Ground	—	—	0
11	L	CAN-H	—	—	—
12	P	CAN-L	—	—	—
15	Y/L	Fuel level sensor signal	—	—	Refer to <a href="#">MWI-12, "FUEL GAUGE : System Description"</a> .
16	B/P	Fuel level sensor ground	ON	—	0
17	R/G	Stop lamp switch	—	Brake pedal depressed	Battery voltage
				Brake pedal released	0
18	P/B	Brake fluid level switch	ON	Brake fluid level low	0
				Brake fluid level normal	Battery voltage
23	G	Parking brake switch	ON	Parking brake applied	0
				Parking brake released	Battery voltage
24	O/L	Ignition switch ON or START	ON	—	Battery voltage
27	O/B	Seat belt buckle switch LH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
28	G/O	Security indicator input	OFF	Security indicator ON	0
				Security indicator OFF	Battery voltage



# COMBINATION METER

## < ECU DIAGNOSIS >

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
29	W/R	Vehicle speed signal output (8-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	<b>NOTE:</b> Maximum voltage may be 12V due to specifications (connected units).  <small>PKIC0643E</small>
				Washer fluid level low	
37	W/L	Washer fluid level switch	ON	Washer fluid level normal	Battery voltage
				Unfastened (ON)	0
41	P/L	Seat belt buckle switch RH	ON	Fastened (OFF)	Battery voltage
				Generator voltage low	0
45	BR/W	Generator	ON	Generator voltage normal	Battery voltage
				Illumination output	—
50	BR		—	—	
52	B	Ground	—	—	0

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

WCS

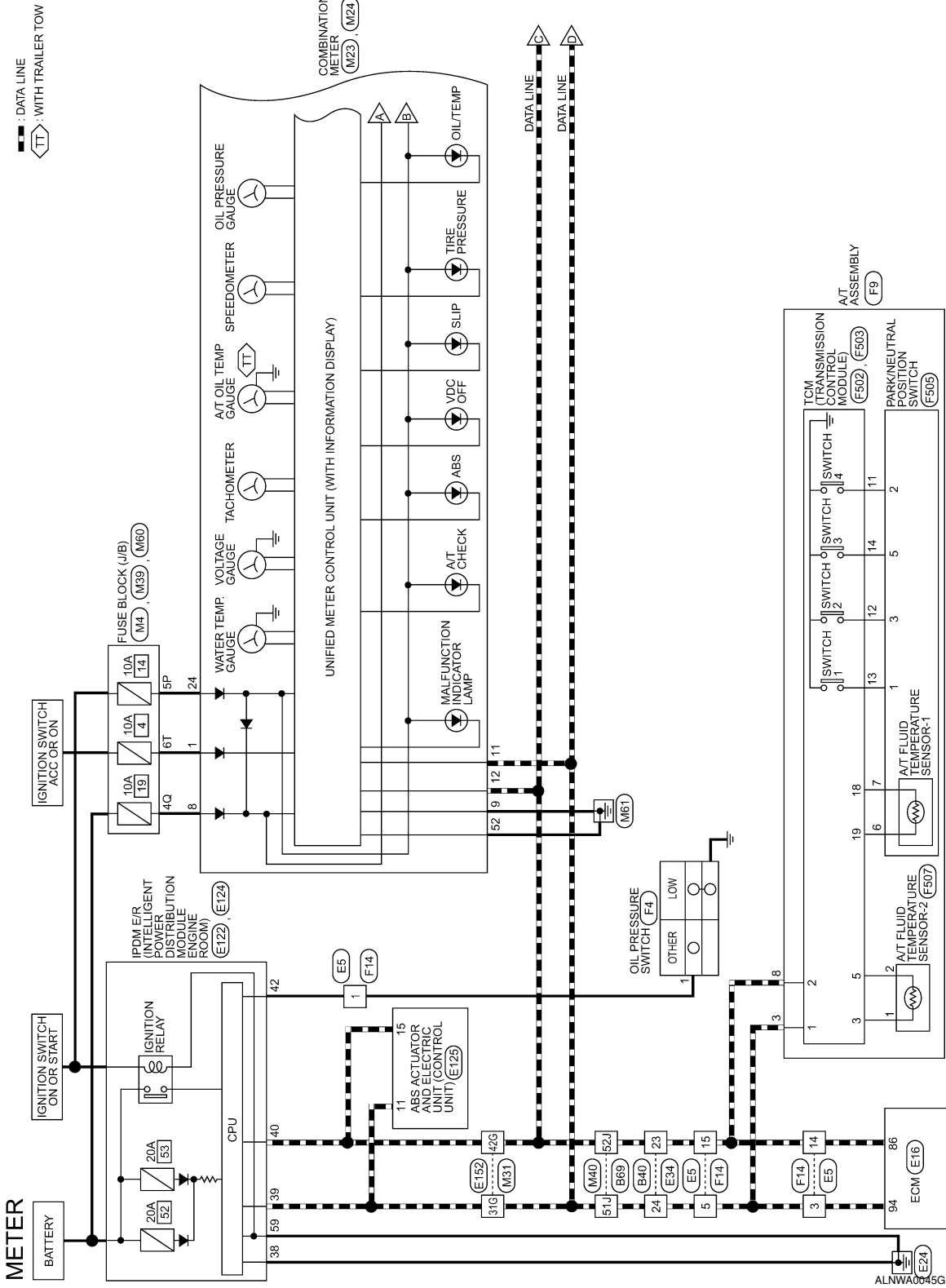
O  
P

# COMBINATION METER

< ECU DIAGNOSIS >

## Wiring Diagram

INFOID:000000001532086

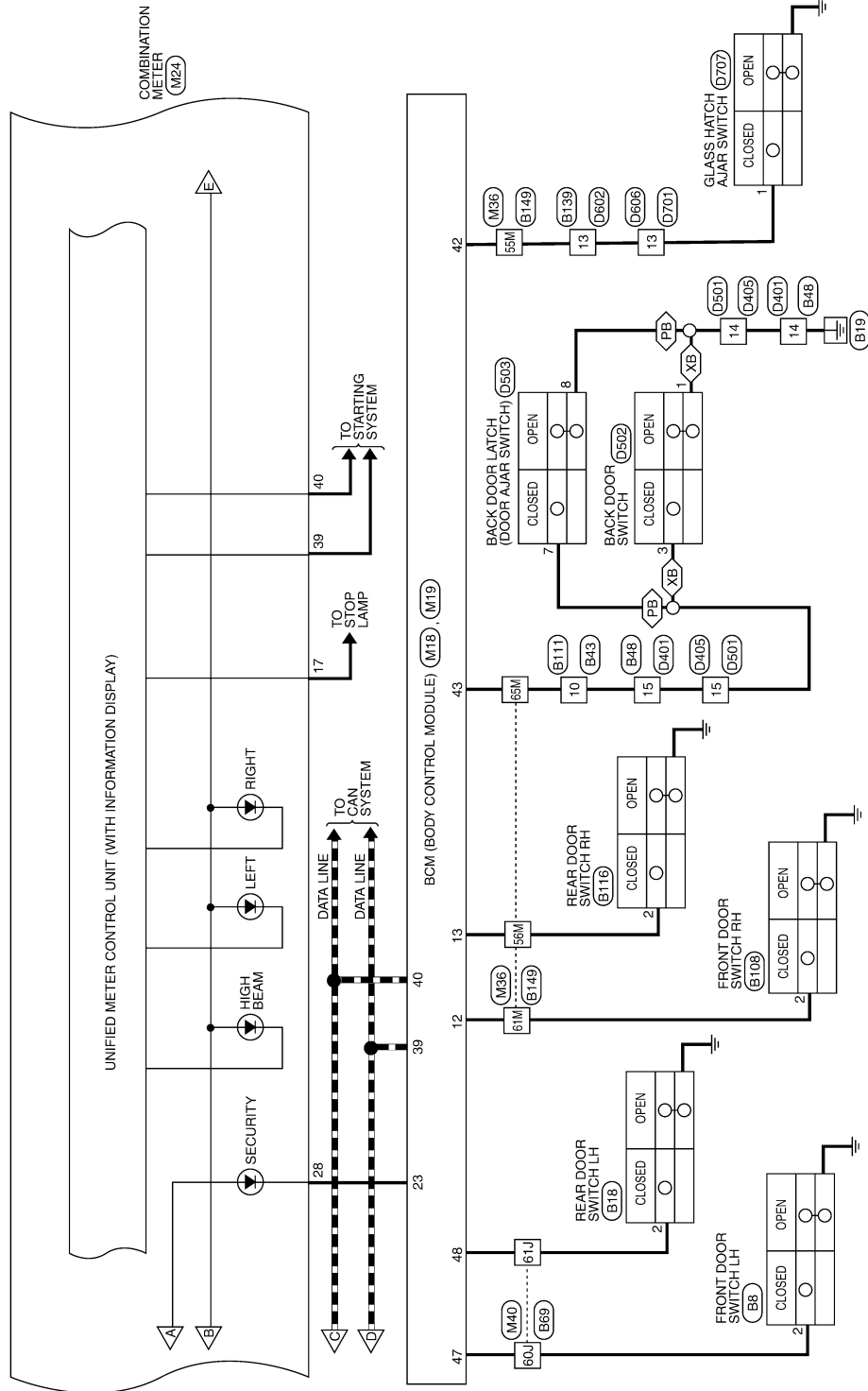


ALNWA0045GE

# COMBINATION METER

< ECU DIAGNOSIS >

◁PB▷ : WITH POWER BACK DOOR  
 ◁XB▷ : WITHOUT POWER BACK DOOR  
 - - - : DATA LINE



ALNWA0046GE

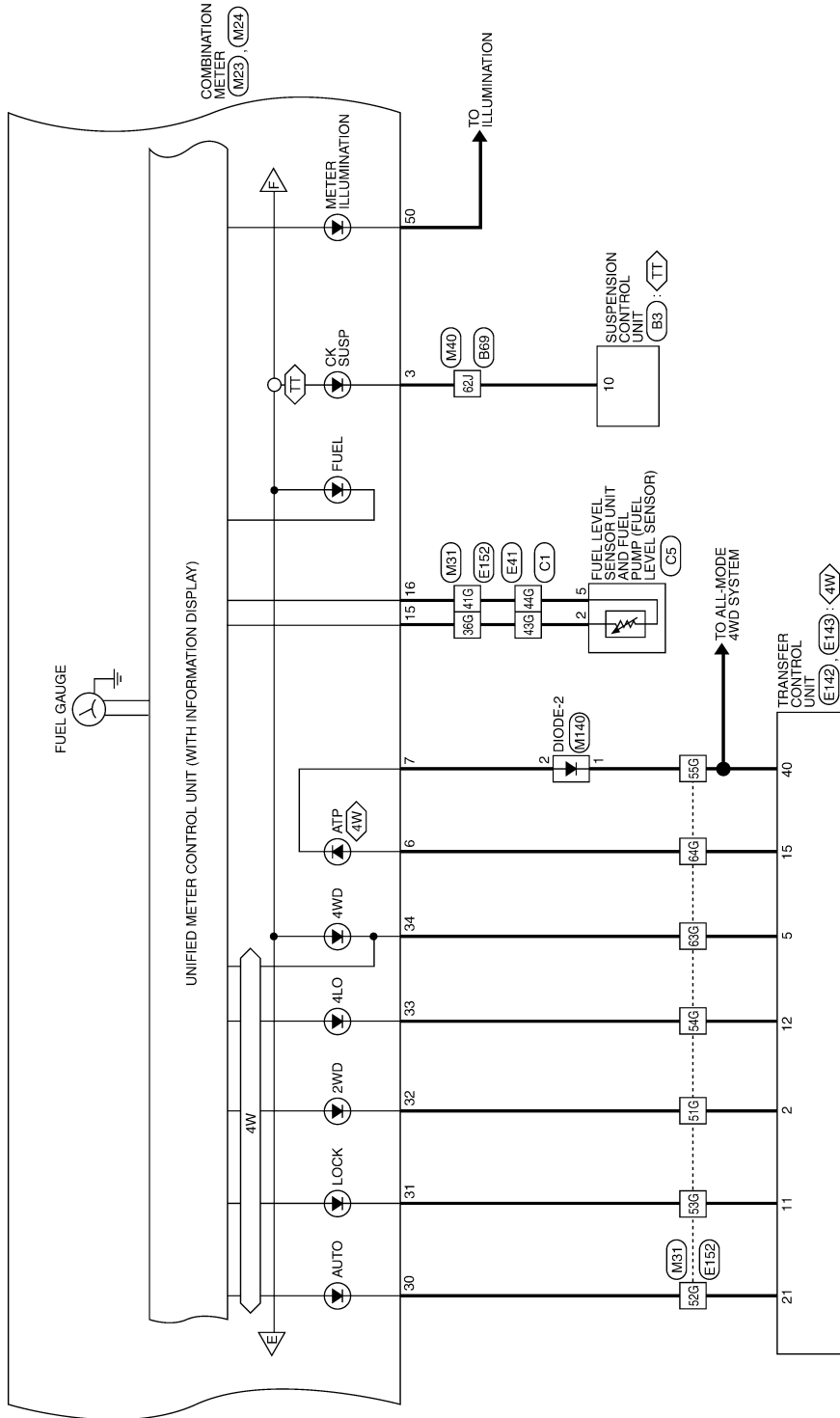
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

WCS

# COMBINATION METER

< ECU DIAGNOSIS >

4W : WITH 4-WHEEL DRIVE  
TT : WITH TRAILER TOW

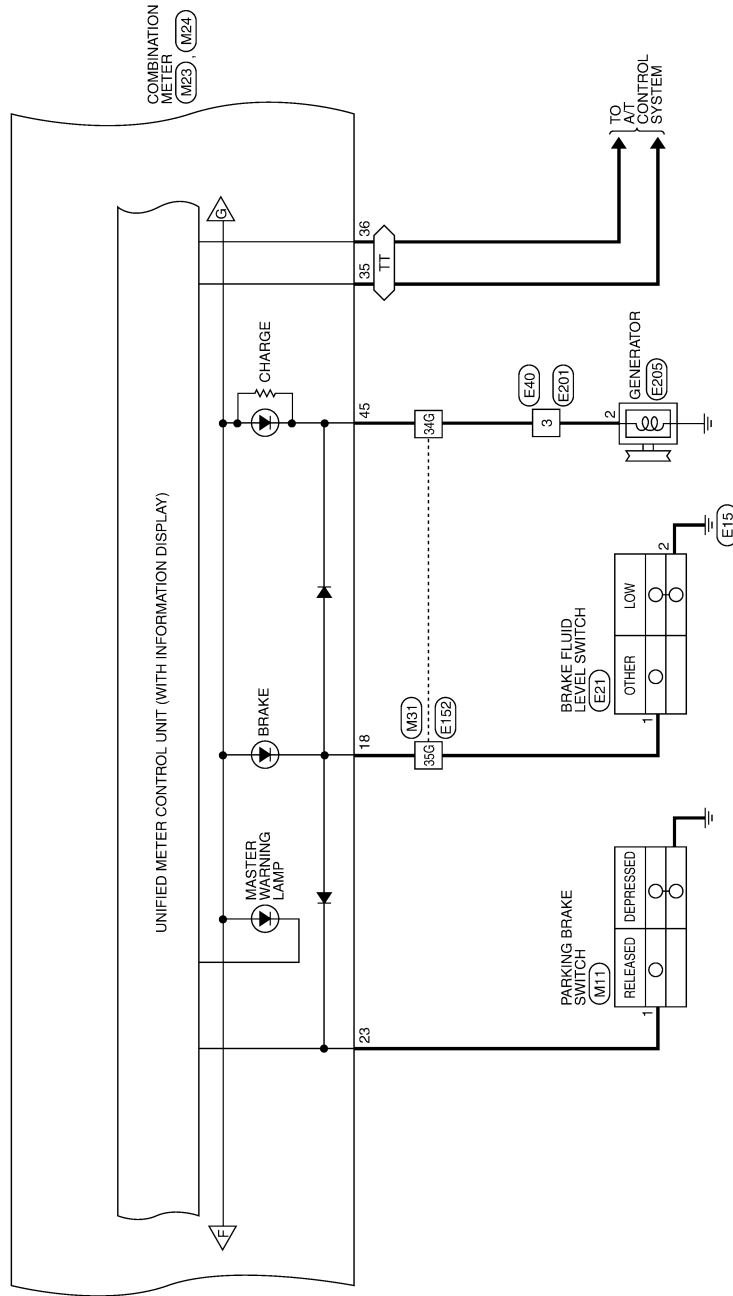


ALNWA0047GE

# COMBINATION METER

< ECU DIAGNOSIS >

TT: WITH TRAILER TOW



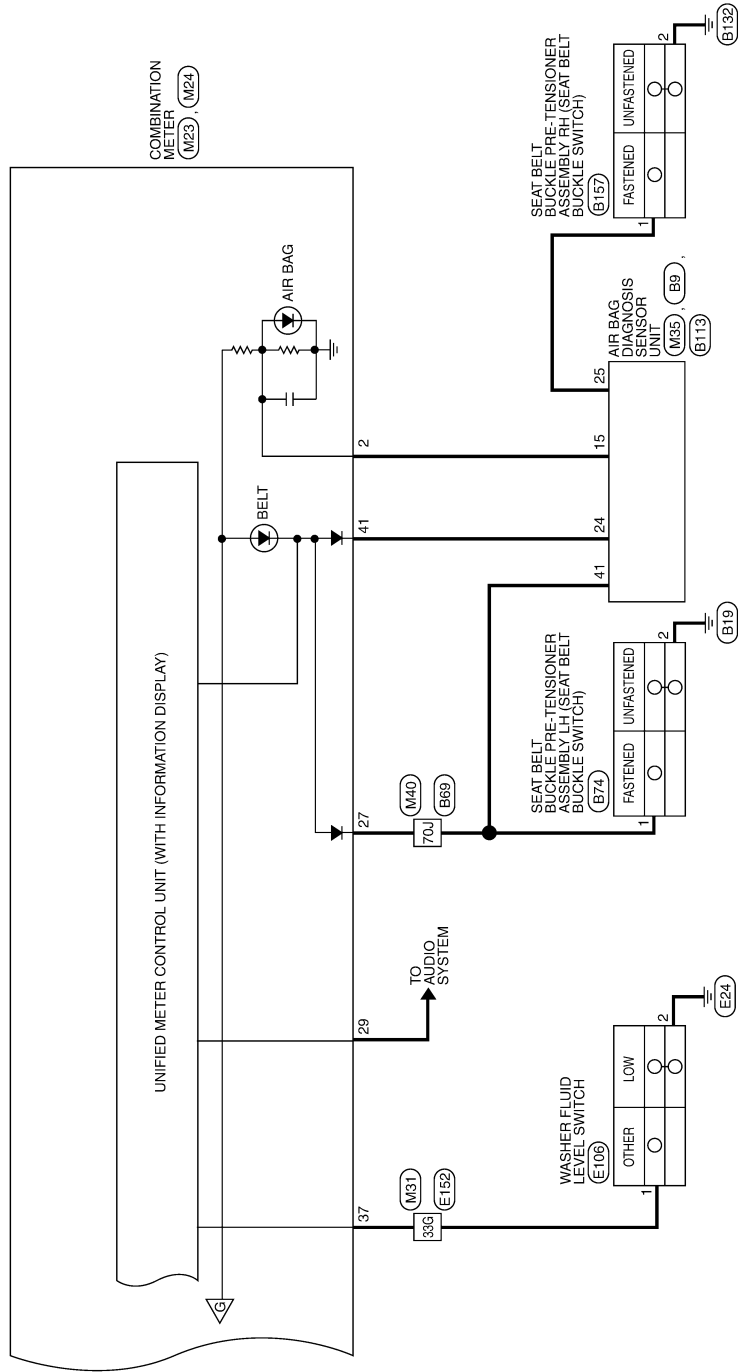
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
O  
P

WCS

ALNWA0043GE

# COMBINATION METER

< ECU DIAGNOSIS >



ALNWA0044GE

# COMBINATION METER

< ECU DIAGNOSIS >

## METER CONNECTORS

Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



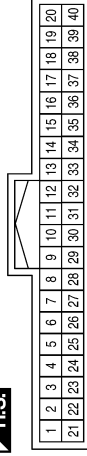
Terminal No.	Color of Wire	Signal Name
5P	O/L	-

Connector No.	M11
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



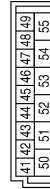
Terminal No.	Color of Wire	Signal Name
1	G	-

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



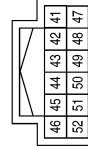
Terminal No.	Color of Wire	Signal Name
12	R/L	DOOR_SW_AS
13	GR	DOOR_SW_RR
23	G/O	SECURITY_INDI_OUTPUT
39	L	CAN-H
40	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
42	GR	GLASS_HATCH_AJAR
43	RB	BACK_DOOR_SW
47	SB	DOOR_SW_DR
48	R/Y	DOOR_SW_RL

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



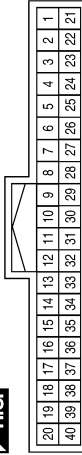
Terminal No.	Color of Wire	Signal Name
41	P/L	BELT_IND
45	BRW	-
50	BR	-
52	B	-

ALNIA0426GB

# COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

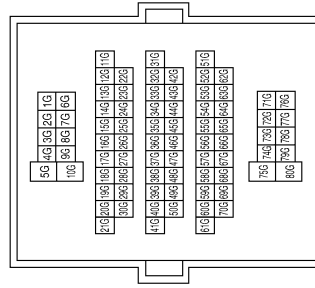


Terminal No.	Color of Wire	Signal Name
1	O	-
2	P	AIR_BAG_IND
3	BR	-
6	L/B	ATP+
7	R/B	ATP-
8	Y/R	-
9	B	-

Terminal No.	Color of Wire	Signal Name
11	L	CAN-H
12	P	CAN-L
15	Y/L	FUEL_SEN
16	B/P	-
17	R/G	-
18	P/B	-
23	G	-
24	O/L	-
27	O/B	BELT_IND
28	G/O	SECURITY_IND
29	W/R	SPEED_8P

Terminal No.	Color of Wire	Signal Name
30	BR	AUTO
31	L	LOCK/4H
32	B/W	2WD
33	W/G	4LD
34	W/B	4WD
35	LG/R	TOW_SW_STATUS
36	Y/V	TOW_IND
37	W/L	WASH_IND
39	B/R	-
40	GR/R	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
31G	L	-
33G	W/L	-
34G	BR/W	-
35G	P/B	-
36G	Y/L	-
41G	B/P	-
42G	P	-
51G	B/W	-
52G	BR	-
53G	L	-
54G	W/G	-
55G	L/Y	-

Terminal No.	Color of Wire	Signal Name
63G	W/B	-
64G	L/B	-

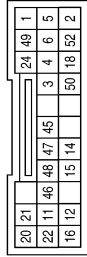
ALNIA0427GB



# COMBINATION METER

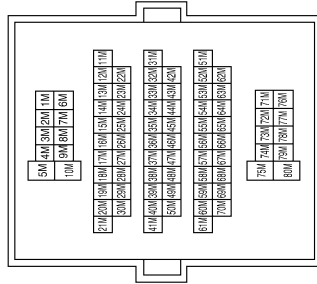
< ECU DIAGNOSIS >

Connector No.	M35
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color	YELLOW



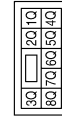
Terminal No.	Color of Wire	Signal Name
15	P	WARN-LAMP
24	P/L	SEAT BELT-MINDER

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



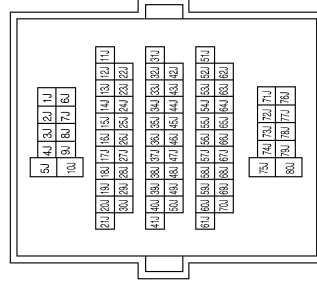
Terminal No.	Color of Wire	Signal Name
55M	GR	-
56M	GR	-
61M	R/L	-
65M	R/B	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
51J	L	-
52J	P	-
60J	SB	-
61J	R/Y	-
62J	B/R	-
70J	O/B	-

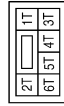
ALNIA0428GB

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

# COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



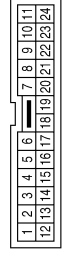
Terminal No.	Color of Wire	Signal Name
6T	O	-

Connector No.	M140
Connector Name	DIODE-2
Connector Color	BLACK



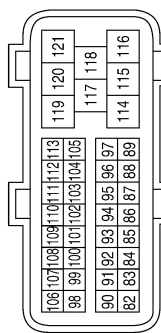
Terminal No.	Color of Wire	Signal Name
1	L/Y	-
2	R/B	-

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G/R	-
3	L	-
5	L	-
14	P	-
15	P	-

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK



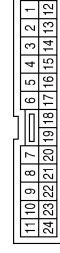
Terminal No.	Color of Wire	Signal Name
86	P	CAN-L
94	L	CAN-H

Connector No.	E21
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	P/B	-
2	B	-

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
23	P	-
24	L	-

ALNIA0429GB

# COMBINATION METER

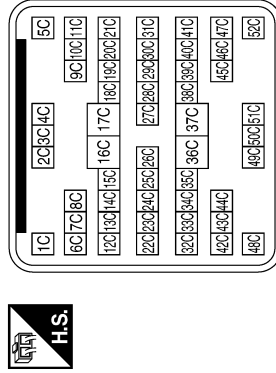
< ECU DIAGNOSIS >

Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
3	BR/W	-

Connector No.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY



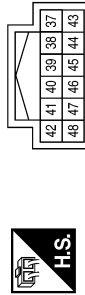
Terminal No.	Color of Wire	Signal Name
43C	Y/L	-
44C	B/P	-

Connector No.	E106
Connector Name	WASHER FLUID LEVEL SWITCH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	W/L	-
2	B	-

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



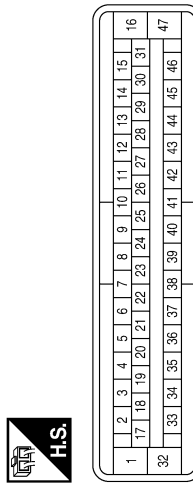
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIG)
39	L	CAN-H
40	P	CAN-L
42	GR	OIL_PRES_SW

Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
59	B	GND (PWR)

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
11	L	CAN-H
15	P	CAN-L

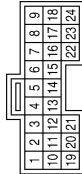
ALNIA0430GB

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

# COMBINATION METER

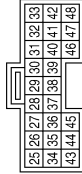
< ECU DIAGNOSIS >

Connector No.	E142
Connector Name	TRANSFER CONTROL UNIT
Connector Color	WHITE



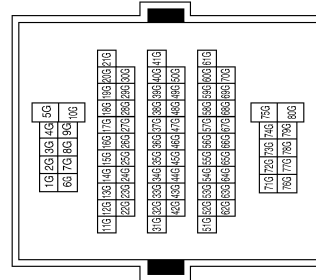
Terminal No.	Color of Wire	Signal Name
2	B/W	2WD IND
5	W/B	4WD FAIL IND
11	L	LOCK IND
12	W/G	4LO IND
15	L/B	ATP-IND
21	BR	AUTO IND

Connector No.	E143
Connector Name	TRANSFER CONTROL UNIT
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
40	L	ATP SW

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
31G	L	-
33G	W/L	-
34G	BR/W	-
35G	P/B	-
36G	Y/L	-
41G	B/P	-
42G	P	-
51G	B/W	-
52G	BR	-
53G	L	-
54G	W/G	-
55G	L/Y	-

Terminal No.	Color of Wire	Signal Name
63G	W/B	-
64G	L/B	-

ALNIA0431GB

# COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	3	Color of Wire	BR/W	Signal Name	-
--------------	---	---------------	------	-------------	---

Connector No.	E205
Connector Name	GENERATOR
Connector Color	BLACK



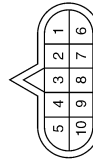
Terminal No.	2	Color of Wire	BR/W	Signal Name	-
--------------	---	---------------	------	-------------	---

Connector No.	F4
Connector Name	OIL PRESSURE SWITCH
Connector Color	GRAY



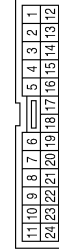
Terminal No.	1	Color of Wire	GR	Signal Name	-
--------------	---	---------------	----	-------------	---

Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN



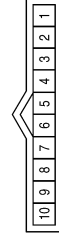
Terminal No.	3	Color of Wire	L	Signal Name	CAN-H
Terminal No.	8	Color of Wire	P	Signal Name	CAN-L

Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	1	Color of Wire	GR	Signal Name	-
Terminal No.	3	Color of Wire	L	Signal Name	-
Terminal No.	5	Color of Wire	L	Signal Name	-
Terminal No.	14	Color of Wire	P	Signal Name	-
Terminal No.	15	Color of Wire	P	Signal Name	-

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY



Terminal No.	1	Color of Wire	BR	Signal Name	CAN-H
Terminal No.	2	Color of Wire	L/Y	Signal Name	CAN-L
Terminal No.	3	Color of Wire	W/Y	Signal Name	ATF SENS 2-
Terminal No.	5	Color of Wire	W/R	Signal Name	ATF SENS 2+

ALNIA0432GB

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

# COMBINATION METER

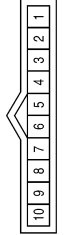
< ECU DIAGNOSIS >

Connector No.	F507
Connector Name	AT TEMPERATURE SENSOR-2
Connector Color	WHITE



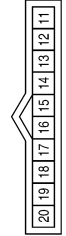
Terminal No.	Color of Wire	Signal Name
1	W/Y	-
2	W/R	-

Connector No.	F505
Connector Name	PARK/NEUTRAL POSITION SWITCH
Connector Color	GRAY



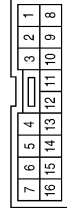
Terminal No.	Color of Wire	Signal Name
1	BR	S1
2	W	S4
3	GR	S2
5	L	S3
6	G	-
7	O	-

Connector No.	F503
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GREEN



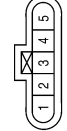
Terminal No.	Color of Wire	Signal Name
11	W	INH-SW4
12	GR	INH-SW2
13	BR	INH-SW1
14	L	INH-SW3
18	O	ATF SENS 1-
19	G	ATF SENS 1+

Connector No.	B3
Connector Name	SUSPENSION CONTROL UNIT
Connector Color	WHITE



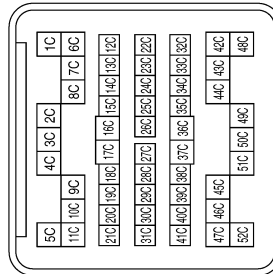
Terminal No.	10	BR	Signal Name	-
--------------	----	----	-------------	---

Connector No.	C5
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP
Connector Color	GRAY



Terminal No.	2	Y/L	Signal Name	-
5	B/P	-	Signal Name	-

Connector No.	C1
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	43C	Y/L	Signal Name	-
44C	B/P	-	Signal Name	-

ALNIA0433GB

# COMBINATION METER

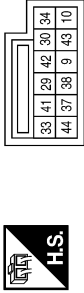
< ECU DIAGNOSIS >

Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	2	Color of Wire	R/Y	Signal Name	-
--------------	---	---------------	-----	-------------	---

Connector No.	B9
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color	YELLOW



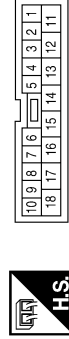
Terminal No.	41	Color of Wire	O/B	Signal Name	-
--------------	----	---------------	-----	-------------	---

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



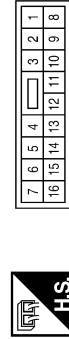
Terminal No.	2	Color of Wire	SB	Signal Name	-
--------------	---	---------------	----	-------------	---

Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Color	WHITE



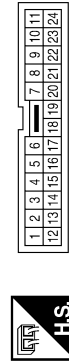
Terminal No.	14	Color of Wire	B	Signal Name	-
	15	Color of Wire	R/W	Signal Name	-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	10	Color of Wire	R/W	Signal Name	-
--------------	----	---------------	-----	-------------	---

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	23	Color of Wire	P	Signal Name	-
	24	Color of Wire	L	Signal Name	-

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

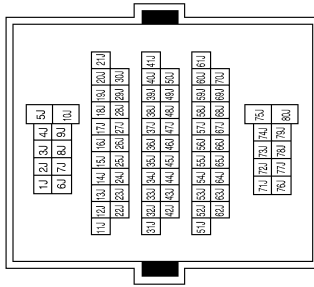
WCS

ALNIA0434GB

# COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



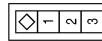
Terminal No.	Color of Wire	Signal Name
51J	L	-
52J	P	-
60J	SB	-
61J	R/Y	-
62J	BR	-
70J	O/B	-

Connector No.	B74
Connector Name	SEAT BELT BUCKLE PRE-TENSIONER ASSEMBLY LH (SEAT BELT BUCKLE SWITCH)
Connector Color	YELLOW



Terminal No.	Color of Wire	Signal Name
1	O/B	-
2	B	-

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



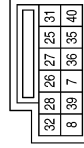
Terminal No.	2	Color of Wire	R/L	Signal Name	-
--------------	---	---------------	-----	-------------	---

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	10	Color of Wire	R/W	Signal Name	-
--------------	----	---------------	-----	-------------	---

Connector No.	B113
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color	YELLOW



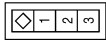
Terminal No.	25	Color of Wire	L	Signal Name	BUCKLE_SW_RH
--------------	----	---------------	---	-------------	--------------



# COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



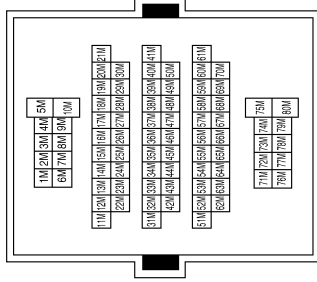
Terminal No.	Color of Wire	Signal Name
2	GR	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



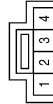
Terminal No.	Color of Wire	Signal Name
13	GR	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



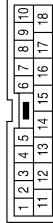
Terminal No.	Color of Wire	Signal Name
55M	GR	-
56M	GR	-
61M	R/L	-
65M	R/B	-

Connector No.	B157
Connector Name	SEAT BELT BUCKLE PRE-TENSIONER ASSEMBLY RH (SEAT BELT BUCKLE SWITCH)
Connector Color	YELLOW



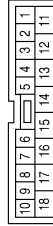
Terminal No.	Color of Wire	Signal Name
1	L	-
2	B	-

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D405
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

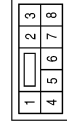
ALNIA0436GB

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

# COMBINATION METER

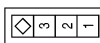
< ECU DIAGNOSIS >

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



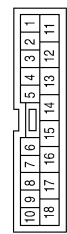
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

Connector No.	D502
Connector Name	BACK DOOR SWITCH
Connector Color	WHITE



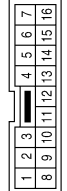
Terminal No.	Color of Wire	Signal Name
1	B	-
3	R/W	-

Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



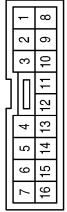
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



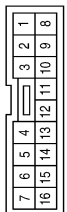
Terminal No.	Color of Wire	Signal Name
13	GR	-

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	GR	-

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	GR	-

ALNIA0437GB

# COMBINATION METER

< ECU DIAGNOSIS >

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

Connector No.	D707
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	WHITE



Terminal No.	Color of wire	Signal Name
1	GR	-

**WCS**

ALNIA0438GB

INFOID:000000001532087

## Fail Safe

The combination meter performs a fail-safe operation for the functions listed below when communication is lost.

# COMBINATION METER

## < ECU DIAGNOSIS >

Function		Specifications
Speedometer		Zero indication.
Tachometer		
Fuel gauge		
Engine coolant temperature gauge		
Engine oil pressure gauge		
Voltage gauge		
A/T oil temperature gauge		
Illumination control	Meter illumination	Change to nighttime mode when communication is lost.
Segment LCD	Odometer	Freeze current indication.
	A/T position	Display turns off.
Buzzer		Buzzer turns off.
Warning lamp/indicator lamp	ABS warning lamp	Lamp turns on when communication is lost.
	Brake warning lamp	
	VDC OFF indicator lamp	
	SLIP indicator lamp	
	A/T CHECK warning lamp	Lamp turns off when communication is lost.
	Oil pressure/coolant temperature warning lamp	
	Malfunction indicator lamp	
	Master warning lamp	
	Air bag warning lamp	
	High beam indicator	Lamp turns off when disconnected.
	Turn signal indicator lamp	
	Intelligent Key system warning lamp	
	Driver and passenger seat belt warning lamp	
	Charge warning lamp	
	Security indicator lamp	
	4WD indicator lamp	
ATP indicator lamp		
CK SUSP warning lamp	Lamp will flash every second for 1 minute and then stay on continuously thereafter.	
Low tire pressure warning lamp		

## DTC Index

INFOID:000000001532088

CONSULT-III display	Malfunction	Reference page
CAN COMM CIRC [U1000]	Malfunction is detected in CAN communication. <b>CAUTION:</b> Even when there is no malfunction on CAN communication system, malfunction may be misinterpreted when battery has low voltage (when maintaining 7 - 8 V for about 2 seconds) or 10A fuse [No. 19, located in the fuse block (J/B)] is disconnected.	<a href="#">MWI-30</a>
VEHICLE SPEED CIRC [B2205]	Malfunction is detected when an erroneous speed signal is input. <b>CAUTION:</b> Even when there is no malfunction on speed signal system, malfunction may be misinterpreted when battery has low voltage (when maintaining 7 - 8 V for about 2 seconds).	<a href="#">MWI-31</a>

### NOTE:

# COMBINATION METER

## < ECU DIAGNOSIS >

---

“TIME” indicates the following.

- 0: Indicates that a malfunction is detected at present.
- 1-63: Indicates that a malfunction was detected in the past. (Displays number of ignition switch OFF → ON cycles after malfunction is detected. Self-diagnosis result is erased when “63” is exceeded.)

A

B

C

D

E

F

G

H

I

J

K

L

M

WCS

O

P

## BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

### BCM (BODY CONTROL MODULE)

#### Reference Value

INFOID:000000001546982

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
	Outside of the room is bright	ON
AUTO LIGHT SW	Lighting switch OFF	OFF
	Lighting switch AUTO	ON
BACK DOOR SW	Back door closed	OFF
	Back door opened	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the LOCK side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the UNLOCK side	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1st	ON

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
HEADLAMP SW1	Headlamp switch OFF	OFF	A
	Headlamp switch 1st	ON	
HEADLAMP SW2	Headlamp switch OFF	OFF	B
	Headlamp switch 1st	ON	
HI BEAM SW	High beam switch OFF	OFF	C
	High beam switch HI	ON	
H/L WASH SW	<b>NOTE:</b> The item is indicated, but not monitored	OFF	D
IGN ON SW	Ignition switch OFF or ACC	OFF	D
	Ignition switch ON	ON	
IGN SW CAN	Ignition switch OFF or ACC	OFF	E
	Ignition switch ON	ON	
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7	
I-KEY LOCK <sup>1</sup>	LOCK button of Intelligent Key is not pressed	OFF	F
	LOCK button of Intelligent Key is pressed	ON	
I-KEY UNLOCK <sup>1</sup>	UNLOCK button of Intelligent Key is not pressed	OFF	G
	UNLOCK button of Intelligent Key is pressed	ON	
KEY ON SW	Mechanical key is removed from key cylinder	OFF	H
	Mechanical key is inserted to key cylinder	ON	
KEYLESS LOCK <sup>2</sup>	LOCK button of key fob is not pressed	OFF	I
	LOCK button of key fob is pressed	ON	
KEYLESS UNLOCK <sup>2</sup>	UNLOCK button of key fob is not pressed	OFF	I
	UNLOCK button of key fob is pressed	ON	
OIL PRESS SW	<ul style="list-style-type: none"> <li>• Ignition switch OFF or ACC</li> <li>• Engine running</li> </ul>	OFF	J
	Ignition switch ON	ON	
PASSING SW	Other than lighting switch PASS	OFF	K
	Lighting switch PASS	ON	
PUSH SW <sup>1</sup>	Return to ignition switch to LOCK position	OFF	L
	Press ignition switch	ON	
REAR DEF SW	Rear window defogger switch OFF	OFF	M
	Rear window defogger switch ON	ON	
RKE LOCK AND UNLOCK <sup>2</sup>	<b>NOTE:</b> The item is indicated, but not monitored	OFF	M
		ON	
RR WASHER SW	Rear washer switch OFF	OFF	WCS
	Rear washer switch ON	ON	
RR WIPER INT	Rear wiper switch OFF	OFF	O
	Rear wiper switch INT	ON	
RR WIPER ON	Rear wiper switch OFF	OFF	P
	Rear wiper switch ON	ON	
RR WIPER STOP	Rear wiper stop position	OFF	
	Other than rear wiper stop position	ON	
TAIL LAMP SW	Lighting switch OFF	OFF	
	Lighting switch 1ST	ON	

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	ON
TURN SIGNAL L	Turn signal switch OFF	OFF
	Turn signal switch LH	ON
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

1: With Intelligent Key

2: With remote keyless entry system



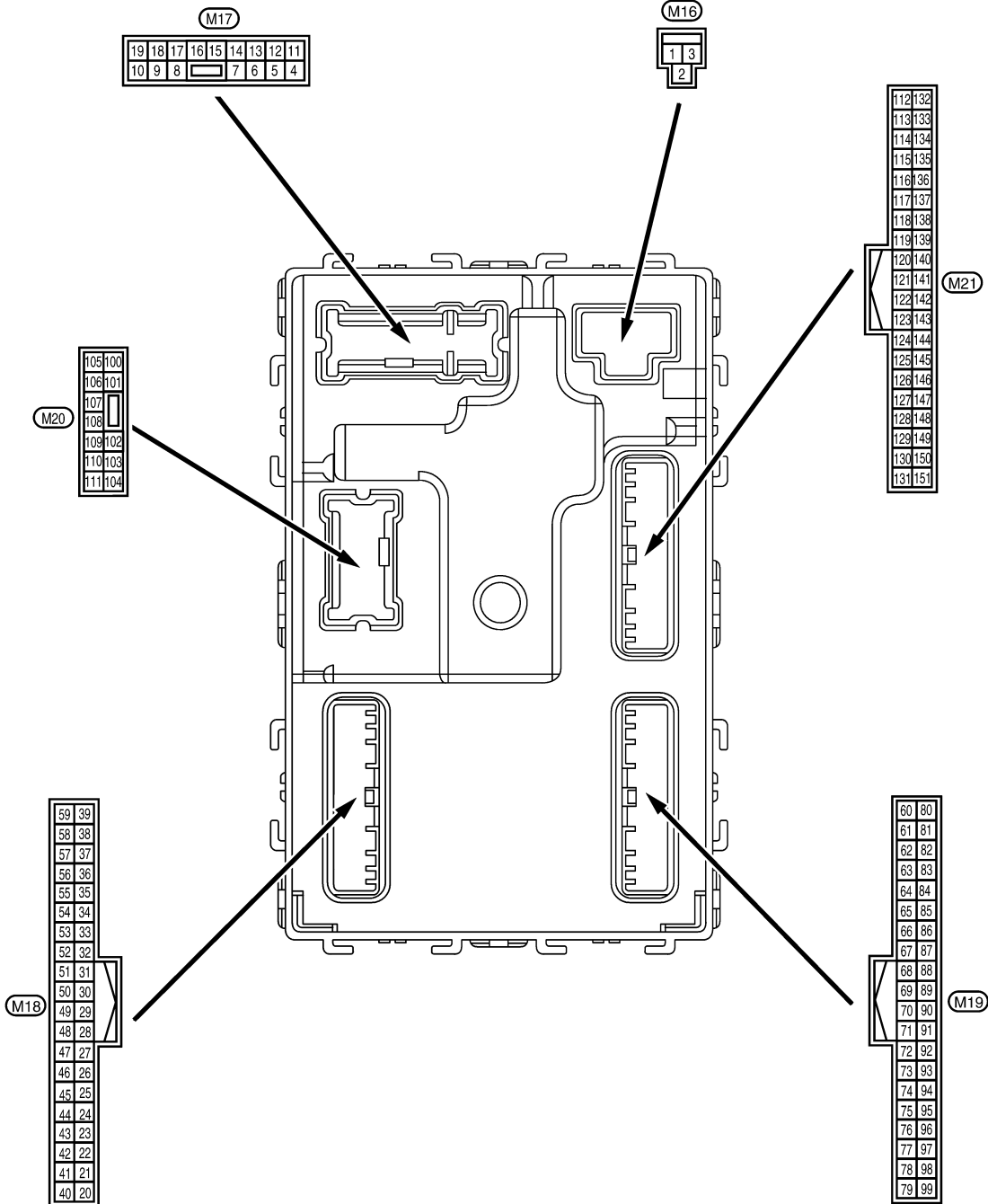
# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## Terminal Layout

INFOID:000000001546983

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



WCS


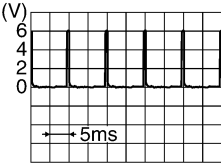

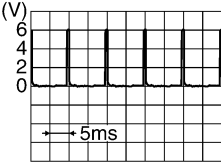
Physical Values

ALMIA0127ZZ

INFOID:000000001546984

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR/W	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	V	Combination switch input 1				
9	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
					OFF (other than above)	Battery voltage
11	O	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	L/W	Tire pressure warning check connector	Input	OFF	—	5V
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	<p style="text-align: right;">LIA1893E</p>
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	<p style="text-align: right;">LIA1894E</p>
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	<p style="text-align: right;">LIA1895E</p>
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	W/V	BUS	—	—	Ignition switch ON or power window timer operates	<p style="text-align: right;">PIIA2344E</p>
23	G/O	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

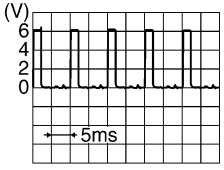
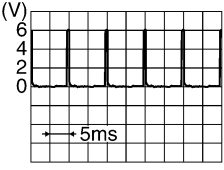
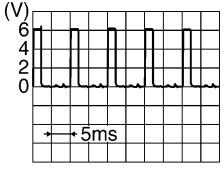
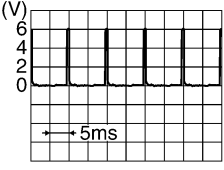
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M

WCS

O  
P

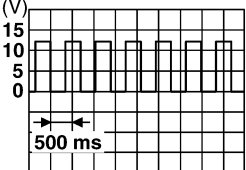
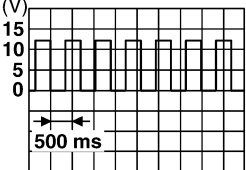
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	W/B	Hazard switch	Input	OFF	ON	0V
					OFF	5V
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
36	R/W	Combination switch output 1				
37 <sup>1</sup>	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
37 <sup>2</sup>	B/R	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key inserted	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery
43	R/B	Back door switch (without power back door) or back door latch (door ajar switch) (with power back door)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

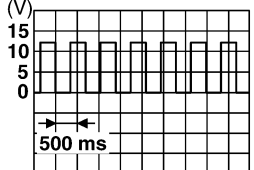
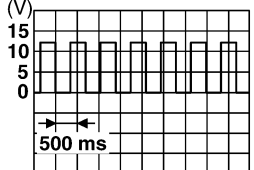
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	SB	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	R	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	G/Y	Trailer turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
54	Y	Rear wiper output circuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	0V
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Battery voltage
55	SB	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/G	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage

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

WCS

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch ON (open)	0V
					OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

1: With remote keyless entry system

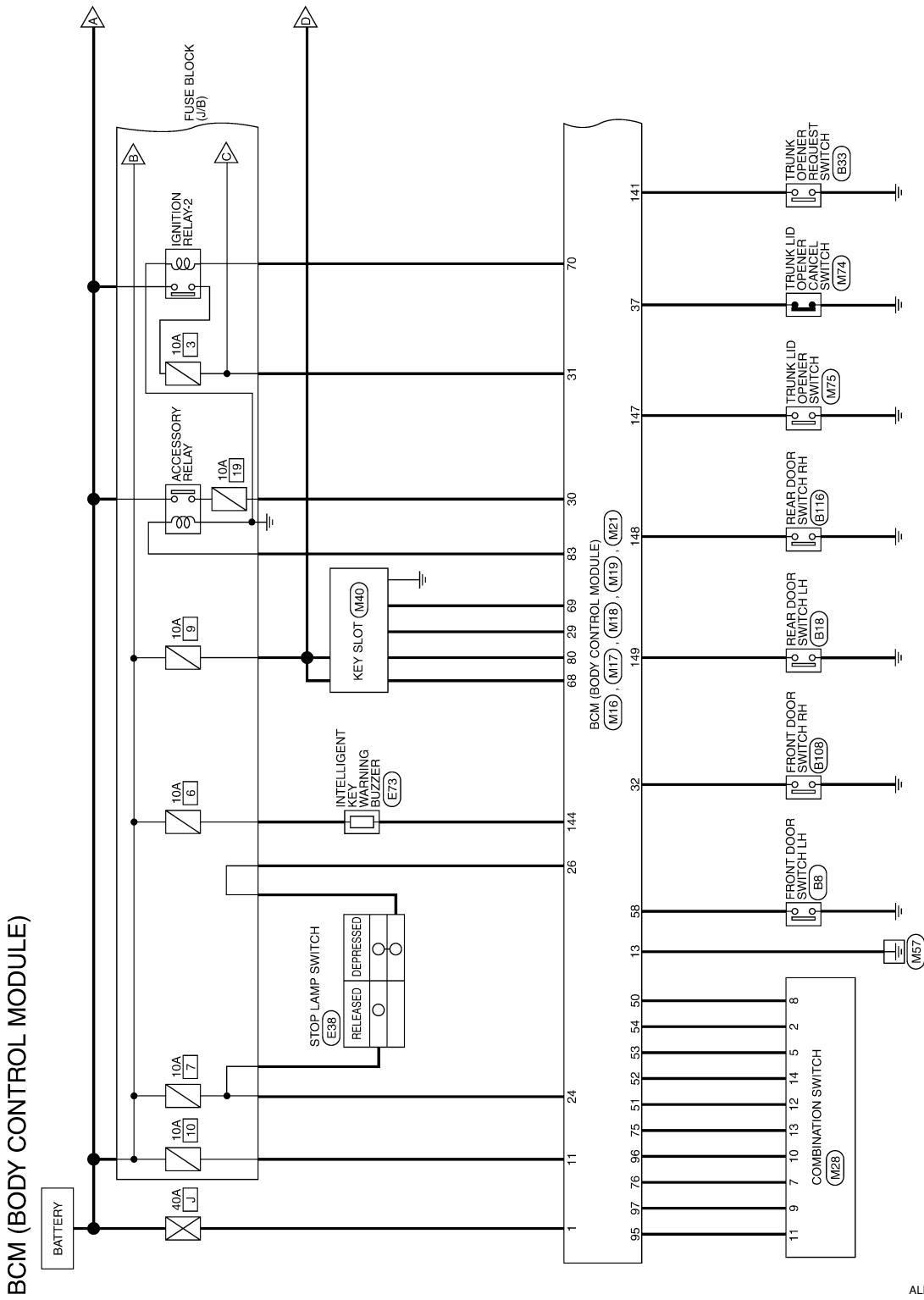
2: With Intelligent Key system

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## Wiring Diagram

INFOID:000000001546985



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

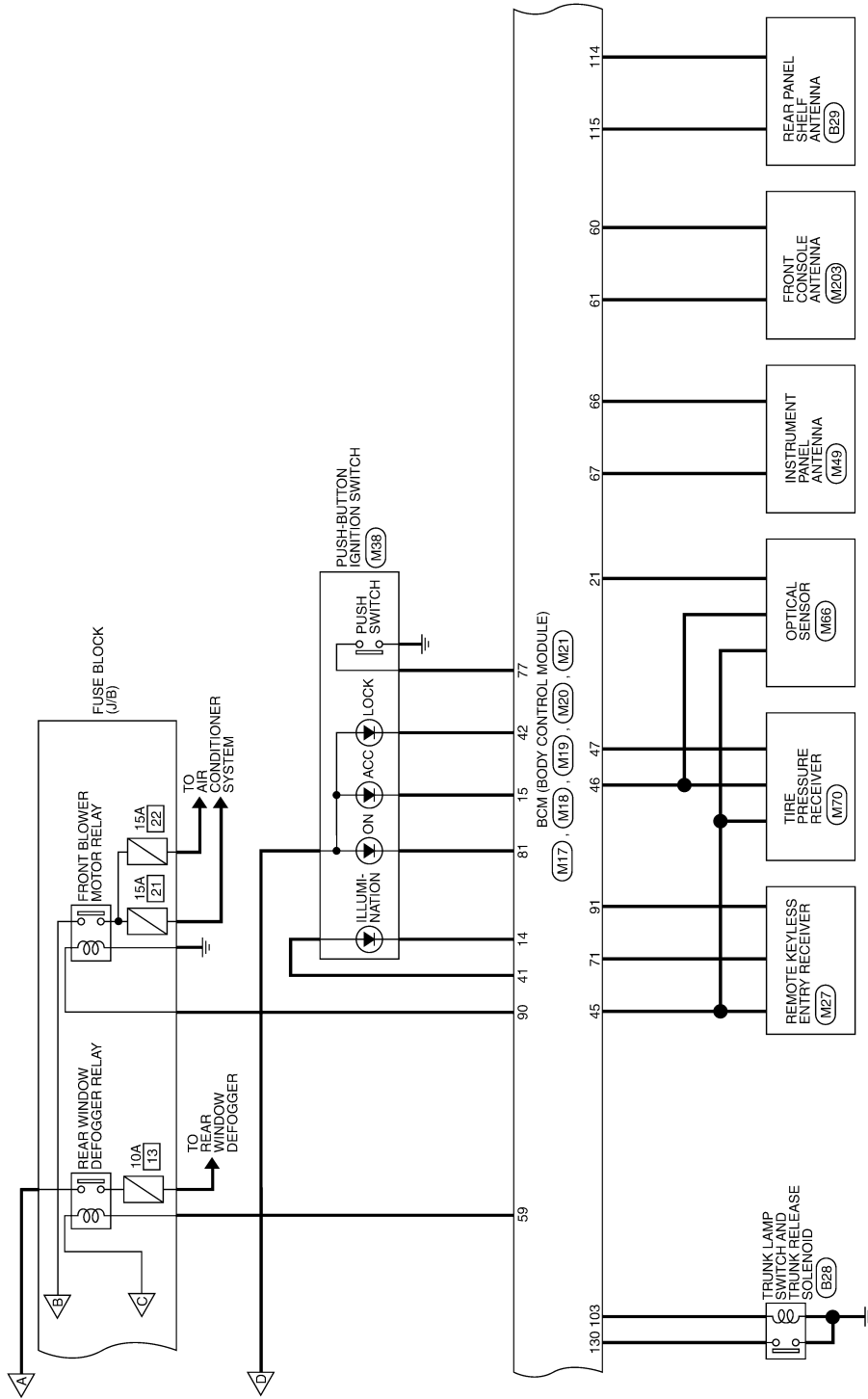
WCS

ALMWA0037GE

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

■ : DATA LINE



ALMWA0038Gf

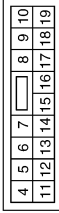


# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
9	G	CDL_DR/FL
10	G/Y	CDL_FR_RL_BACK
11	Y/R	BAT_BCM_FUSE
12	-	-
13	B	GND1
14	R/Y	LOW_SIDE_PUSH_LE D_OUTPUT
15	Y/L	ACC_LED
16	-	-
17	G/B	FR_FLASHER
18	G/O	FL_FLASHER
19	Y	ROOM_LAMP_OUTPUT

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	P/W	ROOM_LAMP_BAT_ SAVER
5	G/Y	CDL_AS
6	-	-
7	R/W	STEP_LAMP_OUTPUT
8	V	CDL_COMMON

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK

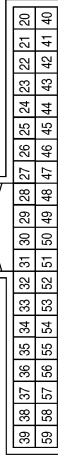


Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L
2	R/Y	PW_POWER_SUPPL Y_PERM
3	L/W	POWER_WINDOW_ POWER_SUPPLY (RAP)

Terminal No.	Color of Wire	Signal Name
47	G/O	KEYLESS_TUNER_SI
48	R/B	SHIFT_N/P
49	L/O	IMMO_LED
50	LG/B	INPUT_5
51	L/W	INPUT_1
52	G/B	INPUT_2
53	LG/R	INPUT_3
54	G/Y	INPUT_4
55	BR/W	BLOWER_FAN_SW/ DOOR_KEY/C_ LOCK_SW
56	L/B	TPMS_MODE_TRIGG ER_SW
57	W	DR_DOOR_SW
58	SB	REAR_DEFOGGER_ RLY
59	G/R	

Terminal No.	Color of Wire	Signal Name
27	G/W	DOOR_LOCK_STATUS
28	-	-
29	Y	FOB_IN_SW_1
30	V/Y	ACC_F/B
31	G	IGN_F/B
32	R/B	AS_DOOR_SW
33	SB	AIRCON_SW
34	L/R	DOOR_KEY/C_ UNLOCK_SW
35	-	-
36	GR	CENTRAL_LOCK_SW
37	O	TRUNK_CANCEL_SW
38	GR/W	REAR_DEFOGGER_SW
39	GR/R	CENTRAL_UNLOCK_SW
40	Y/G	PW_K-LINE
41	W	PUSH_LED
42	R	S/L_LOCK_LED
43	-	-
44	-	-
45	P	GND_RF2_AVL
46	V/W	A/L_SENS_KEYLESS_ TUNER_POWER_SUP PLY

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



Terminal No.	Color of Wire	Signal Name
20	-	-
21	P/B	AUTO_LIGHT_SENSEN R_INPUT1
22	-	-
23	-	-
24	R/W	STOP_LAMP_LOW_SW
25	-	-
26	O/L	STOP_LAMP_HIGH_SW

ALMIA0083GB

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

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
82	-	-
83	L	ACC_CONT
84	Y/R	AT_DEVICE_OUT
85	L/O	S/L_CONDITION_1
86	G/R	S/L_CONDITION_2
87	G/B	SHIFT_P
88	P/L	AS_REQUEST_SWITCH
89	B/W	DR_REQUEST_SWITCH
90	Y	IGN2_CONT
91	L/R	RF1_POWER_SUPPLY
92	-	-
93	-	-
94	G/Y	S/L_POWER_SUPPLY_12V
95	R/W	OUTPUT_1
96	P/B	OUTPUT_4
97	R/B	OUTPUT_2
98	G/R	HAZARD_SW
99	L/Y	S/L_K-LINE

Terminal No.	Color of Wire	Signal Name
62	B/Y	AS_DOOR_ANT_B
63	LG	AS_DOOR_ANT_A
64	V	DR_DOOR_ANT_B
65	P	DR_DOOR_ANT_A
66	R	ROOM_ANT_1_B
67	G	ROOM_ANT_1_A
68	G/O	FOB_READER_CLOCK
69	O	FOB_READER_DATA
70	R/B	IGN_ELEC_CONT
71	L/O	RF1_TUNER_SIGNAL
72	-	-
73	-	-
75	R/Y	OUTPUT_5
76	R/G	OUTPUT_3
77	BR	ENG_START_SW
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB_SLOT_ILLUMINATION
81	LG	IGN_ON_LED

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



79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80

Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM_ANT_2_B
61	W/R	ROOM_ANT_2_A

Terminal No.	Color of Wire	Signal Name
100	-	-
101	-	-
102	-	-
103	V	CDL_BACK_TRUNK
104	-	-
105	-	-
106	-	-
107	-	-
108	-	-
109	-	-
110	V/W	TRUNK_LAMP_OUTPUT
111	-	-

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



100	101	102	103	104		
105	106	107	108	109	110	111

## Fail Safe

ALMIA0084GB

INFOID:000000001546986

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit hybrid system cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit hybrid system cranking	Erase DTC

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit hybrid system cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit hybrid system cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit hybrid system cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit hybrid system cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit hybrid system cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from brake ECU actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit hybrid system cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Starter control relay signal</li> <li>• Starter relay status signal</li> </ul>
B2562: LOW VOLTAGE	<ul style="list-style-type: none"> <li>• Inhibit hybrid system cranking</li> <li>• Inhibit electronic steering column lock</li> </ul>	100 ms after the power supply voltage increases to more than 8.8 V
B2563: HI VOLTAGE	<ul style="list-style-type: none"> <li>• Inhibit hybrid system cranking</li> <li>• Inhibit electronic steering column lock</li> </ul>	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> <li>• Selector lever P position switch signal</li> <li>• P range signal (CAN)</li> </ul>
B2602: SHIFT POSITION	Inhibit electronic steering column lock	5 seconds after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> <li>• Ignition switch is in the ON position</li> <li>• Selector lever P position switch signal: Except P position (battery voltage)</li> <li>• Vehicle speed: 4 /h or more</li> </ul>
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> <li>• Ignition switch is in the ON position</li> <li>• Selector lever P position switch signal: Except P position (battery voltage)</li> <li>• Selector lever P/N position signal: Except P and N positions (0 V)</li> </ul>
B2604: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> <li>• Status 1               <ul style="list-style-type: none"> <li>- Ignition switch is in the ON position</li> <li>- Selector lever P/N position signal: P and N position (battery voltage)</li> <li>- P range signal or N range signal (CAN): ON</li> </ul> </li> <li>• Status 2               <ul style="list-style-type: none"> <li>- Ignition switch is in the ON position</li> <li>- Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>- P range signal and N range signal (CAN): OFF</li> </ul> </li> </ul>

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

WCS

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2605: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> <li>• Ignition switch is in the ON position</li> <li>- Power position: IGN</li> <li>- Selector lever P/N position signal: Except P and N positions (0 V)</li> <li>- Interlock/PNP switch signal (CAN): OFF</li> <li>• Status 2</li> <li>- Ignition switch is in the ON position</li> <li>- Selector lever P/N position signal: P or N position (battery voltage)</li> <li>- PNP switch signal (CAN): ON</li> </ul>
B2606: S/L RELAY	Inhibit hybrid system cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Electronic steering column lock relay signal (Request signal)</li> <li>• Electronic steering column lock relay signal (Condition signal)</li> </ul>
B2607: S/L RELAY	Inhibit hybrid system cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> <li>• Electronic steering column lock relay signal (Request signal)</li> <li>• Electronic steering column lock relay signal (Condition signal)</li> </ul>
B2608: STARTER RELAY	Inhibit hybrid system cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> <li>• Starter motor relay control signal</li> <li>• Starter relay status signal (CAN)</li> </ul>
B2609: S/L STATUS	<ul style="list-style-type: none"> <li>• Inhibit hybrid system cranking</li> <li>• Inhibit electronic steering column lock</li> </ul>	When the following electronic steering column lock conditions agree <ul style="list-style-type: none"> <li>• BCM electronic steering column lock control status</li> <li>• Electronic steering column lock condition No. 1 signal status</li> <li>• Electronic steering column lock condition No. 2 signal status</li> </ul>
B260A: IGNITION RELAY	Inhibit hybrid system cranking	500 ms after the following conditions are fulfilled <ul style="list-style-type: none"> <li>• IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>• Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>• Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives hybrid system status signal (CAN)</li> </ul>
B2612: S/L STATUS	<ul style="list-style-type: none"> <li>• Inhibit hybrid system cranking</li> <li>• Inhibit electronic steering column lock</li> </ul>	When any of the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Electronic steering column lock unit status signal (CAN) is received normally</li> <li>• The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)</li> </ul>
B2617: STARTER RELAY CIRC	Inhibit hybrid system cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit hybrid system cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit hybrid system cranking	1 second after the electronic steering column lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit hybrid system cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit hybrid system cranking	When any of the following conditions is fulfilled <ul style="list-style-type: none"> <li>• Power position changes to ACC</li> <li>• Receives hybrid system status signal (CAN)</li> </ul>

### DTC Inspection Priority Chart

INFOID:000000001546987

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

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Priority	DTC	
1	<ul style="list-style-type: none"> <li>• U1000: CAN COMM CIRCUIT</li> <li>• U1010: CONTROL UNIT (CAN)</li> </ul>	A
2	<ul style="list-style-type: none"> <li>• B2190: NATS ANTENNA AMP</li> <li>• B2191: DIFFERENCE OF KEY</li> <li>• B2192: ID DISCORD BCM-ECM</li> <li>• B2193: CHAIN OF BCM-ECM</li> <li>• B2013: STRG COMM 1</li> <li>• B2552: INTELLIGENT KEY</li> <li>• B2590: NATS MALFUNCTION</li> </ul>	B C
3	<ul style="list-style-type: none"> <li>• C1729: VHCL SPEED SIG ERR</li> </ul>	D
4	<ul style="list-style-type: none"> <li>• C1704: LOW PRESSURE FL</li> <li>• C1705: LOW PRESSURE FR</li> <li>• C1706: LOW PRESSURE RR</li> <li>• C1707: LOW PRESSURE RL</li> <li>• C1708: [NO DATA] FL</li> <li>• C1709: [NO DATA] FR</li> <li>• C1710: [NO DATA] RR</li> <li>• C1711: [NO DATA] RL</li> <li>• C1712: [CHECKSUM ERR] FL</li> <li>• C1713: [CHECKSUM ERR] FR</li> <li>• C1714: [CHECKSUM ERR] RR</li> <li>• C1715: [CHECKSUM ERR] RL</li> <li>• C1716: [PRESSDATA ERR] FL</li> <li>• C1717: [PRESSDATA ERR] FR</li> <li>• C1718: [PRESSDATA ERR] RR</li> <li>• C1719: [PRESSDATA ERR] RL</li> <li>• C1720: [CODE ERR] FL</li> <li>• C1721: [CODE ERR] FR</li> <li>• C1722: [CODE ERR] RR</li> <li>• C1723: [CODE ERR] RL</li> <li>• C1724: [BATT VOLT LOW] FL</li> <li>• C1725: [BATT VOLT LOW] FR</li> <li>• C1726: [BATT VOLT LOW] RR</li> <li>• C1727: [BATT VOLT LOW] RL</li> </ul>	E F G H I J

## DTC Index

INFOID:000000001546988

### NOTE:

- Details of time display
- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	<a href="#">BCS-30</a>
U1010: CONTROL UNIT (CAN)	—	—	—	<a href="#">BCS-31</a>
B2013: STRG COMM 1	—	—	—	<a href="#">SEC-70</a>
B2190: NATS ANTENNA AMP	—	—	—	<a href="#">SEC-29</a> (with I-Key), <a href="#">SEC-106</a> (without I-Key)

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2191: DIFFERENCE OF KEY	—	—	—	<a href="#">SEC-32</a> (with I-Key), <a href="#">SEC-109</a> (without I-Key)
B2192: ID DISCORD BCM-ECM	—	—	—	<a href="#">SEC-33</a> (with I-Key), <a href="#">SEC-110</a> (without I-Key)
B2193: CHAIN OF BCM-ECM	—	—	—	<a href="#">SEC-35</a> (with I-Key), <a href="#">SEC-112</a> (without I-Key)
B2552: INTELLIGENT KEY	—	—	—	<a href="#">SEC-70</a>
B2590: NATS MALFUNCTION	—	—	—	<a href="#">SEC-70</a>
C1704: LOW PRESSURE FL	—	—	—	<a href="#">WT-21</a>
C1705: LOW PRESSURE FR	—	—	—	<a href="#">WT-21</a>
C1706: LOW PRESSURE RR	—	—	—	<a href="#">WT-21</a>
C1707: LOW PRESSURE RL	—	—	—	<a href="#">WT-21</a>
C1708: [NO DATA] FL	—	—	—	<a href="#">WT-13</a>
C1709: [NO DATA] FR	—	—	—	<a href="#">WT-15</a>
C1710: [NO DATA] RR	—	—	—	<a href="#">WT-15</a>
C1711: [NO DATA] RL	—	—	—	<a href="#">WT-15</a>
C1712: [CHECKSUM ERR] FL	—	—	—	<a href="#">WT-15</a>
C1713: [CHECKSUM ERR] FR	—	—	—	<a href="#">WT-15</a>
C1714: [CHECKSUM ERR] RR	—	—	—	<a href="#">WT-15</a>
C1715: [CHECKSUM ERR] RL	—	—	—	<a href="#">WT-15</a>
C1716: [PRESSDATA ERR] FL	—	—	—	<a href="#">WT-17</a>
C1717: [PRESSDATA ERR] FR	—	—	—	<a href="#">WT-15</a>
C1718: [PRESSDATA ERR] RR	—	—	—	<a href="#">WT-15</a>
C1719: [PRESSDATA ERR] RL	—	—	—	<a href="#">WT-15</a>
C1720: [CODE ERR] FL	—	—	—	<a href="#">WT-15</a>
C1721: [CODE ERR] FR	—	—	—	<a href="#">WT-15</a>
C1722: [CODE ERR] RR	—	—	—	<a href="#">WT-15</a>
C1723: [CODE ERR] RL	—	—	—	<a href="#">WT-15</a>
C1724: [BATT VOLT LOW] FL	—	—	—	<a href="#">WT-15</a>
C1725: [BATT VOLT LOW] FR	—	—	—	<a href="#">WT-15</a>
C1726: [BATT VOLT LOW] RR	—	—	—	<a href="#">WT-15</a>
C1727: [BATT VOLT LOW] RL	—	—	—	<a href="#">WT-15</a>
C1729: VHCL SPEED SIG ERR	—	—	—	<a href="#">WT-18</a>
C1734: CONTROL UNIT	—	—	—	—

# THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### THE LIGHT REMINDER WARNING DOES NOT SOUND

#### Description

INFOID:000000001316457

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

#### Diagnosis Procedure

INFOID:000000001316458

#### 1.CHECK COMBINATION SWITCH (LIGHTING SWITCH) OPERATION

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

Do they operate normally?

YES >> GO TO 2

NO >> Refer to [EXL-4. "Work Flow"](#).

#### 2.CHECK FRONT DOOR SWITCH LH SIGNAL CIRCUIT

Perform inspection of the front door switch LH signal circuit. Refer to [DLK-57. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

#### 3.CHECK FRONT DOOR SWITCH LH

Perform a unit inspection for the front door switch LH. Refer to [DLK-57. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-54. "Removal and Installation"](#).

NO >> Replace the front door switch LH.

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

WCS

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

< SYMPTOM DIAGNOSIS >

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

### Description

INFOID:000000001316459

- Seat belt warning does not sound even though driver seat belt is not fastened.
- Seat belt warning sounds even though driver seat belt is fastened.

### Diagnosis Procedure

INFOID:000000001316460

#### 1. CHECK WARNING CHIME OPERATION

1. With key removed from key switch and the front door LH open, turn lighting switch to 1st or 2nd position.
2. Return lighting switch to off position, and insert key into key switch.

Does warning chime sound for both steps?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-104. "Removal and Installation"](#).

#### 2. CHECK SEAT BELT WARNING LAMP

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

**Seat belt fastened : OFF**

**Seat belt not fastened : ON**

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

NO >> GO TO 3

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

Perform inspection of the seat belt buckle switch circuit. Refer to [WCS-21. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

#### 4. CHECK SEAT BELT BUCKLE SWITCH UNIT

Perform a unit inspection for the seat belt buckle switch. Refer to [WCS-22. "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the combination meter. Refer to [MWI-104. "Removal and Installation"](#).

NO >> Replace the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch).



# THE KEY WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## THE KEY WARNING DOES NOT SOUND

### Description

INFOID:000000001532091

Key warning does not sound even though key is in ignition and front door LH is opened.

### Diagnosis Procedure

INFOID:000000001532092

#### 1.CHECK WARNING CHIME OPERATION

With key removed from the ignition and the front door LH open, turn the lighting switch to 1st or 2nd position.

##### Does warning chime sound?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-104, "Removal and Installation"](#).

#### 2.CHECK KEY SWITCH CIRCUIT

Perform inspection of the key switch circuit. Refer to [WCS-23, "Diagnosis Procedure"](#) (with Intelligent Key) or [WCS-25, "Diagnosis Procedure"](#) (without Intelligent Key).

##### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

#### 3.CHECK KEY SWITCH

Perform a unit inspection for the key switch. Refer to [WCS-24, "Component Inspection"](#) (with Intelligent Key) or [WCS-26, "Component Inspection"](#) (without Intelligent Key).

##### Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-54, "Removal and Installation"](#).

NO >> Replace the key switch and ignition knob switch (with Intelligent Key) or key switch and key lock solenoid (without Intelligent Key).

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

WCS

# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000001316461

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.**