

# SECTION **WCS**

## WARNING CHIME SYSTEM

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

#### Work Flow

INFOID:0000000011559246

#### 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 SELF-DIAGNOSIS RESULTS

Connect CONSULT and perform "SELF-DIAGNOSIS". Refer to [MWI-28, "CONSULT 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.

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# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

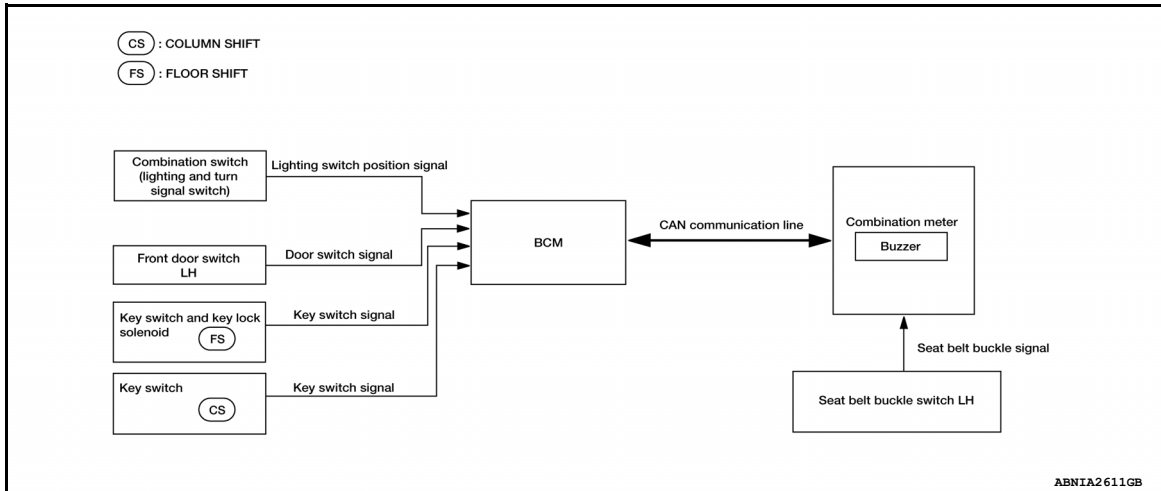
## SYSTEM DESCRIPTION

### WARNING CHIME SYSTEM

### WARNING CHIME SYSTEM

### WARNING CHIME SYSTEM : System Diagram

INFOID:000000011559247



### WARNING CHIME SYSTEM : System Description

INFOID:000000011559248

#### 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

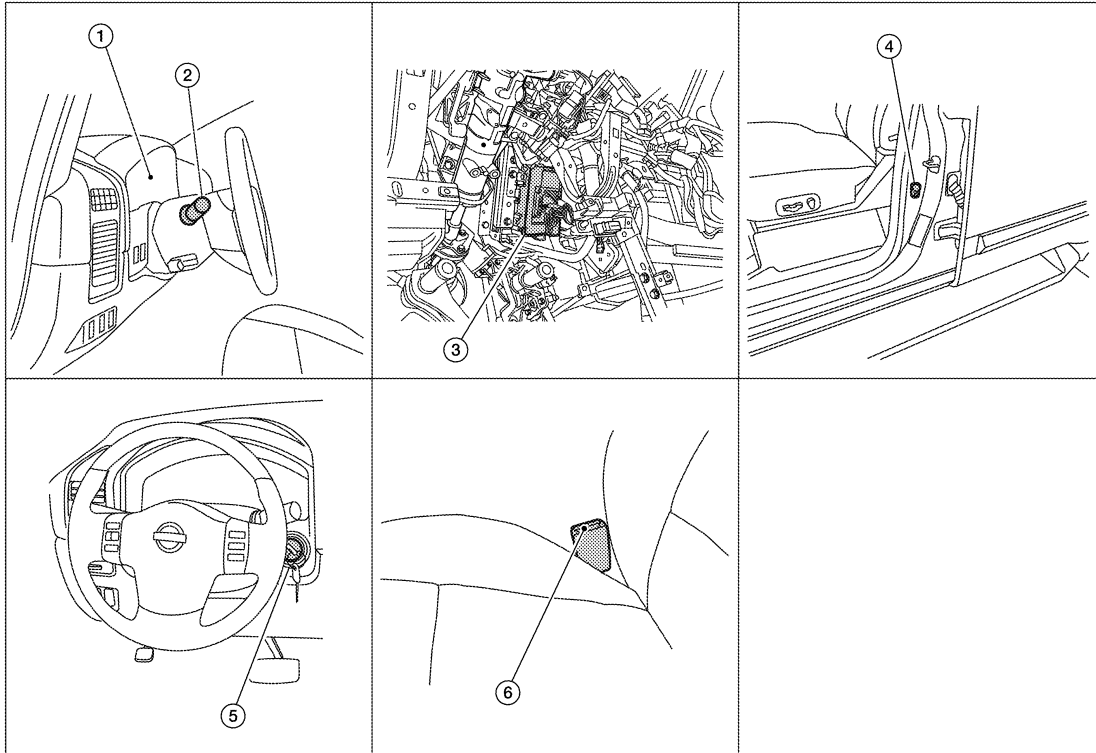
| Warning functions            | Signal name   |
|------------------------------|---|
| Light reminder warning chime | <ul style="list-style-type: none"> <li>• Lighting switch position signal</li> <li>• Door switch signal</li> </ul> |
| Seat belt warning chime      | Seat belt buckle switch signal  |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

# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000011559249



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- |                            |  |  |
|----------------------------|--|--|
| 1. Combination meter M24   | 2. Combination switch (lighting and turn signal switch) M28                            | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8 | 5. Key switch and key lock solenoid M27 (floor shift)<br>Key switch M80 (column shift) | 6. Seat belt buckle switch LH B12                                  |

## WARNING CHIME SYSTEM : Component Description

INFOID:000000011559250

| Unit   | Description   |
|--|---|
| Combination meter                                    | <ul style="list-style-type: none"> <li>Receives the seat belt buckle switch signal from the seat belt buckle switch LH 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.   |
| Key switch (column shift)                            | Transmits key switch signal to BCM.   |
| Key switch and key lock solenoid (floor shift)       |   |
| Seat belt buckle switch LH                           | Transmits a seat belt buckle switch signal to the combination meter.  |
| Combination switch (lighting and turn signal switch) | Transmits the lighting switch position signal to BCM.   |
| Front door switch LH                                 | Transmits the door switch signal to BCM.  |

## LIGHT REMINDER WARNING CHIME

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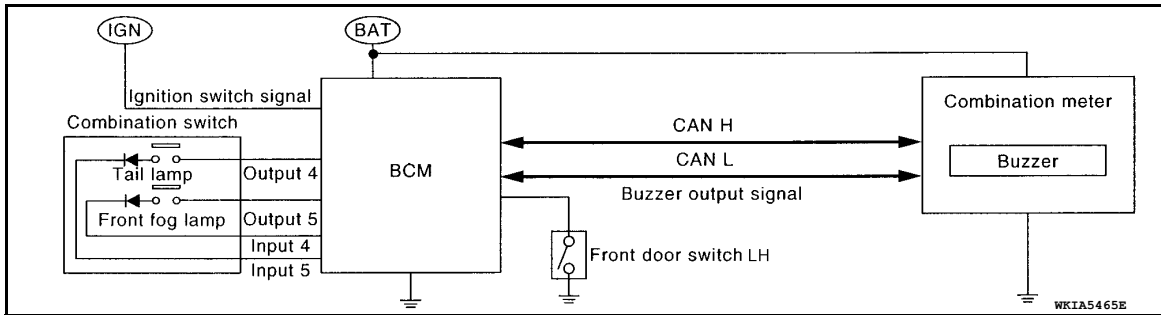
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# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000011559251



## LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000011559252

### 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.

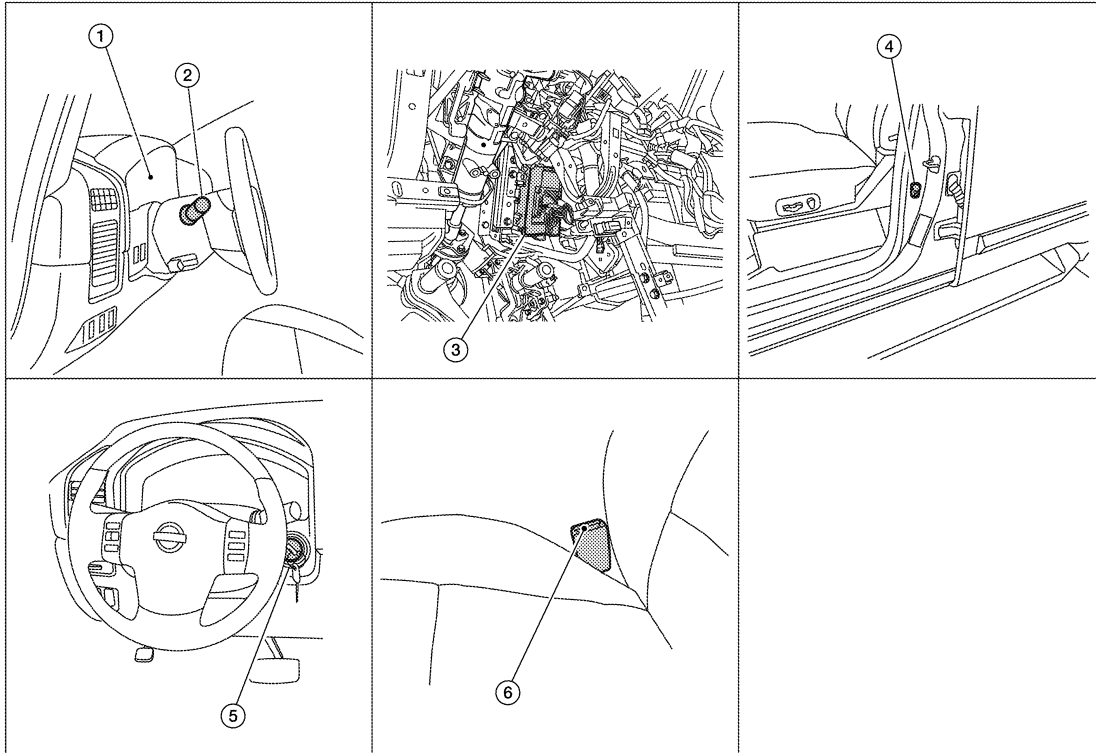
- Lighting switch OFF
- Ignition switch ON
- Front door switch LH is OFF

# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000011559253



AWNIA01762Z

- |                            |  |  |
|----------------------------|--|--|
| 1. Combination meter M24   | 2. Combination switch (lighting and turn signal switch) M28                            | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8 | 5. Key switch and key lock solenoid M27 (floor shift)<br>Key switch M80 (column shift) | 6. Seat belt buckle switch LH B12                                  |

## LIGHT REMINDER WARNING CHIME : Component Description

INFOID:000000011559254

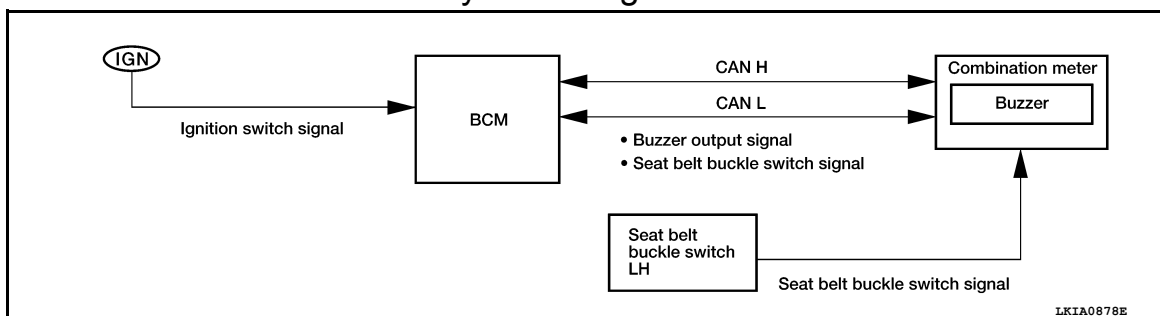
| Unit   | Description  |
|--|--|
| Combination meter                                    | Receives a buzzer output signal from BCM via CAN communication line and sounds the buzzer.   |
| BCM  | Judges the light warning conditions from the signals provided by various switches and transmits a buzzer output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

## SEAT BELT WARNING CHIME

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### SEAT BELT WARNING CHIME : System Diagram

INFOID:000000011559255



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# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING CHIME : System Description

INFOID:000000011559256

### 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)

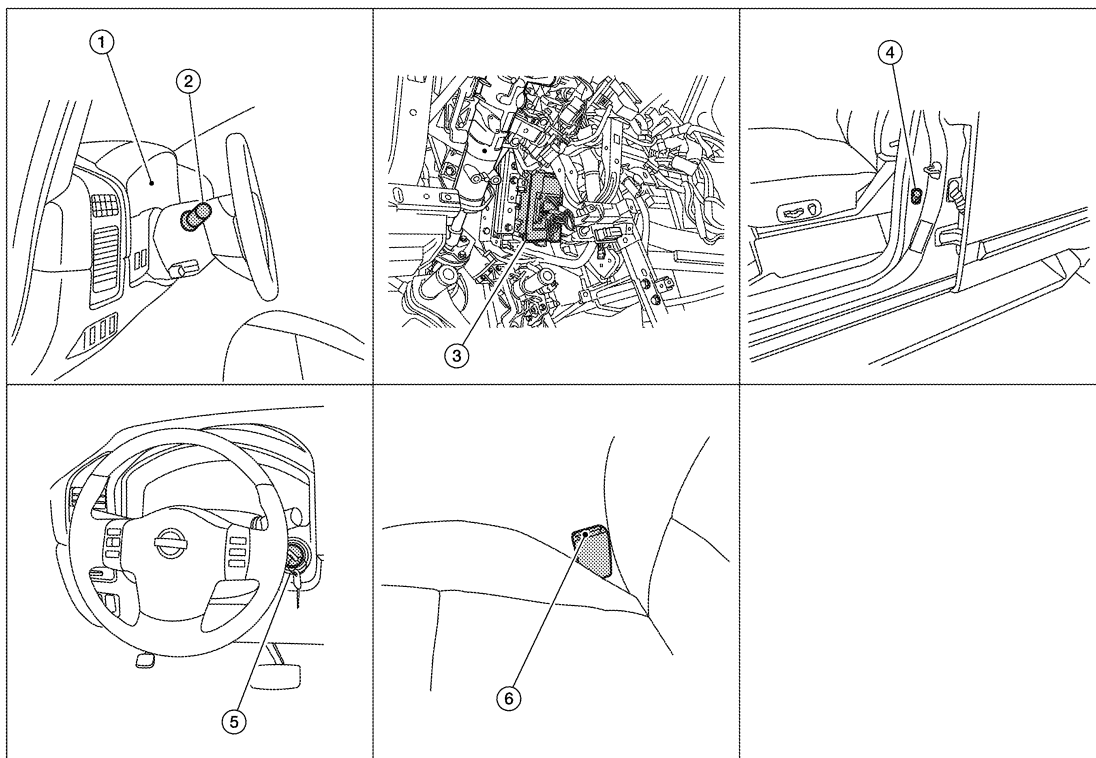
### WARNING CANCEL CONDITIONS

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)

## SEAT BELT WARNING CHIME : Component Parts Location

INFOID:000000011559257



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- |                            |  |  |
|----------------------------|--|--|
| 1. Combination meter M24   | 2. Combination switch (lighting and turn signal switch) M28                            | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8 | 5. Key switch and key lock solenoid M27 (floor shift)<br>Key switch M80 (column shift) | 6. Seat belt buckle switch LH B12                                  |



# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## SEAT BELT WARNING CHIME : Component Description

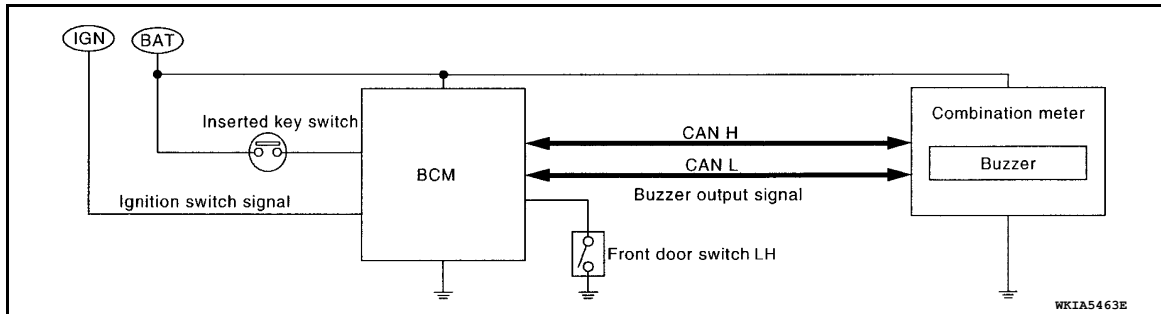
INFOID:000000011559258

| 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> |
| 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 switch LH | Transmits seat belt buckle switch signal to combination meter.   |

## KEY WARNING CHIME

### KEY WARNING CHIME : System Diagram

INFOID:000000011559259



### KEY WARNING CHIME : System Description

INFOID:000000011559260

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.

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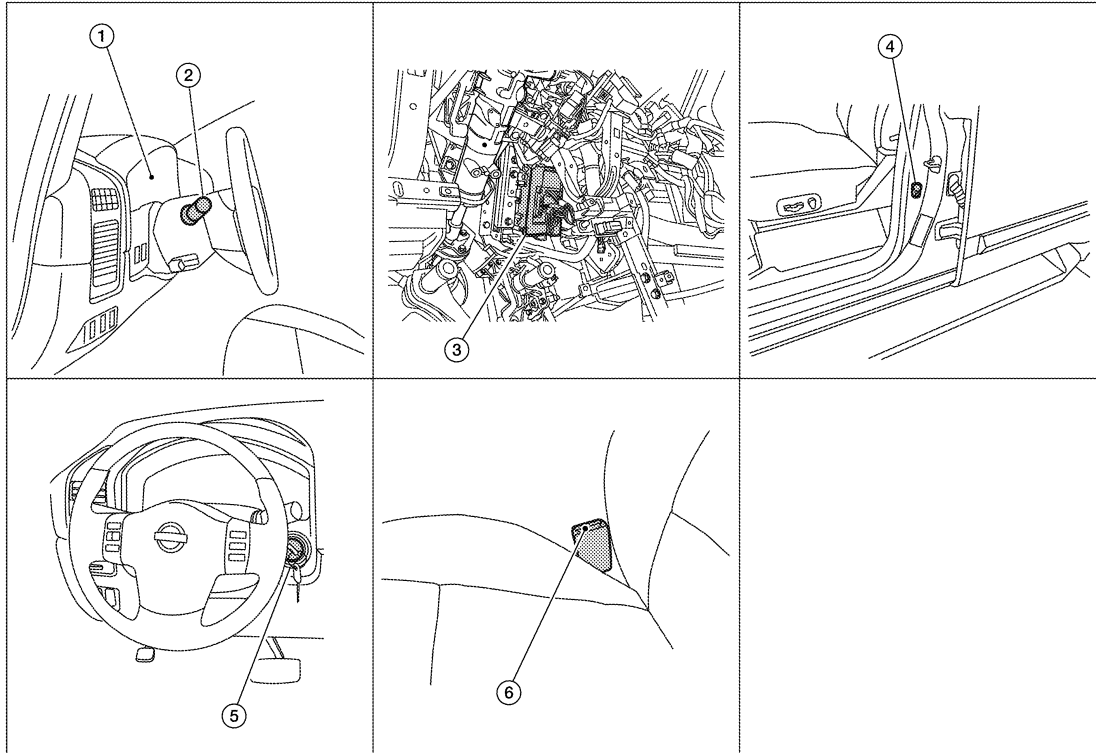
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# WARNING CHIME SYSTEM

< SYSTEM DESCRIPTION >

## KEY WARNING CHIME : Component Parts Location

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|----------------------------|--|--|
| 1. Combination meter M24   | 2. Combination switch (lighting and turn signal switch) M28                            | 3. BCM M18, M19, M20 (view with instrument lower panel LH removed) |
| 4. Front door switch LH B8 | 5. Key switch and key lock solenoid M27 (floor shift)<br>Key switch M80 (column shift) | 6. Seat belt buckle switch LH B12                                  |

## KEY WARNING CHIME : Component Description

INFOID:000000011559262

| 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 (floor shift) or key switch (column shift). It then transmits a buzzer output signal to the combination meter via CAN communication line if necessary. |
| Front door switch LH                           | Transmits door switch signal to BCM.   |
| Key switch (column shift)                      | Transmits key switch signal to BCM.  |
| Key switch and key lock solenoid (floor shift) |  |

# DIAGNOSIS SYSTEM (METER)

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (METER)

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

INFOID:000000011559263

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

| METER/M&A diagnosis mode | Description  |
|--------------------------|--|
| SELF DIAGNOSTIC RESULT   | 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-45, "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.  |
| W TEMP METER [°C] or [°F]    | X            | X                   | Displays the value of engine coolant temperature signal, which is input from ECM.                          |
| FUEL METER [lit.]            | X            | X                   | Displays the value, which processes a resistance signal from fuel gauge.                                   |
| DISTANCE [km] or [mile]      | X            | X                   | Displays the value, which is calculated by vehicle speed signal, fuel gauge and fuel consumption from ECM. |
| FUEL W/L [ON/OFF]            | X            | X                   | Displays [ON/OFF] condition of fuel warning lamp.  |
| C-ENG W/L [ON/OFF]           |              | X                   | Displays [ON/OFF] condition of malfunction indicator lamp.   |
| AIR PRES W/L [ON/OFF]        |              | X                   | Displays [ON/OFF] condition of tire pressure warning lamp.   |
| SEAT BELT W/L [ON/OFF]       |              | X                   | Indicates [ON/OFF] condition of seat belt warning lamp.  |
| BUZZER [ON/OFF]              | X            | X                   | Displays [ON/OFF] condition of buzzer.   |
| DOOR W/L [ON/OFF]            |              | X                   | Displays [ON/OFF] condition of door 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.  |
| VDC/TCS IND [ON/OFF]         |              | X                   | Displays [ON/OFF] condition of VDC OFF indicator lamp.   |
| ABS W/L [ON/OFF]             |              | X                   | Displays [ON/OFF] condition of ABS warning 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.*  |
| 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.  |
| AT SFT DWN SW [ON/OFF]       | X            | X                   | Displays [ON/OFF] condition of A/T shift-down 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.   |

## DIAGNOSIS SYSTEM (METER)

### < SYSTEM DESCRIPTION >

| Display item [Unit]   | MAIN SIGNALS | SELECTION FROM MENU | Description   |
|-----------------------|--------------|---------------------|---|
| 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.  |
| AT CHECK W/L [ON/OFF] |              | X                   | Displays [ON/OFF] condition of AT CHECK warning 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.                 |
| 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.           |
| 4WD W/L [ON/OFF]      |              | X                   | Displays [ON/OFF] condition of 4WD warning lamp.              |
| FUEL CAP W/L [ON/OFF] |              | X                   | Displays [ON/OFF] condition of loose fuel cap indicator.      |
| TPMS PRESS L [ON/OFF] |              | X                   | Displays [ON/OFF] condition of check tire pressure indicator. |

**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)

< SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (BCM)

### BUZZER

BUZZER : CONSULT Function (BCM - BUZZER)

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### DATA MONITOR

| Monitor Item [Unit]   | Description   |
|-----------------------|---|
| DOOR SW-DR [On/Off]   | Indicates condition of front door switch LH.        |
| IGN ON SW [On/Off]    | Indicates condition of ignition switch ON position. |
| KEY ON SW [On/Off]    | Indicates condition of key switch.                  |
| LIGHT SW 1ST [On/Off] | Indicates condition of combination switch.          |
| BUCKLE SW [On/Off]    | Indicates condition of seat belt buckle switch.     |

### ACTIVE TEST

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

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# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

#### COMBINATION METER : Diagnosis Procedure

INFOID:000000011868046

Regarding Wiring Diagram information, refer to [MWI-67, "Wiring Diagram"](#).

### 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?

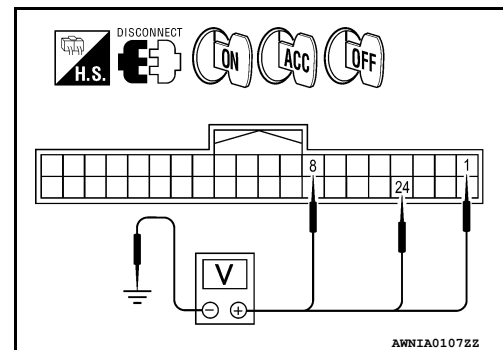
YES >> GO TO 2

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 |                 |                 |                 |                 |
|-----------|----------|--------------------------|-----------------|-----------------|-----------------|-----------------|
| (+)       |          | (-)                      | OFF             | ACC             | ON              | START           |
| Connector | Terminal |                          |                 |                 |                 |                 |
| M24       | 1        | Ground                   | 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?

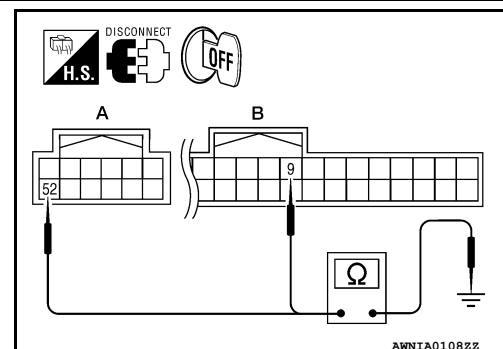
YES >> GO TO 3

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

### 3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect combination meter connector M25.
3. Check continuity between combination meter harness connector M25 terminal 52 and ground, and connector M24 terminal 9 and ground.

| Terminals |          | Continuity |
|-----------|----------|------------|
| (+)       |          |            |
| Connector | Terminal |            |
| A: M25    | 52       | Ground     |
| B: M24    | 9        |            |
|           |          | Yes        |



Is the inspection result normal?

# POWER SUPPLY AND GROUND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

- YES >> Inspection End.
- NO >> Check ground harness.

## BCM (BODY CONTROL MODULE)

### BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000011868050

Regarding Wiring Diagram information, refer to [BCS-47, "Wiring Diagram"](#).

## 1. CHECK FUSES AND FUSIBLE LINK

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

| Terminal No. | Signal name          | Fuses and fusible link No. |
|--------------|----------------------|----------------------------|
| 57           | Battery power supply | 22 (15A)                   |
| 70           |                      | F (50A)                    |
| 11           | Ignition ACC or ON   | 4 (10A)                    |
| 38           | Ignition ON or START | 59 (10A)                   |

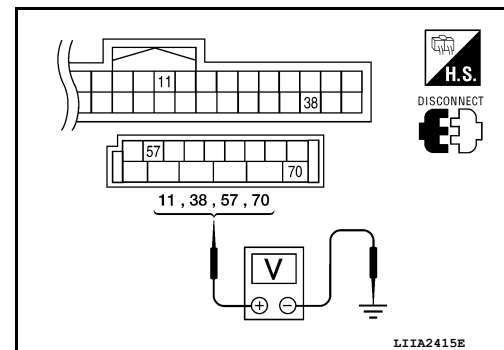
### Is the fuse blown?

- YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
- NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

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

| Connector | Terminals |        | Power source          | Condition                   | Voltage (V) (Approx.) |
|-----------|-----------|--------|-----------------------|-----------------------------|-----------------------|
|           | (+)       | (-)    |                       |                             |                       |
| M18       | 11        | Ground | ACC power supply      | Ignition switch ACC or ON   | Battery voltage       |
|           | 38        | Ground | Ignition power supply | Ignition switch ON or START | Battery voltage       |
| M20       | 57        | Ground | Battery power supply  | Ignition switch OFF         | Battery voltage       |
|           | 70        | Ground | Battery power supply  | Ignition switch OFF         | Battery voltage       |



### Is the measurement value normal?

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

## 3. CHECK GROUND CIRCUIT

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# POWER SUPPLY AND GROUND CIRCUIT

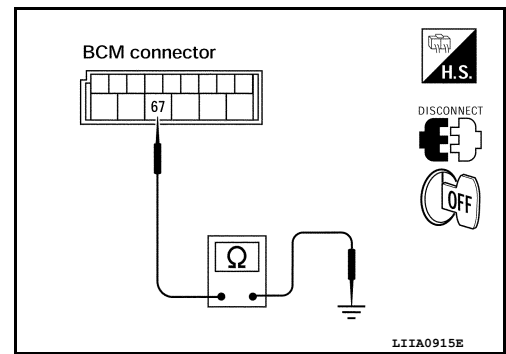
## < DTC/CIRCUIT DIAGNOSIS >

Check continuity between BCM harness connector and ground.

| BCM       |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| M20       | 67       |        | Yes        |

### Does continuity exist?

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





# METER BUZZER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## METER BUZZER CIRCUIT

### Description

INFOID:0000000011559267

- 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:0000000011559268

#### 1. CHECK OPERATION OF METER BUZZER

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

#### Does meter buzzer activate?

- YES >> Inspection End.  
NO >> Replace combination meter. Refer to [MWI-95, "Removal and Installation"](#).

### Diagnosis Procedure

INFOID:0000000011559269

Regarding Wiring Diagram information, refer to [MWI-67, "Wiring Diagram"](#).

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

Check power supply of combination meter. Refer to [MWI-33, "COMBINATION METER : Diagnosis Procedure"](#).

#### Is the inspection result normal?

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

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# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

### Description

INFOID:0000000011559270

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

### Component Function Check

INFOID:0000000011559271

#### 1. CHECK COMBINATION METER INPUT SIGNAL

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

##### SEAT BELT W/L

When seat belt is fastened : OFF

When seat belt is unfastened : ON

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to [WCS-18, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011559272

Regarding Wiring Diagram information, refer to [WCS-38, "Wiring Diagram"](#).

#### 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-95, "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 switch LH connector.
3. Check continuity between combination meter harness connector M24 terminal 27 and seat belt buckle switch LH harness connector B12 terminal 1.

27 - 1 : Continuity should exist.

4. Check continuity between combination meter harness connector M24 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

Check continuity between seat belt buckle switch LH harness connector B12 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

# SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

---

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

A

## Component Inspection

INFOID:0000000011559273

### 1. CHECK SEAT BELT BUCKLE SWITCH

---

B

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

C

#### 1-2

**When seat belt is fastened : Continuity should not exist.**

D

**When seat belt is unfastened : Continuity should exist.**

E

#### Is the inspection result normal?

- YES >> Inspection End.  
NO >> Replace the seat belt buckle switch LH. Refer [SB-13, "Removal and Installation of Front Seat Belt"](#).

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# KEY SWITCH SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## KEY SWITCH SIGNAL CIRCUIT

### Description

INFOID:000000011559274

Transmits a key switch signal to the BCM.

### Component Function Check

INFOID:000000011559275

#### 1. CHECK BCM INPUT SIGNAL

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

#### KEY ON SW

When key is inserted into key cylinder : ON

When key is removed from key cylinder : OFF

Is the inspection result normal?

YES >> Inspection End.

NO >> • For vehicles with column shift, refer to [WCS-20, "Diagnosis Procedure - Column Shift"](#).  
• For vehicles with floor shift, refer to [WCS-21, "Diagnosis Procedure - Floor Shift"](#).

#### Diagnosis Procedure - Column Shift

INFOID:000000011559276

Regarding Wiring Diagram information, refer to [WCS-38, "Wiring Diagram"](#).

### COLUMN SHIFT

#### 1. CHECK FUSE

Check if the key switch 10A fuse [No. 3, located in the fuse block (J/B)] is blown.

Is the fuse blown?

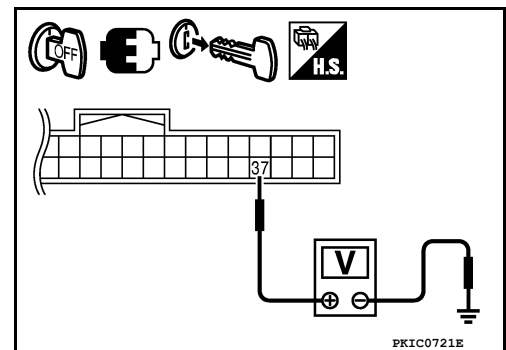
YES >> Be sure to repair the cause of malfunction before installing new fuse.

NO >> GO TO 2.

#### 2. CHECK BCM INPUT SIGNAL

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

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



Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 3.

#### 3. CHECK KEY SWITCH CIRCUIT

# KEY SWITCH SIGNAL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

1. Disconnect BCM connector M18 and key switch connector.
2. Check continuity between BCM harness connector M18 (A) terminal 37 and key switch harness connector M80 (B) terminal 4.

| BCM       |          | Key switch |          | Continuity |
|-----------|----------|------------|----------|------------|
| Connector | Terminal | Connector  | Terminal |            |
| M18 (A)   | 37       | M80 (B)    | 4        | Yes        |

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

| BCM       |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| M18 (A)   | 37       |        | No         |

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

## 4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

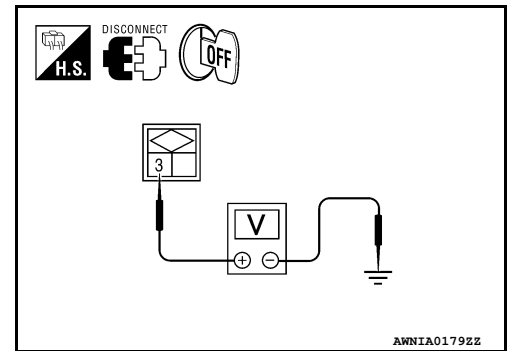
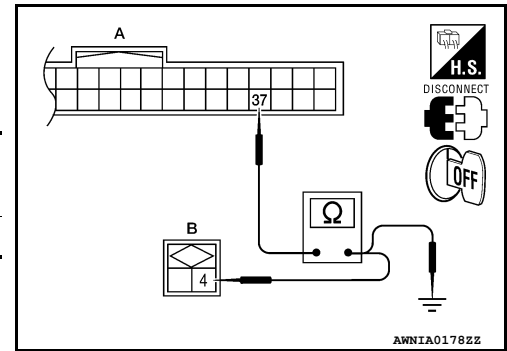
Check voltage between key switch harness connector M80 terminal 3 and ground.

| Terminals  |          |        | Voltage (Approx.) |
|------------|----------|--------|-------------------|
| (+)        |          | (-)    |                   |
| Key switch | Terminal |        |                   |
| M80        | 3        | Ground | Battery voltage   |

### Is the inspection result normal?

YES >> Replace key switch.

NO >> Repair harness or connector.



## Diagnosis Procedure - Floor Shift

INFOID:0000000011559277

Regarding Wiring Diagram information, refer to [WCS-38. "Wiring Diagram"](#).

## FLOOR SHIFT

### 1. CHECK FUSE

Check if the key switch and key lock solenoid 10A fuse [No. 3, 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

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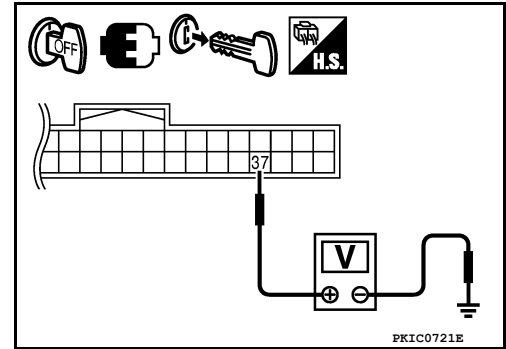
WCS

## KEY SWITCH SIGNAL CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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

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



**Is the inspection result normal?**

YES >> Inspection End.

NO >> GO TO 3

### 3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector M18 and key switch and key lock solenoid connector.
2. Check continuity between BCM harness connector M18 terminal 37 and key switch and key lock solenoid harness connector M27 terminal 4.

| BCM       |          | Key switch and key lock solenoid |          | Continuity |
|-----------|----------|----------------------------------|----------|------------|
| Connector | Terminal | Connector                        | Terminal |            |
| M18       | 37       | M27                              | 4        | Yes        |

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

| BCM       |          | Ground | Continuity |
|-----------|----------|--------|------------|
| Connector | Terminal |        |            |
| M18       | 37       |        | No         |

**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 M27 terminal 3 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 - Column Shift

INFOID:000000011559278

#### COLUMN SHIFT

### 1. CHECK KEY SWITCH

# KEY SWITCH SIGNAL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

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

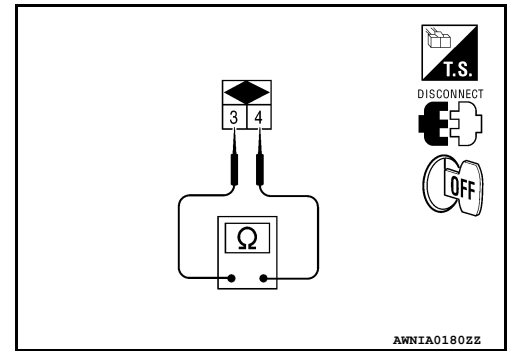
**3 – 4**

**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.



## Component Inspection - Floor Shift

INFOID:0000000011559279

### FLOOR SHIFT

#### 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.

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# COMBINATION METER

< ECU DIAGNOSIS INFORMATION >

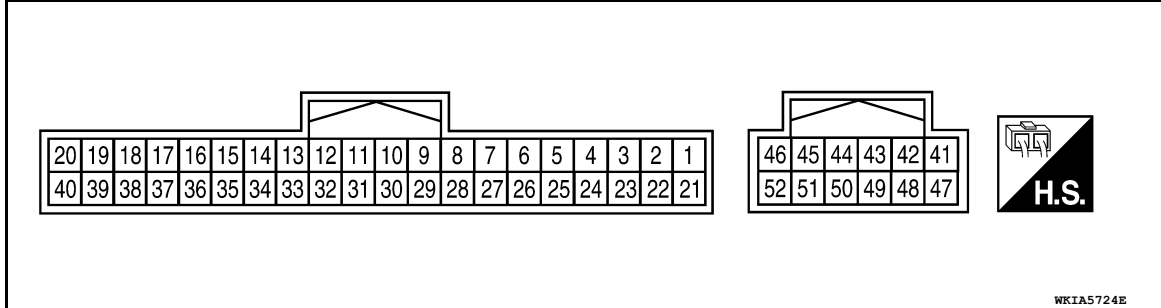
## ECU DIAGNOSIS INFORMATION

### COMBINATION METER

Reference Value

INFOID:0000000011868047

#### TERMINAL LAYOUT



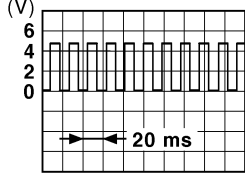
#### PHYSICAL VALUES

| Terminal | Wire color | Item                        | Condition       |                          | Reference value (V)<br>(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  |
| 8        | Y/R        | Battery power supply        | —               | —                        | Battery voltage  |
| 9        | B          | Ground                      | —               | —                        | 0  |
| 11       | L          | CAN-H                       | —               | —                        | —  |
| 12       | P          | CAN-L                       | —               | —                        | —  |
| 14       | L          | DIFF LOCK indicator input   | ON              | DIFF LOCK indicator ON   | 0  |
|          |            |                             |                 | DIFF LOCK indicator OFF  | Battery voltage  |
| 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  |
| 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 INFORMATION >

| Terminal | Wire color | Item                                  | Condition       |  | Reference value (V)<br>(Approx.)   |
|----------|------------|---------------------------------------|-----------------|--|--|
|          |            |                                       | Ignition switch | Operation or condition   |  |
| 29       | W/R        | Vehicle speed signal output (8-pulse) | ON              | Speedometer operated<br>[When vehicle speed is approx. 40 km/h (25 MPH)] | <b>NOTE:</b><br>Maximum voltage may be 12V due to specifications (connected units).<br> |
| 37       | W/L        | Washer fluid level switch             | ON              | Washer fluid level low   | 0  |
|          |            |                                       |                 | Washer fluid level normal  | Battery voltage  |
| 41       | P/L        | Seat belt buckle switch RH            | ON              | Unfastened (ON)  | 0  |
|          |            |                                       |                 | Fastened (OFF)   | Battery voltage  |
| 45       | BR/W       | Generator                             | ON              | Generator voltage low  | 0  |
|          |            |                                       |                 | Generator voltage normal   | Battery voltage  |
| 50       | BR         | Illumination output                   | —               | —  | Refer to <a href="#">INL-10, "System Description"</a> .  |
| 52       | B          | Ground                                | —               | —  | 0  |

### Fail Safe

INFOID:0000000011868048

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

| Function                                |                    | Specifications                                       |
|---|--------------------|--|
| Speedometer                             |                    | Zero indication.                                     |
| Tachometer                              |                    |  |
| Fuel gauge                              |                    |  |
| Engine coolant temperature gauge        |                    |  |
| Engine oil pressure gauge (if equipped) |                    |  |
| Voltage gauge (if equipped)             |                    |  |
| A/T oil temperature gauge (if equipped) |                    |  |
| 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.                                    |

WCS

# COMBINATION METER

## < ECU DIAGNOSIS INFORMATION >

|                                | Function  | Specifications                             |
|--------------------------------|---|--|
| 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  |  |
|                                | Driver and passenger seat belt warning lamp   |  |
|                                | Charge warning lamp   |  |
|                                | Security indicator lamp   |  |
|                                | 4WD indicator lamp  |  |
|                                | ATP indicator lamp  |  |
| DIFF LOCK indicator lamp       |   |  |
| Low tire pressure warning lamp | Lamp will flash every second for 1 minute and then stay on continuously thereafter. |  |

## DTC Index

INFOID:000000011868049

| CONSULT display            | Malfunction   | Reference page         |
|----------------------------|---|------------------------|
| CAN COMM CIRC [U1000]      | Malfunction is detected in CAN communication.<br><b>CAUTION:</b><br>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-31</a> |
| VEHICLE SPEED CIRC [B2205] | Malfunction is detected when an erroneous speed signal is input.<br><b>CAUTION:</b><br>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-32</a> |

### NOTE:

“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.)

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

## BCM (BODY CONTROL MODULE)

### Reference Value

INFOID:000000011867230

#### NOTE:

The Signal Tech II Tool [– (J-50190)] can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information:

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Test remote keyless entry keyfob relative signal strength

### VALUES ON THE DIAGNOSIS TOOL

| Monitor Item  | Condition  | Value/Status                  |
|---------------|--|-------------------------------|
| ACC ON SW     | Ignition switch OFF or ON                        | Off                           |
|               | Ignition switch ACC                              | On                            |
| AIR COND SW   | A/C switch OFF                                   | Off                           |
|               | A/C switch ON                                    | On                            |
| AIR PRESS FL  | Front left tire air pressure value               | kPa, kg/cm <sup>2</sup> , psi |
| AIR PRESS FR  | Front right tire air pressure value              | kPa, kg/cm <sup>2</sup> , psi |
| AIR PRESS RL  | Rear left tire air pressure value                | kPa, kg/cm <sup>2</sup> , psi |
| AIR PRESS RR  | Rear right tire air pressure value               | kPa, kg/cm <sup>2</sup> , psi |
| AUTO LIGHT SW | Lighting switch OFF                              | Off                           |
|               | Lighting switch AUTO                             | On                            |
| BRAKE SW      | Brake pedal released                             | Off                           |
|               | Brake pedal applied                              | On                            |
| BUCKLE SW     | Seat belt buckle unfastened                      | Off                           |
|               | Seat belt buckle fastened                        | On                            |
| BUZZER        | Buzzer in combination meter OFF                  | Off                           |
|               | Buzzer in combination meter ON                   | On                            |
| CARGO LAMP SW | Cargo lamp switch OFF                            | Off                           |
|               | Cargo lamp switch ON                             | 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                            |
| FAN ON SIG    | Blower motor fan switch OFF                      | Off                           |
|               | Blower motor fan switch ON                       | On                            |

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## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

| Monitor Item  | Condition   | Value/Status |
|---------------|---|--------------|
| 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           |
| HEAD LAMP SW1 | Headlamp switch OFF                                 | Off          |
|               | Headlamp switch 1st                                 | On           |
| HEAD LAMP SW2 | Headlamp switch OFF                                 | Off          |
|               | Headlamp switch 1st                                 | On           |
| HI BEAM SW    | High beam switch OFF                                | Off          |
|               | High beam switch HI                                 | On           |
| ID REGST FL1  | ID registration of front left tire incomplete       | YET          |
|               | ID registration of front left tire complete         | DONE         |
| ID REGST FR1  | ID registration of front right tire incomplete      | YET          |
|               | ID registration of front right tire complete        | DONE         |
| ID REGST RL1  | ID registration of rear left tire incomplete        | YET          |
|               | ID registration of rear left tire complete          | DONE         |
| ID REGST RR1  | ID registration of rear right tire incomplete       | YET          |
|               | ID registration of rear right tire complete         | DONE         |
| IGN ON SW     | Ignition switch OFF or ACC                          | Off          |
|               | Ignition switch ON                                  | On           |
| IGN SW CAN    | Ignition switch OFF or ACC                          | Off          |
|               | Ignition switch ON                                  | On           |
| INT VOLUME    | Wiper intermittent dial is in a dial position 1 - 7 | 1 - 7        |
| KEY CYL LK-SW | Door key cylinder LOCK position                     | Off          |
|               | Door key cylinder other than LOCK position          | On           |
| KEY CYL UN-SW | Door key cylinder UNLOCK position                   | Off          |
|               | Door key cylinder other than UNLOCK position        | On           |
| KEY ON SW     | Mechanical key is removed from key cylinder         | Off          |
|               | Mechanical key is inserted to key cylinder          | On           |
| KEYLESS LOCK  | LOCK button of key fob is not pressed               | Off          |
|               | LOCK button of key fob is pressed                   | On           |
| KEYLESS PANIC | PANIC button of key fob is not pressed              | Off          |
|               | PANIC button of key fob is pressed                  | On           |

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS INFORMATION >

| Monitor Item   | Condition  | Value/Status                      |   |
|----------------|--|-----------------------------------|---|
| KEYLESS UNLOCK | UNLOCK button of key fob is not pressed  | Off                               | A |
|                | UNLOCK button of key fob is pressed  | On                                |   |
| LIGHT SW 1ST   | Lighting switch OFF  | Off                               | B |
|                | Lighting switch 1st  | On                                |   |
| OIL PRESS SW   | <ul style="list-style-type: none"> <li>• Ignition switch OFF or ACC</li> <li>• Engine running</li> </ul> | Off                               | C |
|                | Ignition switch ON   | On                                |   |
| OPTICAL SENSOR | Bright outside of the vehicle  | Close to 5V                       | D |
|                | Dark outside of the vehicle  | Close to 0V                       |   |
| PASSING SW     | Other than lighting switch PASS  | Off                               |   |
|                | Lighting switch PASS   | On                                | E |
| REAR DEF SW    | Rear window defogger switch OFF  | Off                               |   |
|                | Rear window defogger switch ON   | On                                |   |
| TURN SIGNAL L  | Turn signal switch OFF   | Off                               | F |
|                | Turn signal switch LH  | On                                |   |
| TURN SIGNAL R  | Turn signal switch OFF   | Off                               | G |
|                | Turn signal switch RH  | On                                |   |
| VEHICLE SPEED  | While driving  | Equivalent to speedometer reading |   |
| WARNING LAMP   | Low tire pressure warning lamp in combination meter OFF  | Off                               | H |
|                | Low tire pressure warning lamp in combination meter ON   | On                                |   |

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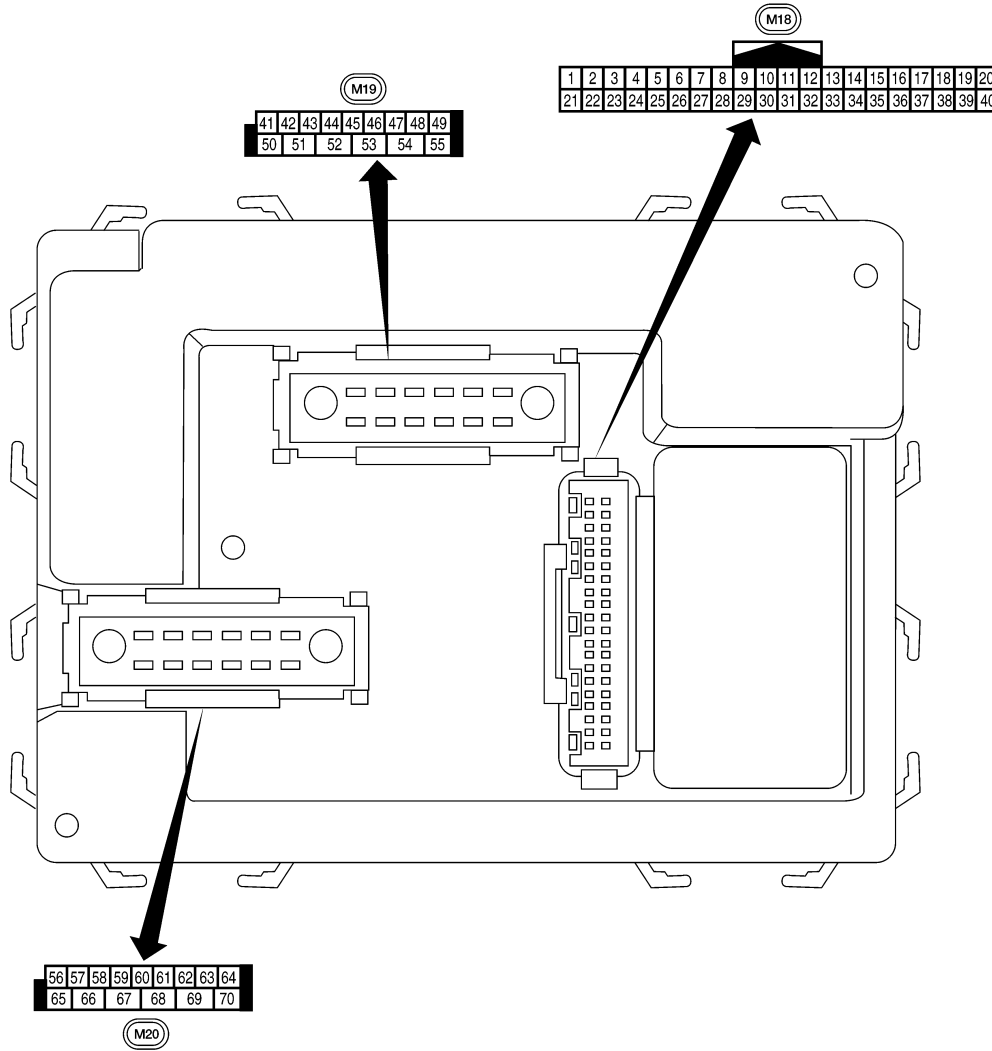
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# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

## Terminal Layout

INFOID:000000011867231



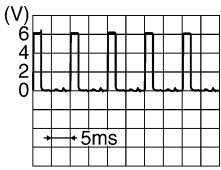
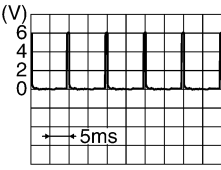
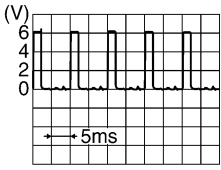

AWMIA1542ZZ

## Physical Values

INFOID:000000011867232

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

| Terminal | Wire color | Signal name   | Signal input/output | Measuring condition |  | Reference value or waveform (Approx.)   |
|----------|------------|---|---------------------|---------------------|--|---|
|          |            |   |                     | Ignition switch     | Operation or condition                             |   |
| 1        | BR/W       | Key ring output   | Output              | OFF                 | ON (driver door open)                              | 0V  |
|          |            |   |                     |                     | OFF (driver door closed)                           | Battery voltage   |
| 2        | SB         | Combination switch input 5                                | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 | <br><small>SKIA5291E</small>   |
| 3        | G/Y        | Combination switch input 4                                | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 | <br><small>SKIA5292E</small>   |
| 4        | Y          | Combination switch input 3                                | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 | <br><small>SKIA5291E</small>  |
| 5        | G/B        | Combination switch input 2                                | Input               | ON                  | Lighting, turn, wiper OFF<br>Wiper dial position 4 | <br><small>SKIA5292E</small> |
| 6        | V          | Combination switch input 1                                |                     |                     |  |   |
| 9        | R/G        | Brake switch  | Input               | ON                  | Brake pedal depressed                              | Battery voltage   |
|          |            |   |                     |                     | Brake pedal released                               | 0V  |
| 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 (All)                                | Input               | OFF                 | ON (open)  | 0V  |
|          |            | Rear door switch lower RH (King Cab)                      |                     |                     | OFF (closed)                                       | Battery voltage   |
|          |            | Rear door switch upper RH (King Cab)                      |                     |                     |  |   |
| 13       | GR         | Rear door switch RH (Crew Cab)                            | 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  |

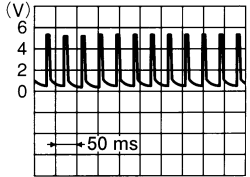
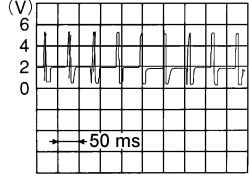
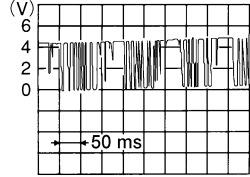
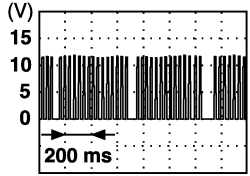
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# BCM (BODY CONTROL MODULE)

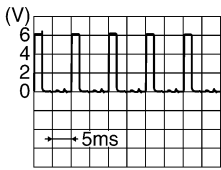
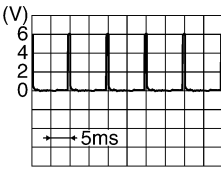
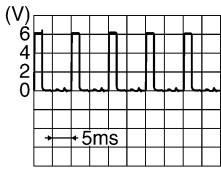
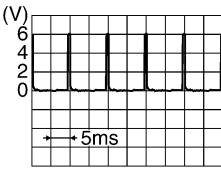
## < ECU DIAGNOSIS INFORMATION >

| 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; font-size: small;">L11A1895E</p>   |
| 20       | G/W        | Remote keyless entry receiver (signal)       | Input               | OFF                 | Stand-by (keyfob buttons released)  |  <p style="text-align: right; font-size: small;">L11A1894E</p>   |
|          |            |  |                     |                     | When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed) |  <p style="text-align: right; font-size: small;">L11A1895E</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       | G          | BUS  | —                   | —                   | Ignition switch ON or power window timer operates                                       |  <p style="text-align: right; font-size: small;">P11A2344E</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.                          |
| 27       | W/R        | Compressor ON signal                         | Input               | ON                  | A/C switch OFF  | 5V  |
|          |            |  |                     |                     | A/C switch ON   | 0V  |
| 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  |
| 31       | P/L        | Cargo lamp switch                            | Input               | OFF                 | Cargo lamp switch ON  | 0   |
|          |            |  |                     |                     | Cargo lamp switch OFF   | Battery voltage   |



# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

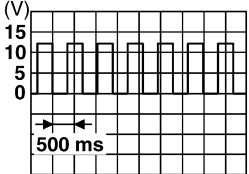
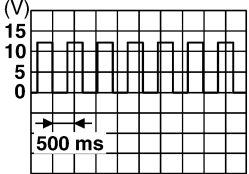
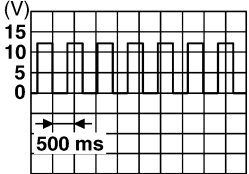
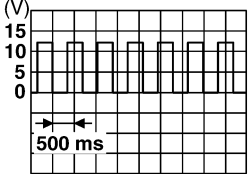
| Terminal | Wire color | Signal name                          | Signal input/output | Measuring condition |  | Reference value or waveform (Approx.)   |
|----------|------------|--------------------------------------|---------------------|---------------------|--|---|
|          |            |                                      |                     | Ignition switch     | Operation or condition                             |   |
| 32       | R/G        | Combination switch output 5          | Output              | ON                  | Lighting, turn, wiper OFF<br>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<br>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<br>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<br>Wiper dial position 4 |  <p style="text-align: right; font-size: small;">SKIA5292E</p> |
| 36       | R/W        | Combination switch output 1          |                     |                     |  |   |
| 37       | B/R        | Key switch and key lock solenoid     | Input               | OFF                 | Key inserted                                       | Battery voltage   |
|          |            |                                      |                     |                     | Key removed  | 0V  |
| 38       | W/L        | Ignition switch (ON)                 | Input               | ON                  | —  | Battery voltage   |
| 39       | L          | CAN-H                                | —                   | —                   | —  | —   |
| 40       | P          | CAN-L                                | —                   | —                   | —  | —   |
| 41       | Y/B        | Rear defogger switch                 | Input               | ON                  | Rear defogger switch ON                            | 0V  |
|          |            |                                      |                     |                     | Rear defogger switch OFF                           | 5V  |
| 47       | SB         | Front door switch LH (All)           | Input               | OFF                 | ON (open)  | 0V  |
|          |            | Rear door switch lower LH (King Cab) |                     |                     |  |   |
|          |            | Rear door switch upper LH (King Cab) |                     |                     |  |   |
| 48       | R/Y        | Rear door switch LH (Crew Cab)       | Input               | OFF                 | ON (open)  | 0V  |
|          |            |                                      |                     |                     | OFF (closed)                                       | Battery voltage   |
| 50       | R/Y        | Cargo bed lamp control               | Output              | OFF                 | Cargo lamp switch (ON)                             | 0V  |
|          |            |                                      |                     |                     | Cargo lamp switch (OFF)                            | Battery voltage   |

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

| Terminal | Wire color | Signal name   | Signal input/output | Measuring condition |  | Reference value or waveform (Approx.)   |
|----------|------------|---|---------------------|---------------------|--|---|
|          |            |   |                     | Ignition switch     | Operation or condition                         |   |
| 51       | Y/B        | 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>   |
| 56       | R/G        | Battery saver output  | Output              | OFF                 | 15 minutes after ignition switch is turned OFF | 0V  |
|          |            |   |                     | ON                  | —  | Battery voltage   |
| 57       | Y/R        | Battery power supply  | Input               | OFF                 | —  | Battery voltage   |
| 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> |
| 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 and rear door lock actuators LH/RH (unlock) | Output              | OFF                 | OFF (neutral)                                  | 0V  |
|          |            |   |                     |                     | ON (unlock)                                    | Battery voltage   |
| 67       | B          | Ground  | Input               | ON                  | —  | 0V  |

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

| Terminal | Wire color | Signal name                     | Signal input/output | Measuring condition |   | Reference value or waveform (Approx.) |
|----------|------------|---------------------------------|---------------------|---------------------|---|---------------------------------------|
|          |            |                                 |                     | Ignition switch     | Operation or condition  |                                       |
| 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                       |

### Fail Safe

INFOID:0000000011867234

### Fail-safe index

BCM performs fail-safe control when any DTC listed below is detected.

| Display contents of CONSULT | Fail-safe               | Cancellation  |
|-----------------------------|-------------------------|---|
| U1000: CAN COMM CIRCUIT     | Inhibit engine cranking | When the BCM re-establishes communication with the other modules. |

### DTC Inspection Priority Chart

INFOID:0000000011867234

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

| Priority | DTC   |
|----------|---|
| 1        | <ul style="list-style-type: none"> <li>U1000: CAN COMM CIRCUIT</li> </ul>   |
| 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> </ul> |

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# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

| Priority | DTC  |
|----------|--|
| 3        | <ul style="list-style-type: none"> <li>• C1729: VHCL SPEED SIG ERR</li> <li>• C1735: IGNITION SIGNAL</li> </ul>  |
| 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> |

## DTC Index

INFOID:000000011867235

### 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 | 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> |
| B2190: NATS ANTENA AMP                               | —         | —                                     | <a href="#">SEC-18</a> |
| B2191: DIFFERENCE OF KEY                             | —         | —                                     | <a href="#">SEC-21</a> |
| B2192: ID DISCORD BCM-ECM                            | —         | —                                     | <a href="#">SEC-22</a> |
| B2193: CHAIN OF BCM-ECM                              | —         | —                                     | <a href="#">SEC-24</a> |
| C1708: [NO DATA] FL                                  | —         | —                                     | <a href="#">WT-15</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-17</a>  |
| C1713: [CHECKSUM ERR] FR                             | —         | —                                     | <a href="#">WT-17</a>  |
| C1714: [CHECKSUM ERR] RR                             | —         | —                                     | <a href="#">WT-17</a>  |
| C1715: [CHECKSUM ERR] RL                             | —         | —                                     | <a href="#">WT-17</a>  |

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS INFORMATION >

| CONSULT display           | Fail-safe | Tire pressure monitor warning lamp ON | Reference page        |
|---------------------------|-----------|---------------------------------------|-----------------------|
| C1716: [PRESSDATA ERR] FL | —         | —                                     | <a href="#">WT-19</a> |
| C1717: [PRESSDATA ERR] FR | —         | —                                     | <a href="#">WT-19</a> |
| C1718: [PRESSDATA ERR] RR | —         | —                                     | <a href="#">WT-19</a> |
| C1719: [PRESSDATA ERR] RL | —         | —                                     | <a href="#">WT-19</a> |
| C1720: [CODE ERR] FL      | —         | —                                     | <a href="#">WT-17</a> |
| C1721: [CODE ERR] FR      | —         | —                                     | <a href="#">WT-17</a> |
| C1722: [CODE ERR] RR      | —         | —                                     | <a href="#">WT-17</a> |
| C1723: [CODE ERR] RL      | —         | —                                     | <a href="#">WT-17</a> |
| C1724: [BATT VOLT LOW] FL | —         | —                                     | <a href="#">WT-17</a> |
| C1725: [BATT VOLT LOW] FR | —         | —                                     | <a href="#">WT-17</a> |
| C1726: [BATT VOLT LOW] RR | —         | —                                     | <a href="#">WT-17</a> |
| C1727: [BATT VOLT LOW] RL | —         | —                                     | <a href="#">WT-17</a> |
| C1729: VHCL SPEED SIG ERR | —         | —                                     | <a href="#">WT-21</a> |
| C1735: IGNITION SIGNAL    | —         | —                                     | <a href="#">WT-23</a> |

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# WARNING CHIME SYSTEM

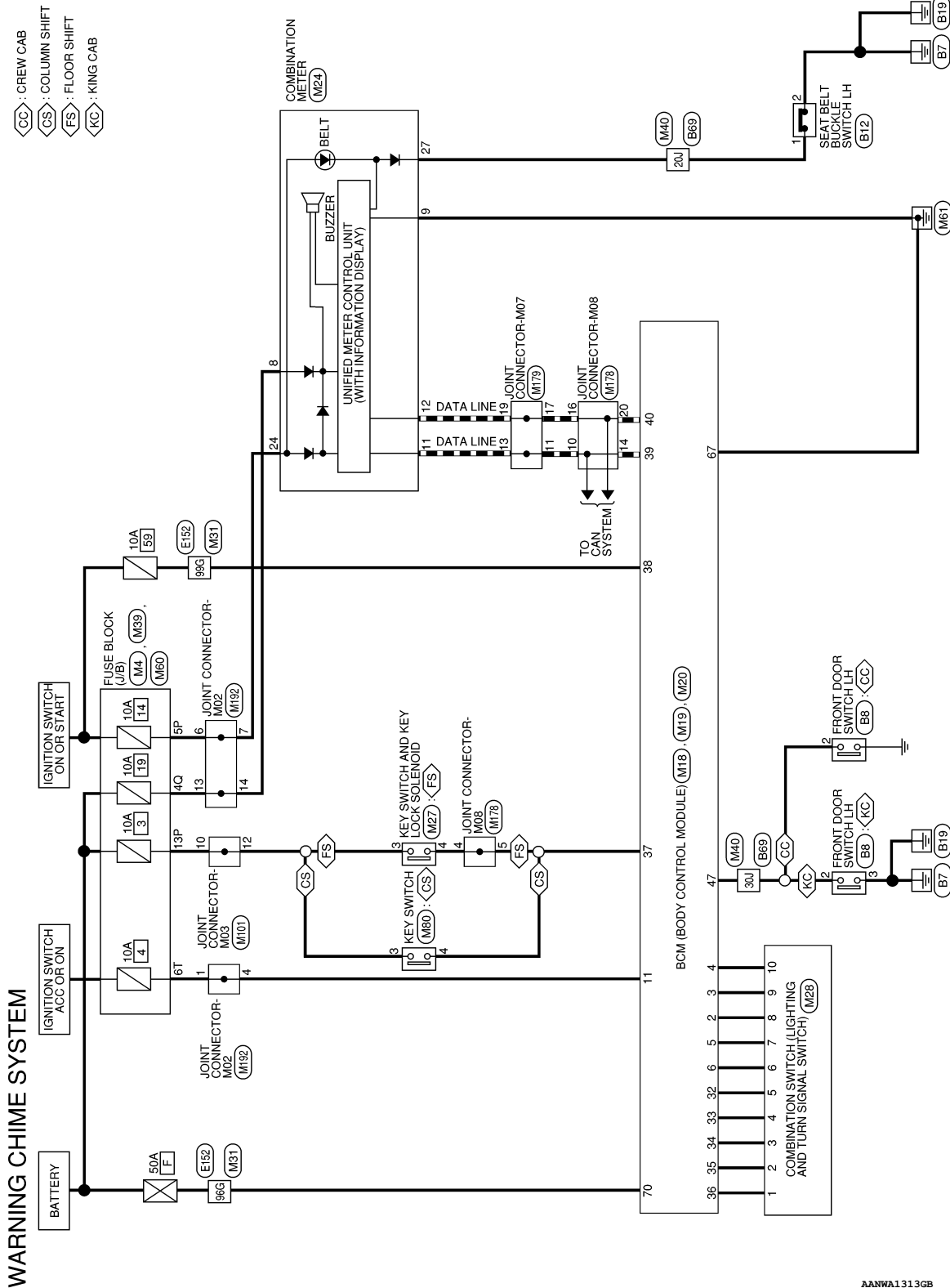
< WIRING DIAGRAM >

## WIRING DIAGRAM

### WARNING CHIME SYSTEM

#### Wiring Diagram

INFOID:000000011559289



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# WARNING CHIME SYSTEM

< WIRING DIAGRAM >

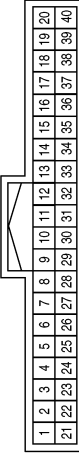
## WARNING CHIME SYSTEM CONNECTORS

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



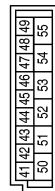
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 5P           | O/L           | -           |
| 13P          | P             | -           |

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



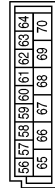
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | SB            | INPUT 5     |
| 3            | G/Y           | INPUT 4     |
| 4            | Y             | INPUT 3     |
| 5            | G/B           | INPUT 2     |
| 6            | V             | 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                     |



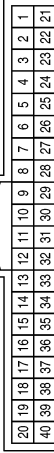
| Terminal No. | Color of Wire | Signal Name  |
|--------------|---------------|--------------|
| 47           | SB            | DOOR SW (DR) |

|                 |                           |
|-----------------|---------------------------|
| 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           | BAT (F/L)   |

|                 |                   |
|-----------------|-------------------|
| Connector No.   | M24               |
| Connector Name  | COMBINATION METER |
| Connector Color | WHITE             |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 8            | Y/R           | BATTERY     |
| 9            | B             | GND         |
| 11           | L             | CAN-H       |
| 12           | P             | CAN-L       |
| 24           | O/L           | RUN/START   |
| 27           | O/B           | SEATBELT    |

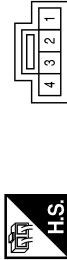
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WCS

# WARNING CHIME SYSTEM

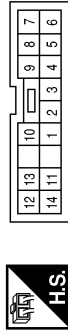
< WIRING DIAGRAM >

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



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

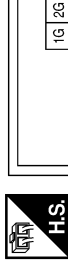
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| Connector No.   | M28  |
| Connector Name  | COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) |
| Connector Color | WHITE  |



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

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

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



- 11G | 12G | 13G | 14G | 15G | 16G | 17G | 18G | 19G | 20G | 21G
- 22G | 23G | 24G | 25G | 26G | 27G | 28G | 29G | 30G
- 31G | 32G | 33G | 34G | 35G | 36G | 37G | 38G | 39G | 40G | 41G
- 42G | 43G | 44G | 45G | 46G | 47G | 48G | 49G | 50G
- 51G | 52G | 53G | 54G | 55G | 56G | 57G | 58G | 59G | 60G | 61G
- 62G | 63G | 64G | 65G | 66G | 67G | 68G | 69G | 70G
- 71G | 72G | 73G | 74G | 75G | 76G | 77G | 78G | 79G | 80G | 81G
- 82G | 83G | 84G | 85G | 86G | 87G | 88G | 89G | 90G
- 91G | 92G | 93G | 94G | 95G
- 96G | 97G | 98G | 99G | 100G

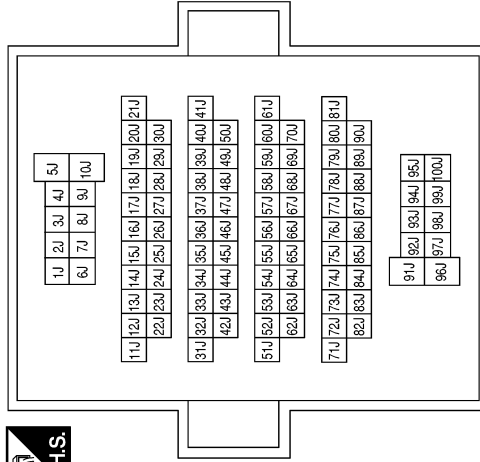
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 96G          | W/B           | -           |
| 99G          | W/L           | -           |

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| 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 |
|--------------|---------------|-------------|
| 20J          | O/B           | -           |
| 30J          | SB            | -           |

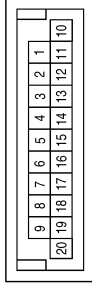
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# WARNING CHIME SYSTEM

< WIRING DIAGRAM >

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|-----------------|---------------------|
| Connector No.   | M101                |
| Connector Name  | JOINT CONNECTOR-M03 |
| Connector Color | BLUE                |



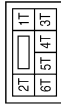
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 10           | P             | -           |
| 12           | P             | -           |

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| Connector No.   | M80        |
| Connector Name  | KEY SWITCH |
| Connector Color | WHITE      |



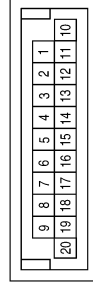
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 3            | P             | -           |
| 4            | B/R           | -           |

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



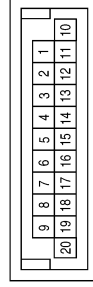
| Terminal No. | Color of Wire | Signal Name |
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| 6T           | O             | -           |

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| Connector No.   | M192                |
| Connector Name  | JOINT CONNECTOR-M02 |
| Connector Color | GREEN               |



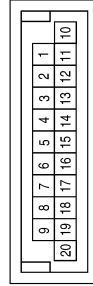
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 1            | O             | -           |
| 4            | O             | -           |
| 6            | O/L           | -           |
| 7            | O/L           | -           |
| 13           | Y/R           | -           |
| 14           | Y/R           | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | M179                |
| Connector Name  | JOINT CONNECTOR-M07 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 11           | L             | -           |
| 13           | L             | -           |
| 17           | P             | -           |
| 19           | P             | -           |

|                 |                     |
|-----------------|---------------------|
| Connector No.   | M178                |
| Connector Name  | JOINT CONNECTOR-M08 |
| Connector Color | WHITE               |



| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 4            | B/R           | -           |
| 5            | B/R           | -           |
| 10           | L             | -           |
| 14           | L             | -           |
| 16           | P             | -           |
| 20           | P             | -           |

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# WARNING CHIME SYSTEM

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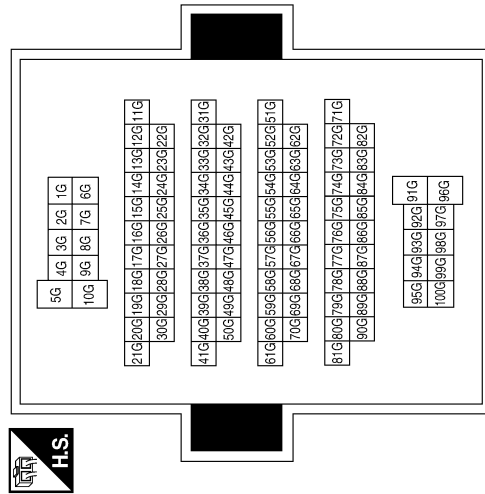
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| Connector No.   | B8                   |
| Connector Name  | FRONT DOOR SWITCH LH |
| Connector Color | WHITE                |



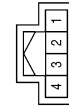
| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 2            | SB            | -           |
| 3            | B             | -           |

| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 96G          | W/B           | -           |
| 99G          | L/W           | -           |

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



|                 |                            |
|-----------------|----------------------------|
| Connector No.   | B12                        |
| Connector Name  | SEAT BELT BUCKLE SWITCH LH |
| Connector Color | WHITE                      |



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

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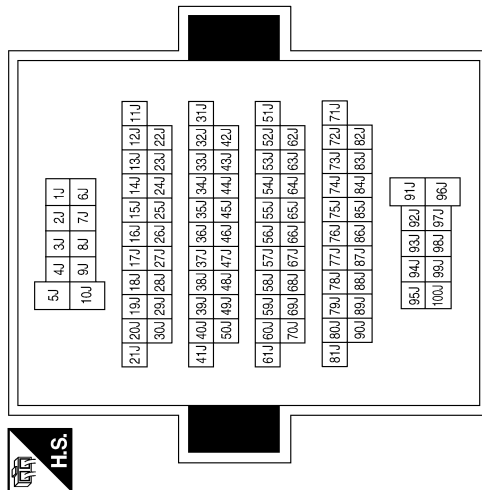
# WARNING CHIME SYSTEM

< WIRING DIAGRAM >

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| Terminal No. | Color of Wire | Signal Name |
|--------------|---------------|-------------|
| 20J          | O/B           | -           |
| 30J          | SB            | -           |

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



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# THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### THE LIGHT REMINDER WARNING DOES NOT SOUND

#### Description

INFOID:0000000011559290

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

#### Diagnosis Procedure

INFOID:0000000011559291

#### 1. CHECK COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) OPERATION

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

Do they operate normally?

YES >> GO TO 2.

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

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

For King Cab, perform inspection of the front door switch LH signal circuit. Refer to [DLK-26, "KING CAB : Diagnosis Procedure"](#) (King Cab).

For Crew Cab, perform inspection of the front door switch LH signal circuit. Refer to [DLK-28, "CREW CAB : Diagnosis Procedure"](#) (Crew Cab).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

#### 3. CHECK FRONT DOOR SWITCH LH

For King Cab, perform a unit inspection for the front door switch LH. Refer to [DLK-26, "KING CAB : Component Function Check"](#).

For Crew Cab, perform a unit inspection for the front door switch LH. Refer to [DLK-27, "CREW CAB : Component Function Check"](#).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-56, "Removal and Installation"](#).

NO >> Replace the front door switch LH.

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

< SYMPTOM DIAGNOSIS >

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

### Description

INFOID:0000000011559292

- 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:0000000011559293

#### 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 >>
- If both light reminder warning and key warning do not sound, replace combination meter. Refer to [MWI-95, "Removal and Installation"](#).
  - If the light reminder warning does not sound only, refer to [WCS-44, "Diagnosis Procedure"](#).
  - If key warning does not sound only, refer to [WCS-46, "Diagnosis Procedure"](#).

#### 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-56, "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-18, "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-19, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the combination meter. Refer to [MWI-95, "Removal and Installation"](#).

NO >> Replace the seat belt buckle switch LH. Refer to [SR-24, "Removal and Installation"](#).

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# THE KEY WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

---

## THE KEY WARNING DOES NOT SOUND

### Description

INFOID:000000011559294

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

### Diagnosis Procedure

INFOID:000000011559295

#### 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-95, "Removal and Installation"](#).

#### 2. CHECK KEY SWITCH CIRCUIT

---

For vehicles with column shift, perform inspection of the key switch circuit. Refer to [WCS-20, "Diagnosis Procedure - Column Shift"](#).

For vehicles with floor shift, perform inspection of the key switch circuit. Refer to [WCS-21, "Diagnosis Procedure - Floor Shift"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

#### 3. CHECK KEY SWITCH

---

For vehicles with column shift, perform a unit inspection for the key switch. Refer to [WCS-22, "Component Inspection - Column Shift"](#).

For vehicles with floor shift, perform a unit inspection for the key switch. Refer to [WCS-23, "Component Inspection - Floor Shift"](#).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-56, "Removal and Installation"](#).

NO >> Replace the key switch (column shift) or key switch and key lock solenoid (floor shift).

# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000011559296

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

#### **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

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