# SECTION MWI
# METER, WARNING LAMP & INDICATOR

## CONTENTS

# PRECAUTION

## PRECAUTIONS

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

INFOID:0000000011583452

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 collisions. Information necessary to service the system safely is included in the SR and SB sections 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.**

### Precaution for Work

INFOID:0000000011583453

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt:

- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.

- Oily dirt:

- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

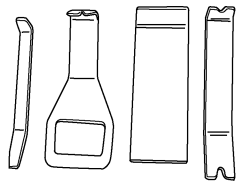
# PREPARATION

## PREPARATION

### Special Service Tool

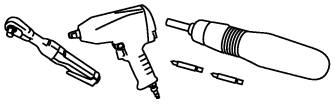
INFOID:0000000011583494

The actual shape of the tools may differ from those illustrated here.

| Tool number<br>(TechMate No.)<br>Tool name | Description |
|---|---|
| —<br>(J-46534)<br>Trim tool set<br>  <br>AWJIA0483ZZ | Removing trim components |

### Commercial Service Tools

INFOID:0000000011583495

| (TechMate No.)<br>Tool name | Description |
|---|---|
| ( — )<br>Power tool<br>  <br>PIIB1407E | Loosening nuts, screws and bolts |

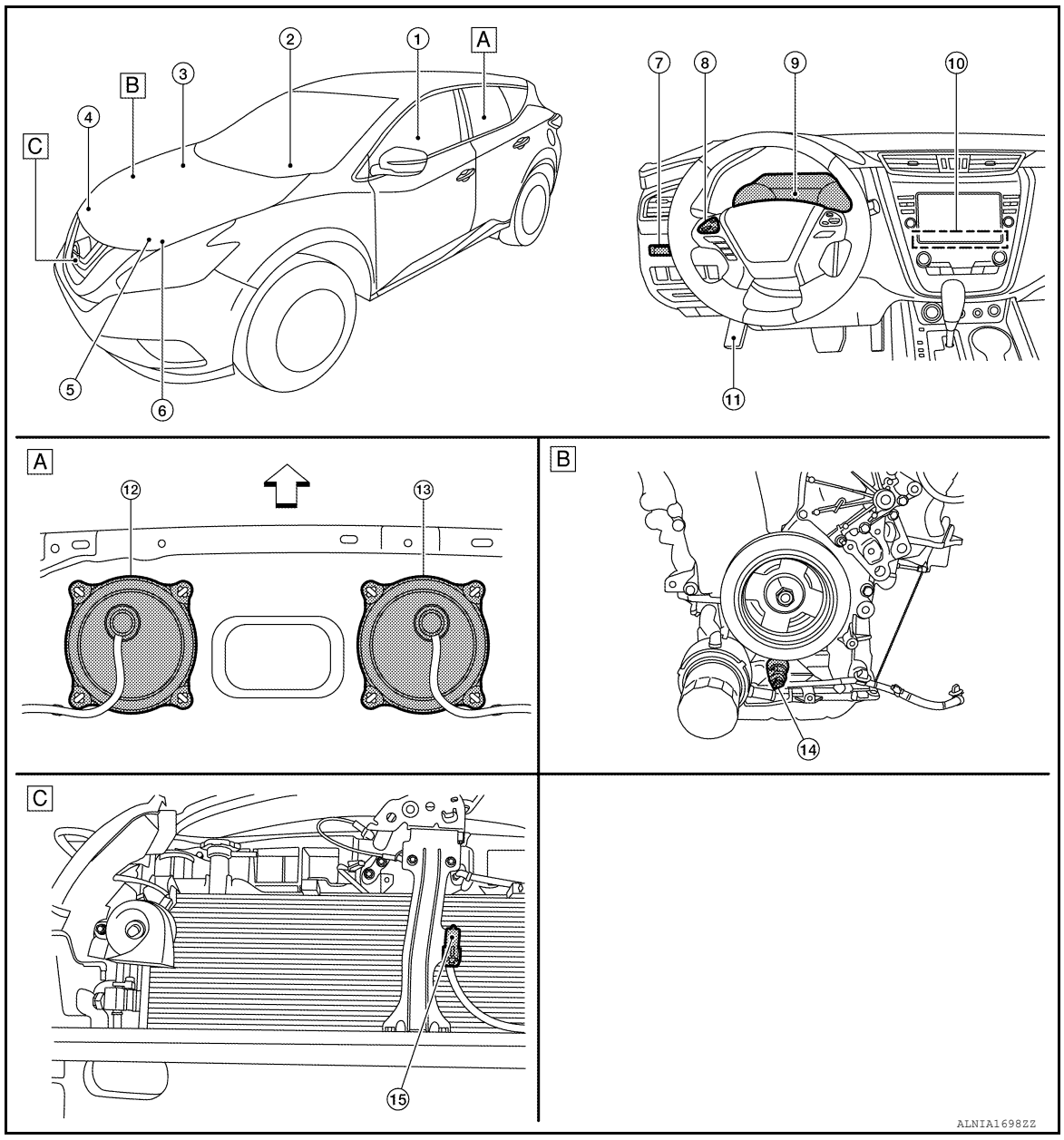
# SYSTEM DESCRIPTION

## COMPONENT PARTS

### METER SYSTEM

#### METER SYSTEM : Component Parts Location

INFOID:0000000011551980




⇦ :Vehicle front

A. View of the inspection hole covers with the second row seat removed

B. View of front engine assembly

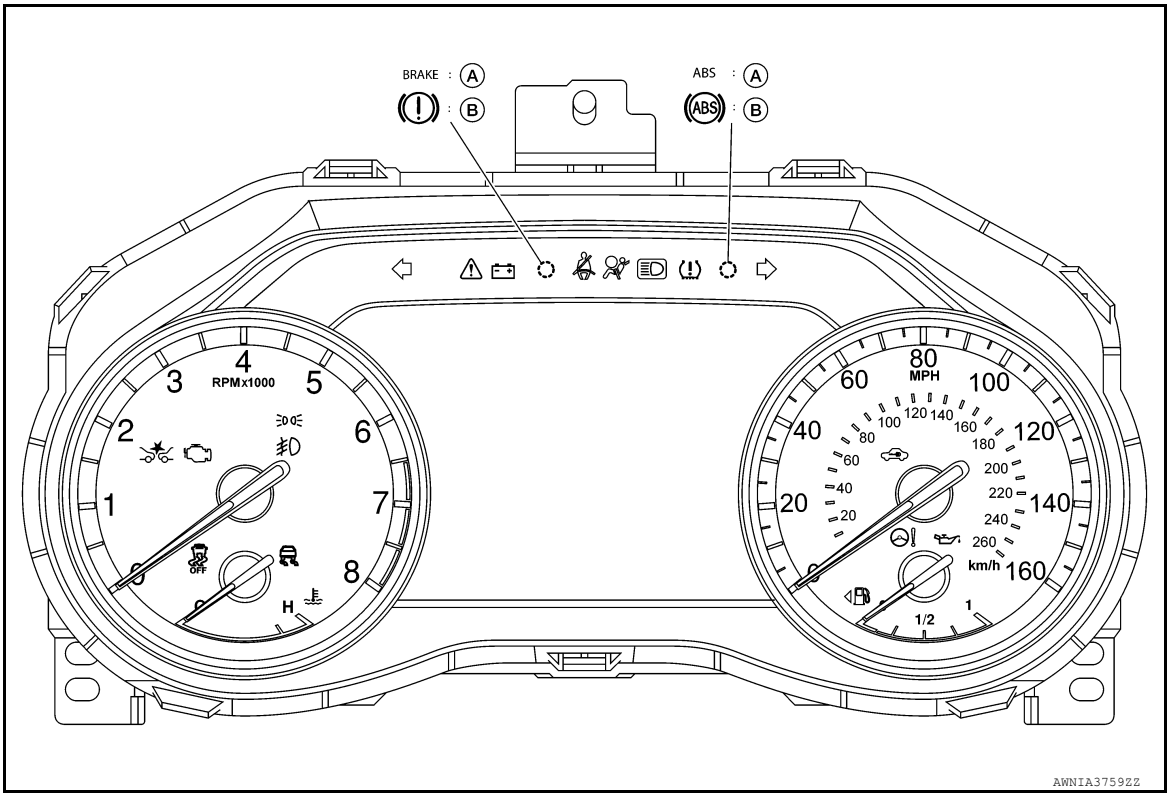
C. View with front fascia removed

| No. | Component | Function |
|---|---|---|
| 1. | Seat belt buckle switch LH | Transmits the seat belt buckle switch LH signal to the combination meter. |
| 2. | BCM | • Transmits each signal to the combination meter via CAN communication. Refer to BCS-6, "BODY CONTROL SYSTEM : System Description".<br>• Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location. |
| 3. | ABS actuator and electric unit (control unit) | • Transmits each signal to the combination meter via CAN communication. Refer to BRC-15, "System Description".<br>• Refer to BRC-10, "Component Parts Location" for detailed installation location. |
| 4. | Washer fluid level switch | • Transmits the washer fluid level switch signal to the combination meter.<br>• Refer to WW-6, "Component Parts Location" for detailed installation location. |
| 5. | ECM | • Transmits each signal to the combination meter via CAN communication. Refer to EC-32, "ENGINE CONTROL SYSTEM : System Description".<br>• Refer to EC-15, "ENGINE CONTROL SYSTEM : Component Parts Location" for detailed installation location. |
| 6. | TCM | • Transmits each signal to the combination meter via CAN communication. Refer to TM-28, "CVT CONTROL SYSTEM : System Description".<br>• Refer to TM-11, "CVT CONTROL SYSTEM : Component Parts Location" for detailed installation location. |
| 7. | Meter control switch | Refer to MWI-17, "Switch Name and Function". |
| 8. | Steering switches | Refer to MWI-17, "Switch Name and Function". |
| 9. | Combination meter | Refer to MWI-9, "METER SYSTEM : System Description". |
| 10. | A/C auto amp. | • Transmits the ambient sensor signal to the combination meter via CAN communication.<br>• Refer to HAC-6, "Component Parts Location" for detailed installation location. |
| 11. | Parking brake switch | Transmits the parking brake switch signal to the combination meter. |
| 12. | Fuel level sensor unit and fuel pump (fuel level sensor) | Transmits the fuel level sensor signal to the combination meter. |
| 13. | Fuel level sensor unit (sub) | Transmits the fuel level sensor signal to the combination meter. |
| 14. | Engine oil pressure sensor | Transmits the engine oil pressure sensor signal to the ECM. |
| 15. | Ambient sensor | • Transmits the ambient sensor signal to the A/C auto amp.<br>• Refer to HAC-6, "Component Parts Location" for detailed installation location. |

## METER SYSTEM : Design

INFOID:0000000011551981

### ARRANGEMENT OF COMBINATION METER




A: USA B: Except USA

## METER SYSTEM : Combination Meter

INFOID:0000000011551983

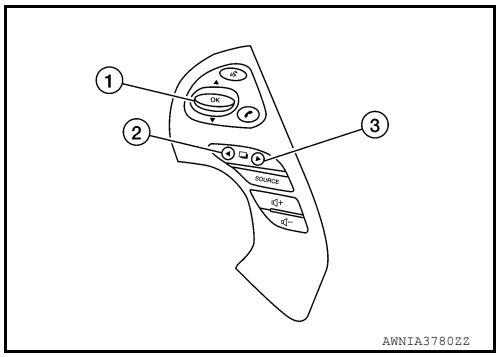
The combination meter controls the following items according to the signals received from each unit via CAN communication and the signals from switches and sensors:

- Speedometer
- Tachometer
- Engine coolant temperature gauge
- Fuel gauge
- Indicator lamps
- Warning lamps
- Meter illumination control
- Meter effect function
- Information display

## METER SYSTEM : Steering Switches

INFOID:0000000011551921

- The steering switches are located on the steering wheel.
- The meter system transmits the steering switch signal to the combination meter.



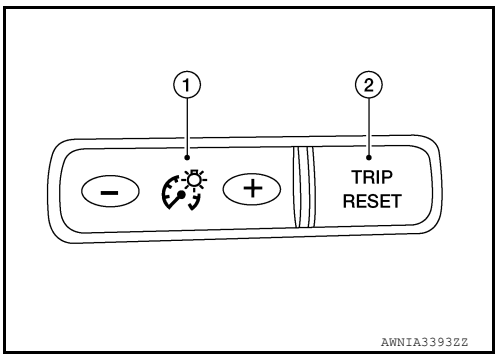
| No. | Switch name | Operation | Description |
|---|---|---|---|
| 1. | Enter/Up/Down switch | Press | The information display settings can be changed. |
| 2. | Back switch | | |
| 3. | Display switch | | |

## METER SYSTEM : Meter Control Switch

INFOID:0000000011551922

- The meter control switch is located on the instrument lower panel LH.
- The meter control switch transmits the following signals to the combination meter:

- Trip reset switch signal
- Illumination control switch signal (+)
- Illumination control switch signal (−)

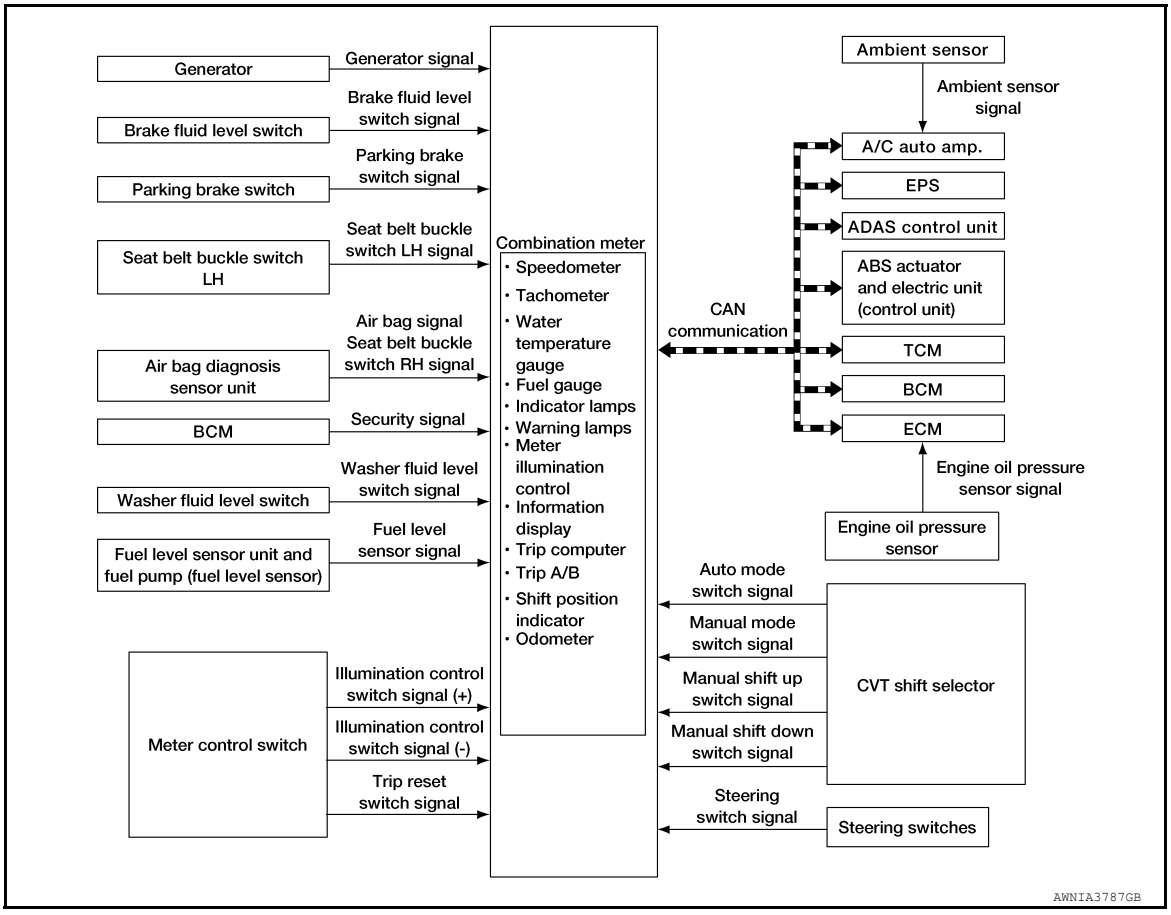



| No. | Switch name | Operation | Description |
|---|---|---|---|
| 1. | Illumination control switch | Press | An illuminance level of the back light of the combination meter can be adjusted. |
| 2. | Trip reset switch | Press | • The trip meter can be switched between A and B.<br>• Trip meter A/B can be reset by pressing and holding the trip reset switch.<br>• A trip computer value displayed on the information display can be reset by pressing and holding the trip reset switch for 1 second or more.<br>• All trip computer values can be reset by pressing and holding the trip reset switch for 3 seconds or more. |

# SYSTEM
## METER SYSTEM
### METER SYSTEM : System Description

INFOID:0000000011551923

#### SYSTEM DIAGRAM




Combination Meter Input Signal (CAN Communication Signal)

| Transmit unit | Signal name |
|---|---|
| ABS actuator and electric unit (control unit) | Vehicle speed signal |
| | ABS warning lamp signal |
| | VDC warning lamp signal |
| | VDC OFF indicator lamp signal |
| | Brake warning lamp signal |

| Transmit unit | Signal name |
|---|---|
| BCM | Dimmer signal |
| | Position light request signal |
| | Door switch signal |
| | Front fog light request signal |
| | High beam request signal |
| | Meter display signal |
| | Sleep wake up signal |
| | Buzzer output signal |
| | Tire pressure data signal |
| | Key ID signal |
| | Turn indicator signal |
| | TPMS malfunction warning lamp signal |
| | Starter relay status signal |
| | Low tire pressure warning lamp signal |
| TCM | Shift position signal |
| | A/T CHECK warning lamp signal |
| ECM | Engine speed signal |
| | ASCD status signal |
| | Engine coolant temperature signal |
| | Fuel consumption monitor signal |
| | Malfunctioning indicator lamp signal |
| | Engine status signal |
| | Engine oil pressure sensor signal |
| | Fuel-filler cap warning display signal |
| AWD control unit | AWD warning lamp signal |
| A/C auto amp. | Ambient sensor signal |
| ADAS control unit | BSW warning lamp signal |
| | ICC warning lamp signal |
| | FEB warning lamp signal |

## DESCRIPTION

Combination Meter

The combination meter controls the following items according to the signals received from each unit via CAN communication and the signals from switches and sensors:

- Speedometer
- Tachometer
- Engine coolant temperature gauge
- Fuel gauge
- Warning lamps
- Indicator lamps
- Meter illumination control
- Meter effect function
- Information display

The combination meter incorporates a buzzer function that sounds an audible alarm with the integrated buzzer. Refer to WCS-5, "WARNING CHIME SYSTEM : System Description" for further details.

The combination meter includes an on board diagnosis function.

The combination meter can be diagnosed with CONSULT.

## METER CONTROL FUNCTION LIST

| System | | Description | Reference |
|---|---|---|---|
| Measuring instruments | Speedometer | Indicates vehicle speed. | MWI-12, "SPEEDOMETER : System Description" |
| | Tachometer | Indicates engine speed. | MWI-13, "TACHOMETER : System Description" |
| | Engine coolant temperature gauge | Indicates engine coolant temperature. | MWI-13, "ENGINE COOLANT TEMPERATURE GAUGE : System Description" |
| | Fuel gauge | Indicates fuel level. | MWI-13, "FUEL GAUGE : System Description" |
| Information display | | The information display displays status according to system malfunction or vehicle condition. | MWI-15, "INFORMATION DISPLAY : System Description" |
| Meter illumination control | Meter illumination control function | Switches back and forth between daytime mode and nighttime mode according to a light switch position. | MWI-14, "METER ILLUMINATION CONTROL : System Description" |
| | Back light illumination control function | The operation of the illumination control switch allows the brightness adjustment of meter illumination. | |
| Meter effect function | Engine-start effect function | Controls pointers of combination meter, back light illumination and information display at engine start to produce illumination effects. | MWI-14, "METER EFFECT FUNCTION : System Description" |
| | Driver welcome function | Controls meter illumination to produce illumination effects when getting in the vehicle. | |

## METER SYSTEM : Fail-safe

INFOID:0000000011551979

The combination meter activates the fail-safe control if the CAN communication lines between each unit are malfunctioning.

| Function | Specifications |
|---|---|
| Speedometer | Reset to zero by suspending communication. |
| Tachometer | |
| Engine coolant temperature gauge | |
| Meter illumination control | When suspending communication, it changes to nighttime mode. |
| Buzzer | Turns OFF by suspending communication. |

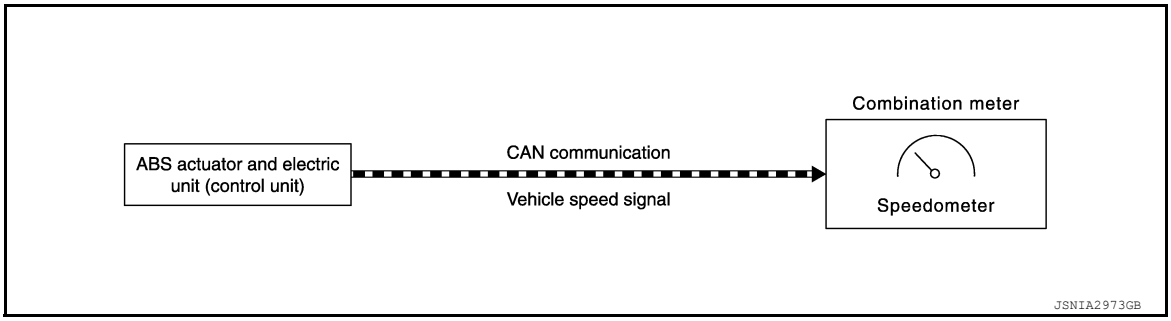
| Function | | Specifications |
|---|---|---|
| Information display | Current fuel consumption | The last result calculated during normal condition is indicated. |
| | Average fuel consumption | |
| | Average vehicle speed | |
| | Range (Distance to empty) | |
| | Driving distance | |
| | Door open warning | The display turns OFF by suspending communication. |
| | Liftgate open warning | |
| | Low tire pressure warning | |
| | Parking brake release warning | |
| | Fuel-filler cap warning | |
| | Oil pressure warning | |
| | AWD warning lamp | |
| | BSW warning | |
| | Odo/trip meter | An indicated value is maintained at communications blackout. |
| | Shift position indicator | The indicator turns OFF by suspending communication. |
| Warning lamp/indicator lamp | ABS warning lamp | Turns ON by suspending communication. |
| | Brake warning lamp | |
| | EPS warning lamp | |
| | VDC warning lamp | |
| | FEB warning lamp | |
| | Malfunction indicator lamp | |
| | Air bag warning lamp | |
| | Charge warning lamp | |
| | VDC OFF indicator lamp | Turns OFF by suspending communication. |
| | High beam indicator lamp | |
| | Turn signal indicator lamp | |
| | Position lamp indicator lamp | |
| | Front fog lamp indicator lamp | |
| | Low tire pressure warning lamp | After blinking for 1 minute, the lamp remains ON. |

# SPEEDOMETER

## SPEEDOMETER : System Description

INFOID:0000000011551925

### SYSTEM DIAGRAM




### DESCRIPTION

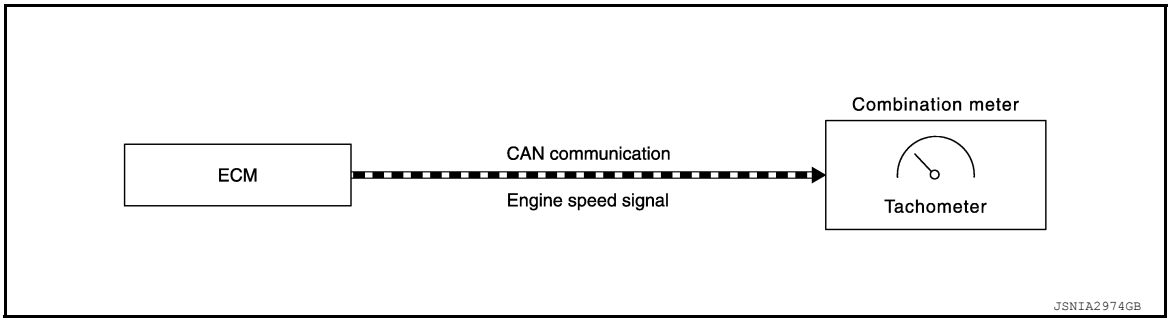
The ABS actuator and electric unit (control unit) receives each wheel speed sensor signal and provides a vehicle speed signal to the combination meter via CAN communication lines.

# TACHOMETER

## TACHOMETER : System Description

INFOID:0000000011551926

### SYSTEM DIAGRAM




### DESCRIPTION

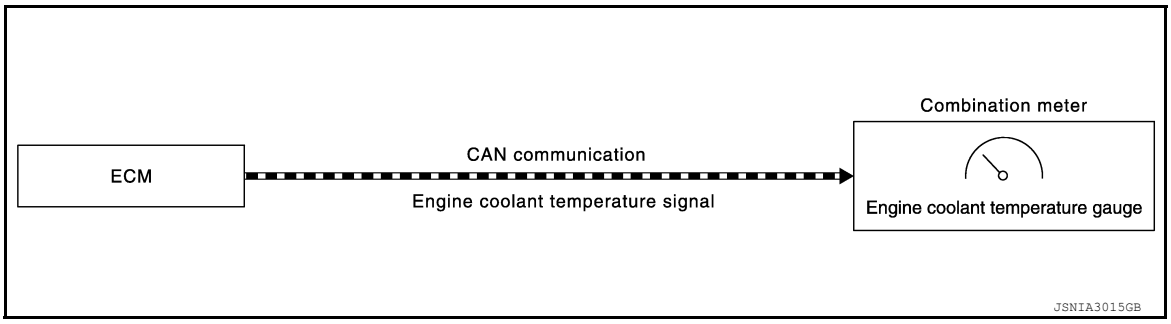
The crank position sensor sends a crankshaft position signal to the ECM. The ECM provides an engine speed signal to the combination meter via CAN communication lines. The tachometer indicates engine speed in revolutions per minute (rpm).

# ENGINE COOLANT TEMPERATURE GAUGE

## ENGINE COOLANT TEMPERATURE GAUGE : System Description

INFOID:0000000011551927

### SYSTEM DIAGRAM




### DESCRIPTION

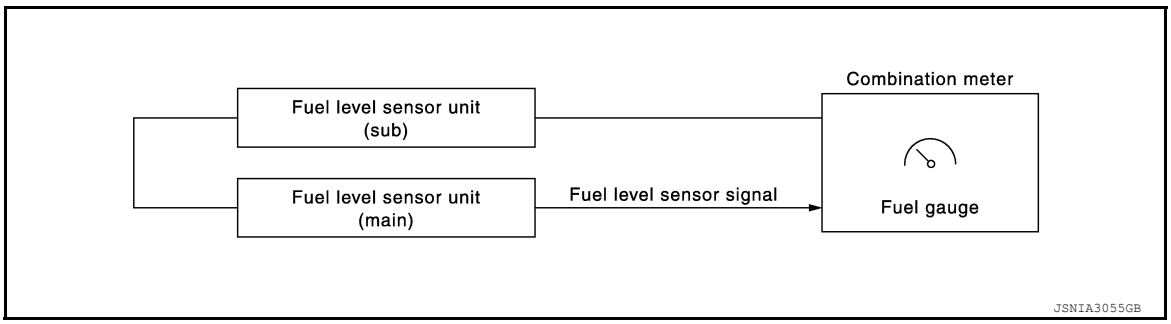
The engine coolant temperature sensor sends an engine coolant temperature signal to the ECM. The ECM provides an engine coolant temperature signal to the combination meter via CAN communication lines. The engine coolant temperature gauge indicates the engine coolant temperature.

# FUEL GAUGE

## FUEL GAUGE : System Description

INFOID:0000000011551928

### SYSTEM DIAGRAM




### DESCRIPTION

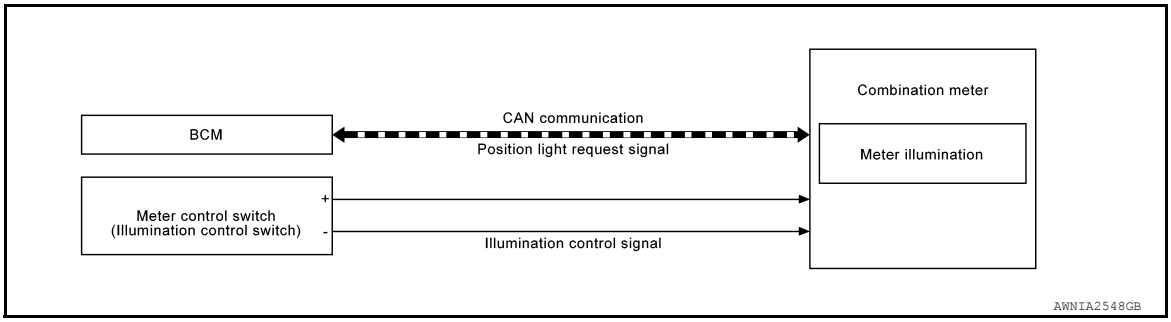
The fuel level sensor unit sends a variable resistor signal to the combination meter. The fuel gauge indicates the approximate fuel level in the fuel tank.

# METER ILLUMINATION CONTROL

# METER ILLUMINATION CONTROL : System Description

INFOID:0000000011551929

## SYSTEM DIAGRAM




## DESCRIPTION

### Meter Illumination Control Function

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

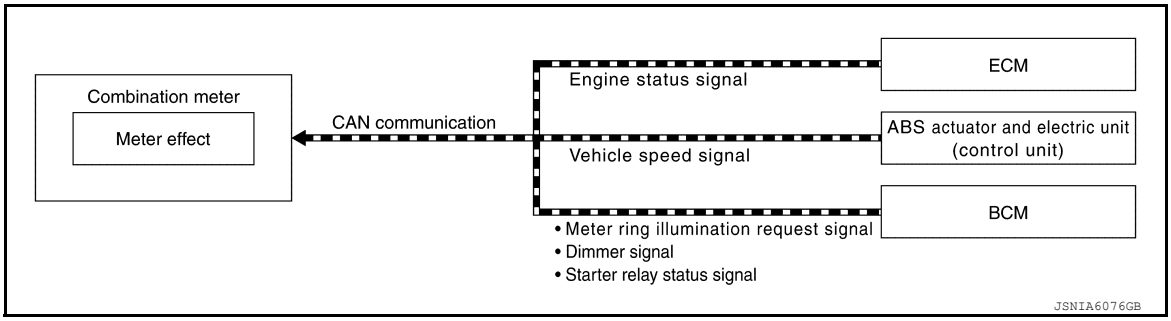
| Meter illumination | The number of adjustable steps |
|---|---|
| Daytime | 21 |
| Nighttime | 21 |

# METER EFFECT FUNCTION

# METER EFFECT FUNCTION : System Description

INFOID:0000000011551930

## SYSTEM DIAGRAM




## ENGINE-START EFFECT FUNCTION

When recognizing an engine start, the combination meter controls the following items for producing the effect:

- Speedometer
- Tachometer
- Engine coolant temperature gauge
- Fuel gauge
- Meter illumination

### Meter and Illumination Operations During Engine-start Effect

The combination meter controls the following items during the engine-start effect:

| Control item | | Operation |
|---|---|---|
| Speedometer | | Sweeps the pointer. |
| Tachometer | | Sweeps the pointer. |
| Engine coolant temperature gauge | | Stops the pointer. |
| Fuel gauge | | Stops the pointer. |
| Meter illumination | Pointers | Turns on the illumination at the effect level. |
| | Information display | Turns on the illumination at the normal brightness level. |
| | Other than those above | Increases the brightness to the effect level in stages. |

**NOTE:**
The pointers are stopped and illumination is turned off while cranking the engine.

Engine Start Judgment
The combination meter judges engine-start and activates the engine-start effect only once when the following operational conditions are all satisfied:

| Condition | |
|---|---|
| Ignition switch | ON position |
| Vehicle speed | Less than 0.6 MPH (1 km/h) |
| Engine state | Other than the time of cranking the engine |
| | 500 rpm or more |
| Information display (SETTING) | The setting of “EFFECT” is ON |

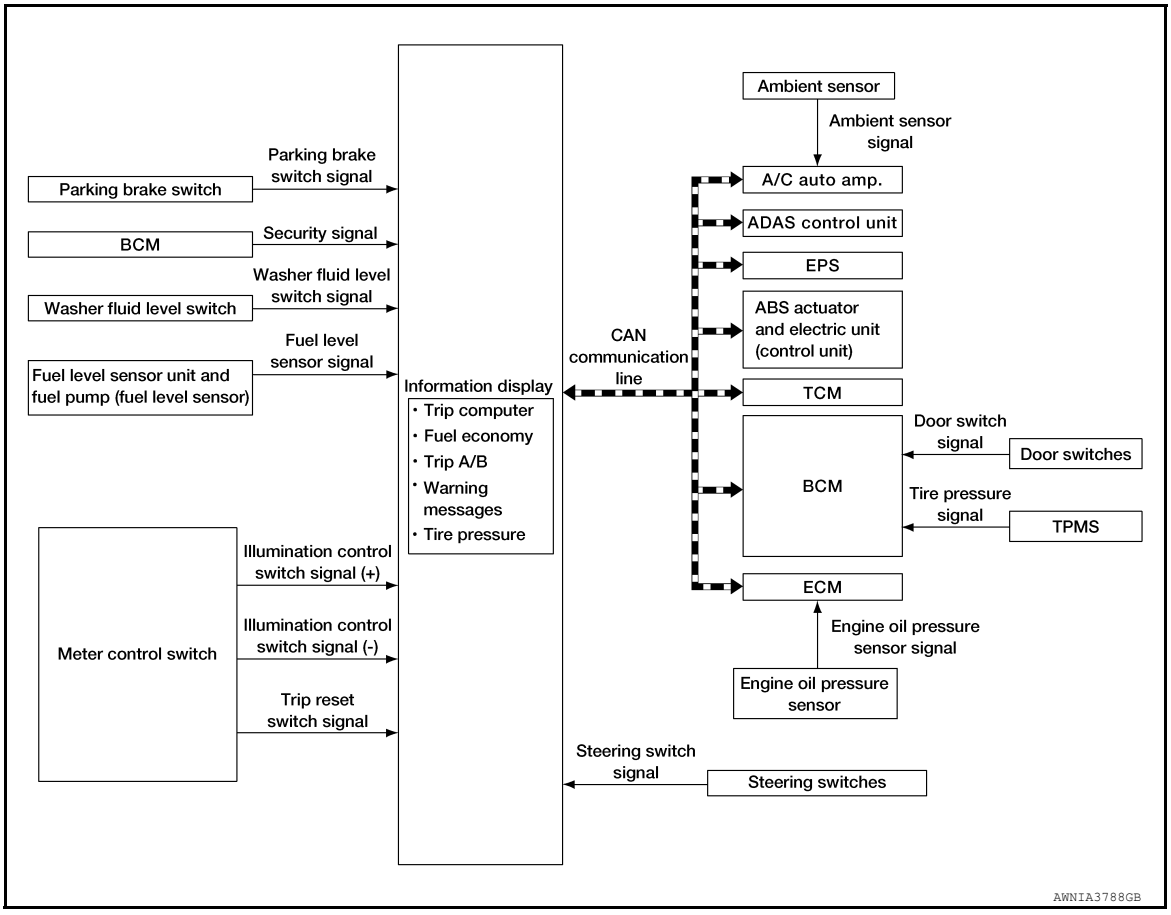
**NOTE:**
Engine-start effect exits when any of the above operational conditions are canceled during the engine-start effect.

# INFORMATION DISPLAY

## INFORMATION DISPLAY : System Description

INFOID:0000000011551931

### SYSTEM DIAGRAM




### FUNCTION

The information display can indicate the following items:
- Outside air temperature
- Trip computer
- Intelligent Key operation information
- Odometer

- Warning/Indication messages (door open, lift gate open, low oil pressure, AWD, I-Key, low fuel, low washer fluid, release parking brake, low tire pressure and loose fuel cap).

### OUTSIDE AIR TEMPERATURE INDICATION

This indication displays the ambient temperature based on signal received from the A/C auto amp. via CAN communication lines.

### LOOSE FUEL CAP MESSAGE

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

### LOW TIRE PRESSURE WARNING

This warning appears when the BCM detects low inflation pressure or a system malfunction. The BCM sends a signal to the combination meter via CAN communication lines to illuminate the low tire pressure warning lamp. In addition, a warning message will be displayed in the vehicle information display.

### DOOR OPEN WARNING

This warning appears when the ignition switch is ON and the door is open. The BCM receives a door switch signal from the door switch of the open door. The BCM sends the door switch signal to the combination meter via CAN communication lines.

### LIFTGATE OPEN WARNING

This warning appears when the ignition switch is ON and the liftgate is opened. The BCM receives a back door switch signal from the back door switch. The BCM sends the back door switch signal to the combination meter via CAN communication lines.

### LOW FUEL WARNING

This warning appears when the fuel level in the fuel tank is low.

### LOW WINDSHIELD WASHER FLUID WARNING

When the windshield washer fluid level is low, the washer fluid level switch provides a ground signal to the combination meter and the warning is displayed. Once fluid is added, the switch opens and the warning is no longer displayed.

### RELEASE PARKING BRAKE WARNING

When the parking brake is applied, the parking brake switch provides a ground signal to the combination meter. When the vehicle speed is greater than 4 MPH (7 km/h), the message is displayed and the warning chime sounds.

### LOW OIL PRESSURE WARNING

The low oil pressure warning appears in the information display when the combination meter receives a low engine oil pressure signal from the ECM via CAN communication lines.

### WARNING CHECK INDICATION

The combination meter can cause an interruption on the information display to indicate a warning, based on signals received from each unit and switch.

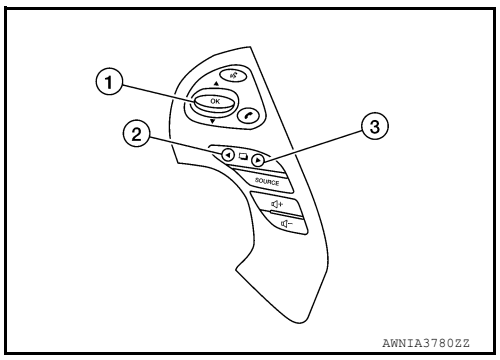
Refer to Owner’s Manual for additional information on the information display items.

# OPERATION

## Switch Name and Function

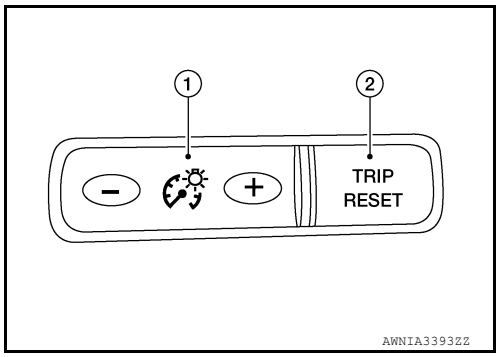
INFOID:0000000011551982

### STEERING SWITCHES




| No. | Switch name | Operation | Description |
|---|---|---|---|
| 1. | Enter/Up/Down switch | Press | The information display settings can be changed. |
| 2. | Back switch | | |
| 3. | Display switch | | |

### METER CONTROL SWITCH




| No. | Switch name | Operation | Description |
|---|---|---|---|
| 1. | Illumination control switch | Press | An illuminance level of the back light of the combination meter can be adjusted. |
| 2. | Trip reset switch | Press | • The trip meter can be switched between A and B.<br>• Trip meter A/B can be reset by pressing and holding the trip reset switch.<br>• A trip computer value displayed on the information display can be reset by pressing and holding the trip reset switch for 1 second or more.<br>• All trip computer values can be reset by pressing and holding the trip reset switch for 3 seconds or more. |

# DIAGNOSIS SYSTEM (COMBINATION METER)

## On Board Diagnosis Function

INFOID:0000000011551934

### COMBINATION METER SELF-DIAGNOSIS MODE

The following meter functions can be checked during Combination Meter Self-Diagnosis Mode:

- Pointer sweep of speedometer, tachometer and gauges
- Illumination of all LCD segments and color patterns for meter displays
- Illumination of all lamps/LEDs that are controlled by the combination meter (regardless of switch status)

### STARTING COMBINATION METER SELF-DIAGNOSIS MODE

**NOTE:**

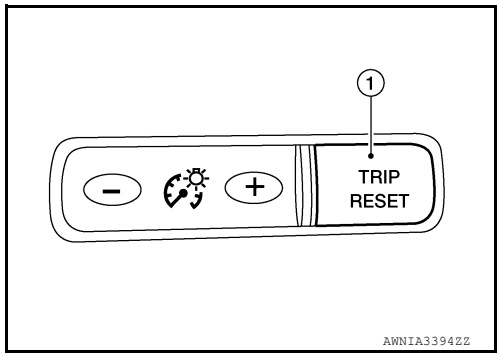
- Check combination meter power supply and ground circuits if self-diagnosis mode does not start. Refer to MWI-59, "COMBINATION METER : Diagnosis Procedure". Replace combination meter if power supply and ground circuits are found to be normal and self-diagnosis mode does not start. Refer to MWI-78, "Removal and Installation".
- Combination meter self-diagnosis mode will function with the ignition switch in ON. Combination meter self-diagnosis mode will exit upon turning the ignition switch to OFF.

How to Initiate Self-Diagnosis Mode

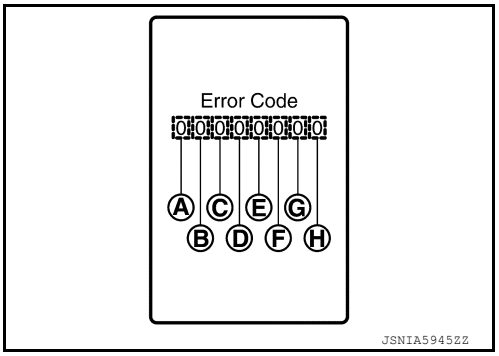
1. Turn ignition switch OFF.
2. While pressing the trip reset switch (1), turn ignition switch ON.
3. Keep pressing the trip reset switch for 1 second or more.
4. Press the trip reset switch at least 3 times within 7 seconds after the ignition switch is turned ON.
5. “Work instruction code” is indicated in the top portion of information display and self-diagnosis is started.
6. The mode switches in the order shown below each time the trip reset switch is pressed.

**NOTE:**

If the trip reset switch is not operated for 20 seconds or more, the self-diagnosis mode is automatically canceled.




| Test order | Test item | Description |
|---|---|---|
| 1 | Work instruction code | This item is displayed, but not used. |
| 2 | Part number | |
| 3 | Software code | |
| 4 | EEPROM code | |
| 5 | Hardware code | |
| 6 | P.C.B code | |
| 7 | Circuit check | The pointer of the following items moves from 0 to MAX twice.<br>• Speedometer<br>• Tachometer<br>• Engine coolant temperature gauge<br>• Fuel gauge<br>**NOTE:**<br>If any of the pointers does not sweep, replace combination meter. |
| 8 | Color check | Performs the color check of the information display. |
| 9 | Error code | Displays the error code of the following items:<br>• Speedometer<br>• Tachometer<br>• Engine coolant temperature gauge<br>• Fuel gauge<br>• Meter control switch |
| 10 | Warning/indicator lamp check | All warning/indicator lamps illuminate. |




| Item | | Code | Description | Action to take/Reference |
|---|---|---|---|---|
| Ⓐ | Speedometer | 0 | Normal | — |
| | | 1 | A vehicle speed signal cannot be received from ABS actuator and electric unit (control unit). | Perform “Self Diagnostic Result” of “ABS.” Refer to MWI-29, "DTC Index". |
| | | 2 | A vehicle speed signal received from the ABS actuator and electric unit (control unit) is abnormal. | |
| Ⓑ | Tachometer | 0 | Normal | — |
| | | 1 | An engine speed signal cannot be received from ECM. | Perform “Self Diagnostic Result” of “ECM.” Refer to MWI-29, "DTC Index". |
| Ⓒ | Fuel gauge | 0 | Normal | — |
| | | 1 | Fuel gauge circuit is shorted. | Refer to MWI-63, "Component Function Check". |
| | | 2 | Fuel gauge circuit is open. | |
| Ⓓ | Engine coolant temperature gauge | 0 | Normal | — |
| | | 1 | An engine coolant temperature signal cannot be received from ECM. | Perform “Self Diagnostic Result” of “ECM.” Refer to MWI-29, "DTC Index". |
| Ⓔ | Meter control switch | 0 | Normal | — |
| | | 1 | When judging that the illumination control switch signal circuit is shorted for 5 minutes or more. | Refer to MWI-61, "Diagnosis Procedure". |
| | | 2 | When judging that the trip reset switch signal circuit is shorted for 5 minutes or more. | |
| | | 3 | When judging that both switch signal circuit are shorted for 5 minutes or more. | |
| Ⓕ | — | 0 | Displays “0” constantly. | — |
| Ⓖ | — | 0 | Displays “0” constantly. | — |
| Ⓗ | — | 0 | Displays “0” constantly. | — |

How to Reset Error Code

Error codes stored in combination meter can be reset by following the instructions below:

1. Turn ignition switch OFF.
2. While pressing the trip reset switch, turn ignition switch ON.
3. Keep pressing the trip reset switch for 1 second or more.
4. Press the trip reset switch at least 3 times within 7 seconds after the ignition switch is turned ON.
5. Turn ignition switch OFF.
6. Perform self-diagnosis and check that the error codes are reset.

## CONSULT Function (METER/M&A)

INFOID:0000000011551935

### APPLICATION ITEMS

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

| 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. |
| Work support | Displays diagnosis procedure of each work item. |
| Warning History | Lighting history of the warning lamp and indicator lamp can be checked. |
| CAN DIAG SUPPORT MNTR | The result of transmit/receive diagnosis of CAN communication can be read. |

### SELF DIAG RESULT

Refer to MWI-29, "DTC Index".

### DATA MONITOR

Display Item List

X: Applicable

| Display item [Unit] | MAIN SIGNALS | Description |
|---|---|---|
| SPEED METER | X | Displays the value of vehicle speed signal. |
| SPEED OUTPUT [mph or km/h] | X | Vehicle speed signal value transmitted to other units via CAN communication. |
| ODO OUTPUT [mph or km/h] | | Odometer signal value transmitted to other units via CAN communication. |
| TACHO METER [rpm] | X | Value of the engine speed signal received from ECM via CAN communication. |
| FUEL METER [L] | X | Fuel level indicated on combination meter. |
| W TEMP METER [°F] or [°C] | X | Displays the value of engine coolant temperature signal, which is input from ECM. |
| ABS W/L [On/Off] | | Displays [ON/OFF] condition of ABS warning indicator. |
| VDC/TCS IND [On/Off] | | Displays [ON/OFF] condition of VDC OFF indicator lamp. |
| SLIP IND [On/Off] | | Displays [ON/OFF] condition of SLIP indicator lamp. |
| BRAKE W/L [On/Off] | | Displays [ON/OFF] condition of brake warning indicator. |
| DOOR W/L [On/Off] | | Displays [ON/OFF] condition of door or liftgate warning message in the information display. |
| HI-BEAM IND [On/Off] | | Displays [ON/OFF] condition of high beam indicator. |
| TURN IND [On/Off] | | Displays [ON/OFF] condition of turn indicator. |
| LIGHT IND [On/Off] | | Displays [ON/OFF] condition of light indicator. |
| FR FOG IND [On/Off] | | Displays [ON/OFF] condition of front fog lamp indicator. |
| OIL W/L [On/Off] | | Displays [ON/OFF] condition of low oil pressure warning message in the information display. |
| MIL [On/Off] | | Displays [ON/OFF] condition of malfunction indicator. |

| Display item [Unit] | MAIN SIGNALS | Description |
|---|---|---|
| BA W/L [On/Off] | | Displays [ON/OFF] condition of FEB warning lamp indicator. |
| ATC/T-AMT W/L [On/Off] | | Displays [ON/OFF] condition of A/T check warning message in the information display. |
| CHAGE W/L [On/Off] | | Displays [ON/OFF] condition of charge warning indicator. |
| 4WD W/L [On/Off] | | Displays [ON/OFF] condition of AWD warning message in the information display. |
| FUEL W/L [On/Off] | | Displays [ON/OFF] condition of low-fuel warning message in the information display. |
| WASHER W/L [On/Off] | | Displays [ON/OFF] condition of low washer fluid warning message in the information display. |
| AIR PRES W/L [On/Off] | | Displays [ON/OFF] condition of tire pressure warning lamp. |
| KEY G/Y W/L [On/Off] | | Displays [ON/OFF] condition of key green warning lamp. |
| EPS W/L [On/Off] | | Displays [ON/OFF] condition of EPS warning indicator. |
| LCD | | Displays the value of Intelligent Key system message indication. |
| ACC TARGET [On/Off] | | Displays [ON/OFF] condition of vehicle ahead detection indicator in the information display. |
| ACC DISTANCE [Off, Short, Middle, Long] | | Displays [Off, Short, Middle, Long] condition of set distance indicator in the information display. |
| SHIFT IND [P, R, N, D, L] | | Displays shift selector position. |
| FUEL CAP W/L [On/Off] | | Displays [ON/OFF] condition of loose fuel cap warning message in the information display. |
| PKB SW [On/Off] | | Displays [ON/OFF] condition of parking brake switch. |
| BUCKLE SW [On/Off] | | Displays [ON/OFF] condition of seat belt buckle switch LH. |
| BRAKE OIL SW [On/Off] | | Displays [ON/OFF] condition of brake fluid level switch. |
| DISTANCE [Mi] or [km] | | Displays distance to empty. |
| OUTSIDE TEMP [°F or °C] | | Displays the ambient air temperature which is input from the ambient sensor. |
| FUEL LOW SIG [On/Off] | | Displays [ON/OFF] condition of low-fuel warning signal. |
| STRG SW INPUT [SW 1-SW 10, NOT INPUT] | | Displays [SW 1-SW 10, NOT INPUT] condition of steering switches. |
| BUZZER [On/Off] | X | Buzzer status (in the combination meter) is detected from the buzzer output signal received from each unit via CAN communication and the warning output condition of the combination meter. |
| BATTERY CIRCUIT STATUS [Normal/Open] | | Displays [Normal/Open] condition of battery power supply circuit. |
| TPMS PRESS L [On/Off] | | Displays [ON/OFF] condition of tire pressure low message in the information display. |
| BSW IND [On/Off] | | Displays [ON/OFF] condition of blind spot warning indicator. |
| BSW W/L [On/Off] | | Displays [ON/OFF] condition of blind spot warning in the information display. |

## WORK SUPPORT

| Work support item | Description |
|---|---|
| Outside air temperature diagnosis | A possible malfunction can be narrowed down by following the displayed instructions. |
| Fuel meter diagnosis (Analog pointer) | |
| Warning/Indicator lamp diagnosis | |

## WARNING HISTORY

Special menu

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

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

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

# ECU DIAGNOSIS INFORMATION

## COMBINATION METER

### Reference Value

INFOID:0000000011551936

#### VALUES ON THE DIAGNOSIS TOOL

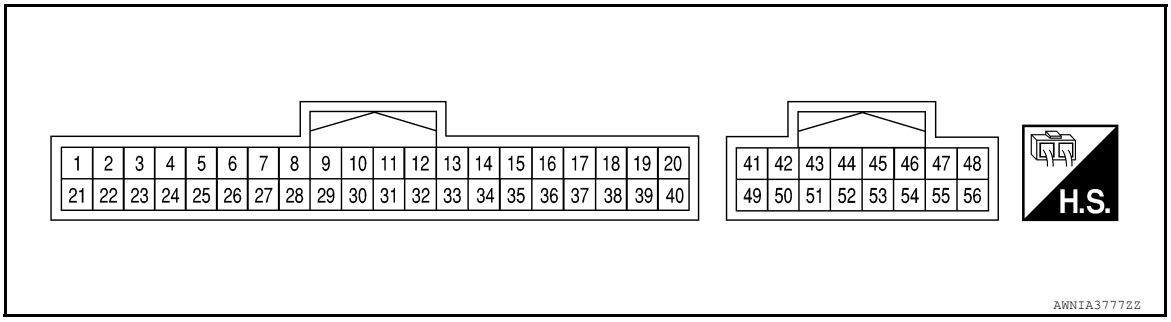
| Monitor Item | Condition | | Value/Status |
|---|---|---|---|
| SPEED METER [mph or km/h] | Ignition switch ON | While driving. | Input value of vehicle speed signal (CAN communication signal). |
| SPEED OUTPUT [mph or km/h] | Ignition switch ON | While driving. | Output value of vehicle speed signal (CAN communication signal). |
| ODO OUTPUT [mph or km/h] | Ignition switch ON | — | Output value of odometer signal (CAN communication signal). |
| TACHO METER [rpm] | Ignition switch ON | Engine running. | Input value of engine speed signal (CAN communication signal). |
| FUEL METER [L] | Ignition switch ON | — | Input value of fuel level sensor signal. |
| W TEMP METER [°F] or [°C] | Ignition switch ON | — | Input value of engine coolant temperature signal (CAN communication signal). |
| ABS W/L | Ignition switch ON | ABS warning lamp ON. | On |
| | | ABS warning lamp OFF. | Off |
| VDC/TCS IND | Ignition switch ON | VDC OFF indicator lamp ON. | On |
| | | VDC OFF indicator lamp OFF. | Off |
| SLIP IND | Ignition switch ON | VDC warning lamp ON. | On |
| | | VDC warning lamp OFF. | Off |
| BRAKE W/L | Ignition switch ON | Brake warning lamp ON. | On[*1] |
| | | Brake warning lamp OFF. | Off |
| DOOR W/L | Ignition switch ON | Door or liftgate open warning displayed. | On |
| | | Other than the above | Off |
| HI-BEAM IND | Ignition switch ON | High beam indicator lamp ON. | On |
| | | High beam indicator lamp OFF. | Off |
| TURN IND | Ignition switch ON | Turn signal indicator lamp ON. | On |
| | | Turn signal indicator lamp OFF. | Off |
| FR FOG IND | Ignition switch ON | Front fog lamp indicator lamp ON. | On |
| | | Front fog lamp indicator lamp OFF. | Off |
| LIGHT IND | Ignition switch ON | Position lamp indicator lamp ON. | On |
| | | Position lamp indicator lamp OFF. | Off |
| OIL W/L | Ignition switch ON | Engine oil pressure warning displayed. | On |
| | | Other than the above. | Off |
| MIL | Ignition switch ON | Malfunction indicator lamp ON. | On |
| | | Malfunction indicator lamp OFF. | Off |
| BA W/L | Ignition switch ON | FEB warning lamp ON | On |
| | | FEB warning lamp OFF | Off |
| ATC/T-AMT W/L | Ignition switch ON | A/T CHECK warning indication | On |
| | | Other than the above | Off |
| 4WD W/L | Ignition switch ON | AWD warning displayed. | On |
| | | Other than the above. | Off |

| Monitor Item | Condition | | Value/Status |
|---|---|---|---|
| FUEL W/L | Ignition switch ON | Low fuel warning displayed. | On |
| | | Low fuel warning lamp OFF. | Off |
| WASHER W/L | Ignition switch ON | Low washer fluid warning displayed. | On |
| | | Other than the above. | Off |
| AIR PRES W/L | Ignition switch ON | Low tire pressure warning lamp ON. | On |
| | | Low tire pressure warning lamp OFF. | Off |
| KEY G/Y W/L | Ignition switch ON | Intelligent Key system warning indication. | On |
| | | Other than the above. | Off |
| EPS W/L | Ignition switch ON | Power steering warning lamp ON. | On |
| | | Power steering warning lamp OFF. | Off |
| CHAGE W/L | Ignition switch ON | Charge warning lamp ON. | On |
| | | Charge warning lamp OFF. | Off |
| ACC TARGET | Ignition switch ON | During vehicle ahead detection indication. | On |
| | | Other than the above | Off |
| ACC DISTANCE | Ignition switch ON | When following distance is set to “LONG” | LONG |
| | | When following distance is set to “MID-DLE” | MID |
| | | When following distance is set to “SHORT” | SHORT |
| | | Set distance indicator not displayed | Off |
| SHIFT IND | Ignition switch ON | Shift position indicator displayed. | [P, R, N, D, L] |
| FUEL CAP W/L | Ignition switch ON | Fuel filler cap warning displayed. | On |
| | | Other than the above. | Off |
| PKB SW | Ignition switch ON | Parking brake switch ON. | On |
| | | Parking brake switch OFF. | Off |
| BUCKLE SW | Ignition switch ON | Driver seat belt not fastened. | On |
| | | Driver seat belt fastened. | Off |
| BRAKE OIL SW | Ignition switch ON | Brake fluid level switch ON. | On |
| | | Brake fluid level switch OFF. | Off |
| DISTANCE [mi] or [km] | Ignition switch ON | — | Distance to empty. |
| OUTSIDE TEMP [°F] or [°C] | Ignition switch ON | — | Displays the ambient air temperature which is input from the ambient sensor. |
| FUEL LOW SIG | — | Low fuel level warning. | On |
| | | Except during low fuel level warning. | Off |
| BUZZER | Ignition switch ON | Buzzer ON. | On |
| | | Buzzer OFF. | Off |
| BATTERY CIR-CUIT STATUS | Ignition switch ON | Battery power supply circuit is normal | Normal |
| | | Battery power supply circuit is open | Open |
| LCD | Ignition switch ON | Engine start information. | B&P |

| Monitor Item | Condition | | Value/Status |
|---|---|---|---|
| STRG SW INPUT | Ignition switch ON | BACK switch is pressed. | SW1 |
| | | MENU UP switch is pressed. | SW2 |
| | | MENU DOWN switch is pressed. | SW3 |
| | | Voice recognition switch is pressed. | SW4 |
| | | MENU OK switch is pressed. | SW5 |
| | | VOL DOWN switch is pressed. | SW6 |
| | | VOL UP switch is pressed. | SW7 |
| | | TEL switch is pressed. | SW8 |
| | | Display back switch is pressed. | SW9 |
| | | Display next switch is pressed. | SW10 |
| | | Other than the above. | NO INPUT |
| TPMS PRESS L | Ignition switch ON | Tire pressure is low. | On |
| | | Tire pressure is normal. | Off |
| BSW IND | Ignition switch ON | Blind spot warning indicator ON. | On |
| | | Blind spot warning indicator OFF. | Off |
| BSW W/L | Ignition switch ON | Blind spot warning displayed. | On |
| | | Other than the above. | Off |

*1: Displays “Off” if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.

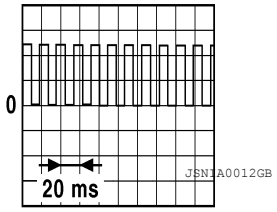
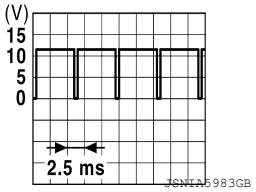
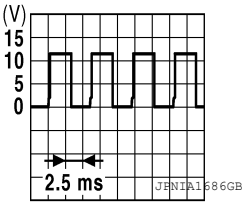
## TERMINAL LAYOUT




## PHYSICAL VALUES

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 7 (V) | Ground | Security signal | Input | Ignition switch OFF | Security indicator ON. | 0 V |
| | | | | | Security indicator OFF. | Battery voltage |
| 10 (B) | Ground | Ground | — | — | — | 0 V |
| 11 (BG) | Ground | Alternator signal | — | Ignition switch ON | Charge warning lamp ON | 2 V |
| | | | | | Charge warning lamp OFF | Battery voltage |
| 12 (Y) | Ground | LED headlamp RH warning signal | Input | Ignition switch ON | Headlamp ON | 1.0 V |
| | | | | | Headlamp OFF | Battery voltage |
| 13 (GR) | Ground | LED headlamp LH warning signal | Input | Ignition switch ON | Headlamp ON | 1.0 V |
| | | | | | Headlamp OFF | Battery voltage |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 14 (P) | Ground | ACC power supply | — | Ignition switch ACC | — | Battery voltage |
| 17 (G) | Ground | Meter control switch ground | — | — | — | 0 V |
| 18 (LG) | Ground | Trip/reset switch signal | Input | Ignition switch OFF or ON | Trip/Reset switch is pressed. | 0 V |
| | | | | | Other than the above. | 5.0 V |
| 21 (R) | Ground | Steering switch ground | — | — | — | 0 V |
| 22 (P) | Ground | Steering switch input 1 | — | — | — | — |
| 23 (BG) | Ground | Steering switch input 2 | — | — | — | — |
| 24 (P) | Ground | Washer fluid level switch signal | Input | Ignition switch ON | Washer fluid level switch ON. | 0 V |
| | | | | | Washer fluid level switch OFF. | Battery voltage |
| 25 (G) | Ground | Brake fluid level switch signal | Input | Ignition switch ON | Brake fluid level low. | 0 V |
| | | | | | Brake fluid level normal. | Battery voltage |
| 26 (BR) | Ground | Parking brake switch signal | Input | Ignition switch ON | Parking brake applied. | 0 V |
| | | | | | Parking brake released. | Battery voltage |
| 27 (BR) | Ground | Seat belt buckle switch signal RH | Input | Ignition switch ON | When passenger seat belt is fastened. | — |
| | | | | | When passenger seat belt is unfastened. | — |
| 28 (Y) | Ground | Seat belt buckle switch signal LH | Input | Ignition switch ON | When driver seat belt is fastened. | Battery voltage |
| | | | | | When driver seat belt is unfastened. | 0 V |
| 30 (V) | Ground | Manual mode signal | Input | Ignition switch ON | Selector lever manual mode position | 0 V |
| | | | | | Other than the above | Battery voltage |
| 31 (P) | Ground | Non-manual mode signal | Input | Ignition switch ON | Selector lever manual mode position | Battery voltage |
| | | | | | Other than the above | 0 V |
| 32 (BG) | Ground | Manual mode shift up signal | Input | Ignition switch ON | Selector lever UP operation | 0 V |
| | | | | | Other than the above | Battery voltage |
| 33 (W) | Ground | Manual mode shift down signal | Input | Ignition switch ON | Selector lever DOWN operation | 0 V |
| | | | | | Other than the above | Battery voltage |
| 36 (BR) | Ground | Illumination control switch signal (+) | Input | Ignition switch OFF or ON | When illumination control switch (+) is pressed. | 0 V |
| | | | | | Other than the above. | 5.0 V |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 37 (Y) | Ground | Illumination control switch signal (-) | Input | Ignition switch OFF or ON | When illumination control switch (-) is pressed. | 0 V |
| | | | | | Other than the above. | 5.0 V |
| 38 (BR) | Ground | Vehicle speed signal (8-pulse) | Output | Ignition switch ON | Speedometer operated [When vehicle speed is approx. 25 MPH (40 km/h)]. | **NOTE:** The maximum voltage varies depending on the specification (destination unit).   |
| 42 (B) | Ground | Illumination control signal | Output | Ignition switch ON | • Lighting switch 1st position • When meter illumination is minimum. |   |
| | | | | | • Lighting switch 1st position • When meter illumination is step 11. |   |
| | | | | | • Lighting switch 1st position • When meter illumination is maximum. | 0 V |
| 43 (B) | Ground | Ground | — | — | — | 0 V |
| 44 (BG) | Ground | Ignition signal | — | Ignition switch ON or START | — | Battery voltage |
| 45 (B) | Ground | Ground | — | — | — | 0 V |
| 46 (W) | Ground | Battery power supply | — | — | — | Battery voltage |
| 47 (R) | Ground | Welcome lighting illumination control | — | — | — | — |
| 48 (W) | Ground | Fuel level sensor signal | — | Ignition switch ON | Fuel gauge indication position. | Battery voltage |

| Terminal No. (Wire color) | | Description | | Condition | | Value (Approx.) |
|---|---|---|---|---|---|---|
| + | – | Signal name | Input/ Output | | | |
| 49 (LG) | Ground | M CAN low | — | — | — | — |
| 50 (SB) | Ground | M CAN high | — | — | — | — |
| 52 (P) | Ground | CAN low | — | — | — | — |
| 53 (L) | Ground | CAN high | — | — | — | — |
| 54 (R) | Ground | Fuel level sensor ground | — | Ignition switch ON | — | 0 V |

## Fail-safe

INFOID:0000000011551937

The combination meter activates the fail-safe control if the CAN communication lines between each unit are malfunctioning.

| Function | | Specifications |
|---|---|---|
| Speedometer | | Reset to zero by suspending communication. |
| Tachometer | | |
| Engine coolant temperature gauge | | |
| Meter illumination control | | When suspending communication, it changes to nighttime mode. |
| Buzzer | | Turns OFF by suspending communication. |
| Information display | Current fuel consumption | The last result calculated during normal condition is indicated. |
| | Average fuel consumption | |
| | Average vehicle speed | |
| | Range (Distance to empty) | |
| | Driving distance | |
| | Door open warning | The display turns OFF by suspending communication. |
| | Liftgate open warning | |
| | Low tire pressure warning | |
| | Parking brake release warning | |
| | Fuel-filler cap warning | |
| | Oil pressure warning | |
| | AWD warning lamp | |
| | BSW warning | |
| | Odo/trip meter | An indicated value is maintained at communications blackout. |
| | Shift position indicator | The indicator turns OFF by suspending communication. |

| Function | | Specifications |
|---|---|---|
| Warning lamp/indicator lamp | ABS warning lamp | Turns ON by suspending communication. |
| | Brake warning lamp | |
| | EPS warning lamp | |
| | VDC warning lamp | |
| | FEB warning lamp | |
| | Malfunction indicator lamp | |
| | Air bag warning lamp | |
| | Charge warning lamp | |
| | VDC OFF indicator lamp | Turns OFF by suspending communication. |
| | High beam indicator lamp | |
| | Turn signal indicator lamp | |
| | Position lamp indicator lamp | |
| | Front fog lamp indicator lamp | |
| | Low tire pressure warning lamp | After blinking for 1 minute, the lamp remains ON. |

## DTC Index

INFOID:0000000011551938

| Display contents of CONSULT | Diagnostic item is detected when... | Refer to |
|---|---|---|
| CAN COMM CIRCUIT [U1000] | Combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more. | MWI-54 |
| CONTROL UNIT (CAN) [U1010] | Detecting error during the initial diagnosis of CAN controller of combination meter. | MWI-55 |
| VEHICLE SPEED [B2205] | The abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more. | MWI-56 |
| ENGINE SPEED [B2267] | ECM continuously transmits abnormal engine speed signals for 2 seconds or more. | MWI-57 |
| WATER TEMP [B2268] | ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more. | MWI-58 |

# BCM (BODY CONTROL MODULE)

## List of ECU Reference

INFOID:0000000011215164

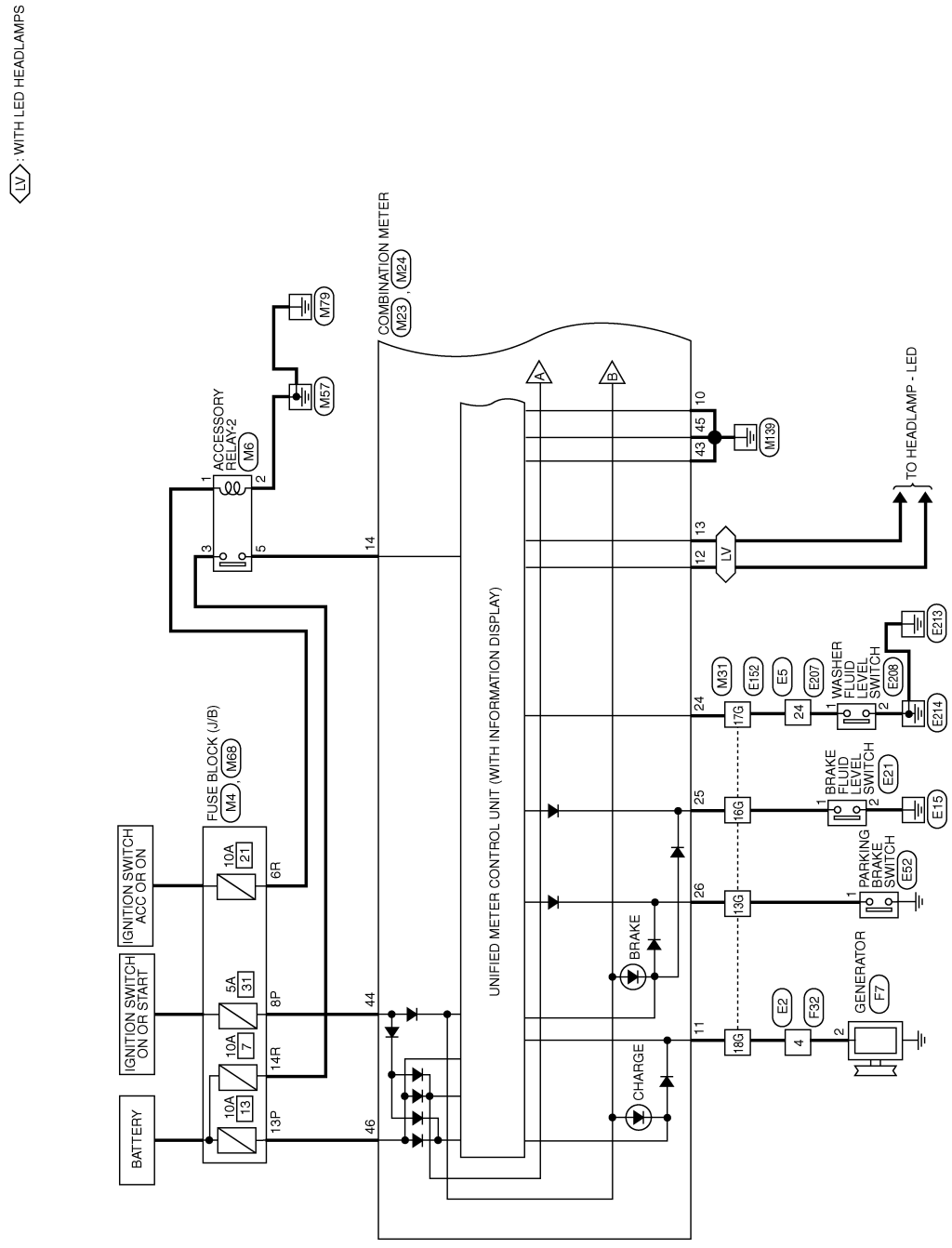
| ECU | Reference |
|---|---|
| BCM | BCS-30, "Reference Value" |
| | BCS-55, "Wiring Diagram" |
| | BCS-50, "Fail Safe" |
| | BCS-51, "DTC Inspection Priority Chart" |
| | BCS-52, "DTC Index" |

# WIRING DIAGRAM

## METER SYSTEM

### Wiring Diagram

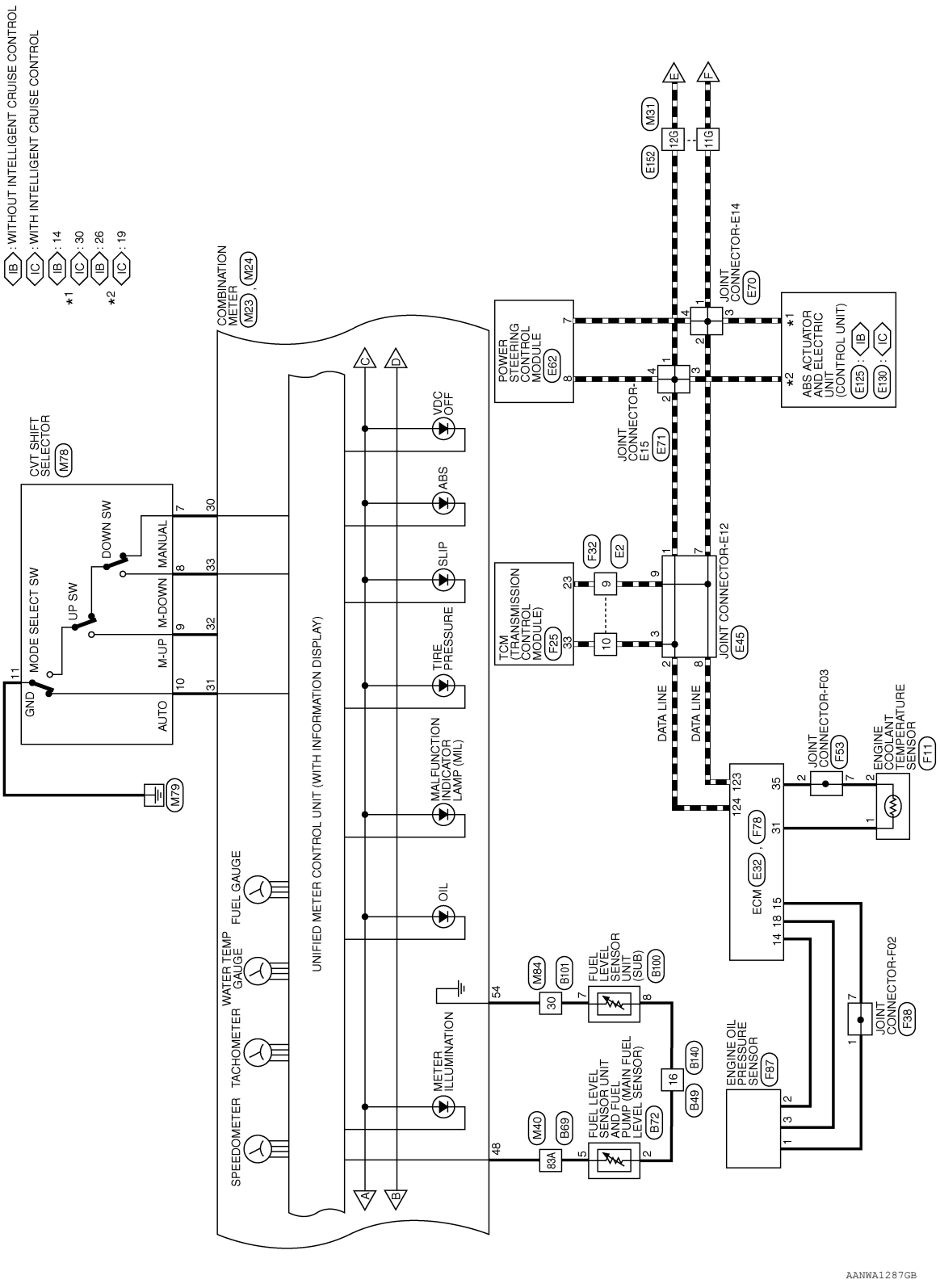
INFOID:0000000011215165

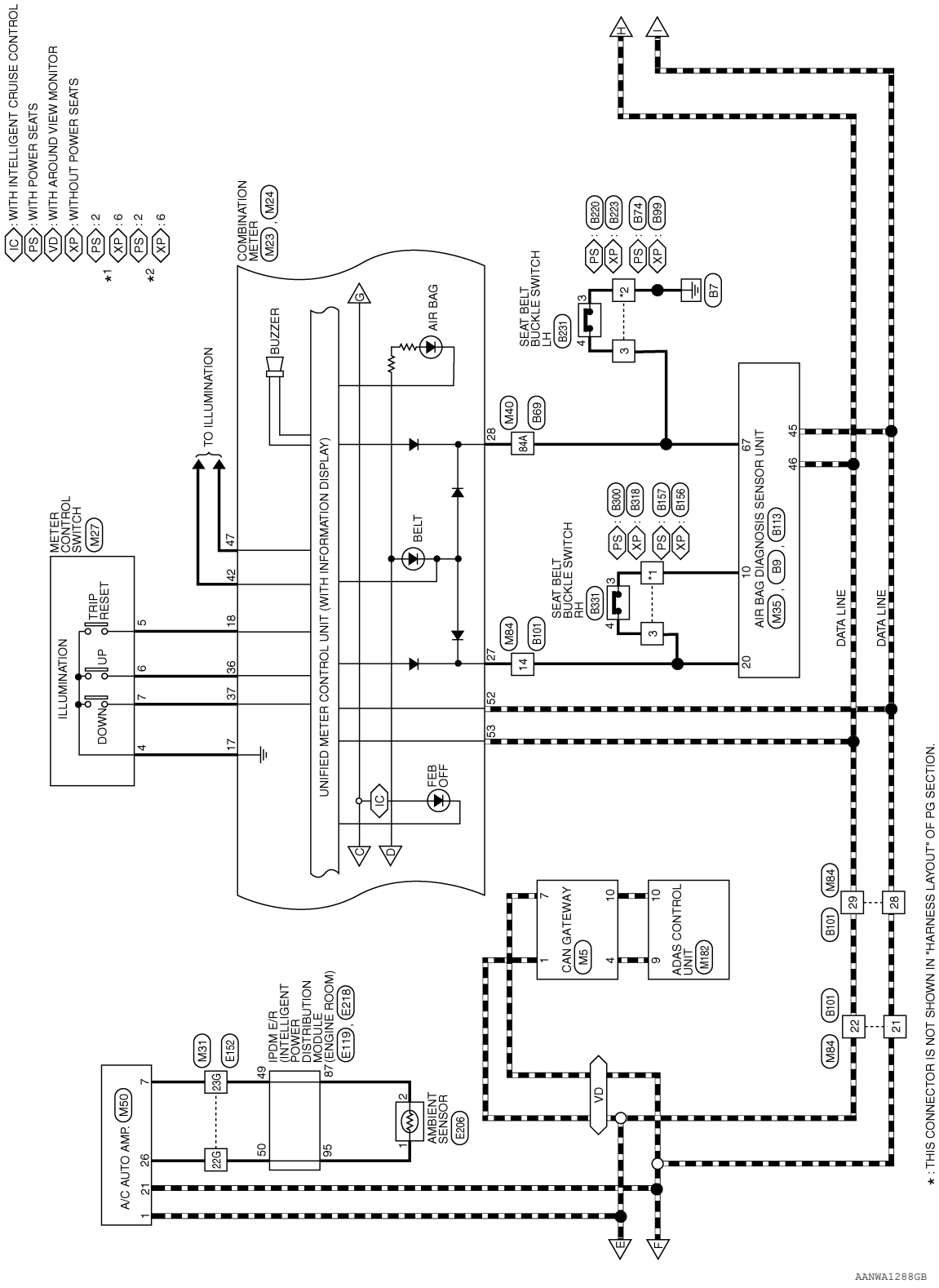


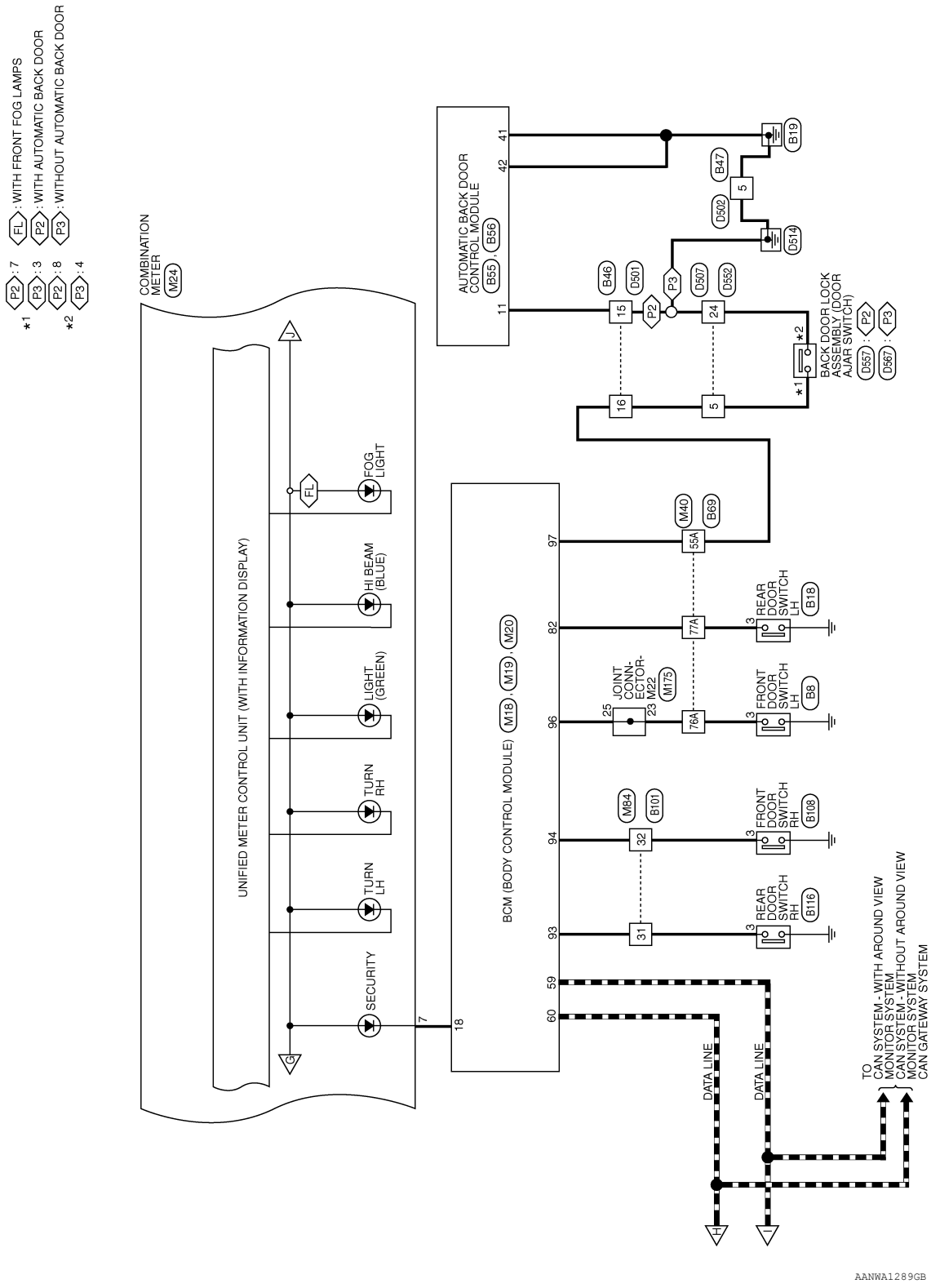

AANWA1286GB

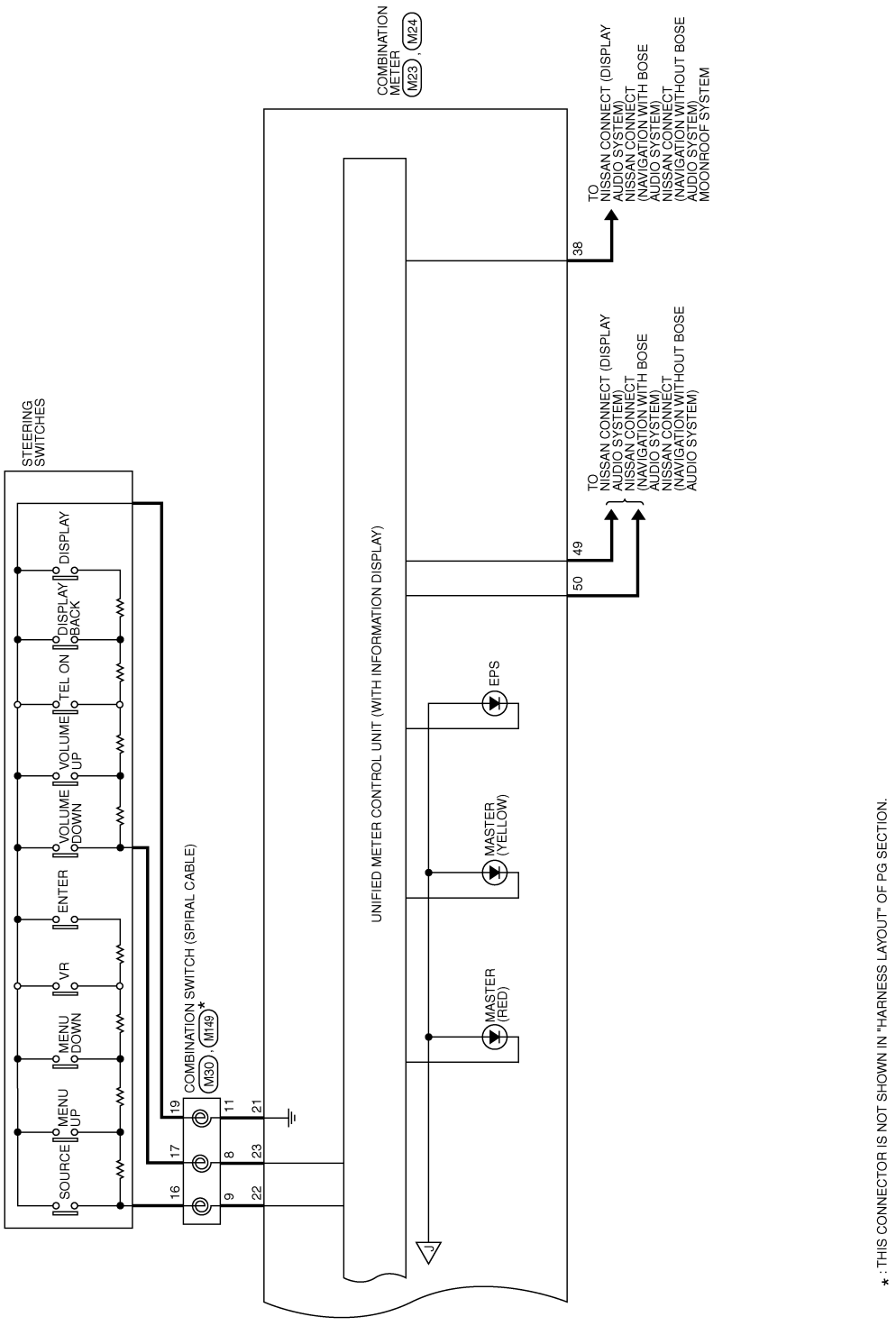


METER


IB : WITHOUT INTELLIGENT CRUISE CONTROL
IC : WITH INTELLIGENT CRUISE CONTROL
IB : 14
IC : 30
IB : 26
IC : 19
*1
*2
COMBINATION METER (M23, M24)
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
SPEEDOMETER
TACHOMETER
WATER TEMP GAUGE
FUEL GAUGE
METER ILLUMINATION
MALFUNCTION INDICATOR LAMP (MIL)
TIRE PRESSURE
SLIP
ABS
VDC OFF
OIL
CVT SHIFT SELECTOR (M78)
MODE SELECT SW
UP SW
DOWN SW
GND
AUTO
M-UP
M-DOWN
MANUAL
M79
FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN FUEL LEVEL SENSOR) B72
FUEL LEVEL SENSOR UNIT (SUB) B100
ENGINE OIL PRESSURE SENSOR F87
ECM E32, F78
ENGINE COOLANT TEMPERATURE SENSOR F11
JOINT CONNECTOR-F03 F53
JOINT CONNECTOR-F02 F38
TCM (TRANSMISSION CONTROL MODULE) F25
JOINT CONNECTOR-E12 E45
JOINT CONNECTOR-E15 E71
JOINT CONNECTOR-E14 E70
POWER STEERING CONTROL MODULE E62
ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) E125 : IB, E130 : IC
DATA LINE
E152
M31
12G
11G
F32
E2
AANWA1287GB


IC : WITH INTELLIGENT CRUISE CONTROL
PS : WITH POWER SEATS
VD : WITH AROUND VIEW MONITOR
XP : WITHOUT POWER SEATS
PS : 2
XP : 6
*1
PS : 2
XP : 6
*2
COMBINATION METER M23, M24
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
BUZZER
TO ILLUMINATION
AIR BAG
BELT
FEB OFF
METER CONTROL SWITCH M27
ILLUMINATION
TRIP RESET
UP
DOWN
SEAT BELT BUCKLE SWITCH LH B231
SEAT BELT BUCKLE SWITCH RH B331
AIR BAG DIAGNOSIS SENSOR UNIT M35, B9, B113
DATA LINE
DATA LINE
CAN GATEWAY M5
ADAS CONTROL UNIT M182
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) E119 E218
A/C AUTO AMP. M50
AMBIENT SENSOR E206
VD
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
AANWA1288GB

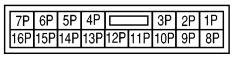

FL : WITH FRONT FOG LAMPS
P2 : WITH AUTOMATIC BACK DOOR
P3 : WITHOUT AUTOMATIC BACK DOOR
*1 P2 : 7
P3 : 3
*2 P2 : 8
P3 : 4
COMBINATION METER M24
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
SECURITY
TURN LH
TURN RH
LIGHT (GREEN)
HI BEAM (BLUE)
FOG LIGHT
BCM (BODY CONTROL MODULE) M18, M19, M20
AUTOMATIC BACK DOOR CONTROL MODULE B55, B56
BACK DOOR LOCK ASSEMBLY (DOOR AJAR SWITCH) *1 *2
REAR DOOR SWITCH RH B116
FRONT DOOR SWITCH RH B108
FRONT DOOR SWITCH LH B8
REAR DOOR SWITCH LH B18
JOINT CONN-ECTOR-M22 M175
DATA LINE
TO CAN SYSTEM - WITH AROUND VIEW MONITOR SYSTEM
CAN SYSTEM - WITHOUT AROUND VIEW MONITOR SYSTEM
CAN GATEWAY SYSTEM
AANWA1289GB


COMBINATION METER (M23), (M24)
TO NISSAN CONNECT (DISPLAY AUDIO SYSTEM) NISSAN CONNECT NAVIGATION WITH BOSE AUDIO SYSTEM NISSAN CONNECT (NAVIGATION WITHOUT BOSE AUDIO SYSTEM) MOONROOF SYSTEM
38
TO NISSAN CONNECT (DISPLAY AUDIO SYSTEM) NISSAN CONNECT NAVIGATION WITH BOSE AUDIO SYSTEM NISSAN CONNECT (NAVIGATION WITHOUT BOSE AUDIO SYSTEM)
49
50
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
EPS
MASTER (YELLOW)
MASTER (RED)
STEERING SWITCHES
DISPLAY
DISPLAY BACK
TEL ON
VOLUME UP
VOLUME DOWN
ENTER
VR
MENU DOWN
MENU UP
SOURCE
COMBINATION SWITCH (SPIRAL CABLE)*
M149
M30
19
17
16
11
8
9
21
23
22
★ : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
AANWA1234GB

## METER CONNECTORS

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

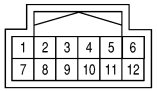
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 8P | BG | – |
| 13P | W | – |

| Connector No. | M5 |
|---|---|
| Connector Name | CAN GATEWAY |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | L | CAH-H |
| 4 | L | CAN2-H |
| 7 | P | CAN-L |
| 10 | P | CAN2-L |

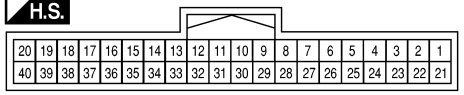
| Connector No. | M6 |
|---|---|
| Connector Name | ACCESSORY RELAY-2 |
| Connector Color | BLUE |

H.S.


| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | L | – |
| 2 | B | – |
| 3 | R | – |
| 5 | P | – |

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

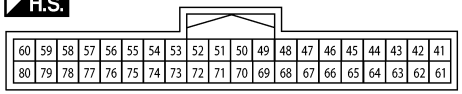
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 18 | V | SECURITY INDICATOR |

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

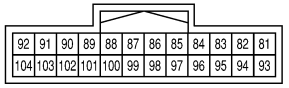
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 59 | P | CAN-L |
| 60 | L | CAN-H |

| Connector No. | M20 |
|---|---|
| Connector Name | BCM (BODY CONTROL MODULE) |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 82 | W | RL DOOR SW |
| 93 | R | RR DOOR SW |
| 94 | G | AS DOOR SW |
| 96 | BG | DR DOOR SW |
| 97 | W | TRUNK/BACK DOOR SW |

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| Connector No. | M23 |
|---|---|
| Connector Name | COMBINATION METER |
| Connector Color | WHITE |

H.S.

| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
|---|---|---|---|---|---|---|---|
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 41 | – | – |
| 42 | B | ILL CONT OUT |
| 43 | B | GND1 |
| 44 | BG | POWER (IGN) |
| 45 | B | GND2 |
| 46 | W | POWER (BAT) |
| 47 | R | INDIRECT ILL CONT OUT |
| 48 | W | FUEL SENSOR |
| 49 | LG | M-CAN (LOW) |
| 50 | SB | M-CAN (HI) |
| 51 | – | – |
| 52 | P | CAN-L |
| 53 | L | CAN-H |
| 54 | R | FUEL SENS GND |
| 55 | – | – |
| 56 | – | – |

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

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | – | – |
| 2 | – | – |
| 3 | – | – |
| 4 | – | – |
| 5 | – | – |
| 6 | – | – |
| 7 | V | SECURITY |
| 8 | – | – |
| 9 | – | – |
| 10 | B | INDIRECT ILLUMINATION |
| 11 | BG | CHARGE |
| 12 | Y | LED HEAD LAMP-R |
| 13 | GR | LED HEAD LAMP-L |
| 14 | P | ACC |
| 15 | – | – |
| 16 | – | – |
| 17 | G | GND (SATELLITE SW) |
| 18 | LG | TRIP RESET SW |
| 19 | – | – |
| 20 | – | – |
| 21 | R | GND (STRG SW INPUT) |
| 22 | P | STRG SW (INPUT 1) |
| 23 | BG | STRG SW (INPUT 2) |
| 24 | P | WASH LEVEL SW |
| 25 | G | BRAKE OIL SW |
| 26 | BR | PKB SW |
| 27 | BR | AS BELT |
| 28 | Y | DR BELT |
| 29 | – | – |
| 30 | V | M RANGE |
| 31 | P | NOT M RANGE |
| 32 | BG | AT SHIFT UP |
| 33 | W | AT SHIFT DOWN |
| 34 | – | – |
| 35 | – | – |
| 36 | BR | ILL UP SW |
| 37 | Y | ILL DOWN SW |
| 38 | BR | SPEED 8P/R |
| 39 | – | – |
| 40 | – | – |

AANIA3586GB

| Connector No. | M27 |
|---|---|
| Connector Name | METER CONTROL SWITCH |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 4 | G | – |
| 5 | LG | – |
| 6 | BR | – |
| 7 | Y | – |

| Connector No. | M30 |
|---|---|
| Connector Name | COMBINATION SWITCH (SPIRAL CABLE) |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 8 | BG | – |
| 9 | P | – |
| 11 | R | – |

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

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 11G | P | – |
| 12G | L | – |
| 13G | BR | – |
| 16G | G | – |
| 17G | P | – |
| 18G | BG | – |
| 22G | W | – |
| 23G | L | – |

| Connector No. | M35 |
|---|---|
| Connector Name | AIR BAG SENSOR UNIT |
| Connector Color | YELLOW |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 45 | P | CAN-L |
| 46 | L | CAN-H |

AANIA3587GB

| Connector No. | M50 |
|---|---|
| Connector Name | A/C AUTO AMP. |
| Connector Color | WHITE |

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | L | CAN-H |
| 7 | L | AMB SENS |
| 21 | P | CAN-L |
| 26 | W | SENS GND |

| Connector No. | M84 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.

| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 14 | BR | – |
| 21 | P | – |
| 22 | L | – |
| 28 | P | – |
| 29 | L | – |
| 30 | R | – |
| 31 | R | – |
| 32 | G | – |

| Connector No. | M40 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 55A | W | – |
| 76A | BG | – |
| 77A | W | – |
| 83A | W | – |
| 84A | Y | – |

| Connector No. | M78 |
|---|---|
| Connector Name | CVT SHIFT SELECTOR |
| Connector Color | WHITE |

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| 7 | 8 | 9 | 10 | 11 | 12 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 7 | V | – |
| 8 | W | – |
| 9 | BG | – |
| 10 | P | – |
| 11 | B | – |

| Connector No. | M68 |
|---|---|
| Connector Name | FUSE BLOCK (J/B) |
| Connector Color | BROWN |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 6R | L | – |
| 14R | R | – |

AANIA3383GB

| Connector No. | M149 |
|---|---|
| Connector Name | COMBINATION SWITCH (SPIRAL CABLE) |
| Connector Color | GRAY |

H.S.

| 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 |
|---|---|---|---|---|---|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 16 | W | – |
| 17 | G | – |
| 19 | BR | – |

| Connector No. | E2 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 4 | P | – |
| 9 | P | – |
| 10 | L | – |

| Connector No. | M175 |
|---|---|
| Connector Name | JOINT CONNECTOR-M22 |
| Connector Color | WHITE |

H.S.

| 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 |
| 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 23 | BG | – |
| 25 | BG | – |

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

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 24 | G | – |

| Connector No. | M182 |
|---|---|
| Connector Name | ADAS CONTROL UNIT |
| Connector Color | WHITE |

H.S.

| 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 9 | L | CAN-H |
| 10 | P | CAN-L |

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

H.S.

| 1 |
|---|
| 2 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | W | – |
| 2 | B | – |

AANIA3588GB

| Connector No. | E32 |
|---|---|
| Connector Name | ECM |
| Connector Color | BLACK |

H.S.

| 121 | 125 | 129 | 133 | 137 | 141 | 145 | 149 |
|---|---|---|---|---|---|---|---|
| 122 | 126 | 130 | 134 | 138 | 142 | 146 | 150 |
| 123 | 127 | 131 | 135 | 139 | 143 | 147 | 151 |
| 124 | 128 | 132 | 136 | 140 | 144 | 148 | 152 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 123 | P | CAN-L |
| 124 | L | CAN-H |

| Connector No. | E45 |
|---|---|
| Connector Name | JOINT CONNECTOR-E12 |
| Connector Color | BLUE |

H.S.

| 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | L | – |
| 2 | L | – |
| 3 | L | – |
| 7 | P | – |
| 8 | P | – |
| 9 | P | – |

| Connector No. | E52 |
|---|---|
| Connector Name | PARKING BRAKE SWITCH |
| Connector Color | BLACK |

H.S.

| 1 |
|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | LG | – |

| Connector No. | E62 |
|---|---|
| Connector Name | POWER STEERING CONTROL MODULE |
| Connector Color | BLACK |

H.S.

| 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 7 | P | CAN-L |
| 8 | L | CAN-H |

| Connector No. | E70 |
|---|---|
| Connector Name | JOINT CONNECTOR-E14 |
| Connector Color | BLACK |

H.S.

| 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | P | – |
| 2 | P | – |
| 3 | P | – |
| 4 | P | – |

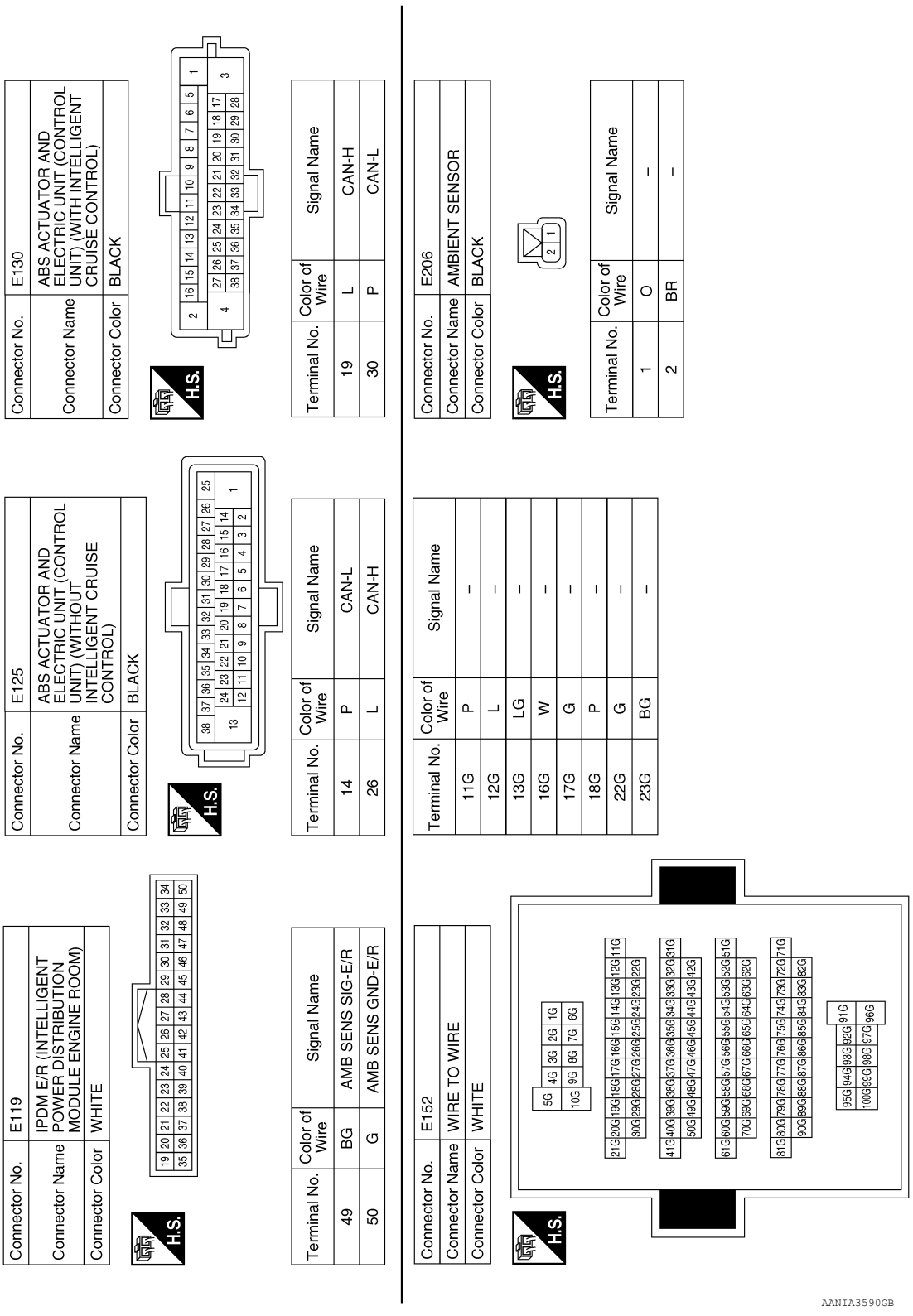
| Connector No. | E71 |
|---|---|
| Connector Name | JOINT CONNECTOR-E15 |
| Connector Color | BLACK |

H.S.

| 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | L | – |
| 2 | L | – |
| 3 | L | – |
| 4 | L | – |

AANIA3589GB




AANIA3590GB

| Connector No. | E207 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.

| 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 24 | Y/V | – |

| Connector No. | E208 |
|---|---|
| Connector Name | WASHER FLUID LEVEL SWITCH |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | Y/V | – |
| 2 | B | – |

| Connector No. | E218 |
|---|---|
| Connector Name | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) |
| Connector Color | WHITE |

H.S.

| 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 |
|---|---|---|---|---|---|---|---|
| 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 87 | BR | AMB SENS SIG-FEM |
| 95 | O | AMB SENS GND-FEM |

| Connector No. | F7 |
|---|---|
| Connector Name | GENERATOR |
| Connector Color | BLACK |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 2 | GR | – |

| Connector No. | F11 |
|---|---|
| Connector Name | ENGINE COOLANT TEMPERATURE SENSOR |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | BR | – |
| 2 | B | – |

| Connector No. | F25 |
|---|---|
| Connector Name | TCM (TRANSMISSION CONTROL MODULE) |
| Connector Color | BLACK |

H.S.

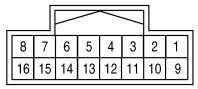
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 47 | 48 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 45 | 46 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 43 | 44 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 41 | 42 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 23 | P | CAN-L |
| 33 | L | CAN-H |

AANIA3591GB

| Connector No. | F32 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

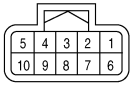
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 4 | GR | – |
| 9 | P | – |
| 10 | L | – |

| Connector No. | F38 |
|---|---|
| Connector Name | JOINT CONNECTOR-F02 |
| Connector Color | BLACK |

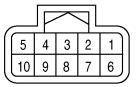
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | B | – |
| 7 | B | – |

| Connector No. | F53 |
|---|---|
| Connector Name | JOINT CONNECTOR-F03 |
| Connector Color | BLACK |

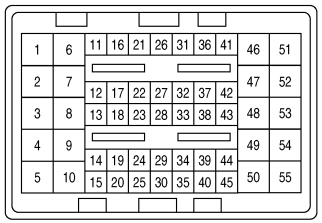
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 2 | B | – |
| 7 | B | – |

| Connector No. | F78 |
|---|---|
| Connector Name | ECM |
| Connector Color | BLACK |

H.S.

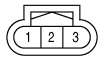



| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 14 | W | ENGINE OIL PRESSURE SENSOR |
| 15 | B | SENSOR GROUND (ENGINE OIL PRESSURE SENSOR, ENGINE OIL TEMPERATURE SENSOR) |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 18 | Y | SENSOR POWER SUPPLY (ENGINE OIL PRESSURE SENSOR) |
| 31 | BR | ENGINE COOLANT TEMPERATURE SENSOR |
| 35 | B | SENSOR GROUND (HEATED OXYGEN SENSOR 2) |

| Connector No. | F87 |
|---|---|
| Connector Name | ENGINE OIL PRESSURE SENSOR |
| Connector Color | BLACK |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 1 | B | – |
| 2 | W | – |
| 3 | Y | – |

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

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | O | – |

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

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 67 | G/W | BUCKLE SW FR LH |

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

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | W | – |

| Connector No. | B46 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 15 | B/W | – |
| 16 | Y/O | – |

| Connector No. | B47 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 5 | B | – |

| Connector No. | B49 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 16 | G | – |

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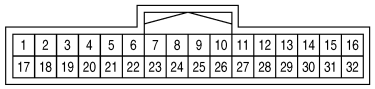
| Connector No. | B55 |
|---|---|
| Connector Name | AUTOMATIC BACK DOOR CONTROL MODULE |
| Connector Color | WHITE |

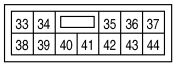
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 11 | B/W | CL SW GND |

| Connector No. | B56 |
|---|---|
| Connector Name | AUTOMATIC BACK DOOR CONTROL MODULE |
| Connector Color | WHITE |

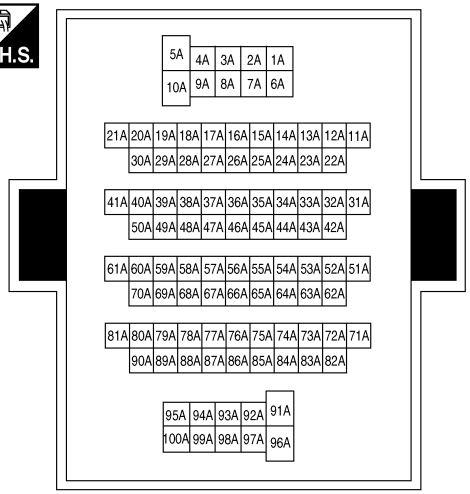
H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 41 | B | GND 1 |
| 42 | B/L | GND 2 |

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

H.S.

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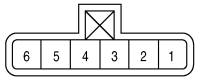
| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 55A | Y/O | – |
| 76A | O | – |
| 77A | W | – |
| 83A | GR/O | – |
| 84A | G/W | – |

| Connector No. | B72 |
|---|---|
| Connector Name | FUEL LEVEL SENSOR UNIT AND FUEL PUMP (MAIN) (FUEL LEVEL SENSOR) |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 2 | G | – |
| 5 | GR/O | – |

| Connector No. | B74 |
|---|---|
| Connector Name | WIRE TO WIRE (WITH POWER SEATS) |
| Connector Color | WHITE |

H.S.

| 1 | 2 | | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 2 | B/V | – |
| 3 | G/W | – |

| Connector No. | B99 |
|---|---|
| Connector Name | WIRE TO WIRE (WITHOUT POWER SEATS) |
| Connector Color | WHITE |

H.S.

| 1 | | 2 |
|---|---|---|
| 3 | 4 | 5 | 6 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | G/W | – |
| 6 | B/V | – |

| Connector No. | B100 |
|---|---|
| Connector Name | FUEL LEVEL SENSOR UNIT (SUB) |
| Connector Color | GRAY |

H.S.

| 8 | 7 |
|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 7 | BR | – |
| 8 | G | – |

| Connector No. | B101 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 14 | BR | – |
| 21 | P | – |
| 22 | L | – |
| 28 | P | – |
| 29 | L | – |
| 30 | BR | – |
| 31 | G/W | – |
| 32 | V | – |

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

H.S.

| 1 | 2 | 3 | 4 |
|---|---|---|---|

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | V | – |

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

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 10 | B | BUCKLE SW FR RH- |
| 20 | BR | BUCKLE SW FR RH+ |

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

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | G/W | – |

| Connector No. | B140 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 16 | G | – |

| Connector No. | B156 |
|---|---|
| Connector Name | WIRE TO WIRE (WITHOUT POWER SEATS) |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | BR | – |
| 6 | B | – |

| Connector No. | B157 |
|---|---|
| Connector Name | WIRE TO WIRE (WITH POWER SEATS) |
| Connector Color | WHITE |

H.S.




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

| Connector No. | B220 |
|---|---|
| Connector Name | WIRE TO WIRE (WITH POWER SEATS) |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 2 | P | – |
| 3 | BR | – |

| Connector No. | B223 |
|---|---|
| Connector Name | WIRE TO WIRE (WITHOUT POWER SEATS) |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | BR | – |
| 6 | P | – |

AANIA3596GB

| Connector No. | B231 |
|---|---|
| Connector Name | SEAT BELT BUCKLE SWITCH LH |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | P | – |
| 4 | BR | – |

| Connector No. | B300 |
|---|---|
| Connector Name | WIRE TO WIRE (WITH POWER SEATS) |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 2 | P | – |
| 3 | BR | – |

| Connector No. | B318 |
|---|---|
| Connector Name | WIRE TO WIRE (WITH MANUAL SEATS) |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | BR | – |
| 6 | P | – |

| Connector No. | B331 |
|---|---|
| Connector Name | SEAT BELT BUCKLE SWITCH RH |
| Connector Color | WHITE |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 3 | P | – |
| 4 | BR | – |

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

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 15 | B | – |
| 16 | P | – |

| Connector No. | D502 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | GRAY |

H.S.




| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 5 | B | – |

AANIA3597GB

| Connector No. | D507 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.

| 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 5 | P | – |
| 24 | B | – |

| Connector No. | D552 |
|---|---|
| Connector Name | WIRE TO WIRE |
| Connector Color | WHITE |

H.S.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 5 | P | – |
| 24 | B | – |

| Connector No. | D557 |
|---|---|
| Connector Name | BACK DOOR LOCK ASSEMBLY (DOOR AJAR SWITCH) (WITH AUTOMATIC BACK DOOR) |
| Connector Color | WHITE |

H.S.

| 1 | 2 | 3 |
|---|---|---|
| 4 | 5 | 6 | 7 | 8 |

| Terminal No. | Color of Wire | Signal Name |
|---|---|---|
| 7 | P | – |
| 8 | B | – |

| Connector No. | D567 |
|---|---|
| Connector Name | BACK DOOR LOCK ASSEMBLY (DOOR AJAR SWITCH) (WITHOUT AUTOMATIC BACK DOOR) |
| Connector Color | WHITE |

H.S.

| 4 | 3 | 2 | 1 |
|---|---|---|---|

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

AANIA3598GB

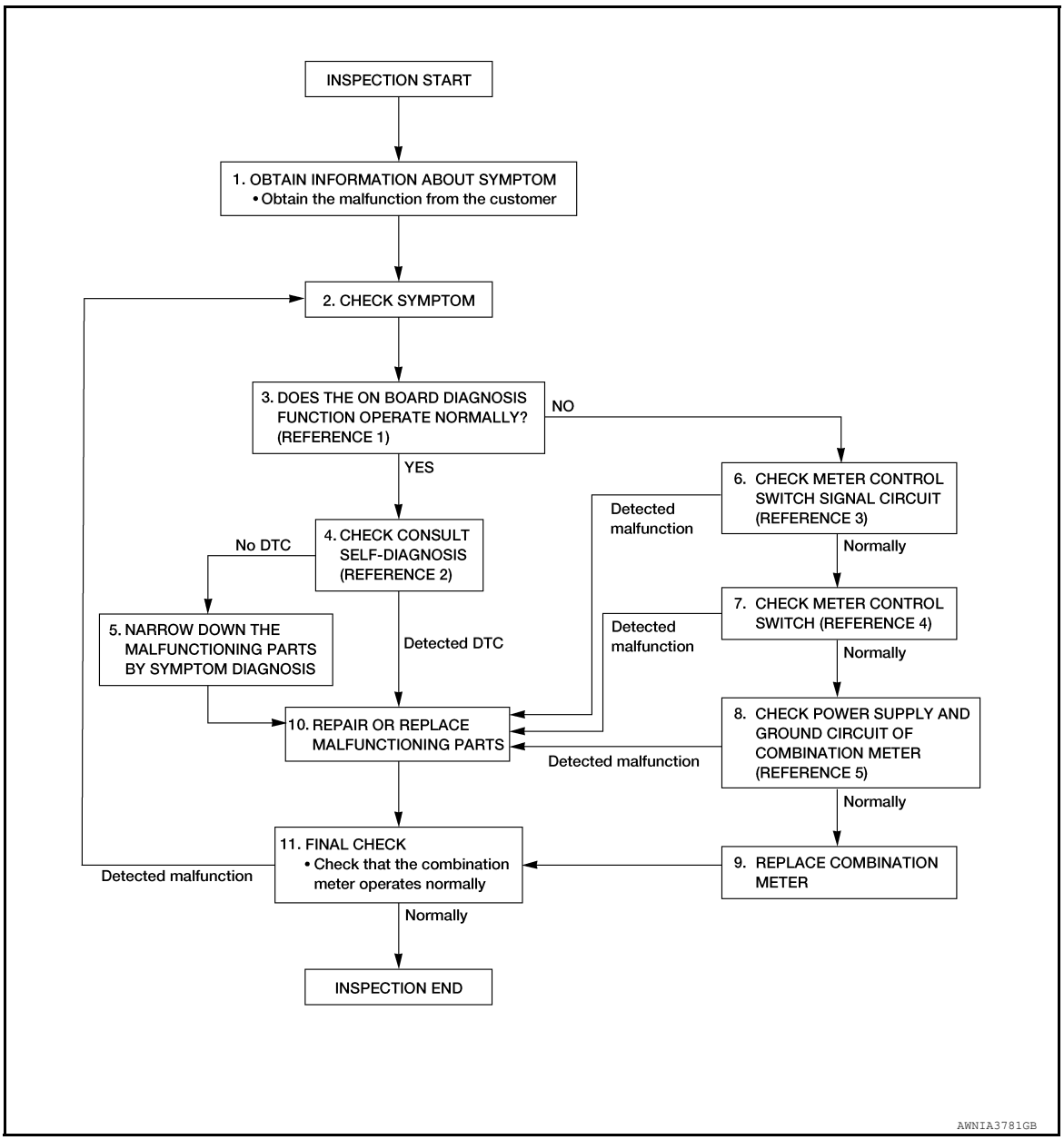
# BASIC INSPECTION

## DIAGNOSIS AND REPAIR WORK FLOW

### Work flow

INFOID:0000000011551975

OVERALL SEQUENCE




- Reference 1: MWI-18, "On Board Diagnosis Function".
- Reference 2: MWI-29, "DTC Index".
- Reference 3: MWI-61, "Diagnosis Procedure".
- Reference 4: MWI-62, "Component Inspection".
- Reference 5: MWI-59, "COMBINATION METER : Diagnosis Procedure".

DETAILED FLOW

### 1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

## 2.CHECK SYMPTOM

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

>> GO TO 3.

## 3.CHECK ON BOARD DIAGNOSIS OPERATION

Check that the on board diagnosis function operates. Refer to MWI-18, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 6.

## 4.CHECK CONSULT SELF-DIAGNOSIS RESULTS

1. Perform “Self Diagnostic Result”. Refer to MWI-29, "DTC Index".
2. When DTC is detected, follow the instructions below:

- Record DTC and Freeze Frame Data.

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 10.

## 5.NARROW DOWN THE MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 10.

## 6.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

Check meter control switch signal circuit. Refer to MWI-61, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 10.

## 7.CHECK METER CONTROL SWITCH

Check meter control switch. Refer to MWI-62, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 10.

## 8.CHECK COMBINATION METER POWER SUPPLY AND GROUND CIRCUITS

Check combination meter power supply and ground circuits. Refer to MWI-59, "COMBINATION METER : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 10.

## 9.REPLACE COMBINATION METER

Replace combination meter.

>> GO TO 11.

## 10.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

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

>> GO TO 11.

## 11. FINAL CHECK

Check that the combination meter operates normally.

Is the inspection result normal?

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

# DTC/CIRCUIT DIAGNOSIS

## U1000 CAN COMM CIRCUIT

### DTC Description

INFOID:0000000011551940

Refer to LAN-12, "CAN COMMUNICATION SYSTEM : System Description".

DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC detection condition | |
|---|---|---|---|
| U1000 | CAN COMM CIRCUIT (CAN COMM CIRCUIT) | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | - |
| | | Threshold | When combination meter is not transmitting or receiving CAN communication signals. |
| | | Diagnosis delay time | 2 seconds or more |

POSSIBLE CAUSE

CAN communication system

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning. Refer to MWI-28, "Fail-safe".

DTC CONFIRMATION PROCEDURE

1.PERFORM SELF-DIAGNOSIS

CONSULT

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Select “Self Diagnostic Result” mode of “METER/M&A”.
3. Check DTC.

Is DTC detected?

YES >> Refer to MWI-54, "Diagnosis Procedure".
NO >> Refer to GI-42, "Intermittent Incident".

### Diagnosis Procedure

INFOID:0000000011551942

1.CHECK CAN COMMUNICATION SYSTEM

Check CAN communication system. Refer to LAN-21, "Trouble Diagnosis Flow Chart".

>> Inspection End.

# U1010 CONTROL UNIT (CAN)

## DTC Description

INFOID:0000000011551943

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC detection condition | |
|---|---|---|---|
| U1010 | CONTROL UNIT (CAN) [CONTROL UNIT (CAN)] | Diagnosis condition | When Ignition switch is ON. |
| | | Signal (terminal) | - |
| | | Threshold | - |
| | | Diagnosis delay time | 2 seconds or more |

### POSSIBLE CAUSE

Combination meter

### FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning. Refer to MWI-28, "Fail-safe".

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM SELF-DIAGNOSIS

CONSULT
1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “METER/M&A”.
3. Check DTC.

Is DTC detected?

YES >> Refer to MWI-55, "Diagnosis Procedure".
NO >> Refer to GI-42, "Intermittent Incident".

## Diagnosis Procedure

INFOID:0000000011551945

#### 1.REPLACE COMBINATION METER

Replace combination meter. Refer to MWI-78, "Removal and Installation".

>> Inspection End.

# B2205 VEHICLE SPEED

## DTC Description

INFOID:0000000011551946

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC detection condition | |
|---|---|---|---|
| B2205 | VEHICLE SPEED CIRC [VEHICLE SPEED CIRC] | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | - |
| | | Threshold | When an erroneous speed signal is received. |
| | | Diagnosis delay time | 2 seconds or more |

### POSSIBLE CAUSE

- Wheel speed sensor
- ABS actuator and electric unit (control unit)

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM SELF-DIAGNOSIS

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “METER/M&A”.
3. Check DTC.

Is DTC detected?

YES >> Refer to MWI-56, "Diagnosis Procedure".
NO >> Inspection End.

## Diagnosis Procedure

INFOID:0000000011551948

#### 1.PERFORM SELF DIAGNOSTIC RESULT

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “ABS”.
3. Check DTC.

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to BRC-50, "DTC Index".
NO >> Inspection End.

# B2267 ENGINE SPEED

## DTC Description

INFOID:0000000011551949

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC detection condition | |
|---|---|---|---|
| B2267 | ENGIE SPEED [ENGIE SPEED] | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | - |
| | | Threshold | ECM continuously transmits abnormal engine speed signals. |
| | | Diagnosis delay time | 2 seconds or more |

### POSSIBLE CAUSE

- Crankshaft position sensor
- ECM

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM SELF-DIAGNOSIS

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “METER/M&A”.
3. Check DTC.

Is DTC detected?

YES >> Refer to MWI-57, "Diagnosis Procedure".
NO >> Inspection End.

## Diagnosis Procedure

INFOID:0000000011551951

#### 1.PERFORM SELF DIAGNOSTIC RESULT

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “ECM”.
3. Check DTC.

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to EC-107, "DTC Index".
NO >> Inspection End.

# B2268 WATER TEMP

## DTC Description

INFOID:0000000011551952

### DTC DETECTION LOGIC

| DTC No. | CONSULT screen terms (Trouble diagnosis content) | DTC detection condition | |
|---|---|---|---|
| B2268 | WATER TEMP [WATER temperature] | Diagnosis condition | When ignition switch is ON. |
| | | Signal (terminal) | - |
| | | Threshold | ECM continuously transmits abnormal engine coolant temperature signals. |
| | | Diagnosis delay time | 60 seconds or more |

### POSSIBLE CAUSE

- Engine coolant temperature sensor
- ECM

### DTC CONFIRMATION PROCEDURE

#### 1.PERFORM SELF-DIAGNOSIS

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “METER/M&A”.
3. Check DTC.

Is DTC detected?

YES >> Refer to MWI-58, "Diagnosis Procedure".
NO >> Inspection End.

## Diagnosis Procedure

INFOID:0000000011551954

#### 1.PERFORM SELF DIAGNOSTIC RESULT

CONSULT

1. Turn ignition switch ON.
2. Select “Self Diagnostic Result” mode of “ECM”.
3. Check DTC.

Is DTC detected?

YES >> Perform diagnosis procedure on the detected DTC. Refer to EC-107, "DTC Index".
NO >> Inspection End.

# POWER SUPPLY AND GROUND CIRCUIT
## COMBINATION METER

### COMBINATION METER : Diagnosis Procedure

INFOID:0000000011551955

Regarding Wiring Diagram information, refer to MWI-31, "Wiring Diagram".

#### 1.CHECK FUSES

Check that the following fuses are not blown:

| Unit | Power source | Fuse No. |
|---|---|---|
| Combination meter | Battery | 13 |
| | Ignition switch ON or ACC | 21 |
| | Ignition switch ON or START | 31 |

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 2.

#### 2.CHECK POWER SUPPLY CIRCUIT

1. Disconnect combination meter harness connector M24.
2. Check voltage between combination meter harness connector M24 and ground.

| Combination meter | | Ground | Ignition switch position | | |
|---|---|---|---|---|---|
| Connector | Terminal | | OFF | ON or ACC | START |
| M24 | 14 | (–) | 0 V | Battery voltage | Battery voltage |
| | 44 | | 0 V | Battery voltage | Battery voltage |
| | 46 | | Battery voltage | Battery voltage | Battery voltage |

Is the inspection result normal?

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

#### 3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between combination meter harness connector M23, M24 and ground.

| Combination meter | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M24 | 10 | (–) | Yes |
| M23 | 43 | | |
| | 45 | | |

Is the inspection result normal?

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

## BCM (BODY CONTROL MODULE)

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

INFOID:0000000011551976

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

## 1. CHECK FUSE AND FUSIBLE LINK

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

| Signal name | Fuse and fusible link No. |
|---|---|
| Fusible link battery power | L (40A) |
| BCM battery fuse | 1 (10A) |

Is the fuse or fusible link blown?

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

## 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M81.
2. Check voltage between BCM connector M81 terminals 131, 139 and ground.

| BCM | | Ground | Voltage (Approx.) |
|---|---|---|---|
| Connector | Terminal | | |
| M81 | 131 | — | Battery voltage |
| | 139 | | |

Is the inspection result normal?

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

## 3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M81 terminals 134, 143 and ground.

| BCM | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M81 | 134 | — | Yes |
| | 143 | | |

Is the inspection result normal?

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

# METER CONTROL SWITCH SIGNAL CIRCUIT

## Diagnosis Procedure

INFOID:0000000011551958

Regarding Wiring Diagram information, refer to MWI-31, "Wiring Diagram".

### 1.CHECK METER CONTROL SWITCH SIGNAL

1. Turn ignition switch ON.
2. Check voltage between the following terminals of the meter control switch harness connector M27.

| Meter control switch | | | Condition | Voltage (Approx.) |
|---|---|---|---|---|
| Connector | Terminal (+) | Terminal (–) | | |
| M27 | 7 | 4 | When illumination control switch (–) is pressed | 0 V |
| | | | Other than the above | 5 V |
| | 5 | | When trip reset switch is pressed | 0 V |
| | | | Other than the above | 5 V |
| | 6 | | When illumination control switch (+) is pressed | 0 V |
| | | | Other than the above | 5 V |

Is the inspection result normal?

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

### 2.CHECK METER CONTROL SWITCH CIRCUITS

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector M24 and meter control switch harness connector M27.
3. Check continuity between combination meter harness connector M24 and meter control switch harness connector M27.

| Combination meter | | Meter control switch | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M24 | 18 | M27 | 5 | Yes |
| | 37 | | 7 | |
| | 36 | | 6 | |
| | 17 | | 4 | |

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

| Combination meter | | | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M24 | 18 | Ground | No |
| | 37 | | |
| | 36 | | |
| | 17 | | |

Is the inspection result normal?

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

## Component Inspection

INFOID:0000000011551959

### 1.CHECK METER CONTROL SWITCH

1. Turn ignition switch OFF.
2. Disconnect meter control switch harness connector.
3. Check meter control switch.

| Meter control switch | | Condition | Continuity |
|---|---|---|---|
| Terminal | | | |
| 7 | 4 | When illumination control switch (–) is pressed | Yes |
| | | Other than the above | No |
| 5 | | When trip reset switch is pressed | Yes |
| | | Other than the above | No |
| 6 | | When illumination control switch (+) is pressed | Yes |
| | | Other than the above | No |

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace meter control switch. Refer to MWI-79, "Removal and Installation".

# FUEL LEVEL SENSOR SIGNAL CIRCUIT

## Component Function Check

INFOID:0000000011551956

### 1.COMBINATION METER INPUT SIGNAL

CONSULT
1. Select “Data Monitor” mode of “METER/M&A”.
2. Select “FUEL METER”.
3. Compare the “FUEL METER” value and the fuel gauge reading of the combination meter. Fuel gauge and data monitor indications should be close.

| Combination meter | Monitor item |
|---|---|
| Fuel gauge | FUEL METER [L] (Approx.) |
| Full | 70.6 |
| 3/4 | 54.5 |
| 1/2 | 38.3 |
| 1/4 | 22.1 |
| Empty | 8.6 |

Does the data monitor value approximately match the fuel gauge indication?

YES >> Inspection End.
NO >> Replace combination meter. Refer to MWI-78, "Removal and Installation".

## Diagnosis Procedure

INFOID:0000000011215188

Regarding Wiring Diagram information, refer to MWI-31, "Wiring Diagram".

### 1.CHECK HARNESS CONNECTOR

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace terminals or connectors.

### 2.CHECK FUEL LEVEL SENSOR CIRCUIT

1. Disconnect combination meter harness connector M23 and fuel level sensor unit and fuel pump (fuel level sensor) harness connector B72.
2. Check continuity between combination meter harness connector M23 and fuel level sensor unit and fuel pump (fuel level sensor) harness connector B72.

| Fuel level sensor unit and fuel pump (fuel level sensor) | | Combination meter | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| B72 | 5 | M23 | 48 | Yes |

3. Check continuity between fuel level sensor unit and fuel pump (fuel level sensor) harness connector B72 and ground.

| Fuel level sensor unit and fuel pump (fuel level sensor) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| B72 | 5 | | No |

Is the inspection result normal?

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

## 3.CHECK FUEL LEVEL SENSOR UNIT (MAIN-SUB) CIRCUIT

1. Disconnect fuel level sensor unit (sub) harness connector B100.
2. Check continuity between fuel level sensor unit and fuel pump (fuel level sensor) harness connector B72 and fuel level sensor unit (sub) harness connector B100.

| Fuel level sensor unit and fuel pump (fuel level sensor) | | Fuel level sensor unit (sub) | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| B72 | 2 | B100 | 8 | Yes |

3. Check continuity between fuel level sensor unit and fuel pump (fuel level sensor) harness connector B72 and ground.

| Fuel level sensor unit and fuel pump (fuel level sensor) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| B72 | 2 | | No |

Is the inspection result normal?

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

## 4.CHECK FUEL LEVEL SENSOR UNIT (SUB) CIRCUIT

1. Check continuity between combination meter harness connector M23 and fuel level sensor unit (sub) harness connector B100.

| Fuel level sensor unit (sub) | | Combination meter | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| B100 | 7 | M23 | 54 | Yes |

2. Check continuity between fuel level sensor unit (sub) harness connector B100 and ground.

| Fuel level sensor unit (sub) | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| B100 | 7 | | No |

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness or connector.

## 5.CHECK INSTALLATION CONDITION

Check fuel level sensor unit installation, and check whether the float arm interferes or binds with any of the internal components in the fuel tank.

Is the inspection result normal?

YES >> Inspection End.
NO >> Install the fuel level sensor unit properly. Refer to FL-5, "Removal and Installation".

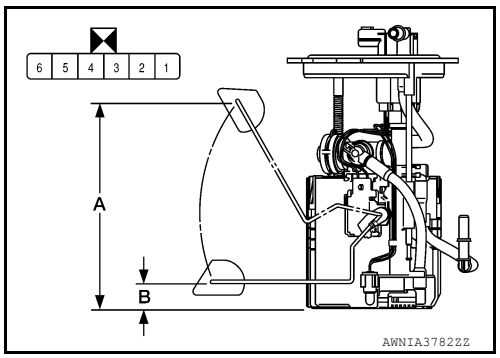
# Component Inspection

INFOID:0000000011551957

## 1.CHECK FUEL LEVEL SENSOR UNIT AND FUEL PUMP (FUEL LEVEL SENSOR)

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

2. Check the resistance between fuel level sensor unit and fuel pump (fuel level sensor) terminals.




| Fuel level sensor unit and fuel pump (fuel level sensor) Terminals | | Condition | Resistance (Ω) (Approx.) | Height [mm (in)] |
|---|---|---|---|---|
| 2 | 5 | Full* (A) | 44 | 167 (6.6) |
| | | Empty* (B) | 137 | 19.8 (0.8) |

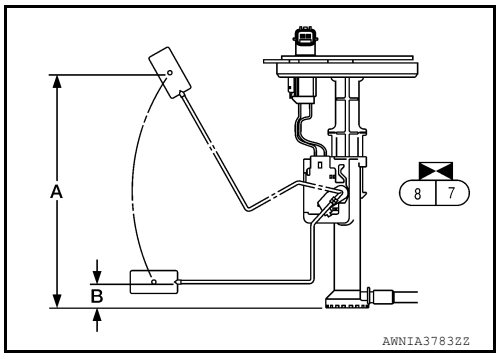
*: When float rod is in contact with stopper.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace fuel level sensor unit and fuel pump (fuel level sensor). Refer to FL-5, "Removal and Installation".

## 2. CHECK FUEL LEVEL SENSOR UNIT (SUB)

1. Remove the fuel level sensor unit (sub). Refer to FL-5, "Removal and Installation".
2. Check the resistance between fuel level sensor unit (sub) terminals.




| Fuel level sensor unit (sub) Terminal | | Condition | Resistance (Ω) (Approx.) | Height [mm (in)] |
|---|---|---|---|---|
| 7 | 8 | Full* (A) | 7.0 | 187.9 (7.6) |
| | | Empty* (B) | 153 | 19.6 (0.8) |

*: When float rod is in contact with stopper.

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace fuel level sensor unit (sub). Refer to FL-5, "Removal and Installation".

# WASHER FLUID LEVEL SWITCH CIRCUIT

## Diagnosis Procedure

INFOID:0000000011215191

Regarding Wiring Diagram information, refer to MWI-31, "Wiring Diagram".

### 1.CHECK WASHER FLUID LEVEL SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector M24 and washer fluid level switch harness connector E208.
3. Check continuity between combination meter harness connector M24 and washer fluid level switch harness connector E208.

| Combination meter | | Washer fluid level switch | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M24 | 24 | E208 | 1 | Yes |

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

| Combination meter | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M24 | 24 | | No |

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

### 2.CHECK WASHER FLUID LEVEL SWITCH GROUND CIRCUIT

Check continuity between washer fluid level switch harness connector E208 and ground.

| Washer fluid level switch | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| E208 | 2 | | Yes |

Is the inspection result normal?

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

## Component Inspection

INFOID:0000000011551960

### 1.CHECK WASHER FLUID LEVEL SWITCH

1. Turn ignition switch OFF.
2. Disconnect washer fluid level switch connector.
3. Check washer fluid level switch.

| Washer fluid level switch | | Condition | Continuity |
|---|---|---|---|
| Terminal | | | |
| 1 | 2 | Washer fluid level switch ON | Yes |
| | | Washer fluid level switch OFF | No |

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace washer fluid level switch. Refer to WW-6, "Component Parts Location".

# STEERING SWITCH

## Diagnosis Procedure

INFOID:0000000011551962

Regarding Wiring Diagram information, refer to MWI-31, "Wiring Diagram".

### 1.CHECK STEERING SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter harness connector M24 and spiral cable harness connector M30.
3. Check continuity between combination meter harness connector M24 and spiral cable harness connector M30.

| Combination meter | | Spiral cable | | Continuity |
|---|---|---|---|---|
| Connector | Terminal | Connector | Terminal | |
| M24 | 21 | M30 | 11 | Yes |
| | 22 | | 9 | |
| | 23 | | 8 | |

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

| Combination meter | | Ground | Continuity |
|---|---|---|---|
| Connector | Terminal | | |
| M24 | 21 | | No |
| | 22 | | |
| | 23 | | |

Is the inspection result normal?

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

## Component Inspection

INFOID:0000000011551963

### 1.CHECK STEERING SWITCH RESISTANCE

Check resistance between the following steering switch terminals:

| Steering switches | | | Condition | Resistance (Ω) (Approx.) |
|---|---|---|---|---|
| Terminal | | Signal name | | |
| 17 | 19 | Display | Depress ▷ switch. | 2023 |
| | | Back | Depress ◁ switch. | 723 |
| 16 | | Enter | Depress OK switch. | 2023 |
| | | Menu Up | Depress △ switch. | 121 |
| | | Menu Down | Depress ▽ switch. | 321 |

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace steering wheel switch. Refer to AV-66, "Removal and Installation".

### 2.CHECK SPIRAL CABLE

Check continuity between the following spiral cable terminals:

| Spiral cable | | Continuity |
|---|---|---|
| Terminal | | |
| 16 | 9 | Yes |
| 17 | 8 | |
| 19 | 11 | |

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace spiral cable. Refer to SR-15, "Removal and Installation".

# SYMPTOM DIAGNOSIS

## THE FUEL GAUGE INDICATOR DOES NOT OPERATE

### Description

INFOID:0000000011215200

Fuel gauge will not indicate from a certain position.

### Diagnosis Procedure

INFOID:0000000011551964

**1.** PERFORM COMBINATION METER SELF-DIAGNOSIS MODE

Perform the self-diagnosis mode of combination meter, and then check that the fuel gauge operates normally. Refer to MWI-18, "On Board Diagnosis Function".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace the combination meter. Refer to MWI-78, "Removal and Installation".

**2.** CHECK COMBINATION METER INPUT SIGNAL

Perform component function check. Refer to MWI-63, "Component Function Check".

Does data monitor value match fuel gauge reading?

YES >> GO TO 3.
NO >> Replace combination meter. Refer to MWI-78, "Removal and Installation".

**3.** CHECK FUEL LEVEL SENSOR UNIT CIRCUITS

Check the fuel level sensor circuits. Refer to MWI-63, "Diagnosis Procedure".

Is the inspection result normal?

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

**4.** CHECK FUEL LEVEL SENSOR UNIT

Check the fuel level sensor unit. Refer to MWI-64, "Component Inspection".

Is the inspection result normal?

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

**5.** CHECK FLOAT INTERFERENCE

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> Repair or replace malfunctioning parts.

# THE METER CONTROL SWITCH IS INOPERATIVE

## Description

INFOID:0000000011551965

The meter control switches are inoperative when pressed.

## Diagnosis Procedure

INFOID:0000000011551966

### 1.CHECK METER CONTROL SWITCH

Check the meter control switch. Refer to MWI-62, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace meter control switch. Refer to MWI-79, "Removal and Installation".

### 2.CHECK METER CONTROL SWITCH SIGNAL

Check the meter control switch signal. Refer to MWI-61, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Repair or replace harness or connector.

# THE OIL PRESSURE WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

## Description

INFOID:0000000011551967

- The low oil pressure warning message stays on when oil pressure is normal.
- The low oil pressure warning message stays off when oil pressure is low.

## Diagnosis Procedure

INFOID:0000000011551968

### 1.CHECK COMBINATION METER INPUT

CONSULT

1. Start the engine.
2. Select “Data Monitor” mode of “METER/M&A”.
3. Select “OIL W/L”.
4. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | CONSULT |
|---|---|---|
| OIL W/L | Engine running | Off |

Is the inspection result normal?

YES >> Perform “Self Diagnostic Result” of “ECM”. Refer to EC-71, "CONSULT Function".
NO >> Replace combination meter. Refer to MWI-78, "Removal and Installation".

# THE PARKING BRAKE RELEASE WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

## Description

INFOID:0000000011551969

- The parking brake warning is displayed during vehicle travel, even though the parking brake is released.
- The parking brake warning is not displayed, even while driving the vehicle with the parking brake applied.

## Diagnosis Procedure

INFOID:0000000011551970

### 1.CHECK PARKING BRAKE WARNING LAMP OPERATION

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

| Condition | Warning lamp status |
|---|---|
| Parking brake applied | ON |
| Parking brake released | OFF |

Is the inspection result normal?

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

### 2.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Check the parking brake switch signal circuit. Refer to WCS-33, "Diagnosis Procedure".

Is the inspection result normal?

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

### 3.CHECK PARKING BRAKE SWITCH UNIT

Check the parking brake switch. Refer to WCS-33, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace parking brake switch. Refer to PB-7, "Exploded View".

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

## Description

INFOID:0000000011551971

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

## Diagnosis Procedure

INFOID:0000000011551972

### 1.CHECK WASHER FLUID LEVEL SWITCH SIGNAL CIRCUIT

Check the washer fluid level switch signal circuit. Refer to MWI-66, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

### 2.CHECK WASHER FLUID LEVEL SWITCH UNIT

Check the washer fluid level switch. Refer to MWI-66, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace washer fluid level switch. Refer to WW-58, "Removal and Installation".

# THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

## Description

INFOID:0000000011215210

- The door open warning is displayed even though all of the doors are closed.
- The door open warning is not displayed even though a door is ajar.

## Diagnosis Procedure

INFOID:0000000011215211

### 1.CHECK BCM INPUT SIGNAL

Check the BCM input signal. Refer to DLK-179, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 3.

### 2.CHECK COMBINATION METER INPUT SIGNAL

CONSULT
1. Select “Data Monitor” mode of “METER/M&A”.
2. Select “DOOR W/L”.
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | Status |
|---|---|---|
| DOOR W/L | Door open | On |
| | Door closed | Off |

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-82, "Removal and Installation".

### 3.CHECK DOOR SWITCH SIGNAL CIRCUIT

Check the door switch signal circuit. Refer to DLK-179, "Diagnosis Procedure".

Is the inspection result normal?

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

### 4.CHECK DOOR SWITCH

Check the door switch. Refer to DLK-180, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace applicable door switch. Refer to DLK-303, "Removal and Installation".

# THE LIFTGATE OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

## Description

INFOID:0000000011215212

- The liftgate open warning is displayed continuously even though the back door is closed.
- The liftgate open warning is not displayed even though the back door is open.

## Diagnosis Procedure

INFOID:0000000011215213

### 1.CHECK BCM INPUT SIGNAL

Check the BCM input signal. Refer to DLK-179, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 3.

### 2.CHECK COMBINATION METER INPUT SIGNAL

CONSULT
1. Select “Data Monitor” mode of “METER/M&A”.
2. Select “DOOR W/L”.
3. Check that the function operates normally according to the following conditions:

| Monitor item | Condition | Status |
|---|---|---|
| DOOR W/L | Back door open | On |
| | Back door closed | Off |

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-82, "Removal and Installation".

### 3.CHECK BACK DOOR SWITCH SIGNAL CIRCUIT

Check the back door switch signal circuit. Refer to DLK-181, "Diagnosis Procedure (With Automatic Back Door)" or DLK-182, "Diagnosis Procedure (Without Automatic Back Door)".

Is the inspection result normal?

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

### 4.CHECK BACK DOOR SWITCH

Check the back door switch. Refer to DLK-183, "Component Inspection (With Automatic Back Door)" or DLK-184, "Component Inspection (Without Automatic Back Door)".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace back door switch. Refer to DLK-297, "DOOR LOCK : Removal and Installation".

# THE STEERING SWITCHES ARE INOPERATIVE

## Description

INFOID:0000000011551973

One or more of the steering switches to control the information display are inoperative.

## Diagnosis Procedure

INFOID:0000000011551974

### 1.CHECK STEERING SWITCH CIRCUIT

Check steering switch circuit. Refer to MWI-67, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

### 2.CHECK STEERING SWITCH RESISTANCE

Check steering switch resistance. Refer to MWI-67, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace steering switch. Refer to AV-66, "Removal and Installation".

### 3.CHECK SPIRAL CABLE

Check spiral cable for continuity. Refer to MWI-67, "Component Inspection".

Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace spiral cable. Refer to SR-15, "Removal and Installation".

# THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

## Description

INFOID:0000000011560690

- The displayed outside air temperature is higher than the actual temperature.
- The displayed outside air temperature is lower than the actual temperature.
- Outside air temperature is not indicated.

## Diagnosis Procedure

INFOID:0000000011560691

### 1.CHECK AMBIENT SENSOR SIGNAL CIRCUIT

Check the ambient sensor signal circuit. Refer to HAC-53, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness or connector.

### 2.CHECK AMBIENT SENSOR

Check the ambient sensor. Refer to HAC-55, "Component Inspection".

Is the inspection result normal?

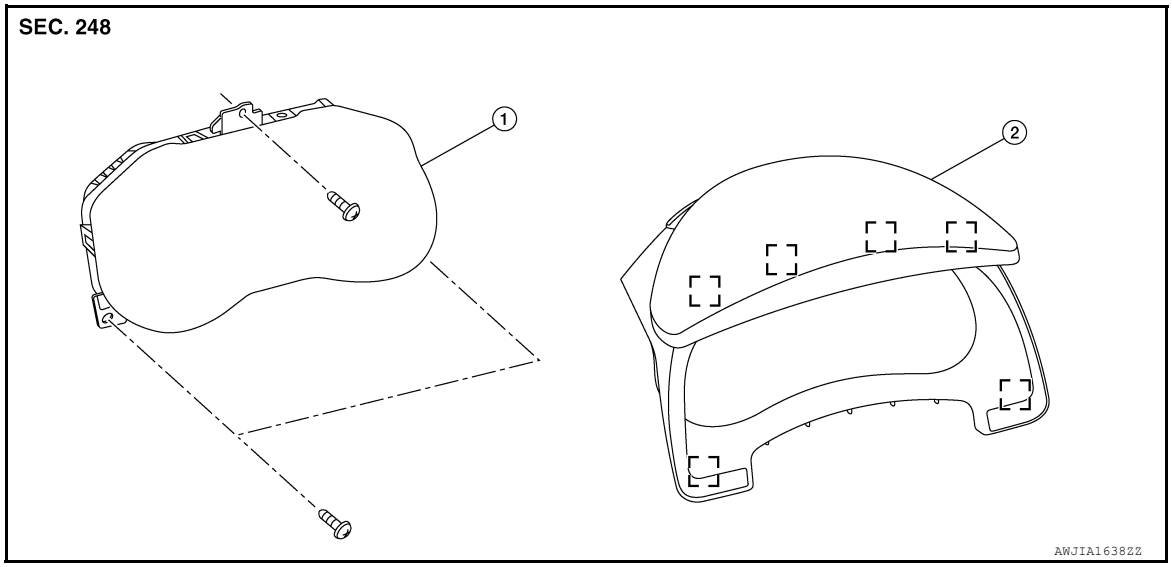
YES >> Replace combination meter. Refer to MWI-78, "Removal and Installation".
NO >> Replace ambient sensor. Refer to HAC-96, "Removal and Installation".

# REMOVAL AND INSTALLATION

## COMBINATION METER

### Exploded View

INFOID:0000000011583496




1. Combination meter
2. Cluster lid A
:Metal clip

### Removal and Installation

INFOID:0000000011215218

REMOVAL

1. Remove cluster lid A. Refer to IP-21, "Removal and Installation".
2. Remove combination meter screws.
3. Remove combination meter then disconnect harness connector.

INSTALLATION

Installation is in the reverse order of removal.

# METER CONTROL SWITCH

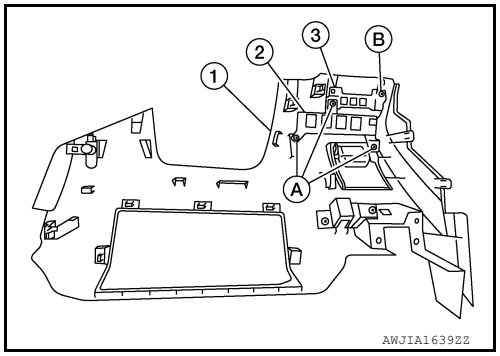
## Removal and Installation

INFOID:0000000011215219

### REMOVAL

**NOTE:**
The illumination control switch and trip reset switch are serviced as an assembly.

1. Remove instrument lower panel LH (1). Refer to IP-24, "Removal and Installation".
2. Remove warning buzzer. Refer to DAS-187, "Removal and Installation".
3. Remove screws (A) then remove middle switch carrier (2).
4. Remove screw (B) then disconnect harness connector and remove meter control switch (3).




### INSTALLATION

Installation is in the reverse order of removal.

# TRIP RESET SWITCH

## Removal and Installation

INFOID:0000000011215220

The trip reset switch is serviced as part of the meter control switch. Refer to MWI-79, "Removal and Installation".

# ILLUMINATION CONTROL SWITCH

## Removal and Installation

INFOID:0000000011583501

The illumination control switch is serviced as part of the meter control switch. Refer to MWI-79, "Removal and Installation".