

MWI

SECTION

METER, WARNING LAMP & INDICATOR

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

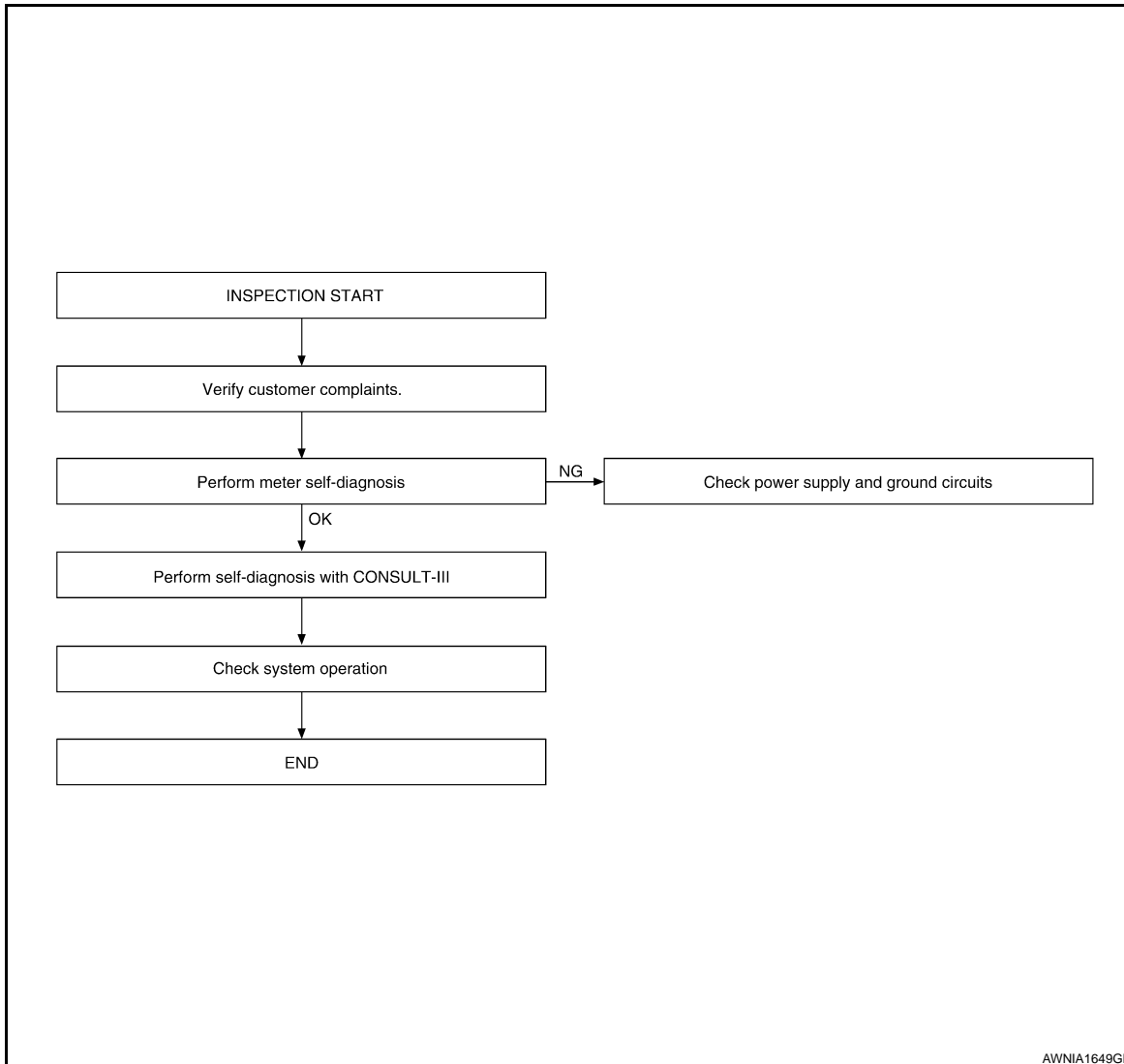
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

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OVERALL SEQUENCE



DETAILED FLOW

1.CONFIRM SYMPTOM

Confirm symptom or customer complaint.

>> GO TO 2

2.CHECK SELF-DIAGNOSIS OPERATION OF COMBINATION METER

Perform self-diagnosis of combination meter. Refer to [MWI-29. "Diagnosis Description"](#).

Does self-diagnosis mode operate?

YES >> GO TO 3

NO >> Check power supply and ground circuit of combination meter. Refer to [MWI-37. "COMBINATION METER : Diagnosis Procedure"](#). Then, GO TO 4

3.CHECK COMBINATION METER (CONSULT-III)

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

Select "METER/M&A" on CONSULT-III and perform "SELF-DIAGNOSIS" of combination meter. Refer to [MWI-29, "CONSULT-III Function \(METER/M&A\)"](#).

Self-diagnostic results content

No malfunction detected>>Repair or replace the cause of symptom. Then, GO TO 4

Malfunction detected>>Refer to [MWI-72, "DTC Index"](#). Then, GO TO 4

4.CONFIRM OPERATION

Does the combination meter operate normally?

YES or NO

YES >> Inspection End.

NO >> GO TO 1

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METER SYSTEM

< FUNCTION DIAGNOSIS >

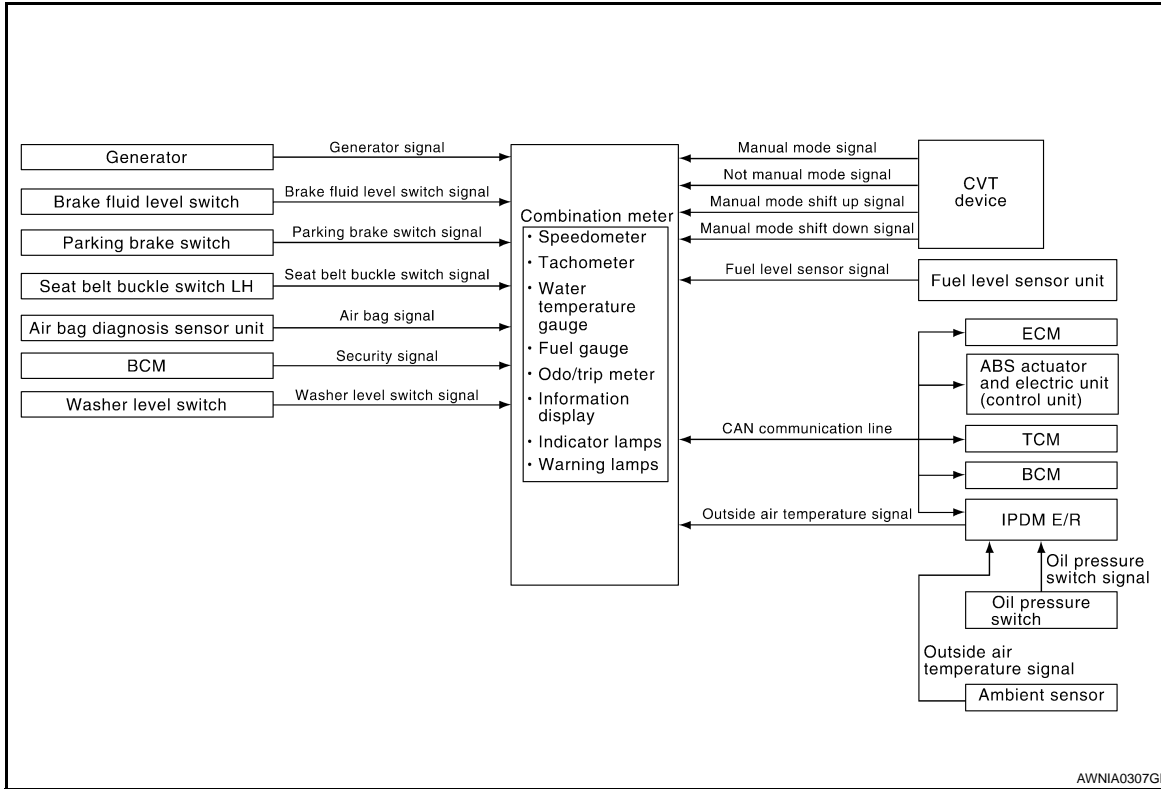
FUNCTION DIAGNOSIS

METER SYSTEM

METER SYSTEM

METER SYSTEM : System Diagram

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METER SYSTEM : System Description

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COMBINATION METER

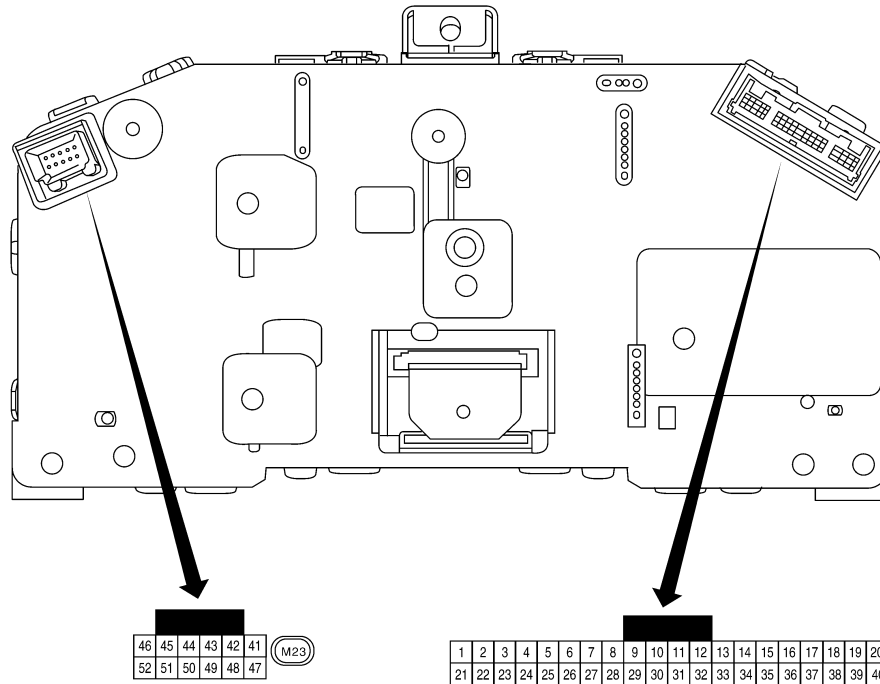
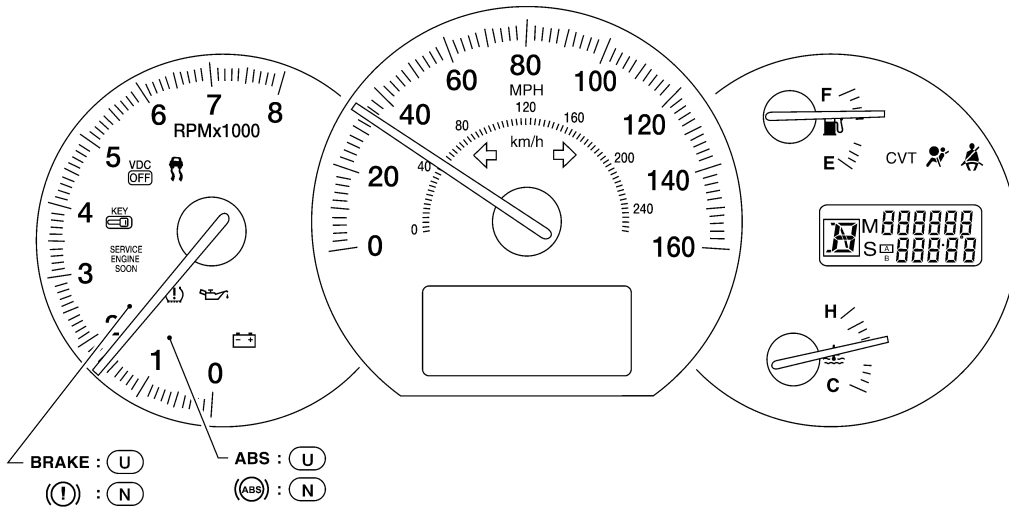
- Speedometer, odo/trip meter, tachometer, fuel gauge, water temperature gauge and information display are controlled by the unified meter control unit, which is built into the combination meter.
- Warning and indicator lamps are controlled by the unified meter control unit and by components connected directly to the combination meter.
- Digital meter is adopted for odo/trip meter.*
*The record of the odometer is kept even if the battery cable is disconnected. The record of the trip meter is erased when the battery cable is disconnected.
- Odo/trip meter and information display segments can be checked in diagnosis mode.
- Meter/gauge can be checked in diagnosis mode.

METER SYSTEM

< FUNCTION DIAGNOSIS >

METER SYSTEM : Arrangement of Combination Meter

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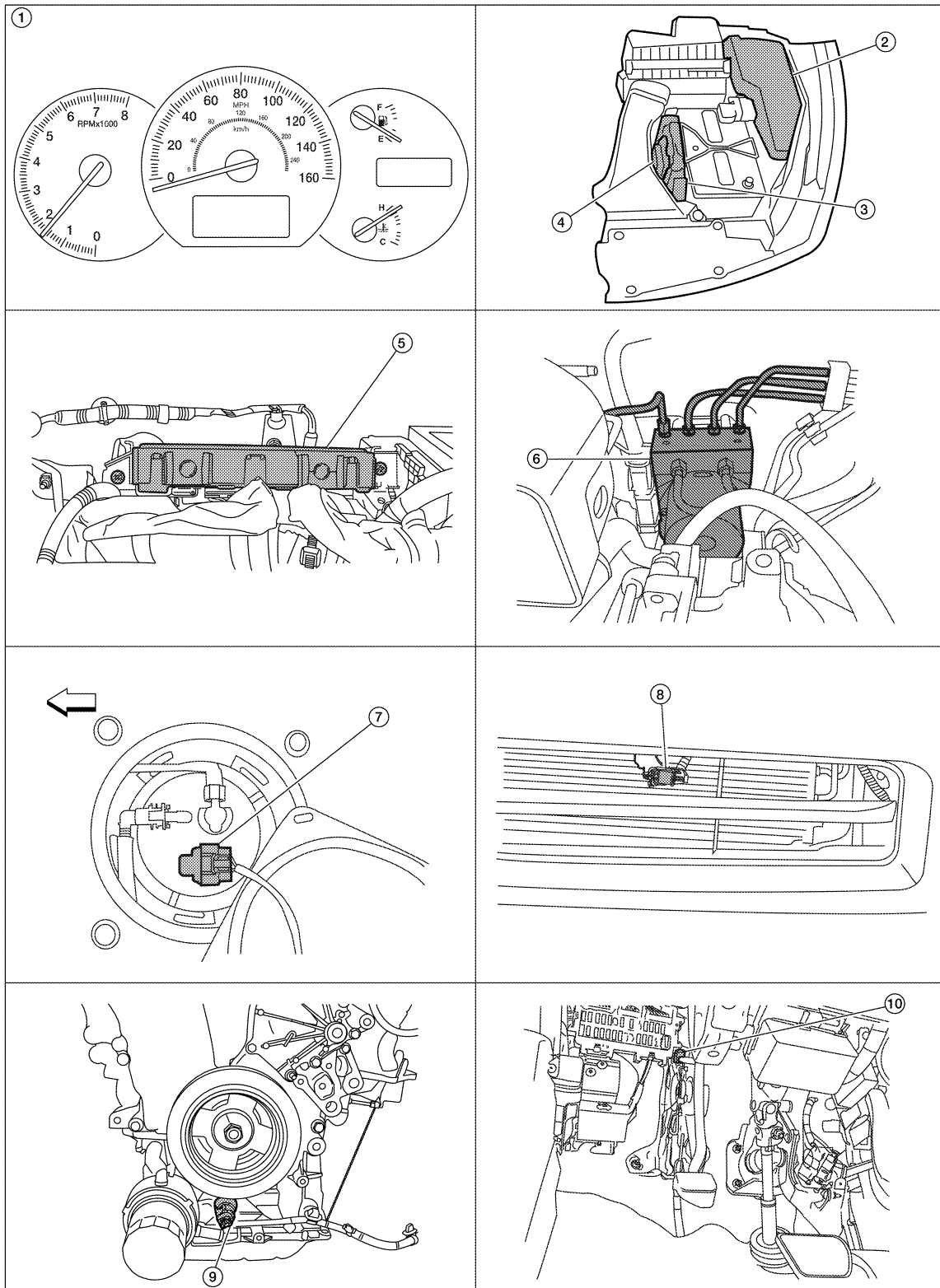
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METER SYSTEM

< FUNCTION DIAGNOSIS >

METER SYSTEM : Component Parts Location

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| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|-------------------------------|--|
| <p>7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
←: Front</p> <p>10. Parking brake switch E35 (view with instrument lower cover LH removed)</p> | <p>8. Ambient sensor E211</p> | <p>9. Oil pressure switch F41 (view with engine removed)</p> |
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METER SYSTEM : Component Description

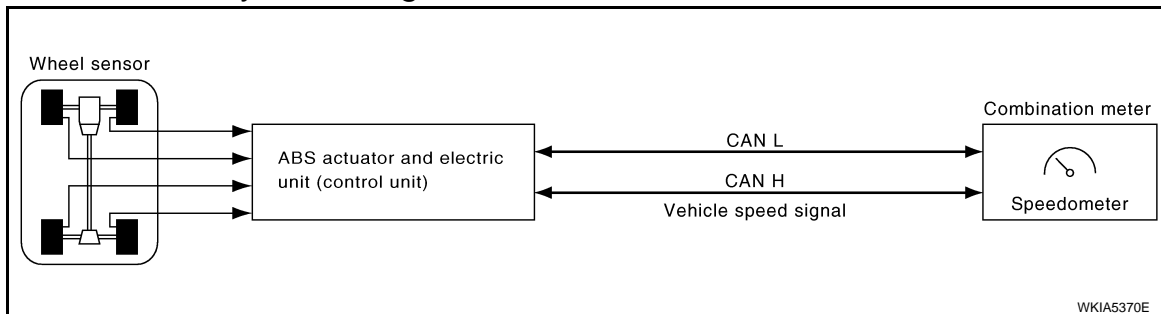
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Unit	Description
Combination meter	<p>Controls the following with the signals received from each unit via CAN communication and the signals from switches and sensors.</p> <ul style="list-style-type: none"> • Speedometer • Engine coolant temperature gauge • Odo/trip meter • Indicator lamps • Information display • Tachometer • Fuel gauge • Warning lamps • Warning chime
IPDM E/R	IPDM E/R reads the ON/OFF signals of the oil pressure switch and transmits the oil pressure switch signal to the combination meter via BCM with CAN communication line.
Fuel level sensor unit	Refer to MWI-40. "Description" .
Oil pressure switch	Refer to MWI-42. "Description" .
ECM	<p>Transmits the following signals to the combination meter with CAN communication line.</p> <ul style="list-style-type: none"> • Engine speed signal • Fuel consumption monitor signal • Engine coolant temperature signal
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter with CAN communication line.
BCM	<ul style="list-style-type: none"> • Transmits signals provided by various units to the combination meter with CAN communication line. • Transmits the security signal to the combination meter.
TCM	Transmits shift position signal to the combination meter with CAN communication line.
Washer level switch	Transmits the washer level signal to the combination meter.
Brake fluid level switch	Transmits the brake fluid level switch signal to the combination meter.
Parking brake switch	Refer to MWI-43. "Description" .

SPEEDOMETER

SPEEDOMETER : System Diagram

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SPEEDOMETER : System Description

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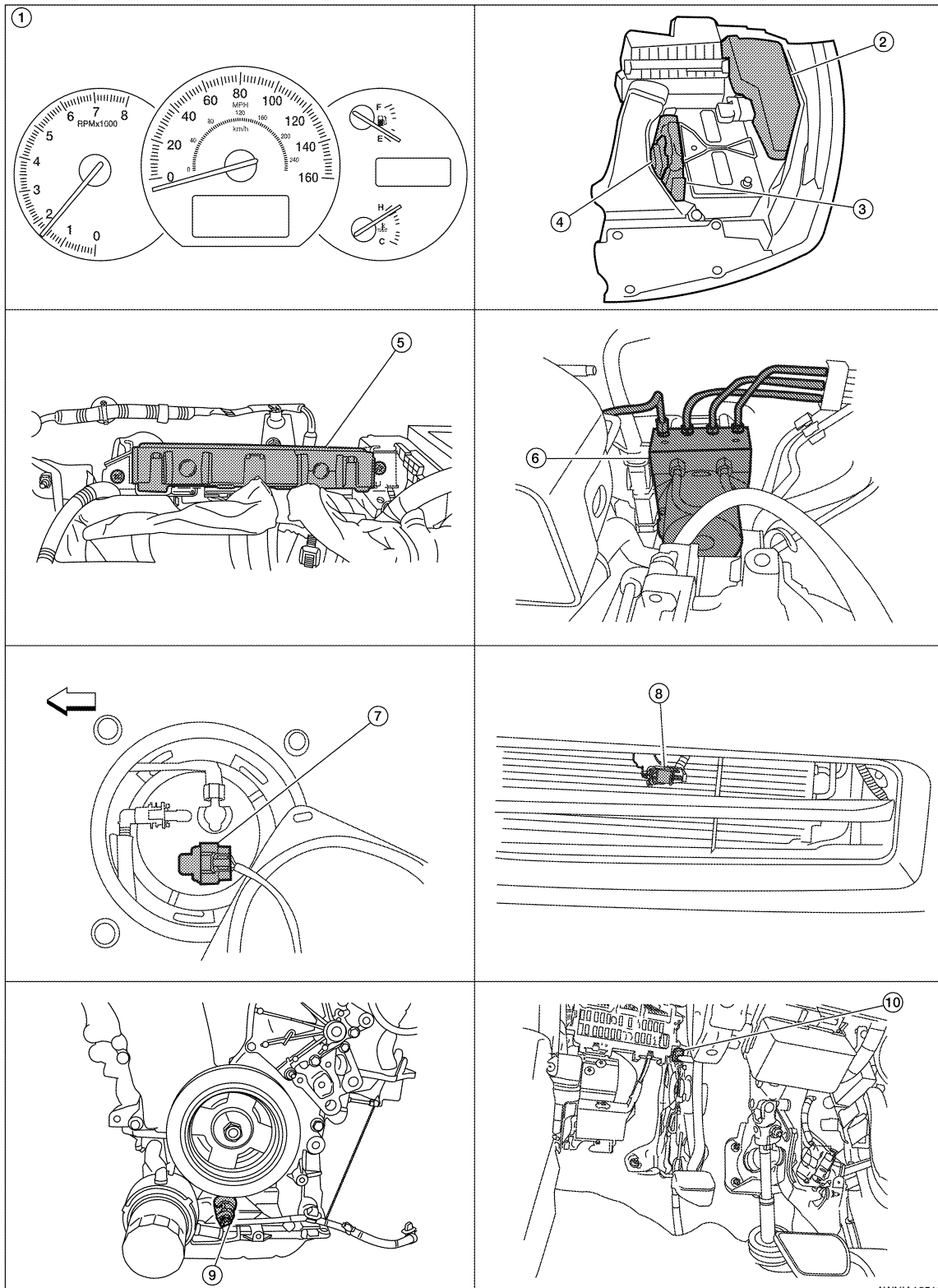
The ABS actuator and electric unit (control unit) provides a vehicle speed signal to the combination meter via CAN communication lines.

METER SYSTEM

< FUNCTION DIAGNOSIS >

SPEEDOMETER : Component Parts Location

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| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|------------------------|---|
| 7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
⇐: Front | 8. Ambient sensor E211 | 9. Oil pressure switch F41 (view with engine removed) |
| 10. Parking brake switch E35 (view with instrument lower cover LH removed) | | |

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SPEEDOMETER : Component Description

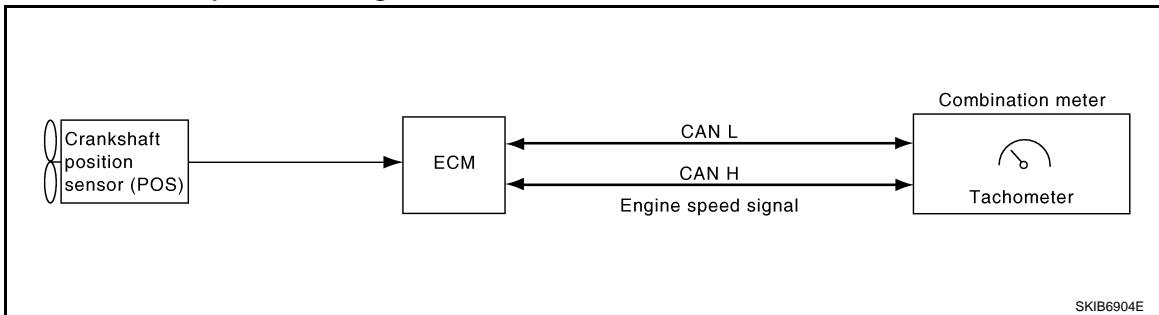
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Unit	Description
Combination meter	Indicates the vehicle speed according to the vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter with CAN communication line.

TACHOMETER

TACHOMETER : System Diagram

INFOID:000000003899453



TACHOMETER : System Description

INFOID:000000003899454

The tachometer indicates engine speed in revolutions per minute (RPM).
The ECM provides an engine speed signal to the combination meter via CAN communication lines.

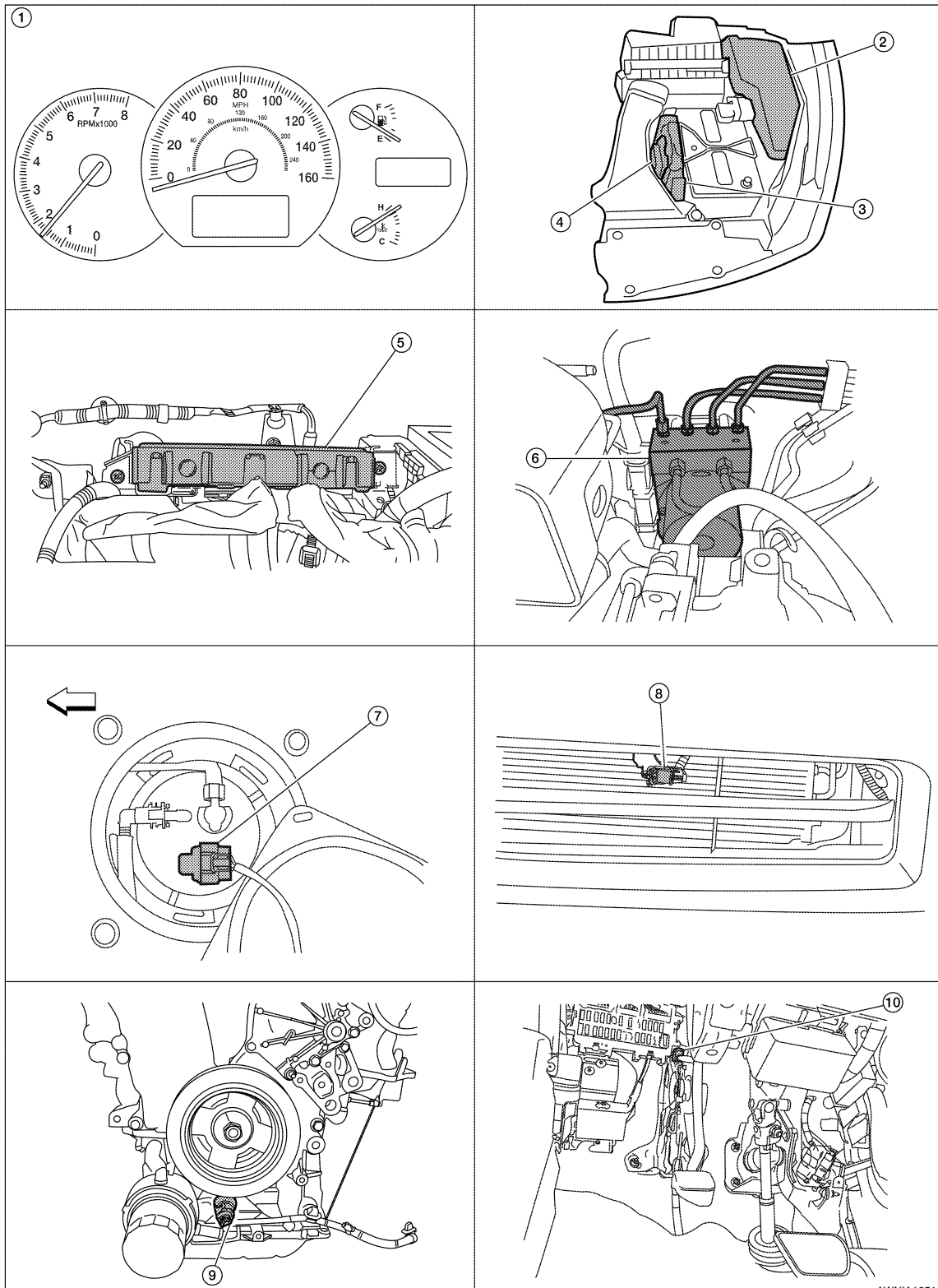
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METER SYSTEM

< FUNCTION DIAGNOSIS >

TACHOMETER : Component Parts Location

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| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|------------------------|---|
| 7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
⇐: Front | 8. Ambient sensor E211 | 9. Oil pressure switch F41 (view with engine removed) |
| 10. Parking brake switch E35 (view with instrument lower cover LH removed) | | |

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TACHOMETER : Component Description

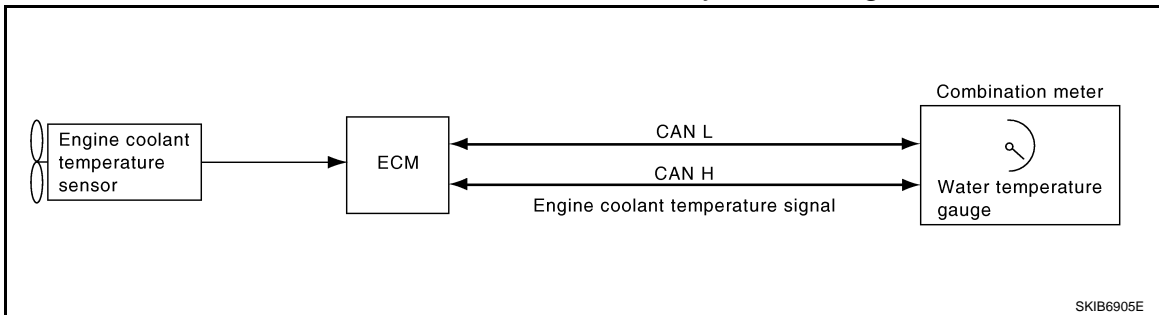
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Unit	Description
Combination meter	Indicates the engine speed in RPM according to the engine speed signal received from ECM via CAN communication.
ECM	Transmits the engine speed signal to the combination meter with CAN communication line.

ENGINE COOLANT TEMPERATURE GAUGE

ENGINE COOLANT TEMPERATURE GAUGE : System Diagram

INFOID:000000003899457



ENGINE COOLANT TEMPERATURE GAUGE : System Description

INFOID:000000003899458

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

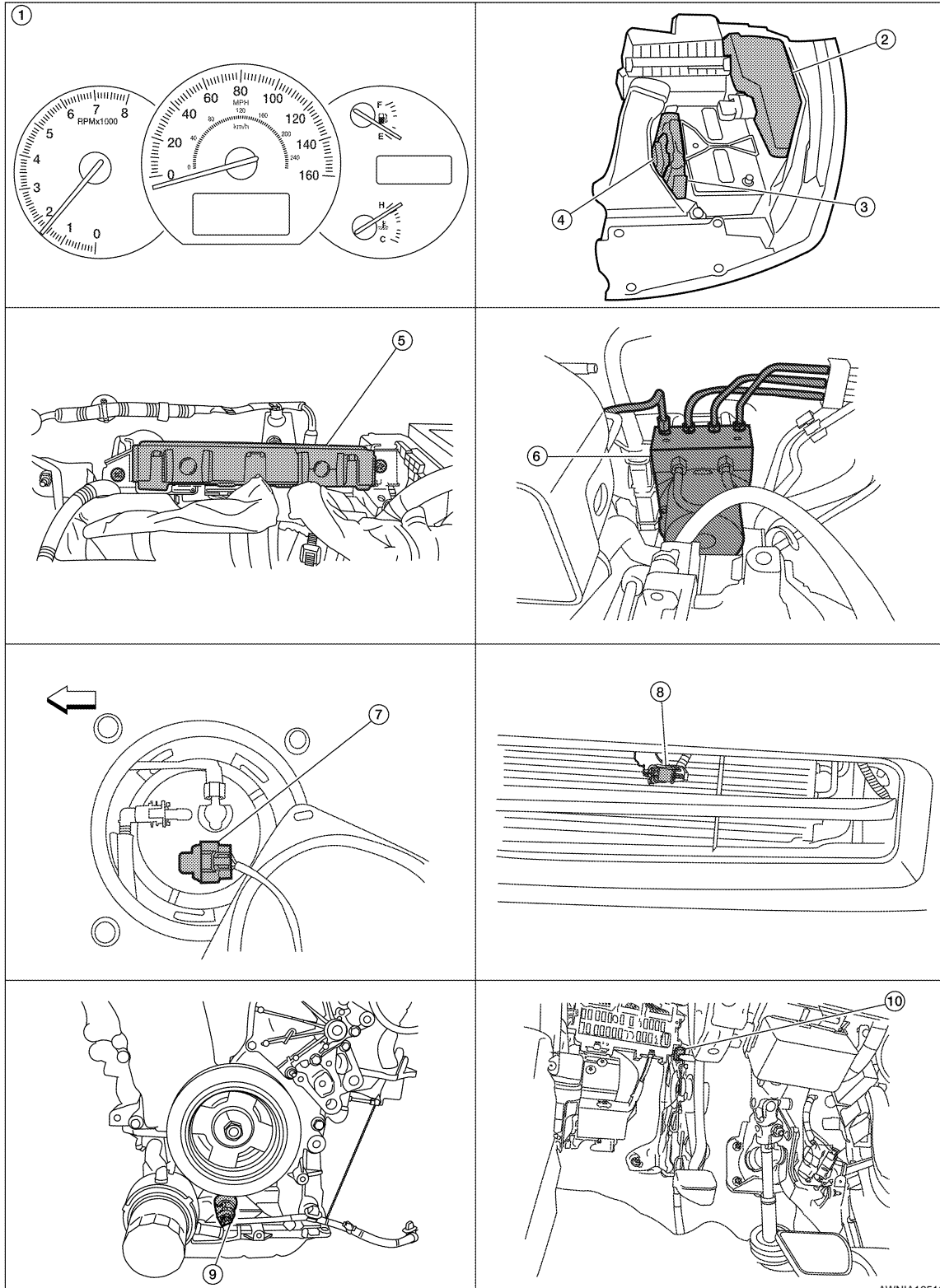
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METER SYSTEM

< FUNCTION DIAGNOSIS >

ENGINE COOLANT TEMPERATURE GAUGE : Component Parts Location

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| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|------------------------|---|
| 7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
⇐: Front | 8. Ambient sensor E211 | 9. Oil pressure switch F41 (view with engine removed) |
| 10. Parking brake switch E35 (view with instrument lower cover LH removed) | | |

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ENGINE COOLANT TEMPERATURE GAUGE : Component Description

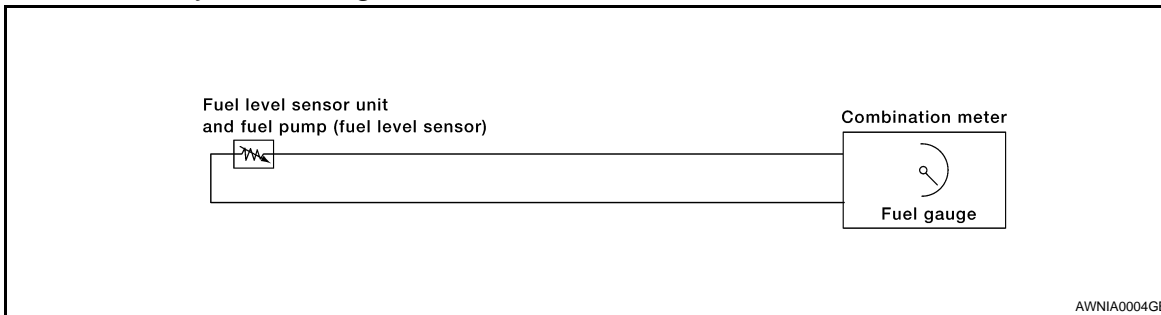
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Unit	Description
Combination meter	Indicates the engine coolant temperature according to the engine coolant temperature signal received from ECM via CAN communication.
ECM	Transmits the engine coolant temperature signal to the combination meter via CAN communication.

FUEL GAUGE

FUEL GAUGE : System Diagram

INFOID:000000003899461



FUEL GAUGE : System Description

INFOID:000000003899462

The fuel gauge indicates the approximate fuel level in the fuel tank. The fuel gauge is regulated by the unified meter control unit and a variable resistor signal supplied by the fuel level sensor unit.

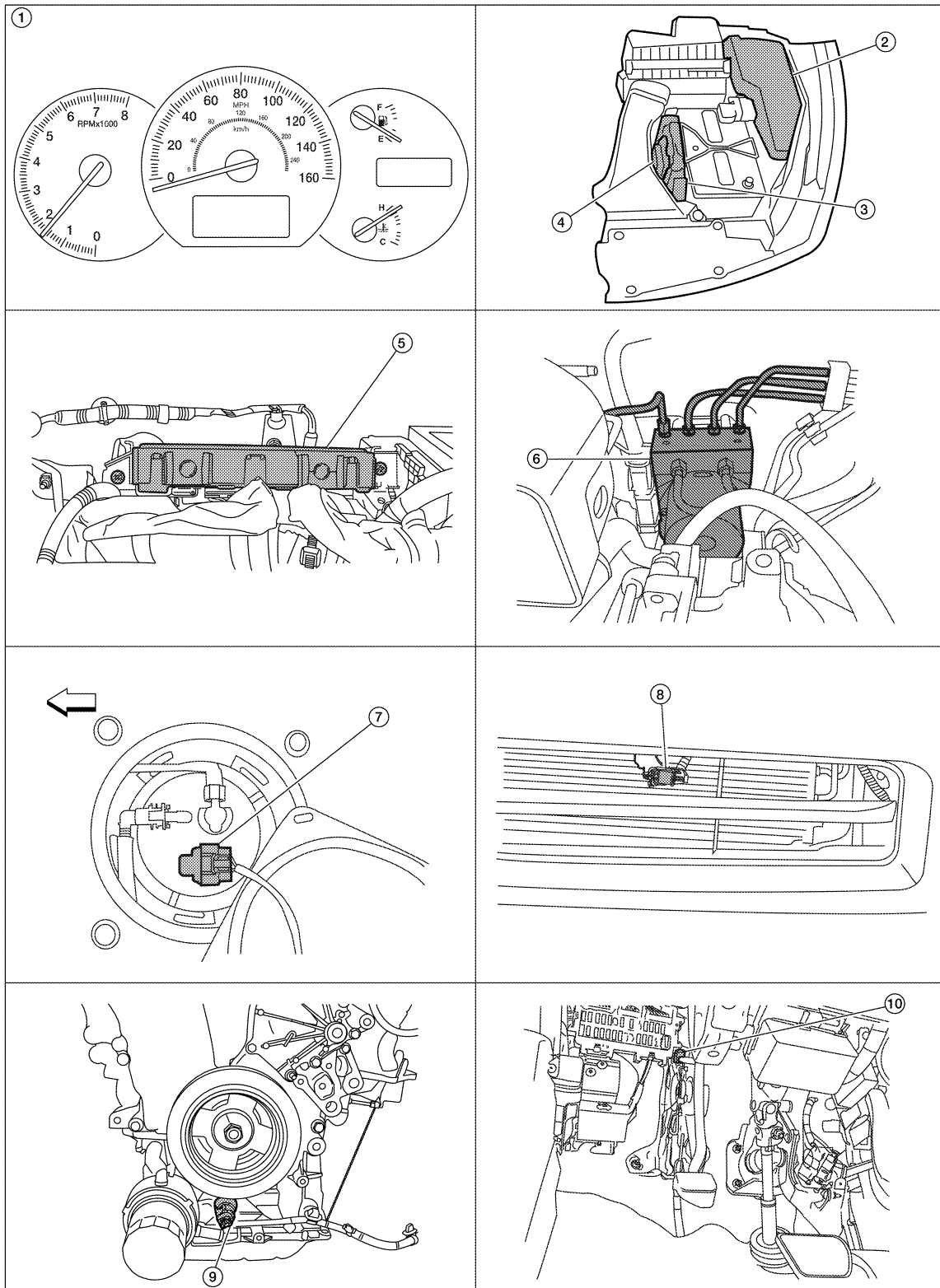
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METER SYSTEM

< FUNCTION DIAGNOSIS >

FUEL GAUGE : Component Parts Location

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| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|-------------------------------|--|
| <p>7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
←: Front</p> <p>10. Parking brake switch E35 (view with instrument lower cover LH removed)</p> | <p>8. Ambient sensor E211</p> | <p>9. Oil pressure switch F41 (view with engine removed)</p> |
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FUEL GAUGE : Component Description

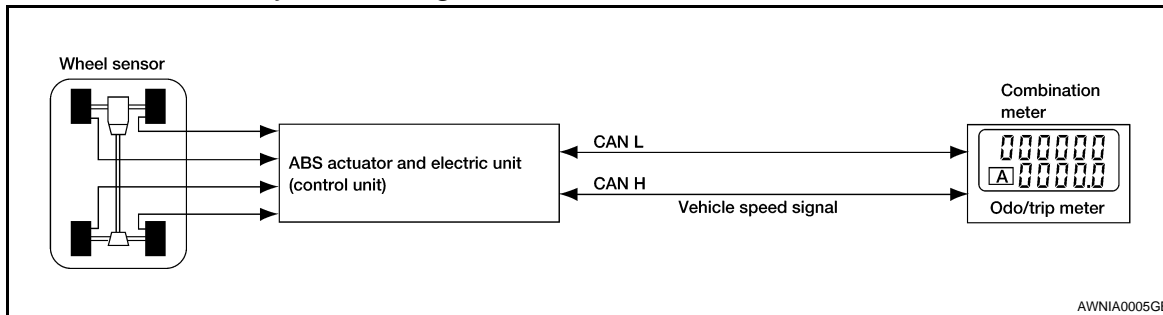
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Unit	Description
Combination meter	Indicates the fuel level according to the fuel level sensor signal received from the fuel level sensor unit.
Fuel level sensor unit	Refer to MWI-40 . "Description".

ODO/TRIP METER

ODO/TRIP METER : System Diagram

INFOID:000000003899465



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ODO/TRIP METER : System Description

INFOID:000000003899466

The vehicle speed signal and the memory signals from the meter memory circuit are processed by the combination meter and the mileage is displayed.

HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

Refer to Owner's Manual for odo/trip meter operating instructions.

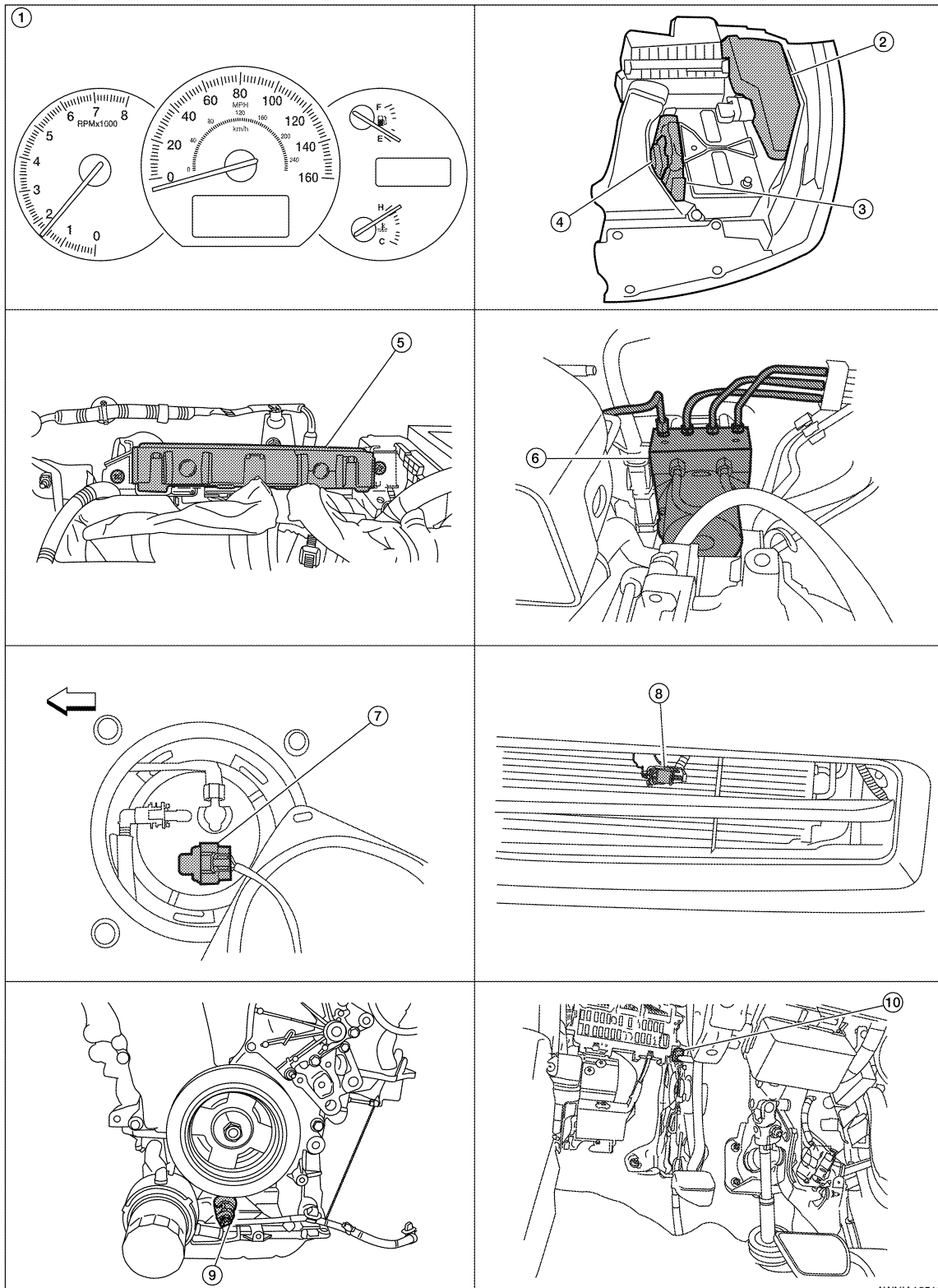
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METER SYSTEM

< FUNCTION DIAGNOSIS >

ODO/TRIP METER : Component Parts Location

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|-------------------------------|---|--|
| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|------------------------|---|
| 7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
⇐: Front | 8. Ambient sensor E211 | 9. Oil pressure switch F41 (view with engine removed) |
| 10. Parking brake switch E35 (view with instrument lower cover LH removed) | | |

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ODO/TRIP METER : Component Description

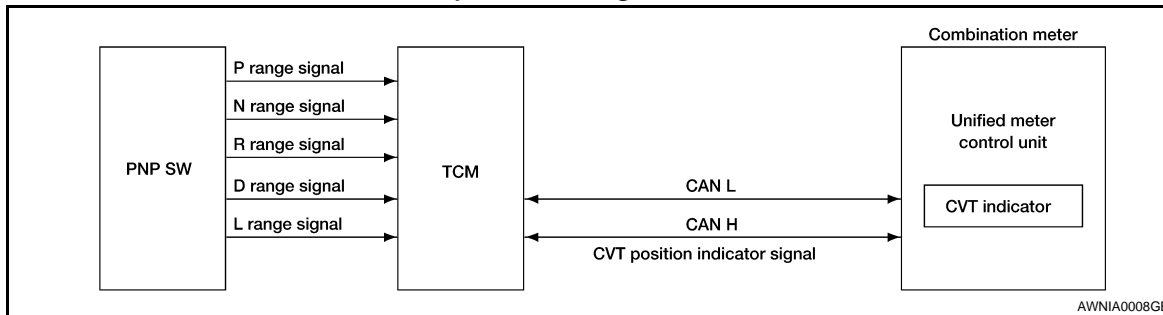
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Unit	Description
Combination meter	Indicates the vehicle speed according to the vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter with CAN communication line.

SHIFT POSITION INDICATOR

SHIFT POSITION INDICATOR : System Diagram

INFOID:000000003899469



SHIFT POSITION INDICATOR : System Description

INFOID:000000003899470

The TCM receives CVT indicator signals from the park/neutral position (PNP) switch. The TCM then sends CVT position indicator signals to the combination meter via CAN communication lines. The combination meter indicates the received shift position.

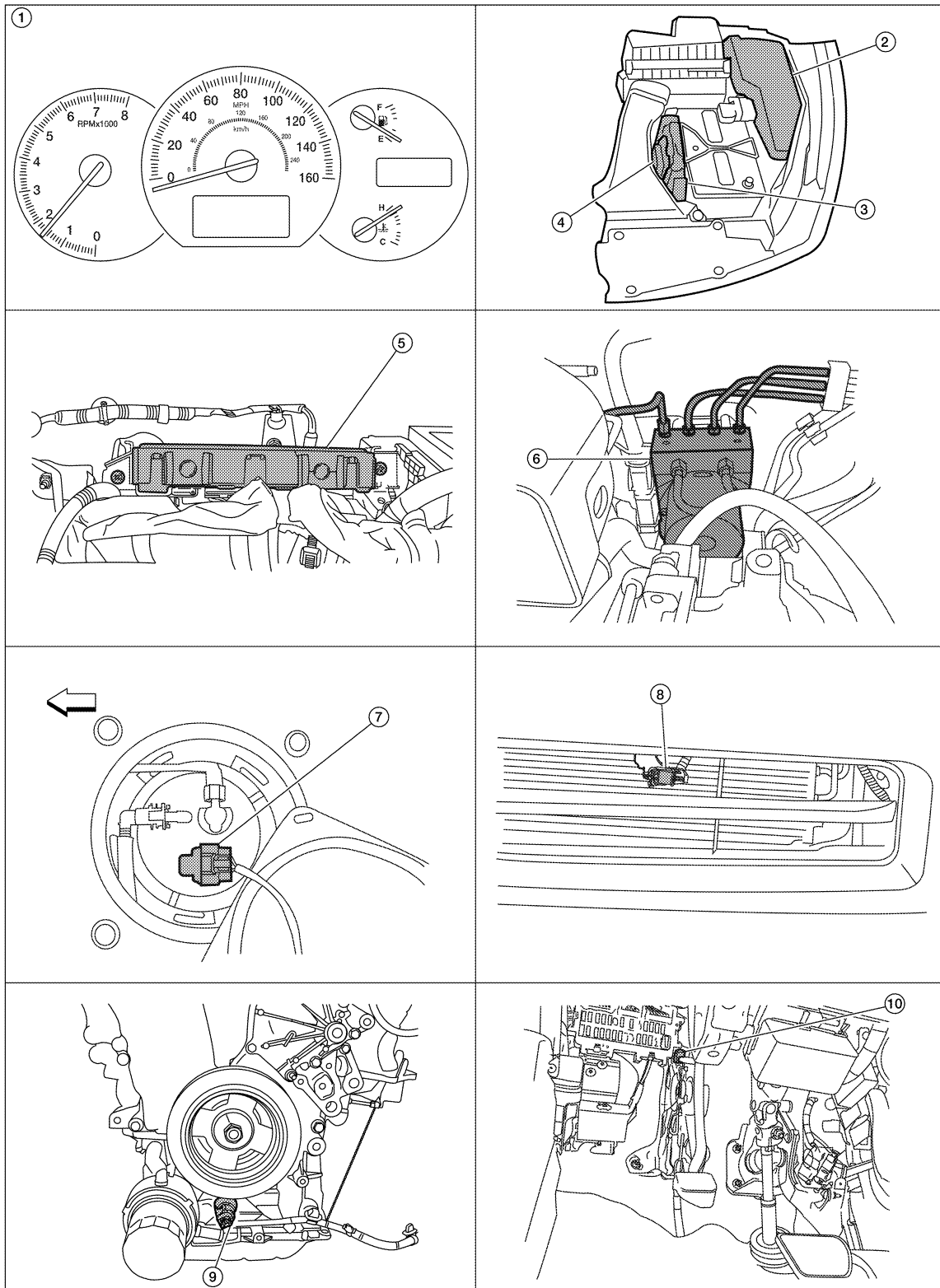
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METER SYSTEM

< FUNCTION DIAGNOSIS >

SHIFT POSITION INDICATOR : Component Parts Location

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| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

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|---|------------------------|---|
| 7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
⇐: Front | 8. Ambient sensor E211 | 9. Oil pressure switch F41 (view with engine removed) |
| 10. Parking brake switch E35 (view with instrument lower cover LH removed) | | |

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SHIFT POSITION INDICATOR : Component Description

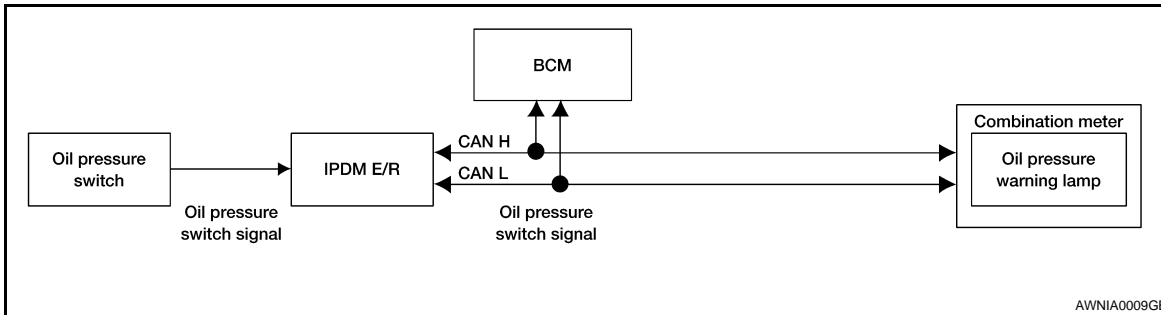
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Unit	Description
Combination meter	Displays the shift position using shift position signal received from TCM.
TCM	Transmits the shift position signal to the combination meter via CAN communication.

WARNING LAMPS/INDICATOR LAMPS

WARNING LAMPS/INDICATOR LAMPS : System Diagram

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WARNING LAMPS/INDICATOR LAMPS : System Description

INFOID:000000003899474

OIL PRESSURE WARNING LAMP

The oil pressure warning lamp is controlled by the IPDM E/R (intelligent power distribution module engine room).

Low oil pressure causes the oil pressure switch to provide a ground signal to the IPDM E/R. The IPDM E/R then signals the combination meter (unified meter control unit) via the CAN communication lines and ground is provided to the oil pressure warning lamp.

When power and ground are supplied, the oil pressure warning lamp illuminates.

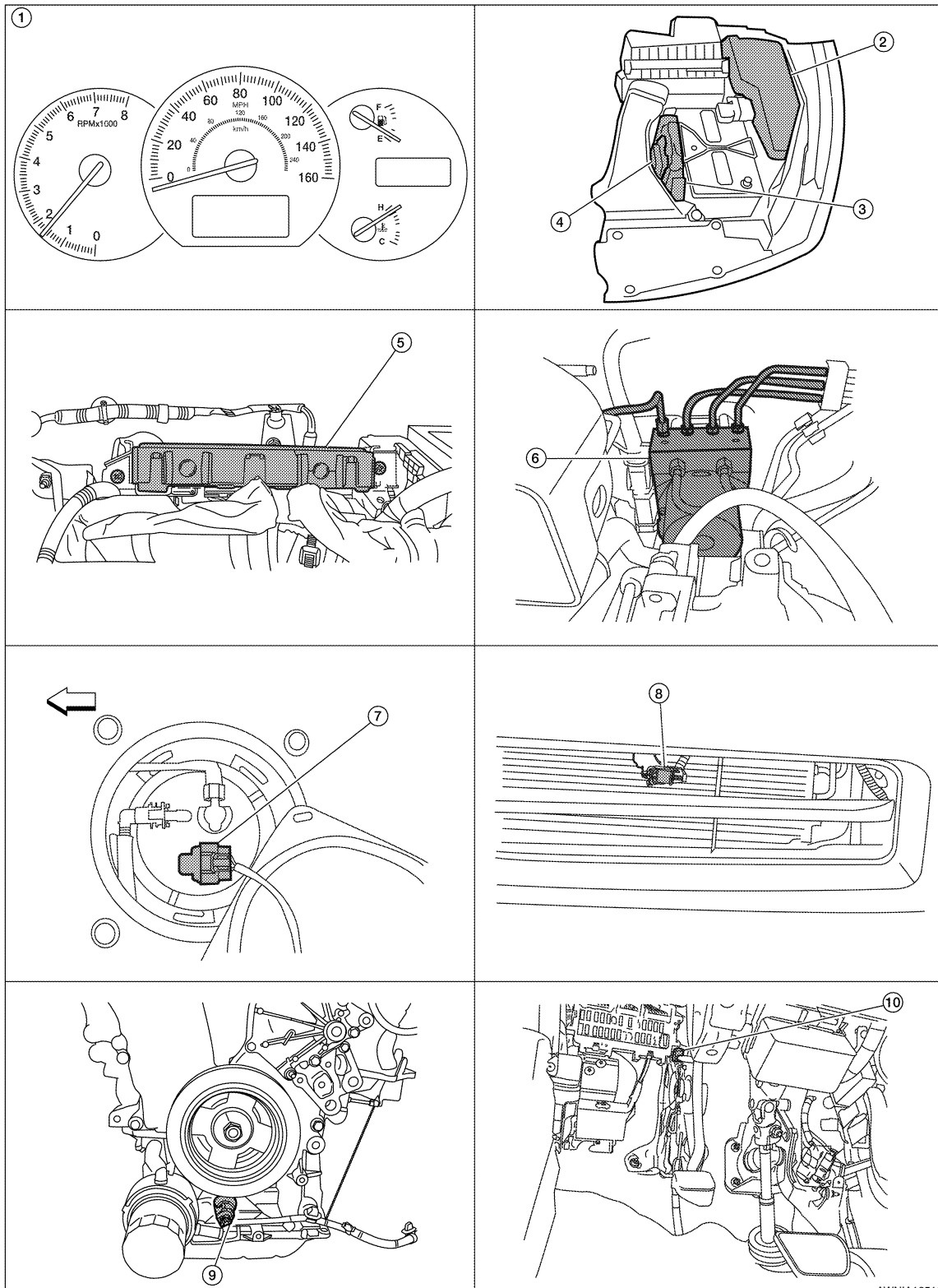
MWI

METER SYSTEM

< FUNCTION DIAGNOSIS >

WARNING LAMPS/INDICATOR LAMPS : Component Parts Location

INFOID:000000004304538



AWNIA1651GB

- | | | |
|-------------------------------|---|--|
| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- | | | |
|---|------------------------|---|
| 7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
⇐: Front | 8. Ambient sensor E211 | 9. Oil pressure switch F41 (view with engine removed) |
| 10. Parking brake switch E35 (view with instrument lower cover LH removed) | | |

WARNING LAMPS/INDICATOR LAMPS : Component Description

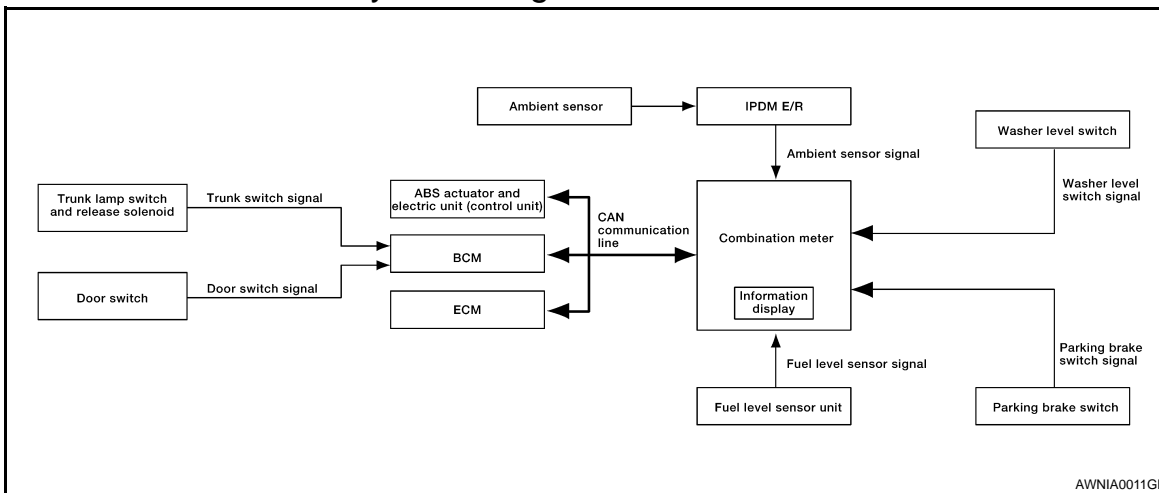
INFOID:000000003899476

Unit	Description
Combination meter	Turns the oil pressure warning lamp ON/OFF according to the oil pressure switch signal received from BCM by means of communication.
IPDM E/R	Reads the ON/OFF signals from the oil pressure switch and transmits the oil pressure switch signal to the combination meter via BCM with the CAN communication line.
Oil pressure switch	Refer to MWI-42, "Description" .
BCM	Transmits the oil pressure switch signal received from IPDM E/R via CAN communication to the combination meter via CAN communication.

INFORMATION DISPLAY

INFORMATION DISPLAY : System Diagram

INFOID:000000003899477



AWNIA0011GE

INFORMATION DISPLAY : System Description

INFOID:000000003899478

FUNCTION

The information display can indicate the following items.

- Outside air temperature
- Trip/fuel consumption readings
- Intelligent Key operation information
- Maintenance information
- Warning/Indication messages (Door ajar, low fuel, low washer fluid, parking brake, cruise control)

OUTSIDE AIR TEMPERATURE INDICATION

The outside air temperature indication is displayed while the ignition switch is in the ON position. Indication range is between -30 and 55°C (-22 and 131°F). When outside temperature is less than 3°C (37°F), display shows ICY. The indicated temperature is not affected by engine heat. It changes only when one of the following conditions exists.

- When vehicle speed is more than approximately 20 km/h (12 MPH).
- The ignition switch has been turned OFF for more than 3.5 hours.
- When outside air temperature is less than the indicated temperature.

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METER SYSTEM

< FUNCTION DIAGNOSIS >

Average fuel consumption indication is calculated using vehicle speed signals from the ABS actuator and electric unit (control unit) and fuel consumption information from the ECM.

MPG/MPH

The average speed mode can be selected to display the average fuel consumption and average speed since last reset. The indications are calculated using vehicle speed signals from the ABS actuator and electric unit (control unit) and fuel consumption information from the ECM.

RANGE

The range indication provides the driver with an estimation of the distance that can be driven before refueling. The range is calculated using signals from the fuel level sensor unit (fuel remaining), ECM (fuel consumption) and vehicle speed signals from the ABS actuator and electric unit (control unit).

DOOR AJAR WARNING

This warning appears when the Intelligent Key is in the vehicle and any door or the trunk is opened.

LOW FUEL WARNING

This warning appears when the fuel level in the fuel tank reaches approximately 12.3 ℓ (3 1/4 US gal, 2 3/4 Imp gal). A variable resistor signal is supplied to the combination meter from the fuel level sensor unit to determine the amount of fuel in the fuel tank.

LOW WINDSHIELD WASHER FLUID WARNING

This warning appears when the windshield washer fluid level is low. When the windshield washer fluid level is low, the washer level switch provides a ground signal to the combination meter (unified meter control unit). The message will be displayed after the ignition switch is turned on for 3 minutes. Once fluid is added, the message will stay on for 30 seconds and then turn off.

PARKING BRAKE INDICATOR

When the ignition switch is in the ON position and the parking brake is applied, the indicator will turn on. When the parking brake is applied, the parking brake switch provides a ground signal to the combination meter (unified meter control unit). Then, when the ignition switch is turned ON and vehicle speed is greater than 5 km/h (3 MPH), the message is displayed.

CRUISE SET INDICATOR

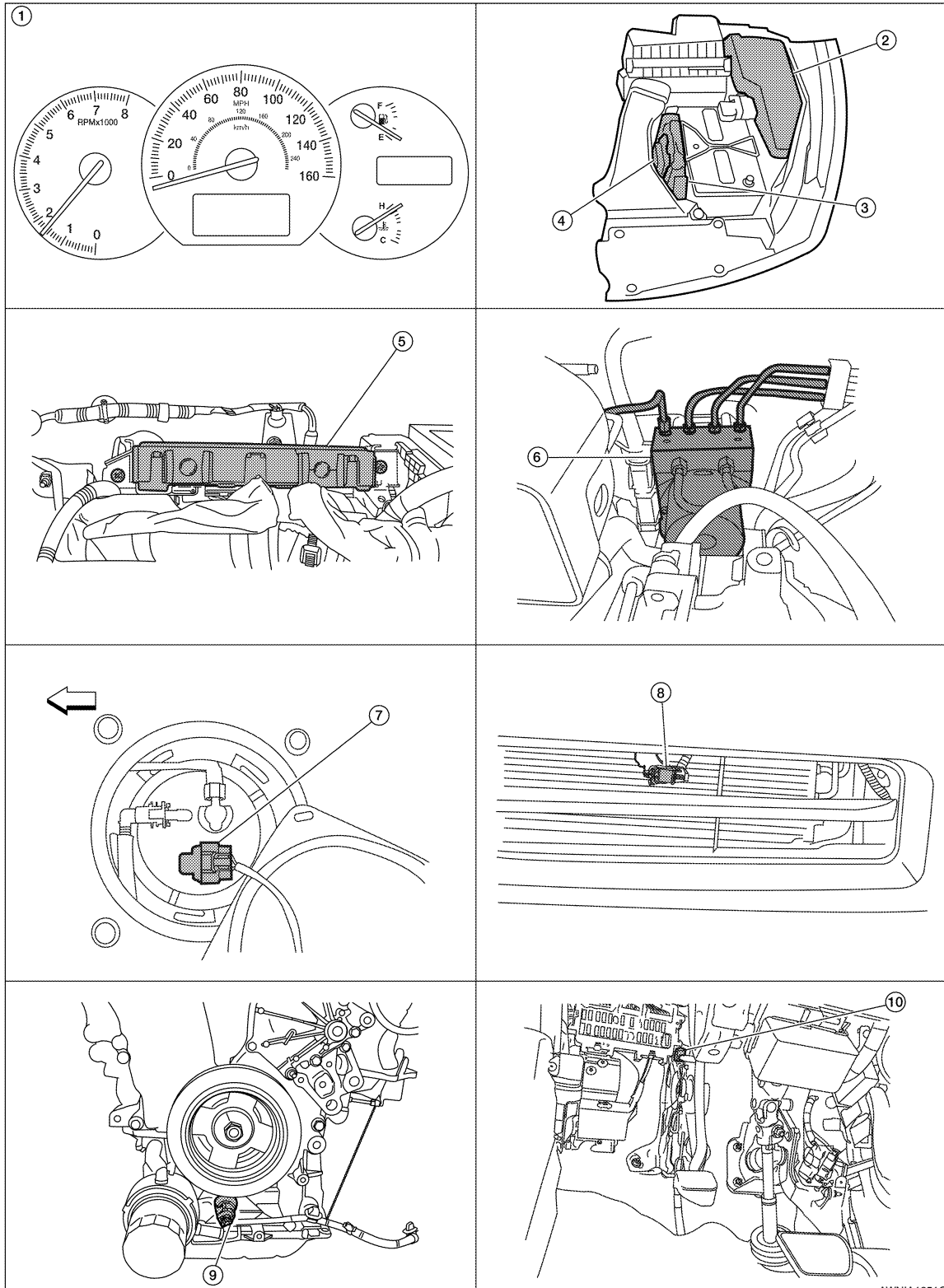
The cruise set indicator message is displayed when the vehicle speed is controlled by the ASCD system. The ECM provides an ASCD ON signal to the combination meter (unified meter control unit) via CAN communication lines.

METER SYSTEM

< FUNCTION DIAGNOSIS >

INFORMATION DISPLAY : Component Parts Location

INFOID:000000004304539



- | | | |
|-------------------------------|---|--|
| 1. Combination meter M23, M24 | 2. IPDM E/R E17, E18, E201, F10 | 3. ECM E10 |
| 4. TCM F15 | 5. BCM M17, M18, M19, M20, M21 (view with instrument panel removed) | 6. ABS actuator and electric unit (control unit) E26 |

AWNIA1654GB

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METER SYSTEM

< FUNCTION DIAGNOSIS >

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| <p>7. Fuel level sensor unit and fuel pump (fuel level sensor) B42 (view with rear seat and inspection hole cover removed)
←: Front</p> <p>10. Parking brake switch E35 (view with instrument lower cover LH removed)</p> | <p>8. Ambient sensor E211</p> | <p>9. Oil pressure switch F41 (view with engine removed)</p> |
|---|-------------------------------|--|

INFORMATION DISPLAY : Component Description

INFOID:000000003899480

Unit	Description
Combination meter	Controls the information display according to the signal received from each unit.
Fuel level sensor unit	Refer to MWI-40. "Description" .
ECM	Transmits the following signals to the combination meter via CAN communication line. <ul style="list-style-type: none"> • Engine speed signal • Fuel consumption monitor signal
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication line.
BCM	Transmits signals provided by various units to the combination meter via CAN communication line.
Washer level switch	Transmits the washer level signal to the combination meter.
Parking brake switch	Refer to MWI-43. "Description" .
Door switch	Transmits the door switch signals to BCM.
Trunk lamp switch and trunk release solenoid	Transmits the trunk switch signal to BCM.
IPDM E/R	Transmits the ambient sensor signal received from the ambient sensor to the combination meter.
Ambient sensor	Detects the ambient temperature and transmits the ambient sensor signal to the IPDM E/R.

COMPASS

< FUNCTION DIAGNOSIS >

COMPASS

Description

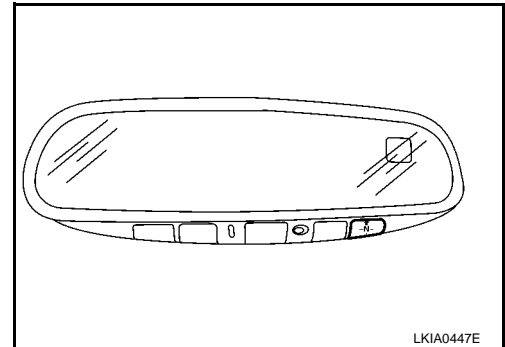
INFOID:000000003899481

DESCRIPTION

With the ignition switch in the ON position, and the mode (N) switch ON, the compass display will indicate the direction the vehicle is heading.

Vehicle direction is displayed as follows:

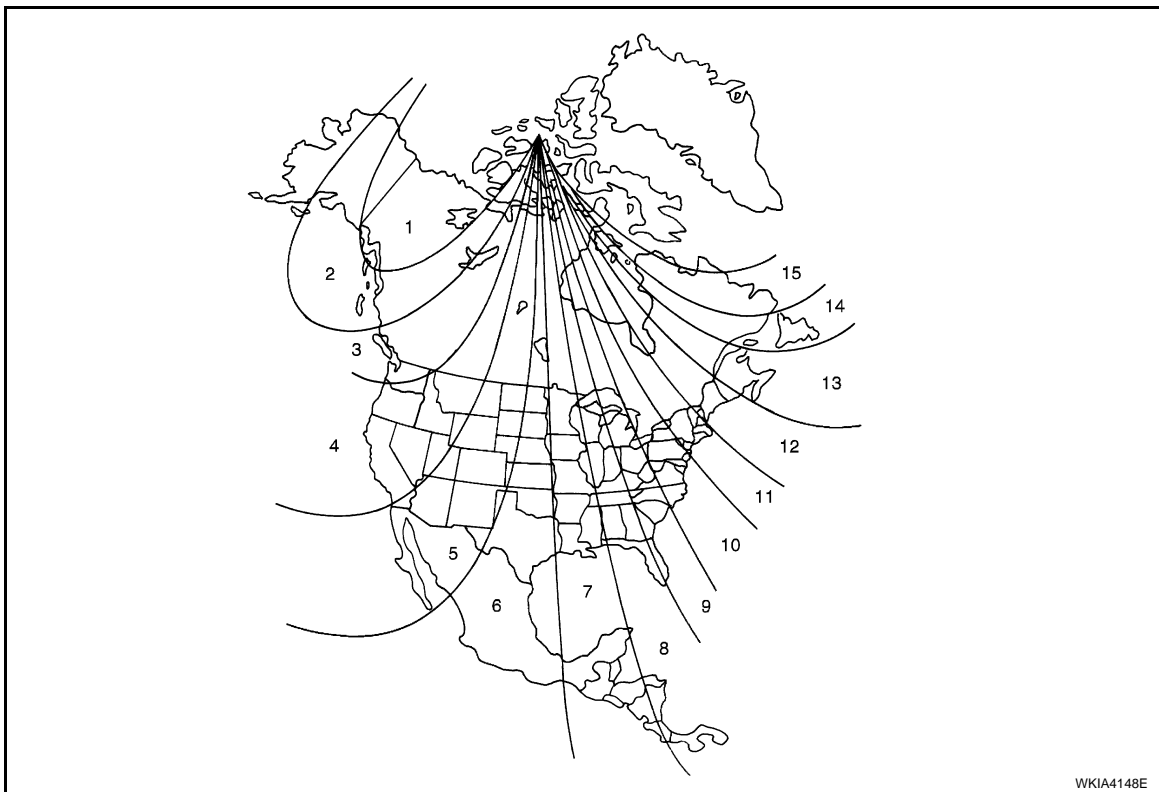
- N: north
- E: east
- S: south
- W: west



ZONE VARIATION SETTING PROCEDURE

The difference between magnetic north and geographical north can sometimes be great enough to cause false compass readings. This difference is known as variance. In order for the compass to operate properly (accurately) in a particular zone, the zone variation must be calibrated using the following procedure.

Zone Variation Chart



1. Determine your location on the zone map.
2. Turn the ignition switch to the ON position.
3. Press and hold the mode (N) switch for about 5 seconds. The current zone number will appear in the display.
4. Press the mode (N) switch repeatedly until the desired zone number appears in the display.

Once the desired zone number is displayed, stop pressing the mode (N) switch and the display will show a compass direction after a few seconds.

NOTE:

Use zone number 5 for Hawaii.

CALIBRATION PROCEDURE

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COMPASS

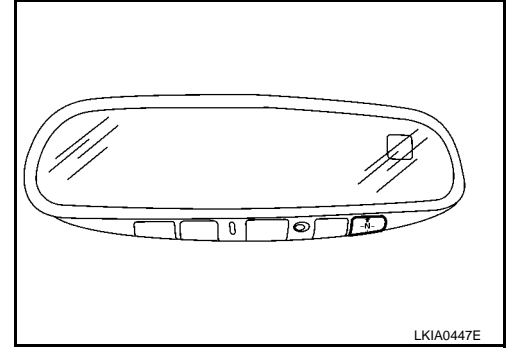
< FUNCTION DIAGNOSIS >

The compass display is equipped with an automatic correction function. If the compass display reads "C" or the direction is not shown correctly, perform the correction procedure below.

1. Press and hold the mode (N) switch for about 9 seconds. The display will read "C".
2. Drive the vehicle slowly in a circle, in an open, safe place. The initial calibration is completed in about three turns.

NOTE:

In places where the terrestrial magnetism is extremely disturbed, the initial correction may start automatically.



DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (METER)

Diagnosis Description

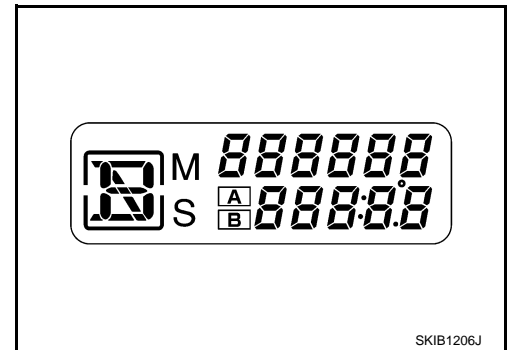
INFOID:000000003899482

SELF-DIAGNOSIS MODE

- Odo/trip meter and information display segment operation can be checked in self-diagnosis mode.
- Meters/gauges can be checked in self-diagnosis mode.

OPERATION PROCEDURE

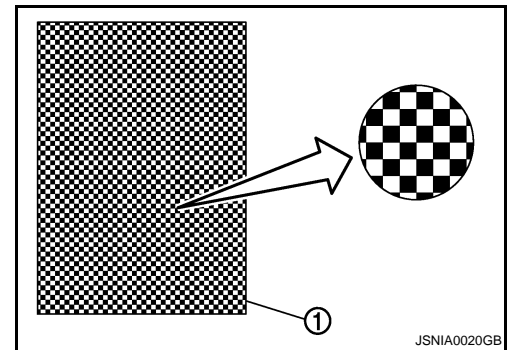
1. Turn the ignition switch OFF.
2. While pushing the odo/trip meter switch, turn the ignition switch ON again.
3. Push the odo/trip meter switch at least 3 times within 7 seconds after the ignition switch is turned ON.
4. The unified meter control unit is turned to self-diagnosis mode.
 - All the segments on the odo/trip meter illuminate.



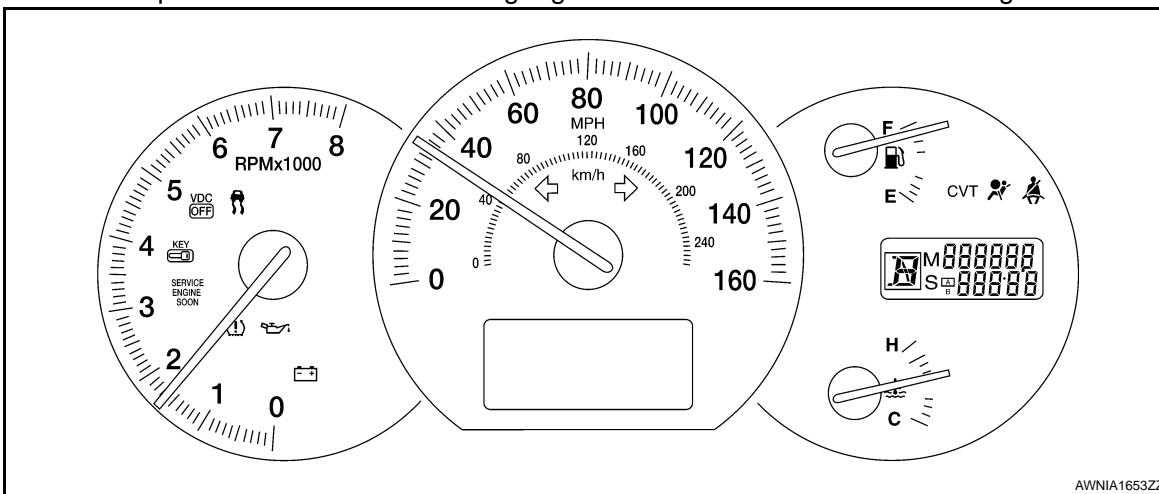
- Dots in all segments of information display LCD (1) flash alternately.

NOTE:

If any of the segments are not displayed, replace the combination meter. Refer to [MWI-144, "Removal and Installation"](#).



5. Push the odo/trip meter switch. Each meter/gauge should indicate as shown in the figure.



CONSULT-III Function (METER/M&A)

INFOID:000000003899483

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

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DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

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

SELF-DIAG RESULTS

Display Item List

Refer to [MWI-72, "DTC Index"](#).

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
SPEED METER [km/h] or [mph]	X	X	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	X	X	Displays the value of vehicle speed signal, which is transmitted to each unit with CAN communication.
ODO OUTPUT		X	Displays the value, which is calculated by vehicle speed signal.
TACHO METER [rpm]	X	X	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [lit.]	X	X	Displays the value, which processes a resistance signal from fuel gauge.
W TEMP METER [°C] or [°F]	X	X	Displays the value of engine coolant temperature signal, which is input from ECM.
ABS W/L [ON/OFF]		X	Displays [ON/OFF] condition of ABS warning lamp.
VDC/TCS IND [ON/OFF]		X	Displays [ON/OFF] condition of VDC/TCS OFF indicator lamp.
SLIP IND [ON/OFF]		X	Displays [ON/OFF] condition of SLIP indicator lamp.
BRAKE W/L [ON/OFF]		X	Displays [ON/OFF] condition of brake warning lamp.*
DOOR W/L [ON/OFF]		X	Displays [ON/OFF] condition of door warning lamp.
TRUNK/GLAS-H [ON/OFF]		X	Displays [ON/OFF] condition of trunk warning lamp.
HI-BEAM IND [ON/OFF]		X	Displays [ON/OFF] condition of high beam indicator.
TURN IND [ON/OFF]		X	Displays [ON/OFF] condition of turn indicator.
OIL W/L [ON/OFF]		X	Displays [ON/OFF] condition of oil pressure warning lamp.
MIL [ON/OFF]		X	Displays [ON/OFF] condition of malfunction indicator lamp.
CRUISE IND [ON/OFF]		X	Displays [ON/OFF] condition of CRUISE indicator.
SET IND [ON/OFF]		X	Displays [ON/OFF] condition of SET indicator.
ATC/T-AMT W/L [ON/OFF]		X	Displays [ON/OFF] condition of AT CHECK warning lamp.
FUEL W/L [ON/OFF]		X	Displays [ON/OFF] condition of low-fuel warning lamp.
WASHER W/L [ON/OFF]		X	Displays [ON/OFF] condition of low washer fluid warning lamp.
AIR PRES W/L [ON/OFF]		X	Displays [ON/OFF] condition of tire pressure warning lamp.
KEY G W/L [ON/OFF]		X	Displays [ON/OFF] condition of key warning lamp.
LCD		X	Displays the value of Intelligent Key system message indication.
SHIFT IND [P, R, N, D, L]		X	Displays [P, R, N, D, L] range position of CVT.
M RANGE SW [ON/OFF]		X	Displays [ON/OFF] condition of manual mode range switch.
NM RANGE SW [ON/OFF]		X	Displays [ON/OFF] condition of except for manual mode range switch.
AT SFT UP SW [ON/OFF]		X	Displays [ON/OFF] condition of A/T shift-up switch.
AT SFT DWN SW [ON/OFF]		X	Displays [ON/OFF] condition of A/T shift-down switch.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
COMP F/B SIG [ON/OFF]		X	A/C compressor activation condition that ECM judges according to the water temperature and the acceleration degree.
PKB SW [ON/OFF]		X	Displays [ON/OFF] condition of parking brake switch.
BUCKLE SW [ON/OFF]		X	Displays [ON/OFF] condition of seat belt buckle switch LH.
BRAKE OIL SW [ON/OFF]		X	Displays [ON/OFF] condition of brake fluid level switch.
DISTANCE [km] or [mile]		X	Displays the value, which is calculated by vehicle speed signal, fuel gauge and fuel consumption from ECM.
OUTSIDE TEMP [°C]		X	Displays the ambient air temperature, which is input from ambient sensor.
FUEL LOW SIG [ON/FF]		X	Displays [ON/OFF] condition of low-fuel warning signal.
BUZZER [ON/OFF]	X	X	Displays [ON/OFF] condition of buzzer.

NOTE:

Some items are not available due to vehicle specification.

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

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

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DTC U1000 CAN COMMUNICATION

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

DTC U1000 CAN COMMUNICATION

DTC Logic

INFOID:000000003899484

DTC DETECTION LOGIC

DTC	CONSULT-III display	Detection condition
U1000	CAN COMM CIRC [U1000]	When combination meter is not transmitting or receiving CAN communication signals for 2 seconds or more.

Diagnosis Procedure

INFOID:000000003899485

Symptom: Displays "CAN COMM CIRC [U1000]" as a self-diagnosis result of combination meter.

1. CHECK CAN COMMUNICATION

Select "SELF-DIAG RESULTS" mode for "METER/M&A" with CONSULT-III.

>> Go to "LAN system". Refer to [LAN-9. "Condition of Error Detection"](#).

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

Description

INFOID:000000004399676

Initial diagnosis of combination meter.

DTC Logic

INFOID:000000004399677

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Probable malfunction location
U1010	CONTROL UNIT (CAN)	If any malfunction is detected during initial diagnosis of combination meter CAN controller	Combination meter

Diagnosis Procedure

INFOID:000000004399678

1. REPLACE COMBINATION METER

When DTC "U1010" is detected, replace combination meter. Refer to [MWI-144. "Removal and Installation"](#).

>> Inspection End.

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DTC B2205 VEHICLE SPEED CIRCUIT

< COMPONENT DIAGNOSIS >

DTC B2205 VEHICLE SPEED CIRCUIT

Description

INFOID:000000003899486

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

DTC Logic

INFOID:000000003899487

DTC	CONSULT-III display	Detection condition
B2205	VEHICLE SPEED CIRC [B2205]	Malfunction is detected when an erroneous speed signal is input for 2 seconds or more.

Diagnosis Procedure

INFOID:000000003899488

Symptom: Displays "VEHICLE SPEED CIRC [B2205]" as a self-diagnosis result of combination meter.

1. CHECK COMBINATION METER INPUT SIGNAL

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

Is the inspection result normal?

- YES >> Perform ABS actuator and electric unit (control unit) self-diagnosis. Refer to [BRC-22, "CONSULT-III Function \(ABS\)"](#).
- NO >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

B2267 ENGINE SPEED

< COMPONENT DIAGNOSIS >

B2267 ENGINE SPEED

Description

INFOID:000000004399679

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

DTC Logic

INFOID:000000004399680

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Probable malfunction location
B2267	ENGINE SPEED	ECM continuously transmits abnormal engine speed signals for 2 seconds or more	<ul style="list-style-type: none">• Crankshaft position sensor (POS)• ECM

Diagnosis Procedure

INFOID:000000004399681

1. PERFORM SELF-DIAGNOSIS OF ECM

Perform "Self Diagnostic Result" of ECM, and repair or replace malfunctioning parts.

>> Refer to [EC-123, "CONSULT-III Function"](#).

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B2268 WATER TEMP

< COMPONENT DIAGNOSIS >

B2268 WATER TEMP

Description

INFOID:000000004399682

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

DTC Logic

INFOID:000000004399683

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Probable malfunction location
B2268	WATER TEMP	ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more	<ul style="list-style-type: none">• Engine coolant temperature sensor• ECM

Diagnosis Procedure

INFOID:000000004399684

1. PERFORM SELF-DIAGNOSIS OF ECM

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

>> Refer to [EC-123. "CONSULT-III Function"](#).

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:000000003899489

1. CHECK FUSES

Check for blown combination meter fuses.

Unit	Power source	Fuse No.
Combination meter	Battery	11
	Ignition switch ON or START	4

Is the inspection result normal?

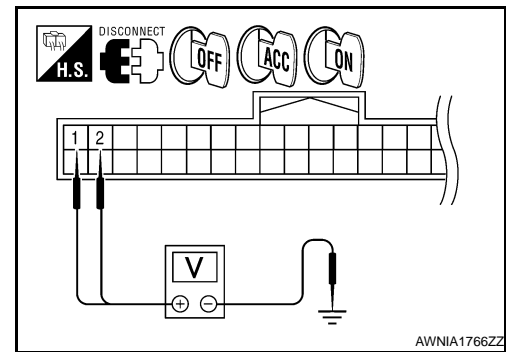
YES >> GO TO 2

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

2. POWER SUPPLY CIRCUIT CHECK

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

Terminals		(-)	Ignition switch position		
(+)			OFF	ON	START
Connector	Terminal				
M24	1	Ground	Battery voltage	Battery voltage	Battery voltage
	2		0V	Battery voltage	Battery voltage



Is the inspection result normal?

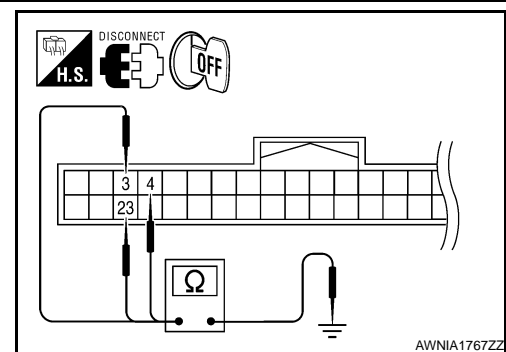
YES >> GO TO 3

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

3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between combination meter harness connector terminals 3, 4, 23 and ground.

Terminals		(-)	Continuity
(+)			
Connector	Terminal		
M24	3	Ground	Yes
	4		
	23		



Is the inspection result normal?

YES >> Inspection End.

NO >> Check ground harness.

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000004296286

1. CHECK FUSE AND FUSIBLE LINK

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	H
11		10
24		7

Is the fuse or fusible link blown?

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

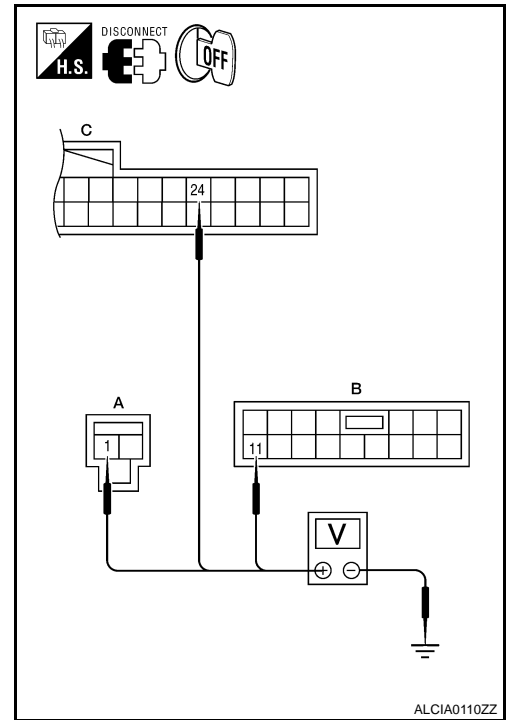
2. CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground Battery voltage
Connector	Terminal	
M16 (A)	1	
M17 (B)	11	
M18 (C)	24	

Is the measurement normal?

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



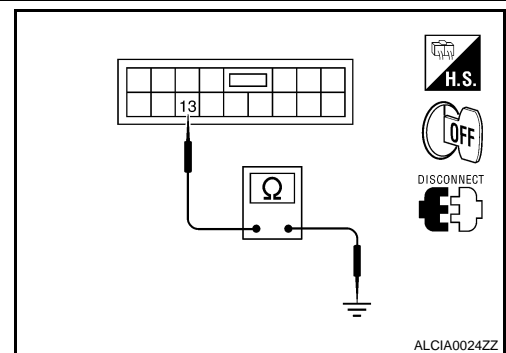
3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	13		Yes

Does continuity exist?

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



BCM (BODY CONTROL MODULE) : Special Repair Requirement

INFOID:000000004296287

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to [BCS-6, "CONFIGURATION \(BCM\) : Special Repair Requirement"](#).

>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Di-

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

agnosis Procedure

INFOID:000000004296288

1. CHECK FUSES AND FUSIBLE LINK

Check that the following IPDM E/R fuses or fusible link are not blown.

Terminal No.	Signal name	Fuses and fusible link No.
1, 2	Battery power supply	B, D
—		42
—		43

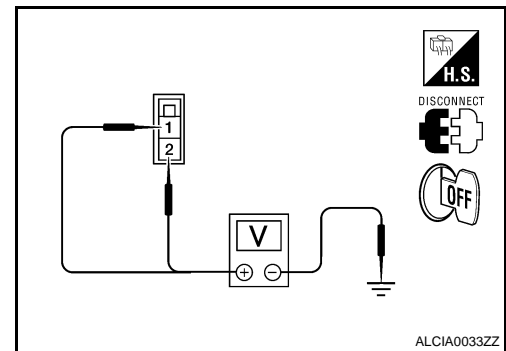
Is the fuse blown?

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

2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect IPDM E/R connectors.
- Check voltage between IPDM E/R harness connector and ground.

Terminals		Voltage (V) (Approx.)
(+)	(-)	
IPDM E/R		Ground
Connector	Terminal	
E16	1 2	
		Battery voltage



Is the measurement value normal?

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

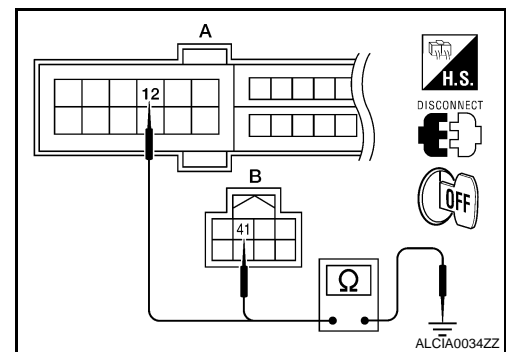
3. CHECK GROUND CIRCUIT

Check continuity between IPDM E/R harness connectors and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
A: E18	12	Ground	Yes
B: E17	41		

Does continuity exist?

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



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MWI

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

FUEL LEVEL SENSOR SIGNAL CIRCUIT

Description

INFOID:000000003899493

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

Component Function Check

INFOID:000000003899494

1.COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT-III.
2. Using "FUEL METER" of "DATA MONITOR", compare the value of DATA MONITOR with fuel gauge pointer of combination meter.

Fuel gauge pointer	Reference value of data monitor [lit.]
Full	Approx. 68
3/4	Approx. 56
1/2	Approx. 38
1/4	Approx. 22
Empty	Approx. 4

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

- YES >> Inspection End.
 NO >> Replace combination meter. Refer to [MWI-144. "Removal and Installation"](#).

Diagnosis Procedure

INFOID:000000003899495

1.CHECK HARNESS CONNECTOR

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

Is the inspection result normal?

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

2.CHECK FUEL LEVEL SENSOR UNIT CIRCUIT

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

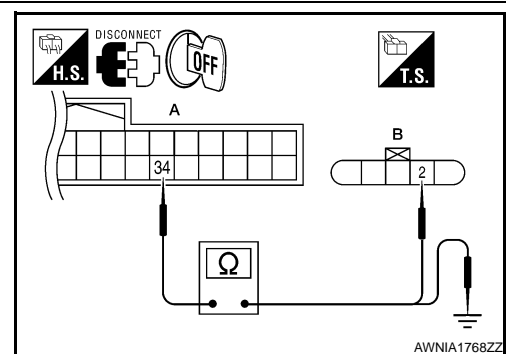
A		B		Continuity
Connector	Terminal	Connector	Terminal	
M24	34	B42	2	Yes

3. Check continuity between combination meter harness connector (A) and ground.

A		Ground	Continuity
Connector	Terminal		
M24	34		No

Is the inspection result normal?

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



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FUEL LEVEL SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

3. CHECK FUEL LEVEL SENSOR UNIT GROUND CIRCUIT

1. Check continuity between combination meter harness connector (A) and fuel level sensor unit and fuel pump harness connector (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M24	24	B42	5	Yes

2. Check continuity between combination meter harness connector (A) and ground.

A		Ground	Continuity
Connector	Terminal		
M24	24		No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4. CHECK INSTALLATION CONDITION

Check fuel level sensor unit installation, and 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.

Component Inspection

INFOID:000000003899496

1. REMOVE FUEL LEVEL SENSOR UNIT

Remove the fuel level sensor unit. Refer to [FL-6. "Removal and Installation"](#).

>> GO TO 2

2. CHECK FUEL LEVEL SENSOR UNIT AND FUEL PUMP

Check the resistance between terminals 2 and 5.

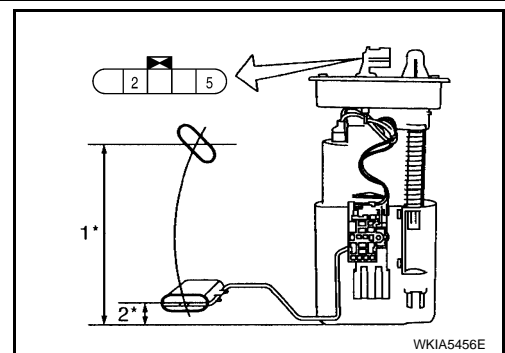
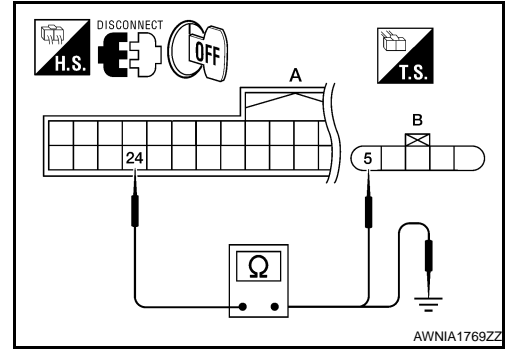
Terminal		Float position mm (in)		Resistance value (Approx.)
2	5	1*	Full (1)	155.4 (6.1)
		2*	Empty (2)	22.9 (0.9)

1* and 2*: When float arm is in contact with stopper.

Is inspection result normal?

YES >> Inspection End.

NO >> Replace fuel level sensor unit and fuel pump. Refer to [FL-6. "Removal and Installation"](#).



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OIL PRESSURE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

OIL PRESSURE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000003899497

Detects the engine oil pressure and transmits the oil pressure switch signal to the IPDM E/R.

Component Function Check

INFOID:000000003899498

1.COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT-III.
2. Monitor "OIL W/L" of "DATA MONITOR" while operating ignition switch.

OIL W/L

When ignition switch is in ON : ON
position (Engine stopped)

When engine is running : OFF

>> Inspection End.

Diagnosis Procedure

INFOID:000000003899499

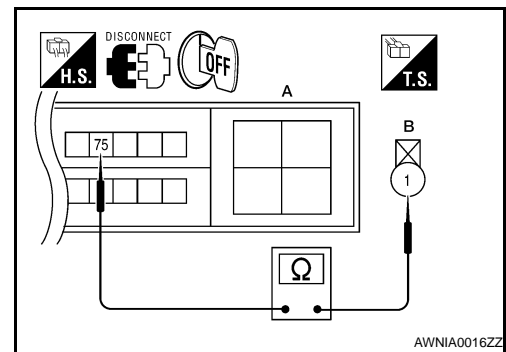
1.CHECK OIL PRESSURE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector F10 and oil pressure switch connector F41.
3. Check continuity between IPDM E/R harness connector F10 (A) terminal 75 and oil pressure switch harness connector F41 (B) terminal 1.

Continuity should exist.

Is the inspection result normal?

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



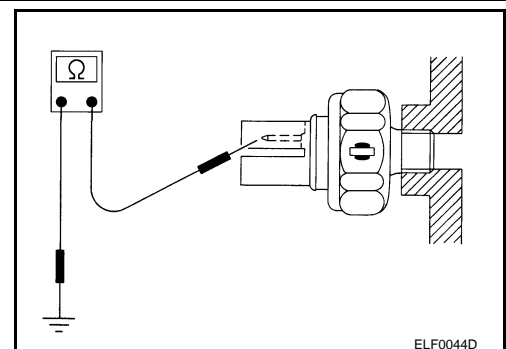
Component Inspection

INFOID:000000003899500

1.CHECK OIL PRESSURE SWITCH

Check continuity between oil pressure switch and ground.

Condition	Oil pressure [kPa (kg/cm ² , psi)]	Continuity
Engine stopped	Less than 29 (0.3, 4)	Yes
Engine running	More than 29 (0.3, 4)	No



Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace the oil pressure switch.

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING BRAKE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000003899501

Transmits the parking brake switch signal to the combination meter.

Component Function Check

INFOID:000000003899502

1.COMBINATION METER INPUT SIGNAL

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

PKB SW

Parking brake applied : ON

Parking brake released : OFF

>> Inspection End.

Diagnosis Procedure

INFOID:000000003899503

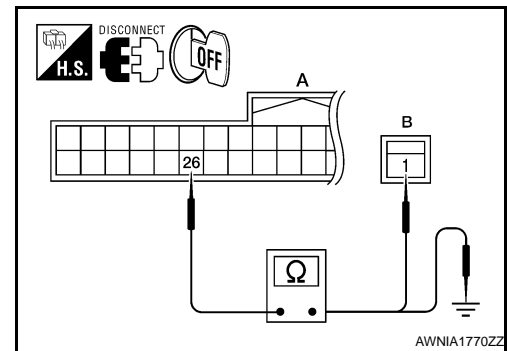
1.CHECK PARKING BRAKE SWITCH CIRCUIT

1. Disconnect combination meter connector and parking brake switch connector.
2. Check continuity between combination meter harness connector M24 (A) terminal 26 and parking brake switch harness connector E35 (B) terminal 1.

26 - 1 : Continuity should exist.

3. Check continuity between combination meter harness connector M24 (A) terminal 26 and ground.

26 - Ground : Continuity should not exist.



Is the inspection result normal?

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

Component Inspection

INFOID:000000003899504

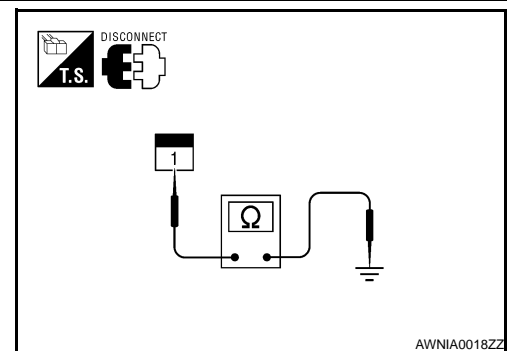
1.CHECK PARKING BRAKE SWITCH

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

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

Is the inspection result normal?

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



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MWI

WASHER LEVEL SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

WASHER LEVEL SWITCH SIGNAL CIRCUIT

Description

INFOID:000000003899505

Transmits the washer level switch signal to the combination meter.

Component Function Check

INFOID:000000003899506

1.COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT-III.
2. Monitor "WASHER W/L" of "DATA MONITOR" under the following conditions.

WASHER W/L

Washer fluid level low : ON

Washer fluid level other : OFF

>> Inspection End.

Diagnosis Procedure

INFOID:000000003899507

1.CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and washer level switch connector.
3. Check continuity between combination meter harness connector M24 (A) terminal 29 and washer level switch harness connector E208 (B) terminal 1.

29 - 1 : Continuity should exist.

4. Check continuity between combination meter harness connector M24 (A) terminal 29 and ground.

29 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK WASHER LEVEL SWITCH GROUND CIRCUIT

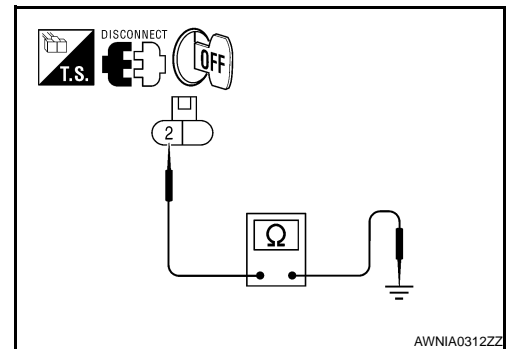
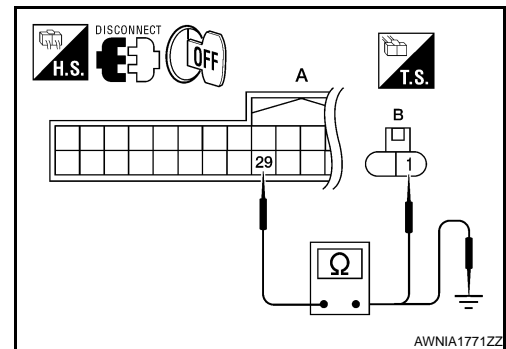
Check continuity between washer fluid level switch harness connector E208 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connector.



Component Inspection

INFOID:000000003899508

1.CHECK WASHER FLUID LEVEL SWITCH

WASHER LEVEL SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

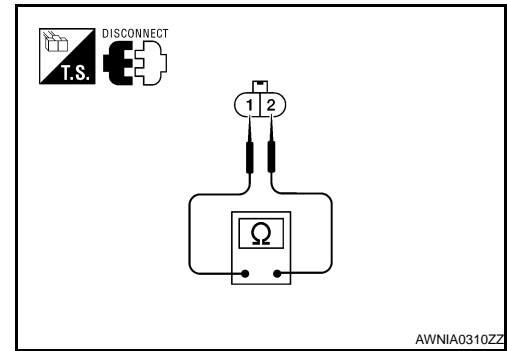
Check continuity between washer level switch terminals 1 and 2.

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace washer level switch.



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MWI

AMBIENT SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

AMBIENT SENSOR SIGNAL CIRCUIT

Description

INFOID:000000003899509

Transmits the ambient sensor signal to the combination meter.

Component Function Check

INFOID:000000003899510

1.COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT-III.
2. Using "OUTSIDE TEMP" on "DATA MONITOR", compare the value of DATA MONITOR with temperature display on combination meter. DATA MONITOR and combination meter indications should be close.

Does the data monitor value approximately match the display on the combination meter?

YES >> Inspection End.

NO >> Replace combination meter. Refer to [MWI-144. "Removal and Installation"](#).

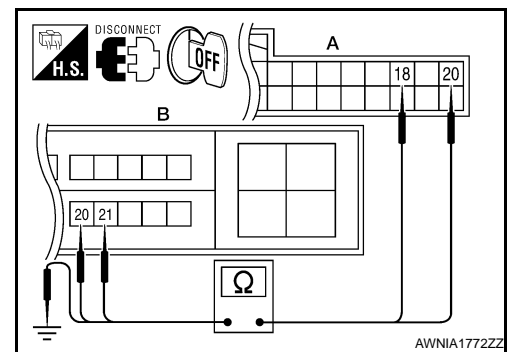
Diagnosis Procedure

INFOID:000000003899511

1.CHECK AMBIENT SENSOR CIRCUITS BETWEEN COMBINATION METER AND IPDM E/R

1. Disconnect combination meter connector M24 and IPDM E/R connector E18.
2. Check continuity between combination meter harness connector M24 (A) terminals 18, 20 and IPDM E/R harness connector E18 (B) terminals 20 and 21.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M24	18	E18	21	Yes
	20		20	



3. Check continuity between combination meter harness connector M24 (A) terminals 18, 20 and ground.

A		Ground	Continuity
Connector	Terminal		
M24	18		No
	20		

Is the inspection result normal?

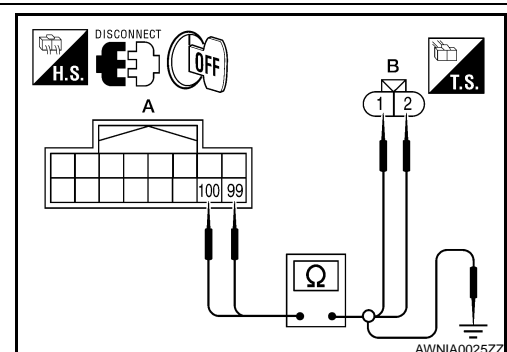
YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK AMBIENT SENSOR CIRCUITS BETWEEN IPDM E/R AND AMBIENT SENSOR

1. Disconnect IPDM E/R connector E201 and ambient sensor connector E211.
2. Check continuity between IPDM E/R harness connector E201 (A) terminals 99, 100 and ambient sensor harness connector E211 terminals 1 and 2.

A		B		Continuity
Connector	Terminal	Connector	Terminal	
E201	99	E211	2	Yes
	100		1	



3. Check continuity between IPDM E/R harness connector E201 (A) terminals 99, 100 and ground.

AMBIENT SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

A		Ground	Continuity
Connector	Terminal		
E201	99		No
	100		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-40, "Removal and Installation"](#).

NO >> Repair harness or connector.

Component Inspection

INFOID:000000003899512

Refer to [HAC-35, "Component Inspection"](#) (with color display) or [HAC-160, "Component Inspection"](#) (without color display).

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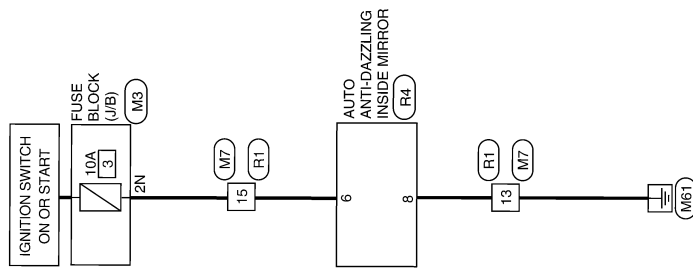
COMPASS

< COMPONENT DIAGNOSIS >

COMPASS

Wiring Diagram

INFOID:000000003899513

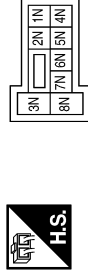


COMPASS

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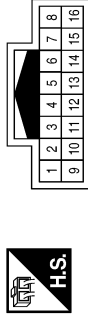
COMPASS CONNECTORS

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



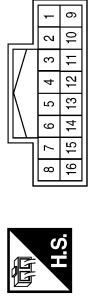
Terminal No.	2N	Color of Wire	G	Signal Name	-
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Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



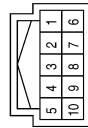
Terminal No.	13	Color of Wire	B	Signal Name	-
	15	Color of Wire	G	Signal Name	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	13	Color of Wire	B	Signal Name	-
	15	Color of Wire	B/R	Signal Name	-

Connector No.	R4
Connector Name	AUTO ANTI-DAZZLING INSIDE MIRROR
Connector Color	BLACK



Terminal No.	6	Color of Wire	B/R	Signal Name	IGN
	8	Color of Wire	B	Signal Name	GND

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COMBINATION METER

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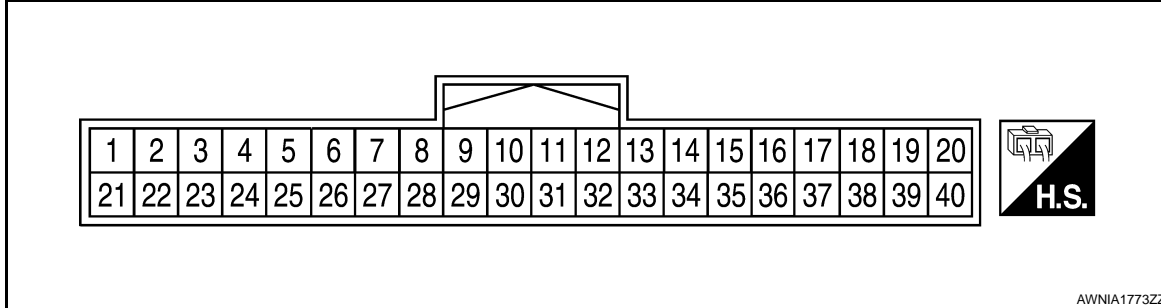
ECU DIAGNOSIS

COMBINATION METER

Reference Value

INFOID:000000003899515

TERMINAL LAYOUT

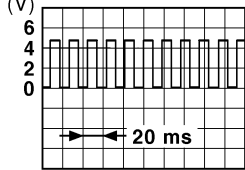


PHYSICAL VALUES

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
1	W/L	Battery power supply	—	—	Battery voltage
2	O	Ignition switch ON or START	ON	—	Battery voltage
3	B	Ground (Power)	—	—	0
4	B	Ground (Illumination)			
5	B	Illumination output	—	—	Refer to INL-9, "System Description" .
10	O/L	Mode switch ground	ON	—	0
11	L/R	Mode switch A	ON	Switch pressed	0
				Switch released	5
12	B/R	Mode switch B	ON	Switch pressed	0
				Switch released	5
15	BR/W	Air bag warning lamp input	ON	Air bag warning lamp ON	3
				Air bag warning lamp OFF	0
18	O/B	Ambient sensor signal	ON	—	0 - 5 (Based on ambient temperature)
19	P	Ambient sensor power	ON	—	5
20	B/Y	Ambient sensor ground	ON	—	0
21	L	CAN-H	—	—	—
22	P	CAN-L	—	—	—
23	B	Ground (Circuit)	—	—	0
24	B/W	Fuel level sensor ground	ON	—	0
25	BR	Generator	ON	Generator voltage low	0
				Generator voltage normal	Battery voltage
26	G/R	Parking brake switch	ON	Parking brake applied	0
				Parking brake released	Battery voltage
27	V	Brake fluid level switch	ON	Brake fluid level low	0
				Brake fluid level normal	Battery voltage
28	L/O	Security indicator input	OFF	Security indicator ON	0
				Security indicator OFF	Battery voltage

COMBINATION METER

< ECU DIAGNOSIS >

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
29	R	Washer fluid level switch	ON	Washer fluid level low	0
				Washer fluid level normal	Battery voltage
30	L/B	Vehicle speed signal output (2-pulse)	ON	Speedometer operated [When vehicle speed is approx. 20 km/h (12 MPH)]	240 Hz
31	V/W	Vehicle speed signal output (8-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	<p>NOTE: Maximum voltage may be 12V due to specifications (connected units).</p>  <p style="text-align: right; font-size: small;">PKIC0643E</p>
34	G/B	Fuel level sensor signal	—	—	Refer to MWI-15, "FUEL GAUGE : System Description" .
35	W/B	Seat belt buckle switch LH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
36	L/W	Seat belt buckle switch RH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
37	G	Not M range	ON	Manual mode switch OFF	0
				Manual mode switch ON	Battery voltage
38	BR	AT shift down	ON	<ul style="list-style-type: none"> • Manual mode switch ON • Shift down operation 	0
				Other than above	Battery voltage
39	W	AT shift up	ON	<ul style="list-style-type: none"> • Manual mode switch ON • Shift up operation 	0
				Other than above	Battery voltage
40	LG/R	M range	ON	Manual mode switch OFF	Battery voltage
				Manual mode switch ON	0
49	G	Paddle shift signal (shift down)	ON	Shift down operation	0
				Switch released	Battery voltage
50	O	Paddle shift signal (shift up)	ON	Shift up operation	0
				Switch released	Battery voltage

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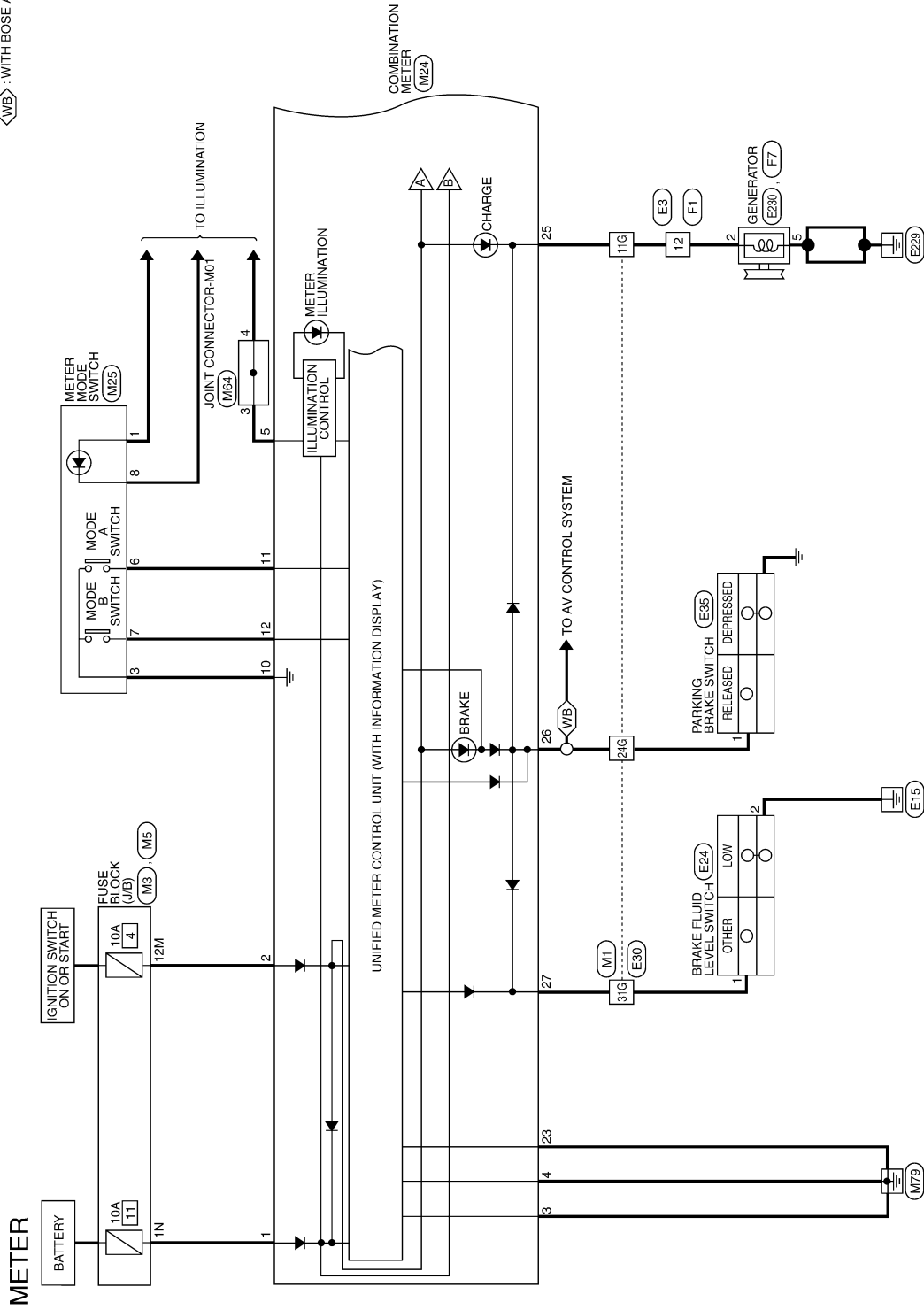
COMBINATION METER

< ECU DIAGNOSIS >

Wiring Diagram

INFOID:000000003899516

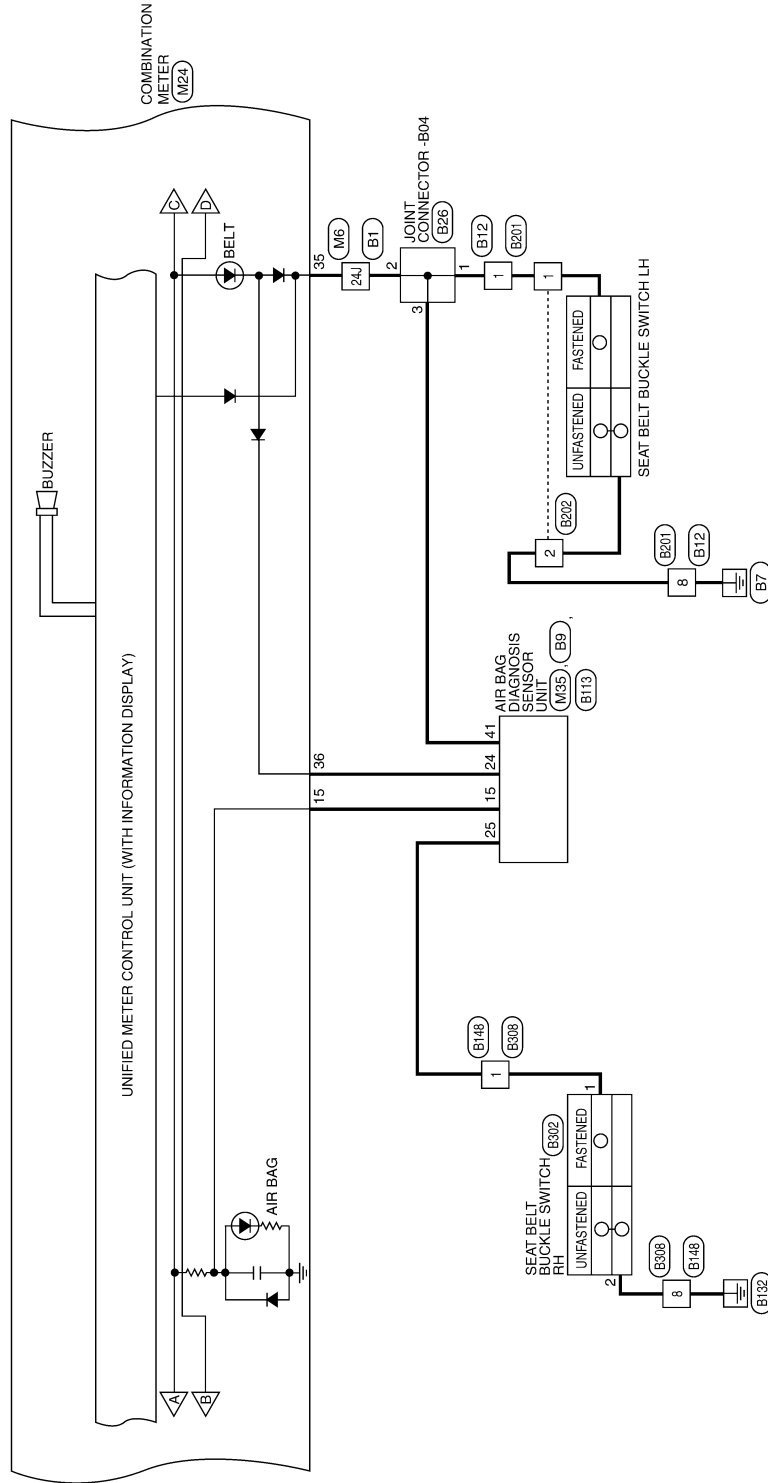
WB: WITH BOSE AUDIO SYSTEM



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COMBINATION METER

< ECU DIAGNOSIS >



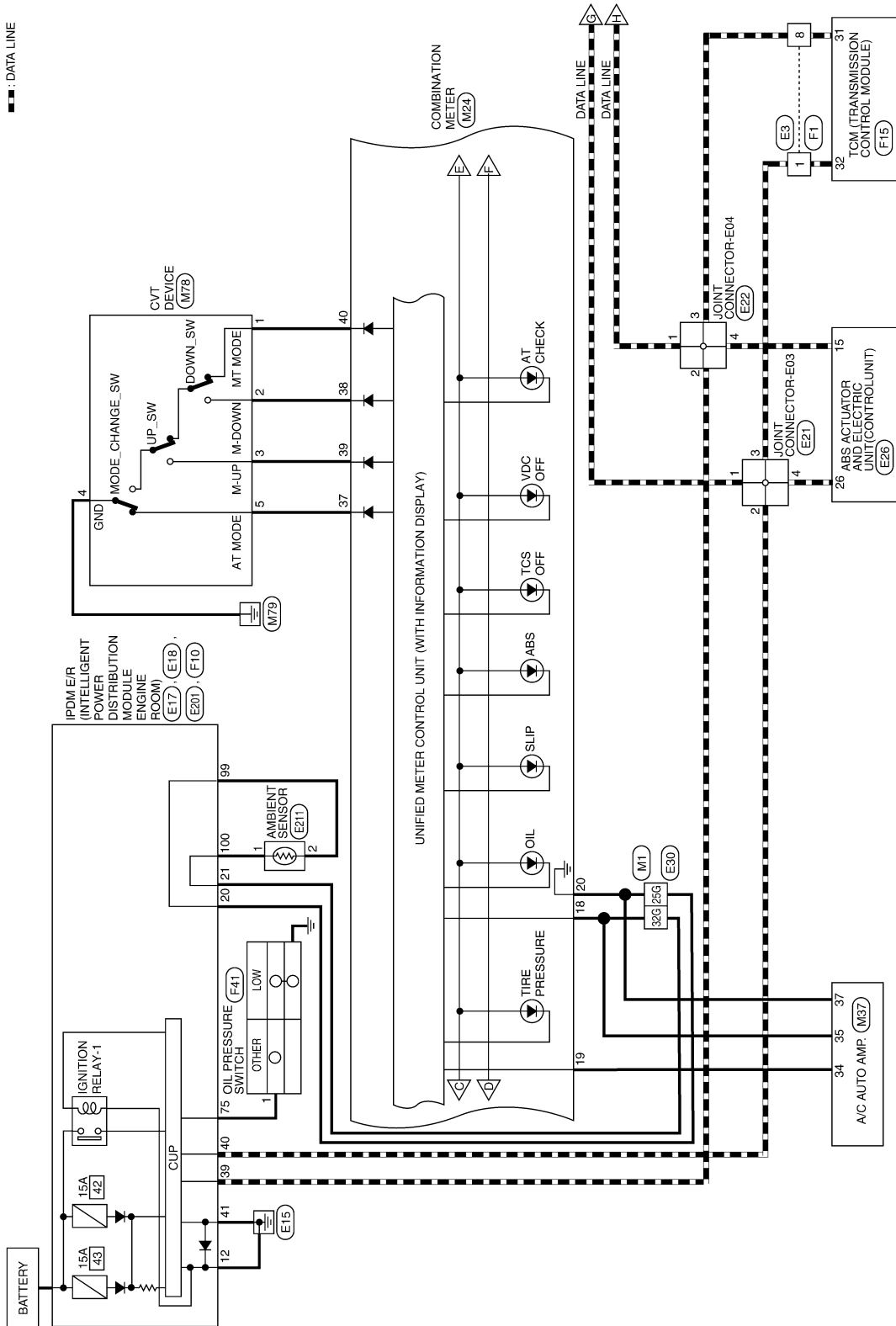
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COMBINATION METER

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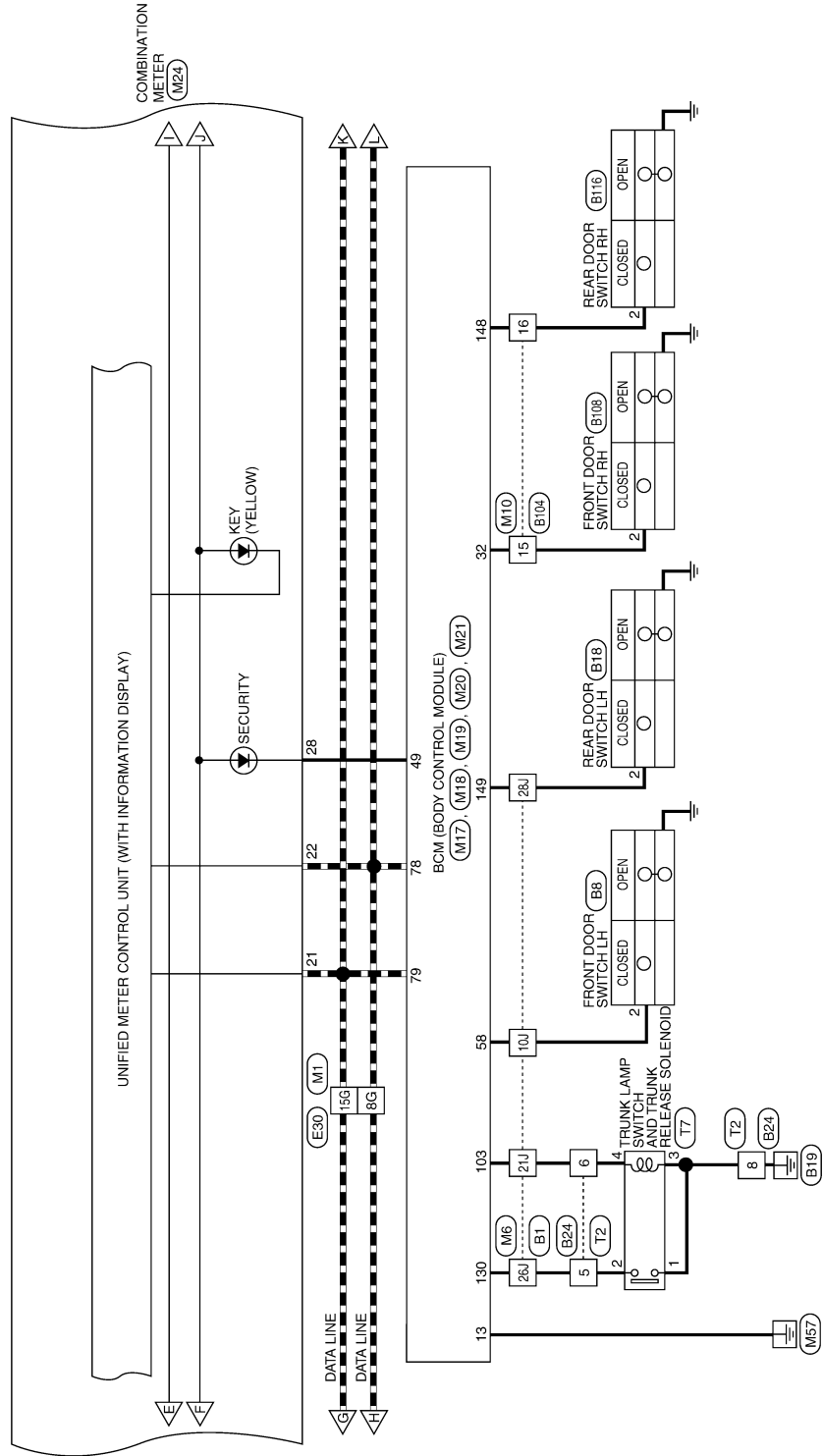


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COMBINATION METER

< ECU DIAGNOSIS >

■ : DATA LINE



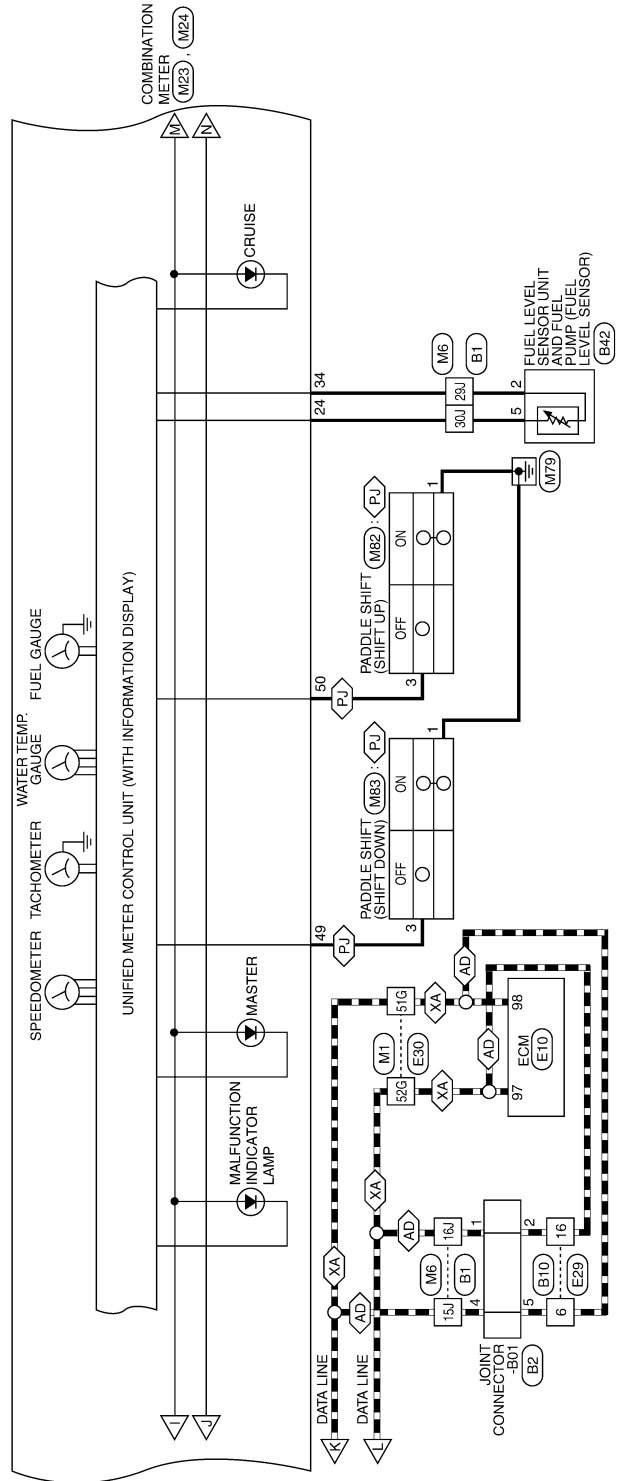
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COMBINATION METER

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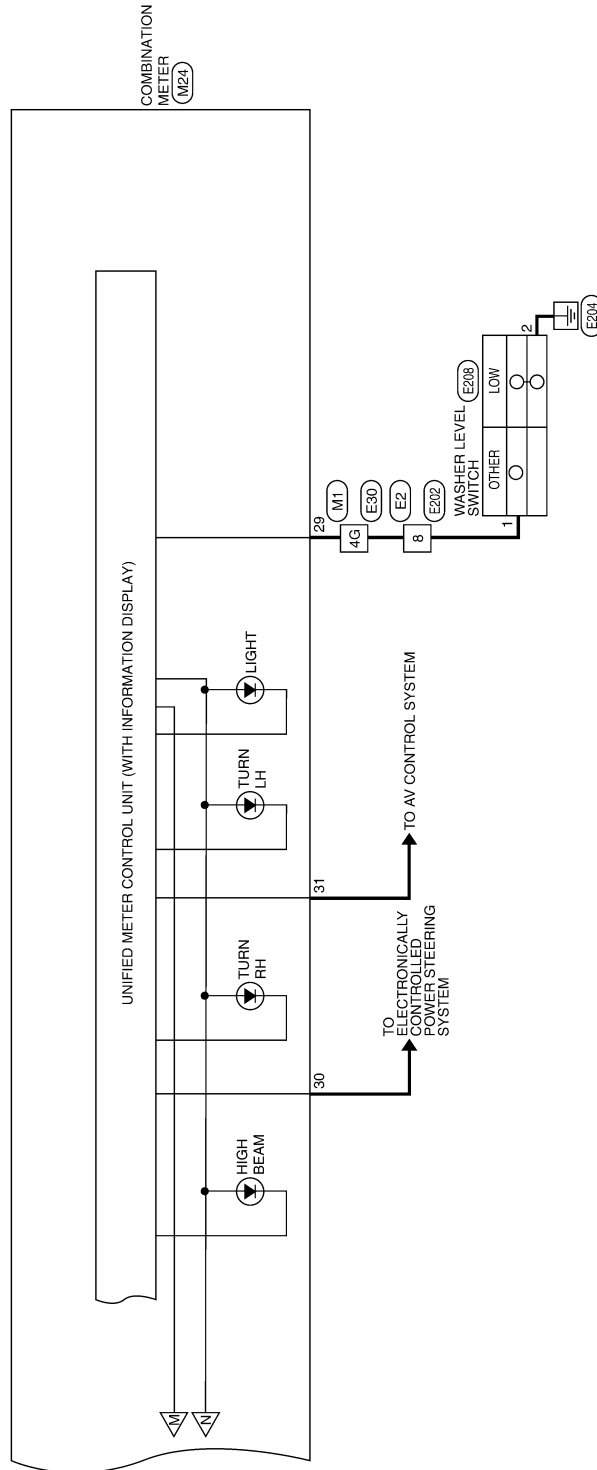
- ◊AD◊ : WITH AUTOMATIC DRIVE POSITIONER
- ◊PJ◊ : WITH PADDLE SHIFT
- ◊XA◊ : WITHOUT AUTOMATIC DRIVE POSITIONER
- : DATA LINE



ABNWA01386I

COMBINATION METER

< ECU DIAGNOSIS >



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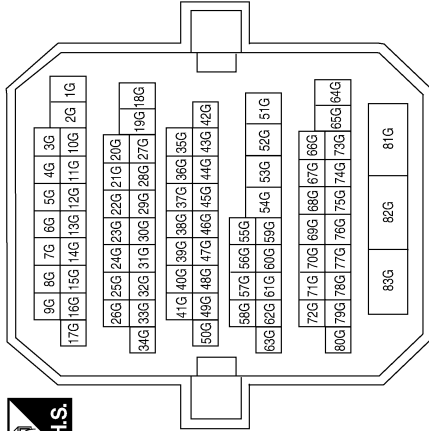
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COMBINATION METER

< ECU DIAGNOSIS >

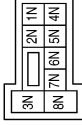
METER CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4G	R	-
8G	P	-
11G	BR	-
15G	L	-
24G	G/R	-
25G	B/Y	-
31G	V	-
32G	O/B	-
51G	L	-
52G	P	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



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

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



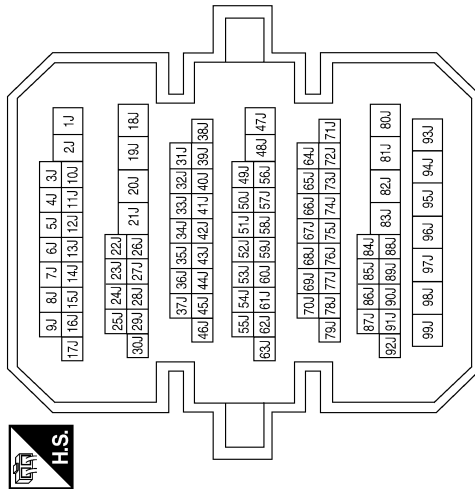
Terminal No.	Color of Wire	Signal Name
12M	O	-

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COMBINATION METER

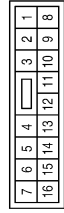
< ECU DIAGNOSIS >

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



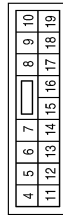
Terminal No.	Color of Wire	Signal Name
10J	SB	-
15J	L	-
16J	P	-
21J	V	-
24J	W/B	-
26J	W	-
28J	R/B	-
29J	G/B	-
30J	B/W	-

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
13	B	GND1

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



Terminal No.	Color of Wire	Signal Name
32	R/B	AS DOOR SW
49	L/O	IMMO LED (SECURITY INDICATOR)
58	SB	DR DOOR SW

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



Terminal No.	Color of Wire	Signal Name
78	P	CAN-L
79	L	CAN-H

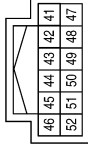
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COMBINATION METER

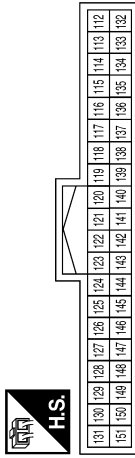
< ECU DIAGNOSIS >

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



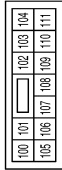
Terminal No.	Color of Wire	Signal Name
41	-	-
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-
49	G	STRG SHIFT DOWN SW
50	O	STRG SHIFT UP SW
51	-	-
52	-	-

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
130	W	TRUNK SW
148	R/W	RR DOOR SW
149	R/B	RL DOOR SW

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



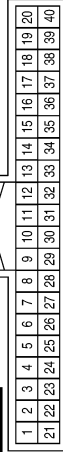
Terminal No.	Color of Wire	Signal Name
103	V	CDL BACK TRUNK

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COMBINATION METER

< ECU DIAGNOSIS >

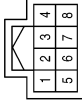
Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W/L	BAT
2	O	IGN
3	B	GND (POWER)
4	B	GND (ILL)
5	B	ILL OUTPUT
6	-	-
7	-	-
8	-	-
9	-	-
10	O/L	GND (SATELLITE SW)
11	L/R	MODE A SW
12	B/R	MODE B SW
13	-	-
14	-	-
15	BR/W	AIR BAG
16	-	-

Terminal No.	Color of Wire	Signal Name
17	-	-
18	O/B	OUTSIDE SENDER
19	P	OUTSIDE SENDER VAC
20	B/Y	OUTSIDE SENDER GND
21	L	CAN-H
22	P	CAN-L
23	B	GND (CIRCUIT)
24	B/W	GND (FUEL SENSOR)
25	BR	CHG
26	G/R	PKB
27	V	BRAKE OIL IN
28	L/O	SECURITY
29	R	LOW WASH FLUID SW
30	L/B	2P/R OUT
31	V/W	8P/R OUT
32	-	-
33	-	-
34	G/B	FUEL SENSOR
35	W/B	DR BELT
36	L/W	AS BELT
37	G	NOT M RANGE
38	BR	AT SHIFT DOWN
39	W	AT SHIFT UP
40	LG/R	M RANGE

Connector No.	M25
Connector Name	METER MODE SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R/L	SW ILL POWER
3	O/L	SW GND
6	L/R	MODE SW A
7	B/R	MODE SW B
8	R/Y	SW ILL GND

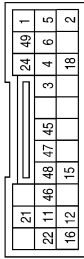
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COMBINATION METER

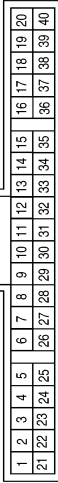
< ECU DIAGNOSIS >

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



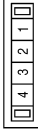
Terminal No.	Color of Wire	Signal Name
15	BR/W	AIRBAG W/L
24	L/W	SEAT BELT REMINDER

Connector No.	M37
Connector Name	A/C AUTO AMP.
Connector Color	WHITE



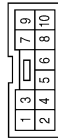
Terminal No.	Color of Wire	Signal Name
34	P	AMB POWER
35	O/B	AMB SENS
37	B/Y	SENS GND

Connector No.	M64
Connector Name	JOINT CONNECTOR-M01
Connector Color	WHITE



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

Connector No.	M78
Connector Name	CVT DEVICE
Connector Color	WHITE



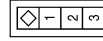
Terminal No.	Color of Wire	Signal Name
1	LG/R	MT MODE
2	BR	M DOWN
3	W	M UP
5	G	AT MODE

Connector No.	M82
Connector Name	PADDLE SHIFTER (SHIFT UP)
Connector Color	WHITE



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

Connector No.	M83
Connector Name	PADDLE SHIFTER (SHIFT DOWN)
Connector Color	WHITE

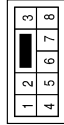


Terminal No.	Color of Wire	Signal Name
1	B	-
3	G	-

COMBINATION METER

< ECU DIAGNOSIS >

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



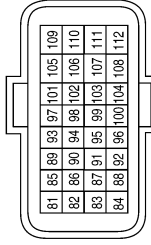
Terminal No.	Color of Wire	Signal Name
8	V	-

Connector No.	E3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



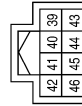
Terminal No.	Color of Wire	Signal Name
1	L	-
8	P	-
12	LG	-

Connector No.	E10
Connector Name	ECM
Connector Color	BLACK



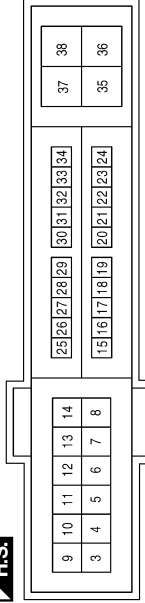
Terminal No.	Color of Wire	Signal Name
97	P	CAN-L
98	L	CAN-H

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	S-GND

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
12	B	P-GND
20	L	AMB SENS GND-E/R
21	LG	AMB SENS SIG-E/R

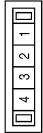
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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	WHITE



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

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	WHITE



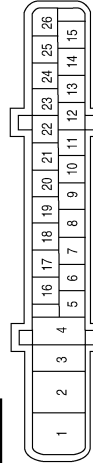
Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
3	P	-
4	P	-

Connector No.	E24
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Color	GRAY



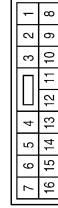
Terminal No.	Color of Wire	Signal Name
1	V	-
2	BY	-

Connector No.	E26
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK



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

Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE



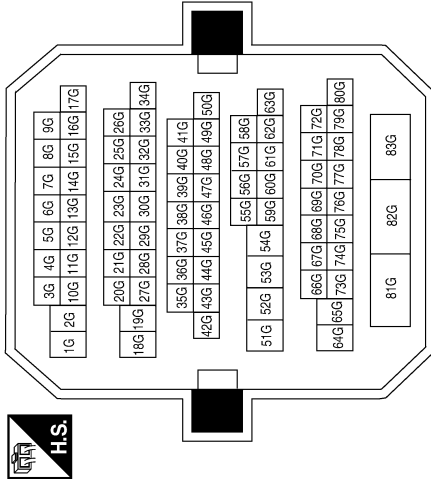
Terminal No.	Color of Wire	Signal Name
6	L	-
16	P	-

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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

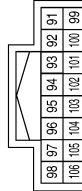


Terminal No.	Color of Wire	Signal Name
4G	V	-
8G	P	-
11G	LG	-
15G	L	-
24G	P	-
25G	L	-
31G	V	-
32G	LG	-
51G	L	-
52G	P	-

Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	P	-

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
99	BR/W	AMB SENS GND-FEM
100	SB	AMB SENS SIG-FEM

Connector No.	E202
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	R	-

Connector No.	E208
Connector Name	WASHER LEVEL SWITCH
Connector Color	WHITE



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

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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E211
Connector Name	AMBIENT SENSOR
Connector Color	BLACK



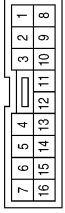
Terminal No.	Color of Wire	Signal Name
1	SB	-
2	BRW	-

Connector No.	E230
Connector Name	GENERATOR
Connector Color	-



Terminal No.	Color of Wire	Signal Name
5	B	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



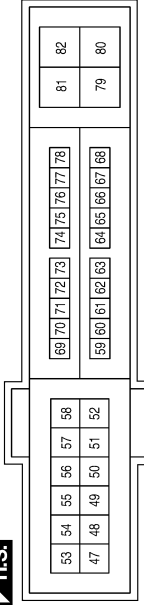
Terminal No.	Color of Wire	Signal Name
1	L	-
8	P	-
12	BR	-

Connector No.	F7
Connector Name	GENERATOR
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	BR	-

Connector No.	F10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



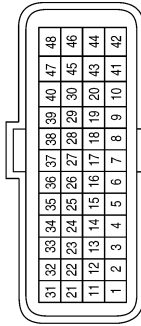
Terminal No.	Color of Wire	Signal Name
75	LG	DIL PRESSURE SW

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< ECU DIAGNOSIS >

Connector No.	F15
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK



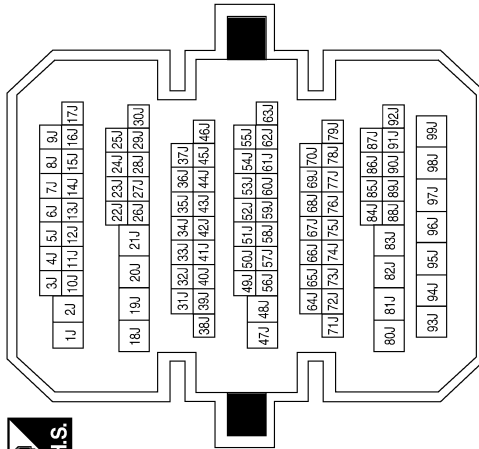
Terminal No.	Color of Wire	Signal Name
31	P	CAN-L
32	L	CAN-H

Connector No.	F41
Connector Name	OIL PRESSURE SWITCH
Connector Color	GRAY



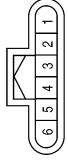
Terminal No.	Color of Wire	Signal Name
1	LG	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10J	SB	-
15J	L	-
16J	P	-
21J	V	-
24J	GR	-
26J	W	-
28J	BR	-
29J	V	-
30J	B	-

Connector No.	B2
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK



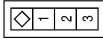
Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
4	L	-
5	L	-

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COMBINATION METER

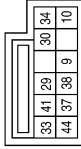
< ECU DIAGNOSIS >

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



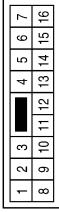
Terminal No.	2	Color of Wire	SB	Signal Name	-
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Connector No.	B9
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color	YELLOW



Terminal No.	41	Color of Wire	GR	Signal Name	LH BUCKLE SW INPUT
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Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



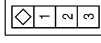
Terminal No.	6	Color of Wire	L	Signal Name	-
	16	Color of Wire	P	Signal Name	-

Connector No.	B12
Connector Name	WIRE TO WIRE
Connector Color	WHITE



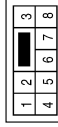
Terminal No.	1	Color of Wire	GR	Signal Name	-
	8	Color of Wire	B/W	Signal Name	-

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



Terminal No.	2	Color of Wire	BR	Signal Name	-
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Connector No.	B24
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	5	Color of Wire	W	Signal Name	-
	6	Color of Wire	V	Signal Name	-
	8	Color of Wire	B	Signal Name	-

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COMBINATION METER

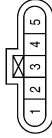
< ECU DIAGNOSIS >

Connector No.	B26
Connector Name	JOINT CONNECTOR-B04
Connector Color	WHITE



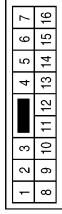
Terminal No.	Color of Wire	Signal Name
1	GR	-
2	GR	-
3	GR	-

Connector No.	B42
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP
Connector Color	GRAY



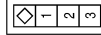
Terminal No.	Color of Wire	Signal Name
2	V	FUEL GND
5	B	FUEL SIGNAL

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	WHITE



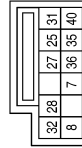
Terminal No.	Color of Wire	Signal Name
15	GR	-
16	B	-

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



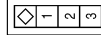
Terminal No.	Color of Wire	Signal Name
2	GR	-

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



Terminal No.	Color of Wire	Signal Name
25	L	RH BUCKLE SW INPUT

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



Terminal No.	Color of Wire	Signal Name
2	B	-

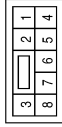
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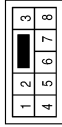
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Connector No.	B148
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	B202
Connector Name	SEAT BELT BUCKLE SWITCH LH
Connector Color	WHITE



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

Connector No.	B302
Connector Name	SEAT BELT BUCKLE SWITCH RH
Connector Color	WHITE



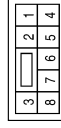
Terminal No.	Color of Wire	Signal Name
1	L	SIGNAL
2	B	GND

Connector No.	B308
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	T2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	W	-
6	V	-
8	B	-

COMBINATION METER

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Connector No.	T7
Connector Name	TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-
2	W	-
3	B	-
4	V	-

MWI

Fail Safe

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

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INFOID:000000003899518

COMBINATION METER

< ECU DIAGNOSIS >

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

DTC Index

INFOID:000000003899519

CONSULT-III display	Malfunction	Reference page
CAN COMM CIRCUIT [U1000]	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	XX-XX, *****
CONTROL UNIT (CAN) [U1010]	When detecting error during the initial diagnosis of the CAN controller of combination meter.	XX-XX, *****
VEHICLE SPEED [B2205]	The abnormal vehicle speed signal is input from the ABS actuator and electric unit (control unit) for 2 seconds or more.	XX-XX, *****
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	XX-XX, *****
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	XX-XX, *****

NOTE:

“TIME” indicates the following.

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000004296289

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TURN SIGNAL R	Other than turn signal switch RH	OFF
	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
DOOR SW-DR	Driver door closed	OFF
	Driver door opened	ON
DOOR SW-AS	Passenger door closed	OFF
	Passenger door opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
CDL LOCK SW	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
	Power door lock switch UNLOCK	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
	When outside of the vehicle is dark	Close to 0 V
REQ SW-DR	When front door request switch is not pressed (driver side)	OFF
	When front door request switch is pressed (driver side)	ON
REQ SW-AS	When front door request switch is not pressed (passenger side)	OFF
	When front door request switch is pressed (passenger side)	ON
REQ SW-RL	When rear door request switch is not pressed (driver side)	OFF
	When rear door request switch is pressed (driver side)	ON
REQ SW-RR	When rear door request switch is not pressed (passenger side)	OFF
	When rear door request switch is pressed (passenger side)	ON
REQ SW-BD/TR	When trunk request switch is not pressed	OFF
	When trunk request switch is pressed	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
PUSH SW	When engine switch (push switch) is not pressed	OFF	A
	When engine switch (push switch) is pressed	ON	
IGN RLY 2-F/B	Ignition switch OFF or ACC	OFF	B
	Ignition switch ON	ON	
ACC RLY-F/B	Ignition switch OFF	OFF	C
	Ignition switch ACC or ON	ON	
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.	OFF	
BRAKE SW 1	When the brake pedal is not depressed	ON	D
	When the brake pedal is depressed	OFF	
DETE/CANCL SW	When selector lever is in P position	OFF	E
	When selector lever is in any position other than P	ON	
SFT PN/N SW	When selector lever is in any position other than P or N	OFF	F
	When selector lever is in P or N position	ON	
S/L-LOCK	Electronic steering column lock LOCK status	OFF	G
	Electronic steering column lock UNLOCK status	ON	
S/L-UNLOCK	Electronic steering column lock UNLOCK status	OFF	H
	Electronic steering column lock LOCK status	ON	
S/L RELAY-F/B	Ignition switch OFF or ACC	OFF	I
	Ignition switch ON	ON	
UNLK SEN-DR	Driver door UNLOCK status	OFF	J
	Driver door LOCK status	ON	
PUSH SW-IPDM	When engine switch (push switch) is not pressed	OFF	K
	When engine switch (push switch) is pressed	ON	
IGN RLY1 F/B	Ignition switch OFF or ACC	OFF	L
	Ignition switch ON	ON	
DETE SW -IPDM	When selector lever is in P position	OFF	M
	When selector lever is in any position other than P	ON	
SFT PN -IPDM	When selector lever is in any position other than P or N	OFF	MWI
	When selector lever is in P or N position	ON	
SFT P-MET	When selector lever is in any position other than P	OFF	O
	When selector lever is in P position	ON	
SFT N-MET	When selector lever is in any position other than N	OFF	P
	When selector lever is in N position	ON	
ENGINE STATE	Engine stopped	STOP	
	While the engine stalls	STALL	
	At engine cranking	CRANK	
	Engine running	RUN	
S/L LOCK-IPDM	Electronic steering column lock LOCK status	OFF	
	Electronic steering column lock UNLOCK status	ON	
S/L UNLCK-IPDM	Electronic steering column lock UNLOCK status	OFF	
	Electronic steering column lock LOCK status	ON	
S/L RELAY-REQ	Ignition switch OFF or ACC	OFF	
	Ignition switch ON	ON	
VEH SPEED 1	While driving	Equivalent to speedometer reading	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
VEH SPEED 2	While driving	Equivalent to speedometer reading
DOOR STAT-DR	Driver door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
DOOR STAT-AS	Passenger door LOCK status	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STAT	When the engine start is prohibited	RESET
	When the engine start is permitted	SET
PRMT RKE STAT	NOTE: This item is displayed, but cannot be monitored.	RESET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
CONFIRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TP 4	The ID of fourth key is not registered to BCM	YET
	The ID of fourth key is registered to BCM	DONE
TP 3	The ID of third key is not registered to BCM	YET
	The ID of third key is registered to BCM	DONE
TP 2	The ID of second key is not registered to BCM	YET
	The ID of second key is registered to BCM	DONE
TP 1	The ID of first key is not registered to BCM	YET
	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire	A
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire	B
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire	
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE	C
	When ID of front LH tire transmitter is not registered	YET	
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE	D
	When ID of front RH tire transmitter is not registered	YET	
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE	E
	When ID of rear RH tire transmitter is not registered	YET	
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE	F
	When ID of rear LH tire transmitter is not registered	YET	
WARNING LAMP	Tire pressure indicator OFF	OFF	
	Tire pressure indicator ON	ON	
BUZZER	Tire pressure warning alarm is not sounding	OFF	G
	Tire pressure warning alarm is sounding	ON	

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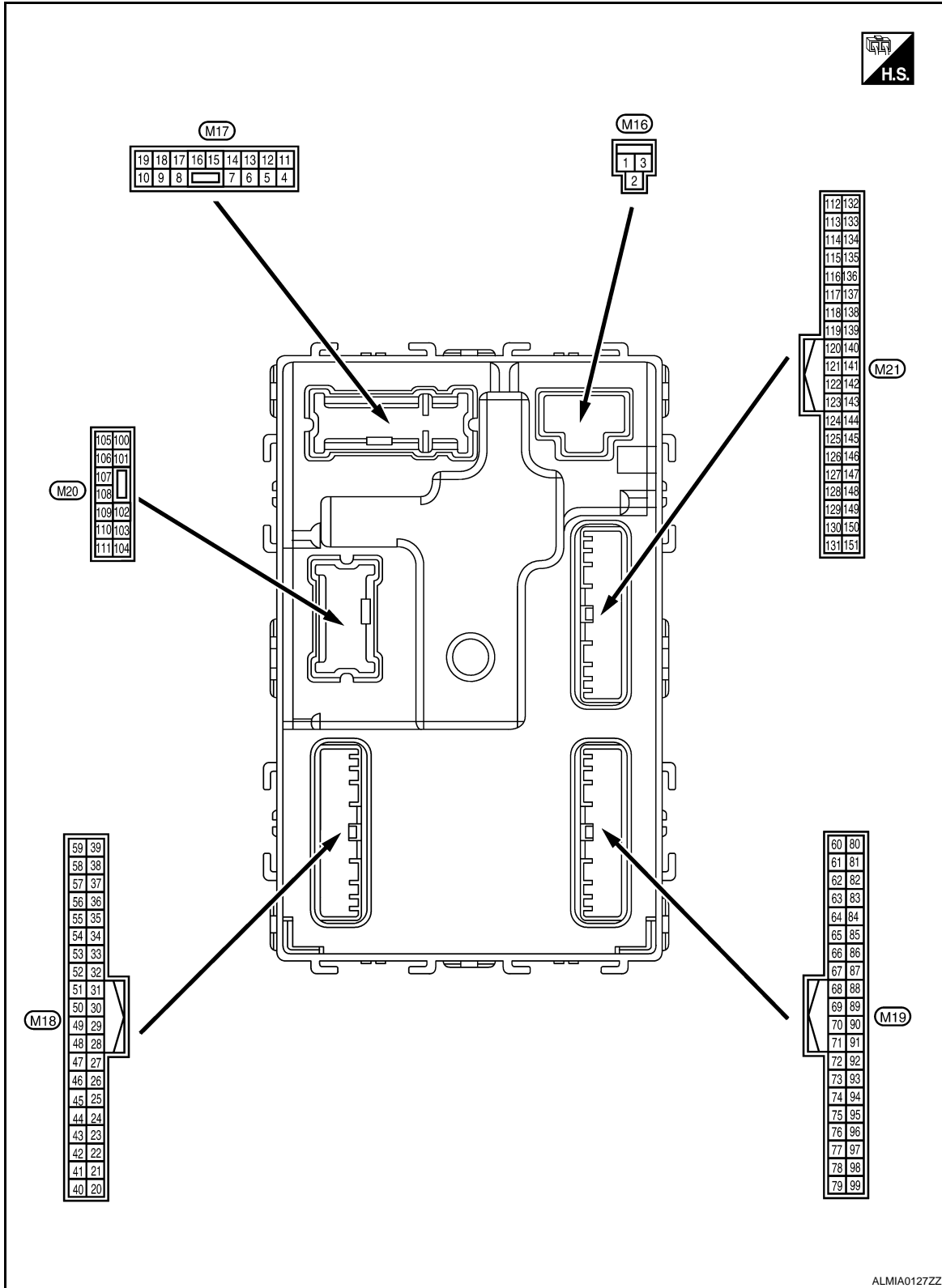
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal Layout

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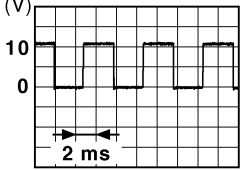


Physical Values

INFOID:000000004296291

BCM (BODY CONTROL MODULE)

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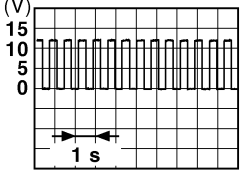
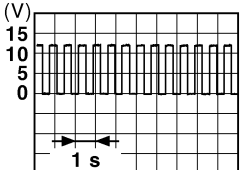
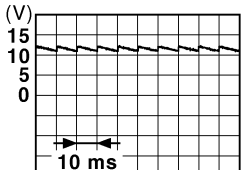
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
		Signal name	Input/ Output			
(+)	(-)					
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
5 (G)	Ground	Front door RH UNLOCK	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0V
					OFF	Battery voltage
8 (V)	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
					Other than LOCK (actuator is not activated)	0V
9 (L)	Ground	Front door LH UNLOCK	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
10 (G)	Ground	Rear door RH and rear door LH UNLOCK	Output	Rear door RH and rear door LH	UNLOCK (actuator is activated)	Battery voltage
					Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0V
14 (GR/W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	0V
					ON	<p>NOTE: When the illumination brightening/dimming level is in the neutral position</p>  <p style="text-align: right;">JSNIA0010GB</p>
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
					ACC or ON	0V

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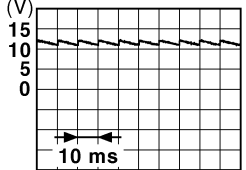
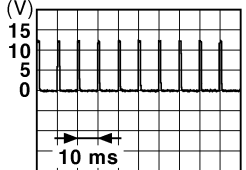
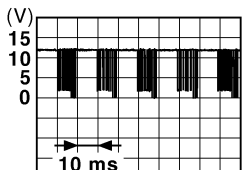
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V
				Turn signal switch RH	 <p style="text-align: center;">6.5 V</p>	
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch OFF	0V
				Turn signal switch LH	 <p style="text-align: center;">6.5 V</p>	
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
				ON	0V	
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch ON	When outside of the vehicle is bright	Close to 5V
				When outside of the vehicle is dark	Close to 0V	
24 (R/W)	Ground	Stop lamp switch 1	Input	—	Battery voltage	
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not depressed)	0V
				ON (brake pedal is depressed)	Battery voltage	
27 (O)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	 <p style="text-align: center;">11.8V</p>
				UNLOCK status	0V	
29 (Y)	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot	Battery voltage	
				When Intelligent Key is not inserted into key slot	0V	
30 (V/Y)	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
				ACC or ON	Battery voltage	
31 (G)	Ground	Rear window defogger feedback signal	Input	Rear window defogger switch	OFF	0V
				ON	Battery voltage	

BCM (BODY CONTROL MODULE)

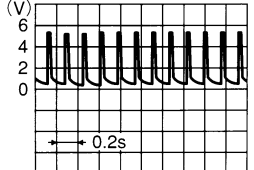

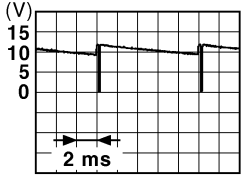
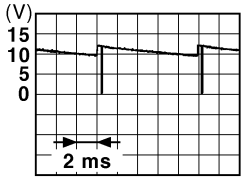
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p> <p style="text-align: center;">11.8 V</p>
					ON (when front door RH opens)	0V
37 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	 <p style="text-align: right; font-size: small;">JPMIA0012GB</p> <p style="text-align: center;">1.1V</p>
					ON	0V
38 (GR/W)	Ground	Rear window defogger ON signal	Input	Rear window defogger switch	OFF	5V
					ON	0V
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON	 <p style="text-align: right; font-size: small;">JPMIA0013GB</p> <p style="text-align: center;">10.2V</p>	
				Ignition switch OFF or ACC	0V	
41 (W)	Ground	Engine switch (push switch) illumination	Output	Engine switch (push switch) illumination	ON	5.5V
					OFF	0V
42 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON	0V
					OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON	0V	
46 (V/W)	Ground	Receiver & sensor power supply output	Output	Ignition switch	OFF	0V
					ACC or ON	5.0V

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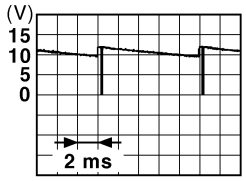
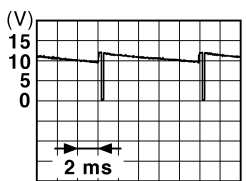
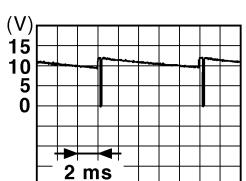
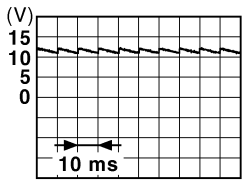
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
47 (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	Standby state  OCC3881D
				When receiving the signal from the transmitter  OCC3880D	
48 (R/G)	Ground	Selector lever P/N position signal	Input	Selector lever	P or N position 12.0V Except P and N positions 0V
				49 (L/O)	Ground
OFF Battery voltage					
50 (LG/B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF 0V
					Lighting switch 1ST
					Lighting switch high-beam
					Lighting switch 2ND
Turn signal switch RH  10.7V JPMIA0031GB					
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4) 0V
					Front wiper switch HI (Wiper intermittent dial 4)
					Any of the conditions below with all switch OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7  10.7V JPMIA0032GB

BCM (BODY CONTROL MODULE)

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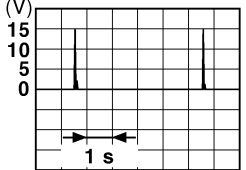
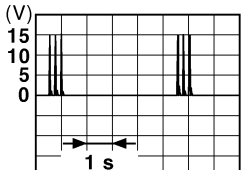
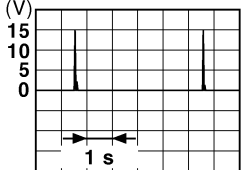
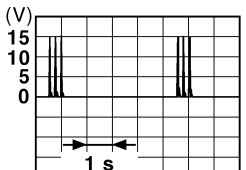
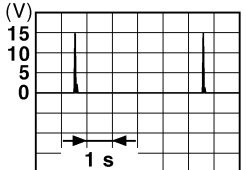
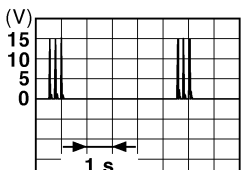
Terminal No. (Wire color)		Description		Condition	Value (Approx.)		
		Signal name	Input/ Output				
(+)	(-)						
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0V	
					Front washer switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0033GB</p>	
					Any of the conditions below with all switch OFF		10.7V
							<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0V	
					Front wiper switch INT	 <p style="text-align: right; font-size: small;">JPMIA0034GB</p>	
					Front wiper switch LO		
					Lighting switch AUTO		
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0V	
					Front fog lamp switch ON	 <p style="text-align: right; font-size: small;">JPMIA0035GB</p>	
					Lighting switch 2ND		
					Lighting switch flash-to- pass		
				Turn signal switch LH	10.7V		
57 (W)	Ground	Tire pressure warn- ing check switch	Input	—	5V		
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	 <p style="text-align: right; font-size: small;">JPMIA0011GB</p>	
					ON (front door LH OPEN)		0V
59 (G/R)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	Battery voltage	
					Not activated	0V	

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compartment	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>
62 (V)	Ground	Front outside handle RH antenna (-)	Output	When the front door RH request switch is operated with ignition switch OFF	 <p style="text-align: right; font-size: small;">JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	 <p style="text-align: right; font-size: small;">JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

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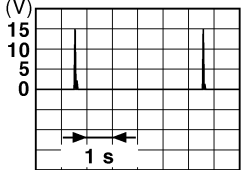
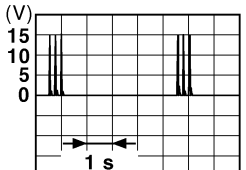
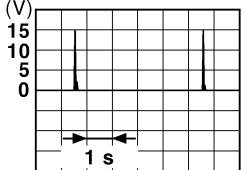
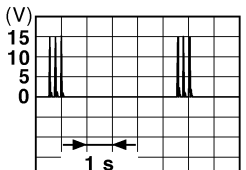
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
63 (P)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operated with ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operated with ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH request switch is operated with ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>

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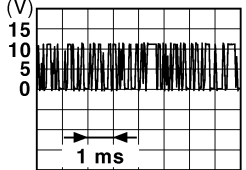
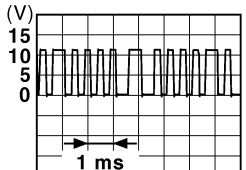
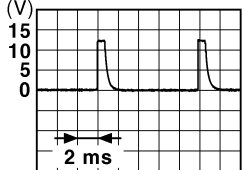
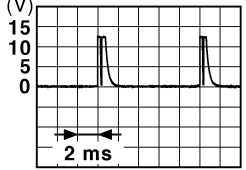

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
66 (R)	Ground	Instrument panel antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment  JMKIA0062GB
					When Intelligent Key is not in the passenger compartment  JMKIA0063GB
67 (G)	Ground	Instrument panel antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment  JMKIA0062GB
					When Intelligent Key is not in the passenger compartment  JMKIA0063GB
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 control	Output	Ignition switch	OFF or ACC 0V
				ON	Battery voltage

BCM (BODY CONTROL MODULE)

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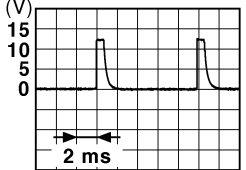
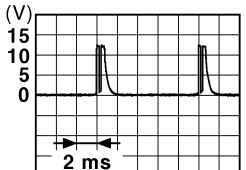

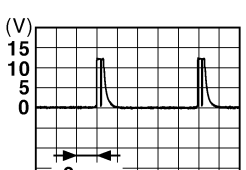
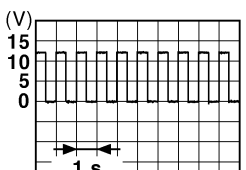
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
71 (L/O)	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting	 <p style="text-align: right; font-size: small;">JMKIA0064GB</p>
				When operating either button on Intelligent Key	 <p style="text-align: right; font-size: small;">JMKIA0065GB</p>
75 (R/Y)	Ground	Combination switch INPUT 5	Input	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4V</p>
				Combination switch Front fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3V</p>
				Any of the conditions below with all switch OFF	<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7  <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3V</p>

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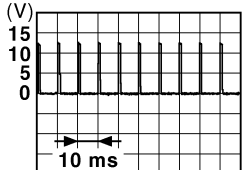
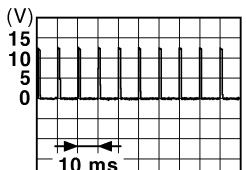
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0041GB</p> <p style="text-align: center;">1.4V</p>
					Lighting switch high-beam (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0036GB</p> <p style="text-align: center;">1.3V</p>
					Lighting switch 2ND (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0037GB</p> <p style="text-align: center;">1.3V</p>
					Any of the conditions below with all switch OFF	<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3  <p style="text-align: right; font-size: small;">JPMIA0040GB</p> <p style="text-align: center;">1.3V</p>
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
				Not pressed	Battery voltage	
78 (P)	Ground	CAN-L	Input/ Output	—	—	
79 (L)	Ground	CAN-H	Input/ Output	—	—	
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF	0V
					Blinking	 <p style="text-align: right; font-size: small;">JPMIA0015GB</p> <p style="text-align: center;">6.5V</p>
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

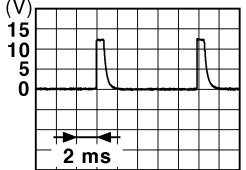

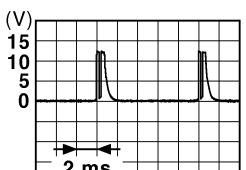
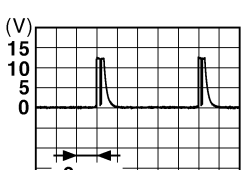
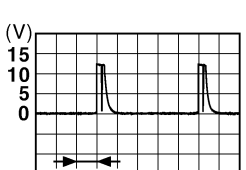
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
(+)	(-)	Signal name	Input/ Output			
81 (Y/L)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
83 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0V
					ACC or ON	Battery voltage
84 (Y/R)	Ground	A/T device	Output	—		Battery voltage
85 (L/O)	Ground	Electronic steering column lock condition No. 1	Input	Electronic steer- ing column lock	Lock status	0V
					Unlock status	Battery voltage
86 (G/R)	Ground	Electronic steering column lock condition No. 2	Input	Electronic steer- ing column lock	Lock status	Battery voltage
					Unlock status	0V
87 (G/B)	Ground	Selector lever P posi- tion switch	Input	Selector lever	P position	0V
					Any position other than P	Battery voltage
88 (R)	Ground	Front door RH re- quest switch	Input	Front door RH re- quest switch	ON (pressed)	0V
					OFF (not pressed)	 <p style="text-align: right; margin-right: 50px;">1.0V</p>
89 (R)	Ground	Front door LH re- quest switch	Input	Front door LH re- quest switch	ON (pressed)	0V
					OFF (not pressed)	 <p style="text-align: right; margin-right: 50px;">1.0V</p>
90 (Y)	Ground	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC	0V
					ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OFF		Battery voltage
94 (G/Y)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V

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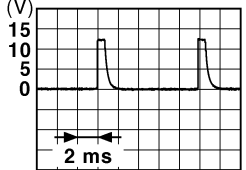
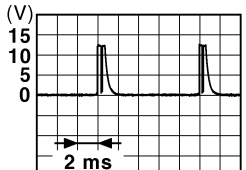
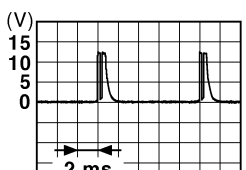
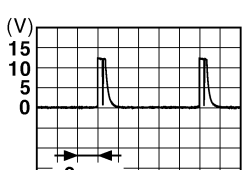
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF <div style="text-align: right;">  <p>1.4V</p> </div>
					Turn signal switch LH <div style="text-align: right;">  <p>1.3V</p> </div>
					Turn signal switch RH <div style="text-align: right;">  <p>1.3V</p> </div>
					Front wiper switch LO <div style="text-align: right;">  <p>1.3V</p> </div>
					Front washer switch ON <div style="text-align: right;">  <p>1.3V</p> </div>

BCM (BODY CONTROL MODULE)

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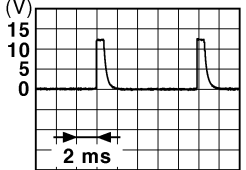

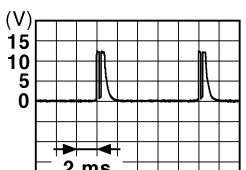
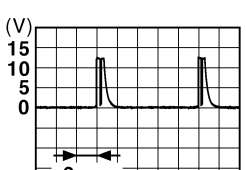
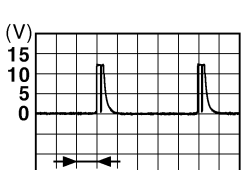
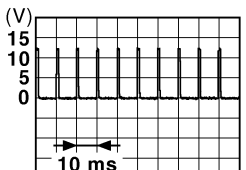
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
(+)	(-)					
96 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4V
					Lighting switch AUTO (Wiper intermittent dial 4)	 1.3V
					Lighting switch 1ST (Wiper intermittent dial 4)	 1.3V
					Any of the conditions below with all switch OFF	 1.3V

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 <p style="text-align: right;">1.4V</p>
					Lighting switch flash-to-pass	 <p style="text-align: right;">1.3V</p>
					Lighting switch 2ND	 <p style="text-align: right;">1.3V</p>
					Front wiper switch INT	 <p style="text-align: right;">1.3V</p>
					Front wiper switch HI	 <p style="text-align: right;">1.3V</p>
					Pressed	0 V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	 <p style="text-align: right;">1.1V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
(+)	(-)	Signal name	Input/ Output			
99 (L/Y)	Ground	Electronic steering column lock unit com- munication	Input/ Output	Electronic steer- ing column lock	LOCK status	Battery voltage
					LOCK or UNLOCK	<p style="text-align: right; font-size: small;">JMKIA0066GB</p>
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0V
103 (V)	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener ac- tuator is activated)	Battery voltage
					Close (trunk lid opener ac- tuator is not activated)	0V
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	<p style="text-align: right; font-size: small;">JMKIA0062GB</p>
					When Intelligent Key is not in the passenger compart- ment	<p style="text-align: right; font-size: small;">JMKIA0063GB</p>

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BCM (BODY CONTROL MODULE)

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
115 (W)	Ground	Trunk room antenna 1 (+)	Output	Ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the passenger compart- ment	<p>JMKIA0063GB</p>
118 (L/O)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid request switch is operated with ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>
119 (BR/ W)	Ground	Rear bumper anten- na (+)	Output	When the trunk lid request switch is operated with ignition switch OFF	<p>JMKIA0062GB</p>
				When Intelligent Key is not in the antenna detection area	<p>JMKIA0063GB</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
(+)	(-)					
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	<p style="text-align: right;">JPMIA0011GB 11.8V</p>
					ON (trunk is open)	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch OFF (M/T vehi- cle)	When the clutch pedal is depressed	Battery voltage
					When the clutch pedal is not depressed	0V
				Ignition switch ON (other than M/ T vehicle)	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	0V
141 (BR)	Ground	Trunk request switch	Input	Trunk request switch	ON (pressed)	0V
					OFF (not pressed)	<p style="text-align: right;">JPMIA0016GB 1.0V</p>
144 (GR)	Ground	Request switch buzz- er	Output	Request switch buzzer	Sounding	0V
					Not sounding	Battery voltage
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0V
					Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	<p style="text-align: right;">JPMIA0011GB 11.8V</p>
					ON (when rear door RH opens)	0V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
(+)	(-)	Signal name	Input/ Output		
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)
				ON (when rear door LH opens)	0V

11.8V

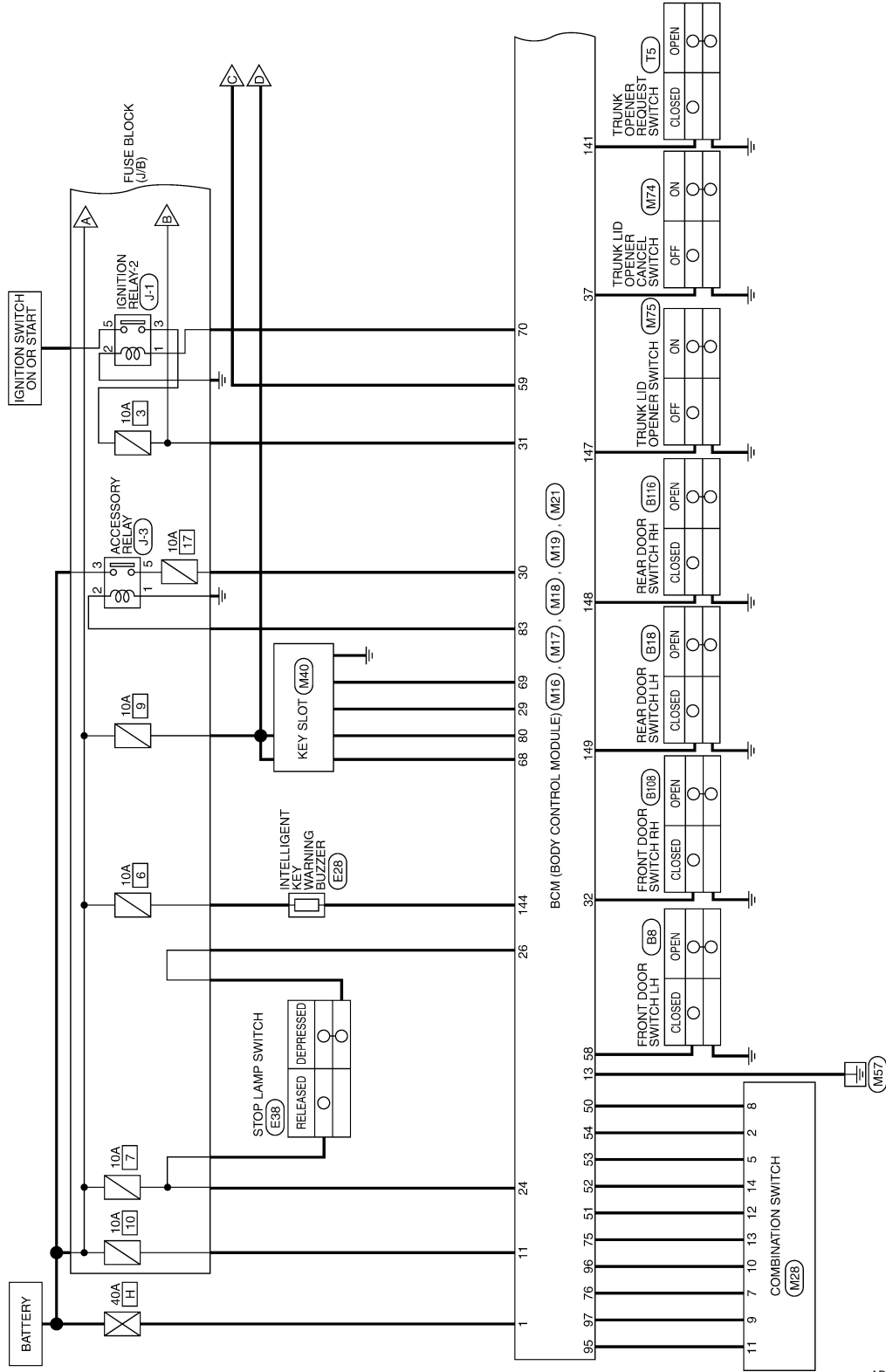
BCM (BODY CONTROL MODULE)

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Wiring Diagram

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BCM (BODY CONTROL MODULE)



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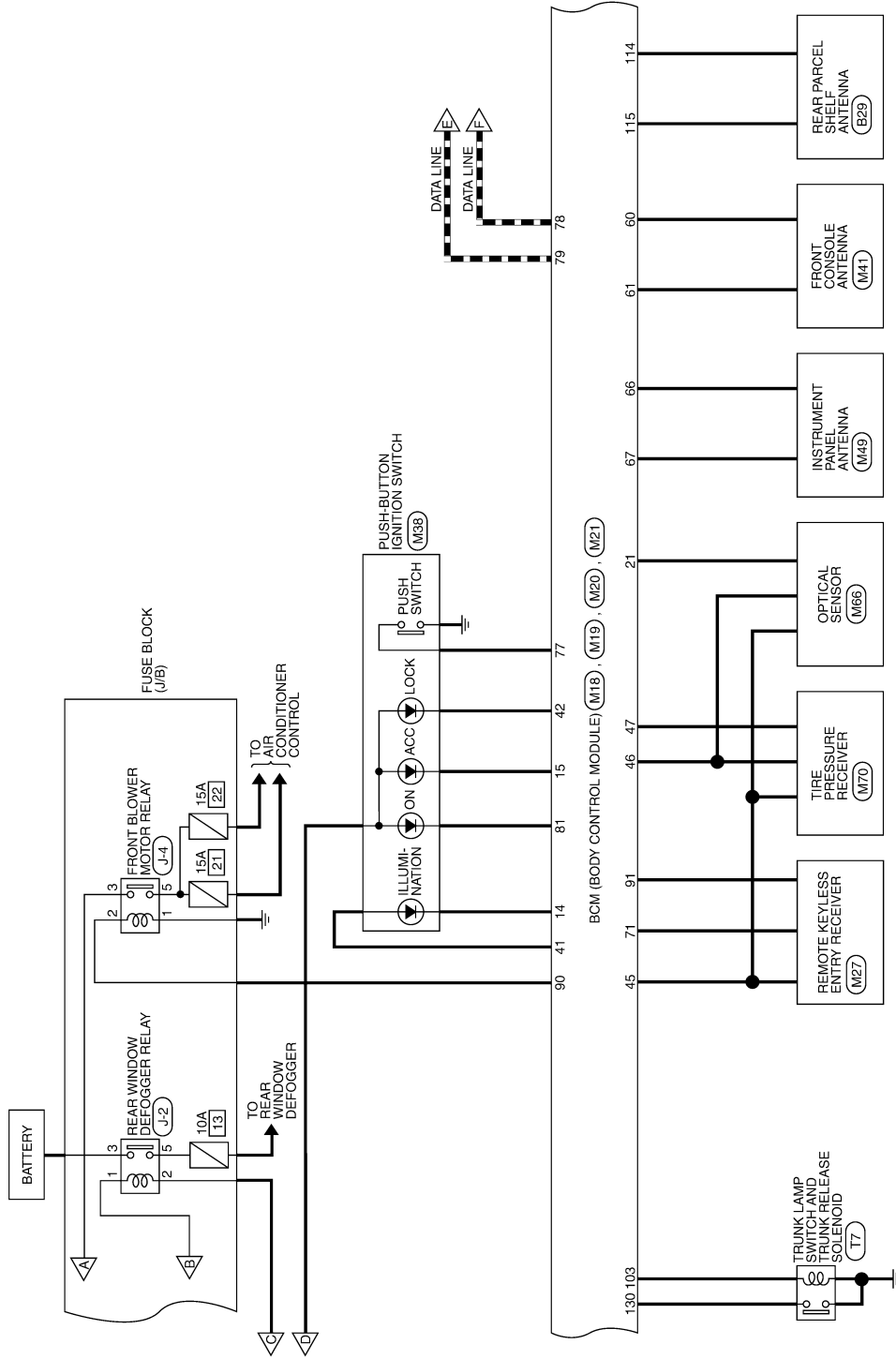
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BCM (BODY CONTROL MODULE)

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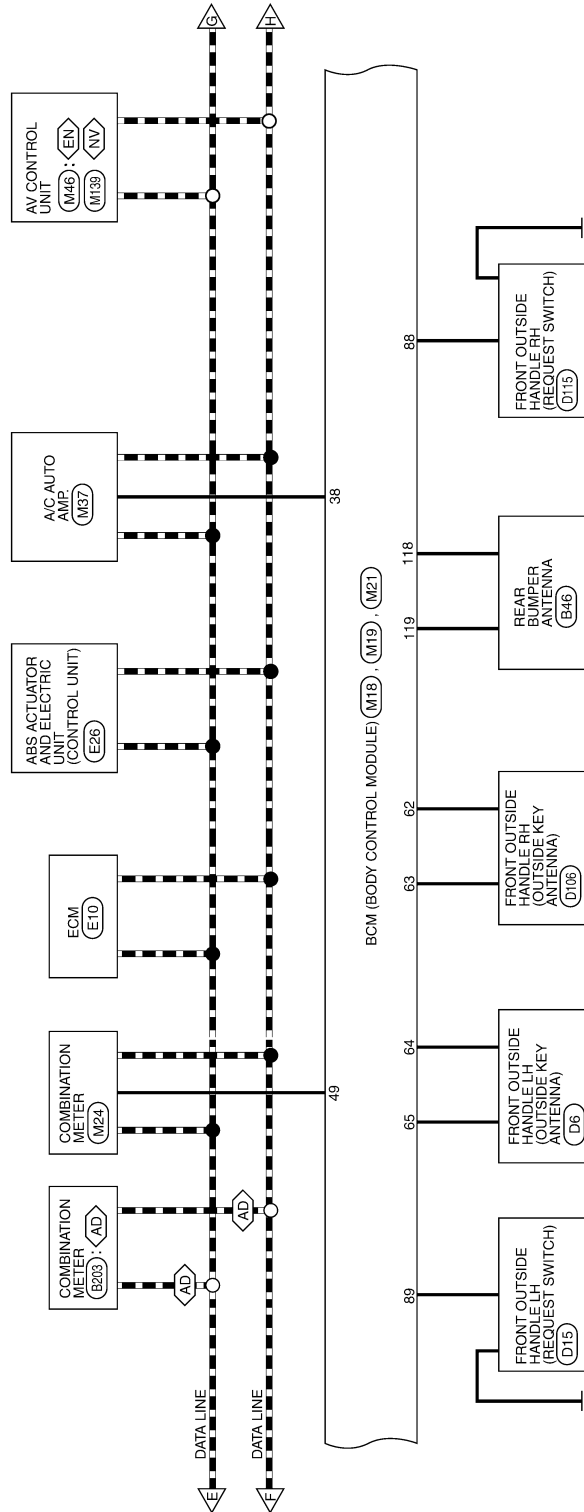


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BCM (BODY CONTROL MODULE)

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 <AD> : WITH AUTOMATIC DRIVE POSITIONER
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 <NV> : WITH NAVI



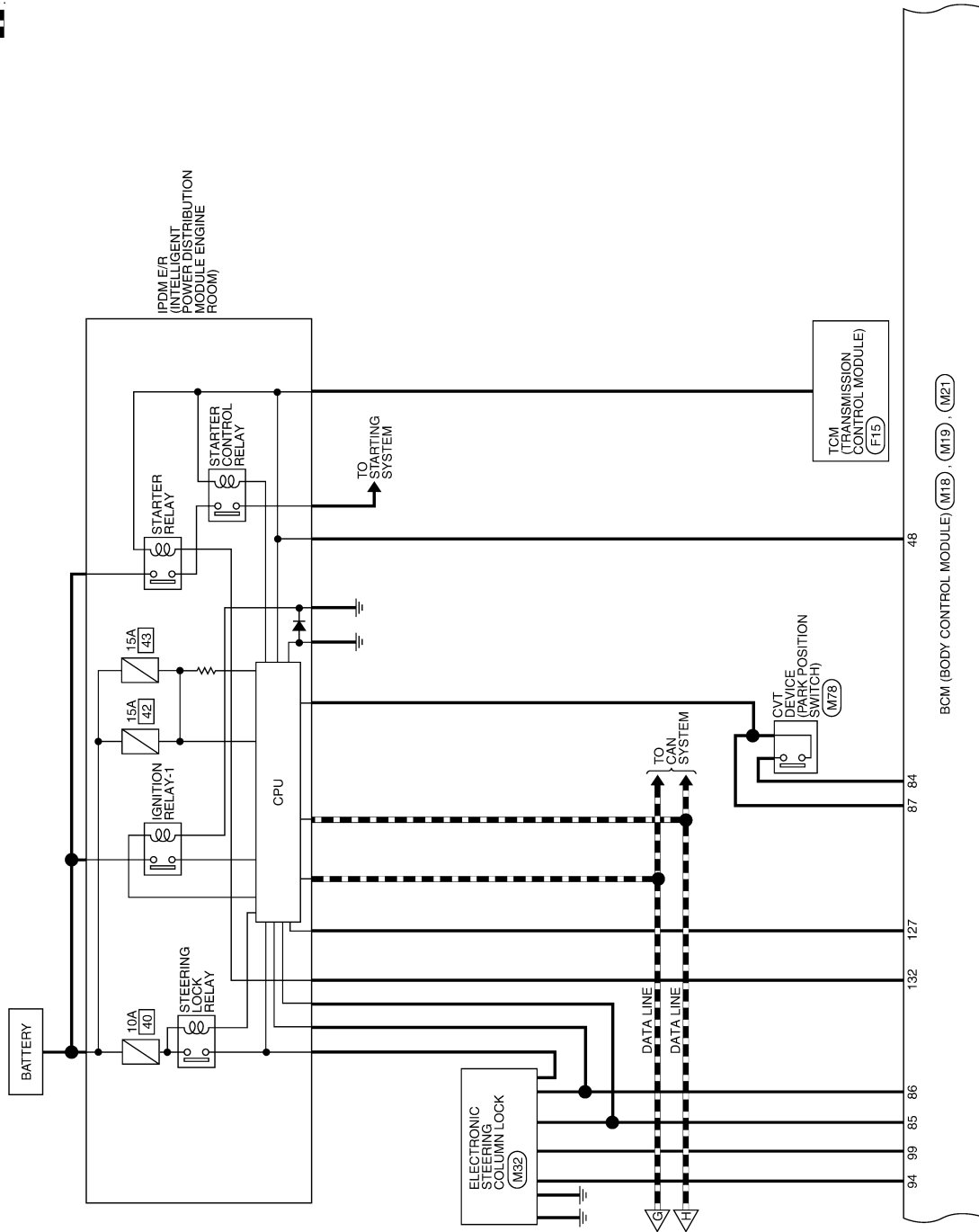
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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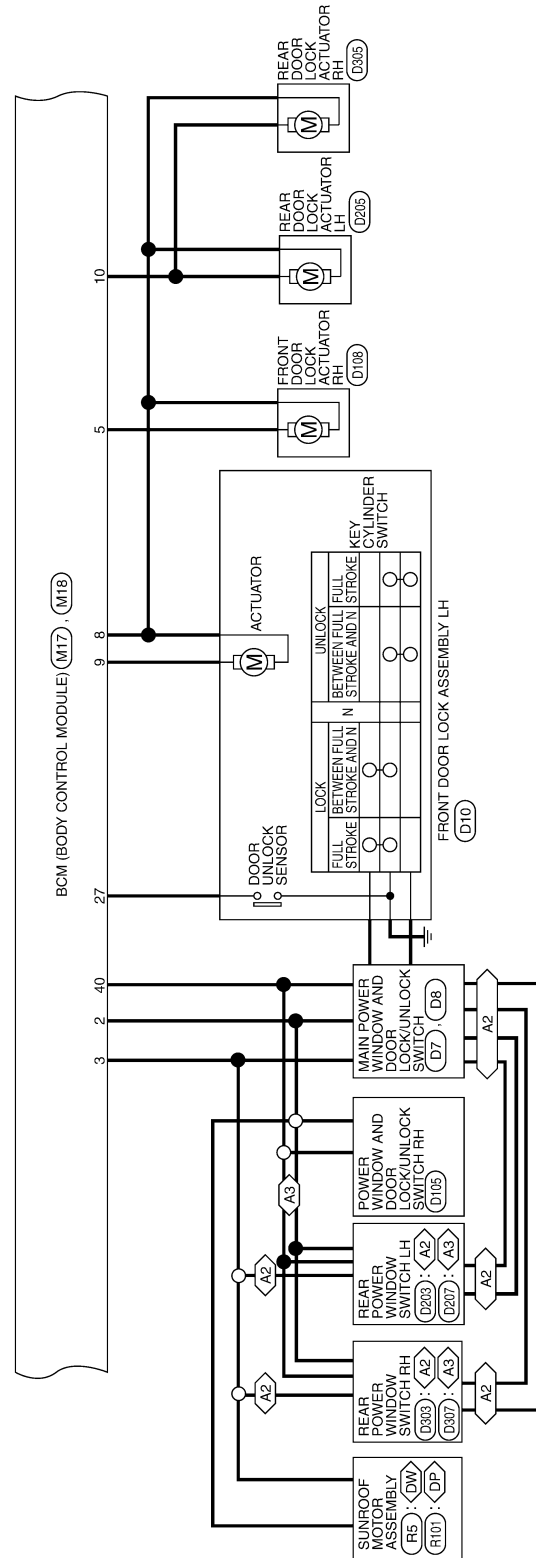


ABMWA0080GI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

- <A2> : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
- <A3> : WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM
- <DP> : WITH DUAL PANEL SUNROOF
- <DW> : WITHOUT DUAL PANEL SUNROOF



ABMWA0081G1

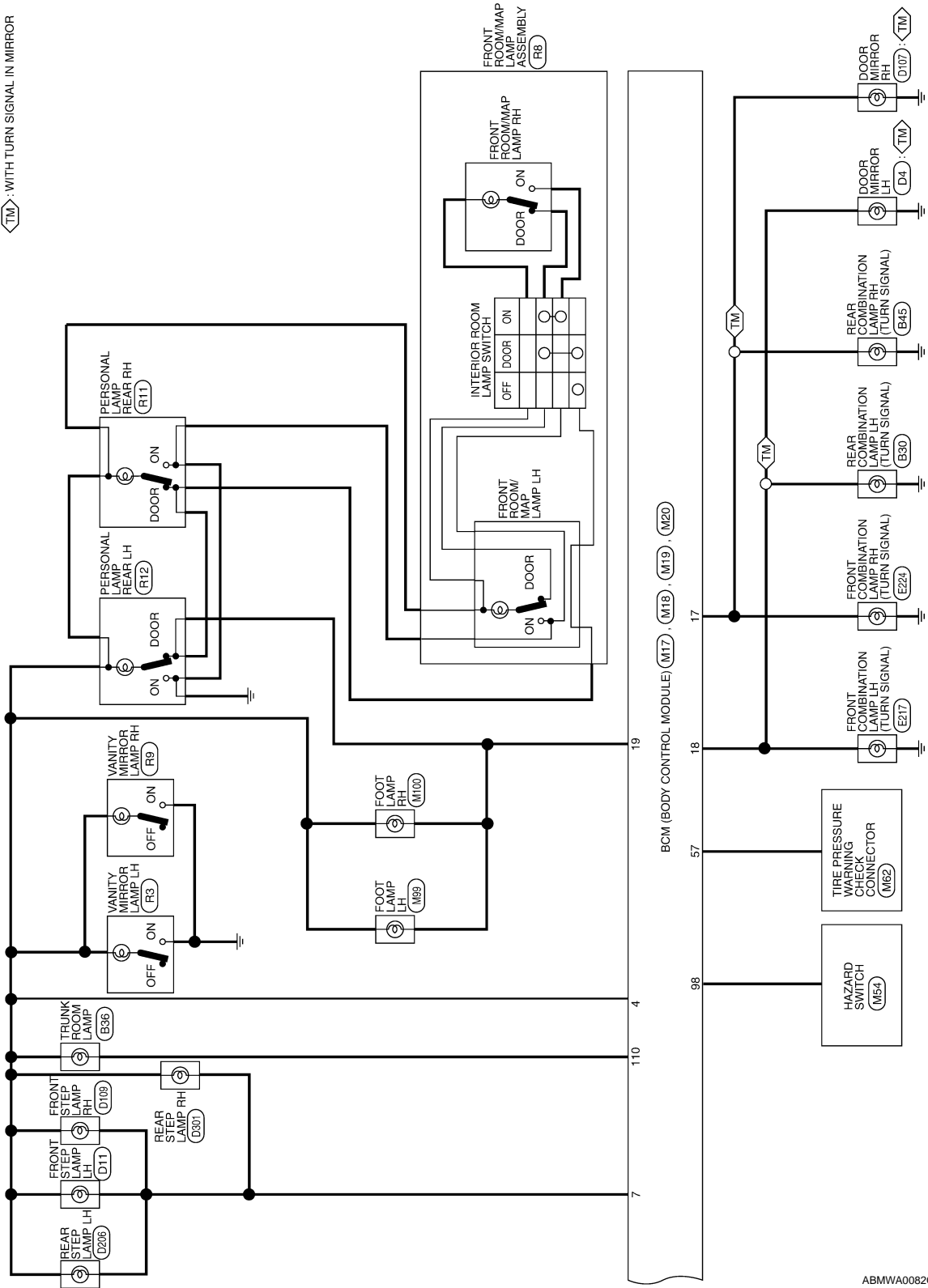
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

TM : WITH TURN SIGNAL IN MIRROR



ABMWA0082GI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

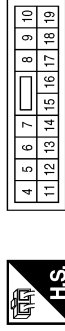
BCM (BODY CONTROL MODULE) CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1	W/B	BAT POWER F/L
2	R/Y	P/W POWER SUPPLY PERM
3	L/W	P/W POWER SUPPLY IGN

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



Terminal No.	Color of Wire	Signal Name
4	P/W	R/L POWER SUPPLY
5	G	DOOR UNLOCK OUTPUT AS
6	-	-
7	R/W	STEP LAMP CONT
8	V	DOOR UNLOCK OUTPUT ALL
9	L	DOOR UNLOCK OUTPUT (DR/FL)

Terminal No.	Color of Wire	Signal Name
10	G	DOOR UNLOCK OUTPUT (RR/RL)
11	Y/R	BAT BCM FUSE
12	-	-
13	B	GND1
14	GR/W	LOW SIDE PUSH LED
15	Y/L	ACC LED
16	-	-
17	G/B	FR FLASHER
18	G/Y	FL FLASHER
19	Y	ROOM LAMP CONT

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



Terminal No.	Color of Wire	Signal Name
20	-	-
21	P/B	A/L SIGNAL TYPE 1
22	-	-
23	-	-
24	R/W	BRAKE SW1
25	-	-
26	O/L	BRAKE SW2

Terminal No.	Color of Wire	Signal Name
27	O	DOOR LOCK STATUS DR
28	-	-
29	Y	FOB IN SW 1
30	V/Y	ACC F/B
31	G	IGN F/B
32	R/B	AS DOOR SW 1
33	-	-
34	-	-
35	-	-
36	-	-
37	O	TRUNK CANCEL SW
38	GR/W	REAR DEFOGGER SW
39	-	-
40	Y/G	PW K-LINE
41	W	PUSH LED
42	R	S/L LOCK LED
43	-	-
44	-	-

Terminal No.	Color of Wire	Signal Name
45	P	GND RF2 A/L
46	V/W	A/L POWER SUPPLY 5V
47	G/O	RF2 TUNER SIGNAL
48	R/G	SHIFT N/R/NEUTRAL SW
49	L/O	IMMO LED (SECURITY INDICATOR)
50	LG/B	COMBI SW OUT 5
51	L/W	COMBI SW OUT 1
52	G/B	COMBI SW OUT 2
53	LG/R	COMBI SW OUT 3
54	G/Y	COMBI SW OUT 4
55	-	-
56	W	TPMS MODE
58	SB	DR DOOR SW
59	G/R	REAR DEFOGGER

ABMIA0177GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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



79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60
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Terminal No.	Color of Wire	Signal Name
60	B/R	ROOM ANT 2 B
61	W/R	ROOM ANT 2 A
62	V	AS DOOR ANT B
63	P	AS DOOR ANT A
64	V	DR DOOR ANT B
65	P	DR DOOR ANT A
66	R	ROOM ANT 1 B



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

Terminal No.	Color of Wire	Signal Name
100	-	-
101	-	-
102	-	-
103	V	CDL BACK TRUNK

Terminal No.	Color of Wire	Signal Name
67	G	ROOM ANT 1 A
68	G/O	FOB READER CLOCK
69	O	FOB READER DATA
70	R/B	IGN REL OUTPUT 2
71	L/O	RF1 TUNER SIGNAL
72	-	-
73	-	-
74	-	-
75	R/Y	COMBI SW IN 5
76	R/G	COMBI SW IN 3
77	BR	ENG START SW
78	P	CAN-L
79	L	CAN-H
80	R/L	FOB SLOT ILLUMINATION
81	Y/L	IGN ON LED
82	-	-
83	L	ACC CONT

Terminal No.	Color of Wire	Signal Name
84	Y/R	AT DEVICE OUT
85	L/O	S/L CONDITION 1
86	G/R	S/L CONDITION 2
87	G/B	SHIFT P/ASCD CANCEL SW
88	R	AS REQUEST SW
89	R	DR REQUEST SW
90	Y	BLOWER FAN RELAY
91	L/R	RF POWER SUPPLY 12V
92	-	-
93	-	-
94	G/Y	S/L POWER SUPPLY 12V
95	RW	COMBI SW IN 1
96	P/B	COMBI SW IN 4
97	R/B	COMBI SW IN 2
98	G/O	HAZARD SW
99	L/Y	S/L K-LINE

Terminal No.	Color of Wire	Signal Name
104	-	-
105	-	-
106	-	-
107	-	-
108	-	-
109	-	-
110	V/W	TRUNK LAMP CONT
111	-	-

ABMIA0178GB

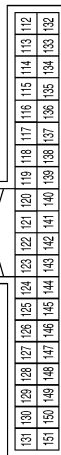
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
136	-	-
137	-	-
138	-	-
139	-	-
140	-	-
141	BR	TRUNK REQUEST SW
142	-	-
143	-	-
144	GR	BUZZER
145	-	-
146	-	-
147	L/R	BACK TRUNK OPENER
148	R/W	RR DOOR SW
149	R/B	RL DOOR SW
150	-	-
151	-	-

Terminal No.	Color of Wire	Signal Name
119	BR/W	BACK DOOR ANT A
120	-	-
121	-	-
122	-	-
123	-	-
124	-	-
125	-	-
126	-	-
127	BR/W	IGN RELAY OUTPUT
128	-	-
129	-	-
130	W	TRUNK SW
131	-	-
132	R	ST RELAY OUTPUT
133	-	-
134	-	-
135	-	-

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
112	-	-
113	-	-
114	B	TRUNK ANT 1 B
115	W	TRUNK ANT 1 A
116	-	-
117	-	-
118	L/O	BACK DOOR ANT B

Fail Safe

ABMIA0179GB

INFOID:000000004296293

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Starter control relay signal • Starter relay status signal
B2562: LO VOLTAGE	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	500 ms after the following signal reception status becomes consistent <ul style="list-style-type: none"> • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	5 seconds after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	500 ms after the following BCM recognition conditions are fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> • Status 1 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P and N position (battery voltage) - P range signal or N range signal (CAN): ON • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: Except P and N positions (0 V) - P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit electronic steering column lock	500 ms after any of the following BCM recognition conditions is fulfilled <ul style="list-style-type: none"> • Ignition switch is in the ON position <ul style="list-style-type: none"> - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 <ul style="list-style-type: none"> - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent <ul style="list-style-type: none"> • Electronic steering column lock relay signal (Request signal) • Electronic steering column lock relay signal (Condition signal)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent <ul style="list-style-type: none"> • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit electronic steering column lock 	When the following electronic steering column lock conditions agree <ul style="list-style-type: none"> • BCM electronic steering column lock control status • Electronic steering column lock condition No. 1 signal status • Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled <ul style="list-style-type: none"> • IGN relay (IPDM E/R) control signal: OFF (Battery voltage) • Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) • Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	<ul style="list-style-type: none"> • Inhibit engine cranking • Inhibit electronic steering column lock 	When any of the following conditions is fulfilled <ul style="list-style-type: none"> • Electronic steering column lock unit status signal (CAN) is received normally • The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the electronic steering column lock unit power supply output control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled <ul style="list-style-type: none"> • Power position changes to ACC • Receives engine status signal (CAN)

DTC Inspection Priority Chart

INFOID:000000004296294

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

Priority	DTC
1	<ul style="list-style-type: none"> • B2562: LO VOLTAGE
2	<ul style="list-style-type: none"> • U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
3	<ul style="list-style-type: none"> • B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Priority	DTC
4	<ul style="list-style-type: none"> • B2013: ID DISCORD BCM-S/L • B2014: CHAIN OF S/L-BCM • B2553: IGNITION RELAY • B2555: STOP LAMP • B2556: PUSH-BTN IGN SW • B2557: VEHICLE SPEED • B2560: STARTER CONT RELAY • B2601: SHIFT POSITION • B2602: SHIFT POSITION • B2603: SHIFT POSI STATUS • B2604: PNP SW • B2605: PNP SW • B2606: S/L RELAY • B2607: S/L RELAY • B2608: STARTER RELAY • B2609: S/L STATUS • B260A: IGNITION RELAY • B260B: STEERING LOCK UNIT • B260C: STEERING LOCK UNIT • B260D: STEERING LOCK UNIT • B260F: ENG STATE SIG LOST • B2612: S/L STATUS • B2614: ACC RELAY CIRC • B2615: BLOWER RELAY CIRC • B2616: IGN RELAY CIRC • B2617: STARTER RELAY CIRC • B2618: BCM • B2619: BCM • B261A: PUSH-BTN IGN SW • B26E1: ENG STATE NO RECIV • C1729: VHCL SPEED SIG ERR • U0415: VEHICLE SPEED SIG
5	<ul style="list-style-type: none"> • C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1734: CONTROL UNIT
6	<ul style="list-style-type: none"> • B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:000000004296295

NOTE:

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Details of time display

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-37
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-38
U0415: VEHICLE SPEED SIG	—	—	—	BCS-39
B2013: ID DISCORD BCM-S/L	×	—	—	SEC-30
B2014: CHAIN OF S/L-BCM	×	—	—	SEC-31
B2190: NATS ANTENNA AMP	×	—	—	SEC-34
B2191: DIFFERENCE OF KEY	×	—	—	SEC-37
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-38
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-39
B2553: IGNITION RELAY	—	—	—	PCS-54
B2555: STOP LAMP	—	—	—	SEC-40
B2556: PUSH-BTN IGN SW	—	×	—	SEC-42
B2557: VEHICLE SPEED	×	×	—	SEC-44
B2560: STARTER CONT RELAY	×	×	—	SEC-45
B2562: LOW VOLTAGE	—	—	—	BCS-40
B2601: SHIFT POSITION	×	×	—	SEC-46
B2602: SHIFT POSITION	×	×	—	SEC-49
B2603: SHIFT POSI STATUS	×	×	—	SEC-51
B2604: PNP SW	×	×	—	SEC-54
B2605: PNP SW	×	×	—	SEC-56
B2606: S/L RELAY	×	×	—	SEC-58
B2607: S/L RELAY	×	×	—	SEC-59
B2608: STARTER RELAY	×	×	—	SEC-61
B2609: S/L STATUS	×	×	—	SEC-63
B260A: IGNITION RELAY	×	×	—	PCS-56
B260B: STEERING LOCK UNIT	—	×	—	SEC-67
B260C: STEERING LOCK UNIT	—	×	—	SEC-68
B260D: STEERING LOCK UNIT	—	×	—	SEC-69
B260F: ENG STATE SIG LOST	×	×	—	SEC-70
B2612: S/L STATUS	×	×	—	SEC-72
B2614: ACC RELAY CIRC	—	×	—	PCS-58
B2615: BLOWER RELAY CIRC	—	×	—	PCS-61
B2616: IGN RELAY CIRC	—	×	—	PCS-64
B2617: STARTER RELAY CIRC	×	×	—	PCS-64
B2618: BCM	×	×	—	PCS-67

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2619: BCM	×	×	—	SEC-78
B261A: PUSH-BTN IGN SW	—	×	—	SEC-79
B2621: INSIDE ANTENNA	—	—	—	DLK-57
B2622: INSIDE ANTENNA	—	—	—	DLK-60
B2623: INSIDE ANTENNA	—	—	—	DLK-63
B26E1: ENG STATE NO RES	×	×	—	SEC-71
C1704: LOW PRESSURE FL	—	—	×	WT-48
C1705: LOW PRESSURE FR	—	—	×	WT-48
C1706: LOW PRESSURE RR	—	—	×	WT-48
C1707: LOW PRESSURE RL	—	—	×	WT-48
C1708: [NO DATA] FL	—	—	×	WT-13
C1709: [NO DATA] FR	—	—	×	WT-13
C1710: [NO DATA] RR	—	—	×	WT-13
C1711: [NO DATA] RL	—	—	×	WT-13
C1712: [CHECKSUM ERR] FL	—	—	×	WT-15
C1713: [CHECKSUM ERR] FR	—	—	×	WT-15
C1714: [CHECKSUM ERR] RR	—	—	×	WT-15
C1715: [CHECKSUM ERR] RL	—	—	×	WT-15
C1716: [PRESSDATA ERR] FL	—	—	×	WT-17
C1717: [PRESSDATA ERR] FR	—	—	×	WT-17
C1718: [PRESSDATA ERR] RR	—	—	×	WT-17
C1719: [PRESSDATA ERR] RL	—	—	×	WT-17
C1720: [CODE ERR] FL	—	—	×	WT-15
C1721: [CODE ERR] FR	—	—	×	WT-15
C1722: [CODE ERR] RR	—	—	×	WT-15
C1723: [CODE ERR] RL	—	—	×	WT-15
C1724: [BATT VOLT LOW] FL	—	—	×	WT-15
C1725: [BATT VOLT LOW] FR	—	—	×	WT-15
C1726: [BATT VOLT LOW] RR	—	—	×	WT-15
C1727: [BATT VOLT LOW] RL	—	—	×	WT-15
C1729: VHCL SPEED SIG ERR	—	—	×	WT-18
C1734: CONTROL UNIT	—	—	×	WT-19

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Reference Value

INFOID:000000004296296

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1,2,3,4
AC COMP REQ	Engine running	A/C switch OFF	Off
		A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
	Lighting switch 1ST, 2ND, HI or AUTO (Light is illuminated)		On
HL LO REQ	Lighting switch OFF		Off
	Lighting switch 2ND HI or AUTO (Light is illuminated)		On
HL HI REQ	Lighting switch OFF		Off
	Lighting switch HI		On
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	Front fog lamp switch OFF	Off
		<ul style="list-style-type: none"> • Front fog lamp switch ON • Daytime running light activated (Only for Canada models) 	On
FR WIP REQ	Ignition switch ON	Front wiper switch OFF	STOP
		Front wiper switch INT	1LOW
		Front wiper switch LO	Low
		Front wiper switch HI	Hi
WIP AUTO STOP	Ignition switch ON	Front wiper stop position	STOP P
		Any position other than front wiper stop position	ACT P
WIP PROT	Ignition switch ON	Front wiper operates normally	Off
		Front wiper stops at fail-safe operation	BLOCK
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
IGN RLY	Ignition switch OFF or ACC		Off
	Ignition switch ON		On
PUSH SW	Release the push-button ignition switch		Off
	Press the push-button ignition switch		On
INTER/NP SW	Ignition switch ON	CVT selector lever in any position other than P or N	Off
	Ignition switch ON	CVT selector lever in P or N position	On
ST RLY CONT	Ignition switch ON		Off
	At engine cranking		On
IHBT RLY -REQ	Ignition switch ON		Off
	At engine cranking		On

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

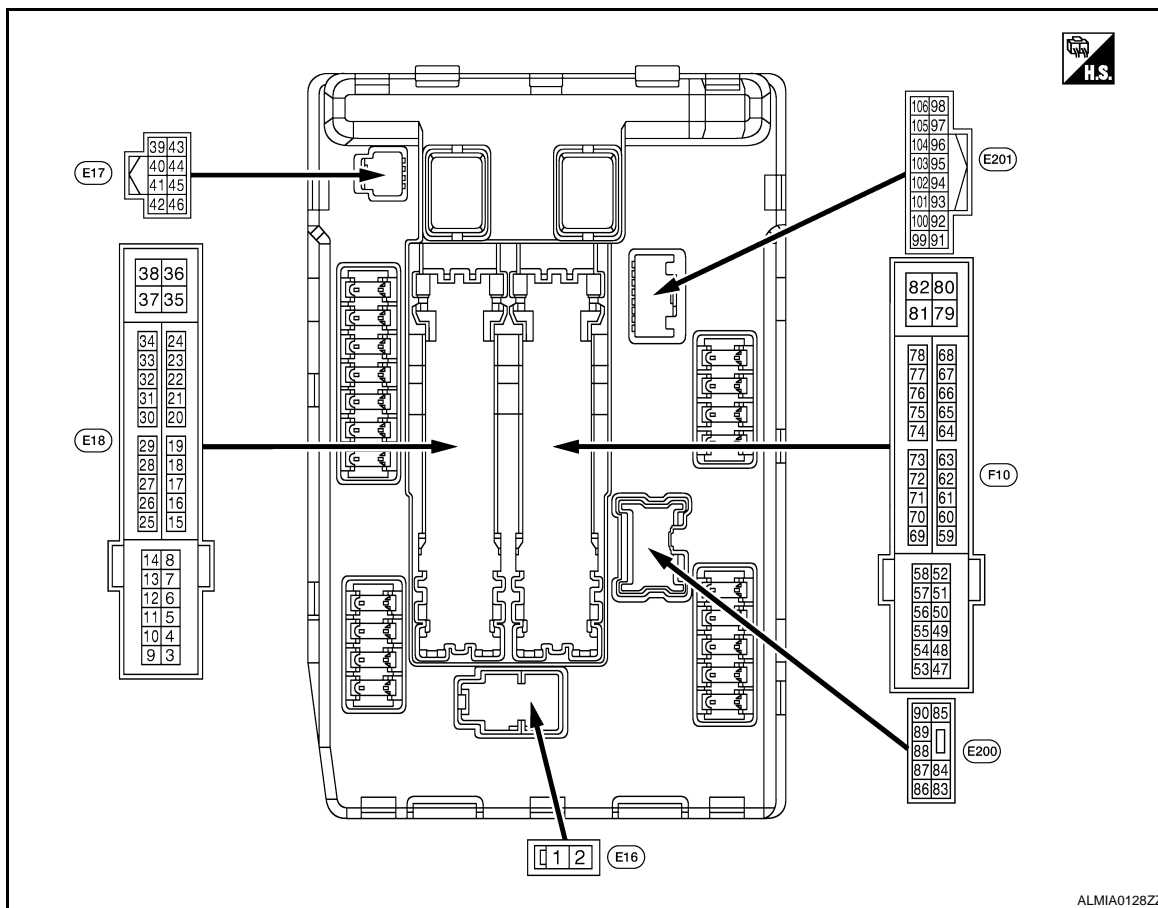
< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
ST/INHI RLY	Ignition switch ON	Off
	At engine cranking	ST →INHI
	The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF	UNKWN
DETENT SW	Ignition switch ON <ul style="list-style-type: none"> • Press the selector button with CVT selector lever in P position • CVT selector lever in any position other than P 	Off
	Release the CVT selector button with CVT selector lever in P position	On
S/L RLY -REQ	None of the conditions below are present	Off
	<ul style="list-style-type: none"> • Open the driver door after the ignition switch is turned OFF (for a few seconds) • Press the push-button ignition switch when the steering lock is activated 	On
S/L STATE	Steering lock is activated	LOCK
	Steering lock is deactivated	UNLK
	[DTC B210A] is detected	UNKWN
DTRL REQ	NOTE: This item is displayed, but cannot be monitored.	Off
OIL P SW	Ignition switch OFF, ACC or engine running	Open
	Ignition switch ON	Close
THFT HRN REQ	Not operated	Off
	<ul style="list-style-type: none"> • Panic alarm is activated • Horn is activated with VEHICLE SECURITY (THEFT WARNING) SYSTEM 	On
HORN CHIRP	Not operated	Off
	Door locking with Intelligent Key (horn chirp mode)	On
CRNRNG LMP REQ	NOTE: This item is displayed, but cannot be monitored.	Off
HOOD SW	NOTE: This item is displayed, but cannot be monitored.	On
HL WASHER REQ	NOTE: This item is displayed, but cannot be monitored.	On

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
4 (LG)	Ground	Front wiper LO	Output	Ignition switch OFF	Front wiper switch OFF	0 V
				Ignition switch ON	Front wiper switch LO	Battery voltage
5 (Y)	Ground	Front wiper HI	Output	Ignition switch OFF	Front wiper switch OFF	0 V
				Ignition switch ON	Front wiper switch HI	Battery voltage
6 (L)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition switch OFF		Battery voltage
7 (GR)	Ground	Tail, license plate lamps & interior lamps	Output	Ignition switch OFF	Lighting switch OFF	0 V
				Ignition switch ON	Lighting switch 1ST	Battery voltage
10 (BR)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		Battery voltage

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
11 (O)	Ground	Electronic steering column lock power supply	Output	Ignition switch OFF	A few seconds after opening the driver door	Battery voltage
				Ignition switch LOCK	Press the push-button ignition switch	Battery voltage
				Ignition switch ACC or ON		0 V
12 (B)	Ground	Ground	—	Ignition switch ON		0 V
13 (SB)	Ground	Fuel pump power supply	Output	Approximately 1 second or more after turning the ignition switch ON		0 V
				<ul style="list-style-type: none"> Approximately 1 second after turning the ignition switch ON Engine running 		Battery voltage
15 (W)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
16 (R)	Ground	Front wiper auto stop	Input	Ignition switch ON	Front wiper stop position	0 V
					Any position other than front wiper stop position	Battery voltage
19 (Y)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
20 (L)	Ground	Ambient sensor ground	—	Ignition switch ON		0V
21 (LG)	Ground	Ambient sensor	—	Ignition switch ON		5V
22 (SB)	Ground	Refrigerent pressure sensor ground	—	Ignition switch ON		0V
23 (GR)	Ground	Refrigerent pressure sensor	—	<ul style="list-style-type: none"> Ignition switch ON (READY) Both A/C switch and blower motor switch ON (electric compressor operates) 		1.0 - 4.0V
24 (G)	Ground	Refrigerent pressure sensor power supply	—	Ignition switch ON		5V
25 (GR)	Ground	Ignition relay-1 power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
27 (W)	Ground	Ignition relay monitor	Input	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		0 V
28 (SB)	Ground	Push-button ignition switch	Input	Press the push-button ignition switch		0 V
				Release the push-button ignition switch		Battery voltage
30 (BR)	Ground	Starter relay control	Input	CVT selector lever in any position other than P or N (ignition switch ON)		0 V
				CVT selector lever P or N (ignition switch ON)		Battery voltage
32 (P)	Ground	Electronic steering column lock unit condition-1	Input	Electronic steering column lock is activated		0 V
				Electronic steering column lock is deactivated		Battery voltage

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
33 (G)	Ground	Electronic steering column lock condition-2	Input	Electronic steering column lock is activated	Battery voltage	
				Electronic steering column lock is deactivated	0 V	
34 (O)	Ground	Cooling fan relay-3 control	Input	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	0.7 V	
35 (P)	Ground	Cooling fan motor control	Output	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	0.7 V	
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
38 (GR)	Ground	Cooling fan motor control	Output	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	0.7 V	
39 (P)	—	CAN - L	Input/ Output	—	—	
40 (L)	—	CAN - H	Input/ Output	—	—	
41 (B)	Ground	Ground	—	Ignition switch ON	0 V	
42 (SB)	Ground	Cooling fan relay-2 control	Input	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	0.7 V	
43 (Y)	Ground	CVT device (Detention switch)	Input	Press the CVT selector button (CVT selector lever P)	Battery voltage	
				Ignition switch ON	<ul style="list-style-type: none"> CVT selector lever in any position other than P Release the CVT selector button (CVT selector lever P) 	0 V
44 (W)	Ground	Horn relay control	Input	The horn is deactivated	Battery voltage	
				The horn is activated	0 V	
45 (GR)	Ground	Anti theft horn relay control	Input	The horn is deactivated	Battery voltage	
				The horn is activated	0 V	
46 (BR)	Ground	Starter relay control	Input	CVT selector lever in any position other than P or N (ignition switch ON)	0 V	
				CVT selector lever P or N (ignition switch ON)	Battery voltage	
48 (W)	Ground	A/C relay power supply	Output	Engine running	A/C switch OFF	0 V
				A/C switch ON (A/C compressor is operating)	Battery voltage	
49 (R/G)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)	0 V	
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 	Battery voltage	
51 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF	0 V	
				Ignition switch ON	Battery voltage	

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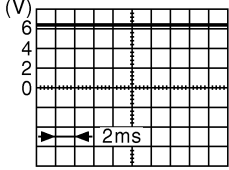
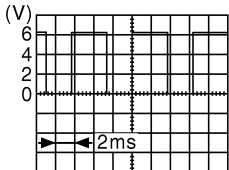
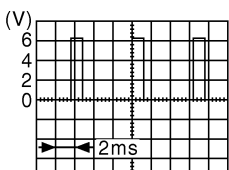
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
52 (Y/G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
53 (R/W)	Ground	ECM relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		Battery voltage
54 (G/W)	Ground	Throttle control motor relay power supply	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		Battery voltage
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56 (R/Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
57 (O)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
58 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
69 (W/B)	Ground	ECM relay control	Output	Ignition switch OFF (For a few seconds after turning ignition switch OFF)		Battery voltage
				<ul style="list-style-type: none"> Ignition switch ON Ignition switch OFF (More than a few seconds after turning ignition switch OFF) 		0 - 1.5 V
70 (O)	Ground	Throttle control motor relay control	Output	Ignition switch ON → OFF		0 -1.0 V ↓ Battery voltage ↓ 0 V
				Ignition switch ON		0 - 1.0 V
72 (R/B)	Ground	PNP switch signal	Input	Ignition switch ON	CVT selector lever in P or N position	Battery voltage
					CVT selector lever in any position other than P or N position	0 V
75 (LG)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
76 (SB)	Ground	Power generation command signal	Output	Ignition switch ON	 <p>6.3 V</p>	
				40% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"	 <p>3.8 V</p>	
				80% is set on "Active test", "ALTERNATOR DUTY" of "ENGINE"	 <p>1.4 V</p>	
77 (GR)	Ground	Fuel pump relay control	Output	<ul style="list-style-type: none"> Approximately 1 second after turning the ignition switch ON Engine running 	0 - 1.0 V	
				Approximately 1 second or more after turning the ignition switch ON	Battery voltage	
80 (B/W)	Ground	Starter motor	Output	At engine cranking	Battery voltage	
83 (R/Y)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
				Lighting switch 2ND	Battery voltage	
84 (L)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
				Lighting switch 2ND	Battery voltage	
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	<ul style="list-style-type: none"> Front fog lamp switch ON Daytime running light activated (Only for Canada models) 	Battery voltage
				Front fog lamp switch OFF	0 V	
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	<ul style="list-style-type: none"> Front fog lamp switch ON Daytime running light activated (Only for Canada models) 	Battery voltage
				Front fog lamp switch OFF	0 V	
88 (R/W)	Ground	Washer pump power supply	Output	Ignition switch ON	Battery voltage	

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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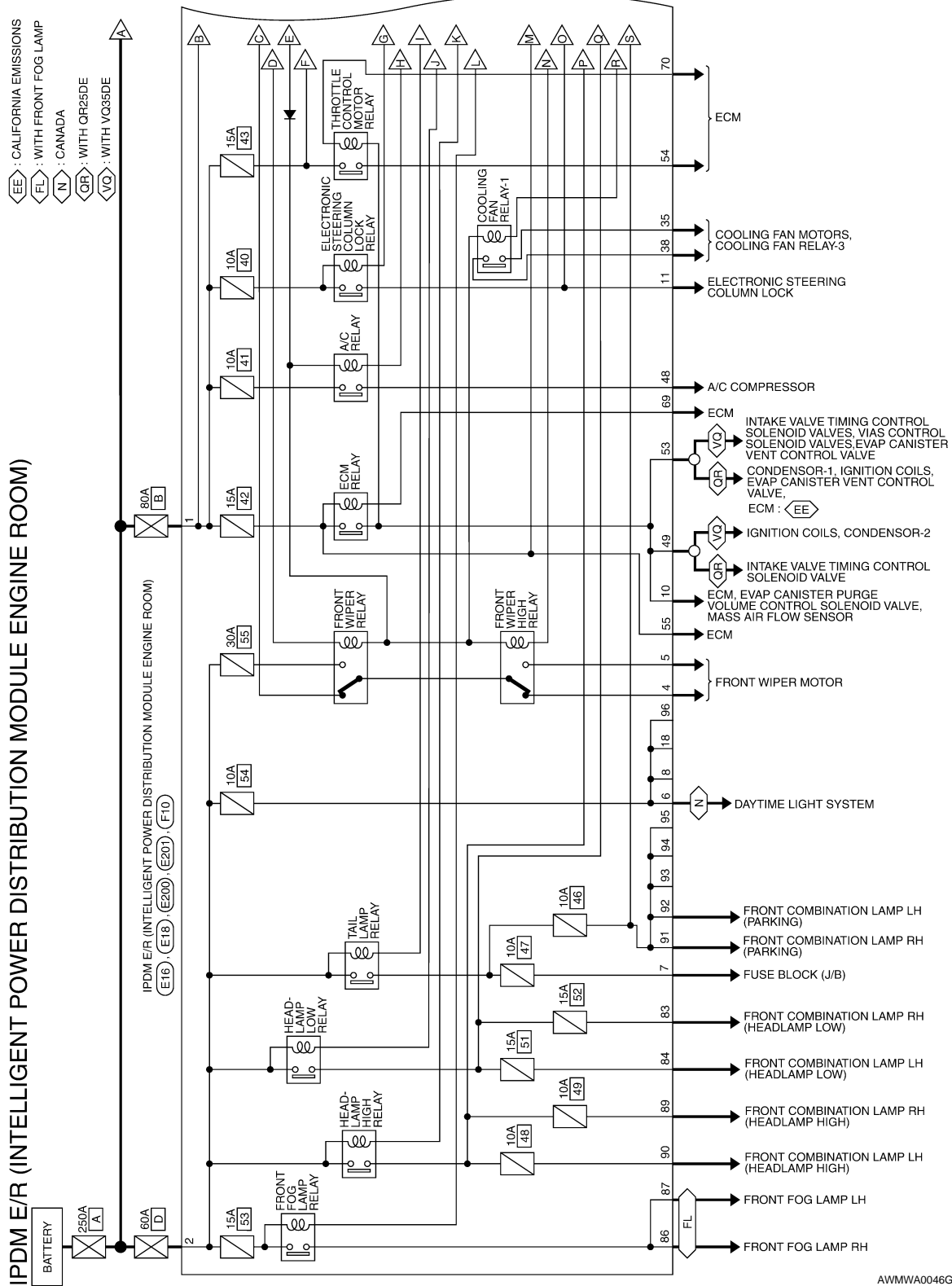
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
91 (LG/ R)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
92 (LG/ B)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
99 (BR/ W)	Ground	Ambient sensor ground	—	Ignition switch ON		0V
100 (SB)	Ground	Ambient sensor	—	Ignition switch ON		5V
101 (W)	Ground	Refrigerent pressure sensor ground	—	Ignition switch ON		0V
102 (R)	Ground	Refrigerent pressure sensor	—	• Ignition switch ON (READY) • Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
103 (P)	Ground	Refrigerent pressure sensor power supply	—	Ignition switch ON		5V
105 (V)	Ground	Daytime light relay control (Only for Canada models)	Output	Ignition switch ON	Daytime light system active	Battery voltage
				Ignition switch ON	Daytime light system inactive	0 V

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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Wiring Diagram — Coupe

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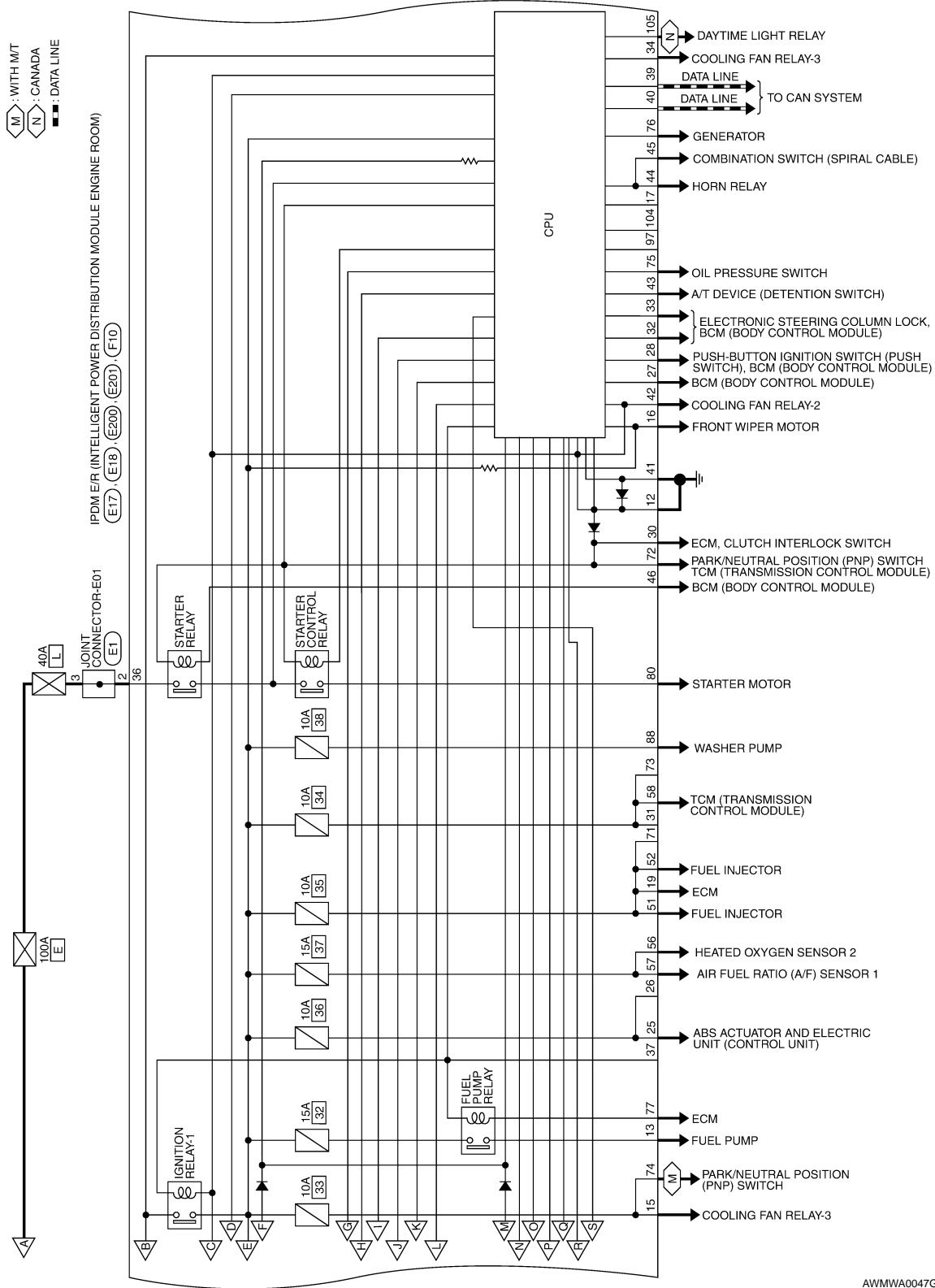
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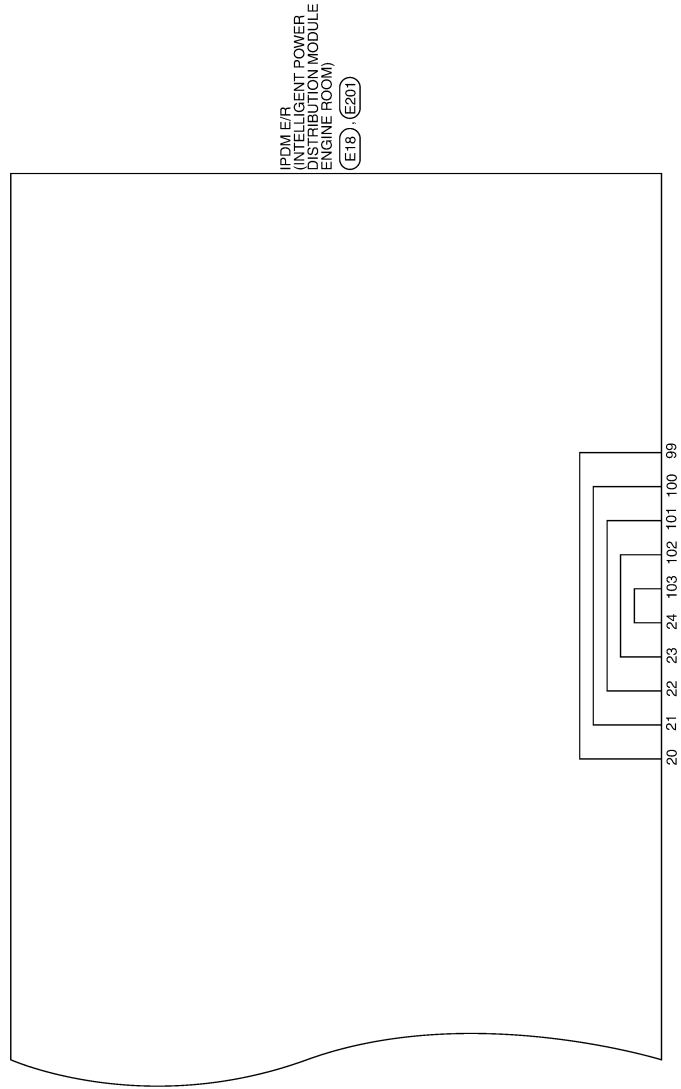
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) CONNECTORS

Connector No.	E1
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G	-
3	G	-

Connector No.	E16
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



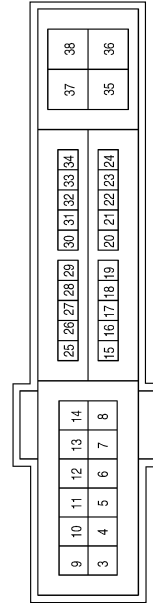
Terminal No.	Color of Wire	Signal Name
1	R	F/L_MAIN
2	B/Y	F/L_USM

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	S-GND
42	SB	MOTOR_FAN_RLY_MID
43	G/B	DETENT_SW
44	G/W	HORN_RLY
45	L/O	HORN_SW
46	R	START_CONT

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	-	-
4	L/R	FR_WIPER_LO
5	L/B	FR_WIPER_HI
6	SB	DTRL
7	R/L	TAIL/ILLUMI

Terminal No.	Color of Wire	Signal Name
8	-	-
9	-	-
10	R/B	ECM_VB
11	P/L	ESCL
12	B	P-GND
13	W	FUEL_PUMP
14	-	-
15	G/W	START_IG-E/R
16	L/Y	WIPER_AUTOSTOP
17	-	-
18	-	-
19	L/Y	BCM_IGNSW
20	B/Y	AMB_SENS_GND-E/R
21	O/B	AMB_SENS_SIG-E/R
22	W/R	PD_SENS_GND-E/R

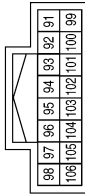
Terminal No.	Color of Wire	Signal Name
23	B/R	PD_SENS_SIG-E/R
24	BR/W	PD_SENS_PWR-E/R
25	GR	ABS_ECU
26	-	-
27	BR/W	IGN_SIGNAL
28	BR	PUSH_START_SW
29	-	-
30	R/B	CLUTCH_I/L_SW
31	-	-
32	L/O	SL_CONDITION_1
33	G/R	SL_CONDITION_2
34	O/L	MOTOR_FAN_RLY_HI
35	L/B	MOTOR_FAN_LO
36	G	F/L_IGNSW
37	-	-
38	R/W	F/L_MOTOR_FAN

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

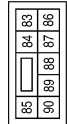
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Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
91	LG/R	CLEARANCE_RH
92	LG/B	CLEARANCE_LH
93	-	-
94	-	-
95	-	-
96	-	-
97	-	-
98	-	-
99	BR/W	AMB_SENS_GND-FEM
100	SB	AMB_SENS_SIG-FEM
101	O/L	PD_SENS_GND-FEM
102	R/B	PD_SENS_SIG-FEM
103	P	PD_SENS_PWR-FEM
104	-	-
105	V	DTRL_RLY
106	-	-

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
83	R/Y	HEADLAMP_LO_RH
84	L	HEADLAMP_LO_LH
85	-	-
86	W/R	FR_FOG_LAMP_RH
87	L/Y	FR_FOG_LAMP_LH
88	R/W	WASHER_MTR
89	L/W	HEADLAMP_HI_RH
90	G	HEADLAMP_HI_LH

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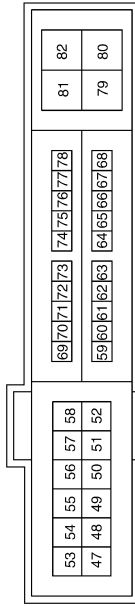
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Connector No.	F10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
47	-	-
48	Y/R	A/C_COMP
49	R/B	ENG_SOL (WITHOUT VQ35DE)
49	R/B	IGN_SOL (WITH VQ35DE)

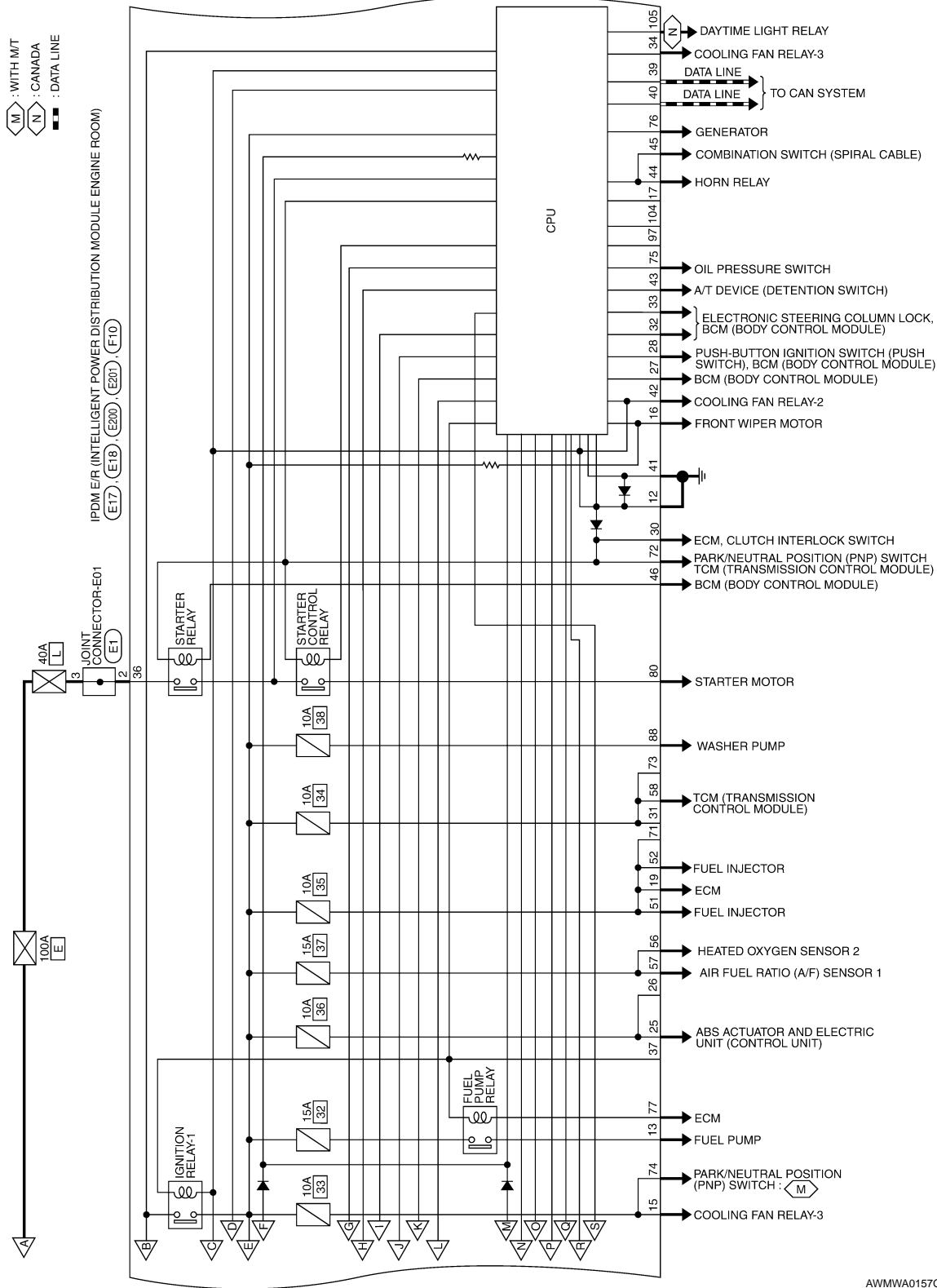
Terminal No.	Color of Wire	Signal Name
50	-	-
51	LG	INJECTOR_#1
52	Y/G	INJECTOR_#2
53	R/B	IGN_SOL (WITH VQ35DE)
53	B/R	ENG_SOL (WITH VQ35DE)
54	G/W	ETC
55	W/L	ECM_BAT
56	R/Y	O2_SENS_#1
57	O	O2_SENS_#2
58	Y	AT_ECU
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-

Terminal No.	Color of Wire	Signal Name
65	-	-
66	-	-
67	-	-
68	-	-
69	W/B	SSOF
70	O	MOTRLY
71	-	-
72	R/B	NPSW
73	-	-
74	Y	START_IG-EGI
75	P/L	OIL_PRESSURE_SW
76	GR	ALT_C
77	B/R	FPR
78	-	-
79	-	-
80	B/W	STARTER_MOTOR
81	-	-
82	-	-

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

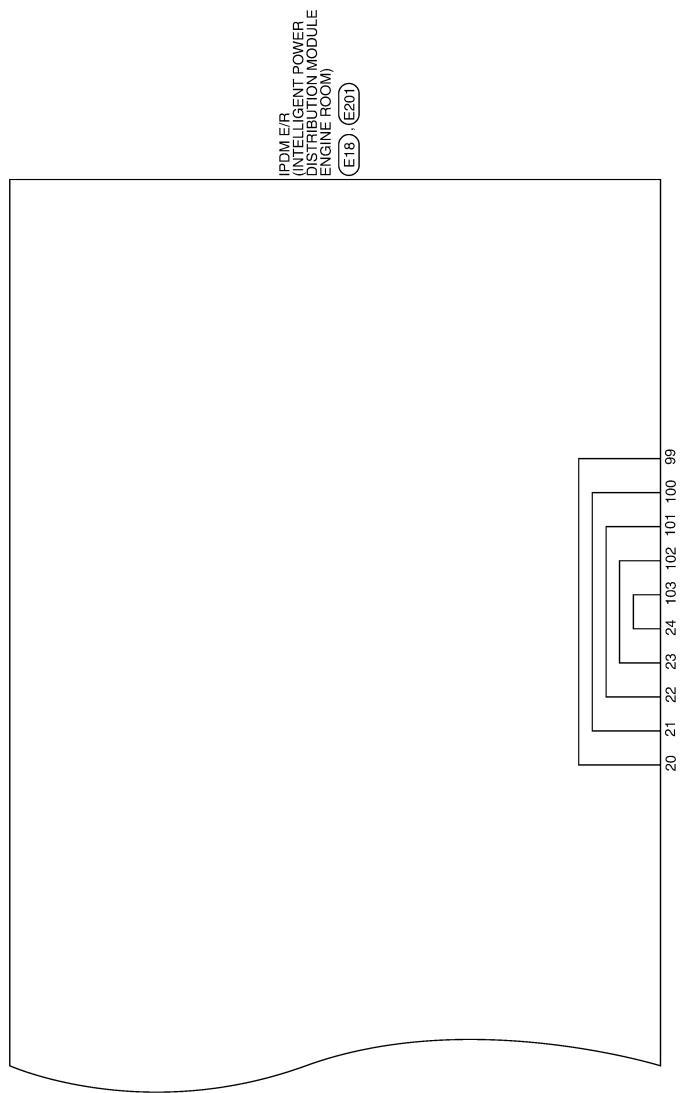
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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

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IPDM E/R CONNECTORS (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Connector No.	E1
Connector Name	JOINT CONNECTOR-E01
Connector Color	WHITE



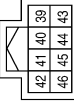
Terminal No.	Color of Wire	Signal Name
2	G	-
3	G	-

Connector No.	E16
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	R	F/L_MAIN
2	B/Y	F/L_USM

Connector No.	E17
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
39	P	CAN-L
40	L	CAN-H
41	B	S-GND
42	SB	MOTOR_FAN_RLY_MID
43	G/B	DETENT_SW
44	G/W	HORN_RLY
45	L/O	HORN_SW
46	R	START_CONT

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	-	-
4	L/R	FR_WIPER_LO
5	L/B	FR_WIPER_HI
6	SB	DTRL
7	R/L	TAIL/ILLUMI

Terminal No.	Color of Wire	Signal Name
8	-	-
9	-	-
10	R/B	ECM_VB
11	P/L	ESCL
12	B	P-GND
13	W	FUEL_PUMP
14	-	-
15	G/W	START_IG-E/R
16	L/Y	WIPER_AUTOSTOP
17	-	-
18	-	-
19	L/Y	BCM_IGNSW
20	B/Y	AMB_SENS_GND-E/R
21	O/B	AMB_SENS_SIG-E/R
22	W/R	PD_SENS_GND-E/R

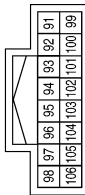
Terminal No.	Color of Wire	Signal Name
23	B/R	PD_SENS_SIG-E/R
24	BR/W	PD_SENS_PWR-E/R
25	GR	ABS_ECU
26	-	-
27	BR/W	IGN_SIGNAL
28	BR	PUSH_START_SW
29	-	-
30	R/B	CLUTCH_I/L_SW
31	-	-
32	L/O	SL_CONDITION_1
33	G/R	SL_CONDITION_2
34	O/L	MOTOR_FAN_RLY_HI
35	L/B	MOTOR_FAN_LO
36	G	F/L_IGNSW
37	-	-
38	R/W	F/L_MOTOR_FAN

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

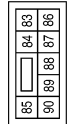
< ECU DIAGNOSIS >

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
91	LG/R	CLEARANCE_RH
92	LG/B	CLEARANCE_LH
93	-	-
94	-	-
95	-	-
96	-	-
97	-	-
98	-	-
99	BR/W	AMB_SENS_GND-FEM
100	SB	AMB_SENS_SIG-FEM
101	O/L	PD_SENS_GND-FEM
102	R/B	PD_SENS_SIG-FEM
103	P	PD_SENS_PWR-FEM
104	-	-
105	V	DTRL_RLY
106	-	-

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
83	R/Y	HEADLAMP_LO_RH
84	L	HEADLAMP_LO_LH
85	-	-
86	W/R	FR_FOG_LAMP_RH
87	L/Y	FR_FOG_LAMP_LH
88	R/W	WASHER_MTR
89	L/W	HEADLAMP_HI_RH
90	G	HEADLAMP_HI_LH

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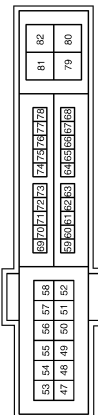
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
65	-	-
66	-	-
67	-	-
68	-	-
69	W/B	SSOF
70	O	MOTRLY
71	-	-
72	R/B	NPSW
73	-	-
74	Y	START_IG-EGI
75	P/L	OIL_PRESSURE_SW
76	GR	ALT_C
77	B/R	FPR
78	-	-
79	-	-
80	B/W	STARTER_MOTOR
81	-	-
82	-	-

Terminal No.	Color of Wire	Signal Name
50	-	-
51	LG	INJECTOR_#1
52	Y/G	INJECTOR_#2
53	R/B	IGN_SOL (WITH VQ35DE)
53	B/R	ENG_SOL (WITH VQ35DE)
54	G/W	ETC
55	W/L	ECM_BAT
56	R/Y	O2_SENS_#1
57	O	O2_SENS_#2
58	Y	AT_ECU
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-

Connector No.	F10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
47	-	-
48	Y/R	A/C COMP
49	B/R	ENG SOL (WITHOUT VQ35DE)
49	R/B	IGN_SOL (WITH VQ35DE)

AWMIA0302GB

INFOID:000000004296299

Fail Safe

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With ECM

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Control part	Fail-safe in operation
Cooling fan	<ul style="list-style-type: none"> • Signals cooling fans ON when the ignition switch is turned ON • Signals cooling fans OFF when the ignition switch is turned OFF
A/C compressor	A/C relay OFF
Generator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	<ul style="list-style-type: none"> • Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF
<ul style="list-style-type: none"> • Parking lamps • License plate lamps • Illumination • Tail lamps 	<ul style="list-style-type: none"> • Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	<ul style="list-style-type: none"> • The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. • The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Front fog lamps (if equipped)	Front fog lamp relay OFF
Horn	Horn OFF
Ignition relay	The status just before activation of fail-safe is maintained.
Starter motor	Starter control relay OFF
Electronic steering column lock	Steering lock relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay inside it.
- IPDM E/R judges the ignition relay error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay	Tail lamp relay
—	ON	ON	—
—	OFF	OFF	—
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	—

NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

FRONT WIPER CONTROL

IPDM E/R detects front wiper stop position by a front wiper auto stop signal.

When a front wiper auto stop signal is in the conditions listed below, IPDM E/R stops power supply to wiper after repeating a front wiper 10 second activation and 20 second stop five times.

Ignition switch	Front wiper switch	Auto stop signal
ON	OFF	Front wiper stop position signal cannot be input 10 seconds.
	ON	The signal does not change for 10 seconds.

NOTE:

This operation status can be confirmed on the IPDM E/R “Data Monitor” that displays “BLOCK” for the item “WIP PROT” while the wiper is stopped.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

STARTER MOTOR PROTECTION FUNCTION

IPDM E/R turns OFF the starter control relay to protect the starter motor when the starter control relay remains active for 90 seconds.

DTC Index

INFOID:000000004296300

CONSULT-III display	Fail-safe	TIME ^{NOTE}		Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-18
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-19
B2099: IGN RELAY OFF	—	CRNT	1 – 39	PCS-20
B2108: STRG LCK RELAY ON	—	CRNT	1 – 39	SEC-81
B2109: STRG LCK RELAY OFF	—	CRNT	1 – 39	SEC-82
B210A: STRG LCK STATE SW	—	CRNT	1 – 39	SEC-83
B210B: START CONT RLY ON	—	CRNT	1 – 39	SEC-87
B210C: START CONT RLY OFF	—	CRNT	1 – 39	SEC-88
B210D: STARTER RELAY ON	—	CRNT	1 – 39	SEC-89
B210E: STARTER RELAY OFF	—	CRNT	1 – 39	SEC-90
B210F: INTRLCK/PNP SW ON	—	CRNT	1 – 39	SEC-92
B2110: INTRLCK/PNP SW OFF	—	CRNT	1 – 39	SEC-94

NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 - 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like 0 → 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

THE FUEL GAUGE POINTER DOES NOT MOVE

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE FUEL GAUGE POINTER DOES NOT MOVE

Description

INFOID:000000003899533

Fuel gauge needle will not move from a certain position.

Diagnosis Procedure

INFOID:000000003899534

1. CHECK COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT-III.
2. Using "FUEL METER" of "DATA MONITOR", compare the monitor value with the fuel gauge reading on the combination meter. Refer to [MWI-40, "Component Function Check"](#).

Does monitor value match fuel gauge reading?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

2. CHECK FUEL LEVEL SENSOR SIGNAL CIRCUIT

Check the fuel level sensor signal circuit. Refer to [MWI-40, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3. CHECK FUEL LEVEL SENSOR UNIT

Perform a unit check for the fuel level sensor unit. Refer to [MWI-41, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace fuel level sensor unit. Refer to [FL-6, "Removal and Installation"](#).

4. CHECK FLOAT INTERFERENCE

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

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

NO >> Repair or replace malfunctioning parts.

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THE FUEL GAUGE POINTER DOES NOT MOVE TO "F" WHEN REFUELING

< SYMPTOM DIAGNOSIS >

THE FUEL GAUGE POINTER DOES NOT MOVE TO "F" WHEN REFUELING

Description

INFOID:000000003899535

The fuel gauge needle will not move to "F" position when refueling.

Diagnosis Procedure

INFOID:000000003899536

1.OBSERVE FUEL GAUGE

Does it take a long time for the pointer to move to FULL position?

YES or NO

YES >> GO TO 2

NO >> GO TO 3

2.IDENTIFY FUELING CONDITION

Was the vehicle fueled with the ignition switch ON?

YES or NO

YES >> Be sure to fuel the vehicle with the ignition switch OFF. Otherwise, it will take a long time to move to FULL position because of the characteristic of the fuel gauge.

NO >> GO TO 3

3.OBSERVE VEHICLE POSITION

Is the vehicle parked on an incline?

YES or NO

YES >> Check the fuel level indication with vehicle on a level surface.

NO >> GO TO 4

4.OBSERVE FUEL GAUGE POINTER

During driving, does the fuel gauge pointer move gradually toward EMPTY position?

YES or NO

YES >> Check the components. Refer to [MWI-41. "Component Inspection"](#).

NO >> The float arm may interfere or bind with the components in the fuel tank.

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

Description

INFOID:000000003899537

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

Diagnosis Procedure

INFOID:000000003899538

1.CHECK OIL PRESSURE WARNING LAMP

Perform IPDM E/R auto active test. Refer to [PCS-13, "Diagnosis Description"](#).

Is oil pressure warning lamp illuminated?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

2.CHECK OIL PRESSURE SWITCH SIGNAL CIRCUIT

Check the oil pressure switch signal circuit. Refer to [MWI-42, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK OIL PRESSURE SWITCH UNIT

Perform a unit check for the oil pressure switch. Refer to [MWI-42, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-40, "Removal and Installation"](#).

NO >> Replace oil pressure switch.

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THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

Description

INFOID:000000003899539

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

Diagnosis Procedure

INFOID:000000003899540

1. CHECK OIL PRESSURE WARNING LAMP

Perform IPDM E/R auto active test. Refer to [PCS-13, "Diagnosis Description"](#).

Is oil pressure warning lamp illuminated?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

2. CHECK IPDM E/R OUTPUT VOLTAGE

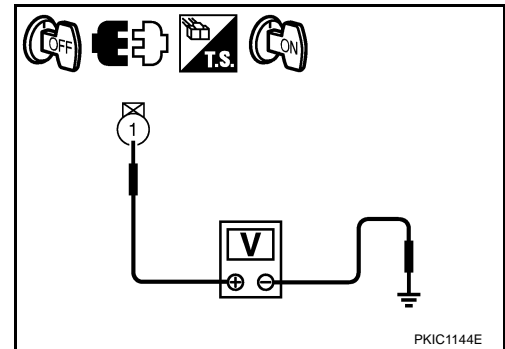
1. Turn ignition switch OFF.
2. Disconnect the oil pressure switch connector.
3. Turn ignition switch ON.
4. Check voltage between the oil pressure switch harness connector F41 terminal 1 and ground.

1 – Ground : Approx. 12V

Is the inspection result normal?

YES >> GO TO 3

NO >> GO TO 4



3. CHECK OIL PRESSURE SWITCH

Perform a unit check for the oil pressure switch. Refer to [MWI-42, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-40, "Removal and Installation"](#).

NO >> Replace oil pressure switch.

4. CHECK OIL PRESSURE SWITCH SIGNAL CIRCUIT

Check the oil pressure switch signal circuit. Refer to [MWI-42, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-40, "Removal and Installation"](#).

NO >> Repair harness or connector.

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

< SYMPTOM DIAGNOSIS >

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

Description

INFOID:000000003899541

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

Diagnosis Procedure

INFOID:000000003899542

1. CHECK PARKING BRAKE WARNING LAMP OPERATION

1. Start engine.
2. Monitor "BRAKE" warning lamp while applying and releasing the parking brake.

BRAKE warning lamp

Parking brake applied : ON

Parking brake released : OFF

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

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 [MWI-43, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3

NG >> Repair harness or connector.

3. CHECK PARKING BRAKE SWITCH UNIT

Perform a unit check for the parking brake switch. Refer to [MWI-43, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).

NO >> Replace parking brake switch.

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

< SYMPTOM DIAGNOSIS >

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

Description

INFOID:000000003899543

- 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:000000003899544

1. CHECK WASHER LEVEL SWITCH SIGNAL CIRCUIT

Check the washer level switch signal circuit. Refer to [MWI-44. "Diagnosis Procedure"](#).

Is the inspection result normal?

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

2. CHECK WASHER LEVEL SWITCH UNIT

Perform a unit check for the washer level switch. Refer to [MWI-44. "Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-144. "Removal and Installation"](#).
NO >> Replace washer level switch.

THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS >

THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description

INFOID:000000003899545

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

Diagnosis Procedure

INFOID:000000003899546

1. CHECK BCM INPUT SIGNAL

Connect CONSULT-III and check the BCM input signals. Refer to [DLK-68. "Component Function Check"](#) (Door switch) and [DLK-88. "Component Function Check"](#) (Trunk lamp switch and truck release solenoid).

Are the inspection results normal?

- YES >> GO TO 2
NO >> GO TO 3

2. CHECK COMBINATION METER INPUT SIGNAL

1. Select "METER/M&A" on CONSULT-III.
2. Monitor "DOOR W/L" and "TRUNK/GLAS-H" of "DATA MONITOR" while opening and closing doors and trunk.

"DOOR W/L"

Door open : ON
Door closed : OFF

"TRUNK/GLAS-H"

Trunk open : ON
Trunk closed : OFF

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-144. "Removal and Installation"](#).
NO >> Replace BCM. Refer to [BCS-87. "Removal and Installation"](#).

3. CHECK DOOR SWITCH SIGNAL CIRCUIT

Check the door switch signal circuit. Refer to [DLK-68. "Diagnosis Procedure"](#).

Is the inspection result normal?

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

4. CHECK DOOR SWITCH UNIT

Perform a unit check for the door switch. Refer to [DLK-70. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 5
NO >> Replace door switch.

5. CHECK TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID SIGNAL CIRCUIT

Check the trunk lamp switch and trunk release solenoid signal circuit. Refer to [DLK-88. "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 6
NO >> Repair harness or connector.

6. CHECK TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID UNIT

Perform a unit check for the trunk lamp switch and trunk release solenoid. Refer to [DLK-89. "Component Inspection"](#).

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THE DOOR OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-144, "Removal and Installation"](#).
- NO >> Replace trunk lamp switch and trunk release solenoid.

THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

< SYMPTOM DIAGNOSIS >

THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

Description

INFOID:000000003899547

- The displayed ambient air temperature is higher than the actual temperature.
- The displayed ambient air temperature is lower than the actual temperature.

Diagnosis Procedure

INFOID:000000003899548

NOTE:

Check that the symptom is not applicable to the normal operating condition before starting diagnosis. Refer to [MWI-23. "INFORMATION DISPLAY : System Description"](#).

1. CHECK AMBIENT SENSOR SIGNAL CIRCUIT

Check the ambient sensor signal circuit. Refer to [MWI-46. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair harness or connector.

2. CHECK AMBIENT SENSOR UNIT

Perform a unit check for the ambient sensor. Refer to [HAC-35. "Component Inspection"](#) (with color display) or [HAC-160. "Component Inspection"](#) (with monochrome display).

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-144. "Removal and Installation"](#).

NO >> Replace ambient sensor.

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION COMPASS

COMPASS : Description

INFOID:000000003899549

COMPASS

- The electronic compass is highly protected from changes in most magnetic fields. However, some large changes in magnetic fields can affect it. Some examples are (but not limited to): high tension power lines, large steel buildings, subways, steel bridges, automatic car washes, large piles of scrap metal, etc.
- During normal operation, the Compass Mirror will continuously update the compass calibration to adjust for gradual changes in the vehicle's magnetic "remnant" field. If the vehicle is subjected to high magnetic influences, the compass may appear to indicate false headings, become locked, or appear that it is unable to be calibrated. If this occurs, perform the calibration procedure.
- If at any time the compass continually displays the incorrect direction or the reading is erratic or locked, verify the correct zone variance.

SYMPTOM CHART

Symptom	Cause	Solution / Reference
The compass display reads "C".	<ul style="list-style-type: none"> • Compass is not calibrated. • Incorrect zone variance setting. • Large change in magnetic field (Steel bridges, subways, concentrations of metal, car washes, etc.) • Compass was calibrated incorrectly or in the presence of a strong magnetic field. 	Perform Calibration. Refer to MWI-27, "Description" .
Compass shows the wrong direction.		
Compass does not change direction appears "Locked".		
Compass does not show all the directions, one or more is missing.		
The compass was calibrated but it "loses" calibration.		Perform Zone Variation Setting if correct reading is desired in that location. Refer to MWI-27, "Description" .
On long trips the compass shows the wrong direction.		

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000003899550

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

WARNING:

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

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004394017

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Carry the Intelligent Key or insert it to the key slot and turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

COMBINATION METER

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

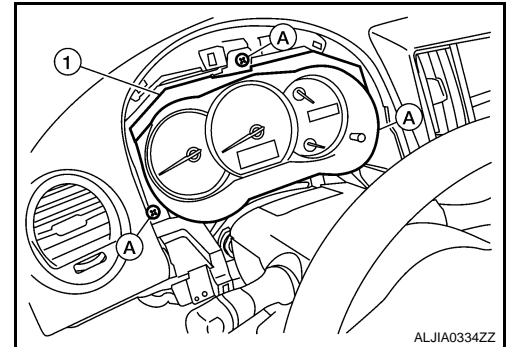
COMBINATION METER

Removal and Installation

INFOID:000000003899551

REMOVAL

1. Disconnect the negative battery terminal.
2. Remove the cluster lid A. Refer to [IP-12. "Removal and Installation"](#).
3. Remove the combination meter screws (A) using power tools.
4. Pull out the combination meter (1), then disconnect the combination meter connectors and remove the combination meter (1).



INSTALLATION

Installation is in the reverse order of removal.

METER CONTROL SWITCH

< ON-VEHICLE REPAIR >

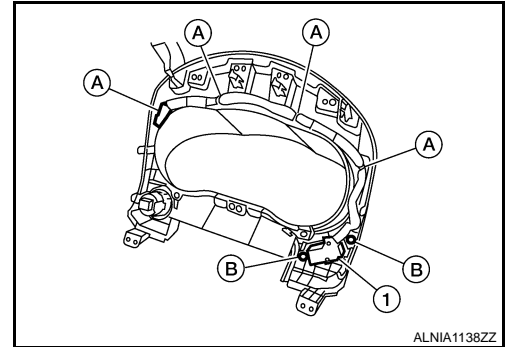
METER CONTROL SWITCH

Removal and Installation

INFOID:000000004260323

REMOVAL

1. Disconnect the negative battery terminal.
2. Remove the cluster lid A. Refer to [IP-12, "Removal and Installation"](#).
3. Detach the combination meter control switch harness clips (A), then remove the combination meter control switch screws (B) and remove the combination meter control switch (1).



INSTALLATION

Installation is in the reverse order of removal.

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COMBINATION METER

< DISASSEMBLY AND ASSEMBLY >

DISASSEMBLY AND ASSEMBLY

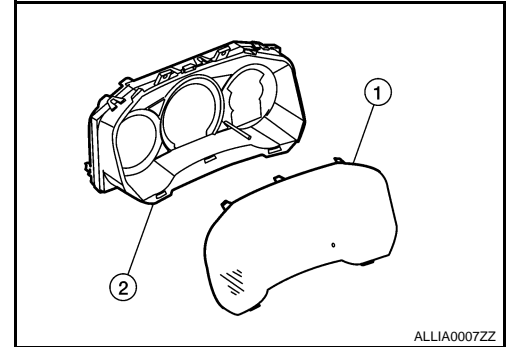
COMBINATION METER

Disassembly and Assembly

INFOID:000000003899552

DISASSEMBLY

1. Remove the combination meter. Refer to [JP-12. "Removal and Installation"](#).
2. Remove the combination meter lens (1) from the combination meter (2).



ASSEMBLY

Assembly is in the reverse order of disassembly.