

MWI

SECTION

METER, WARNING LAMP & INDICATOR

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

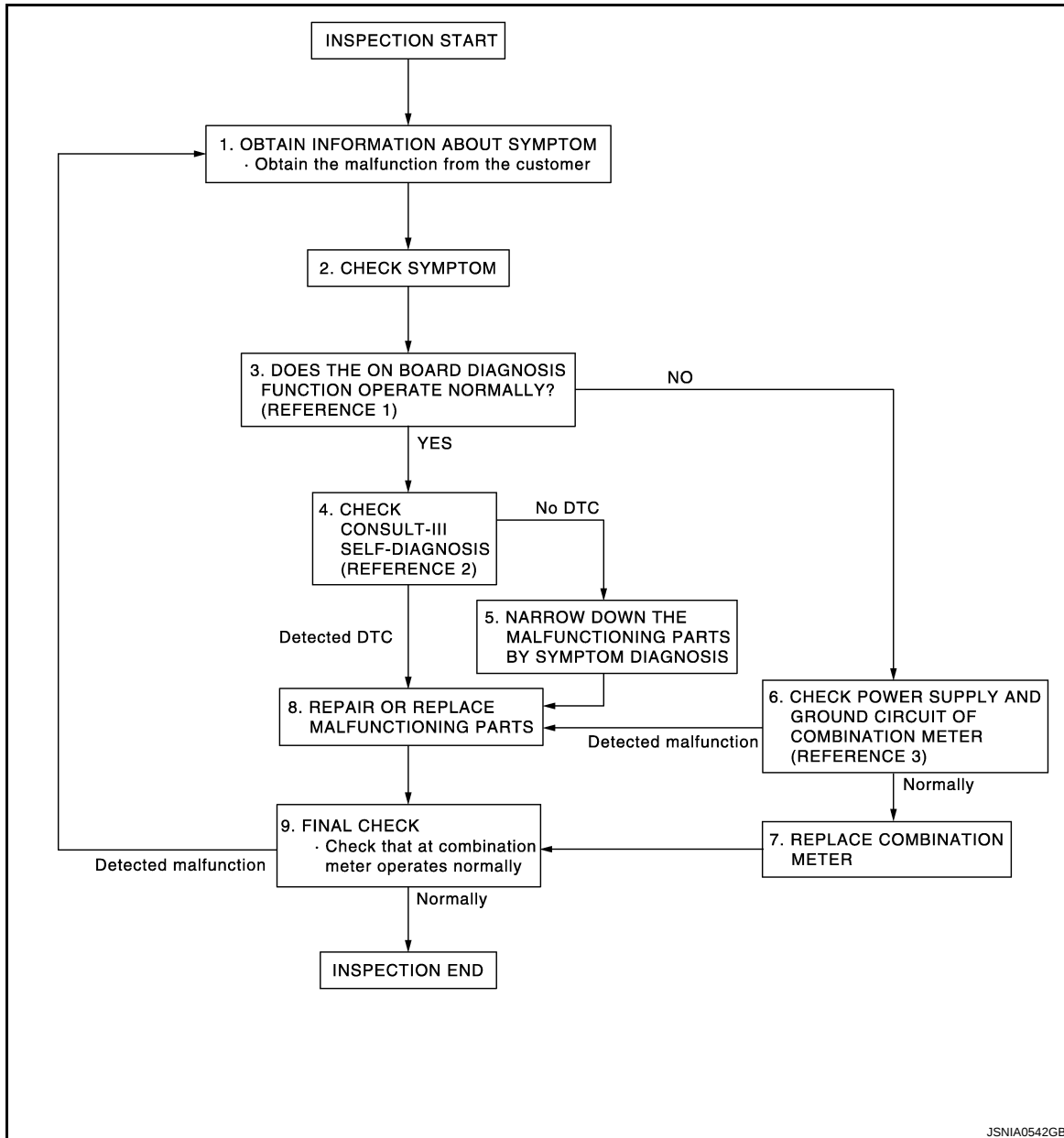
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work flow

INFOID:000000003792506

OVERALL SEQUENCE



- Reference 1...[MWI-32, "Diagnosis Description"](#).
- Reference 2...[MWI-67, "DTC Index"](#).
- Reference 3...[MWI-42, "COMBINATION METER : Diagnosis Procedure"](#).

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.CHECK SYMPTOM

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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

>> GO TO 3.

3.CHECK ON BOARD DIAGNOSIS OPERATION

Check that the on board diagnosis function operates. Refer to [MWI-32, "Diagnosis Description"](#).

Does the on board diagnosis function operate normally?

YES >> GO TO 4.

NO >> GO TO 6.

4.CHECK CONSULT-III SELF-DIAGNOSIS RESULTS

Connect CONSULT-III and perform self-diagnosis. Refer to [MWI-33, "CONSULT-III Function \(METER/M&A\)"](#).

Are self-diagnosis results normal?

YES >> GO TO 5.

NO >> GO TO 8.

5.NARROW DOWN THE MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 7.

6.CHECK COMBINATION METER POWER SUPPLY AND GROUND CIRCUITS

Inspect combination meter power supply and ground circuits. Refer to [MWI-42, "COMBINATION METER : Diagnosis Procedure"](#).

Is inspection result OK?

YES >> GO TO 7.

NO >> GO TO 8.

7.REPLACE COMBINATION METER

Replace combination meter.

>> GO TO 9.

8.REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

NOTE:

If DTC is displayed, erase DTC after repair or replace malfunctioning parts.

>> GO TO 9.

9.FINAL CHECK

Check that the combination meter operates normally.

Do they operate normally?

YES >> INSPECTION END

NO >> GO TO 1.

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METER SYSTEM

< FUNCTION DIAGNOSIS >

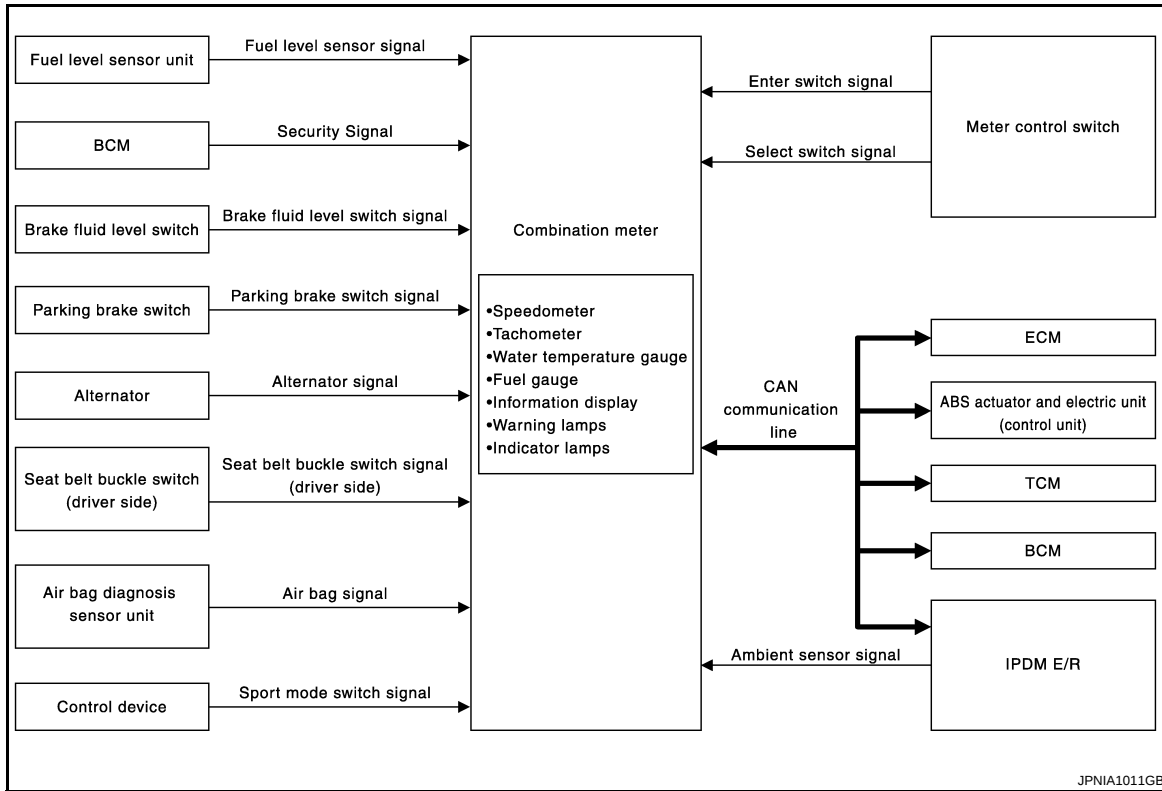
FUNCTION DIAGNOSIS

METER SYSTEM

METER SYSTEM

METER SYSTEM : System Diagram

INFOID:000000003792507



METER SYSTEM : System Description

INFOID:000000003792508

COMBINATION METER

- The combination meter receives the information required to control the operation of each gauge, indicator/warning lamp, and information display via CAN communication from each unit, each switch, and sensor.
- The combination meter incorporates a trip computer that displays warnings and messages on the information display according to the information received from various units.
- The combination meter incorporates a buzzer function that sounds an audible alarm with the integrated buzzer device. Refer to [WCS-5, "WARNING CHIME SYSTEM : System Description"](#) for further details.
- The combination meter integrates the meter circuit check function and the segment check function that checks the information display operation.

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 the CAN communication line.
- IPDM E/R is equipped with the diagnosis function. It can perform the operation check of oil pressure warning lamp with the auto active test and the diagnosis with CONSULT-III.

METER CONTROL FUNCTION LIST

METER SYSTEM

< FUNCTION DIAGNOSIS >

System		Description	Signal source	
Meter/gauge	Speedometer	Receives vehicle speed signal and indicates vehicle speed.	ABS actuator and electric unit (control unit)	A
	Tachometer	Receives engine speed signal and indicates engine speed.	ECM	B
	Fuel gauge	Receives fuel level sensor signal and indicates fuel level.	Fuel level sensor unit	
	Engine coolant temperature gauge	Receives engine coolant temperature signal and indicates coolant temperature.	ECM	C
Warning lamp/indicator lamp	Oil pressure warning lamp	Receives oil pressure warning lamp signal and illuminates warning lamp.	IPDM E/R	
	Master warning	Illuminates according to warning output on information display.	—	D
Information display	Door open warning	Receives door switch signals and displays warning.	BCM	
	Trunk open warning	Receives trunk switch signals and displays warning.	BCM	E
	Parking brake release warning	Receives parking brake switch signal and vehicle speed signal and displays warnings.	Parking brake switch	
			ABS actuator and electric unit (control unit)	F
	Low fuel warning	Receives fuel gauge signal and displays warning if fuel level decreases to 11 ℓ (2-2/5 Imp gal) or less.	Fuel level sensor unit	
	Low outside temperature warning	Monitors ambient sensor signal and displays warning if ambient temperature decreases to 3°C (37°F) or less. (If enabled)	Ambient sensor	G
	Instantaneous fuel consumption	Calculates instantaneous fuel consumption based on received vehicle speed signals and fuel consumption monitor signal and displays it.	ECM	
			ABS actuator and electric unit (control unit)	H
	Average fuel consumption	Calculates average fuel consumption in a reset-to-reset interval based on received vehicle speed signals and fuel consumption monitor signal and displays it.	ECM	
			ABS actuator and electric unit (control unit)	I
	Average vehicle speed	Calculates average vehicle speed in a reset-to-reset interval based on received vehicle speed signals and displays it.	ABS actuator and electric unit (control unit)	J
	Travel time	Displays accumulated key switch ON time from reset to reset.	—	
	Travel distance	Calculates accumulated travel distance in a reset-to-reset interval based on received vehicle speed signals and displays it.	ABS actuator and electric unit (control unit)	K
	Possible driving distance	Calculates possible driving distance based on received fuel consumption monitor signal, vehicle speed signals and fuel level sensor signal and displays it.	ABS actuator and electric unit (control unit)	
			ECM	L
	Ambient air temperature	Corrects ambient air temperature value based on received ambient sensor signals and displays it.	Fuel level sensor unit	
			Ambient sensor	M

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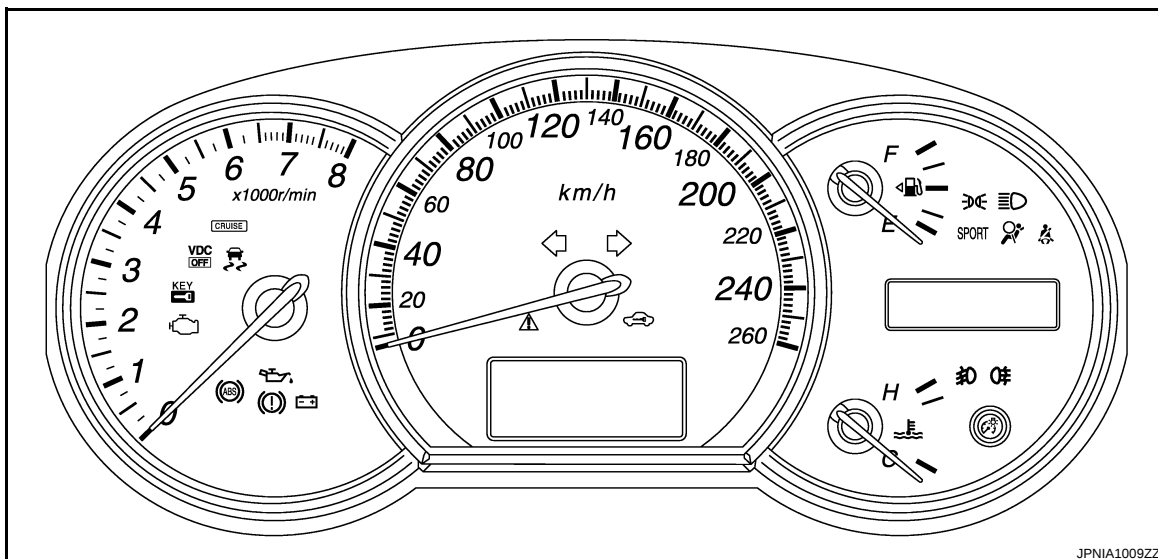
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METER SYSTEM

< FUNCTION DIAGNOSIS >

ARRANGEMENT OF COMBINATION METER

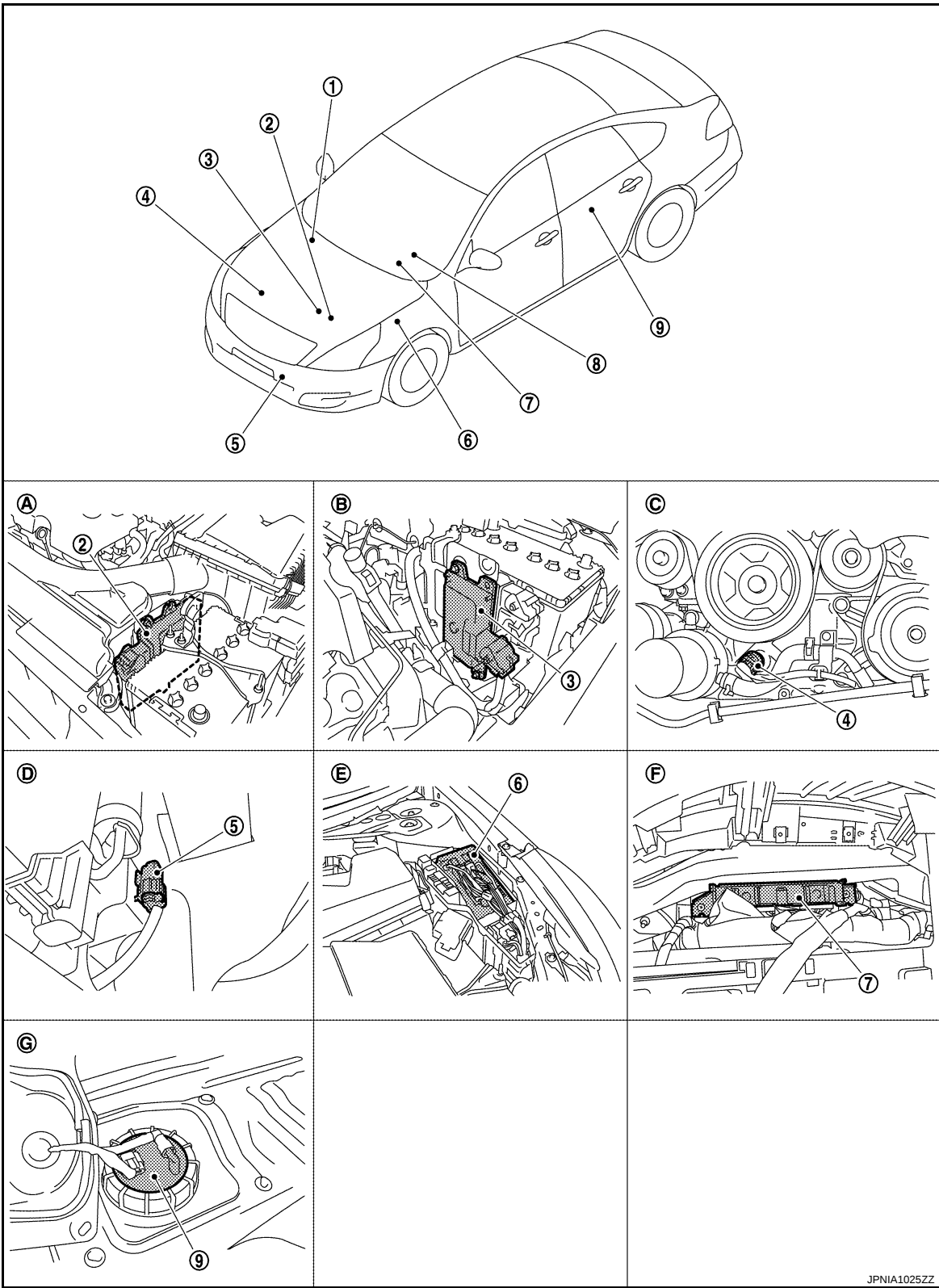


METER SYSTEM

< FUNCTION DIAGNOSIS >

METER SYSTEM : Component Parts Location

INFOID:000000003792509



- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

METER SYSTEM : Component Description

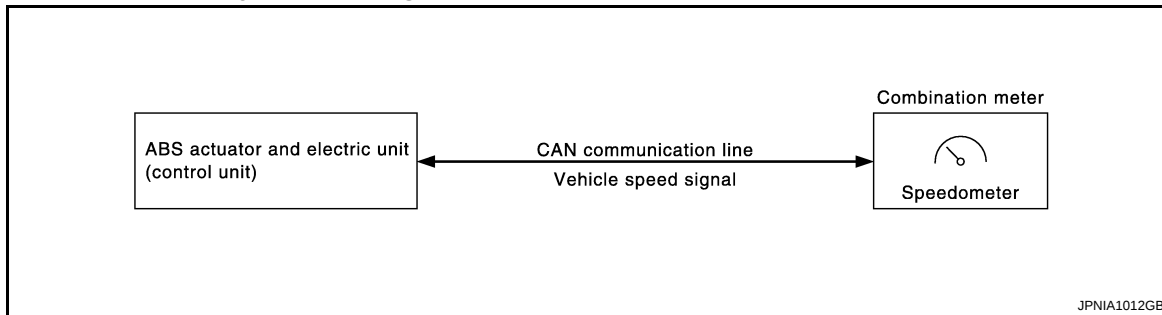
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Unit	Description
Combination meter	Controls the following with the signals received from each unit via CAN communication and the signals from switches and sensors. - Speedometer - Engine coolant temperature gauge - Warning lamps - Information display - Tachometer - Fuel gauge - Indicator lamps
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-45, "Description" .
Oil pressure switch	Refer to MWI-50, "Description" .
ECM	Transmits the following signals to the combination meter with CAN communication line. - 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	Transmits signals provided by various units to the combination meter with CAN communication line.
Control device	Transmits the sport mode switch signal to the combination meter.
TCM	Transmits the shift position signal to the combination meter with CAN communication line.
Meter control switch	Refer to MWI-48, "Description" .
Brake fluid level switch	Transmits the brake fluid level switch signal to the combination meter.
Parking brake switch	Refer to MWI-52, "Description" .

SPEEDOMETER

SPEEDOMETER : System Diagram

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SPEEDOMETER : System Description

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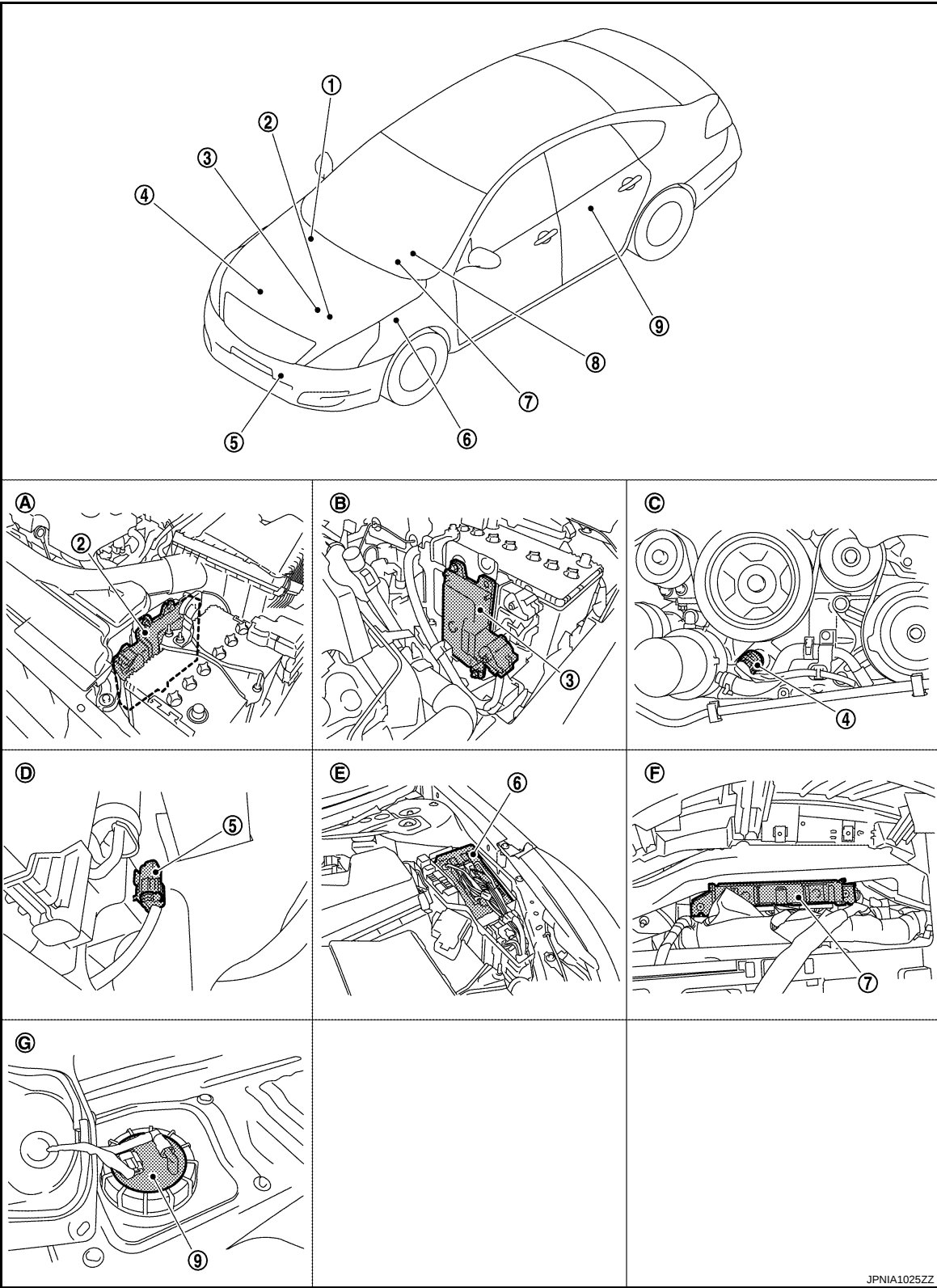
- The ABS actuator and electric unit (control unit) converts the rectangular wave signal provided by the wheel sensor to a vehicle speed signal and transmits it to the combination meter via CAN communication.
- The combination meter indicates the vehicle speed to the speedometer according to the vehicle speed signal received via CAN communication.

METER SYSTEM

< FUNCTION DIAGNOSIS >

SPEEDOMETER : Component Parts Location

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- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

SPEEDOMETER : Component Description

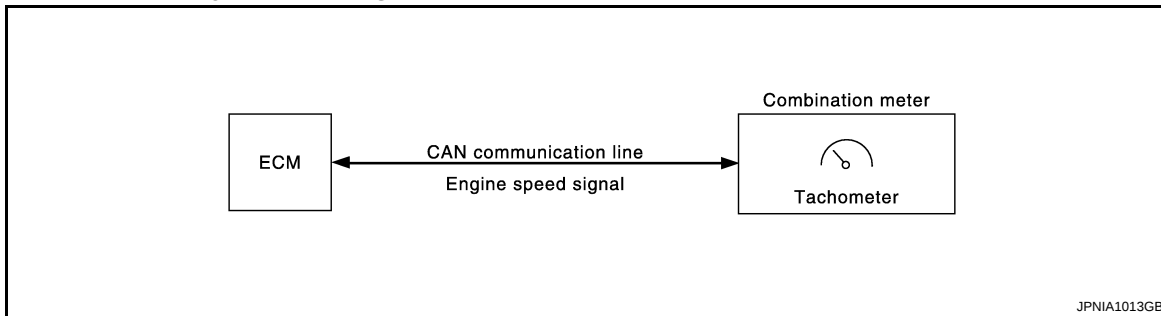
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Unit	Description
Combination meter	Indicates the vehicle speed to the speedometer according to the vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication.
ABS actuator and electric unit (control unit)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

TACHOMETER

TACHOMETER : System Diagram

INFOID:000000003792515



TACHOMETER : System Description

INFOID:000000003792516

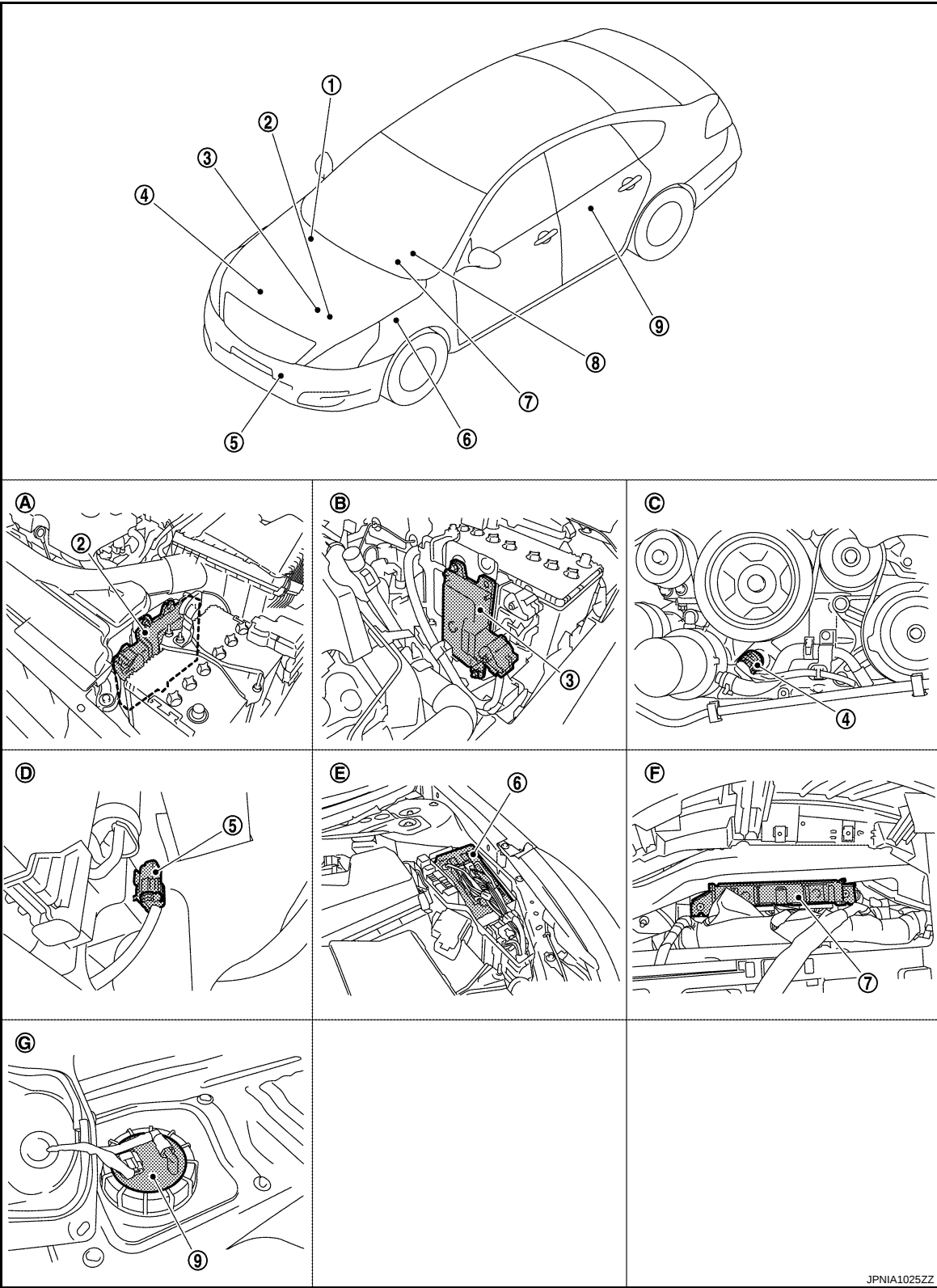
- ECM converts the pulse signal provided by the crankshaft position sensor to an engine speed signal and transmits it to the combination meter with CAN communication line.
- The combination meter indicates the engine speed to the tachometer according to the engine speed signal received via CAN communication.

METER SYSTEM

< FUNCTION DIAGNOSIS >

TACHOMETER : Component Parts Location

INFOID:000000003879300



- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

TACHOMETER : Component Description

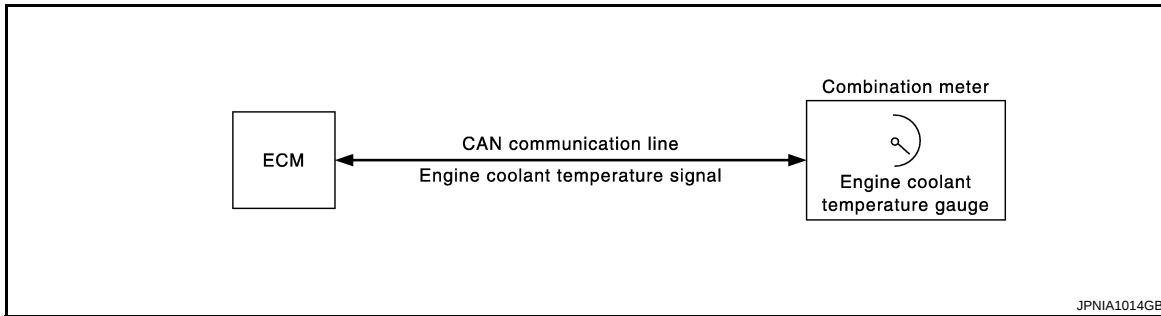
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Unit	Description
Combination meter	Indicates the engine speed to the tachometer according to the engine speed signal received from ECM via CAN communication.
ECM	Transmits the engine speed signal to the combination meter with CAN communication line.

ENGINE COOLANT TEMPERATURE GAUGE

ENGINE COOLANT TEMPERATURE GAUGE : System Diagram

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ENGINE COOLANT TEMPERATURE GAUGE : System Description

INFOID:000000003792520

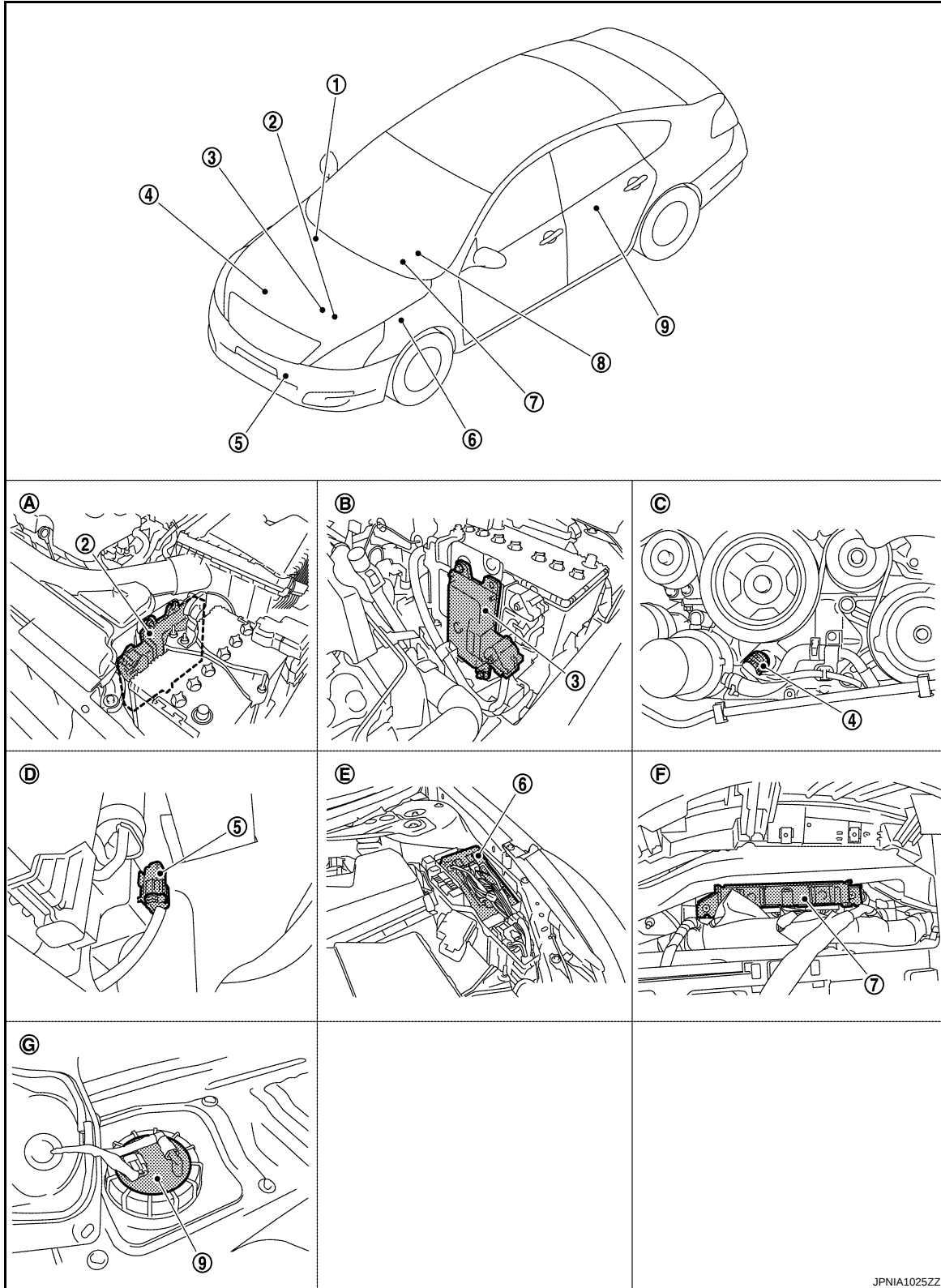
- ECM reads the engine coolant temperature signal from the engine coolant temperature sensor and transmits the signal to the combination meter via CAN communication.
- The combination meter indicates the engine coolant temperature to the water temperature gauge according to the engine coolant temperature signal received via CAN communication.

METER SYSTEM

< FUNCTION DIAGNOSIS >

ENGINE COOLANT TEMPERATURE GAUGE : Component Parts Location

INFOID:000000003879301



- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- | | | |
|---------------------------------|---------------------|---------------------------------|
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |
| D. Front bumper (left back) | E. Engine room (LH) | F. Behind the combination meter |
| G. Lower left side of rear seat | | |

ENGINE COOLANT TEMPERATURE GAUGE : Component Description

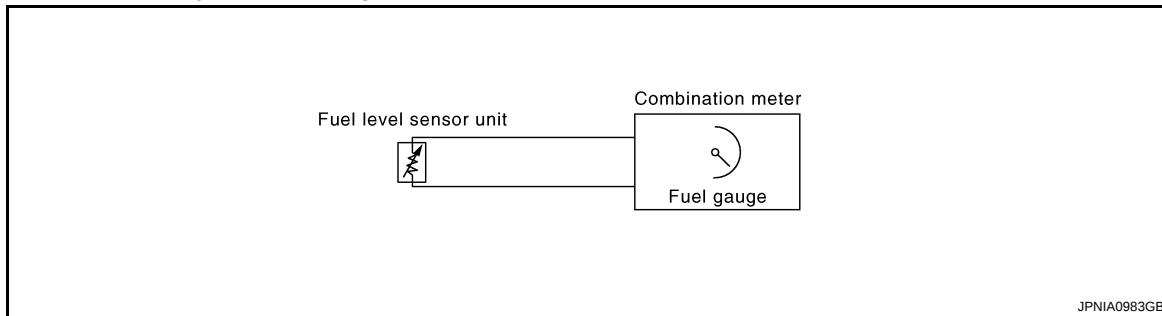
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Unit	Description
Combination meter	Indicates the engine coolant temperature to the water temperature gauge according to the engine coolant temperature signal received from ECM via CAN communication.
ECM	Transmits the engine coolant temperature signal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

FUEL GAUGE

FUEL GAUGE : System Diagram

INFOID:000000003792523



FUEL GAUGE : System Description

INFOID:000000003792524

CONTROL OUTLINE

The combination meter reads the fuel level sensor signal from the fuel level sensor unit and indicates the fuel level to the fuel gauge.

REFUEL CONTROL

The combination meter accelerates the fuel gauge segment if the all conditions listed below are met, or the ignition switch is ON from OFF.

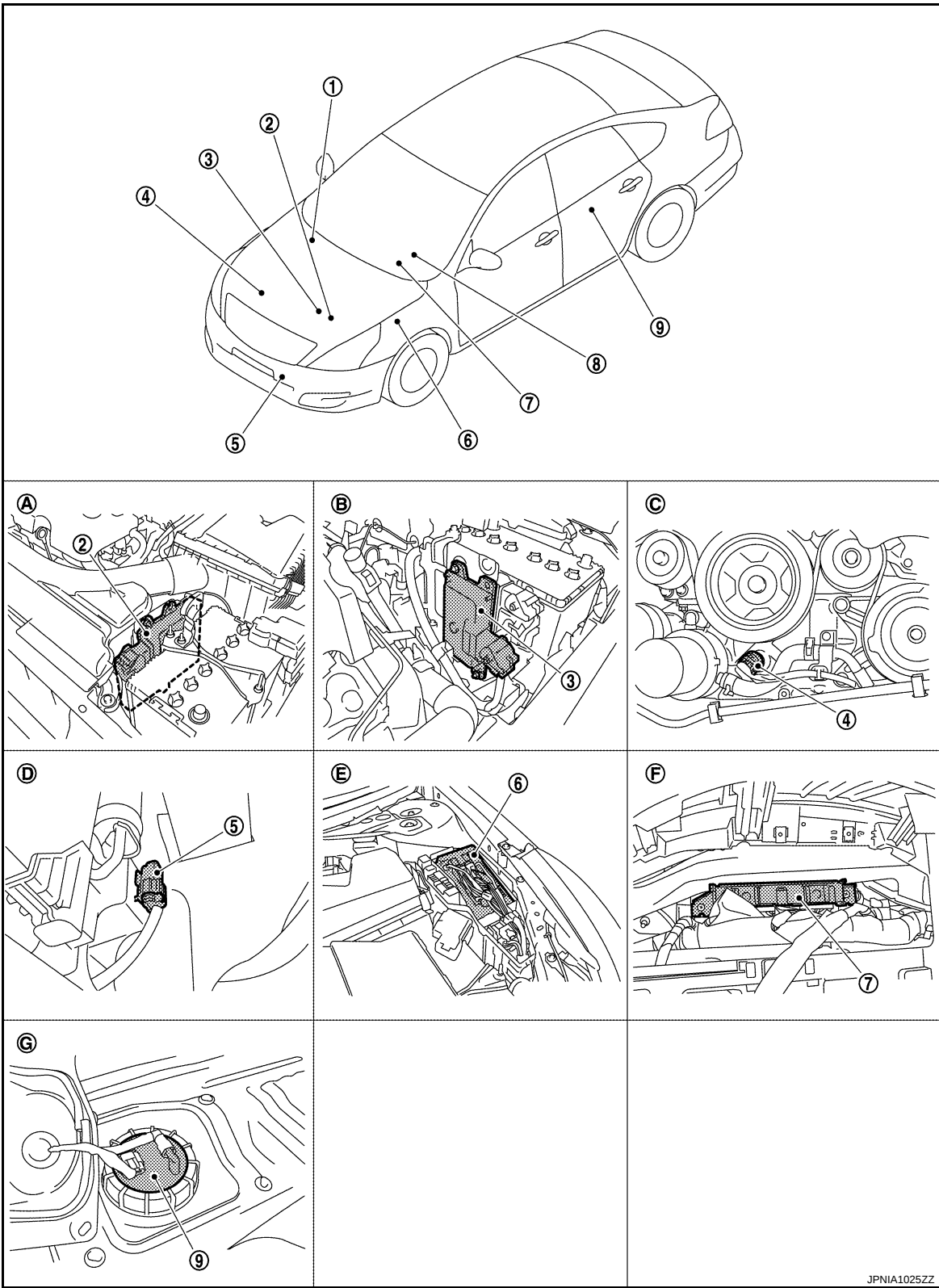
- Ignition switch is ON position.
- The vehicle is not moving.
- The fuel level change by 15 ℓ (3 - 1/4 Imp gal) or more.

METER SYSTEM

< FUNCTION DIAGNOSIS >

FUEL GAUGE : Component Parts Location

INFOID:000000003879302



- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

FUEL GAUGE : Component Description

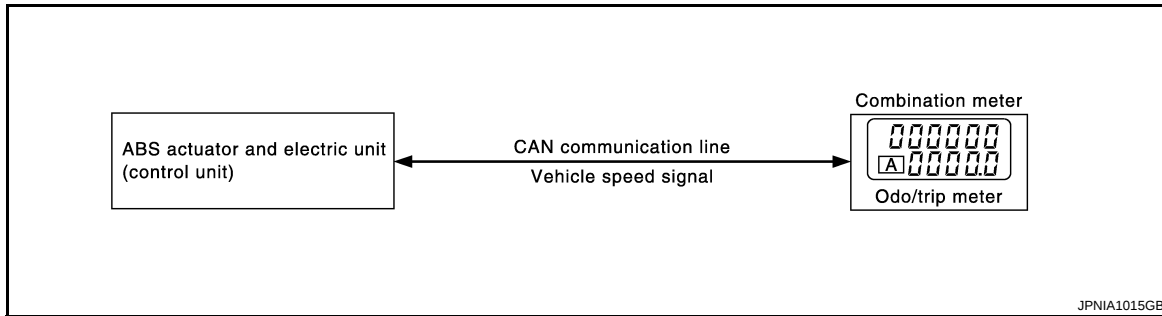
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Unit	Description
Combination meter	Indicates the fuel gauge according to the fuel level sensor signal received from the fuel level sensor unit.
Fuel level sensor unit	Refer to MWI-45, "Description" .

ODO/TRIP METER

ODO/TRIP METER : System Diagram

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ODO/TRIP METER : System Description

INFOID:000000003792528

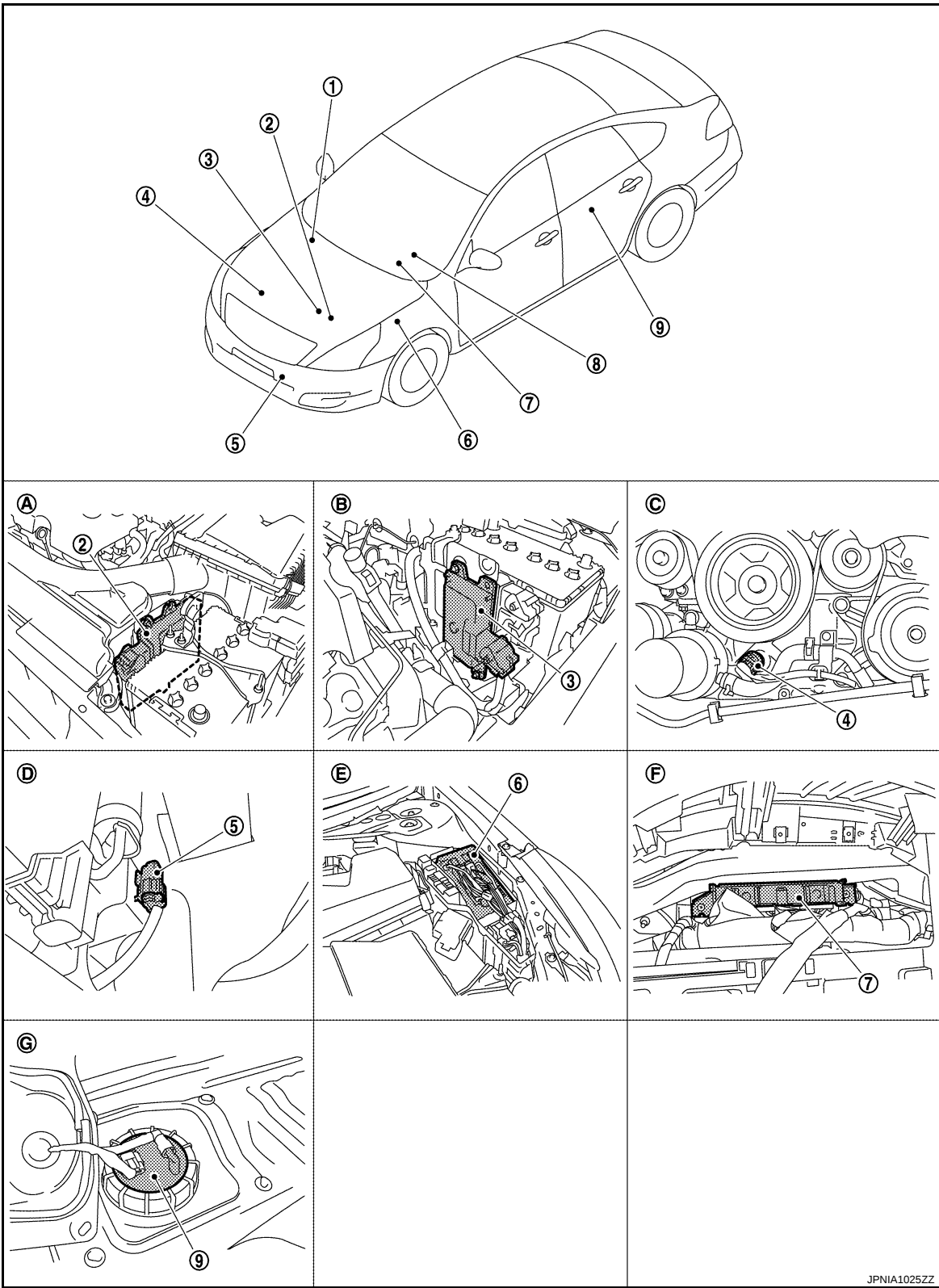
- The ABS actuator and electric unit (control unit) reads the rectangular wave signal provided by the wheel sensor and transmits the vehicle speed signal to the combination meter via CAN communication.
- The combination meter converts the vehicle speed signal received via CAN communication to mileage, and it displays the accumulated mileage to the odo/trip meter.

METER SYSTEM

< FUNCTION DIAGNOSIS >

ODO/TRIP METER : Component Parts Location

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- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

ODO/TRIP METER : Component Description

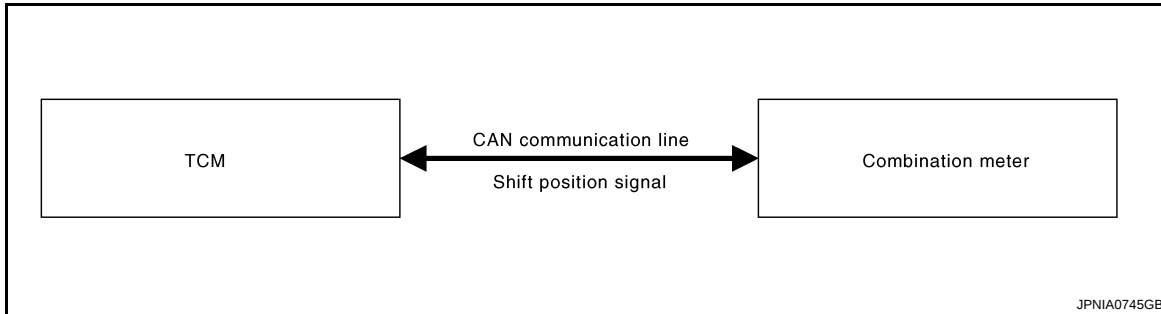
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Unit	Description
Combination meter	Converts the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication to mileage, and it displays the accumulated mileage to the odo/trip meter.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication.

SHIFT POSITION INDICATOR

SHIFT POSITION INDICATOR : System Diagram

INFOID:000000003792531



SHIFT POSITION INDICATOR : System Description

INFOID:000000003792532

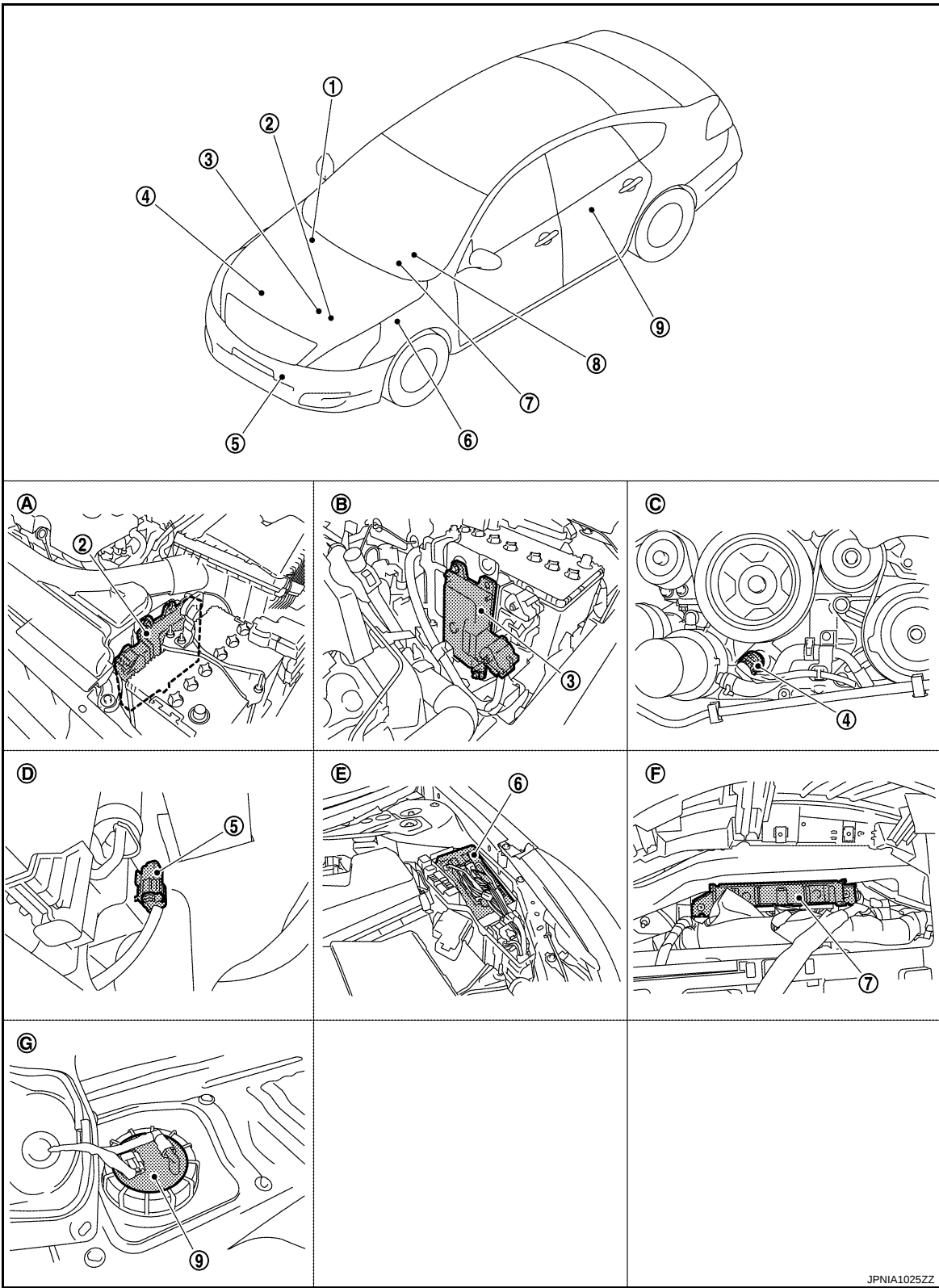
- Shift position is displayed in the information display LCD in the combination meter.
- TCM transmits the shift position signal to the combination meter via CAN communication.
- The combination meter indicates shift position according to the shift position signal received via CAN communication.

METER SYSTEM

< FUNCTION DIAGNOSIS >

SHIFT POSITION INDICATOR : Component Parts Location

INFOID:000000003879661



- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

SHIFT POSITION INDICATOR : Component Description

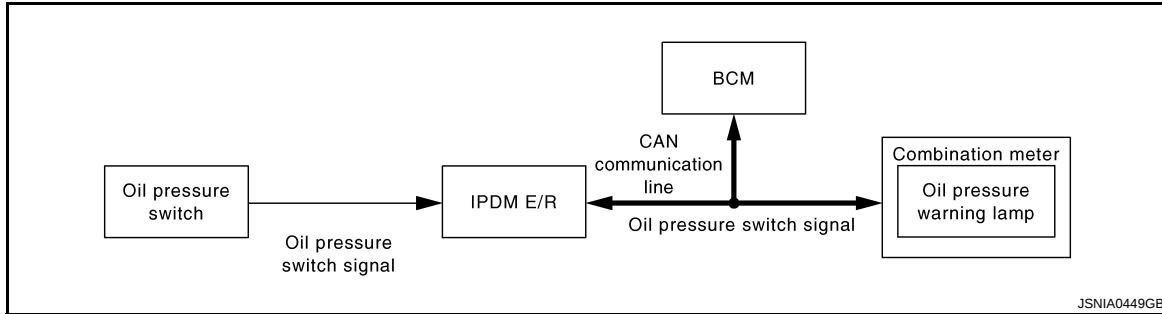
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Unit	Description
Combination meter	Displays the shift position on the information display with shift position signal received from TCM via CAN communication.
TCM	Transmits shift position signal to the combination meter with CAN communication.

WARNING LAMPS/INDICATOR LAMPS

WARNING LAMPS/INDICATOR LAMPS : System Diagram

INFOID:0000000003792535



WARNING LAMPS/INDICATOR LAMPS : System Description

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OIL PRESSURE WARNING LAMP

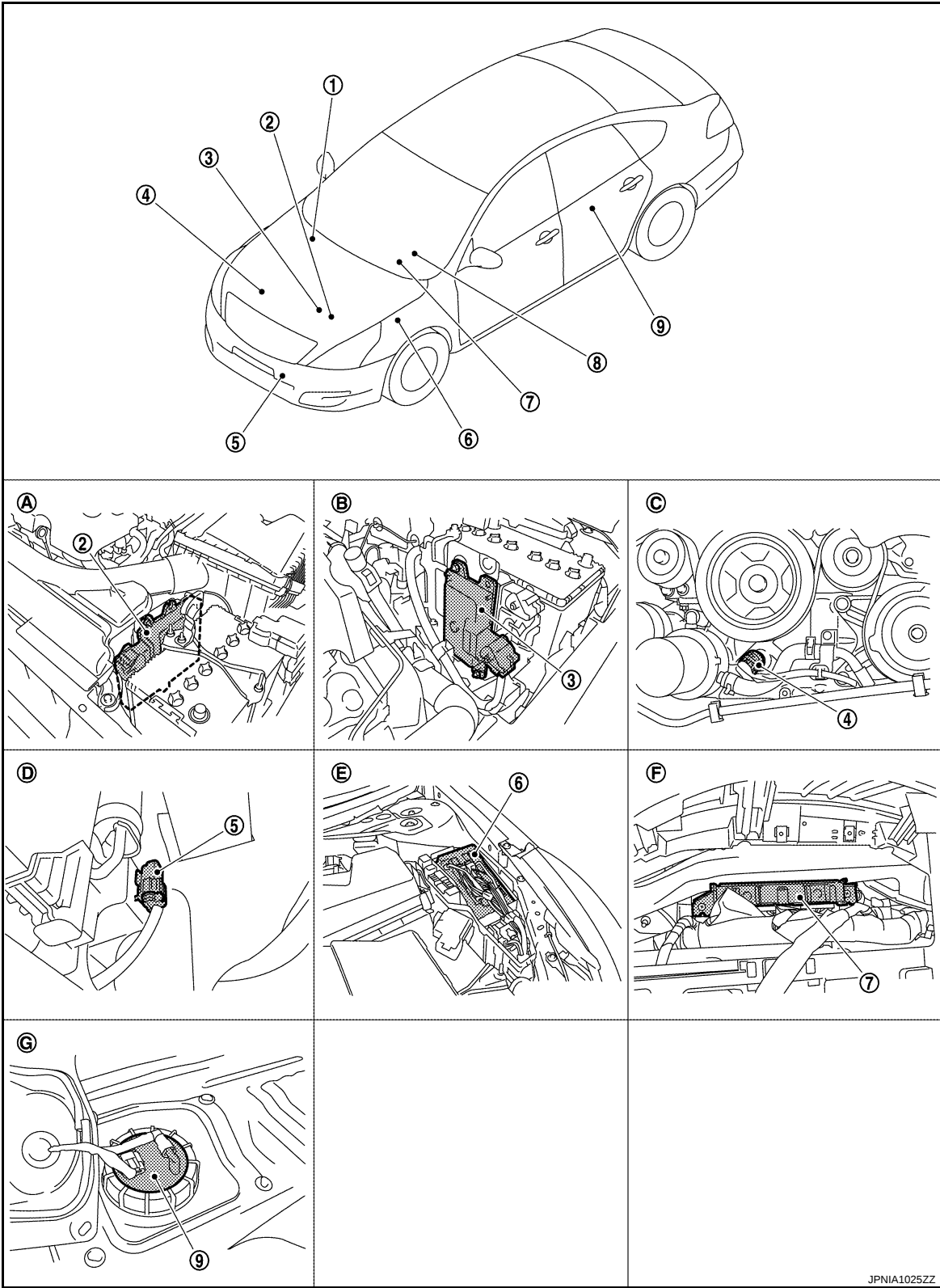
- IPDM E/R reads the ON/OFF signals from the oil pressure switch and transmits the oil pressure switch signal to the combination meter via BCM with the CAN communication line.
- The combination meter turns the oil pressure warning lamp ON/OFF according to the oil pressure switch signal received via CAN communication.

METER SYSTEM

< FUNCTION DIAGNOSIS >

WARNING LAMPS/INDICATOR LAMPS : Component Parts Location

INFOID:000000003879662



- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

WARNING LAMPS/INDICATOR LAMPS : Component Description

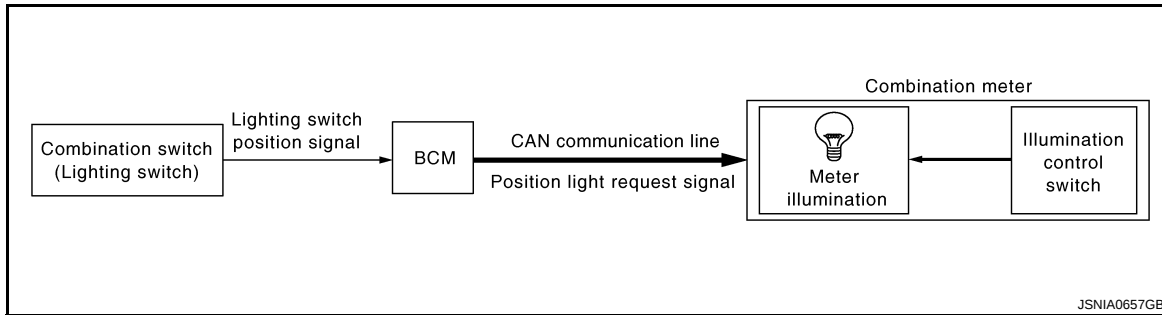
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Unit	Description
Combination meter	Turns the oil pressure warning lamp ON/OFF according to the oil pressure switch signal received from BCM via CAN communication.
IPDM E/R	Reads the ON/OFF signals from the oil pressure switch and transmits the oil pressure switch signal to the combination meter via BCM and CAN communication.
Oil pressure switch	Refer to MWI-50, "Description" .
BCM	Transmits the oil pressure switch signal received from IPDM E/R via CAN communication to the combination meter via CAN communication.

METER ILLUMINATION CONTROL

METER ILLUMINATION CONTROL : System Diagram

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METER ILLUMINATION CONTROL : System Description

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SYSTEM DESCRIPTION

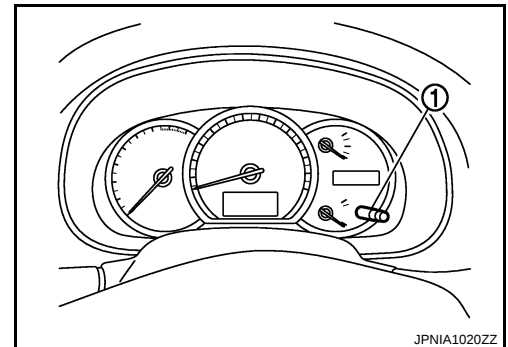
Combination meter controls meter illumination according to following signals.

- Illumination control switch signal from illumination control switch signal integrated to combination meter.
- Position light request signal received from BCM via CAN communication.

Daytime Mode

Meter illumination is adjusted to 22 steps by turning the illumination control switch (1) in daytime mode.

- Turn right : Raise illuminance
Turn left : Lower illuminance



Nighttime Mode

- Combination meter is transferred to nighttime mode with position light request signal from BCM with CAN communication.
- Meter illumination is adjusted to 22 steps by turning the illumination control switch in nighttime mode.

- Turn right : Raise illuminance
Turn left : Lower illuminance

METER SYSTEM

< FUNCTION DIAGNOSIS >

When the illumination of the meter illumination changes, the illumination status is displayed on the information display.

Brightness	Information display indication
0	MIN
1	
10	
20	
21	MAX

JPNIA1062GB

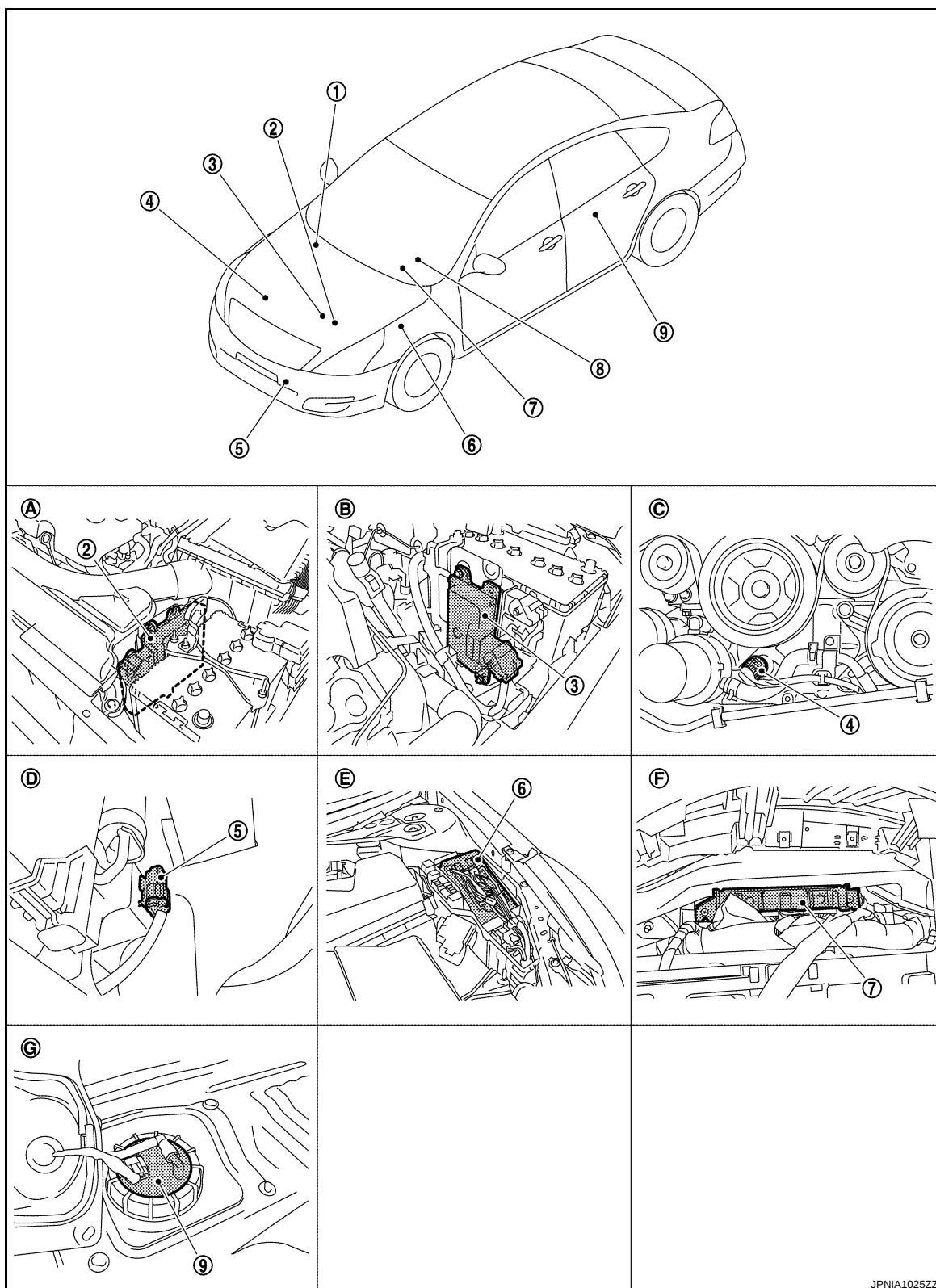
NOTE:
The buzzer sounds when the meter illumination in the information display is MIN or MAX.

METER SYSTEM

< FUNCTION DIAGNOSIS >

METER ILLUMINATION CONTROL : Component Parts Location

INFOID:000000003879663



JPNIA1025ZZ

- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

METER ILLUMINATION CONTROL : Component Description

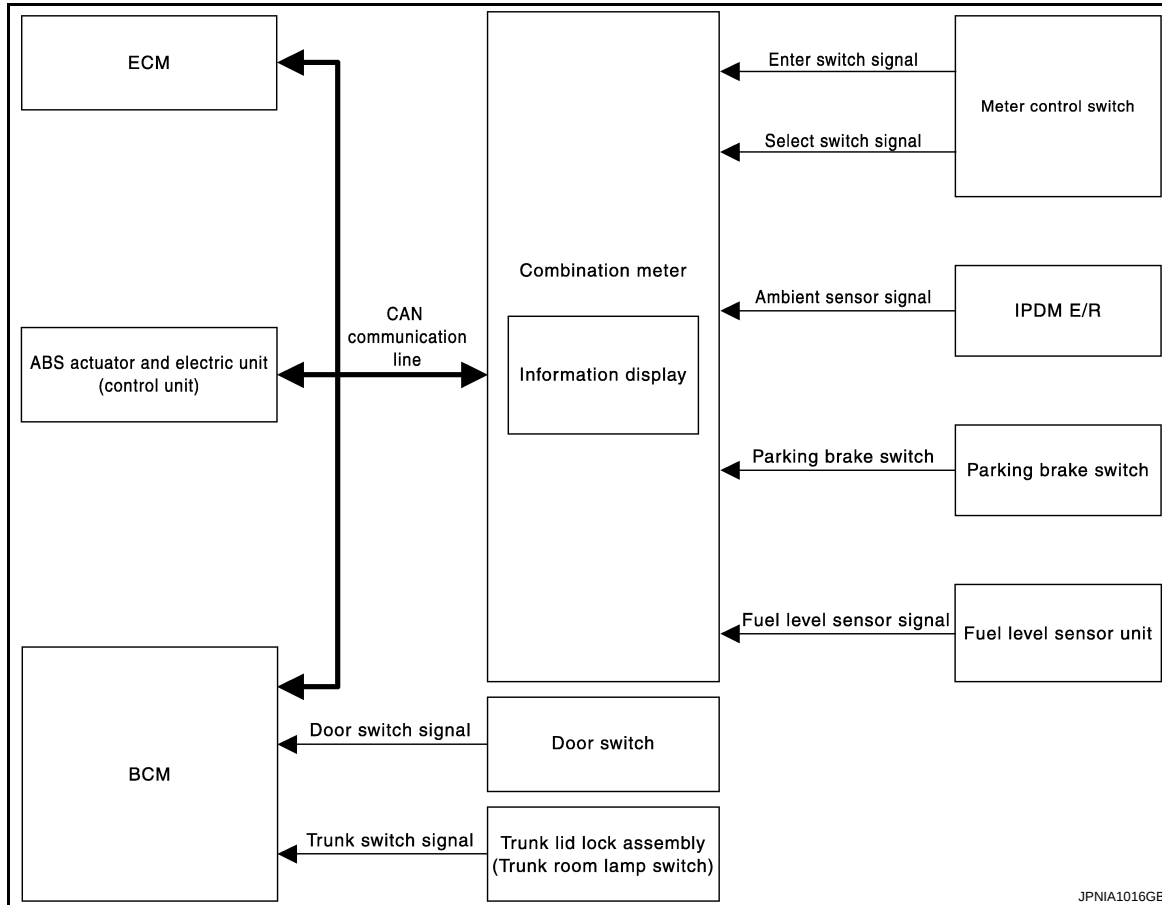
INFOID:000000003796391

Unit	Description
Combination meter	Controls the meter illumination according to the position light request signal transmitted from BCM via CAN communication and the signal from illumination control switch integrated with the combination meter.
BCM	Transmits the position light request signal to the combination meter via CAN communication.

INFORMATION DISPLAY

INFORMATION DISPLAY : System Diagram

INFOID:000000003792543



INFORMATION DISPLAY : System Description

INFOID:000000003792544

DESCRIPTION

The combination meter incorporates a trip computer that displays the warning / information according to the information received from various units.

PARKING BRAKE RELEASE WARNING

The combination meter indicates the parking brake release warning judged by the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the parking brake switch signal from the parking brake switch.

Warning operation condition

Parking brake release warning is judged if all of the following conditions are fulfilled.

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

METER SYSTEM

< FUNCTION DIAGNOSIS >

LOW FUEL WARNING

The combination meter indicates the low fuel warning judged by the fuel level sensor signal received from the fuel level sensor unit.

Warning operation condition

- Fuel level: Approx. 11 ℓ (2 - 2/5 Imp gal) or less

DOOR/TRUNK OPEN WARNING

- The combination meter indicates the door open warning judged by each door switch signal received from the BCM via CAN communication line.
- The combination meter indicates the trunk open warning judged by trunk switch signal received from the BCM via CAN communication line.

INSTANTANEOUS FUEL CONSUMPTION

- The combination meter receives the fuel consumption monitor signal from the ECM and the vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication.
- The combination meter calculates instantaneous fuel consumption according to the fuel consumption monitor signal and the vehicle speed signal received via CAN communication.

AVERAGE FUEL CONSUMPTION

- The combination meter receives the fuel consumption monitor signal from the ECM and the vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication.
- The combination meter calculates the average fuel consumption according to the fuel consumption monitor signal and the vehicle speed signal received via CAN communication.
- The average fuel consumption displayed on the information display is uploaded in approximately 30-second intervals.

NOTE:

When turning ON the ignition switch after triggering a reset or removing/installing the battery, “——” is indicated until 30 seconds/500 m (0.31 miles) of driving.

AVERAGE VEHICLE SPEED

- The combination meter receives the vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication.
- Measures the time while the ignition switch is ON through the combination meter.
- The combination meter the average vehicle speed according to the above signals.
- The average vehicle speed displayed on the information display is uploaded in approximately 30-second intervals.

NOTE:

When turning ON the ignition switch after triggering a reset or removing/installing the battery, “——” is indicated until 30 seconds/500 m (0.31 miles) of driving.

TRAVEL TIME

Measures the time while the ignition switch is ON through the combination meter.

TRAVEL DISTANCE

- The combination meter receives the vehicle speed signal from the ABS actuator and electric unit (control unit) via CAN communication.
- The combination meter calculates the vehicle distance according to the vehicle speed signal. The vehicle distance is displayed.

POSSIBLE DRIVING DISTANCE

The combination meter calculates possible driving distance according to the vehicle speed signal and fuel consumption monitor signal transmitted via CAN communication and the fuel level sensor signal transmitted from the fuel level sensor.

NOTE:

- When turning ON the ignition switch after removing/installing the battery, “——” is indicated until 30 seconds.
- The indicated values may not match each other when refueling with the ignition switch ON. Refer to [MWI-124, "INFORMATION DISPLAY : Description"](#).

AMBIENT AIR TEMPERATURE

- The combination meter receives the ambient sensor signal from the ambient sensor.
- The combination meter calculates the ambient temperature according to the ambient sensor signal.
- The indicated temperature does not increase if the vehicle speed is less than 20 km/h (12 MPH).

METER SYSTEM

< FUNCTION DIAGNOSIS >

NOTE:

- The ambient sensor input value that is displayed on “Data Monitor” of CONSULT-III is the value before the correction. It may not match the indicated temperature on the information display.
- The ambient temperature may be indicated higher than the actual temperature, depending on heat in the engine, the road surface temperature, and so on.

SETTING

Setting item list

Items		Setting range	Setting unit	Description
ALERT	TIME TO REST	No setting - 6 hours	30 minutes, [60 minutes]*	Time to rest is displayed on the information display if the vehicle reached the set travel distance.
	ICY	ON/OFF	—	Low outside temp is displayed on the information display if the ambient temperature is 3°C (37°F) or less.
MAINTENANCE	ENGINE OIL	No setting - 30,000 km	500 km, 1000 km*	The engine oil replacement interval is displayed on the information display if the vehicle reached the set distance.
	OIL FILTER	No setting - 30,000 km	500 km, 1000 km*	The oil filter replacement interval is displayed on the information display if the vehicle reached the set distance.
	TIRE	No setting - 30,000 km	500 km, 1000 km*	The tire replacement interval is displayed on the information display if the vehicle reached the set distance.
	OTHER	No setting - 30,000 km	500 km, 1000 km*	The other replacement interval is displayed on the information display if the vehicle reached the set distance.
UNIT		km, km/l / km, l/100km	—	The unit setting can be changed.

* : Press and hold the switch (1 second or more).

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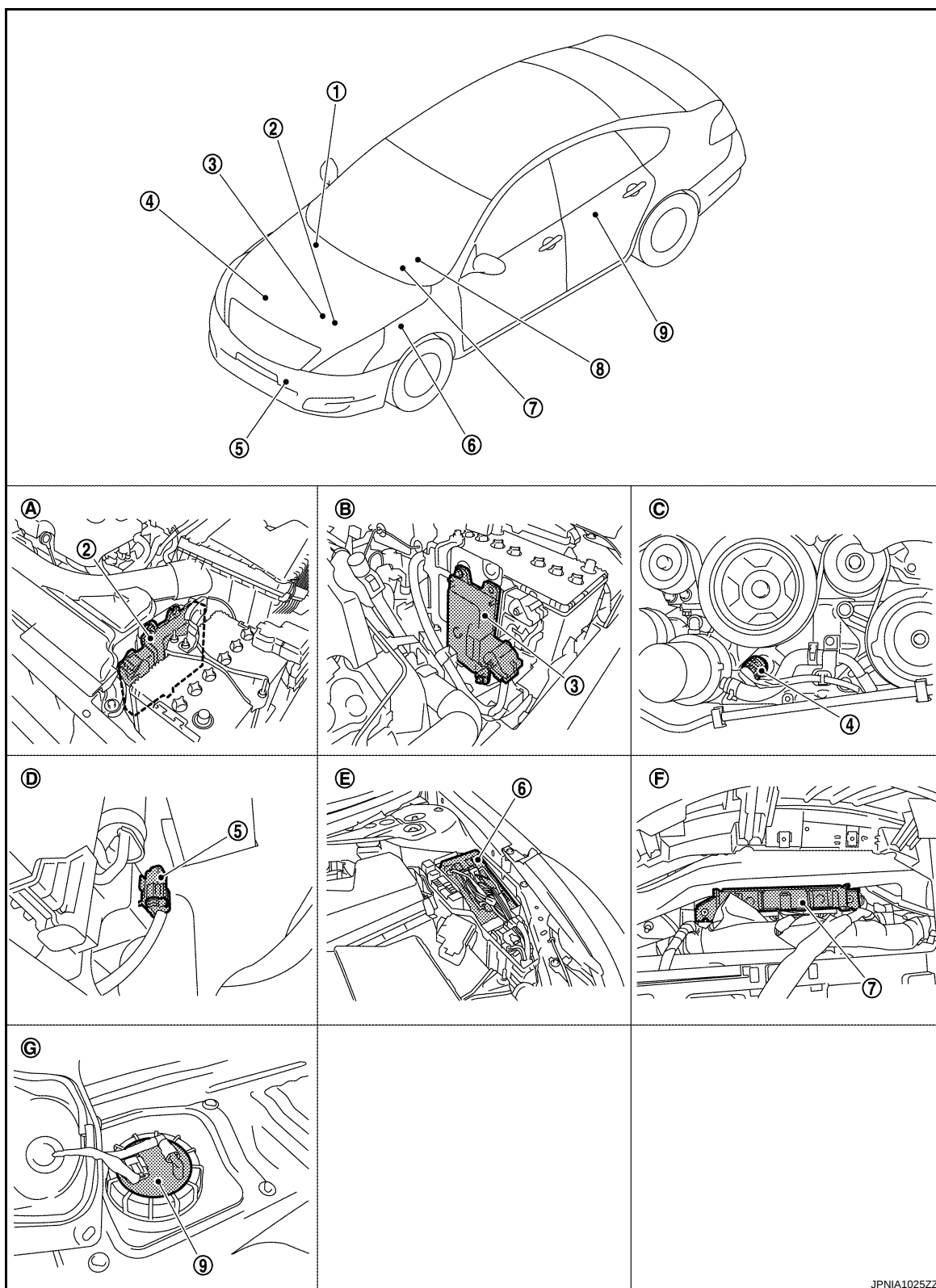
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METER SYSTEM

< FUNCTION DIAGNOSIS >

INFORMATION DISPLAY : Component Parts Location

INFOID:000000003879664



JPNIA1025ZZ

- | | | |
|--|----------------------|---|
| 1. ABS actuator and electric unit (control unit) | 2. ECM | 3. TCM |
| 4. Oil pressure switch | 5. Ambient sensor | 6. IPDM E/R |
| 7. BCM | 8. Combination meter | 9. Fuel level sensor unit and fuel pump |
| A. Engine room (LH) | B. Engine room (LH) | C. Engine front side |

METER SYSTEM

< FUNCTION DIAGNOSIS >

- D. Front bumper (left back) E. Engine room (LH) F. Behind the combination meter
G. Lower left side of rear seat

INFORMATION DISPLAY : Component Description

INFOID:000000003792546

Unit	Description
Combination meter	Controls the information display according to the signal received from each unit.
Fuel level sensor unit	Refer to MWI-45, "Description" .
ECM	Transmits the following signals to the combination meter via CAN communication. • 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.
BCM	Transmits signals provided by various units to the combination meter via CAN communication.
Meter control switch	Transmits the following signals to the combination meter. • Enter switch signal • Select switch signal
Parking brake switch	Refer to MWI-52, "Description" .
Door switch	Transmits the door switch signals to BCM.
Trunk room lamp switch	Transmits the trunk room lamp switch signal to BCM
Ambient sensor	Detects the ambient air temperature and transmits the ambient sensor signal to the combination meter.

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MWI

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (METER)

Diagnosis Description

INFOID:000000003792550

SELF-DIAGNOSIS MODE

- Information display LCD segment operation can be checked in self-diagnosis mode.
- Meters/gauges can be checked in self-diagnosis mode.

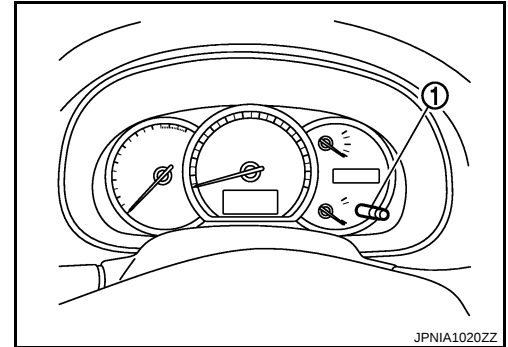
OPERATION PROCEDURE

1. Turn ignition switch ON, and switch the trip meter to “trip A” or “trip B”.

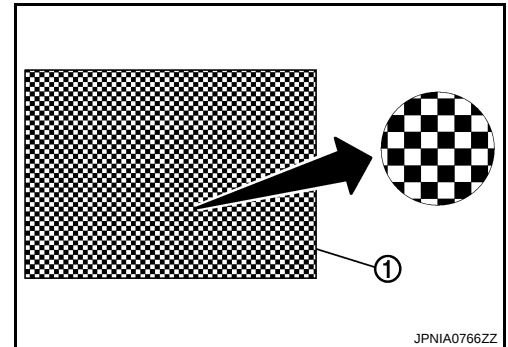
NOTE:

If the diagnosis function is activated with “trip A” displayed, the mileage on “trip A” is reset to “0000.0”.
(The same way for “trip B”.)

2. Turn ignition switch OFF.
3. While pressing the trip reset switch (1), turn ignition switch ON again.
4. Make sure that the trip meter displays “0000.0”.
5. Press the trip reset switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON.)



6. The unified meter control unit is turned to self-diagnosis mode.
 - The segment dots of the information display LCD (1) blink alternately.
 - Water temperature gauge and fuel gauge return to zero, simultaneously.



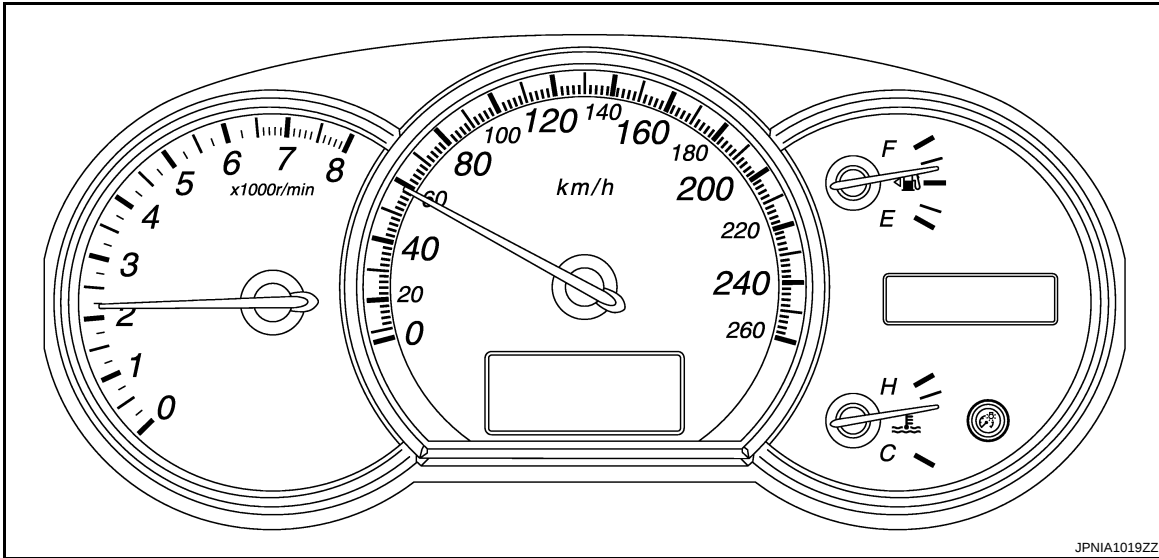
NOTE:

- Check combination meter power supply and ground circuit when the self-diagnosis mode of the combination meter does not start. Replace combination meter if abnormal.
- If any of the segments are not displayed, replace combination meter.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

7. Each meter activates by pressing the trip reset switch.



NOTE:

If any of the meters or gauges are not activated, replace combination meter.

CONSULT-III Function (METER/M&A)

INFOID:000000003792551

CONSULT-III APPLICATION ITEMS

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

System	Diagnosis mode	Description
METER/M&A	Self Diagnostic Result	The combination meter checks the conditions and displays memorized errors.
	Data Monitor	Displays the combination meter input/output data in real time.
	Special function	Lighting history of the warning lamp and indicator lamp can be checked.

SELF DIAG RESULT

Refer to [MWI-67, "DTC Index"](#).

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	Description
SPEED METER [km/h]	X	Value of vehicle speed signal received from ABS actuator and electric unit (control unit) via CAN communication. NOTE: 655.35 is displayed when the malfunction signal is received.
SPEED OUTPUT [km/h]	X	Vehicle speed signal value transmitted to other units via CAN communication. NOTE: 655.35 is displayed when the malfunction signal is received.
ODO OUTPUT [km/h or mph]		Odometer signal value transmitted to other units via CAN communication.
TACHO METER [rpm]	X	Value of the engine speed signal received from ECM via CAN communication. NOTE: 8191.875 is displayed when the malfunction signal is received.
FUEL METER [lit.]	X	Fuel level indicated on combination meter.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	Description
W TEMP METER [°C]	X	Value of engine coolant temperature signal is received from ECM via CAN communication. NOTE: 215 is displayed when the malfunction signal is input.
ABS W/L [On/Off]		Status of ABS warning lamp detected from ABS warning lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication.
VDC/TCS IND [On/Off]		Status of VDC OFF indicator lamp detected from VDC OFF indicator lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication.
SLIP IND [On/Off]		Status of SLIP indicator lamp detected from slip indicator lamp signal received from ABS actuator and electric unit (control unit) via CAN communication.
BRAKE W/L [On/Off]		Status of brake warning lamp detected from brake warning lamp signal is received from ABS actuator and electric unit (control unit) via CAN communication. NOTE: Displays "Off" if the brake warning lamp is illuminated when the valve check starts, the parking brake switch is turned ON or the brake fluid level switch is turned ON.
DOOR W/L [On/Off]		Status of door warning detected from door switch signal received from BCM via CAN communication.
TRUNK/GLAS-H [On/Off]		Status of trunk warning detected from trunk switch signal received from BCM via CAN communication.
HI-BEAM IND [On/Off]		Status of high beam indicator lamp detected from high beam request signal is received from BCM via CAN communication.
TURN IND [On/Off]		Status of turn indicator lamp detected from turn indicator signal is received from BCM via CAN communication.
FR FOG IND [On/Off]		Status of front fog light indicator lamp detected from front fog light request signal is received from BCM via CAN communication.
RR FOG IND [On/Off]		Status of rear fog light indicator lamp detected from rear fog light request signal is received from BCM via CAN communication.
LIGHT IND [On/Off]		Status of light indicator lamp detected from position light request signal is received from BCM via CAN communication.
OIL W/L [On/Off]		Status of oil pressure warning lamp detected from oil pressure switch signal is received from BCM via CAN communication.
MIL [On/Off]		Status of malfunction indicator lamp detected from malfunctioning indicator lamp signal is received from ECM via CAN communication.
CRUISE IND [On/Off]		Status of CRUISE indicator detected from ASCD status signal is received from ECM via CAN communication.
SPORT IND [On/Off]		Status of SPORT indicator detected from sport mode switch signal is received from control device.
4WD W/L [On/Off]		This item is displayed, but cannot be monitored.
4WD LOCK IND [On/Off]		This item is displayed, but cannot be monitored.
FUEL W/L [On/Off]		Low-fuel warning lamp status detected by the identified fuel level.
WASHER W/L [On/Off]		This item is displayed, but cannot be monitored.
KEY G/Y W/L [On/Off]		Status of key warning lamp (G/Y) detected from key warning signal is received from BCM via CAN communication.
AFS OFF IND [On/Off]		This item is displayed, but cannot be monitored.
LCD [B&P N, B&P I, ID NG, ROTAT, SFT P, INSRT, BATT, NO KY,OUTKY, LK WN]		Displays status of Intelligent Key system warning detected from meter display signal is received from BCM via CAN communication.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	Description	
SHIFT IND [P, R, N, D, L]		Status of shift position indicator detected from shift position signal and manual mode indicator signal is received from TCM via CAN communication.	A
O/D OFF SW [On/Off]		Status of sport mode switch.	B
M RANGE SW [On/Off]		This item is displayed, but cannot be monitored.	C
NM RANGE SW [On/Off]		This item is displayed, but cannot be monitored.	
AT SFT UP SW [On/Off]		This item is displayed, but cannot be monitored.	D
AT SFT DWN SW [On/Off]		This item is displayed, but cannot be monitored.	E
ST SFT UP SW [On/Off]		This item is displayed, but cannot be monitored.	
ST SFT DWN SW [On/Off]		This item is displayed, but cannot be monitored.	F
PKB SW [On/Off]		Status of parking brake switch.	G
BUCKLE SW [On/Off]		Status of seat belt buckle switch.	
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.	H
DISTANCE [km]		Value of possible driving distance calculated by combination meter.	I
A/C AMP CONN [On/Off]		Input status of A/C auto amp. connection recognition signal.	
ENTER SW [On/Off]		Status of  (ENTER) switch.	J
SELECT SW [On/Off]		Status of  (SELECT) switch.	K
OUTSIDE TEMP [°C or °F]		Ambient air temperature value converted from ambient sensor signal received from ambient sensor. NOTE: This may not match with the temperature value indicated on the information display. (Because the information display value is a corrected value from the ambient sensor input value.)	L
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit via CAN communication.	M
BUZZER [On/Off]	X	Buzzer status (in the combination meter) is detected from the buzzer output signal received from each unit via CAN communication and the warning output condition of the combination meter.	MWI

NOTE:

Some items are not available according to vehicle specification.

SPECIAL FUNCTION

Special menu

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

W/L ON HISTORY

- Stores histories when warning/indicator lamp is turned on.
- “W/L ON HISTORY” indicates the “TIME” when the warning/ indicator lamp is turned on.
- The “TIME” above is :

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

- 0 : The condition that the warning/indicator lamp has been turned on 1 or more times after starting the engine and waiting for 30 seconds.
- 1 - 39 : The number of times the engine was restarted after the 0 condition.
- NO W/L ON HISTORY : Stores NO (0) turning on history of warning/indicator lamp.

NOTE:

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

Display Item

Display item	Description
ABS W/L	Lighting history of ABS warning lamp.
VDC/TCS IND	Lighting history of VDC OFF indicator lamp.
SLIP IND	Lighting history of SLIP indicator lamp.
BRAKE W/L	Lighting history of brake warning lamp.
DOOR W/L	Lighting history of door warning.
TRUNK/GLAS-H	Lighting history of trunk warning.
OIL W/L	Lighting history of oil pressure warning lamp.
C-ENG W/L	Lighting history of malfunction indicator lamp.
C-ENG2 W/L	This item is displayed, but cannot be monitored.
CRUISE IND	Lighting history of CRUISE indicator lamp.
SET IND	This item is displayed, but cannot be monitored.
CRUISE W/L	This item is displayed, but cannot be monitored.
BA W/L	This item is displayed, but cannot be monitored.
O/D OFF IND	This item is displayed, but cannot be monitored.
ATC/T-AMT W/L	This item is displayed, but cannot be monitored.
ATF TEMP W/L	This item is displayed, but cannot be monitored.
CVT IND	This item is displayed, but cannot be monitored.
SPORT IND	Lighting history of SPORT indicator lamp.
4WD W/L	This item is displayed, but cannot be monitored.
FUEL W/L	Lighting history of low fuel level warning.
WASHER W/L	This item is displayed, but cannot be monitored.
AIR PRES W/L	This item is displayed, but cannot be monitored.
KEY G/Y W/L	Lighting history of key warning lamp (green/yellow).
KEY R W/L	Lighting history of key warning lamp (red).
KEY KNOB W/L	This item is displayed, but cannot be monitored.
SYS FAIL W/L	This item is displayed, but cannot be monitored.
SFT POSI W/L	This item is displayed, but cannot be monitored.
HV BAT W/L	This item is displayed, but cannot be monitored.
HEV BRAKE W/L	This item is displayed, but cannot be monitored.
SFT OPER W/L	This item is displayed, but cannot be monitored.
CHAGE W/L	Lighting history of charge warning lamp.
OIL LEV LOW	This item is displayed, but cannot be monitored.
DPF W/L	This item is displayed, but cannot be monitored.

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000003792552

CAN (Controller Area Network) is a serial communication system for real time application. It is an on-vehicle multiplex communication system with high data communication speed and excellent error detectability. Many electronic control units are equipped onto vehicles, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with two communication lines (CAN-H line, CAN-L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Signal Chart. Refer to [LAN-13, "How to Use CAN Communication Signal Chart"](#).

DTC Logic

INFOID:0000000003792553

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Probable malfunction location
U1000	CAN COMM CIRCUIT	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	CAN communication system

Diagnosis Procedure

INFOID:0000000003792554

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 seconds or more.
2. Check "Self Diagnostic Result" of "METER/M&A".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-14, "Trouble Diagnosis Flow Chart"](#).
NO >> Refer to [GI-35, "Intermittent Incident"](#).

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U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

Description

INFOID:0000000003792555

Initial diagnosis of combination meter.

DTC Logic

INFOID:0000000003792556

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:0000000003792557

1. REPLACE COMBINATION METER

When DTC "U1010" is detected, replace combination meter.

>> INSPECTION END

B2205 VEHICLE SPEED

< COMPONENT DIAGNOSIS >

B2205 VEHICLE SPEED

Description

INFOID:000000003792558

Vehicle speed signal is transmitted from ABS actuator and electric unit (control unit) via CAN communication to combination meter.

DTC Logic

INFOID:000000003792559

DTC DETECTION LOGIC

DTC	Display contents of CONSULT-III	Diagnostic item is detected when ...	Probable malfunction location
B2205	VEHICLE SPEED	An abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more	- Wheel sensor - ABS actuator and electric unit (control unit)

Diagnosis Procedure

INFOID:000000003792560

1.PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Perform "Self Diagnostic Result" of ABS actuator and electric unit (control unit), and repair or replace malfunctioning parts.

>> Refer to [BRC-13, "CONSULT-III Function"](#) (with ABS models) or [BRC-80, "CONSULT-III Function"](#) (with VDC models).

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B2267 ENGINE SPEED

< COMPONENT DIAGNOSIS >

B2267 ENGINE SPEED

Description

INFOID:0000000003792561

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

DTC Logic

INFOID:0000000003792562

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	• Crankshaft position sensor (POS) • ECM

Diagnosis Procedure

INFOID:0000000003792563

1.PERFORM SELF-DIAGNOSIS OF ECM

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

>> Refer to [EC-113, "CONSULT-III Function"](#).

B2268 WATER TEMP

< COMPONENT DIAGNOSIS >

B2268 WATER TEMP

Description

INFOID:000000003792564

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

DTC Logic

INFOID:000000003792565

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	• Engine coolant temperature sensor • ECM

Diagnosis Procedure

INFOID:000000003792566

1.PERFORM SELF-DIAGNOSIS OF ECM

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

>> Refer to [EC-113, "CONSULT-III Function"](#).

MWI

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:000000003792567

1.CHECK FUSE

Check for blown fuses.

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Be sure to eliminate cause of malfunction before installing new fuse.

2.CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector terminals and ground.

Terminals			Voltage (Approx.)
(+)		(-)	
Combination meter		Ground	
Connector	Terminal		
M34	1		
	2		
			Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness between combination meter and fuse.

3.CHECK GROUND CIRCUIT

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

Terminals			Continuity
(+)		(-)	
Combination meter		Ground	
Connector	Terminal		
M34	3		
	23		
			Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000003900505

1.CHECK FUSE AND FUSIBLE LINK

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Signal name	Fuse and fusible link No.
Battery power supply	I
	10

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals		Voltage (Approx.)
(+)	(-)	
BCM		Ground Battery voltage
Connector	Terminal	
M118	1	
M119	11	

Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

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

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

INFOID:0000000003900506

1.CHECK FUSES AND FUSIBLE LINK

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

Signal name	Fuses and fusible link No.
Battery power supply	E
	50
	51

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.

NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

2. Disconnect IPDM E/R connector.
3. Check voltage between IPDM E/R harness connector and ground.

Terminals			Voltage (Approx.)
(+)		(–)	
IPDM E/R			
Connector	Terminal	Ground	
E9	1		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		
E10	12		Existed
E11	41		

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

FUEL LEVEL SENSOR SIGNAL CIRCUIT

Description

INFOID:000000003792570

The fuel level sensor unit and fuel pump detect the fuel level in the fuel tank and transmit the fuel gauge signal to the combination meter.

Component Function Check

INFOID:000000003792571

1.CHECK COMBINATION METER OUTPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and compare the "FUEL METER" monitor value with the fuel gauge reading on the combination meter.

Fuel gauge pointer	Reference value of data monitor [lit.]
Full	Approx. 64.6
Three quarters	Approx. 53.5
Half	Approx. 36.0
A quarter	Approx. 18.5
Empty	Approx. 8.0

Does monitor value match fuel gauge reading?

- YES >> INSPECTION END
NO >> Replace combination meter.

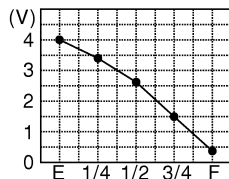
Diagnosis Procedure

INFOID:000000003792572

1.CHECK COMBINATION METER INPUT SIGNAL

- Turn ignition switch ON.
- Check voltage between combination meter harness connector terminal and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
Combination meter		
Terminal	Connector	Ground
M34	34	



JPNIA0740ZZ

Does it match fuel gauge reading?

- YES >> GO TO 2.
NO >> Replace the combination meter.

2.CHECK FUEL LEVEL SENSOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect combination meter connector and fuel level sensor unit and fuel pump connector.
- Check continuity between combination meter harness connector terminal and fuel level sensor unit and fuel pump harness connector terminal.

FUEL LEVEL SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

Terminals				Continuity
(+) (+)		(-) (-)		
Combination meter		Fuel level sensor unit and fuel pump		
Connector	Terminal	Connector	Terminal	
M34	34	B40	2	Existed

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

Terminals			Continuity
(+) (+)		(-) (-)	
Combination meter		Ground	
Connector	Terminal		
M34	34		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3.CHECK FUEL LEVEL SENSOR GROUND CIRCUIT

Check continuity between fuel level sensor unit and fuel pump harness connector terminal and combination meter harness connector terminal.

Terminals				Continuity
(+) (+)		(-) (-)		
Fuel level sensor unit and fuel pump		Combination meter		
Connector	Terminal	Connector	Terminal	
B40	5	M34	24	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:000000003792573

1.REMOVE FUEL LEVEL SENSOR UNIT

Remove the fuel level sensor unit. Refer to [FL-5, "Removal and Installation"](#).

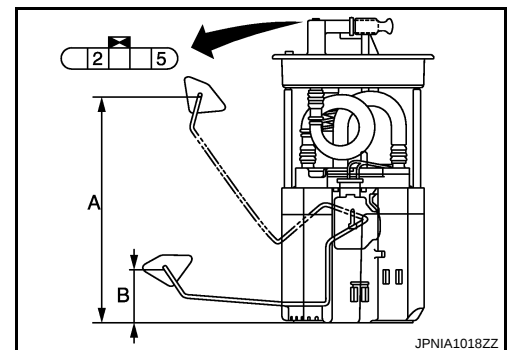
>> GO TO 2.

2.CHECK FUEL LEVEL SENSOR UNIT

Check the resistance between fuel level sensor unit.

Terminals				Condition	Resistance (Ω)	Height [mm (in)]
Fuel level sensor unit						
(+)		(-)				
Con- nector	Termi- nal	Con- nector	Termi- nal			
B40	2	B40	5	Full (A)*	6	167.8 (6.61)
				Empty (B)*	80	35.9 (1.413)

* : When float rod is in contact with stopper.



FUEL LEVEL SENSOR SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace fuel level sensor unit.

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METER CONTROL SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

METER CONTROL SWITCH SIGNAL CIRCUIT

Description

INFOID:000000003792574

Transmits the following signals to the combination meter.

-  (enter) switch is pressed
-  (select) switch signal

Diagnosis Procedure

INFOID:000000003792575

1.CHECK METER CONTROL SWITCH INPUT SIGNAL

1. Turn the ignition switch ON.
2. Check voltage between the following terminals of the combination meter.

Terminals				Condition	Voltage (Approx.)
Combination meter					
(+)		(-)			
Connector	Terminal	Connector	Terminal		
M34	11	M34	10	When  (enter) switch is pressed	0 V
				Other than the above	5 V
	12			When  (select) switch is pressed	0 V
				Other than the above	5 V

Is the inspection result normal?

- YES >> INSPECTION END
 NO >> GO TO 2.

2.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the combination meter and meter control switch connectors.
3. Check continuity between combination meter harness connector terminals and meter control switch harness connector terminals.

Terminals				Continuity
Combination meter		Meter control switch		
(+)		(-)		
Connector	Terminal	Connector	Terminal	
M34	10	M83	2	Existed
	11		7	
	12		6	

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

Terminals			Continuity
(+)		(-)	
Combination meter		Ground	
Connector	Terminal		
M34	10		
	11		
	12		
			Not existed

Is the inspection result normal?

METER CONTROL SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

YES >> INSPECTION END
NO >> Repair harness or connector.

Component Inspection

INFOID:000000003792576

1.CHECK METER CONTROL SWITCH

1. Turn the ignition switch OFF.
2. Disconnect the meter control switch connector.
3. Check continuity between the following terminals of the meter control switch.

Connector	Terminal No.		Operation and status	Continuity
M83	6	2	Press the ● (select) switch	Existed
			Other than the above	Not existed
	7	2	Press the □ (enter) switch	Existed
			Other than the above	Not existed

Is inspection result OK?

YES >> INSPECTION END
NO >> Replace the meter control switch.

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MWI

OIL PRESSURE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

OIL PRESSURE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000003792577

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

Component Function Check

INFOID:000000003792578

1.CHECK COMBINATION METER INPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and check the "OIL W/L" monitor value.

"OIL W/L"

Ignition switch ON : On

Engine running : Off

>> INSPECTION END

Diagnosis Procedure

INFOID:000000003792579

1.CHECK OIL PRESSURE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and oil pressure switch connector.
3. Check continuity between IPDM E/R harness connector terminal and oil pressure switch harness connector terminal.

Terminals				Continuity
(+)		(-)		
IPDM E/R		Oil pressure switch		
Connector	Terminal	Connector	Terminal	
F12	75	F63	1	Existed

4. Check continuity between IPDM E/R harness connector terminal and ground.

Terminals			Continuity
(+)		(-)	
IPDM E/R		Ground	
Connector	Terminal		
F12	75		Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:000000003792580

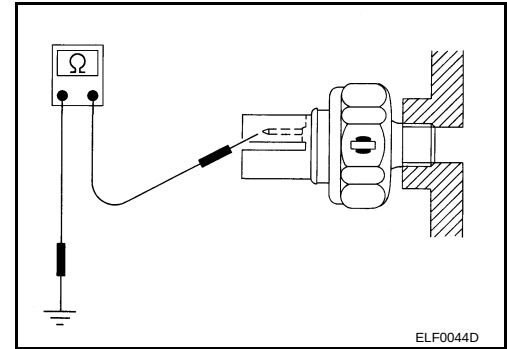
1.CHECK OIL PRESSURE SWITCH UNIT

OIL PRESSURE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

Check continuity between oil pressure switch and ground.

Condition	Continuity
Engine stopped	Existed
Engine running	Not existed



Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the oil pressure switch.

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MWI

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING BRAKE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000003792581

Transmits the parking brake switch signal to the combination meter.

Diagnosis Procedure

INFOID:000000003792582

1.CHECK COMBINATION METER INPUT SIGNAL

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

Terminals			Condition	Voltage (Approx.)
(+)		(-)		
Combination meter		Ground		
Connector	Terminal			
M34	26			
		When parking brake is applied	0 V	
		When parking brake is released	5 V	

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

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

Terminals				Continuity
(+) (+)		(-) (-)		
Combination meter		Parking brake switch		
Connector	Terminal	Connector	Terminal	
M34	26	E27	1	Existed

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

Terminals			Continuity
(+)		(-)	
Combination meter			
Connector	Terminal	Ground	
M34	26		Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:000000003792583

1.CHECK PARKING BRAKE SWITCH

Check parking brake switch. Refer to [BRC-124, "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace parking brake switch.

COMBINATION METER

< ECU DIAGNOSIS >

ECU DIAGNOSIS

COMBINATION METER

Reference Value

INFOID:000000003792588

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
SPEED METER [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
SPEED OUTPUT [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
ODO OUTPUT [km/h or mph]	Ignition switch ON	—	Equivalent to odometer reading in combination meter
TACHO METER [rpm]	Ignition switch ON	While driving	Equivalent to tachometer reading NOTE: 8191.875 is displayed when the malfunction signal is received
FUEL METER [lit]	Ignition switch ON	—	Values according to fuel level
W TEMP METER [°C]	Ignition switch ON	—	Values according to engine coolant temperature NOTE: 215 is displayed when the malfunction signal is input
ABS W/L	Ignition switch ON	ABS warning lamp ON	On
		ABS warning lamp OFF	Off
VDC/TCS IND	Ignition switch ON	VDC OFF indicator lamp ON	On
		VDC OFF indicator lamp OFF	Off
SLIP IND	Ignition switch ON	SLIP Indicator lamp ON	On
		SLIP indicator lamp OFF	Off
BRAKE W/L	Ignition switch ON	Brake warning lamp ON	On
		Brake warning lamp OFF	Off
DOOR W/L	Ignition switch ON	Door warning ON	On
		Door warning OFF	Off
TRUNK/GLAS-H	Ignition switch ON	Trunk warning ON	On
		Trunk warning OFF	Off
HI-BEAM IND	Ignition switch ON	High-beam indicator lamp ON	On
		High-beam indicator lamp OFF	Off
TURN IND	Ignition switch ON	Turn signal indicator lamp ON	On
		Turn signal indicator lamp OFF	Off
FR FOG IND	Ignition switch ON	Front fog light indicator lamp ON	On
		Front fog light indicator lamp OFF	Off
RR FOG IND	Ignition switch ON	Rear fog light indicator lamp ON	On
		Rear fog light indicator lamp OFF	Off
LIGHT IND	Ignition switch ON	Tail lamp indicator lamp ON	On
		Tail lamp indicator lamp OFF	Off

COMBINATION METER

< ECU DIAGNOSIS >

Monitor Item	Condition		Value/Status
OIL W/L	Ignition switch ON	Oil pressure warning lamp ON	On
		Oil pressure warning lamp OFF	Off
MIL	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off
CRUISE IND	Ignition switch ON	Cruise indicator lamp ON	On
		Cruise indicator lamp OFF	Off
SPORT IND	Ignition switch ON	SPORT indicator lamp ON	On
		SPORT indicator lamp OFF	Off
4WD W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
4WD LOCK IND	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
FUEL W/L	Ignition switch ON	Low-fuel warning lamp ON	On
		Low-fuel warning lamp OFF	Off
WASHER W/L	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
KEY G/Y W/L	Ignition switch ON	KEY warning lamp (green/yellow) ON	On
		KEY warning lamp (green/yellow) OFF	Off
LCD	Ignition switch ON	Engine start information display	B&P I
	Ignition switch ACC	Engine start information display	B&P N
	Ignition switch LOCK	Key ID warning display	ID NG
	Ignition switch LOCK	Steering lock information display	ROTAT
	Ignition switch LOCK	P position warning display	SFT P
	Ignition switch LOCK	Intelligent Key insert information display	INSRT
	Ignition switch LOCK	Intelligent Key low battery warning display	BATT
	Ignition switch ON	Take away warning display	NO KY
	Ignition switch LOCK	Key warning display	OUTKY
	Ignition switch ON	ACC warning display	LK WN
SHIFT IND	Ignition switch ON	Shift position indicator P display	P
		Shift position indicator R display	R
		Shift position indicator N display	N
		Shift position indicator D display	D
		Shift position indicator L display	L
O/D OFF SW	Ignition switch ON	Sport mode switch pressed	On
		Other than the above	Off

COMBINATION METER

< ECU DIAGNOSIS >

Monitor Item	Condition		Value/Status
M RANGE SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	On
NM RANGE SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
AT SFT UP SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	On
AT SFT DWN SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	On
ST SFT UP SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
ST SFT DWN SW	Ignition switch ON	NOTE: This item is displayed, but cannot be monitored.	Off
PKB SW	Ignition switch ON	Parking brake switch ON	On
		Parking brake switch OFF	Off
BUCKLE SW	Ignition switch ON	Seat belt not fastened	On
		Seat belt fastened	Off
BRAKE OIL SW	Ignition switch ON	Brake fluid level switch ON	On
		Brake fluid level switch OFF	Off
DISTANCE [km]	Ignition switch ON	—	Possible driving distance calculated by combination meter
A/C AMP CONN	Ignition switch ON	Receives A/C auto amp. connection recognition signal	On
		Other than the above	Off
ENTER SW	Ignition switch ON	When  is pressed	On
		Other than the above	Off
SELECT SW	Ignition switch ON	When  is pressed	On
		Other than the above	Off
OUTSIDE TEMP [°C] or [°F]	Ignition switch ON	—	Equivalent to ambient temperature NOTE: This may not match the indicated value on the information display.
FUEL LOW SIG	Ignition switch ON	Low fuel warning signal output	On
		Low fuel warning signal not output	Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off

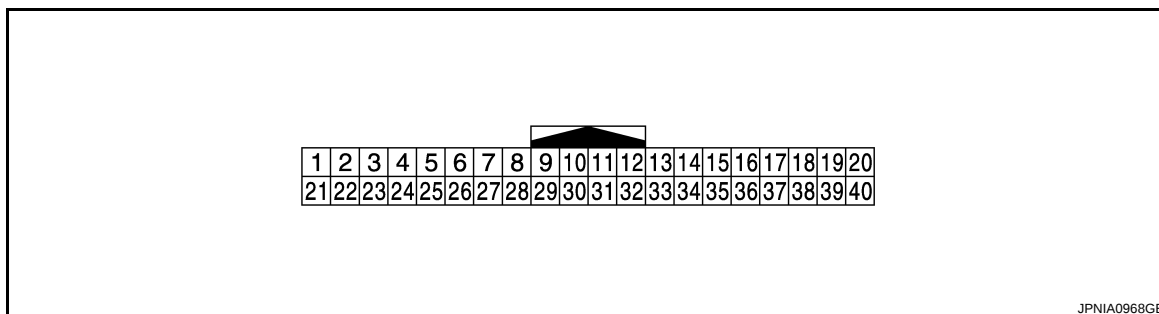
NOTE:

Some items are not available according to vehicle specification.

COMBINATION METER

< ECU DIAGNOSIS >

TERMINAL LAYOUT

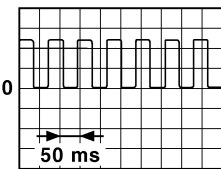
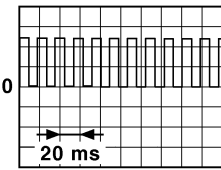
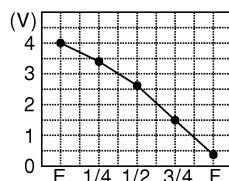


PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
1 (W/L)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (O)	Ground	IGN signal	Input	Ignition switch ON	—	Battery voltage
3 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
10 (O/L)	Ground	Meter control switch ground	—	Ignition switch ON	—	0 V
11 (L/R)	10 (O/L)	Enter switch signal	Input	Ignition switch ON	When is pressed.	0 V
					Other than the above	5 V
12 (B/R)	10 (O/L)	Select switch signal	Input	Ignition switch ON	When is pressed.	0 V
					Other than the above	5 V
15 (BR/W)	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	4 V
					Air bag warning lamp OFF	0 V
18 (O/B)	Ground	Ambient sensor signal	Input	Ignition switch ON	Changes depending to am- bient temperature.	JSNIA0014GB
19 (P)	Ground	A/C auto amp. connection recognition signal	Input	Ignition switch ON	—	5 V
20 (B/Y)	Ground	Ambient sensor ground	Input	Ignition switch ON	—	0 V
21 (L)	—	CAN-H	—	—	—	—
22 (P)	—	CAN-L	—	—	—	—

COMBINATION METER

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
23 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
24 (B/W)	Ground	Fuel level sensor signal ground	—	Ignition switch ON	—	0 V
25 (BR)	Ground	Alternator signal	Input	Ignition switch ON	Charge warning lamp ON	2 V
					Charge warning lamp OFF	12 V
26 (G/R)	Ground	Parking brake switch signal	Input	Ignition switch ON	When parking brake is ap- plied	0 V
					When parking brake is re- leased	5 V
27 (V)	Ground	Brake fluid level switch sig- nal	Input	Ignition switch ON	Brake fluid level is normal	12 V
					Brake fluid level is less than low level	0 V
28 (L/O)	Ground	Security signal	Input	Ignition switch ON	Security warning lamp OFF	12 V
					Security warning lamp ON	0 V
30 (L/B)	Ground	Vehicle speed signal output (2-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies de- pending on the specification (destination unit).  JSNIA0015GB
31 (V/W)	Ground	Vehicle speed signal output (8-pulse)	Output	Ignition switch ON	Speedometer operated [When vehicle speed is ap- prox. 40 km/h (25 MPH)]	NOTE: The maximum voltage varies de- pending on the specification (destination unit).  JSNIA0012GB
32 (LG/R)	Ground	Sport mode switch signal	Input	Ignition switch ON	Sport mode switch pressed.	0 V
					Sport mode switch not pressed.	5 V
34 (G/B)	Ground	Fuel level sensor signal	Input	Ignition switch ON	—	 JPNIA0740ZZ

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COMBINATION METER

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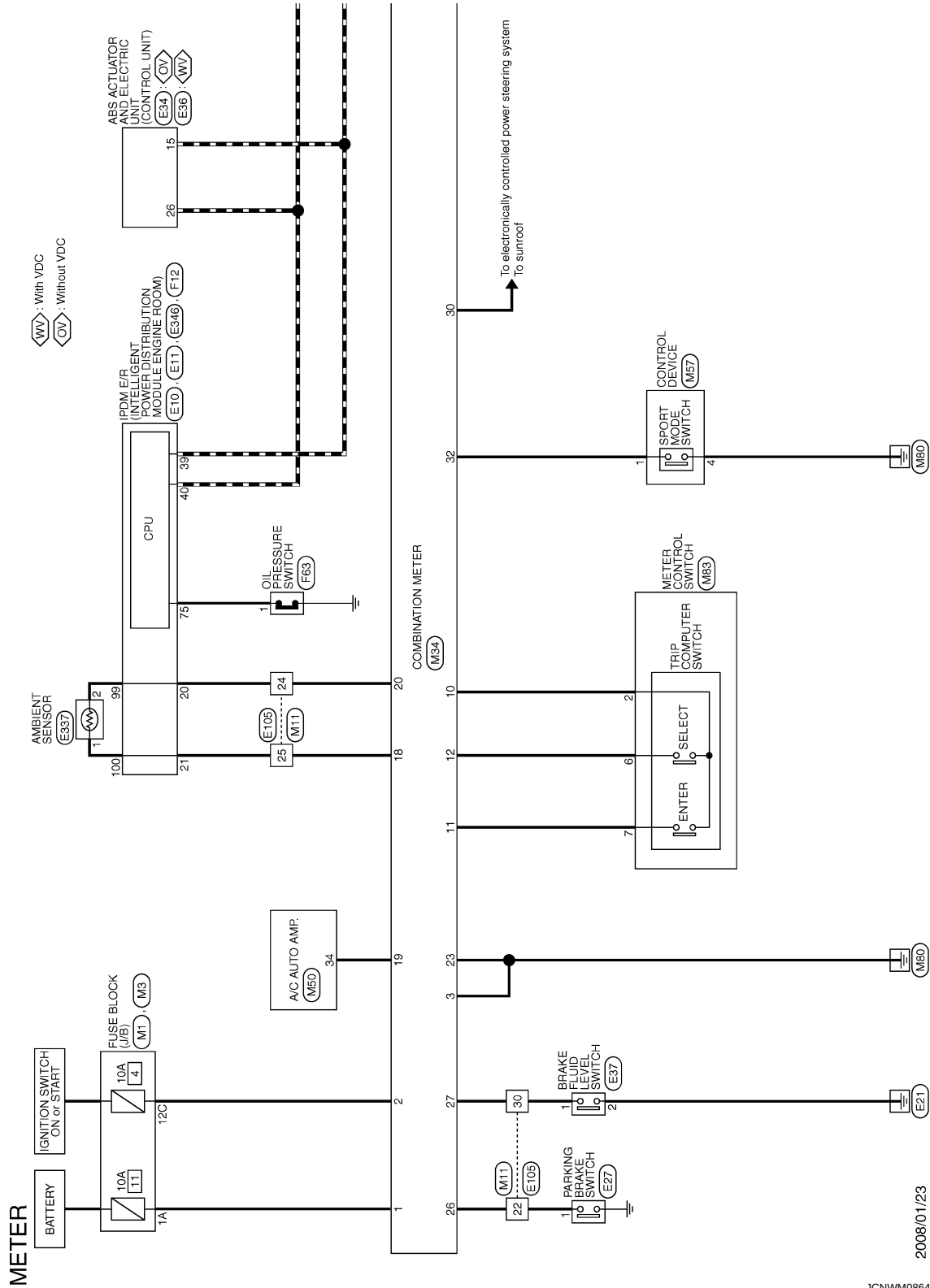
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	–	Signal name	Input/ Output			
35 (W/B)	Ground	Seat belt buckle switch signal (driver side)	Input	Ignition switch ON	When driver seat belt is fastened.	12 V
					When driver seat belt is unfastened.	0 V

COMBINATION METER

< ECU DIAGNOSIS >

Wiring Diagram - METER -

INFOID:000000003792589



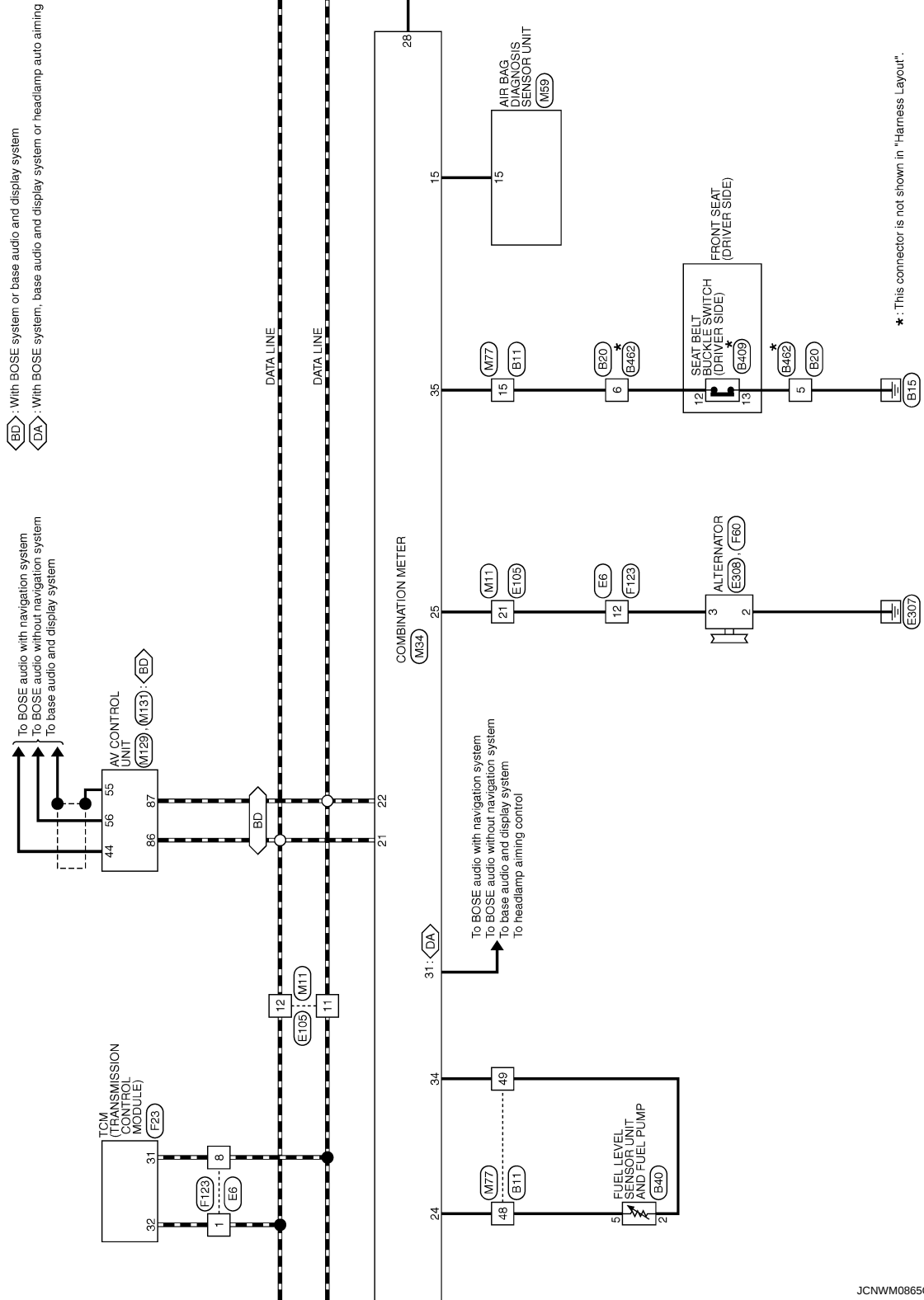
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COMBINATION METER

< ECU DIAGNOSIS >

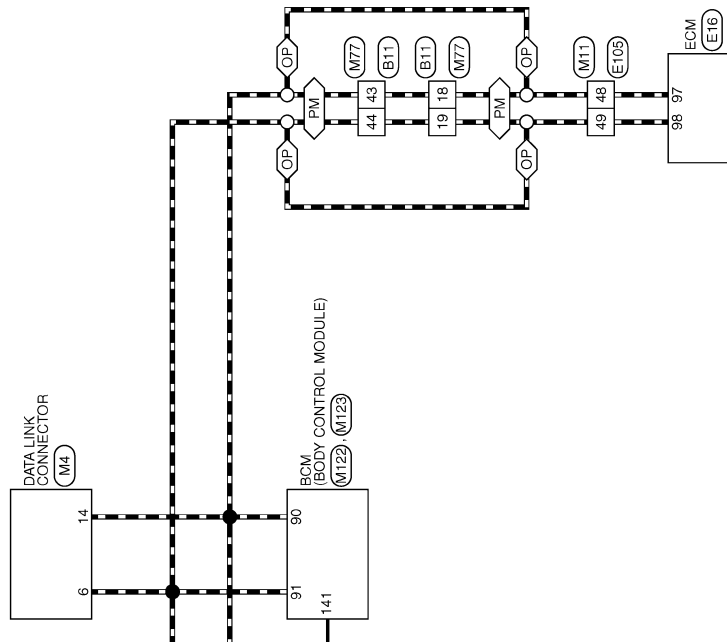


JCNWWM0865G1

COMBINATION METER

< ECU DIAGNOSIS >

PM : With automatic drive positioner
OP : Without automatic drive positioner



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COMBINATION METER

< ECU DIAGNOSIS >

METER

Connector No.	B11
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS19



Terminal No.	Color of Wire	Signal Name [Specification]
15	GR	-
18	P	-
19	L	-
43	P	-
44	L	-
48	P	-
49	V	-

Connector No.	B20
Connector Name	WIRE TO WIRE
Connector Type	TK10FW-NS8



Terminal No.	Color of Wire	Signal Name [Specification]
5	B/W	-
6	GR	-

Connector No.	B40
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP
Connector Type	E06FGY-RS



Terminal No.	Color of Wire	Signal Name [Specification]
2	V	-
5	P	-

Connector No.	B409
Connector Name	SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	TK03FW



Terminal No.	Color of Wire	Signal Name [Specification]
12	W/G	-
13	GR	-

Connector No.	B462
Connector Name	WIRE TO WIRE
Connector Type	TK10MW-NS8



Connector No.	E6
Connector Name	WIRE TO WIRE
Connector Type	TK10MGY-1V



Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS12-M4-1V



Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH08FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
5	GR	-
6	W/G	-

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

Terminal No.	Color of Wire	Signal Name [Specification]
20	B	-
21	O	-

Terminal No.	Color of Wire	Signal Name [Specification]
39	P	-
40	L	-

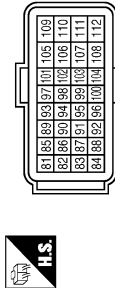
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COMBINATION METER

< ECU DIAGNOSIS >

METER

Connector No.	E16
Connector Name	ECM
Connector Type	RH24FB-RZ8-L-LH



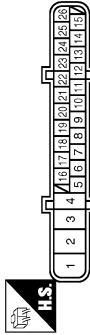
Terminal No.	Color of Wire	Signal Name [Specification]
97	P	VEHGAN-L
98	L	VEHGAN-H

Connector No.	E27
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A



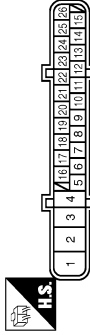
Terminal No.	Color of Wire	Signal Name [Specification]
1	P	-

Connector No.	E34
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (WITHOUT VDC)
Connector Type	BA42ZFB-ANZ4-RH



Terminal No.	Color of Wire	Signal Name [Specification]
15	P	CAN(-)
26	L	CAN(+)

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (WITH VDC)
Connector Type	BA42ZFB-ANZ4-RH



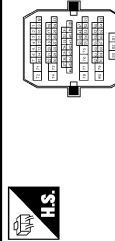
Terminal No.	Color of Wire	Signal Name [Specification]
15	P	CAN-L(YFS)
26	L	CAN-H(YFS)

Connector No.	E37
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Type	TV02FGY



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
2	B/Y	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH70MW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
21	BR	-
22	P	-
24	B	-
25	O	-
30	V	-
48	P	-
49	L	-

Connector No.	E308
Connector Name	ALTERNATOR
Connector Type	E-LAB



Terminal No.	Color of Wire	Signal Name [Specification]
2	B	-

Connector No.	E337
Connector Name	AMBIENT SENSOR
Connector Type	RS02FB



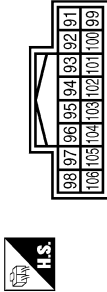
Terminal No.	Color of Wire	Signal Name [Specification]
1	SS	-
2	W	-

COMBINATION METER

< ECU DIAGNOSIS >

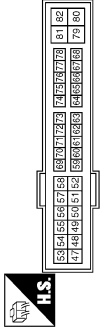
METER

Connector No.	E346
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH16FW-NH



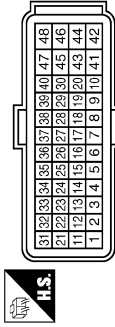
Terminal No.	Color of Wire	Signal Name [Specification]
99	W	-
100	SB	-

Connector No.	F12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH20FW-CS/2-M4



Terminal No.	Color of Wire	Signal Name [Specification]
75	P/L	-

Connector No.	F23
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	8H40FB-T23-L-RH



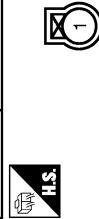
Terminal No.	Color of Wire	Signal Name [Specification]
31	P	CAN-L
32	L	CAN-H

Connector No.	F60
Connector Name	AL TERMINATOR
Connector Type	HS30FB



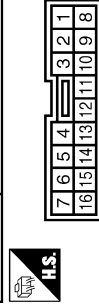
Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	F83
Connector Name	OIL PRESSURE SWITCH
Connector Type	E0 FG-Y-RS-AR



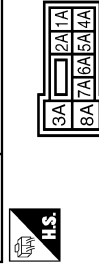
Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-

Connector No.	F123
Connector Name	WIRE TO WIRE
Connector Type	TK18FGY-1V



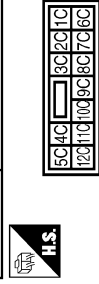
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
8	P	-
12	BR	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS08FW-M2



Terminal No.	Color of Wire	Signal Name [Specification]
1A	W/L	-

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
12C	O	-

JCNWWM0869G1

COMBINATION METER

< ECU DIAGNOSIS >

METER

Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD16FW



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

Terminal No.	Color of Wire	Signal Name [Specification]
6	L	-
14	P	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH7DFW-CS10-M3



Terminal No.	Color of Wire	Signal Name [Specification]
11	P	-
12	L	-
21	BR	-
22	G/R	-
24	B/Y	-
25	O/B	-
30	V	-
48	P	-
49	L	-

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH4DFW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Terminal No.	Color of Wire	Signal Name [Specification]
1	W/L	BAT
2	O	IGN
3	B	GROUND
10	O/L	METER CONTROL SWITCH GROUND
11	L/R	ENTER SWITCH SIGNAL
12	B/R	SELECT SWITCH SIGNAL
13	BR/W	AIR BAG
18	O/B	AMBIENT SENSOR SIGNAL
19	P	A/C AUTO AMP CONNECTION RECOGNITION SIGNAL
20	B/Y	AMBIENT SENSOR GROUND
21	L	GAN-H

Connector No.	M50
Connector Name	A/C AUTO AMP.
Connector Type	SAB4DFW



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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Connector No.	M57
Connector Name	CONTROL DEVICE
Connector Type	TK10FW



1	2	3	4	5	6	7	8	9
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Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	TK20FY-EX-SC



18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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Terminal No.	Color of Wire	Signal Name [Specification]
34	P	A/C AUTO AMP CONNECTION RECOGNITION SIGNAL

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG/R	-
4	B/Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
15	BR/W	W/L

22	P	GAN-L
23	B	GROUND
24	B/W	FUEL LEVEL SENSOR GROUND
25	BR	CRG
26	G/R	PARKING BRAKE SWITCH SIGNAL
27	V	BRAKE FLUID LEVEL SWITCH SIGNAL
28	L/O	SECURITY
30	L/B	VEHICLE SPEED SIGNAL (2-PULSE)
31	V/W	VEHICLE SPEED SIGNAL (8-PULSE)
32	LG/R	SPORT MODE SWITCH SIGNAL
34	G/B	FUEL LEVEL SENSOR SIGNAL
35	W/B	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH8DFW-CS19



Terminal No.	Color of Wire	Signal Name [Specification]
15	W/B	-
18	P	-
19	L	-
43	P	-
44	L	-
48	B/W	-
49	G/B	-

JCNWM0870GI

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COMBINATION METER

< ECU DIAGNOSIS >

METER

Connector No.	M83
Connector Name	METER CONTROL SWITCH
Connector Type	TH8BMW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	O/L	GND(SATELLITE SW)
6	B/R	MODE SW B
7	L/R	MODE SW A

Connector No.	M131
Connector Name	AV CONTROL UNIT
Connector Type	TH42FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
86	L	CAN-H
87	P	CAN-L

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH4GFB-NH



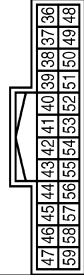
Terminal No.	Color of Wire	Signal Name [Specification]
90	P	CAN-L
91	L	CAN-H

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH4JGFB-NH



Terminal No.	Color of Wire	Signal Name [Specification]
141	L/O	SECURITY INDICATOR OUTPUT

Connector No.	M129
Connector Name	AV CONTROL UNIT
Connector Type	TH24FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
44	G	COMM (DISP->CONT)
55	SHIELD	SHIELD
56	R	COMM (CONT->DISP)

Fail-Safe

FAIL-SAFE

The combination meter activates the fail-safe control if CAN communication with each unit is malfunctioning.

JCNWWM0871G1

INFOID:0000000003792590

COMBINATION METER

< ECU DIAGNOSIS >

Function		Specifications
Speedometer		Reset to zero by suspending communication.
Tachometer		
Water temperature gauge		
Illumination control		When suspending communication, changes to nighttime mode.
Information display	Door open warning	The display turns off by suspending communication.
	Trunk open warning	
	Parking brake release warning	
	Instantaneous fuel warning	- When reception time of an abnormal signal is 2 seconds or less, the last received datum is used for calculation to indicate the result. - When reception time of an abnormal signal is more than two seconds, the last result calculated during normal condition is indicated.
	Average fuel consumption	
	Average vehicle speed	
	Travel distance	
Buzzer		The buzzer turns off by suspending communication.
Warning lamp/indicator lamp	ABS warning lamp	The lamp turns on by suspending communication.
	VDC OFF indicator lamp	
	SLIP indicator lamp	
	Brake warning lamp	
	High beam indicator lamp	The lamp turns off by suspending communication.
	Front fog light indicator lamp	
	Rear fog light indicator lamp	
	Turn signal indicator lamp	
	Light indicator lamp	
	Oil pressure warning lamp	
	Malfunction indicator lamp	
	CRUISE indicator lamp	
	SPORT indicator lamp	
	Key warning lamp	

DTC Index

INFOID:000000003792591

Display contents of CONSULT-III	Diagnostic item is detected when ...	Refer to
CAN COMM CIRCUIT [U1000]	When combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	MWI-37. "Diagnosis Procedure"
CONTROL UNIT (CAN) [U1010]	When detecting error during the initial diagnosis of the CAN controller of combination meter.	MWI-38. "Diagnosis Procedure"
VEHICLE SPEED [B2205]	The abnormal vehicle speed signal is input from the ABS actuator and electric unit (control unit) for 2 seconds or more.	MWI-39. "Diagnosis Procedure"
ENGINE SPEED [B2267]	If ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	MWI-40. "Diagnosis Procedure"
WATER TEMP [B2268]	If ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	MWI-41. "Diagnosis Procedure"

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003900496

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

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
RR FOG SW	Rear fog lamp switch OFF	Off
	Rear 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 RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off	A
CDL LOCK SW	Other than power door lock switch LOCK	Off	B
	Power door lock switch LOCK	On	
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off	C
	Power door lock switch UNLOCK	On	
KEY CYL LK-SW	NOTE: The item is indicated, but not monitored.	Off	
KEY CYL UN-SW	NOTE: The item is indicated, but not monitored.	Off	D
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off	E
HAZARD SW	Hazard switch is OFF	Off	F
	Hazard switch is ON	On	
REAR DEF SW NOTE: At model with BOSE audio system this item is indicated, but is not monitored.	Rear window defogger switch is OFF	Off	G
	Rear window defogger switch is ON	On	
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off	H
TR/BD OPEN SW	Trunk lid opener switch OFF	Off	I
	While the trunk lid opener switch is turned ON	On	
TRNK/HAT MNTR	Trunk lid closed	Off	J
	Trunk lid opened	On	
RKE-LOCK	LOCK button of the key is not pressed	Off	K
	LOCK button of the key is pressed	On	
RKE-UNLOCK	UNLOCK button of the key is not pressed	Off	L
	UNLOCK button of the key is pressed	On	
RKE-TR/BD	TRUNK OPEN button of the key is not pressed	Off	M
	TRUNK OPEN button of the key is pressed	On	
RKE-PANIC	NOTE: The item is indicated, but not monitored.	Off	
RKE-P/W OPEN	NOTE: The item is indicated, but not monitored.	Off	
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off	MWI
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On	
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V	O
	Dark outside of the vehicle	Close to 0 V	
REQ SW -DR	Driver door request switch is not pressed	Off	P
	Driver door request switch is pressed	On	
REQ SW -AS	Passenger door request switch is not pressed	Off	
	Passenger door request switch is pressed	On	
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Trunk lid opener request switch is not pressed	Off
	Trunk lid opener request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
BRAKE SW 1	The brake pedal is not depressed	On
	The brake pedal is depressed	Off
DETE/CANCL SW	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
S/L -LOCK	Steering is locked	Off
	Steering is unlocked	On
S/L -UNLOCK	Steering is unlocked	Off
	Steering is locked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
UNLK SEN -DR	Driver door is unlocked	Off
	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in P position	Off
	Selector lever in any position other than P	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
	Selector lever 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	Steering is locked	Off
	Steering is unlocked	On
S/L UNLK-IPDM	Steering is unlocked	Off
	Steering is locked	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
S/L RELAY-REQ	Ignition switch in OFF or ACC position	Off	A
	Ignition switch in ON position	On	
VEH SPEED 1	While driving	Equivalent to speedometer reading	B
VEH SPEED 2	While driving	Equivalent to speedometer reading	
DOOR STAT-DR	Driver door is locked	LOCK	C
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Driver door is unlocked	UNLOCK	
DOOR STAT-AS	Passenger door is locked	LOCK	D
	Wait with selective UNLOCK operation (5 seconds)	READY	
	Passenger door is unlocked	UNLOCK	
ID OK FLAG	Ignition switch in ACC or ON position	Reset	E
	Ignition switch in OFF position	Set	
PRMT ENG STRT	The engine start is prohibited	Reset	F
	The engine start is permitted	Set	
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset	G
KEY SW -SLOT	The key is not inserted into key slot	Off	
	The key is inserted into key slot	On	H
RKE OPE COUN1	During the operation of the key	Operation frequency of the key	
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	—	I
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	J
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	K
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	L
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	M
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	O
TP 4	The ID of fourth key is not registered to BCM	Yet	
	The ID of fourth key is registered to BCM	Done	P
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	

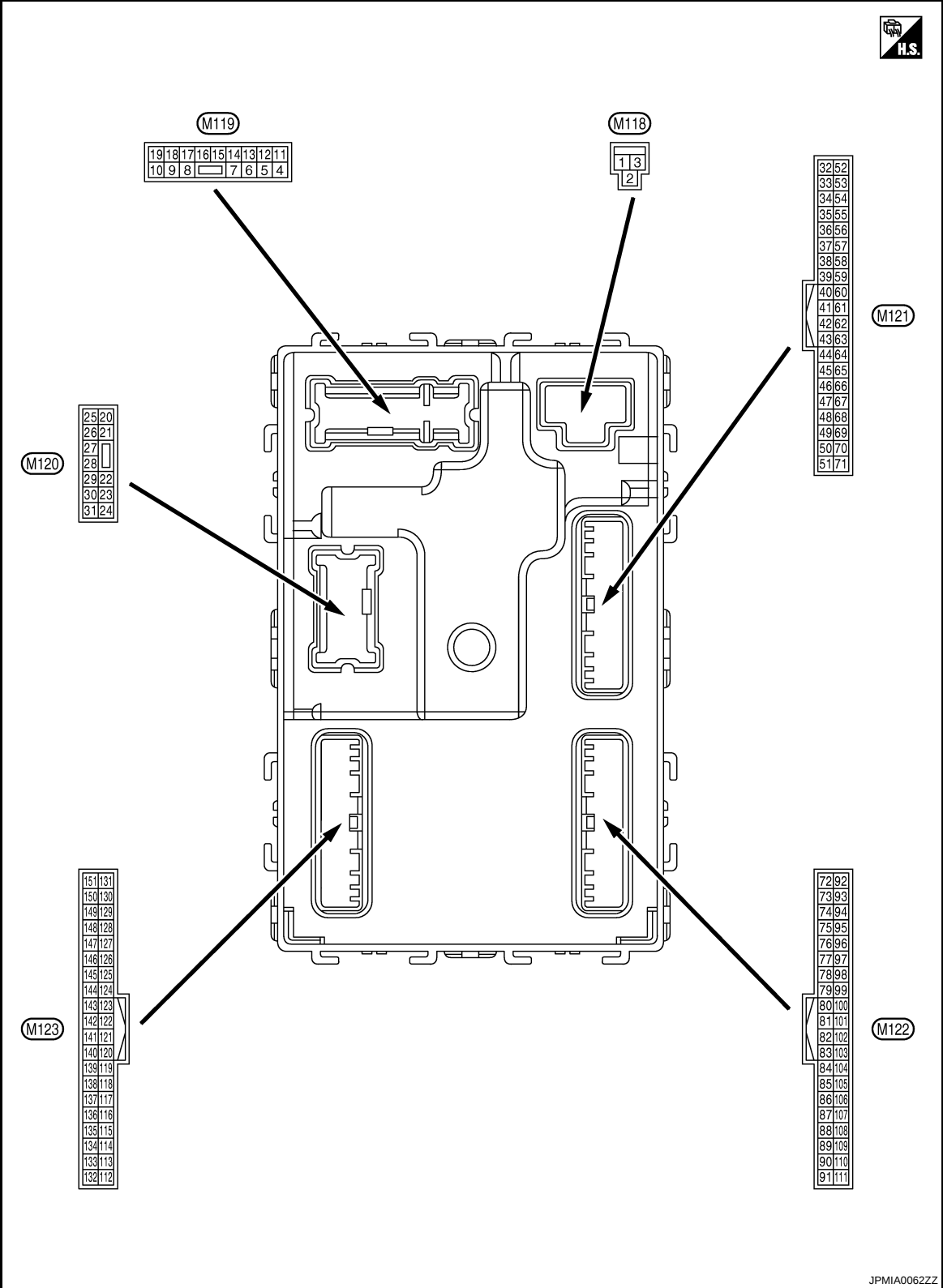
MWI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TP 1	The ID of first key is not registered to BCM	Yet
	The ID of first key is registered to BCM	Done

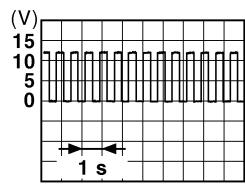
TERMINAL LAYOUT



PHYSICAL VALUES

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (L/W)	Ground	P/W power supply (IGN)	Output	Ignition switch ON		Battery voltage
4 (P/W)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver is activated. (Cuts the interior room lamp power supply)		0 V
				Interior room lamp battery saver is not activated. (Outputs the interior room lamp power supply)		Battery voltage
5 (G/Y)	Ground	Passenger door UNLOCK	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
7 (R/W)	Ground	Step lamp	Output	Step lamp	ON	0 V
					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)	0 V
9 (G)	Ground	Driver door UNLOCK	Output	Driver door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
10 (G/Y)	Ground	Rear RH door and rear LH door UNLOCK	Output	Rear RH door and rear LH door	UNLOCK (Actuator is activated)	Battery voltage
					Other than UNLOCK (Actuator is not activated)	0 V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
13 (B)	Ground	Ground	—	Ignition switch ON		0 V
15 (Y)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ACC or ON	0 V
17 (G/B)	Ground	Turn signal RH (Front and door mirror)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 6.5 V

A

B

C

D

E

F

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J

K

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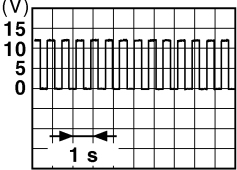
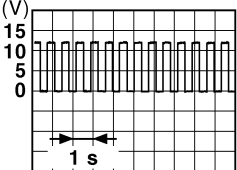
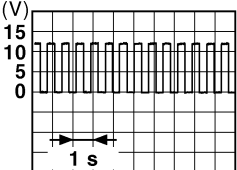
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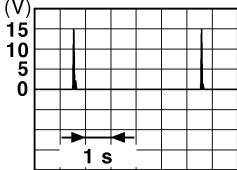
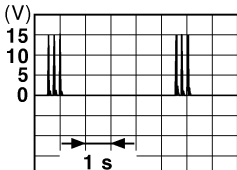
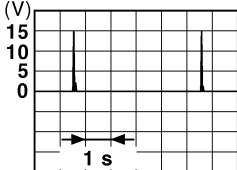
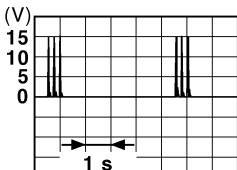
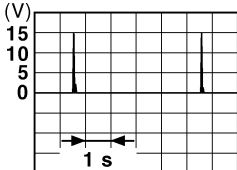
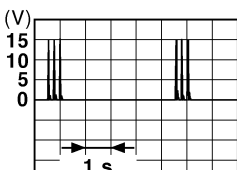
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
18 (G/Y)	Ground	Turn signal LH (Front and door mirror)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
20 (G/B)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
23 (R)	Ground	Trunk lid opening	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	Battery voltage
					Other than OPEN (Trunk lid opener actuator is not activated)	0 V
24 (G)	Ground	Rear fog lamp	Output	Rear fog lamp	OFF	0 V
					ON	Battery voltage
25 (G/Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
30 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	OFF	0 V
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
34 (B)	Ground	Trunk room antenna (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
35 (W)	Ground	Trunk room antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
38 (L/O)	Ground	Rear bumper anten- na (-)	Output	When the trunk lid opener request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detec- tion area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB

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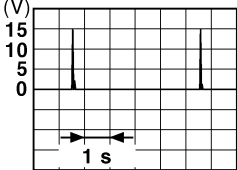
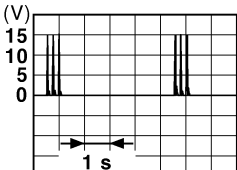
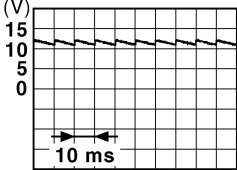
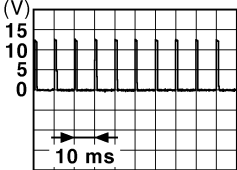
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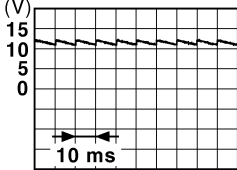
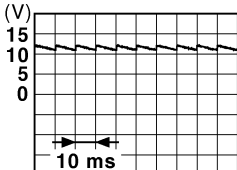
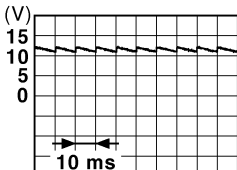
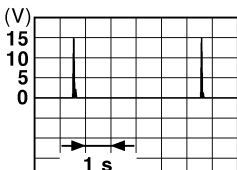
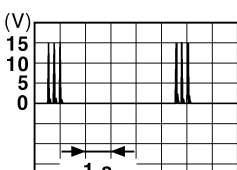
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
39 (BR/W)	Ground	Rear bumper antenna (+)	Output	When the trunk lid opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
				When Intelligent Key is not in the antenna detection area	When Intelligent Key is not in the antenna detection area	 JMKIA0063GB
47 (BR/W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V
50 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (When trunk lid closes)	 JPMIA0011GB 11.8 V
					ON (When trunk lid opens)	0 V
52 (R)	Ground	Starter relay control	Output	Ignition switch ON	When selector lever is in P or N position	Battery voltage
					When selector lever is not in P or N position	0.3 V
				Ignition switch OFF		0 V
61 (G/R)	Ground	Trunk lid request switch	Input	Trunk lid request switch	ON (Pressed)	0 V
					OFF (Not pressed)	 JPMIA0016GB 1.0 V
64 (GR)	Ground	Request switch buzzer	Output	Request switch buzzer	Sounding	0 V
					Not sounding	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

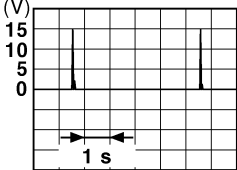
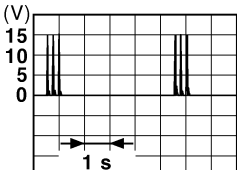
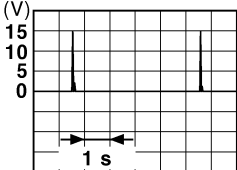
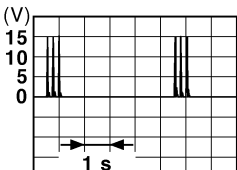
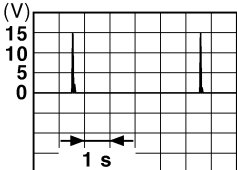
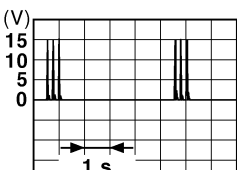
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
67 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed	0 V
					Not pressed	 11.8 V JPMIA0011GB
68 (R/W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	 11.8 V JPMIA0011GB
					ON (When rear RH door opens)	0 V
69 (R/B)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	 11.8 V JPMIA0011GB
					ON (When rear LH door opens)	0 V
72 (B/R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 1 s JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 1 s JMKIA0063GB

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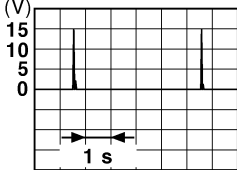
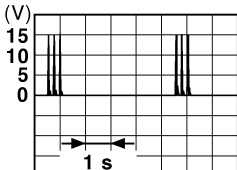
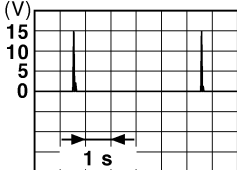
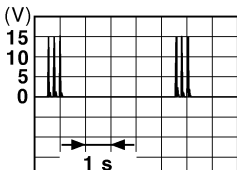
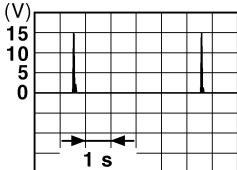
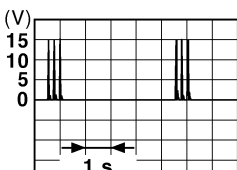
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
73 (W/R)	Ground	Room antenna 2 (+) (center console)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
74 (B/Y)	Ground	Passenger door an- tenna (-)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
75 (LG)	Ground	Passenger door an- tenna (+)	Output	When the pas- senger door re- quest switch is operated with ig- nition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
76 (V)	Ground	Driver door antenna (-)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
77 (P)	Ground	Driver door antenna (+)	Output	When the driver door request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	 JMKIA0062GB
					When Intelligent Key is not in the antenna detec- tion area	 JMKIA0063GB
78 (R)	Ground	Room antenna 1 (-) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB

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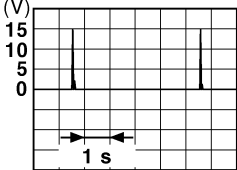
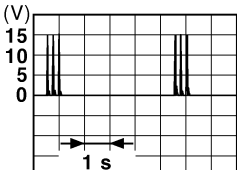
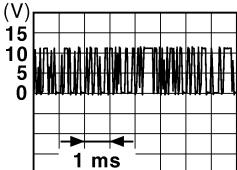
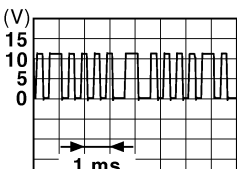
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
79 (G)	Ground	Room antenna 1 (+) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	 JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	 JMKIA0063GB
80 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82 (R/B)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
83 (L/O)	Ground	Remote keyless en- try receiver commu- nication	Input/ Output		During waiting	 JMKIA0064GB
					When operating either button on the key	 JMKIA0065GB

BCM (BODY CONTROL MODULE)

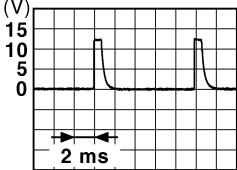
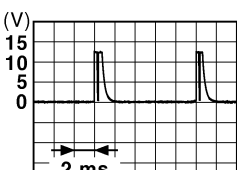
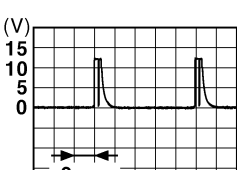
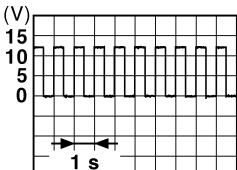
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
87 (R/Y)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	 1.3 V
					Rear fog lamp switch ON (Wiper intermittent dial 4)	 1.2 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	 1.3 V

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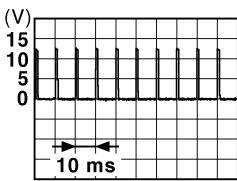
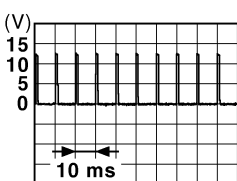
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
88 (R/G)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 JPMIA0036GB 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 JPMIA0037GB 1.3 V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 JPMIA0040GB 1.3 V
89 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push switch)	Pressed	0 V
					Not pressed	Battery voltage
90 (P)	Ground	CAN-L	Input/ Output	—	—	—
91 (L)	Ground	CAN-H	Input/ Output	—	—	—
92 (R/L)	Ground	Key slot illumination	Output	Key slot illumination	OFF	Battery voltage
					Blinking	 JPMIA0015GB 6.5 V
					ON	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
93 (Y)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
					ON or ACC	0 V
95 (L)	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
					ACC or ON	Battery voltage
96 (Y/R)	Ground	Control device (detention switch) power supply	Output	—		Battery voltage
97 (L/O)	Ground	Steering lock condition No. 1	Input	Steering lock	LOCK status	0 V
					UNLOCK status	Battery voltage
98 (G/R)	Ground	Steering lock condition No. 2	Input	Steering lock	LOCK status	Battery voltage
					UNLOCK status	0 V
99 (G/B)	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
					Any position other than P	Battery voltage
100 (P/L)	Ground	Passenger door request switch	Input	Passenger door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	
101 (B/W)	Ground	Driver door request switch	Input	Driver door request switch	ON (Pressed)	0 V
					OFF (Not pressed)	
102 (Y)	Ground	Blower fan motor relay control	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
103 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
106 (G/Y)	Ground	Steering wheel lock unit power supply	Output	Ignition switch	OFF or ACC	Battery voltage
					ON	0 V

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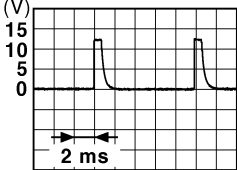
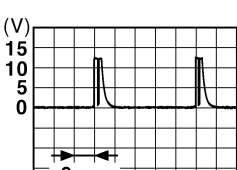
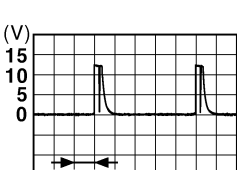
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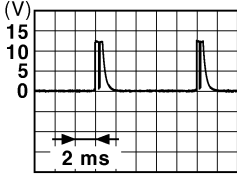
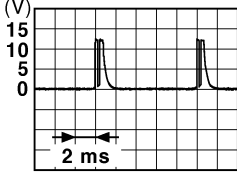
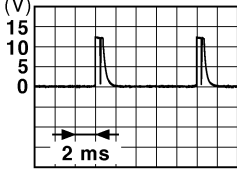
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
107 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	 JPMIA0041GB 1.4 V
					 JPMIA0037GB 1.3 V
					 JPMIA0036GB 1.3 V
					 JPMIA0038GB 1.3 V
					 JPMIA0039GB 1.3 V

BCM (BODY CONTROL MODULE)

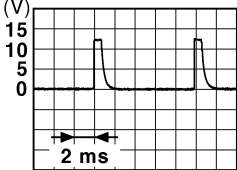
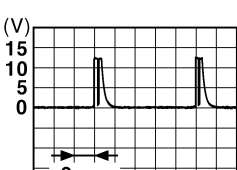
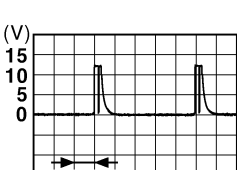
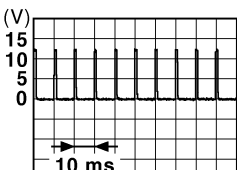
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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
108 (P/B)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	 1.3 V
					Lighting switch 1ST (Wiper intermittent dial 4)	 1.3 V
					Any of the conditions be- low with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	 1.3 V

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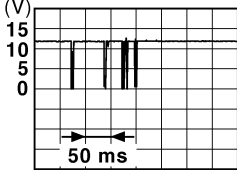
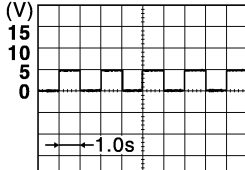
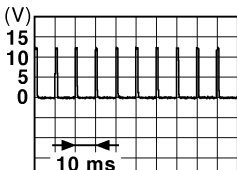
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
109 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 JPMIA0041GB 1.4 V
					Lighting switch PASS	 JPMIA0037GB 1.3 V
					Lighting switch 2ND	 JPMIA0036GB 1.3 V
					Front wiper switch INT	 JPMIA0038GB 1.3 V
					Front wiper switch HI	 JPMIA0040GB 1.3 V
110 (G/O)	Ground	Hazard switch	Input	Hazard switch	ON	0 V
					OFF	 JPMIA0012GB 1.1 V

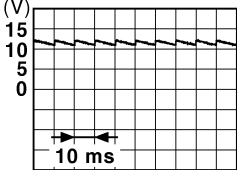
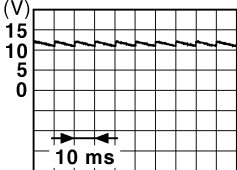
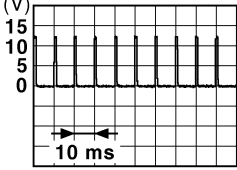
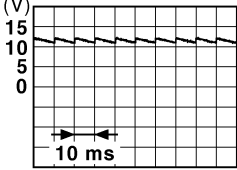
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
111 (L/Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK status Battery voltage
					LOCK or UNLOCK  JMKIA0066GB
					For 15 seconds after UN- LOCK Battery voltage
					15 seconds or later after UNLOCK 0 V
113 (P/B)	Ground	Optical sensor	Input	Ignition switch ON	When bright outside of the vehicle Close to 5 V
					When dark outside of the vehicle Close to 0 V
115 (L)	Ground	Shock sensor	Input	Ignition switch	OFF 0 V
					ACC 5.0 V
					ON  JPMIA1034GB 2.5 V
116 (R/W)	Ground	Fuse check (Stop lamp switch)	Input	—	Battery voltage
118 (O/L)	Ground	Stop lamp switch	Input	Stop lamp switch	OFF (Brake pedal is not depressed) 0 V
					ON (Brake pedal is de- pressed) Battery voltage
119 (G/W)	Ground	Front door lock as- sembly driver side (unlock sensor)	Input	Driver door	LOCK status (unlock sen- sor switch OFF)  JPMIA0012GB 1.1 V
					UNLOCK status (unlock sensor switch ON) 0 V
121 (Y)	Ground	Key slot switch	Input	When the key is inserted into key slot	Battery voltage
				When the key is not inserted into key slot	0 V
122 (V/R)	Ground	ACC feedback	Input	Ignition switch	OFF 0 V
					ACC or ON Battery voltage
123 (G/W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC 0 V
					ON Battery voltage

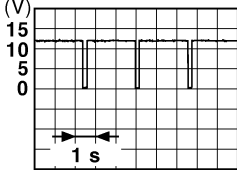
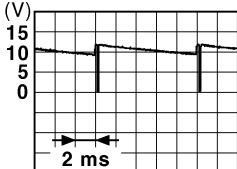
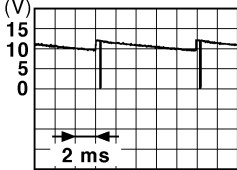
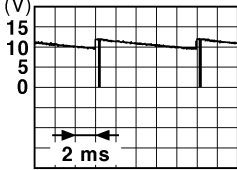
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
124 (R/B)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	 JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V
128 (GR)	Ground	Door lock and un- lock switch LOCK	Input	Door lock and un- lock switch [pow- er window main switch or front power window switch (passen- ger side)]	NEUTRAL position	 JPMIA0011GB 11.8 V
					LOCK position	0 V
130* (GR/W)	Ground	Rear window defog- ger switch	Input	Ignition switch ON	Rear window defogger switch OFF	 JPMIA0012GB 1.1 V
					Rear window defogger switch ON	0 V
131 (GR/R)	Ground	Door lock and un- lock switch UN- LOCK	Input	Door lock and un- lock switch [pow- er window main switch or front power window switch (passen- ger side)]	NEUTRAL position	 JPMIA0011GB 11.8 V
					UNLOCK position	0 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button igni- tion switch illum- ination	ON	9.5 V
					OFF	0 V
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	OFF	Battery voltage
					ON	0 V
137 (P)	Ground	Receiver and sen- sor ground	Input	Ignition switch ON		0 V
138 (V/W)	Ground	Receiver and sen- sor power supply output	Output	Ignition switch	OFF	0 V
					ACC or ON	5.0 V
140 (R/G)	Ground	Selector lever P/N position	Input	Selector lever	P or N position	Battery voltage
					Except P and N positions	0 V

BCM (BODY CONTROL MODULE)

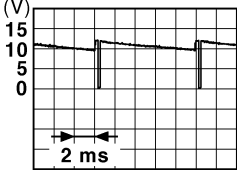
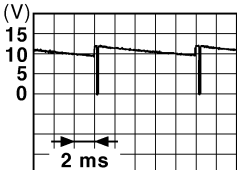
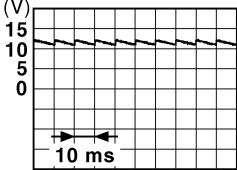
< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
141 (L/O)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 JPMIA0014GB 11.3 V
					OFF	Battery voltage
142 (LG/B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 JPMIA0031GB 10.7 V
					Lighting switch HI	
					Lighting switch 2ND	
					Turn signal switch RH	
143 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 JPMIA0032GB 10.7 V
					Any of the conditions be- low with all switch OFF	
					• Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	
144 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 JPMIA0033GB 10.7 V
					Any of the conditions be- low with all switch OFF	
					• Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
145 (LG/R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front wiper switch INT	 10.7 V
					Front wiper switch LO	
					Lighting switch AUTO	
					Rear fog lamp switch ON	
146 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front fog lamp switch ON	 10.7 V
					Lighting switch 2ND	
					Lighting switch PASS	
					Turn signal switch LH	
150 (SB)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	 11.8 V
					ON (When driver door opens)	0 V
151 (G/R)	Ground	Rear window defog- ger relay	Output	Rear window de- fogger	Active	0 V
					Not activated	Battery voltage

NOTE:

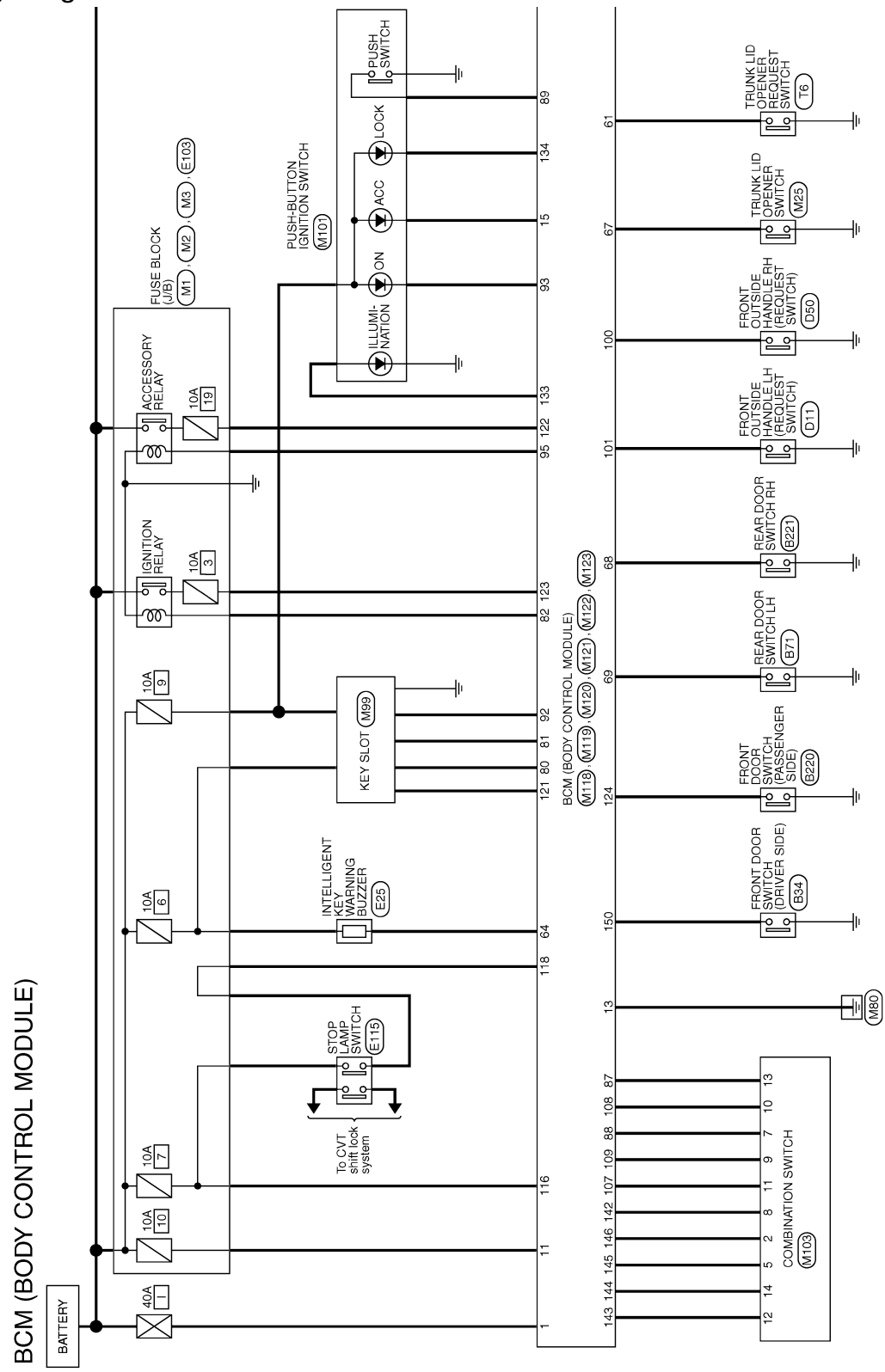
*: Without BOSE audio system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram - BCM -

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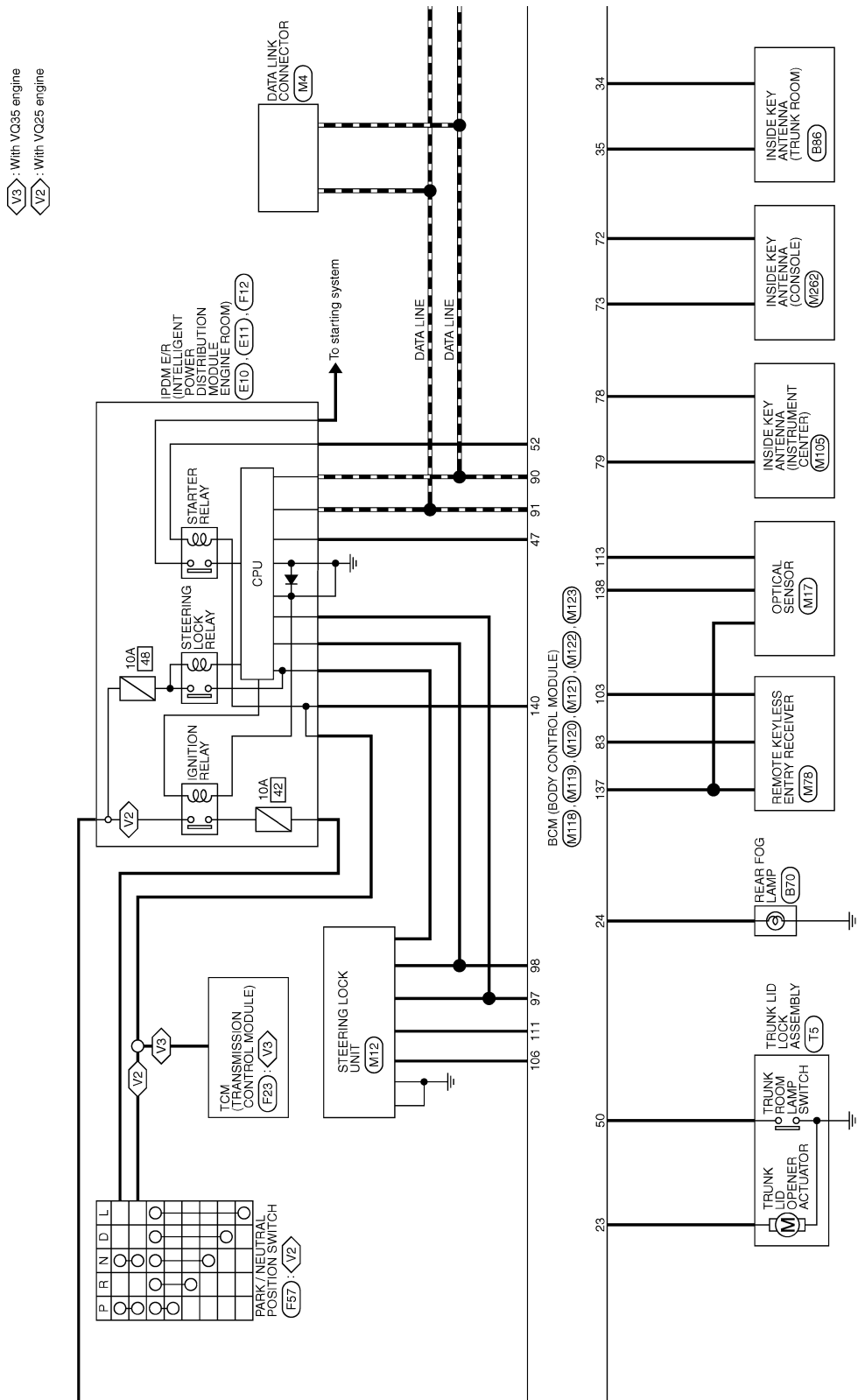


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JCMWM1671G1

BCM (BODY CONTROL MODULE)

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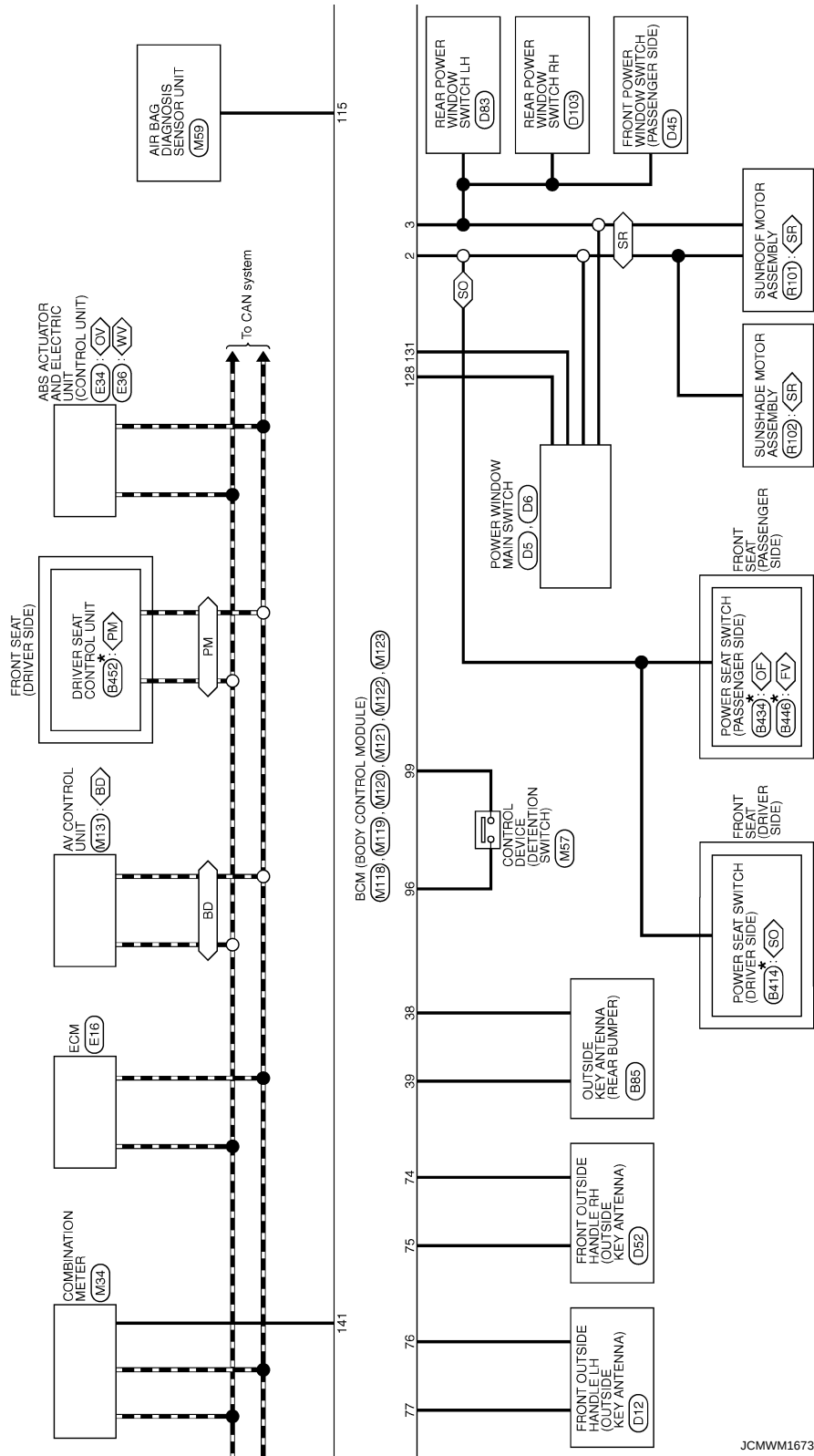
JCMWM1672G

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

- WV : With VDC
- OV : Without VDC
- PM : With automatic drive positioner
- SO : With power seat without automatic drive positioner
- BD : With BOSE system or base audio and display system
- SR : With sunroof
- FV : With front ventilation seat
- OF : Without front ventilation seat

★: This connector is not shown in "Harness Layout".



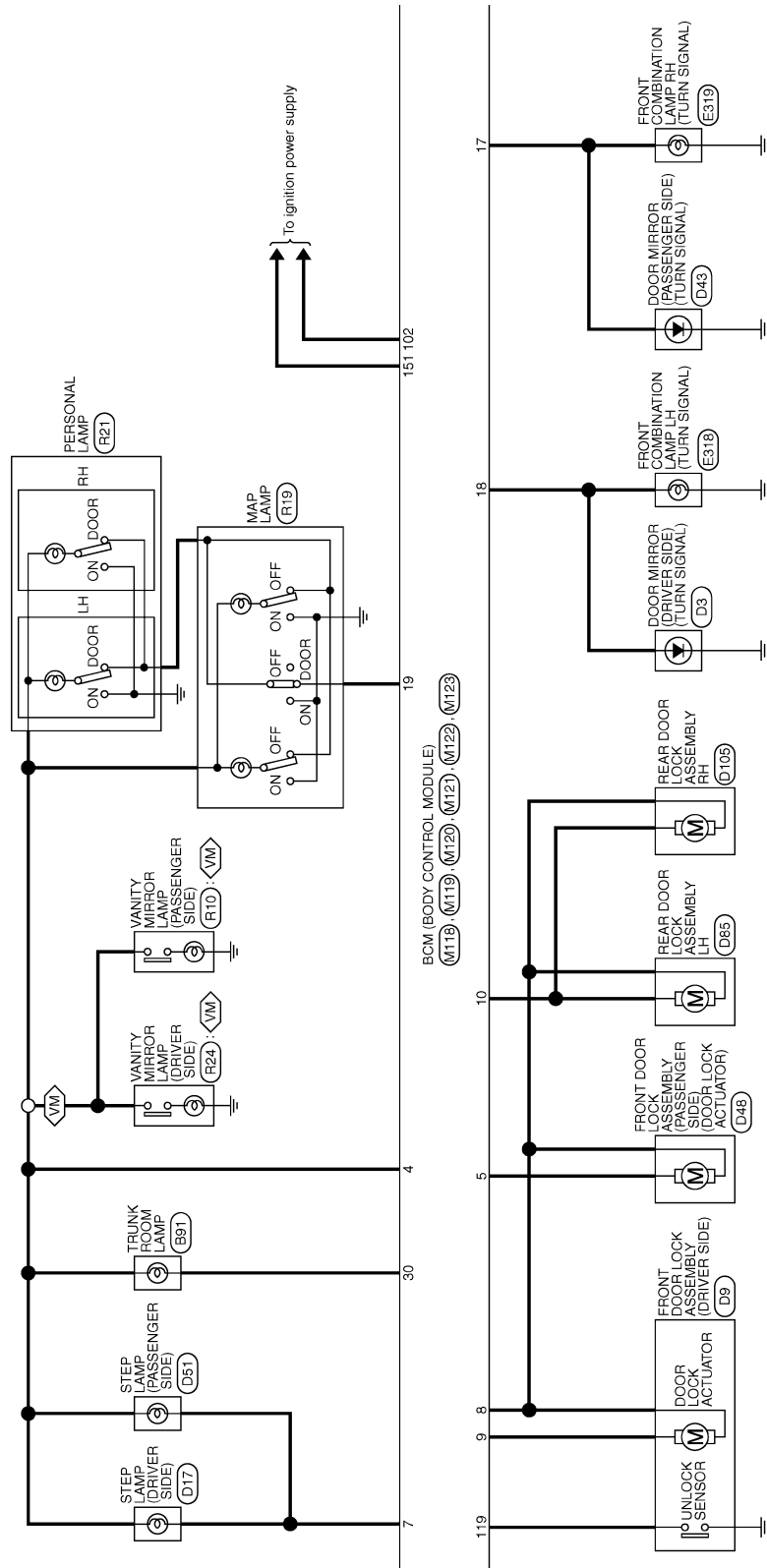
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MWI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

◁ VM ▷ : With vanity mirror lamp

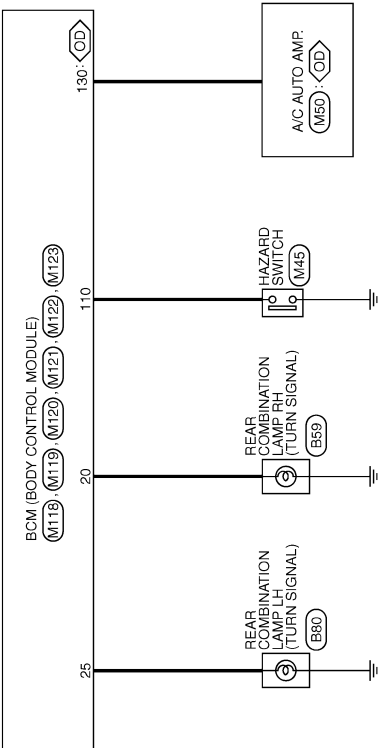


JCMWM1674G

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

⬠OD⬠ : Without BOSE system or base audio and display system



JCMWWM1675G1

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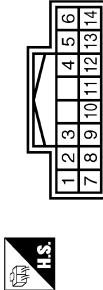
MWI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

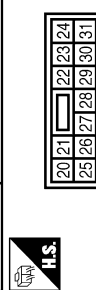
BCM (BODY CONTROL MODULE)

Connector No.	M103
Connector Name	COMBINATION SWITCH
Connector Type	TH16FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
2	G/Y	OUTPUT 4
5	LG/R	OUTPUT 3
7	R/G	INPUT 3
8	LG/B	OUTPUT 5
9	R/B	INPUT 2
10	P/B	INPUT 4
11	R/W	INPUT 1
12	L/W	OUTPUT 1
13	R/Y	INPUT 5
14	G/B	OUTPUT 2

Connector No.	M120
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS12FW-CS



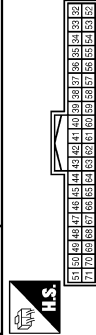
Terminal No.	Color of Wire	Signal Name [Specification]
20	G/B	TURN SIGNAL RH (REAR)
23	R	TRUNK OPEN OUTPUT
24	G	REAR FOG LAMP OUTPUT
25	G/Y	TURN SIGNAL LH (REAR)
30	V/W	TRUNK LAMP OUTPUT

Connector No.	M118
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	M03FB-LC



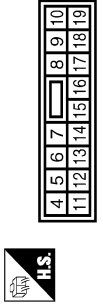
Terminal No.	Color of Wire	Signal Name [Specification]
1	W/B	BAT (F/L)
2	R/Y	POWER WINDOW POWER SUPPLY (BAT)
3	L/W	POWER WINDOW POWER SUPPLY (IGN)

Connector No.	M121
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	Color of Wire	Signal Name [Specification]
34	B	TRUNK ANT 1 B
35	W	TRUNK ANT 1 A
38	L/O	RR BUMPER ANT B
39	BR/W	RR BUMPER ANT A
47	BR/W	IGN RELAY IPDM E/R CONT
50	W	TRUNK SW
52	R	IGN RELAY IPDM E/R CONT
61	G/R	TRUNK REQUEST SW
64	GR	REQUEST SW BUZZER
67	L/R	INTERIOR TRUNK SW
68	R/W	REAR RH DOOR SW

Connector No.	M119
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
4	P/W	INTERIOR ROOM LAMP POWER SUPPLY
5	G/Y	PASSENGER DOOR UNLOCK OUTPUT
7	R/W	STEP LAMP OUTPUT
8	V	ALL DOOR LOCK OUTPUT
9	G	DRIVER DOOR UNLOCK OUTPUT
10	G/Y	REAR DOOR UNLOCK OUTPUT
11	Y/R	BAT (FUSE)
13	B	GND
15	Y	ACC IND
17	G/B	TURN SIGNAL RH (FRONT D/MIRROR)
18	G/Y	TURN SIGNAL LH (FRONT D/MIRROR)

Connector No.	
Connector Name	REAR LH DOOR SW

19	Y	ROOM LAMP TIMER CONTROL
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JCMWM1676G

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Connector No.	M122
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FB-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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Terminal No.	Color of Wire	Signal Name [Specification]
72	B/R	ROOM ANT2-
73	W/R	ROOM ANT2+
74	B/Y	PASSENGER DOOR ANT-
75	L/G	PASSENGER DOOR ANT+
76	V	DRIVER DOOR ANT-
77	P	DRIVER DOOR ANT+
78	R	ROOM ANT1-
79	G	ROOM ANT1+
80	G/O	FOB READER CLOCK
81	O	FOB READER DATA
82	R/B	IGN RELAY (F/B) CONT

83	L/O	KEYLESS ENTRY RECEIVER SIGNAL
87	R/Y	COMBI SW INPUT 5
88	R/G	COMBI SW INPUT 3
89	BR	PUSH SW
90	P	CAN-L
91	L	CAN-H
92	R/L	FOB SLOT ILLUMINATION
93	Y	ON IND
95	L	ACC RELAY CONT
96	Y/R	CONTROL DEVICE POWER SUPPLY
97	L/O	S/L CONDITION 1
98	G/R	S/L CONDITION 2
99	G/B	SHIFT P
100	P/L	PASSENGER DOOR REQUEST SW
101	B/W	DRIVER DOOR REQUEST SW
102	Y	BLOWER FAN MOTOR RELAY CONT
103	L/R	KEYLESS ENTRY RECEIVER POWER SUPPLY
106	G/Y	S/L POWER SUPPLY
107	R/W	COMBI SW INPUT 1
108	P/B	COMBI SW INPUT 4
109	R/B	COMBI SW INPUT 2
110	G/O	HAZARD SW
111	L/Y	S/L COMM

Connector No.	M123
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FG-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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Terminal No.	Color of Wire	Signal Name [Specification]
113	P/B	OPTICAL SENSOR
115	L	SHOCK SENSOR SIGNAL
116	R/W	STOP L LOW SW
118	O/L	STOP L HIGH SW
119	G/W	DR DOOR UNLOCK SENSOR
121	Y	KEY SLOT SW
122	V/R	ACC P/B
123	G/W	IGN P/B
124	R/B	PASSENGER DOOR SW
128	GR	CENTRAL LOCK SW
130	GR/W	REAR DEFOGGER SW

131	GR/R	CENTRAL UNLOCK SW
133	W	PUSH-BUTTON IGNITION SW ILL POWER
134	R	LOCK LED
137	P	RECEIVER SENSOR GND
138	V/W	RECEIVER SENSOR POWER SUPPLY
140	R/G	SHIFT N/P
141	L/O	SECURITY INDICATOR OUTPUT
142	LG/B	COMBI SW OUTPUT 5
143	L/W	COMBI SW OUTPUT 1
144	G/B	COMBI SW OUTPUT 2
145	LG/R	COMBI SW OUTPUT 3
146	G/Y	COMBI SW OUTPUT 4
150	SB	DRIVER DOOR SW
151	G/R	REAR WINDOW DEFOGGER RELAY

Fail-safe

FAIL-SAFE CONTROL BY DTC

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

JCMWWM1677GI

INFOID:000000003900498

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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
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
B2557: VEHICLE SPEED	Inhibit steering 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 • Starter control relay signal • Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	5 seconds after the following BCM recognition conditions are fulfilled • Ignition switch is in the ON position • Selector lever P position switch signal: Except P position (battery voltage) • Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	500 ms after the following BCM recognition conditions are fulfilled • 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 steering lock	500 ms after any of the following BCM recognition conditions is fulfilled • Status 1 - 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 - 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 steering lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - 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 • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Steering lock relay signal (Request signal) • Steering 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 - Starter motor relay control signal - Starter relay status signal (CAN)
B2609: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When the following steering lock conditions agree - BCM steering lock control status - Steering lock condition No. 1 signal status - Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled - 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 - Power position changes to ACC - Receives engine status signal (CAN)
B2612: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When any of the following conditions is fulfilled - Steering lock unit status signal (CAN) is received normally - The BCM steering lock control status matches the steering lock status recognized by the steering 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 steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RES	Inhibit engine cranking	When any of the following conditions is fulfilled - Power position changes to ACC - Receives engine status signal (CAN)
B26E9: S/L STATUS	- Inhibit engine cranking - Inhibit steering lock	When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions is fulfilled - Steering condition No. 1 signal: LOCK (0 V) - Steering condition No. 2 signal: LOCK (Battery voltage)

HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

NOTE:

The blinking speed is normal while activating the hazard warning lamp.

DTC Inspection Priority Chart

INFOID:000000003900499

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

Priority	DTC
1	B2562: LOW VOLTAGE
2	- U1000: CAN COMM CIRCUIT - U1010: CONTROL UNIT (CAN)
3	- 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	• 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 • B261E: VEHICLE TYPE • B26E1: ENG STATE NO RES • B26E9: S/L STATUS • B26EA: KEY REGISTRATION • U0415: VEHICLE SPEED SIG
5	• B2621: INSIDE ANTENNA • B2622: INSIDE ANTENNA • B2623: INSIDE ANTENNA

DTC Index

INFOID:000000003900500

NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data and IGN Counter, refer to [BCS-16, "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)"](#).

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warn- ing lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-33
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-34
U0415: VEHICLE SPEED SIG	—	—	—	BCS-35
B2013: ID DISCORD BCM-S/L	×	×	—	SEC-46
B2014: CHAIN OF S/L-BCM	×	×	—	SEC-47
B2190: NATS ANTENNA AMP	×	—	—	SEC-39
B2191: DIFFERENCE OF KEY	×	—	—	SEC-42

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Freeze Frame Data	Intelligent Key warn- ing lamp ON	Reference page	
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-43	A
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-45	B
B2553: IGNITION RELAY	—	×	—	PCS-49	
B2555: STOP LAMP	—	×	—	SEC-50	
B2556: PUSH-BTN IGN SW	—	×	×	SEC-52	C
B2557: VEHICLE SPEED	×	×	×	SEC-54	
B2560: STARTER CONT RELAY	×	×	×	SEC-55	
B2562: LOW VOLTAGE	—	×	—	BCS-36	D
B2601: SHIFT POSITION	×	×	×	SEC-56	
B2602: SHIFT POSITION	×	×	×	SEC-59	E
B2603: SHIFT POSI STATUS	×	×	×	SEC-61	
B2604: PNP SW	×	×	×	SEC-64	F
B2605: PNP SW	×	×	×	SEC-67	
B2606: S/L RELAY	×	×	×	SEC-69	
B2607: S/L RELAY	×	×	×	SEC-70	G
B2608: STARTER RELAY	×	×	×	SEC-72	
B2609: S/L STATUS	×	×	×	SEC-74	
B260A: IGNITION RELAY	×	×	×	PCS-51	H
B260B: STEERING LOCK UNIT	—	×	×	SEC-78	
B260C: STEERING LOCK UNIT	—	×	×	SEC-79	I
B260D: STEERING LOCK UNIT	—	×	×	SEC-80	
B260F: ENG STATE SIG LOST	×	×	×	SEC-81	
B2612: S/L STATUS	×	×	×	SEC-85	J
B2614: ACC RELAY CIRC	—	×	×	PCS-53	
B2615: BLOWER RELAY CIRC	—	×	×	PCS-55	
B2616: IGN RELAY CIRC	—	×	×	PCS-57	K
B2617: STARTER RELAY CIRC	×	×	×	SEC-89	
B2618: BCM	×	×	×	PCS-59	L
B2619: BCM	×	×	×	SEC-91	
B261A: PUSH-BTN IGN SW	—	×	×	SEC-92	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	SEC-95	M
B2621: INSIDE ANTENNA	—	×	—	DLK-50	MWI
B2622: INSIDE ANTENNA	—	×	—	DLK-52	
B2623: INSIDE ANTENNA	—	×	—	DLK-54	
B26E1: ENG STATE NO RES	×	×	×	SEC-82	O
B26E9: S/L STATUS	×	×	× (Turn ON for 15 seconds)	SEC-83	
B26EA: KEY REGISTRATION	—	×	× (Turn ON for 15 seconds)	SEC-84	P

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

< ECU DIAGNOSIS >

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

Reference Value

INFOID:000000003900501

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
		Front fog lamp switch ON	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	Selector lever in any position other than P or N	Off
		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		INHI → ST
	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	- Press the selector button with selector lever in P position - Selector lever in any position other than P	Off
	Release the selector button with selector lever in P position		On
S/L RLY -REQ	None of the conditions below are present		Off
	- 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		UNLOCK
	[DTC: B210A] is detected		UNKWN
DTRL REQ	NOTE: The item is indicated, but not monitored.		Off
OIL P SW	Ignition switch OFF, ACC or engine running		Open
	Ignition switch ON		Close
HOOD SW	Close the hood		Off
	Open the hood		On
HL WASHER REQ	Not operating		Off
	Headlamp washer operating		On
THFT HRN REQ	Not operating		Off
	Horn is activated with vehicle security (theft warning) system		On
HORN CHIRP	Not operating		Off
	- Door locking with Intelligent Key (horn chirp mode) - Door locking with key fob (horn chirp mode)		On
CRNRNG LMP REQ	NOTE: The item is indicated, but not monitored.		Off

A

B

C

D

E

F

G

H

I

J

K

L

M

MWI

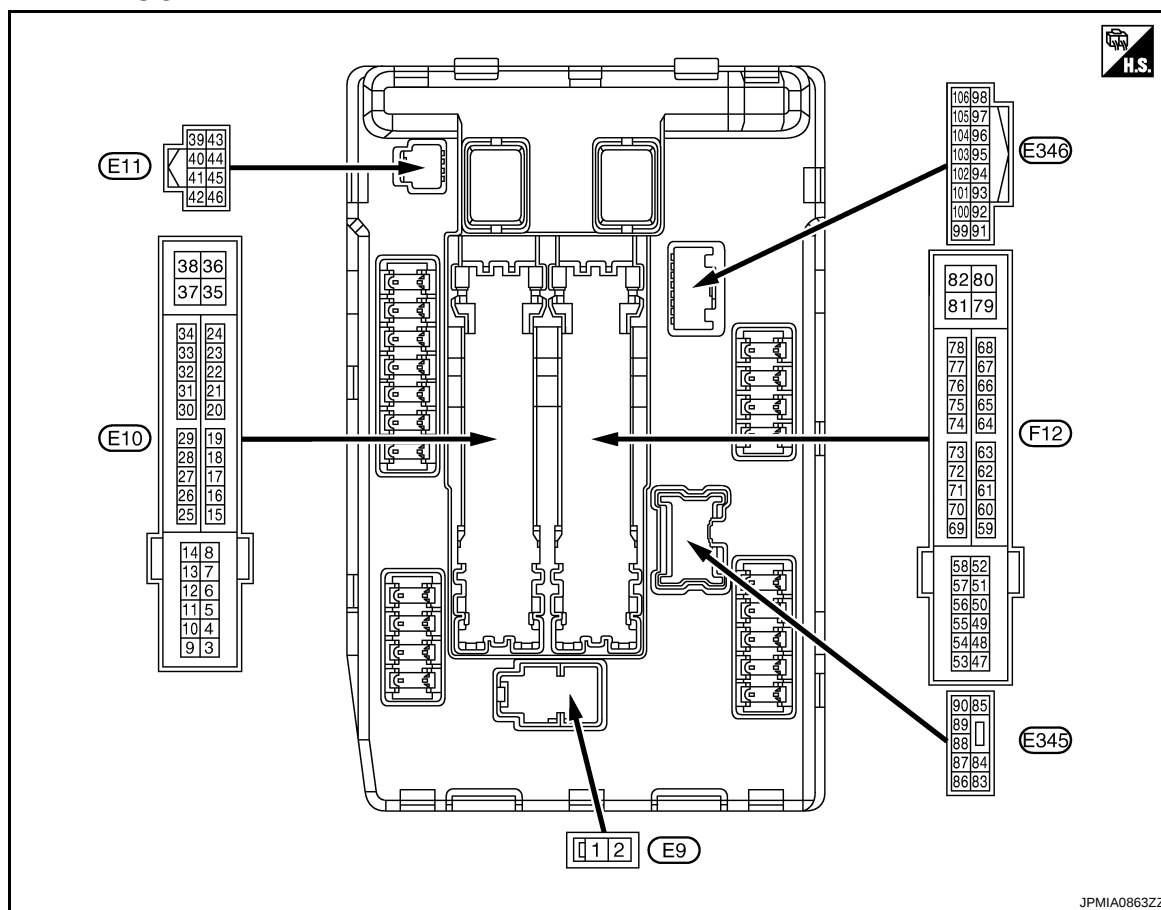
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P

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

< ECU DIAGNOSIS >

TERMINAL LAYOUT

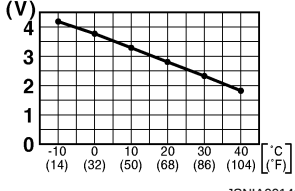


PHYSICAL VALUES

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 ON	Front wiper switch OFF	0 V
					Front wiper switch LO	Battery voltage
5 (Y)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
					Front wiper switch HI	Battery voltage
7 (GR)	Ground	Tail, license plate lamps & illuminations	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 1ST	Battery voltage
10 (BR)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion 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 (P)	Ground	Steering lock unit 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/W)	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
				- Approximately 1 second after turning the ignition switch ON - Engine running		Battery voltage
15 (W)	Ground	Ignition relay 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
17 (V)	Ground	Headlamp washer relay control	Input	Ignition switch ON	Headlamp washer deactivated	Battery voltage
					Headlamp washer activated	0 V
19 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		Battery voltage
20 (B)	Ground	Ambient sensor ground	Output	Ignition switch ON		0 V
21 (O)	Ground	Ambient sensor	Input	Ignition switch ON NOTE: Changes depending to ambient temperature		 JSNIA0014GB
22 (SB)	Ground	Refrigerant pressure sensor ground	Output	Engine running	- Warm-up condition - Idle speed	0 V
23 (GR)	Ground	Refrigerant pressure sensor	Output	Engine running	- Warm-up condition - Both A/C switch and blower fan motor switch ON (Compressor operates)	1.0 - 4.0 V
24 (G)	Ground	Refrigerant pressure sensor power supply	Input	Ignition switch OFF		0 V
				Ignition switch ON		5.0 V
25 (GR)	Ground	Ignition relay 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

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

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	—	Signal name	Input/ Output			
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	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
32 (V)	Ground	Steering lock unit condition-1	Input	Steering lock is activated		0 V
				Steering lock is deactivated		Battery voltage
33 (G)	Ground	Steering lock unit condition-2	Input	Steering lock is activated		Battery voltage
				Steering lock is deactivated		0 V
34 (O)	Ground	Cooling fan relay-3 control	Input	Cooling fan stopped		Battery voltage
				Cooling fan at HI operation		0 V
35 (P)	Ground	Cooling fan relay-1 power supply	Input	Cooling fan stopped		Battery voltage
				Cooling fan at LO operation		6.0 V
36 (G)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
38 (GR)	Ground	Cooling fan relay-1 power supply	Output	Cooling fan not operating		0 V
				Cooling fan at LO operation		6.0 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	Cooling fan stopped		Battery voltage
				- Cooling fan MID operating - Cooling fan HI operating		0 V
43 (Y)	Ground	Control device (Detention switch)	Input	Ignition switch ON	Press the selector button (selector lever P)	Battery voltage
					- Selector lever in any position other than P - Release the selector button (selector lever P)	0 V
44 (G)	Ground	Horn relay control	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
45 (O)	Ground	Horn switch	Input	The horn is deactivated		Battery voltage
				The horn is activated		0 V
46 (BR)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any position other than P or N	0 V
					Selector lever P or N	Battery voltage
48 (Y/R)	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

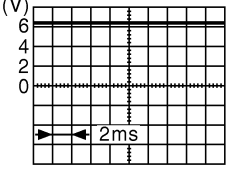
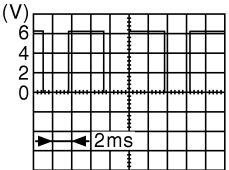
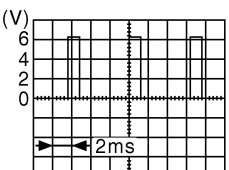
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)	
+	-	Signal name	Input/ Output				
49 (R/B)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V	A
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage	B
51 (LG)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	C
				Ignition switch ON		Battery voltage	D
52 (Y/G)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	E
				Ignition switch ON		Battery voltage	F
53 (R/W)	Ground	ECM relay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V	G
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage	H
54 (G/W)	Ground	Throttle control motor re- lay power supply	Output	Ignition switch OFF (More than a few seconds after turning ignition switch OFF)		0 V	I
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		Battery voltage	J
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage	K
56 (R/Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	L
				Ignition switch ON		Battery voltage	M
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 (More than a few seconds after turning ignition switch OFF)		Battery voltage	
				- Ignition switch ON - Ignition switch OFF (For a few seconds after turning igni- tion switch OFF)		0 - 1.5 V	MWI
70 (O)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON → OFF		0 -1.0 V ↓ Battery voltage ↓ 0 V	O
				Ignition switch ON		0 - 1.0 V	P
72 (R/B)	Ground	Starter relay control	Input	Ignition switch ON	Selector lever in any posi- tion other than P or N	0 V	
					Selector lever P or N	Battery voltage	
74 (Y)	Ground	Ignition relay power supply	Output	Ignition switch OFF		0 V	
				Ignition switch ON		Battery voltage	

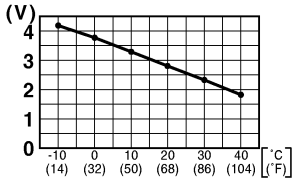
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
75 (P/L)	Ground	Oil pressure switch	Input	Ignition switch ON	Engine stopped	0 V
					Engine running	Battery voltage
76 (SB)	Ground	Power generation command signal	Output	Ignition switch ON		 6.3 V
				40% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 3.8 V
				80% is set on "ACTIVE TEST", "ALTERNATOR DUTY" of "ENGINE"		 1.4 V
77 (GR)	Ground	Fuel pump relay control	Output	- Approximately 1 second after turning the ignition switch ON - Engine running		0 - 1.5 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 (Y)	Ground	Headlamp LO (RH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
84 (SB)	Ground	Headlamp LO (LH)	Output	Ignition switch ON	Lighting switch OFF	0 V
					Lighting switch 2ND	Battery voltage
86 (L)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	- Front fog lamp switch ON - Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V
87 (R)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	- Front fog lamp switch ON - Daytime running light activated (Only for Canada)	Battery voltage
					Front fog lamp switch OFF	0 V

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

< ECU DIAGNOSIS >

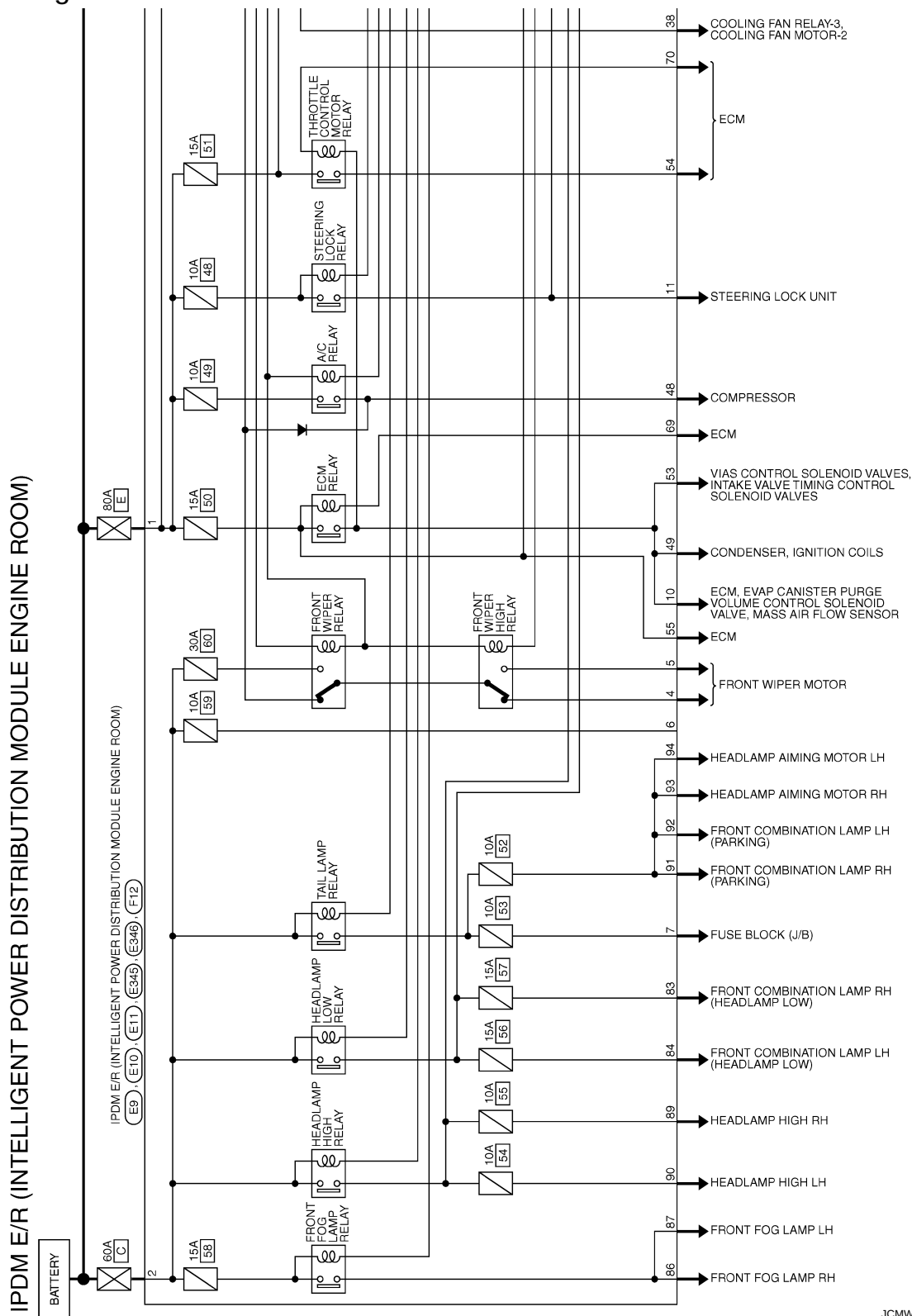
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
88 (P)	Ground	Washer pump power supply	Output	Ignition switch ON		Battery voltage
89 (W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
90 (O)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	• Lighting switch HI • Lighting switch PASS	Battery voltage
					Lighting switch OFF	0 V
91 (O)	Ground	Parking lamp (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
92 (L)	Ground	Parking lamp (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
93 (BR)	Ground	Headlamp aiming motor (RH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
94 (Y)	Ground	Headlamp aiming motor (LH)	Output	Ignition switch ON	Lighting switch 1ST	Battery voltage
					Lighting switch OFF	0 V
99 (W)	Ground	Ambient sensor ground	Input	Ignition switch ON		0 V
100 (SB)	Ground	Ambient sensor	Output	Ignition switch ON NOTE: Changes depending to ambient temperature		 JSNIA0014GB
101 (GR)	Ground	Refrigerant pressure sensor ground	Input	Engine running	• Warm-up condition • Idle speed	0 V
102 (R)	Ground	Refrigerant pressure sensor	Input	Engine running	• Warm-up condition • Both A/C switch and blower fan motor switch ON (Compressor operates)	1.0 - 4.0 V
103 (P)	Ground	Refrigerant pressure sensor power supply	Output	Ignition switch OFF		0 V
				Ignition switch ON		5.0 V
104 (LG)	Ground	Hood switch	Output	Close the hood		Battery voltage
				Open the hood		0 V

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

< ECU DIAGNOSIS >

Wiring Diagram - IPDM E/R -

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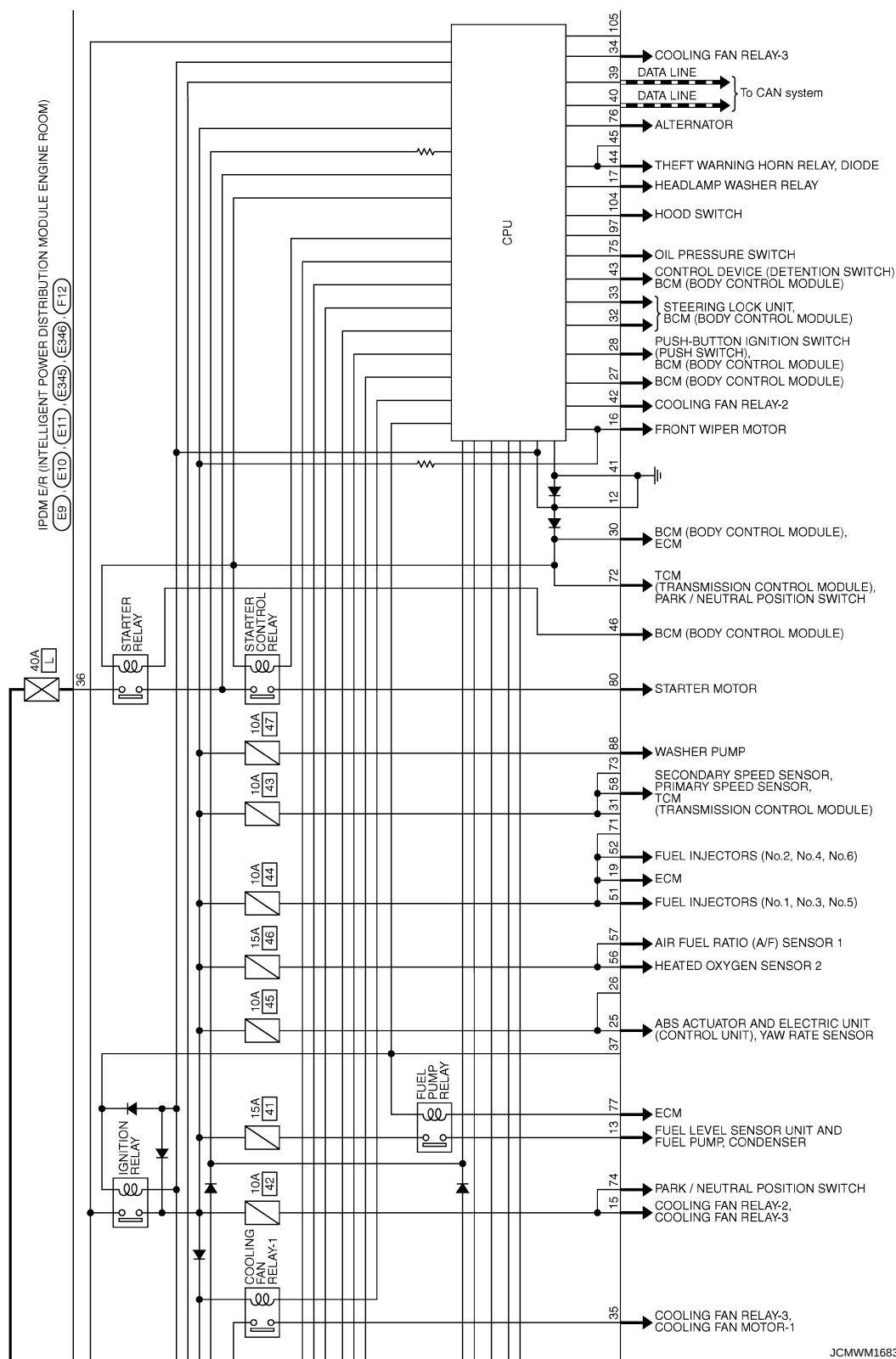


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JCMWM1682G

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

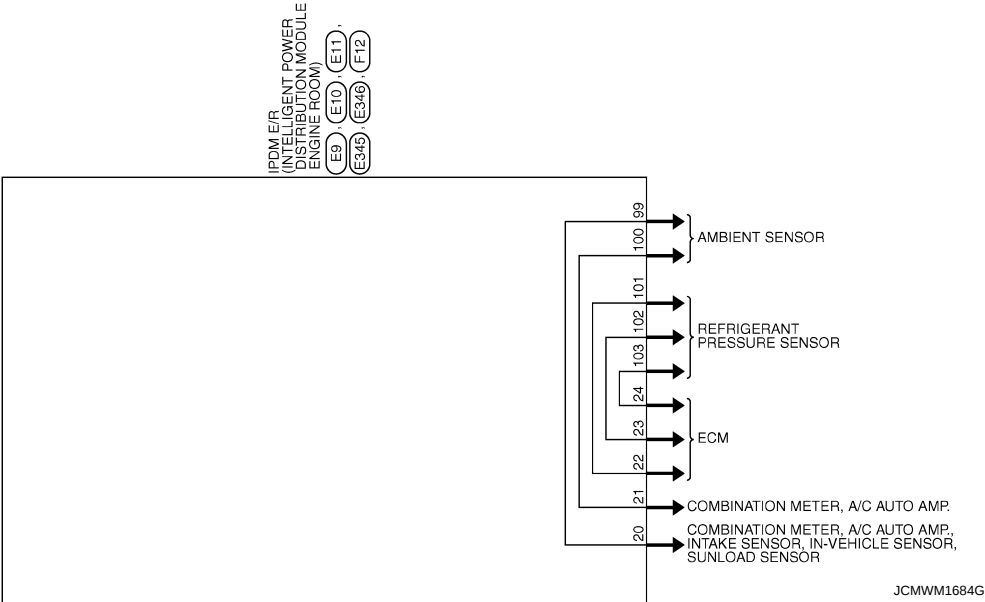
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JCMWM1683GI

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

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

< ECU DIAGNOSIS >

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

Connector No.	E9
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	LOPE-MC



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	
2	L	

Connector No.	E10
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH2DFW-CS12-M4-1V



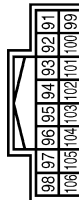
Terminal No.	Color of Wire	Signal Name [Specification]
4	LG	
5	Y	
7	GR	
10	BR	
11	P	
12	B/W	
13	SB	
15	W	
16	R	
17	V	
19	Y	

Connector No.	E345
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
83	Y	
84	SB	
86	L	
87	R	
88	P	
89	W	
90	O	

Connector No.	E346
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH10FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
91	O	
92	L	
93	BR	
94	Y	
99	W	
100	SB	
101	GR	
102	R	
103	P	
104	LG	

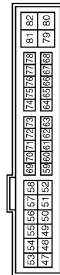
20	B	-
21	O	-
22	SB	-
23	GR	-
24	G	-
25	GR	-
27	W	-
28	SB	-
30	BR	-
32	V	-
33	G	-
34	O	-
35	P	-
36	G	-
38	GR	-

Connector No.	E11
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH03FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
39	P	
40	L	
41	B	
42	SB	
43	Y	
44	G	
46	BR	

Connector No.	F12
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH2DFW-CS12-M4



Terminal No.	Color of Wire	Signal Name [Specification]
48	Y/R	
49	R/B	
51	LG	
52	Y/G	
53	R/W	
54	G/W	
55	W/L	
56	R/Y	
57	O	
58	Y	
69	W/B	

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 operation
Cooling fan	• Turns ON the cooling fan relay-2 and the cooling fan relay-3 when ignition switch is turned ON (Cooling fan operates at HI) • Turns OFF the cooling fan relay-1, the cooling fan relay-2 and the cooling fan relay-3 when the ignition switch is turned OFF (Cooling fan does not operate)
A/C compressor	A/C relay OFF
Alternator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
Headlamp	• 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
• Parking lamps • License plate lamps • Illuminations • Tail lamps	• 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	• 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	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
Steering lock unit	Steering lock relay OFF
Headlamp washer relay	Headlamp washer 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.

Voltage judgment		IPDM E/R judgment	Operation
Ignition relay contact side	Ignition relay excitation coil side		
ON	ON	Ignition relay ON normal	—
OFF	OFF	Ignition relay OFF normal	—
ON	OFF	Ignition relay ON stuck	• Detects DTC "B2098: IGN RELAY ON" • Turns ON the tail lamp relay for 10 minutes
OFF	ON	Ignition relay OFF stuck	Detects DTC "B2099: IGN RELAY OFF"

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 seconds activation and 20 seconds stop five times.

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

< ECU DIAGNOSIS >

Ignition switch	Front wiper switch	Front wiper auto stop signal
ON	OFF	The front wiper auto stop signal (stop position) cannot be input for 10 seconds.
	ON	The front wiper auto stop 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.

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:0000000003900504

NOTE:

- The details of time display are as follows.
 - CRNT: A malfunction is detected now
 - PAST: A malfunction was detected in the past.
- IGN counter is displayed on FFD (Freeze Frame data).
 - The number is 0 when is detected now
 - The number increases like 1 → 2 ... 38 → 39 after returning to the normal condition whenever IGN OFF → ON.
 - The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

x: Applicable

CONSULT display	Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—
U1000: CAN COMM CIRCUIT	x	PCS-16
B2098: IGN RELAY ON	x	PCS-17
B2099: IGN RELAY OFF	—	PCS-18
B2108: STRG LCK RELAY ON	—	SEC-96
B2109: STRG LCK RELAY OFF	—	SEC-97
B210A: STRG LCK STATE SW	—	SEC-98
B210B: START CONT RLY ON	—	SEC-102
B210C: START CONT RLY OFF	—	SEC-103
B210D: STARTER RELAY ON	—	SEC-104
B210E: STARTER RELAY OFF	—	SEC-105
B210F: INTRLCK/PNP SW ON	—	SEC-107
B2110: INTRLCK/PNP SW OFF	—	SEC-109

THE FUEL GAUGE POINTER DOES NOT MOVE

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE FUEL GAUGE POINTER DOES NOT MOVE

Description

INFOID:000000003792601

Fuel gauge needle will not move from a certain position.

Diagnosis Procedure

INFOID:000000003792602

1.CHECK FOR THE COMBINATION METER IN SELF-DIAGNOSIS MODE

Check that the fuel gauge needle moves normally by using self-diagnosis function of the combination meter.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace combination meter. Refer to [MWI-126, "Removal and Installation"](#).

2.CHECK COMBINATION METER OUTPUT SIGNAL

1. Connect CONSULT-III.

2. Select the "Data Monitor" for the "METER/M&A" and compare the "FUEL METER" monitor value with the fuel gauge reading on the combination meter. Refer to [MWI-45, "Component Function Check"](#).

Does monitor value match fuel gauge reading?

YES >> GO TO 3.

NO >> Replace combination meter.

3.CHECK FUEL LEVEL SENSOR SIGNAL CIRCUIT

Check the fuel level sensor signal circuit. Refer to [MWI-45, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK FUEL LEVEL SENSOR UNIT

Perform a unit check for the fuel level sensor unit. Refer to [MWI-46, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace fuel level sensor unit. Refer to [FL-5, "Removal and Installation"](#).

5.CHECK FLOAT INTERFERENCE

Check that the float arm interferes with or binds to other components in the fuel tank.

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Repair or replace malfunctioning parts.

THE METER CONTROL SWITCH IS INOPERATIVE

< SYMPTOM DIAGNOSIS >

THE METER CONTROL SWITCH IS INOPERATIVE

Description

INFOID:000000003792603

If any of the following malfunctions is found for the meter control switch operation.

- All switches are inoperative
- The specified switch cannot be operated

Diagnosis Procedure

INFOID:000000003792604

1.CHECK METER CONTROL SWITCH SIGNAL CIRCUIT

Check the meter control switch signal circuit. Refer to [MWI-48, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair harness or connector.

2.CHECK METER CONTROL SWITCH UNIT

Perform a unit check for the meter control switch. Refer to [MWI-49, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace meter control switch.

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THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

THE OIL PRESSURE WARNING LAMP DOES NOT TURN ON

Description

INFOID:000000003792605

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

Diagnosis Procedure

INFOID:000000003792606

1.CHECK OIL PRESSURE WARNING LAMP

Perform auto active test. Refer to [MWI-32, "Diagnosis Description"](#).

Is oil pressure warning lamp illuminated?

YES >> GO TO 2.

NO >> GO TO 4.

2.CHECK OIL PRESSURE SWITCH SIGNAL CIRCUIT

Check the oil pressure switch signal circuit. Refer to [MWI-50, "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-50, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> Replace oil pressure switch.

4.CHECK COMBINATION METER INPUT SIGNAL

Connect CONSULT-III and perform an input signal check for the combination meter.

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

< SYMPTOM DIAGNOSIS >

THE OIL PRESSURE WARNING LAMP DOES NOT TURN OFF

Description

INFOID:000000003792607

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

Diagnosis Procedure

INFOID:000000003792608

1.CHECK OIL PRESSURE WARNING LAMP

Perform auto active test. Refer to [MWI-32, "Diagnosis Description"](#).

Is oil pressure warning lamp illuminated?

- YES >> GO TO 2.
NO >> GO TO 5.

2.CHECK IPDM E/R OUTPUT VOLTAGE

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

Terminals			Voltage (Approx.)
(+)		(-)	
Oil pressure switch			
Connector	Terminal	Ground	
F63	1		12 V

Is the inspection result normal?

- YES >> GO TO 3.
NO >> GO TO 4.

3.CHECK OIL PRESSURE SWITCH UNIT

Perform a unit check for the oil pressure switch. Refer to [MWI-50, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34, "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-50, "Diagnosis Procedure"](#).

Is the inspection result normal?

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

5.CHECK COMBINATION METER INPUT SIGNAL

Connect CONSULT-III and perform an input signal check for the combination meter. Refer to [MWI-50, "Component Function Check"](#).

Is the inspection result normal?

- YES >> Replace combination meter.
NO >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

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:000000003792609

- The parking brake warning is displayed during vehicle travel 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:000000003792610

1.CHECK PARKING BRAKE WARNING LAMP OPERATION

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

Condition	Warning lamp status
When parking brake is applied	ON
When parking brake is released	OFF

Is the inspection result normal?

- YES >> Replace combination meter.
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-52, "Diagnosis Procedure"](#).

Is the inspection result normal?

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

3.CHECK PARKING BRAKE SWITCH UNIT

Perform a unit check for the parking brake switch. Refer to [BRC-124, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace combination meter.
NO >> Replace parking brake 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:000000003792613

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

Diagnosis Procedure

INFOID:000000003792614

1.CHECK BCM INPUT/OUTPUT SIGNAL

Connect CONSULT-III and check the BCM input signals. Refer to [DLK-57, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK COMBINATION METER INPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and check the "DOOR W/L" monitor value.

"DOOR W/L"

Door open : On

Door closed : Off

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace BCM. Refer to [BCS-78, "Removal and Installation"](#).

3.CHECK DOOR SWITCH SIGNAL CIRCUIT

Check the door switch signal circuit. Refer to [DLK-57, "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-59, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace applicable door switch. Refer to [DLK-234, "Removal and Installation"](#).

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THE TRUNK OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

< SYMPTOM DIAGNOSIS >

THE TRUNK OPEN WARNING CONTINUES DISPLAYING, OR DOES NOT DISPLAY

Description

INFOID:000000003795430

- The trunk ajar warning is displayed continuously even though the trunk lid is closed.
- The trunk ajar warning is not displayed even though the trunk lid is open.

Diagnosis Procedure

INFOID:000000003795431

1.CHECK BCM INPUT/OUTPUT SIGNAL

Connect CONSULT-III and check the BCM input signals. Refer to [DLK-70. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK COMBINATION METER INPUT SIGNAL

Select the "Data Monitor" for the "METER/M&A" and check the "TRUNK/GLAS-H" monitor value.

"TRUNK/GLAS-H"

Trunk lid open : On

Trunk lid closed : Off

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace BCM.

3.CHECK TRUNK LID OPENER SWITCH SIGNAL CIRCUIT

Check the trunk lid opener switch signal circuit. Refer to [DLK-70. "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK TRUNK LID OPENER SWITCH UNIT

Perform a unit check for the trunk lid opener switch. Refer to [DLK-71. "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace the trunk lid switch. Refer to [DLK-243. "Removal and Installation"](#).

THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

< SYMPTOM DIAGNOSIS >

THE AMBIENT TEMPERATURE DISPLAY IS INCORRECT

Description

INFOID:000000003792615

- 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:000000003792616

NOTE:

Check that the symptom is not applicable to the normal operating condition before starting diagnosis. Refer to [MWI-124, "INFORMATION DISPLAY : Description"](#).

1.CHECK AMBIENT SENSOR SIGNAL CIRCUIT

Check the ambient sensor signal circuit.

- Refer to [HAC-45, "Diagnosis Procedure"](#) (without 7 inch display).
- Refer to [HAC-167, "Diagnosis Procedure"](#) (with 7 inch display).

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-46, "Component Inspection"](#) (without 7 inch display).
- Refer to [HAC-168, "Component Inspection"](#) (with 7 inch display).

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Replace ambient sensor. Refer to [VTL-24, "Removal and Installation"](#) (without 7 inch display) or [VTL-81, "Removal and Installation"](#) (with 7 inch display).

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

INFORMATION DISPLAY

INFORMATION DISPLAY : Description

INFOID:000000003792618

AMBIENT AIR TEMPERATURE

The displayed ambient air temperature on the information display may differ from the actual temperature because it is a corrected value calculated from the ambient sensor signal by the combination meter. Refer to [MWI-27, "INFORMATION DISPLAY : System Description"](#) for details on the correction process.

POSSIBLE DRIVING DISTANCE

The calculated possible driving distance may differ from the actual distance to empty if the refueling amount is approximately 15 ℓ (3-3/10 Imp gal) or less. This is because the refuel control (moves the fuel gauge needle quicker than normal judging that the driver is refueling the vehicle) is not performing.

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000003940983

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. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" 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 "SRS AIRBAG".
- Never 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.

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COMBINATION METER

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

COMBINATION METER

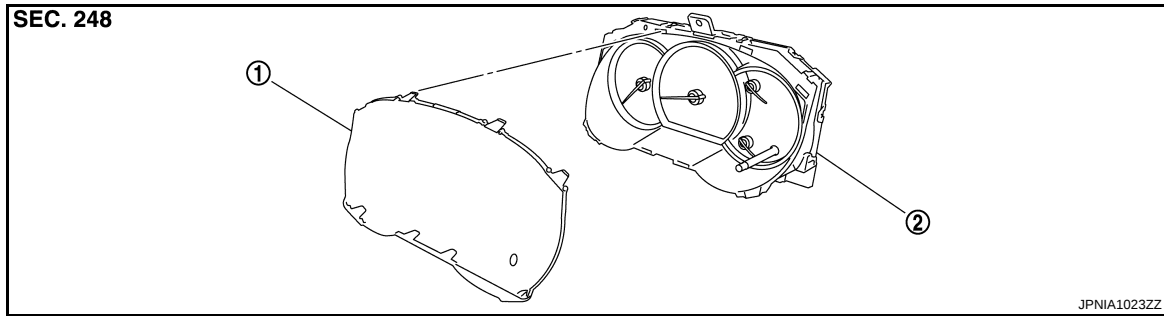
Exploded View

INFOID:000000003792621

REMOVAL

Refer to [IP-11. "Exploded View"](#).

DISASSEMBLY



1. Front cover

2. Unified meter control unit

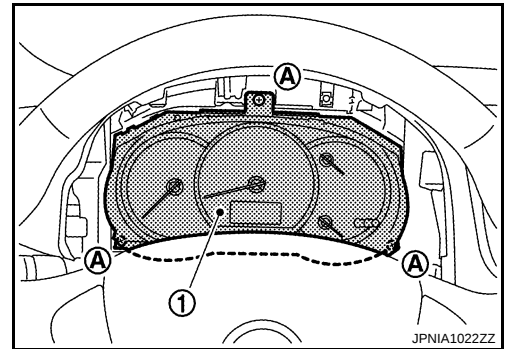
Removal and Installation

INFOID:000000003792622

REMOVAL

Removal

1. Remove the cluster lid A. Refer to [IP-11. "Exploded View"](#).
2. Remove screws (A) and connector, and remove combination meter (1).



INSTALLATION

Install in the reverse order of removal.

Disassembly and Assembly

INFOID:000000003792623

DISASSEMBLY

Disengage the tabs to separate front cover.

ASSEMBLY

Assemble in the reverse order of disassembly.

METER CONTROL SWITCH

< ON-VEHICLE REPAIR >

METER CONTROL SWITCH

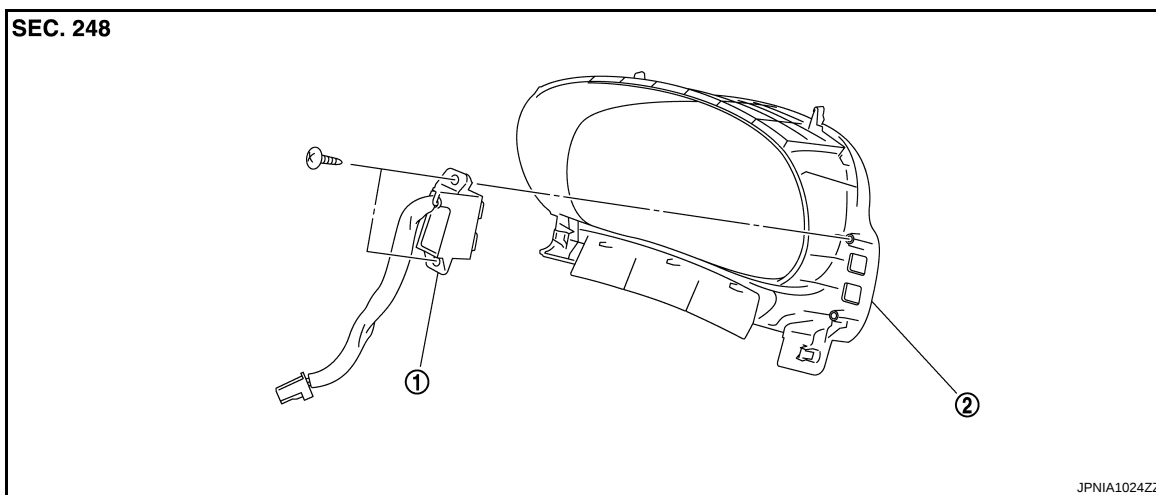
Exploded View

INFOID:000000003792624

REMOVAL

Refer to [JP-11, "Exploded View"](#).

DISASSEMBLY



Removal and Installation

INFOID:000000003792625

REMOVAL

1. Remove cluster lid A. Refer to [JP-11, "Exploded View"](#).
2. Remove screws and remove meter control switch from cluster lid A.

INSTALLATION

Install in the reverse order of removal.

MWI