

SECTION WCS

WARNING CHIME SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

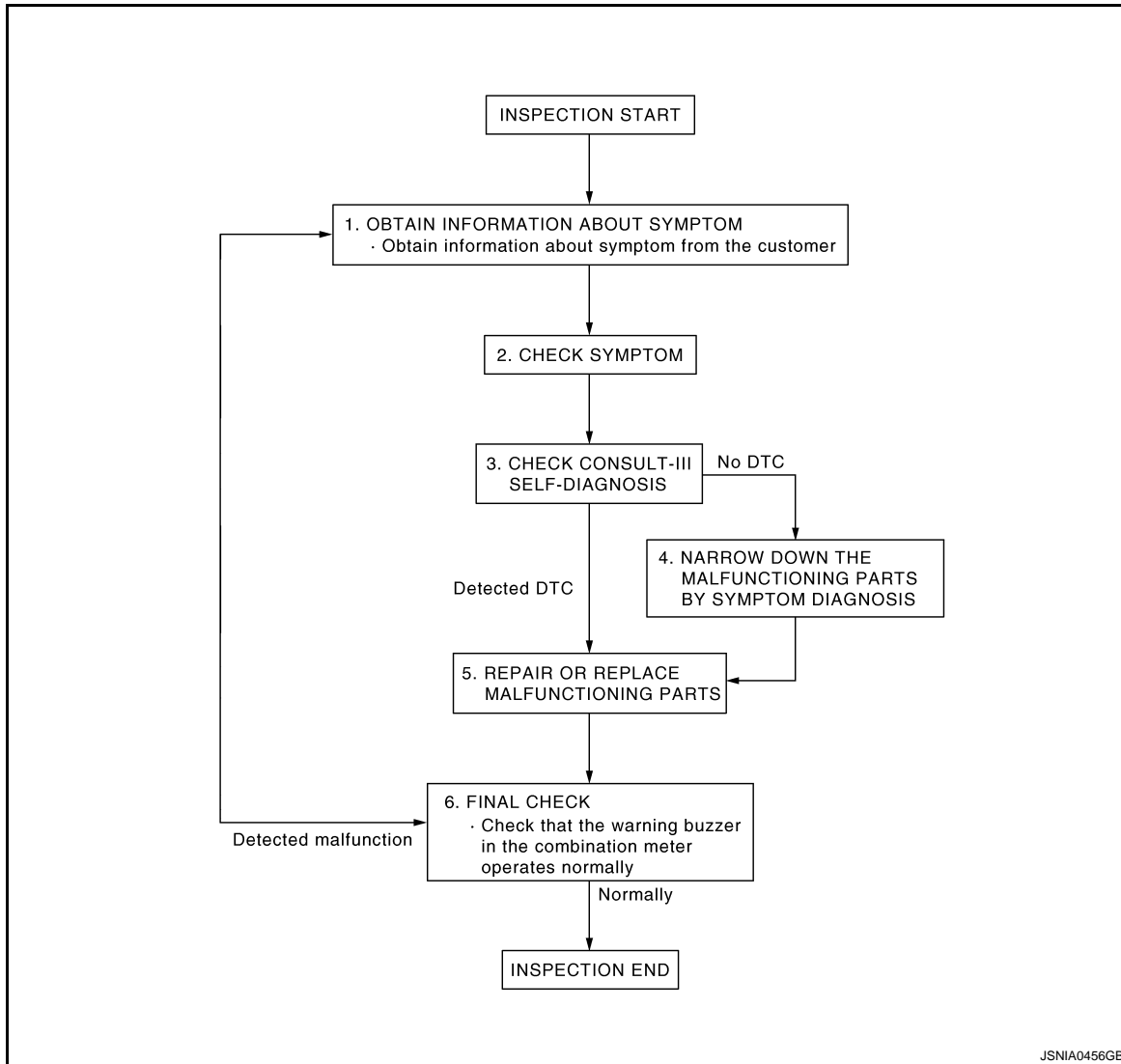
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001193802

OVERALL SEQUENCE



DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.CHECK SYMPTOM

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

>> GO TO 3.

3.CHECK CONSULT-III SELF-DIAGNOSIS RESULTS

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

1. Connect CONSULT-III and perform "Self Diagnostic Result" of combination meter. Refer to [MWI-27, "CONSULT-III Function \(METER/M&A\)"](#).
2. Check if DTC is detected. Refer to [MWI-57, "DTC Index"](#).

NOTE:

If "CAN COMM CIRCUIT [U1000]" is displayed, start with the diagnosis for the CAN communication system. Refer to [MWI-30, "Diagnosis Procedure"](#).

If any DTC detected?

YES >> GO TO 5.

NO >> GO TO 4.

4. NARROW DOWN THE MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and narrow down the malfunctioning parts.

>> GO TO 5.

5. REPAIR OR REPLACE MALFUNCTIONING PARTS

Repair or replace malfunctioning parts.

NOTE:

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

>> GO TO 6.

6. FINAL CHECK

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

Does it operate normally?

YES >> INSPECTION END

NO >> GO TO 1.

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

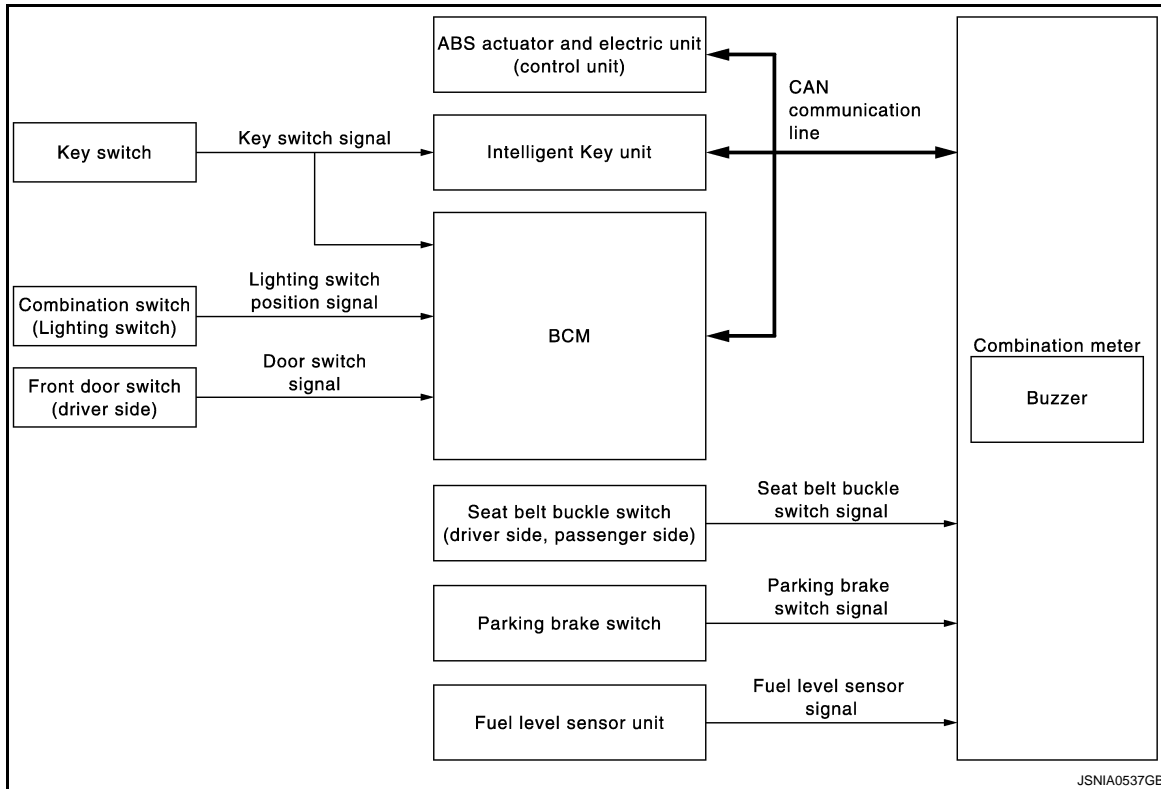
FUNCTION DIAGNOSIS

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram

INFOID:000000001193803

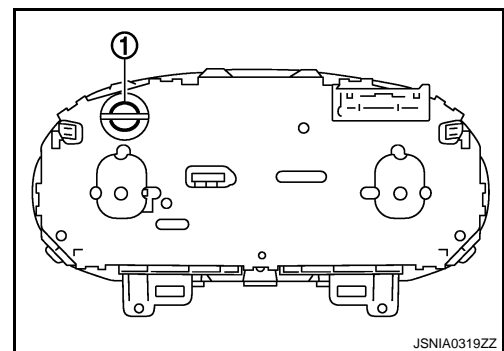


WARNING CHIME SYSTEM : System Description

INFOID:000000001193804

COMBINATION METER

- The buzzer (1) for the warning chime system is integrated in the combination meter.
- The combination meter sounds the alarm buzzer installed in the combination meter when receiving the buzzer output signal transmitted from each unit.



BCM

BCM receives signals from various units and transmits a buzzer output signal to the combination meter via CAN communication if it judges that the warning buzzer should be activated.

BCM warning function list

Warning functions	Signal name
Light reminder warning chime	<ul style="list-style-type: none"> • Ignition switch signal • Lighting switch position signal • Front door switch signal (driver side)

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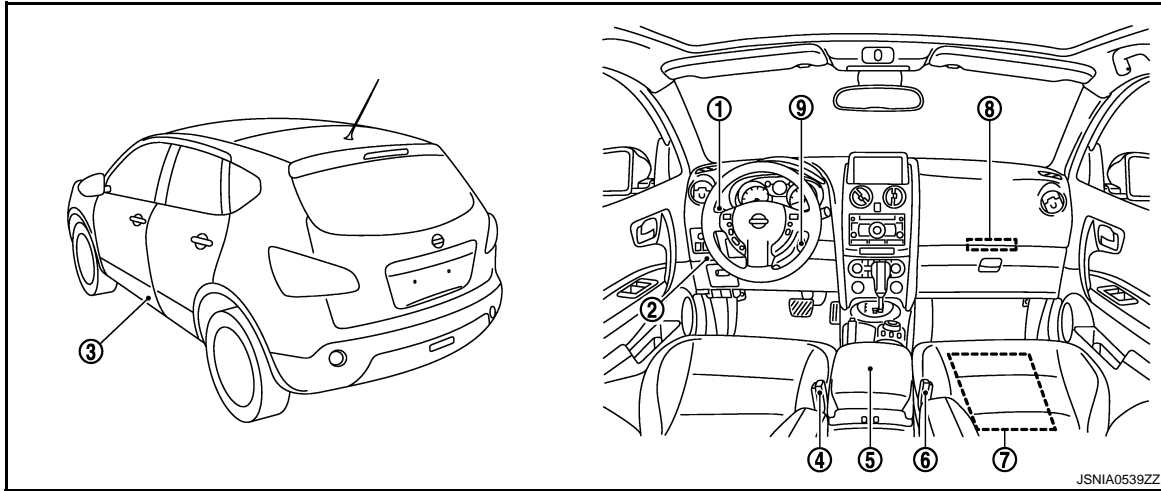
WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

- Seat belt reminder warning chime, parking brake release warning chime and low fuel warning chime are judged by combination meter.
- Intelligent key warning chime is judged by Intelligent Key unit.
- Key warning chime (with Intelligent Key) is judged by Intelligent Key unit.

WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000001193805



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|--|-------------------------|---|
| 1. Combination switch (Lighting switch) | 2. Intelligent Key unit | 3. Front door switch (driver side) |
| 4. Front seat belt buckle switch (driver side) | 5. Parking brake switch | 6. Front seat belt buckle switch (passenger side) |
| 7. Occupant detection unit | 8. BCM | 9. Key switch |

WARNING CHIME SYSTEM : Component Description

INFOID:000000001193806

Unit	Description
Combination meter	<ul style="list-style-type: none"> • Receives the buzzer output signal from BCM with the CAN communication line and sounds the buzzer. • Judges the parking brake release warning according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the parking brake switch signal from parking brake switch and sounds the warning buzzer. • Judges the seat belt reminder warning according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the seat belt buckle switch signal from seat belt buckle switch and sounds the warning buzzer. • Judges according to the fuel level sensor signal received from the fuel level sensor and sounds the warning buzzer.
BCM	Transmits signals received from each unit to the combination meter with the CAN communication line.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to combination meter with the CAN communication line.
Front seat belt buckle switch (driver side, passenger side)	Transmits the seat belt buckle switch signal to the combination meter.
Combination switch (Lighting switch)	Transmits the lighting switch signal to BCM.
Front door switch (driver side)	Transmits the door switch signal to BCM.
Key switch	Transmits the key switch signal to BCM and Intelligent Key unit.
Fuel level sensor unit	Refer to MWI-36, "2WD : Description" (2WD) or MWI-38, "4WD : Description" (4WD).
Parking brake switch	Refer to WCS-24, "Description" .

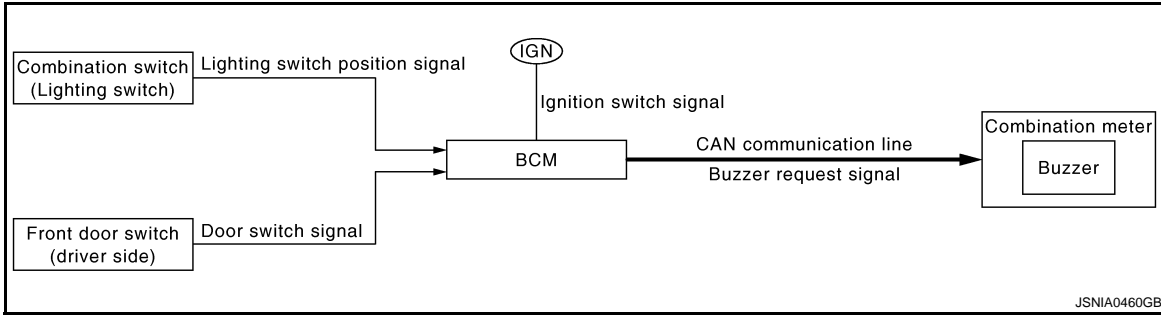
LIGHT REMINDER WARNING CHIME

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000001193807



LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000001193808

DESCRIPTION

If external lamp are activated again by light switch with ignition switch still OFF, after external lamp battery saver function was activated.

NOTE:

External lamp battery saver function. Refer to [EXL-28. "System Description"](#).

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

- External lamp battery saver function ON
- Ignition switch OFF
- Lighting switch ON
- Front door switch (driver side) ON

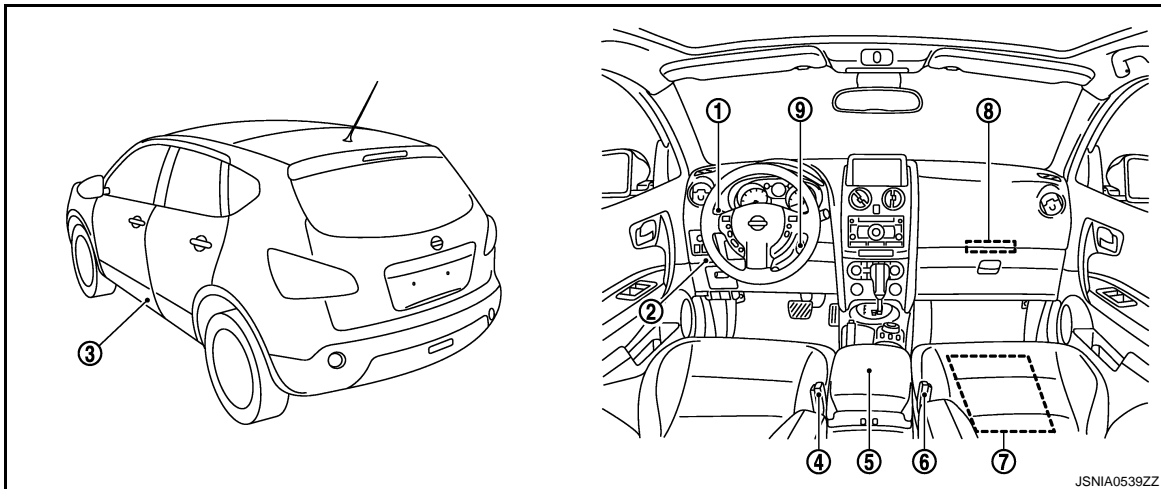
WARNING CANCEL CONDITIONS

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

- Lighting switch OFF
- Ignition switch ON

LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:0000000011532399



- | | | |
|--|-------------------------|---|
| 1. Combination switch (Lighting switch) | 2. Intelligent Key unit | 3. Front door switch (driver side) |
| 4. Front seat belt buckle switch (driver side) | 5. Parking brake switch | 6. Front seat belt buckle switch (passenger side) |
| 7. Occupant detection unit | 8. BCM | 9. Key switch |

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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

LIGHT REMINDER WARNING CHIME : Component Description

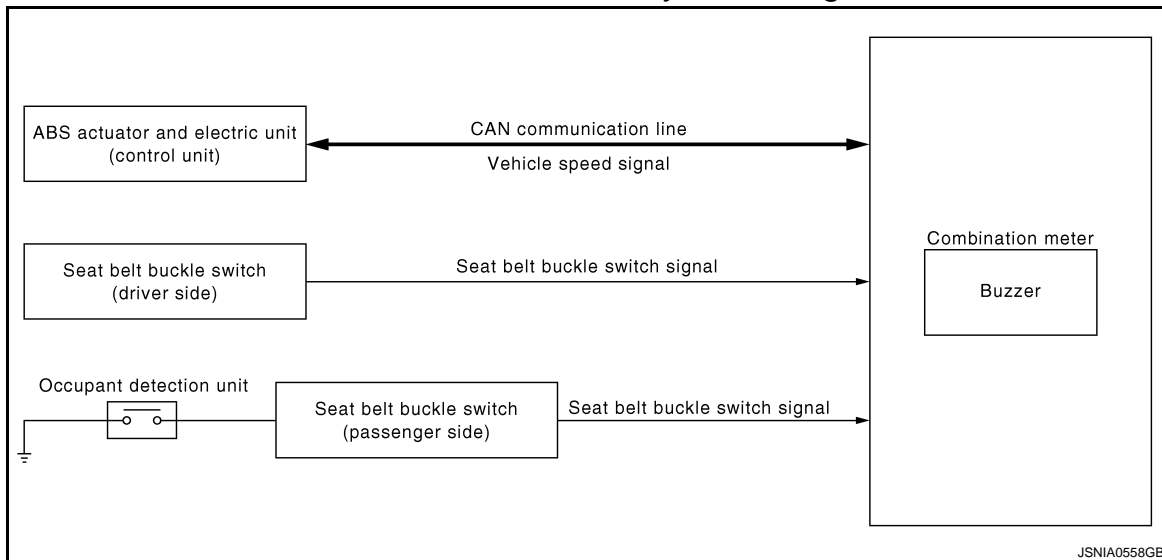
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Unit	Description
Combination meter	Receives a buzzer output signal from the BCM and sounds the buzzer.
BCM	Judges light reminder warning according to the door switch signal from the front door switch (driver side) and the lighting position signal from the lighting switch and transmits the buzzer output signal to the combination meter via CAN communication.
Combination switch (Lighting switch)	Transmits the lighting switch position signal to BCM.
Front door switch (driver side)	Transmits the door switch signal to BCM.

SEAT BELT REMINDER WARNING CHIME

SEAT BELT REMINDER WARNING CHIME : System Diagram

INFOID:000000001193811



SEAT BELT REMINDER WARNING CHIME : System Description

INFOID:000000001193812

DESCRIPTION

- Combination meter receives the vehicle speed signals from ABS actuator and electric unit (control unit) with CAN communication line.
- Combination meter receives the seat belt buckle switch signals from seat belt buckle switches (driver side and passenger side).
- Combination meter judges seat belt reminder warning based on the received signals to sound the warning buzzer.

WARNING OPERATION CONDITIONS

Driver Side Warning Operation Conditions

If all of the following conditions are fulfilled.

- Ignition switch ON
- Seat belt buckle switch (driver side) is ON (driver seat belt not fastened)
- Vehicle speed approximately 15 km/h (9.3 MPH) or more

Passenger Side Operation Conditions

If all of the following conditions are fulfilled.

- Ignition switch ON
- When getting in the passenger seat
- Seat belt buckle switch (passenger side) is ON (passenger seat belt not fastened)
- Vehicle speed approximately 15 km/h (9.3 MPH) or more

WARNING CANCEL CONDITIONS

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

Driver Side Warning Cancel Conditions

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

- Ignition switch OFF
- Seat belt buckle switch (driver side) is OFF (driver seat belt fastened)
- 90 seconds have passed since the start of the warning

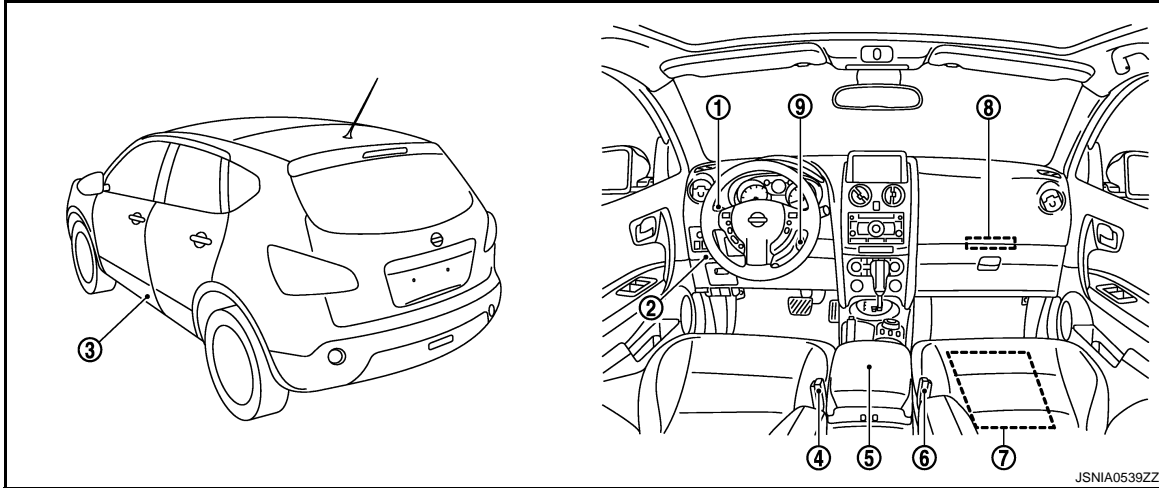
Passenger Side Warning Cancel Conditions

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

- Ignition switch OFF
- When getting out the passenger seat
- Seat belt buckle switch (passenger side) is OFF (passenger seat belt fastened)
- 90 seconds have passed since the start of the warning

SEAT BELT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000001532400



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| 1. Combination switch (Lighting switch) | 2. Intelligent Key unit | 3. Front door switch (driver side) |
| 4. Front seat belt buckle switch (driver side) | 5. Parking brake switch | 6. Front seat belt buckle switch (passenger side) |
| 7. Occupant detection unit | 8. BCM | 9. Key switch |

SEAT BELT REMINDER WARNING CHIME : Component Description

INFOID:000000001193814

Unit	Description
Combination meter	Judges the seat belt reminder warning according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the seat belt buckle switch signal from seat belt buckle switch and sounds the warning buzzer.
Front seat belt buckle switch (driver side)	Transmits the seat belt buckle switch signal to the combination meter.
Front seat belt buckle switch (passenger side)	Transmits the seat belt buckle switch signal to the combination meter via the occupant detection unit.
Occupant detection unit	Detects getting in/out conditions of passenger seat.

PARKING BRAKE RELEASE WARNING CHIME

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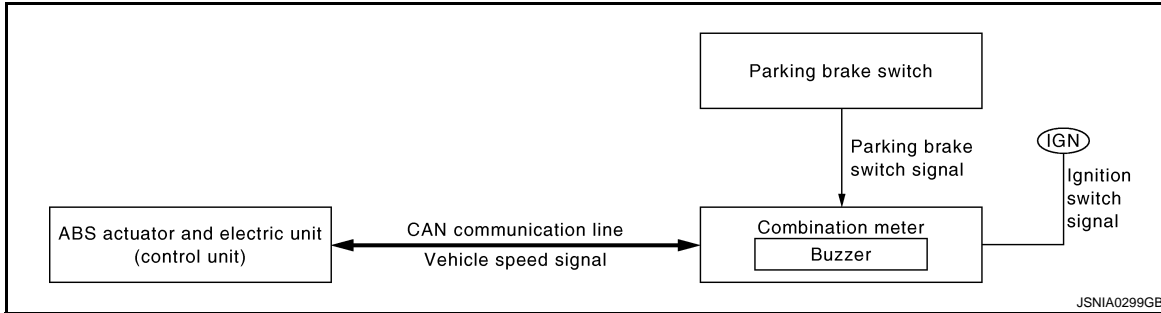
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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

PARKING BRAKE RELEASE WARNING CHIME : System Diagram

INFOID:000000001193815



JSNIA0299GB

PARKING BRAKE RELEASE WARNING CHIME : System Description

INFOID:000000001193816

DESCRIPTION

Parking brake release warning chime judges the remaining parking brake according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the parking brake switch signal from parking brake switch to sound the warning buzzer.

WARNING OPERATION CONDITIONS

IF all of the following conditions are fulfilled.

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

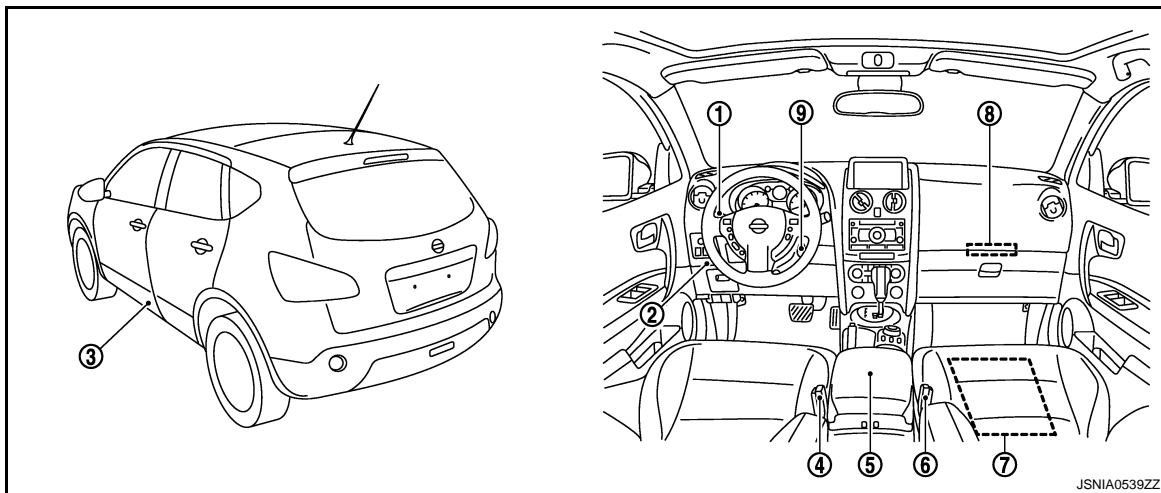
WARNING CANCEL CONDITIONS

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

- Vehicle speed is approximately 3 km/h (1.9 MPH) or less
- Parking brake switch OFF

PARKING BRAKE RELEASE WARNING CHIME : Component Parts Location

INFOID:000000001532401



JSNIA0539ZZ

- | | | |
|--|-------------------------|---|
| 1. Combination switch (Lighting switch) | 2. Intelligent Key unit | 3. Front door switch (driver side) |
| 4. Front seat belt buckle switch (driver side) | 5. Parking brake switch | 6. Front seat belt buckle switch (passenger side) |
| 7. Occupant detection unit | 8. BCM | 9. Key switch |

WARNING CHIME SYSTEM

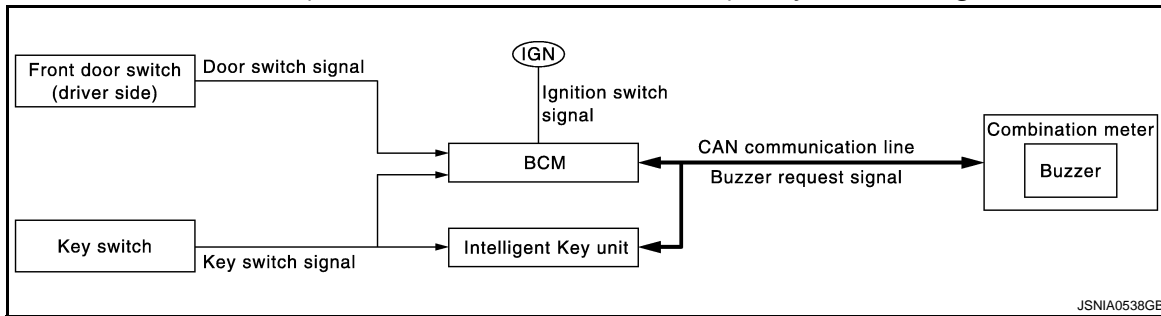
< FUNCTION DIAGNOSIS >

PARKING BRAKE RELEASE WARNING CHIME : Component Description INFOID:000000001451241

Unit	Description
Combination meter	Judges the remaining parking brake according to the vehicle speed signal received from the ABS actuator and electric unit (control unit) via CAN communication and the parking brake switch signal from parking brake switch and sounds the warning buzzer.
ABS actuator and electric unit (control unit)	Transmits the vehicle speed signal to the combination meter via CAN communication.
Parking brake switch	Transmits the parking brake switch signal to the combination meter.

KEY WARNING CHIME (WITH INTELLIGENT KEY)

KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Diagram INFOID:000000001193819



KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Description INFOID:000000001193820

DESCRIPTION

- Intelligent Key unit judges key warning according to the input of ignition switch, key switch and door switch (driver side) signals and transmits the buzzer output signal via CAN communication.
- The combination meter receives the buzzer output signal from Intelligent Key unit and sounds the warning buzzer.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

- Other than ignition switch ON
- Key switch ON (Insert mechanical key into ignition key cylinder)
- Front door switch (driver side) ON

WARNING CANCEL CONDITIONS

Warning canceled if any of the following conditions is fulfilled.

- Ignition switch ON
- Key switch OFF (Remove mechanical key from ignition key cylinder)
- Front door switch (driver side) OFF

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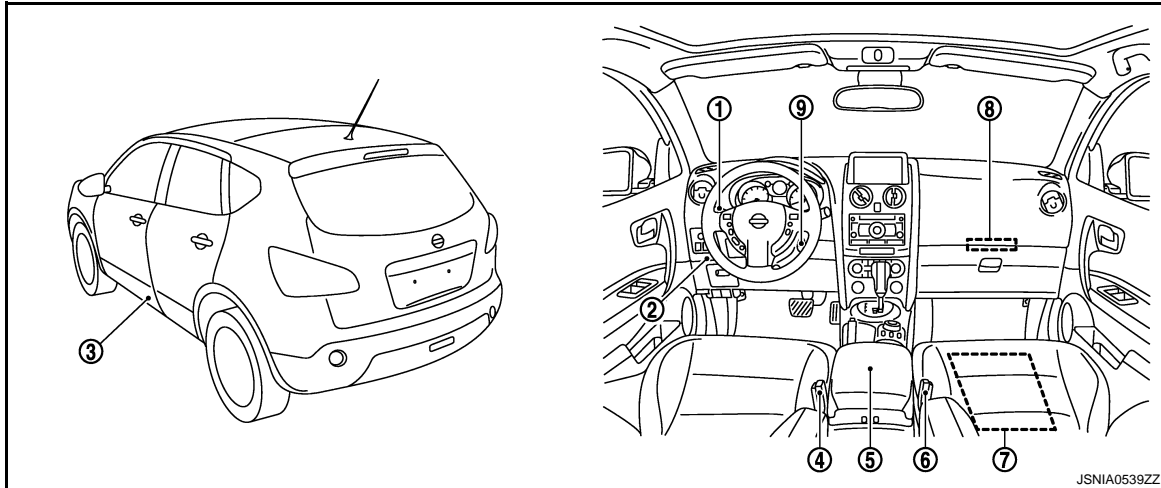
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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

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

INFOID:000000001532402



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|--|-------------------------|---|
| 1. Combination switch (Lighting switch) | 2. Intelligent Key unit | 3. Front door switch (driver side) |
| 4. Front seat belt buckle switch (driver side) | 5. Parking brake switch | 6. Front seat belt buckle switch (passenger side) |
| 7. Occupant detection unit | 8. BCM | 9. Key switch |

KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Description

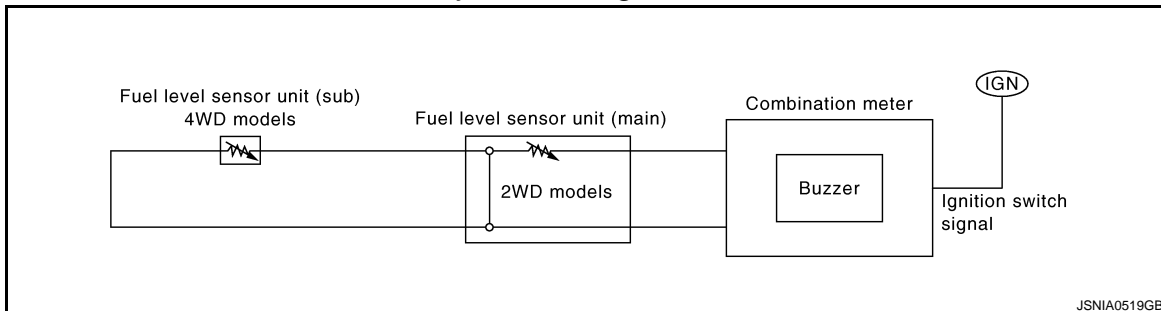
INFOID:000000001193822

Unit	Description
Combination meter	Sounds the warning buzzer according to the buzzer output signal received from BCM via CAN communication.
Intelligent Key unit	Judges key warning according to the door switch signal from the front door switch (driver side) and the key switch signal from the key switch and transmits the buzzer output signal to the combination meter via CAN communication.
Front door switch (driver side)	Transmits the door switch signal to BCM.
Key switch	Transmits the key switch signal to BCM and Intelligent Key unit.

LOW FUEL WARNING CHIME

LOW FUEL WARNING CHIME : System Diagram

INFOID:000000001193823



LOW FUEL WARNING CHIME : System Description

INFOID:000000001193824

DESCRIPTION

The combination meter judges the low fuel warning according to the fuel level sensor signal from the fuel level sensor and sounds the warning buzzer.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

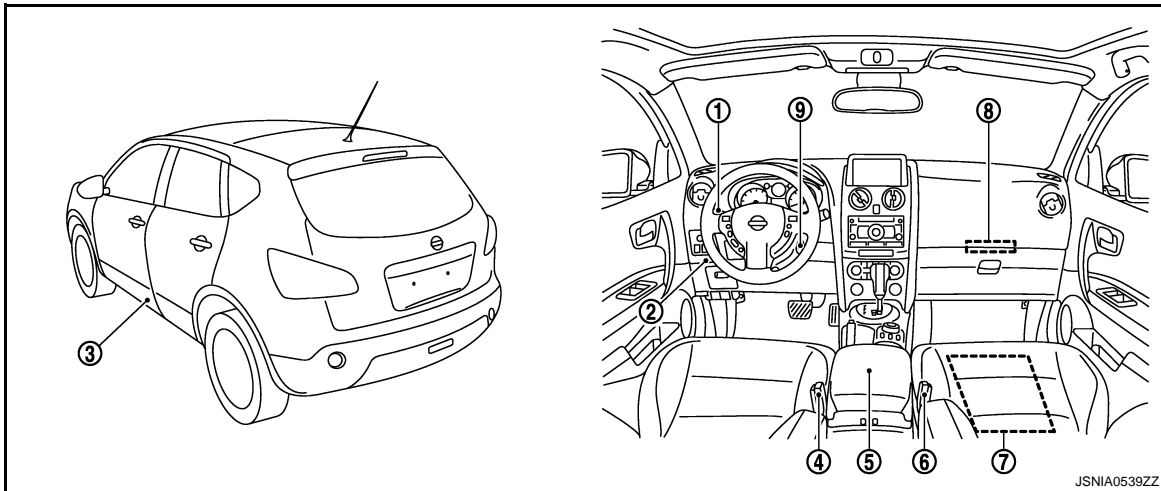
- Ignition switch ON
- Fuel level: Approximately 12.5 ℓ (2 - 4/5 Imp gal) or less

NOTE:

The low fuel warning does not operate until refueling the fuel and fulfilling the above operation conditions again if it operates once.

LOW FUEL WARNING CHIME : Component Parts Location

INFOID:000000001532403



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|--|-------------------------|---|
| 1. Combination switch (Lighting switch) | 2. Intelligent Key unit | 3. Front door switch (driver side) |
| 4. Front seat belt buckle switch (driver side) | 5. Parking brake switch | 6. Front seat belt buckle switch (passenger side) |
| 7. Occupant detection unit | 8. BCM | 9. Key switch |

LOW FUEL WARNING CHIME : Component Description

INFOID:000000001193826

Unit	Description
Combination meter	Judges according to the fuel level sensor signal received from the fuel level sensor and sounds the warning buzzer.
Fuel level sensor	Refer to MWI-36. "2WD : Description" (2WD) or MWI-38. "4WD : Description" (4WD).

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DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (METER)

CONSULT-III Function (METER/M&A)

INFOID:000000001350251

CONSULT-III FUNCTION (METER/M&A)

System	Diagnosis mode	Description
METER/M&A	Self Diagnostic Result	Combination meter checks the conditions and displays memorized error.
	Data Monitor	Displays combination meter input/output data in real time.

SELF DIAG RESULT

Refer to [MWI-57, "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) with CAN communication line. NOTE: 655.35 is displayed when the malfunction signal is received.
SPEED OUTPUT [km/h]	X	Vehicle speed signal value transmitted to other units with CAN communication line. NOTE: 655.35 is displayed when the malfunction signal is received.
TACHO METER [rpm]	X	Value of the engine speed signal received from ECM with CAN communication line. NOTE: 8191.875 is displayed when the malfunction signal is received.
W TEMP METER [°C]	X	Value of engine coolant temperature signal received from ECM with CAN communication line. NOTE: 215 is displayed when the malfunction signal is input.
FUEL METER [lit.]	X	Fuel level indicated on combination meter.
DISTANCE [km]	X	Value of possible driving distance calculated by combination meter.
FUEL W/L [On/Off]	X	Low-fuel warning status judged by the identified fuel level.
C -ENG W/L [On/Off]		Status of malfunction indicator lamp judged from malfunctioning indicator lamp signal received from ECM with CAN communication line.
SEAT BELT W/L [On/Off]		Status of front seat belt buckle switch (driver side).
BUZZER [On/Off]	X	Buzzer status (in the combination meter) judged with the buzzer output signal received from BCM via CAN communication and the warning output condition of the combination meter.
C -ENG2 W/L [On/Off]		Status of malfunction indicator lamp 2 judged from malfunctioning indicator lamp signal received from ECM with CAN communication line.
GLOW IND [On/Off]		Glow indicator lamp status judged from glow indicator lamp signal received from ECM with the CAN communication line.
DOOR W/L [On/Off]		Status of door warning judged from door switch signal received from BCM with CAN communication line.
HI -BEAM IND [On/Off]		Status of high beam indicator lamp judged from high beam request signal received from BCM with CAN communication line.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	Description
TURN IND [On/Off]		Status of turn indicator lamp judged from turn indicator signal received from BCM with CAN communication line.
FR FOG IND [On/Off]		Status of front fog light indicator lamp judged from front fog light request signal received from BCM with CAN communication line.
RR FOG IND [On/Off]		Status of rear fog light indicator lamp judged from rear fog light request signal received from BCM with CAN communication line.
OIL W/L [On/Off]		Status of oil pressure warning lamp judged from oil pressure switch signal received from IPDM E/R with CAN communication line.
LIGHT IND [On/Off]		Status of light indicator lamp judged from position light request signal received from BCM with CAN communication line.
DPF W/L [On/Off]		DPF warning lamp status judged by the DPF warning lamp signal received from ECM with the CAN communication line.
A/T TEMP W/L [On/Off]		A/T TEMP warning lamp status judged by the A/T fluid temperature sensor signal received from TCM with the CAN communication line.
VDC/TCS IND [On/Off]		Status of VDC indicator lamp judged from VDC OFF indicator lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line.
ABS W/L [On/Off]		Status of ABS warning lamp judged from ABS warning lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line.
SLIP IND [On/Off]		Status of slip indicator lamp judged from slip indicator lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line.
BRAKE W/L [On/Off]		Status of brake warning lamp judged from brake warning lamp signal received from ABS actuator and electric unit (control unit) with CAN communication line. 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.
OIL LEVEL IND [LEVEL1, 2, 3, 4, 5/CR NG/On]		Oil level status judged by the oil level sensor signal from the oil level sensor.
KEY G W/L [On/Off]		Status of key warning lamp (G) judged from key warning signal received from Intelligent Key unit with CAN communication line.
KEY R W/L [On/Off]		Status of key warning lamp (R) judged from key warning signal received from Intelligent Key unit with CAN communication line.
KEY KNOB W/L [On/Off]		Key knob switch status received from Intelligent Key unit with the CAN communication line.
M RANGE SW [On/Off]	X	Status of mode select switch (manual).
NM RANGE SW [On/Off]	X	Status of mode select switch (auto).
AT SFT UP SW [On/Off]	X	Status of position select switch (up).
AT SFT DWN SW [On/Off]	X	Status of position select switch (down).

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DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	Description
P RANGE IND [On/Off]	X	Status of shift position indicator judged from shift position signal and manual mode indicator signal received from TCM with CAN communication line.
R RANGE IND [On/Off]	X	
N RANGE IND [On/Off]	X	
D RANGE IND [On/Off]	X	
4 RANGE IND [On/Off]	X	
3 RANGE IND [On/Off]	X	
2 RANGE IND [On/Off]	X	
1 RANGE IND [On/Off]	X	
AT CHECK W/L [On/Off]		A/T check warning lamp status judged by the A/T CHECK indicator lamp signal received from TCM with the CAN communication line.
CVT IND [On/Off]		CVT indicator lamp status judged from CVT CHECK indicator lamp signal received from TCM with the CAN communication line.
CRUISE IND [On/Off]		Status of CRUISE indicator judged from ASCD CRUISE lamp signal received from ECM with CAN communication line.
SET IND [On/Off]		Status of set indicator judged from ASCD SET indicator signal received from ECM with CAN communication line.
4WD LOCK SW [On/Off]		4WD lock switch status judged by the 4WD signal received from 4WD control unit with the CAN communication line.
4WD LOCK IND [On/Off]		4WD lock indicator status judged by the 4WD signal received from 4WD control unit with the CAN communication line.
4WD W/L [On/Off]		Status of 4WD warning lamp judged from 4WD warning lamp signal received from 4WD control unit with CAN communication line.
EPS W/L [On/Off]		Status of EPS warning lamp judged from EPS warning lamp signal received from EPS control unit with CAN communication line.

NOTE:

Some items are not available according to vehicle specification.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000001532404

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM. Refer to BCS-62, "DTC Index" .
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul style="list-style-type: none"> Enables to read and save the vehicle specification. Enables to write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
—	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
PTC heater system	PTC HEATER		×	×

BUZZER

BUZZER : CONSULT-III Function (BCM - BUZZER)

INFOID:000000001532405

CONSULT-III FUNCTION (BCM – BUZZER)

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

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

DATA MONITOR

Display item [Unit]	Description
IGN ON SW [On/Off]	Ignition switch (ON) status judged by ignition power supply input.
KEY ON SW [On/Off]	Key switch status.
DOOR SW -DR [On/Off]	Front door switch (driver side) status judged by BCM.
TAIL LAMP SW [On/Off]	Lighting switch status judged by the lighting switch signal read with combination switch reading function.
DOOR SW -AS [On/Off]	Front door switch (passenger side) status judged by BCM.
DOOR SW -RR [On/Off]	Rear door switch RH status judged by BCM.
DOOR SW -RL [On/Off]	Rear door switch LH status judged by BCM.
BACK DOOR SW [On/Off]	Back door switch status judged by BCM.
VEHICLE SPEED [km/h]	Vehicle speed signal value received from combination meter via CAN communication.

ACTIVE TEST

Display item	Description
LIGHT WARN ALM	The light reminder warning operation can be checked by operating the relevant function (On/Off).
IGN KEY WARN ALM	The key warning operation can be checked by operating the relevant function (On/Off).
KEY REMINDER WARN	The key reminder warning operation can be checked by operating the relevant function (On/Off).

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:000000001518907

1.CHECK FUSE

Check for blown fuses.

Terminal No.	Signal name	Fuse No.
1	Battery power supply	8
2	Ignition signal	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 1, 2 and ground.

Terminals		Ignition switch position		
(+)	(-)			
Combination meter		OFF	ON	
Connector	Terminal			
M34	1	Ground	Battery voltage	Battery voltage
	2		Approx. 0 V	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 3, 23 and ground.

Combination meter		Ground	Continuity
Connector	Terminal		
M34	3		Existed
	23		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000001193831

1.CHECK FUSES AND FUSIBLE LINK

Check that the following fuses and fusible link are not fusing.

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Terminal No.	Signal name	Fuses and fusible link No.
41	Battery power supply	9
57		J
38	Ignition power supply	4

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			Ignition switch position		
(+)	BCM		(-)	OFF	ACC
Connector		Terminal			
M65	38	Ground	Approx. 0 V	Approx. 0 V	Battery voltage
M66	41		Battery voltage	Battery voltage	Battery voltage
M67	57				

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		
M67	55		Existed

Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

METER BUZZER CIRCUIT

< COMPONENT DIAGNOSIS >

METER BUZZER CIRCUIT

Description

INFOID:000000001193832

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

Component Function Check

INFOID:000000001193833

1. CHECK OPERATION OF METER BUZZER

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

Does meter buzzer beep?

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

2. CHECK COMBINATION METER INPUT SIGNAL

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

"BUZZER"

Under the condition of buzzer input : On

Except above : Off

Is the inspection result normal?

- YES >> Replace combination meter. Refer to [MWI-78, "Removal and Installation"](#).
NO >> Replace BCM. Refer to [BCS-65, "Exploded View"](#).

Diagnosis Procedure

INFOID:000000001193834

1. CHECK POWER SUPPLY AND GROUND CIRCUIT OF COMBINATION METER

Check power supply and ground circuit of combination meter. Refer to [MWI-34, "COMBINATION METER : Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Repair or replace malfunctioning parts.

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WCS

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000001193835

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

Component Function Check

INFOID:000000001193836

1.CHECK COMBINATION METER INPUT SIGNAL

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

"SEAT BELT W/L"

When driver seat belt is fastened : Off

When driver seat belt is unfastened : On

>> INSPECTION END

Diagnosis Procedure

INFOID:000000001193837

1.CHECK COMBINATION METER INPUT SIGNAL 1

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector terminal 35 and ground.

35 – Ground

When driver seat belt is fastened : Approx. 5 V

When driver seat belt is unfastened : Approx. 0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK COMBINATION METER INPUT SIGNAL 2

Check voltage between combination meter harness connector terminal 36 and ground.

36 – Ground

- Passenger seat getting in conditions : Approx. 12 V
- When passenger seat belt is fastened

When passenger seat belt is unfastened : Approx. 0 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 5.

3.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and front seat belt buckle switch (driver side) connector.
3. Check continuity between combination meter harness connector terminal 35 and front seat belt buckle switch (driver side) harness connector terminal 1.

35 – 1 : Continuity should exist.

4. Check harness continuity between combination meter harness connector terminal 35 and ground.

35 – Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair harness or connector.

4.CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) GROUND CIRCUIT

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

Check harness continuity between front seat belt buckle switch (driver side) harness connector terminal 2 and ground.

2 – Ground : Continuity should exist.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

5. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE) CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and front seat belt buckle switch (passenger side) connector.
3. Check continuity between combination meter harness connector terminal 36 and front seat belt buckle switch (passenger side) harness connector terminal 1.

36 – 1 : Continuity should exist.

4. Check harness continuity between combination meter harness connector terminal 36 and ground.

36 – Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair harness or connector.

6. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE) CIRCUIT 2

1. Disconnect occupant detection unit connector.
2. Check continuity between front seat belt buckle switch (passenger side) harness connector terminal 2 and occupant detection unit harness connector terminal 1.

2 – 1 : Continuity should exist.

3. Check harness continuity between front seat belt buckle switch (passenger side) harness connector terminal 2 and ground.

2 – Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair harness or connector.

7. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE) GROUND CIRCUIT

Check harness continuity between occupant detection unit harness connector terminal 2 and ground.

2 – Ground : Continuity should exist.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

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WCS

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING BRAKE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000001193838

Transmits the parking brake switch signal to the combination meter.

Diagnosis Procedure

INFOID:000000001193839

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector terminal 26 and ground.

26 – Ground

Parking brake ON : Approx. 0 V

Parking brake OFF : Approx. 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 26 and parking brake switch harness connector terminal 1.

26 – 1 : Continuity should exist.

4. Check continuity between combination meter harness connector terminal 26 and ground.

26 – Ground : Continuity should not exist.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair harness or connector.

Component Inspection

INFOID:000000001193840

Refer to [BRC-47, "Component Inspection"](#).

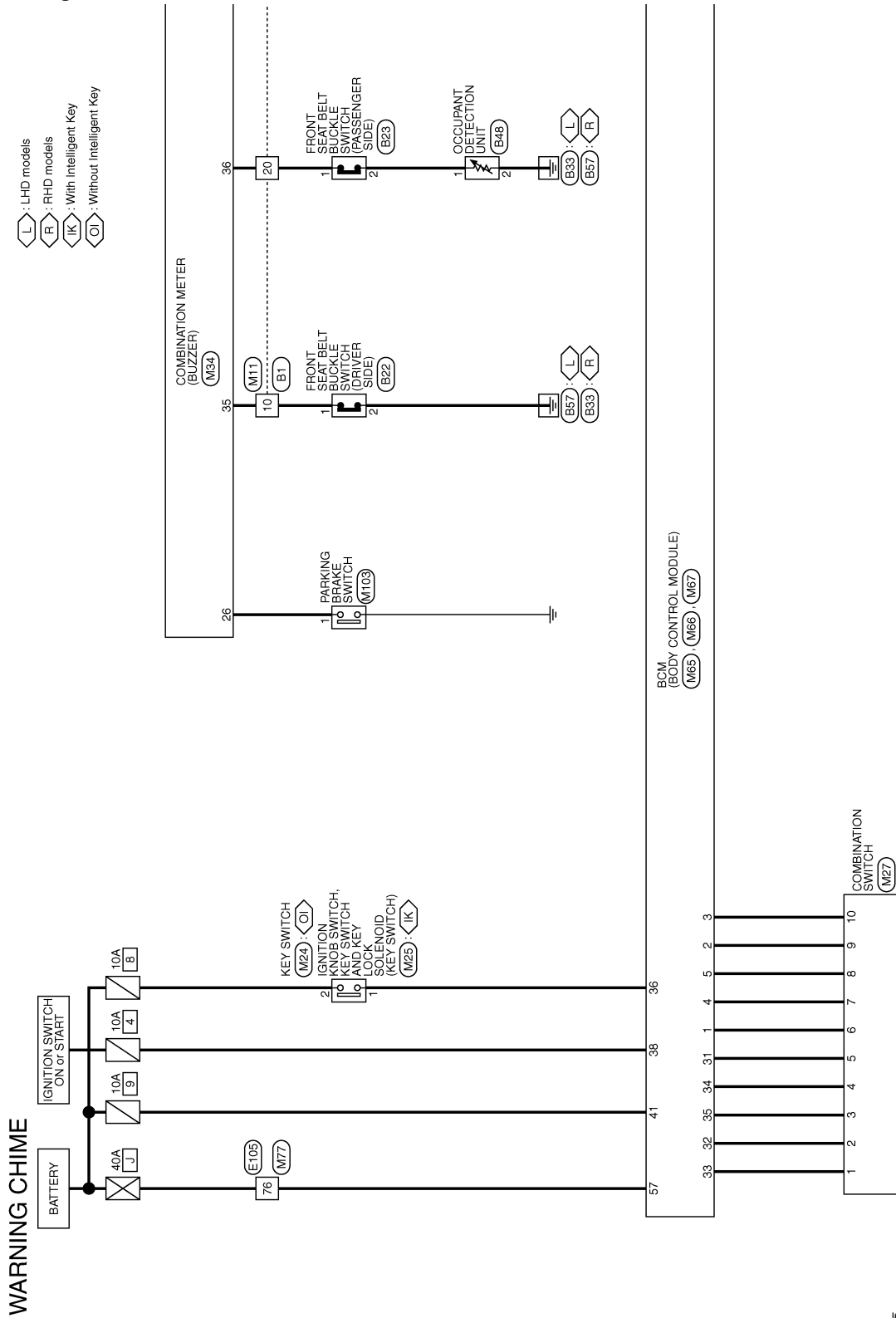
WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME SYSTEM

Wiring Diagram - WARNING CHIME -

INFOID:000000001193841



- ◁ L ▷ : LHD models
- ◁ R ▷ : RHD models
- ◁ IK ▷ : With Intelligent Key
- ◁ OI ▷ : Without Intelligent Key

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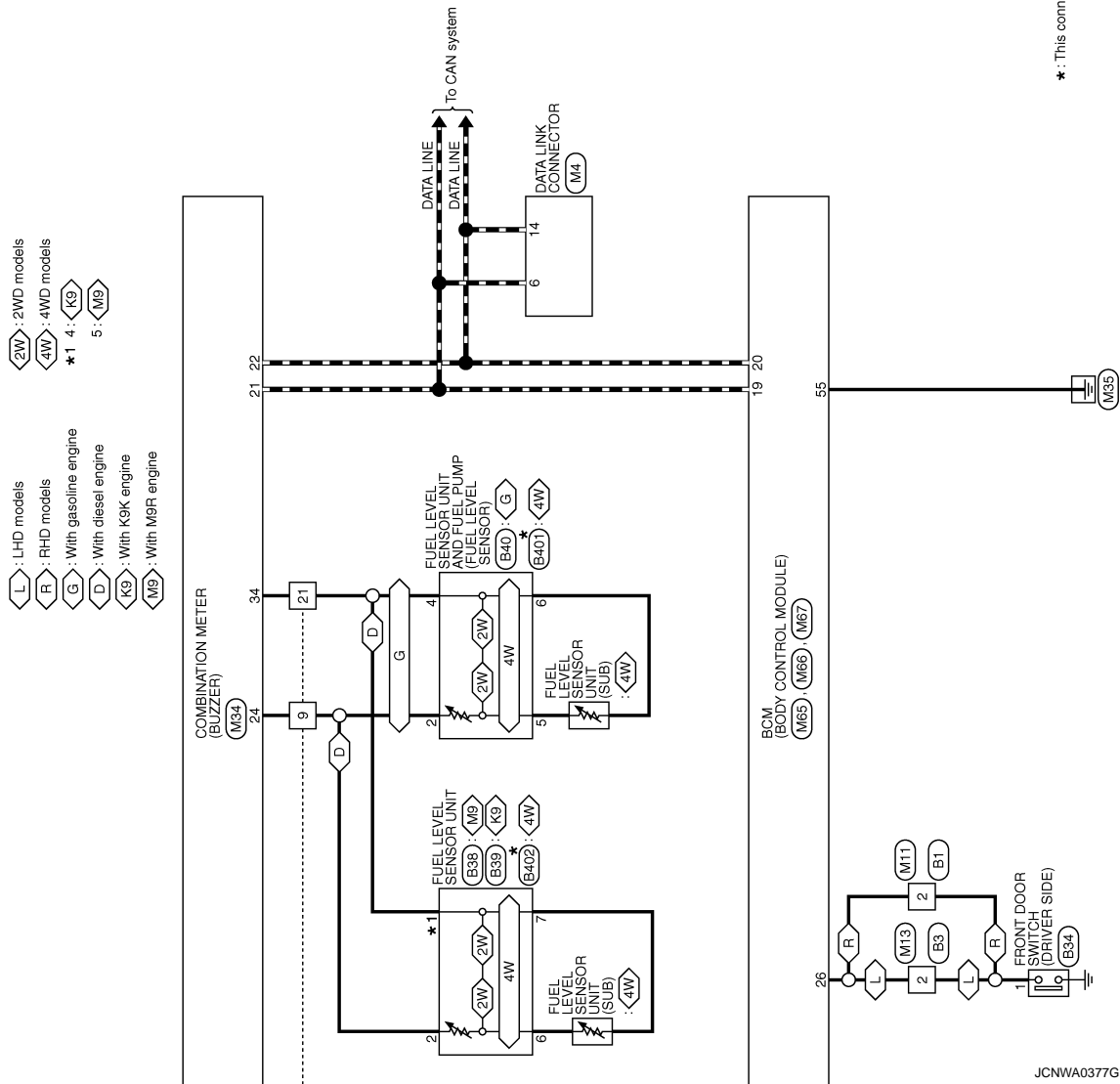
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WARNING CHIME SYSTEM

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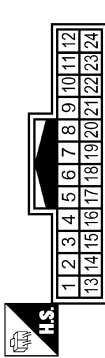


WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

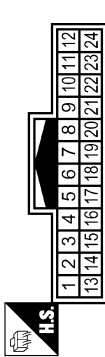
WARNING CHIME

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH24MW



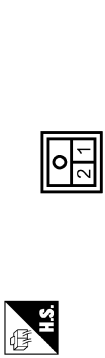
Terminal No.	Color of Wire	Signal Name [Specification]
2	R/W	[RHD models]
9	G	-
10	O	-
20	GR	-
21	B	-

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH24MW



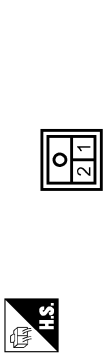
Terminal No.	Color of Wire	Signal Name [Specification]
2	R/W	[LHD models]

Connector No.	B22
Connector Name	FRONT SEAT BELT BUCKLE SWITCH (DRIVER SIDE)
Connector Type	020FW



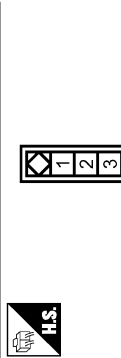
Terminal No.	Color of Wire	Signal Name [Specification]
1	O	-
2	B	-

Connector No.	B23
Connector Name	FRONT SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)
Connector Type	020FW



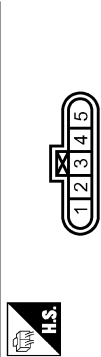
Terminal No.	Color of Wire	Signal Name [Specification]
1	GR	-
2	LG	-

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	A03FW



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

Connector No.	B38
Connector Name	FUEL LEVEL SENSOR UNIT
Connector Type	E03FGY-RS



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

Connector No.	B39
Connector Name	FUEL LEVEL SENSOR UNIT
Connector Type	E04FGY-RS



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

Connector No.	B40
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP
Connector Type	E04FGY-RS



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

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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >


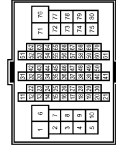
WARNING CHIME

Connector No.	B48
Connector Name	OCCUPANT DETECTION UNIT
Connector Type	S02FW



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

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH60MW-NS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Connector No.	B402
Connector Name	FUEL LEVEL SENSOR UNIT
Connector Type	-


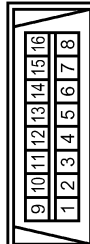
Terminal No.	Color of Wire	Signal Name [Specification]
6	-	-
7	-	-

Connector No.	B401
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP
Connector Type	-



Terminal No.	Color of Wire	Signal Name [Specification]
5	-	-
6	-	-

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



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

Connector No.	M24
Connector Name	KEY SWITCH
Connector Type	A02MW



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

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH24FW


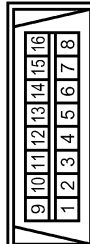
Terminal No.	Color of Wire	Signal Name [Specification]
2	R	- [LHD models]

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH24FW

Terminal No.	Color of Wire	Signal Name [Specification]
2	R	- [RHD models]
9	G	-
10	O	-
20	GR	-
21	B	-

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

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

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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME

Connector No.	M25
Connector Name	IGNITION KNOB SWITCH, KEY SWITCH AND KEY LOCK SOLENOID
Connector Type	TKORMGY



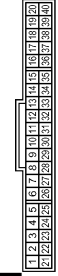
Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
2	Y	-

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TK18FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	INPUT1
2	G	INPUT2
3	L	INPUT3
4	GR	INPUT4
5	BR	INPUT5
6	P	OUTPUT1
7	R	OUTPUT2
8	W	OUTPUT3
9	Y	OUTPUT4
10	LG	OUTPUT3

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB4QFW



Terminal No.	Color of Wire	Signal Name [Specification]
21	L	CAN-H
22	P	CAN-L
24	G	FUEL LEVEL SENS GND
26	V	PARKING BRAKE SW
34	B	FUEL LEVEL SENS
35	O	SEAT BELT BUCKLE SW (DRIVER SIDE)
36	GR	SEAT BELT BUCKLE SW (PASSENGER SIDE)

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AA84QFB



Terminal No.	Color of Wire	Signal Name [Specification]
1	P	COMBI SW OUTPUT 1
2	Y	COMBI SW OUTPUT 4
3	LG	COMBI SW OUTPUT 3
4	R	COMBI SW OUTPUT 2
5	W	COMBI SW OUTPUT 5
19	L	CAN-H
20	P	CAN-L
28	R	DOOR SW (DR)
31	BR	COMBI SW INPUT 5
32	G	COMBI SW INPUT 2
33	V	COMBI SW INPUT 1

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC1251017



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(F)USE

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC08350017



Terminal No.	Color of Wire	Signal Name [Specification]
55	B	GND(POWER)
57	Y	BAT(F)/L

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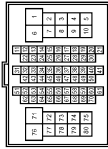
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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-NS16-TM4



Terminal No.	76	Y	-	-	Signal Name [Specification]
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Connector No.	M103
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A



Terminal No.	1	V	-	-	Signal Name [Specification]
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COMBINATION METER

< ECU DIAGNOSIS >

ECU DIAGNOSIS

COMBINATION METER

Reference Value

INFOID:000000001542700

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
TACHO METER [rpm]	Ignition switch ON	While driving	Equivalent to tachometer reading NOTE: 8191.875 is displayed when the malfunction signal is received
W TEMP METER [°C]	Ignition switch ON	—	Values according to engine coolant temperature NOTE: 215 is displayed when the malfunction signal is input
FUEL METER [lit]	Ignition switch ON	—	Values according to fuel level
DISTANCE [km]	Ignition switch ON	—	Possible driving distance calculated by combination meter
FUEL W/L	Ignition switch ON	Low-fuel warning lamp ON	On
		Low-fuel warning lamp OFF	Off
C-ENG W/L	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off
SEAT BELT W/L	Ignition switch ON	Seat belt warning lamp ON	On
		Seat belt warning lamp OFF	Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off
C-ENG 2 W/L	Ignition switch ON	Malfunction indicator lamp 2 ON	On
		Malfunction indicator lamp 2 OFF	Off
GLOW IND	Ignition switch ON	Glow indicator lamp ON	On
		Glow indicator lamp OFF	Off
DOOR W/L	Ignition switch ON	Door warning lamp ON	On
		Door warning lamp 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 lamp indicator lamp ON	On
		Front fog lamp indicator lamp OFF	Off
RR FOG IND	Ignition switch ON	Rear fog lamp indicator lamp ON	On
		Rear fog lamp indicator lamp OFF	Off

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COMBINATION METER

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Monitor Item	Condition		Value/Status
OIL W/L	Ignition switch ON	Oil pressure warning lamp ON	On
		Oil pressure warning lamp OFF	Off
LIGHT IND	Ignition switch ON	Tail lamp indicator lamp ON	On
		Tail lamp indicator lamp OFF	Off
DPF W/L	Ignition switch ON	DPF warning lamp ON	On
		DPF warning lamp OFF	Off
AT TEMP W/L	Ignition switch ON	A/T TEMP warning lamp ON	On
		A/T TEMP warning lamp OFF	Off
VDC/TCS IND	Ignition switch ON	ESP OFF indicator lamp ON	On
		ESP OFF indicator lamp OFF	Off
ABS W/L	Ignition switch ON	ABS warning lamp ON	On
		ABS warning 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
OIL LEVEL IND	Ignition switch ON	Oil level 1 is detected	LEVEL1
		Oil level 2 is detected	LEVEL2
		Oil level 3 is detected	LEVEL3
		Oil level 4 is detected	LEVEL4
		Oil level 5 is detected	LEVEL5
		OIL LOW is detected	On
		Oil level is not detected	CR NG
KEY G W/L	Ignition switch ON	KEY warning lamp (green) ON	On
		KEY warning lamp (green) OFF	Off
KEY R W/L	Ignition switch ON	KEY warning lamp (red) ON	On
		KEY warning lamp (red) OFF	Off
KEY KNOB W/L	Ignition switch ON	LOCK warning lamp ON	On
		LOCK warning lamp OFF	Off
M RANGE SW	Ignition switch ON	Manual mode	On
		Other than the above	Off
NM RANGE SW	Ignition switch ON	Manual mode	Off
		Other than the above	On
AT SFT UP SW	Ignition switch ON	Selector lever (+) position	On
		Other than the above	Off
AT SFT DWN SW	Ignition switch ON	Selector lever (-) position	On
		Other than the above	Off
P RANGE IND	Ignition switch ON	Selector lever in P position	On
		Other than the above	Off
R RANGE IND	Ignition switch ON	Selector lever in R position	On
		Other than the above	Off
N RANGE IND	Ignition switch ON	Selector lever in N position	On
		Other than the above	Off

COMBINATION METER

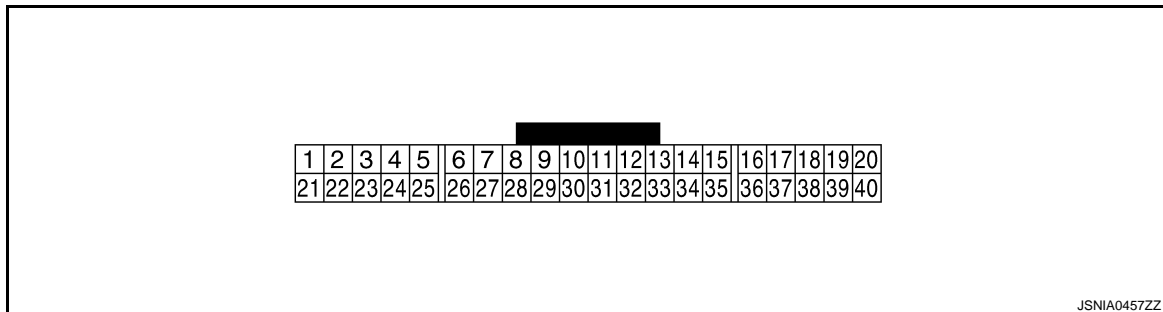
< ECU DIAGNOSIS >

Monitor Item	Condition		Value/Status	
D RANGE IND	Ignition switch ON	Selector lever in D position	On	A
		Other than the above	Off	
4 RANGE IND	Ignition switch ON	Shift indicator 4 is displayed	On	B
		Other than the above	Off	
3 RANGE IND	Ignition switch ON	Shift indicator 3 is displayed	On	C
		Other than the above	Off	
2 RANGE IND	Ignition switch ON	Shift indicator 2 is displayed	On	D
		Other than the above	Off	
1 RANGE IND	Ignition switch ON	Shift indicator 1 is displayed	On	E
		Other than the above	Off	
AT CHECK-W/L	Ignition switch ON	TCM electronic control system warning lamp ON	On	E
		TCM electronic control system warning lamp OFF	Off	F
CVT IND	Ignition switch ON	CVT indicator lamp ON	On	
		CVT indicator lamp OFF	Off	G
CRUISE IND	Ignition switch ON	Cruise indicator lamp ON	On	
		Cruise indicator lamp OFF	Off	H
SET IND	Ignition switch ON	SET indicator lamp ON	On	
		SET indicator lamp OFF	Off	I
4WD LOCK SW	Ignition switch ON	4WD LOCK switch ON	On	
		4WD LOCK switch OFF	Off	J
4WD LOCK IND	Ignition switch ON	4WD LOCK indicator lamp ON	On	
		4WD LOCK indicator lamp OFF	Off	K
4WD W/L	Ignition switch ON	4WD warning lamp ON	On	
		4WD warning lamp OFF	Off	L
EPS W/L	Ignition switch ON	EPS warning lamp ON	On	
		EPS warning lamp OFF	Off	M

NOTE:

Some items are not available according to vehicle specification.

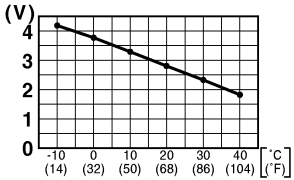
TERMINAL LAYOUT



PHYSICAL VALUES

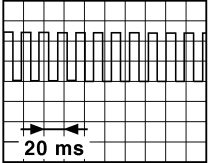
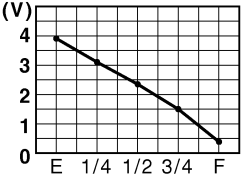
COMBINATION METER

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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (Y)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (GR)	Ground	IGN signal	Input	Ignition switch ON	—	Battery voltage
3 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
11 (B)*1 (R)*2	Ground	Steering switch (trip com- puter) signal	Input	Ignition switch ON	Press the steering switch (trip computer)	0 V
					Other than the above	5 V
15 (W)	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	4 V
					Air bag warning lamp OFF	0 V
19 (V)	Ground	OAT sensor signal	Input	Ignition switch ON	—	 <p style="text-align: right; font-size: small;">JSNIA0014GB</p>
20 (L/O)	Ground	OAT sensor ground	—	Ignition switch ON	—	0 V
21 (L)	—	CAN-H	—	—	—	—
22 (P)	—	CAN-L	—	—	—	—
23 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
24 (G)	Ground	Fuel level sensor signal ground	—	Ignition switch ON	—	0 V
25 (L)	Ground	Alternator signal	Input	Ignition switch ON	Charge warning lamp ON	0 V
					Charge warning lamp OFF	12 V
26 (V)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake ON	0 V
					Parking brake OFF	5 V
27 (BR)	Ground	Brake fluid level switch sig- nal	Input	Ignition switch ON	Brake fluid level is normal	5 V
					Brake fluid level is less than LOW level	0 V
28 (SB)	Ground	Security signal	Input	Ignition switch ON	Security warning lamp ON	0 V
					Security warning lamp OFF	12 V

COMBINATION METER

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
31 (Y)	Ground	Vehicle speed signal (8 pulse)	Output	Ignition switch ON	Vehicle speed is approx. 40 km/h (25 MPH)
<p>NOTE: The maximum voltage varies depending on the specification (destination unit).</p>  <p style="text-align: right; font-size: small;">JSNIA0012GB</p>					
32 (Y)	Ground	Oil level sensor signal	Input	Ignition switch ON	—
<p>Refer to MWI-32, "Component Inspection (HR16DE Engine Models)" or MWI-33, "Component Inspection (Except HR16DE Engine Models)".</p> <p>NOTE: The measurement cannot be performed because the signal is input for a moment with the ignition switch ON.</p>					
33 (P)	Ground	Oil level sensor signal ground	—	Ignition switch ON	—
34 (B)	Ground	Fuel level sensor signal	Input	Ignition switch ON	—
 <p style="text-align: right; font-size: small;">JSNIA0322GB</p>					
35 (O)	Ground	Seat belt buckle switch signal (driver side)	Input	Ignition switch ON	When driver seat belt is fastened
					When driver seat belt is unfastened
36 (GR)	Ground	Seat belt buckle switch signal (passenger side)	Input	Ignition switch ON	<ul style="list-style-type: none"> When getting in the passenger seat When passenger seat belt is fastened
					<ul style="list-style-type: none"> When getting in the passenger seat When passenger seat belt is not fastened
37 (R)	Ground	Not manual mode signal	Input	Ignition switch ON	Manual mode
					Other than the above
38 (LG)	Ground	Manual mode shift down signal	Input	Ignition switch ON	Selector lever (-) position
					Other than the above
39 (W)	Ground	Manual mode shift up signal	Input	Ignition switch ON	Selector lever (+) position
					Other than the above

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Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
40 (L)	Ground	Manual mode signal	Input	Ignition switch ON	Manual mode	0 V
					Other than the above	12 V

*1: With NAVI

*2: Without NAVI

COMBINATION METER

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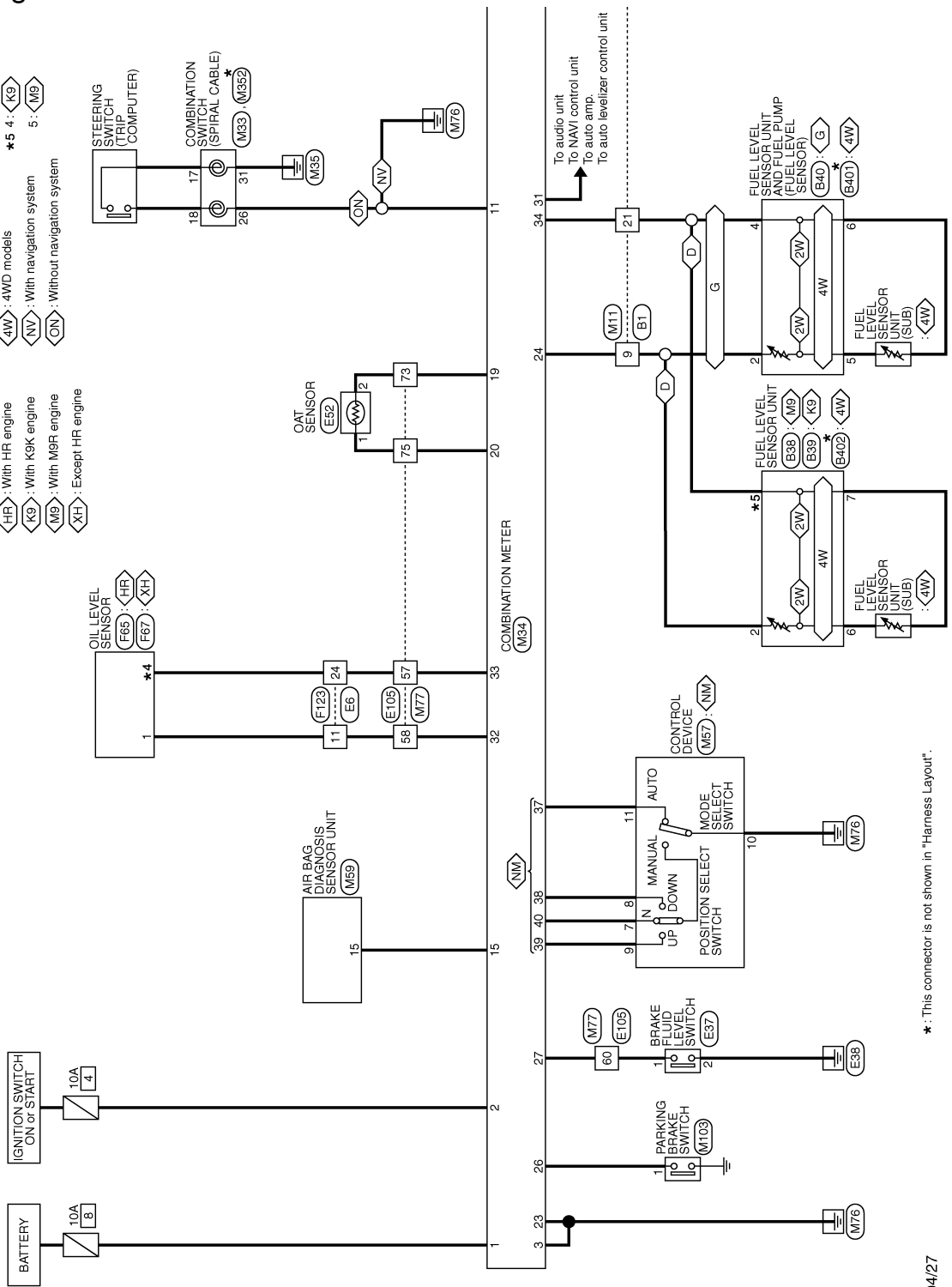
Wiring Diagram - METER -

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- G** : With gasoline engine
- D** : With diesel engine
- HR** : With HR engine
- K9** : With K9K engine
- M9** : With M9F engine
- XH** : Except HR engine
- NM** : Except MT
- 2W** : 2WD models
- 4W** : 4WD models
- NV** : With navigation system
- ON** : Without navigation system

- *4 3** : **HR**
- 2** : **XH**
- *5 4** : **K9**
- 5** : **M9**



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

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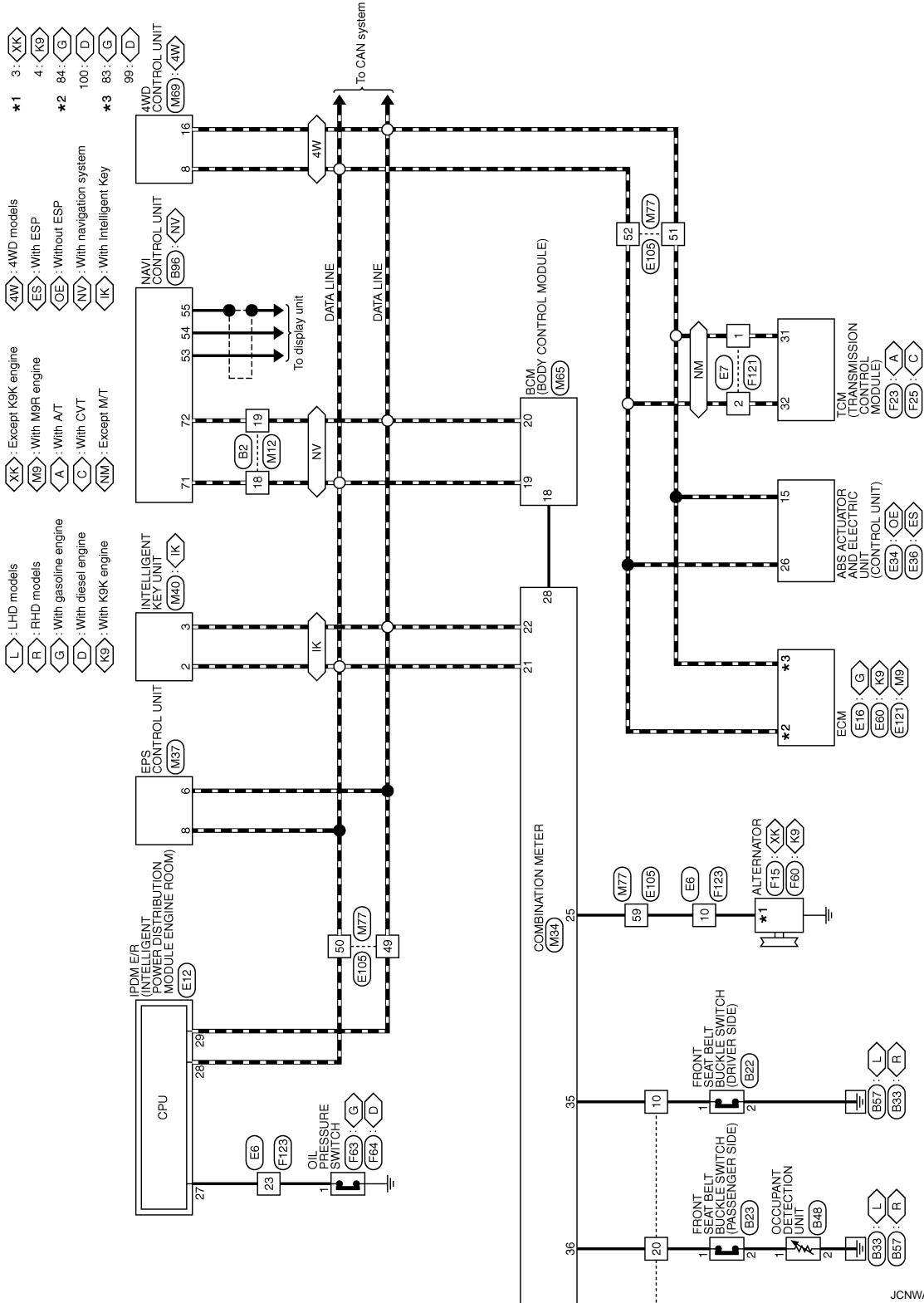
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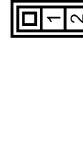


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COMBINATION METER

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Connector No.	B1	Connector No.	B2	Connector No.	B23	Connector No.	B48
Connector Name	WIRE TO WIRE	Connector Name	FRONT SEAT BELT BUCKLE SWITCH (DRIVER SIDE)	Connector Name	FRONT SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)	Connector Name	OCCUPANT DETECTION UNIT
Connector Type	TH24MW	Connector Type	TH24MW	Connector Type	SO2FW	Connector Type	SO2FW
 		 		 		 	
Terminal No.	9	Terminal No.	18	Terminal No.	1	Terminal No.	1
Color of Wire	G	Color of Wire	L	Color of Wire	GR	Color of Wire	GR
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	10	Terminal No.	19	Terminal No.	2	Terminal No.	2
Color of Wire	O	Color of Wire	P	Color of Wire	LG	Color of Wire	LG
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	20	Terminal No.	1	Terminal No.	1	Terminal No.	1
Color of Wire	GR	Color of Wire	L	Color of Wire	O	Color of Wire	O
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	21	Terminal No.	2	Terminal No.	2	Terminal No.	2
Color of Wire	B	Color of Wire	B	Color of Wire	B	Color of Wire	B
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	5	Terminal No.	2	Terminal No.	4	Terminal No.	4
Color of Wire	G	Color of Wire	G	Color of Wire	G	Color of Wire	G
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	2	Terminal No.	4	Terminal No.	2	Terminal No.	2
Color of Wire	G	Color of Wire	B	Color of Wire	B	Color of Wire	B
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	3	Terminal No.	2	Terminal No.	4	Terminal No.	4
Color of Wire	B	Color of Wire	G	Color of Wire	G	Color of Wire	G
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	4	Terminal No.	4	Terminal No.	4	Terminal No.	4
Color of Wire	B	Color of Wire	B	Color of Wire	B	Color of Wire	B
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	5	Terminal No.	4	Terminal No.	4	Terminal No.	4
Color of Wire	B	Color of Wire	B	Color of Wire	B	Color of Wire	B
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-

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28	L	-																																																																																																																																															
29	P	-																																																																																																																																															
Connector No.	E34																																																																																																																																																
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)																																																																																																																																																
Connector Type	BAA2ZF8-AH24-LH																																																																																																																																																
Terminal No.	Color of Wire	Signal Name [Specification]																																																																																																																																															
15	P	CAN-L																																																																																																																																															
26	L	CAN-H																																																																																																																																															

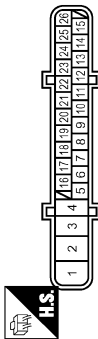
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COMBINATION METER

< ECU DIAGNOSIS >

METER

Connector No.	E38
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	BAA2FEB-AH24-LH



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

Connector No.	E37
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Type	YV02FGY



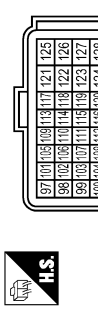
Terminal No.	Color of Wire	Signal Name [Specification]
1	R/B	-
2	B	-

Connector No.	E52
Connector Name	OAT SENSOR
Connector Type	RHQ4FB



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

Connector No.	E60
Connector Name	ECM
Connector Type	MAA2FEB-MA8-LH



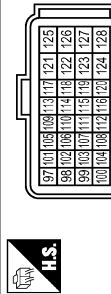
Terminal No.	Color of Wire	Signal Name [Specification]
99	P	MAIN CAN-L (BODY)
100	L	MAIN CAN-H (BODY)

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH03MW-NS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
49	P	-
50	L	-
51	P	-
52	L	-
57	P	-
58	Y	-
59	L	-
60	R/B	-
78	V	-
79	L/O	-

Connector No.	E121
Connector Name	ECM
Connector Type	MAA2FEB-MA8-LH



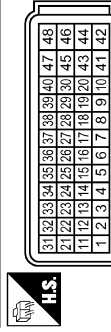
Terminal No.	Color of Wire	Signal Name [Specification]
99	P	MAIN CAN-L(BODY)
100	L	MAIN CAN-H(BODY)

Connector No.	F15
Connector Name	ALTERNATOR
Connector Type	HS03FB



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

Connector No.	F23
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	MOLEX 500894-411



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


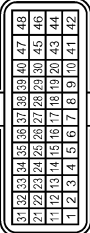








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COMBINATION METER

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Connector No.	F25	Connector No.	F64	Connector No.	F60	Connector No.	F63	Connector No.	F123
Connector Name	TCM (TRANSMISSION CONTROL MODULE)	Connector Name	OIL PRESSURE SWITCH	Connector Name	ALTERNATOR	Connector Name	OIL PRESSURE SWITCH	Connector Name	WIRE TO WIRE
Connector Type	MOLEX 500994-4111	Connector Type	RH02FB	Connector Type	FEA02FB	Connector Type	E01FGY-RS-AR	Connector Type	TK24FW-1V
									
Terminal No.	31	Terminal No.	1	Terminal No.	4	Terminal No.	1	Terminal No.	10
Color of Wire	P	Color of Wire	W	Color of Wire	L	Color of Wire	W	Color of Wire	L
Signal Name [Specification]	CAN-L CAN-H	Signal Name [Specification]	-	Signal Name [Specification]	L	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	32	Terminal No.	1	Terminal No.	2	Terminal No.	2	Terminal No.	11
Color of Wire	L	Color of Wire	W	Color of Wire	Y	Color of Wire	P	Color of Wire	L
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	3	Terminal No.	1	Terminal No.	2	Terminal No.	1	Terminal No.	23
Color of Wire	P	Color of Wire	W	Color of Wire	P	Color of Wire	L	Color of Wire	W
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	1	Terminal No.	1	Terminal No.	1	Terminal No.	1	Terminal No.	11
Color of Wire	Y	Color of Wire	P	Color of Wire	Y	Color of Wire	P	Color of Wire	L
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-
Terminal No.	2	Terminal No.	2	Terminal No.	2	Terminal No.	2	Terminal No.	24
Color of Wire	P	Color of Wire	L	Color of Wire	P	Color of Wire	L	Color of Wire	P
Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-	Signal Name [Specification]	-

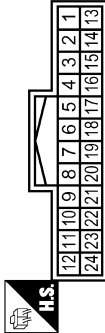
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COMBINATION METER

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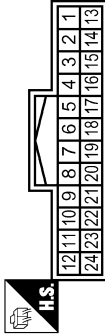
METER

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH24FW



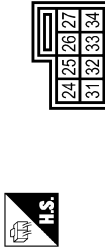
Terminal No.	Color of Wire	Signal Name [Specification]
9	G	-
10	O	-
20	GR	-
21	B	-

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Type	TH24FW



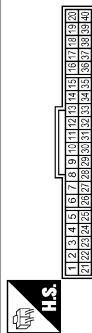
Terminal No.	Color of Wire	Signal Name [Specification]
18	L	-
19	P	-

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK3BFGV-1V



Terminal No.	Color of Wire	Signal Name [Specification]
26	R	-
31	B	-

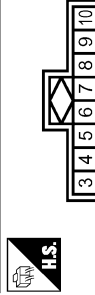
Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB4QFW



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	BAT
2	GR	IGN
3	B	GND
11	R	STEERING SW(Without navigation system)
15	W	AIR BAG
19	V	OAT SENS
20	L/O	OAT SENS GND
21	L	CAN-H
22	P	CAN-L
23	B	GND
24	G	FUEL LEVEL SENS GND

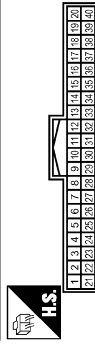
25	L	ALTERNATOR
26	V	PARKING BRAKE SW
27	BR	BRAKE FLUID LEVEL SW
28	SB	SECURITY
31	Y	VEHICLE SPEED (6-PULSE)
32	Y	OIL LEVEL SENS
33	P	OIL LEVEL SENS GND
34	B	FUEL LEVEL SENS
35	O	SEAT BELT BUCKLE SW (DRIVER SIDE)
36	GR	SEAT BELT BUCKLE SW (PASSENGER SIDE)
37	R	NOT MANUAL MODE
38	LG	SHIFT DOWN
39	W	SHIFT UP
40	L	MANUAL MODE

Connector No.	M37
Connector Name	EFS CONTROL UNIT
Connector Type	Molex 38545-0001



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

Connector No.	M40
Connector Name	INTELLIGENT KEY UNIT
Connector Type	TH4QFW



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

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COMBINATION METER

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METER

Connector No.	M57
Connector Name	CONTROL DEVICE
Connector Type	TH16FW

Terminal No.	Color of Wire	Signal Name [Specification]
7	L	MANUAL MODE SW
8	LG	SHIFT DOWN
9	W	SHIFT UP
10	B	GND
11	R	NOT MANUAL MODE SW

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	TK28FY-EX-SC

Terminal No.	Color of Wire	Signal Name [Specification]
15	W	WARNING LAMP

Connector No.	M65
Connector Name	PCM (BODY CONTROL MODULE)
Connector Type	AA84QFB

Terminal No.	Color of Wire	Signal Name [Specification]
18	SB	SECURITY INDICATOR
19	L	CAN-H
20	P	CAN-L

Connector No.	M69
Connector Name	4WD CONTROL UNIT
Connector Type	TH16FW

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

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH83FW-NS16-TM4

Terminal No.	Color of Wire	Signal Name [Specification]
49	P	-
50	L	-
51	P	-
52	L	-
57	P	-
58	Y	-
59	L	-
60	BR	-
72	V	-
75	L/O	-

Connector No.	M103
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A

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

Connector No.	M352
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK08MGY-X

Terminal No.	Color of Wire	Signal Name [Specification]
17	-	-
18	-	-

Fail Safe

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

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INFOID:000000001542702

COMBINATION METER

< ECU DIAGNOSIS >

Function	Specifications	
Speedometer	Reset to zero by suspending communication.	A
Tachometer		
Meter illumination control	Changed to nighttime mode.	B
Buzzer	Turned off by suspending communication.	
Warning lamp/indicator lamp	ABS warning lamp	C
	Brake warning lamp	
	EPS OFF indicator lamp	
	VDC OFF indicator lamp	
	SLIP indicator lamp	
	CVT indicator lamp	D
	AT CHECK warning lamp	
	Oil pressure warning lamp	
	Door warning lamp	
	Malfunction indicator lamp	
	CRUISE indicator lamp	
	Tail lamp indicator lamp	
	Front fog indicator lamp	
	Rear fog indicator lamp	
	Glow indicator lamp	
	DPF warning lamp	
	Malfunction indicator lamp 2	
	Trailer indicator lamp	
KEY R/G warning lamp		
KEY LOCK warning lamp		
High beam indicator lamp		
Turn signal indicator lamp	E	
	Turned off by suspending communication.	F
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DTC Index

INFOID:000000001542703

Display contents of CONSULT-III	Time	Diagnostic item is detected when ...	Refer to
CAN COMM CIRCUIT [U1000]	CRNT, 1 - 39	Combination meter is not transmitting or receiving CAN communication signal for 2 seconds or more.	MWI-30
VEHICLE SPEED [B2205]	CRNT, 1 - 39	The abnormal vehicle speed signal is input from ABS actuator and electric unit (control unit) for 2 seconds or more.	MWI-31
OIL LEV SEN OPEN [B2321]	CRNT, 1 - 39	Combination meter judged that the oil level sensor signal circuit is open-circuited for 1 second or more.	MWI-32 (HR16DE) MWI-32 (Except HR16DE)
OIL LEV SEN SHORT [B2322]	CRNT, 1 - 39	Combination meter judged that the oil level sensor signal circuit is short-circuited for 1 second or more.	

BCM (BODY CONTROL MODULE)

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BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000001542704

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	
ACC ON SW	Ignition switch OFF	Off	
	Ignition switch ACC or ON	On	
AIR COND SW	A/C switch OFF	Off	
	A/C switch ON	On	
AUT LIGHT SYS	Outside of the room is bright	Off	
	Outside of the room is dark	On	
AUTO LIGHT SW	Lighting switch OFF	Off	
	Lighting switch AUTO	On	
AUTO RELOCK	Auto lock function does not operate	Off	
	Auto lock function is operating	On	
BACK DOOR SW	Back door closed	Off	
	Back door opened	On	
BATTERY VOLT NOTE: Diesel engine models only	Ignition switch ON	Approximately the same as power supply voltage	
BRAKE SW	Brake pedal is not depressed	Off	
	Brake pedal is depressed	On	
CDL LOCK SW	Door lock/unlock switch does not operate	Off	
	Press door lock/unlock switch to the LOCK side	On	
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off	
	Press door lock/unlock switch to the UNLOCK side	On	
DOOR SW-AS	Passenger door closed	Off	
	Passenger door opened	On	
DOOR SW-DR	Driver door closed	Off	
	Driver door opened	On	
DOOR SW-RL	Rear LH door closed	Off	
	Rear LH door opened	On	
DOOR SW-RR	Rear RH door closed	Off	
	Rear RH door opened	On	
ELEC PWR CUT NOTE: Diesel engine models only	Engine running	Fan switch ON (when engine coolant is cool) NOTE: Depending on the ambient temperature, battery voltage, etc.	Off
		The current status maintained with the signal from ECM received.	FREEZ
		<ul style="list-style-type: none"> • Fan switch OFF • Fan switch ON after engine warming UP NOTE: Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
ENG COOLNT T NOTE: Diesel engine models only	Engine running	Approximately the same as water temperature gauge reading	A
ENGINE RPM NOTE: Diesel engine models only	Engine running	Approximately the same as tachometer reading	B
ENGINE RUN	Engine stopped	Off	C
	Engine running	On	
ENGINE STATUS NOTE: Diesel engine models only	Engine stopped	STOP	D
	While the engine stalls	STALL	
	Engine running	RUN	
	At engine cranking	CRA	
FAN ON SIG	Fan switch OFF	Off	E
	Fan switch ON	On	
FR FOG SW	Front fog lamp switch OFF	Off	F
	Front fog lamp switch ON	On	
FR WASHER SW	Front washer switch OFF	Off	G
	Front washer switch ON	On	
FR WIPER LOW	Front wiper switch OFF	Off	H
	Front wiper switch LO	On	
FR WIPER HI	Front wiper switch OFF	Off	I
	Front wiper switch HI	On	
FR WIPER INT	Front wiper switch OFF	Off	J
	Front wiper switch INT	On	
FR WIPER STOP	Any position other than front wiper stop position	Off	K
	Front wiper stop position	On	
GLS BREAK SEN	The vehicle without glass break sensor	On	L
	The vehicle with glass break sensor	Off	
HAZARD SW	When hazard switch is not pressed	Off	M
	When hazard switch is pressed	On	
HD LIGHT TIME	—	Displays a setting time of the follow me home function set by the work support	
HEAD LAMP SW 1	Lighting switch OFF	Off	WCS
	Lighting switch 2ND	On	
HEAD LAMP SW 2	Lighting switch OFF	Off	O
	Lighting switch 2ND	On	
HI BEAM SW	Lighting switch OFF	Off	P
	Lighting switch HI	On	
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	Off	
	Open the hood	On	
H/L WASH SW	NOTE: The item is indicated, but not monitored	Off	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK	LOCK button of Intelligent Key is not pressed	Off
	LOCK button of Intelligent Key is pressed	On
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
KEYLESS LOCK	LOCK button of key fob is not pressed	Off
	LOCK button of key fob is pressed	On
KEY LESS PANIC	NOTE: The item is indicated, but not monitored	Off
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	Off
	UNLOCK button of key fob is pressed	On
LIT-SEN FAIL	Light & rain sensor is in normal condition	OK
	Light & rain sensor is with internal error	NOT OK
MEMORY 1	Key fob ID code is not registered in "Memory 1"	Off
	Key fob ID code is registered in "Memory 1"	On
MEMORY 2	Key fob ID code is not registered in "Memory 2"	Off
	Key fob ID code is registered in "Memory 2"	On
MEMORY 3	Key fob ID code is not registered in "Memory 3"	Off
	Key fob ID code is registered in "Memory 3"	On
MEMORY 4	Key fob ID code is not registered in "Memory 4"	Off
	Key fob ID code is registered in "Memory 4"	On
MEMORY 5	Key fob ID code is not registered in "Memory 5"	Off
	Key fob ID code is registered in "Memory 5"	On
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	Off
	Ignition switch ON	On
OUT SIDE TEMP NOTE: Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature
PASSING SW	Other than lighting switch PASS	Off
	Lighting switch PASS	On
REVERSE SW CAN	Except selector lever R position	Off
	Selector lever R position	On
PUSH SW	Return to ignition switch to LOCK position	Off
	Press ignition switch	On
REAR DEF SW	Rear window defogger switch OFF	Off
	Rear window defogger switch ON	On
RR FOG SW	Rear fog lamp switch OFF	Off
	Rear fog lamp switch ON	On

BCM (BODY CONTROL MODULE)

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Monitor Item	Condition	Value/Status	
RR WASHER SW	Rear washer switch OFF	Off	A
	Rear washer switch ON	On	
RR WIPER INT	Rear wiper switch OFF	Off	B
	Rear wiper switch INT	On	
RR WIPER ON	Rear wiper switch OFF	Off	C
	Rear wiper switch ON	On	
RR WIPER STOP	Rear wiper stop position	Off	
	Other than rear wiper stop position	On	D
SHOCK SENSOR	Ignition switch ON	NOMAL	
	After the reception of air bag deployment signal from air bag diagnosis sensor unit	Off	E
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	On	
TAIL LAMP SW	Lighting switch OFF	Off	F
	Lighting switch 1ST	On	
TRNK OPNR SW	When back door opener switch is not pressed	Off	
	When back door opener switch is pressed	On	G
TURN SIGNAL L	Turn signal switch OFF	Off	
	Turn signal switch LH	On	H
TURN SIGNAL R	Turn signal switch OFF	Off	
	Turn signal switch RH	On	
UNLOCK SHOCK	Other than the following	Off	I
	During the unlock operation interlocked with air bag	On	
VEHICLE SPEED	While driving	Equivalent to speedometer reading	J

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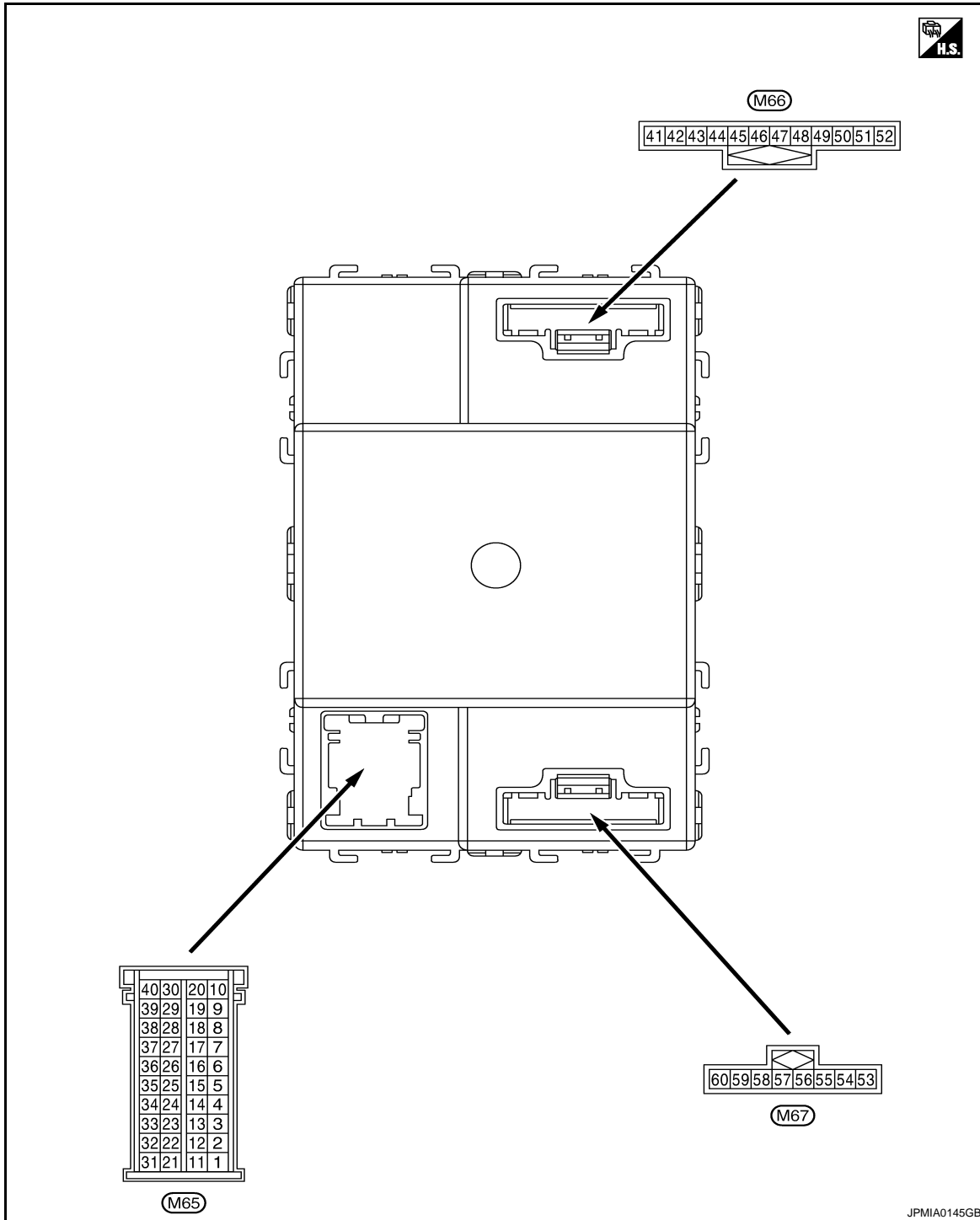
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BCM (BODY CONTROL MODULE)

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TERMINAL LAYOUT



PHYSICAL VALUES

CAUTION:

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to [BCS-27, "COMB SW : CONSULT-III Function \(BCM - COMB SW\)"](#).
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to [BCS-10, "System Description"](#).

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

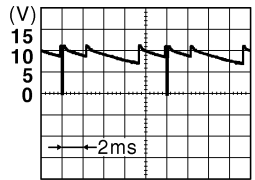
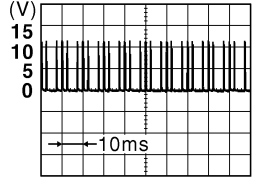
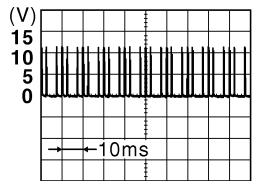
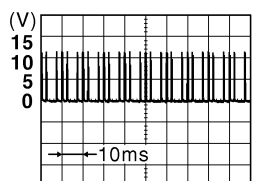
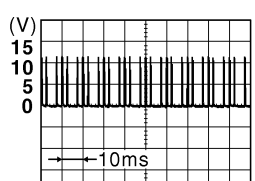
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
1 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	<p>JPMIA0160GB</p>
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF	
		<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7 	9.1 V			
2 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 2ND	<p>JPMIA0163GB</p>
					Lighting switch PASS	
					Front fog lamp switch ON	
		Turn signal switch LH	9.3 V			
3 (LG)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch AUTO	<p>JPMIA0162GB</p>
					Rear fog lamp switch OFF	
					Front wiper switch MIST	
					Front wiper switch INT	
		Front wiper switch LO	9.3 V			
4 (R)	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)	<p>JPMIA0161GB</p>
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF	
		<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6 	9.1 V			

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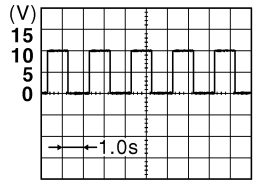
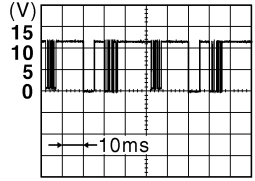
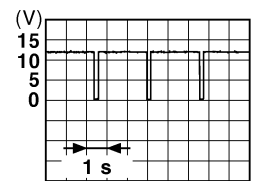
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
5 (W)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 <p style="text-align: right; font-size: small;">JPMIA0164GB</p>
					Lighting switch 2ND	
					Lighting switch HI	
					Turn signal switch RH	
7 (P)	Ground	Door lock/unlock switch (Lock)	Input	Door lock/un- lock switch	Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0154GB</p>
					Pressed to the lock side	0 V
8 (LG)	Ground	Hazard switch	Input	Hazard switch	Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0154GB</p>
					Pressed	0 V
9 (BR)	Ground	Door lock/unlock switch (Unlock)	Input	Door lock/un- lock switch	Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0154GB</p>
					Pressed to the unlock side	0 V
12 (P)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0154GB</p>
					Pressed	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

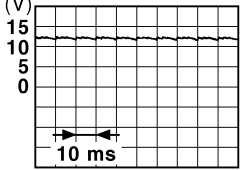
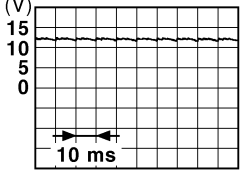
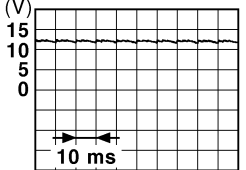
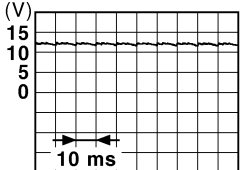
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
13 (R)	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC	0 V
				Ignition switch ON	 <p style="text-align: right; font-size: small;">JPMIA0155GB</p>
14 (L/R)	Ground	A/C switch	Input	A/C switch	Not pressed 0 V
				Pressed Battery voltage	
15 (LG/B)	Ground	Fan switch	Input	Fan switch	Not pressed 0 V
				Pressed Battery voltage	
16 (GR)	Ground	Alarm link	Output	—	—
17 (BR)	Ground	Light & rain sensor serial link	Input/ Output	Ignition switch OFF or ACC	Battery voltage
				Ignition switch ON	 <p style="text-align: right; font-size: small;">JPMIA0156GB</p>
18 (SB)	Ground	Security indicator	Output	Security indicator	ON 0 V
				Blinking	 <p style="text-align: right; font-size: small;">JPMIA0014GB</p>
				OFF Battery voltage	
19 (L)	—	CAN-H	Input/ Output	—	—
20 (P)	—	CAN-L	Input/ Output	—	—
21 (SB)	Ground	Rear window defogger switch	Input	Rear window defogger switch	Not pressed 1.1 V
				While pressing 0 V	

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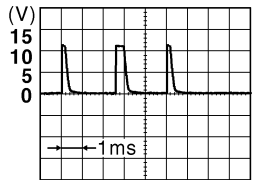
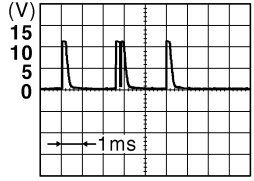
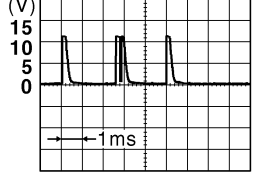
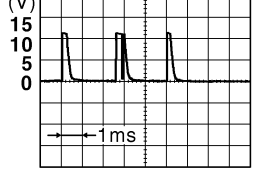
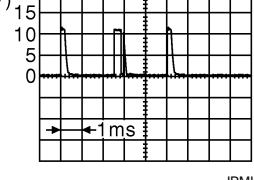
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
24 (GR)	Ground	Door lock status indicator	Output	Door lock status indicator	ON	Battery voltage
					OFF	0 V
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	 11.2 V
					ON (When rear door LH opened)	0 V
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 11.2 V
					ON (When driver door opened)	0 V
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 11.2 V
					ON (When passenger door opened)	0 V
28 (G)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	Battery voltage
					ON (When back door opened)	0 V
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	 11.2 V
					ON (When rear door RH opened)	0 V
30 (SB)	Ground	Audio link	Input/ Output	—	—	—

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

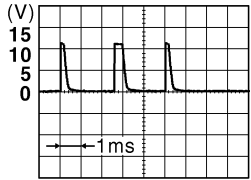
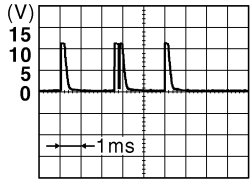
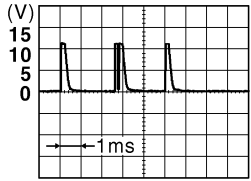
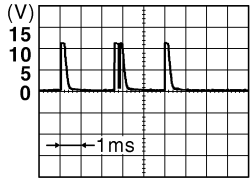
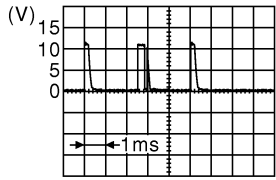
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
31 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; margin-top: 5px;">JPMIA0165GB 1.3 V</p> </div>
				Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; margin-top: 5px;">JPMIA0167GB 1.3 V</p> </div>
				Combination switch	Rear fog lamp switch ON (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; margin-top: 5px;">JPMIA0168GB 1.3 V</p> </div>
				Combination switch	Rear wiper switch ON (Wiper intermittent dial 4) <div style="text-align: right;">  <p style="text-align: right; margin-top: 5px;">JPMIA0169GB 1.3 V</p> </div>
				Combination switch	Any of the condition below with all switch OFF <ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7 <div style="text-align: right;">  <p style="text-align: right; margin-top: 5px;">JPMIA0196GB 1.3 V</p> </div>

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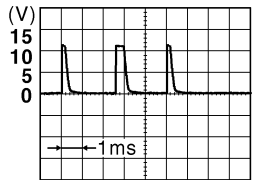
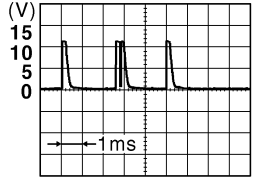
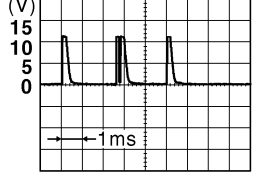
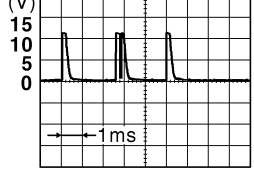
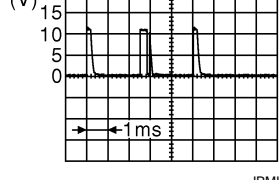
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 <p style="text-align: right;">1.4 V</p>
					Lighting switch PASS	 <p style="text-align: right;">1.3 V</p>
					Lighting switch 2ND	 <p style="text-align: right;">1.3 V</p>
					Front wiper switch INT	 <p style="text-align: right;">1.3 V</p>
					Front wiper switch HI	 <p style="text-align: right;">1.3 V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

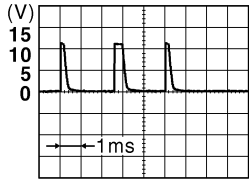
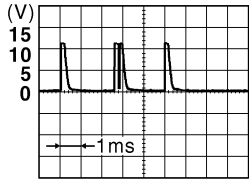
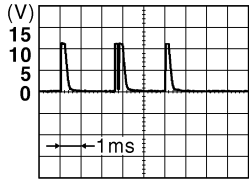
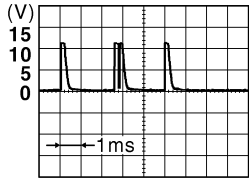
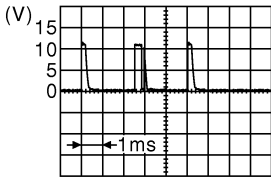
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
33 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 <p style="text-align: right; font-size: small;">JPMIA0165GB</p> <p style="text-align: center;">1.4 V</p>
					Turn signal switch LH	 <p style="text-align: right; font-size: small;">JPMIA0167GB</p> <p style="text-align: center;">1.3 V</p>
					Turn signal switch RH	 <p style="text-align: right; font-size: small;">JPMIA0166GB</p> <p style="text-align: center;">1.3 V</p>
					Front wiper switch LO	 <p style="text-align: right; font-size: small;">JPMIA0168GB</p> <p style="text-align: center;">1.3 V</p>
					Front washer switch ON	 <p style="text-align: right; font-size: small;">JPMIA0196GB</p> <p style="text-align: center;">1.3 V</p>

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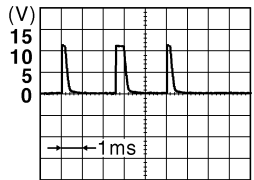
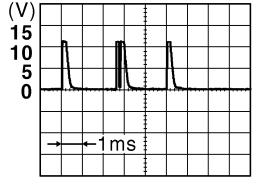
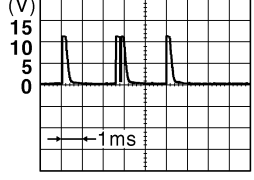
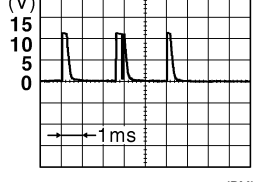
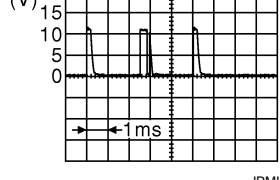
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right;">1.4 V</p>
					Lighting switch AUTO (Wiper intermittent dial 4)	 <p style="text-align: right;">1.3 V</p>
					Lighting switch 1ST (Wiper intermittent dial 4)	 <p style="text-align: right;">1.3 V</p>
					Rear wiper INT (Wiper intermittent dial 4)	 <p style="text-align: right;">1.3 V</p>
					Any of the condition below with all switch OFF	 <p style="text-align: right;">1.3 V</p>
<ul style="list-style-type: none"> • Wiper intermittent dial 1 • Wiper intermittent dial 6 						

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

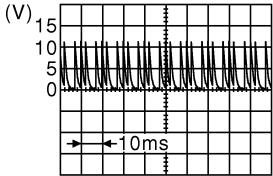
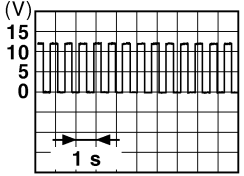
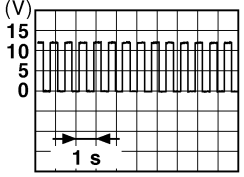
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
		Signal name	Input/ Output			
+	-					
35 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0165GB 1.4 V</p>
					Lighting switch HI (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0166GB 1.3 V</p>
					Lighting switch 2ND (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0167GB 1.3 V</p>
					Rear wiper switch ON	 <p style="text-align: right; font-size: small;">JPMIA0169GB 1.3 V</p>
					Any of the condition below with all switch OFF	 <p style="text-align: right; font-size: small;">JPMIA0196GB 1.3 V</p>
36 (V)	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder	Battery voltage	
				Remove mechanical key from ignition key cylinder	0 V	
37 (R)	Ground	ACC power supply	Input	Ignition switch OFF	0 V	
				Ignition switch ACC or ON	Battery voltage	
38 (W)	Ground	Ignition power supply	Input	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	Battery voltage	

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move	
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move	
41 (V)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	
42 (V)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time	0 V	
				Any other time after passing the interior room lamp battery saver operation time	Battery voltage	
43 (L)	Ground	Rear wiper motor	Output	Rear wiper switch OFF	0 V	
				Rear wiper switch ON	Battery voltage	
44 (L/W)	Ground	Rear wiper auto stop	Input	Rear wiper stop position	0 V	
				Ignition switch ON Any position other than rear wiper stop position	 <p style="text-align: right; font-size: small;">JPMIA0197GB</p>	
45 (GR)	Ground	Back door lock actuator	Output	Back door opener switch	Pressed	Battery voltage (300ms)
				Not pressed	0 V	
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 <p style="text-align: right; font-size: small;">PKID0926E</p>
48 (G/B)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 <p style="text-align: right; font-size: small;">PKID0926E</p>
49 (Y)	Ground	Rear fog lamp	Output	Lighting switch 1ST and front fog lamp switch ON	Rear fog lamp switch OFF	0 V
					Rear fog lamp switch ON	Battery voltage
51 (R/W)*1 (R)*2	Ground	Stop lamp switch	Input	Depress the brake pedal	Battery voltage	
				Release the brake pedal	0 V	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
52 (R)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
53 (L)	Ground	Power window power supply	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
54 (O)	Ground	Door unlock (All)	Output	Door lock/unlock switch	Pressed to the unlock side	Battery voltage
					Pressed to the lock side	0 V
55 (B)	Ground	Ground	—	Ignition switch ON		0 V
56 (Y) ^{*1} (SB) ^{*2}	Ground	Door lock (All)	Output	Door lock/unlock switch	Pressed to the unlock side	0 V
					Pressed to the lock side	Battery voltage
57 (Y)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
58 (P)	Ground	Power window power supply	Output	Ignition switch OFF		Battery voltage
59 (BR)	Ground	Super lock	Output	When lock button of key fob or Intelligent Key is not pressed		0 V
				When lock button of key fob or Intelligent Key is pressed		Battery voltage
60 (GR)	Ground	Driver door unlock	Output	Door lock/unlock switch	Pressed to the unlock side	Battery voltage
					Pressed to the lock side	0 V

*1: With Intelligent Key system

*2: Without Intelligent Key system

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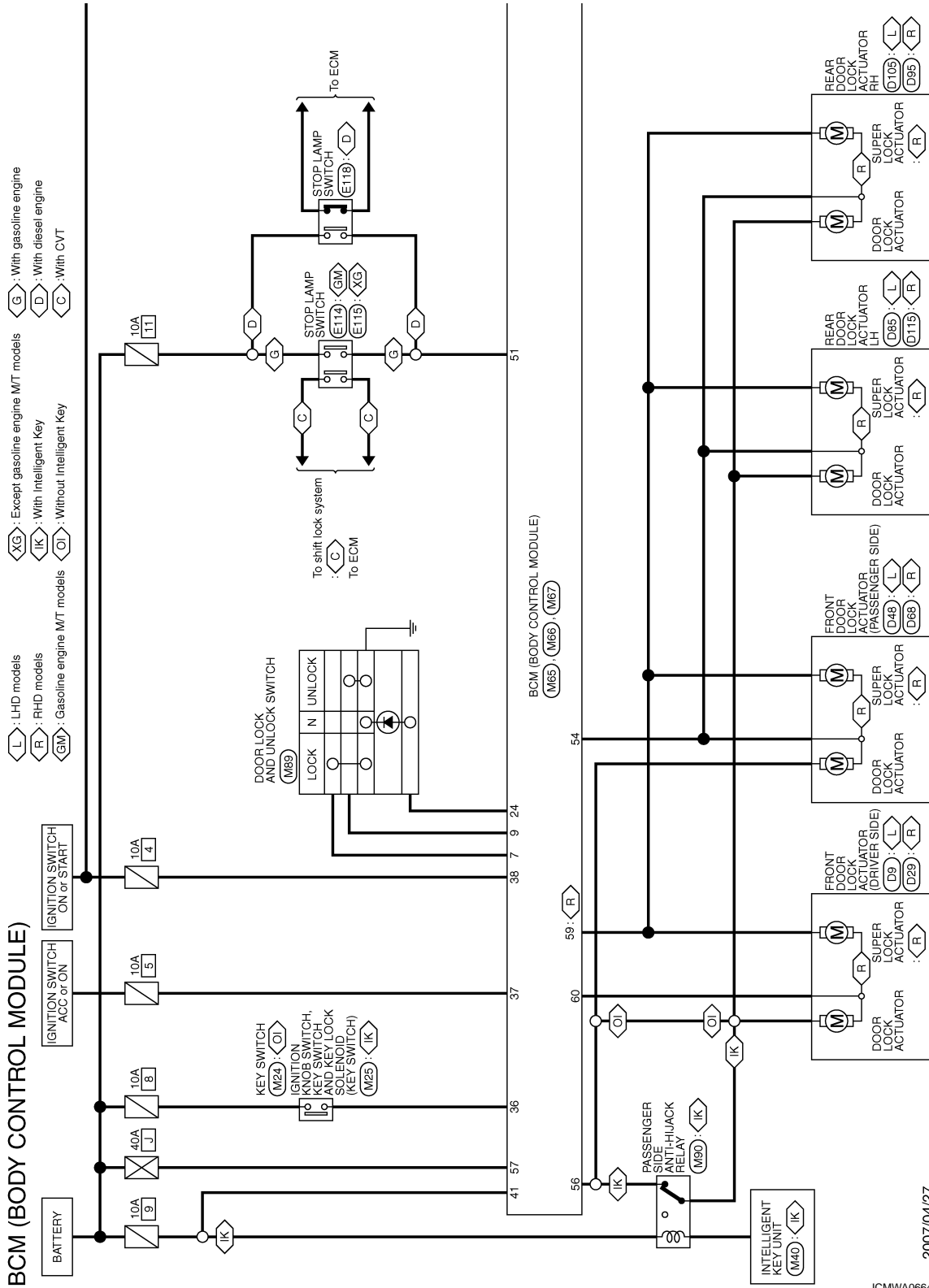
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BCM (BODY CONTROL MODULE)

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Wiring Diagram - BCM -

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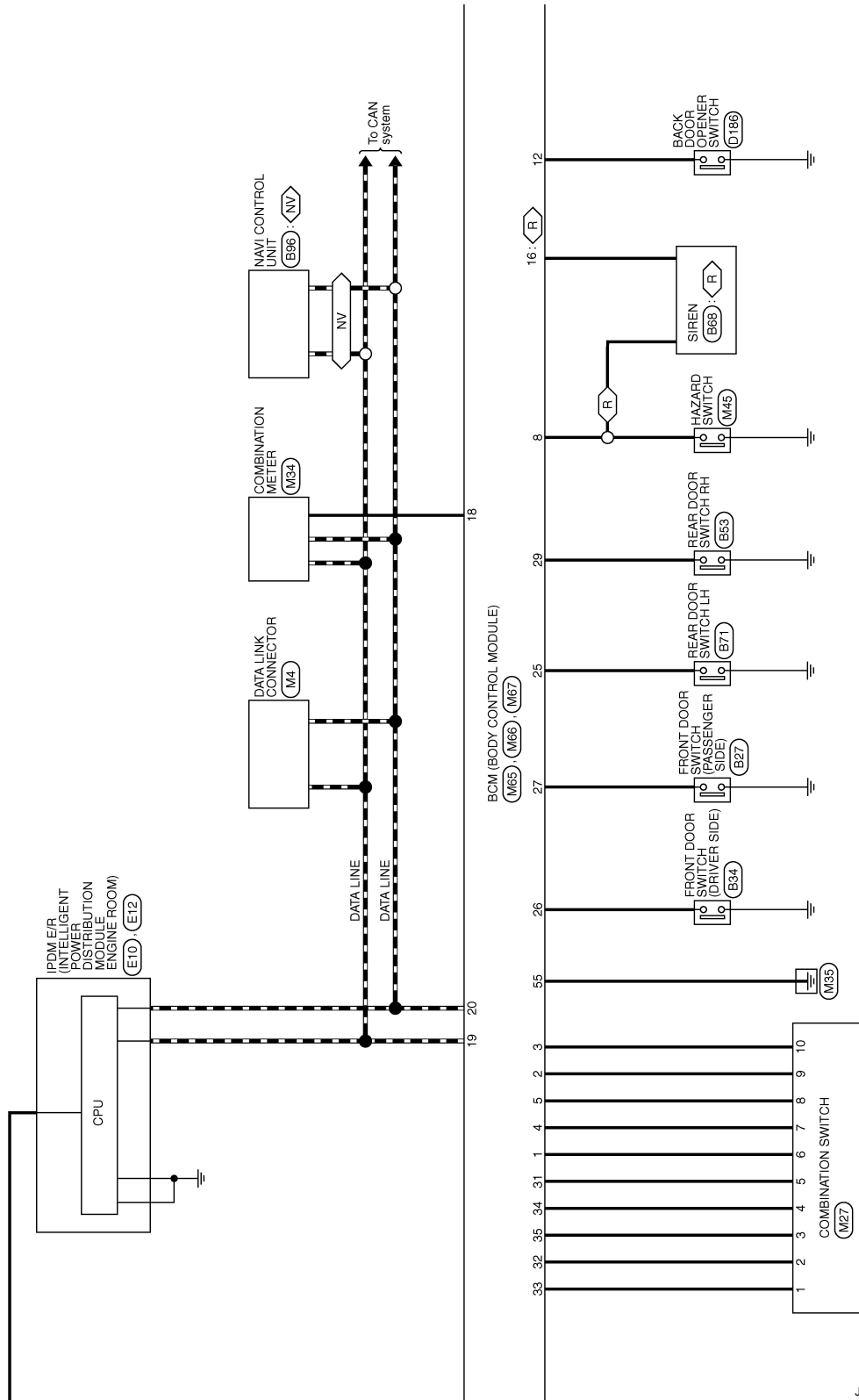
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BCM (BODY CONTROL MODULE)

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R : RHD models
NV : With navigation system

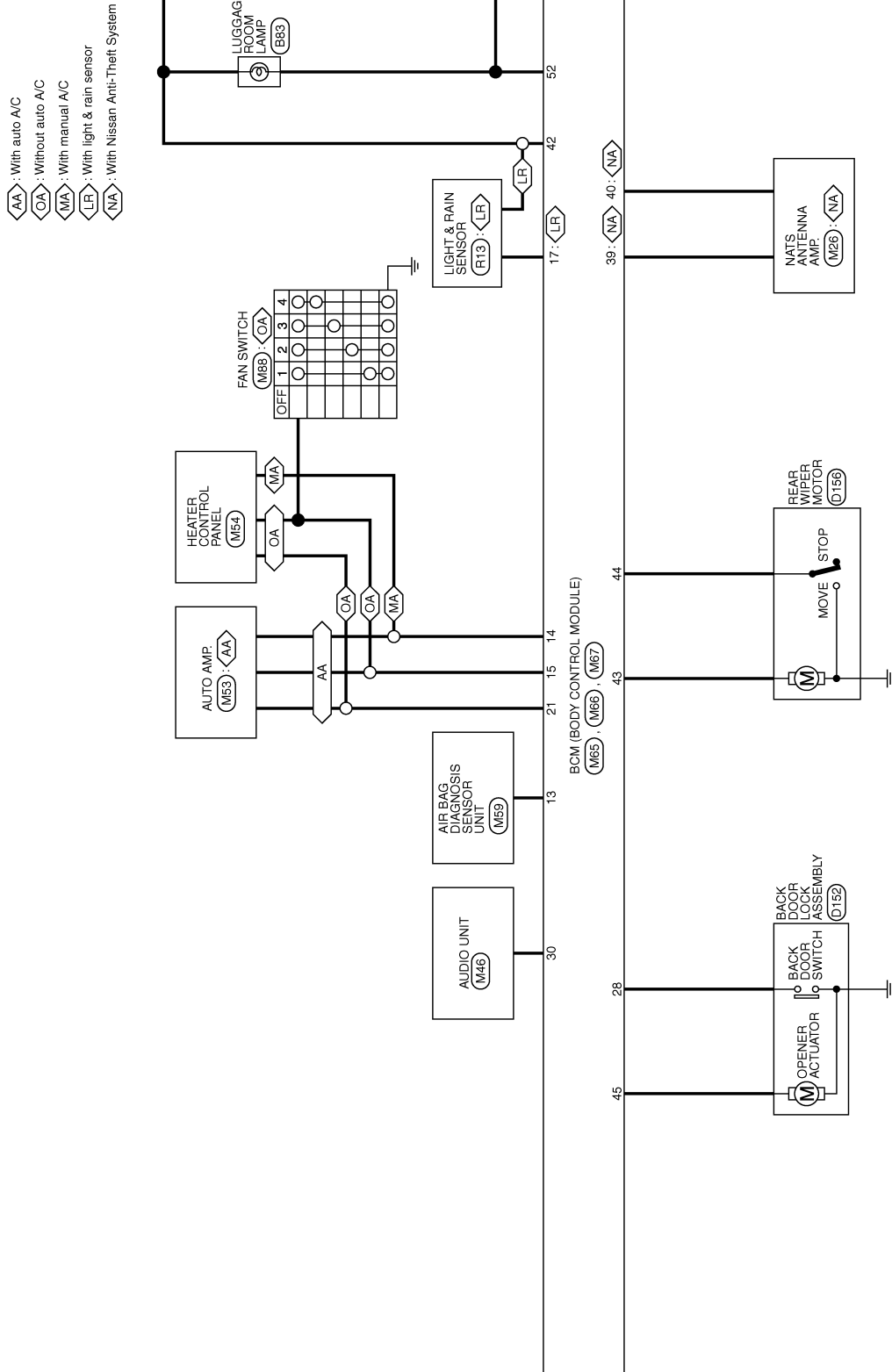


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BCM (BODY CONTROL MODULE)

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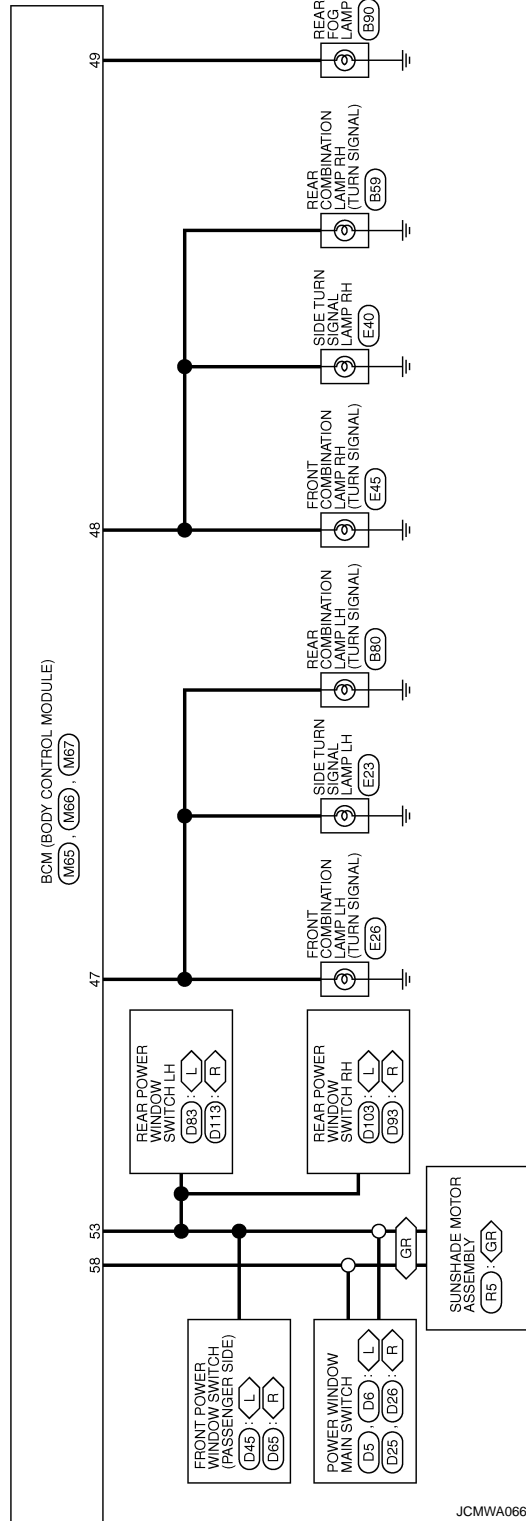
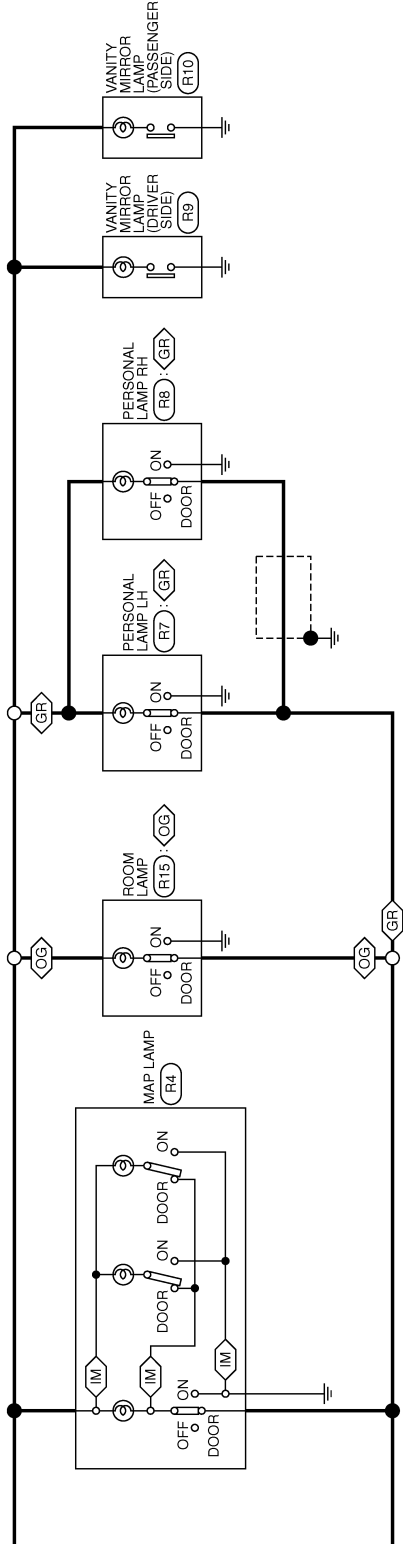


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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

- : LHD models
- : RHD models
- : With integrated map lamp
- : With glass top roof
- : Without glass top roof



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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Connector No.	M67
Connector Name	COMBINATION SWITCH
Connector Type	TK16FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	INPUT1
2	G	INPUT2
3	L	INPUT3
4	GR	INPUT4
5	BR	INPUT5
6	P	OUTPUT1
7	R	OUTPUT2
8	W	OUTPUT5
9	Y	OUTPUT4
10	LG	OUTPUT3

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 21PC068S0017



Terminal No.	Color of Wire	Signal Name [Specification]
53	L	POWER WDW PWR SUPPLY (LINKED TO IGN)
54	O	DOOR UNLOCK OUTPUT (OTHER)
55	B	GND(POWER)
56	Y	DOOR LOCK OUTPUT (ALL) (With Intelligent Key)
56	SB	DOOR LOCK OUTPUT (ALL) (Without Intelligent Key)
57	Y	BAT(F/L)
58	P	POWER WDW PWR SUPPLY (BAT)
59	BR	SUPER LOCK SET OUTPUT
60	GR	UNLOCK (DR)

15	LG/BR	BLOWER FAN SW
16	GR	ALARM LINK
17	BR	LIGHT & RAIN SENS
18	SB	SECURITY INDICATOR
19	L	CAN-H
20	P	CAN-L
21	SB	REAR DEFROGER SW
24	GR	DOOR LOCK STATUS IND
24	GR	DOOR SW (RL)
25	R	DOOR SW (DR)
26	R	DOOR SW (AS)
27	BR	DOOR SW (BACK)
28	G	DOOR SW (RR)
29	LG	AUDIO LINK
30	SB	COMBI SW INPUT 5
31	BR	COMBI SW INPUT 2
32	G	COMBI SW INPUT 1
33	V	COMBI SW INPUT 4
34	GR	COMBI SW INPUT 3
35	L	COMBI SW INPUT 2
36	V	KEY SW
37	R	ACC SW
38	W	IGN SW
39	P	MATS ANTENNA AMP.
40	LG	MATS ANTENNA AMP.

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 21PC1231017



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(F/USE)
42	V	ROOM LAMP POWER SUPPLY
43	L	REAR WIPER MOTOR OUTPUT
44	L/W	REAR WIPER AUTO STOP
45	GR	BACK DOOR OPENER
47	G/Y	FLASHER OUTPUT (LEFT)
48	G/B	FLASHER OUTPUT (RIGHT)
49	Y	REAR Fog LAMP
51	R/W	STOP LAMP SW (With Intelligent Key)
51	R	STOP LAMP SW (Without Intelligent Key)
52	R	ROOM LAMP OUTPUT

Fail Safe

Fail-safe index

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

JCMWA0668Gt

INFOID:000000001542706

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	<ul style="list-style-type: none"> • Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM) 	Erase DTC
B2191: DIFFERENCE OF KEY	<ul style="list-style-type: none"> • Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM) 	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	<ul style="list-style-type: none"> • Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM) 	Erase DTC
B2195: ANTI SCANNING	<ul style="list-style-type: none"> • Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM) 	Erase DTC
B2196: DONGLE NG	<ul style="list-style-type: none"> • Inhibits engine cranking • Inhibits steering lock unlocking (Intelligent Key unit) • Fuel cut (ECM) 	Erase DTC

REAR WIPER CONTROL

BCM detects a rear wiper stopping position according to a rear wiper auto stop signal.

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Rear wiper auto stop signal
ON	OFF	The rear wiper auto stop signal (stop position) cannot be input for 5 seconds.
	ON	The rear wiper auto stop signal does not change for 5 seconds.

NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

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.

LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

Auto Light Control

Headlamp is turned ON.

Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

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WCS

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

DTC Inspection Priority Chart

INFOID:000000001542707

Priority	DTC
1	<ul style="list-style-type: none"> U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
2	<ul style="list-style-type: none"> B2190: NATS ANTENNA AMP B2191: DIFFERNCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2194: DISCORD BCM-I-KEY B2195: ANTI SCANNING B2196: DONGLE NG

DTC Index

INFOID:000000001542708

NOTE:

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

CONSULT display	TIME		Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	0	1 - 39	—	BCS-33
U1010: CONTROL UNIT (CAN)	0	1 - 39	—	BCS-34
B2190: NATS ANTENNA AMP	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system SEC-45 • Without Intelligent Key system SEC-194
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system SEC-47 • Without Intelligent Key system SEC-196
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system SEC-48 • Without Intelligent Key system SEC-197
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system SEC-50 • Without Intelligent Key system SEC-199
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	SEC-51
B2195: ANTI SCANNING	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system SEC-52 • Without Intelligent Key system SEC-200
B2196: DONGLE NG	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system SEC-53 • Without Intelligent Key system SEC-201

THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:000000001193851

The light reminder warning chime does not sound under the following conditions.

- External lamp battery saver function ON
- Ignition switch OFF
- Lighting switch ON
- Front door switch (driver side) ON

NOTE:

Normal operation unless the external lamp battery saver function is overridden by subsequent operation of the light switch.

Diagnosis Procedure

INFOID:000000001193852

1. CHECK COMBINATION SWITCH (LIGHTING SWITCH) OPERATION

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

Do they operate normally?

YES >> GO TO 2.

NO >> Refer to [EXL-159, "Symptom Table"](#).

2. CHECK FRONT DOOR SWITCH (DRIVER SIDE) SIGNAL CIRCUIT

Check the front door switch (driver side) signal circuit. Refer to [DLK-83, "DRIVER SIDE : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

3. CHECK FRONT DOOR SWITCH (DRIVER SIDE) UNIT

Perform a unit check for the front door switch (driver side). Refer to [DLK-84, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-65, "Exploded View"](#).

NO >> Replace the front door switch (driver side). Refer to [DLK-270, "Exploded View"](#).

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WCS

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

< SYMPTOM DIAGNOSIS >

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

Description

INFOID:000000001193853

- Seat belt reminder warning does not sound.
- Seat belt reminder warning sounds continuously.

Trouble diagnosis procedure

INFOID:000000001193854

1. CHECK FRONT SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

Check the front seat belt buckle switch signal circuit. Refer to [WCS-22. "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 2.
NO >> Repair the harnesses or connectors.

2. CHECK FRONT SEAT BELT BUCKLE SWITCH UNIT

Perform a unit check for the front seat belt buckle switch. Refer to [SBC-8. "Component Inspection"](#) (driver side) or [SBC-11. "Component Inspection \(seat belt buckle switch passenger side\)"](#) (passenger side).

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Replace the seat belt buckle. Refer to [SB-9. "SEAT BELT BUCKLE : Removal and Installation"](#).

3. CHECK OCCUPANT DETECTION UNIT

Perform a unit check for the occupant detection unit. Refer to [SBC-11. "Component Inspection \(occupant detection unit\)"](#).

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace the occupant detection unit. Refer to [SE-15. "Disassembly and Assembly"](#).

THE PARKING BRAKE RELEASE WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE PARKING BRAKE RELEASE WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

Description

INFOID:000000001193855

- The parking brake warning buzzer sounds continuously during vehicle travel even though the parking brake is released.
- The parking brake warning buzzer does not sound at all even though driving the vehicle with the parking brake applied.

Diagnosis Procedure

INFOID:000000001193856

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
Parking brake ON	ON
Parking brake OFF	OFF

Is the inspection result normal?

YES >> Replace combination meter.

NO >> GO TO 2.

2. CHECK PARKING BRAKE SWITCH SIGNAL CIRCUIT

Check the parking brake switch signal circuit. Refer to [WCS-24, "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-47, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-78, "Removal and Installation"](#).

NO >> Replace parking brake switch.

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WCS

THE KEY WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE KEY WARNING DOES NOT SOUND

Description

INFOID:000000001193857

The key warning does not sound under the following conditions.

- Other than ignition switch ON
- Key switch ON (Insert mechanical key into ignition key cylinder)
- Front door switch (driver side) ON

Diagnosis Procedure

INFOID:000000001193858

1.CHECK INTELLIGENT KEY UNIT INPUT SIGNAL

Connect CONSULT-III and check the Intelligent Key unit input signal. Refer to [DLK-91, "Component Function Check"](#).

Is the inspection result normal?

- YES >> Replace Intelligent Key unit. Refer to [DLK-280, "Exploded View"](#).
NO >> GO TO 2.

2.CHECK KEY SWITCH SIGNAL CIRCUIT

Check the key switch signal circuit. Refer to [DLK-91, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 3.
NO >> Check applicable parts, and repair or replace corresponding parts.

3.CHECK FRONT DOOR SWITCH (DRIVER SIDE) SIGNAL CIRCUIT

Check the front door switch (driver side) signal circuit. Refer to [DLK-83, "DRIVER SIDE : Diagnosis Procedure"](#).

Is the inspection result normal?

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

4.CHECK FRONT DOOR SWITCH (DRIVER SIDE) UNIT

Perform a unit check for the front door switch (driver side). Refer to [DLK-84, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace the BCM. Refer to [BCS-65, "Exploded View"](#).
NO >> Replace the front door switch (driver side). Refer to [DLK-270, "Removal and Installation"](#).

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001193859

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "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".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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