

SECTION **WCS**

WARNING CHIME SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001080318

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

Connect CONSULT-III and perform self-diagnosis. Refer to [WCS-9. "CONSULT-III Function \(METER/M&A\)".](#)

Are self-diagnosis results normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts and go to 5.

4.NARROW DOWN THE MALFUNCTIONING PARTS BY SYMPTOM DIAGNOSIS

Perform symptom diagnosis and repair or replace the identified malfunctioning parts.

>> GO TO 5.

5.FINAL CHECK

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

Does it operate normally?

YES >> INSPECTION END

NO >> GO TO 1.

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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

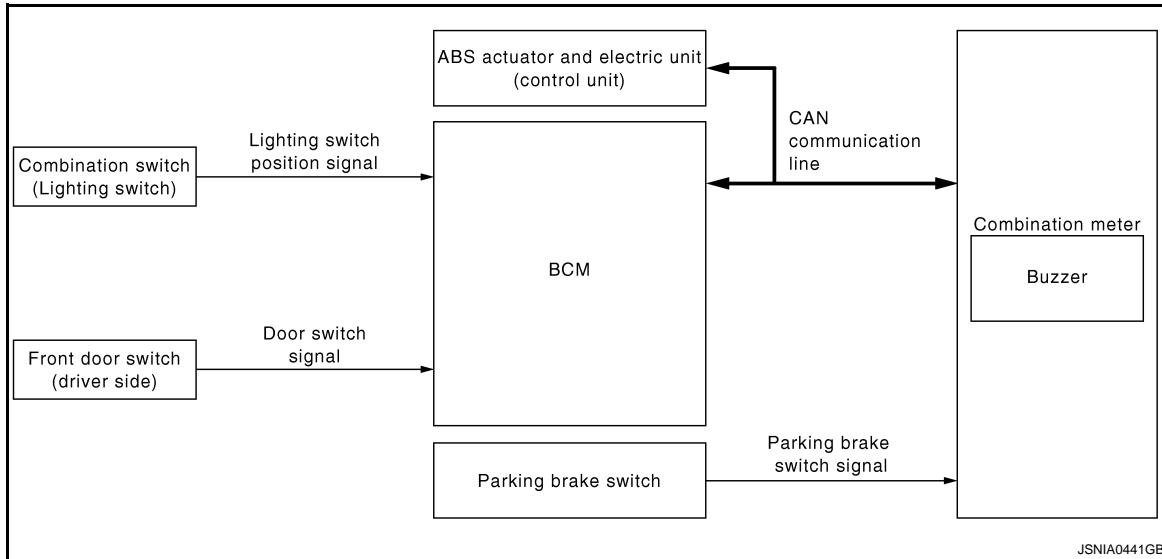
FUNCTION DIAGNOSIS

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram

INFOID:000000001080319



WARNING CHIME SYSTEM : System Description

INFOID:000000001080320

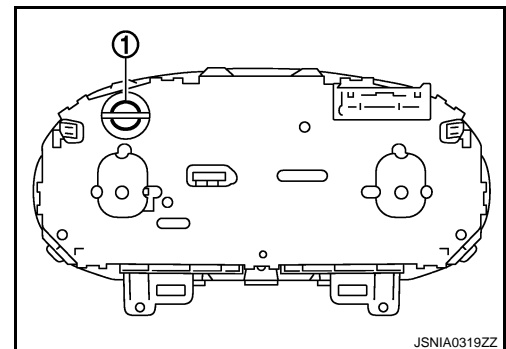
- Combination meter judges the necessity of parking brake warning according to vehicle speed signal and parking brake switch signal.
- BCM judges the necessity of buzzer output according to signals from each switch, and transmits signal to combination meter.

NOTE:

- Intelligent key warning is judged by intelligent key unit.
- Seat belt reminder warning is judged by front seat belt warning unit. Seat belt reminder warning buzzer is integrated in the front seat belt warning unit.

COMBINATION METER

- The buzzer (1) for the warning chime system is integrated in the combination meter.
- Combination meter sounds warning buzzer in the following conditions.
 - When it receives buzzer output signal from BCM with CAN communication.
 - When it judges the necessity of buzzer output according to vehicle speed signal received from ABS actuator and electric unit (control unit) with CAN communication and parking brake switch signal received from parking brake switch.



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

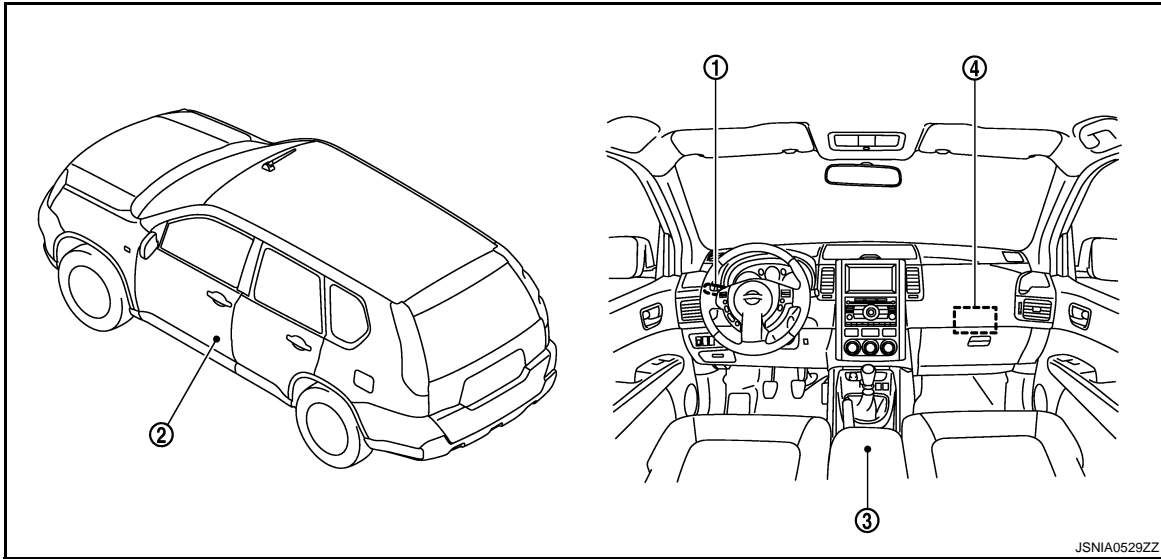
Warning functions	Signal name
Light reminder warning chime	<ul style="list-style-type: none"> • Ignition switch signal • Lighting switch position signal • Front door switch signal (driver side)

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000001080321



1. Combination switch (Lighting switch)
2. Front door switch (driver side)
3. Parking brake switch
4. BCM

WARNING CHIME SYSTEM : Component Description

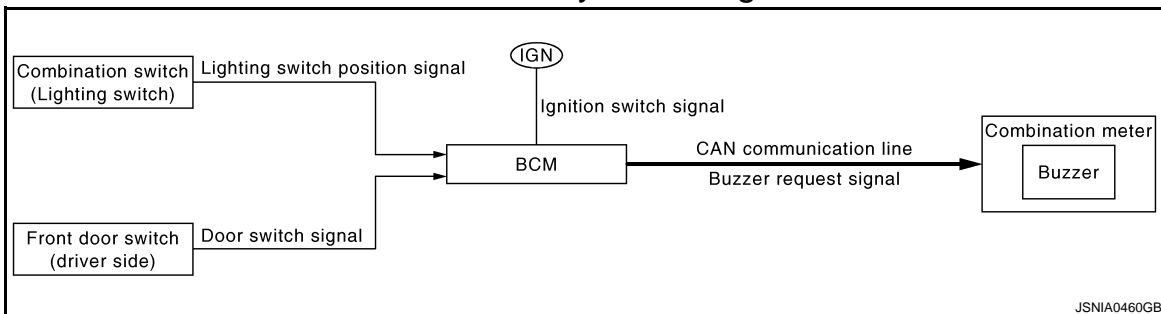
INFOID:000000001080322

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 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.
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.
Combination switch (Lighting switch)	Transmits the lighting switch position signal to BCM.
Front door switch (driver side)	Transmits the door switch signal to BCM.
Parking brake switch	Refer to WCS-17, "Description" .

LIGHT REMINDER WARNING CHIME

LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000001080323



WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000001080324

DESCRIPTION

With ignition switch in OFF or ACC position, driver door open, and lighting switch in 1ST or 2ND position, the light reminder warning chime will sound.

- BCM detects ignition switch in OFF or ACC position, front door switch (driver side) ON, and lighting switch in 1ST or 2ND position. And then transmits buzzer output signal (light reminder warning chime) to combination meter with CAN communication line.
- When combination meter receives buzzer output signal (light reminder warning chime), it sounds the buzzer.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled.

- Lighting switch is at 1ST or 2ND position
- Ignition switch is at OFF or ACC
- Front door switch (driver side) is ON

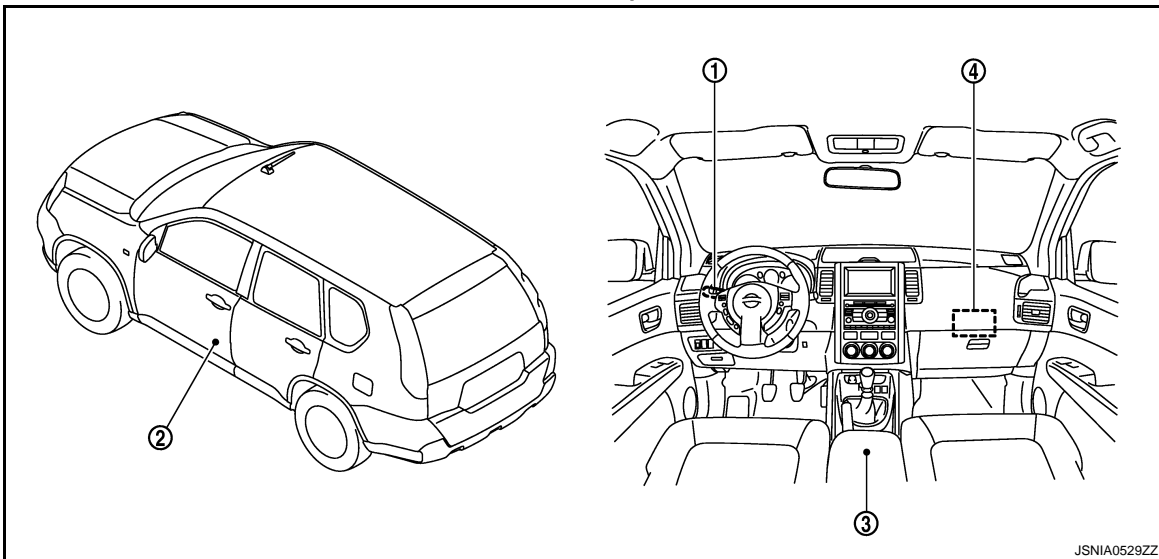
WARNING CANCEL CONDITIONS

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

- Lighting switch OFF
- Ignition switch ON
- Front door switch (driver side) OFF

LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000001297236



1. Combination switch (Lighting switch)
2. Front door switch (driver side)
3. Parking brake switch
4. BCM

LIGHT REMINDER WARNING CHIME : Component Description

INFOID:000000001080326

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

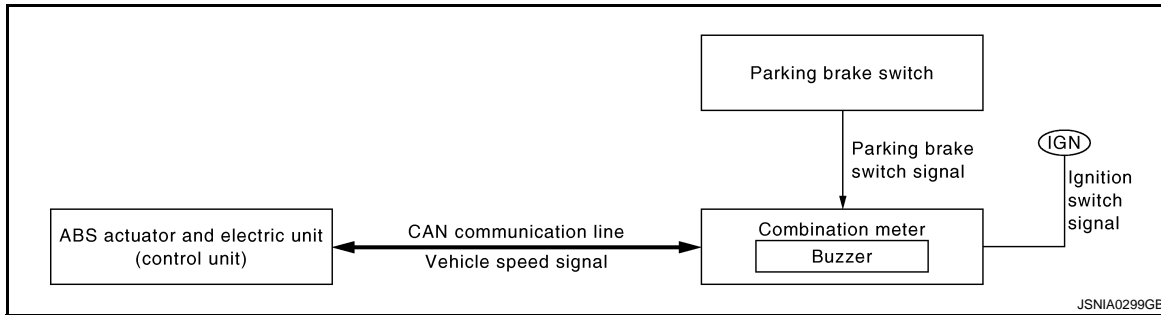
PARKING BRAKE RELEASE WARNING CHIME

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

PARKING BRAKE RELEASE WARNING CHIME : System Diagram

INFOID:000000001080331



PARKING BRAKE RELEASE WARNING CHIME : System Description

INFOID:000000001080332

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 any of the following conditions are fulfilled.

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

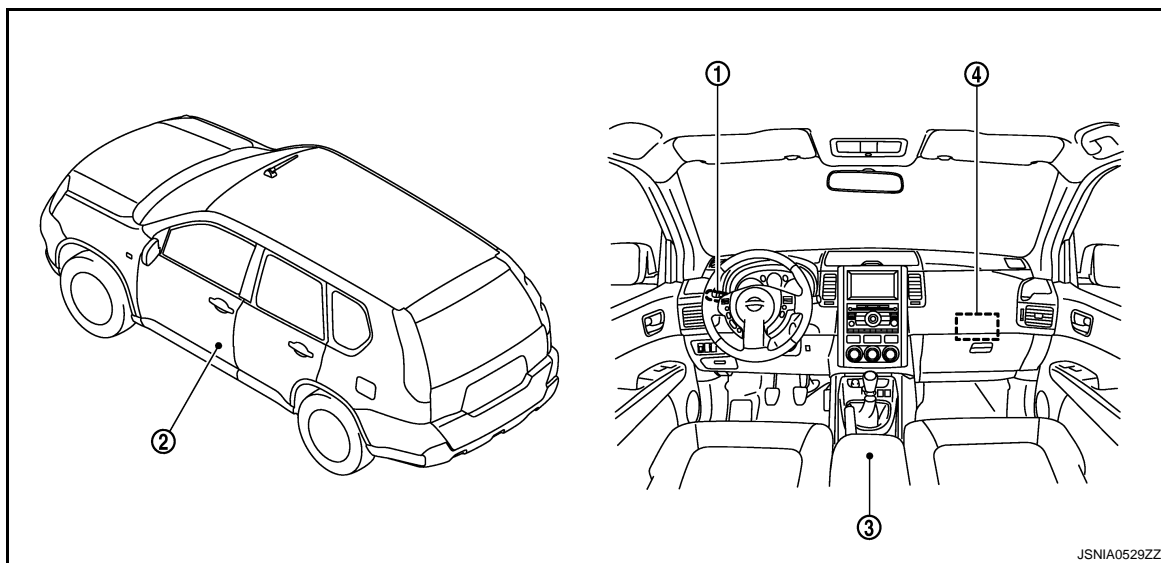
WARNING CANCEL CONDITIONS

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:000000001297237



JSNIA0529ZZ

1. Combination switch (Lighting switch)
2. Front door switch (driver side)
3. Parking brake switch
4. BCM

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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

PARKING BRAKE RELEASE WARNING CHIME : Component Description INFOID:000000001080334

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	Refer to WCS-17, "Description" .

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (METER)

CONSULT-III Function (METER/M&A)

INFOID:000000001081148

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 DIAGNOSTIC RESULT

Refer to [MWI-64, "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.
ODO OUTPUT [km/h or mph]		Odometer signal value transmitted to other units with CAN communication line.
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.
FUEL METER [lit.]	X	Fuel level indicated on combination meter.
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.
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.
VDC/TCS IND [On/Off]		Status of ESP indicator lamp judged from ESP OFF indicator 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.
DOOR W/L [On/Off]		Status of door warning lamp 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.
TURN IND [On/Off]		Status of turn indicator lamp judged from turn indicator signal received from BCM with CAN communication line.

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DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	Description
FR FOG IND [On/Off]		Status of front fog lamp 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 lamp indicator lamp judged from rear fog lamp status 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.
MIL [On/Off]		Status of malfunction indicator lamp judged from malfunctioning indicator lamp signal received from ECM with CAN communication line.
GLOW IND [On/Off]		Status of glow indicator lamp judged from glow indicator lamp signal received from ECM 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.
ATC/T-AMT W/L [On/Off]		Status of A/T check warning lamp judged from A/T CHECK indicator lamp signal received from TCM 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.
4WD LOCK IND [On/Off]		Status of 4WD lock indicator judged from 4WD signal received from 4WD control unit with the CAN communication line.
FUEL W/L [On/Off]	X	Status of Low-fuel warning lamp judged from identified fuel level.
KEY G/Y W/L [On/Off]		Status of key warning lamp (G/Y) 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]		Status of Key knob switch received from Intelligent Key unit with the 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 the CAN communication line.
HDC W/L [On/Off]		Status of HDC warning lamp judged from HV system warning lamp signal received from ABS actuator and electric unit (control unit) with the CAN communication line.
SHIFT IND [P/ R/ N/ D/ M1/ M2/ M3/ M4/ M5/ M6]		Status of shift position indicator judged from shift position signal and manual mode indicator signal received from TCM with CAN communication line.
O/D OFF SW [On/Off]		Status of O/D OFF switch.
A/T S MODE SW		Status of snow mode switch.
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).
COMP F/B SIG [On/Off]		A/C compressor activation condition that ECM judges according to the water temperature and the acceleration degree.
PKB SW [On/Off]		Status of parking brake switch.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	Description	A
BRAKE OIL SW [On/Off]		Status of brake fluid level switch.	B
DISTANCE [km]	X	Value of possible driving distance calculated by combination meter.	C
OUTSIDE TEMP [°C or °F]		Ambient temperature value converted from OAT sensor signal received from OAT sensor. NOTE: This may not match with the temperature value indicated on the information display. (Because the information display value is a corrected value from the OAT sensor input value.)	D
FUEL LOW SIG [On/Off]		Status of fuel level low warning signal to output to AV control unit with CAN communication line.	E
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.	F

NOTE:

Some items are not available according to vehicle specification.

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:000000001307327

APPLICATION ITEM

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

Diagnosis mode	Function description
ECU Identification	BCM part number is displayed.
Self-Diagnostic Results	Displays the diagnosis results judged by BCM. Refer to BCS-65, "DTC Index" .
Data Monitor	BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Work Support	Changes the setting for each system function.
Configuration	<ul style="list-style-type: none"> Read and save the vehicle specification. Write the vehicle specification when replacing BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from 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	CONSULT-III 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 control	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*			

*: This item is displayed, but is not function.

BUZZER

BUZZER : CONSULT-III Function (BCM - BUZZER)

INFOID:000000001080344

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.

ACTIVE TEST

Display item	Description
LIGHT WARN ALM	The light reminder warning operation can be checked by operating the relevant function (On/Off).
ANTI KEY LOCK IN	The anti key lock in 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).

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:000000001081149

1.CHECK FUSE

Check for blown fuses.

Terminal No.	Signal name	Fuses No.
1	Battery power supply	9
2	Ignition signal	3

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	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:000000001367522

1.CHECK FUSES AND FUSIBLE LINK

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Terminal No.	Signal name	Fuses and fusible link No.
41	Battery power supply	10
57		J
4	ACC power supply	20
3	Ignition power supply	1

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		
(+)			OFF	ACC	ON
BCM		Ground			
Connector	Terminal				
M67	57		Battery voltage	Battery voltage	Battery voltage
M66	41		Battery voltage	Battery voltage	Battery voltage
M65	4	Approx. 0 V	Battery voltage	Battery voltage	
	3	Approx. 0 V	Approx. 0 V	Battery voltage	

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.

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METER BUZZER CIRCUIT

< COMPONENT DIAGNOSIS >

METER BUZZER CIRCUIT

Description

INFOID:000000001080347

- 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:000000001080348

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.
NO >> Replace BCM. Refer to [BCS-68, "Exploded View"](#).

Diagnosis Procedure

INFOID:000000001080349

1. CHECK POWER SUPPLY AND GROUND CIRCUIT OF COMBINATION METER

Check power supply and ground circuit of combination meter. Refer to [WCS-14, "COMBINATION METER : Diagnosis Procedure"](#).

Is the inspection result normal?

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

PARKING BRAKE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING BRAKE SWITCH SIGNAL CIRCUIT

Description

INFOID:000000001080355

Transmits the parking brake switch signal to the combination meter.

Diagnosis Procedure

INFOID:000000001080356

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:000000001080357

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

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WARNING CHIME SYSTEM

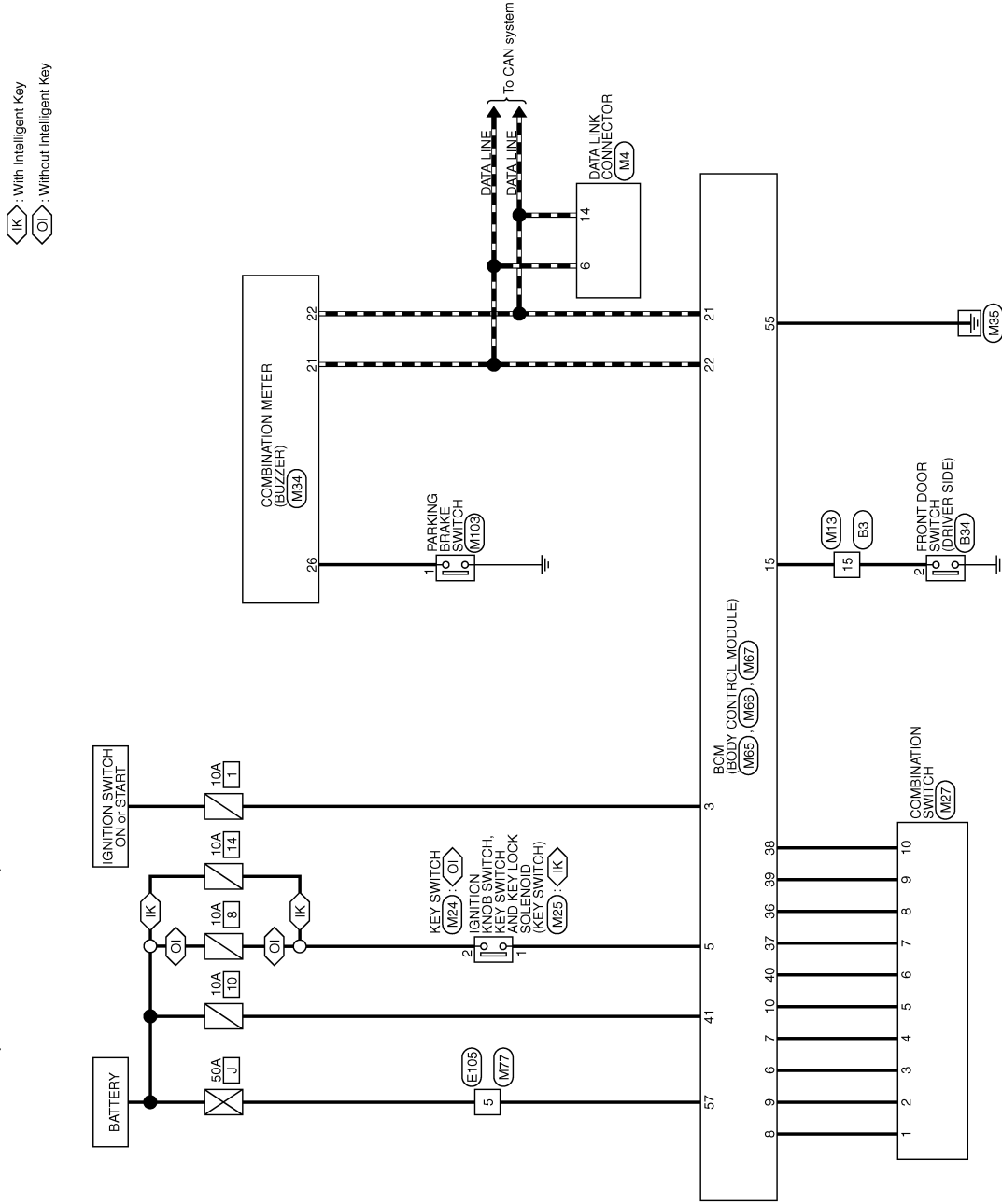
< COMPONENT DIAGNOSIS >

WARNING CHIME SYSTEM

Wiring Diagram - WARNING CHIME (LHD MODELS) -

INFOID:000000001538126

WARNING CHIME (LHD MODELS)



IK : With Intelligent Key
OI : Without Intelligent Key

2007/02/28

JCNWA0277GE

WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME (LHD MODELS)

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	TH32MW-NH

Terminal No.	15	P	Signal Name [Specification]	-
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Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	AQ3FW

Terminal No.	2	P	Signal Name [Specification]	- [LHD models]
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Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS18-TM4

Terminal No.	5	Y	Signal Name [Specification]	-
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Connector No.	M4
Connector Name	DATA LINK CONNECTOR
Connector Type	BD18FW

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

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Type	TH32FW-NH

Terminal No.	15	P	Signal Name [Specification]	-
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Connector No.	M24
Connector Name	KEY SWITCH
Connector Type	TK02MBR-P

Terminal No.	1	R	Signal Name [Specification]	-
	2	Y		-

Connector No.	M25
Connector Name	IGNITION KNOB SWITCH, KEY SWITCH AND KEY LOCK SOLENOID
Connector Type	TK08MBY

Terminal No.	1	LG	Signal Name [Specification]	-
	2	R		-

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TK18FW

Terminal No.	1	V	Signal Name [Specification]	INPUT 1
	2	B		INPUT 2 [LHD models]
	3	L		INPUT 3
	4	GR		INPUT 4
	5	BR		INPUT 5 [LHD models]
	6	P		OUTPUT 1
	7	R		OUTPUT 2
	8	G		OUTPUT 5
	9	Y		OUTPUT 4
	10	W		OUTPUT 3

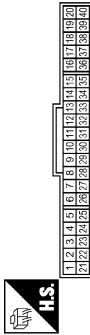
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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME (LHD MODELS)

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB40FW



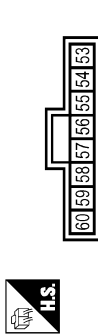
Terminal No.	Color of Wire	Signal Name [Specification]
21	L	CAN-H
22	P	CAN-L
26	GR	PARKING BRAKE SW

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAAB40FB



Terminal No.	Color of Wire	Signal Name [Specification]
3	W	IGN SW
5	LG	KEY SW (With Intelligent Key)
5	R	KEY SW (Without Intelligent Key)
6	L	COMBI SW INPUT 3
7	GR	COMBI SW INPUT 4
8	V	COMBI SW INPUT 1
9	B	COMBI SW INPUT 2 (LHD models)
10	BR	COMBI SW 5 (LHD models)
15	P	DOOR SW (DR) (LHD models)
21	P	CAN-L
22	L	CAN-H

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FHA8FB



Terminal No.	Color of Wire	Signal Name [Specification]
55	B	GND
57	Y	BATTERY

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-C51B-TM4



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

36	G	COMBI SW OUTPUT 5
37	R	COMBI SW OUTPUT 2
38	W	COMBI SW OUTPUT 3
39	Y	COMBI SW OUTPUT 4
40	P	COMBI SW OUTPUT 1



Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT (FUSE)

Connector No.	M103
Connector Name	PARKING BRAKE SWITCH
Connector Type	PF1FB-A



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

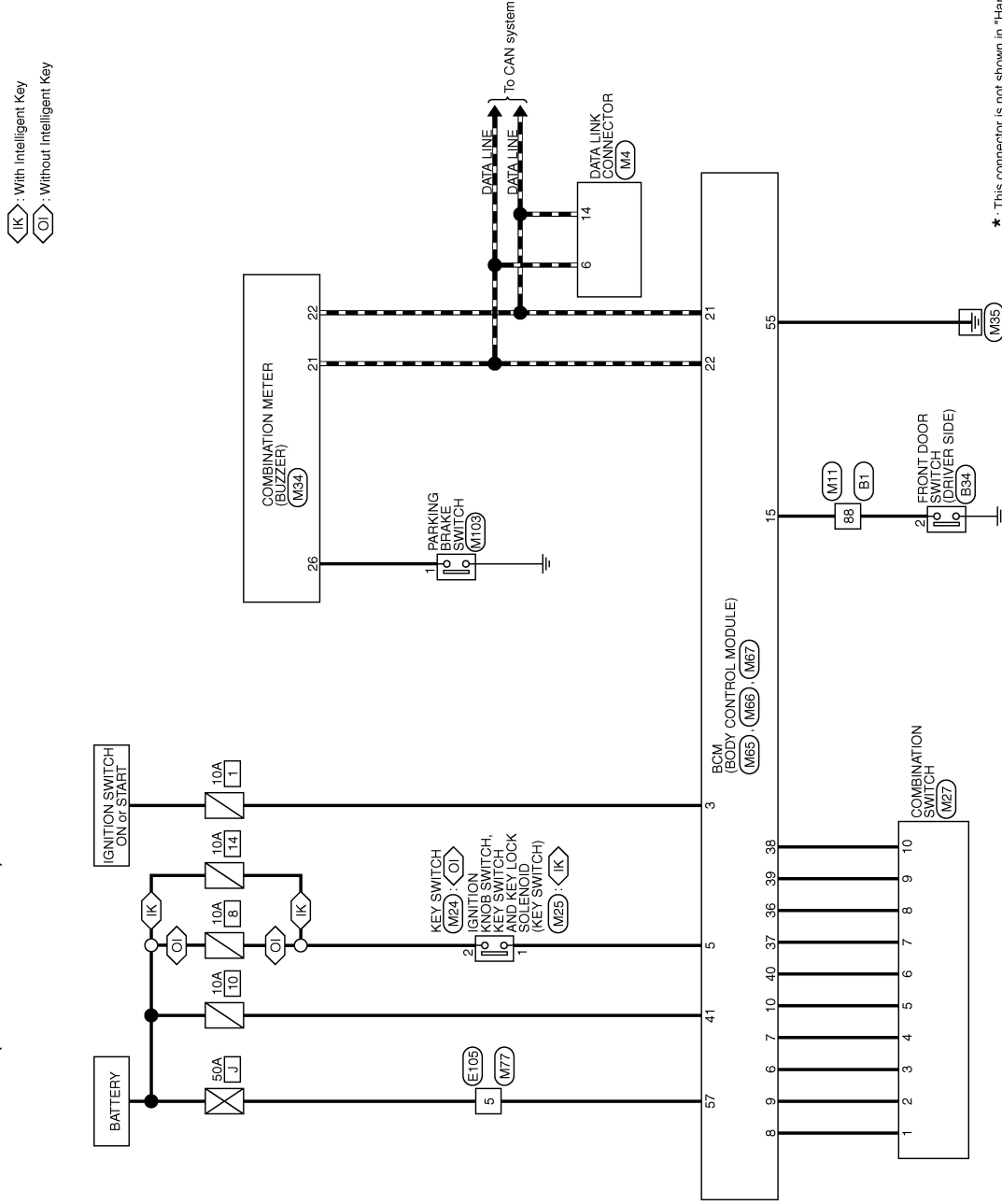
WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

Wiring Diagram - WARNING CHIME (RHD MODELS) -

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WARNING CHIME (RHD MODELS)



IK : With Intelligent Key
 OI : Without Intelligent Key

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

2007/02/28

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WARNING CHIME SYSTEM

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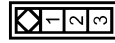
WARNING CHIME (RHD MODELS)

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



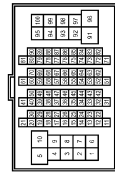
Terminal No.	Color of Wire	Signal Name [Specification]
88	BR	-

Connector No.	B34
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)
Connector Type	AQ3FW



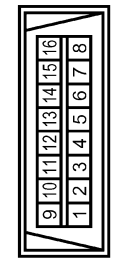
Terminal No.	Color of Wire	Signal Name [Specification]
2	BR	-[RHD models]

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4




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

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




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

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



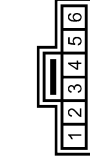
Terminal No.	Color of Wire	Signal Name [Specification]
88	BR	-

Connector No.	M24
Connector Name	KEY SWITCH
Connector Type	TK02MBR-P



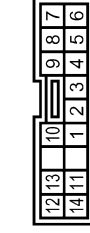
Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	Y	-

Connector No.	M25
Connector Name	IGNITION KNOB SWITCH, KEY SWITCH AND KEY LOCK SOLENOID
Connector Type	TK08MBY



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

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TK16FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	INPUT 1
2	LG	INPUT 2[RHD models]
3	L	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5[RHD models]
6	P	OUTPUT 1
7	R	OUTPUT 2
8	G	OUTPUT 5
9	Y	OUTPUT 4
10	W	OUTPUT 3

WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME (RHD MODELS)

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB4FW



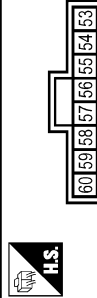
Terminal No.	Color of Wire	Signal Name [Specification]
21	L	CAN-H
22	P	CAN-L
26	GR	PARKING BRAKE SW

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAAB4FB



Terminal No.	Color of Wire	Signal Name [Specification]
3	W	IGN SW
5	LG	KEY SW(With Intelligent Key)
5	R	KEY SW(Without Intelligent Key)
6	L	COMBI SW (INPUT 3)
7	GR	COMBI SW (INPUT 4)
8	V	COMBI SW (INPUT 1)
9	LG	COMBI SW (INPUT 2)(RHD models)
10	O	COMBI SW 2 (RHD models)
15	BR	DOOR SW (DR)(RHD models)
21	P	CAN-L
22	L	CAN-H

Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FHA3FB



Terminal No.	Color of Wire	Signal Name [Specification]
55	B	GND
57	Y	BAT(7/L)

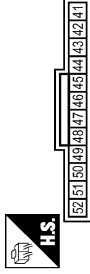
Connector No.	M103
Connector Name	PARKING BRAKE SWITCH
Connector Type	P01FB-A



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

36	G	COMBI SW OUTPUT 5
37	R	COMBI SW OUTPUT 2
38	W	COMBI SW OUTPUT 3
39	Y	COMBI SW OUTPUT 4
40	P	COMBI SW OUTPUT 1

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA12FBR



Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT(FUSE)

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COMBINATION METER

< ECU DIAGNOSIS >

ECU DIAGNOSIS

COMBINATION METER

Reference Value

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VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
SPEED METER [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
SPEED OUTPUT [km/h]	Ignition switch ON	While driving	Equivalent to speedometer reading NOTE: 655.35 is displayed when the malfunction signal is received
ODO OUTPUT	Ignition switch ON	—	Equivalent to odometer reading in combination meter
TACHO METER [rpm]	Ignition switch ON	While driving	Equivalent to tachometer reading NOTE: 8191.875 is displayed when the malfunction signal is received
FUEL METER [lit]	Ignition switch ON	—	Values according to fuel level
W TEMP METER [°C]	Ignition switch ON	—	Values according to engine coolant temperature NOTE: 215 is displayed when the malfunction signal is input
ABS W/L	Ignition switch ON	ABS warning lamp ON	On
		ABS warning lamp OFF	Off
VDC/TCS IND	Ignition switch ON	ESP OFF indicator lamp ON	On
		ESP OFF indicator lamp OFF	Off
SLIP IND	Ignition switch ON	SLIP indicator lamp ON	On
		SLIP indicator lamp OFF	Off
BRAKE W/L	Ignition switch ON	Brake warning lamp ON	On
		Brake warning lamp OFF	Off
DOOR W/L	Ignition switch ON	Door warning 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
OIL W/L	Ignition switch ON	Oil pressure warning lamp ON	On
		Oil pressure warning lamp OFF	Off
MIL	Ignition switch ON	Malfunction indicator lamp ON	On
		Malfunction indicator lamp OFF	Off

COMBINATION METER

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Monitor Item	Condition		Value/Status	
GLOW IND	Ignition switch ON	Glow indicator lamp ON	On	A
		Glow indicator lamp OFF	Off	
CRUISE IND	Ignition switch ON	Cruise indicator lamp ON	On	B
		Cruise indicator lamp OFF	Off	
SET IND	Ignition switch ON	SET indicator lamp ON	On	C
		SET indicator lamp OFF	Off	
ATC/T-AMT W/L	Ignition switch ON	TCM electronic control system warning lamp ON	On	D
		TCM electronic control system warning lamp OFF	Off	
4WD W/L	Ignition switch ON	4WD warning lamp ON	On	E
		4WD warning lamp OFF	Off	
4WD LOCK IND	Ignition switch ON	4WD LOCK indicator lamp ON	On	F
		4WD LOCK indicator lamp OFF	Off	
FUEL W/L	Ignition switch ON	Low-fuel warning lamp ON	On	G
		Low-fuel warning lamp OFF	Off	
KEY G/Y W/L	Ignition switch ON	KEY warning lamp (green/yellow) ON	On	H
		KEY warning lamp (green/yellow) OFF	Off	
KEY R W/L	Ignition switch ON	KEY warning lamp (red) ON	On	I
		KEY warning lamp (red) OFF	Off	
KEY KNOB W/L	Ignition switch ON	LOCK warning lamp ON	On	J
		LOCK warning lamp OFF	Off	
EPS W/L	Ignition switch ON	EPS warning lamp ON	On	K
		EPS warning lamp OFF	Off	
HDC W/L	Ignition switch ON	HDC warning lamp ON	On	L
		HDC warning lamp OFF	Off	
SHIFT IND	Ignition switch ON	Shift position indicator P display	P	M
		Shift position indicator R display	R	
		Shift position indicator N display	N	
		Shift position indicator D display	D	
		Shift position indicator M1 display	M1	
		Shift position indicator M2 display	M2	
		Shift position indicator M3 display	M3	
		Shift position indicator M4 display	M4	
		Shift position indicator M5 display	M5	
		Shift position indicator M6 display	M6	
O/D OFF SW	Ignition switch ON	O/D OFF indicator lamp ON	On	O
		O/D OFF indicator lamp OFF	Off	
AT S MODE SW	Ignition switch ON	Snow mode switch ON	On	P
		Snow mode switch 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	

COMBINATION METER

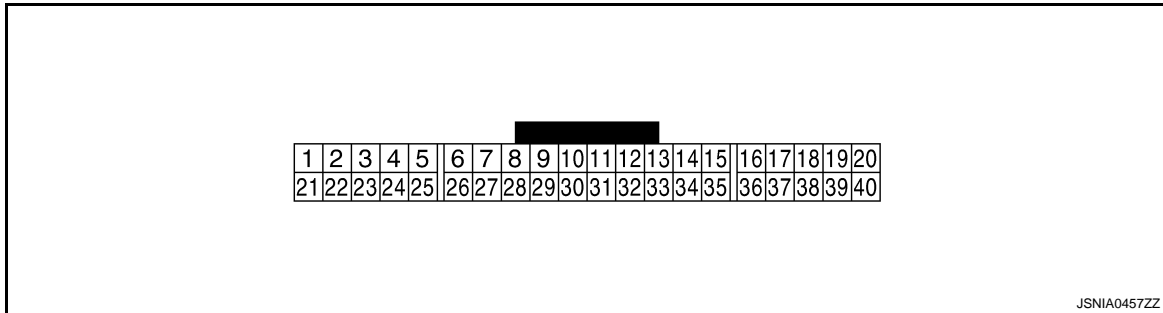
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Monitor Item	Condition		Value/Status
AT SFT UP SW	Ignition switch ON	Selector lever (+) position	On
		Other than the above	Off
AT SFT DWN SW	Ignition switch ON	Selector lever (-) position	On
		Other than the above	Off
COMP F/B SIG	Ignition switch ON	A/C compressor activation condition	On
		A/C compressor deactivation condition	Off
PKB SW	Ignition switch ON	Parking brake switch ON	On
		Parking brake switch OFF	Off
BRAKE OIL SW	Ignition switch ON	Brake fluid level switch ON	On
		Brake fluid level switch OFF	Off
DISTANCE [km]	Ignition switch ON	—	Possible driving distance calculated by combination meter
OUTSIDE TEMP [°C or °F]	Ignition switch ON	—	Equivalent to ambient air temperature NOTE: This may not match the indicated value on the information display.
FUEL LOW SIG	Ignition switch ON	Low-fuel warning displayed	On
		Low-fuel warning not displayed	Off
BUZZER	Ignition switch ON	Buzzer ON	On
		Buzzer OFF	Off

NOTE:

Some items are not available according to vehicle specification.

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (G)	Ground	Battery power supply	Input	Ignition switch OFF	—	Battery voltage
2 (P)	Ground	IGN signal	Input	Ignition switch ON	—	Battery voltage
3 (B)	Ground	Ground	—	Ignition switch ON	—	0 V
8* (Y)	Ground	Fuel filter sensor signal	Input	Ignition switch ON	Fuel filter warning lamp ON	0 V
					Fuel filter warning lamp OFF	12 V

COMBINATION METER

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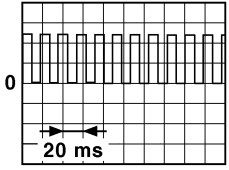
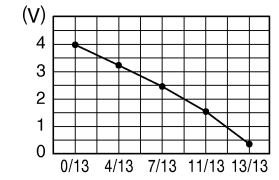
Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
9 (P)	Ground	O/D OFF switch signal	Input	Ignition switch ON	O/D OFF switch pressed	0 V
					O/D OFF switch not pressed	12 V
11 (W)	Ground	Steering switch (trip com- puter) signal	Input	Ignition switch ON	Press the steering switch (trip computer)	0 V
					Other than the above	5 V
15 (GR)	Ground	Air bag signal	Input	Ignition switch ON	Air bag warning lamp ON	4 V
					Air bag warning lamp OFF	0 V
19 (BR)	Ground	OAT sensor signal	Input	Ignition switch ON	—	<p style="text-align: center;">(V)</p> <p style="text-align: center;">(°C) (°F)</p> <p style="text-align: right; font-size: small;">JSNIA0014GB</p>
20 (R)	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 (B)	Ground	Fuel level sensor signal ground	—	Ignition switch ON	—	0 V
25 (BR)	Ground	Alternator signal	Input	Ignition switch ON	Charge warning lamp ON	0 V
					Charge warning lamp OFF	12 V
26 (GR)	Ground	Parking brake switch signal	Input	Ignition switch ON	Parking brake ON	0 V
					Parking brake OFF	5 V
27 (LG)	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 (B)	Ground	Security signal	Input	Ignition switch ON	Security warning lamp ON	0 V
					Security warning lamp OFF	12 V

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COMBINATION METER

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Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
31 (V)	Ground	Vehicle speed signal (8 pulse)	Output	Ignition switch ON Vehicle speed is approxi- mately 40 km/h (25 MPH)	NOTE: The maximum voltage varies de- pending on the specification (destination unit).  <small>JSNIA0012GB</small>	
32 (L)	Ground	Oil level sensor signal	Input	Ignition switch ON —	Refer to MWI-33, "Component Inspection (QR25DE Engine Models)" or MWI-34, "Compo- nent Inspection (Except QR25DE Engine Models)" . NOTE: The measurement cannot be performed because the signal is input for a moment with the igni- tion switch ON.	
33 (O)	Ground	Oil level sensor signal ground	—	Ignition switch ON —	0 V	
34 (G)	Ground	Fuel level sensor signal	Input	Ignition switch ON —	 <small>JSNIA0423GB</small>	
37 (Y)	Ground	Not manual mode signal	Input	Ignition switch ON	Manual mode	12 V
					Other than the above	0 V
38 (O)	Ground	Manual mode shift down signal	Input	Ignition switch ON	Selector lever (-) position	0 V
					Other than the above	12 V
39 (V)	Ground	Manual mode shift up sig- nal	Input	Ignition switch ON	Selector lever (+) position	0 V
					Other than the above	12 V
40 (LG)	Ground	Manual mode signal	Input	Ignition switch ON	Manual mode	0 V
					Other than the above	12 V

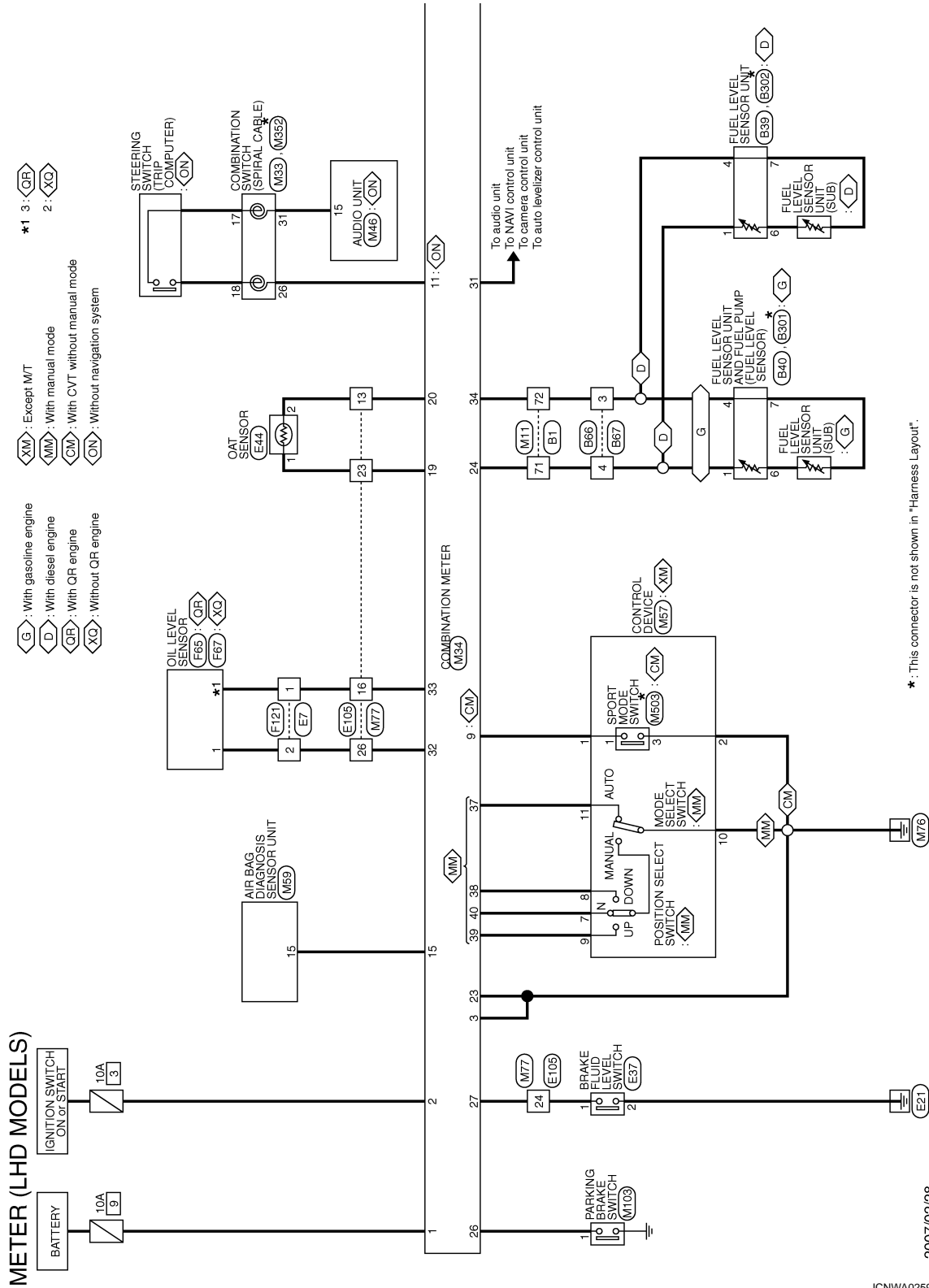
*: LHD models

COMBINATION METER

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Wiring Diagram - METER (LHD MODELS) -

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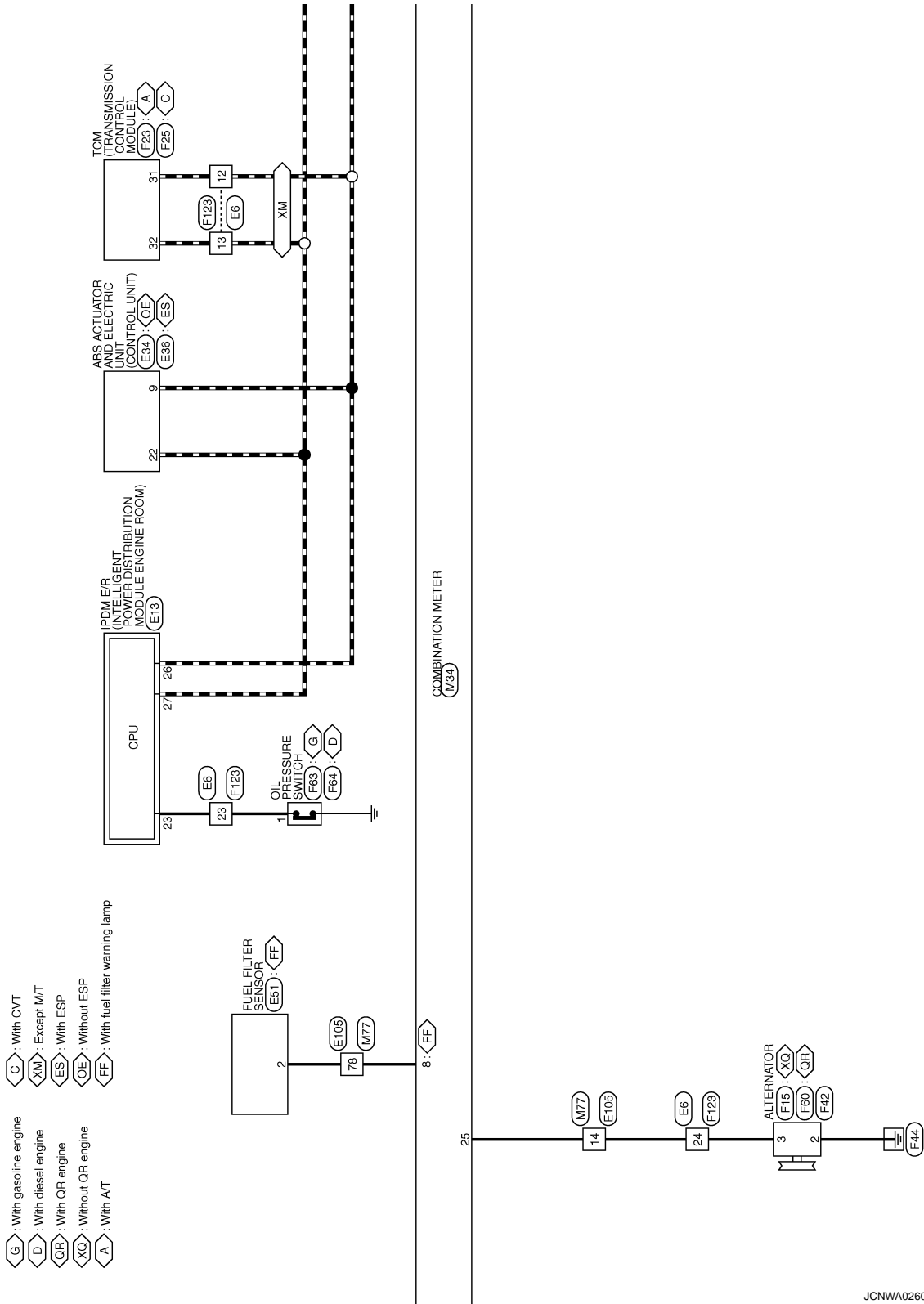


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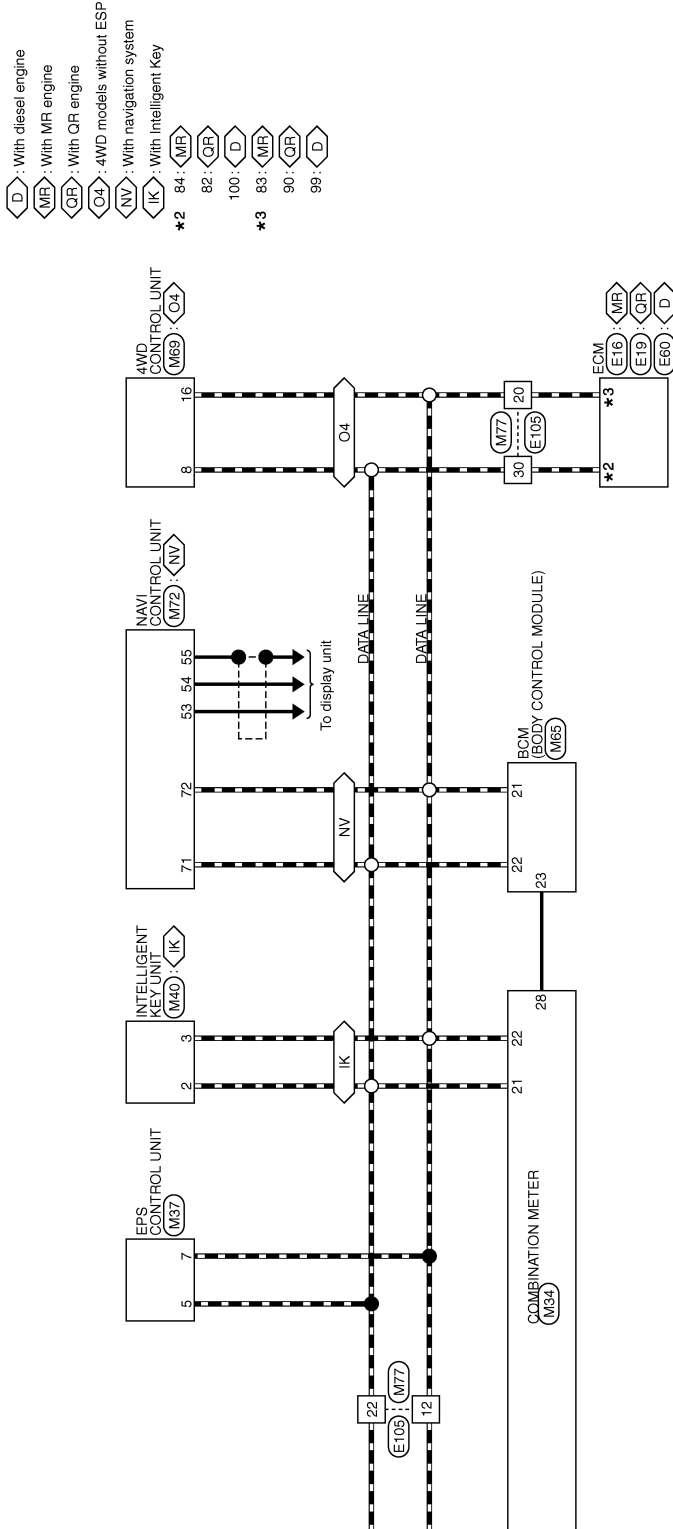
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COMBINATION METER

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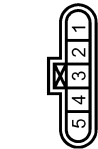
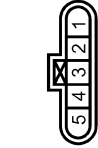
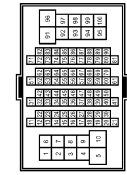
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COMBINATION METER

< ECU DIAGNOSIS >

METER (LHD MODELS)

Connector No.	B1	Connector No.	B39	Connector No.	B40	Connector No.	B68
Connector Name	WIRE TO WIRE	FUEL LEVEL SENSOR UNIT	FUEL LEVEL SENSOR UNIT AND FUEL PUMP	FUEL LEVEL SENSOR UNIT AND FUEL PUMP	WIRE TO WIRE	WIRE TO WIRE	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4	ED9FGY-RS	ED9FGY-RS	ED9FGY-RS	NSC4FW-CS	NSC4FW-CS	NSC4FW-CS
Terminal No.	71	1	4	6	3	4	3
Color of Wire	B	B	G	B	G	B	G
Signal Name [Specification]	-	-	-	-	-	-	-
Terminal No.	72	4	1	4	4	4	4
Color of Wire	G	G	G	G	G	B	B
Signal Name [Specification]	-	-	-	-	-	-	-



Connector No.	B67	Connector No.	B301	Connector No.	B302	Connector No.	E6
Connector Name	WIRE TO WIRE	FUEL LEVEL SENSOR UNIT AND FUEL PUMP	FUEL LEVEL SENSOR UNIT AND FUEL PUMP	FUEL LEVEL SENSOR UNIT	WIRE TO WIRE	WIRE TO WIRE	WIRE TO WIRE
Connector Type	NS24MW-CS	-	-	-	TK24MW-1V	TK24MW-1V	TK24MW-1V
Terminal No.	3	6	6	6	12	12	12
Color of Wire	G	-	-	-	P	P	P
Signal Name [Specification]	-	-	-	-	-	-	-
Terminal No.	4	7	7	7	13	13	13
Color of Wire	B	-	-	-	L	L	L
Signal Name [Specification]	-	-	-	-	-	-	-
Terminal No.	4	7	7	7	23	23	23
Color of Wire	B	-	-	-	W	W	W
Signal Name [Specification]	-	-	-	-	-	-	-
Terminal No.	4	7	7	7	24	24	24
Color of Wire	B	-	-	-	O	O	O
Signal Name [Specification]	-	-	-	-	-	-	-

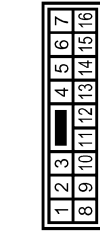


COMBINATION METER

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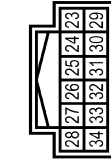
METER (LHD MODELS)

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



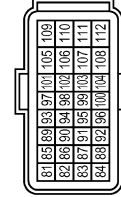
Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-[With gasoline engine]
1	W	-[With diesel engine]
2	Y	-[With gasoline engine]
2	R	-[With diesel engine]

Connector No.	E13
Connector Name	IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH12FW-NH



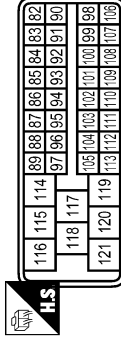
Terminal No.	Color of Wire	Signal Name [Specification]
23	W	-
26	P	-
27	L	-

Connector No.	E16
Connector Name	ECM
Connector Type	MAA24FB-MEA8-LH



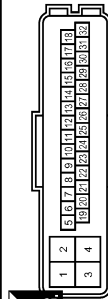
Terminal No.	Color of Wire	Signal Name [Specification]
83	P	CAN-L1
84	L	CAN-H1

Connector No.	E19
Connector Name	ECM
Connector Type	BAA23FB-AH18



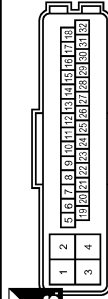
Terminal No.	Color of Wire	Signal Name [Specification]
82	L	VEHCAN-H
90	P	VEHCAN-L

Connector No.	E34
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	RH22FB-NU4-DH



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

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	RH22FB-NU4-DH



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

Connector No.	E37
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Type	Y102FGY



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

Connector No.	E44
Connector Name	OAT SENSOR
Connector Type	RS22FB



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

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COMBINATION METER

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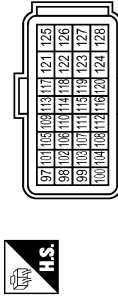
METER (LHD MODELS)

Connector No.	E51
Connector Name	FUEL FILTER SENSOR
Connector Type	BS03FB-AHY-S



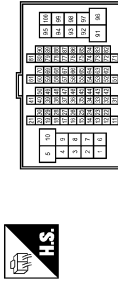
Terminal No.	Color of Wire	Signal Name [Specification]
2	Y	SIGNAL

Connector No.	E60
Connector Name	ECM
Connector Type	MAA24FB-MEA8-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	TH80FW-CS16-TM4



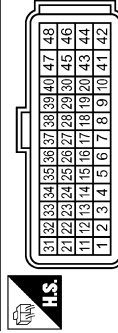
Terminal No.	Color of Wire	Signal Name [Specification]
12	P	-
13	R	-
14	O	-
16	G	[With gasoline engine]
16	W	[With diesel engine]
20	P	-
22	L	-
23	BR	-
24	LG	-
26	-	-
30	L	-

Connector No.	F15
Connector Name	ALTERNATOR
Connector Type	HS03FB



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

Connector No.	F25
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Type	MAA40FB-MEA8-LH



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

Connector No.	F42
Connector Name	ALTERNATOR
Connector Type	-



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

COMBINATION METER

< ECU DIAGNOSIS >

METER (LHD MODELS)

Connector No.	Connector Name	Connector Type	Terminal No.	Color of Wire	Signal Name [Specification]
F60	ALTERNATOR	X02FW	3	L	L
F63	OIL PRESSURE SWITCH	ED1FGY-RS-AR	1	W	-
F64	OIL PRESSURE SWITCH	RH02FB	1	W	-
F65	OIL LEVEL SENSOR	F503F-SB-GY	1	L	SEN(+)
			2	Y	SEN(-)
			3	Y	SEN(-)



Connector No.	Connector Name	Connector Type	Terminal No.	Color of Wire	Signal Name [Specification]
F67	OIL LEVEL SENSOR	B52FB-ANY-S	1	Y	+ [With MR engine]
			1	L	+ [With diesel engine]
			2	G	- [With MR engine]
			2	W	- [With diesel engine]



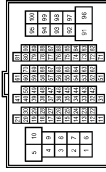
Connector No.	Connector Name	Connector Type	Terminal No.	Color of Wire	Signal Name [Specification]
F121	WIRE TO WIRE	RS16FW-CS	1	G	- [With MR engine]
			1	Y	- [With OR engine]
			1	W	- [With diesel engine]
			2	Y	- [With MR engine]
			2	L	- [Without MR engine]



Connector No.	Connector Name	Connector Type	Terminal No.	Color of Wire	Signal Name [Specification]
F123	WIRE TO WIRE	TK24FW-TV	12	P	- [Except M/T]
			13	L	- [Except M/T]
			23	W	-
			24	L	-



Connector No.	Connector Name	Connector Type	Terminal No.	Color of Wire	Signal Name [Specification]
M11	WIRE TO WIRE	TH80FW-GS16-TM4	71	B	-
			72	G	-



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	+ [With MR engine]
1	L	+ [With diesel engine]
2	G	- [With MR engine]
2	W	- [With diesel engine]

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	- [With MR engine]
1	Y	- [With OR engine]
1	W	- [With diesel engine]
2	Y	- [With MR engine]
2	L	- [Without MR engine]

Terminal No.	Color of Wire	Signal Name [Specification]
12	P	- [Except M/T]
13	L	- [Except M/T]
23	W	-
24	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
71	B	-
72	G	-

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COMBINATION METER

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METER (LHD MODELS)

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK0BF-GY-1V



Terminal No.	Color of Wire	Signal Name [Specification]
26	W	-
31	GR	-

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB40FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	BAT
2	P	IGN
3	B	GND
8	Y	FUEL FILTER SENS
9	P	O/D OFF SW
11	W	STRG SW
15	GR	AIR BAG
19	BR	OAT SENS
20	R	OAT SENS GND
21	L	CAN-H
22	P	CAN-L

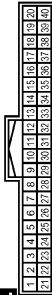
23	B	GND
24	B	FUEL LEVEL SENS GND
25	BR	ALTERNATOR
26	GR	PARKING BRAKE SW
27	LG	BRAKE FLUID LEVEL SW
28	B	SECURITY
31	V	VEHICLE SPEED (8-PULSE)
32	L	OIL LEVEL SENS
33	O	OIL LEVEL SENS GND
34	G	FUEL LEVEL SENS
37	Y	NOT MANUAL MODE SW
38	O	SHIFT DOWN
39	V	SHIFT UP
40	LG	MANUAL MODE SW

Connector No.	M37
Connector Name	EPS CONTROL UNIT
Connector Type	Molex 98545-0001



Terminal No.	Color of Wire	Signal Name [Specification]
5	L	-
7	P	-

Connector No.	M40
Connector Name	INTELLIGENT KEY UNIT
Connector Type	TH40FW-NH



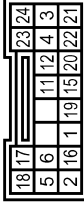
Terminal No.	Color of Wire	Signal Name [Specification]
2	L	CAN-H
3	P	CAN-L

Connector No.	M57
Connector Name	CONTROL DEVICE
Connector Type	TH18FW-NH



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

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	TK20FY-EX-SC



Terminal No.	Color of Wire	Signal Name [Specification]
15	GR	A/V W/LLHD models

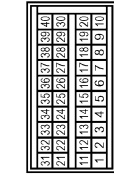
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COMBINATION METER

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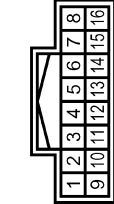
METER (LHD MODELS)

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FE



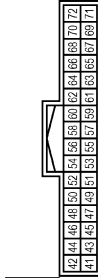
Terminal No.	Color of Wire	Signal Name [Specification]
21	P	CAN-L
22	L	CAN-H
23	V	SECURITY INDICATOR[LHD models]

Connector No.	M69
Connector Name	4WD CONTROL UNIT
Connector Type	TH18FW-NH



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

Connector No.	M72
Connector Name	NAVI CONTROL UNIT
Connector Type	TH32FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
53	L	COMMUNICATION SIGNAL (CONT-DISP)
54	P	COMMUNICATION SIGNAL (DISP-CONT)
55	SHIELD	SHIELD
71	L	CAN-H
72	P	CAN-L

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH61MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
12	P	-
13	R	-
14	BR	-
16	-	-
20	P	-
22	L	-
23	BR	-
24	LG	-
26	-	-
30	L	-
78	GR	-

Connector No.	M103
Connector Name	PARKING BRAKE SWITCH
Connector Type	F01FE-A



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

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



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

Connector No.	M503
Connector Name	SPORT MODE SWITCH
Connector Type	HRP-03-S



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	SPORT MODE SW
3	W	GND

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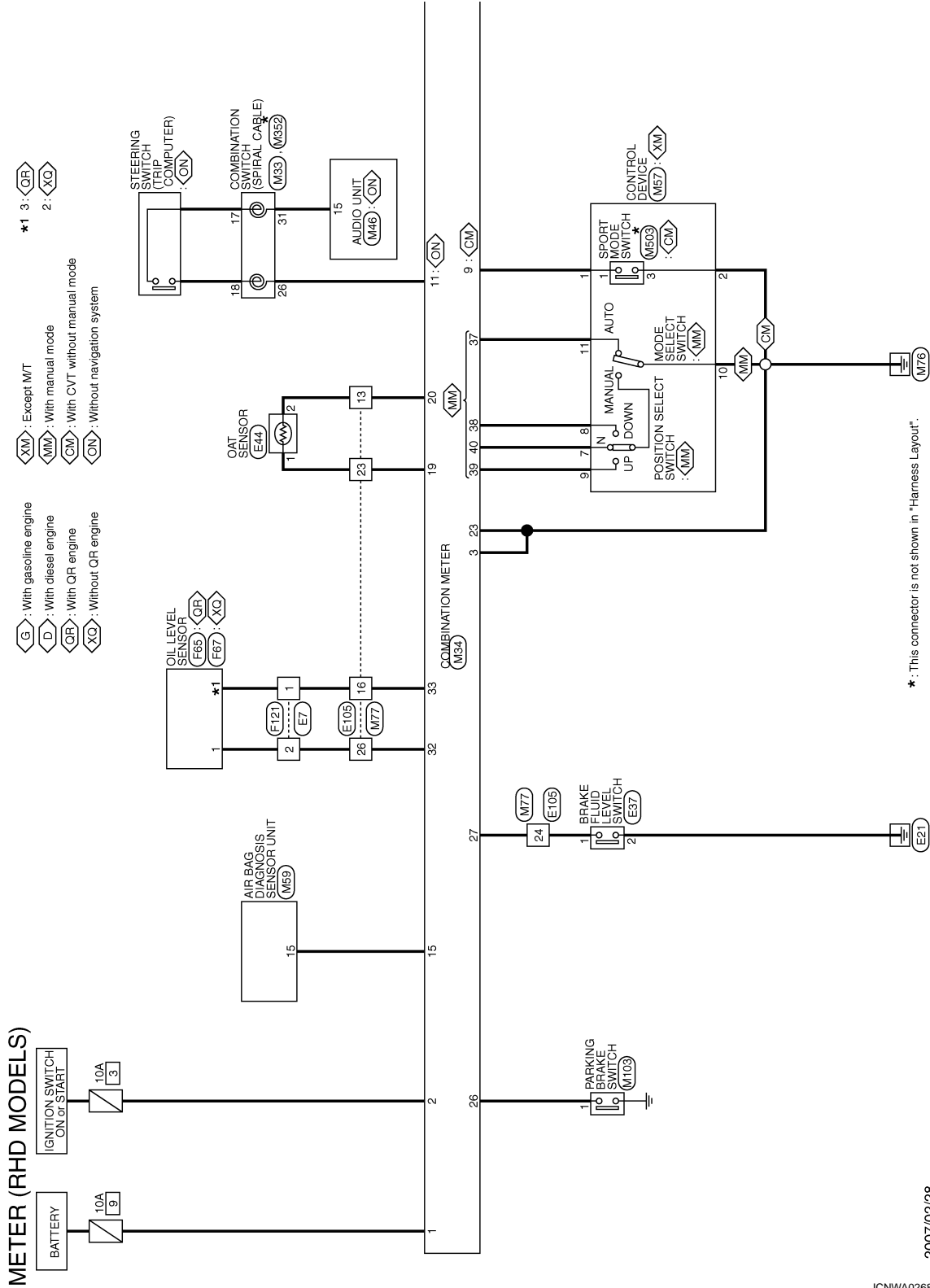
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COMBINATION METER

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Wiring Diagram - METER (RHD MODELS) -

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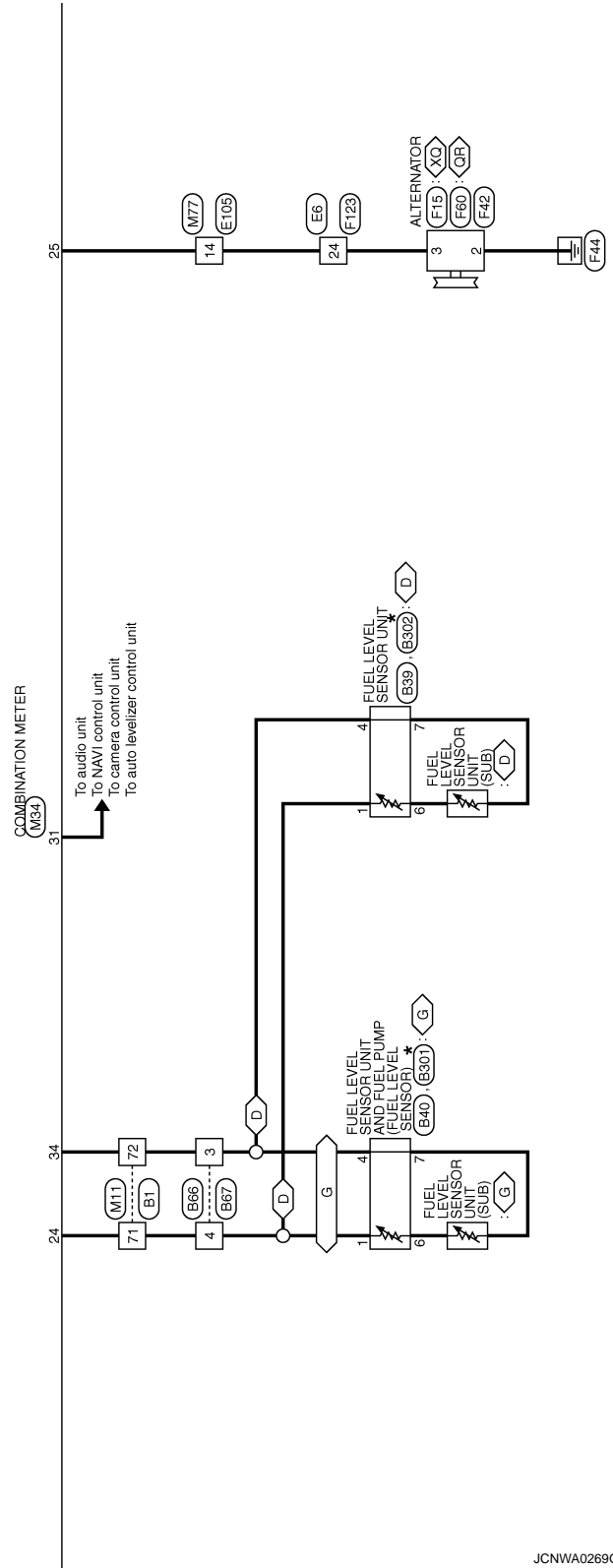
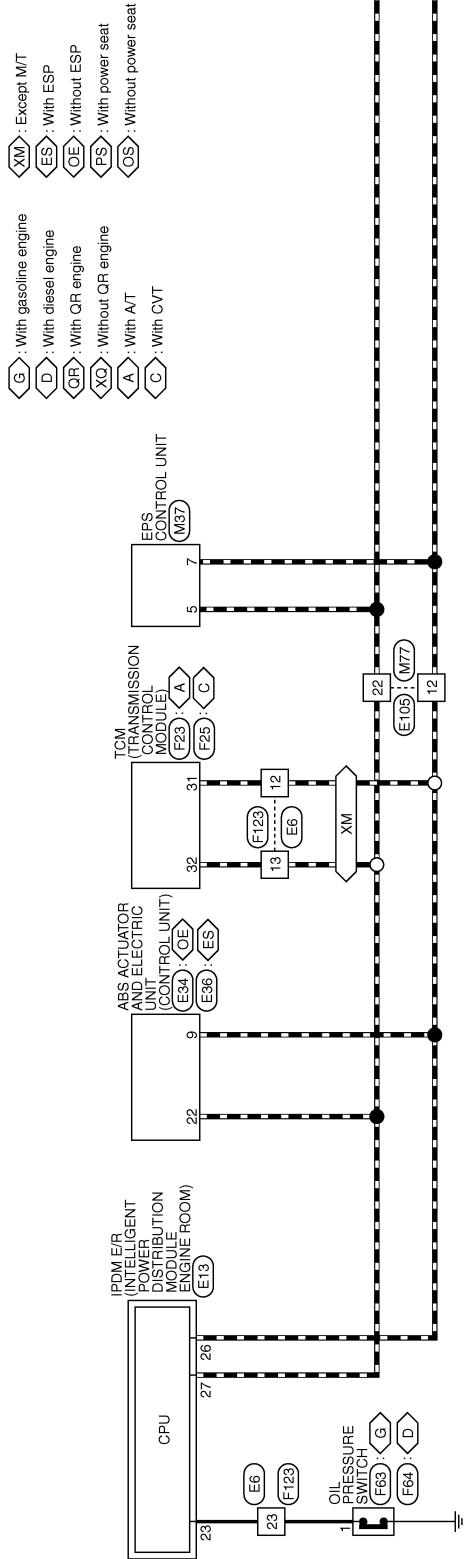


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COMBINATION METER

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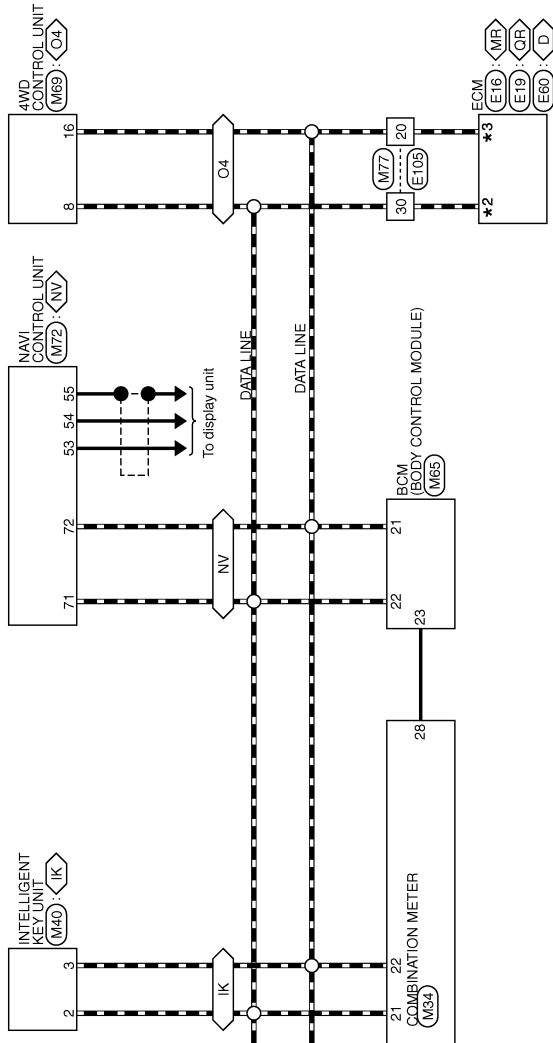
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COMBINATION METER

< ECU DIAGNOSIS >

- D** : With diesel engine
- MF** : With MR engine
- OR** : With OR engine
- O4** : 4WD models without ESP
- NV** : With navigation system
- IK** : With Intelligent Key
- *2** 84: **ME**
- 82: **OR**
- 100: **D**
- *3** 83: **MF**
- 90: **OR**
- 99: **D**



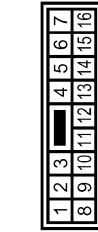
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COMBINATION METER

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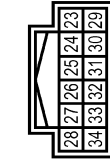
METER (RHD MODELS)

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



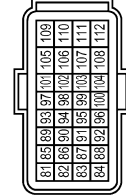
Terminal No.	Color of Wire	Signal Name [Specification]
1	G	- [With gasoline engine]
1	W	- [With diesel engine]
2	Y	- [With gasoline engine]
2	R	- [With diesel engine]

Connector No.	E13
Connector Name	IPDM E/R INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Type	TH12FW-NH



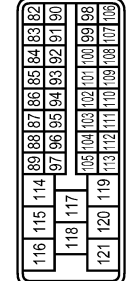
Terminal No.	Color of Wire	Signal Name [Specification]
23	W	-
26	P	-
27	L	-

Connector No.	E16
Connector Name	ECM
Connector Type	MAA24FB-MEA8-LH



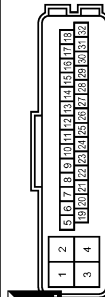
Terminal No.	Color of Wire	Signal Name [Specification]
83	P	CAN-LI
84	L	CAN-HI

Connector No.	E19
Connector Name	ECM
Connector Type	BAA32FB-AHY8



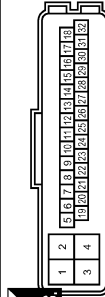
Terminal No.	Color of Wire	Signal Name [Specification]
82	L	VEHCAN-H
90	P	VEHCAN-L

Connector No.	E34
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	RH2FB-NU4-DH



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

Connector No.	E36
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Type	RH2FB-NU4-DH



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

Connector No.	E37
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Type	YV02FY



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

Connector No.	E44
Connector Name	OAT SENSOR
Connector Type	RS02FB



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

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COMBINATION METER

< ECU DIAGNOSIS >

METER (RHD MODELS)

Connector No. ECM	Connector Name ECM	Connector Type MAA24FB-MEA8-LH	Terminal No. 99	Color of Wire P	Signal Name [Specification] MAIN CAN-L(BODY)
Connector No. ECM	Connector Name ECM	Connector Type MAA24FB-MEA8-LH	Terminal No. 100	Color of Wire L	Signal Name [Specification] MAIN CAN-H(BODY)
Connector No. TCM (TRANSMISSION CONTROL MODULE)	Connector Name TCM (TRANSMISSION CONTROL MODULE)	Connector Type MAA40FB-MEA8-LH	Terminal No. 31	Color of Wire P	Signal Name [Specification] CAN-L
Connector No. TCM (TRANSMISSION CONTROL MODULE)	Connector Name TCM (TRANSMISSION CONTROL MODULE)	Connector Type MAA40FB-MEA8-LH	Terminal No. 32	Color of Wire L	Signal Name [Specification] CAN-H
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 12	Color of Wire P	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 13	Color of Wire R	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 14	Color of Wire O	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 16	Color of Wire G	Signal Name [Specification] - [With gasoline engine]
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 18	Color of Wire W	Signal Name [Specification] - [With diesel engine]
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 20	Color of Wire P	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 22	Color of Wire L	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 23	Color of Wire BR	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 24	Color of Wire LG	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 26	Color of Wire -	Signal Name [Specification] -
Connector No. WIRE TO WIRE	Connector Name WIRE TO WIRE	Connector Type TH80FW-CS1E-TM4	Terminal No. 30	Color of Wire L	Signal Name [Specification] -
Connector No. ALTERNATOR	Connector Name ALTERNATOR	Connector Type X02FW	Terminal No. 3	Color of Wire L	Signal Name [Specification] L
Connector No. OIL PRESSURE SWITCH	Connector Name OIL PRESSURE SWITCH	Connector Type E01FGY-RS-AR	Terminal No. 1	Color of Wire W	Signal Name [Specification] -
Connector No. ALTERNATOR	Connector Name ALTERNATOR	Connector Type X02FW	Terminal No. 3	Color of Wire L	Signal Name [Specification] L
Connector No. ALTERNATOR	Connector Name ALTERNATOR	Connector Type X02FW	Terminal No. 2	Color of Wire -	Signal Name [Specification] GND
Connector No. TCM (TRANSMISSION CONTROL MODULE)	Connector Name TCM (TRANSMISSION CONTROL MODULE)	Connector Type MAA40FB-MEA8-LH	Terminal No. 31	Color of Wire P	Signal Name [Specification] CAN-L
Connector No. TCM (TRANSMISSION CONTROL MODULE)	Connector Name TCM (TRANSMISSION CONTROL MODULE)	Connector Type MAA40FB-MEA8-LH	Terminal No. 32	Color of Wire L	Signal Name [Specification] CAN-H

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COMBINATION METER

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METER (RHD MODELS)

Connector No.	F64
Connector Name	OIL PRESSURE SWITCH
Connector Type	RH02FB



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

Connector No.	F65
Connector Name	OIL LEVEL SENSOR
Connector Type	RS03FSB-GY



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	SEN(+)
3	Y	SEN(-)

Connector No.	F67
Connector Name	OIL LEVEL SENSOR
Connector Type	BS02FE-AHY-S



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-[With MR engine]
1	L	-[With QR engine]
2	G	-[With MR engine]
2	W	-[With diesel engine]

Connector No.	F121
Connector Name	WIRE TO WIRE
Connector Type	NS18FW-GS



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-[With MR engine]
1	Y	-[With QR engine]
1	W	-[With diesel engine]
2	Y	-[With MR engine]
2	L	-[Without MR engine]

Connector No.	F123
Connector Name	WIRE TO WIRE
Connector Type	TK24FW-1V



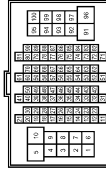
Terminal No.	Color of Wire	Signal Name [Specification]
12	P	-[Except M/T]
13	L	-[Except M/T]
23	W	-
24	L	-

Connector No.	M33
Connector Name	COMBINATION SWITCH (SPRAL CABLE)
Connector Type	TK08FGY-1V



Terminal No.	Color of Wire	Signal Name [Specification]
26	W	-
31	GR	-

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CSJ(B-TM)



Terminal No.	Color of Wire	Signal Name [Specification]
71	B	-
72	G	-

COMBINATION METER

< ECU DIAGNOSIS >

METER (RHD MODELS)

Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	SAB4FW



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

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	BAT
2	P	IGN
3	B	GND
8	P	O/D OFF SW
11	W	STRG SW
15	GR	AIR BAG
19	BR	OAT SENS
20	R	OAT SENS GND
21	L	CAN-H
22	P	CAN-L
23	B	GND

Connector No.	M46
Connector Name	AUDIO UNIT
Connector Type	TH18FW-GS2



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Terminal No.	Color of Wire	Signal Name [Specification]
15	GR	STRG SW GND

24	B	FUEL LEVEL SENS GND
25	BR	ALTERNATOR
26	GR	PARKING BRAKE SW
27	LG	BRAKE FLUID LEVEL SW
28	B	SECURITY
31	V	VEHICLE SPEED (9-PULSE)
32	L	OIL LEVEL SENS
33	O	OIL LEVEL SENS GND
34	G	FUEL LEVEL SENS
37	Y	NOT MANUAL MODE SW
38	O	SHIFT DOWN
39	V	SHIFT UP
40	LC	MANUAL MODE SW

Connector No.	M37
Connector Name	EPS CONTROL UNIT
Connector Type	Molex 98545-0001



10	9	8	7	6	5	4	3
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Terminal No.	Color of Wire	Signal Name [Specification]
5	L	-
7	P	-

Connector No.	M59
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	TK20FY-EX-SG



18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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Terminal No.	Color of Wire	Signal Name [Specification]
15	SB	A/B W/L [RHD models]

Connector No.	M40
Connector Name	INTELLIGENT KEY UNIT
Connector Type	TH40FW-NH



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Terminal No.	Color of Wire	Signal Name [Specification]
2	L	CAN-H
3	P	CAN-L

Connector No.	M65
Connector Name	BOM (BODY CONTROL MODULE)
Connector Type	A4B40FB



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

Terminal No.	Color of Wire	Signal Name [Specification]
21	P	CAN-L
22	L	CAN-H
23	B	SECURITY INDICATOR[RHD models]

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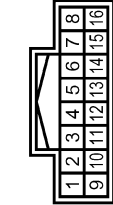
WCS

COMBINATION METER

< ECU DIAGNOSIS >

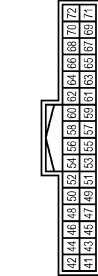
METER (RHD MODELS)

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



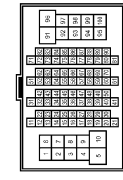
Terminal No.	Color of Wire	Signal Name [Specification]
8	L	CAN-H
16	P	CAN-L

Connector No.	M72
Connector Name	NAVY CONTROL UNIT
Connector Type	TH42FW-NH



Terminal No.	Color of Wire	Signal Name [Specification]
53	L	COMMUNICATION SIGNAL (CONT-DISP)
54	P	COMMUNICATION SIGNAL (DISP-CONT)
55	SHIELD	SHIELD
71	L	CAN-H
72	P	CAN-L

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
12	P	
13	R	
14	BR	
16	-	
20	P	
22	L	
23	BR	
24	LG	
26	-	
30	L	

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



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

Connector No.	M352
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Type	TK8BMGY-X



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

Connector No.	M503
Connector Name	SPORT MODE SWITCH
Connector Type	HPP-03-S



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	SPORT MODE SW
3	W	GND

Fail Safe

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

JCNWA0276GE

INFOID:000000001081152

COMBINATION METER

< ECU DIAGNOSIS >

Function		Specifications	
Speedometer		Reset to zero by suspending communication.	A
Tachometer			
Meter illumination control		Change to nighttime mode.	B
Buzzer		Turned off by suspending communication.	
Warning lamp/indicator lamp	ABS warning lamp	Turned on by suspending communication.	C
	Brake warning lamp		
	EPS OFF indicator lamp		
	ESP OFF indicator lamp		
	SLIP indicator lamp		
	4WD warning lamp		
	SPORT indicator lamp	Turned off by suspending communication.	E
	4WD indicator lamp		
	4WD LOCK indicator lamp		
	Oil pressure warning lamp		
	Door warning lamp		
	Malfunction indicator lamp		
	CRUISE indicator lamp		
	SET indicator lamp		
	Front fog lamp indicator lamp		
	Rear fog lamp indicator lamp		
	Glow indicator lamp		
	DPF warning lamp		
	HDC indicator lamp		
	KEY R/G warning lamp		
KEY LOCK warning lamp			
High beam indicator lamp			
Turn signal indicator lamp			

DTC Index

INFOID:000000001081153

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-28
CONTROL UNIT (CAN) [U1010]	CRNT, 1 - 39	Detecting error during the initial diagnosis of CAN controller of combination meter.	MWI-29
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-30
ENGINE SPEED [B2267]	CRNT, 1 - 39	ECM continuously transmits abnormal engine speed signals for 2 seconds or more.	MWI-31
WATER TEMP [B2268]	CRNT, 1 - 39	ECM continuously transmits abnormal engine coolant temperature signals for 60 seconds or more.	MWI-32
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-33 (QR25DE)
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.	• MWI-33 (Except QR25DE)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000001367523

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
VEHICLE SPEED	While driving	Equivalent to speedometer reading
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	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-DR	Driver's door closed	Off
	Driver's door opened	On
DOOR SW-AS	Passenger door closed	Off
	Passenger door opened	On
DOOR SW-RR	Rear RH door closed	Off
	Rear RH door opened	On
DOOR SW-RL	Rear LH door closed	Off
	Rear LH door opened	On
BACK DOOR SW	Back door closed	Off
	Back door opened	On
I-KEY LOCK	"LOCK" button of Intelligent Key or door request switch are not pressed	Off
	"LOCK" button of Intelligent Key or door request switch are pressed	On
I-KEY UNLOCK	"UNLOCK" button of Intelligent Key or door request switch are not pressed	Off
	"UNLOCK" button of Intelligent Key or door request switch are pressed	On
PUSH SW	Return to ignition switch to "LOCK" position	Off
	Press ignition switch	On
KEYLESS LOCK	"LOCK" button of key fob is not pressed	Off
	"LOCK" button of key fob is pressed	On
KEYLESS UNLOCK	"UNLOCK" button of key fob is not pressed	Off
	"UNLOCK" button of key fob is pressed	On
SHOCK SENSOR	Ignition switch ON	NOMAL
	After the reception of air bag deployment signal from air bag diagnosis sensor unit	Off
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	On
UNLOCK SHOCK	Other than the following	Off
	During the unlock operation interlocked with air bag	On
UNLOCK WITH DR	NOTE: The item is indicated, but not monitored	On
		Off

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
LOCK WITH SPEED	Vehicle speed sensing auto door lock function does not operate	Off	A
	Vehicle speed sensing auto door lock function is operating	On	
ACC ON SW	Ignition switch OFF	Off	B
	Ignition switch ACC or ON	On	
REAR DEF SW	Rear window defogger switch OFF	Off	C
	Rear window defogger switch ON	On	
TAIL LAMP SW	Lighting switch OFF	Off	D
	Lighting switch 1ST	On	
TURN SIGNAL R	Turn signal switch OFF	Off	E
	Turn signal switch RH	On	
TURN SIGNAL L	Turn signal switch OFF	Off	F
	Turn signal switch LH	On	
HI BEAM SW	Lighting switch OFF	Off	G
	Lighting switch HI	On	
HEAD LAMP SW 1	Lighting switch OFF	Off	H
	Lighting switch 2ND	On	
HEAD LAMP SW 2	Lighting switch OFF	Off	I
	Lighting switch 2ND	On	
PASSING SW	Other than lighting switch PASS	Off	J
	Lighting switch PASS	On	
AUTO LIGHT SW	Lighting switch OFF	Off	K
	Lighting switch AUTO	On	
FR FOG SW	Front fog lamp switch OFF	Off	L
	Front fog lamp switch ON	On	
RR FOG SW	Rear fog lamp switch OFF	Off	M
	Rear fog lamp switch ON	On	
ENGINE RUN	Engine stopped	Off	
	Engine running	On	
LIT-SEN FAIL	Light & rain sensor is in normal condition	OK	
	Light & rain sensor is with error	NOTOK	
AUT LIGHT SYS	Outside of the room is dark	On	
	Outside of the room is bright	Off	
HD LIGHT TIME	—	Displays a setting time of the follow me home function set by the work support	WCS
IGN SW CAN	Ignition switch OFF or ACC	Off	
	Ignition switch ON	On	O
FR WIPER HI	Front wiper switch OFF	Off	
	Front wiper switch HI	On	
FR WIPER LOW	Front wiper switch OFF	Off	P
	Front wiper switch LO	On	
FR WIPER INT	Front wiper switch OFF	Off	
	Front wiper switch INT	On	
FR WASHER SW	Front washer switch OFF	Off	
	Front washer switch ON	On	

BCM (BODY CONTROL MODULE)

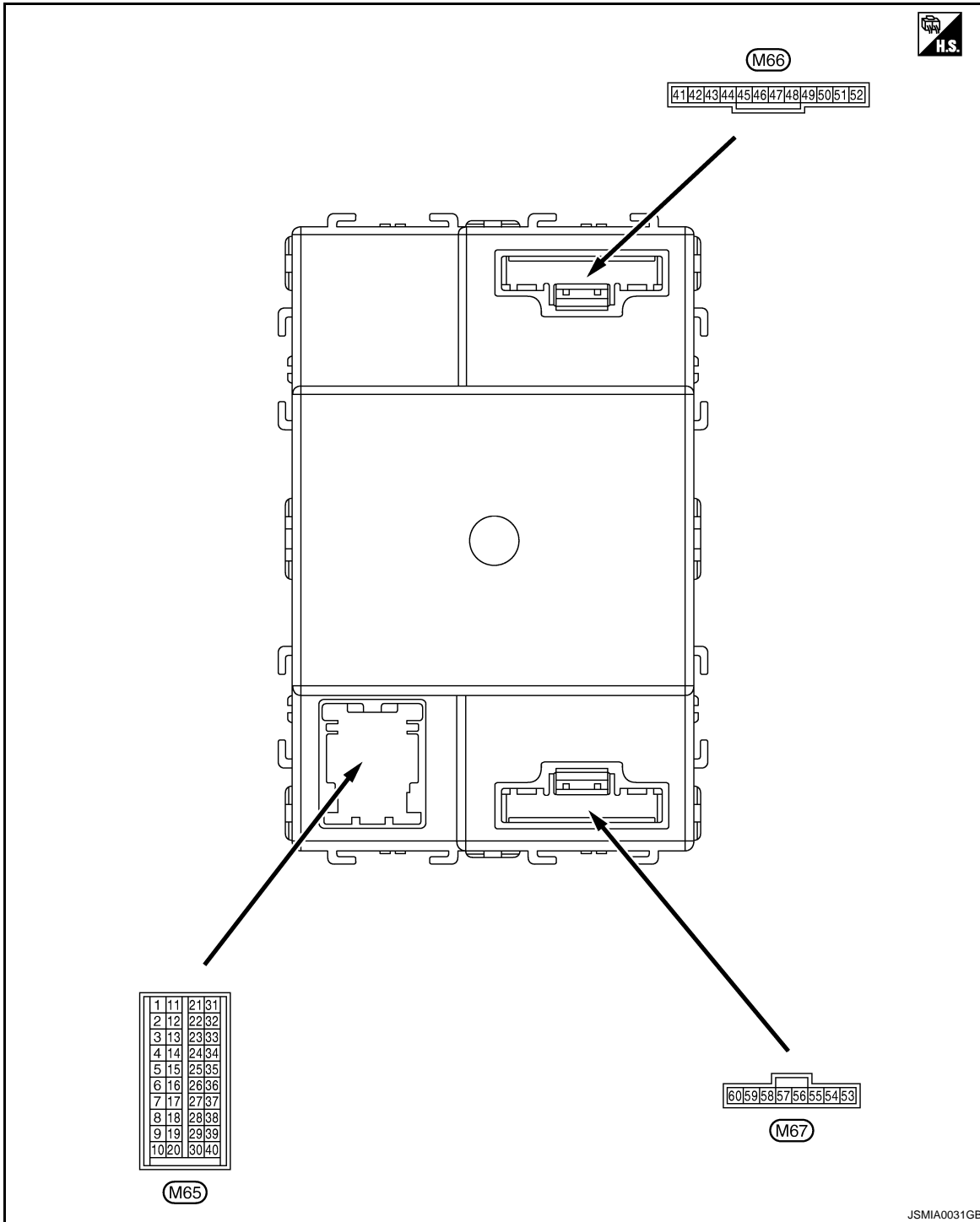
< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
RR WIPER ON	Rear wiper switch OFF	Off
	Rear wiper switch ON	On
RR WIPER INT	Rear wiper switch OFF	Off
	Rear wiper switch INT	On
RR WIPER STOP	Rear wiper stop position	Off
	Other than rear wiper stop position	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
REVERSE SW CAN	NOTE: The item is indicated, but not monitored	Off
		On
H/L WASH SW	When headlamp washer switch is not pressed	Off
	When headlamp washer switch is pressed	On
FAN ON SIG	Blower fan motor switch OFF	Off
	Blower fan motor switch ON (other than OFF)	On
AIR COND SW	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	Off
	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	On
HAZARD SW	Hazard switch OFF	Off
	Hazard switch ON	On
BRAKE SW	Brake pedal is not depressed	Off
	Brake pedal is depressed	On
TRNK OPNR SW	When back door opener switch is not pressed	Off
	When back door opener switch is pressed	On
HOOD SW	Close the hood NOTE: Vehicles without theft warning system are OFF-fixed	Off
	Open the hood	On
AUTO RELOCK	Auto lock function does not operate	Off
	Auto lock function is operating	On
GLS BREAK SEN	The vehicle without glass break sensor	Off
	The vehicle with glass break sensor	On
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	Off
	Ignition switch ON	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

TERMINAL LAYOUT



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WCS

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-28, "COMB SW : CONSULT-III Function \(BCM - COMB SW\)"](#).
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to [BCS-9, "System Description"](#).

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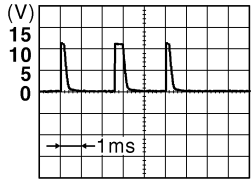
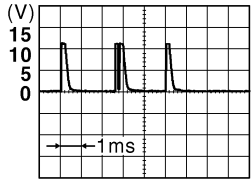
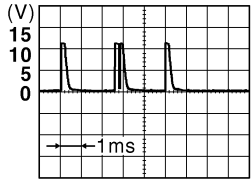
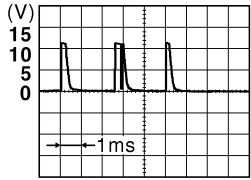
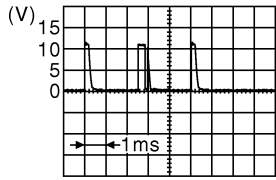
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
		Signal name	Input/ Output		
+	-				
1 (W)	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
2 (G)	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
3 (W)	Ground	Ignition power supply	Input	Ignition switch OFF or ACC	0 V
				Ignition switch ON or START	Battery voltage
4 (SB)	Ground	ACC power supply	Input	Ignition switch OFF	0 V
				Ignition switch ON or ACC	Battery voltage
5 (LG) ^{*1} (R) ^{*2}	Ground	Key switch	Input	Insert mechanical key into ignition key cylinder	Battery voltage
				Remove mechanical key from ignition key cylinder	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

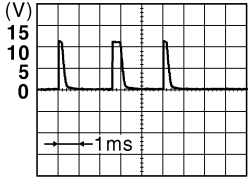
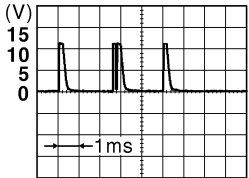
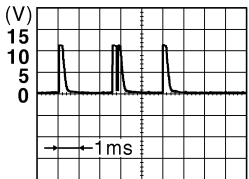
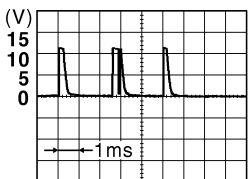
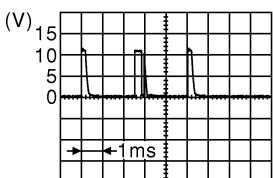
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
6 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right;">1.4 V</p>
					Lighting switch HI (Wiper intermittent dial 4)	 <p style="text-align: right;">1.3 V</p>
					Lighting switch 2ND (Wiper intermittent dial 4)	 <p style="text-align: right;">1.3 V</p>
					Rear washer switch ON	 <p style="text-align: right;">1.3 V</p>
					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 	 <p style="text-align: right;">1.3 V</p>

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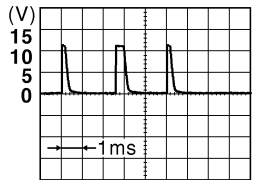
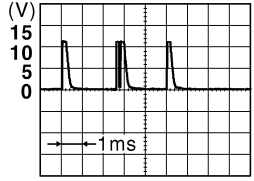
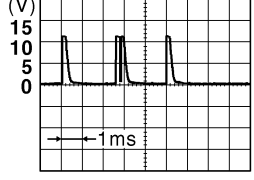
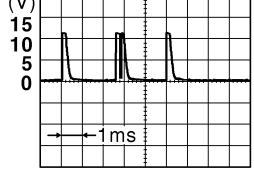
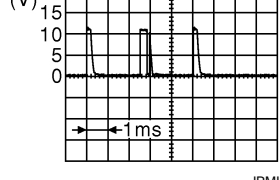
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
7 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0165GB</p> <p style="text-align: center;">1.4 V</p>
					Lighting switch 1ST (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0166GB</p> <p style="text-align: center;">1.3 V</p>
					Lighting switch AUTO (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0168GB</p> <p style="text-align: center;">1.3 V</p>
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 6	 <p style="text-align: right; font-size: small;">JPMIA0169GB</p> <p style="text-align: center;">1.3 V</p>
					Rear wiper INT (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMIA0196GB</p> <p style="text-align: center;">1.3 V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

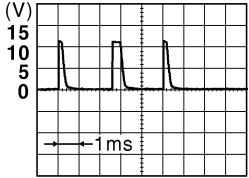
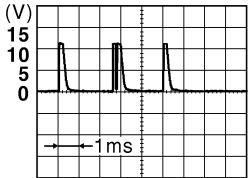
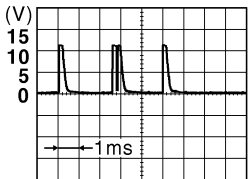
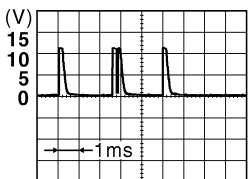
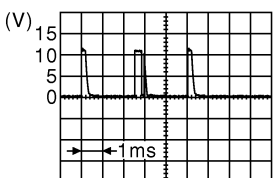
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
8 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	 <p style="text-align: center;">1.4 V</p> <p style="text-align: right; font-size: small;">JPMIA0165GB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

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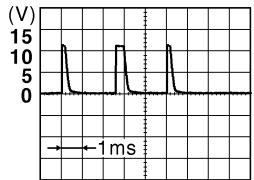
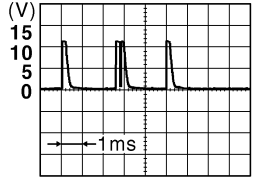
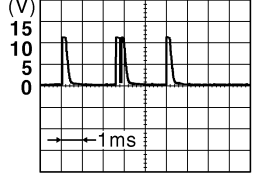
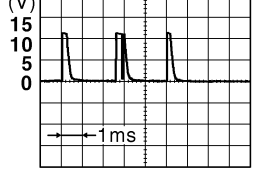
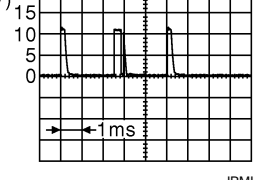
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
9 (G) ^{*3} (B) ^{*4}	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	 <p style="text-align: right; font-size: small;">JPMIA0165GB</p> <p style="text-align: center;">1.4 V</p>
					Lighting switch 2ND	 <p style="text-align: right; font-size: small;">JPMIA0166GB</p> <p style="text-align: center;">1.3 V</p>
					Lighting switch PASS	 <p style="text-align: right; font-size: small;">JPMIA0167GB</p> <p style="text-align: center;">1.3 V</p>
					Front wiper switch INT	 <p style="text-align: right; font-size: small;">JPMIA0168GB</p> <p style="text-align: center;">1.3 V</p>
					Front wiper switch HI	 <p style="text-align: right; font-size: small;">JPMIA0196GB</p> <p style="text-align: center;">1.3 V</p>

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

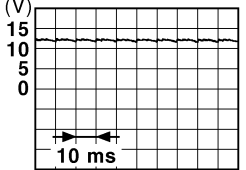
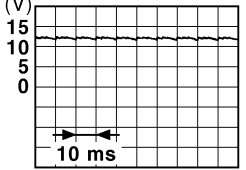
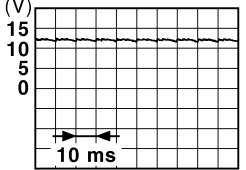
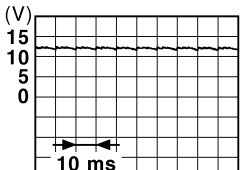
Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
10 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMAI0165GB</p> <p style="text-align: center;">1.3 V</p>
					Front fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMAI0167GB</p> <p style="text-align: center;">1.3 V</p>
					Rear fog lamp switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMAI0168GB</p> <p style="text-align: center;">1.3 V</p>
					Rear wiper switch ON (Wiper intermittent dial 4)	 <p style="text-align: right; font-size: small;">JPMAI0169GB</p> <p style="text-align: center;">1.3 V</p>
					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  <p style="text-align: right; font-size: small;">JPMAI0196GB</p> <p style="text-align: center;">1.3 V</p>
11 (B)	Ground	Audio link	Input/ Output	—	—	

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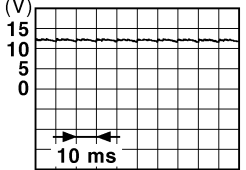
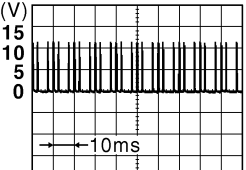
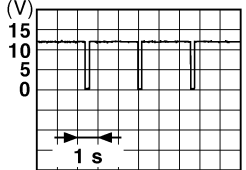
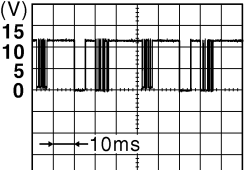
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
12 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	 11.2 V
				Rear door switch RH	ON (When rear door RH opened)	0 V
13 (V)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	 11.2 V
				Back door switch	ON (When back door opened)	0 V
14 (P) ^{*3} (BR) ^{*4}	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 11.2 V
				Passenger door switch	ON (When passenger door opened)	0 V
15 (BR) ^{*3} (P) ^{*4}	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 11.2 V
				Driver door switch	ON (When driver door opened)	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

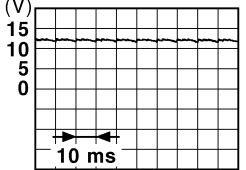
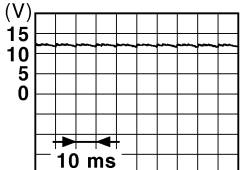
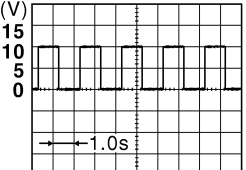
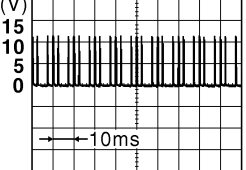
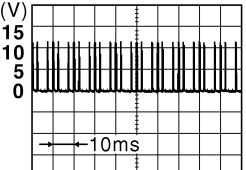
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
16 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	 <p style="text-align: right;">PKID0924E</p> <p style="text-align: center;">11.2 V</p>
				ON (When rear door LH opened)	0 V
17 (L)	Ground	Door lock status indicator	Output	Door lock status indicator	ON 12 V
				OFF	0 V
20 (SB)	Ground	Rear window defogger switch	Input	Rear window defogger switch	 <p style="text-align: right;">JPMIA0154GB</p> <p style="text-align: center;">1.1 V</p>
				While pressing	0 V
21 (P)	—	CAN-L	Input/ Output	—	—
22 (L)	—	CAN-H	Input/ Output	—	—
23 (V)	Ground	Security indicator	Output	Security indicator	ON 0 V
				Blinking	 <p style="text-align: right;">JPMIA0014GB</p> <p style="text-align: center;">10.3 V</p>
24 (GR)	Ground	Light & rain sensor serial link	Input/ Output	Ignition switch OFF or ACC	12 V
				Ignition switch ON	 <p style="text-align: right;">JPMIA0156GB</p> <p style="text-align: center;">8.7 V</p>
25 (G)	Ground	Alarm link	Output	—	—

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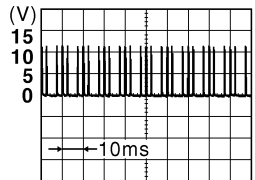
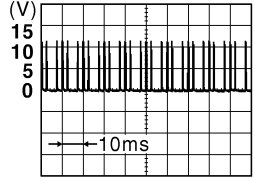
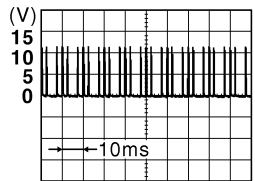
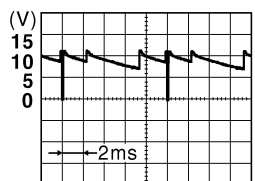
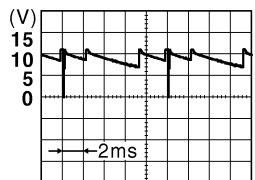
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
26 (GR) ^{*5} (LG) ^{*6}	Ground	Blower fan motor switch	Input	Blower fan mo- tor switch	OFF	 <small>PKID0924E</small> 11.2 V
					ON (other than OFF)	0 V
27 (P) ^{*5} (Y) ^{*6}	Ground	A/C switch	Input	Ignition switch ON	Compressor ON is not re- quested from auto amp. (A/C indicator OFF, blow- er fan motor switch OFF or etc.)	 <small>PKID0924E</small> 11.2 V
					Compressor ON is re- quested from auto amp. (A/C indicator ON and blower fan motor switch ON).	0 V
28 (LG) ^{*7} (R) ^{*8}	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	 <small>JPMIA0155GB</small> 6.0 V	
29 (LG) ^{*3} (O) ^{*4}	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	 <small>JPMIA0154GB</small> 1.2 V
					Pressed	0 V
32 (BR)	Ground	Door lock/unlock switch (Unlock)	Input	Door lock/un- lock switch	Not pressed	 <small>JPMIA0154GB</small> 1.2 V
					Pressed to the unlock side	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
33 (W) ^{*9} (Y) ^{*10}	Ground	Hazard switch	Input	Hazard switch	OFF	 <p style="text-align: right; font-size: small;">JPMIA0154GB</p>
					ON	0 V
34 (SB) ^{*3} (P) ^{*4}	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
35 (G)	Ground	Headlamp washer switch	Input	Headlamp washer switch	Not pressed	 <p style="text-align: right; font-size: small;">JPMIA0154GB</p>
					Pressed to the lock side	0 V
36 (G)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Turn signal switch RH	 <p style="text-align: right; font-size: small;">JPMIA0164GB</p>
					Lighting switch 2ND	
					Lighting switch HI	
					Lighting switch 1ST	
37 (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 style="text-align: right; font-size: small;">JPMIA0161GB</p>
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF	
					Rear wiper switch ON (Wiper intermittent dial 4)	

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)	
+	-	Signal name	Input/ Output			
38 (W)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Front wiper switch LO	
					Front wiper switch MIST	
					Front wiper switch INT	
					Lighting switch AUTO	
					Rear fog lamp switch ON	
39 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Turn signal switch LH	
					Lighting switch PASS	
					Lighting switch 2ND	
					Front fog lamp switch ON	
40 (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)	
					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 	
Rear wiper switch INT (Wiper intermittent dial 4)	9.1 V					
41 (LG)	Ground	Battery power sup- ply	Input	Ignition switch OFF	Battery voltage	
42 (V)	Ground	Interior room lamp power supply	Output	Interior room lamp battery saver activation	0 V	
				Interior room lamp battery saver no activation	12 V	
43 (SB)	Ground	Rear wiper motor	Output	Rear wiper switch OFF	0 V	
				Rear wiper switch ON	12 V	
44 (B)	Ground	Rear wiper auto stop	Input	Ignition switch ON		
				Any position other than rear wiper stop position	0 V	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

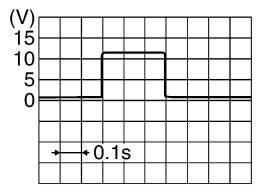
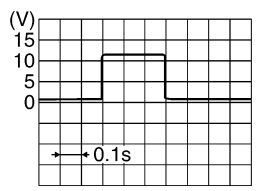
Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
45 (V)	Ground	Back door lock actuator	Output	Back door opener switch	
				Pressed	0 V
47 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	
				Turn signal switch LH	6.5 V
48 (GR)	Ground	Turn signal RH	Output	Ignition switch ON	
				Turn signal switch RH	6.5 V
49 (Y)	Ground	Rear fog lamp	Output	Rear fog lamp	OFF 0 V ON 12 V
				OFF	0 V
50 (G)	Ground	Unlock sensor	Input	Driver's door	Unlock 5 V lock 0 V
				lock	0 V
51 (R)	Ground	Stop lamp switch	Input	Depress the brake pedal	Battery voltage
				Release the brake pedal	0 V
52 (R)	Ground	Room lamp timer control	Output	Interior room lamp	OFF 12 V ON 0 V
				OFF	12 V
53 (L)	Ground	Power window power supply (IGN)	Output	Ignition switch	OFF or ACC 0 V ON 12 V
				OFF or ACC	0 V
54 (O)	Ground	Door unlock (All other than driver's door)	Output	Door lock/unlock switch	
				Pressed to the unlock side	0 V
55 (B)	Ground	Ground	—	Ignition switch ON	0 V
				Not pressed	0 V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
56 (V)	Ground	Door lock (All) and fuel lid lock	Output	Door lock/un- lock switch	Not pressed	0 V
					Pressed to the lock side	
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage
58 (P)	Ground	Power window pow- er supply (BAT)	Output	Ignition switch OFF		12 V
59 (R)	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		12 V
60 (G)	Ground	Driver's door unlock and fuel lid unlock	Output	Door lock/un- lock switch	Pressed to the unlock side	
					Not pressed	0 V

*1: With Intelligent Key

*2: Without Intelligent Key

*3: RHD models

*4: LHD models

*5: With gasoline engine

*6: With diesel engine

*7: RHD models with side air bag

*8: LHD models with side air bag

*9: With xenon headlamp and daytime light system

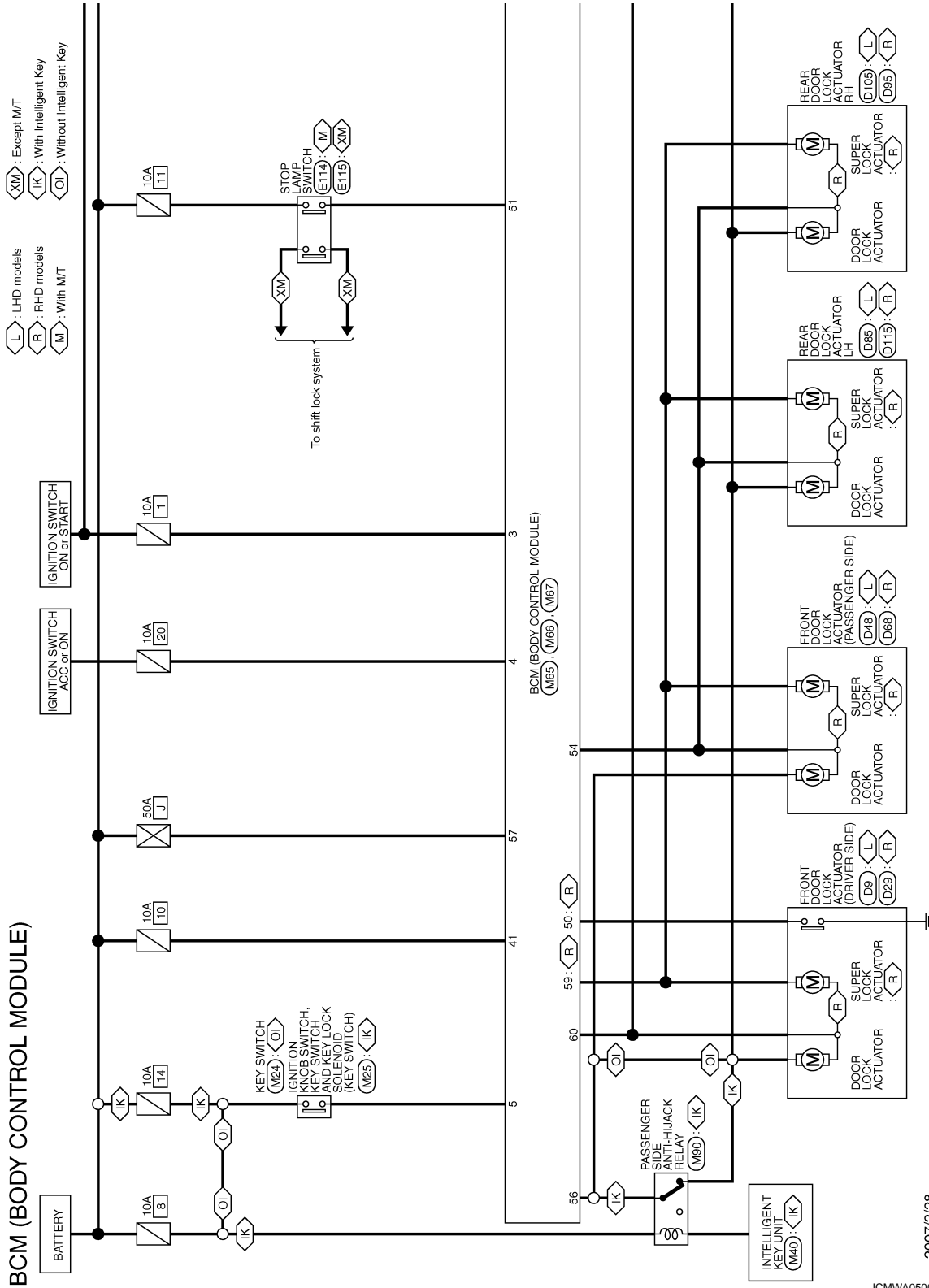
*10: Except with xenon headlamp and daytime light system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram - BCM -

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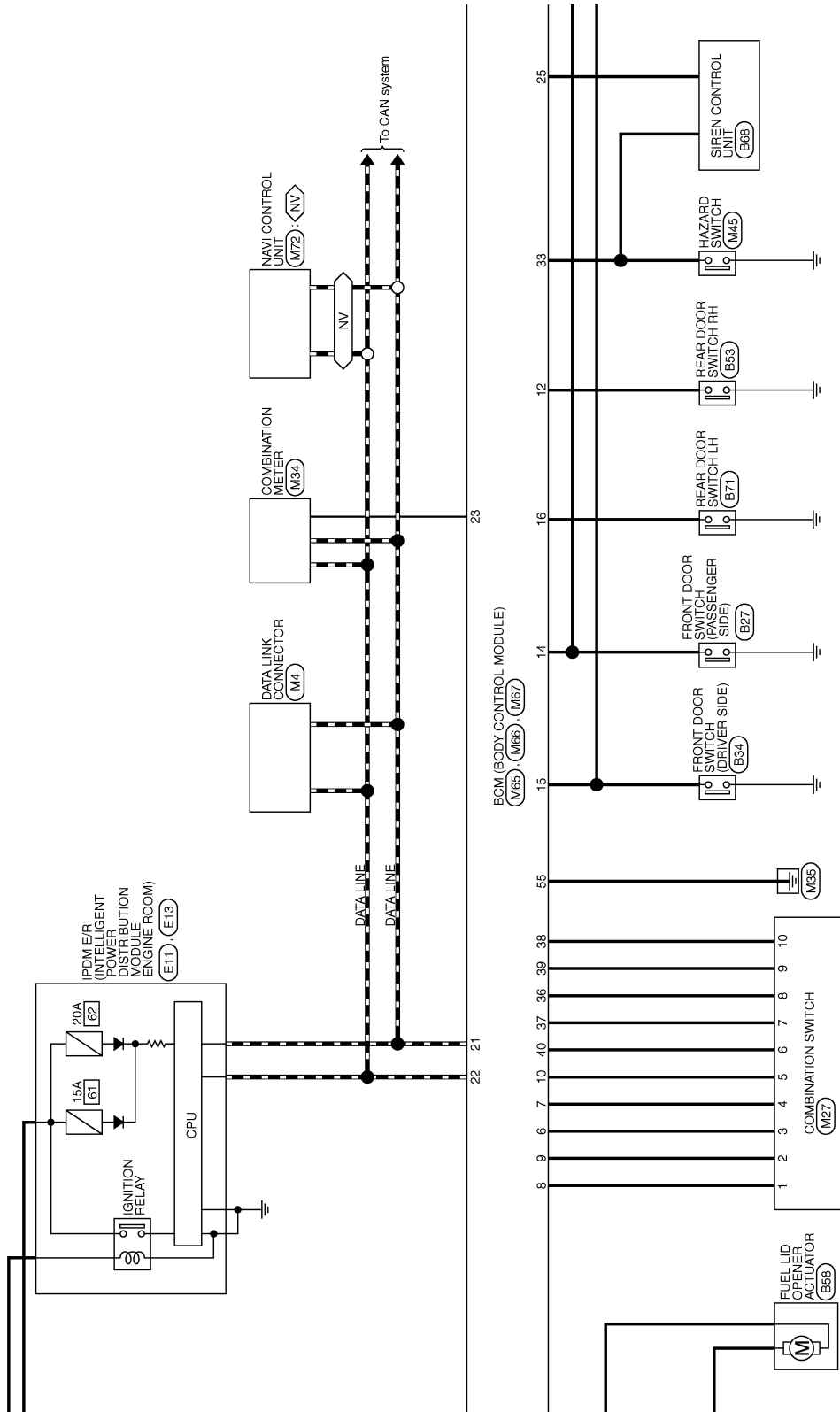
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

With navigation system

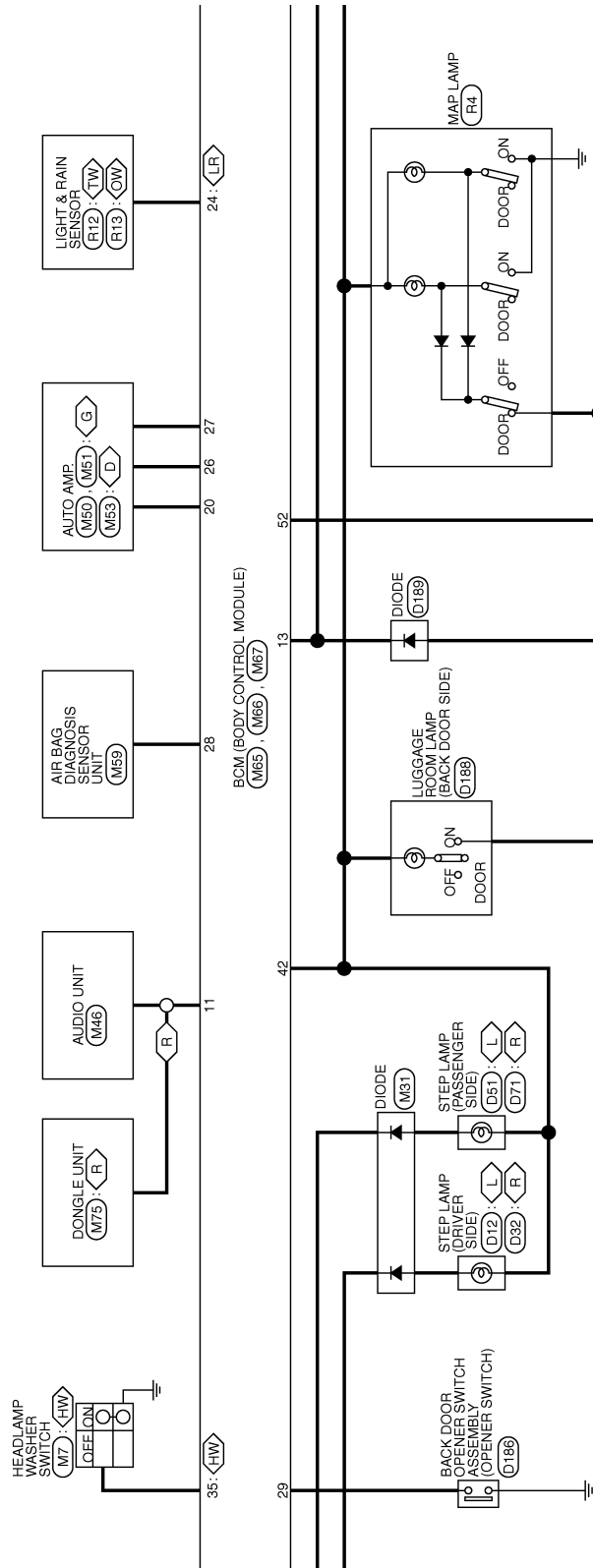


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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

- L : LHD models
- R : RHD models
- G : With gasoline engine
- D : With diesel engine
- HW : With headlamp washer
- LR : With light & rain sensor
- TW : With theft warning system
- OW : Without theft warning system



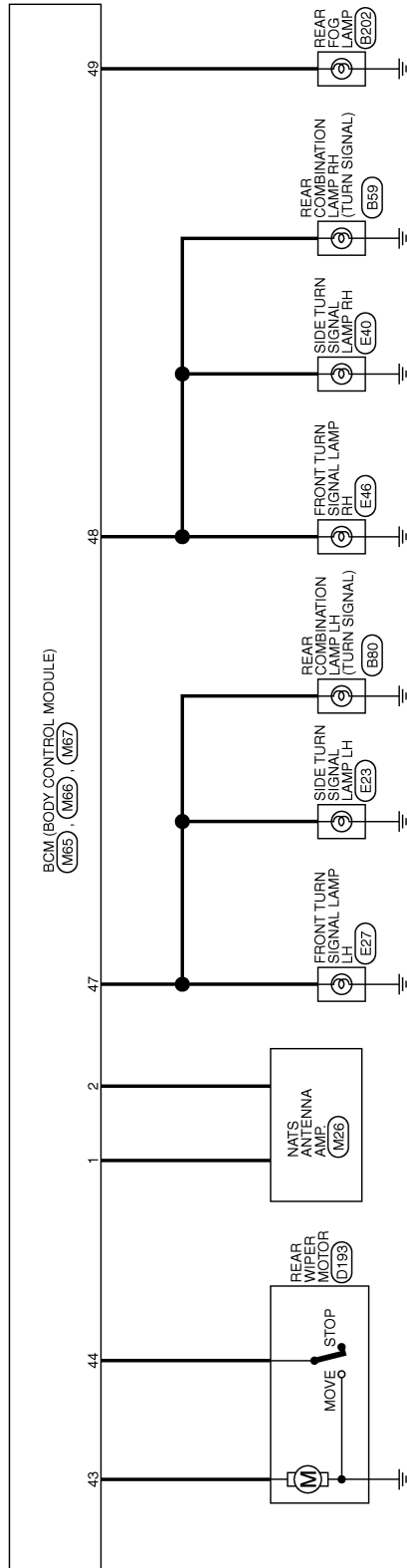
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BCM (BODY CONTROL MODULE)

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BCM (BODY CONTROL MODULE)

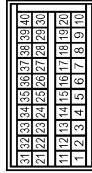
< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Connector No.	M27
Connector Name	COMBINATION SWITCH
Connector Type	TK18FW



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	INPUT 1
2	LG	INPUT 2[RHD models]
3	L	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5[RHD models]
6	P	OUTPUT 1
7	R	OUTPUT 2
8	G	OUTPUT 5
9	Y	OUTPUT 4



Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAS4QFB

Terminal No.	Color of Wire	Signal Name [Specification]
1	W	NATS ANTENNA AMP.
2	G	NATS ANTENNA AMP.
3	W	IGN SW
4	SB	ACC SW
5	LG	KEY SW[With Intelligent Key]
6	L	COMBI SW INPUT 3
7	GR	COMBI SW INPUT 4
8	V	COMBI SW INPUT 1
9	LG	COMBI SW INPUT 2[RHD models]
10	O	COMBI SW 5 [RHD models]

10	W	OUTPUT 3
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39	Y	COMBI SW OUTPUT 4
40	P	COMBI SW OUTPUT 1

11	B	AUDIO DONGLE LINK(SIGNAL)
12	LG	DOORS SW (R)
13	V	DOOR SW (BACK)[LHD models]
14	P	DOOR SW (AS)[RHD models]
15	BR	DOOR SW (DR)[RHD models]
16	GR	DOOR SW (RL)[LHD models]
17	L	DOOR LOCK INDICATOR
20	SB	RR DEF SW
21	P	CAN-L
22	L	CAN-H
23	V	SECURITY INDICATOR[LHD models]
24	GR	LIGHT & RAIN SEN
25	G	ALARM LINK
26	GR	BLOWER FAN SW
27	P	AIRCON SW[With gasoline engine]
28	LG	SHOCK DETECT SW[RHD models with air bag]
29	O	BACK DOOR OPEN SW
32	BR	LOCK UNLOCK SW (UNLOCK)
33	W	HASBAG SW[With second hasbag seat belt system]
34	SB	LOCK UNLOCK SW (LOCK)[RHD models]
35	G	HEAD LAMP WASSHER SW
36	G	COMBI SW OUTPUT 5
37	R	COMBI SW OUTPUT 2
38	W	COMBI SW OUTPUT 3

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BCM (BODY CONTROL MODULE)

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Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FHA08FB



Terminal No.	Color of Wire	Signal Name [Specification]
53	L	P/W POWER SUPPLY(IGN)
54	O	DOOR UNLOCK OUTPUT (OTHER[LHD models])
55	B	GND
56	V	DOOR LOCK OUTPUT (ALL)
57	Y	BAT(F/L)
58	P	P/W POWER SUPPLY(BAT)
59	R	SUPER LOCK SET OUTPUT
60	G	DOORUNLOCK/RELEASE OUTPUT(OTHER[LHD models])

52	R	ROOM LAMP CONTROL
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BCM (BODY CONTROL MODULE)

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA12FBR



Terminal No.	Color of Wire	Signal Name [Specification]
41	LG	BAT(F/USE)
42	V	ROOM LAMP POWER SUPPLY
43	SB	REAR WIPER MOTOR OUTPUT
44	B	REAR WIPER AUTO STOP
45	V	BACK DOOR OPEN OUTPUT(LHD models)
47	BR	FRASHER OUTPUT (LH)
48	GR	FRASHER OUTPUT (RH)
49	Y	REAR FOG LAMP
50	G	EXTRA INPUT(LHD models with Intelligent Key)
51	R	STOP LAMP SW(LHD models)

WCS

Fail Safe

FAIL-SAFE CONTROL BY DTC

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

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

DTC	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 MOTOR PROTECTION

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

When the rear wiper auto stop signal does not change more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

Condition of cancellation

1. Turn ignition switch OFF.
2. Pass more than 1 minute after the rear wiper stop.
3. Turn ignition switch ON.
4. Operate the rear wiper switch.

HIGH FLASHER OPERATION

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.

FAIL-SAFE CONTROL BY LIGHT & RAIN SENSOR MALFUNCTION

BCM detects the light & rain sensor serial link error and the light & rain sensor malfunction.

BCM controls the following fail-safe when light & rain sensor has a malfunction.

Fail-safe Control

- 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.

DTC Inspection Priority Chart

INFOID:000000001367526

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: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2194: DISCORD BCM-I-KEY B2195: ANTI SCANNING B2196: DONGLE NG

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

DTC Index

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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.

DTC	TIME		Fail-safe	Reference
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-41 • Without Intelligent Key system: SEC-254
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system: SEC-43 • Without Intelligent Key system: SEC-256
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system: SEC-38 • Without Intelligent Key system: SEC-251
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system: SEC-40 • Without Intelligent Key system: SEC-253
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	SEC-53
B2195: ANTI SCANNING	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system: SEC-54 • Without Intelligent Key system: SEC-264
B2196: DONGLE NG	CRNT	PAST	×	<ul style="list-style-type: none"> • With Intelligent Key system: SEC-55 • Without Intelligent Key system: SEC-265

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WCS

THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:000000001080363

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

- Lighting switch 1ST or 2ND position
- Driver door open
- Ignition switch OFF or ACC

Diagnosis Procedure

INFOID:000000001080364

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-193, "WITHOUT DAYTIME RUNNING LIGHT SYSTEM : Symptom Table"](#).

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

Perform the inspection for 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 inspection 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-68, "Removal and Installation"](#).

NO >> Replace the front door switch (driver side). Refer to [DLK-292, "Removal and Installation"](#).

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:000000001080367

- 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:000000001080368

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

Perform an inspection for the parking brake switch signal circuit. Refer to [WCS-17, "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 inspection for the parking brake switch. Refer to [BRC-47, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Replace combination meter.
- NO >> Replace parking brake switch.

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WCS

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001558903

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- 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.