

SECTION **WCS**

WARNING CHIME SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000003709000

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 to see 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 [MWI-27, "CONSULT-III Function \(METER/M&A\)"](#).

Are self-diagnosis results normal?

YES >> GO TO 4

NO >> Repair or replace the malfunctioning parts, GO TO 5

4. NARROW DOWN MALFUNCTIONING PARTS THROUGH 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 >

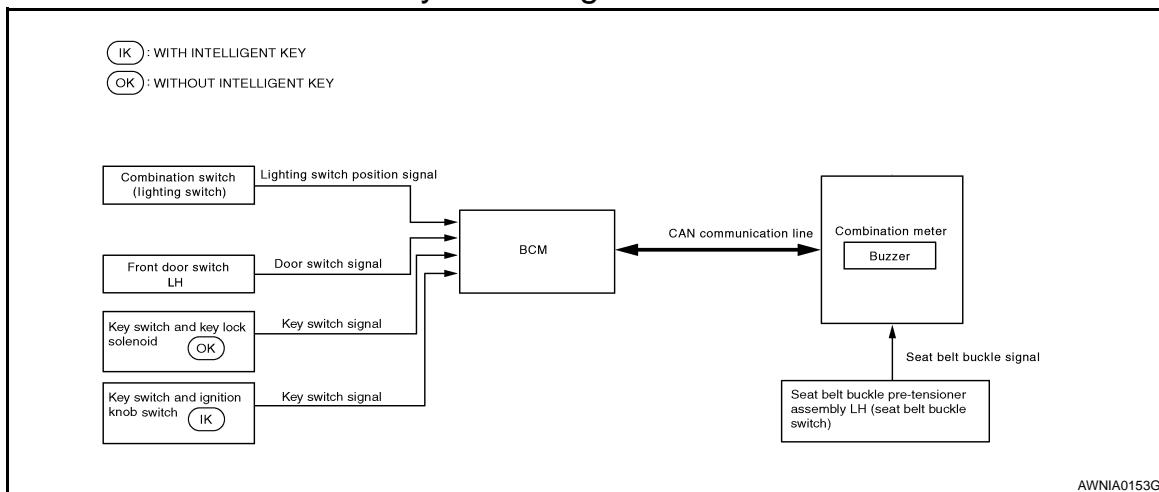
FUNCTION DIAGNOSIS

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram

INFOID:0000000003709001



AWNIA0153GB

WARNING CHIME SYSTEM : System Description

INFOID:0000000003709002

COMBINATION METER

- The buzzer for warning chime system is installed in the combination meter.
- The buzzer sounds when the combination meter receives a buzzer output signal from each unit.

BCM

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

BCM warning function list

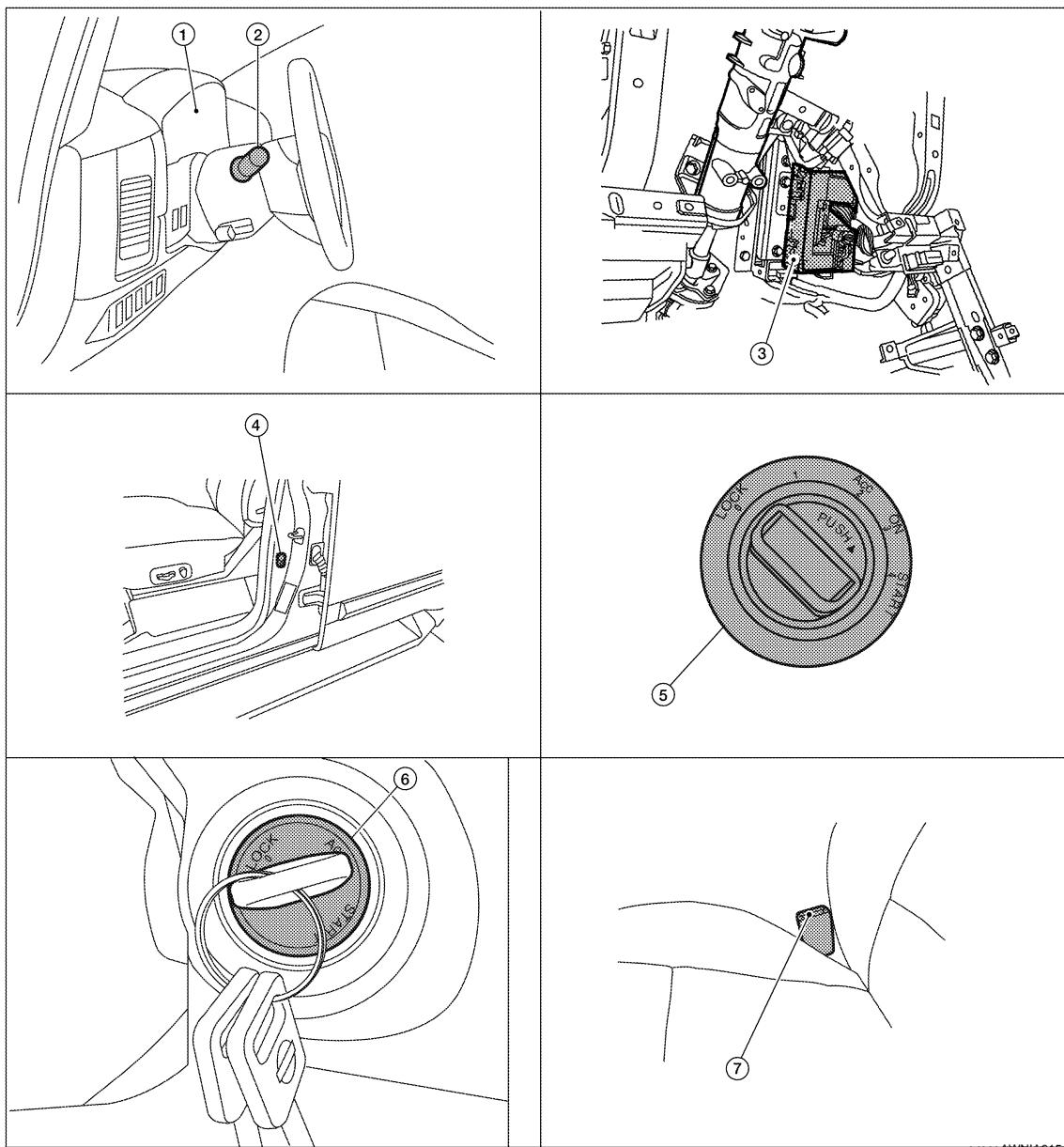
Warning functions	Signal name
Light reminder warning chime	<ul style="list-style-type: none">• Lighting switch position signal• Door switch signal
Seat belt warning chime	Seat belt buckle switch signal
Key warning chime	<ul style="list-style-type: none">• Key switch signal• Door switch signal

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000003709003



AWNIA0154ZZ

1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and ignition knob switch M12 (with Intelligent Key)
6. Key switch and key lock solenoid M27 (without Intelligent Key)
7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74

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WARNING CHIME SYSTEM : Component Description

INFOID:000000003709004

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Unit	Description
Combination meter	<ul style="list-style-type: none"> Receives the seat belt buckle switch signal from the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) and transmits it to BCM with CAN communication line. Receives a buzzer output signal from BCM with CAN communication line.
BCM	Transmits signals provided by various units to the combination meter with CAN communication line.

WARNING CHIME SYSTEM

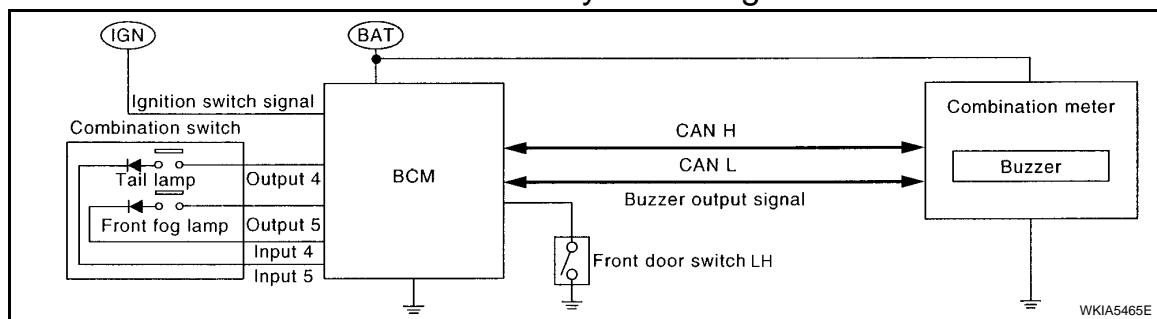
< FUNCTION DIAGNOSIS >

Unit	Description
Key switch and ignition knob switch (with Intelligent Key)	Transmits key switch signal to BCM.
Key switch and key lock solenoid (without Intelligent Key)	Transmits key switch signal to BCM.
Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch)	Transmits a seat belt buckle switch signal to the combination meter.
Combination switch (Lighting switch)	Transmits the lighting switch position signal to BCM.
Front door switch LH	Transmits the door switch signal to BCM.

LIGHT REMINDER WARNING CHIME

LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:0000000003709005



LIGHT REMINDER WARNING CHIME : System Description

INFOID:0000000003709006

DESCRIPTION

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

- BCM detects ignition switch in OFF or ACC position, front door switch LH 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 LH is ON

WARNING CANCEL CONDITIONS

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

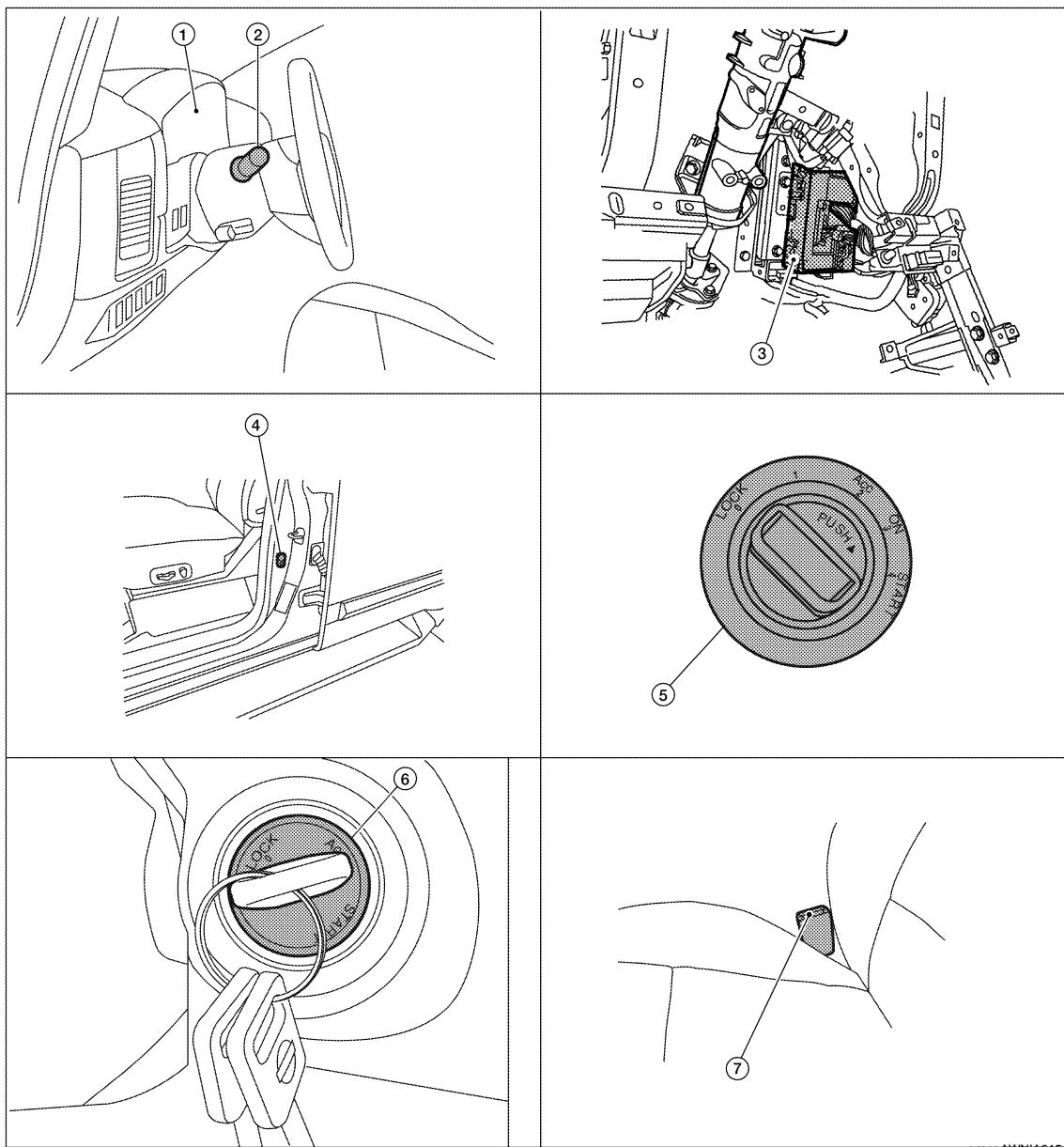
- Lighting switch OFF
- Ignition switch ON
- Front door switch LH is OFF

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:000000004171298



AWNIA0154ZZ

1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and ignition knob switch M12 (with Intelligent Key)
6. Key switch and key lock solenoid M27 (without Intelligent Key)
7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74

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LIGHT REMINDER WARNING CHIME : Component Description

INFOID:000000003709008

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Unit	Description
Combination meter	Receives a buzzer output signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the light 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 LH	Transmits the door switch signal to BCM.

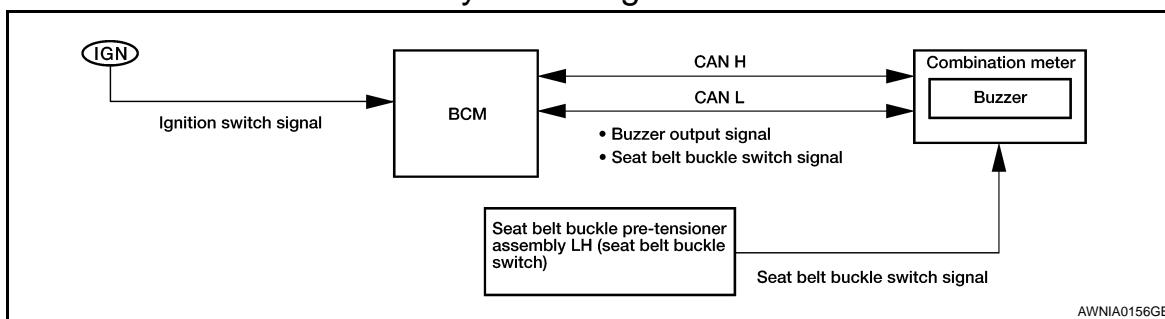
WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

SEAT BELT WARNING CHIME

SEAT BELT WARNING CHIME : System Diagram

INFOID:0000000003709009



AWNIA0156GB

SEAT BELT WARNING CHIME : System Description

INFOID:0000000003709010

DESCRIPTION

With ignition switch turned ON and driver seat belt unfastened, seat belt warning chime will sound for approximately 6 seconds.

- BCM receives seat belt buckle switch signal from combination meter with CAN communication line.
- BCM detects ignition switch turned ON and seat belt buckle switch LH ON. And then transmits buzzer output signal (seat belt warning chime) to combination meter with CAN communication line.
- When combination meter receives buzzer output signal (seat belt warning chime), it sounds the buzzer.

WARNING OPERATION CONDITIONS

If all of the following conditions are fulfilled

- Ignition switch OFF → ON
- Seat belt buckle switch LH is ON (driver seat belt not fastened)

WARNING CANCEL CONDITIONS

Cancels the warning if any of the following conditions is fulfilled.

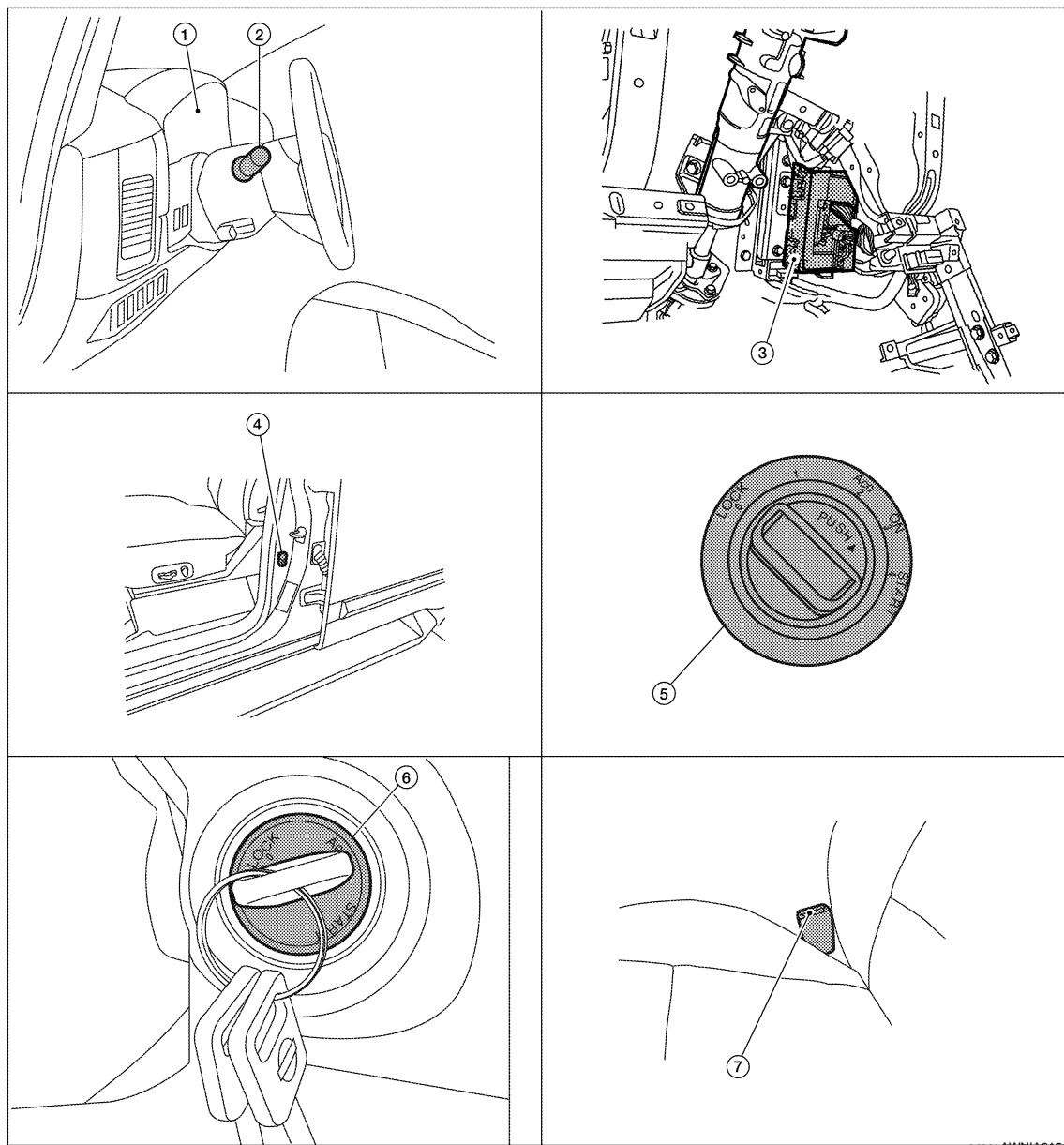
- Ignition switch OFF
- Seat belt buckle switch LH is OFF (driver seat belt fastened)

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

SEAT BELT WARNING CHIME : Component Parts Location

INFOID:000000004171299



AWNIA0154ZZ

- | | | |
|--|--|---|
| 1. Combination meter M24 | 2. Combination switch (lighting switch)
M28 | 3. BCM M18, M19, M20 (view with instru-
ment lower panel LH removed) |
| 4. Front door switch LH B8 | 5. Key switch and ignition knob switch
M12 (with Intelligent Key) | 6. Key switch and key lock solenoid M27
(without Intelligent Key) |
| 7. Seat belt buckle pre-tensioner assem-
bly LH (seat belt buckle switch) B74 | | |

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SEAT BELT WARNING CHIME : Component Description

INFOID:000000003709012

Unit	Description
Combination meter	<ul style="list-style-type: none"> • Receives the seat belt buckle switch signal from the seat belt buckle switch and transmits it to BCM via CAN communication line. • Receives a buzzer output signal from BCM via CAN communication line and sounds the buzzer.

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WARNING CHIME SYSTEM

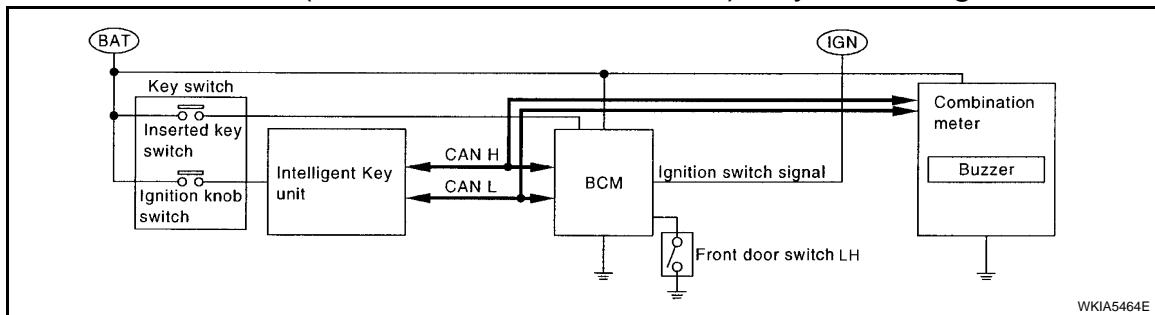
< FUNCTION DIAGNOSIS >

Unit	Description
BCM	Judges the seat belt warning condition from the seat belt buckle switch signal received from the combination meter and transmits a buzzer output signal to the combination meter via CAN communication line if necessary.
Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch)	Transmits seat belt buckle switch signal to combination meter.

KEY WARNING CHIME (WITH INTELLIGENT KEY)

KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Diagram

INFOID:000000003709013



KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Description

INFOID:000000003709014

WHEN MECHANICAL KEY IS USED

With the key inserted into the key switch, and the ignition switch in the LOCK or ACC position, when driver's door is opened, the warning chime will sound.

- BCM detects key inserted into the ignition switch, and sends key warning signal to combination meter with CAN communication line.
- When combination meter receives key warning signal, it sounds the warning chime.

WHEN INTELLIGENT KEY IS CARRIED WITH THE DRIVER

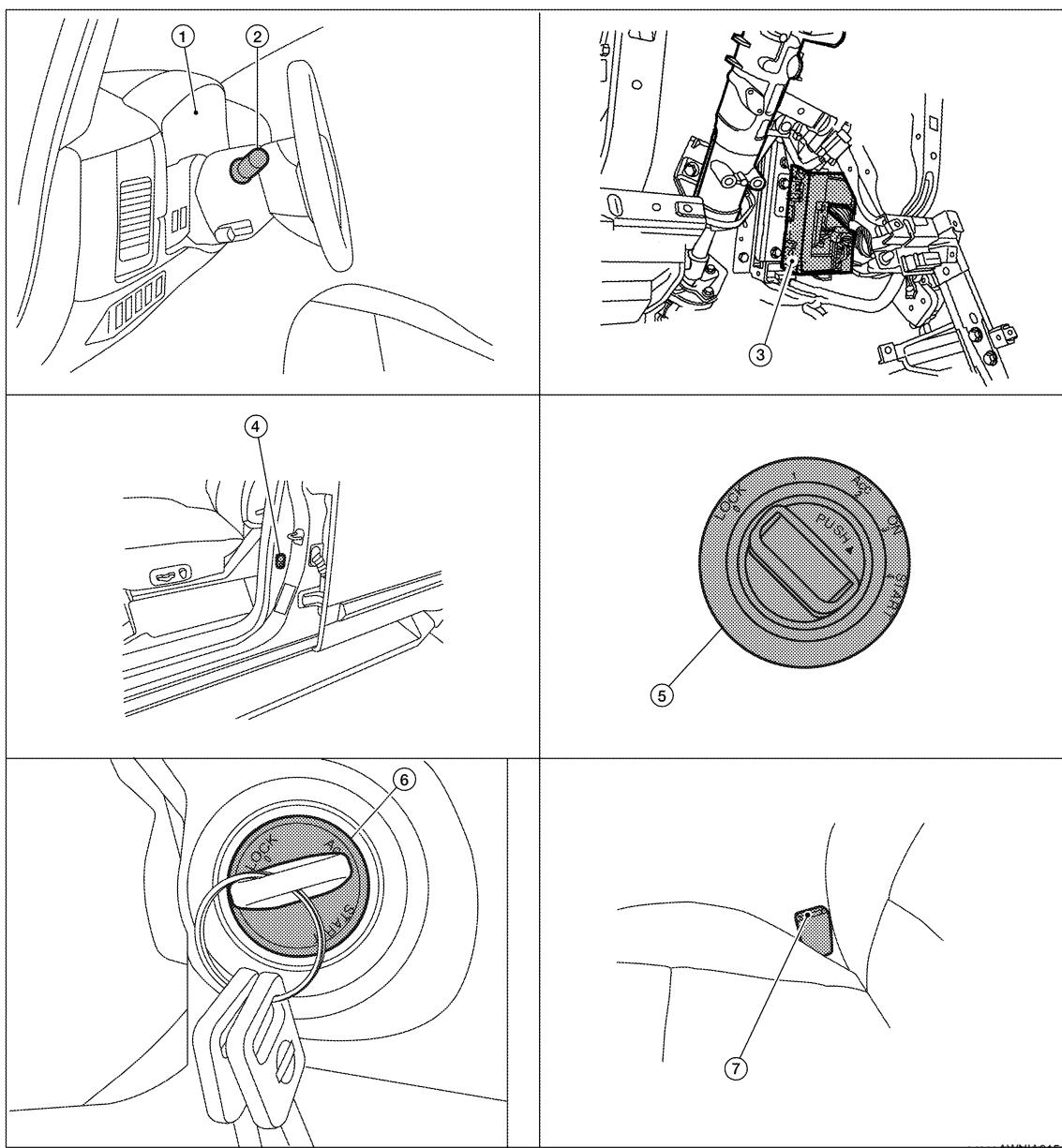
Refer to [DLK-8. "Work Flow"](#).

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

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

INFOID:000000004171300



- 1. Combination meter M24
- 2. Combination switch (lighting switch) M28
- 3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
- 4. Front door switch LH B8
- 5. Key switch and ignition knob switch M12 (with Intelligent Key)
- 6. Key switch and key lock solenoid M27 (without Intelligent Key)
- 7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74

WCS

KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Description

INFOID:000000003709016

Unit	Description
Combination meter	Receives key warning signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the key warning condition using the door switch signal received from the front door switch LH, and the key switch signal received from the key switch and ignition knob switch. It then transmits a buzzer output signal to the combination meter via CAN communication line if necessary.

WARNING CHIME SYSTEM

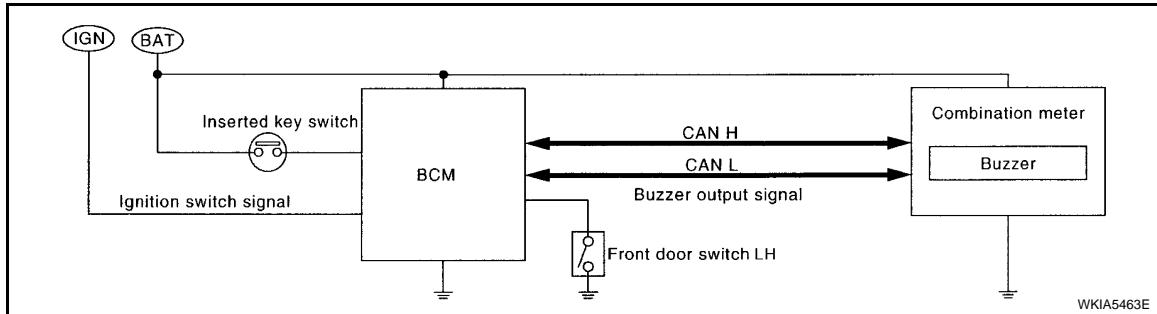
< FUNCTION DIAGNOSIS >

Unit	Description
Front door switch LH	Transmits door switch signal to BCM.
Key switch and ignition knob switch	Transmits key switch signal to BCM.

KEY WARNING CHIME (WITHOUT INTELLIGENT KEY)

KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Diagram

INFOID:000000003709017



KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Description

INFOID:000000003709018

With the key inserted into the key switch, and the ignition switch in the OFF or ACC position, when driver's door is opened, the warning chime will sound.

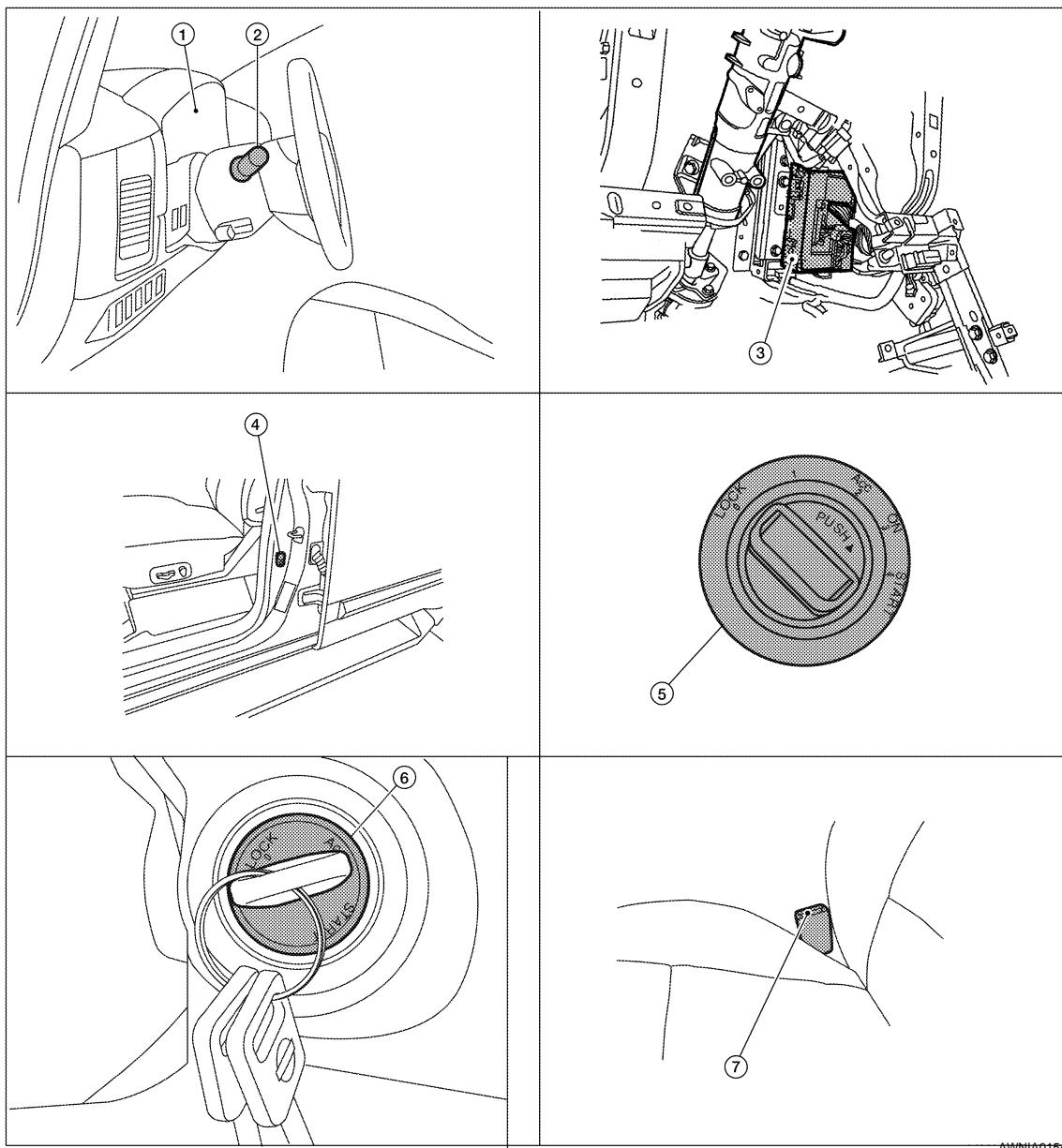
- BCM detects key inserted into the ignition switch, and sends key warning signal to combination meter with CAN communication line.
- When combination meter receives key warning signal, it sounds warning chime.

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Parts Location

INFOID:000000004171301



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1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and ignition knob switch M12 (with Intelligent Key)
6. Key switch and key lock solenoid M27 (without Intelligent Key)
7. Seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) B74

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KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Description

INFOID:000000003709020

Unit	Description
Combination meter	Receives key warning signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the key warning condition from the door switch signal received from the front door switch LH, and the key switch signal received from the key switch and key lock solenoid. It then transmits a buzzer output signal to the combination meter via CAN communication line if necessary.

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

Unit	Description
Front door switch LH	Transmits door switch signal to BCM.
Key switch and key lock solenoid	Transmits key switch signal to BCM.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (METER)

CONSULT-III Function (METER/M&A)

INFOID:0000000004053021

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

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

SELF-DIAG RESULTS

Display Item List

Refer to [MWI-62, "DTC Index"](#).

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
SPEED METER [km/h] or [mph]	X	X	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	X	X	Displays the value of vehicle speed signal, which is transmitted to each unit with CAN communication.
TACHO METER [rpm]	X	X	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [lit.]	X	X	Displays the value, which processes a resistance signal from fuel gauge.
W TEMP METER [°C] or [°F]	X	X	Displays the value of engine coolant temperature signal, which is input from ECM.
ABS W/L [ON/OFF]		X	Displays [ON/OFF] condition of ABS warning lamp.
VDC/TCS IND [ON/OFF]		X	Displays [ON/OFF] condition of VDC OFF indicator lamp.
SLIP IND [ON/OFF]		X	Displays [ON/OFF] condition of SLIP indicator lamp.
BRAKE W/L [ON/OFF]		X	Displays [ON/OFF] condition of brake warning lamp.*
DOOR W/L [ON/OFF]		X	Displays [ON/OFF] condition of door warning lamp.
TRUNK W/L [ON/OFF]		X	Displays [ON/OFF] condition of glass hatch warning lamp.
HI-BEAM IND [ON/OFF]		X	Displays [ON/OFF] condition of high beam indicator.
TURN IND [ON/OFF]		X	Displays [ON/OFF] condition of turn indicator.
OIL W/L [ON/OFF]		X	Displays [ON/OFF] condition of oil pressure warning lamp.
C-ENG W/L [ON/OFF]		X	Displays [ON/OFF] condition of malfunction indicator lamp.
CRUISE IND [ON/OFF]		X	Displays [ON/OFF] condition of CRUISE indicator.
SET IND [ON/OFF]		X	Displays [ON/OFF] condition of SET indicator.
AT CHECK W/L [ON/OFF]		X	Displays [ON/OFF] condition of AT CHECK warning lamp.
FUEL W/L [ON/OFF]	X	X	Displays [ON/OFF] condition of low-fuel warning lamp.
AIR PRES W/L [ON/OFF]		X	Displays [ON/OFF] condition of tire pressure warning lamp.
KEY G W/L [ON/OFF]		X	Displays [ON/OFF] condition of key green warning lamp.
KEY R W/L [ON/OFF]		X	Displays [ON/OFF] condition of key red warning lamp.
KEY KNOB W/L [ON/OFF]		X	Displays [ON/OFF] condition of key knob warning lamp.
M RANGE SW [ON/OFF]	X	X	Displays [ON/OFF] condition of manual mode range switch.
NM RANGE SW [ON/OFF]	X	X	Displays [ON/OFF] condition of except for manual mode range switch.
AT SFT UP SW [ON/OFF]	X	X	Displays [ON/OFF] condition of A/T shift-up switch.

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DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
AT SFT DWN SW [ON/OFF]	X	X	Displays [ON/OFF] condition of A/T shift-down switch.
DISTANCE [km] or [mile]	X	X	Displays the value, which is calculated by vehicle speed signal, fuel gauge and fuel consumption from ECM.
BUZZER [ON/OFF]	X	X	Displays [ON/OFF] condition of buzzer.
BRAKE SW [ON/OFF]		X	Indicates [ON/OFF] condition of parking brake switch.
AT-M GEAR [1, 2, 3, 4, 5]	X	X	Indicates [1, 2, 3, 4, 5] condition of A/T manual mode gear position.
P RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift P range indicator.
R RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift R range indicator.
N RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift N range indicator.
D RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift D range indicator.
4 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 4 range indicator.
3 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 3 range indicator.
2 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 2 range indicator.
1 RANGE IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T shift 1range indicator.
CRUISE W/L [ON/OFF]		X	Indicates [ON/OFF] condition of CRUISE warning lamp.
4WD LOCK SW [ON/OFF]		X	Indicates [ON/OFF] condition of 4WD lock switch.
4WD LOCK IND [ON/OFF]		X	Indicates [ON/OFF] condition of 4WD lock indicator.
SEAT BELT W/L [ON/OFF]		X	Indicates [ON/OFF] condition of seat belt warning lamp.

NOTE:

Some items are not available due to vehicle specification.

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

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

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM) BUZZER

BUZZER : CONSULT-III Function (BCM - BUZZER)

INFOID:000000004053022

DATA MONITOR

Monitor 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
LIGHT SW 1ST [ON/OFF]	Lighting switch status judged by the lighting switch signal read with combination switch reading function
BUCKLE SW [ON/OFF]	Seat belt buckle switch status

ACTIVE TEST

Test Item	Description
LIGHT WARN ALM	The light reminder warning operation can be checked by operating the relevant function (On/Off).
IGN KEY WARN ALM	The key reminder warning operation can be checked by operating the relevant function (On/Off).
SEAT BELT WARN TEST	The seat belt warning operation can be checked by operating the relevant function (On/Off).
DOOR WARNING IND	The door open 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:000000004055158

1. CHECK FUSES

Check for blown combination meter fuses.

Unit	Power source	Fuse No.
Combination meter	Battery	19
	Ignition switch ON or START	14
	Ignition switch ACC or ON	4

Is the inspection result normal?

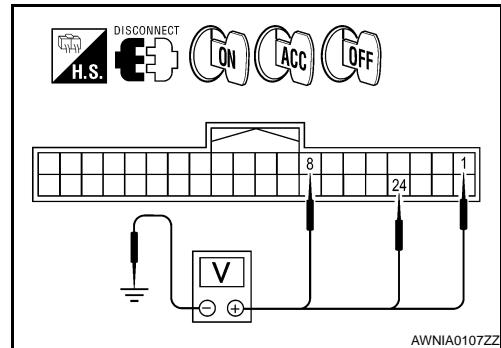
YES >> GO TO 2

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

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect combination meter connector M24.
2. Check voltage between combination meter harness connector M24 terminals 1, 8, 24 and ground.

Terminals		Ignition switch position			
(+)	(-)	OFF	ACC	ON	START
Connector	Terminal				
M24	1	0V	Battery voltage	Battery voltage	0V
	8	Battery voltage	Battery voltage	Battery voltage	Battery voltage
	24	0V	0V	Battery voltage	Battery voltage



Is the inspection result normal?

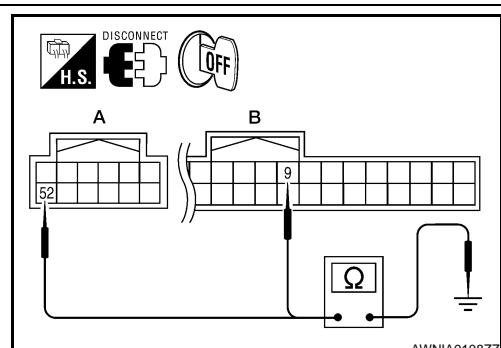
YES >> GO TO 3

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

3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect combination meter connector M23.
3. Check continuity between combination meter harness connector M23 terminal 52 and ground, and connector M24 terminal 9 and ground.

Terminals		Continuity
(+)	(-)	
Connector	Terminal	
A: M23	52	
B: M24	9	Ground
		Yes



Is the inspection result normal?

YES >> Inspection End.

NO >> Check ground harness.

BCM (BODY CONTROL MODULE)

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000004055159

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (10A)

Is the fuse blown?

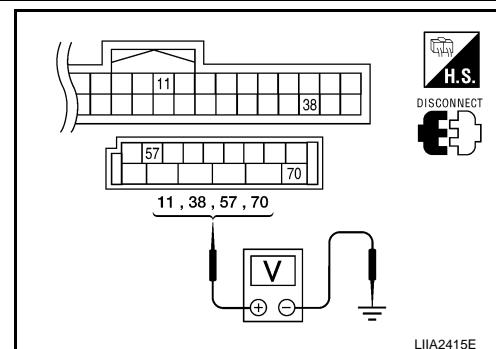
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

Connector	Terminals		Power source	Condition	Voltage (V) (Approx.)
	(+)	(-)			
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

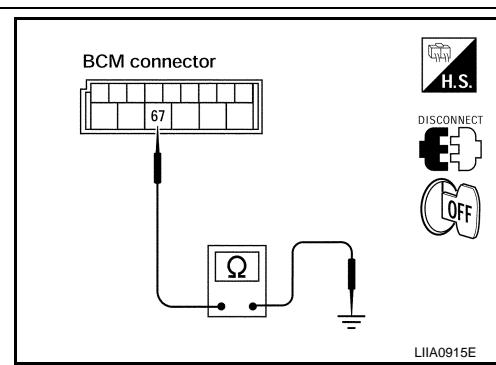
Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



METER BUZZER CIRCUIT

< COMPONENT DIAGNOSIS >

METER BUZZER CIRCUIT

Description

INFOID:0000000003709026

- 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:0000000003709027

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 activate?

YES >> Inspection End.

NO >> Replace combination meter. Refer to [MWI-105, "Removal and Installation"](#).

Diagnosis Procedure

INFOID:0000000003709028

1. CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to [MWI-32, "COMBINATION METER : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair power supply circuit of combination meter.

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

Description

INFOID:0000000003709029

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

Component Function Check

INFOID:0000000003709030

1. CHECK COMBINATION METER INPUT SIGNAL

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

SEAT BELT W/L

When seat belt is fastened : OFF

When seat belt is unfastened : ON

>> Inspection End.

Diagnosis Procedure

INFOID:0000000003709031

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector M24 terminal 27 and ground.

27 - Ground

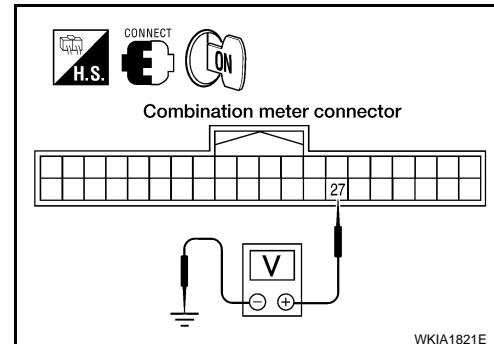
When driver seat belt is fastened : Approx. 12V

When driver seat belt is unfastened : Approx. 0V

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-105, "Removal and Installation".](#)

NO >> GO TO 2

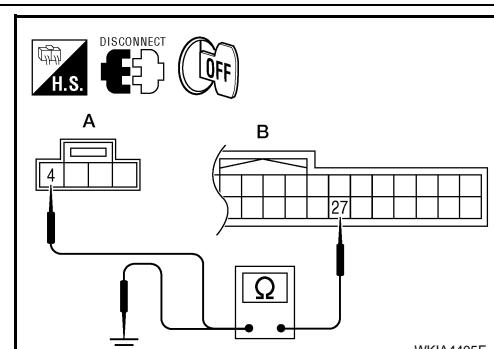


2. CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter and seat belt buckle pre-tensioner assembly LH (seat belt buckle switch).
3. Check continuity between combination meter harness connector M24 (B) terminal 27 and seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) harness connector B74 (A) terminal 4.

27 - 4 : Continuity should exist.

4. Check continuity between combination meter harness connector M24 (B) terminal 27 and ground.



27 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

< COMPONENT DIAGNOSIS >

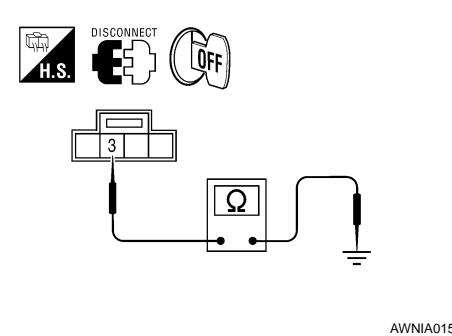
Check continuity between seat belt buckle pre-tensioner assembly LH (seat belt buckle switch) harness connector B74 terminal 3 and ground.

3 - Ground

: Continuity should exist.

Is the inspection result normal?

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



Component Inspection

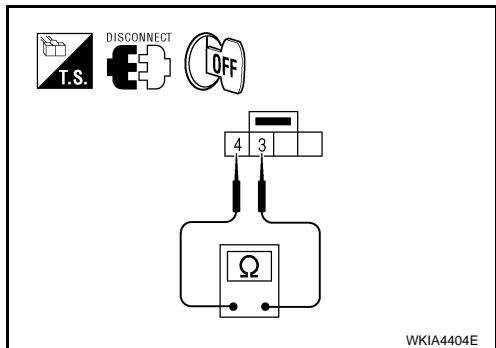
1. CHECK SEAT BELT BUCKLE SWITCH

1. Turn ignition switch OFF.
2. Disconnect the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch).
3. Check continuity between terminals 3 and 4.

3– 4

When seat belt is fastened : Continuity should not exist.

When seat belt is unfastened : Continuity should exist.



Is the inspection result normal?

- YES >> Inspection End.
NO >> Replace the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch).

KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

Description

INFOID:0000000003709033

Transmits a key switch signal to the BCM.

Component Function Check

INFOID:0000000003709034

1. CHECK BCM INPUT SIGNAL

Select "DATA MONITOR" for "BCM" and check the "KEY ON SW" monitor value.

KEY ON SW

When key is inserted into key cylinder : ON

When key is removed from key cylinder : OFF

>> Inspection End.

Diagnosis Procedure

INFOID:0000000003709035

1. CHECK FUSE

Check if the key switch and ignition knob switch 10A fuse (No. 62, located in the fuse and relay box) is blown.

Is the fuse blown?

YES >> Be sure to repair the cause of malfunction before installing new fuse.

NO >> GO TO 2

2. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
BCM connector	Terminal		
M18	37	Key is inserted	Battery voltage
		Key is removed	0

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 3

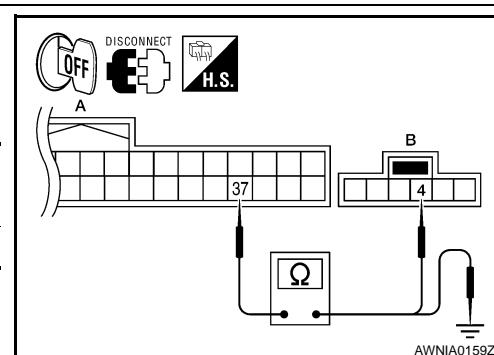
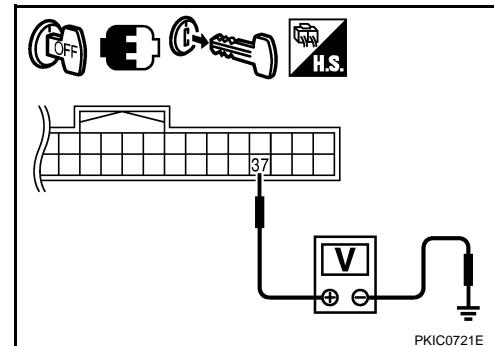
3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM and key switch and ignition knob switch.
2. Check continuity between BCM harness connector M18 and key switch and ignition knob switch harness connector M12.

Connector	Terminal	Connector	Terminal	Continuity
M18 (A)	37	M12 (B)	4	Yes

3. Check continuity between BCM harness connector M18 and ground.

Connector	Terminal	Ground	Continuity
M18 (A)	37		No



KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

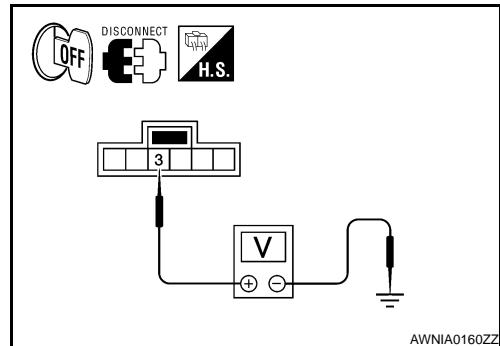
YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

Check voltage between key switch and ignition knob switch harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
Key switch and ignition knob switch connector	Terminal	
M12	3	Ground
		Battery voltage



AWNIA0160ZZ

Is the inspection result normal?

YES >> Replace key switch and ignition knob switch.

NO >> Repair or replace harness.

Component Inspection

INFOID:0000000003709036

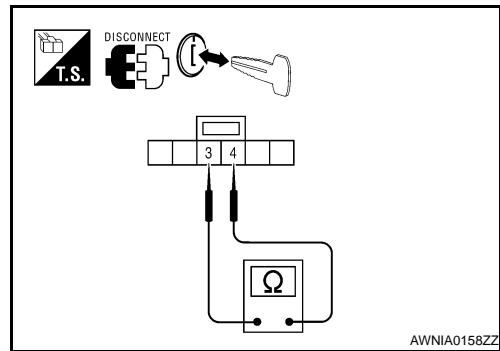
1. CHECK KEY SWITCH

1. Turn ignition switch OFF.
2. Disconnect key switch and ignition knob switch.
3. Check continuity between key switch and ignition knob switch terminals 3 and 4.

3 – 4

When key is inserted into key cylinder : Continuity should exist.

When key is removed from key cylinder : Continuity should not exist.



AWNIA0158ZZ

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace key switch and ignition knob switch.

KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

Description

INFOID:0000000003709037

Transmits a key switch signal to the BCM.

Component Function Check

INFOID:0000000003709038

1. CHECK BCM INPUT SIGNAL

Select "DATA MONITOR" for "BCM" and check the "KEY ON SW" monitor value.

KEY ON SW

When key is inserted into key cylinder : ON

When key is removed from key cylinder : OFF

>> Inspection End.

Diagnosis Procedure

INFOID:0000000003709039

1. CHECK FUSE

Check if the key switch and key lock solenoid 10A fuse [No. 19, located in the fuse block (J/B)] is blown.

Is the fuse blown?

YES >> Be sure to repair the cause of malfunction before installing new fuse.

NO >> GO TO 2

2. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
BCM connector	Terminal		
M18	37	Key is inserted	Battery voltage
		Key is removed	0

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 3

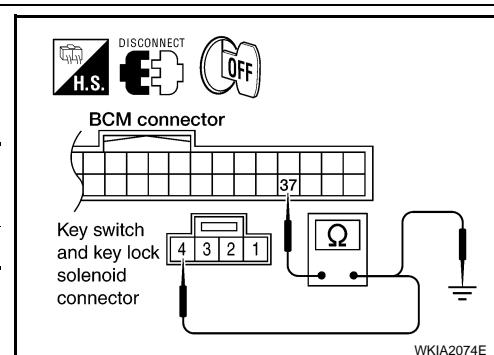
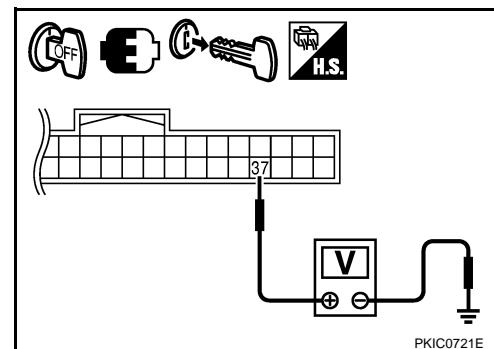
3. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM and key switch and key lock solenoid.
2. Check continuity between BCM harness connector M18 and key switch and key lock solenoid harness connector M27.

Connector	A	Connector	B	Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M27	4	Yes

3. Check continuity between BCM harness connector M18 and ground.

Connector	A	Ground	Continuity
Connector	Terminal		
M18	37		No



KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

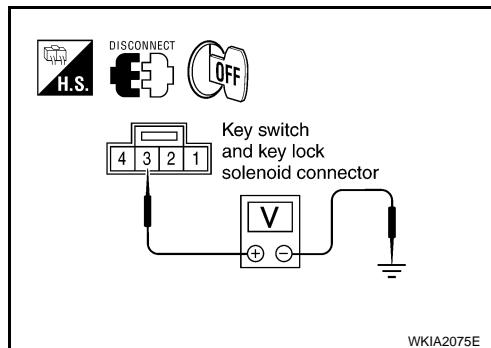
YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

Check voltage between key switch and key lock solenoid harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
Key switch and key lock solenoid	Terminal	
M27	3	Ground
		Battery voltage



Is the inspection result normal?

YES >> Replace key switch and key lock solenoid.

NO >> Repair or replace harness.

Component Inspection

INFOID:0000000003709040

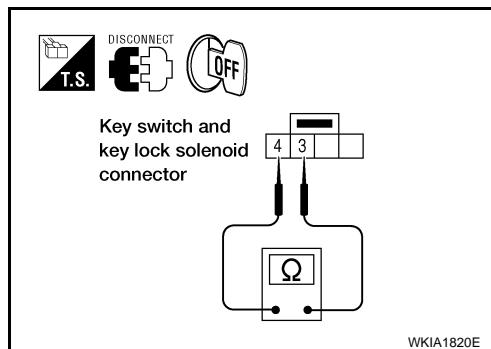
1. CHECK KEY SWITCH

1. Turn ignition switch OFF.
2. Disconnect key switch and key lock solenoid.
3. Check continuity between key switch and key lock solenoid terminals 3 and 4.

3 – 4

When key is inserted into key cylinder : Continuity should exist.

When key is removed from key cylinder : Continuity should not exist.



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace key switch and key lock solenoid.

WARNING CHIME SYSTEM

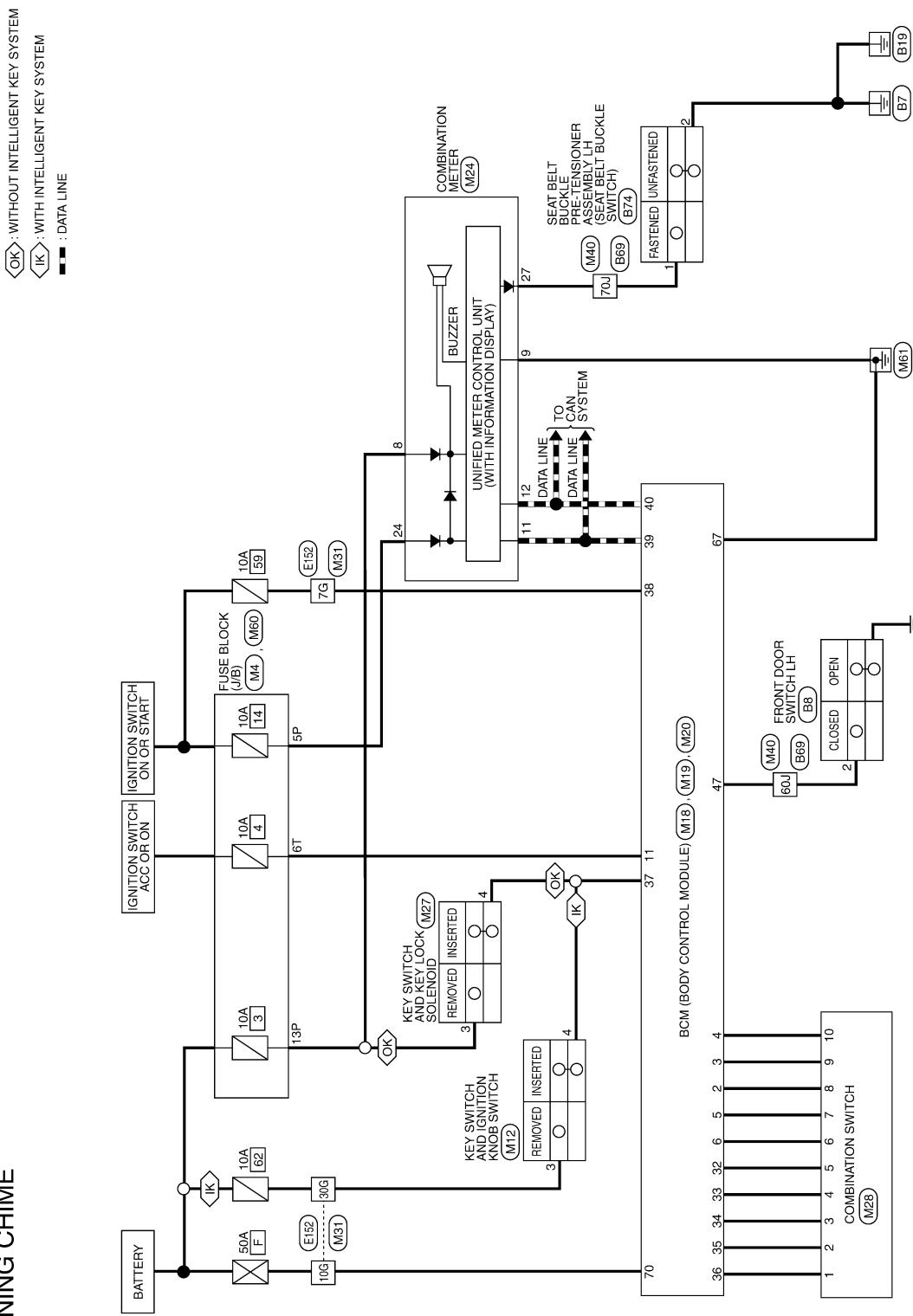
< COMPONENT DIAGNOSIS >

WARNING CHIME SYSTEM

Wiring Diagram

INFOID:0000000003709041

WARNING CHIME



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

WCS

ABNWA0072GE

WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME CONNECTORS

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



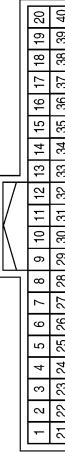
Terminal No.	Color of Wire	Signal Name
5P	O/L	-
13P	P	-

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



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

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



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

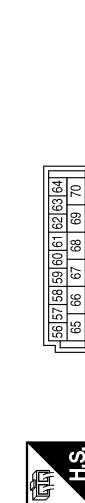


Connector No.	47
Connector Name	DOOR SW (DR)
Connector Color	SB

WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

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



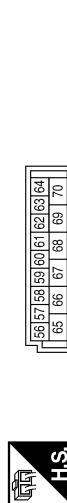
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (F/L)

Terminal No.	Color of Wire	Signal Name
8	Y/R	BATTERY (TYPE A*)
8	P	BATTERY (TYPE B*)
9	B	GND
11	L	CAN-H
12	P	CAN-L
24	O/L	RUN/START
27	O/B	SEATBELT

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

Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
30G	Y	-

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3

Terminal No.	Color of Wire	Signal Name
21G	20G	19G
20G	29G	28G
27G	26G	25G
24G	23G	22G
5G	4G	3G
9G	8G	7G
10G		6G

Terminal No.	Color of Wire	Signal Name
41G	40G	39G
37G	36G	35G
34G	33G	32G
31G		30G

Terminal No.	Color of Wire	Signal Name
5G	9G	8G
4G	4G	4G
45G	44G	43G
42G		41G

Terminal No.	Color of Wire	Signal Name
61G	60G	59G
58G	57G	56G
55G	54G	53G
52G	51G	50G
50G	49G	48G

Terminal No.	Color of Wire	Signal Name
70G	69G	68G
67G	66G	65G
64G	63G	62G
62G	61G	60G
59G	58G	57G

Terminal No.	Color of Wire	Signal Name
75G	74G	73G
72G	71G	70G
78G	77G	76G
80G		79G

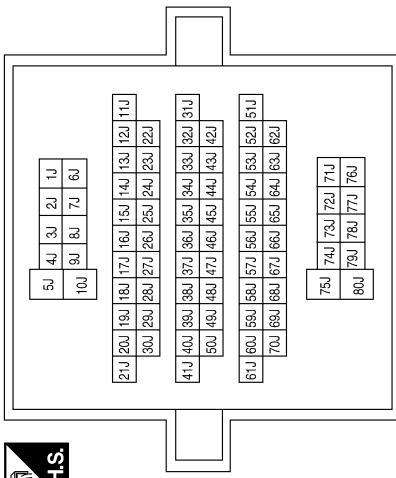
* : REFER TO HARNESS LAYOUT OF PG SECTION FOR DEFINITION OF TYPE A AND TYPE B.

WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
60J	SB	-
70J	O/B	-

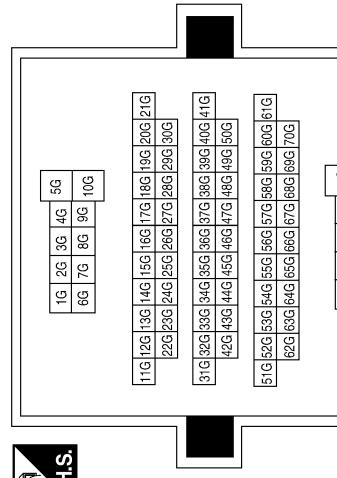


Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
6T	O	-



Terminal No.	Color of Wire	Signal Name
7G	L/W	-
10G	W/B	-
30G	Y	-



Terminal No.	Color of Wire	Signal Name
2	SB	-

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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

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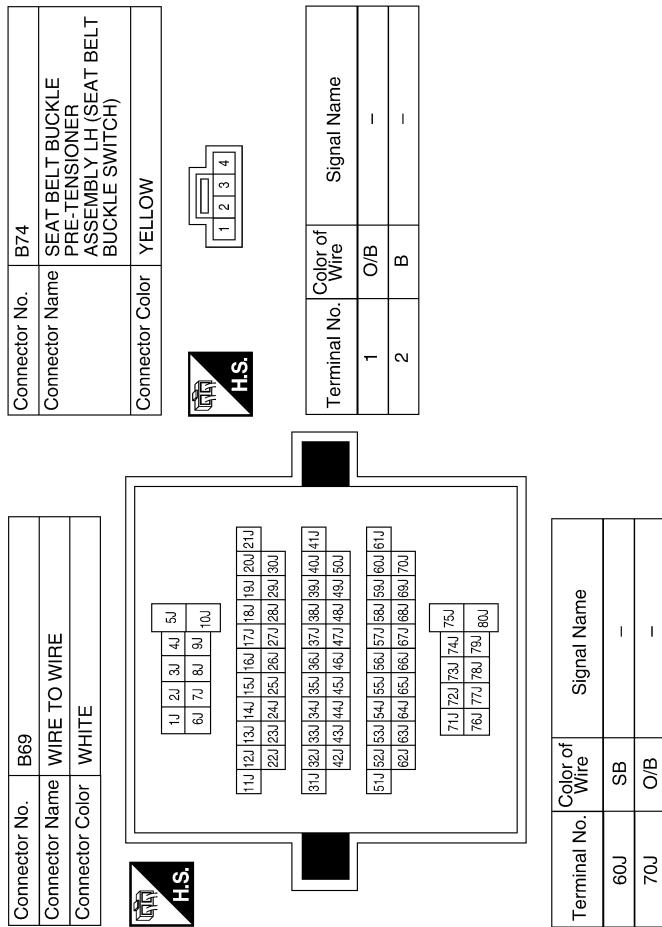
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ABNIA0212GB

COMBINATION METER

< ECU DIAGNOSIS >

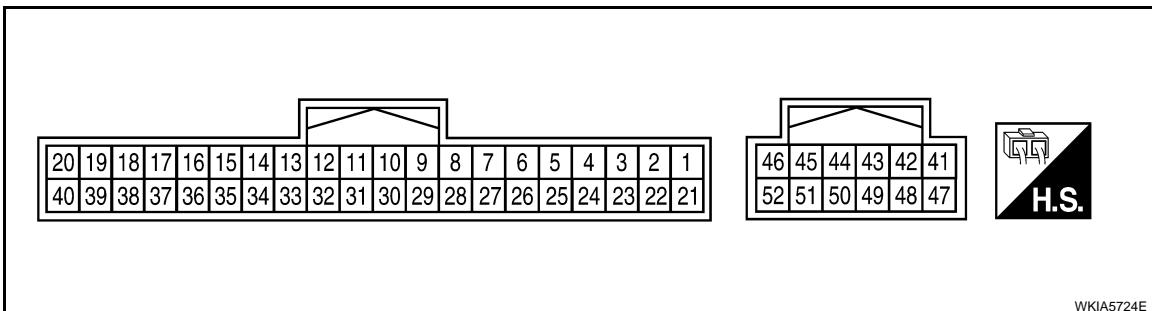
ECU DIAGNOSIS

COMBINATION METER

Reference Value

INFOID:000000004750047

TERMINAL LAYOUT

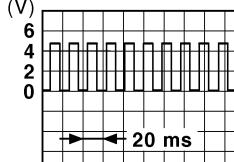


PHYSICAL VALUES

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
1	O	Ignition switch ACC or ON	—	—	Battery voltage
2	P	Air bag warning lamp input	ON	Air bag warning lamp ON	4
				Air bag warning lamp OFF	0
3	BR	CK SUSP warning lamp input	—	CK SUSP warning lamp ON	0
				CK SUSP warning lamp OFF	Battery voltage
8	Y/R*1	Battery power supply	—	—	Battery voltage
8	P*2	Battery power supply	—	—	Battery voltage
9	B	Ground	—	—	0
11	L	CAN-H	—	—	—
12	P	CAN-L	—	—	—
15	Y/L	Fuel level sensor signal	—	—	Refer to MWI-12, "FUEL GAUGE : System Description".
16	B/P	Fuel level sensor ground	ON	—	0
18	P/B	Brake fluid level switch	ON	Brake fluid level low	0
				Brake fluid level normal	Battery voltage
23	G	Parking brake switch	ON	Parking brake applied	0
				Parking brake released	Battery voltage
24	O/L	Ignition switch ON or START	ON	—	Battery voltage
27	O/B	Seat belt buckle switch LH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
28	G/O	Security indicator input	OFF	Security indicator ON	0
				Security indicator OFF	Battery voltage

COMBINATION METER

< ECU DIAGNOSIS >

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
29	W/R	Vehicle speed signal output (8-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	NOTE: Maximum voltage may be 12V due to specifications (connected units).  PKIC0643E
37	W/L	Washer fluid level switch	ON	Washer fluid level low	0
				Washer fluid level normal	Battery voltage
41	P/L	Seat belt buckle switch RH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
45	BR/W	Generator	ON	Generator voltage low	0
				Generator voltage normal	Battery voltage
50	BR	Illumination output	—	—	Refer to INL-9, "System Description" .
52	B	Ground	—	—	0

*1: With Type A main harness. For definition of Type A main harness, refer to [PG-39, "Harness Layout"](#).

*2: With Type B main harness. For definition of Type B main harness, refer to [PG-39, "Harness Layout"](#).

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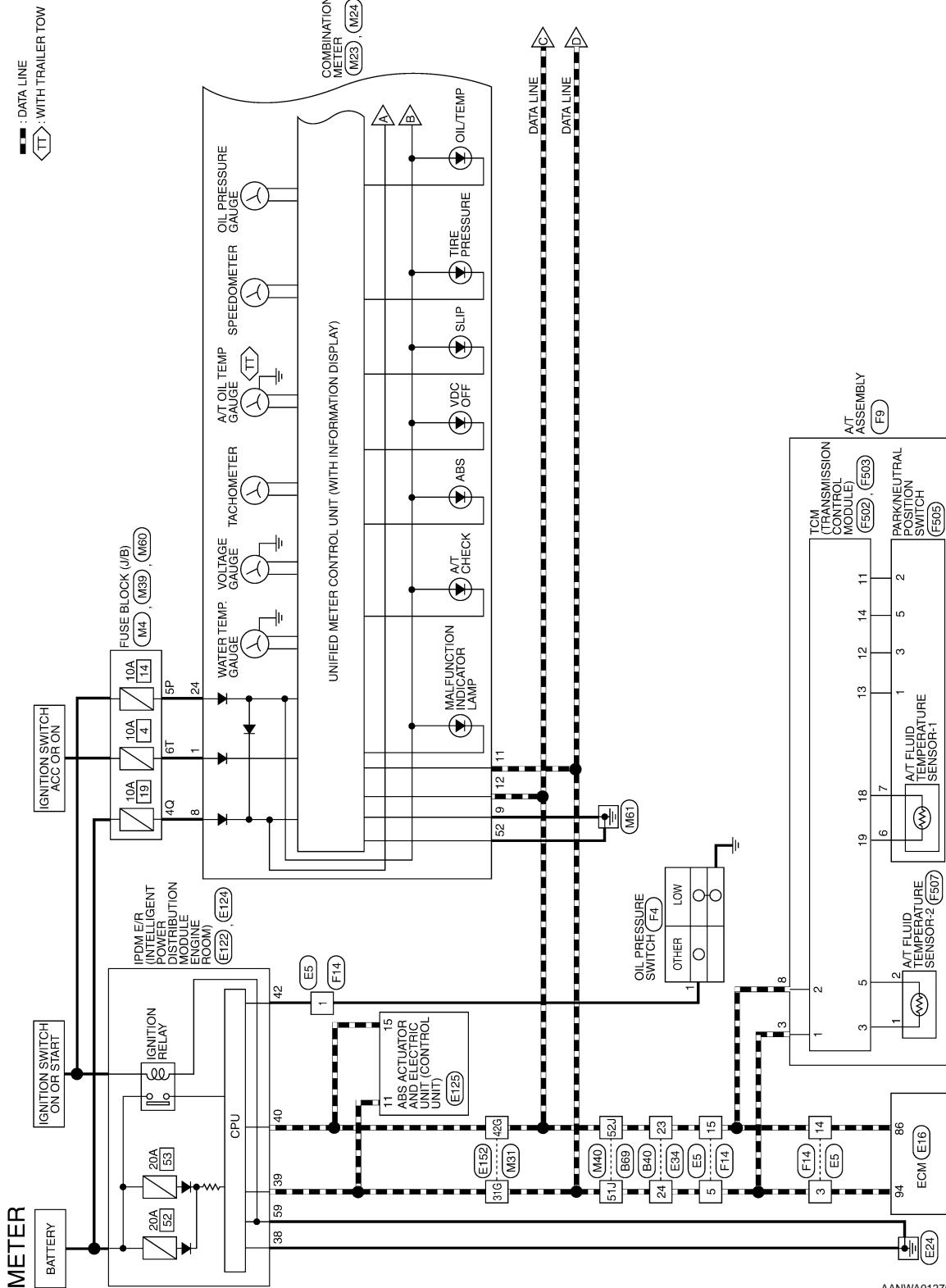
P

COMBINATION METER

< ECU DIAGNOSIS >

Wiring Diagram

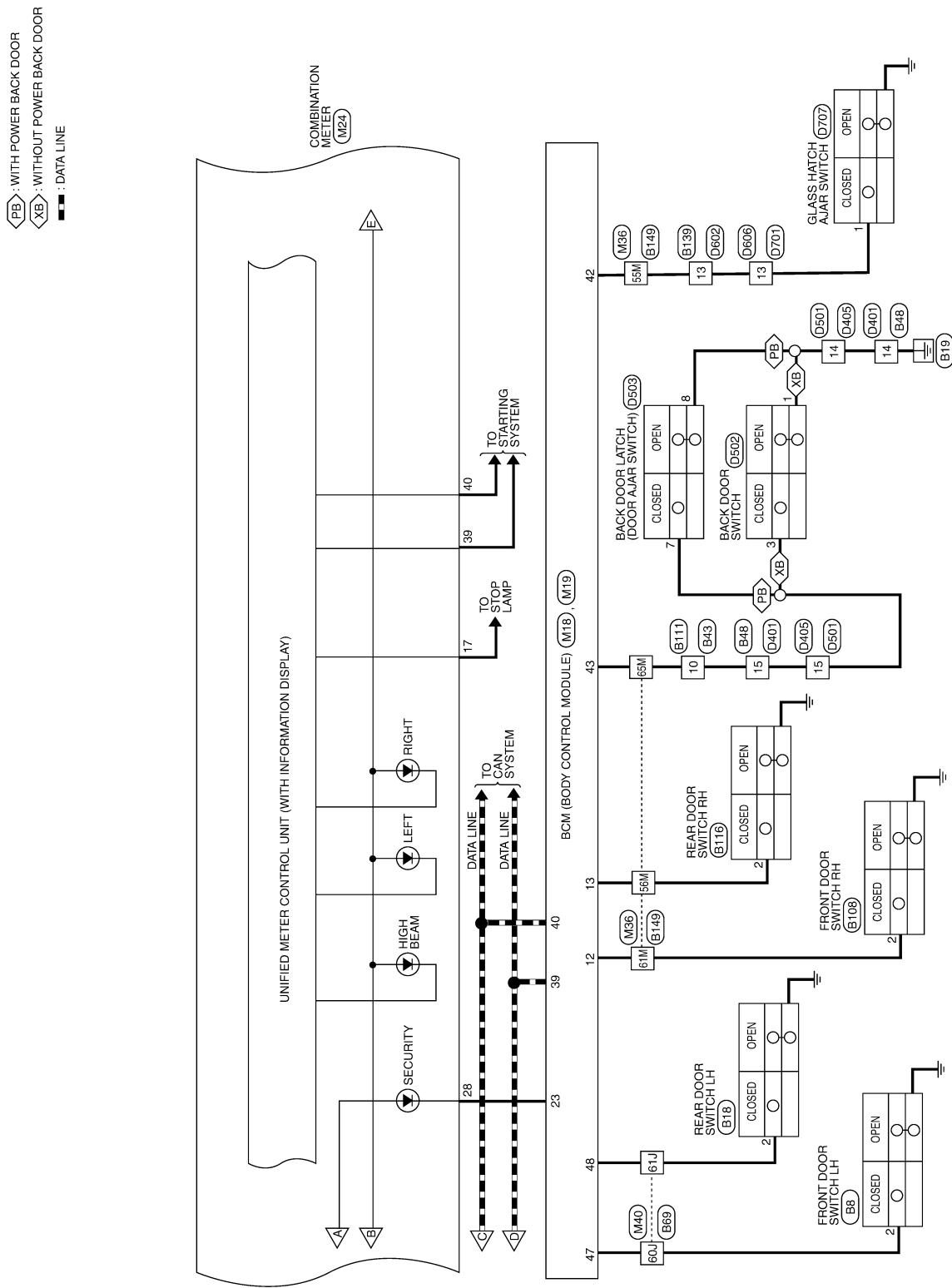
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COMBINATION METER

< ECU DIAGNOSIS >

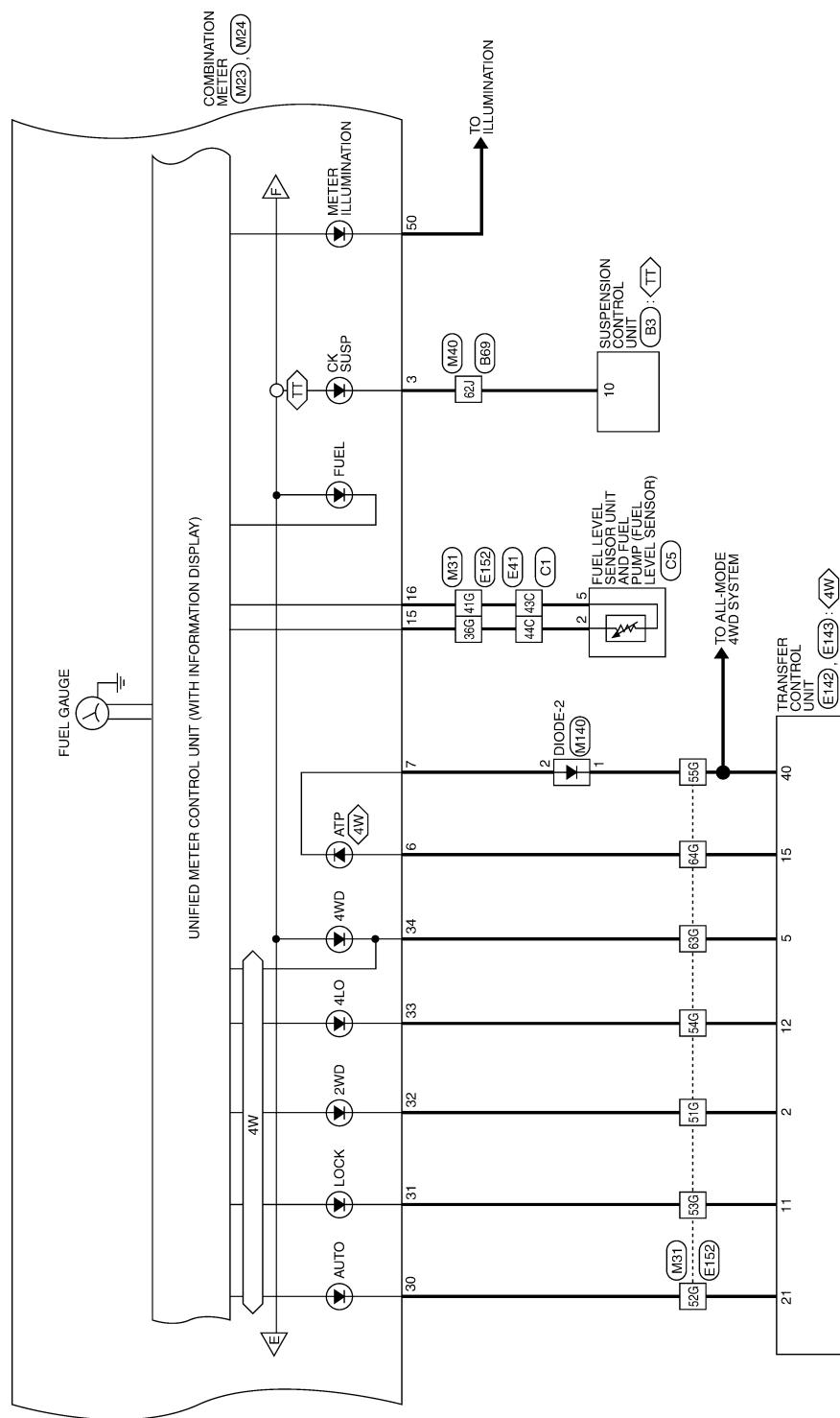


ALNWA0046GE

COMBINATION METER

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: WITH 4-WHEEL DRIVE
 : WITH TRAILER TOW

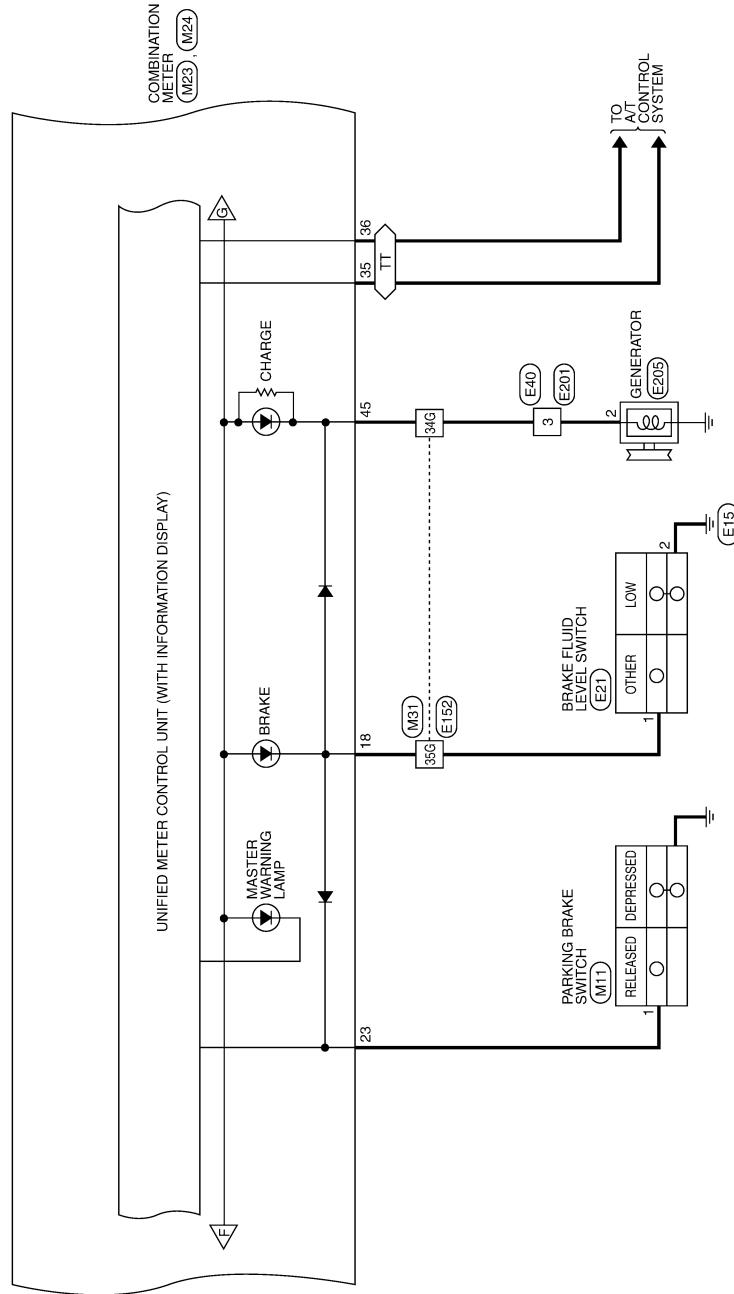


AANWA0119GE

COMBINATION METER

< ECU DIAGNOSIS >

$\langle TT \rangle$: WITH TRAILER TOW

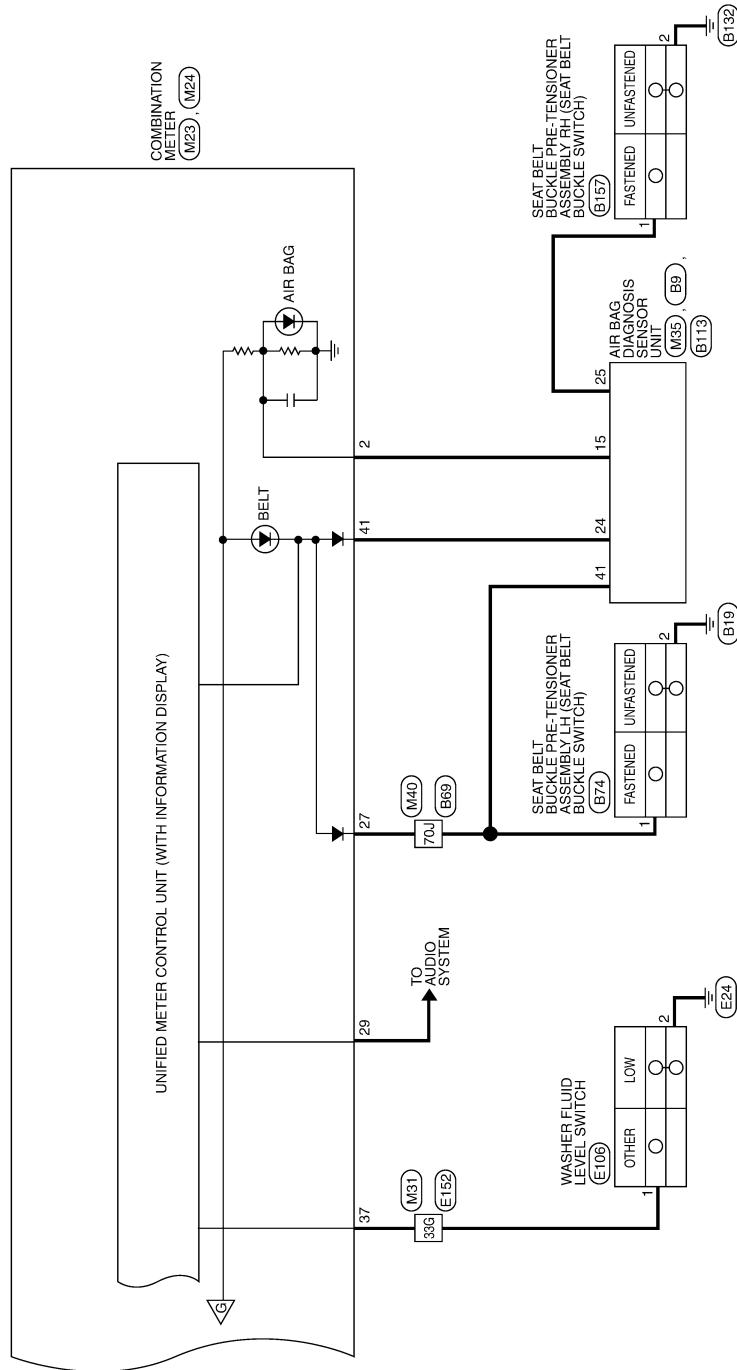


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COMBINATION METER

< ECU DIAGNOSIS >



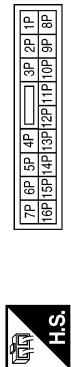
ALNWA0044GE

COMBINATION METER

< ECU DIAGNOSIS >

METER CONNECTORS

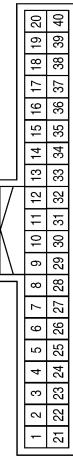
Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Connector No.	M11
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



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



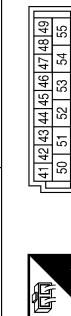
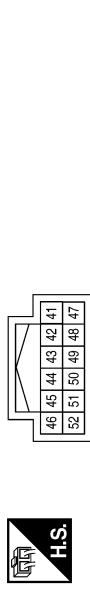
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
1	G	-	12	R/L	DOOR_SW_AS
13	GR	DOOR_SW_RR	23	G/O	SECURITY_INDL_OUTPUT
39	L	CAN-H	40	P	CAN-L

Terminal No.	Color of Wire	Signal Name
5P	O/L	-

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



Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
41	P/L	BELT_IND
45	BR/W	-
50	BR	-
52	B	-

Terminal No.	Color of Wire	Signal Name
42	GR	GLASS_HATCH_AJAR
43	RB	BACK_DOOR_SW
47	SB	DOOR_SW_DR
48	R/Y	DOOR_SW_RL

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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	O	—
2	P	AIR_BAG_IND
3	BR	—
6	L/B	ATP+
7	R/B	ATP-
8	Y/R	—
9	B	—

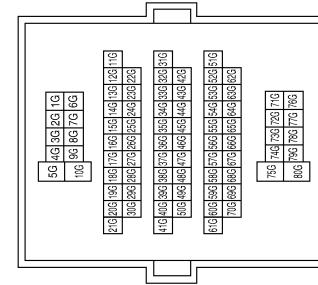
Terminal No.	Color of Wire	Signal Name
11	L	CAN-H
12	P	CAN-L
15	Y/L	FUEL SEN
16	B/P	—
17	R/G	—
18	P/B	—
23	G	—
24	O/L	—
27	O/B	BELT_IND
28	G/O	SECURITY_IND
29	W/R	SPEED_8P

Terminal No.	Color of Wire	Signal Name
11	L	CAN-H
12	P	CAN-L
15	Y/L	FUEL SEN
16	B/P	—
17	R/G	—
18	P/B	—
23	G	—
24	O/L	—
27	O/B	BELT_IND
28	G/O	SECURITY_IND
29	W/R	SPEED_8P

Terminal No.	Color of Wire	Signal Name
30	BR	AUTO
31	L	LOCK/4H
32	B/W	2WD
33	W/G	4LD
34	W/B	4WD
35	LG/R	TOW_SW_STATUS
36	Y/N	TOW_IND
37	W/L	WASH_IND
39	B/R	—
40	GR/R	—

Terminal No.	Color of Wire	Signal Name
31G	L	—
33G	W/L	—
34G	BR/W	—
35G	P/B	—
36G	Y/L	—
41G	B/P	—
42G	P	—
51G	B/W	—
52G	BR	—
53G	L	—
54G	W/G	—
55G	L/Y	—

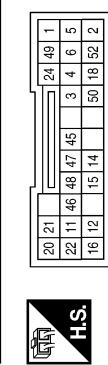
31G	L	—
33G	W/L	—
34G	BR/W	—
35G	P/B	—
36G	Y/L	—
41G	B/P	—
42G	P	—
51G	B/W	—
52G	BR	—
53G	L	—
54G	W/G	—
55G	L/Y	—



COMBINATION METER

< ECU DIAGNOSIS >

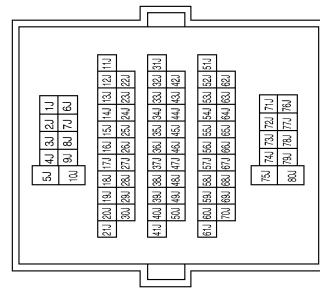
Connector No.	M35
Connector Name	AIR BAG DIAGNOSIS
Connector Color	SENSOR UNIT YELLOW



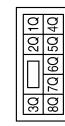
Terminal No.	Color of Wire	Signal Name
15	P	WARN-LAMP
24	P/L	SEAT BELT-MINDER

Terminal No.	Color of Wire	Signal Name
5M	GR	-
56M	GR	-
61M	R/L	-
65M	R/B	-

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
51J	L	-
52J	P	-
60J	SB	-
61J	R/Y	-
62J	B/R	-
70J	O/B	-

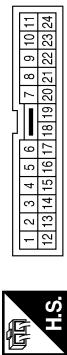
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COMBINATION METER

< ECU DIAGNOSIS >

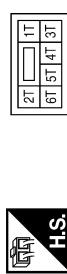
Connector No.	M140
Connector Name	DIODE-2
Connector Color	BLACK



Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Connector No.	E16
Connector Name	ECM
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	L/Y	—
2	R/B	—

Terminal No.	Color of Wire	Signal Name
6T	O	—

Terminal No.	Color of Wire	Signal Name
1	G/R	—
3	L	—
5	L	—
14	P	—
15	P	—

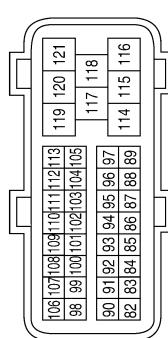
Terminal No.	Color of Wire	Signal Name
1	—	—
2	—	—



Terminal No.	Color of Wire	Signal Name
23	P	—
24	L	—

Terminal No.	Color of Wire	Signal Name
1	—	—
2	—	—

Terminal No.	Color of Wire	Signal Name
1	—	—
2	—	—



Terminal No.	Color of Wire	Signal Name
1	P/B	—
2	B	—

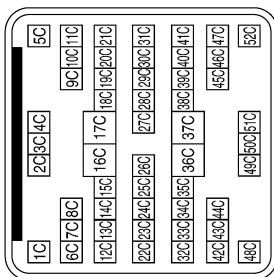
COMBINATION METER

< ECU DIAGNOSIS >

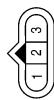
Connector No.	E106
Connector Name	WASHER FLUID LEVEL SWITCH
Connector Color	BROWN



Connector No.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Connector No.	E40
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
3	BR/W	-

Terminal No.	Color of Wire	Signal Name
43C	B/P	-
44C	Y/L	-

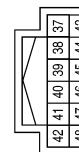
Terminal No.	Color of Wire	Signal Name
1	W/L	-
2	B	-



Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK



Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	2	3
17	18	19
20	21	22
23	24	25
26	27	28
29	30	31
31	32	33
34	35	36
37	38	39
39	40	41
42	43	44
44	45	46
46	47	48
48	49	50
50	51	52
52	53	54
54	55	56
56	57	58
58	59	60

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

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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E142
Connector Name	TRANSFER CONTROL UNIT
Connector Color	WHITE



Connector No.	E143
Connector Name	TRANSFER CONTROL UNIT
Connector Color	GRAY



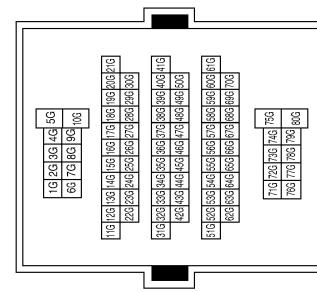
Terminal No.	Color of Wire	Signal Name
2	B/W	2WD IND
5	W/B	4WD FAIL IND
11	L	LOCK IND
12	W/G	4LO IND
15	L/B	ATP-IND
21	BR	AUTO IND

Terminal No.	Color of Wire	Signal Name
1	2G	4G
2	3G	4G
3	5G	6G
4	7G	8G
5	9G	10G
6	11G	12G
7	13G	14G
8	15G	16G
9	17G	18G
10	19G	20G
11	21G	22G
12	23G	24G
13	25G	26G
14	27G	28G
15	29G	30G
16	31G	32G
17	33G	34G
18	35G	36G
19	37G	38G
20	39G	40G
21	41G	42G
22	43G	44G
23	45G	46G
24	47G	48G
25	49G	50G
26	51G	52G
27	53G	54G
28	55G	56G
29	57G	58G
30	59G	60G
31	61G	62G
32	63G	64G
33	65G	66G
34	67G	68G
35	69G	70G
36	71G	72G
37	73G	74G
38	75G	76G
39	77G	78G
40	79G	80G

Terminal No.	Color of Wire	Signal Name
31G	L	-
33G	W/L	-
34G	BR/W	-
35G	P/B	-
36G	Y/L	-
41G	B/P	-
42G	P	-
51G	B/W	-
52G	BR	-
53G	L	-
54G	W/G	-
55G	L/Y	-

Terminal No.	Color of Wire	Signal Name
63G	W/B	-
64G	L/B	-

Terminal No.	Color of Wire	Signal Name
31G	L	-
33G	W/L	-
34G	BR/W	-
35G	P/B	-
36G	Y/L	-
41G	B/P	-
42G	P	-
51G	B/W	-
52G	BR	-
53G	L	-
54G	W/G	-
55G	L/Y	-



Terminal No.	Color of Wire	Signal Name
1G	2G	3G
5G	6G	7G
9G	10G	11G
13G	14G	15G
17G	18G	19G
21G	22G	23G
25G	26G	27G
29G	30G	31G
33G	34G	35G
37G	38G	39G
41G	42G	43G
45G	46G	47G
49G	50G	51G
53G	54G	55G
57G	58G	59G
61G	62G	63G
65G	66G	67G
69G	70G	71G
73G	74G	75G

COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E201
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
3	BR/W	-

Connector No.	E205
Connector Name	GENERATOR
Connector Color	BLACK

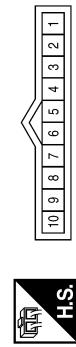


Connector No.	F4
Connector Name	OIL PRESSURE SWITCH
Connector Color	GRAY



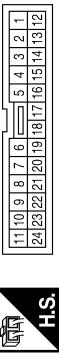
Terminal No.	Color of Wire	Signal Name
1	GR	-

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	BR	CAN-H
2	L/Y	CAN-L
3	W/Y	ATF SENS 2-
5	W/R	ATF SENS 2+

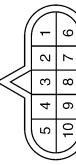
Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
1	GR	-
3	L	CAN-H
5	L	CAN-L
14	P	-
15	P	-



A B C D E F G H I J K L M N O P

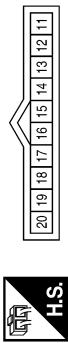
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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	F503
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GREEN



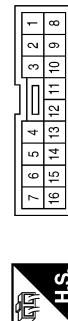
Terminal No.	Color of Wire	Signal Name
11	W	INH-SW4
12	GR	INH-SW2
13	BR	INH-SW1
14	L	INH-SW3
18	O	ATF SENS 1-
19	G	ATF SENS 1+

Connector No.	F507
Connector Name	ATT TEMPERATURE SENSOR-2
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BR	S1
2	W	S4
3	GR	S2
5	L	S3
6	G	-
7	O	-

Terminal No.	Color of Wire	Signal Name
1	W/Y	-
2	W/R	-

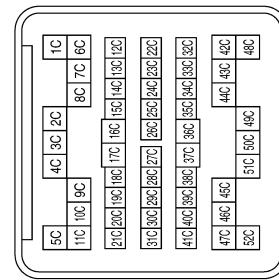


Terminal No.	Color of Wire	Signal Name
10	BR	-

Connector No.	C5
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	2	-
2	3	-
3	4	-
4	5	-



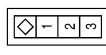
Terminal No.	Color of Wire	Signal Name
43C	Y/L	-
44C	B/P	-

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COMBINATION METER

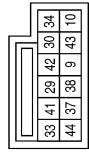
< ECU DIAGNOSIS >

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



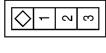
Terminal No.	Color of Wire	Signal Name
2	SB	-

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



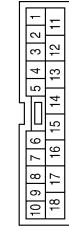
Terminal No.	Color of Wire	Signal Name
41	O/B	-

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

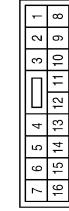


Terminal No.	Color of Wire	Signal Name
2	R/Y	-

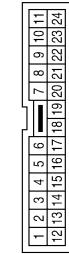
Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Color	WHITE



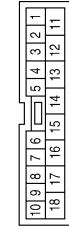
Terminal No.	Color of Wire	Signal Name
2	O/B	-



Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	R/W	-
23	P	-



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

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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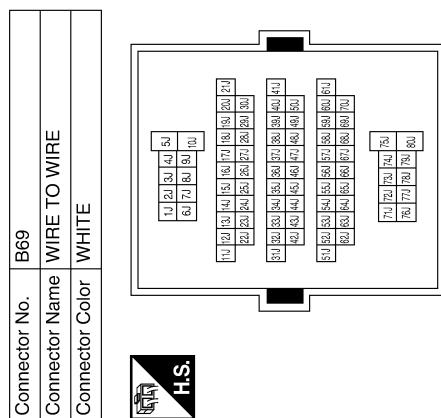
COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	B74
Connector Name	SEAT BELT BUCKLE PRE-TENSIONER ASSEMBLY LH (SEAT BELT BUCKLE SWITCH)
Connector Color	YELLOW
	

Terminal No.	Color of Wire	Signal Name
51J	L	-
52J	P	-
60J	SB	-
61J	RY	-
62J	BR	-
70J	O/B	-

Terminal No.	Color of Wire	Signal Name
51J	L	-
52J	P	-
60J	SB	-
61J	RY	-
62J	BR	-
70J	O/B	-



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

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

Terminal No.	Color of Wire	Signal Name
1	O/B	-
2	B	-
3	Y	-
4	R	-
5	G	-
6	W	-
7	BL	-
8	BR	-
9	BL	-
10	BR	-
11	BL	-
12	BR	-
13	BL	-
14	BR	-
15	BL	-
16	BR	-

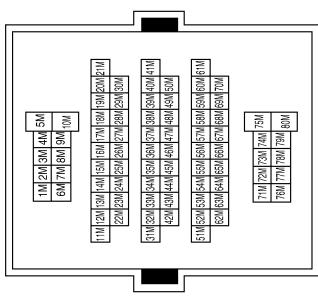
Terminal No.	Color of Wire	Signal Name
10	RW	-
25	L	BUCKLE_SW_RH

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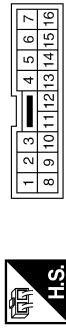
COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

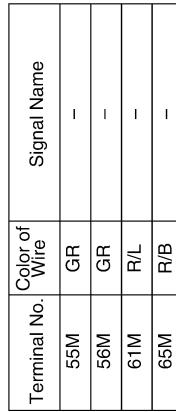


Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

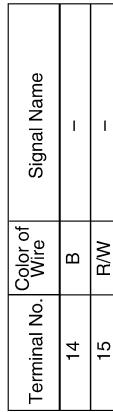


Terminal No.	Color of Wire	Signal Name
13	GR	-

Terminal No.	Color of Wire	Signal Name
55M	GR	-
56M	GR	-
61M	R/L	-
65M	R/B	-



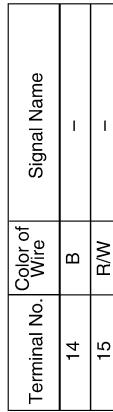
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-



Terminal No.	Color of Wire	Signal Name
55M	GR	-
56M	GR	-
61M	R/L	-
65M	R/B	-



Terminal No.	Color of Wire	Signal Name
14	L	-
15	B	-



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



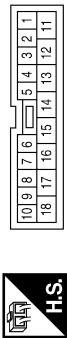
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z WCS

ALNIA0436GB

COMBINATION METER

< ECU DIAGNOSIS >

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



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



Connector No.	D502
Connector Name	BACK DOOR SWITCH
Connector Color	WHITE

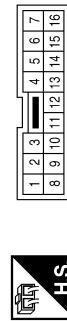


Terminal No.	Color of Wire	Signal Name
1	B	-
3	R/W	-

Terminal No.	Color of Wire	Signal Name
1	B	-
3	R/W	-

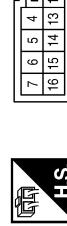


Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



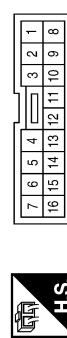
Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE

COMBINATION METER

< ECU DIAGNOSIS >

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Connector No.	D707
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	WHITE



Terminal No.	Color of wire	Signal Name
1	GR	-

Fail Safe

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

ALNIA0438GB

INFOID:0000000004173693

COMBINATION METER

< ECU DIAGNOSIS >

Function		Specifications
Speedometer		
Tachometer		
Fuel gauge		
Engine coolant temperature gauge		Zero indication.
Engine oil pressure gauge		
Voltage gauge		
A/T oil temperature gauge		
Illumination control	Meter illumination	Change to nighttime mode when communication is lost.
Segment LCD	Odometer	Freeze current indication.
	A/T position	Display turns off.
Buzzer		Buzzer turns off.
Warning lamp/indicator lamp	ABS warning lamp	Lamp turns on when communication is lost.
	Brake warning lamp	
	VDC OFF indicator lamp	
	SLIP indicator lamp	
	A/T CHECK warning lamp	Lamp turns off when communication is lost.
	Oil pressure/coolant temperature warning lamp	
	Malfunction indicator lamp	
	Master warning lamp	
	Air bag warning lamp	
	High beam indicator	
	Turn signal indicator lamp	
	Intelligent Key system warning lamp	
	Driver and passenger seat belt warning lamp	Lamp turns off when disconnected.
	Charge warning lamp	
	Security indicator lamp	
	4WD indicator lamp	
	ATP indicator lamp	
	CK SUSP warning lamp	Lamp will flash every second for 1 minute and then stay on continuously thereafter.
	Low tire pressure warning lamp	

DTC Index

INFOID:000000004173694

CONSULT-III display	Malfunction	Reference page
CAN COMM CIRC [U1000]	<p>Malfunction is detected in CAN communication.</p> <p>CAUTION: Even when there is no malfunction on CAN communication system, malfunction may be misinterpreted when battery has low voltage (when maintaining 7 - 8 V for about 2 seconds) or 10A fuse [No. 19, located in the fuse block (J/B)] is disconnected.</p>	MWI-30
VEHICLE SPEED CIRC [B2205]	<p>Malfunction is detected when an erroneous speed signal is input.</p> <p>CAUTION: Even when there is no malfunction on speed signal system, malfunction may be misinterpreted when battery has low voltage (when maintaining 7 - 8 V for about 2 seconds).</p>	MWI-31

NOTE:

COMBINATION METER

< ECU DIAGNOSIS >

"TIME" indicates the following.

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

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000004173684

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
	Outside of the room is bright	ON
AUTO LIGHT SW	Lighting switch OFF	OFF
	Lighting switch AUTO	ON
BACK DOOR SW	Back door closed	OFF
	Back door opened	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the LOCK side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the UNLOCK side	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1st	ON

BCM (BODY CONTROL MODULE)

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Monitor Item	Condition	Value/Status	
HEADLAMP SW1	Headlamp switch OFF	OFF	A
	Headlamp switch 1st	ON	
HEADLAMP SW2	Headlamp switch OFF	OFF	B
	Headlamp switch 1st	ON	
HI BEAM SW	High beam switch OFF	OFF	C
	High beam switch HI	ON	
H/L WASH SW	NOTE: The item is indicated, but not monitored	OFF	D
IGN ON SW	Ignition switch OFF or ACC	OFF	
	Ignition switch ON	ON	
IGN SW CAN	Ignition switch OFF or ACC	OFF	E
	Ignition switch ON	ON	
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7	F
I-KEY LOCK ¹	LOCK button of Intelligent Key is not pressed	OFF	
	LOCK button of Intelligent Key is pressed	ON	
I-KEY UNLOCK ¹	UNLOCK button of Intelligent Key is not pressed	OFF	G
	UNLOCK button of Intelligent Key is pressed	ON	
KEY ON SW	Mechanical key is removed from key cylinder	OFF	H
	Mechanical key is inserted to key cylinder	ON	
KEYLESS LOCK ²	LOCK button of key fob is not pressed	OFF	
	LOCK button of key fob is pressed	ON	I
KEYLESS UNLOCK ²	UNLOCK button of key fob is not pressed	OFF	
	UNLOCK button of key fob is pressed	ON	J
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	OFF	K
	Ignition switch ON	ON	
PASSING SW	Other than lighting switch PASS	OFF	L
	Lighting switch PASS	ON	
PUSH SW ¹	Return to ignition switch to LOCK position	OFF	M
	Press ignition switch	ON	
REAR DEF SW	Rear window defogger switch OFF	OFF	
	Rear window defogger switch ON	ON	
RKE LOCK AND UNLOCK ²	NOTE: The item is indicated, but not monitored	OFF	
		ON	
RR WASHER SW	Rear washer switch OFF	OFF	O
	Rear washer switch ON	ON	
RR WIPER INT	Rear wiper switch OFF	OFF	
	Rear wiper switch INT	ON	P
RR WIPER ON	Rear wiper switch OFF	OFF	
	Rear wiper switch ON	ON	
RR WIPER STOP	Rear wiper stop position	OFF	
	Other than rear wiper stop position	ON	
TAIL LAMP SW	Lighting switch OFF	OFF	
	Lighting switch 1ST	ON	WCS

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	ON
TURN SIGNAL L	Turn signal switch OFF	OFF
	Turn signal switch LH	ON
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

1: With Intelligent Key

2: With remote keyless entry system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal Layout

INFOID:000000004173685

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LIIA2443E

INFOID:000000004173686

Physical Values

(M19)

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

(M18)

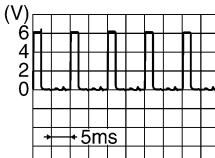
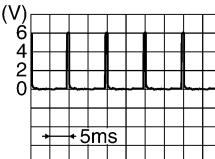
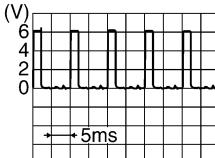
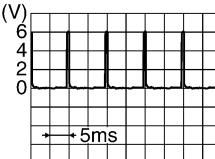
1 2 3 4 5 6 7 8
21 22 23 24 25 26 27 28
9 10 11 12 13 14 15 16
29 30 31 32 33 34 35 36
17 18 19 20
37 38 39 40

(M20)

56 57 58 59 60 61 62 63 64
65 66 67 68 69 70

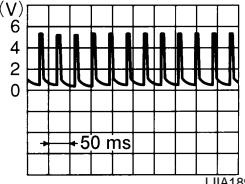
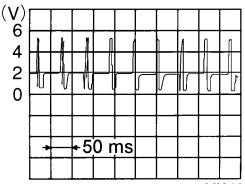
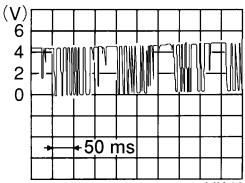
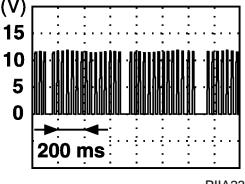
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR/W	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	V	Combination switch input 1				
9	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
					OFF (other than above)	Battery voltage
11	O	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	L/W	Tire pressure warning check connector	Input	OFF	—	5V
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

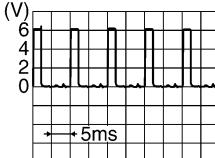
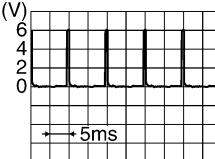
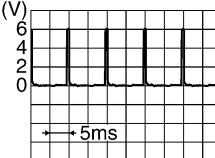
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LIIA1893E
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 LIIA1894E
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LIIA1895E
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	W/V	BUS	—	—	Ignition switch ON or power window timer operates	 PIIA2344E
23	G/O	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

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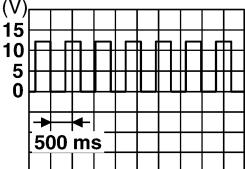
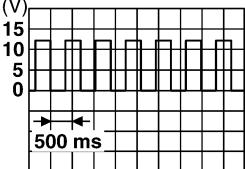
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)				
				Ignition switch	Operation or condition					
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage				
					Front blower motor ON	0V				
29	W/B	Hazard switch	Input	OFF	ON	0V				
					OFF	5V				
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E				
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E				
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E				
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E				
36	R/W	Combination switch output 1								
37 ¹	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage				
					Intelligent Key inserted	0V				
37 ²	B/R	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage				
					Key inserted	0V				
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage				
39	L	CAN-H	—	—	—	—				
40	P	CAN-L	—	—	—	—				
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0				
					Glass hatch closed	Battery				
43	R/B	Back door switch (without power back door) or back door latch (door ajar switch) (with power back door)	Input	OFF	ON (open)	0V				
					OFF (closed)	Battery voltage				

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	SB	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	R	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	G/Y	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
54	Y	Rear wiper output circuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	0V
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Battery voltage
55	SB	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/G	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
					ON	—
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage

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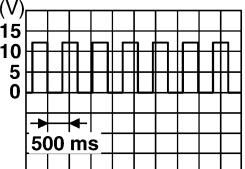
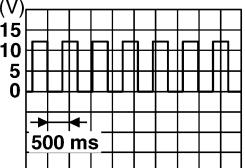
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch	0V
					ON (open)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

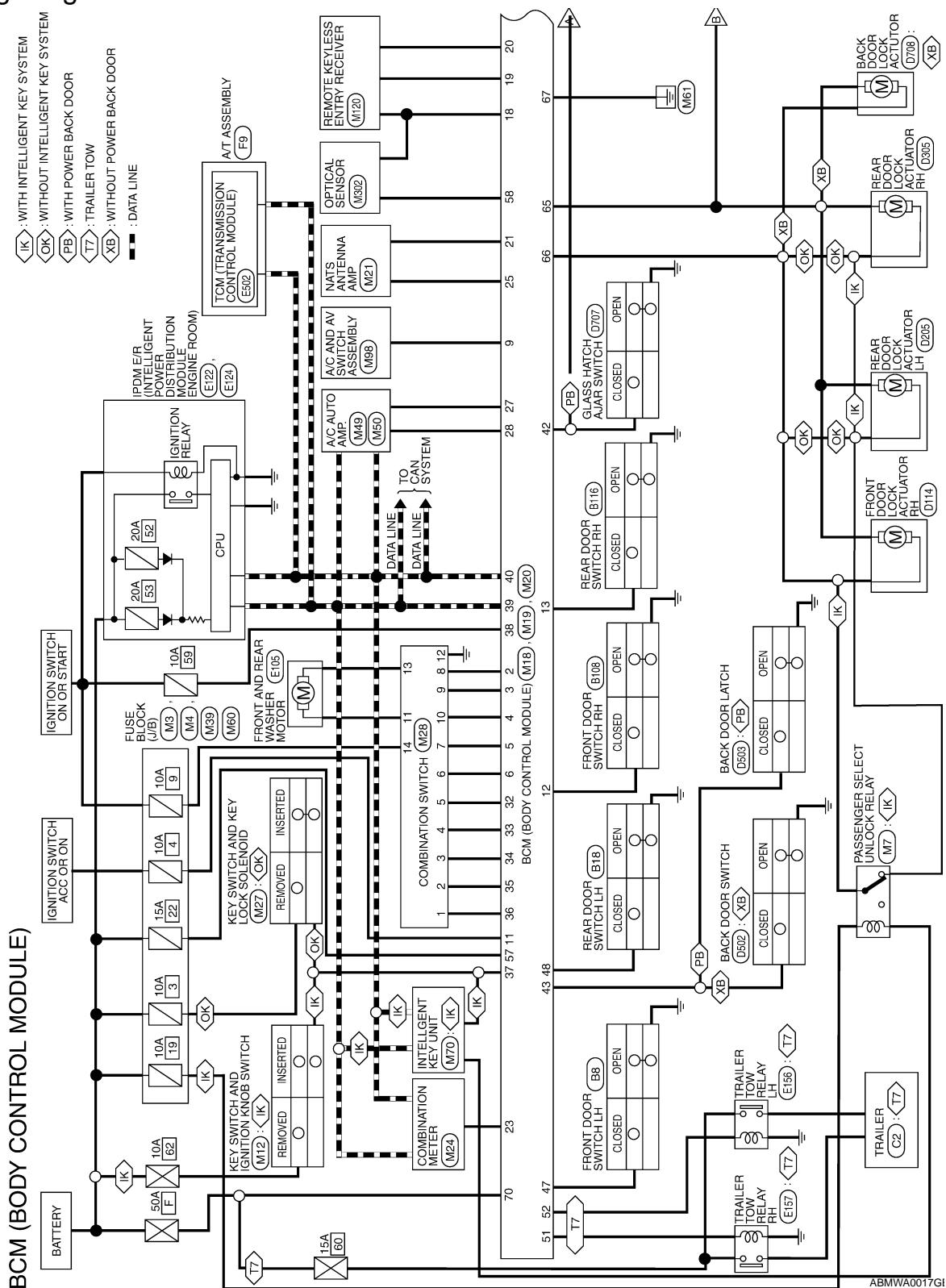
1: With Intelligent Key system

2: With remote keyless entry system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram



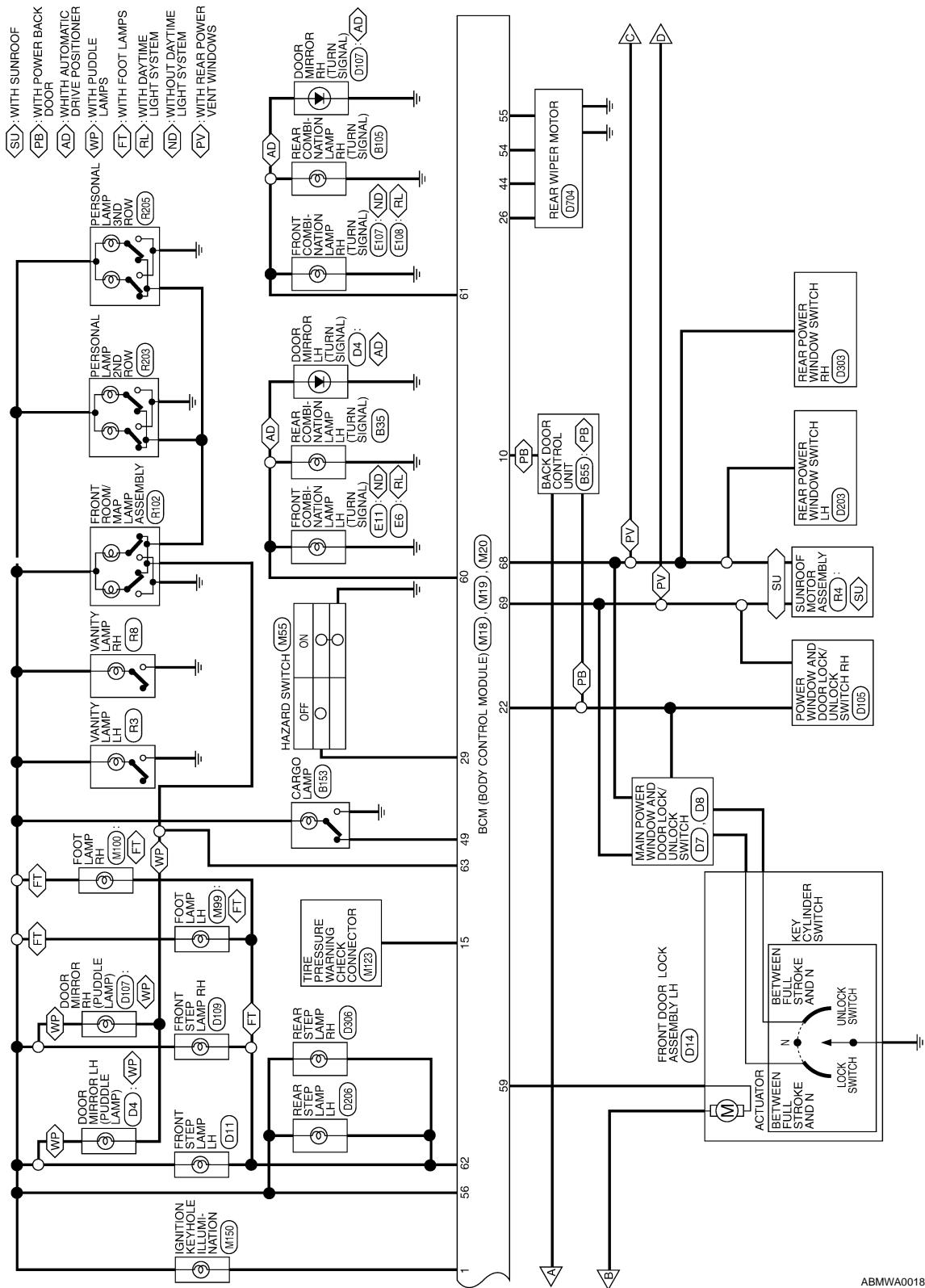
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WCS

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

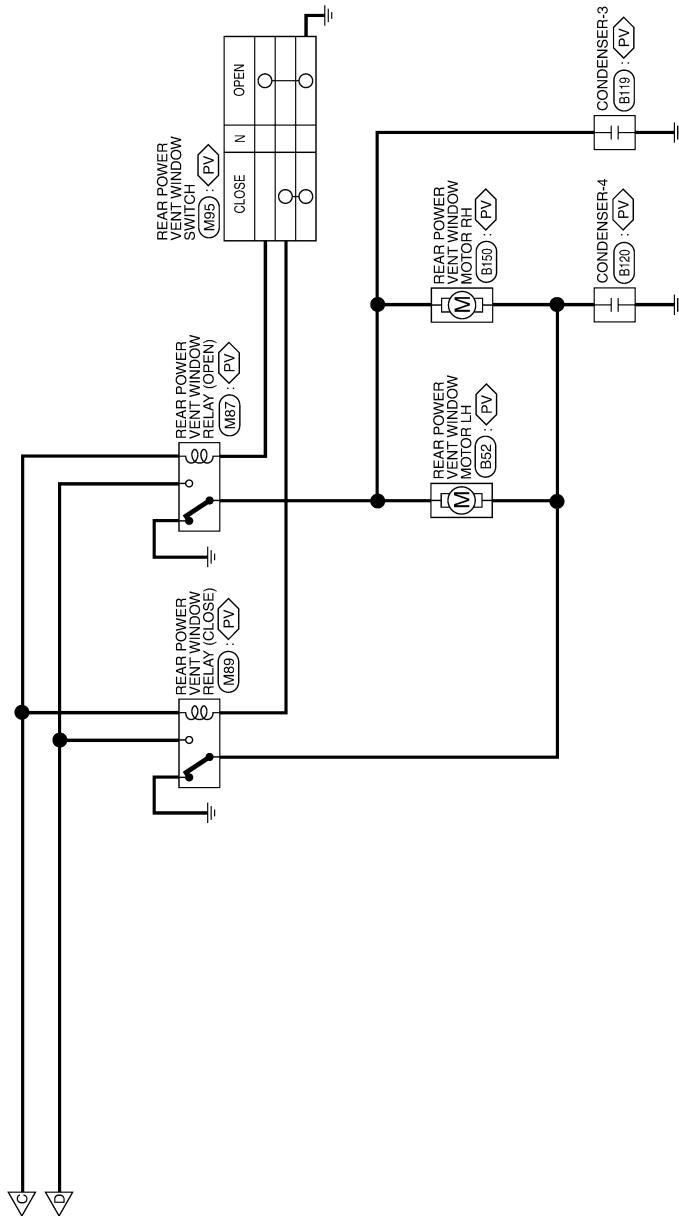


ABMWA0018GI

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

PV: WITH REAR POWER VENT WINDOWS



ABMWA0019G

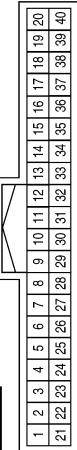
WCS

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE) CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1	BR/W	KEY RING OUTPUT
2	SB	INPUT 5
3	GR/Y	INPUT 4
4	Y	INPUT 3
5	GR/B	INPUT 2
6	V	INPUT 1
7	-	-
8	-	-
9	GR/R	REAR DEFOGGER SW
10	G	IVCS INPUT
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
14	-	-
15	L/W	TPMS MODE TRIGGER SW

Terminal No.	Color of Wire	Signal Name
16	-	-
17	-	-
18	P	KEYLESS AND AUTO LIGHT SENSOR GND
19	V/W	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G/W	KEYLESS TUNER SIGNAL



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



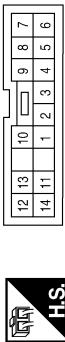
Terminal No.	Color of Wire	Signal Name
41	-	-
42	GR	GLASS HATCH SW
43	R/B	BACK DOOR SW
44	O	REAR WIPER AUTO STOP SW1
45	-	-
46	-	-
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
49	R	LUGGAGE LAMP OUTPUT
50	-	-
51	GR	TRAILER FLASHER OUTPUT (RIGHT)
52	G/B	TRAILER FLASHER OUTPUT (LEFT)
53	-	-
54	Y	REAR WIPER MOTOR OUTPUT 2
55	SB	REARR WIPER MOTOR OUTPUT 1

BCM (BODY CONTROL MODULE)

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



Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT	1	R/W	INPUT 1
57	Y/R	BAT (FUSE)	2	O/B	INPUT 2
58	W/R	AUTO LIGHT SENSOR INPUT 2	3	L	INPUT 3
59	G	DOOR UNLOCK OUTPUT (DR)	4	R/Y	INPUT 4
60	G/B	FLASHER OUTPUT (LEFT)	5	R/G	INPUT 5
61	G/Y	FLASHER OUTPUT (RIGHT)	6	V	OUTPUT 1
62	R/W	STEP LAMP OUTPUT	7	G/B	OUTPUT 2
63	L	ROOM LAMP	8	SB	OUTPUT 5
64	-	-	9	G/Y	OUTPUT 4
65	V	DOOR LOCK OUTPUT (ALL)	10	Y	OUTPUT 3
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)	11	V/W	WASHER MOTOR
67	B	GND (POWER)	12	B	GND
68	W/L	POWER WINDOW POWER SUPPLY (RAP)	13	W/R	WASHER MOTOR
69	W/R	POWER WINDOW POWER SUPPLY (BAT)	14	R/L	GND
70	W/B	BATT (F/L)			

WCS

Fail Safe

ABMIA0026GB

INFOID:0000000004173688

Fail-safe index

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.
U1010: CONTROL UNIT (CAN)	Inhibit engine cranking	When the BCM re-start communicating with the other modules.

DTC Inspection Priority Chart

INFOID:000000004173689

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

Priority	DTC
1	<ul style="list-style-type: none"> • 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 • B2013: STRG COMM 1 • B2552: INTELLIGENT KEY • B2590: NATS MALFUNCTION
3	<ul style="list-style-type: none"> • C1729: VHCL SPEED SIG ERR
4	<ul style="list-style-type: none"> • C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • C1708: [NO DATA] FL • C1709: [NO DATA] FR • C1710: [NO DATA] RR • C1711: [NO DATA] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL • C1735: IGNITION SIGNAL

DTC Index

INFOID:000000004173690

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.
- 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.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-31
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-32
B2013: STRG COMM 1	—	—	—	SEC-26
B2190: NATS ANTENNA AMP	—	—	—	SEC-29 (with I-Key), SEC-125 (without I-Key)
B2191: DIFFERENCE OF KEY	—	—	—	SEC-32 (with I-Key), SEC-128 (without I-Key)
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-33 (with I-Key), SEC-129 (without I-Key)
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-35 (with I-Key), SEC-131 (without I-Key)
B2552: INTELLIGENT KEY	—	—	—	SEC-37
B2590: NATS MALFUNCTION	—	—	—	SEC-38
C1704: LOW PRESSURE FL	—	—	—	WT-33
C1705: LOW PRESSURE FR	—	—	—	WT-33
C1706: LOW PRESSURE RR	—	—	—	WT-33
C1707: LOW PRESSURE RL	—	—	—	WT-33
C1708: [NO DATA] FL	—	—	—	WT-14
C1709: [NO DATA] FR	—	—	—	WT-16
C1710: [NO DATA] RR	—	—	—	WT-16
C1711: [NO DATA] RL	—	—	—	WT-16
C1712: [CHECKSUM ERR] FL	—	—	—	WT-16
C1713: [CHECKSUM ERR] FR	—	—	—	WT-16
C1714: [CHECKSUM ERR] RR	—	—	—	WT-16
C1715: [CHECKSUM ERR] RL	—	—	—	WT-16
C1716: [PRESSDATA ERR] FL	—	—	—	WT-18
C1717: [PRESSDATA ERR] FR	—	—	—	WT-16
C1718: [PRESSDATA ERR] RR	—	—	—	WT-16
C1719: [PRESSDATA ERR] RL	—	—	—	WT-16
C1720: [CODE ERR] FL	—	—	—	WT-16
C1721: [CODE ERR] FR	—	—	—	WT-16
C1722: [CODE ERR] RR	—	—	—	WT-16
C1723: [CODE ERR] RL	—	—	—	WT-16
C1724: [BATT VOLT LOW] FL	—	—	—	WT-16
C1725: [BATT VOLT LOW] FR	—	—	—	WT-16
C1726: [BATT VOLT LOW] RR	—	—	—	WT-16
C1727: [BATT VOLT LOW] RL	—	—	—	WT-16
C1729: VHCL SPEED SIG ERR	—	—	—	WT-19
C1735: IGN_CIRCUIT_OPEN	—	—	—	—

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THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:000000003709053

Light reminder warning does not sound even though headlamp is illuminated.

Diagnosis Procedure

INFOID:000000003709054

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-4, "Work Flow"](#).

2.CHECK FRONT DOOR SWITCH LH SIGNAL CIRCUIT

Perform inspection of the front door switch LH signal circuit. Refer to [DLK-72, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK FRONT DOOR SWITCH LH

Perform a unit inspection for the front door switch LH. Refer to [DLK-72, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-56, "Removal and Installation"](#).

NO >> Replace the front door switch LH.

THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

Description

INFOID:0000000003709055

- Seat belt warning does not sound even though driver seat belt is not fastened.
- Seat belt warning sounds even though driver seat belt is fastened.

Diagnosis Procedure

INFOID:0000000003709056

1.CHECK WARNING CHIME OPERATION

1. With key removed from key switch and the front door LH open, turn lighting switch to 1st or 2nd position.
2. Return lighting switch to off position, and insert key into key switch.

Does warning chime sound for both steps?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-105, "Removal and Installation"](#).

2.CHECK SEAT BELT WARNING LAMP

1. Turn ignition switch ON.
2. Check the operation of the seat belt warning lamp in the combination meter.

Seat belt fastened : OFF

Seat belt not fastened : ON

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-56, "Removal and Installation"](#).

NO >> GO TO 3

3.CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

Perform inspection of the seat belt buckle switch circuit. Refer to [WCS-21, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair harness or connector.

4.CHECK SEAT BELT BUCKLE SWITCH UNIT

Perform a unit inspection for the seat belt buckle switch. Refer to [WCS-22, "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the combination meter. Refer to [MWI-105, "Removal and Installation"](#).

NO >> Replace the seat belt buckle pre-tensioner assembly LH (seat belt buckle switch).

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THE KEY WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE KEY WARNING DOES NOT SOUND

Description

INFOID:0000000003709057

Key warning does not sound even though key is in ignition and front door LH is opened.

Diagnosis Procedure

INFOID:0000000003709058

1.CHECK WARNING CHIME OPERATION

With key removed from the ignition and the front door LH open, turn the lighting switch to 1st or 2nd position.

Does warning chime sound?

YES >> GO TO 2

NO >> Replace combination meter. Refer to [MWI-105, "Removal and Installation"](#).

2.CHECK KEY SWITCH CIRCUIT

Perform inspection of the key switch circuit. Refer to [WCS-23, "Diagnosis Procedure"](#) (with Intelligent Key) or [WCS-25, "Diagnosis Procedure"](#) (without Intelligent Key).

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

3.CHECK KEY SWITCH

Perform a unit inspection for the key switch. Refer to [WCS-24, "Component Inspection"](#) (with Intelligent Key) or [WCS-26, "Component Inspection"](#) (without Intelligent Key).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-56, "Removal and Installation"](#).

NO >> Replace the key switch and ignition knob switch (with Intelligent Key) or key switch and key lock solenoid (without Intelligent Key).

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:0000000003709059

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

WARNING:

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

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