

SECTION WCS

WARNING CHIME SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001712818

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-24. "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 >

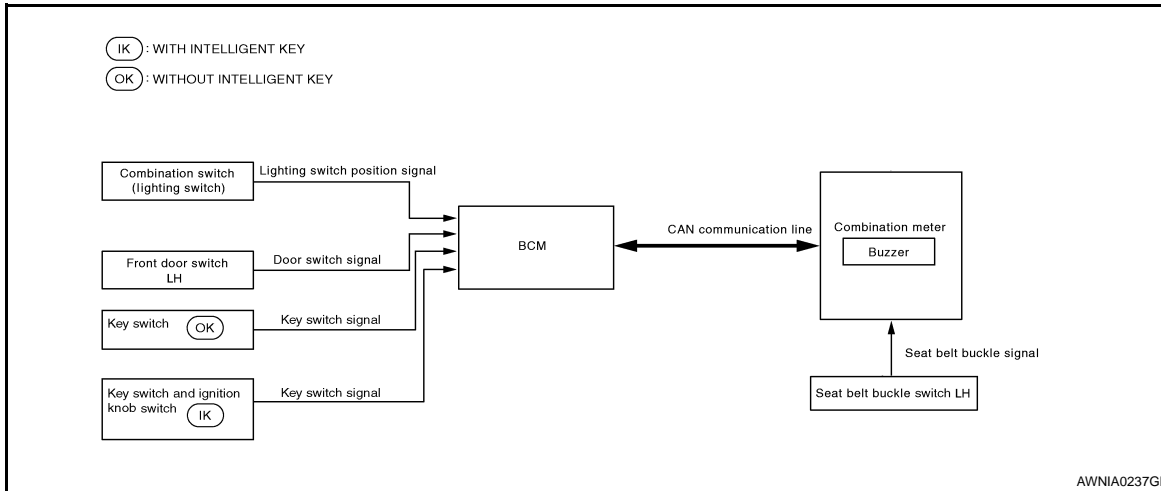
FUNCTION DIAGNOSIS

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM

WARNING CHIME SYSTEM : System Diagram

INFOID:000000001712819



WARNING CHIME SYSTEM : System Description

INFOID:000000001712820

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

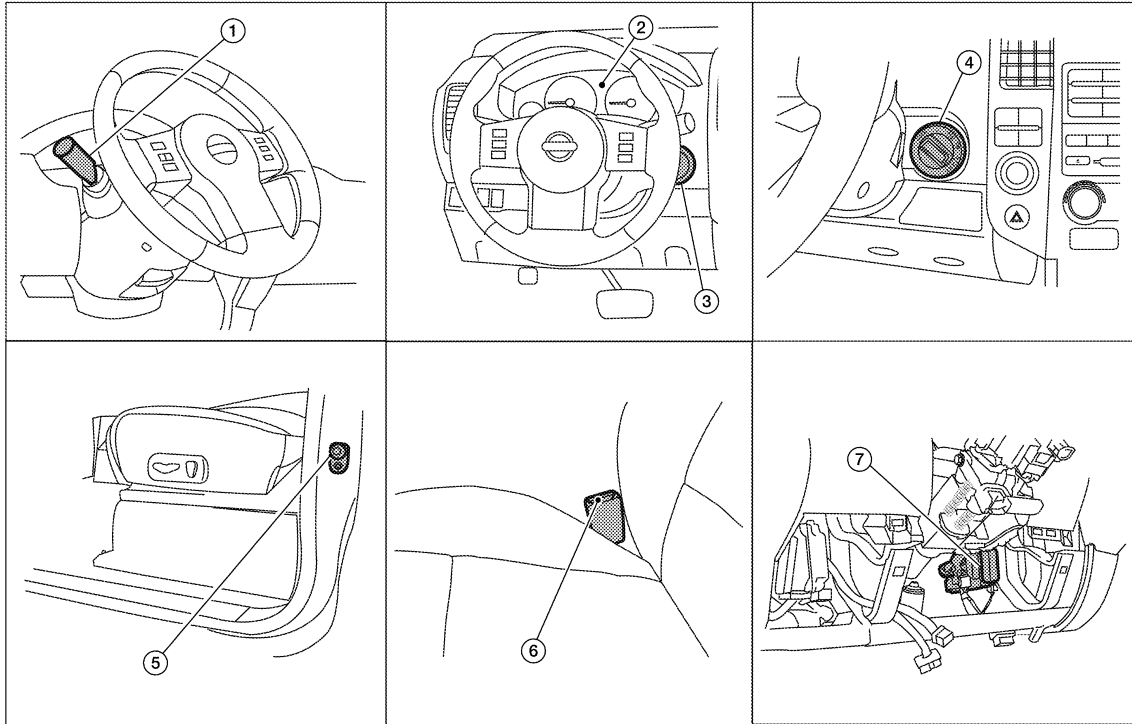
Warning functions	Signal name
Light reminder warning chime	<ul style="list-style-type: none"> • Lighting switch position signal • Door switch signal
Seat belt warning chime	Seat belt buckle switch signal
Key warning chime	<ul style="list-style-type: none"> • Key switch signal • Door switch signal

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

WARNING CHIME SYSTEM : Component Parts Location

INFOID:000000001712821



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|--------------------------------------------------------------------|----------------------------|---------------------------------------------|
| 1. Combination switch (lighting switch) M28 | 2. Combination meter M24 | 3. Key switch M27 (without Intelligent Key) |
| 4. Key switch and ignition knob switch M66 (with Intelligent Key) | 5. Front door switch LH B8 | 6. Seat belt buckle switch LH B12 |
| 7. BCM M18, M19, M20 (view with instrument lower panel LH removed) | | |

WARNING CHIME SYSTEM : Component Description

INFOID:000000001712822

Unit	Description
Combination meter	<ul style="list-style-type: none"> Receives the seat belt buckle switch signal from the seat belt buckle switch LH 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.
Key switch and ignition knob switch (with Intelligent Key)	Transmits key switch signal to BCM.
Key switch (without Intelligent Key)	Transmits key switch signal to BCM.
Seat belt buckle switch LH	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.

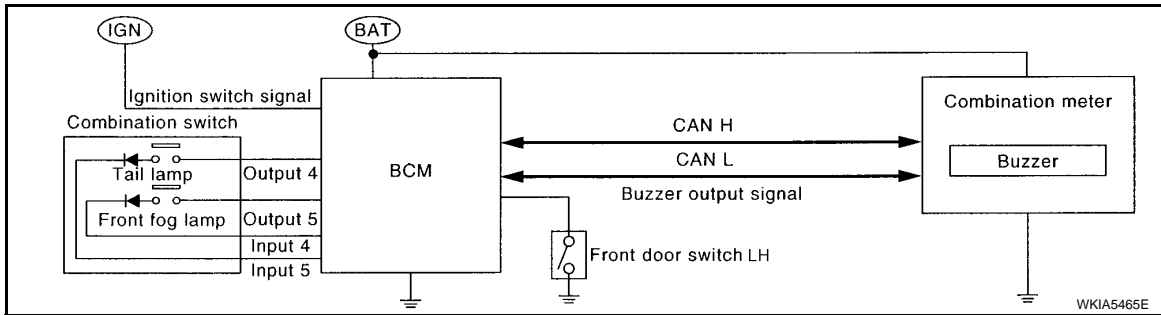
LIGHT REMINDER WARNING CHIME

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:000000001712823



LIGHT REMINDER WARNING CHIME : System Description

INFOID:000000001712824

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.

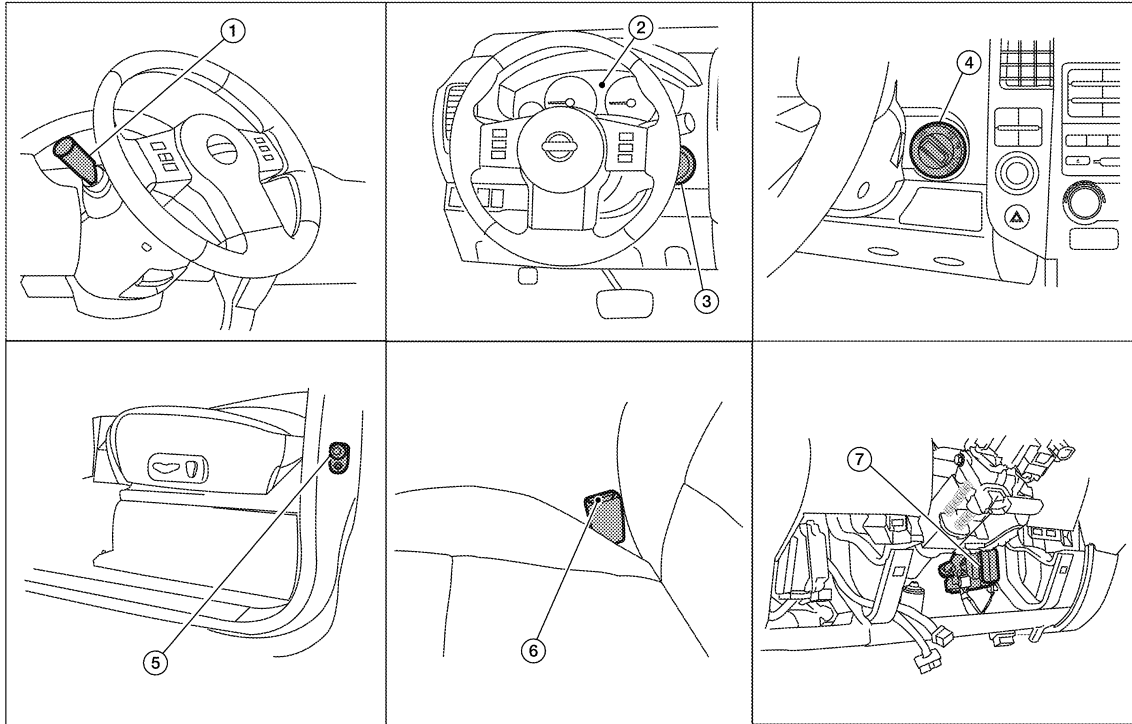
- Lighting switch OFF
- Ignition switch ON
- Front door switch LH is OFF

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

LIGHT REMINDER WARNING CHIME : Component Parts Location

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- | | | |
|--------------------------------------------------------------------|----------------------------|---------------------------------------------|
| 1. Combination switch (lighting switch) M28 | 2. Combination meter M24 | 3. Key switch M27 (without Intelligent Key) |
| 4. Key switch and ignition knob switch M66 (with Intelligent Key) | 5. Front door switch LH B8 | 6. Seat belt buckle switch LH B12 |
| 7. BCM M18, M19, M20 (view with instrument lower panel LH removed) | | |

LIGHT REMINDER WARNING CHIME : Component Description

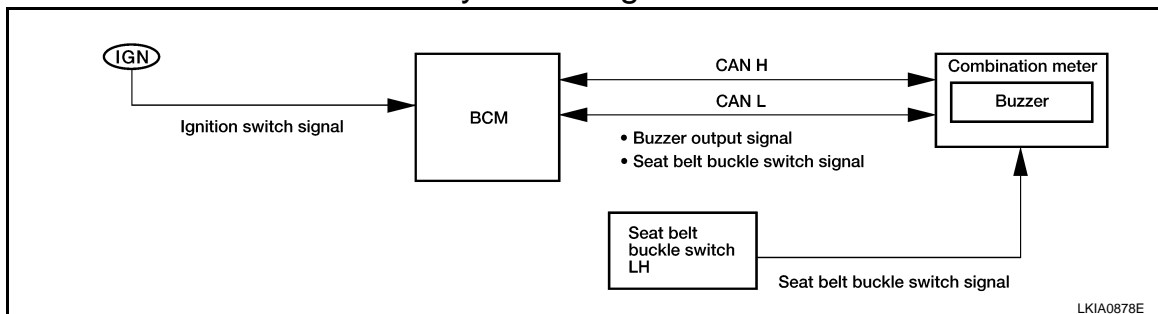
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Unit	Description
Combination meter	Receives a buzzer output signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the light warning conditions from the signals provided by various switches and transmits a buzzer output signal 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.

SEAT BELT WARNING CHIME

SEAT BELT WARNING CHIME : System Diagram

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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

SEAT BELT WARNING CHIME : System Description

INFOID:000000001712828

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)

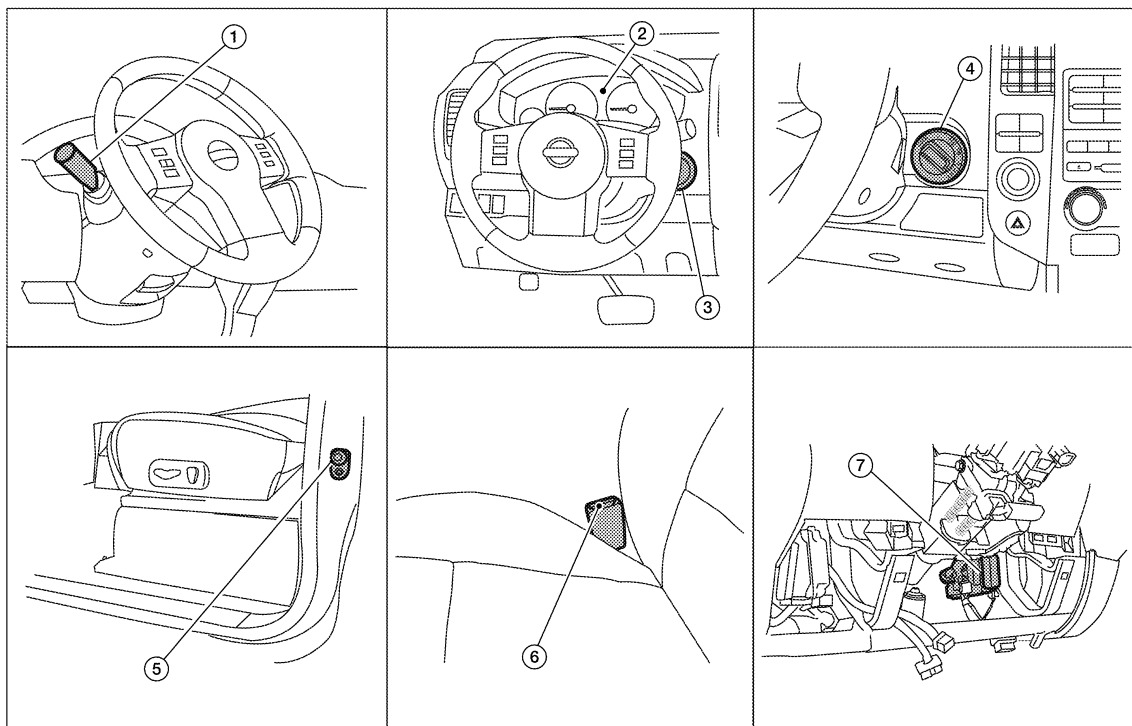
WARNING CANCEL CONDITIONS

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)

SEAT BELT WARNING CHIME : Component Parts Location

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|--------------------------------------------------------------------|----------------------------|---------------------------------------------|
| 1. Combination switch (lighting switch) M28 | 2. Combination meter M24 | 3. Key switch M27 (without Intelligent Key) |
| 4. Key switch and ignition knob switch M66 (with Intelligent Key) | 5. Front door switch LH B8 | 6. Seat belt buckle switch LH B12 |
| 7. BCM M18, M19, M20 (view with instrument lower panel LH removed) | | |

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

SEAT BELT WARNING CHIME : Component Description

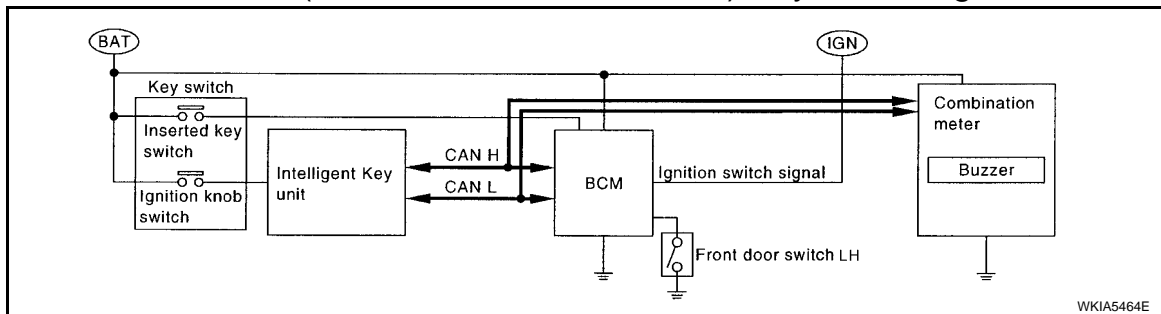
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Unit	Description
Combination meter	<ul style="list-style-type: none"> Receives the seat belt buckle switch signal from the seat belt buckle switch and transmits it to BCM via CAN communication line. Receives a buzzer output signal from BCM via CAN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

KEY WARNING CHIME (WITH INTELLIGENT KEY)

KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Diagram

INFOID:000000001712831



KEY WARNING CHIME (WITH INTELLIGENT KEY) : System Description

INFOID:000000001712832

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"](#).

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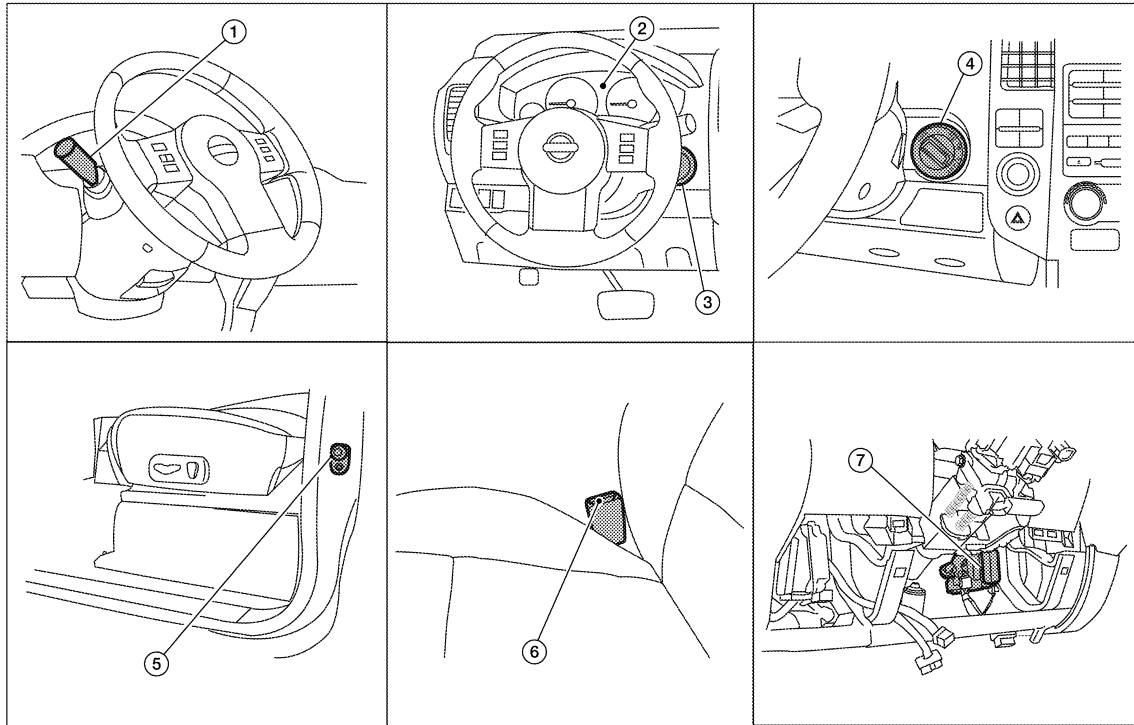
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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

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

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|--------------------------------------------------------------------|----------------------------|---------------------------------------------|
| 1. Combination switch (lighting switch) M28 | 2. Combination meter M24 | 3. Key switch M27 (without Intelligent Key) |
| 4. Key switch and ignition knob switch M66 (with Intelligent Key) | 5. Front door switch LH B8 | 6. Seat belt buckle switch LH B12 |
| 7. BCM M18, M19, M20 (view with instrument lower panel LH removed) | | |

KEY WARNING CHIME (WITH INTELLIGENT KEY) : Component Description

INFOID:000000001712834

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

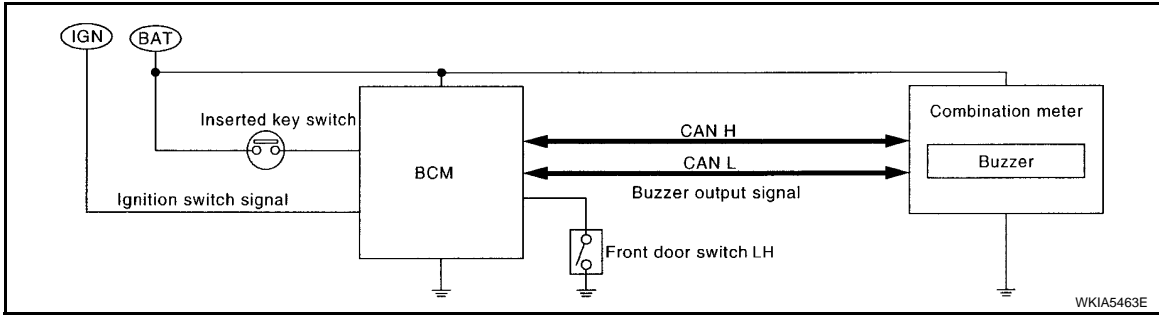
KEY WARNING CHIME (WITHOUT INTELLIGENT KEY)

WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Diagram

INFOID:000000001712835



KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : System Description

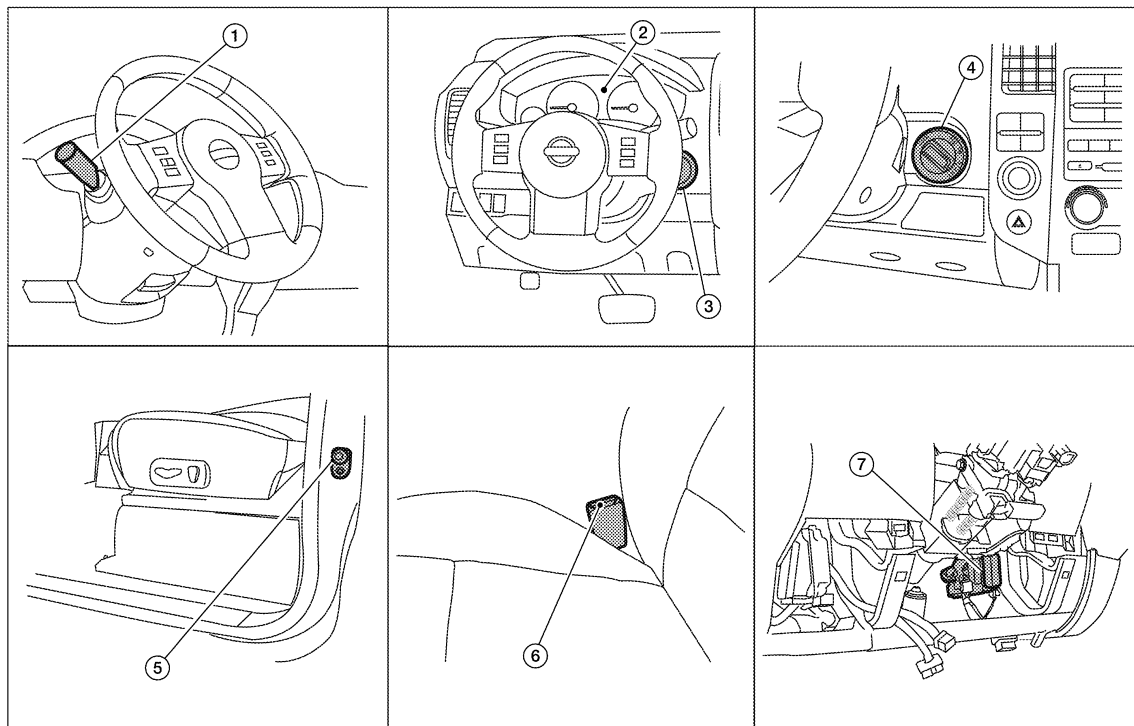
INFOID:000000001712836

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.

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

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|--------------------------------------------------------------------|----------------------------|---------------------------------------------|
| 1. Combination switch (lighting switch) M28 | 2. Combination meter M24 | 3. Key switch M27 (without Intelligent Key) |
| 4. Key switch and ignition knob switch M66 (with Intelligent Key) | 5. Front door switch LH B8 | 6. Seat belt buckle switch LH B12 |
| 7. BCM M18, M19, M20 (view with instrument lower panel LH removed) | | |

KEY WARNING CHIME (WITHOUT INTELLIGENT KEY) : Component Description

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WARNING CHIME SYSTEM

< FUNCTION DIAGNOSIS >

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. It then transmits a buzzer output signal to the combination meter via CAN communication line if necessary.
Front door switch LH	Transmits door switch signal to BCM.
Key switch	Transmits key switch signal to BCM.

DIAGNOSIS SYSTEM (METER)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (METER)

CONSULT-III Function (METER/M&A)

INFOID:000000001716995

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-60, "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.
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.
O/D OFF W/L [ON/OFF]		X	Displays [ON/OFF] condition of AT CHECK (with manual mode) or O/D OFF (without manual mode) 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 IND [ON/OFF]	X	X	Indicates [ON/OFF] condition of A/T manual mode indicator.
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 1 range indicator.
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.
O/D OFF SWITCH [ON/OFF]		X	Indicates [ON/OFF] condition of O/D OFF switch.
FR FOG IND [ON/OFF]		X	This item is not used for this model. "OFF" is always displayed.
RR FOG IND [ON/OFF]		X	This item is not used for this model. "OFF" is always displayed.

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:000000001712840

CONSULT-III APPLICATION ITEMS

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

DATA MONITOR

Display item [Unit]	Description
IGN ON SW [On/Off]	Status of ignition switch judged by BCM.
KEY ON SW [On/Off]	Status of key switch judged by BCM.
DOOR SW-DR [On/Off]	Status of front door switch LH judged by BCM.
LIGHT SW 1ST [On/Off]	Status of lighting switch judged by BCM using the combination switch readout function.
BUCKLE SW [On/Off]	Status of seat belt buckle switch judged by BCM.

ACTIVE TEST

Display item [Unit]	Description
IGN KEY WARN ALM	The key warning chime operation can be checked by operating the relevant function (On/Off).
SEAT BELT WARN TEST	The seat belt warning chime operation can be checked by operating the relevant function (On/Off).
LIGHT WARN ALM	The light warning chime 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:000000001717017

1. CHECK FUSES

Check for blown combination meter fuses.

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

Is the inspection result normal?

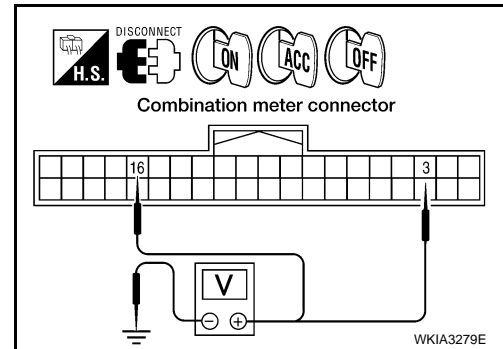
YES >> GO TO 2

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 3, 16 and ground.

Terminals		(-)	Ignition switch position		
(+)			OFF	ACC	ON
Connector	Terminal	Ground	Battery voltage	Battery voltage	Battery voltage
	M24		3	0V	0V
	16				Battery voltage



Is the inspection result normal?

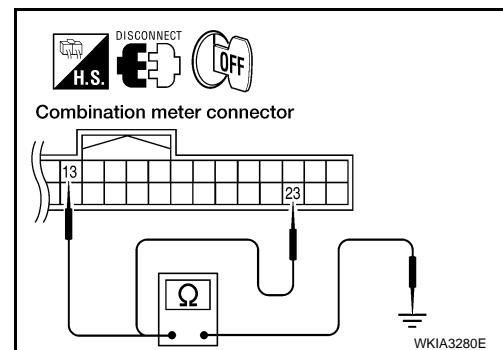
YES >> GO TO 3

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

3. GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Check continuity between combination meter harness connector M24 terminals 13, 23 and ground.

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



Is the inspection result normal?

YES >> Inspection End.

NO >> Check ground harness.

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000001717018

1. CHECK FUSES AND FUSIBLE LINK

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	18 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

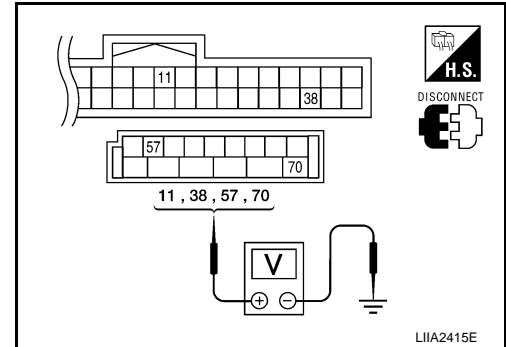
Is the fuse blown?

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

2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM.
- 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.

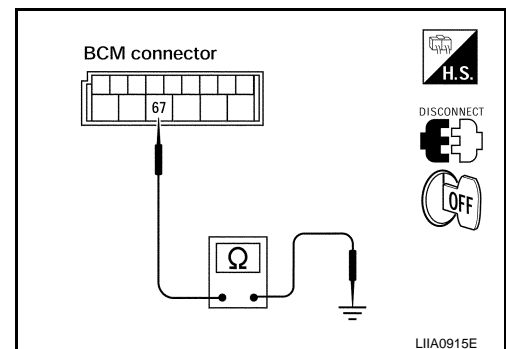
3. CHECK GROUND CIRCUIT

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.



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METER BUZZER CIRCUIT

< COMPONENT DIAGNOSIS >

METER BUZZER CIRCUIT

Description

INFOID:000000001712844

- 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:000000001712845

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-94. "Removal and Installation"](#).

Diagnosis Procedure

INFOID:000000001712846

1.CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to [WCS-16. "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:000000001712847

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

Component Function Check

INFOID:000000001712848

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:000000001712849

1. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector M24 terminal 24 and ground.

24 - Ground

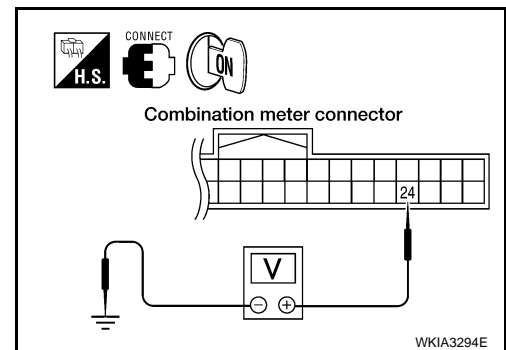
When driver seat belt is fastened : Approx. 12V

When driver seat belt is unfastened : Approx. 0V

Is the inspection result normal?

YES >> Replace combination meter. Refer to [MWI-94, "Removal and Installation"](#).

NO >> GO TO 2



2. CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and seat belt buckle switch LH connector.
3. Check continuity between combination meter harness connector M24 terminal 24 and seat belt buckle switch LH harness connector B12 terminal 1.

24 - 1 : Continuity should exist.

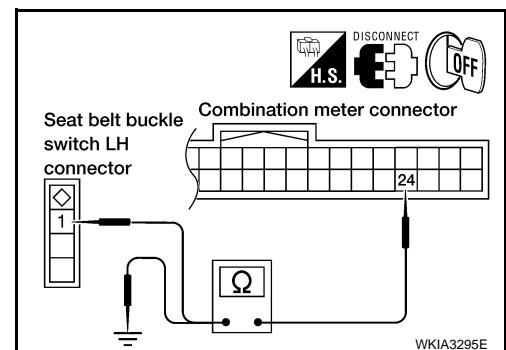
4. Check continuity between combination meter harness connector M24 terminal 24 and ground.

24 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.



3. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

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SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT

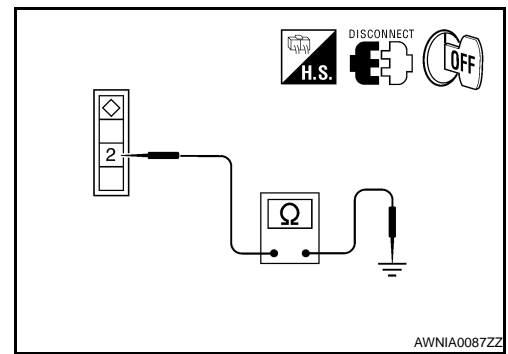
< COMPONENT DIAGNOSIS >

Check continuity between seat belt buckle switch LH harness connector B12 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

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



INFOID:000000001712850

Component Inspection

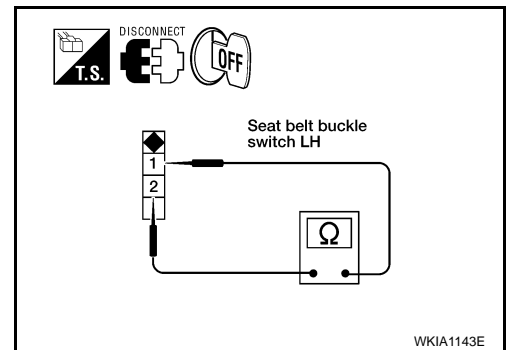
1. CHECK SEAT BELT BUCKLE SWITCH

1. Turn ignition switch OFF.
2. Disconnect the seat belt buckle switch LH connector.
3. Check continuity between terminals 1 and 2.

1- 2
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 switch LH.



KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

Description

INFOID:000000001712851

Transmits a key switch signal to the BCM.

Component Function Check

INFOID:000000001712852

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:000000001712853

1.CHECK FUSE

Check if the key switch and ignition knob switch 10A fuse [No. 11, 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

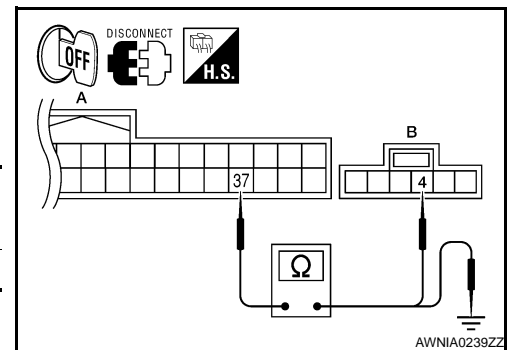
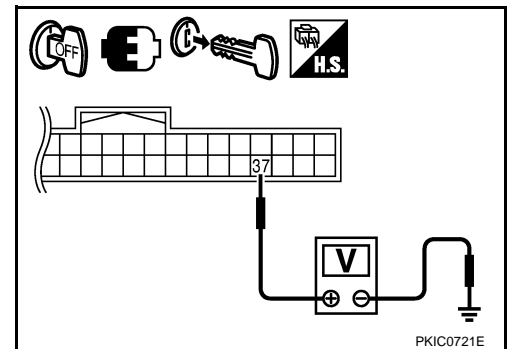
3.CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM and key switch and ignition knob switch connectors.
2. Check continuity between BCM harness connector M18 (A) and key switch and ignition knob switch harness connector M66 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M66	4	Yes

3. Check continuity between BCM harness connector M18 (A) and ground.

A		Ground	Continuity
Connector	Terminal		
M18	37		No



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KEY SWITCH SIGNAL CIRCUIT (WITH INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

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

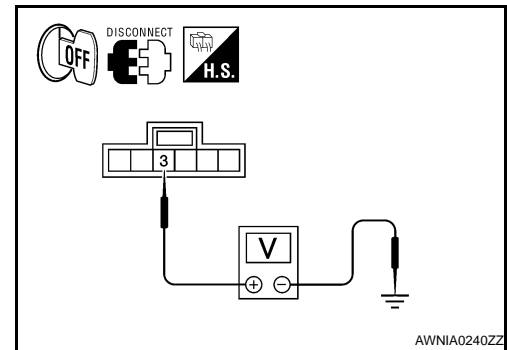
4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(-)	
Key switch and ignition knob switch connector	Terminal		
M66	3	Ground	Battery voltage

Is the inspection result normal?

- YES >> Replace key switch and ignition knob switch.
- NO >> Repair harness or connector.



INFOID:000000001712854

Component Inspection

1. CHECK KEY SWITCH

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

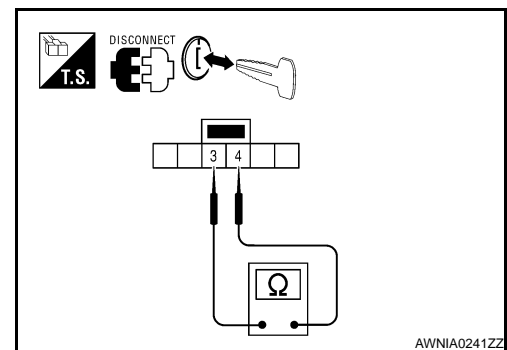
3 – 4

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

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

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:000000001712855

Transmits a key switch signal to the BCM.

Component Function Check

INFOID:000000001712856

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:000000001712857

1.CHECK FUSE

Check if the key switch 10A fuse [No. 25, 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

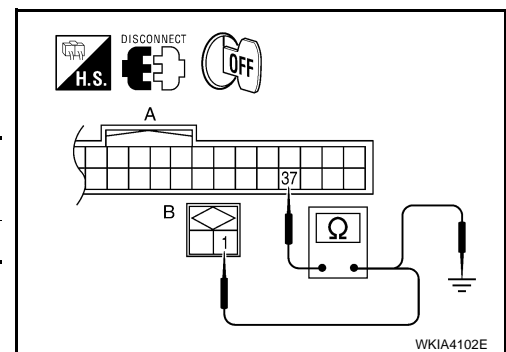
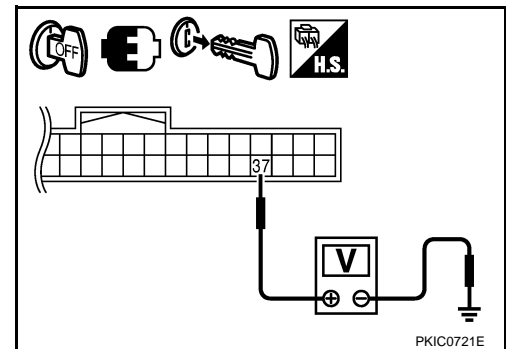
3.CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM and key switch connectors.
2. Check continuity between BCM harness connector M18 (A) and key switch harness connector M27 (B).

A		B		Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M27	1	Yes

3. Check continuity between BCM harness connector M18 (A) and ground.

A		Ground	Continuity
Connector	Terminal		
M18	37		No



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KEY SWITCH SIGNAL CIRCUIT (WITHOUT INTELLIGENT KEY)

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

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

4.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

Check voltage between key switch harness connector and ground.

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

Is the inspection result normal?

- YES >> Replace key switch.
- NO >> Repair harness or connector.

Component Inspection

1.CHECK KEY SWITCH

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

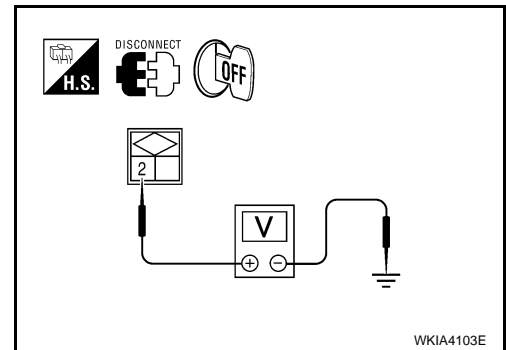
1 – 2

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

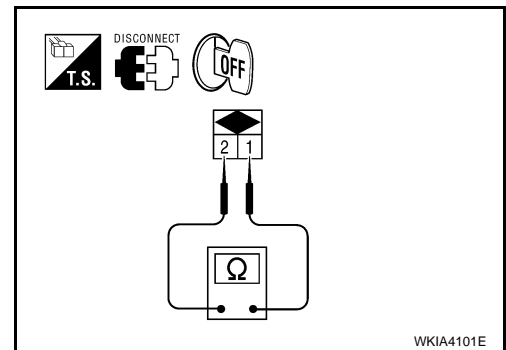
When key is removed from key cylinder : Continuity should not exist.

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace key switch.



INFOID:000000001712858



WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME SYSTEM

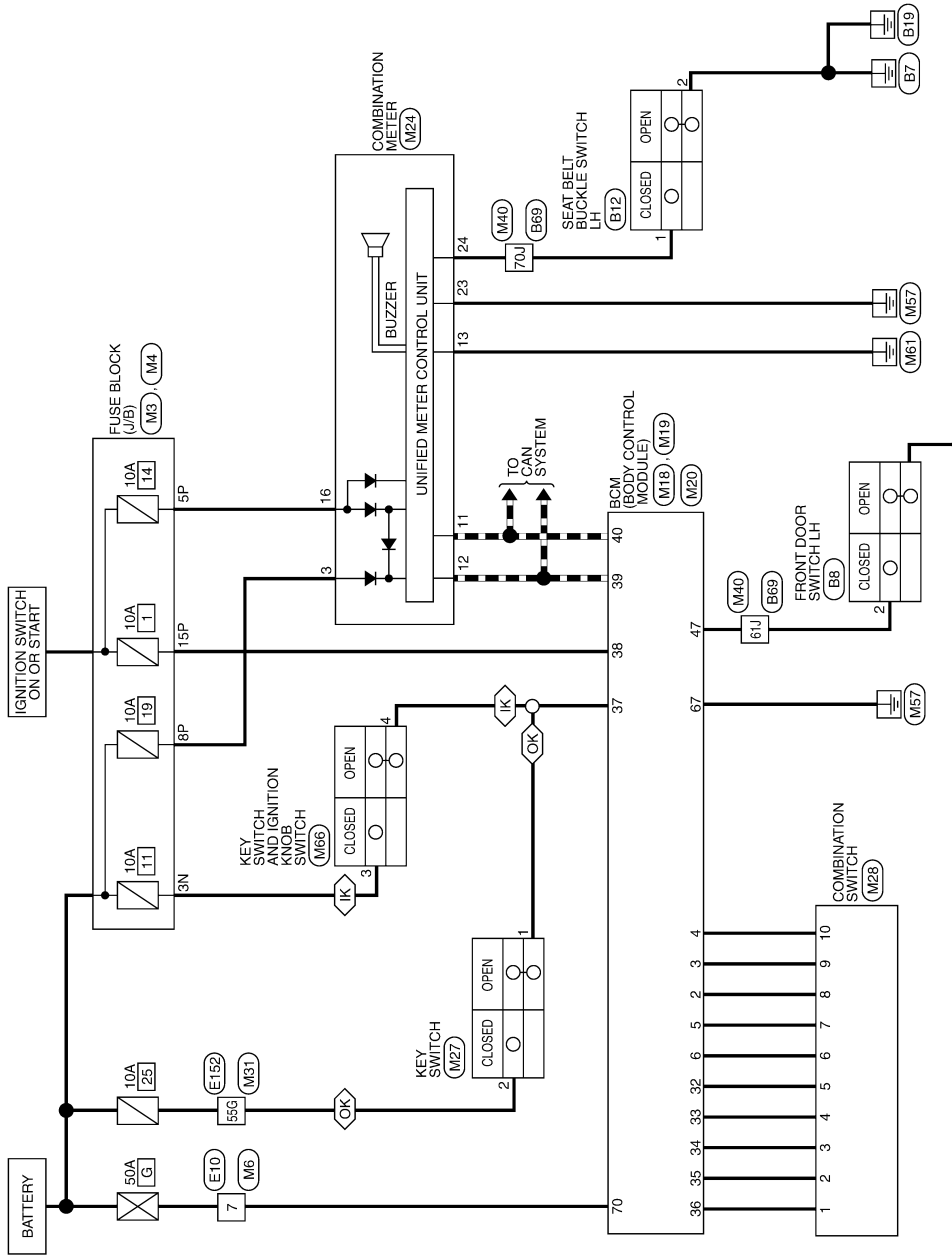
Wiring Diagram

INFOID:000000001712859

◊ : WITHOUT INTELLIGENT KEY

 ◊ : WITH INTELLIGENT KEY

 - - - : DATA LINE



WARNING CHIME SYSTEM

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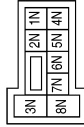
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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

WARNING CHIME SYSTEM CONNECTORS

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



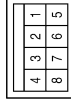
Terminal No.	Color of Wire	Signal Name
3N	R/B	-

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



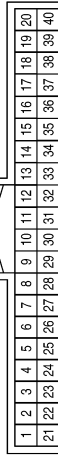
Terminal No.	Color of Wire	Signal Name
5P	W/G	-
8P	R/Y	-
15P	W/R	-

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



Terminal No.	Color of Wire	Signal Name
7	W	-

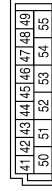
Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	P	COMBI SW INPUT5
3	SB	COMBI SW INPUT4

Terminal No.	Color of Wire	Signal Name
4	V	COMBI SW INPUT3
5	L	COMBI SW INPUT2
6	R	COMBI SW INPUT1
32	O	COMBI SW OUTPUT5
33	GR	COMBI SW OUTPUT4
34	G	COMBI SW OUTPUT3
35	BR	COMBI SW OUTPUT2
36	LG	COMBI SW OUTPUT1
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
47	GR	DOOR SW (DR)

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WARNING CHIME SYSTEM

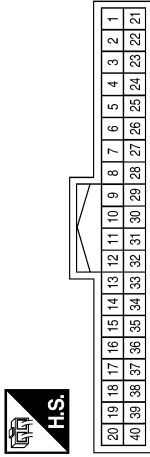
< COMPONENT DIAGNOSIS >

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



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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



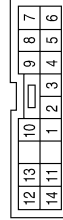
Terminal No.	Color of Wire	Signal Name
3	R/Y	-
11	P	-
12	L	-
13	GR	-
16	W/G	-
23	B	-
24	V	-

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE



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

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1

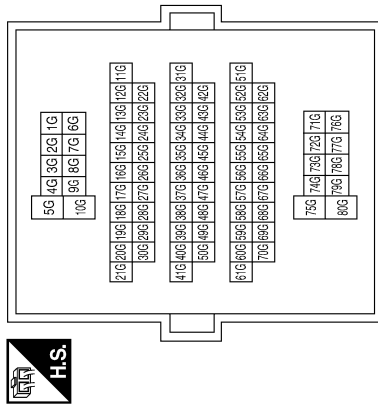
Terminal No.	Color of Wire	Signal Name
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUT PUT 1
7	L	OUT PUT 2
8	P	OUT PUT 5
9	SB	OUT PUT 4
10	V	OUT PUT 3

WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

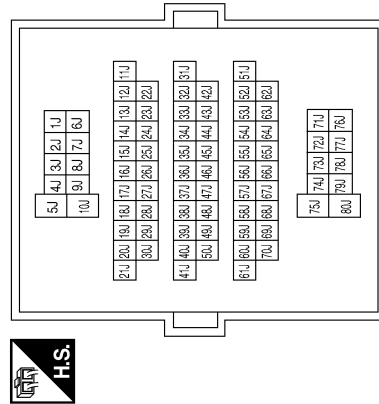
Terminal No.	Color of Wire	Signal Name
55G	Y	-

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
61J	GR	-
70J	V	-

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



Connector No.	M66
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



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

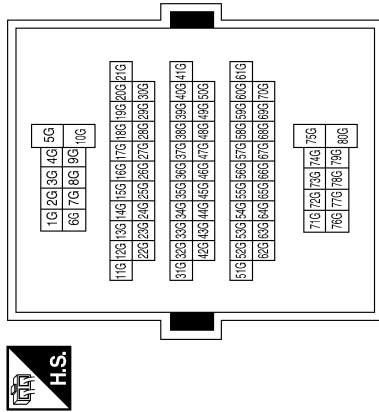
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WARNING CHIME SYSTEM

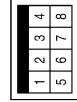
< COMPONENT DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
55G	Y	-

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

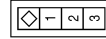


Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



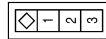
Terminal No.	Color of Wire	Signal Name
7	W	-

Connector No.	B12
Connector Name	SEAT BELT BUCKLE SWITCH LH
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
2	GR	-

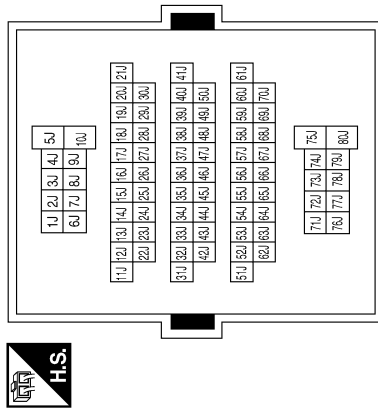
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WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
61J	GR	-
70J	V	-

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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COMBINATION METER

< ECU DIAGNOSIS >

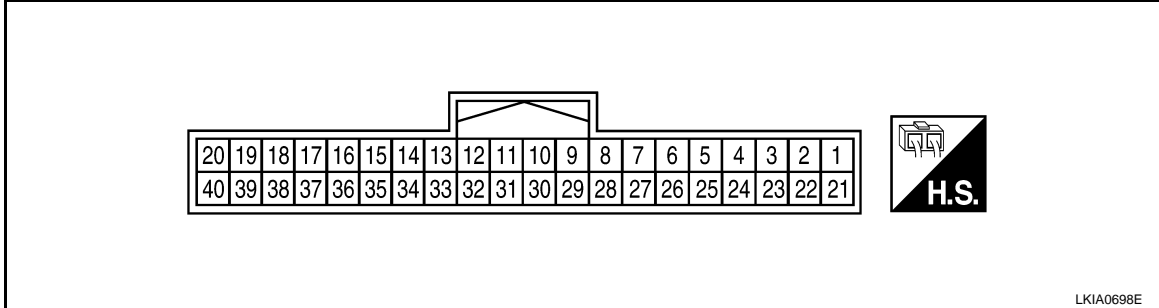
ECU DIAGNOSIS

COMBINATION METER

Reference Value

INFOID:000000001717119

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
2	P	Generator	ON	Generator voltage low	0
				Generator voltage normal	Battery voltage
3	R/Y	Battery power supply	—	—	Battery voltage
4	B/Y	Fuel level sensor ground	ON	—	0
6	LG	Vehicle speed signal output (8-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	<p>NOTE: Maximum voltage may be 12V due to specifications (connected units).</p> <p>PKIC0643E</p>
9	BR	Fuel level sensor signal	—	—	Refer to MWI-11, "FUEL GAUGE : System Description" .
11	P	CAN-L	—	—	—
12	L	CAN-H	—	—	—
13	GR	Ground	—	—	0
16	W/G	Ignition switch ON or START	ON	—	Battery voltage
22	BR	Illumination control switch	—	—	Refer to INL-9, "System Description" .
23	B	Ground	—	—	0
24	V	Seat belt buckle switch LH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
31	G	Parking brake switch	ON	Parking brake applied	0
				Parking brake released	Battery voltage
32	SB	Brake fluid level switch	ON	Brake fluid level low	0
				Brake fluid level normal	Battery voltage

COMBINATION METER

< ECU DIAGNOSIS >

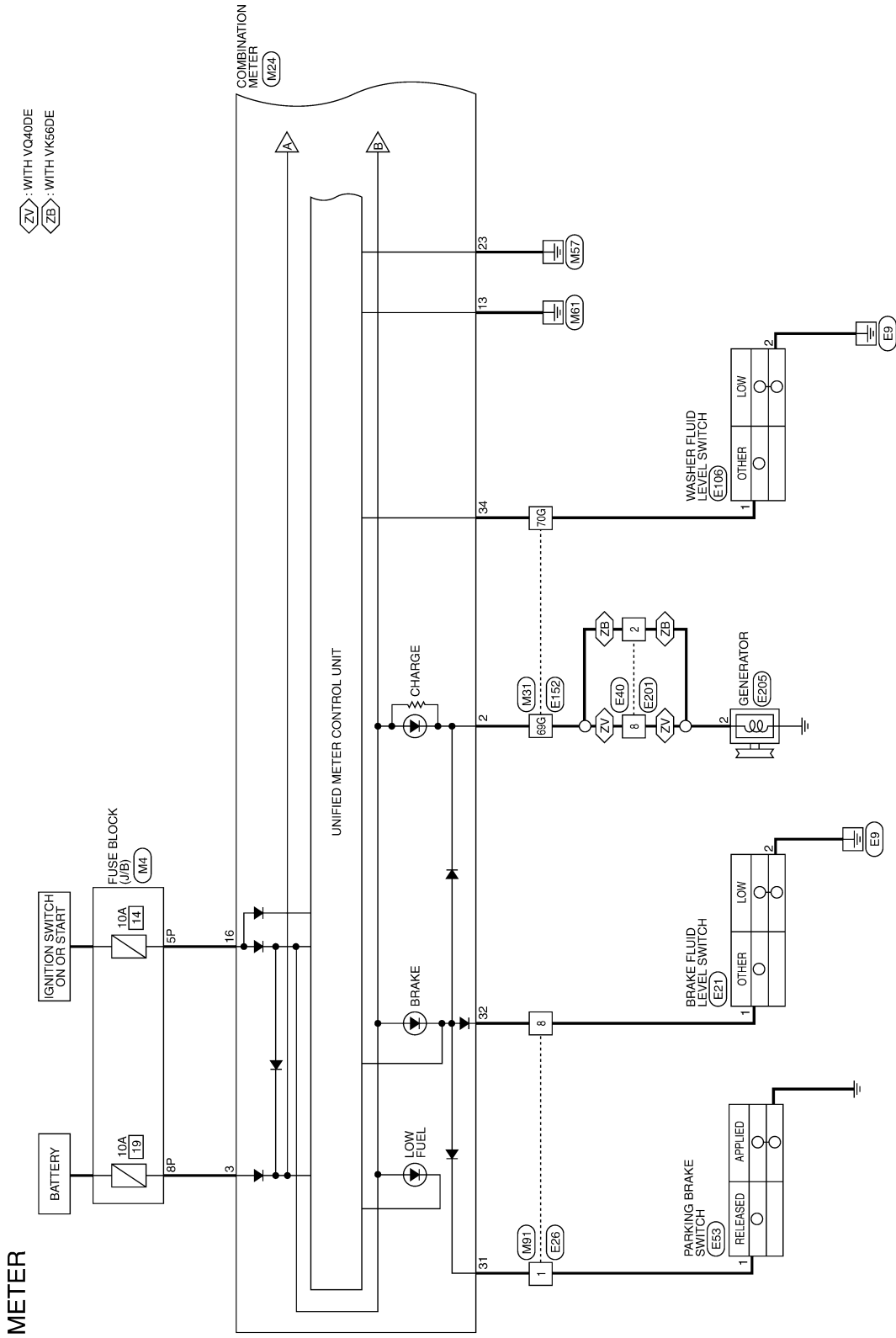
Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
33	LG	Stop lamp switch	—	Brake pedal depressed	Battery voltage
				Brake pedal released	0
34	L	Washer fluid level switch	ON	Washer fluid level low	0
				Washer fluid level normal	Battery voltage
37	SB	Air bag warning lamp input	ON	Air bag warning lamp ON	4
				Air bag warning lamp OFF	0
39	G	Security indicator input	OFF	Security indicator ON	0
				Security indicator OFF	Battery voltage
40	LG	Seat belt buckle switch RH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage

COMBINATION METER

< ECU DIAGNOSIS >

Wiring Diagram

INFOID:000000001717120



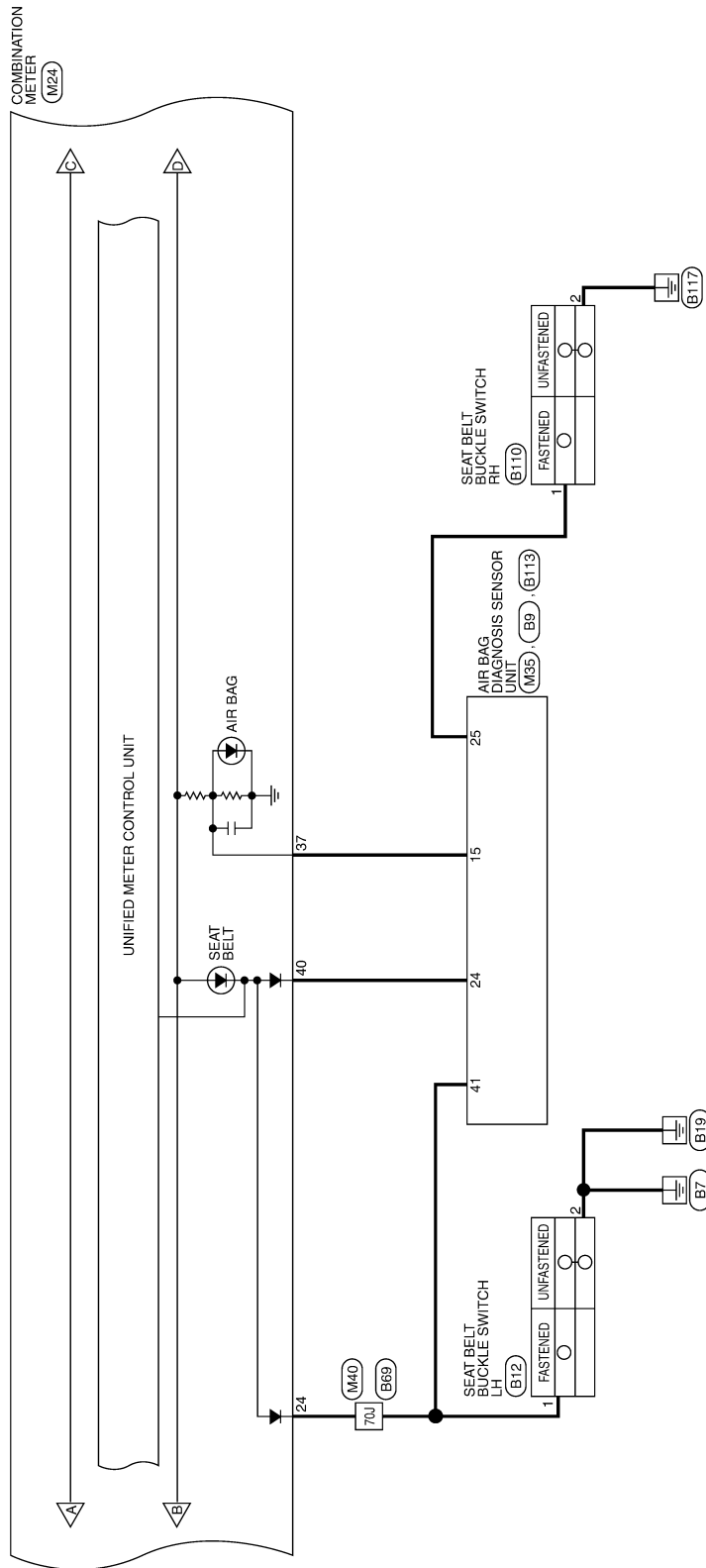
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COMBINATION METER

< ECU DIAGNOSIS >

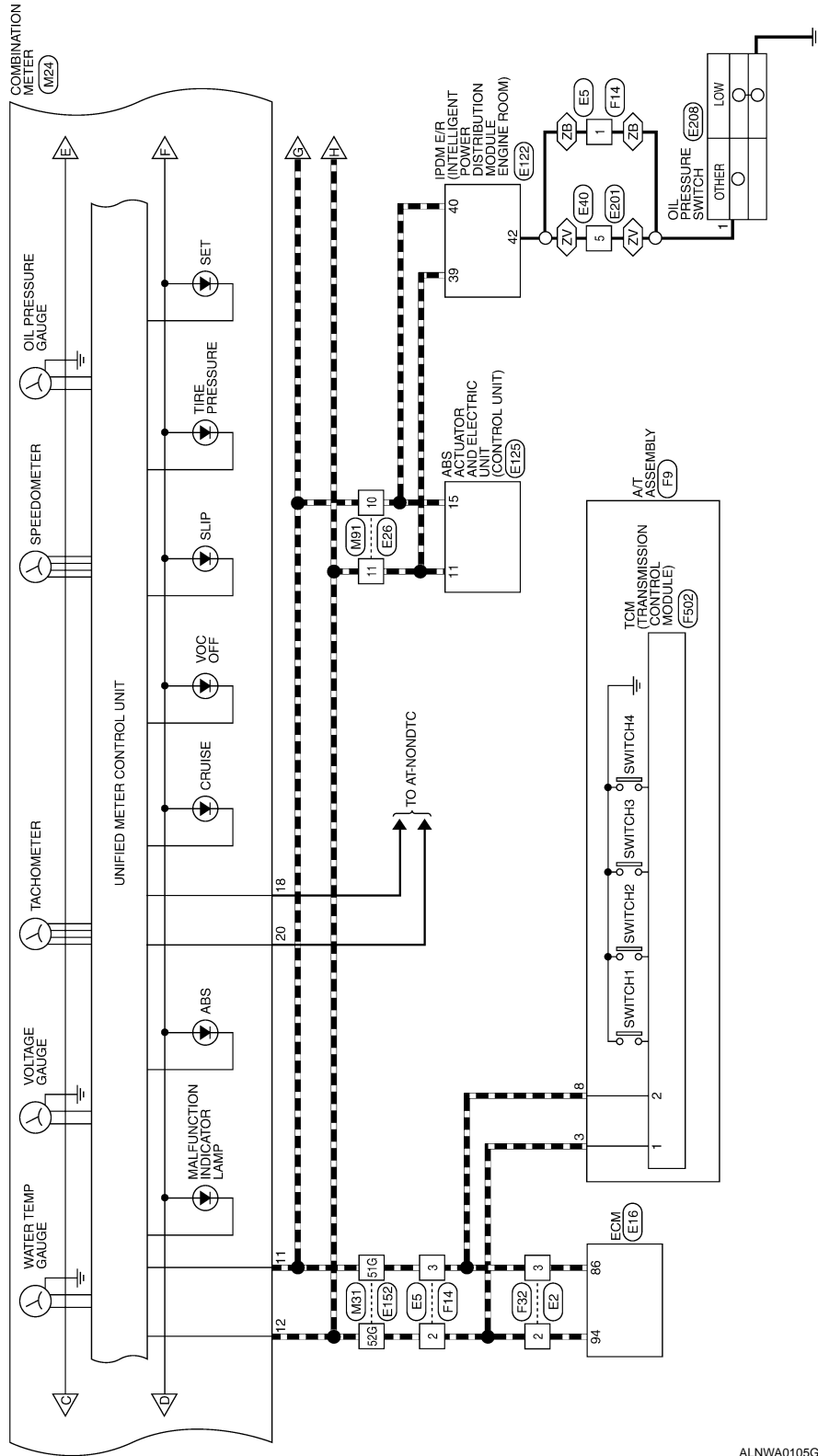


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COMBINATION METER

< ECU DIAGNOSIS >

: WITH VK66DE
 : WITH VQ40DE
 : DATA LINE



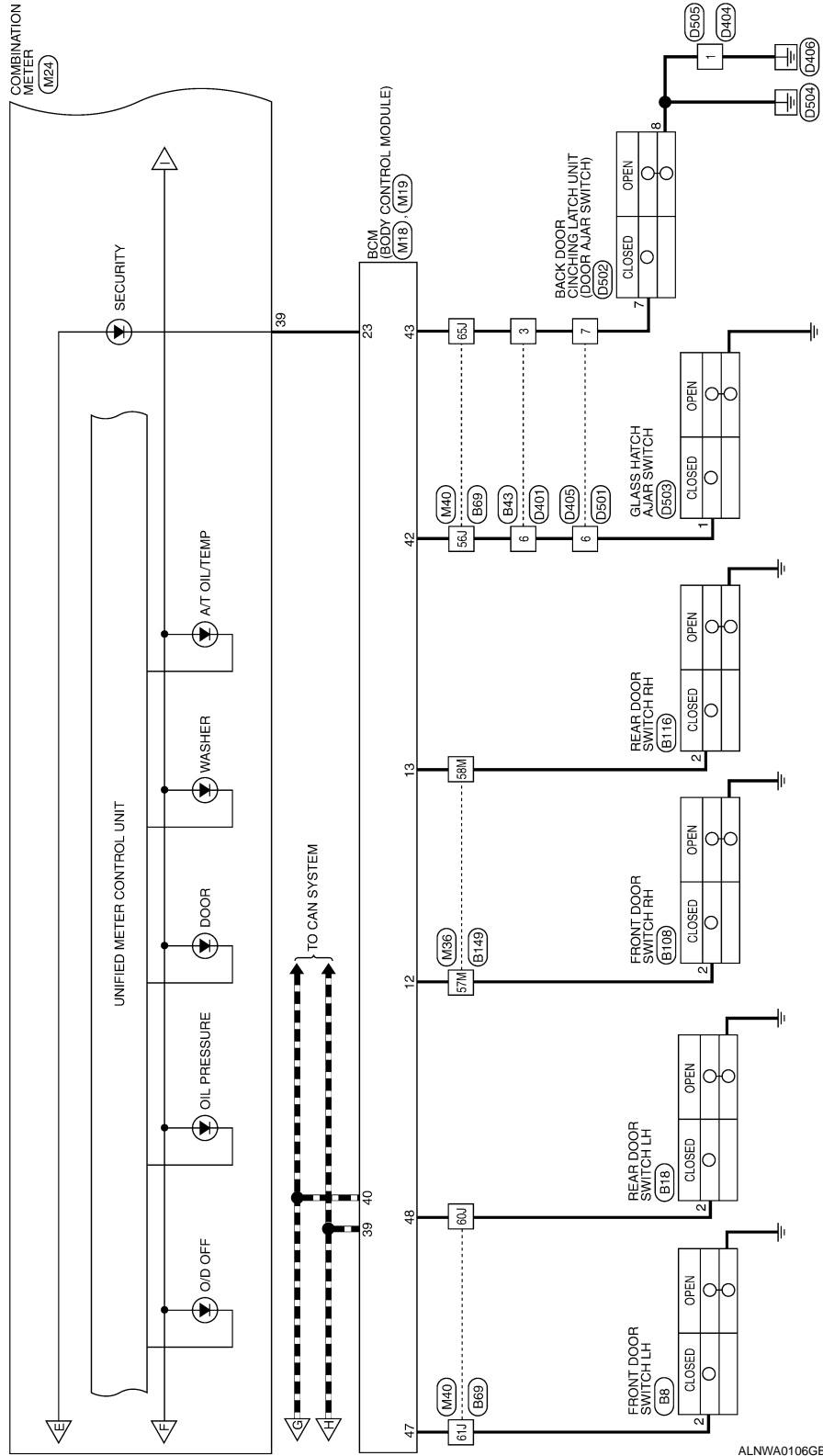
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COMBINATION METER

< ECU DIAGNOSIS >

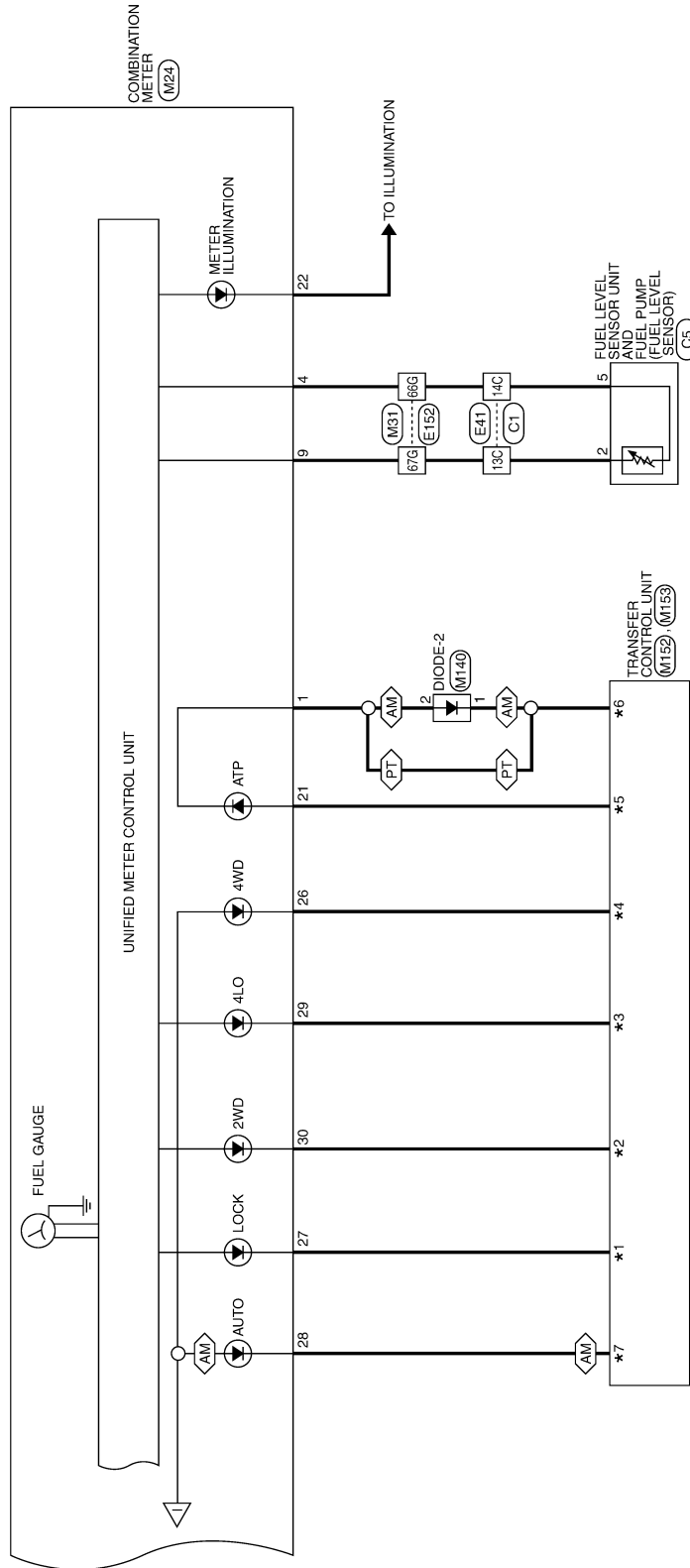


ALNWA0106GE

COMBINATION METER

< ECU DIAGNOSIS >

- AM: ALL-MODE 4WD SYSTEM
- PT: PART TIME 4WD SYSTEM
- *1 11: AM
- *2 2: AM
- *3 12: AM
- *4 5: AM
- 36: PT
- 35: PT
- 37: PT
- 38: PT
- *5 15: AM
- *6 40: AM
- *7 21: AM
- 39: PT
- 23: PT



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COMBINATION METER

< ECU DIAGNOSIS >

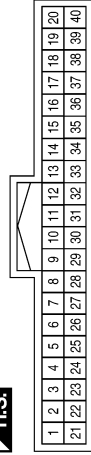
METER CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
5P	W/G	-
8P	R/Y	-

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



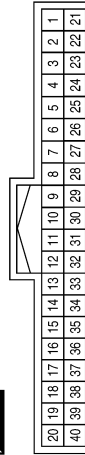
Terminal No.	Color of Wire	Signal Name
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
23	G	SECURITY INDICATOR OUTPUT
39	L	CAN-H
40	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
42	LG	GLASS HATCH AJAR
43	SB	BACK DOOR SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
3	R/Y	-
4	B/Y	-
9	BR	-
11	P	-
12	L	-
13	GR	-
16	W/G	-
18	L	-
20	Y	-
21	LG	ATP+
22	BR	-
23	B	-

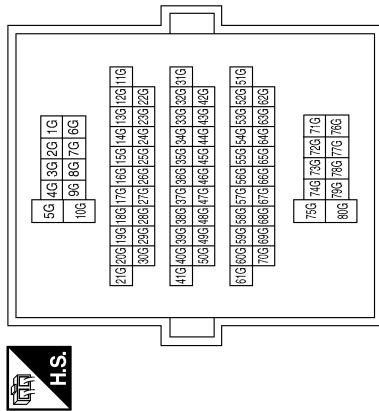
Terminal No.	Color of Wire	Signal Name
24	V	-
26	GR	4WD FAIL
27	BR	LOCK/4H
28	B	AUTO
29	O	4LO
30	V	2WD
31	G	-
32	SB	-
34	L	-
37	SB	-
39	G	-
40	LG	-

ALNIA0630GB

COMBINATION METER

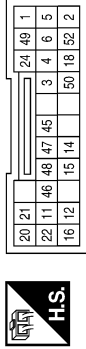
< ECU DIAGNOSIS >

Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



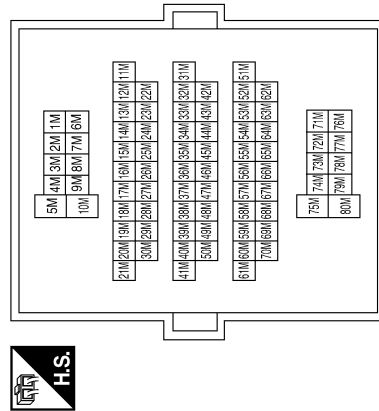
Terminal No.	Color of Wire	Signal Name
51G	P	-
52G	L	-
66G	B/Y	-
67G	BR	-
69G	P	-
70G	L	-

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



Terminal No.	Color of Wire	Signal Name
15	SB	WARN LP
24	LG	SEAT BELT REMIND

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
57M	LG	-
58M	L	-

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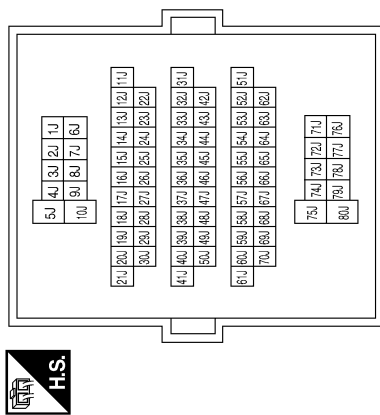
WCS

ALNIA0631GB

COMBINATION METER

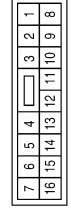
< ECU DIAGNOSIS >

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



Terminal No.	Color of Wire	Signal Name
56J	LG	-
60J	P	-
61J	GR	-
65J	SB	-
70J	V	-

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



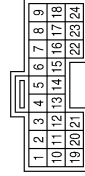
Terminal No.	Color of Wire	Signal Name
1	G	-
8	SB	-
10	P	-
11	L	-

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



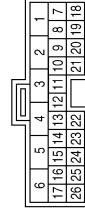
Terminal No.	Color of Wire	Signal Name
1	V	-
2	R	-

Connector No.	M152
Connector Name	TRANSFER CONTROL UNIT (ALL-MODE 4WD SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	V	2WD IND
5	GR	ETSFALL
11	BR	LOCK IND
12	O	4LO IND
15	LG	ATP-IND
21	B	AUTO IND

Connector No.	M152
Connector Name	TRANSFER CONTROL UNIT (PART TIME 4WD SYSTEM)
Connector Color	WHITE



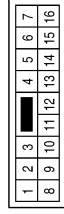
Terminal No.	Color of Wire	Signal Name
23	R	ATP-SW

ALNIA0632GB

COMBINATION METER

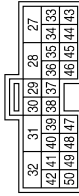
< ECU DIAGNOSIS >

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



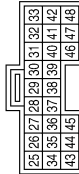
Terminal No.	Color of Wire	Signal Name
2	L	-
3	P	-

Connector No.	M153
Connector Name	TRANSFER CONTROL UNIT (PART TIME 4WD SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
35	V	2WD_IND
36	BR	4HIND
37	O	4LOIND
38	GR	4WD_FAIL
39	LG	ATP_IND

Connector No.	M153
Connector Name	TRANSFER CONTROL UNIT (ALL-MODE 4WD SYSTEM)
Connector Color	WHITE



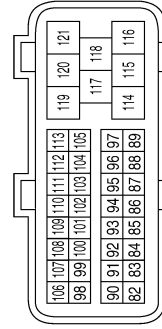
Terminal No.	Color of Wire	Signal Name
40	R	ATP-SW

Connector No.	E21
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Color	GRAY



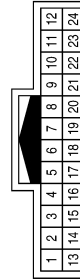
Terminal No.	Color of Wire	Signal Name
1	SB	-
2	B	-

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
86	P	CAN-L
94	L	CAN-H

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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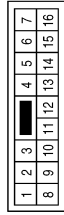
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COMBINATION METER

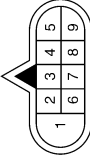
< ECU DIAGNOSIS >

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G	-
8	SB	-
10	P	-
11	L	-

Connector No.	E40
Connector Name	WIRE TO WIRE (WITH VQ40DE)
Connector Color	GRAY



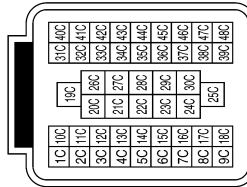
Terminal No.	Color of Wire	Signal Name
5	GR	-
8	P	-

Connector No.	E40
Connector Name	WIRE TO WIRE (WITH VK56DE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
2	P	-

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



Terminal No.	Color of Wire	Signal Name
13C	BR	-
14C	B/Y	-

Connector No.	E53
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	G	-

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



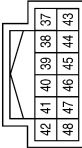
Terminal No.	Color of Wire	Signal Name
1	L	-
2	B	-

ALNIA0634GB

COMBINATION METER

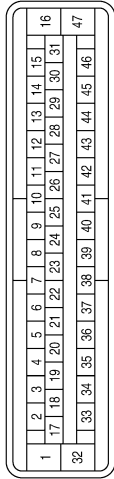
< ECU DIAGNOSIS >

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



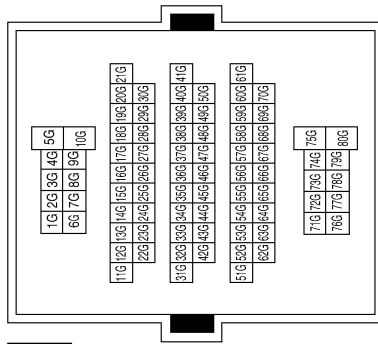
Terminal No.	Color of Wire	Signal Name
39	L	CAN-H
40	P	CAN-L
42	GR	OIL PRESSURE SW

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
Connector Color	BLACK



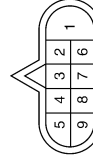
Terminal No.	Color of Wire	Signal Name
11	L	CAN-H
15	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
51G	P	-
52G	L	-
66G	B/Y	-
67G	BR	-
69G	P	-
70G	L	-

Connector No.	E201
Connector Name	WIRE TO WIRE (WITH VQ40DE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
5	GR	-
8	P	-

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COMBINATION METER

< ECU DIAGNOSIS >

Connector No.	E201
Connector Name	WIRE TO WIRE (WITH VK56DE)
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
2	P	-

Connector No.	E205
Connector Name	GENERATOR
Connector Color	BLACK



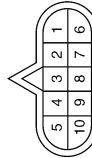
Terminal No.	Color of Wire	Signal Name
2	P	L

Connector No.	E208
Connector Name	OIL PRESSURE SWITCH
Connector Color	GRAY



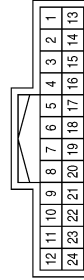
Terminal No.	Color of Wire	Signal Name
1	GR	-

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



Terminal No.	Color of Wire	Signal Name
3	L	CAN-H
8	P	CAN-L

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



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

Connector No.	F32
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

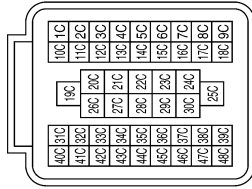
ALNIA0636GB

COMBINATION METER

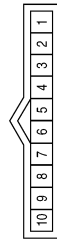
< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
13C	BR	-
14C	B/Y	-

Connector No.	C1
Connector Name	WIRE TO WIRE
Connector Color	BLACK

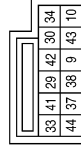


Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY

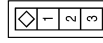


Terminal No.	Color of Wire	Signal Name
1	BR	CAN-H
2	L/Y	CAN-L

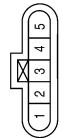
Connector No.	B9
Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Color	YELLOW



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



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



Terminal No.	Color of Wire	Signal Name
41	O	BUCKLE SW LH

Terminal No.	Color of Wire	Signal Name
2	GR	-

Terminal No.	Color of Wire	Signal Name
2	BR	-
5	B/Y	-

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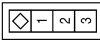
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COMBINATION METER

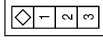
< ECU DIAGNOSIS >

Connector No.	B12
Connector Name	SEAT BELT BUCKLE SWITCH LH
Connector Color	WHITE



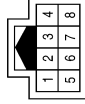
Terminal No.	Color of Wire	Signal Name
1	O	-
2	B	-

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



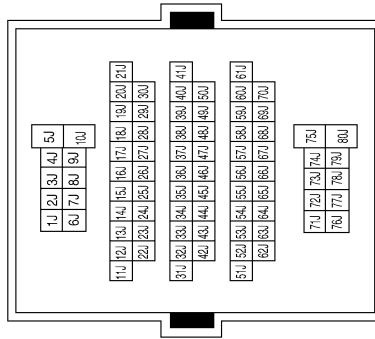
Terminal No.	Color of Wire	Signal Name
2	P	-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



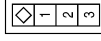
Terminal No.	Color of Wire	Signal Name
3	SB	-
6	LG	-

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
56J	LG	-
60J	P	-
61J	GR	-
65J	SB	-
70J	V	-

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



Terminal No.	Color of Wire	Signal Name
2	LG	-

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COMBINATION METER

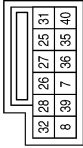
< ECU DIAGNOSIS >

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



Terminal No.	Color of Wire	Signal Name
2	L	-

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



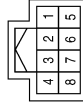
Terminal No.	Color of Wire	Signal Name
25	L	BUCKLE SW RH

Connector No.	B110
Connector Name	SEAT BELT BUCKLE SWITCH RH
Connector Color	WHITE



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

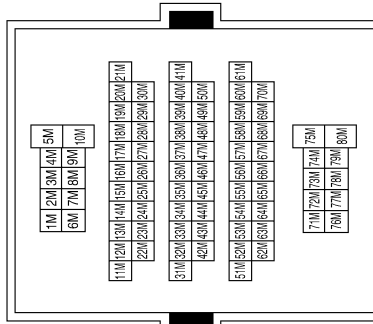
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	SB	-
6	LG	-

Terminal No.	Color of Wire	Signal Name
57M	LG	-
58M	L	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



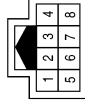
ALNIA0639GB

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COMBINATION METER

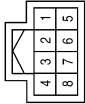
< ECU DIAGNOSIS >

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



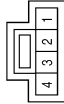
Terminal No.	Color of Wire	Signal Name
6	LG	-
7	SB	-

Connector No.	D405
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	LG	-
7	SB	-

Connector No.	D404
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



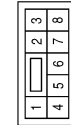
Terminal No.	Color of Wire	Signal Name
1	B	-

Connector No.	D503
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	LG	-

Connector No.	D502
Connector Name	BACK DOOR CINCHING LATCH UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	SB	-
8	B	-

ALNIA0640GB

INFOID:000000001717121

Fail Safe

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

COMBINATION METER

< ECU DIAGNOSIS >

	Function	Specifications	
	Speedometer	Zero indication.	A
	Tachometer		B
	Fuel gauge		C
	Engine coolant temperature gauge		
	Engine oil pressure gauge		
	Voltage 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.	E
	Brake warning lamp		F
	VDC OFF indicator lamp		
	SLIP indicator lamp		
	Shift P warning lamp	Lamp turns off when communication is lost.	G
	AT oil temp warning lamp		H
	Low washer fluid warning lamp		
	Hill decent control indicator lamp		
	Door open warning lamp		
	CRUISE indicator lamp		
	SET indicator lamp		
	A/T CHECK warning lamp (with manual mode)		
	O/D OFF indicator lamp (without manual mode)		
	Oil pressure warning lamp		
	Malfunction indicator 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.	M
Charge warning lamp			
Security indicator lamp			
4WD indicator lamp			
ATP indicator lamp			
	Low tire pressure warning lamp	Lamp will flash every second for 1 minute and then stay on continuously thereafter.	O

WCS

COMBINATION METER

< ECU DIAGNOSIS >

DTC Index

INFOID:000000001717122

CONSULT-III display	Malfunction	Reference page
CAN COMM CIRC [U1000]	Malfunction is detected in CAN communication. 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.	MWI-27
VEHICLE SPEED CIRC [B2205]	Malfunction is detected when an erroneous speed signal is input. 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).	MWI-28

NOTE:

“TIME” indicates the following.

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000001717123

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

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
HEADLAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HEADLAMP SW2	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HI BEAM SW	High beam switch OFF	OFF
	High beam switch HI	ON
H/L WASH SW	NOTE: The item is indicated, but not monitored	OFF
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
IGN SW CAN	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK 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
	UNLOCK button of Intelligent Key is pressed	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
KEYLESS LOCK ²	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK ²	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	ON
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	OFF
	Ignition switch ON	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
PUSH SW ¹	Return to ignition switch to LOCK position	OFF
	Press ignition switch	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RKE LOCK AND UNLOCK ²	NOTE: The item is indicated, but not monitored	OFF
		ON
RR WASHER SW	Rear washer switch OFF	OFF
	Rear washer switch ON	ON
RR WIPER INT	Rear wiper switch OFF	OFF
	Rear wiper switch INT	ON
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

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

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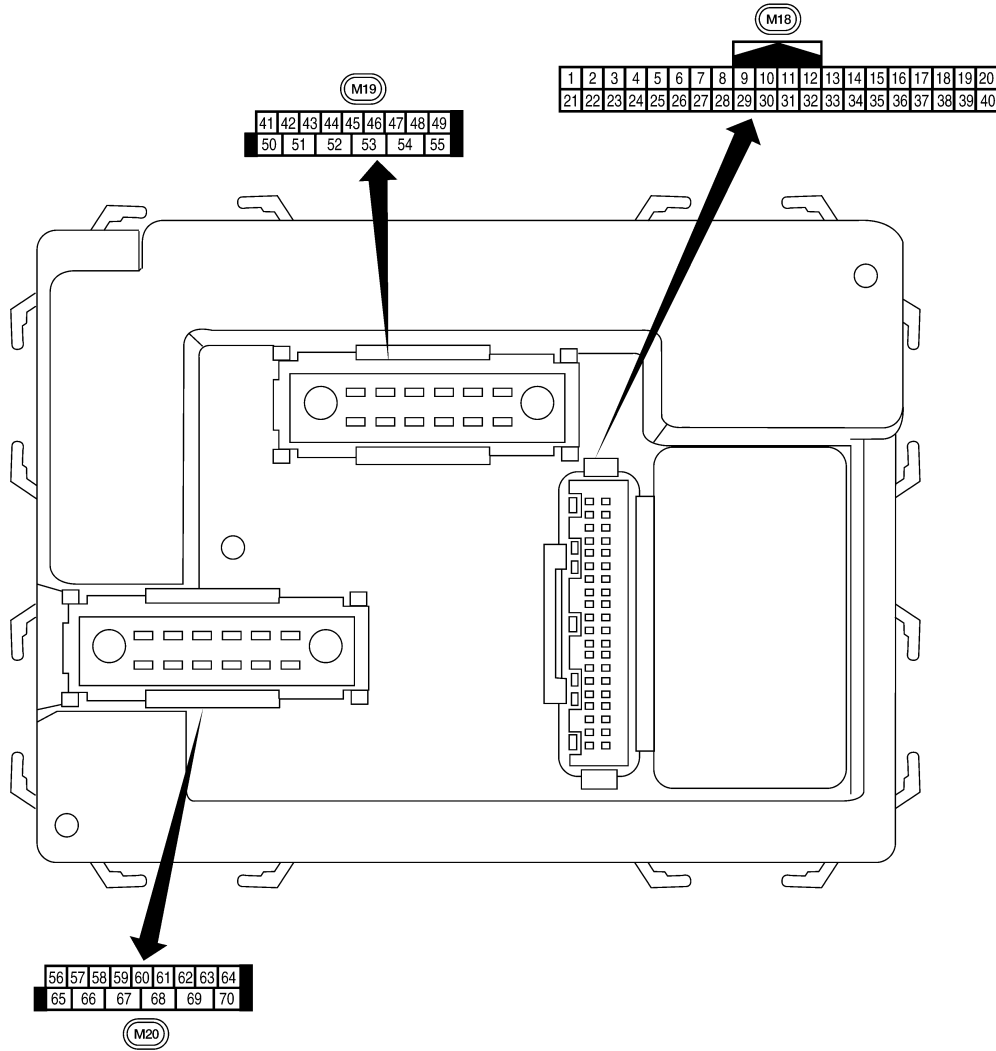
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal Layout

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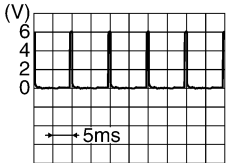

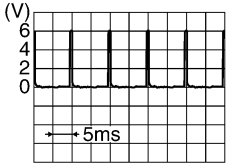
Physical Values

LIA2443E

INFOID:000000001717125

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

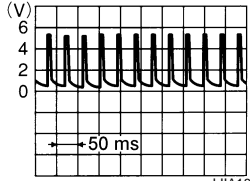
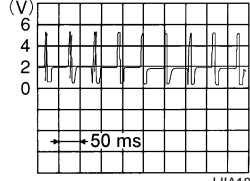
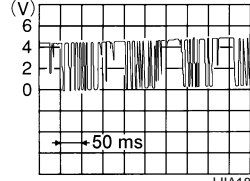
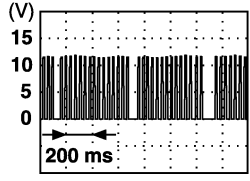
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input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

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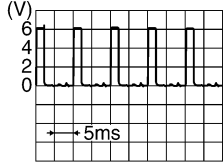

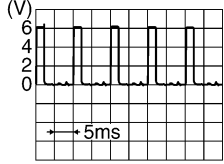
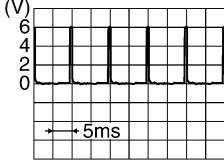
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 <p style="text-align: right; font-size: small;">LIA1893E</p>
20	G	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 <p style="text-align: right; font-size: small;">LIA1894E</p>
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 <p style="text-align: right; font-size: small;">LIA1895E</p>
21	GR	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	V	BUS	—	—	Ignition switch ON or power window timer operates	 <p style="text-align: right; font-size: small;">PIIA2344E</p>
23	G	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.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	LG	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

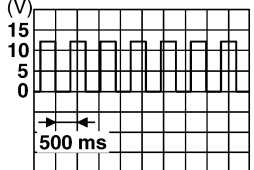
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
36	LG	Combination switch output 1				
37 ¹	B	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
37 ²	B	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key inserted	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	LG	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery
43	SB	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

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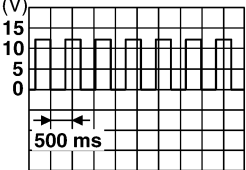
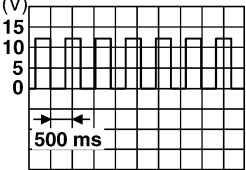
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
44	SB	Rear wiper auto stop switch	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	GR	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	P	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	L	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	G	Trailer turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
52	V	Trailer turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
55	W	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	V	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	R/Y	Battery power supply	Input	OFF	—	Battery voltage
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	GR	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	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	
60	LG	Turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
61	G	Turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
63	BR	Interior room/map lamp	Output	OFF	Any door switch	ON (open) 0V
					OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	L	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	O	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	L	Power window power supply	Output	—	—	Battery voltage
70	W	Battery power supply	Input	OFF	—	Battery voltage

1: With remote keyless entry system

2: With Intelligent Key system

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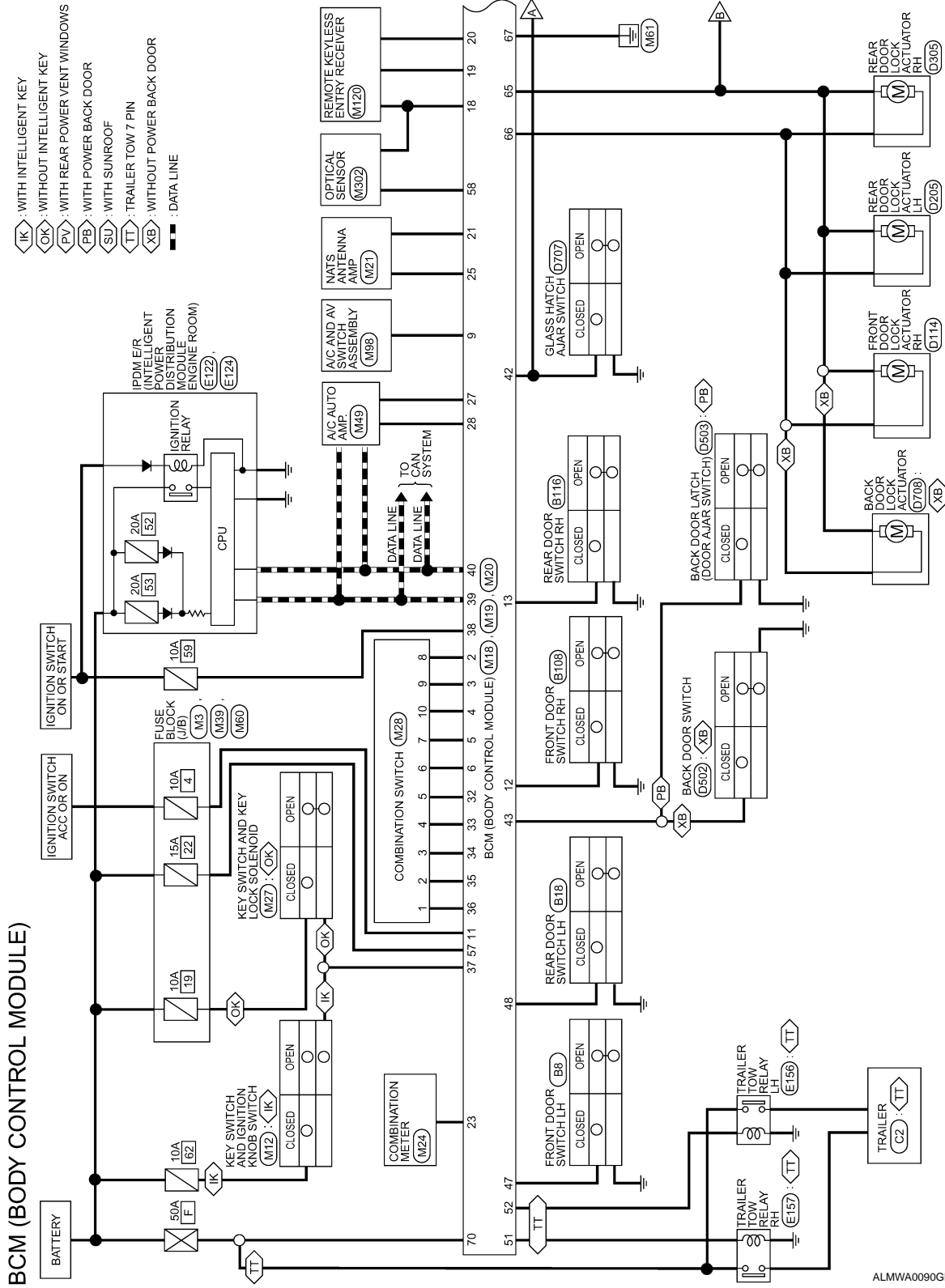
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Wiring Diagram

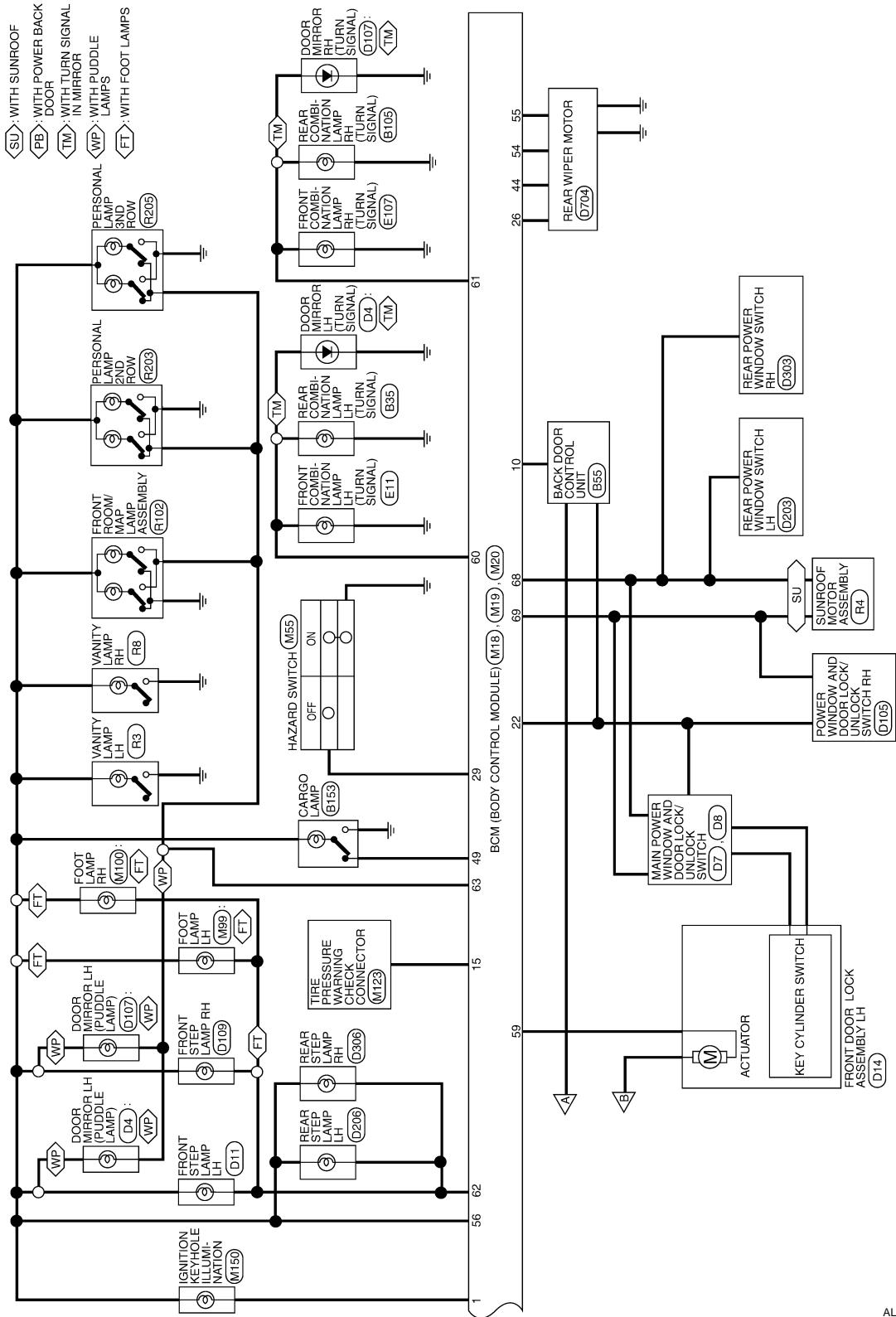
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BCM (BODY CONTROL MODULE)

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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



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

Terminal No.	Color of Wire	Signal Name
41	-	-
42	GR	TRNK/GLASS HATCH SW
43	R/B	BACK DOOR SW/FUEL LID OPEN SW
44	O	AUTO_STOP
45	-	-
46	-	-
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
49	R	LUGGAGE_LAMP
50	-	-
51	G/Y	TRAILER_RH_FLASH
52	G/B	TRAILER_LH_FLASH
53	-	-
54	Y	RR_WIPER_OUTP_2 (MTR)
55	SB	RR_WIPER_OUTP_1 (MTR)

Terminal No.	Color of Wire	Signal Name
16	-	-
17	-	-
18	P	SIG GND
19	V/W	KEYLESS PWR TUNER
20	GW	KEYLESS TUNER SIGNAL
21	G	IMMOBILIZER SCL
22	W/W	ANTI-PINCH SERIAL LINK (RX, TX)
23	G/O	SECURITY_IND_OUTPUT
24	-	-
25	BR	IMMOBILIZER SC (RX, TX)
26	-	-
27	W/R	AC_SW
28	L/R	BLR_FAN_SW
29	W/B	HAZARD_SW
30	-	-
31	-	-
32	R/G	OUTPUT-5
33	R/Y	OUTPUT-4
34	L	OUTPUT-3
35	O/B	OUTPUT-2
36	R/W	OUTPUT-1
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



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

Terminal No.	Color of Wire	Signal Name
1	BR/W	RING_KEY_ILL
2	SB	INPUT-5
3	G/Y	INPUT-4
4	Y	INPUT-3
5	G/B	INPUT-2
6	V	INPUT-1
7	-	-
8	-	-
9	GR/R	RR DEF 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

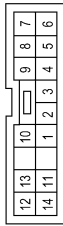
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BCM (BODY CONTROL MODULE)

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Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



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

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



Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT (FUSE)
58	W/R	AUTO_L_INPUT
59	G	DOOR UNLOCK OUTPUT (DR)
60	G/B	FLASHER OUTPUT (LEFT)
61	G/Y	FLASHER OUTPUT (RIGHT)
62	R/W	STEP LAMP OUTPUT
63	L	ROOM LAMP OUTPUT
64	-	-
65	V	DOOR LOCK OUTPUT (ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
68	W/L	POWER WINDOW POWER SUPPLY (RAP)
69	W/R	POWER WINDOW POWER SUPPLY (BAT)
70	W/B	BATT (FL)

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DTC Inspection Priority Chart

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

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

DTC Index

INFOID:000000001717128

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.

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-30
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-31
B2013: STRG COMM 1	—	—	—	SEC-27
B2190: NATS ANTENNA AMP	—	—	—	SEC-30 (with I-Key), SEC-111 (without I-Key)

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	A
B2191: DIFFERENCE OF KEY	—	—	—	SEC-33 (with I-Key), SEC-114 (without I-Key)	B
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-34 (with I-Key), SEC-115 (without I-Key)	C
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-36 (with I-Key), SEC-117 (without I-Key)	D
B2552: INTELLIGENT KEY	—	—	—	SEC-38	
B2590: NATS MALFUNCTION	—	—	—	SEC-39	E
C1708: [NO DATA] FL	—	—	—	WT-13	
C1709: [NO DATA] FR	—	—	—	WT-13	F
C1710: [NO DATA] RR	—	—	—	WT-13	
C1711: [NO DATA] RL	—	—	—	WT-13	G
C1712: [CHECKSUM ERR] FL	—	—	—	WT-15	
C1713: [CHECKSUM ERR] FR	—	—	—	WT-15	H
C1714: [CHECKSUM ERR] RR	—	—	—	WT-15	
C1715: [CHECKSUM ERR] RL	—	—	—	WT-15	I
C1716: [PRESSDATA ERR] FL	—	—	—	WT-17	
C1717: [PRESSDATA ERR] FR	—	—	—	WT-17	J
C1718: [PRESSDATA ERR] RR	—	—	—	WT-17	
C1719: [PRESSDATA ERR] RL	—	—	—	WT-17	K
C1720: [CODE ERR] FL	—	—	—	WT-15	
C1721: [CODE ERR] FR	—	—	—	WT-15	L
C1722: [CODE ERR] RR	—	—	—	WT-15	
C1723: [CODE ERR] RL	—	—	—	WT-15	M
C1724: [BATT VOLT LOW] FL	—	—	—	WT-15	
C1725: [BATT VOLT LOW] FR	—	—	—	WT-15	O
C1726: [BATT VOLT LOW] RR	—	—	—	WT-15	
C1727: [BATT VOLT LOW] RL	—	—	—	WT-15	P
C1729: VHCL SPEED SIG ERR	—	—	—	WT-18	
C1734: CONTROL UNIT	—	—	—	—	

WCS

THE LIGHT REMINDER WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:000000001712871

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

Diagnosis Procedure

INFOID:000000001712872

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-48, "Diagnosis Procedure"](#) (with Intelligent Key) or [DLK-214, "Diagnosis Procedure"](#) (without Intelligent Key).

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-48, "Diagnosis Procedure"](#) (with Intelligent Key) or [DLK-214, "Diagnosis Procedure"](#) (without Intelligent Key).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-54, "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:000000001712873

- 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:000000001712874

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-94. "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-54. "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-19. "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-20. "Component Inspection"](#).

Is the inspection result normal?

YES >> Replace the combination meter. Refer to [MWI-94. "Removal and Installation"](#).

NO >> Replace the seat belt buckle switch LH.

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WCS

THE KEY WARNING DOES NOT SOUND

< SYMPTOM DIAGNOSIS >

THE KEY WARNING DOES NOT SOUND

Description

INFOID:000000001712875

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

Diagnosis Procedure

INFOID:000000001712876

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-94, "Removal and Installation"](#).

2.CHECK KEY SWITCH CIRCUIT

Perform inspection of the key switch circuit. Refer to [WCS-21, "Diagnosis Procedure"](#) (with Intelligent Key) or [WCS-23, "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-22, "Component Inspection"](#) (with Intelligent Key) or [WCS-24, "Component Inspection"](#) (without Intelligent Key).

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-54, "Removal and Installation"](#).

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

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000001555022

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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