SECTION WCS
WARNING CHIME SYSTEM

CONTENTS

BASIC INSPECTION 3

DIAGNOSIS AND REPAIR WORKFLOW 3
Work Flow 3

FUNCTION DIAGNOSIS 4

WARNING CHIME SYSTEM 4

WARNING CHIME SYSTEM 4
WARNING CHIME SYSTEM : System Diagram 4
WARNING CHIME SYSTEM : System Description 4
WARNING CHIME SYSTEM : Component Parts Location 5
WARNING CHIME SYSTEM : Component Description 5

LIGHT REMINDER WARNING CHIME 5
LIGHT REMINDER WARNING CHIME : System Diagram 6
LIGHT REMINDER WARNING CHIME : System Description 6
LIGHT REMINDER WARNING CHIME : Component Parts Location 7
LIGHT REMINDER WARNING CHIME : Component Description 7

SEAT BELT WARNING CHIME 7
SEAT BELT WARNING CHIME : System Diagram 7
SEAT BELT WARNING CHIME : System Description 8
SEAT BELT WARNING CHIME : Component Parts Location 8
SEAT BELT WARNING CHIME : Component Description 9

KEY WARNING CHIME 9
KEY WARNING CHIME : System Diagram 9
KEY WARNING CHIME : System Description 9
KEY WARNING CHIME : Component Parts Location 10
KEY WARNING CHIME : Component Description 10

DIAGNOSIS SYSTEM (METER) 11
CONSULT-III Function (METER/M&A) 11

DIAGNOSIS SYSTEM (BCM) 13

BUZZER 13
BUZZER : CONSULT-III Function (BCM - BUZZER) 13

COMPONENT DIAGNOSIS 14

POWER SUPPLY AND GROUND CIRCUIT 14

COMBINATION METER 14
COMBINATION METER : Diagnosis Procedure 14

BCM (BODY CONTROL MODULE) 14
BCM (BODY CONTROL MODULE) : Diagnosis Procedure 15

METER BUZZER CIRCUIT 16
Description 16
Component Function Check 16
Diagnosis Procedure 16

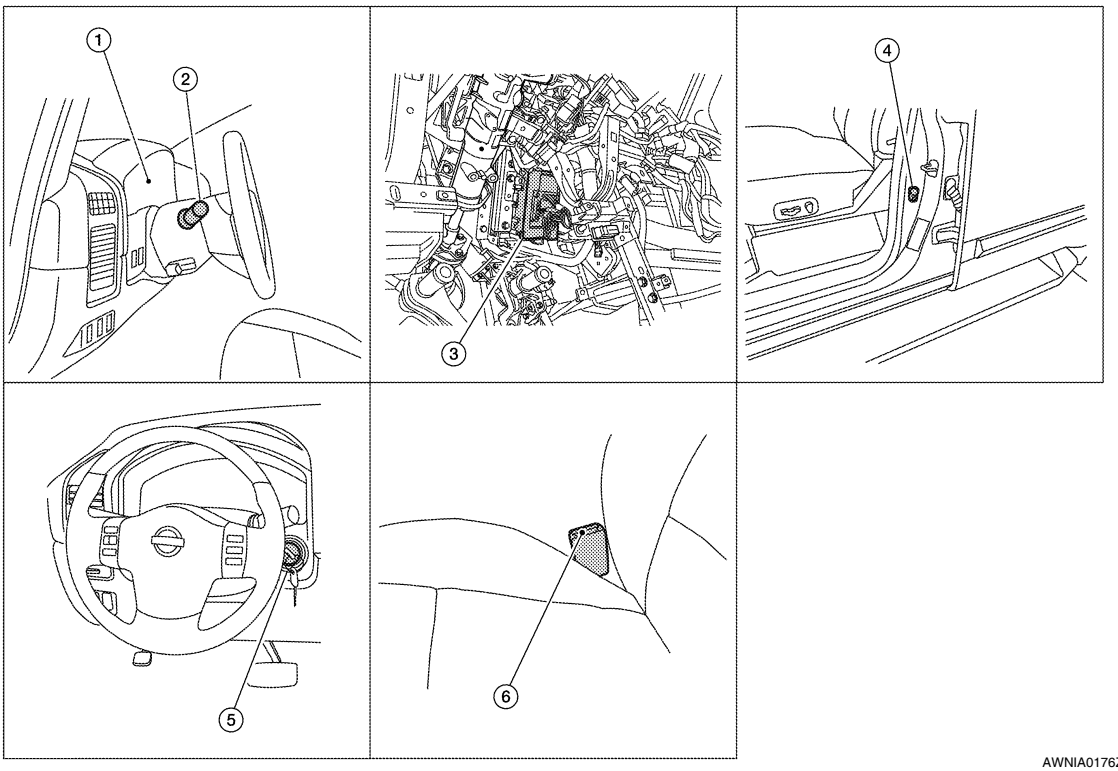
SEAT BELT BUCKLE SWITCH SIGNAL CIRCUIT 17
Description 17
Component Function Check 17
Diagnosis Procedure 17
Component Inspection 18

KEY SWITCH SIGNAL CIRCUIT 19
Description 19
Component Function Check 19
Diagnosis Procedure 19
Component Inspection 21

WARNING CHIME SYSTEM 23

WARNING CHIME SYSTEM : Component Parts Location

INFOID:0000000003789263



AWNIA0176ZZ

1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and key lock solenoid M27 (floor shift)
   Key switch M80 (column shift)
6. Seat belt buckle switch LH B12

WARNING CHIME SYSTEM : Component Description

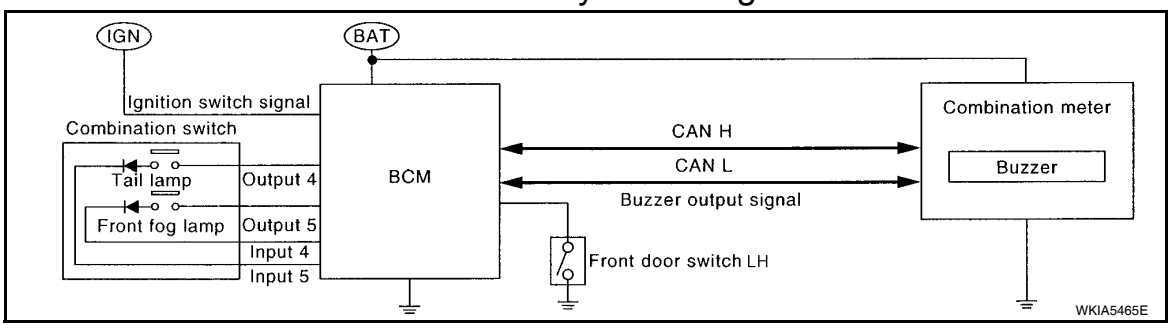
INFOID:0000000003789264

Unit	Description
Combination meter	• 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 (column shift)	Transmits key switch signal to BCM.
Key switch and key lock solenoid (floor shift)	
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

LIGHT REMINDER WARNING CHIME : System Diagram

INFOID:0000000003789265



LIGHT REMINDER WARNING CHIME : System Description

INFOID:0000000003789266

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

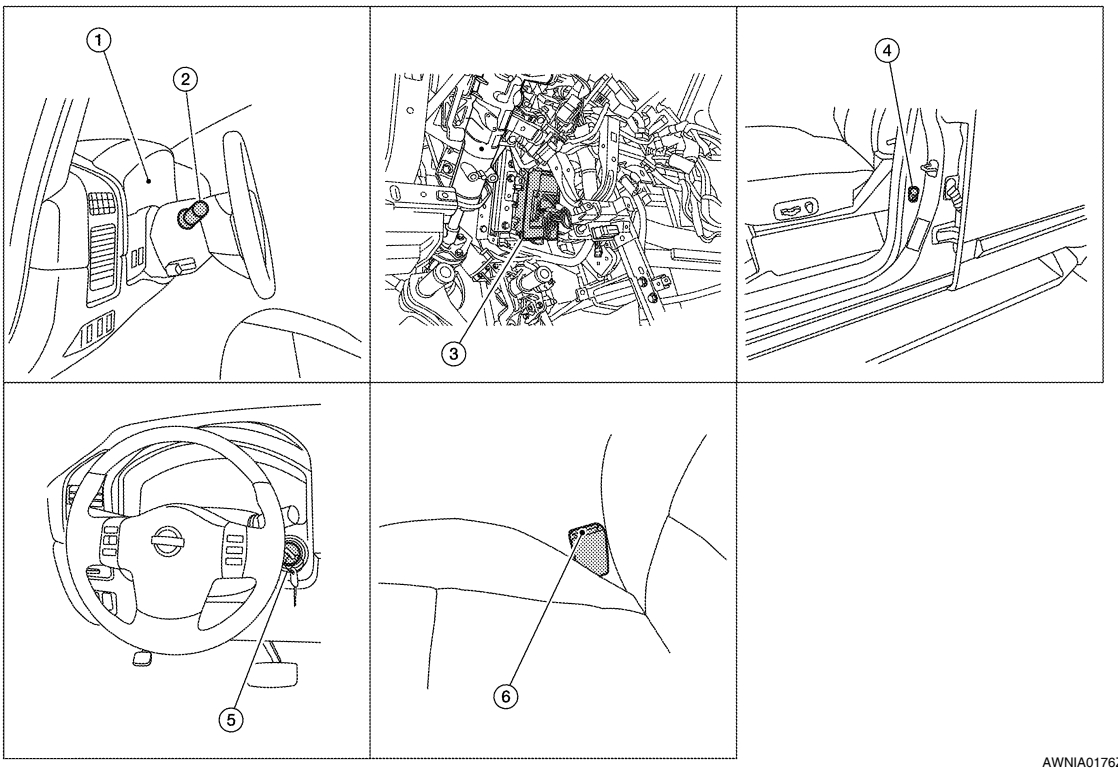
WARNING CANCEL CONDITIONS

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

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

LIGHT REMINDER WARNING CHIME : Component Parts Location

INFOID:0000000004132751



AWNIA0176ZZ

1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and key lock solenoid M27 (floor shift)
   Key switch M80 (column shift)
6. Seat belt buckle switch LH B12

LIGHT REMINDER WARNING CHIME : Component Description

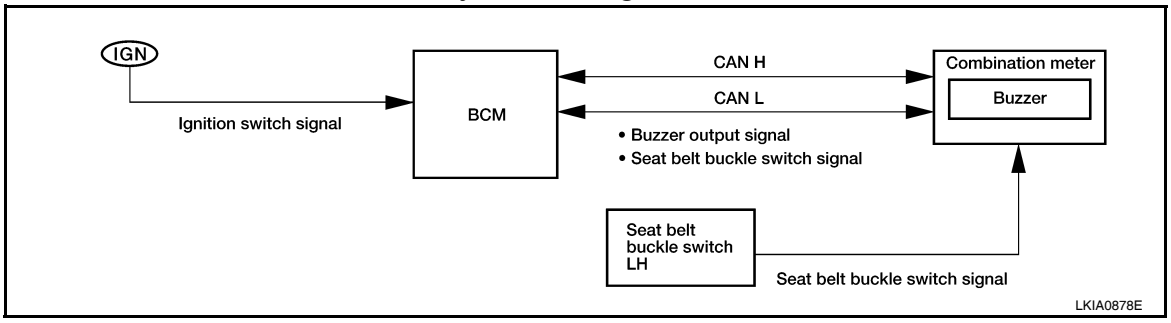
INFOID:0000000003789268

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

INFOID:0000000003789269



SEAT BELT WARNING CHIME : System Description

INFOID:0000000003789270

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)

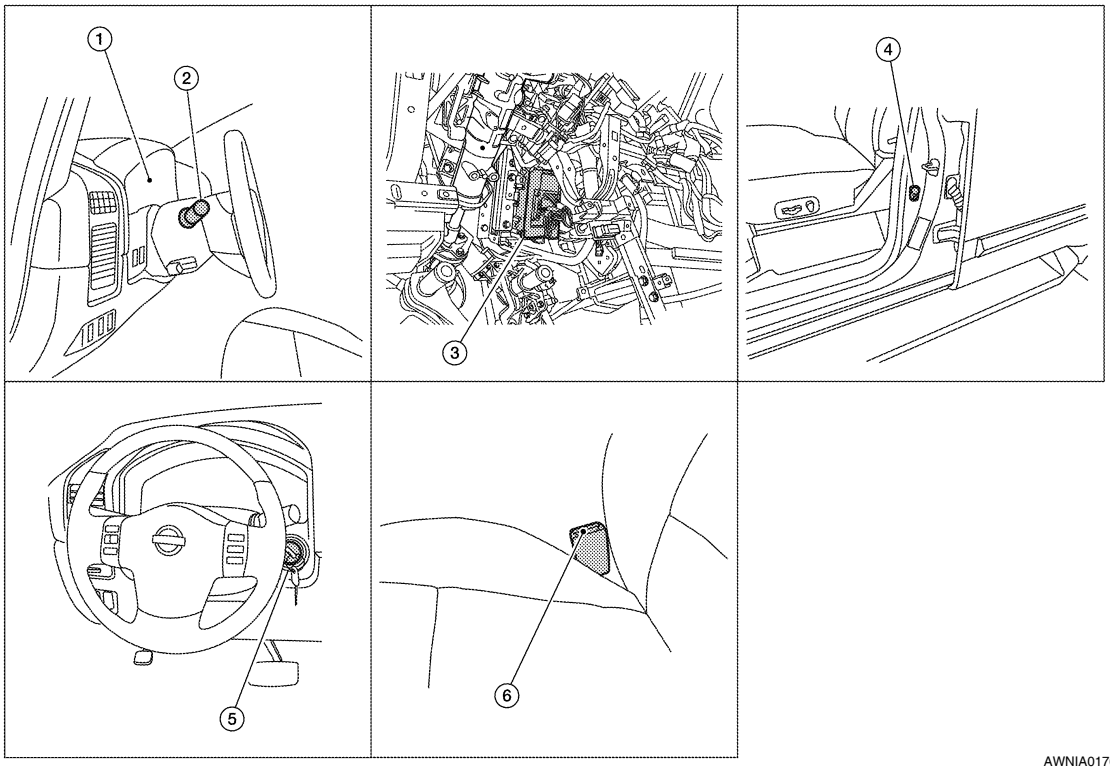
WARNING CANCEL CONDITIONS

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

INFOID:0000000004132752



AWNIA0176ZZ

1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and key lock solenoid M27 (floor shift)
   Key switch M80 (column shift)
6. Seat belt buckle switch LH B12

SEAT BELT WARNING CHIME : Component Description

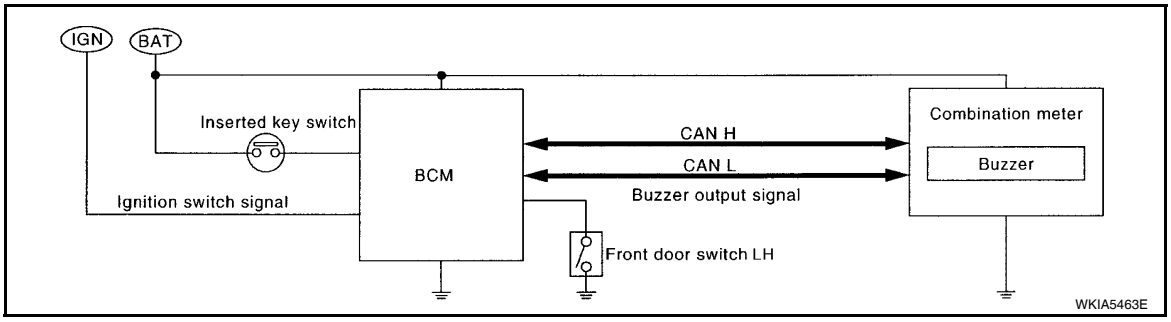
INFOID:0000000003789272

Unit	Description
Combination meter	• 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

KEY WARNING CHIME : System Diagram

INFOID:0000000003789273



KEY WARNING CHIME : System Description

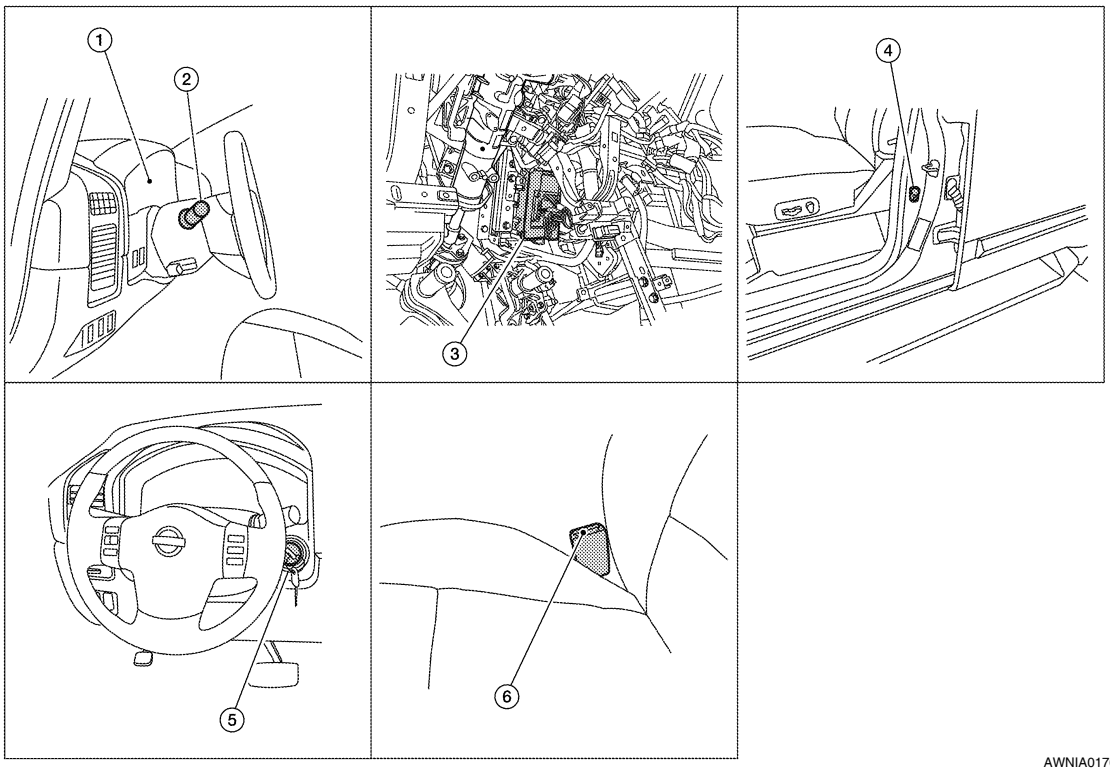
INFOID:0000000003789274

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 : Component Parts Location

INFOID:0000000004132753



AWNIA0176ZZ

1. Combination meter M24
2. Combination switch (lighting switch) M28
3. BCM M18, M19, M20 (view with instrument lower panel LH removed)
4. Front door switch LH B8
5. Key switch and key lock solenoid M27 (floor shift)
   Key switch M80 (column shift)
6. Seat belt buckle switch LH B12

KEY WARNING CHIME : Component Description

INFOID:0000000003789276

Unit	Description
Combination meter	Receives key warning signal from BCM via CAN communication line and sounds the buzzer.
BCM	Judges the key warning condition from the door switch signal received from the front door switch LH, and the key switch signal received from the key switch and key lock solenoid (floor shift) or key switch (column shift). 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 (column shift)	Transmits key switch signal to BCM.
Key switch and key lock solenoid (floor shift)	

DIAGNOSIS SYSTEM (METER)

CONSULT-III Function (METER/M&A)

INFOID:0000000004230743

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-65, "DTC Index".

DATA MONITOR

Display Item List

X: Applicable

Display item [Unit]	MAIN SIGNALS	SELECTION FROM MENU	Description
SPEED METER [km/h] or [mph]	X	X	Displays the value of vehicle speed signal.
SPEED OUTPUT [km/h] or [mph]	X	X	Displays the value of vehicle speed signal, which is transmitted to each unit with CAN communication.
TACHO METER [rpm]	X	X	Displays the value of engine speed signal, which is input from ECM.
FUEL METER [lit.]	X	X	Displays the value, which processes a resistance signal from fuel gauge.
W TEMP METER [°C] or [°F]	X	X	Displays the value of engine coolant temperature signal, which is input from ECM.
ABS W/L [ON/OFF]		X	Displays [ON/OFF] condition of ABS warning lamp.
VDC/TCS IND [ON/OFF]		X	Displays [ON/OFF] condition of VDC OFF indicator lamp.
SLIP IND [ON/OFF]		X	Displays [ON/OFF] condition of SLIP indicator lamp.
BRAKE W/L [ON/OFF]		X	Displays [ON/OFF] condition of brake warning lamp.*
DOOR W/L [ON/OFF]		X	Displays [ON/OFF] condition of door warning lamp.
TRUNK W/L [ON/OFF]		X	This item is not used for this model. “OFF” is always displayed.
HI-BEAM IND [ON/OFF]		X	Displays [ON/OFF] condition of high beam indicator.
TURN IND [ON/OFF]		X	Displays [ON/OFF] condition of turn indicator.
OIL W/L [ON/OFF]		X	Displays [ON/OFF] condition of oil pressure warning lamp.
C-ENG W/L [ON/OFF]		X	Displays [ON/OFF] condition of malfunction indicator lamp.
CRUISE IND [ON/OFF]		X	Displays [ON/OFF] condition of CRUISE indicator.
SET IND [ON/OFF]		X	Displays [ON/OFF] condition of SET indicator.
AT CHECK W/L [ON/OFF]		X	Displays [ON/OFF] condition of AT CHECK warning lamp.
AIR PRES W/L [ON/OFF]		X	Displays [ON/OFF] condition of tire pressure warning lamp.
KEY G/Y W/L [ON/OFF]		X	This item is not used for this model. “OFF” is always displayed.
KEY R W/L [ON/OFF]		X	This item is not used for this model. “OFF” is always displayed.
KEY KNOB W/L [ON/OFF]		X	This item is not used for this model. “OFF” is always displayed.
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.
AT SFT DWN SW [ON/OFF]	X	X	Displays [ON/OFF] condition of A/T shift-down switch.

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

NOTE:

Some items are not available due to vehicle specification.

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

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

DIAGNOSIS SYSTEM (BCM)
BUZZER

BUZZER : CONSULT-III Function (BCM - BUZZER)

INFOID:0000000004132755

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judged by ignition power supply input
KEY ON SW [ON/OFF]	Key switch status
DOOR SW -DR [ON/OFF]	Front door switch (driver side) status judged by BCM
LIGHT SW 1ST [ON/OFF]	Lighting switch status judged by the lighting switch signal read with combination switch reading function
BUCKLE SW [ON/OFF]	Seat belt buckle switch status

ACTIVE TEST

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

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT
COMBINATION METER

COMBINATION METER : Diagnosis Procedure

INFOID:0000000004230744

1.CHECK FUSES

Check for blown combination meter fuses.

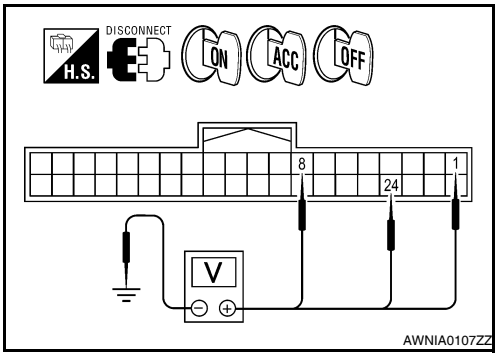
Unit	Power source	Fuse No.
Combination meter	Battery	3
	Ignition switch ON or START	14
	Ignition switch ACC or ON	4

Is the inspection result normal?

YES >> GO TO 2
NO >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse.

2.POWER SUPPLY CIRCUIT CHECK

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



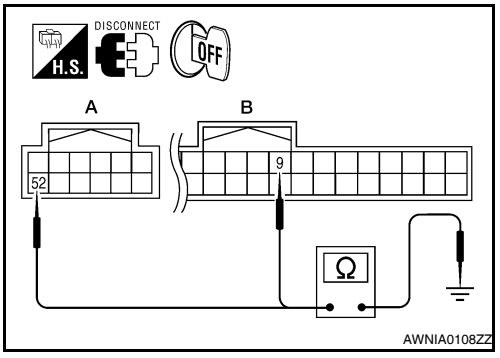
Terminals			Ignition switch position			
(+)		(–)	OFF	ACC	ON	START
Connector	Terminal					
M24	1	Ground	0V	Battery voltage	Battery voltage	0V
	8		Battery voltage	Battery voltage	Battery voltage	Battery voltage
	24		0V	0V	Battery voltage	Battery voltage

Is the inspection result normal?

YES >> GO TO 3
NO >> Check harness for open between combination meter and fuse.

3.GROUND CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect combination meter connector M25.
3. Check continuity between combination meter harness connector M25 terminal 52 and ground, and connector M24 terminal 9 and ground.



Terminals			Continuity
(+)		(–)	
Connector	Terminal		
A: M25	52	Ground	Yes
B: M24	9		

Is the inspection result normal?

YES >> Inspection End.
NO >> Check ground harness.

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000004133032

1. CHECK FUSES AND FUSIBLE LINK

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

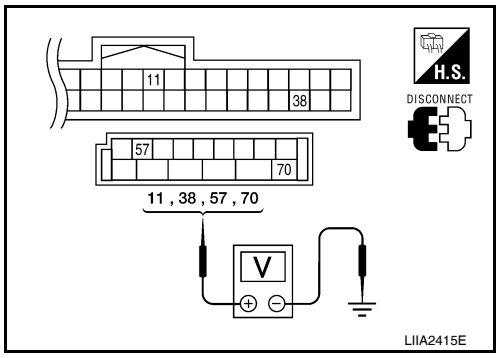
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (10A)

Is the fuse blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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



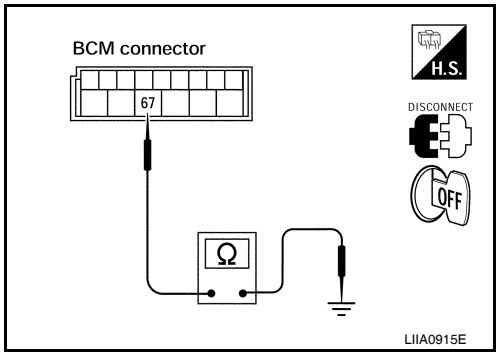
Connector	Terminals (+)	Terminals (-)	Power source	Condition	Voltage (V) (Approx.)
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage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

Is the measurement value normal?

YES >> GO TO 3
NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.



BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

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

METER BUZZER CIRCUIT

Description

INFOID:0000000003789281

- 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:0000000003789282

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-103, "Removal and Installation".

Diagnosis Procedure

INFOID:0000000003789283

1.CHECK POWER SUPPLY OF COMBINATION METER

Check power supply of combination meter. Refer to WCS-14, "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

Description

INFOID:0000000003789284

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

Component Function Check

INFOID:0000000003789285

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.

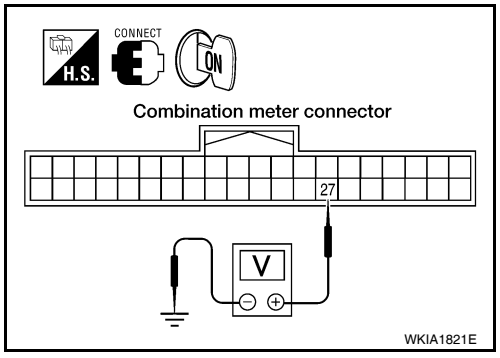
Diagnosis Procedure

INFOID:0000000003789286

1.CHECK COMBINATION METER INPUT SIGNAL

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

27 - Ground
When driver seat belt is fastened : Approx. 12V
When driver seat belt is unfastened : Approx. 0V



Is the inspection result normal?

YES >> Replace combination meter. Refer to MWI-103, "Removal and Installation".
NO >> GO TO 2

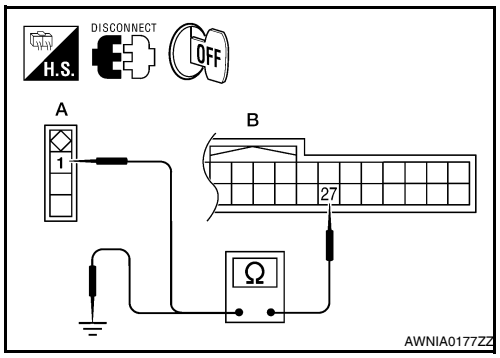
2.CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

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 (B) terminal 27 and seat belt buckle switch LH harness connector B12 (A) terminal 1.

27 - 1 : Continuity should exist.

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

27 - Ground : Continuity should not exist.



Is the inspection result normal?

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

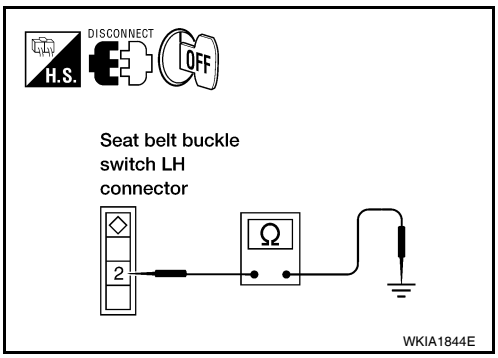
3.CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

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.



Component Inspection

INFOID:0000000003789287

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.

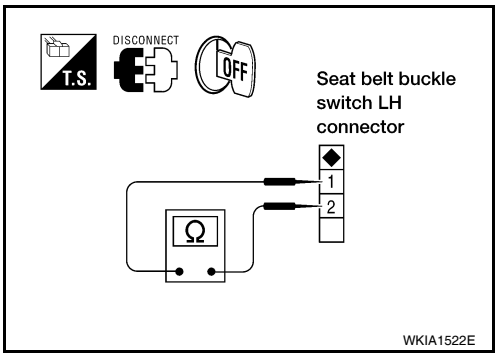
1– 2

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

Description

INFOID:0000000003789288

Transmits a key switch signal to the BCM.

Component Function Check

INFOID:0000000003789289

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:0000000003789290

COLUMN SHIFT

1.CHECK FUSE

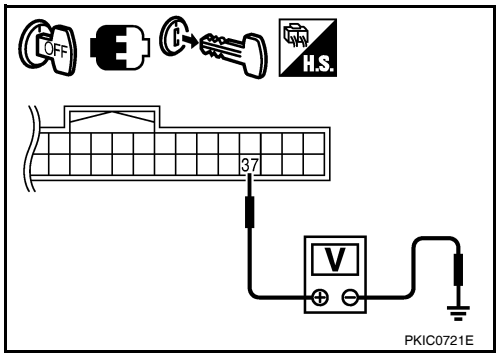
Check if the key switch 10A fuse [No. 19, located in the fuse block (J/B)] is blown.

Is the fuse blown?

YES >> Be sure to repair the cause of malfunction before installing new fuse.
NO >> GO TO 2

2.CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.



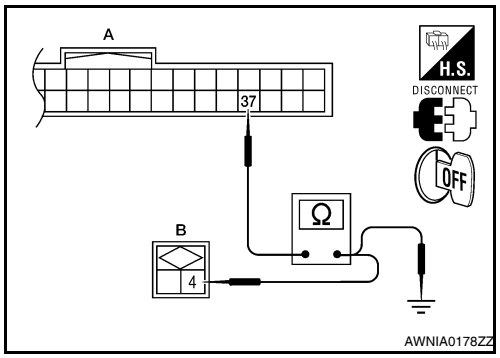
Terminals			Condition	Voltage (Approx.)
(+)		(–)		
BCM connector	Terminal			
M18	37	Ground	Key is inserted	Battery voltage
			Key is removed	0

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 and key switch harness connector M80.



A		B		Continuity
Connector	Terminal	Connector	Terminal	
M18	37	M80	4	Yes

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

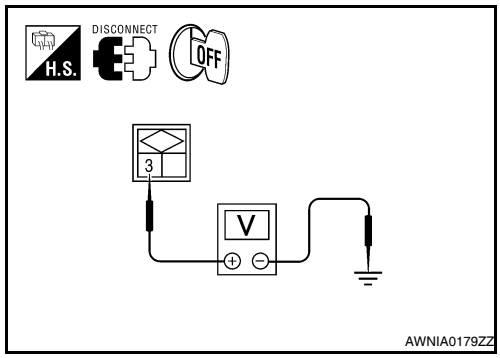
A		Ground	Continuity
Connector	Terminal		
M18	37		No

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		
M80	3	Ground	Battery voltage

Is the inspection result normal?

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

FLOOR SHIFT

1. CHECK FUSE

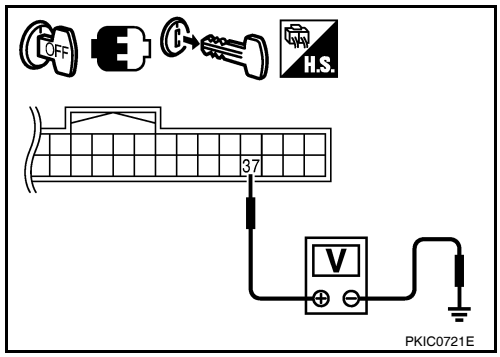
Check if the key switch and key lock solenoid 10A fuse [No. 19, located in the fuse block (J/B)] is blown.

Is the fuse blown?

YES >> Be sure to repair the cause of malfunction before installing new fuse.
NO >> GO TO 2

2. CHECK BCM INPUT SIGNAL

Check voltage between BCM harness connector and ground.



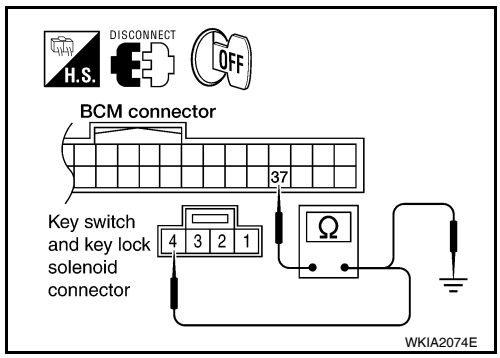
Terminals			Condition	Voltage (Approx.)
(+)		(−)		
BCM connector	Terminal			
M18	37	Ground	Key is inserted	Battery voltage
			Key is removed	0

Is the inspection result normal?

YES >> Inspection End.
NO >> GO TO 3

3. CHECK KEY SWITCH CIRCUIT

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



Terminals				Continuity
(+)		(-)		
Connector	Terminal	Connector	Terminal	
M18	37	M27	4	Yes

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

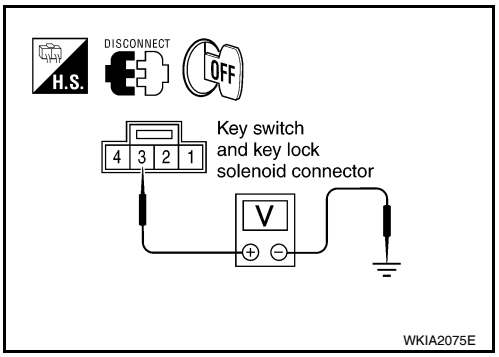
Terminals			Continuity
(+)		(-)	
Connector	Terminal	Ground	
M18	37		No

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 key lock solenoid harness connector and ground.



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

Is the inspection result normal?

YES >> Replace key switch and key lock solenoid.
NO >> Repair harness or connector.

Component Inspection

INFOID:0000000003789291

COLUMN SHIFT

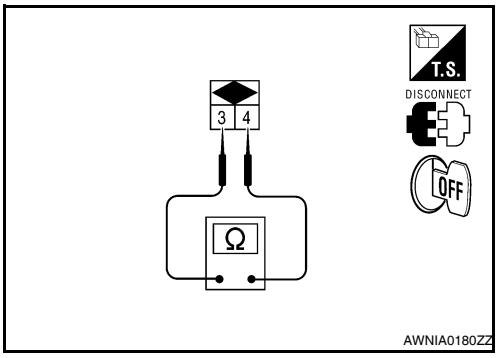
1.CHECK KEY SWITCH

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

FLOOR SHIFT

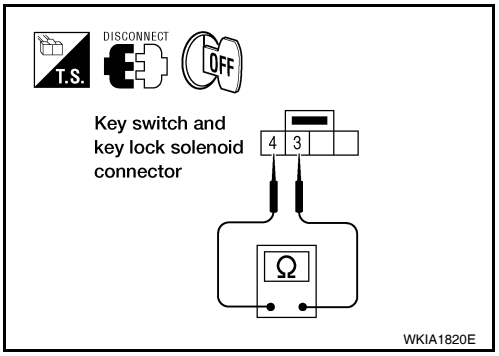
1.CHECK KEY SWITCH

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

3 – 4

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

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



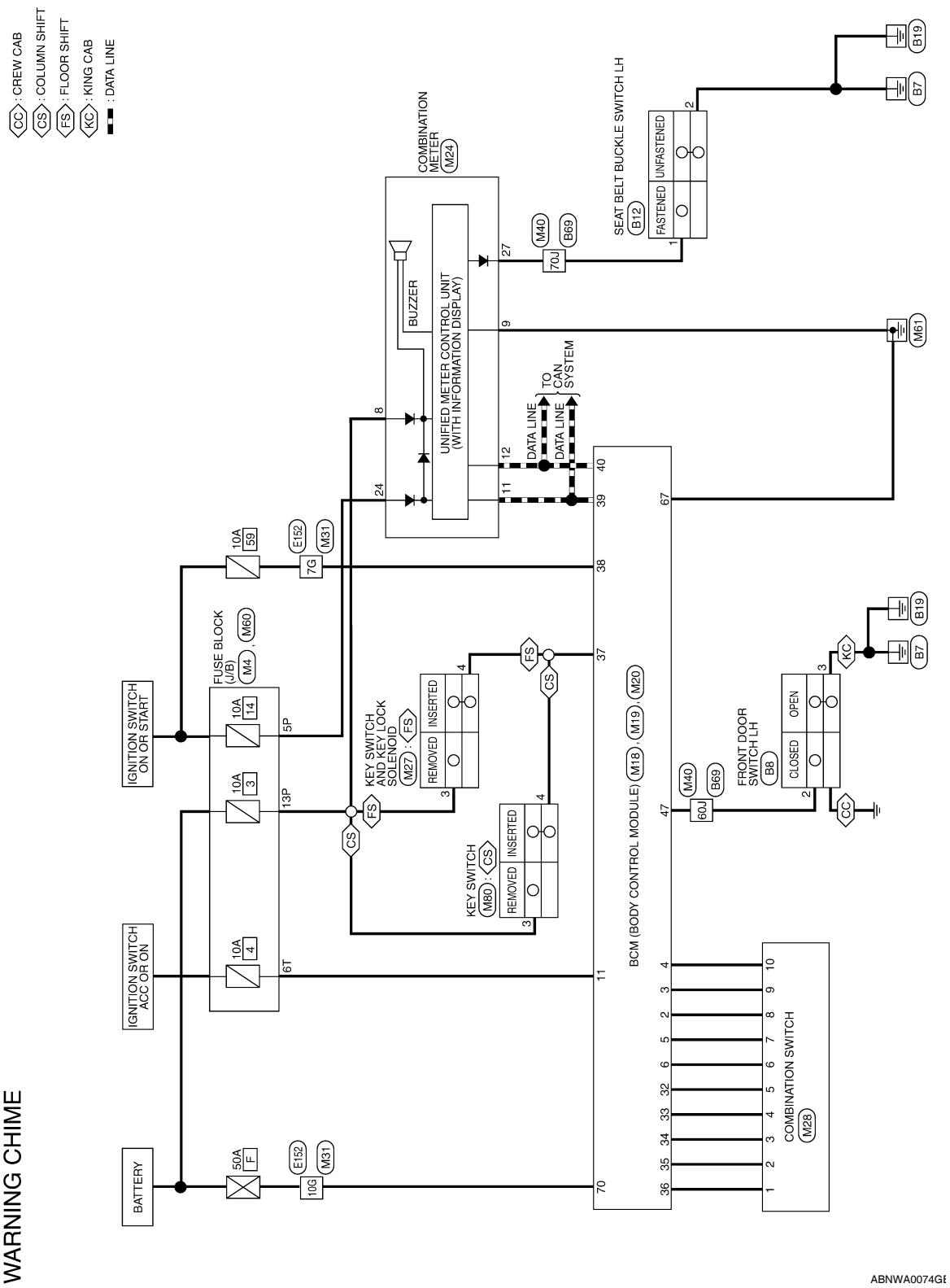
Is the inspection result normal?

YES >> Inspection End.
NO >> Replace key switch and key lock solenoid.

WARNING CHIME SYSTEM

Wiring Diagram

INFOID:0000000003789292

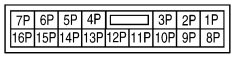


ABNWA0074GB

WARNING CHIME CONNECTORS

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

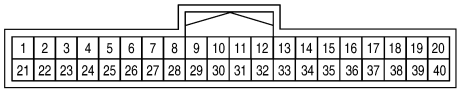
H.S.



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

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

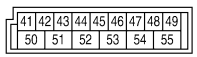
H.S.



Terminal No.	Color of Wire	Signal Name
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
11	O	ACC SW
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.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

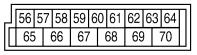
H.S.



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

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

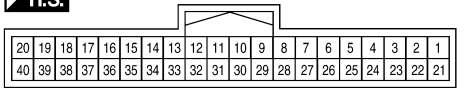
H.S.



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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.



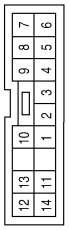
Terminal No.	Color of Wire	Signal Name
8	P	BATTERY
9	B	GND
11	L	CAN-H
12	P	CAN-L
24	O/L	RUN START
27	O/B	SEATBELT

ABNIA0217GB

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

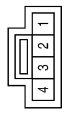
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.



Connector No.	M27
Connector Name	KEY SWITCH AND KEY LOCK SOLENOID
Connector Color	WHITE

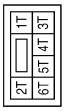
H.S.



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

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

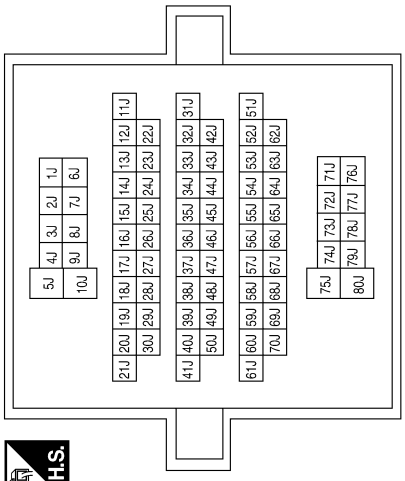
H.S.



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

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

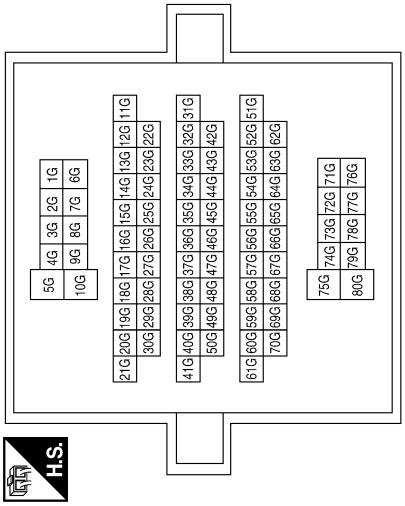
H.S.



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

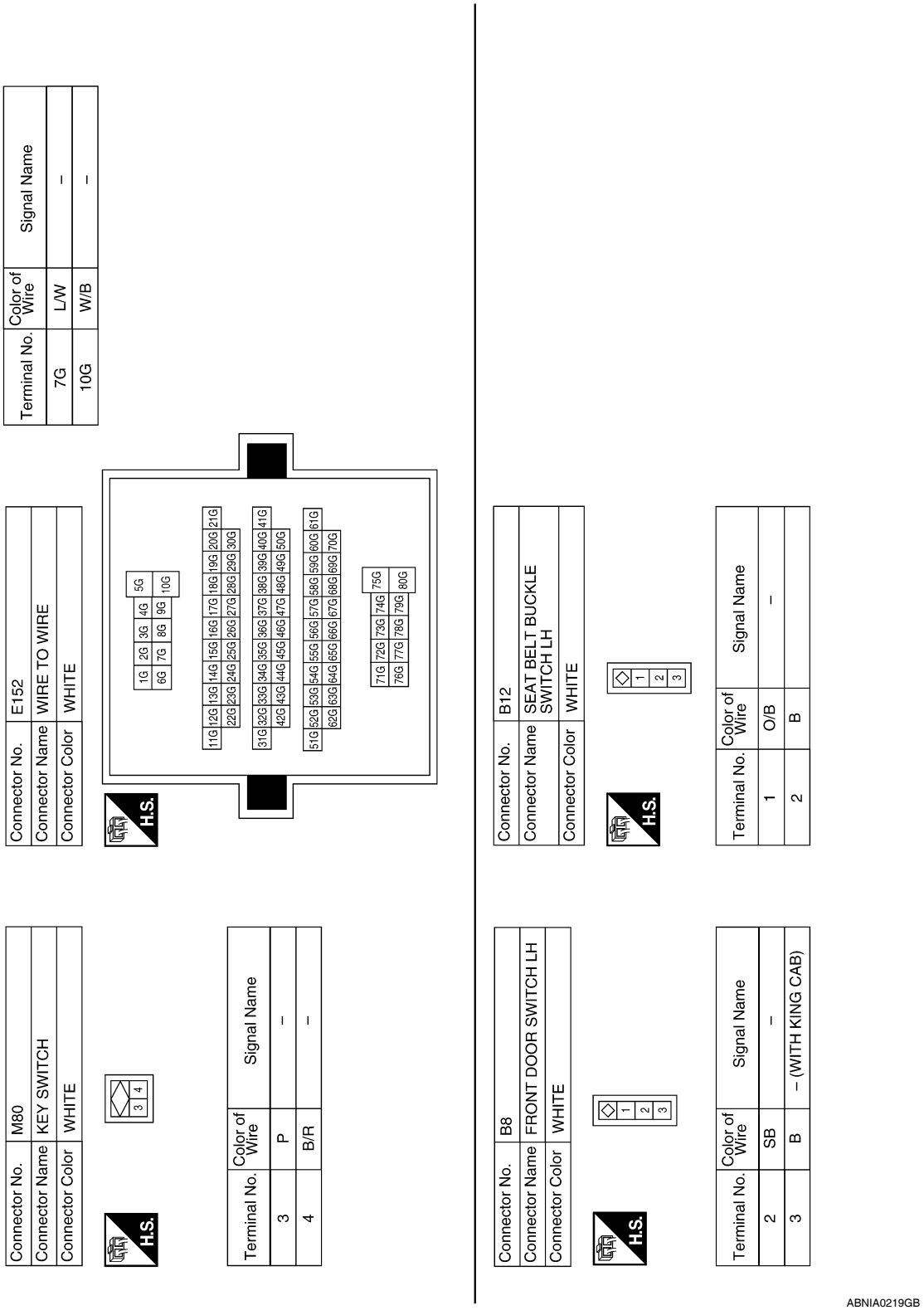
Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



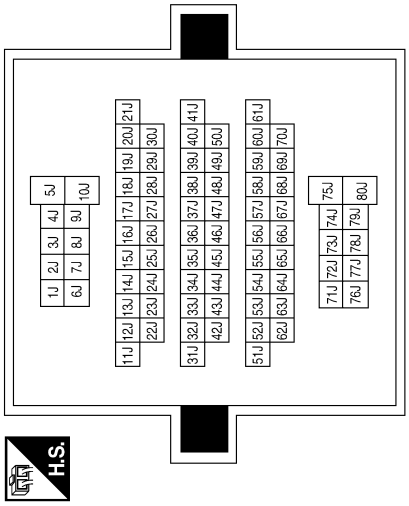
Terminal No.	Color of Wire	Signal Name
7G	W/L	–
10G	W/B	–

ABNIA0218GB


Connector No. M80
Connector Name KEY SWITCH
Connector Color WHITE
H.S.
3 4
Terminal No. Color of Wire Signal Name
3 P –
4 B/R –
Connector No. E152
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1G 2G 3G 4G 5G
6G 7G 8G 9G 10G
11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G
22G 23G 24G 25G 26G 27G 28G 29G 30G
31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 41G
42G 43G 44G 45G 46G 47G 48G 49G 50G
51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G
62G 63G 64G 65G 66G 67G 68G 69G 70G
71G 72G 73G 74G 75G
76G 77G 78G 79G 80G
Terminal No. Color of Wire Signal Name
7G L/W –
10G W/B –
Connector No. B8
Connector Name FRONT DOOR SWITCH LH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 SB –
3 B – (WITH KING CAB)
Connector No. B12
Connector Name SEAT BELT BUCKLE SWITCH LH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
1 O/B –
2 B
ABNIA0219GB

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

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



ABNIA0220GB

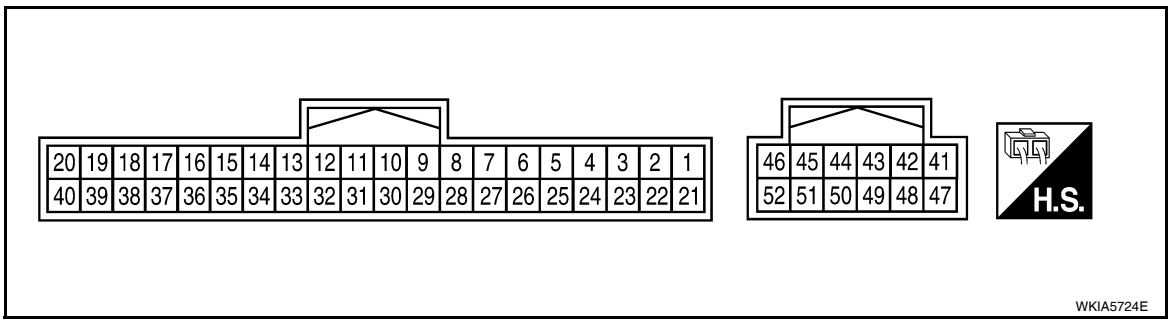
ECU DIAGNOSIS

COMBINATION METER

Reference Value

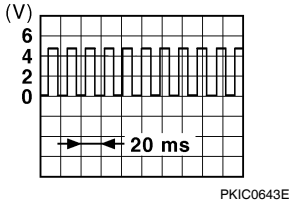
INFOID:0000000004230745

TERMINAL LAYOUT



PHYSICAL VALUES

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

Terminal	Wire color	Item	Condition		Reference value (V) (Approx.)
			Ignition switch	Operation or condition	
29	W/R	Vehicle speed signal output (8-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	**NOTE:** Maximum voltage may be 12V due to specifications (connected units).  PKIC0643E
37	W/L	Washer fluid level switch	ON	Washer fluid level low	0
				Washer fluid level normal	Battery voltage
41	P/L	Seat belt buckle switch RH	ON	Unfastened (ON)	0
				Fastened (OFF)	Battery voltage
45	BR/W	Generator	ON	Generator voltage low	0
				Generator voltage normal	Battery voltage
50	BR	Illumination output	—	—	Refer to INL-10, "System Description".
52	B	Ground	—	—	0

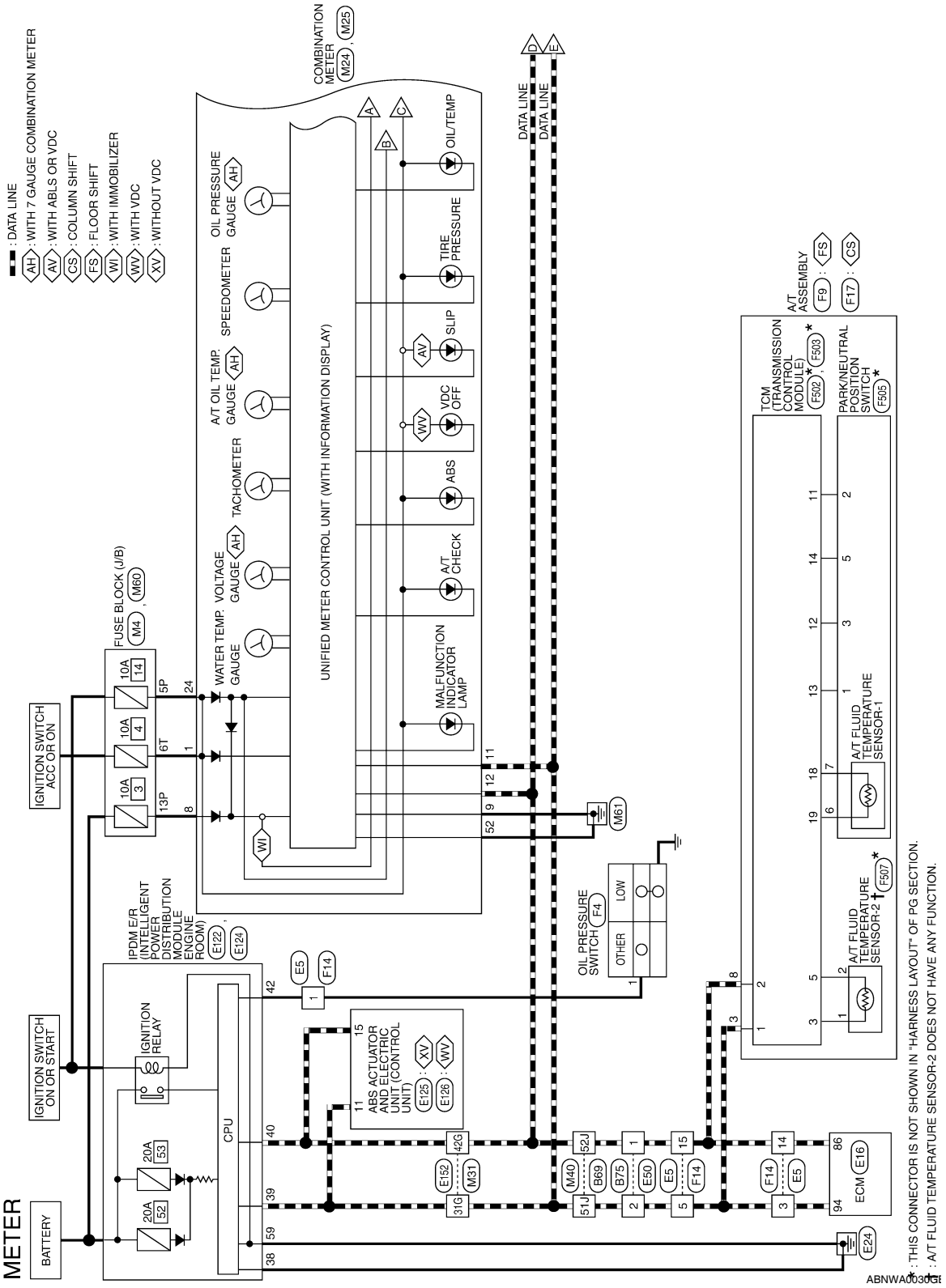
NOTE:

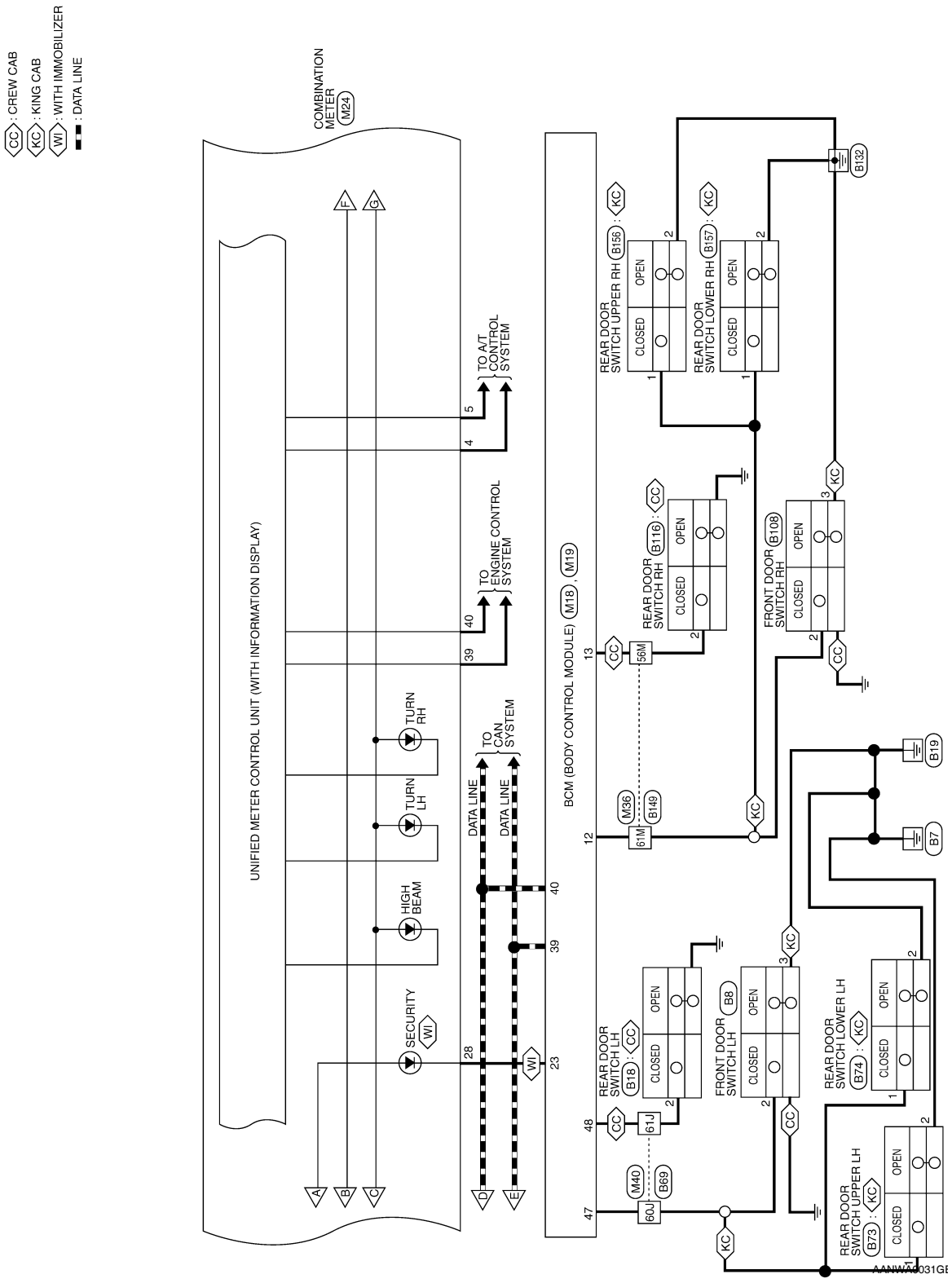
*1: With Type A main harness. For definition of Type A main harness, refer to PG-38, "Harness Layout".

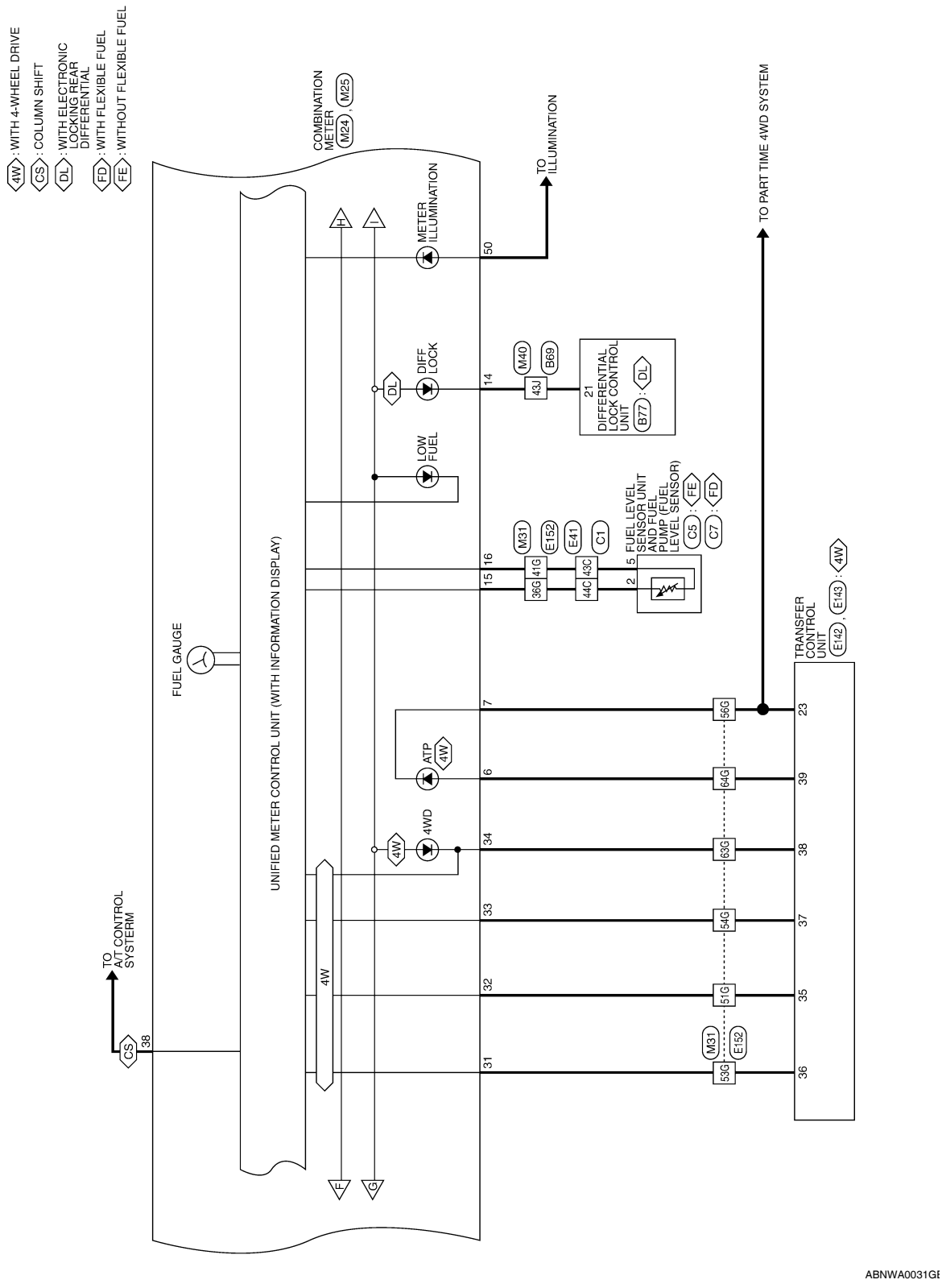
*2: With Type B main harness. For definition of Type B main harness, refer to PG-38, "Harness Layout".

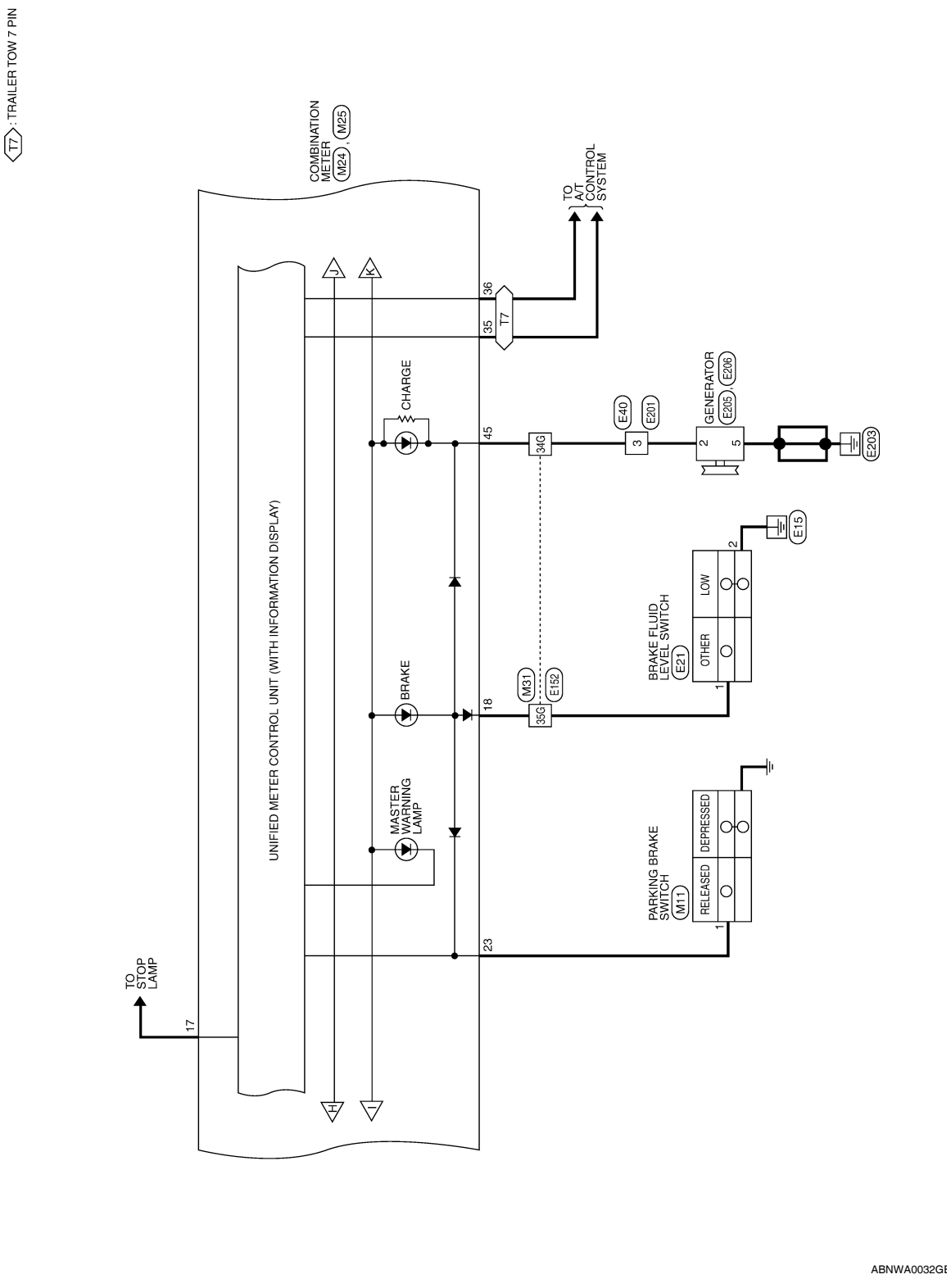
Wiring Diagram

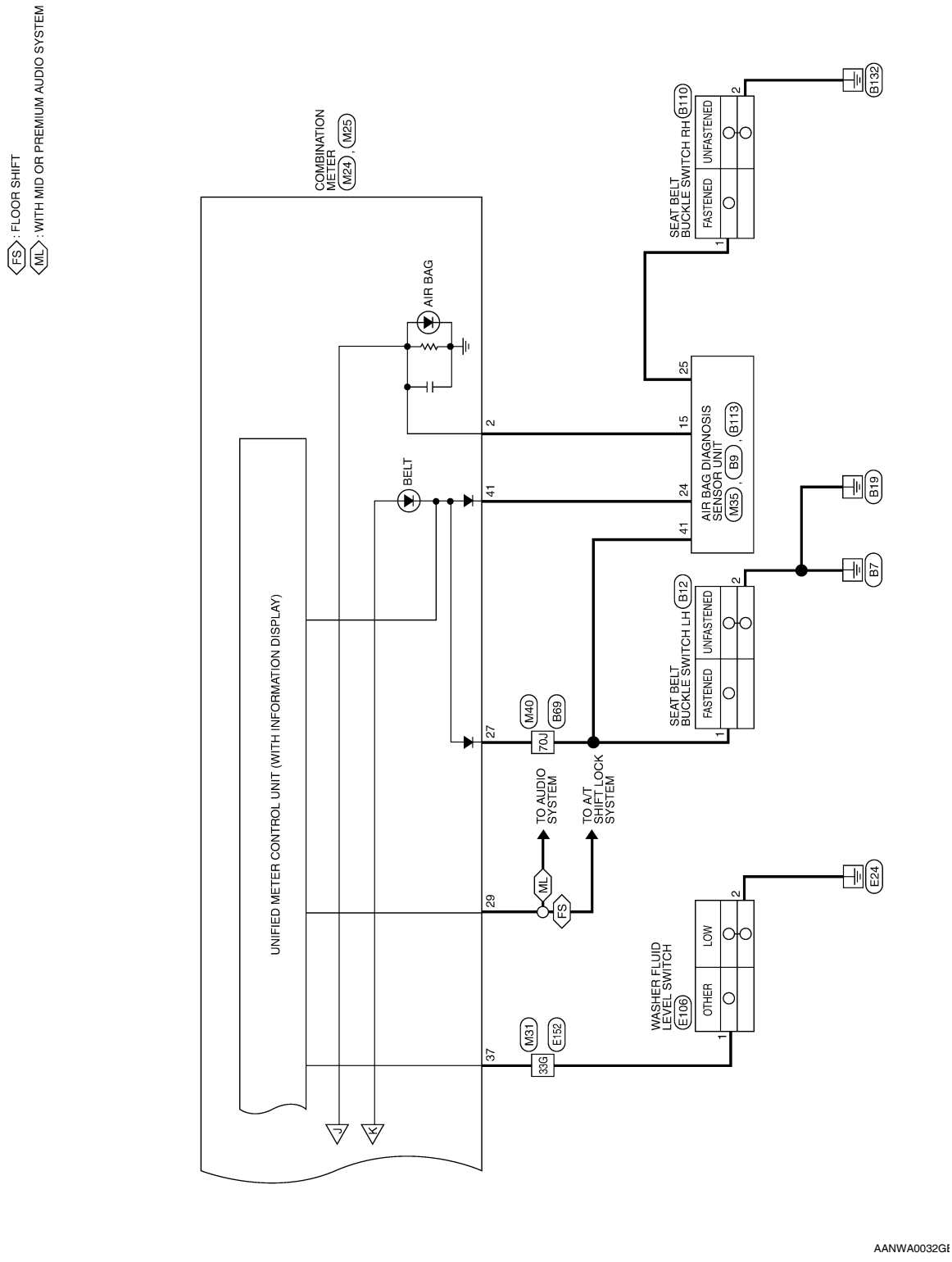
INFOID:0000000004230746




CC : CREW CAB
KC : KING CAB
WI : WITH IMMOBILIZER
: DATA LINE
COMBINATION METER (M24)
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
BCM (BODY CONTROL MODULE) (M18), (M19)
TO A/T CONTROL SYSTEM
TO ENGINE CONTROL SYSTEM
TO CAN SYSTEM
DATA LINE
TURN RH
TURN LH
HIGH BEAM
SECURITY
REAR DOOR SWITCH UPPER RH (B156) : KC
REAR DOOR SWITCH LOWER RH (B157) : KC
REAR DOOR SWITCH RH (B116) : CC
FRONT DOOR SWITCH RH (B108)
REAR DOOR SWITCH LH (B18) : CC
FRONT DOOR SWITCH LH (B8)
REAR DOOR SWITCH LOWER LH (B74) : KC
REAR DOOR SWITCH UPPER LH (B73) : KC
CLOSED
OPEN
AANWA0031GB


4W : WITH 4-WHEEL DRIVE
CS : COLUMN SHIFT
DL : WITH ELECTRONIC LOCKING REAR DIFFERENTIAL
FD : WITH FLEXIBLE FUEL
FE : WITHOUT FLEXIBLE FUEL
COMBINATION METER (M24), (M25)
TO ILLUMINATION
TO PART TIME 4WD SYSTEM
METER ILLUMINATION
DIFF LOCK
LOW FUEL
ATP 4W
4WD
4W
FUEL GAUGE
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
TO A/T CONTROL SYSTEM
DIFFERENTIAL LOCK CONTROL UNIT (B77) : DL
FUEL LEVEL SENSOR UNIT AND FUEL PUMP (FUEL LEVEL SENSOR) (C5) : FE (C7) : FD
TRANSFER CONTROL UNIT (E142), (E143) : 4W
M40
B69
43J
M31
E152
E41
C1
41G
36G
43C
44C
56G
64G
63G
54G
51G
53G
50
14
16
15
5
2
7
6
34
33
32
31
38
23
39
38
37
35
36
H
L
F
G
CS
ABNWA0031GB


T7 : TRAILER TOW 7 PIN
COMBINATION METER (M24, M25)
TO A/T CONTROL SYSTEM
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
CHARGE
BRAKE
MASTER WARNING LAMP
GENERATOR (E205, E206)
E40
E201
E203
34G
45
36
35
T7
M31
E152
35G
18
23
17
TO STOP LAMP
BRAKE FLUID LEVEL SWITCH (E21)
LOW
OTHER
E15
PARKING BRAKE SWITCH (M11)
DEPRESSED
RELEASED
ABNWA0032GB


FS : FLOOR SHIFT
ML : WITH MID OR PREMIUM AUDIO SYSTEM
COMBINATION METER (M24), (M25)
AIR BAG
BELT
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
J
K
2
41
27
29
37
SEAT BELT BUCKLE SWITCH RH (B110)
FASTENED
UNFASTENED
SEAT BELT BUCKLE SWITCH LH (B12)
AIR BAG DIAGNOSIS SENSOR UNIT (M35), (B9), (B113)
25
15
24
41
M40
B69
70J
M31
E152
33G
TO AUDIO SYSTEM
TO A/T SHIFT LOCK SYSTEM
ML
FS
WASHER FLUID LEVEL SWITCH (E106)
OTHER
LOW
B132
B19
B7
E24
AANWA0032GB

METER CONNECTORS

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

H.S.

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

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

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

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	G	–

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

H.S.

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
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
23	G/O	SECURITY INDICATOR OUTPUT
39	L	CAN-H
40	P	CAN-L

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

ABNIA0065GB

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	O	ACCESSORY
2	P	AIR BAG
3	–	–
4	Y/G	AT 1RANGE DN
5	SB	AT 4RANGE UP
6	L/B	ATP+
7	R/B	ATP-
8	Y/R	BATTERY (TYPE A*)
8	P	BATTERY (TYPE B*)
9	B	GND

Terminal No.	Color of Wire	Signal Name
10	–	–
11	L	CAN-H
12	P	CAN-L
13	–	–
14	L	DIFF LOCK
15	Y/L	FUEL IN
16	B/P	ANALOG GND
17	R/G	BRAKE PEDAL
18	P/B	BRAKE FLUID
19	–	–
20	–	–
21	–	–
22	–	–
23	G	PARK BRAKE
24	O/L	RUN START
25	–	–
26	–	–
27	O/B	SEATBELT

Terminal No.	Color of Wire	Signal Name
28	G/O	SECURITY
29	W/R	SPEED OUT
30	–	–
31	L	TF LOCK
32	B/W	TF 2WD
33	W/G	TF 4LO
34	W/B	TF 4WD
35	LG/R	TOW MODE
36	Y/V	TOW MODE LAMP
37	W/L	WASHER FLUID
38	V/W	MANUAL MODE
39	B/R	PN ATCU
40	GR/R	PN REVERSE

Connector No.	M25
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	P/L	PASS SEAT BELT
42	–	–
43	–	–
44	–	–

Terminal No.	Color of Wire	Signal Name
45	BR/W	CHARGE IN
46	–	–
47	–	–
48	–	–
49	–	–
50	BR	ILL LED CON OUTPUT
51	–	–
52	B	ILL GND

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

ABNIA0066GB

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

H.S.

5G	4G	3G	2G	1G
	9G	8G	7G	6G
10G				

21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
	30G	29G	28G	27G	26G	25G	24G	23G	22G	

41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
	50G	49G	48G	47G	46G	45G	44G	43G	42G	

61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
	70G	69G	68G	67G	66G	65G	64G	63G	62G	

75G	74G	73G	72G	71G
	80G	79G	78G	77G	76G

Terminal No.	Color of Wire	Signal Name
31G	L	–
33G	W/L	–
34G	BR/W	–
35G	P/B	–
36G	Y/L	–
41G	B/P	–
42G	P	–
51G	B/W	–
53G	L	–
54G	W/G	–
56G	R/B	–
63G	W/B	–
64G	L/B	–

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

H.S.

20	21							24	49	1
22	11	46	48	47	45		3	4	6	5
16	12		15	14			50	18	52	2

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

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

H.S.

5M	4M	3M	2M	1M
10M	9M	8M	7M	6M

21M	20M	19M	18M	17M	16M	15M	14M	13M	12M	11M
	30M	29M	28M	27M	26M	25M	24M	23M	22M	

41M	40M	39M	38M	37M	36M	35M	34M	33M	32M	31M
	50M	49M	48M	47M	46M	45M	44M	43M	42M	

61M	60M	59M	58M	57M	56M	55M	54M	53M	52M	51M
	70M	69M	68M	67M	66M	65M	64M	63M	62M	

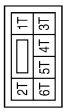
75M	74M	73M	72M	71M
	80M	79M	78M	77M	76M

Terminal No.	Color of Wire	Signal Name
56M	GR	–
61M	R/L	–

ABNIA0067GB

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

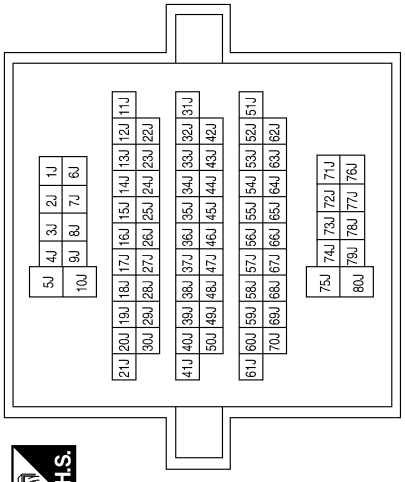
H.S.



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

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

H.S.



Terminal No.	Color of Wire	Signal Name
43J	L	–
51J	L	–
52J	P	–
60J	SB	–
61J	R/Y	–
70J	O/B	–

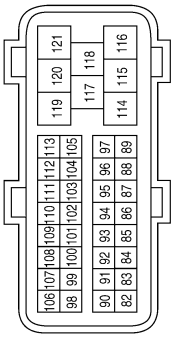
Connector No.	E21
Connector Name	BRAKE FLUID LEVEL SWITCH
Connector Color	GRAY

H.S.

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

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK

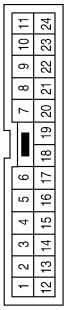
H.S.



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

H.S.



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

ABNIA0068GB

Connector No.	E50
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	L	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
42	GR	OIL PRESSURE SW

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

H.S.

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

ABNIA0069GB

Connector No.	E125
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (WITHOUT VDC)
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47

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

Connector No.	E126
Connector Name	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) (WITH VDC)
Connector Color	BLACK

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47

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

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

H.S.

6	5	4	3	2	1
17	16	15	14	13	12	11	10	9	8	7
26	25	24	23	22	21	20	19	18

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

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

H.S.

32	31	30	29	28	27
42	41	40	39	38	37	36	35	34	33
50	49	48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
35	B/W	2WD IND
36	L	LOCK IND
37	W/G	4LD IND
38	W/B	4WD FAIL
39	L/B	ATP IND

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

H.S.

1G	2G	3G	4G	5G
6G	7G	8G	9G	10G

11G	12G	13G	14G	15G	16G	17G	18G	19G	20G	21G
22G	23G	24G	25G	26G	27G	28G	29G	30G		
31G	32G	33G	34G	35G	36G	37G	38G	39G	40G	41G
42G	43G	44G	45G	46G	47G	48G	49G	50G		
51G	52G	53G	54G	55G	56G	57G	58G	59G	60G	61G
62G	63G	64G	65G	66G	67G	68G	69G	70G		
71G	72G	73G	74G	75G						
76G	77G	78G	79G	80G						

Terminal No.	Color of Wire	Signal Name
31G	L	–
33G	W/L	–
34G	BR/W	–
35G	P/B	–
36G	Y/L	–
41G	B/P	–
42G	P	–
51G	B/W	–
53G	L	–
54G	W/G	–
56G	R/B	–
63G	W/B	–
64G	L/B	–

ABNIA0070GB

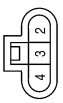
Connector No.	E206
Connector Name	GENERATOR
Connector Color	–

H.S.

Terminal No.	Color of Wire	Signal Name
5	B	–

Connector No.	E205
Connector Name	GENERATOR
Connector Color	BLACK

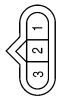
H.S.



Terminal No.	Color of Wire	Signal Name
2	BR/W	–

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

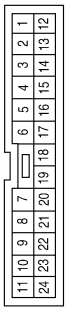
H.S.



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

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

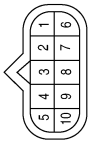
H.S.



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

Connector No.	F9
Connector Name	A/T ASSEMBLY (FLOOR SHIFT)
Connector Color	GREEN

H.S.



Terminal No.	Color of Wire	Signal Name
3	L	–
8	P	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	–

ABNIA0071GB

Connector No.	F17
Connector Name	A/T ASSEMBLY (COLUMN SHIFT)
Connector Color	GREEN

H.S.

5	4	3	2	1
10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
3	L	–
8	P	–

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

H.S.

10	9	8	7	6	5	4	3	2	1

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

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

H.S.

20	19	18	17	16	15	14	13	12	11

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

Connector No.	F505
Connector Name	PARK/NEUTRAL POSTION SWITCH
Connector Color	GRAY

H.S.

10	9	8	7	6	5	4	3	2	1

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

Connector No.	F507
Connector Name	A/T FLUID TEMPERATURE SENSOR-2
Connector Color	WHITE

H.S.

2	1

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

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

H.S.

5C		4C	3C	2C				1C
11C	10C	9C				8C	7C	6C
21C	20C	19C	18C	17C	16C	15C	14C	13C	12C
31C	30C	29C	28C	27C	26C	25C	24C	23C	22C
41C	40C	39C	38C	37C	36C	35C	34C	33C	32C
47C	46C	45C					44C	43C	42C
52C				51C	50C	49C			48C

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

ABNIA0072GB

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

Terminal No.	Color of Wire	Signal Name
2	SB	–
3	B	–

Connector No.	C7
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP (WITH FLEXIBLE FUEL)
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
2	Y/L	–
5	B/P	–

Connector No.	C5
Connector Name	FUEL LEVEL SENSOR UNIT AND FUEL PUMP (WITHOUT FLEXIBLE FUEL)
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
2	Y/L	–
5	B/P	–

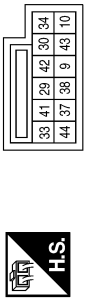
Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

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

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

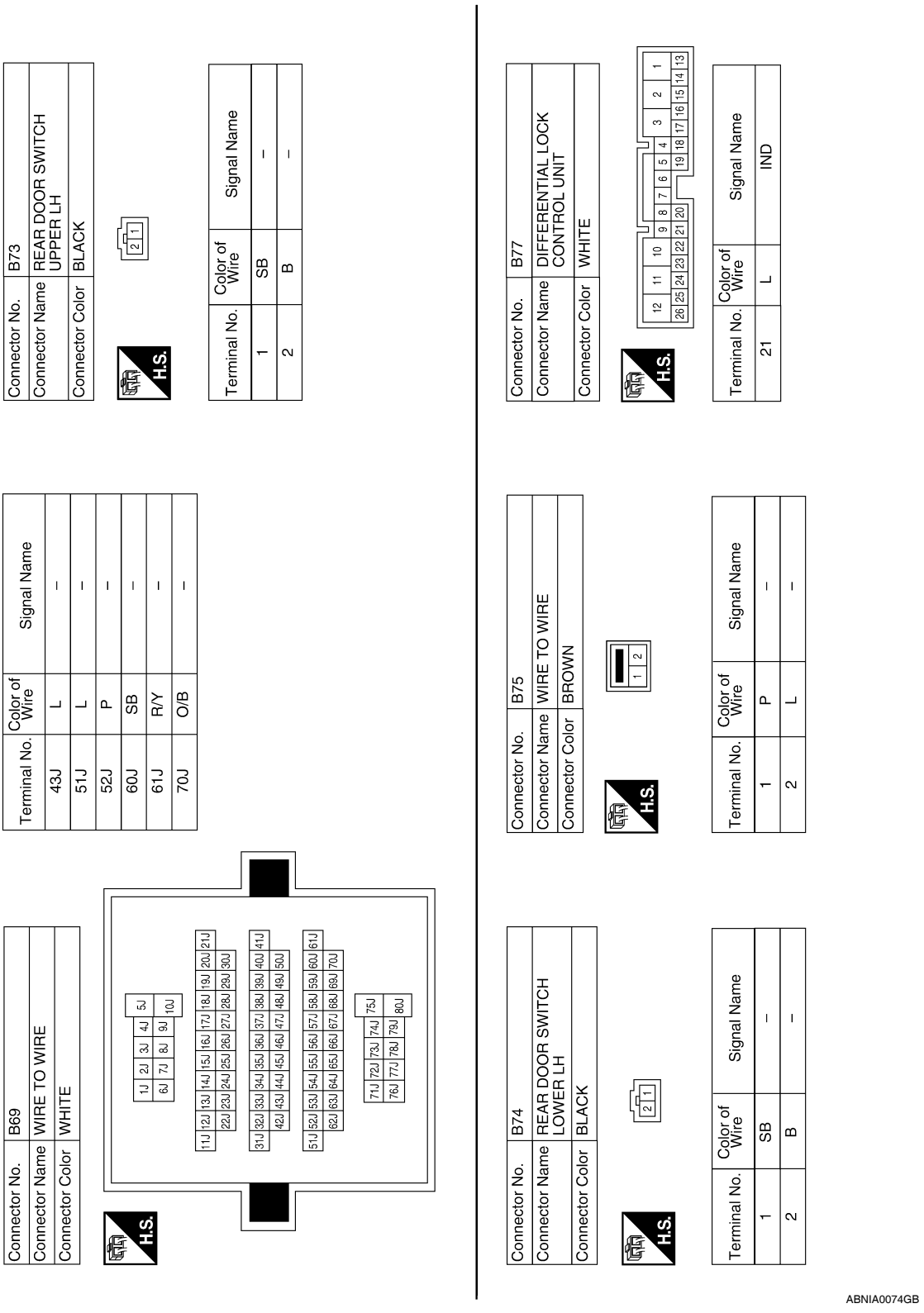
Terminal No.	Color of Wire	Signal Name
1	O/B	–
2	B	–

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



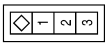
Terminal No.	Color of Wire	Signal Name
41	O/B	BUCKLE SW LH

ABNIA0073GB


Connector No. B73
Connector Name REAR DOOR SWITCH UPPER LH
Connector Color BLACK
H.S.
Terminal No. Color of Wire Signal Name
1 SB –
2 B –
Connector No. B77
Connector Name DIFFERENTIAL LOCK CONTROL UNIT
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
21 L IND
Connector No. B69
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
43J L –
51J L –
52J P –
60J SB –
61J R/Y –
70J O/B –
Connector No. B75
Connector Name WIRE TO WIRE
Connector Color BROWN
H.S.
Terminal No. Color of Wire Signal Name
1 P –
2 L –
Connector No. B74
Connector Name REAR DOOR SWITCH LOWER LH
Connector Color BLACK
H.S.
Terminal No. Color of Wire Signal Name
1 SB –
2 B –
ABNIA0074GB

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

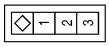
H.S.



Terminal No.	Color of Wire	Signal Name
2	R/L	–
3	B	–

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

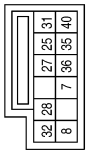
H.S.



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

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

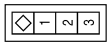
H.S.



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

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

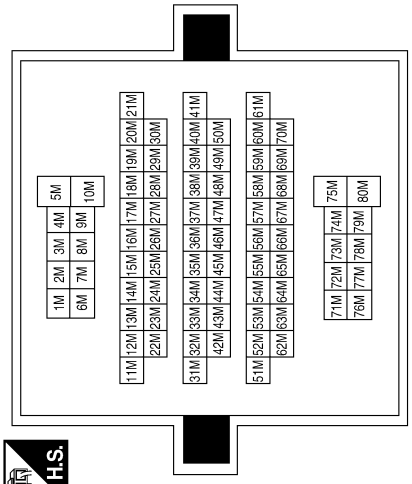
H.S.



Terminal No.	Color of Wire	Signal Name
2	GR	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
56M	GR	–
61M	R/L	–

ABNIA0075GB

Connector No.	B157
Connector Name	REAR DOOR SWITCH LOWER RH
Connector Color	BLACK

H.S.

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

Connector No.	B156
Connector Name	REAR DOOR SWITCH UPPER RH
Connector Color	BLACK

H.S.

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

ABNIA0076GB

Fail Safe

INFOID:0000000004230748

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

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

DTC Index

INFOID:0000000004230747

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. 3, located in the fuse block (J/B)] is disconnected.**	MWI-31
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-32

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)

Reference Value

INFOID:0000000004133037

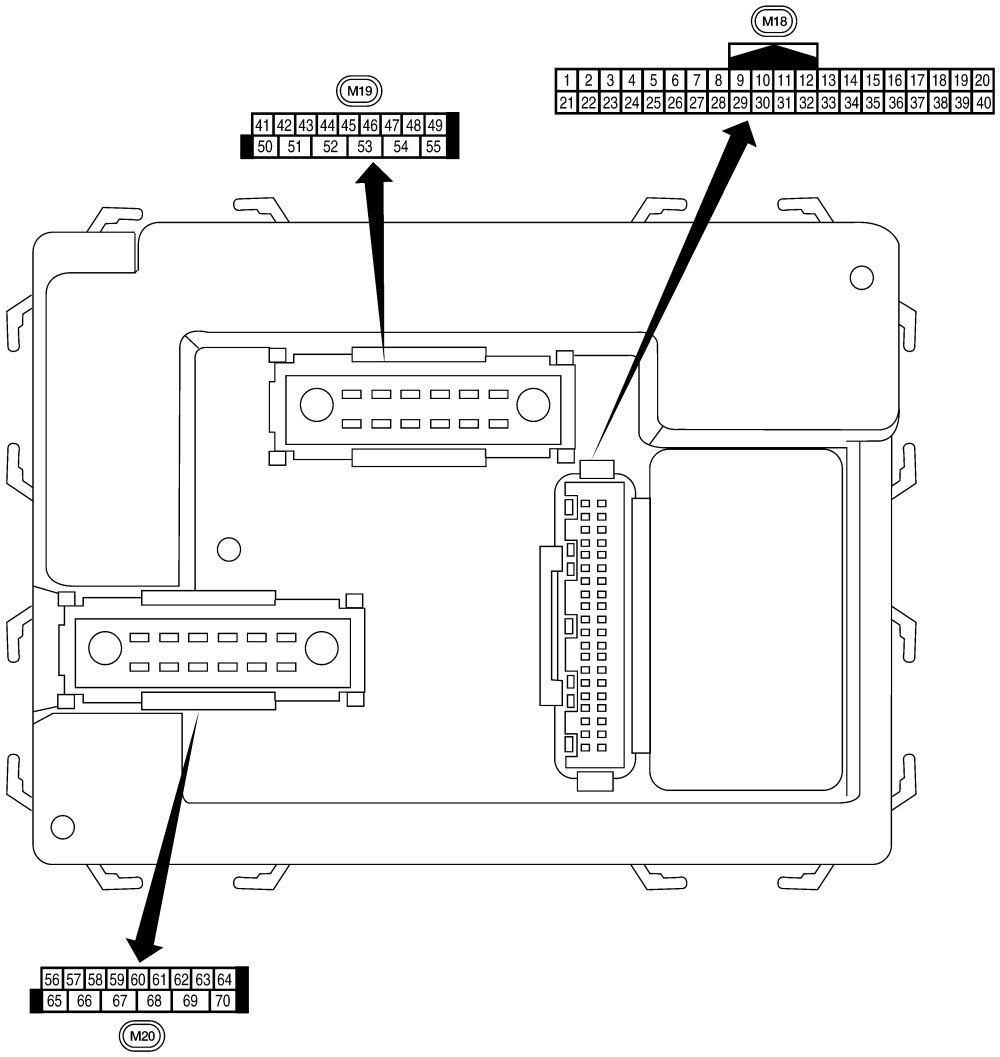
VALUES ON THE DIAGNOSIS TOOL

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
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
HEADLAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON

Monitor Item	Condition	Value/Status
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
KEY ON SW	Key is removed from key cylinder	OFF
	Key is inserted to key cylinder	ON
KEYLESS LOCK	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	ON
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	OFF
	Ignition switch ON	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RKE LOCK AND UN-LOCK	**NOTE:** The item is indicated, but not monitored	OFF
		ON
TAIL LAMP SW	Lighting switch OFF	OFF
	Lighting switch 1ST	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

Terminal Layout

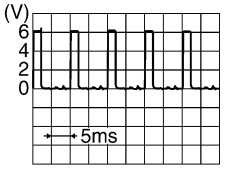
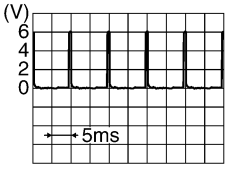
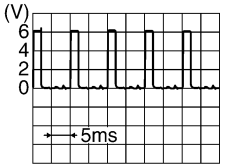
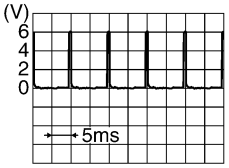
INFOID:0000000004133038

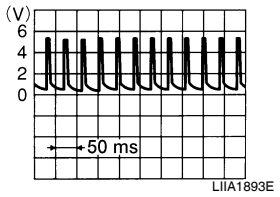
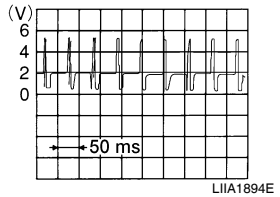
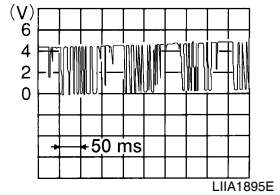
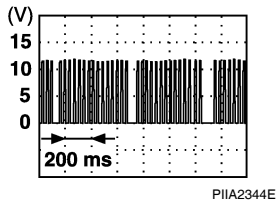


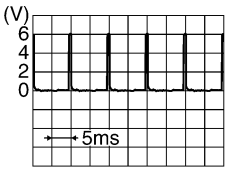
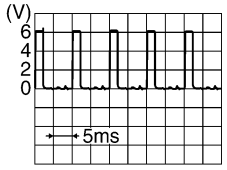
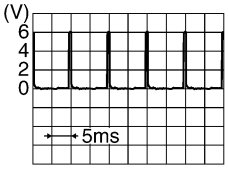
LIIA2443E

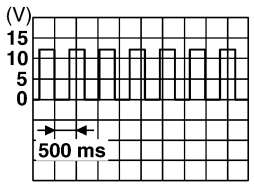
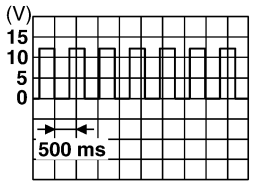
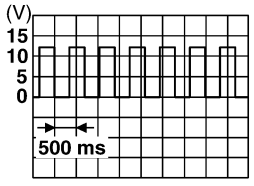
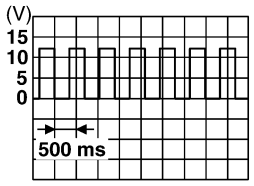
Physical Values

INFOID:0000000004133039

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

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LIIA1893E
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 LIIA1894E
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LIIA1895E
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	G	BUS	—	—	Ignition switch ON or power window timer operates	 PIIA2344E
23	G/O	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	W/B	Hazard switch	Input	OFF	ON	0V
					OFF	5V
31	P/L	Cargo lamp switch	Input	OFF	Cargo lamp switch ON	0
					Cargo lamp switch OFF	Battery voltage

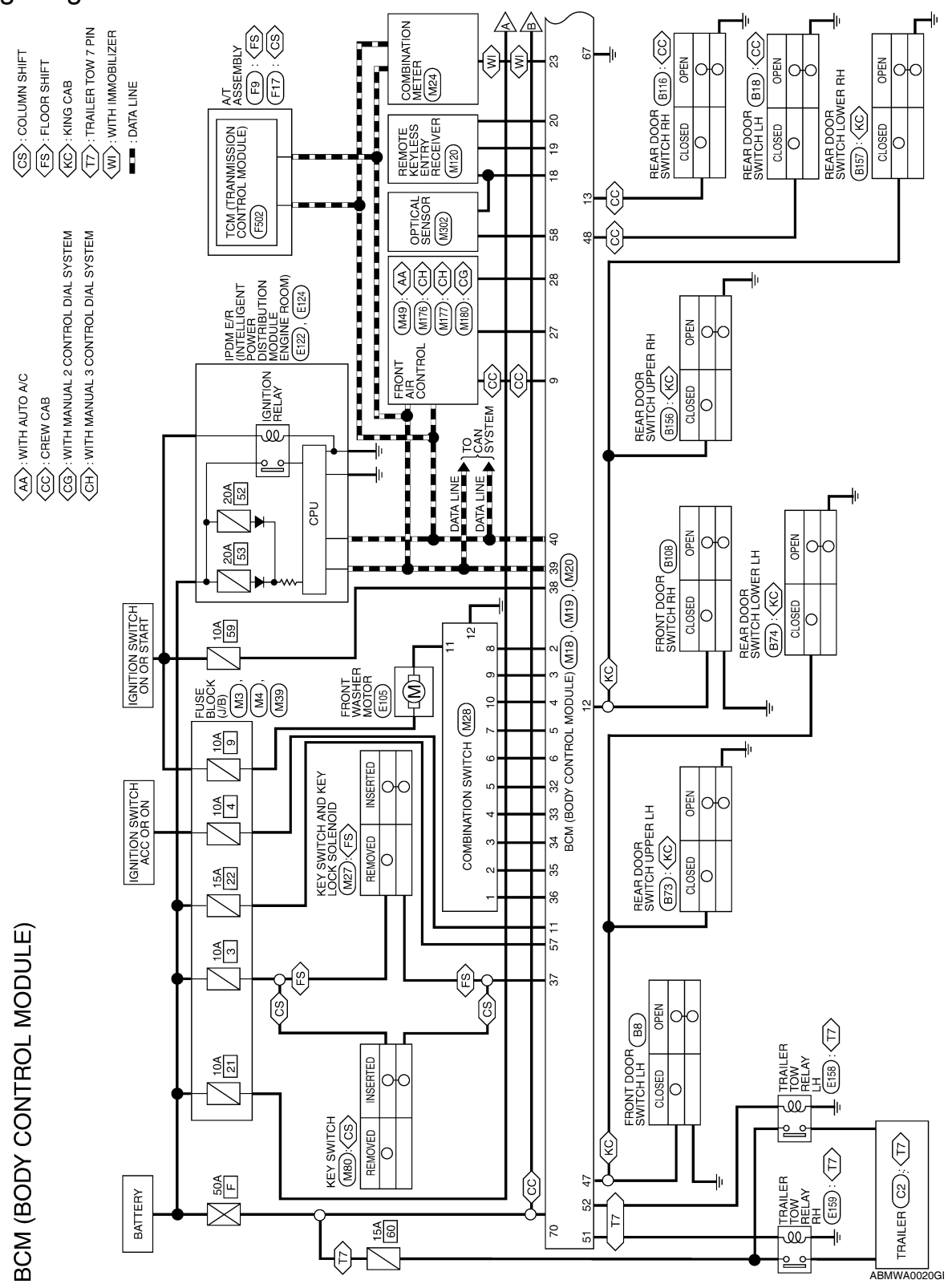
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	R/W	Combination switch output 1				
37	B/R	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key inserted	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
47	SB	Front door switch LH (All)	Input	OFF	ON (open)	0V
		Rear door switch lower LH (King Cab)				
		Rear door switch upper LH (King Cab)			OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
50	R/Y	Cargo bed lamp control	Output	OFF	Cargo lamp switch (ON)	0V
					Cargo lamp switch (OFF)	Battery voltage

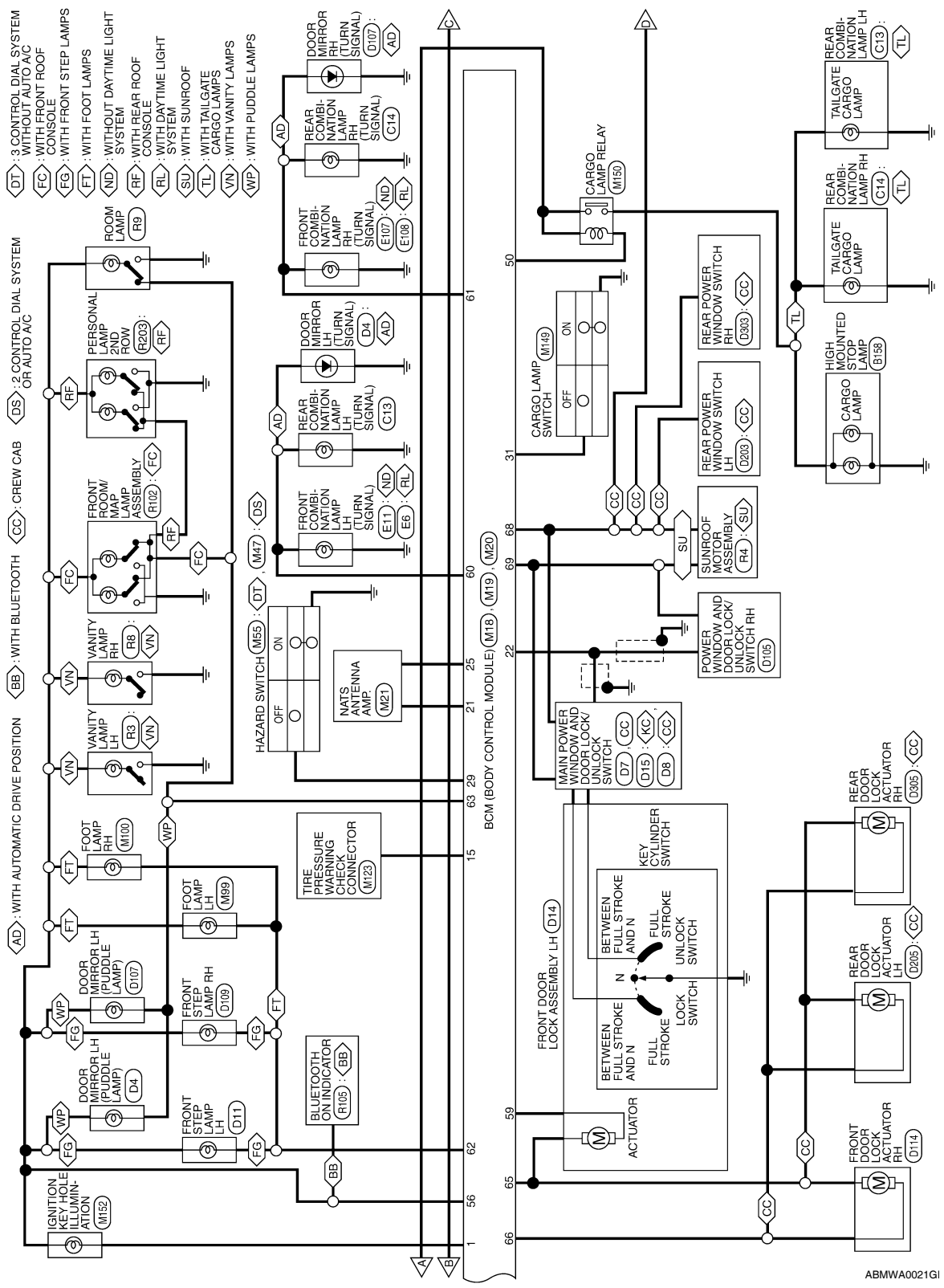
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
51	G/Y	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
56	R/G	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch — ON (open)	0V
					Any door switch — OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH and rear door lock actuators LH/RH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage

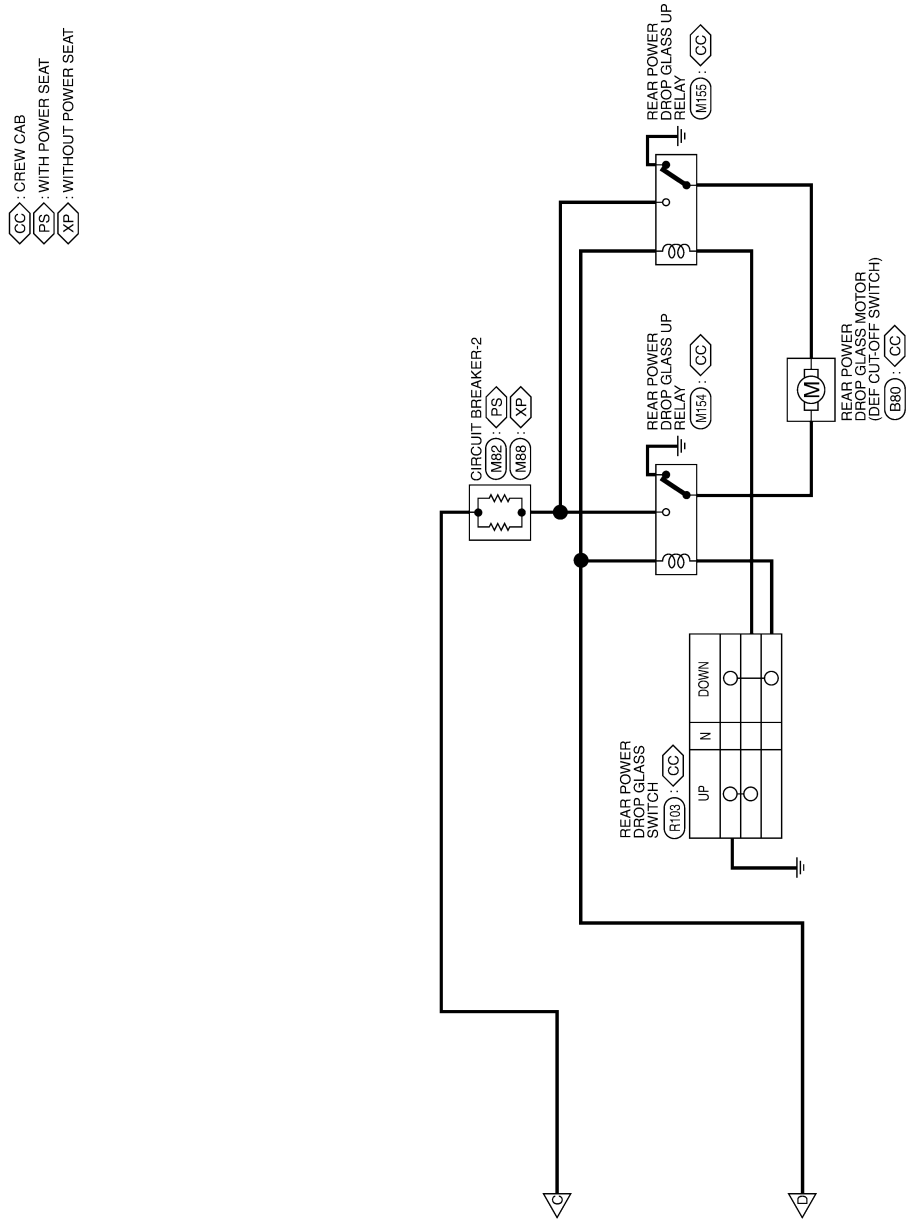
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

Wiring Diagram

INFOID:0000000004133040



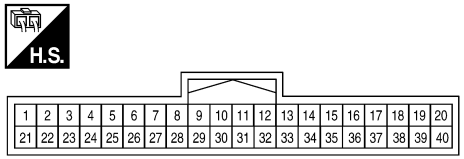

DT : 3 CONTROL DIAL SYSTEM WITHOUT AUTO A/C
FC : WITH FRONT ROOF CONSOLE
FG : WITH FRONT STEP LAMPS
FT : WITH FOOT LAMPS
ND : WITHOUT DAYTIME LIGHT SYSTEM
RF : WITH REAR ROOF CONSOLE
RL : WITH DAYTIME LIGHT SYSTEM
SU : WITH SUNROOF
TL : WITH TAILGATE CARGO LAMPS
VN : WITH VANITY LAMPS
WP : WITH PUDDLE LAMPS
DS : 2 CONTROL DIAL SYSTEM OR AUTO A/C
CC : CREW CAB
BB : WITH BLUETOOTH
AD : WITH AUTOMATIC DRIVE POSITION
ROOM LAMP R9
PERSONAL LAMP 2ND ROW R203 : RF
FRONT ROOM/ MAP LAMP ASSEMBLY R102 : FC
VANITY LAMP RH R8 : VN
VANITY LAMP LH R3 : VN
FOOT LAMP RH M100
FOOT LAMP LH M99
DOOR MIRROR LH (PUDDLE LAMP) D107
DOOR MIRROR LH (PUDDLE LAMP) D4
FRONT STEP LAMP RH D109
FRONT STEP LAMP LH D11
IGNITION KEY HOLE ILLUMINATION M152
BLUETOOTH ON INDICATOR R105 : BB
TIRE PRESSURE WARNING CHECK CONNECTOR M123
HAZARD SWITCH M55 : DT, M47 : DS
OFF
ON
NATS ANTENNA AMP. M21
FRONT COMBINATION LAMP LH (TURN SIGNAL) E11 : ND E6 : RL
REAR COMBINATION LAMP LH (TURN SIGNAL) C13
DOOR MIRROR LH (TURN SIGNAL) D4 : AD
FRONT COMBINATION LAMP RH (TURN SIGNAL) E107 : ND E108 : RL
REAR COMBINATION LAMP RH (TURN SIGNAL) C14
DOOR MIRROR RH (TURN SIGNAL) D107 : AD
BCM (BODY CONTROL MODULE) M18, M19, M20
CARGO LAMP RELAY M150
CARGO LAMP SWITCH M149
REAR POWER WINDOW SWITCH RH D303 : CC
REAR POWER WINDOW SWITCH LH D203 : CC
SUNROOF MOTOR ASSEMBLY R4 : SU
POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH RH D105
MAIN POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH D7 : CC D15 : KC D8 : CC
FRONT DOOR LOCK ASSEMBLY LH D14
KEY CYLINDER SWITCH
BETWEEN FULL STROKE AND N
FULL STROKE
UNLOCK SWITCH
LOCK SWITCH
ACTUATOR
FRONT DOOR LOCK ACTUATOR RH D114
REAR DOOR LOCK ACTUATOR LH D205 : CC
REAR DOOR LOCK ACTUATOR RH D305 : CC
TAILGATE CARGO LAMP
HIGH MOUNTED STOP LAMP B158
CARGO LAMP
REAR COMBINATION LAMP RH C14 : TL
REAR COMBINATION LAMP LH C13 : TL
ABMWA0021GI



ABMWA0022GI

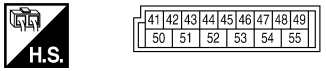
BCM (BODY CONTROL MODULE) CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1	BR/W	KEY RING OUTPUT
2	SB	INPUT 5
3	G/Y	INPUT 4
4	Y	INPUT 3
5	G/B	INPUT 2
6	V	INPUT 1
7	–	–
8	–	–
9	Y/B	REAR DEFOGGER SW
10	–	–
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
14	–	–
15	L/W	TPMS MODE TRIGGER SW
16	–	–
17	–	–
18	P	KEYLESS AND AUTO LIGHT SENSOR GND
19	V/W	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G/W	KEYLESS TUNER SIGNAL
21	G	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
22	G	ANTI-PINCH SERIAL LINK (RX,TX)
23	G/O	SECURITY INDICATOR OUTPUT
24	–	–
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX, TX)
26	–	–
27	W/R	AIRCON SW
28	L/R	BLOWER FAN SW
29	W/B	HAZARD SW
30	–	–
31	P/L	CARGO LAMP SW
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.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	–	–
46	–	–
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
49	–	–
50	R/Y	CARGO LAMP OUTPUT
51	G/Y	TRAILER FLASHER OUTPUT (RIGHT)
52	G/B	TRAILER FLASHER OUTPUT (LEFT)
53	–	–
54	–	–
55	–	–

ABMIA0027GB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	R/W	INPUT 1
2	O/B	INPUT 2
3	L	INPUT 3
4	R/Y	INPUT 4
5	R/G	INPUT 5
6	V	OUTPUT 1
7	G/B	OUTPUT 2
8	SB	OUTPUT 5
9	G/Y	OUTPUT 4
10	Y	OUTPUT 3
11	V/W	WASHER MOTOR
12	B	GND
13	–	–
14	–	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT (FUSE)
58	W/R	AUTO LIGHT SENSOR INPUT 2
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
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	BAT (F/L)

ABMIA0028GB

DTC Inspection Priority Chart

INFOID:0000000004133041

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

Priority	DTC
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM
3	• C1729: VHCL SPEED SIG ERR • C1735: IGNITION SIGNAL
4	• 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:0000000004133042

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	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—
U1000: CAN COMM CIRCUIT	—	—	BCS-28
U1010: CONTROL UNIT (CAN)	—	—	BCS-29
B2190: NATS ANTTENA AMP	—	—	SEC-17
B2191: DIFFERENCE OF KEY	—	—	SEC-20
B2192: ID DISCORD BCM-ECM	—	—	SEC-21
B2193: CHAIN OF BCM-ECM	—	—	SEC-23
C1708: [NO DATA] FL	—	—	WT-14

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
C1709: [NO DATA] FR	—	—	WT-14
C1710: [NO DATA] RR	—	—	WT-14
C1711: [NO DATA] RL	—	—	WT-14
C1712: [CHECKSUM ERR] FL	—	—	WT-16
C1713: [CHECKSUM ERR] FR	—	—	WT-16
C1714: [CHECKSUM ERR] RR	—	—	WT-16
C1715: [CHECKSUM ERR] RL	—	—	WT-16
C1716: [PRESSDATA ERR] FL	—	—	WT-18
C1717: [PRESSDATA ERR] FR	—	—	WT-18
C1718: [PRESSDATA ERR] RR	—	—	WT-18
C1719: [PRESSDATA ERR] RL	—	—	WT-18
C1720: [CODE ERR] FL	—	—	WT-16
C1721: [CODE ERR] FR	—	—	WT-16
C1722: [CODE ERR] RR	—	—	WT-16
C1723: [CODE ERR] RL	—	—	WT-16
C1724: [BATT VOLT LOW] FL	—	—	WT-16
C1725: [BATT VOLT LOW] FR	—	—	WT-16
C1726: [BATT VOLT LOW] RR	—	—	WT-16
C1727: [BATT VOLT LOW] RL	—	—	WT-16
C1729: VHCL SPEED SIG ERR	—	—	WT-19
C1735: IGNITION SIGNAL	—	—	WT-20

SYMPTOM DIAGNOSIS

THE LIGHT REMINDER WARNING DOES NOT SOUND

Description

INFOID:0000000003789303

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

Diagnosis Procedure

INFOID:0000000003789304

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-26, "KING CAB : Diagnosis Procedure" (King Cab) or DLK-28, "CREW CAB : Diagnosis Procedure" (Crew Cab).

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-26, "KING CAB : Diagnosis Procedure" (King Cab) or DLK-28, "CREW CAB : Diagnosis Procedure" (Crew Cab).

Is the inspection result normal?

YES >> Replace the BCM. Refer to BCS-53, "Removal and Installation".
NO >> Replace the front door switch LH.

THE SEAT BELT WARNING CONTINUES SOUNDING, OR DOES NOT SOUND

Description

INFOID:0000000003789305

- 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:0000000003789306

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-103, "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-53, "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-17, "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-18, "Component Inspection".

Is the inspection result normal?

YES >> Replace the combination meter. Refer to MWI-103, "Removal and Installation".
NO >> Replace the seat belt buckle switch LH.

THE KEY WARNING DOES NOT SOUND

Description

INFOID:0000000003789307

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

Diagnosis Procedure

INFOID:0000000003789308

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-103, "Removal and Installation".

2.CHECK KEY SWITCH CIRCUIT

Perform inspection of the key switch circuit. Refer to WCS-19, "Diagnosis Procedure".

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-21, "Component Inspection".

Is the inspection result normal?

YES >> Replace the BCM. Refer to BCS-53, "Removal and Installation".
NO >> Replace the key switch (column shift) or key switch and key lock solenoid (floor shift).

PRECAUTION

PRECAUTIONS

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

INFOID:0000000003789309

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.**