

SECTION **DI**

DRIVER INFORMATION SYSTEM

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PRECAUTION

PRECAUTION

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Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

AKS00C03

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

PFP:24814

COMBINATION METERS

System Description

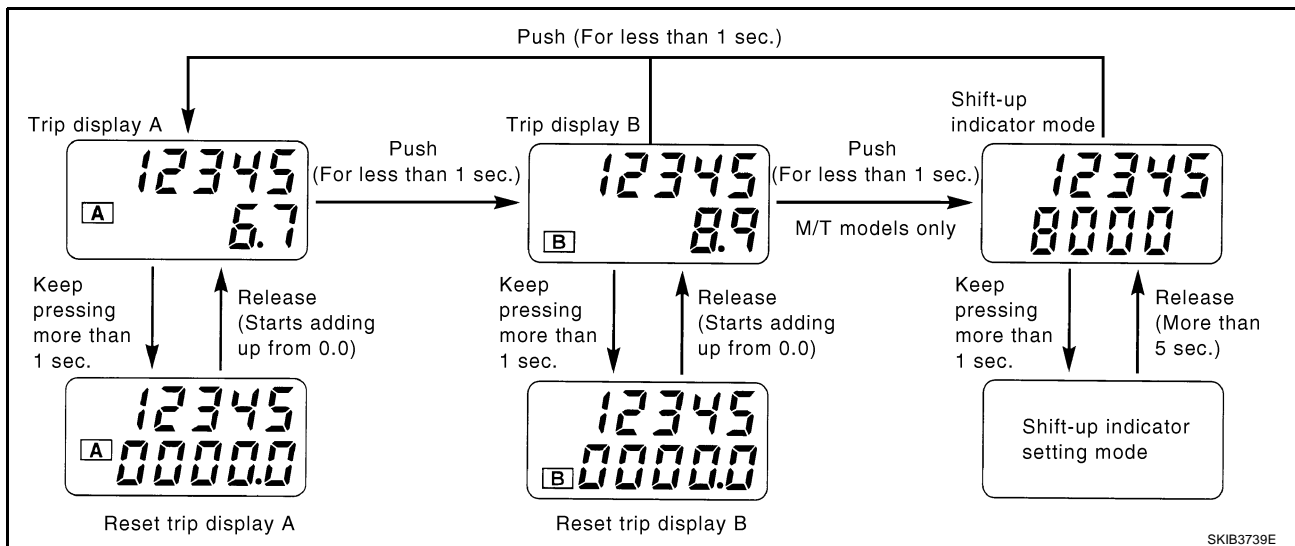
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UNIFIED METER CONTROL UNIT

- Speedometer, odo/trip meter, tachometer, fuel gauge and water temperature gauge are controlled by the unified meter control unit, which is built into the combination meter.
- Shift-up indicator is adopted in the combination meter (M/T models). Setting of shift-up engine speed (rpm) can be set with odo/trip meter.
- Odo/trip meter and A/T indicator segments can be checked in diagnosis mode.
- Meter/gauge can be checked in diagnosis mode.

HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

- The vehicle speed signal and the memory signals from the meter memory circuit are processed by the combination meter and the mileage is displayed.
- Depressing the odo/trip meter switch toggles the mode in the following order.



- Switching odo/trip meter display to the setting of engine speed (rpm) (M/T models) and reset of trip can be changed by time while pressing odo/trip switch.
- When resetting with trip A displayed, only trip A display is reset (The same way for trip B).

NOTE:

- The record of the odo meter is kept even if the battery cable is disconnected. The record of the trip meter is erased when the battery cable is disconnected.
- Refer to [DI-6](#) for the operation and setting of shift-up indicator.

POWER SUPPLY AND GROUND CIRCUIT

Power is supplied at all times

- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to combination meter terminal 21.

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 14, located in the fuse block (J/B)]
- to combination meter terminals 22 and 23.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 6, located in the fuse block (J/B)]
- to combination meter terminal 18.

Ground is supplied

- to combination meter terminals 1, 24 and 25
- through grounds M30 and M66.

COMBINATION METERS

SPEEDOMETER

VDC/TCS/ABS control unit provides a vehicle speed signal to the combination meter for the speedometer with CAN communication line.

TACHOMETER

The tachometer indicates engine speed in revolutions per minute (rpm).

ECM provides an engine speed signal to combination meter for tachometer with CAN communication line.

WATER TEMPERATURE GAUGE

The water temperature gauge indicates the engine coolant temperature.

ECM provides an engine coolant temperature signal to combination meter for water temperature gauge with CAN communication line.

FUEL GAUGE

The fuel gauge indicates the approximate fuel level in the fuel tank.

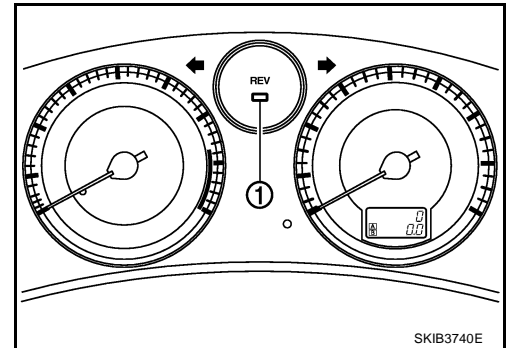
The fuel gauge is regulated by a variable ground signal supplied

- from grounds M30 and M66
- through terminals 5 and 2 of the fuel level sensor unit and fuel pump (main)
- through terminals 2 and 1 of the fuel level sensor unit (sub) and
- to combination meter terminal 7 for the fuel gauge.

SHIFT-UP INDICATOR

Shift-up indicator can be used when shifting up at a constant engine speed from any gear while driving. It becomes a guide for shift-up timing.

- Combination meter receives engine speed signal (CAN communication signal) from ECM.
- Shift-up indicator (1) flashes before reaching engine speed set, approximately 500 rpm before, then it illuminates when reaching the engine speed set.



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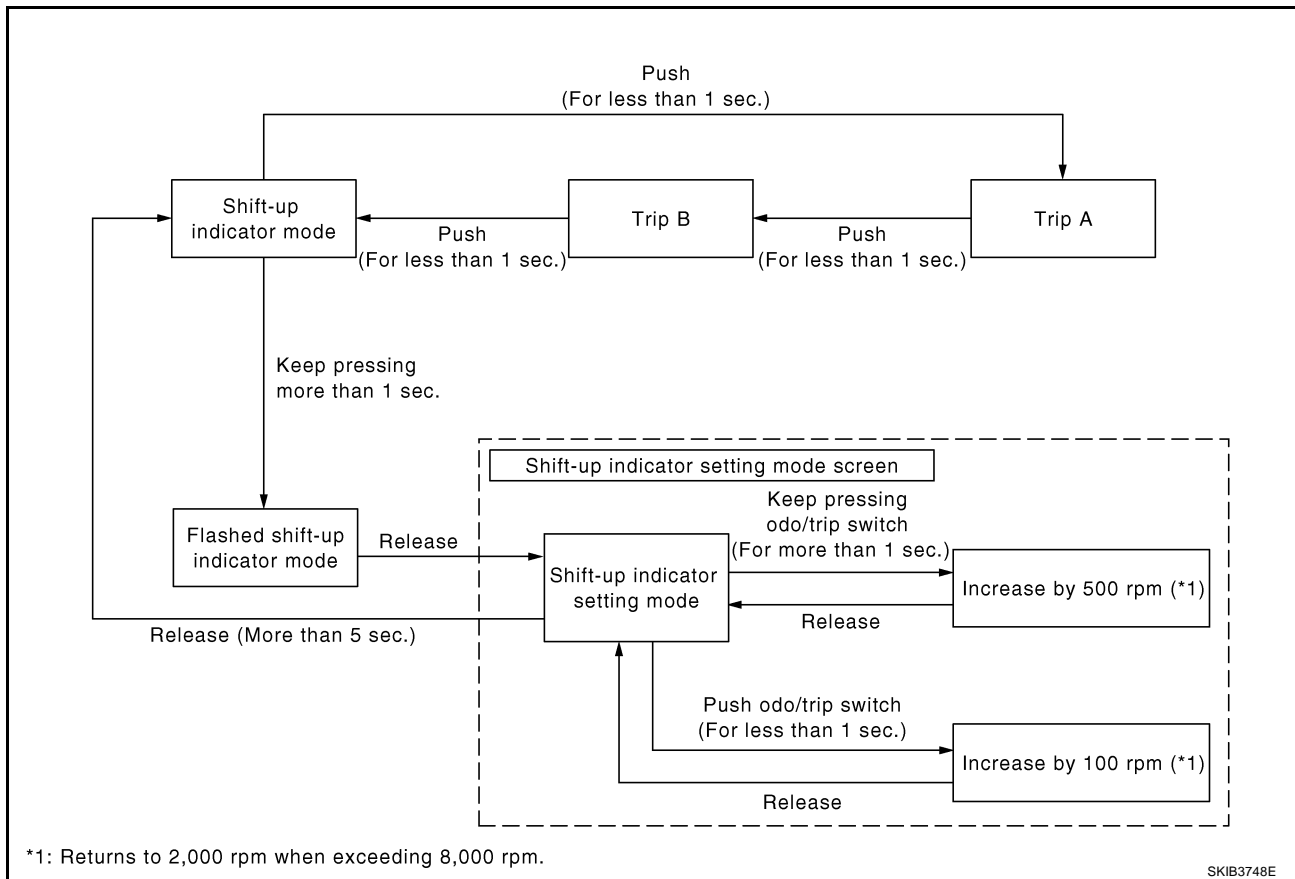
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COMBINATION METERS

Setting Procedure of Shift-up Engine Speed (rpm)

Setting of shift-up engine speed with odo/trip meter.



1. Push odo/trip switch (for less than 1 sec.) to change trip meter display to trip A → trip B → shift-up indicator mode.
2. Keep pressing odo/trip switch (for more than 1 sec.), then release odo/trip switch (display flashes and changes to shift-up indicator setting mode).
3. Set according to the following.
 - a. Keep pressing odo/trip switch (for more than 1 sec.): Increase setting engine speed by 500 rpm.
 - b. Push odo/trip switch (for less than 1 sec.): Increase setting engine speed by 100 rpm.

NOTE:

The range of engine speed is 2,000 - 8,000 rpm (Pushing odo/trip switch when exceeding 8,000 rpm returns to 2,000 rpm).

4. Stop the flash when not pushing odo/trip switch for more than 5 sec. (Shift-up engine speed is set.)

NOTE:

Setting is 8,000 rpm (the initial setting rpm) when disconnecting the battery cable.

CAN Communication

AKS0008V

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Unit

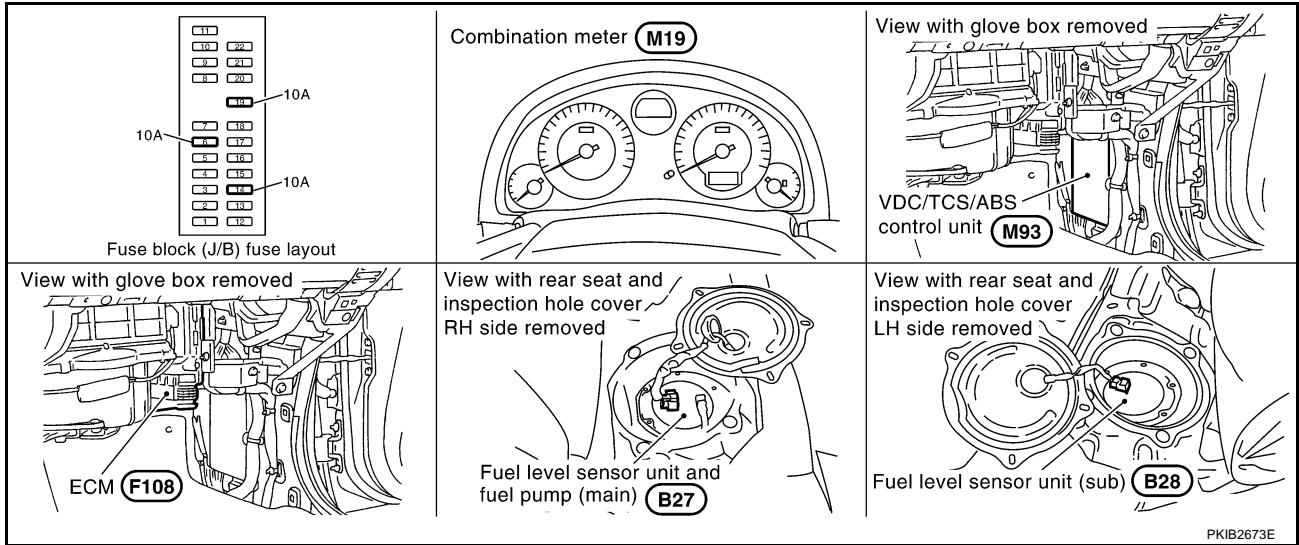
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Refer to [LAN-21, "CAN Communication Unit"](#) in "LAN SYSTEM".

COMBINATION METERS

Component Parts and Harness Connector Location

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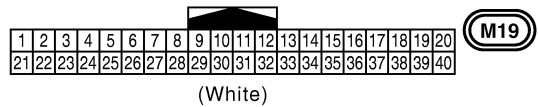
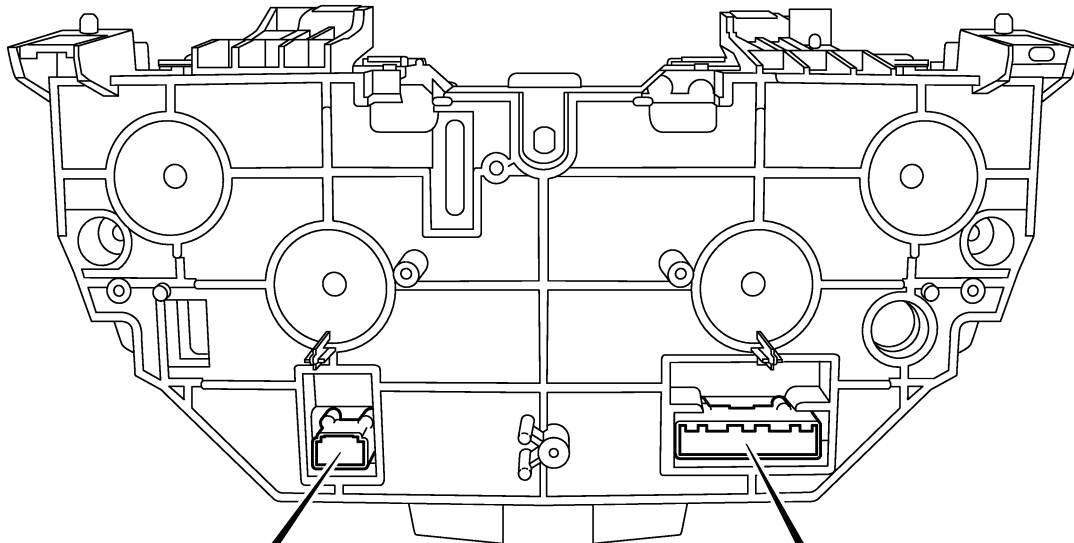
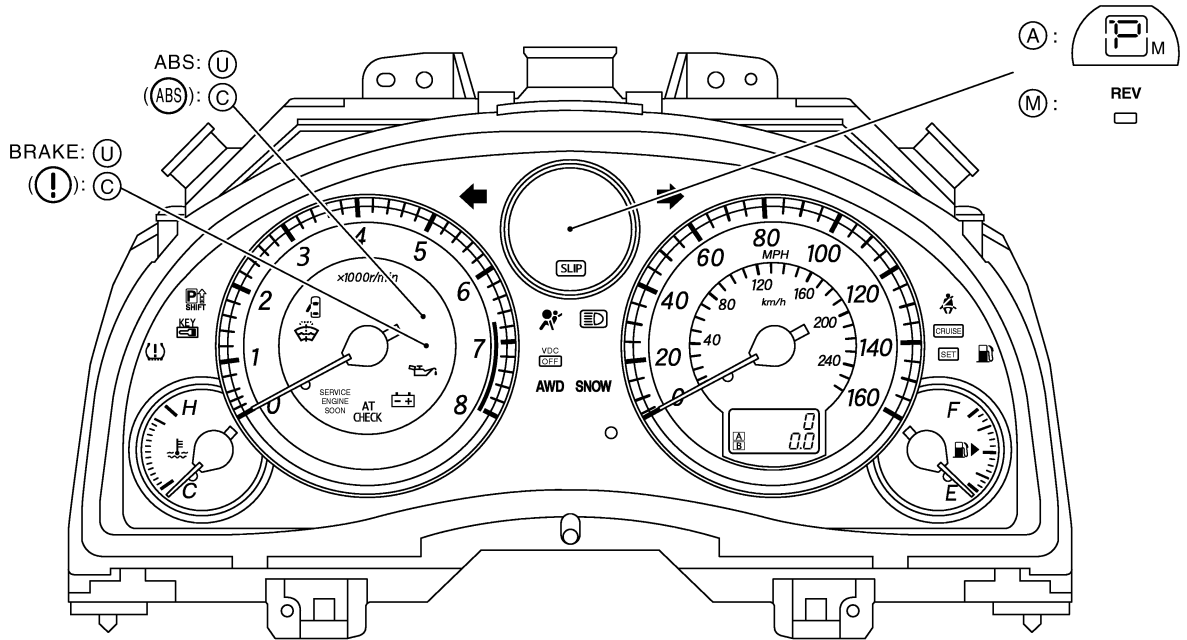
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COMBINATION METERS

Arrangement of Combination Meter

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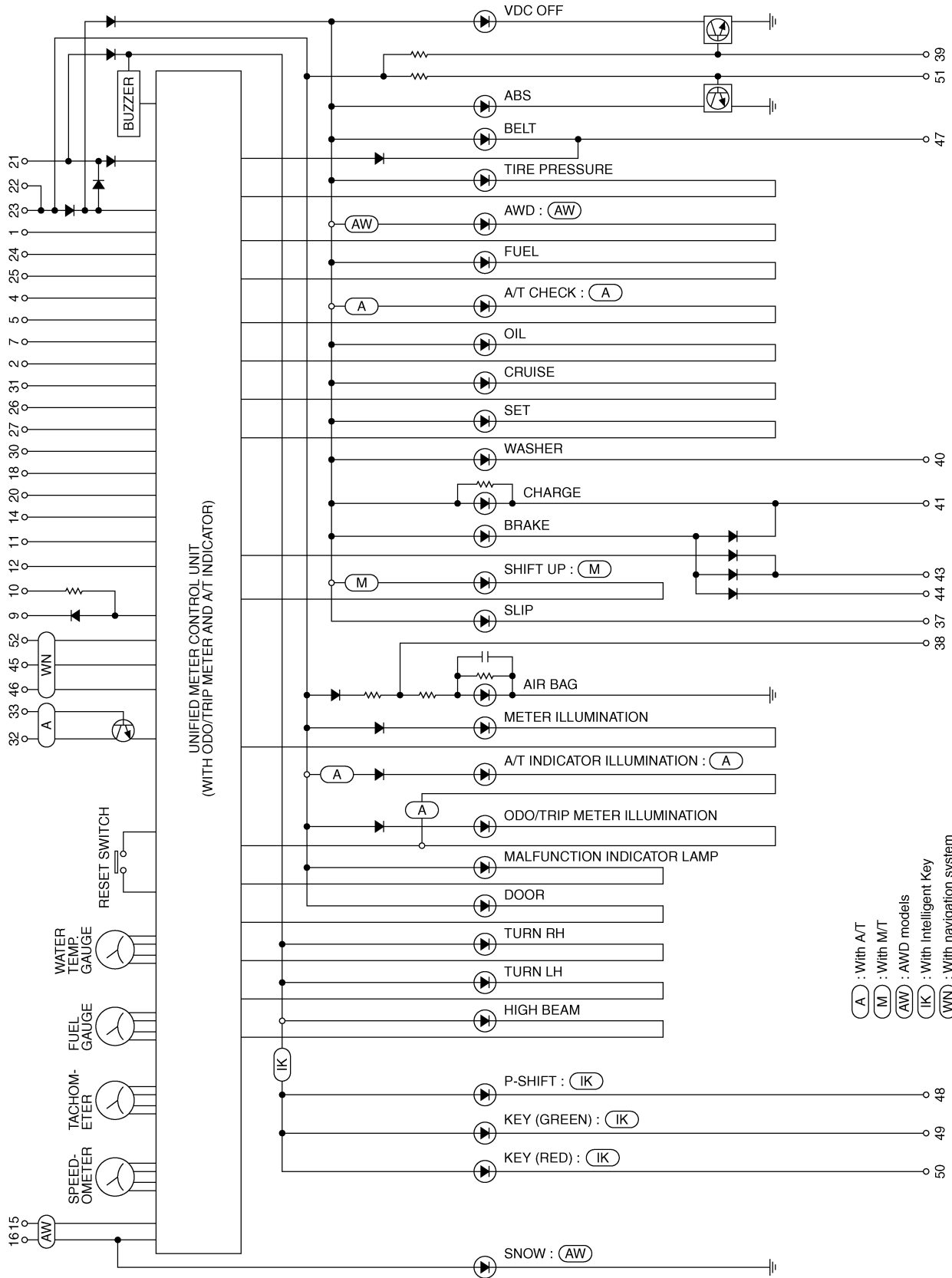
- (U) : For U.S.A.
- (C) : For Canada
- (A) : A/T models
- (M) : M/T models

PKIB7244E

COMBINATION METERS

Schematic

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- (A) : With A/T
- (M) : With M/T
- (AW) : AWD models
- (IK) : With Intelligent Key
- (WN) : With navigation system

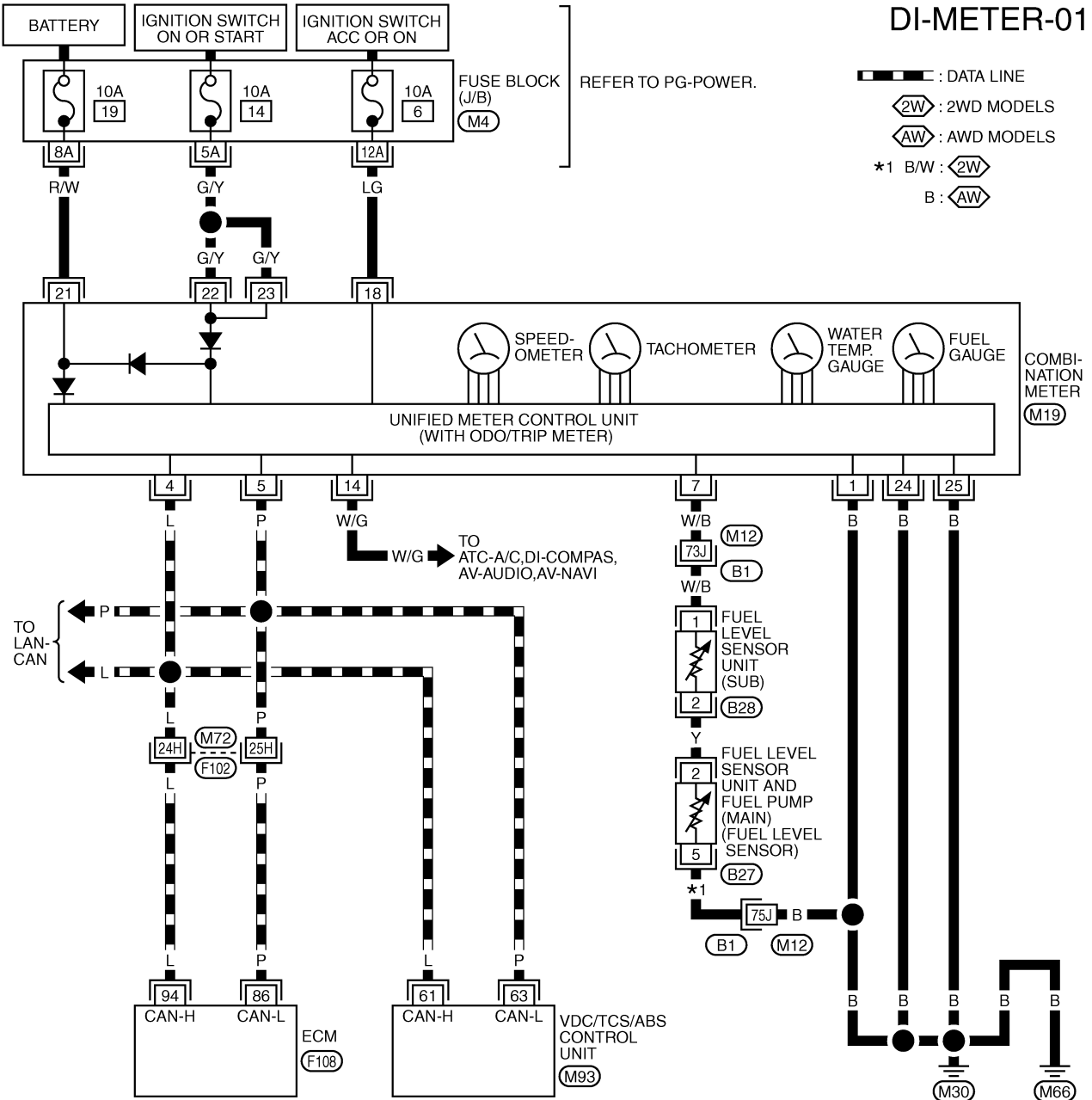
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COMBINATION METERS

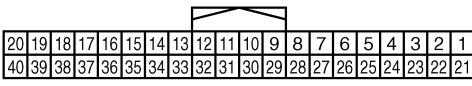
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Wiring Diagram — METER —

DI-METER-01



- : DATA LINE
- ◊2W : 2WD MODELS
- ◊AW : AWD MODELS
- *1 B/W : ◊2W
- B : ◊AW



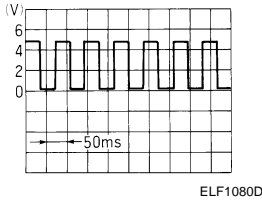
- REFER TO THE FOLLOWING.
- (F102), (B1) -SUPER MULTIPLE JUNCTION (SMJ)
 - (M4) -FUSE BLOCK-JUNCTION BOX (J/B)
 - (M93), (F108) -ELECTRICAL UNITS

TKWM2939E

COMBINATION METERS

Terminals and Reference Value for Combination Meter

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Terminal No.	Wire Color	Item	Condition		Reference Value
			Ignition switch	Operation or condition	
1	B	Ground	ON	—	Approx. 0 V
4	L	CAN H	—	—	—
5	P	CAN L	—	—	—
7	W/B	Fuel level sensor signal	—	—	Refer to DI-18. "FUEL LEVEL SENSOR UNIT CHECK" .
14	W/G	Vehicle speed signal (2-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h (25 MPH)]	
18	LG	Ignition switch (ACC)	ACC	—	Battery voltage
21	R/W	Battery power supply	OFF	—	Battery voltage
22	G/Y	Ignition switch (ON)	ON	—	Battery voltage
23					
24	B	Ground	ON	—	Approx. 0 V
25					

Self-Diagnosis Mode of Combination Meter SELF-DIAGNOSIS FUNCTION

AKS00090

- Odo/trip meter segment and A/T indicator segment operation can be checked in self-diagnosis mode.
- Meters/gauges can be checked in self-diagnosis mode.

OPERATION PROCEDURE

1. Turn the ignition switch ON, and switch the odo/trip meter to "trip A" or "trip B".

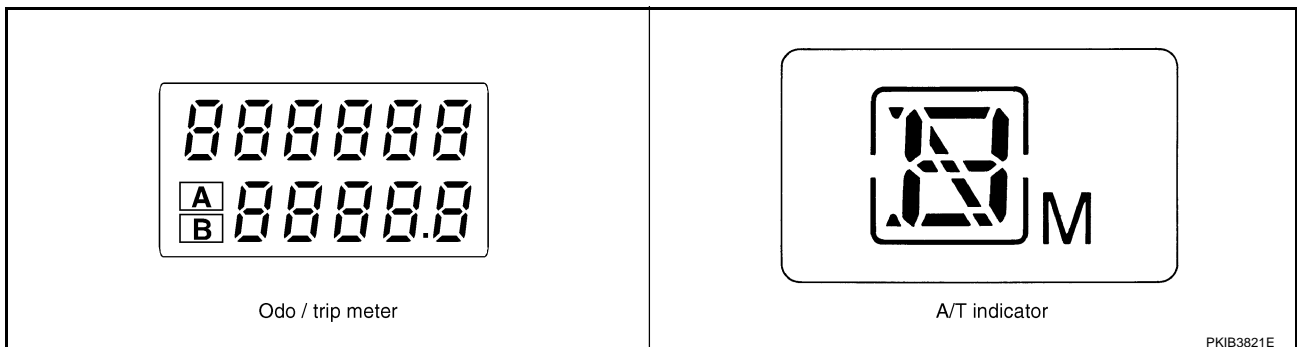
NOTE:

If the diagnosis function is activated with the trip meter A displayed, the mileage on the trip meter A will indicate 0000.0 miles, but the actual trip mileage will be retained (The same way for trip B).

2. Turn ignition switch OFF.
3. While pushing the odo/trip meter switch, turn ignition switch ON again.
4. Make sure that the trip meter displays "0000.0".
5. Push the odo/trip meter switch at least 3 times. (Within 7 seconds after the ignition switch is turned ON.)
6. All the segments on the odo/trip meter and A/T indicator illuminate, and simultaneously the low-fuel warning lamp indicator illuminates. At this time, the unified meter control unit is turned to diagnosis mode.

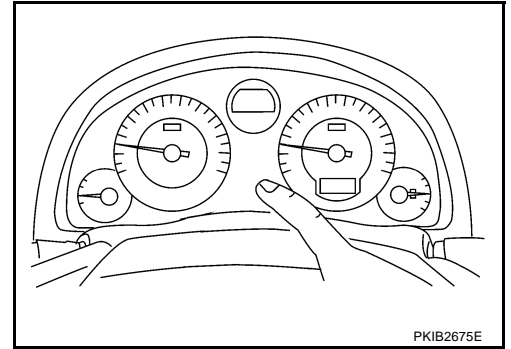
NOTE:

If any of the segments is not displayed, replace the combination meter.



COMBINATION METERS

7. Push the odo/trip meter switch. Each meter/gauge should indicate as shown in the figure while pushing odo/trip meter switch. (At this time, the low-fuel warning lamp goes off.)



AKS00091

Trouble Diagnosis

HOW TO PERFORM TROUBLE DIAGNOSIS

1. Confirm the symptom or customer complaint.
2. Perform preliminary check. Refer to [DI-12, "PRELIMINARY CHECK"](#).
3. According to the symptom chart, repair or replace the cause of the symptom. Refer to [DI-13, "SYMPTOM CHART"](#).
4. Does the meter operate normally? If so, GO TO 5. If not, GO TO 2.
5. INSPECTION END

PRELIMINARY CHECK

1. CHECK WARNING LAMP ILLUMINATION

1. Turn ignition switch ON.
2. Make sure that warning lamps (such as MIL and oil pressure warning lamp) illuminate.

Do warning lamps illuminate?

YES >> GO TO 2.

NO >> Check power supply circuit of combination meter when ignition switch is ON. Refer to [DI-14, "Power Supply and Ground Circuit Inspection"](#).

2. CHECK SELF-DIAGNOSIS OPERATION

Perform combination meter self-diagnosis. Refer to [DI-11, "SELF-DIAGNOSIS FUNCTION"](#).

Does self-diagnosis function operate?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check power supply and ground circuit. Refer to [DI-14, "Power Supply and Ground Circuit Inspection"](#).

OK or NG

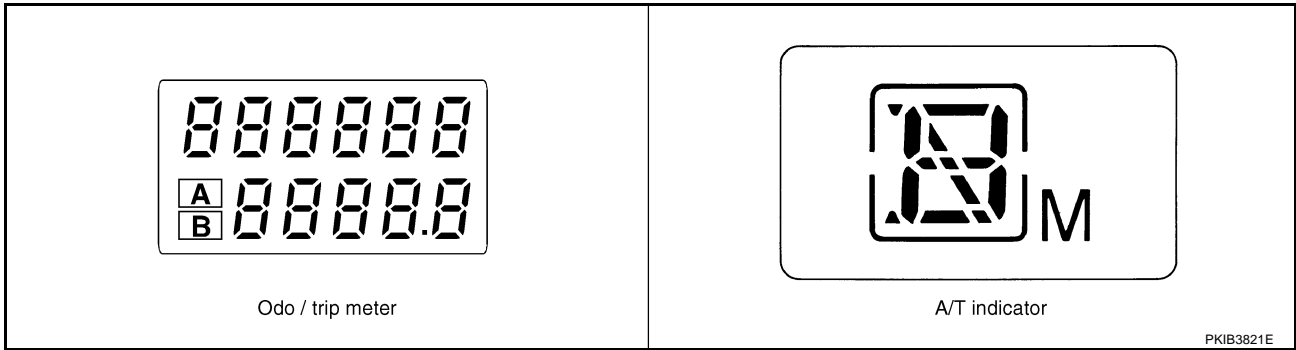
OK >> Replace combination meter.

NG >> Repair malfunctioning part.

COMBINATION METERS

4. CHECK ODO/TRIP METER OPERATION

Check segment display status of odo/trip meter and A/T indicator.



Is the display normal?

YES >> GO TO 5.

NO >> Replace combination meter.

5. CHECK FUEL WARNING LAMP ILLUMINATION

While checking fuel warning lamp, confirm illumination of fuel warning lamp.

Condition of odo/trip meter switch	Fuel warning lamp
Pushed	Does not illuminate.
Released	Illuminates.

OK or NG

OK >> GO TO 6.

NG >> Replace combination meter.

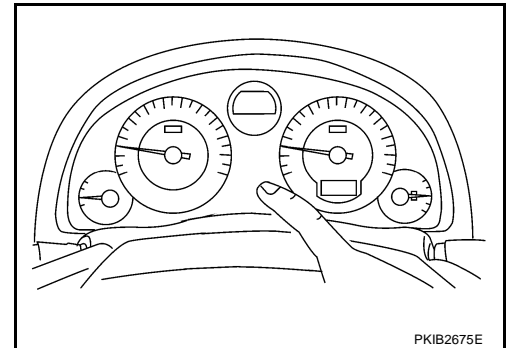
6. CHECK METER CIRCUIT

Check indication of each meter/gauge in self-diagnosis mode.

OK or NG

OK >> Go to [DI-13, "SYMPTOM CHART"](#) .

NG >> Replace combination meter.



SYMPTOM CHART

Symptom	Possible cause
Tachometer indication is malfunction.	Refer to DI-15, "Engine Speed Signal Inspection" .
Low-fuel warning lamp indication is irregular.	Refer to DI-15, "Fuel Level Sensor Signal Inspection" .
Fuel gauge indication is malfunction.	
Water temperature gauge indication is malfunction.	Refer to DI-15, "Engine Coolant Temperature Signal Inspection" .
Indication is irregular for the speedometer and odo/trip meter.	Refer to DI-15, "Vehicle Speed Signal Inspection" .
A/T position indicator is malfunction.	Refer to DI-40, "A/T Indicator Does Not Illuminate" .

COMBINATION METERS

Power Supply and Ground Circuit Inspection

AKS00093

1. CHECK FUSE

Check for blown combination meter fuses.

Unit	Power source	Fuse No.
Combination meter	Battery	19
	Ignition switch (ON)	14
	Ignition switch (ACC)	6

OK or NG

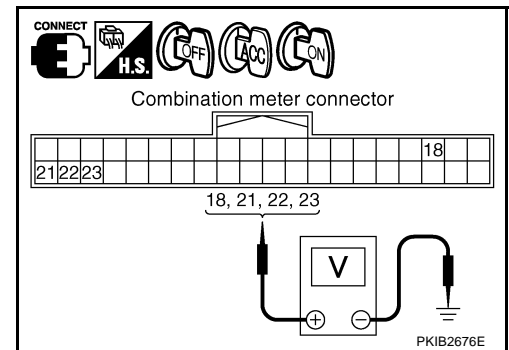
OK >> GO TO 2.

NG >> Be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-3. "POWER SUPPLY ROUTING CIRCUIT"](#).

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between combination meter harness connector M19 terminals 18 (LG), 21 (R/W), 22 (G/Y), 23 (G/Y) and ground.

Terminals		(-)	Ignition switch position		
(+)	Terminal (Wire color)		OFF	ACC	ON
Connector M19	18 (LG)	Ground	0 V	Battery voltage	Battery voltage
	21 (R/W)		Battery voltage	Battery voltage	Battery voltage
	22 (G/Y)		0 V	0 V	Battery voltage
	23 (G/Y)				



OK or NG

OK >> GO TO 3.

NG >> Check harness between combination meter and fuse.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Check continuity between combination meter harness connector M19 terminals 1 (B), 24 (B), 25 (B) and ground.

1 (B) – Ground

24 (B) – Ground

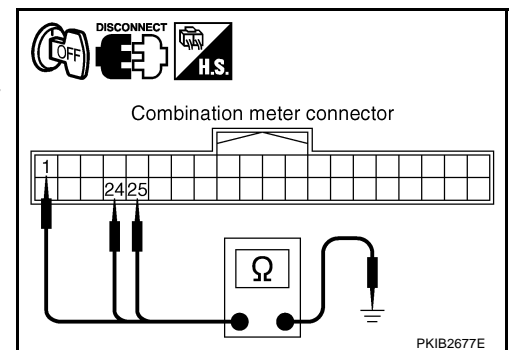
25 (B) – Ground

: Continuity should exist.

OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.



COMBINATION METERS

Vehicle Speed Signal Inspection

AKS00099

Symptom: Indication is irregular for the speedometer and odo/trip meter.

1. CHECK VDC/TCS/ABS CONTROL UNIT SELF-DIAGNOSIS

Preform VDC/TCS/ABS control unit self-diagnosis. Refer to [BRC-25, "CONSULT-II Functions"](#) .

Self-diagnostic results content

No malfunction detected >> Replace combination meter.

Malfunction detected >> Check applicable parts, and repair or replace corresponding parts.

Engine Speed Signal Inspection

AKS00096

Symptom: Tachometer indication is malfunction.

1. CHECK ECM SELF-DIAGNOSIS

Perform ECM self-diagnosis. Refer to [EC-137, "CONSULT-II Function \(ENGINE\)"](#) .

Self-diagnostic results content

No malfunction detected >> Replace combination meter.

Malfunction detected >> Perform "Diagnostic Procedure" in displayed DTC.

Engine Coolant Temperature Signal Inspection

AKS00098

Symptom: Water temperature gauge indication is malfunction.

1. CHECK ECM SELF-DIAGNOSIS

Preform ECM self-diagnosis. Refer to [EC-137, "CONSULT-II Function \(ENGINE\)"](#) .

Self-diagnostic results content

No malfunction detected >> Replace combination meter.

Malfunction detected >> Perform "Diagnostic Procedure" in displayed DTC.

Fuel Level Sensor Signal Inspection

AKS00095

Symptom:

- Fuel gauge indication is malfunction.
- Low-fuel warning lamp indication is irregular.

NOTE:

The following symptoms do not indicate a malfunction.

Fuel gauge

- Depending on vehicle position or driving circumstance, the fuel in the tank flows and the pointer may fluctuate.
- If the vehicle is fueled with the ignition switch ON, the pointer will move slowly.

Low-fuel warning lamp

- Depending on vehicle position or driving circumstance, the fuel in the tank flows and the warning lamp ON timing may change.

1. CHECK HARNESS CONNECTOR

Check combination meter and fuel level sensor unit terminals (meter side, unit side, harness side) for looseness or bent terminals.

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

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COMBINATION METERS

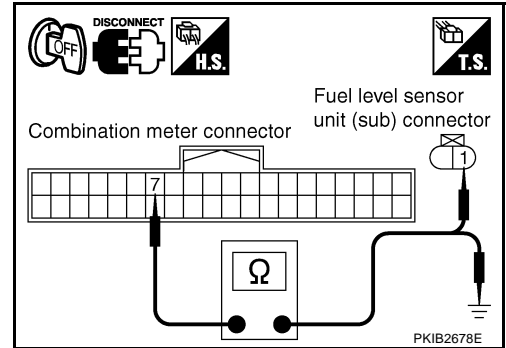
2. CHECK COMBINATION METER CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector and fuel level sensor unit (sub) connector.
3. Check continuity between combination meter harness connector M19 terminal 7 (W/B) and fuel level sensor unit (sub) harness connector B28 terminal 1 (W/B).

7 (W/B) – 1 (W/B) : Continuity should exist.

4. Check continuity between combination meter harness connector M19 terminal 7 (W/B) and ground.

7 (W/B) – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

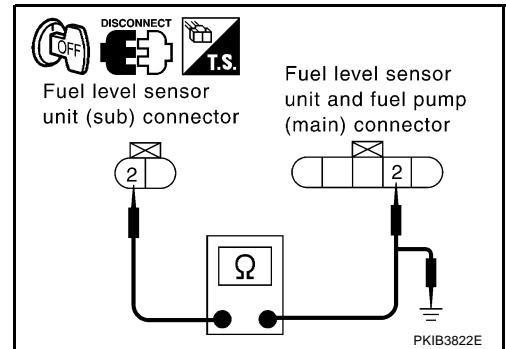
3. CHECK FUEL LEVEL SENSOR CIRCUIT

1. Disconnect fuel level sensor unit and fuel pump (main) connector.
2. Check continuity between fuel level sensor unit (sub) harness connector B28 terminal 2 (Y) and fuel level sensor unit and fuel pump (main) harness connector B27 terminal 2 (Y).

2 (Y) – 2 (Y) : Continuity should exist.

3. Check continuity between fuel level sensor unit (sub) harness connector B28 terminal 2 (Y) and ground.

2 (Y) – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 4.

NG >> Repair harness or connector.

4. CHECK GROUND CIRCUIT

Check continuity between fuel level sensor unit and fuel pump (main) harness connector B27 terminal 5 (B/W*1 or B*2) and ground.

5 (B/W*1 or B*2) – Ground : Continuity should exist.

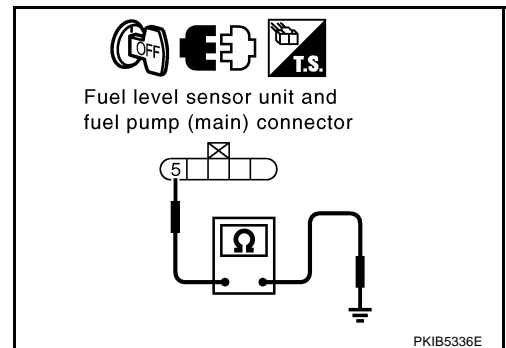
NOTE:

*1: 2WD models, *2: AWD models

OK or NG

OK >> GO TO 5.

NG >> Repair harness or connector.



5. CHECK FUEL LEVEL SENSOR

Check fuel level sensor units. Refer to [DI-18, "FUEL LEVEL SENSOR UNIT CHECK"](#).

OK or NG

OK >> GO TO 6.

NG >> Replace fuel level sensor unit and fuel pump (main) or fuel level sensor unit (sub).

COMBINATION METERS

6. CHECK INSTALLATION CONDITION

Check fuel level sensor unit installation, and check whether the float arm interferes or binds with any of the internal components in the fuel tank.

OK or NG

- OK >> Replace combination meter.
- NG >> Install fuel level sensor unit properly.

Fuel Gauge Pointer Fluctuates, Indicator Wrong Value or Varies

AKS0009B

1. CHECK FUEL GAUGE FLUCTUATION

Test drive vehicle to see if gauge fluctuates only during driving or at the instant of stopping.

Does the indication value vary only during driving or at the instant of stopping?

- YES >> The pointer fluctuation may be caused by fuel level change in the fuel tank. Condition is normal.
- NO >> Ask the customer about the situation when the symptom occurs in detail, and perform the trouble diagnosis.

Fuel Gauge Does Not Move to FULL Position

AKS00CGE

1. QUESTION 1

Does it take a long time for the pointer to move to FULL position?

- YES >> GO TO 2.
- NO >> GO TO 3.

2. QUESTION 2

Was the vehicle fueled with the ignition switch ON?

- YES >> Be sure to fuel the vehicle with the ignition switch OFF. Otherwise, it will take a long time to move to FULL position because of the characteristic of the fuel gauge.
- NO >> GO TO 3.

3. QUESTION 3

Is the vehicle parked on an incline?

- YES >> Check the fuel level indication with vehicle on a level surface.
- NO >> GO TO 4.

4. QUESTION 4

During driving, does the fuel gauge pointer move gradually toward EMPTY position?

- YES >> Check the fuel level sensor unit. Refer to [DI-18, "FUEL LEVEL SENSOR UNIT CHECK"](#).
- NO >> The float arm may interfere or bind with any of the components in the fuel tank.

A
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COMBINATION METERS

AKS000EA

Electrical Components Inspection FUEL LEVEL SENSOR UNIT CHECK

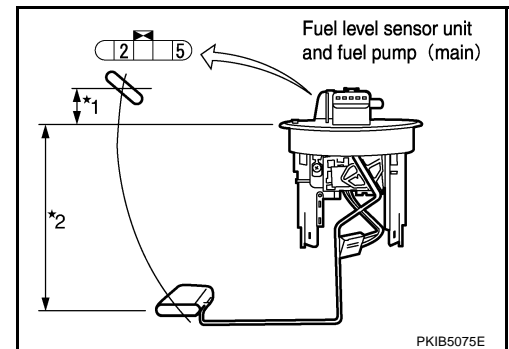
For removal, refer to [FL-4, "FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY"](#) .

Fuel Level Sensor Unit and Fuel Pump (Main)

Check the resistance between terminals 2 and 5.

Terminal		Float position [mm (in)]			Resistance value [Ω]
2	5	*1	Full	9.0 (0.35)	Approx. 3
		*2	Empty	175 (6.89)	Approx. 80

*1 and *2: When float rod is in contact with stopper.

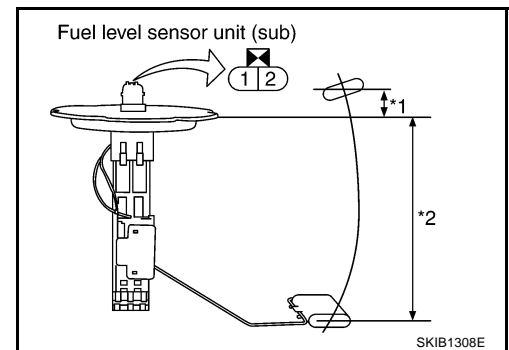


Fuel Level Sensor Unit (Sub)

Check the resistance between terminals 1 and 2.

Terminal		Float position [mm (in)]			Resistance value [Ω]
1	2	*1	Full	9.4 (0.37)	Approx. 3
		*2	Empty	179 (7.05)	Approx. 43

*1 and *2: When float rod is in contact with stopper.



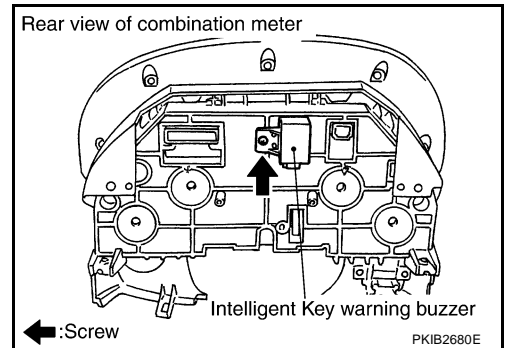
COMBINATION METERS

Removal and Installation for Combination Meter

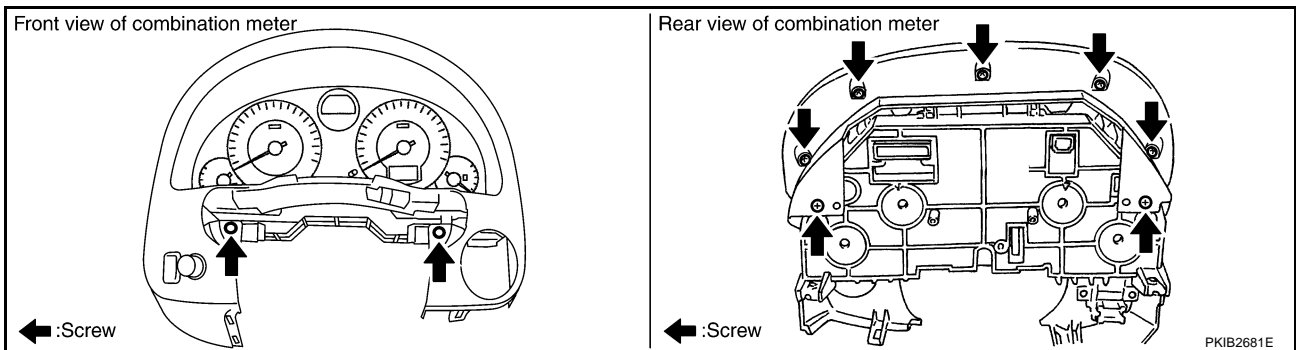
AKS000EV

REMOVAL

1. Remove steering column cover. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
2. Remove lighting and turn signal switch. Refer to [LT-128, "LIGHTING AND TURN SIGNAL SWITCH"](#) .
3. Remove front wiper and washer switch. Refer to [WW-35, "Removal and Installation of Front Wiper and Washer Switch"](#) .
4. Remove instrument lower driver panel. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
5. Remove the screws (4) and remove cluster lid A and combination meter assembly. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
6. Disconnect connectors and remove combination meter.
7. Remove the screw (1) and remove Intelligent Key warning buzzer (with Intelligent Key).



8. Remove the screws (9) and disassemble cluster lid A and combination meter.



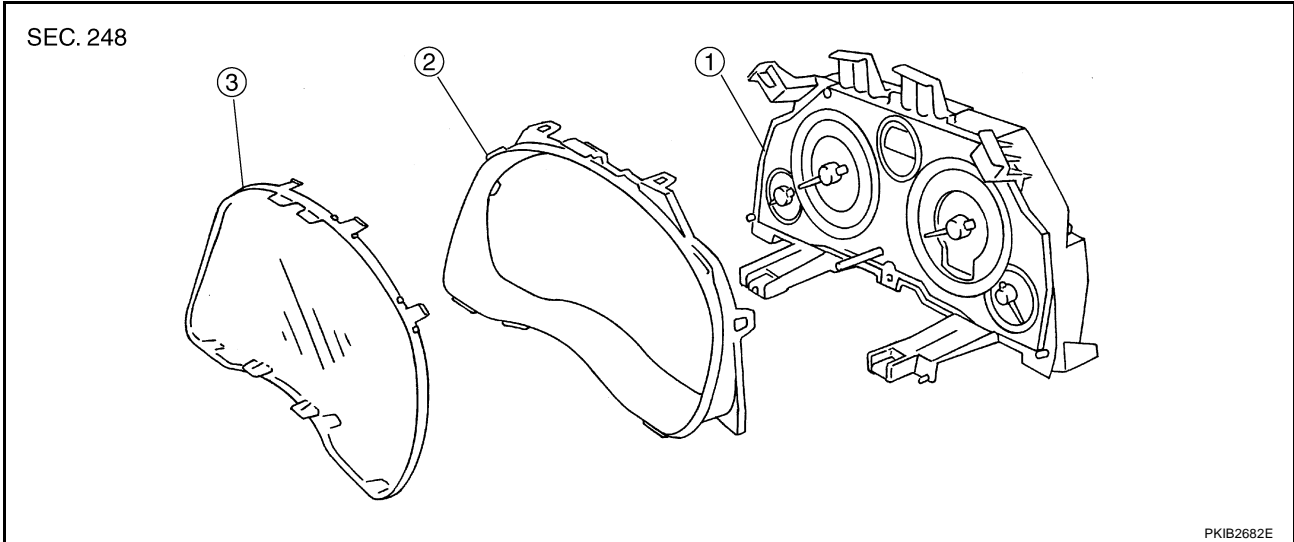
INSTALLATION

Installation is the reverse order of removal.

COMBINATION METERS

Disassembly and Assembly for Combination Meter

AKS000EW



1. Unified meter control unit assembly 2. Upper housing 3. Front cover

DISASSEMBLY

1. Disengaged the tabs (8) to separate front cover and upper housing assembly.
2. Disengaged the tabs (8) to separate front cover.

ASSEMBLY

Assembly is the reverse order of disassembly.

COMPASS

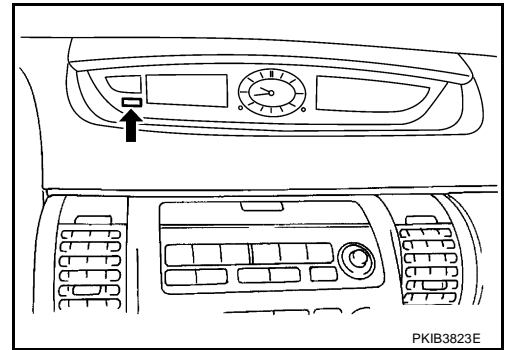
COMPASS

PF2:24835

System Description

AKS004FE

Display and A/C auto amp. displays earth magnetism and heading direction of vehicle.



DIRECTION DISPLAY

Push the switch when the ignition switch is in the ON or START position. The direction will be displayed.

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M

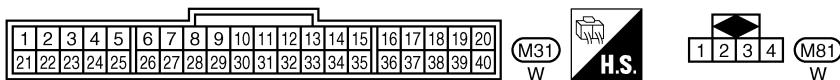
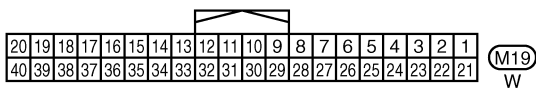
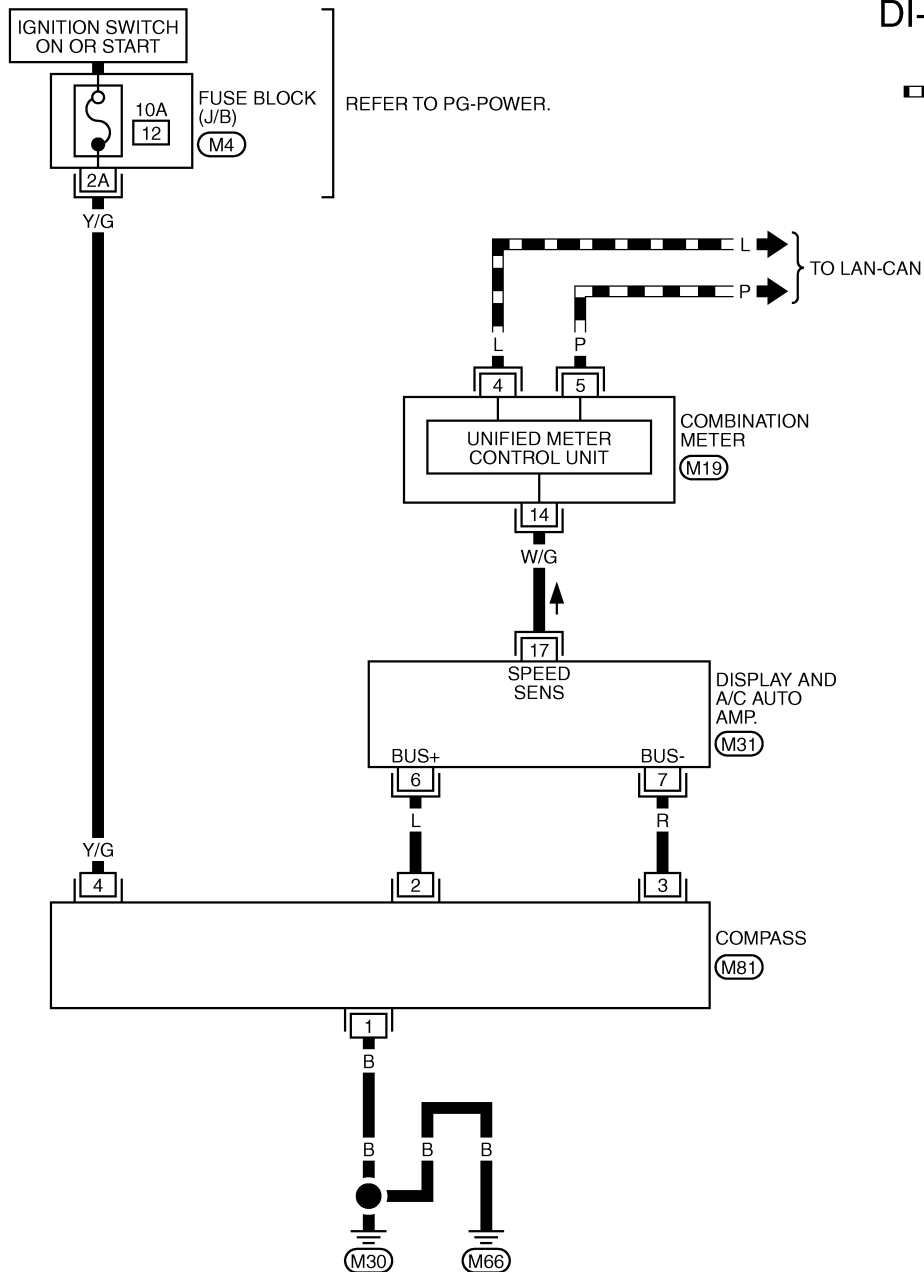
COMPASS

Wiring Diagram — COMPASS —

AKS004FF

DI-COMPAS-01

▬ : DATA LINE



REFER TO THE FOLLOWING.
(M4) - FUSE BLOCK-JUNCTION BOX (J/B)

TKWM2122E

Fail-Safe System

AKS004FH

DESCRIPTION

- If there is no response from display and A/C auto amp., previous display is kept for 10 minutes. After 10 minutes, “---” is displayed. (Only when there is no response continuously for 10 minutes.)
- If display and A/C auto amp. receives normal data within 10 minutes, normal operation will be recovered.
- If display and A/C auto amp. receives normal data while “---” is being displayed, normal operation will be recovered.
- If ignition switch is turned OFF within 10 minutes: Previously retained data is displayed when ignition switch is turned ON again. Then after 10 minutes, “---” is displayed.
- If response is never received after battery is turned ON, no data is retained. Therefore nothing is displayed for 10 minutes.

Power Supply and Ground Circuit Inspection

AKS004FG

1. CHECK FUSE

Check if the compass 10A fuse [No. 12, located in fuse block (J/B)] is blown.

OK or NG

OK >> GO TO 2.

NG >> Be sure to eliminate cause of malfunction before installing new fuse. Refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#).

2. CHECK POWER SUPPLY CIRCUIT

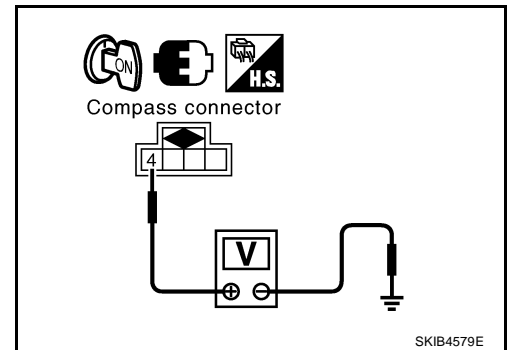
1. Turn ignition switch ON.
2. Check voltage between compass harness connector M81 terminal 4 (Y/G) and ground.

4 (Y/G) – Ground : Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness between compass and fuse.



3. CHECK GROUND CIRCUIT

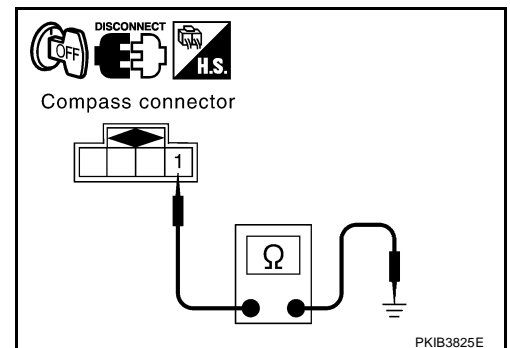
1. Turn ignition switch OFF.
2. Disconnect compass connector.
3. Check continuity between compass harness connector M81 terminal 1 (B) and ground.

1 (B) – Ground : Continuity should exist.

OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.



Compass Does not Display

AKS004FI

1. CHECK DISPLAY AND A/C AUTO AMP. SELF-DIAGNOSIS

Check display and A/C auto amp. self-diagnosis. Refer to [ATC-54, "FUNCTION CONFIRMATION PROCEDURE"](#).

Are all segments of display and A/C auto amp. displayed?

YES >> Check fail-safe system. Refer to [DI-23, "Fail-Safe System"](#).

NO >> Replace display and A/C auto amp.

COMPASS

AKS004FJ

Compass Displays “- - -”

1. CHECK FAIL-SAFE MODE

Make sure that fail-safe mode is not activated. Refer to [DI-23, "Fail-Safe System"](#).

Is fail-safe mode activated?

- YES >> GO TO 3.
- NO >> GO TO 2.

2. CHECK DISPLAY AND A/C AUTO AMP. SELF-DIAGNOSIS

Check display and A/C auto amp. self-diagnosis. Refer to [ATC-54, "FUNCTION CONFIRMATION PROCEDURE"](#).

Are all segments of display and A/C auto amp. displayed?

- YES >> INSPECTION END
- NO >> Replace display and A/C auto amp.

3. CHECK POWER AND GROUND CIRCUIT

Check power and ground circuit. Refer to [DI-23, "Power Supply and Ground Circuit Inspection"](#).

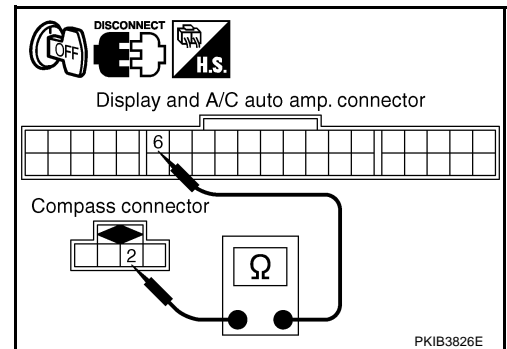
OK or NG

- OK >> GO TO 4.
- NG >> Repair malfunctioning part.

4. CHECK COMPASS CIRCUIT

1. Disconnect display and A/C auto amp. connector.
2. Check continuity between compass harness connector M81 terminal 2 (L) and display and A/C auto amp. harness connector M31 terminal 6 (L).

2 (L) – 6 (L) : Continuity should exist.

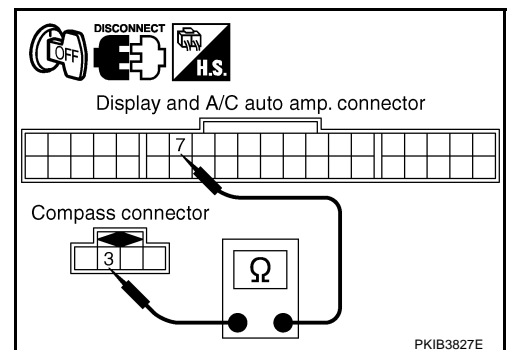


3. Check continuity between compass harness connector M81 terminal 3 (R) and display and A/C auto amp. harness connector M31 terminal 7 (R).

3 (R) – 7 (R) : Continuity should exist.

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness or connector.

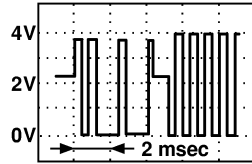


COMPASS

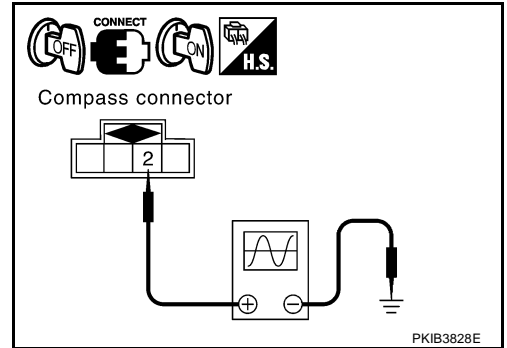
5. CHECK COMPASS SIGNAL

1. Turn ignition switch OFF.
2. Connect compass connector and display and A/C auto amp. connector.
3. Turn ignition switch ON.
4. Check voltage signal between compass harness connector M81 terminal 2 (L) and ground.

2 (L) – Ground:

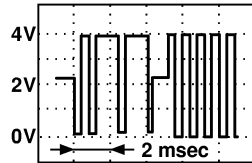


RJIA0867E

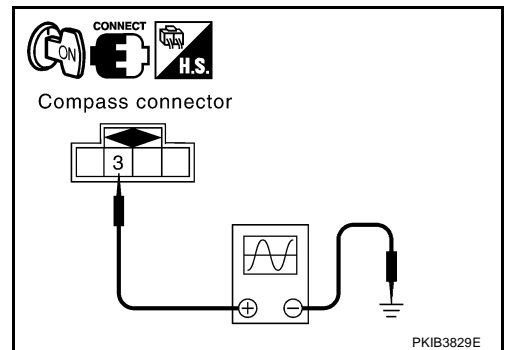


5. Check voltage signal between compass harness connector M81 terminal 3 (R) and ground.

3 (R) – Ground:



RJIA0868E



OK or NG

- OK >> Replace display and A/C auto amp.
- NG >> Replace compass.

Forward Direction Indication Slips Off The Mark or Incorrect

AKS004FK

1. ZONE VARIATION CHANGE IS NOT DONE

Perform the zone variation change.

OK or NG

- OK >> INSPECTION END
- NG >> Replace compass.

Compass Reading Remains Unchanged

AKS004FL

1. CHECK POWER AND GROUND CIRCUIT

Check power and ground circuit. Refer to [DI-23, "Power Supply and Ground Circuit Inspection"](#).

OK or NG

- OK >> Replace compass.
- NG >> Repair malfunctioning part.

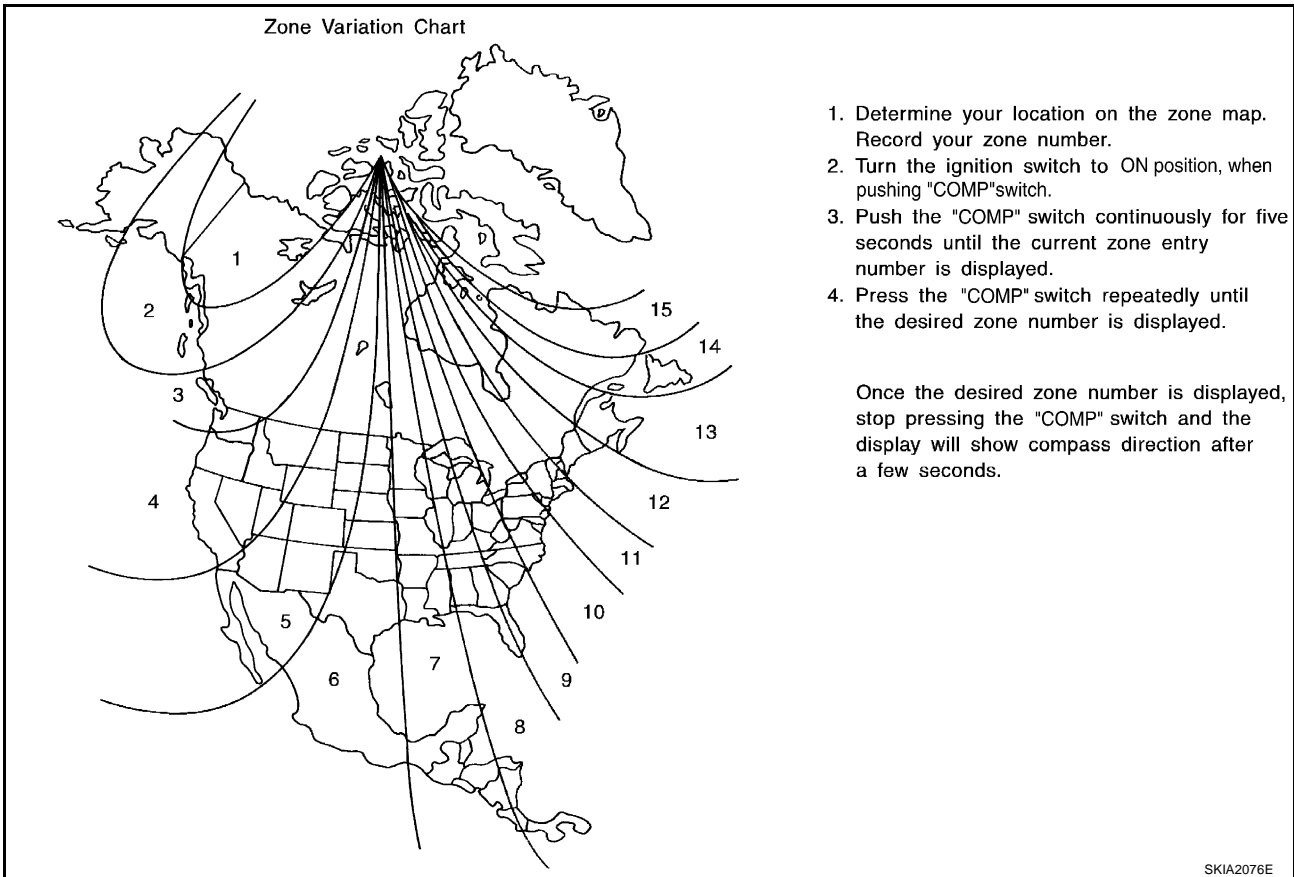
COMPASS

AKS004FM

Calibration Procedure for Compass

The difference between magnetic North and geographical North can sometimes be great enough to cause false compass readings.

In order for the compass to operate accurately in a particular zone, it must be calibrated using the following procedure.



COMPASS

CORRECTION FUNCTIONS OF COMPASS

If the direction is not shown correctly, perform initial correction.

INITIAL CORRECTION PROCEDURE FOR COMPASS

1. Pushing the "COMP" switch for about 10 seconds will enter the initial correction mode. The direction bar starts blinking.
2. Turn off all electrical equipment (turn signals, hazard signal, A/C, lights, etc.). In a broad, flat, and safe location, drive the vehicle slowly [approximately 5 km/h (3 MPH) or less], and turn the vehicle 360° or more several times. When the direction appears on the display, correction is complete.

NOTE:

The correct direction may not be shown in locations where the earth's magnetic field is disrupted, such as those listed below.

- Elevated bridges
- Railroad crossings
- Streets lined with large buildings
- Iron bridges
- Tunnels
- Locations above subways
- Underground parking areas
- Near large vehicles
- Electric power substations

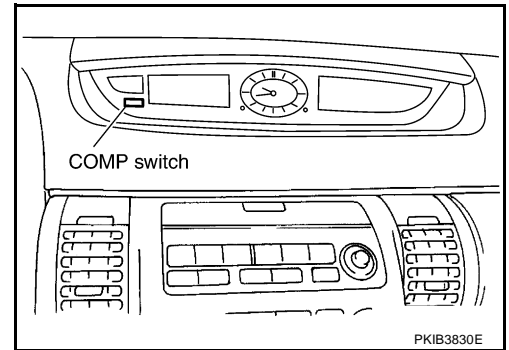
If display correction is performed in any of the above locations, accurate correction may not be possible.

- When heater or A/C fan speed is at maximum, the direction indicator display may move. This is not a malfunction. It will return to normal when the heater or A/C fan speed is reduced.

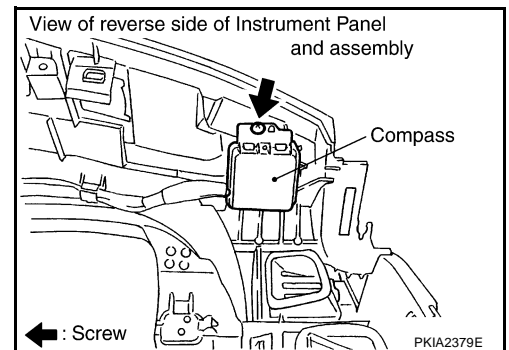
Removal and Installation of Compass

REMOVAL

1. Remove instrument panel and pad. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove screw (1), and remove compass.



AKS004D4



INSTALLATION

Installation is the reverse order of removal.

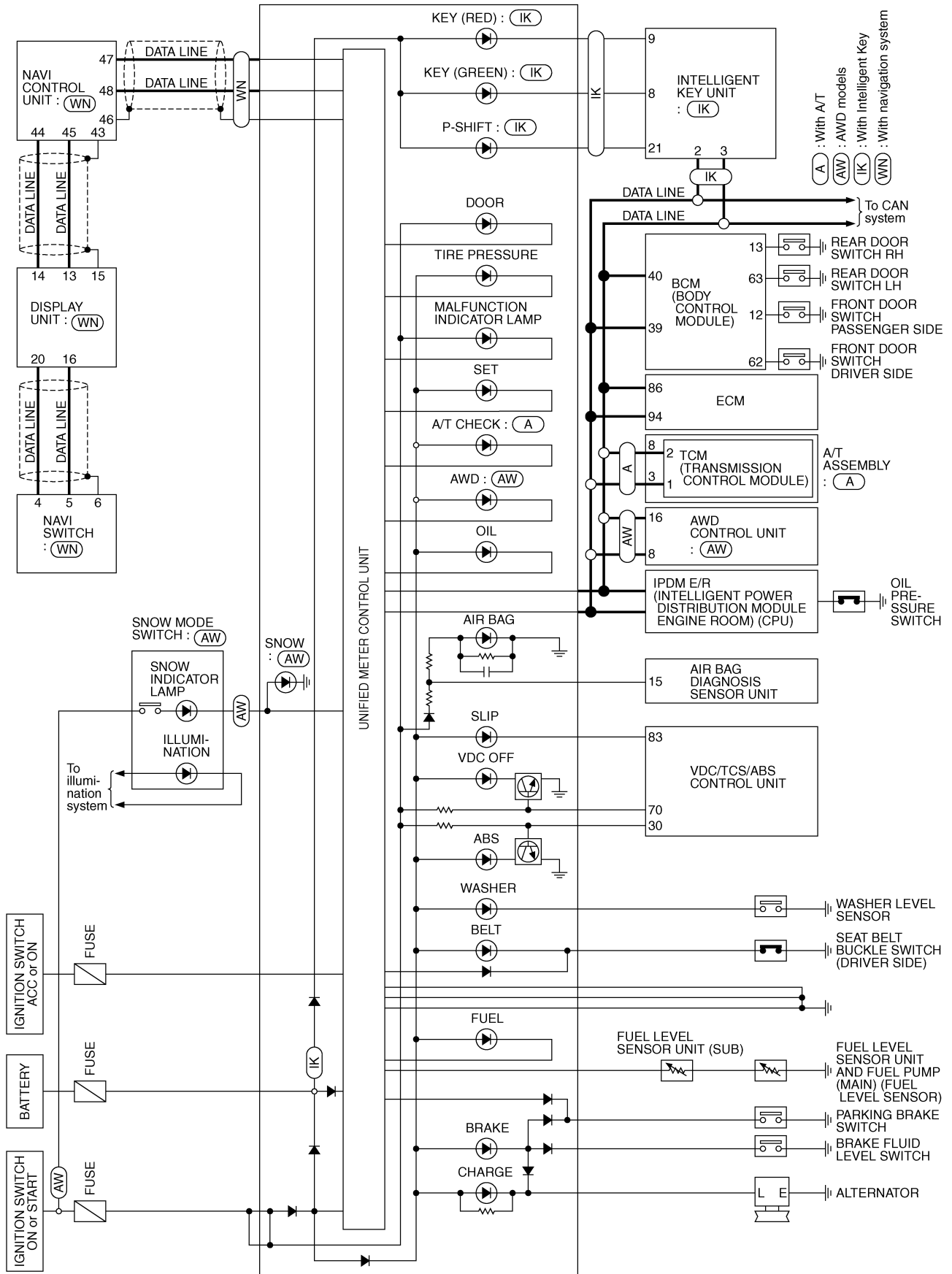
WARNING LAMPS

PFP:24814

AKS0009J

WARNING LAMPS

Schematic



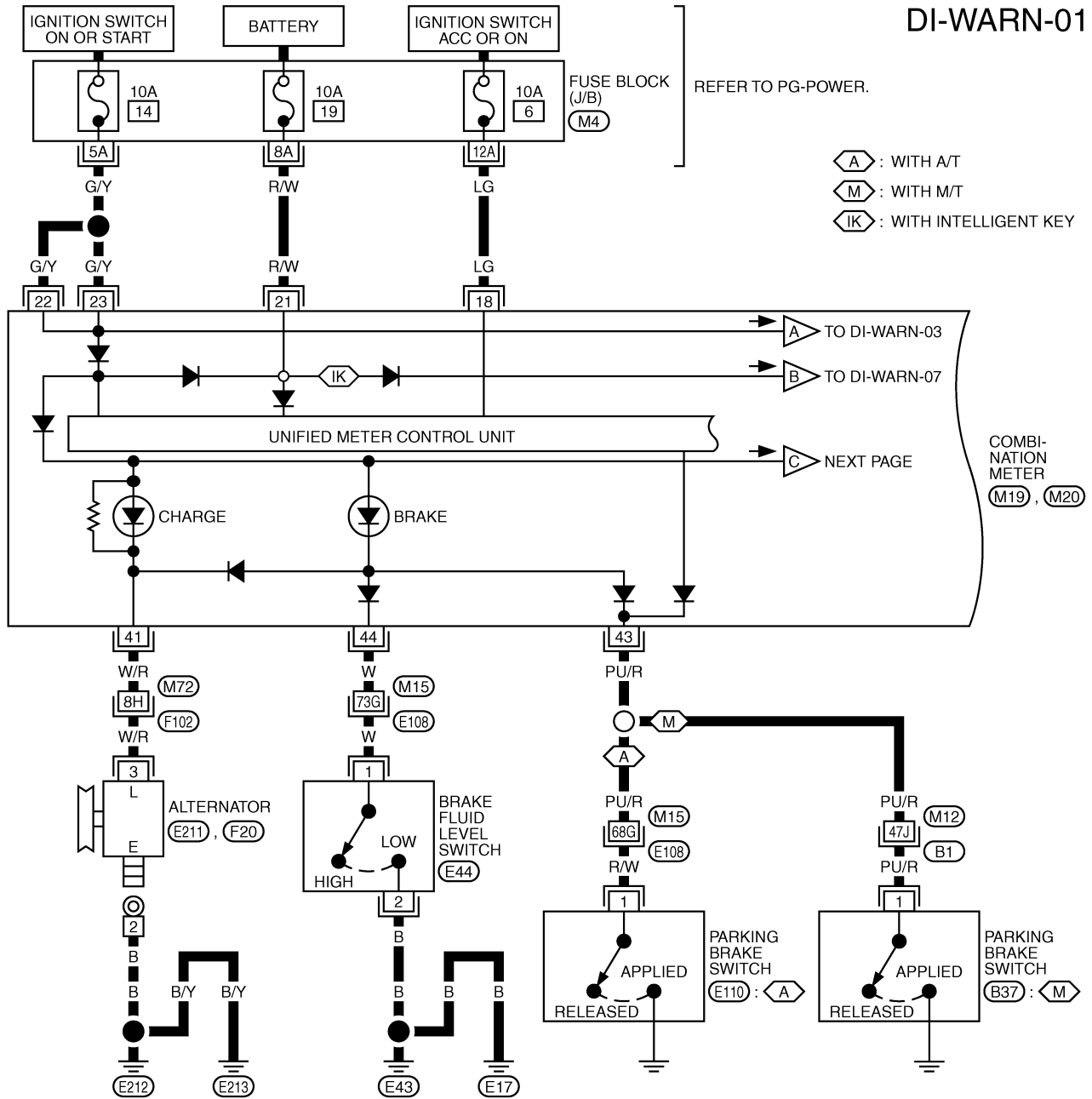
TKWM2940E

WARNING LAMPS

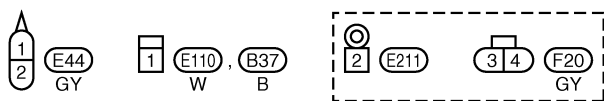
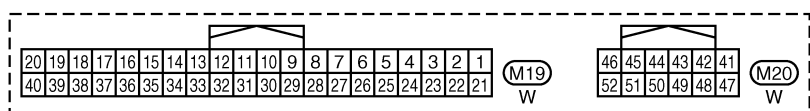
Wiring Diagram — WARN —

AKS0009K

DI-WARN-01



- (A) : WITH A/T
- (M) : WITH M/T
- (IK) : WITH INTELLIGENT KEY



REFER TO THE FOLLOWING.

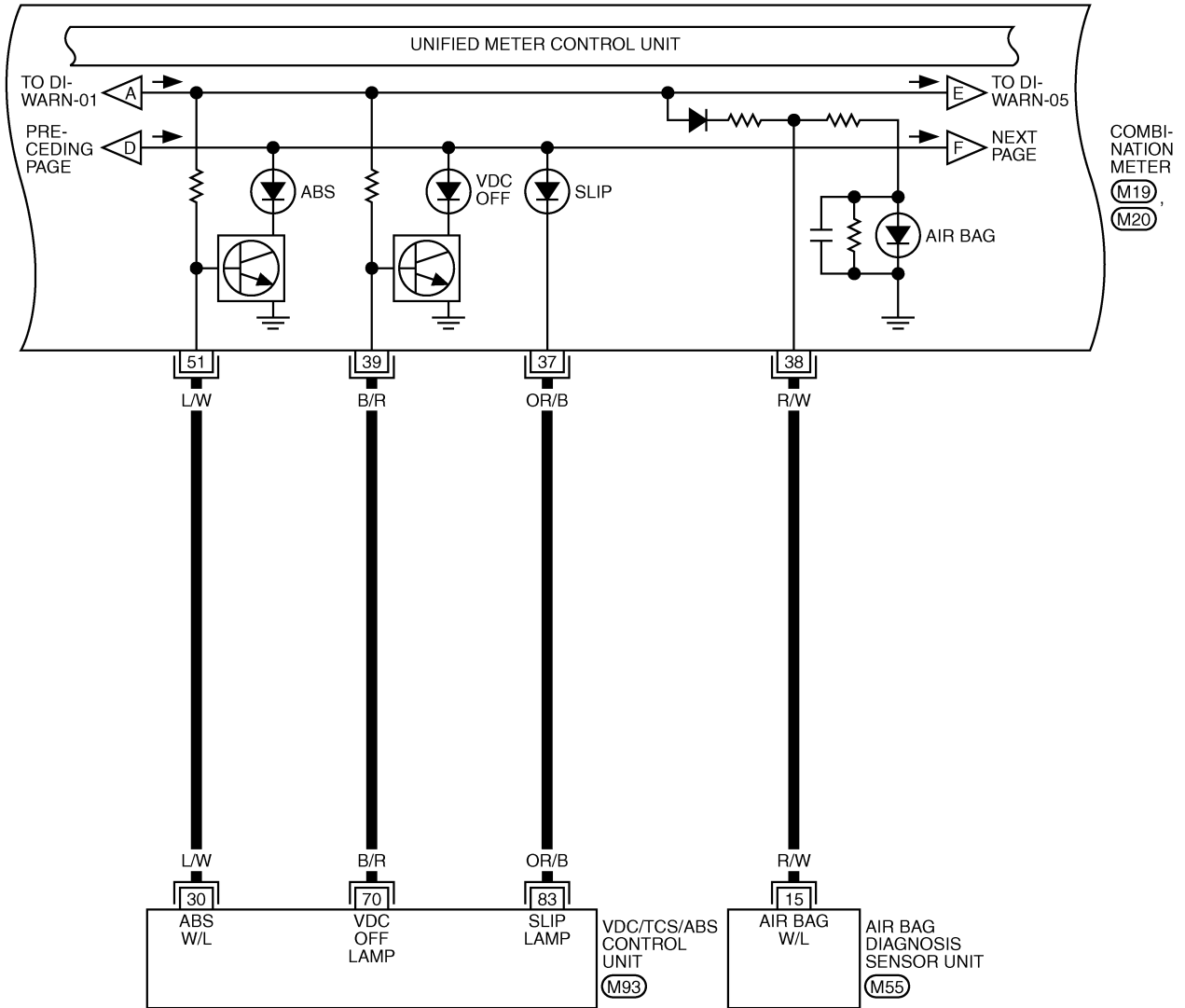
(E108, F102, B1) -SUPER MULTIPLE JUNCTION (SMJ)

(M4) -FUSE BLOCK-JUNCTION BOX (J/B)

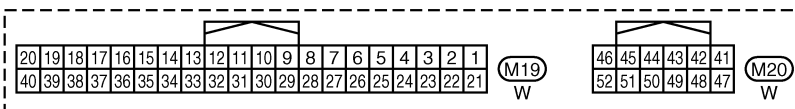
TKWM2124E

WARNING LAMPS

DI-WARN-03



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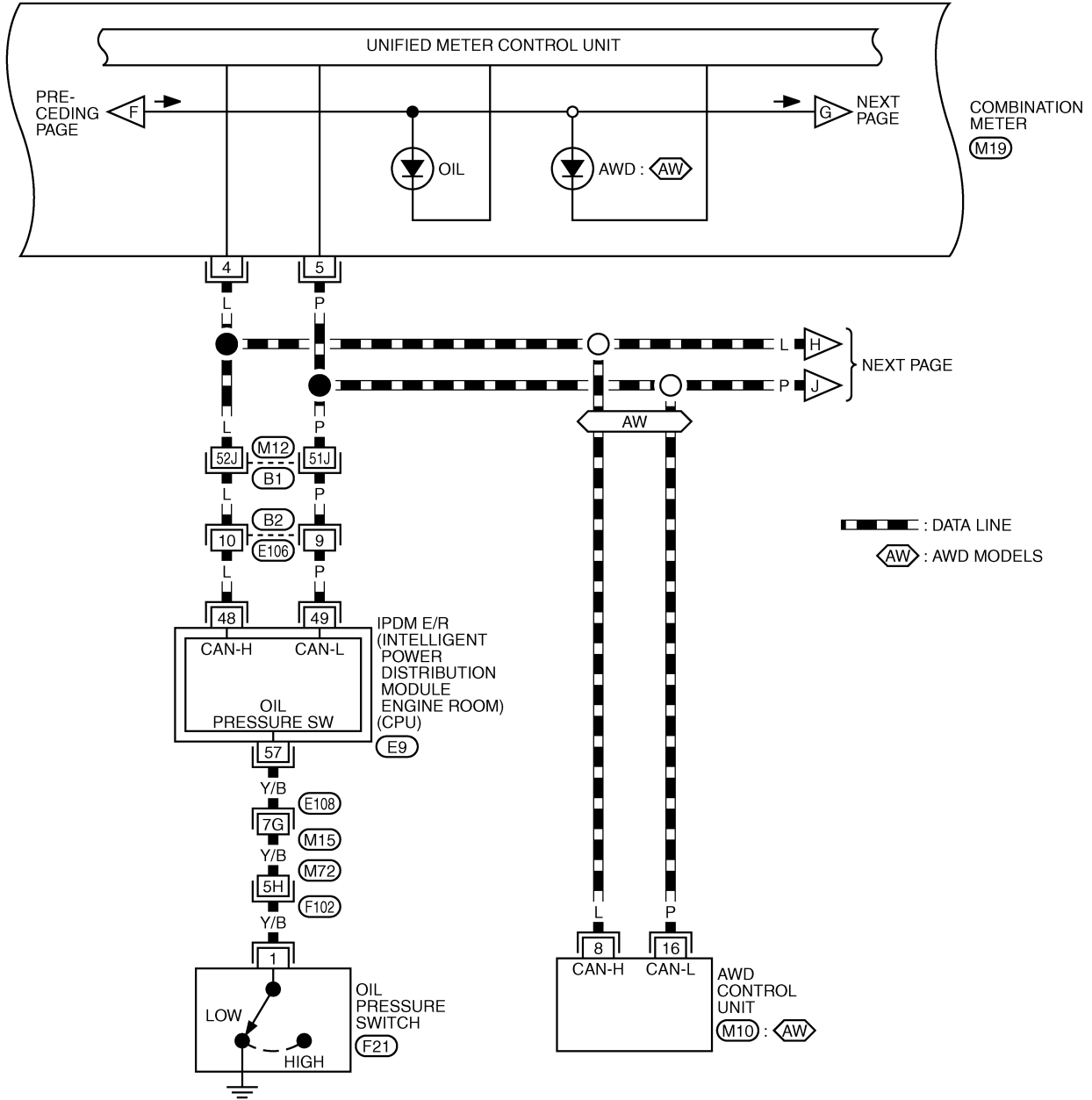


REFER TO THE FOLLOWING.
(M93) -ELECTRICAL UNITS

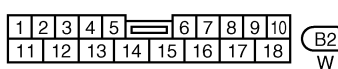
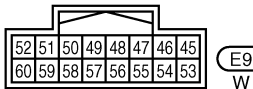
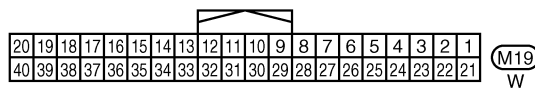
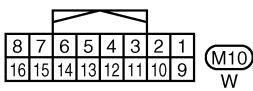
TKWM2942E

WARNING LAMPS

DI-WARN-04



--- : DATA LINE
 <AW> : AWD MODELS

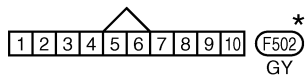
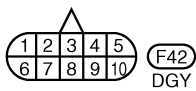
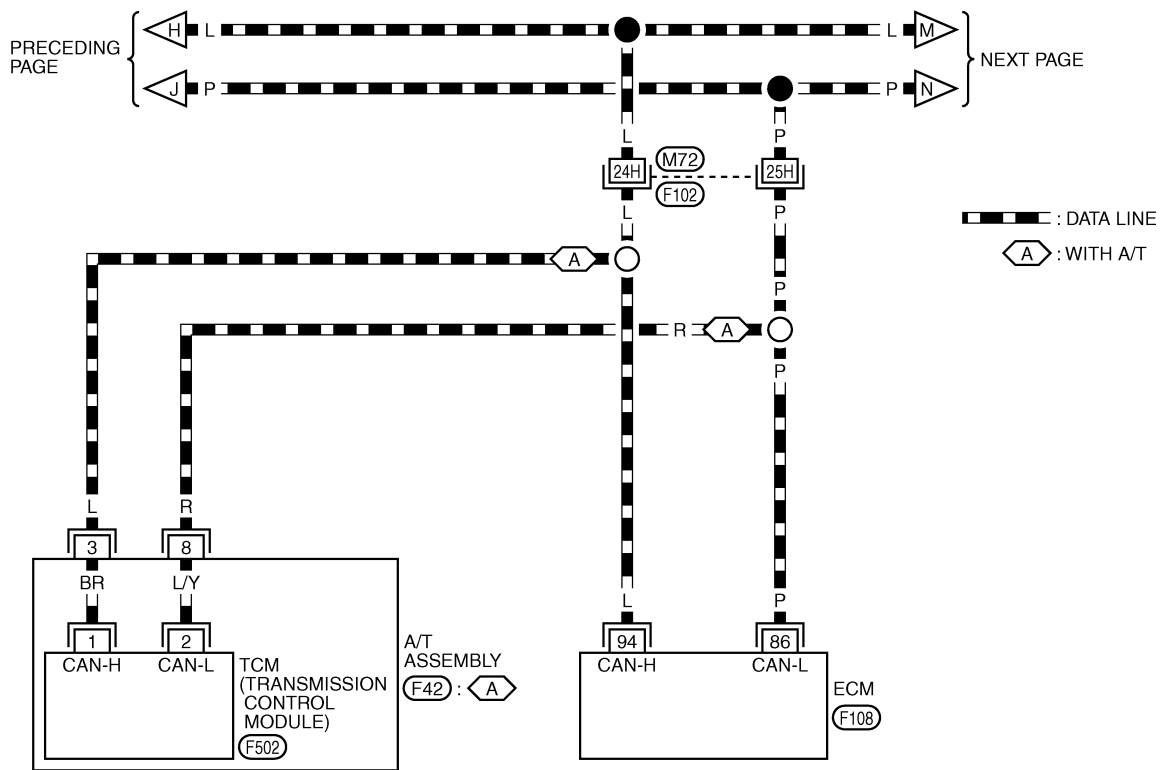
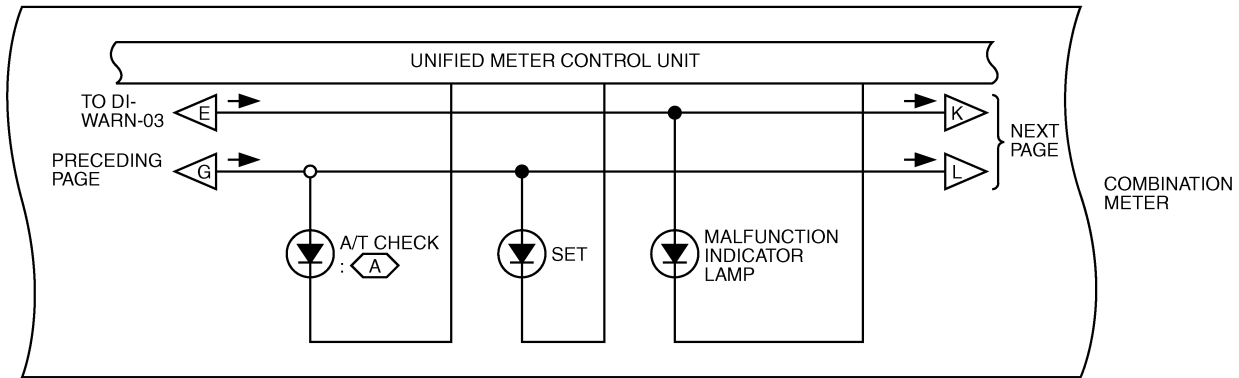


REFER TO THE FOLLOWING.
 (E108), (F102), (B1) -SUPER
 MULTIPLE JUNCTION (SMJ)

TKWM2943E

WARNING LAMPS

DI-WARN-05

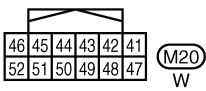
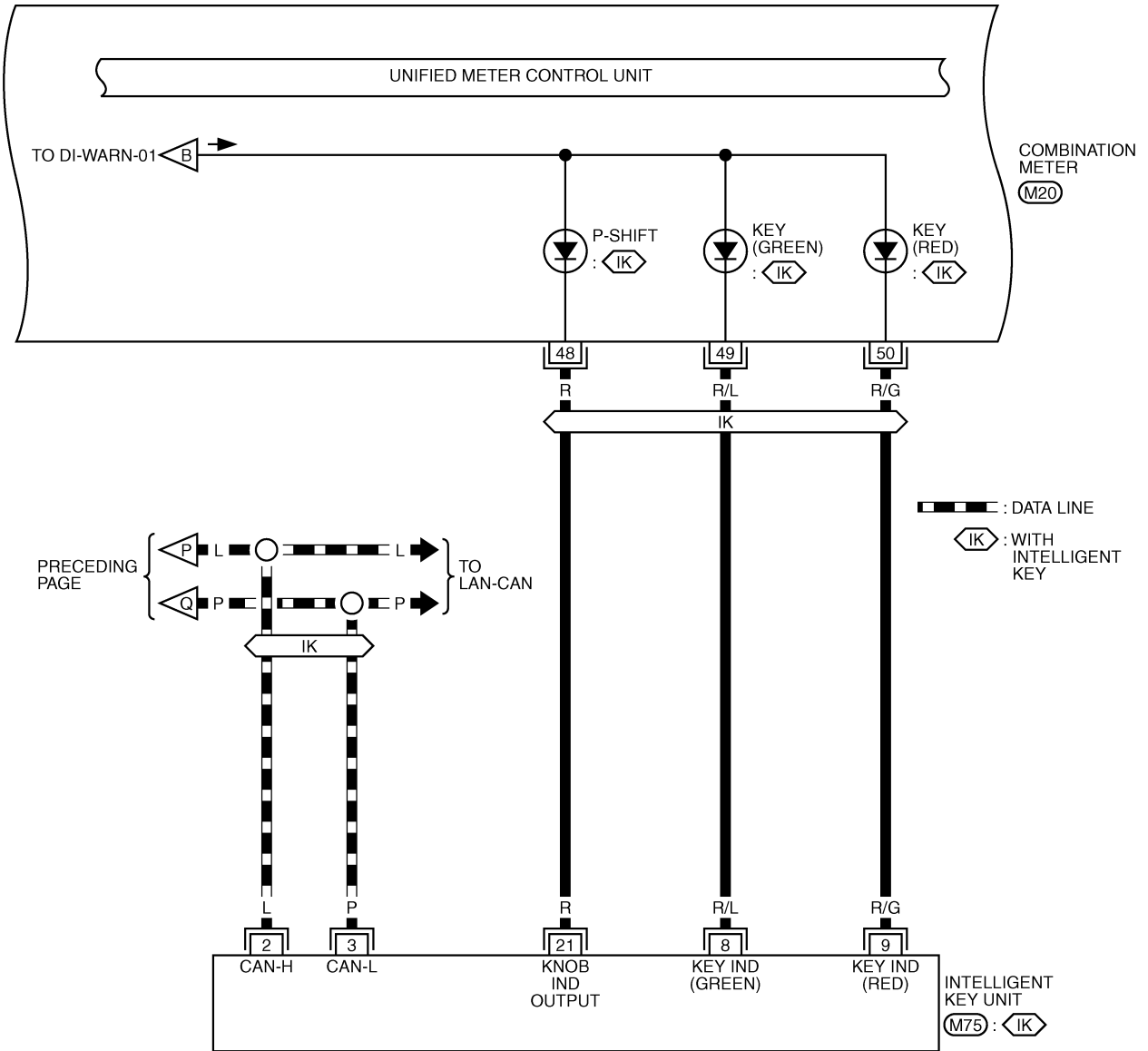


REFER TO THE FOLLOWING.
 (F102) -SUPER MULTIPLE JUNCTION (SMJ)
 (F108) -ELECTRICAL UNITS

*: THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT", PG SECTION.

WARNING LAMPS

DI-WARN-07

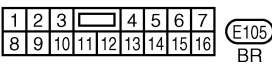
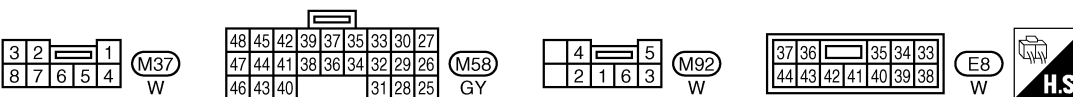
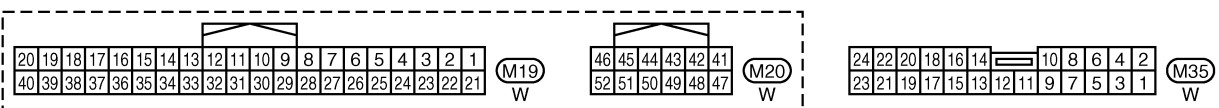
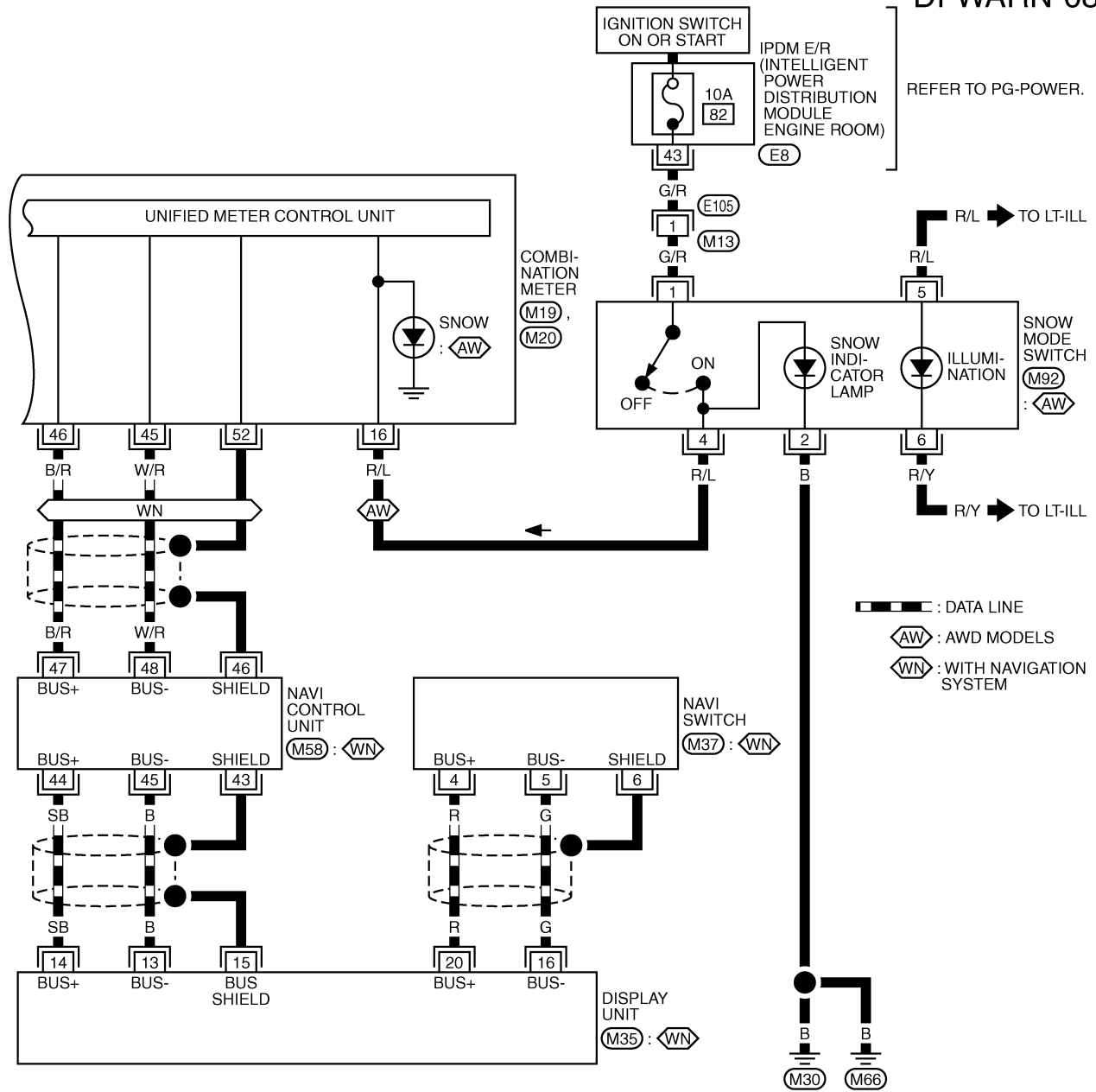


REFER TO THE FOLLOWING.
(M75) -ELECTRICAL UNITS

TKWM2946E

WARNING LAMPS

DI-WARN-08



TKWM2955E

WARNING LAMPS

Oil Pressure Warning Lamp Stays Off (Ignition Switch ON)

AKS009HD

1. CHECK IPDM E/R OUTPUT SIGNAL

Activate IPDM E/R auto active test. Refer to [PG-22, "Auto Active Test"](#).

Does oil pressure warning lamp blink?

- YES >> GO TO 4.
- NO >> GO TO 2.

2. CHECK SELF-DIAGNOSTIC RESULTS OF IPDM E/R

Select "IPDM E/R" on CONSULT-II, and perform self-diagnosis of IPDM E/R. Refer to [PG-18, "CONSULT-II Function \(IPDM E/R\)"](#).

Self-diagnostic results content

- No malfunction detected>> GO TO 3.
- Malfunction detected>> Go to [PG-19, "SELF-DIAG RESULTS"](#) in "IPDM E/R".

3. CHECK IPDM E/R INPUT SIGNAL

Select "IPDM E/R" on CONSULT-II. Operate ignition switch with "OIL P SW" of "DATA MONITOR" and check operation status.

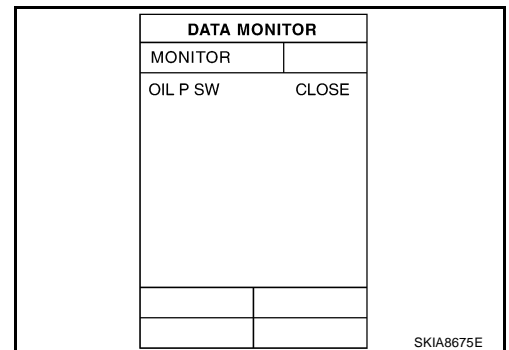
"OIL P SW"

**When ignition switch is in ON position : CLOSE
(Engine stopped)**

When engine running : OPEN

OK or NG

- OK >> Replace combination meter.
- NG >> Replace IPDM E/R. Refer to [PG-28, "Removal and Installation of IPDM E/R"](#).



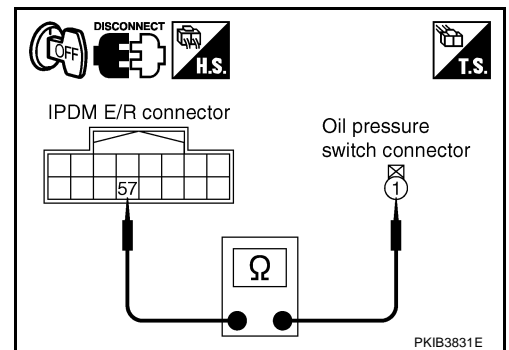
4. CHECK OIL PRESSURE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and oil pressure switch connector.
3. Check continuity between IPDM E/R harness connector E9 terminal 57 (Y/B) and oil pressure switch harness connector F21 terminal 1 (Y/B).

57 (Y/B) – 1 (Y/B) : Continuity should exist.

OK or NG

- OK >> GO TO 5.
- NG >> Repair harness or connector.



5. CHECK OIL PRESSURE SWITCH

Check oil pressure switch. Refer to [DI-38, "OIL PRESSURE SWITCH"](#).

OK or NG

- OK >> Replace IPDM E/R. Refer to [PG-28, "Removal and Installation of IPDM E/R"](#).
- NG >> Replace oil pressure switch.

WARNING LAMPS

Oil Pressure Warning Lamp Does Not Turn Off (Oil Pressure Is Normal)

AKS0009S

NOTE:

For oil pressure inspection, refer to [LU-8, "OIL PRESSURE CHECK"](#).

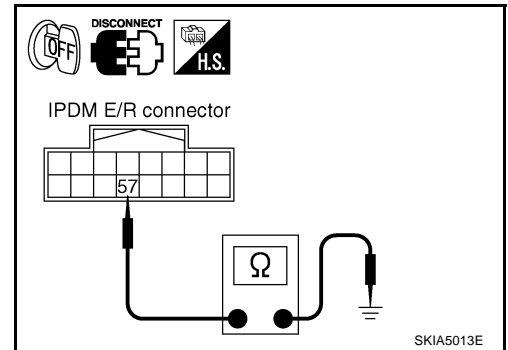
1. CHECK OIL PRESSURE SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector and oil pressure switch connector.
3. Check continuity between IPDM E/R harness connector E9 terminal 57 (Y/B) and ground.

57 (Y/B) – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 2.
 NG >> Repair harness or connector.



2. CHECK OIL PRESSURE SWITCH

Check oil pressure switch. Refer to [DI-38, "OIL PRESSURE SWITCH"](#).

OK or NG

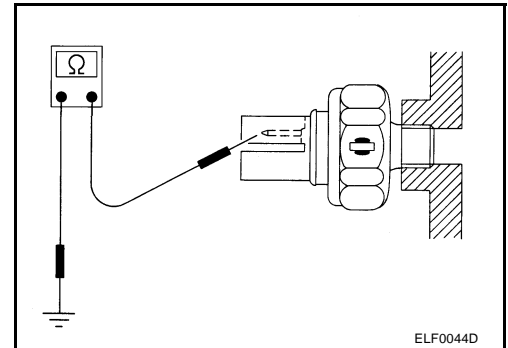
- OK >> Replace IPDM E/R. Refer to [PG-28, "Removal and Installation of IPDM E/R"](#).
 NG >> Replace oil pressure switch.

Component Inspection OIL PRESSURE SWITCH

AKS0009T

Check continuity between the oil pressure switch and ground.

Condition	Oil pressure [kPa (kg/cm ² , psi)]	Continuity
Engine stopped	Less than 29 (0.3, 4)	Yes
Engine running	More than 29 (0.3, 4)	No



A/T INDICATOR

PFP:24814

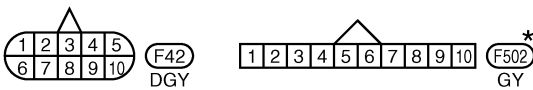
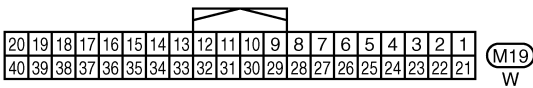
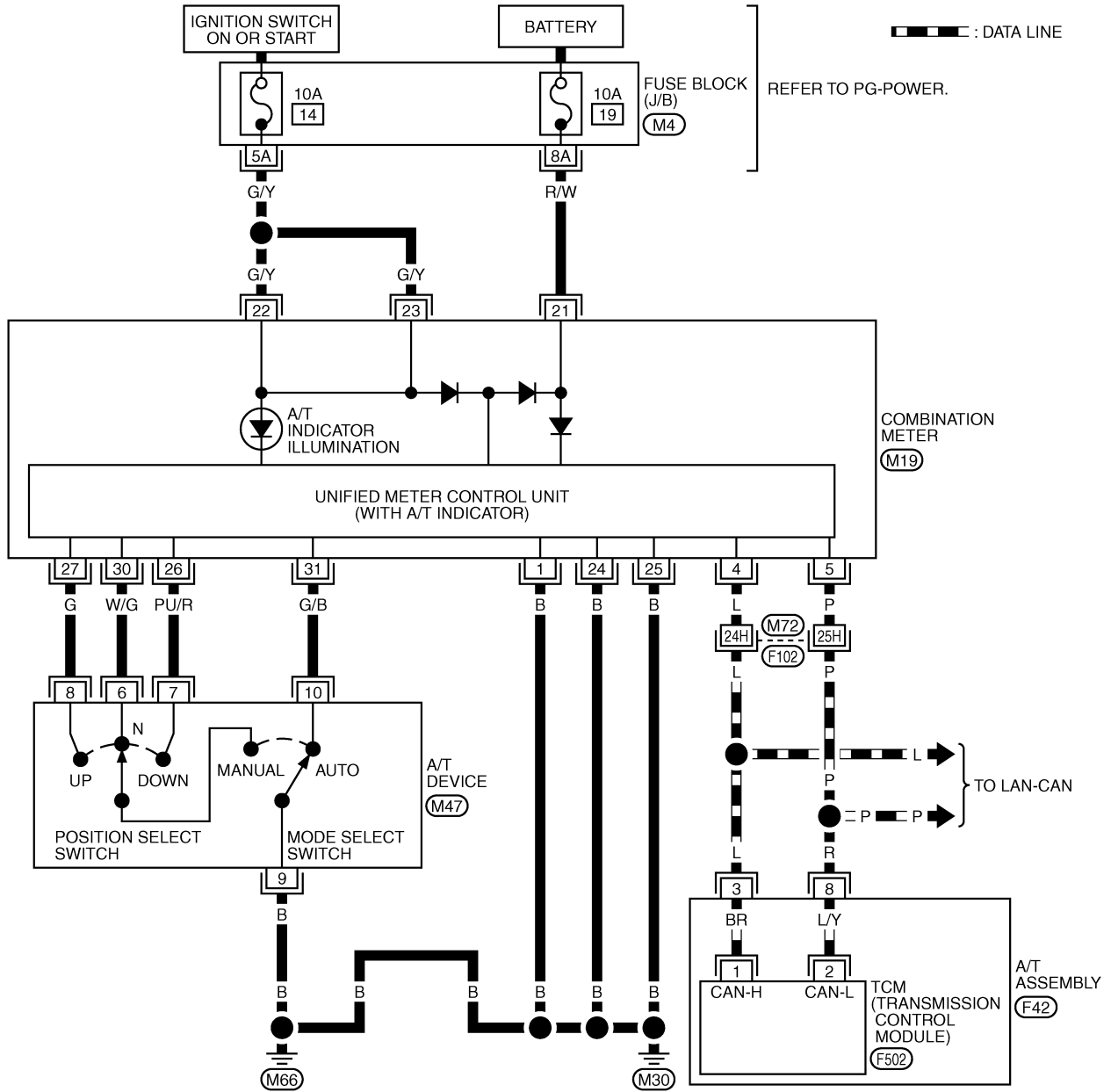
A/T INDICATOR

Wiring Diagram — AT/IND —

AKS0009U

DI-AT/IND-01

— — — — — : DATA LINE



REFER TO THE FOLLOWING.

- (F102) -SUPER MULTIPLE JUNCTION (SMJ)
- (M4) -FUSE BLOCK-JUNCTION BOX (J/B)

*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWM2132E

A/T INDICATOR

A/T Indicator Does Not Illuminate

AKS0009W

1. CHECK COMBINATION METER SELF-DIAGNOSIS

Perform combination meter self-diagnosis. Refer to [DI-11, "Self-Diagnosis Mode of Combination Meter"](#) .

Are all segments displayed?

YES >> GO TO 2.

NO >> Replace combination meter.

2. CHECK TCM SELF-DIAGNOSIS

Perform TCM self-diagnosis. Refer to [AT-92, "CONSULT-II Function \(A/T\)"](#) .

Self-diagnostic results content

No malfunction detected >> Replace combination meter.

Malfunction detected >> Check applicable parts, and repair or replace corresponding parts.

WARNING CHIME

PFP:24814

System Description

AKS0009Y

The warning chime is controlled by the BCM.

The warning chime is located in the combination meter.

When combination meter receives buzzer signal from BCM with CAN communication line, the warning chime will sound.

FUNCTION

Power is supplied at all times

- through 50A fusible link (letter F, located in the fuse and fusible link block)
- to BCM terminal 55,
- through 10A fuse [No. 18, located in the fuse block (J/B)]
- to BCM terminal 42,
- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to key switch terminal 2 (without Intelligent Key),
- through 15A fuse (No. 33, located in the fuse and fusible link block)
- to key switch and ignition knob switch terminals 1 and 3 (with Intelligent Key),
- through 10A fuse [No. 19, located in the fuse block (J/B)]
- to combination meter terminal 21.

With ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to BCM terminal 38,
- through 10A fuse [No. 14, located in the fuse block (J/B)]
- to combination meter terminals 22 and 23.

Ground is supplied

- to BCM terminal 52
- through grounds M30 and M66,
- to combination meter terminals 1, 24 and 25
- through grounds M30 and M66.

NOTE:

When ignition key warning chime, light warning chime, and seat belt warning chime should be performed at the same time, the priorities for each chime are the following.

1. Seat belt warning chime
2. Light warning chime
3. Ignition key warning chime

IGNITION KEY WARNING CHIME (WITHOUT INTELLIGENT KEY)

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

Power is supplied

- through key switch terminal 1
- to BCM terminal 37.

Ground is supplied

- to BCM terminal 62
- through front door switch driver side terminal 1.

Front door switch driver side is case grounded.

BCM detects key inserted into the ignition key cylinder, and sends key warning signal to combination meter with CAN communication line.

When combination meter receives key warning signal, it sounds warning chime.

WARNING CHIME

IGNITION KEY WARNING CHIME (WITH INTELLIGENT KEY)

When Mechanical Key Is Used

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

Power is supplied

- through key switch and ignition knob switch terminal 4
- to BCM terminal 37.

Ground is supplied

- to BCM terminal 62
- through front door switch driver side terminal 1.

Front door switch driver side is case grounded.

BCM detects key inserted into the ignition key cylinder, and sends key warning signal to combination meter with CAN communication line.

When combination meter receives key warning signal, it sounds warning chime.

When Intelligent Key Is Carried With The Driver

Intelligent Key unit detects ignition knob return is forgotten, and sends key warning signal to Intelligent Key buzzer.

When Intelligent Key buzzer receives key warning signal, it sounds warning chime.

Refer to [BL-96, "WARNING CHIME FUNCTION"](#).

LIGHT WARNING CHIME

The warning chime will sound, when driver's door is opened (door switch ON) with lighting switch ON except in the case of ignition switch ON or START position. [Except when headlamp battery saver control operates (for 5 minutes after ignition switch is turned to OFF or ACC position) and headlamps do not illuminate.]

Signal is supplied

- from combination switch (lighting switch) terminals 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10
- to BCM terminals 2, 3, 4, 5, 6, 32, 33, 34, 35 and 36.

NOTE:

BCM detected lighting switch in 1ST or 2ND position, refer to [LT-131, "Combination Switch Reading Function"](#).

Ground is supplied

- from front door switch driver side terminal 1
- to BCM terminal 62.

BCM detects headlamps are illuminated, and sends light warning signal to combination meter with CAN communication line.

When combination meter receives light warning signal, it sounds warning chime.

SEAT BELT WARNING CHIME

With ignition switch turned ON and seat belt unfastened [seat belt buckle switch (driver side) ON], warning chime will sound for approximately 6 seconds.

Ground is supplied

- from seat belt buckle switch (driver side) terminal 1
- to combination meter terminal 47.

Seat belt buckle switch (driver side) terminal 2 is grounded through grounds B5 and B29.

BCM receives seat belt unfastened signal from combination meter over CAN communication line, and sends seat belt warning signal to combination meter with CAN communication line.

When combination meter receives seat belt warning signal, it sounds warning chime.

CAN Communication

AKS0009Z

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

WARNING CHIME

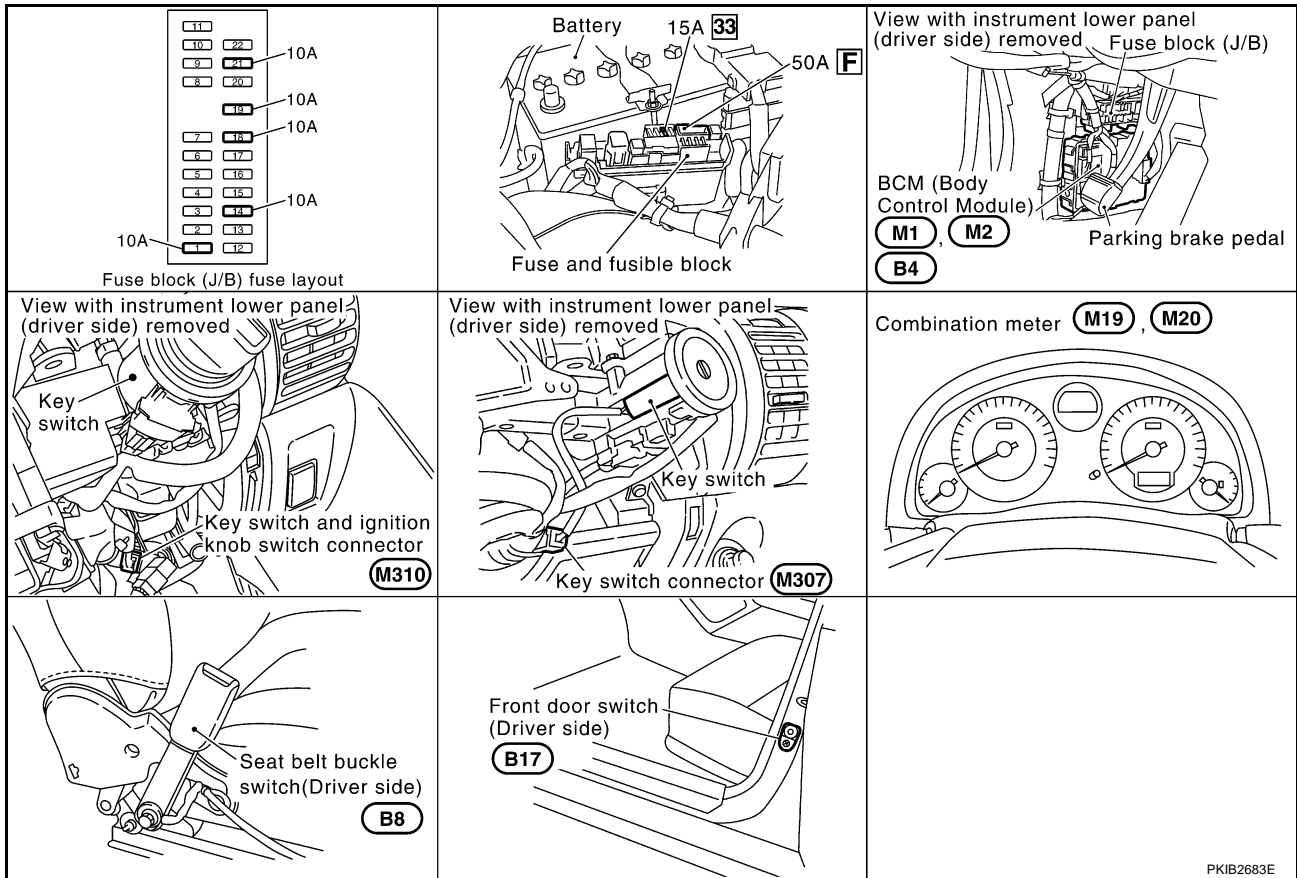
CAN Communication Unit

AKS0081C

Refer to [LAN-21, "CAN Communication Unit"](#) in "LAN SYSTEM".

Component Parts and Harness Connector Location

AKS0009X



A
B
C
D
E
F
G
H
I
J

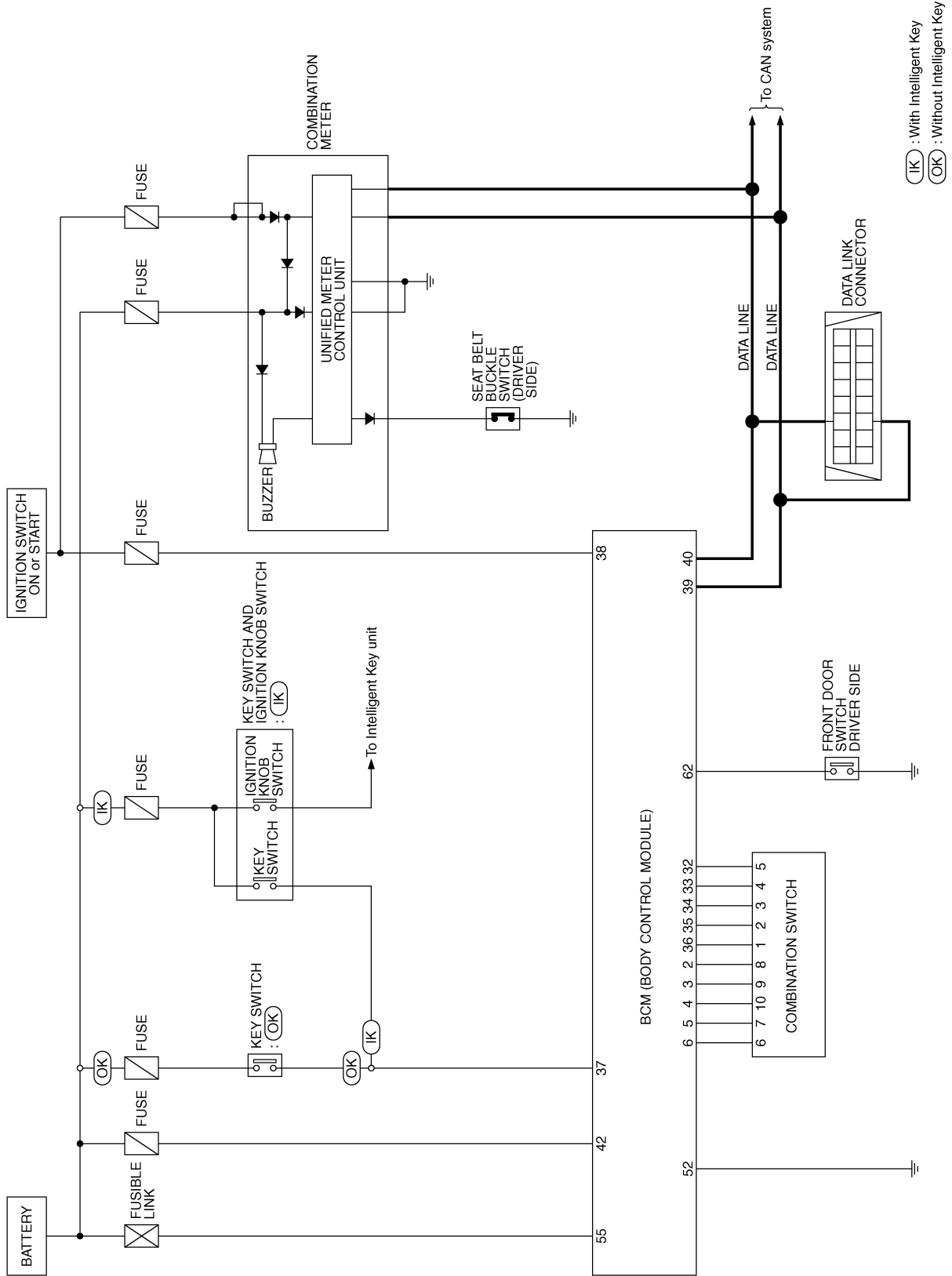
DI

L
M

WARNING CHIME

Schematic

AKS00E9C



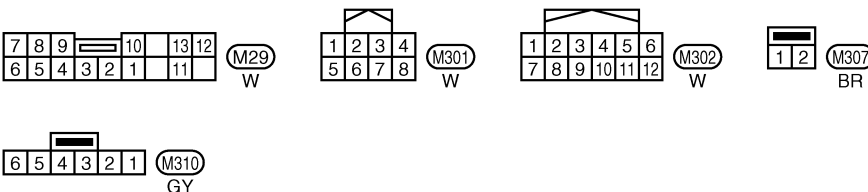
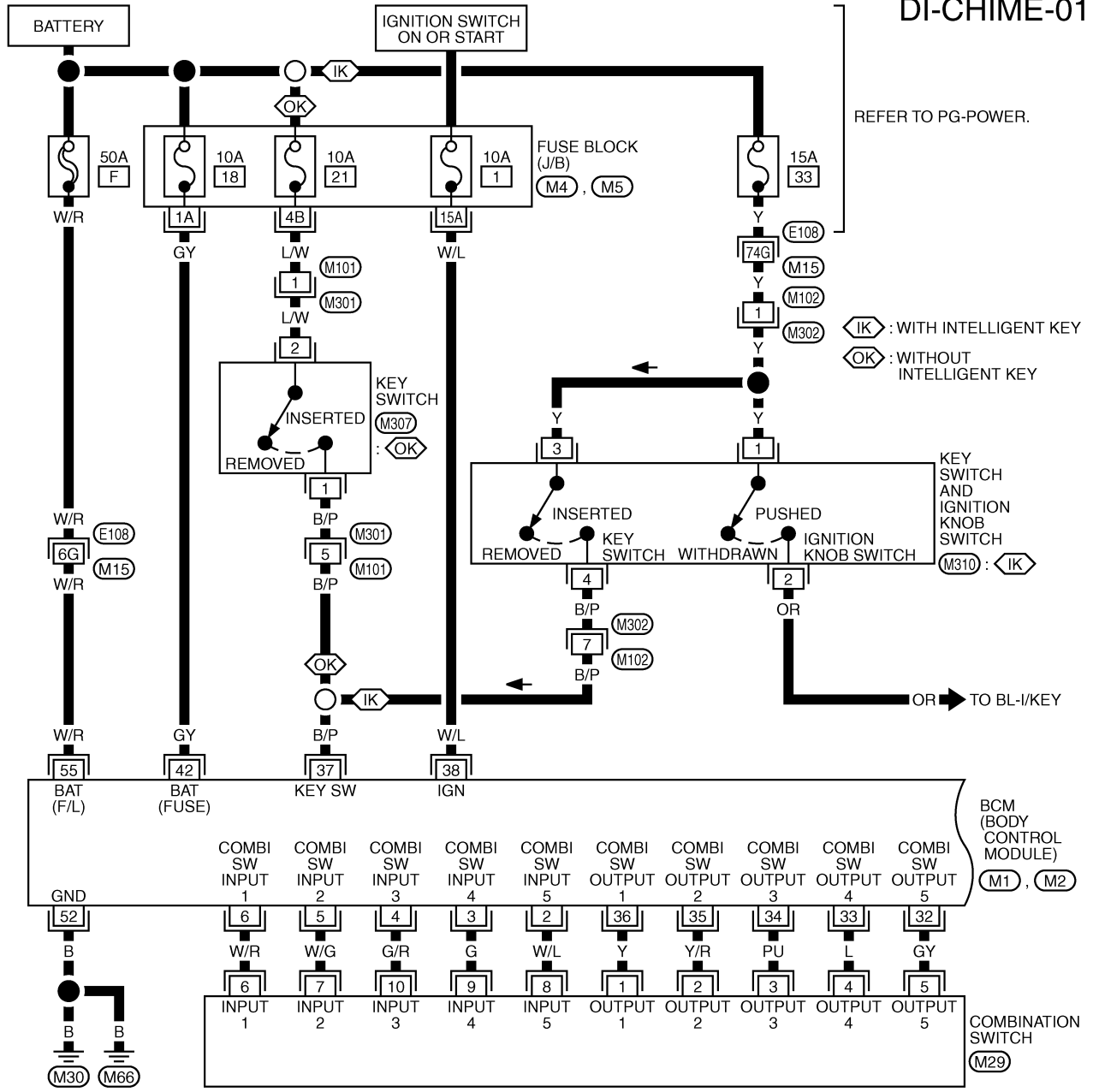
TKWM2133E

WARNING CHIME

Wiring Diagram — CHIME —

AKS000A1

DI-CHIME-01



REFER TO THE FOLLOWING.

(E108) -SUPER MULTIPLE JUNCTION (SMJ)

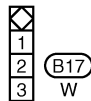
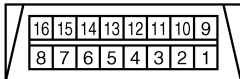
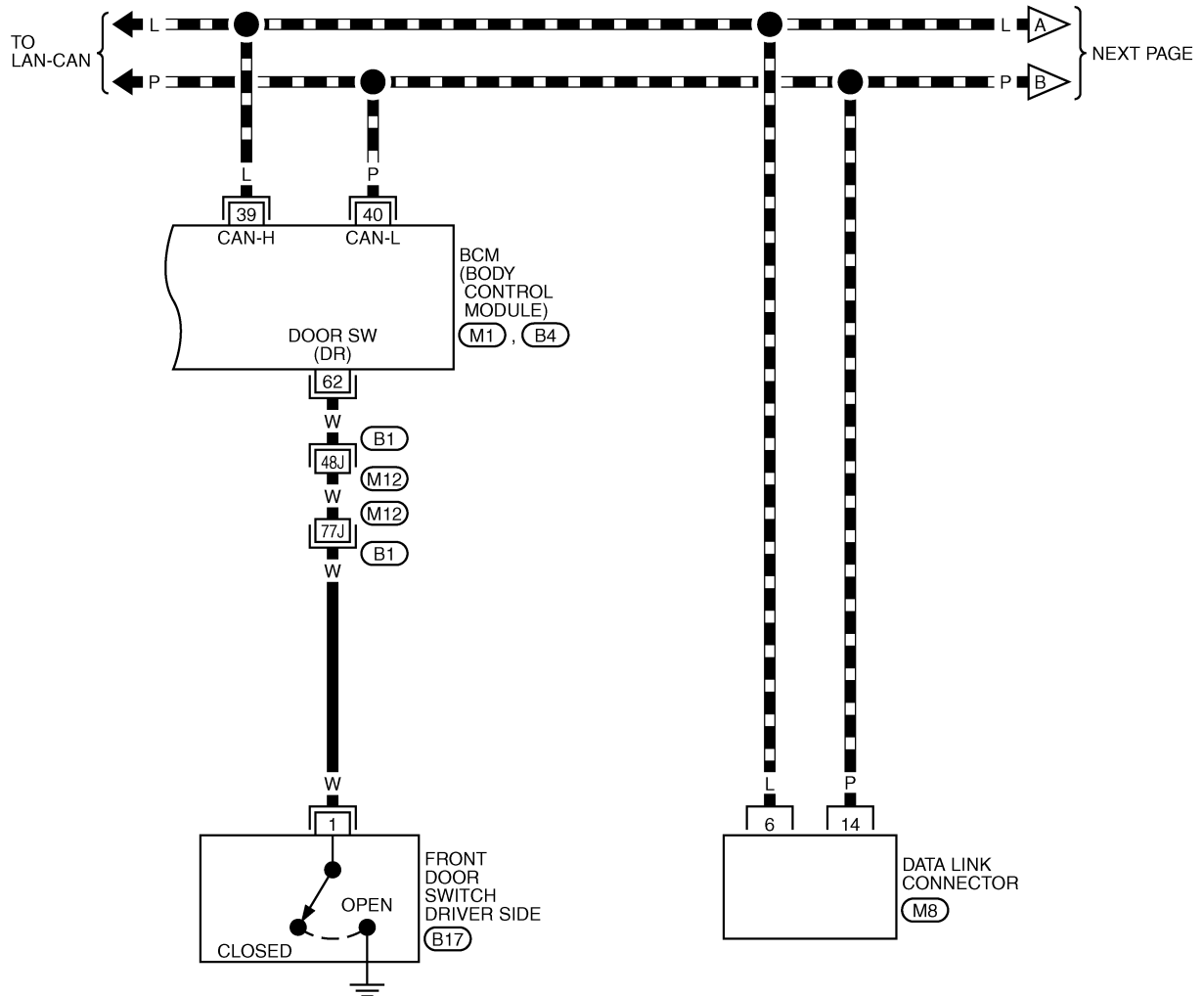
(M4), (M5) -FUSE BLOCK-JUNCTION BOX (J/B)

(M1), (M2) -ELECTRICAL UNITS

WARNING CHIME

DI-CHIME-02

▬ : DATA LINE



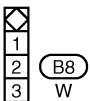
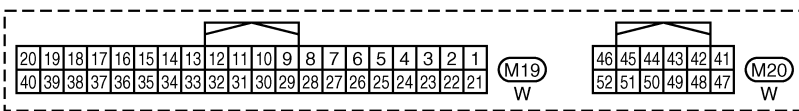
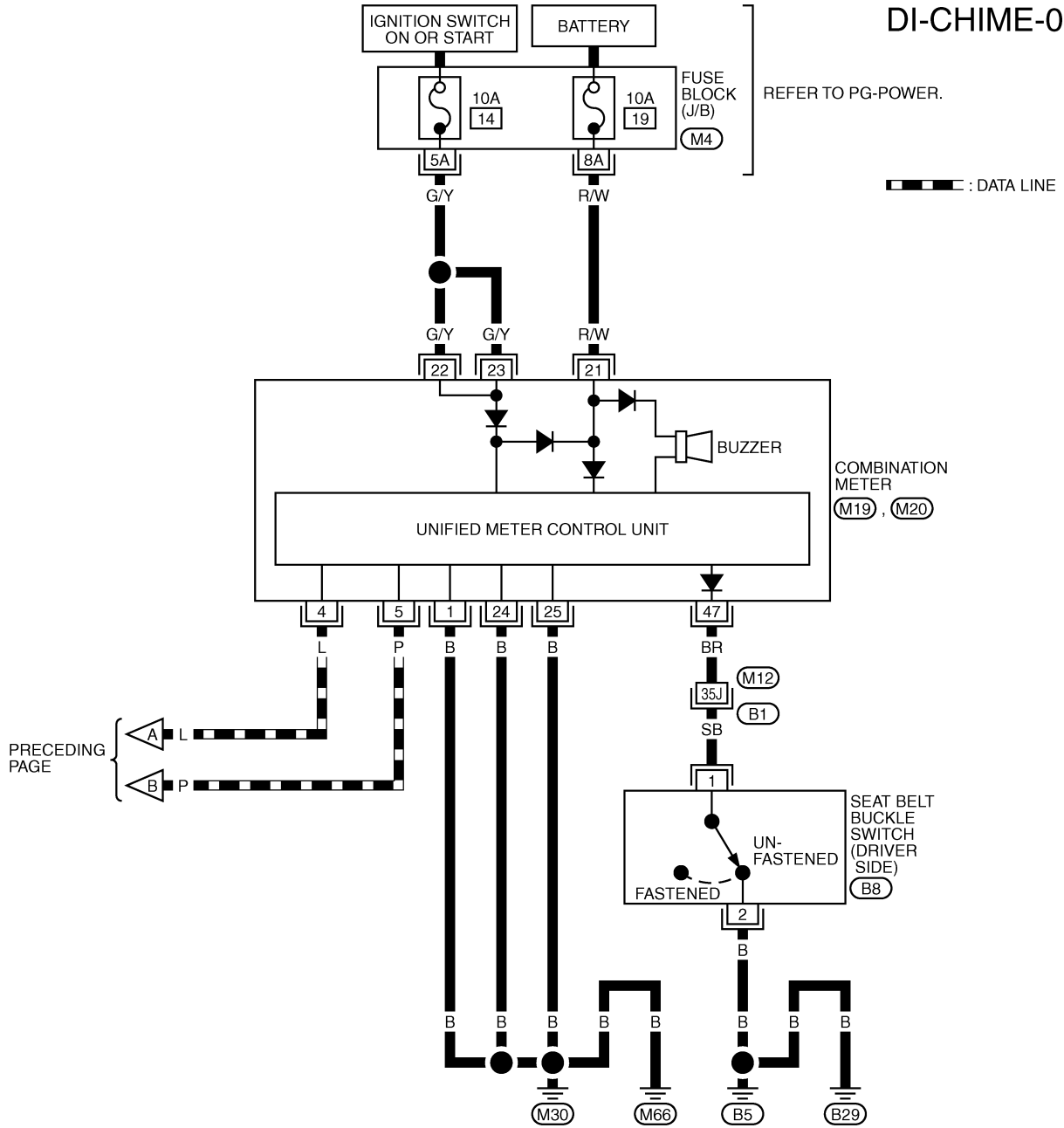
REFER TO THE FOLLOWING.

- (B1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1), (B4) -ELECTRICAL UNITS

TKWM2135E

WARNING CHIME

DI-CHIME-03



REFER TO THE FOLLOWING.

(B1) -SUPER MULTIPLE JUNCTION (SMJ)

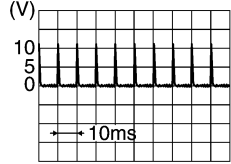
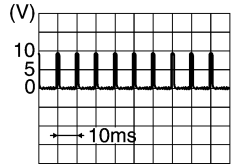
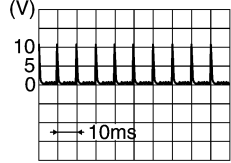
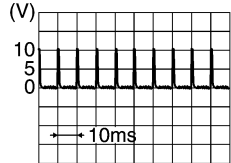
(M4) -FUSE BLOCK-JUNCTION BOX (J/B)

TKWM2136E

WARNING CHIME

Terminals and Reference Value for BCM

AKS009BA

Terminal No.	Wire color	Signal name	Measuring condition		Reference value	
			Ignition switch	Operation or condition		
2	W/L	Combination switch input 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">PKIB3468E</p>	
3	G	Combination switch input 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">PKIB3469E</p>	
4	G/R	Combination switch input 3				
5	W/G	Combination switch input 2				
6	W/R	Combination switch input 1				
32	GY	Combination switch output 5	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">PKIB3470E</p>	
33	L	Combination switch output 4	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right;">PKIB3471E</p>	
34	PU	Combination switch output 3				
35	Y/R	Combination switch output 2				
36	Y	Combination switch output 1				
37	B/P	Key switch signal	OFF	Key is removed	Approx. 0 V	
				Key is inserted	Approx. 12 V	
38	W/L	Ignition switch (ON)	ON	—	Battery voltage	
39	L	CAN H	—	—	—	
40	P	CAN L	—	—	—	
42	GY	Battery power supply (FUUSE)	OFF	—	Battery voltage	
52	B	Ground	ON	—	Approx. 0 V	
55	W/R	Battery power supply (F/L)	OFF	—	Battery voltage	
62	W	Front door switch signal	OFF	Driver's door	ON (open)	Approx.0 V
					OFF (close)	Approx.5 V

Trouble Diagnosis

AKS000A3

HOW TO PERFORM TROUBLE DIAGNOSIS

1. Confirm the symptom or customer complaint.
2. Understand operation description and function description. Refer to [DI-41, "System Description"](#) .
3. Referring to trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to [DI-49, "PRE-LIMINARY CHECK"](#) .
4. Does the warning chime operate normally? If so, GO TO 5. If not, GO TO 3.
5. INSPECTION END

WARNING CHIME

PRELIMINARY CHECK

Inspection for Power Supply and Ground Circuit

1. CHECK FUSE AND FUSIBLE LINK

Check for blown fuse and fusible link of BCM.

Unit	Power source	Fuse and fusible link No.
BCM	Battery	F
		18
	Ignition switch (ON)	1

OK or NG

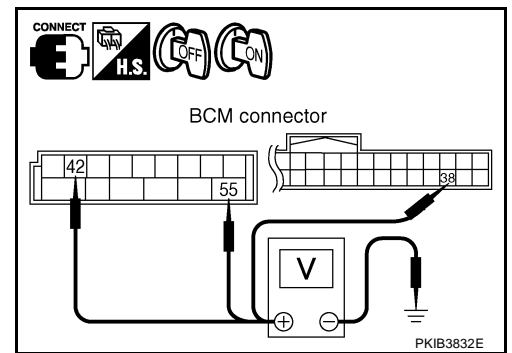
OK >> GO TO 2.

NG >> Be sure to eliminate cause of malfunction before installing new fuse or fusible link. Refer to [PG-3](#), "[POWER SUPPLY ROUTING CIRCUIT](#)".

2. CHECK POWER SUPPLY CIRCUIT

Check voltage between BCM connector and ground.

Terminals		(-)	Ignition switch position	
(+)			OFF	ON
M2	Terminal (Wire color)	Ground	Battery voltage	Battery voltage
	55 (W/R)			
42 (GY)	0 V		Battery voltage	
M1	38 (W/L)			



OK or NG

OK >> GO TO 3.

NG >> Check harness between BCM and fuse.

3. CHECK GROUND CIRCUIT

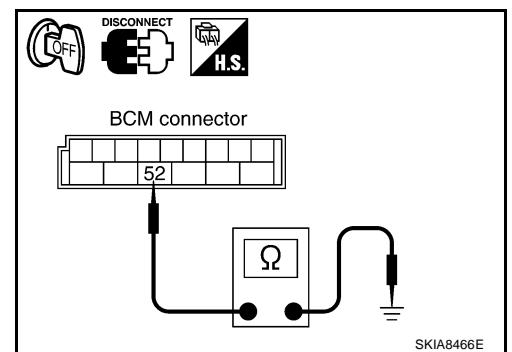
1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between BCM harness connector M2 terminal 52 (B) and ground.

52 (B) – Ground : Continuity should exist.

OK or NG

OK >> INSPECTION END

NG >> Repair harness or connector.



WARNING CHIME

AKS009HA

CONSULT-II Function (BCM)

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

DIAGNOSTIC ITEMS DESCRIPTION

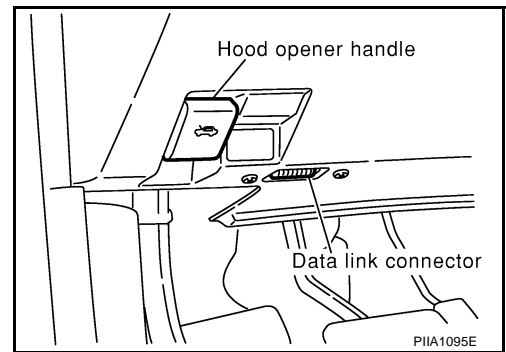
BCM diagnosis position	Diagnosis mode	Description	Reference page
BUZZER	Data monitor	The input data to the BCM control unit is displayed in real time.	DI-51
	Active test	Operation of electrical loads can be checked by sending driving signal to them.	DI-51
BCM	Self-diagnosis	BCM performs self-diagnosis of CAN communication.	DI-52

CONSULT-II BASIC OPERATION PROCEDURE

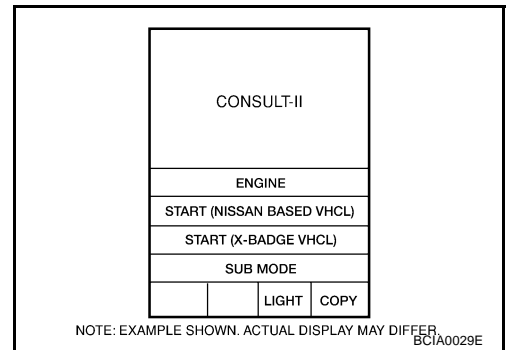
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

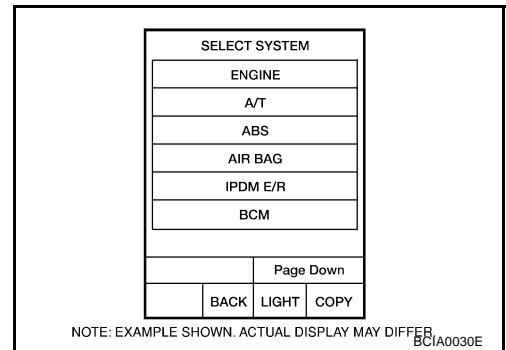
1. With the ignition switch OFF, connect "CONSULT-II" and "CONSULT-II CONVERTER" to the data link connector, and turn the ignition switch ON.



2. Touch "START (NISSAN BASED VHCL)".

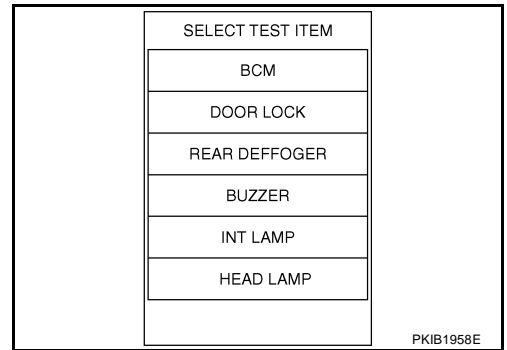


3. Touch "BCM" on "SELECT SYSTEM" screen. If "BCM" is not indicated, go to [GI-39, "CONSULT-II Data Link Connector \(DLC\) Circuit"](#).

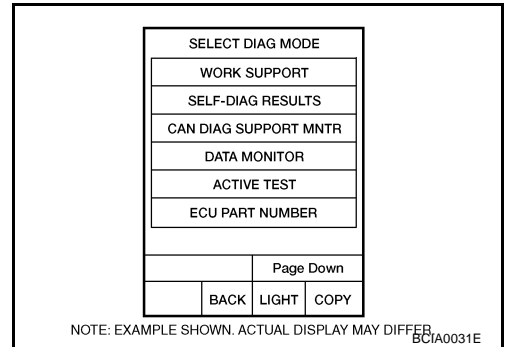


WARNING CHIME

4. Touch "BUZZER" or "BCM".



5. Select "DATA MONITOR", "ACTIVE TEST" or "SELF-DIAG RESULTS".



DATA MONITOR

Operation Procedure

1. Touch "BUZZER" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch "ALL SIGNALS" or "SELECTION FROM MENU" on "DATA MONITOR" screen.

ALL SIGNALS	Monitors main items.
SELECTION FROM MENU	Selects and monitors items.

4. If "SELECTION FROM MENU" is selected, touch the desired monitor item. If "ALL SIGNALS" is selected, all items required to control are monitored.
5. Touch "START".
6. During monitoring, touching "RECORD" can start recording the monitored item status.

Display Item List

Monitored item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
LIGHT SW 1ST	Indicates [ON/OFF] condition of lighting switch.
BUCKLE SW	Indicates [ON/OFF] condition of seat belt buckle switch.

ACTIVE TEST

Operation Procedure

1. Touch "BUZZER" on "SELECT TEST ITEM" screen.
2. Touch "ACTIVE TEST" on "SELECT DIAG MODE" screen.
3. Touch the item to be tested, and check the operation.
4. During the operation check, touching "OFF" deactivates the operation.

WARNING CHIME

Display Item List

Test item	Malfunction is detected when...
LIGHT WARN ALM	This test is able to check light warning chime operation. Light warning chime sounds for 2 seconds after touching "ON" on CONSULT-II screen.
IGN KEY WARN ALM	This test is able to check key warning chime operation. Key warning chime sounds for 2 seconds after touching "ON" on CONSULT-II screen.
SEAT BELT WARN TEST	This test is able to check seat belt warning chime operation. Seat belt warning chime sounds for 2 seconds after touching "ON" on CONSULT-II screen.

SELF-DIAGNOSTIC RESULTS

Operation Procedure

1. Touch "BCM" on "SELECT TEST ITEM" screen.
2. Touch "SELF-DIAG RESULTS" on "SELECT DIAG MODE" screen.
3. Self-diagnostic results are displayed.

Display Item List

Monitored Item	CONSULT-II display	Description
CAN communication	CAN communication [U1000]	Malfunction is detected in CAN communication.

NOTE:

If "CAN communication [U1000]" is indicated, after printing the monitor item, go to "CAN system". Refer to [LAN-3, "Precautions When Using CONSULT-II"](#).

All Warnings Are Not Operated

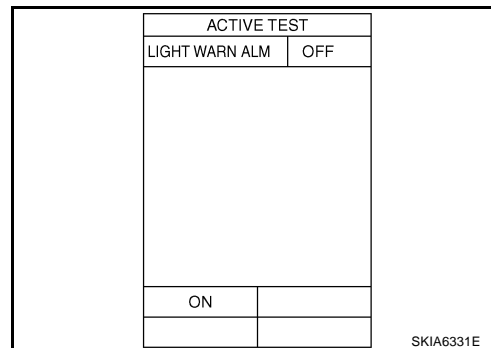
AKS009HB

1. CHECK CHIME OPERATION

Select "BUZZER" on CONSULT-II, and perform "LIGHT WARN ALM", "IGN KEY WARN ALM" or "SEAT BELT WARN" of "ACTIVE TEST".

Does chime sound?

- YES >> Replace BCM.
NO >> GO TO 2.



2. BCM SELF-DIAGNOSIS

Select BCM on CONSULT-II, and perform "BCM" self-diagnosis.

Self-diagnostic result content.

No malfunction detected >> GO TO 3.

CAN communication >> Check BCM CAN communication system. Go to [BCS-15, "CAN Communication Inspection Using CONSULT-II \(Self-Diagnosis\)"](#).

3. CHECK BATTERY POWER SUPPLY CIRCUIT OF COMBINATION METER

Check battery power supply circuit of combination meter. Refer to [DI-14, "Power Supply and Ground Circuit Inspection"](#).

OK or NG

- OK >> Replace combination meter.
NG >> Check harness between combination meter and fuse.

WARNING CHIME

Key Warning Chime and Light Warning Chime Does Not Operate (Seat Belt Warning Chime Does Operate)

AKS009HC

1. CHECK BCM INPUT SIGNAL

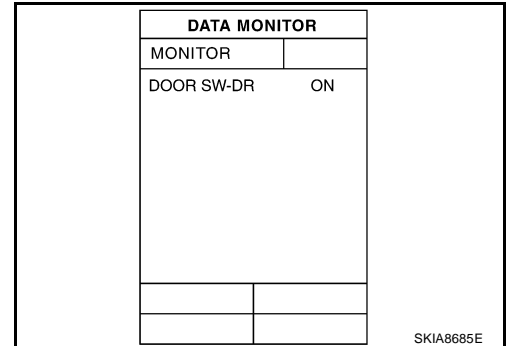
Ⓟ With CONSULT-II

1. Select "BCM".
2. With "DATA MONITOR" of "BUZZER", confirm "DOOR SW-DR" when the driver side door is operated.

"DOOR SW-DR"

When driver side door is opened : ON

When driver side door is closed : OFF



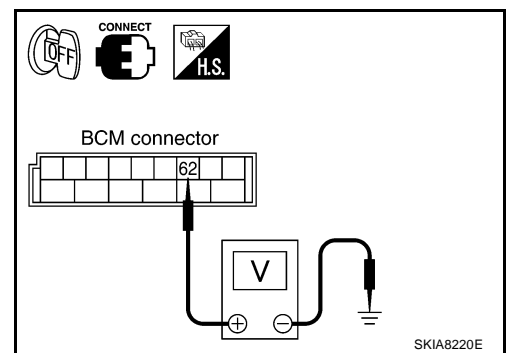
⊗ Without CONSULT-II

Check voltage between BCM harness connector B4 terminal 62 (W) and ground.

62 (W) – Ground

When driver side door is opened : Approx. 0 V

When driver side door is closed : Approx. 5 V



OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> GO TO 2.

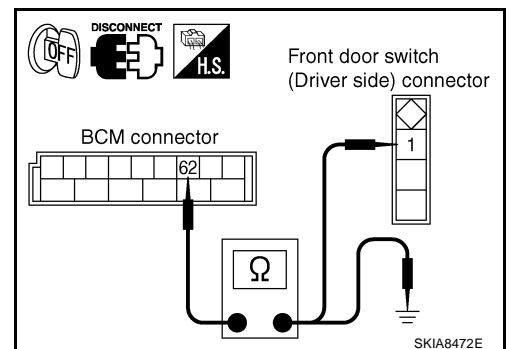
2. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector and front door switch (driver side) connector.
2. Check continuity between BCM harness connector B4 terminal 62 (W) and front door switch (driver side) harness connector B17 terminal 1 (W).

62 (W) – 1 (W) : Continuity should exist.

3. Check continuity between BCM harness connector B4 terminal 62 (W) and ground.

62 (W) – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 3.

NG >> Repair harness or connector.

3. CHECK DOOR SWITCH

Check front door switch (driver side).

1 – Door switch case ground

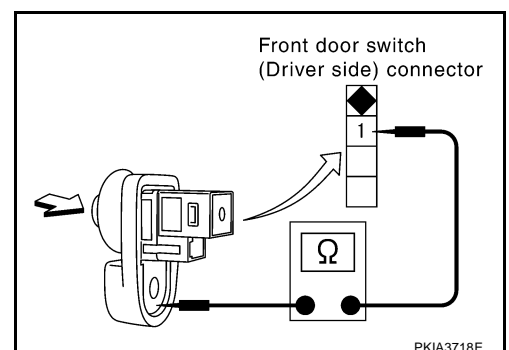
When door switch is released : Continuity should exist.

When door switch is pushed : Continuity should not exist.

OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> Replace front door switch (driver side).



WARNING CHIME

Key Warning Chime Does Not Operate (Without Intelligent Key)

AKS009BC

1. CHECK FUSE

Check if the key switch 10A fuse [No. 21, located in the fuse block (J/B)] is blown.

OK or NG

OK >> GO TO 2.

NG >> Be sure to repair the cause of malfunction before installing new fuse. Refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#).

2. CHECK WARNING CHIME OPERATION

Check the chime under conditions in exception of key warning chime (without Intelligent Key) operation.

Does warning chime sound?

YES >> GO TO 3.

NO >> Go to [DI-52, "All Warnings Are Not Operated"](#) or [DI-53, "Key Warning Chime and Light Warning Chime Does Not Operate \(Seat Belt Warning Chime Does Operate\)"](#).

3. CHECK BCM INPUT SIGNAL

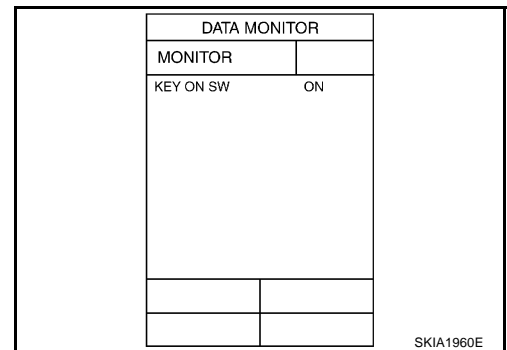
 With CONSULT-II

1. Select "BCM".
2. With "DATA MONITOR" of "BUZZER", confirm "KEY ON SW" when the key switch is operated.

"KEY ON SW"

When key is inserted to ignition key cylinder : ON

When key is removed from ignition key cylinder : OFF



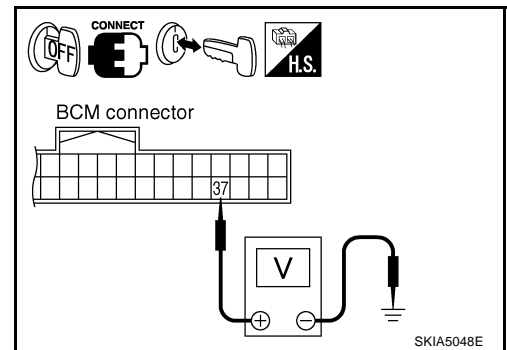
 Without CONSULT-II

Check voltage between BCM harness connector M1 terminal 37 (B/P) and ground.

37 (B/P) – Ground

When key is inserted to ignition key cylinder : Approx. 12 V

When key is removed from ignition key cylinder : Approx. 0 V



OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> GO TO 4.

WARNING CHIME

4. CHECK KEY SWITCH

1. Disconnect key switch connector.
2. Check continuity between key switch connector M307 terminals 1 and 2.

1 – 2

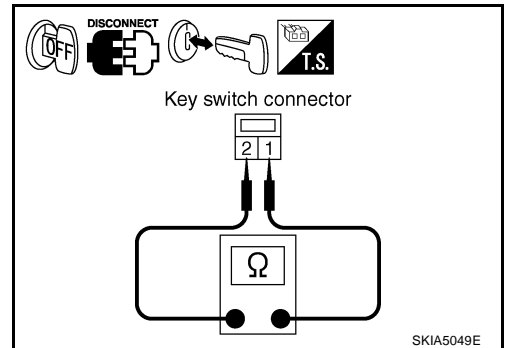
When key is inserted to ignition key cylinder : Continuity should exist.

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

OK or NG

OK >> GO TO 5.

NG >> Replace key switch.



5. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M1 terminal 37 (B/P) and key switch harness connector M307 terminal 1 (B/P).

37 (B/P) – 1 (B/P) : Continuity should exist.

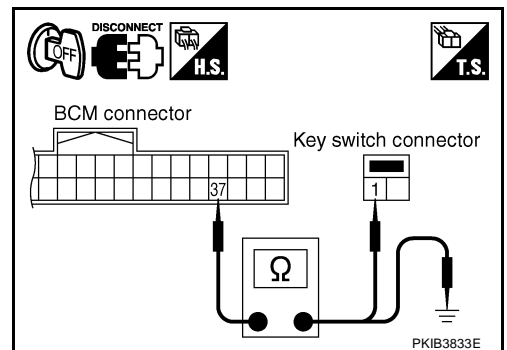
3. Check continuity between BCM harness connector M1 terminal 37 (B/P) and ground.

37 (B/P) – Ground : Continuity should not exist.

OK or NG

OK >> GO TO 6.

NG >> Repair harness or connector.



6. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

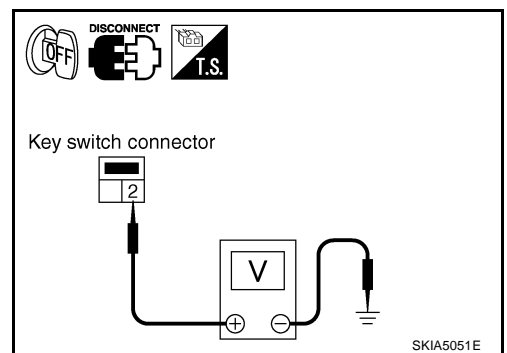
Check voltage between key switch harness connector M307 terminal 2 (L/W) and ground.

2 (L/W) – Ground : Battery voltage

OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> Check continuity between key switch and fuse.



Key Warning Chime Does Not Operate (With Intelligent Key, When Mechanical Key Is Used)

AKS00C9G

1. CHECK FUSE

Check if the key switch and ignition knob switch 15A fuse (No. 33, located in the fuse and fusible link block) is blown.

OK or NG

OK >> GO TO 2.

NG >> Be sure to repair the cause of malfunction before installing new fuse. Refer to [PG-3, "POWER SUPPLY ROUTING CIRCUIT"](#).

WARNING CHIME

2. CHECK WARNING CHIME OPERATION

Check the chime under conditions in exception of key warning chime (when mechanical key is used) operation.

Does warning chime sound?

YES >> GO TO 3.

NO >> Go to [DI-52, "All Warnings Are Not Operated"](#) or [DI-53, "Key Warning Chime and Light Warning Chime Does Not Operate \(Seat Belt Warning Chime Does Operate\)"](#).

3. CHECK BCM INPUT SIGNAL

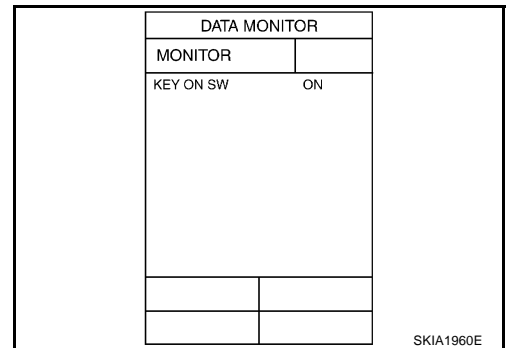
 With CONSULT-II

1. Select "BCM".
2. With "DATA MONITOR" of "BUZZER", confirm "KEY ON SW" when the key is operated.

"KEY ON SW"

When key is inserted to ignition key cylinder : ON

When key is removed from ignition key cylinder : OFF



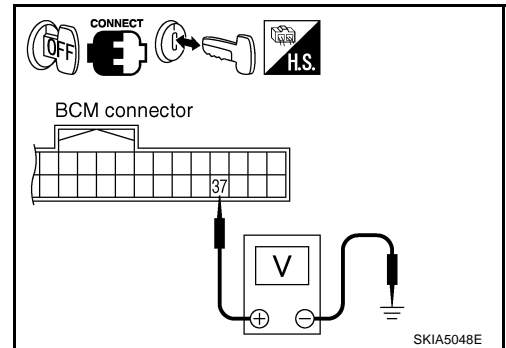
 Without CONSULT-II

Check voltage between BCM harness connector M1 terminal 37 (B/P) and ground.

37 (B/P) – Ground

When key is inserted to ignition key cylinder : Approx. 12 V

When key is removed from ignition key cylinder : Approx. 0 V



OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> GO TO 4.

4. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

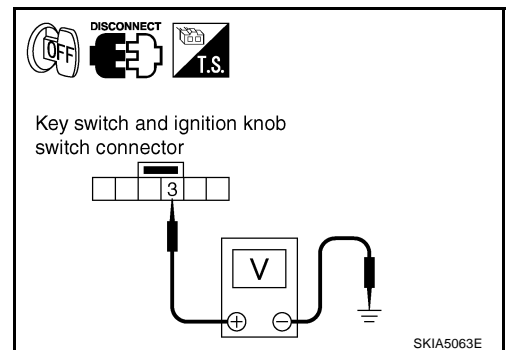
1. Disconnect key switch and ignition knob switch connector.
2. Check voltage between key switch and ignition knob switch harness connector M310 terminal 3 (Y) and ground.

3 (Y) – Ground : Battery voltage

OK or NG

OK >> GO TO 5.

NG >> Check harness between key switch and ignition knob switch and fuse.



WARNING CHIME

5. CHECK KEY SWITCH

Check continuity between key switch and ignition knob switch connector M310 terminals 3 and 4.

3 – 4

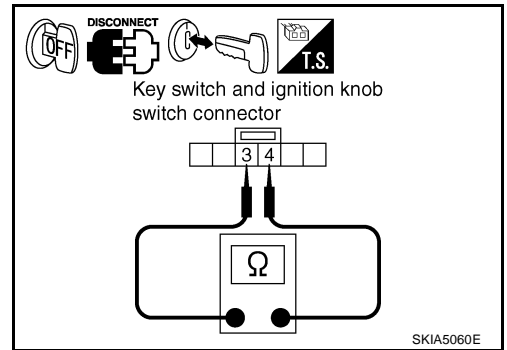
When key is inserted to ignition key cylinder : Continuity should exist.

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

OK or NG

OK >> GO TO 6.

NG >> Replace key switch and ignition knob switch.



6. CHECK KEY SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M1 terminal 37 (B/P) and key switch and ignition knob switch harness connector M310 terminal 4 (B/P).

37 (B/P) – 4 (B/P) : Continuity should exist.

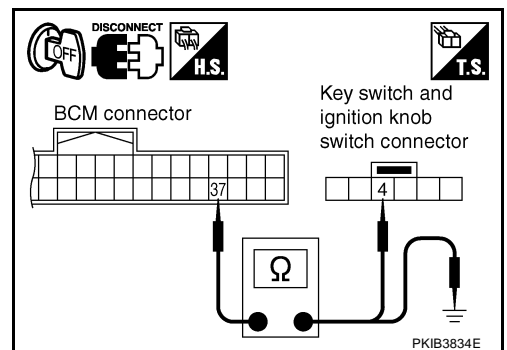
3. Check continuity between BCM harness connector M1 terminal 37 (B/P) and ground.

37 (B/P) – Ground : Continuity should not exist.

OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> Repair harness or connector.



Key Warning Chime Does Not Operate (With Intelligent Key, When Intelligent Key Is Carried With The Driver)

AKS00C9H

Refer to [BL-129, "WARNING CHIME FUNCTION MALFUNCTION"](#).

Light Warning Chime Does Not Operate

AKS000A8

1. CHECK WARNING CHIME OPERATION

Check except for headlamp warning chime operation.

Does warning chime sound?

YES >> GO TO 2.

NO >> Go to [DI-52, "All Warnings Are Not Operated"](#) or [DI-53, "Key Warning Chime and Light Warning Chime Does Not Operate \(Seat Belt Warning Chime Does Operate\)"](#).

2. CHECK BCM INPUT SIGNAL

With "DATA MONITOR" of "BUZZER", confirm "LIGHT SW 1ST" when the lighting switch is operated.

"LIGHT SW 1ST"

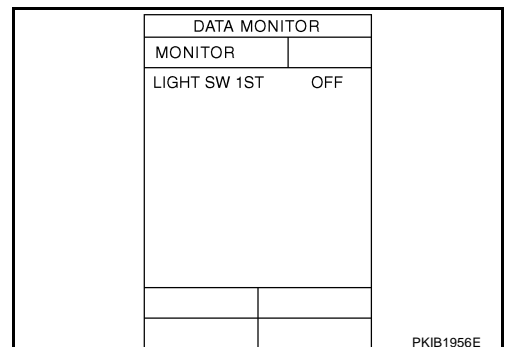
Lighting switch (1st position) : ON

Lighting switch (OFF) : OFF

OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#).

NG >> Check lighting switch. Refer to [LT-133, "Combination Switch Inspection"](#).



WARNING CHIME

AKS000A9

Seat Belt Warning Chime Does Not Operate

1. CHECK WARNING CHIME OPERATION

Check the chime under conditions in exception of seat belt warning chime operation.

Does warning chime sound?

YES >> GO TO 2.

NO >> Go to [DI-52, "All Warnings Are Not Operated"](#) .

2. SEAT BELT WARNING CHIME INPUT SIGNAL

1. Select "BCM" on CONSULT-II.
2. With "DATA MONITOR" of "BUZZER", confirm "BUCKLE SW" when the seat belt buckle switch (driver side) is operated.

"BUCKLE SW"

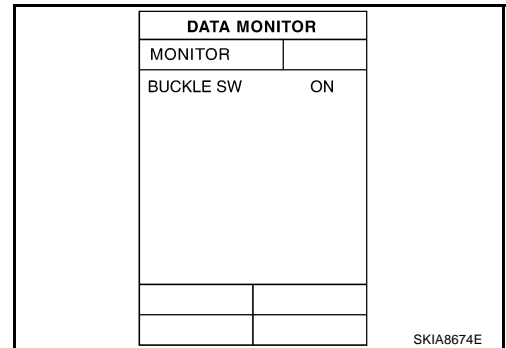
When seat belt is fastened : OFF

When seat belt is unfastened : ON

OK or NG

OK >> Replace BCM. Refer to [BCS-16, "Removal and Installation of BCM"](#) .

NG >> GO TO 3.



3. CHECK COMBINATION METER INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between combination meter harness connector M20 terminal 47 (BR) and ground.

47 (BR) – Ground

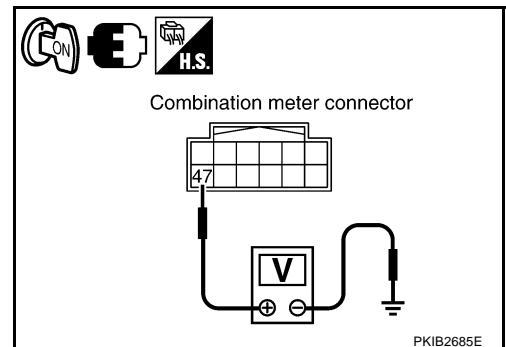
When seat belt is fastened : Approx. 12 V

When seat belt is unfastened : Approx. 0 V

OK or NG

OK >> Replace combination meter.

NG >> GO TO 4.



4. CHECK SEAT BELT BUCKLE SWITCH

1. Turn ignition switch OFF.
2. Disconnect seat belt buckle switch (driver side) connector
3. Check continuity seat belt buckle switch (driver side) connector terminals 1 and 2.

1 – 2

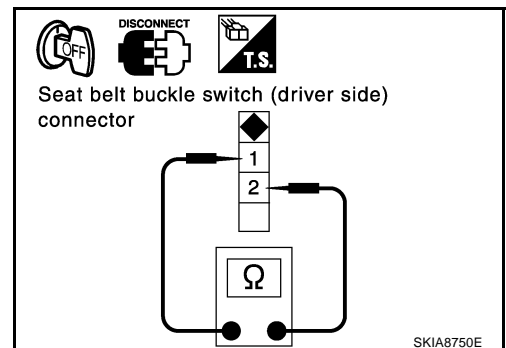
When seat belt is fastened : Continuity should not exist.

When seat belt is unfastened : Continuity should exist.

OK or NG

OK >> GO TO 5.

NG >> Replace seat belt buckle switch (driver side).



WARNING CHIME

5. CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

1. Disconnect combination meter connector.
2. Check continuity between combination meter harness connector M20 terminal 47 (BR) and seat belt buckle switch (driver side) harness connector B8 terminal 1 (SB).

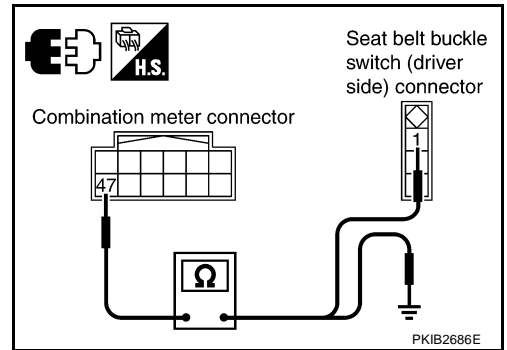
47 (BR) – 1 (SB) : Continuity should exist.

3. Check continuity between combination meter harness connector M20 terminal 47 (BR) and ground.

47 (BR) – Ground : Continuity should not exist.

OK or NG

- OK >> GO TO 6.
NG >> Repair harness or connector.



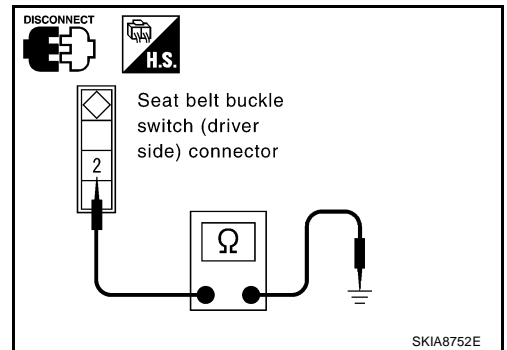
6. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

Check continuity between seat belt buckle switch (driver side) harness connector B8 terminal 2 (B) and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

- OK >> Replace combination meter.
NG >> Repair harness or connector.



A
B
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J
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L
M

CLOCK

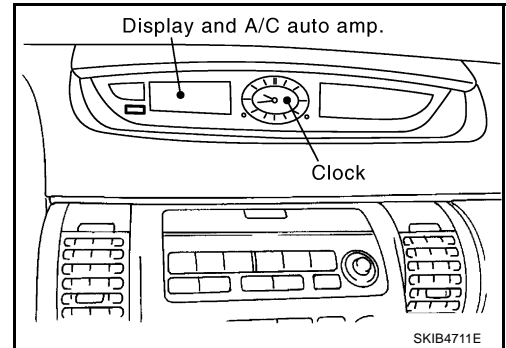
CLOCK

PFP:25820

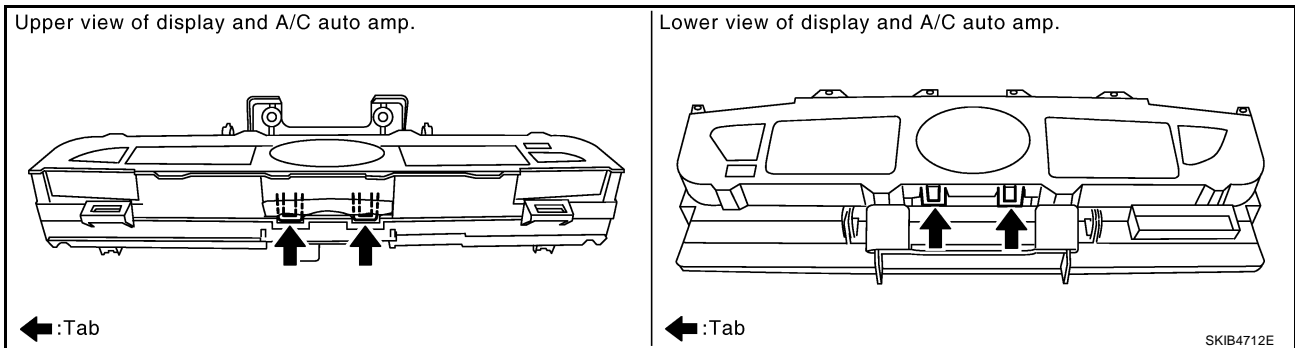
Removal and Installation of Clock REMOVAL

AKS000IN

1. Remove the display and A/C auto amp. and clock assembly. Refer to [ATC-120, "Removal and Installation of Display and A/C Auto Amp."](#) .



2. Disconnect clock connector.
3. Disengage tabs (4), and remove clock.



INSTALLATION

Installation is the reverse order of removal.