

DI

SECTION

DRIVER INFORMATION SYSTEM

A
B
C

CONTENTS

D
E

PRECAUTION	Fluorescent Lamp Check	4	20
Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	Inspection/Engine Speed Signal	4	20
Wiring Diagrams and Trouble Diagnosis	Inspection/Water Temperature Gauge	4	21
COMBINATION METERS	Inspection/Vehicle Speed Signal	5	21
System Description	Inspection/Fuel Level Sensor Unit	5	22
UNIFIED CONTROL METER	FUEL LEVEL SENSOR UNIT	5	22
HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER	LOW-FUEL WARNING LAMP	5	22
POWER SUPPLY AND GROUND CIRCUIT	The Fuel Gauge Pointer Fluctuates-Indicator Wrong Value-Or Varies.	5	23
WATER TEMPERATURE GAUGE	The Fuel Gauge Does Not Move to F-position.	5	23
TACHOMETER	The Fuel Gauge Does Not Work.	6	24
FUEL GAUGE	Low Fuel Warning Lamp Illuminate or Not Illuminate..	6	24
SPEEDOMETER	ICC System Display Does Not Illuminate	6	24
CAN Communication	Electrical Components Inspection	6	25
SYSTEM DESCRIPTION	FUEL LEVEL SENSOR UNIT CHECK	6	25
FOR VDC MODELS	Removal and Installation for Combination Meter ...	6	25
FOR ICC MODELS	Disassembly and Assembly for Combination Meter..	7	26
Component Parts and Harness Connector Location...	WARNING LAMPS	8	27
Combination Meter/Without ICC System	System Description	9	27
CHECK	OUTLINE	9	27
Combination Meter/With ICC System	AIR BAG WARNING LAMP	10	27
CHECK	DOOR WARNING LAMP	10	27
Schematic	ACTIVE DAMPER INDICATOR LAMP (SPORT)..	11	27
Wiring Diagram — METER —	LOW OIL PRESSURE WARNING LAMP	12	27
Wiring Diagram — LOAD/S —	CHARGE WARNING LAMP	14	27
Terminals and Reference Value for Combination Meter	LOW WASHER LEVEL WARNING LAMP	16	28
Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display	A/T OIL TEMP WARNING LAMP	17	28
SELF-DIAGNOSIS FUNCTION	LOW FUEL LEVEL WARNING LAMP	17	28
HOW TO ALTERNATE DIAGNOSIS MODE	ABS WARNING LAMP	17	28
Work Flow	VDC OFF WARNING LAMP	17	28
Trouble Diagnoses	SLIP WARNING LAMP	18	28
SYMPTOM CHART 1 (MALFUNCTION INDICATED DIAGNOSIS MODE)	SEAT BELT WARNING LAMP	18	28
SYMPTOM CHART 2 (NO MALFUNCTION INDICATED IN DIAGNOSIS MODE)	BRAKE WARNING LAMP	18	29
Power Supply and Ground Circuit Check	MALFUNCTION INDICATOR LAMP	19	29
	LOW TIRE PRESSURE WARNING LAMP		29
	ASC D WARNING LAMP		29
	ICC SYSTEM WARNING LAMP		29
	WARNING MESSAGE ON DISPLAY		29
	Schematic		30
	Wiring Diagram — WARN —		31

F
G
H
I
J
DI

L
M

Terminals and Reference Value for BCM	39	PRECAUTION OF LCD MONITOR	68
Work Flow	40	POWER SUPPLY AND GROUND	68
Preliminary Check	40	AV COMMUNICATION LINE	68
CONSULT-II Function	40	VEHICLE INFORMATION SYSTEM	69
DIAGNOSTIC ITEMS DESCRIPTION	40	SETTING OF VEHICLE STATUS	71
CONSULT-IIBASICOPERATIONPROCEDURE	40	WARNING INDICATIONS	74
DATA MONITOR	41	Precautions for AV and NAVI Control Unit or AV Control Unit Replacement	76
ACTIVE TEST	42	Component Parts and Harness Connector and Harness Connector Location	76
On Board Diagnosis	42	Schematic	77
DIAGNOSIS ITEM	42	Wiring Diagram— INF/D— without Navigation System and For CANADA without Rear Control Switch..	78
SWITCH MONITOR	42	Wring Diagram— INF/D— with Navigation System For CANADA with Rear Control Switch	86
Trouble Diagnosis for Door Warning Lamp	43	Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit	93
Inspection/Combination Meter Circuit	44	Terminals and Reference Value for Display	97
Inspection/Front Door Switch	44	Terminals and Reference Value for Multifunction Switch	99
Inspection/Rear Door Switch	45	On Board Self-Diagnosis Function (without Navigation System)	99
Electrical Components Inspection	46	DESCRIPTION	99
OIL PRESSURE SWITCH	46	DIAGNOSIS ITEM	100
DIODE CHECK	47	Self-Diagnosis Mode (without Navigation System).100	
A/T INDICATOR	48	OPERATION PROCEDURE	100
Wiring Diagram — AT/IND —	48	SELF-DIAGNOSIS RESULT	101
Trouble Diagnosis	49	AV COMMUNICATION LINE CIRCUIT DIAGRAM (WITHOUT NAVIGATION SYSTEM)	103
SYMPTOM CHART	49	CONFIRMATION/ADJUSTMENT Mode (without Navigation System)	104
A/T Indicator Does Not Illuminate	49	OPERATION PROCEDURE	104
WARNING CHIME	50	DISPLAY DIAGNOSIS	104
System Description	50	VEHICLE SIGNALS	105
FUNCTION	50	SPEAKER TEST	105
IGNITION KEY WARNING CHIME	50	AUTO CLIMATE CONTROL	105
LIGHT WARNING CHIME	50	CONSULT-II Function (without Navigation System).105	
SEAT BELT WARNING CHIME	51	OPERATION PROCEDURE	105
Component Parts and Harness Connector Location..	51	SELF-DIAG RESULTS	106
Major Component Parts and Function	51	DATA MONITOR	106
Schematic	52	VERSION	107
Wiring Diagram — CHIME —	53	On Board Self-Diagnosis Function (with Navigation System)	107
Terminals and Reference Value Chart for BCM	56	DESCRIPTION	107
Work Flow	57	DIAGNOSIS ITEM	107
Preliminary Check	58	Self-Diagnosis Mode (with Navigation System) ...	108
INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT	58	OPERATION PROCEDURE	108
CONSULT-II Function	58	SELF-DIAGNOSIS RESULT	110
DIAGNOSTIC ITEMS DESCRIPTION	59	AV COMMUNICATION LINE CIRCUIT DIAGRAM (WITH NAVIGATION SYSTEM)	112
CONSULT-IIBASICOPERATIONPROCEDURE	59	CONFIRMATION/ADJUSTMENT Mode (with Navigation System)	113
DATA MONITOR	60	OPERATION PROCEDURE	113
ACTIVE TEST	60	DISPLAY DIAGNOSIS	113
On Board Diagnosis	61	VEHICLE SIGNALS	114
DIAGNOSIS ITEM	61	SPEAKER TEST	114
SWITCH MONITOR	61	AUTO CLIMATE CONTROL	114
Symptom Chart	62	NAVIGATION	115
Warning Chime Circuit Check	62	HISTORY OF ERRORS	115
Front Door Switch (Driver side) Check	64		
Key Switch Insert Signal Check	65		
Lighting Switch Input Signal Check	66		
Seat Belt Buckle Switch Check	67		
Removal and Installation of Warning Chime	67		
VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM	68		
System Description	68		
INTEGRATED SWITCH SYSTEM	68		

DIAGNOSIS BY HISTORY OF ERRORS	115	Terminals and Reference Value for Rear View Camera Control Unit	144	A
REAR VIEW CAMERA	117	Self-Diagnosis Function	146	
CONSULT-II Function (with Navigation System) ..	117	DESCRIPTION	146	B
OPERATION PROCEDURE	117	DIAGNOSIS ITEM	146	
SELF-DIAG RESULTS	117	Self-Diagnosis Mode	146	C
DATA MONITOR	118	OPERATION PROCEDURE	146	
VERSION	119	Confirmation/Adjustment Mode	146	D
Multifunction Switch Self-Diagnosis Function	119	OPERATION PROCEDURE	146	
STARTING THE SELF-DIAGNOSIS MODE	119	Side Distance Guideline Correction	147	E
EXITING THE SELF-DIAGNOSIS MODE	119	Power Supply and Ground Circuit Check	148	
DIAGNOSIS FUNCTION	119	Rear View Is Not Displayed With The A/T Selector Lever In R-position.	149	F
Power Supply and Ground Circuit Check for AV and NAVI Control Unit or AV Control Unit	120	The Backlight Correction Does Not Work When The ENTER Switch Is Pressed.	150	G
Power Supply and Ground Circuit Check for Display	121	The Rear View Image Is Distorted.	151	
Power Supply and Ground Circuit Check for Multifunction Switch	122	Removal and Installation of Rear View Camera Control Unit	152	H
Vehicle Speed Signal Check	123	Removal and Installation of Rear View Camera ..	152	
Parking Brake Signal Check	124	VOICE ACTIVATED CONTROL SYSTEM	153	I
Illumination Control Signal Check	125	System Description	153	J
Ignition Signal Check	125	OUT LINE	153	
RGB Screen Is Not Shown	126	VOICE ACTIVATED CONTROL FUNCTION ...	153	
Color of RGB Image Is Not Proper	127	AV COMMUNICATION LINE	153	
RGB Screen Is Rolling	130	Schematic	155	
No Fuel Information Is Displayed/No Warning Message Is Displayed.	131	Wiring Diagram — VOICE —	156	
Vehicle Condition Setting Is Not Possible.	132	Terminals and Reference Values for Voice Activated Control Module	162	
Multifunction Switch Does Not Operate.	133	Component Parts and Harness Connector Location	164	
Multifunction Switch Indicator Does Not illuminate.	134	Trouble Diagnoses	164	
Removal and Installation of Display	134	THIS CONDITION IS NOT ABNORMAL	164	
Disassembly and Assembly for Multifunction Switch	135	Self-Diagnosis Function	165	
Removal and Installation of AV and NAVI Control Unit and AV Control Unit (For CANADA with Rear Control Switch)	136	DESCRIPTION	165	
Removal and Installation of AV Control Unit (without Navigation System and without Rear Control Switch)	136	DIAGNOSIS ITEM	165	
CLOCK	137	Self-Diagnosis Mode	165	DI
Wiring Diagram — CLOCK —	137	OPERATION PROCEDURE	165	
Removal and Installation	138	Confirmation/Adjustment Mode	166	
REAR VIEW MONITOR	139	OPERATION PROCEDURE	166	L
System Description	139	Power Supply and Ground Circuit Check	166	
POWER SUPPLY AND GROUND	139	Voice Command Not Identified (With Voice Activated Control System in Operation)	167	
AV COMMUNICATION LINE	139	No Guide Sound or Beeps	168	
REAR VIEW CAMERA OPERATION	139	Voice Activated Control System Not Starting PTT Switch Pushed ON	169	
FUNCTION OF BACKLIGHT CORRECTION ..	140	Audio Not Muted with PTT Switch Pushed ON ...	170	
Component Parts and Harness Connector Location	140	Audio Mute Not Released	171	
Schematic	141	Removal and Installation for Voice Activated Control Module	172	M
Wiring Diagram — R/VIEW —	142			

PRECAUTION

PRECAUTION

PFP:00011

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

EKS001R5

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

Wiring Diagrams and Trouble Diagnosis

EKS001R6

When you read wiring diagrams, refer to the followings:

- Refer to [GI-14, "How to Read Wiring Diagrams"](#) .
- Refer to [PG-2, "POWER SUPPLY ROUTING"](#) for power distribution circuit.

When you perform trouble diagnosis, refer to the followings:

- Refer to [GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"](#) .
- Refer to [GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident"](#) .

COMBINATION METERS

COMBINATION METERS

PFP:24814

System Description

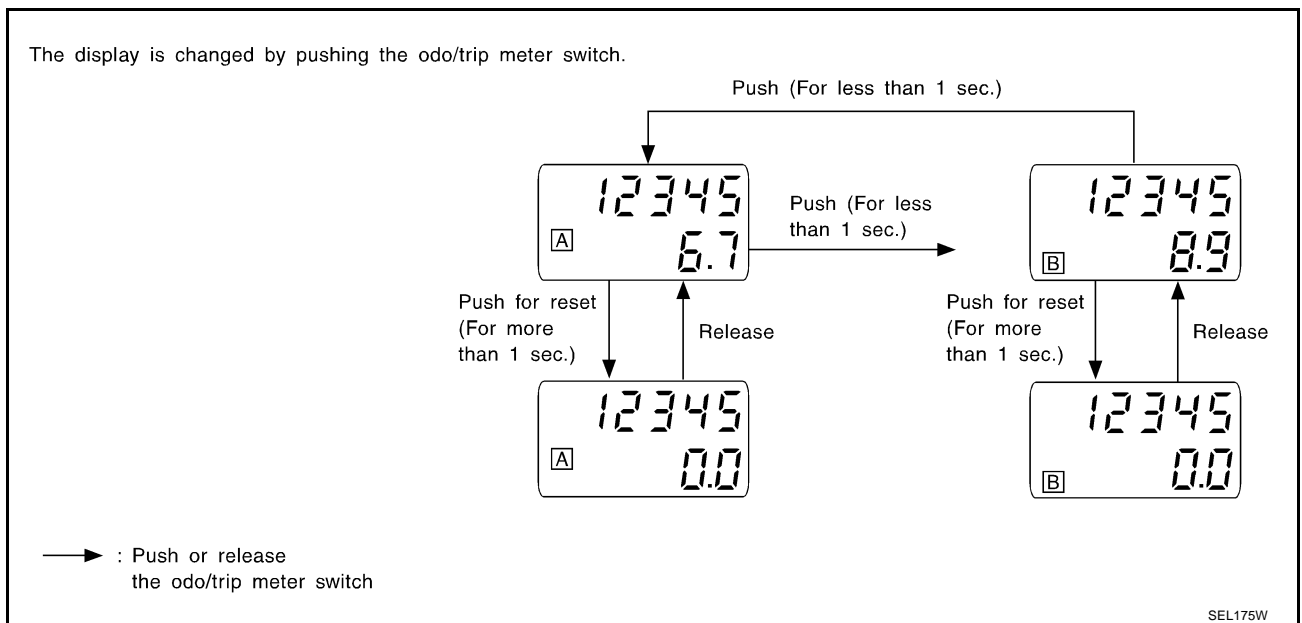
EKS0002T

UNIFIED CONTROL METER

- Speedometer, odo/trip meter, tachometer, fuel gauge and water temperature gauge are controlled totally by control unit built in combination meter.
- Digital meter is adopted for odo/trip meter.*
*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.
- Odo/trip meter, A/T indicator and ICC system display segments can be checked in self-diagnosis mode.
- Meter/gauge can be checked in self-diagnosis mode.

HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

- The CAN communication signals (vehicle speed signal) from VDC/TCS/ABS control unit, and the memory signals from the meter memory circuit are processed by the combination meter, and the mileage is displayed.
- Operating the odometer/trip switch allows switching the mode in the following order.



- The odometer/trip display switching and trip display resetting can be identified by the time from pressing the odometer/trip switch to releasing it.
- When resetting with trip A displayed, only trip A display is reset (same as trip B).

POWER SUPPLY AND GROUND CIRCUIT

Power is supplied at all times

- through 10A fuse [NO.6,located in the fuse block (J/B) NO.1]
- to combination meter terminal 57.

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

- through 10A fuse [NO.9,located in the fuse block (J/B) NO.1]
- to combination meter terminal 59.

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

- through 10A fuse [NO.21,located in the fuse block (J/B) NO.1]
- to combination meter terminal 1.

Ground is supplied

- to combination meter terminal 60,61and 62
- through body grounds M24 and M114.

WATER TEMPERATURE GAUGE

The water temperature gauge indicates the engine coolant temperature.

COMBINATION METERS

ECM provides a water temperature signal to combination meter for water temperature gauge with CAN communication line.

TACHOMETER

The tachometer indicates engine speed in revolution per minutes (rpm).

ECM provides a engine speed signal to combination meter for tachometer 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 resistor signal supplied

- to combination meter terminal 30 for the fuel level sensor
- from terminal 5 of the fuel level sensor unit
- through terminal 6 of the fuel level sensor unit and
- through combination meter terminal 29

SPEEDOMETER

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

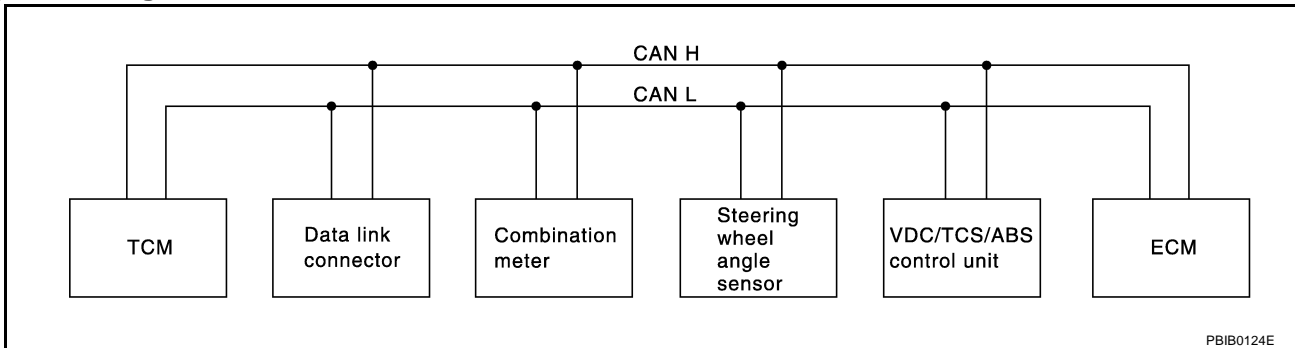
CAN Communication SYSTEM DESCRIPTION

EKS0010C

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.

FOR VDC MODELS

System Diagram



Input/Output Signal Chart

T: Transmit R: Receive

Signals	TCM	Combination meter	Steering wheel angle sensor	VDC / TCS / ABS control unit	ECM
Engine speed signal	R	R		R	T
Engine coolant temperature signal	R	R			T
Accelerator pedal position signal	R			R	T
Engine torque signal	R			R	T
Battery voltage signal	R				T
Closed throttle position signal	R				T
Wide open throttle position signal	R				T
Lock-up prohibition signal	R				T
Torque-down permission signal	R				T
Fuel consumption monitor signal		R			T

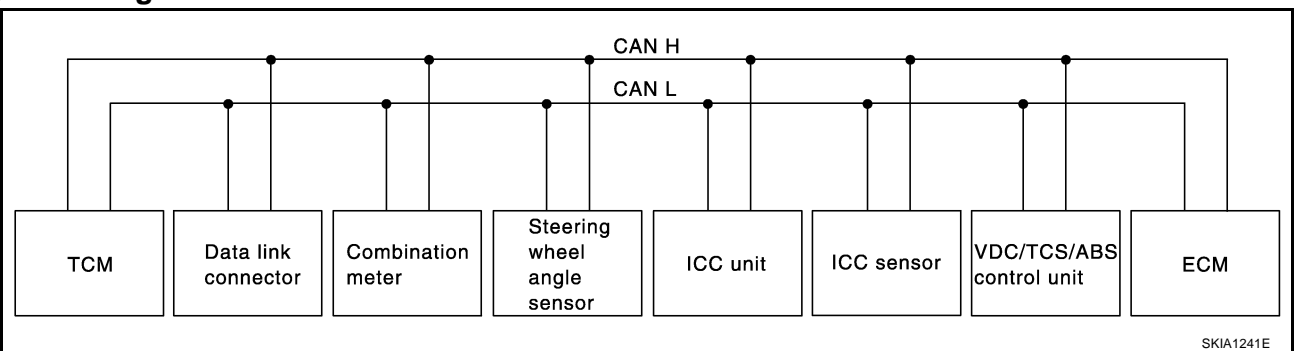
COMBINATION METERS

Signals	TCM	Combination meter	Steering wheel angle sensor	VDC / TCS / ABS control unit	ECM
Lock-up signal	T				R
Hard deceleration signal	T				R
Torque-down signal	T				R
Power mode indicator signal	T				R
A/T fluid temperature warning lamp signal	T	R			R
Current gear position signal	T	R		R	R
	R	T			
Next gear position signal	T			R	R
Shift change signal	T			R	R
Shift pattern signal	T				R
VDC system control signal				T	R
VDC operation signal				T	R
Stop lamp switch signal	R			T	
Steering wheel angle sensor signal	R		T	R	R
Air conditioner switch signal		T			R
Headlamp switch signal		T			R
Rear window defogger switch signal		T			R
OD cancel switch signal	R	T		R	
Brake switch signal	R	T			
Power mode switch signal	R	T			
Vehicle speed signal	R	R		T	
	R	T			R
	T				R

A
B
C
D
E
F
G
H
I
J

FOR ICC MODELS

System Diagram



DI
L
M

Input/Output Signal Chart

T: Transmit R: Receive

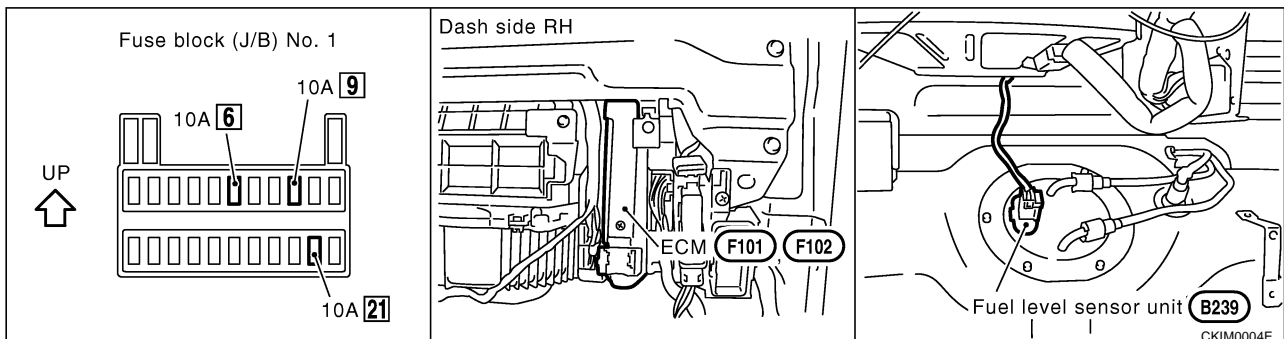
Signals	TCM	Combina- tion meter	Steering wheel angle sensor	ICC unit	ICC sen- sor	VDC / TCS / ABS con- trol unit	ECM
ICC system display signal		R		T			
ICC sensor signal				R	T		
Engine speed signal	R	R		R		R	T
Engine coolant temperature signal	R	R					T
Accelerator pedal position signal	R					R	T

COMBINATION METERS

Signals	TCM	Combina- tion meter	Steering wheel angle sensor	ICC unit	ICC sen- sor	VDC / TCS / ABS con- trol unit	ECM
Engine torque signal	R					R	T
Battery voltage signal	R						T
Closed throttle position signal	R			R			T
Lock-up prohibition signal	R						T
Torque-down permission signal	R						T
Fuel consumption monitor signal		R					T
Lock-up signal	T						R
Hard deceleration signal	T						R
Torque-down signal	T						R
Power mode indicator signal	T						R
A/T fluid temperature warning lamp signal	T	R					R
Current gear position signal	T	R				R	R
	R	T					
Next gear position signal	T					R	R
Shift change signal	T					R	R
Shift pattern signal	T			R			R
VDC system control signal						T	R
VDC operation signal				R		T	R
Stop lamp switch signal	R					T	
Steering wheel angle sensor signal	R		T			R	R
Air conditioner switch signal		T					R
Headlamp switch signal		T					R
Rear window defogger switch signal		T					R
OD cancel switch signal	R	T				R	
Brake switch signal	R	T					
Power mode switch signal	R	T					
Vehicle speed signal	R	R		R		T	
	R	T					R
	T			R			R

Component Parts and Harness Connector Location

EKS0002U

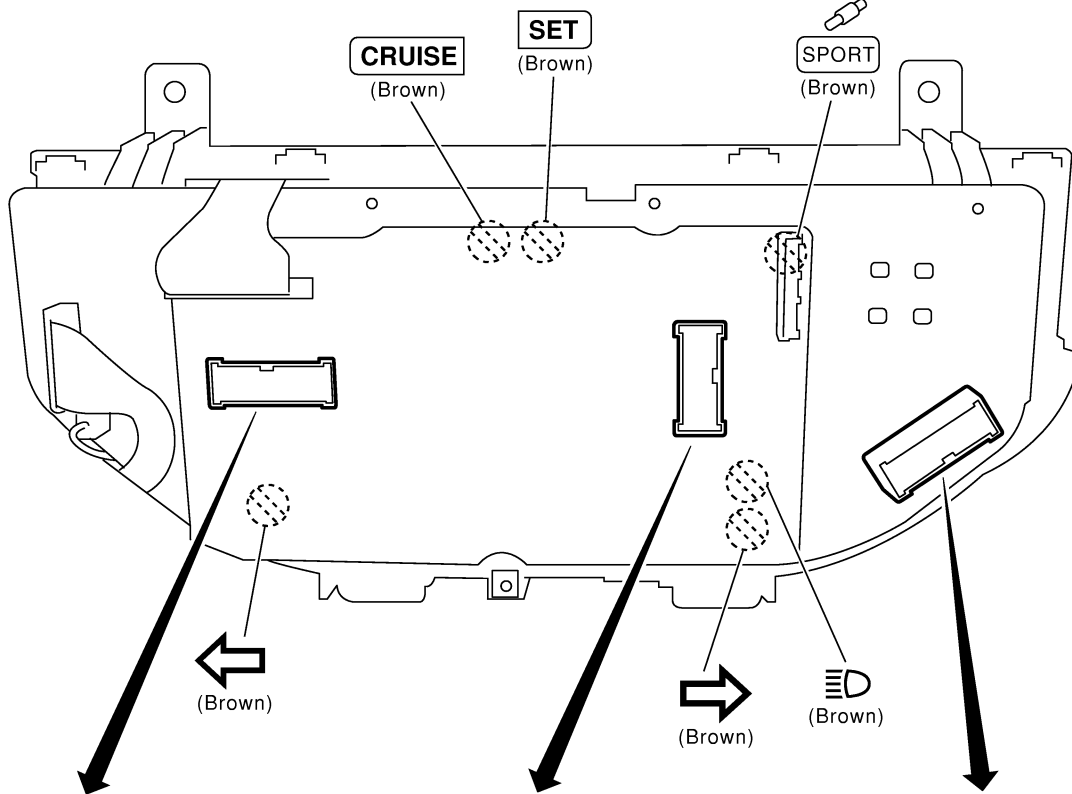
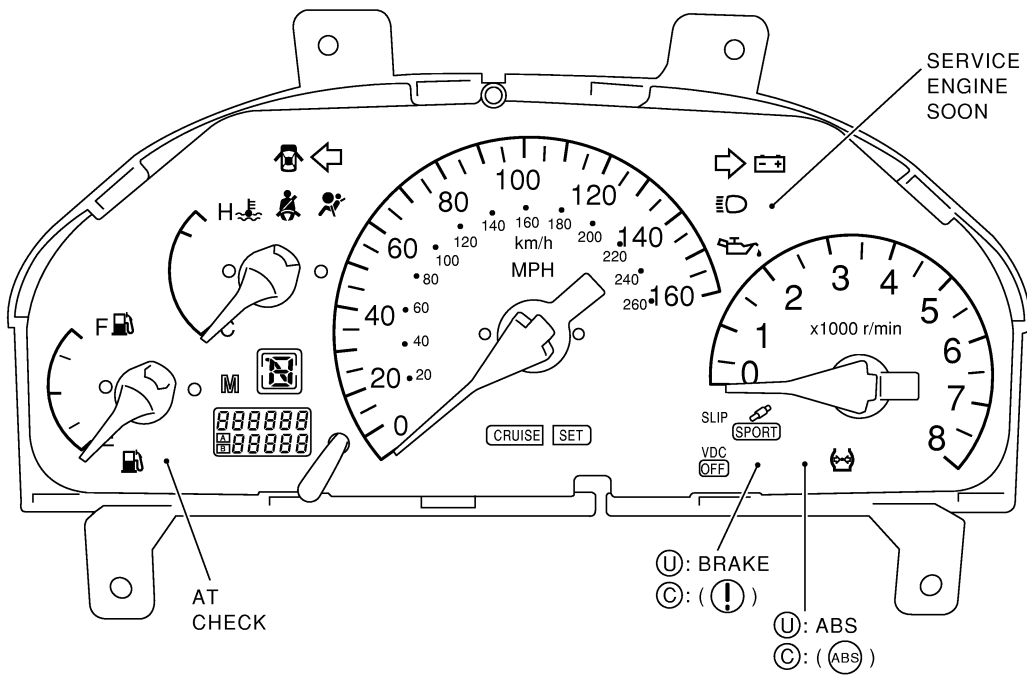


COMBINATION METERS

Combination Meter/Without ICC System CHECK

EKS003KW

A
B
C
D
E
F
G
H
I
J
DI
L
M



32	33	34	35	36	37	38	39	40	41	42	43	44
21	22	23	24	25	26	27	28	29	30	31	M42	

10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	M41	

56	57	58	59	60	61	62	63	64	65	66	67	68
45	46	47	48	49	50	51	52	53	54	55	M43	

Bulb socket color	Bulb wattage
Brown	1.4W

(): Warning bulb socket color

Ⓢ: For USA

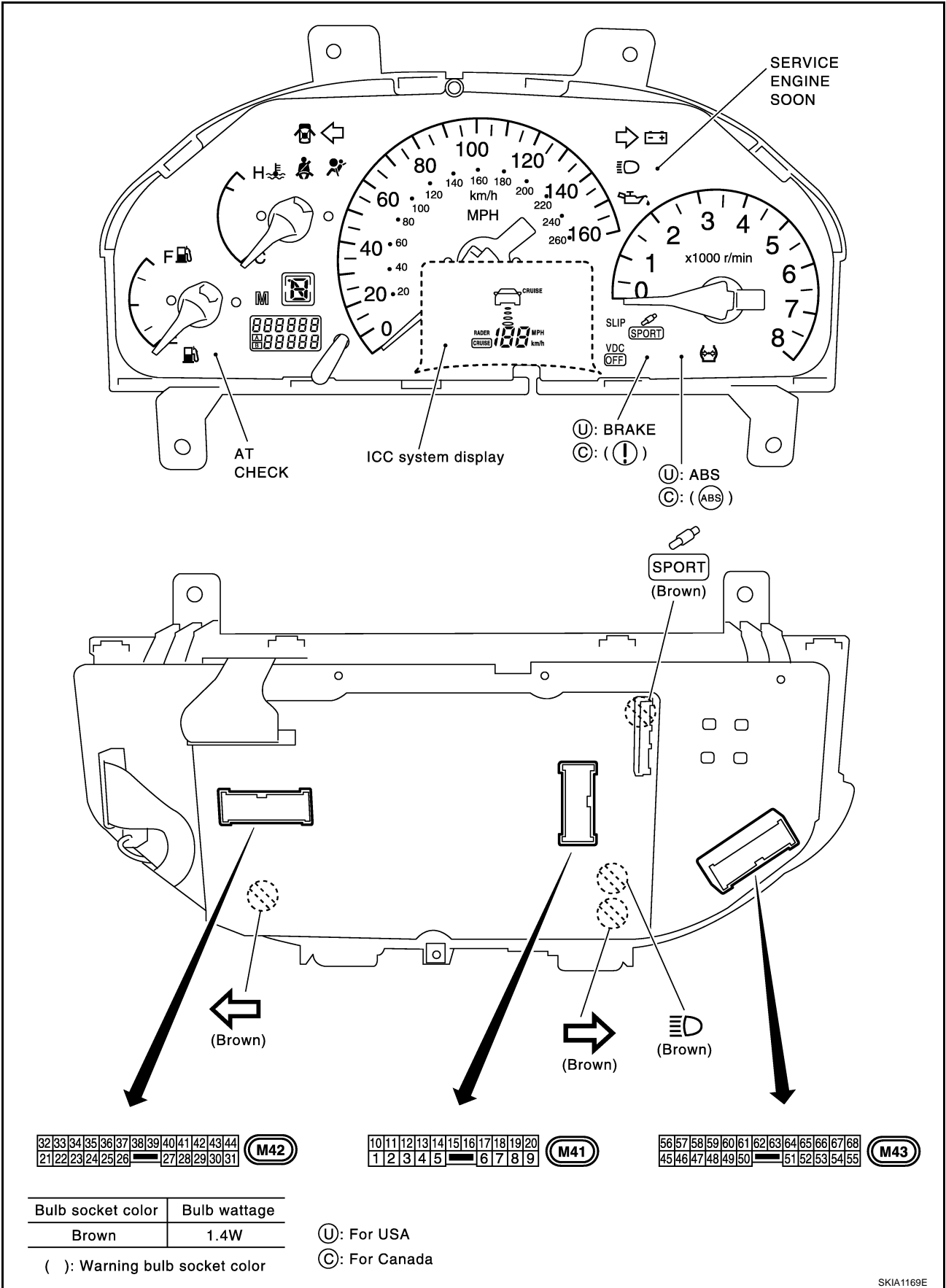
Ⓒ: For Canada

SKIA0472E

COMBINATION METERS

Combination Meter/With ICC System CHECK

EKS0018P

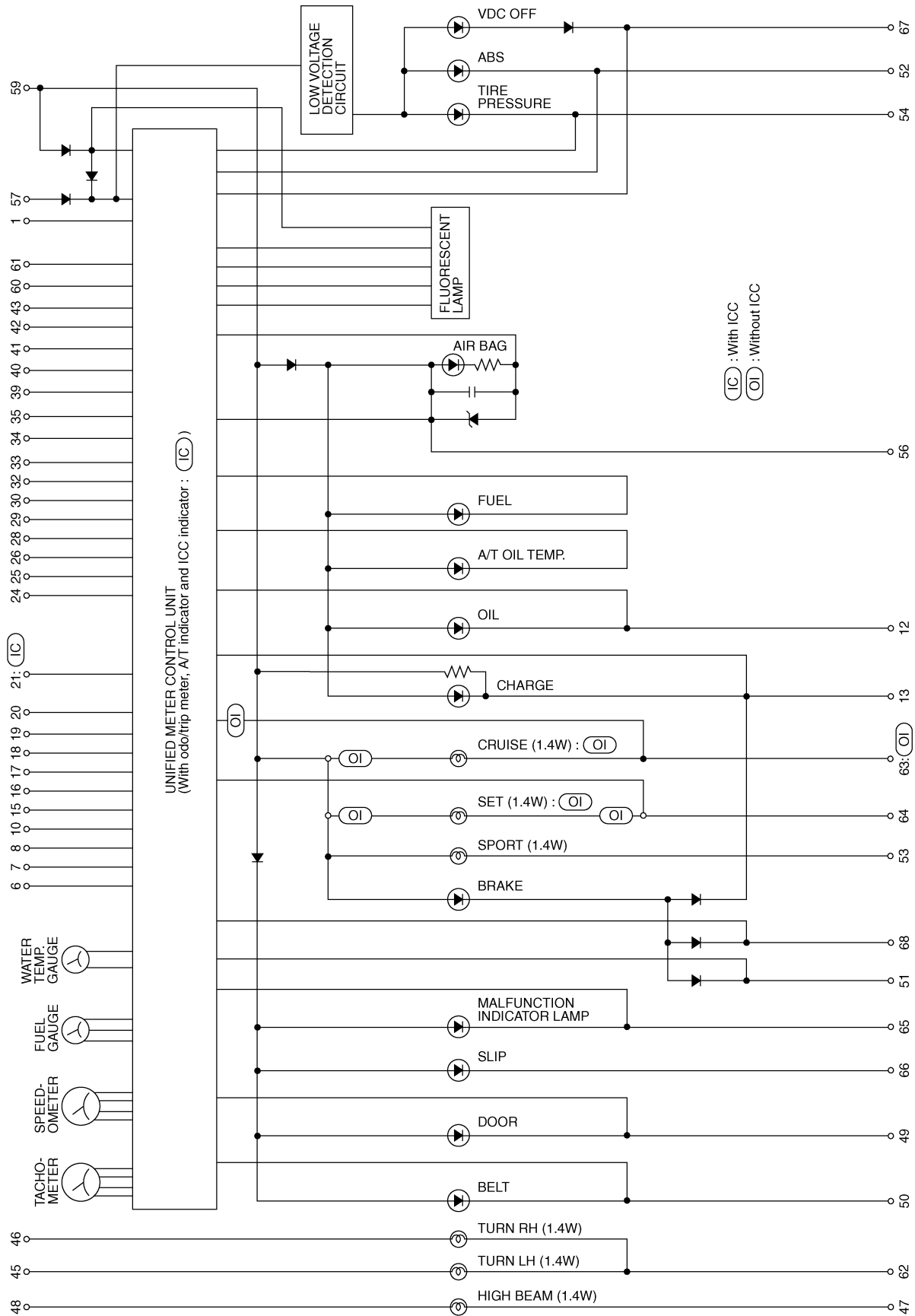


SKIA1169E

COMBINATION METERS

Schematic

EKS000ZW



TKWM0215E

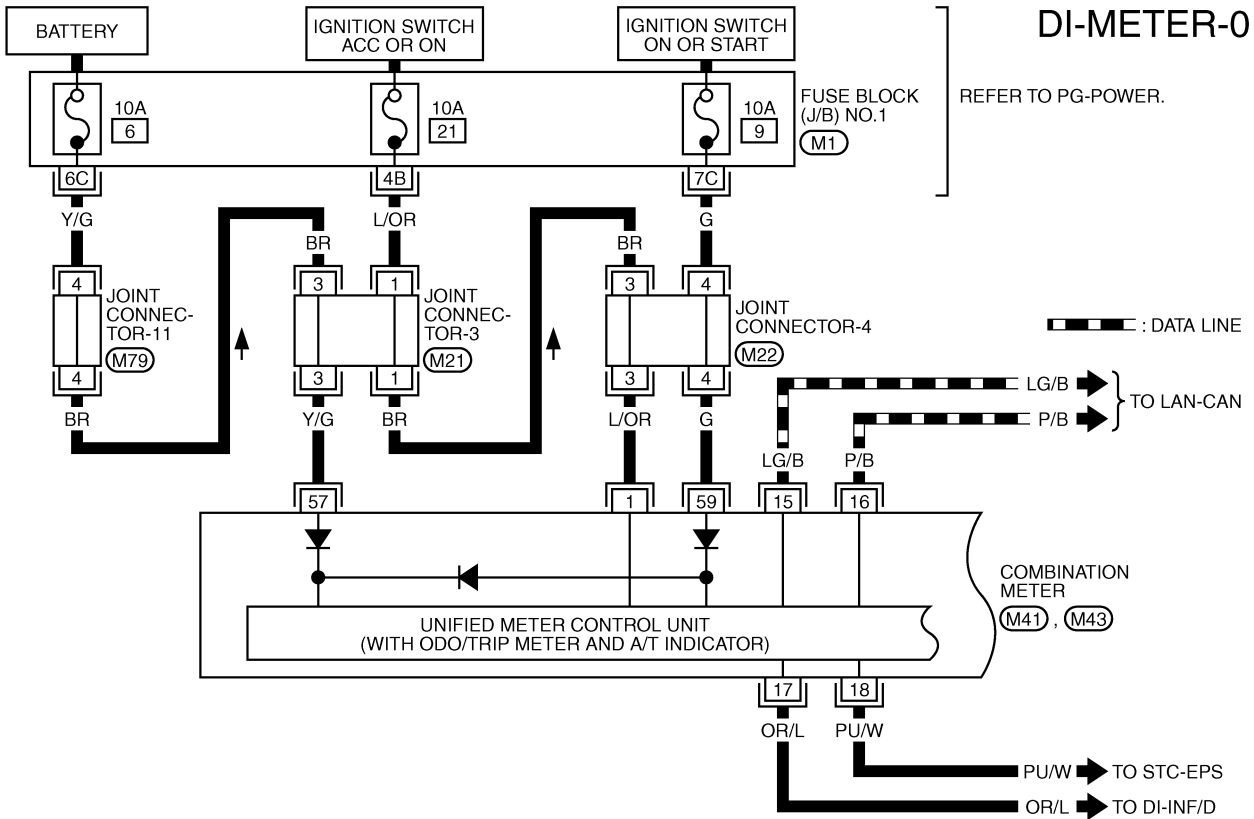
A
B
C
D
E
F
G
H
I
J
DI
L
M

COMBINATION METERS

EKS00184

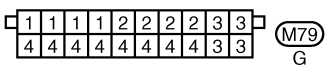
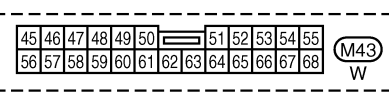
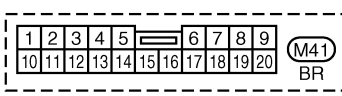
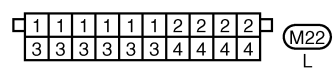
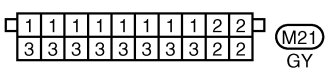
Wiring Diagram — METER —

DI-METER-01



REFER TO PG-POWER.

— — — — — : DATA LINE

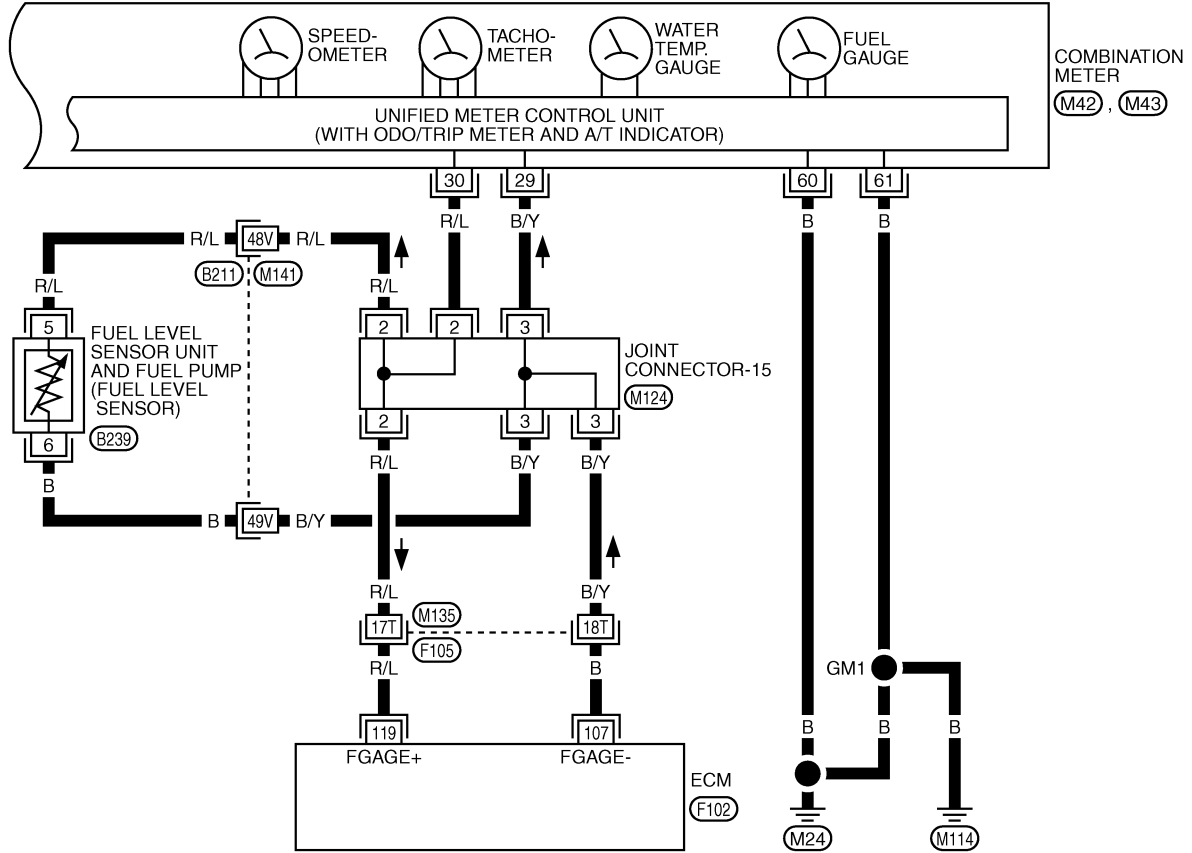


REFER TO THE FOLLOWING.
(M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWM0060E

COMBINATION METERS

DI-METER-02



21	22	23	24	25	26	27	28	29	30	31	M42	45	46	47	48	49	50	51	52	53	54	55	M43				
32	33	34	35	36	37	38	39	40	41	42	43	44	BR	56	57	58	59	60	61	62	63	64	65	66	67	68	W

1	1	1	2	2	2	3	3	3	3	M124	3	2	1	B	3	2	1	B239	6	5	4	W
4	4	4	4	4	4	5	5	5	5													

REFER TO THE FOLLOWING.

(F105), (B211) -SUPER MULTIPLE JUNCTION (SMJ)

(F102) -ELECTRICAL UNITS

A
B
C
D
E
F
G
H
I
J
DI
L
M

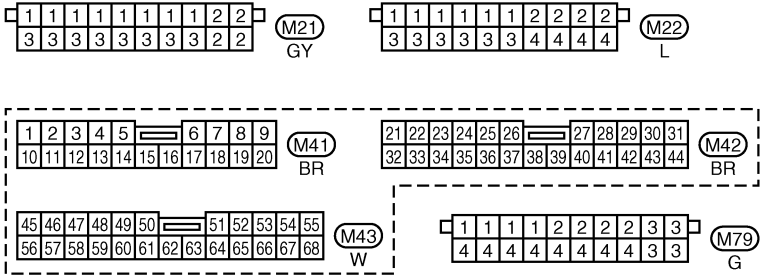
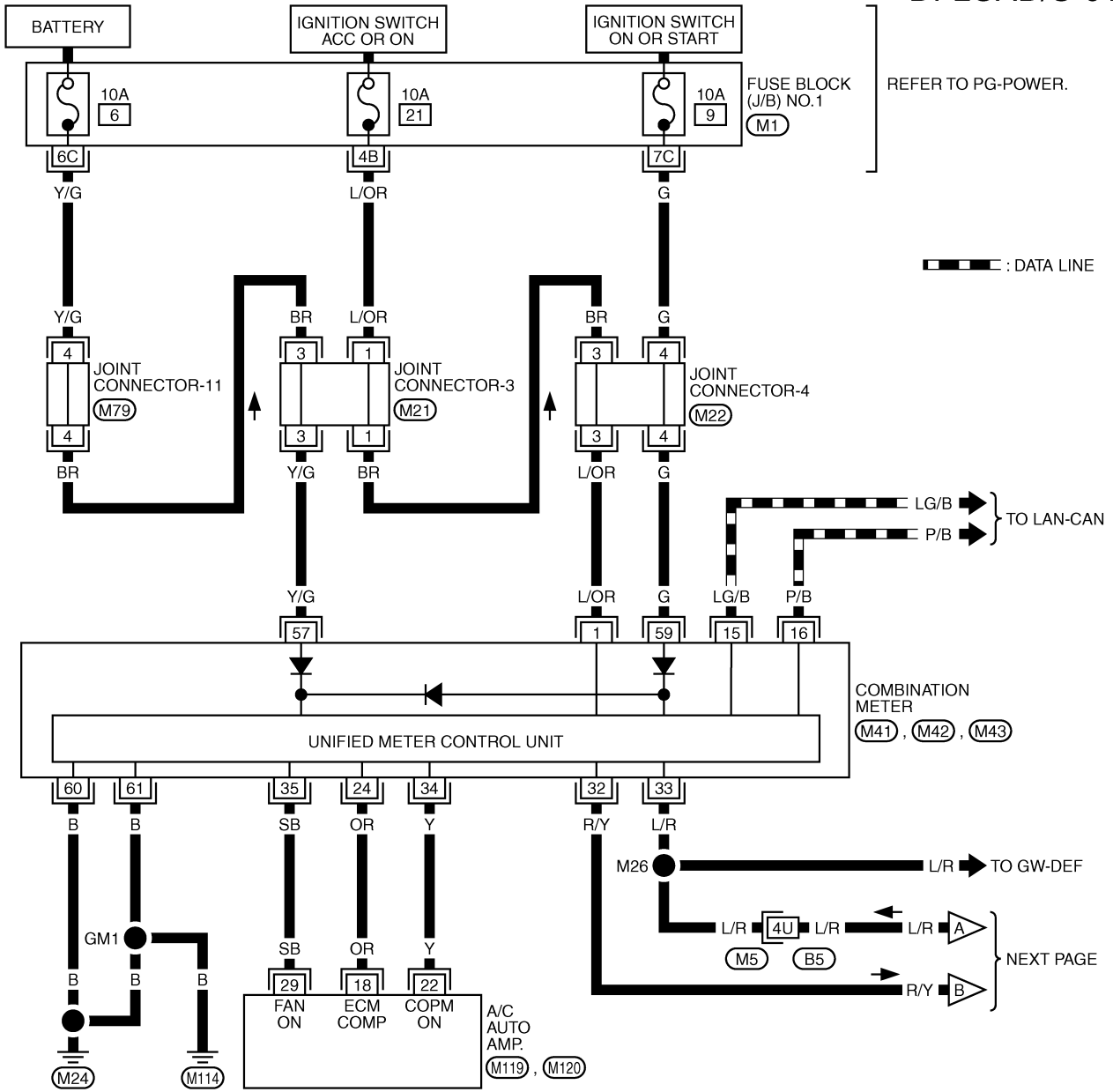
TKWM0061E

COMBINATION METERS

EKS00185

Wiring Diagram — LOAD/S —

DI-LOAD/S-01



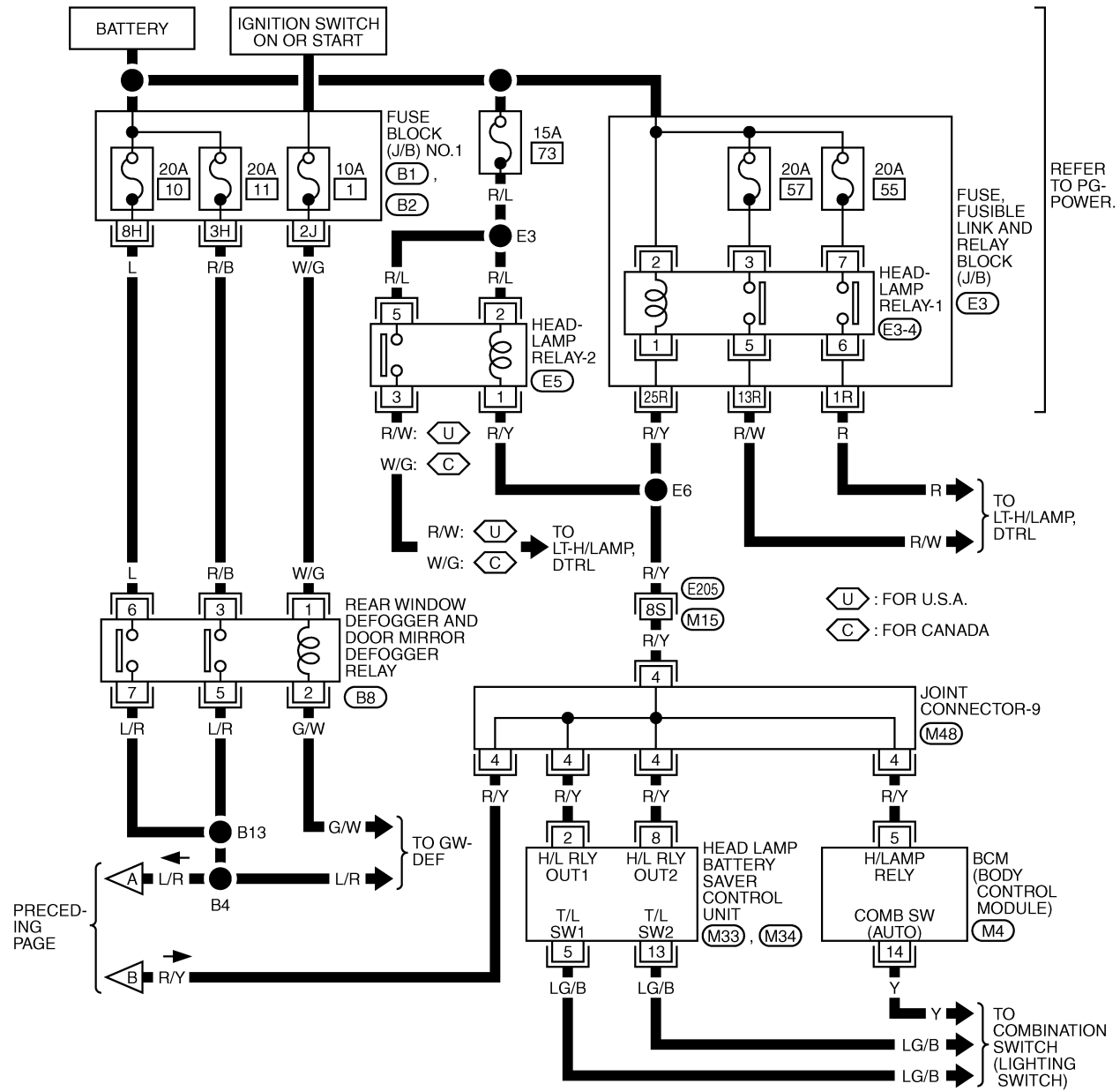
REFER TO THE FOLLOWING.

- (M5) - SUPER MULTIPLE JUNCTION (SMJ)
- (M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (M119), (M120) - ELECTRICAL UNITS

COMBINATION METERS

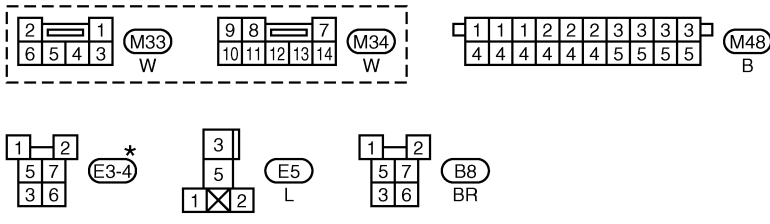
DI-LOAD/S-02

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



PRECED-
ING
PAGE

DI



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

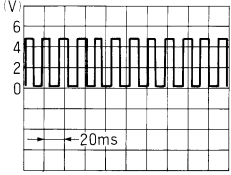
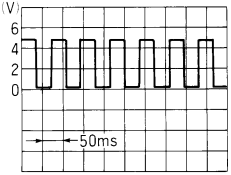
REFER TO THE FOLLOWING.
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)
 (B1), (B2) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
 (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)
 (M4) -ELECTRICAL UNITS

TKWM0181E

COMBINATION METERS

Terminals and Reference Value for Combination Meter

EKS000ZY

TERMI- NAL	WIRE COLOR	ITEM	CONDITION		Voltage (V)
			Ignition switch	Operation or condition	
1	L/OR	Ignition switch ACC or ON	ACC	—	Approx. 12V
15	LG/B	CAN L	—	—	—
16	P/B	CAN H	—	—	—
17	OR/L	Vehicle speed signal (8-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h(25MPH)]	 <p style="text-align: right; font-size: small;">ELF1084D</p>
18	PU/W	Vehicle speed signal (2-pulse)	ON	Speedometer operated [When vehicle speed is approx. 40 km/h(25MPH)]	 <p style="text-align: right; font-size: small;">ELF1080D</p>
24	OR	COMP F/B signal	ON	When the refrigerant pressure sensor disconnected	Approx. 0V
				—	Approx. 5V
29	B/Y	Fuel level sensor ground	ON	—	—
30	R/L	Fuel level sensor signal	ON	—	Refer to DI-25. "Electrical Components Inspection" .
32	R/Y	Head lamp ON signal	ON	Lighting switch OFF	Approx. 12V
				Lighting switch 1ST	Approx. 0V
33	L/R	Rear defogger ON signal	ON	Rear defogger switch ON	Approx. 12V
34	Y	A/C ON signal	ON	A/C switch ON	Approx. 0V
				A/C switch OFF	Approx. 12V
35	SB	Blower fan switch signal	ON	A/C switch ON	Approx. 0V
				A/C switch OFF	Approx. 12V
57	Y/G	Battery Power supply	OFF	—	Approx. 12V
59	G	Ignition switch ON or START	ON	—	Approx. 12V
60	B	Ground	ON	—	Approx. 0V
61	B	Ground	ON	—	Approx. 0V
62	B	Ground	ON	—	Approx. 0V

COMBINATION METERS

Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display

EKS000ZZ

SELF-DIAGNOSIS FUNCTION

- Odo/trip meter segment, A/T indicator segment and ICC system display can be checked in self-diagnosis mode.
- Meters/gauges can be checked in self-diagnoses mode.

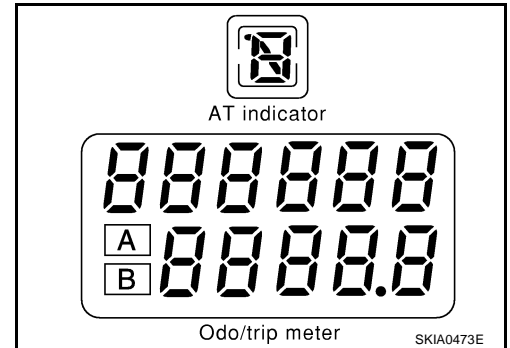
HOW TO ALTERNATE DIAGNOSIS MODE

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

NOTE:

If the diagnosis function is activated with the trip meter A displayed, the mileage on the tripmeter A is reset to 0.0 km (same as the tripmeter B display).

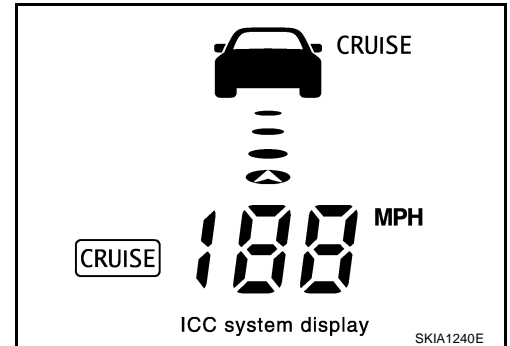
2. Turn the ignition switch OFF.
3. While pushing the odo/trip meter switch, turn the ignition switch ON again.
4. Check that the tripmeter displays "0000.0".



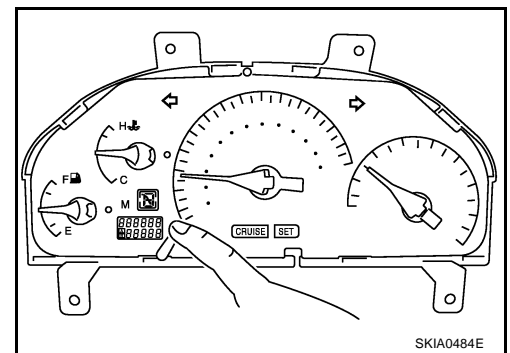
5. Push the odo/trip meter switch at least 3 times within 5 seconds.
6. All the segments on the odo/trip meter, A/T indicator and ICC system display illuminate, and simultaneously the low-fuel warning lamp indicator illuminate. At this time, the unified control meter is turned to diagnosis mode.

NOTE:

If any of the segments is not displayed, replace the odo/trip meter and A/T indicator with the speedometer assembly.



7. Push the odo/trip meter switch. Indication of each meter/gauge should be as shown in the right during pushing odo/trip meter switch if there is no malfunctioning. (at this time, the low-fuel warning lamp goes off).



Work Flow

1. CHECK WARNING LAMPS

1. Turn ignition switch ON.
2. Warning lamps should illuminate (seat belt warning or door warning etc.).

Do warning lamps illuminate?

YES >> GO TO 2

NO >> Power supply and ground check. Refer to [DI-19, "Power Supply and Ground Circuit Check"](#) .

COMBINATION METERS

2. CHECK INDICATOR LAMPS

Meter / gauges / A/T indicator should indicate.

Do indicators indicate?

YES >> GO TO 3

NO >> Fluorescent lamp check. Refer to [DI-20, "Fluorescent Lamp Check"](#) .

3. CHECK SELF-DIAGNOSIS MODE OPERATION

Perform self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#)

Can diagnosis mode be activated?

YES >> GO TO 4

NO >> Replace unified meter control unit (sub)

4. SEGMENTS CHECK

Check odo / trip meter segment, A/T indicator or ICC system display segment.

Do all segments illuminate?

YES >> GO TO 5

NO >> ● Check A/T indicator. Refer to [DI-24, "ICC System Display Does Not Illuminate"](#) .
 ● Check ICC system display. Refer to [DI-24, "ICC System Display Does Not Illuminate"](#) .
 ● Replace unified meter control unit (sub) and meter and gauge assembly.

5. CHECK SELF-DIAGNOSIS MODE

Check meter / gauge operation in self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#)

OK or NG

OK >> Symptom chart 2

NG >> Symptom chart 1

Trouble Diagnoses

SYMPTOM CHART 1 (MALFUNCTION INDICATED DIAGNOSIS MODE)

EKS00101

Symptom	Possible cause	Repair procedure
Speedometer or odo/trip meter indicate(s) malfunction in Diagnosis mode.	<ul style="list-style-type: none"> ● Meter and gauge assembly ● Unified meter control unit 	<ul style="list-style-type: none"> ● Replace unified meter control unit (main and sub) and meter and gauge assembly.
Multiple meter/gauge indicate malfunction in Diagnosis mode.	<ul style="list-style-type: none"> ● Harness connector condition ● Unified meter control unit 	<ul style="list-style-type: none"> ● Check connector conditions in combination meter. ● Replace unified meter control unit (sub).
One of speedometer/ tachometer/fuel gauge/ water temp.gauge is malfunctioning.	<ul style="list-style-type: none"> ● Meter/Gauge ● Unified meter control unit 	<ul style="list-style-type: none"> ● Replace meter and gauge assembly and Replace unified meter control unit (sub).

SYMPTOM CHART 2 (NO MALFUNCTION INDICATED IN DIAGNOSIS MODE)

Symptom	Possible case	Repair order
Speedometer and odo/trip meter are malfunctioning.	<ol style="list-style-type: none"> 1. Signal – Speedometer, odo/trip meter 2. Harness connector condition 3. Unified meter control unit 	<ol style="list-style-type: none"> 1. Check vehicle speed signal. INSPECTION/VEHICLE SPEED SIGNAL (Refer to DI-21, "Inspection/Vehicle Speed Signal") 2. Check connector conditions in combination meter. 3. Replace unified meter control unit (sub).

COMBINATION METERS

Symptom	Possible case	Repair order
Multiple meter/gauge are malfunctioning, (except for speedometer, odo/trip meter)	1. Harness connector condition 2. Unified meter control unit	1. Check connector conditions in combination meter. 2. Replace unified meter control unit.
One of tachometer/fuel gauge/ water temp.gauge is malfunctioning.	1. Signal - Tachometer - Fuel gauge - Water temp.gauge 2. Harness connector condition 3. Unified meter control unit	1. Check signal for malfunctioning meter/gauge - INSPECTION/ENGINE SPEED SIGNAL (Refer to DI-21, "Inspection/Vehicle Speed Signal") - INSPECTION/FUEL LEVEL SENSOR UNIT (Refer to DI-22, "Inspection/Fuel Level Sensor Unit") - INSPECTION/ENGINE COOLANT TEMPERATURE SENSOR.(Refer to DI-21, "Inspection/Water Temperature Gauge") 2. Check connector conditions in combination meter. 3. Replace unified meter control unit (sub)

Power Supply and Ground Circuit Check

EKS00102

1. CHECK FUSES.

- Check that any of the fuses in combination meter is blown.

Unit	Power source	Fuse No.
Combination meter	Battery	6
	Ignition switch ON or START	9
	Ignition switch ACC or ON	21

OK or NG

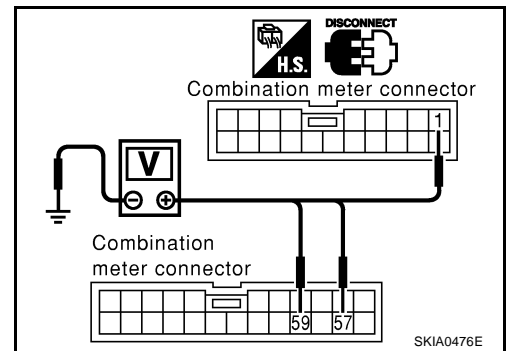
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse.Refer to [PG-2, "POWER SUPPLY ROUTING"](#) .

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect the combination meter connector.
2. Check voltage between combination meter harness connectors M41 terminal 1(L/OR), M43 terminals 57(Y/G), 59 (G) and ground.

Terminals		(-)	Ignition switch position		
Connector	Terminal (Wire color)		OFF	ACC	ON
M41	1(L/OR)	Ground	0V	Battery voltage	Battery voltage
M43	57(Y/G)		Battery voltage	Battery voltage	Battery voltage
M43	59(G)		0V	0V	Battery voltage



OK or NG

OK >> GO TO 3.

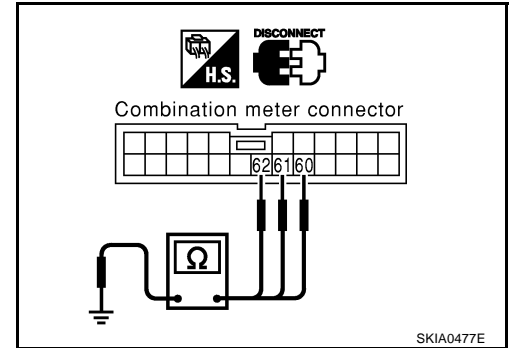
NG >> Check harness for open or short between combination meter and fuse.

COMBINATION METERS

3. GROUND CIRCUIT CHECK

Check continuity between combination meter harness connector M43 terminal 60(B), 61(B) and ground.

Terminals		(-)	Continuity
(+)	Terminal (Wire color)		
M43	60 (B)	Ground	Yes
	61 (B)		



OK or NG

- OK >> Inspection end.
- NG >> Check ground harness.

Fluorescent Lamp Check

1. CHECK FLEXIBLE CIRCUIT (FPC) CONNECTOR

1. Disconnect fluorescent lamp harness connector.
2. Check terminals for damage or loose connection. Then reconnect connectors.
3. Check FPC connector for damage or loose connection. Then reconnect connector.

OK or NG

- OK >> Replace unified meter control unit (main and sub) and fluorescent lamp.
- NG >> ● Repair or replace fluorescent harness connector.
 - Repair or replace FPC connector.

Inspection/Engine Speed Signal

1. VISUAL INSPECTION

At the engine start, does the pointer on the tachometer fluctuate?

Is the fluctuation acceptable?

- OK >> GO TO 2.
- NG >> GO TO 3.

2. ENGINE SPEED INSPECTION

Compare the values indicated in the engine speed and tachometer.

Does the engine speed correspond to the speed indicated?

- YES >> Tachometer is OK.
- NO >> Replace unified meter control unit (sub) and meter and gauges assembly.

3. ECM SYSTEM INSPECTION

Perform ECM self-diagnosis. Refer to [EC-118, "CONSULT-II Function"](#).

OK or NG

- YES >> GO TO 4.
- NO >> Check engine control system.

4. SELF-DIAGNOSIS INSPECTION

Perform the combination meter self-diagnosis mode, refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#).

OK or NG

- OK >> Combination meter is OK.
- NG >> Replace unified meter control unit (sub).

COMBINATION METERS

Inspection/Water Temperature Gauge

EKS00105

1. ECM SYSTEM INSPECTION

Perform the ECM self-diagnosis. Refer to [EC-118, "CONSULT-II Function"](#) in "Engine Control Module (EC)" section.

OK or NG

- OK >> GO TO 2.
- NG >> Check Engine control system.

2. SELF-DIAGNOSIS INSPECTION

Perform combination meter self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#).

OK or NG

- OK >> Combination meter is OK.
- NG >> Replace unified meter control unit (sub).

Inspection/Vehicle Speed Signal

EKS00106

1. VDC/TCS/ABS CONTROL UNIT SYSTEM INSPECTION

Perform VDC/TCS/ABS control unit self-diagnosis. Refer to [BRC-30, "Functions of CONSULT-II"](#).

OK or NG

- OK >> GO TO 2.
- NG >> Check VDC/TCS/ABS control unit system.

2. SELF-DIAGNOSIS INSPECTION

Perform combination meter self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#).

OK or NG

- OK >> GO TO 3.
- NG >> Replace unified meter control unit (sub).

3. CHECK VEHICLE SPEED OUTPUT SIGNAL

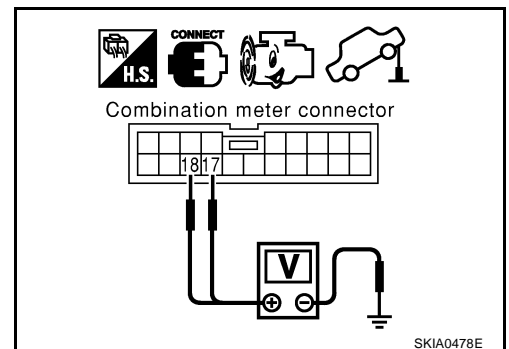
1. Jack-up the drive wheels.
2. Maintain the conditions below.
 - Vehicle speed is more than 40 km/h (25 MPH).
3. Check output signal between combination meter harness connector M41 terminal 17(OR/L), 18(PU/W) and ground. (Use "SIMPLE OSCILLOSCOPE" in "SUB MODE" with CONSULT-II.)

17-ground :Refer to [DI-16, "Terminals and Reference Value for Combination Meter"](#)

18-ground :Refer to [DI-16, "Terminals and Reference Value for Combination Meter"](#)

OK or NG

- OK >> inspection end.
- NG >> Replace combination meter.



COMBINATION METERS

EKS00107

Inspection/Fuel Level Sensor Unit

FUEL LEVEL SENSOR UNIT

The following symptoms do not indicate a malfunction.

- Depending on vehicle posture or driving circumstance, the fuel level in the tank varies, 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 posture or driving circumstance, the fuel level in the tank varies, and the warning lamp ON timing may be changed.

1. SELF-DIAGNOSIS INSPECTION

Perform the combination meter self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#).

OK or NG

- OK >> GO TO 2.
- NG >> Replace unified meter control unit (sub).

2. HARNESS CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Check combination meter, fuel level sensor unit and terminals (meter-side, module-side, lead-side, and harness-side) for poor connection and bend.

OK or NG

- OK >> GO TO 3.
- NG >> Repair or replace terminals or connectors.

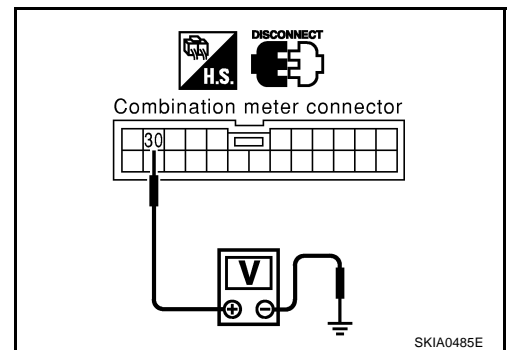
3. CHECK HARNESS CONNECTOR OUTPUT SIGNAL

1. Check voltage between combination meter harness connector M42 terminal 30(R/L) and ground.

Approx. 5V

OK or NG

- OK >> GO TO 4.
- NG >> Replace unified meter control unit (sub).



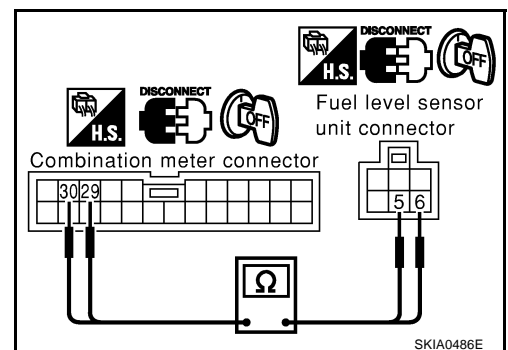
4. CHECK HARNESS FOR OPEN OR SHORT

1. Disconnect combination meter connector and fuel level sensor unit connector.
2. Check the following.
 - Continuity between combination meter harness connector M42 terminal 30(R/L) and fuel level sensor unit harness connector B239 terminal 5(R/L).
 - Check for continuity between combination meter harness connector M42 terminal 29(B/Y) and the fuel level sensor unit harness connector terminal 6(B).

Continuity should exist.

OK or NG

- OK >> GO TO 5.
- NG >> Repair or replace harnesses or connectors.



COMBINATION METERS

5. FUEL LEVELS SENSOR UNIT INSPECTION

Check the components. Refer to [DI-25, "FUEL LEVEL SENSOR UNIT CHECK"](#) .

OK or NG

- OK >> GO TO 6.
- NG >> Replace fuel level sensor unit.

6. CHECK INSTALLATION CONDITION.

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

OK or NG

- OK >> Replace unified meter control unit (sub).
- NG >> Install fuel level sensor unit properly.

The Fuel Gauge Pointer Fluctuates-Indicator Wrong Value-Or Varies.

EKS00108

1. CHECK THE FUEL GAUGE POINTER FOR FLUCTUATION.

Does the indication value fluctuate during driving or before/after stop?

Does the indication value vary?

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

The Fuel Gauge Does Not Move to F-position.

EKS00109

1. QUESTION 1

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

YES?

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

2. QUESTION 2

Was the vehicle fueled with the ignition switch ON?

YES?

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

3. QUESTION 3

Is the floor or the vehicle inclined?

YES?

- YES >> It may not be filled fully.
- NO >> GO TO 4.

4. QUESTION 4

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

YES?

- YES >> Check the components. Refer to [DI-22, "FUEL LEVEL SENSOR UNIT"](#) .
- NO >> The float arm may interfere or bind with any of the components in the fuel tank.

COMBINATION METERS

The Fuel Gauge Does Not Work.

EKS0010A

1. HARNESS CONNECTOR INSPECTION

1. Turn the ignition switch OFF.
2. Check combination meter, fuel level sensor unit, and terminals (meter-side, module-side, lead-side, and harness-side) for poor connection and bend.

OK or NG

- OK >> GO TO 2.
NG >> Replace fuel level sensor unit.

2. CHECK INSTALLATION CONDITION.

Check fuel level sensor unit installation (refer to [FL-3, "FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY"](#)), and check whether the float arm interferes or binds with any components inside the arm.

OK or NG

- OK >> Fuel level sensor unit is OK.
NG >> Check fuel level sensor unit. Refer to [DI-22, "FUEL LEVEL SENSOR UNIT"](#).

Low Fuel Warning Lamp Illuminate or Not Illuminate

EKS0010B

1. SELF-DIAGNOSIS INSPECTION

Perform combination meter self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#).

OK or NG

- OK >> Check fuel level sensor unit. Refer to [DI-22, "FUEL LEVEL SENSOR UNIT"](#).
NG >> Replace unified meter control unit (sub).

ICC System Display Does Not Illuminate

EKS003KU

1. ICC SYSTEM DISPLAY CHECK

Does all of ICC system display illuminate?

OK or NG

- All of display does not illuminate >> GO TO 2.
Partially does not illuminate >> GO TO 2.
Segment is missing >> GO TO 3.

2. ICC SYSTEM INSPECTION

Perform ICC unit self-diagnosis. Refer to [ACS-65, "SELF-DIAGNOSIS BY ICC SYSTEM DISPLAY WILL NOT RUN"](#).

Is self-diagnosis result OK?

OK or NG

- OK >> GO TO 3.
NG >> Check ICC system trouble diagnosis. Refer to [ACS-65, "SELF-DIAGNOSIS BY ICC SYSTEM DISPLAY WILL NOT RUN"](#).

3. COMBINATION METER INSPECTION

Perform combination meter self-diagnosis. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#).

Is self-diagnosis result OK?

OK or NG

- OK >> ICC system display is OK.
NG >> Replace unified meter control unit (sub) and ICC system display.

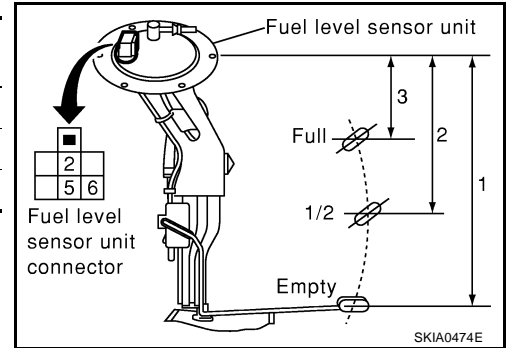
COMBINATION METERS

Electrical Components Inspection FUEL LEVEL SENSOR UNIT CHECK

EKS0010E

- For removal, Refer to [FL-3, "FUEL LEVEL SENSOR UNIT, FUEL FILTER AND FUEL PUMP ASSEMBLY"](#)
- Check the resistance between terminals 5 and 6.

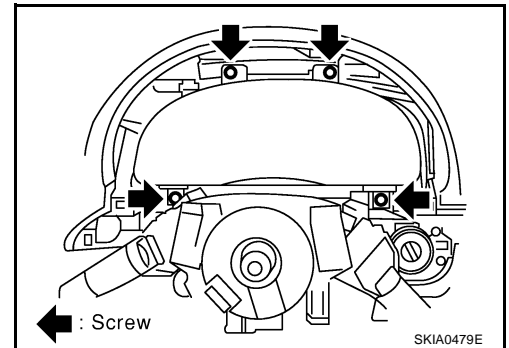
Measurement terminal		Float position mm (in)		Resistance value (Ω)
5	6	Full (1)	Approx. 82.7 (3.3)	Approx. 4.5 – 5.5
		1/2 (2)	Approx. 200.3 (7.9)	Approx. 31.5 – 35.5
		Empty(3)	Approx. 325.0 (12.8)	Approx. 80.0 – 83.0



Removal and Installation for Combination Meter

EKS0010F

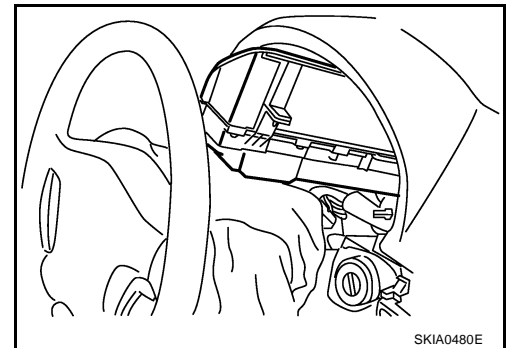
1. Remove the cluster lid A. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
2. Remove the screws (4), and disconnect connectors.



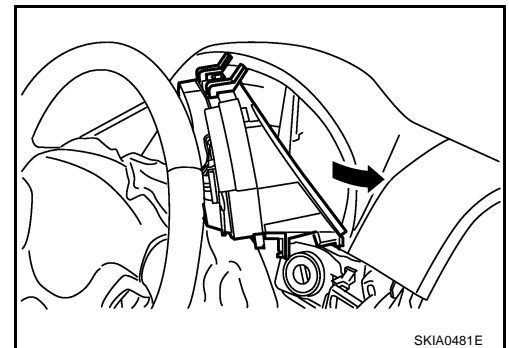
3. Rotating the combination meter so that the left-side is in front, turn it until the meter face comes to the top.

CAUTION:

To prevent it from being damaged by interference with the meter bracket, protect the meter with waste rags.



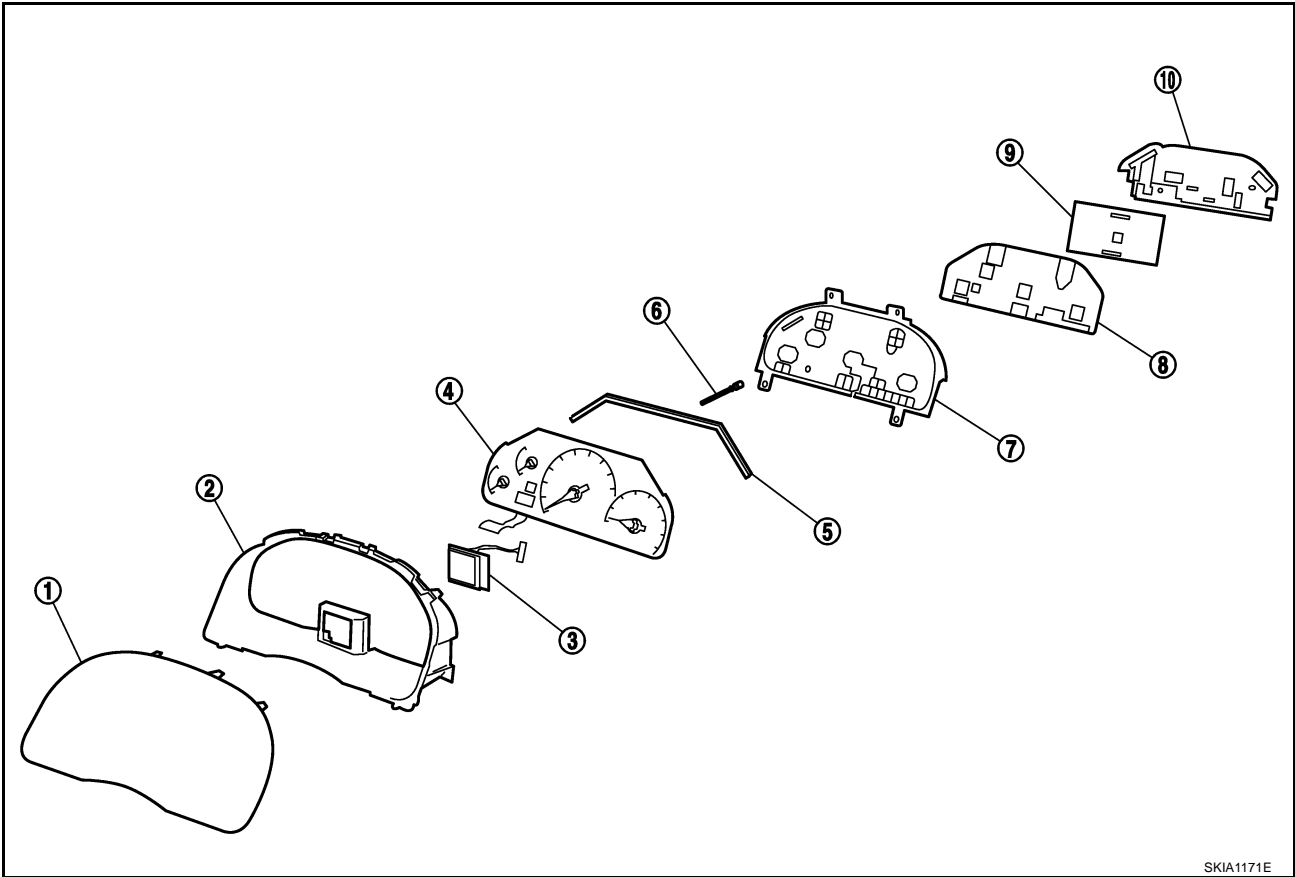
4. While pulling combination meter forward, pull it out to the right (combination meter back-side shall be in front).



COMBINATION METERS

Disassembly and Assembly for Combination Meter

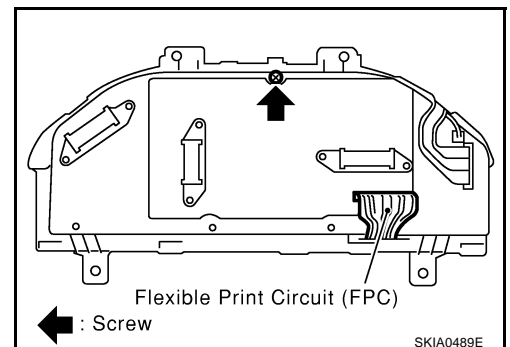
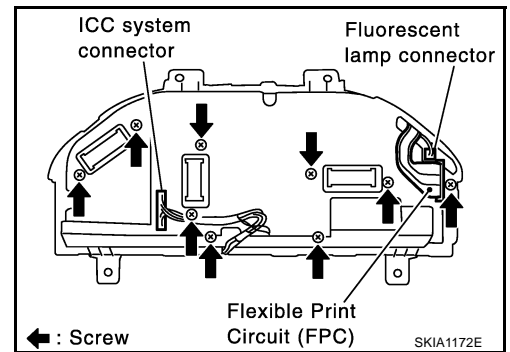
EKS0010G



SKIA1171E

- | | | |
|-----------------------------|--------------------------------------|-------------------------------------|
| 1. Front cover | 5. Fluorescent lamp | 9. Unified meter control unit (sub) |
| 2. Upper housing | 6. Odo/trip meter switch shaft | 10. Meter cover |
| 3. ICC system display | 7. Lower housing | |
| 4. Meter and gauge assembly | 8. Unified meter control unit (main) | |

1. Disconnect ICC system display connector.
2. Remove the screws (9) to separate meter cover.
3. Disconnect the connectors for fluorescent lamp connector and flexible printed circuit for fluorescent lamp.
4. Disconnect the flexible printed circuit for odo/trip meter.
5. Remove the screw (1) to separate unified meter control unit (main and sub).
6. Disengage the tabs (8) to separate upper housing.
7. Remove the screw (1) to separate meter and gauge assembly.
8. Disengage the tabs (7) to separate front cover.
9. Separate unified meter control unit (main) from unified meter control unit (sub).



WARNING LAMPS

PFP:24814

System Description OUTLINE

EKS0010H

Power is supplied at all times

- through 10A fuse [No.6, located in the fuse block (J/B) NO.1]
- to combination meter terminal 57.

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

- through 10A fuse [No.9, located in the fuse block (J/B) NO.1]
- to combination meter terminal 59.

Ground is supplied

- to combination meter terminal 60
- through body grounds M24 and M114, and
- to seat belt buckle switch terminal 15A
- through body grounds B17 and B57, and
- to brake fluid level switch terminal 1 and 2
- through body grounds E24 and E44, and
- to washer level switch terminal 2
- through body grounds E42 and E62.

AIR BAG WARNING LAMP

During probe out or when an air bag malfunction occurs, the ground path is interrupted

- from the air bag diagnosis sensor unit terminal 15
- to combination meter terminal 56.

Ground is supplied

- through combination meter terminal 61

When power and ground are supplied, the air bag warning lamp (LEDs) illuminates.

For further information, refer to [SRS-8, "TROUBLE DIAGNOSIS"](#).

DOOR WARNING LAMP

Door warning lamp is controlled by BCM.

When one of the doors is opened, ground is supplied to the BCM terminals 33,37,142 and 143.

And then ground is supplied

- to combination meter terminal 49
- from BCM terminal 111

When power and ground are supplied, the door warning lamp illuminates.

ACTIVE DAMPER INDICATOR LAMP (SPORT)

When an active damper suspension system malfunction occurs, or "SPORT" mode is selected by active damper suspension select switch, ground is supplied

- to combination meter terminal 53
- from active damper suspension control unit terminal 16

When power and ground are supplied, the active damper indicator lamp (SPORT) blinks or illuminates.

For further information.

LOW OIL PRESSURE WARNING LAMP

Low oil pressure causes oil pressure switch terminal 1 to provide ground to combination meter terminal 12.

When power and ground are supplied, the low oil pressure warning lamp illuminates.

CHARGE WARNING LAMP

During prove out or when a alternator malfunction occurs, ground is supplied

- to combination meter terminal 13
- from alternator terminal 3

When power and ground are supplied, the charge warning lamp and brake lamp illuminate.

A

B

C

D

E

F

G

H

I

J

DI

L

M

WARNING LAMPS

LOW WASHER LEVEL WARNING LAMP

When the washer fluid level is low, ground is supplied

- to combination meter terminal 26
- from washer fluid level switch terminal 1.

When power and ground are supplied, the signal is sent

- from combination meter terminal 6and7
- through AV and NAVI control unit terminal 35 and 34 or AV control unit terminal 35 and 34
- to display

Then warning lamp message appears display.

A/T OIL TEMP WARNING LAMP

When an A/T system malfunction occurs, signal sent

- to combination meter terminals 15 and 16
- from TCM (transmission control module) with CAN communication line

When signal is received, the AT oil temp warning lamp blinks or illuminates.

For further information, refer to [AT-187, "A/T CHECK Indicator Lamp does not come on"](#)

LOW FUEL LEVEL WARNING LAMP

The amount of fuel in the fuel tank is determined by the fuel level sensor in the fuel tank. A signal is sent

- from fuel level sensor unit terminal 5
- to combination meter terminal 30
- through fuel level sensor unit terminal 6
- to combination meter terminal 29

The fuel level sensor will illuminate the low fuel level warning lamp when the fuel level is low.

When power and ground are supplied, the low fuel level warning lamp illuminates.

ABS WARNING LAMP

When an ABS malfunction occurs, ground is supplied

- to combination meter terminal 52
- from VDC/TCS/ABS control unit terminal 30

When power and ground is supplied, the ABS warning lamp illuminates.

For further information, refer to [BRC-71, "Symptom 5: Pedal Vibration and Noise"](#) .

VDC OFF WARNING LAMP

When VDC off switch is in OFF position, or an VDC/TCS/ABS malfunction occurs, ground is supplied

- to combination meter terminal 67
- from VDC/TCS/ABS control unit terminal 31

When power and ground are supplied, the VDC off warning lamp illuminates.

For further information, refer to [BRC-72, "Symptom 6: VDC OFF Indicator Lamp Does Not Illuminate"](#)

SLIP WARNING LAMP

When VDC is in operation, or a VDC malfunction occurs, ground is supplied

- to combination meter terminal 66
- from VDC/TCS/ABS control unit terminal 83

When power and ground are supplied, the slip warning lamp illuminates.

For further information, refer to [BRC-73, "Symptom 7: SLIP Indicator Lamp Does Not Illuminate"](#)

SEAT BELT WARNING LAMP

When the driver's seat belt is unfastened, ground is supplied

- to combination meter terminal 50
- from seat belt buckle switch terminal 41

When power and ground are supplied, the seat belt warning lamp illuminates.

WARNING LAMPS

BRAKE WARNING LAMP

When the parking brake is applied, or the brake fluid level is low, ground is supplied

- to combination meter terminal 68
- from parking brake switch terminal 1, or
- to combination meter terminal 51
- brake fluid level switch terminal 4

When power and ground are supplied, the brake warning lamp illuminates.

MALFUNCTION INDICATOR LAMP

During prove out or when an engine control malfunction occurs, ground is supplied

- to combination meter terminal 65
- from ECM terminal 35

When power and ground are supplied, the malfunction indicator lamp illuminates.

For further information, refer to [EC-412, "DTC P0650 MIL \(CIRCUIT\)"](#).

LOW TIRE PRESSURE WARNING LAMP

When a low tire pressure warning control malfunction occurs, ground is supplied

- to combination meter terminal 54
- from low tire pressure warning control unit terminal 3

When power and ground are supplied, the tire pressure warning lamp illuminates.

For further information, refer to [WT-20, "TROUBLE DIAGNOSIS FOR SYMPTOMS"](#)

ASCD WARNING LAMP

When an ASCD malfunction occurs, ground is supplied

- to combination meter terminal 64
- from ASCD control unit terminal 18

When power and ground are supplied, the ASCD warning lamp illuminates.

ICC SYSTEM WARNING LAMP

When an ICC system malfunction occurs, ground is supplied

- to combination meter terminal 21
- from ICC unit terminal 25.

When power and ground are supplied, the ICC system warning lamp illuminates.

WARNING MESSAGE ON DISPLAY

When a warning lamp illuminates or flushes, signal is sent

- from combination meter terminals 6 and 7
- through AV and NAVI control unit terminal 35 and 34 or AV control unit terminal 35 and 34.
- to display.

Then warning message appears on display.

A

B

C

D

E

F

G

H

I

J

DI

L

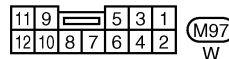
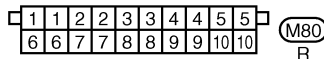
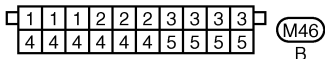
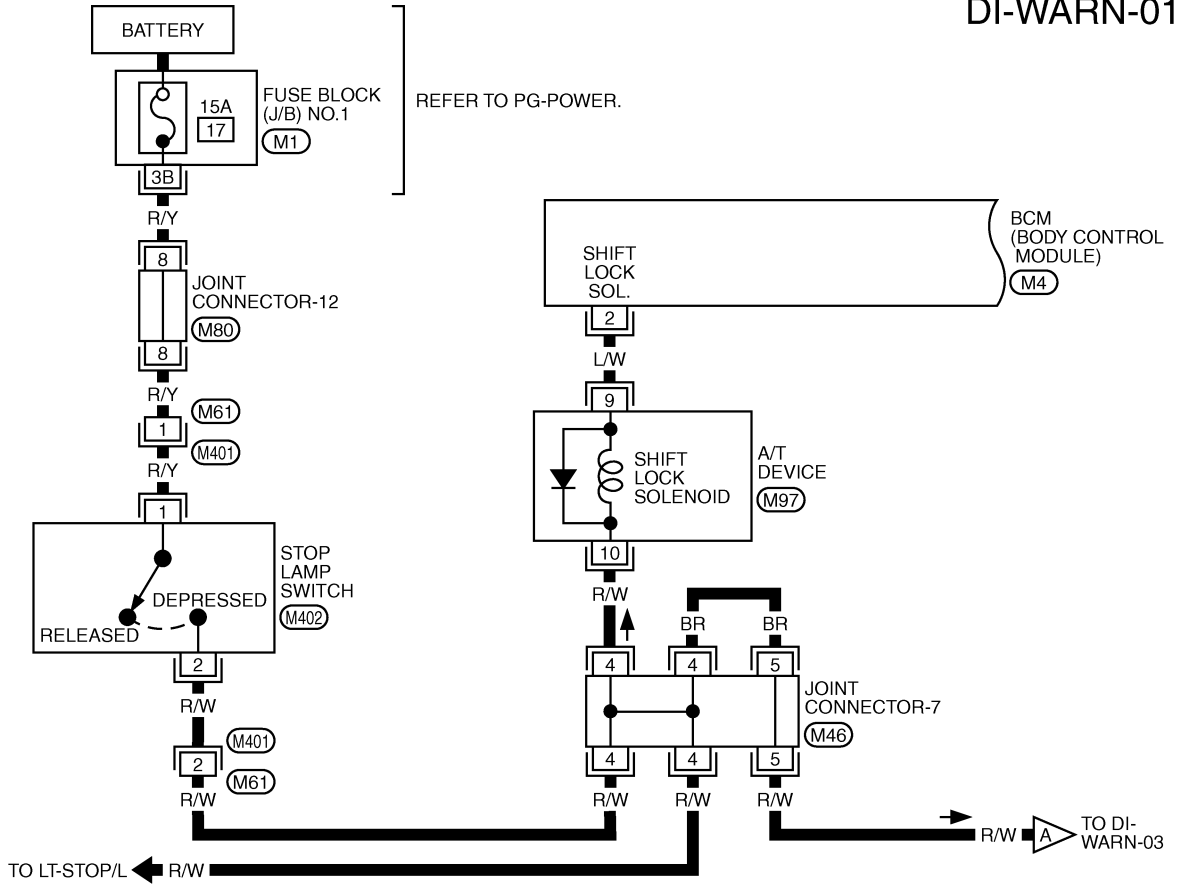
M

WARNING LAMPS

Wiring Diagram — WARN —

EKS0019L

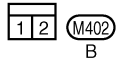
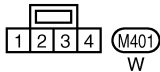
DI-WARN-01



REFER TO THE FOLLOWING.

(M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(M4) - ELECTRICAL UNITS



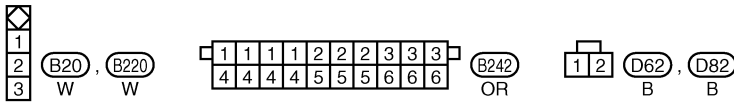
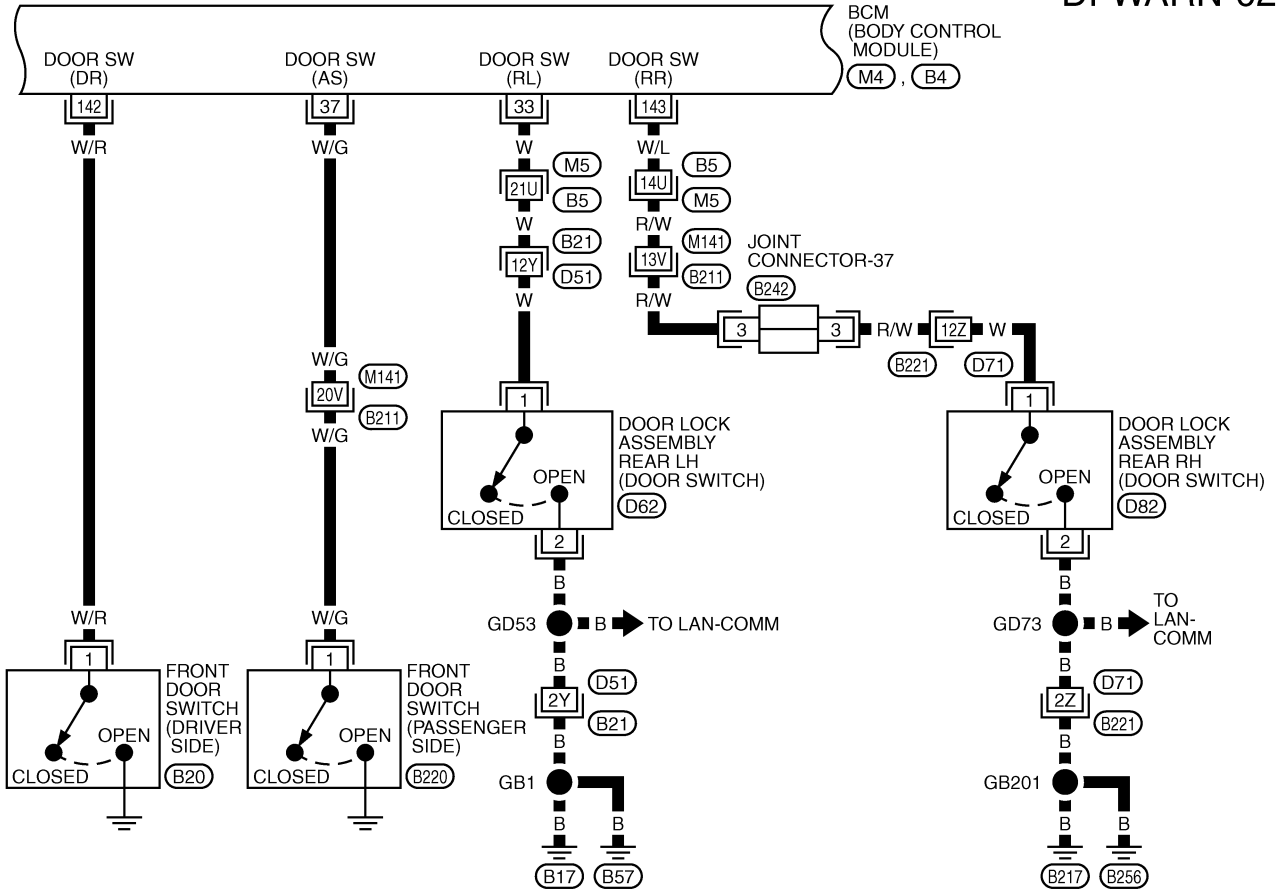
A
B
C
D
E
F
G
H
I
J
L
M

DI

TKWM0063E

WARNING LAMPS

DI-WARN-02



REFER TO THE FOLLOWING.

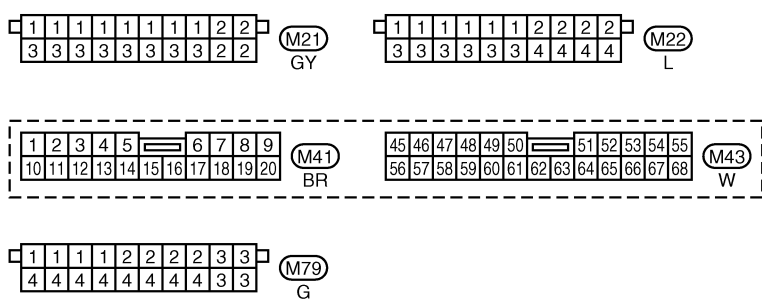
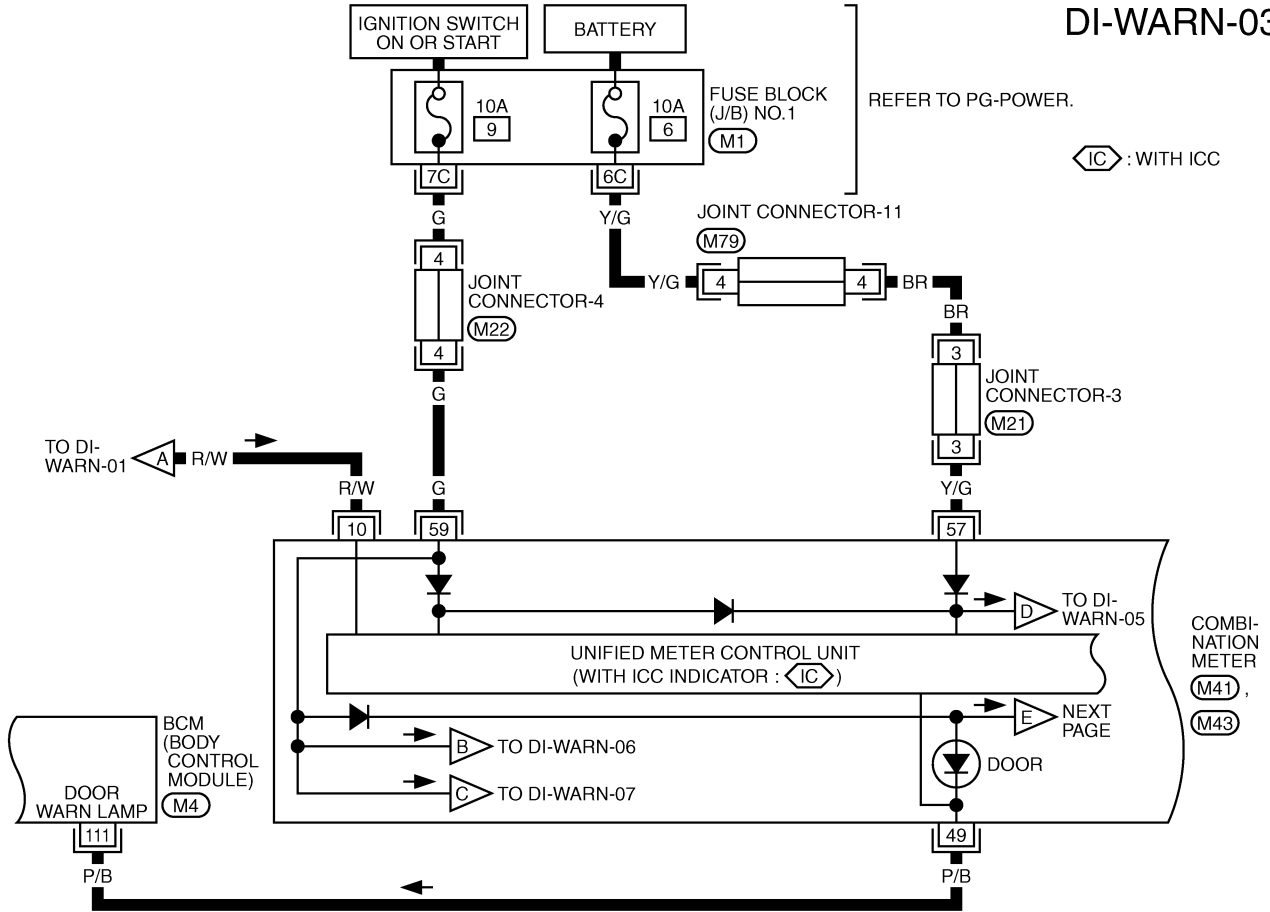
(M5), (B21), (B211), (B221)
-SUPER MULTIPLE JUNCTION (SMJ)

(M4), (B4) -ELECTRICAL UNITS

TKWM0182E

WARNING LAMPS

DI-WARN-03



REFER TO THE FOLLOWING.
 (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
 (M4) -ELECTRICAL UNITS

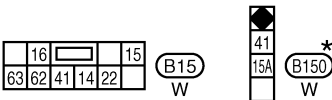
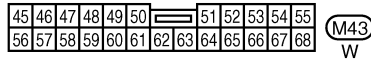
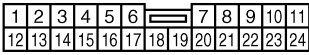
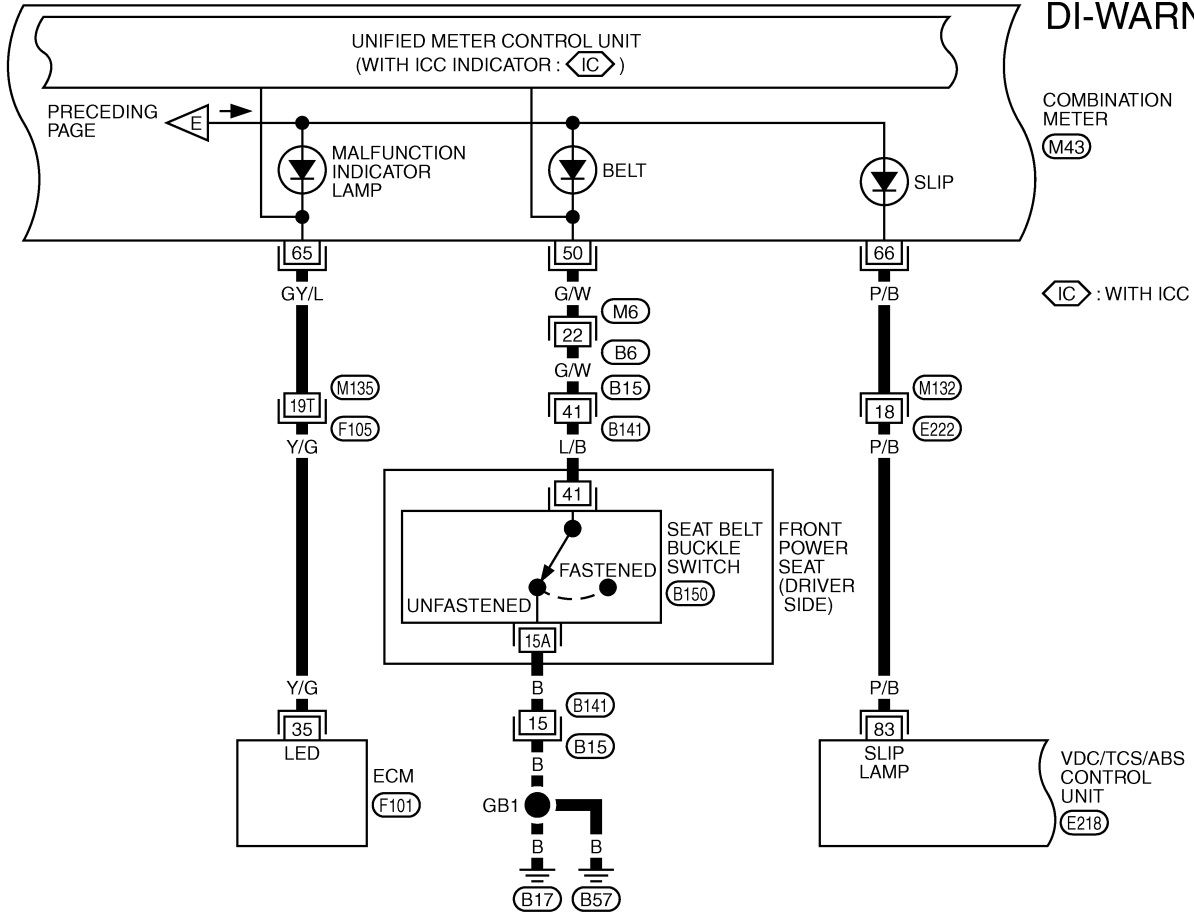
A
B
C
D
E
F
G
H
I
J
L
M

DI

TKWM0208E

WARNING LAMPS

DI-WARN-04



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

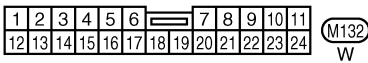
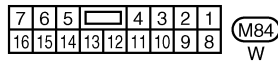
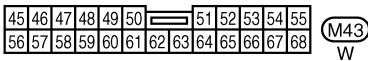
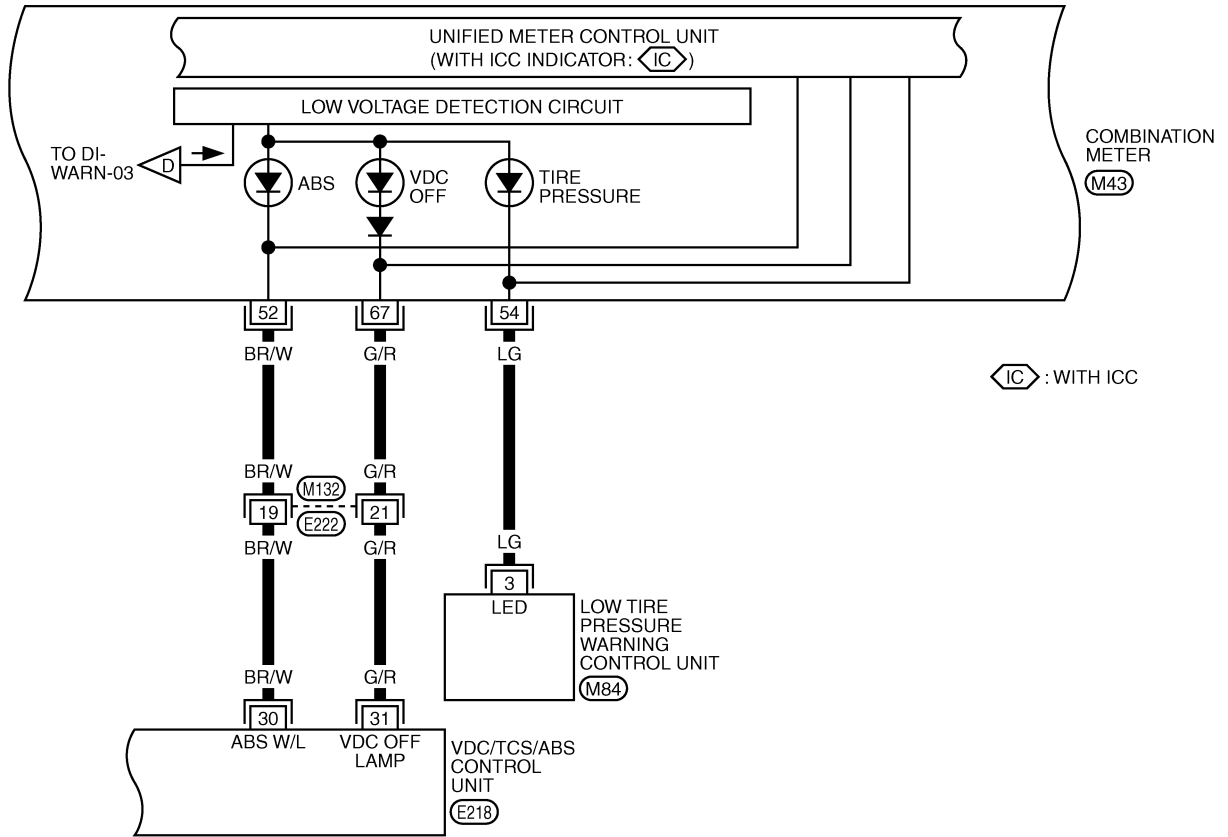
REFER TO THE FOLLOWING.

- (F105) -SUPER MULTIPLE JUNCTION (SMJ)
- (E218), (F101) -ELECTRICAL UNITS

TKWM0209E

WARNING LAMPS

DI-WARN-05



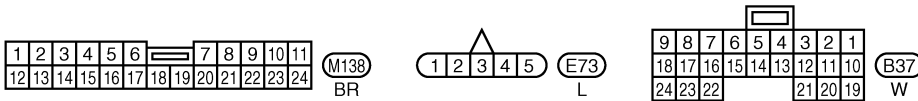
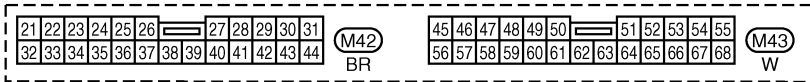
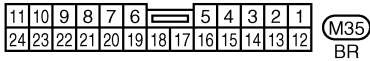
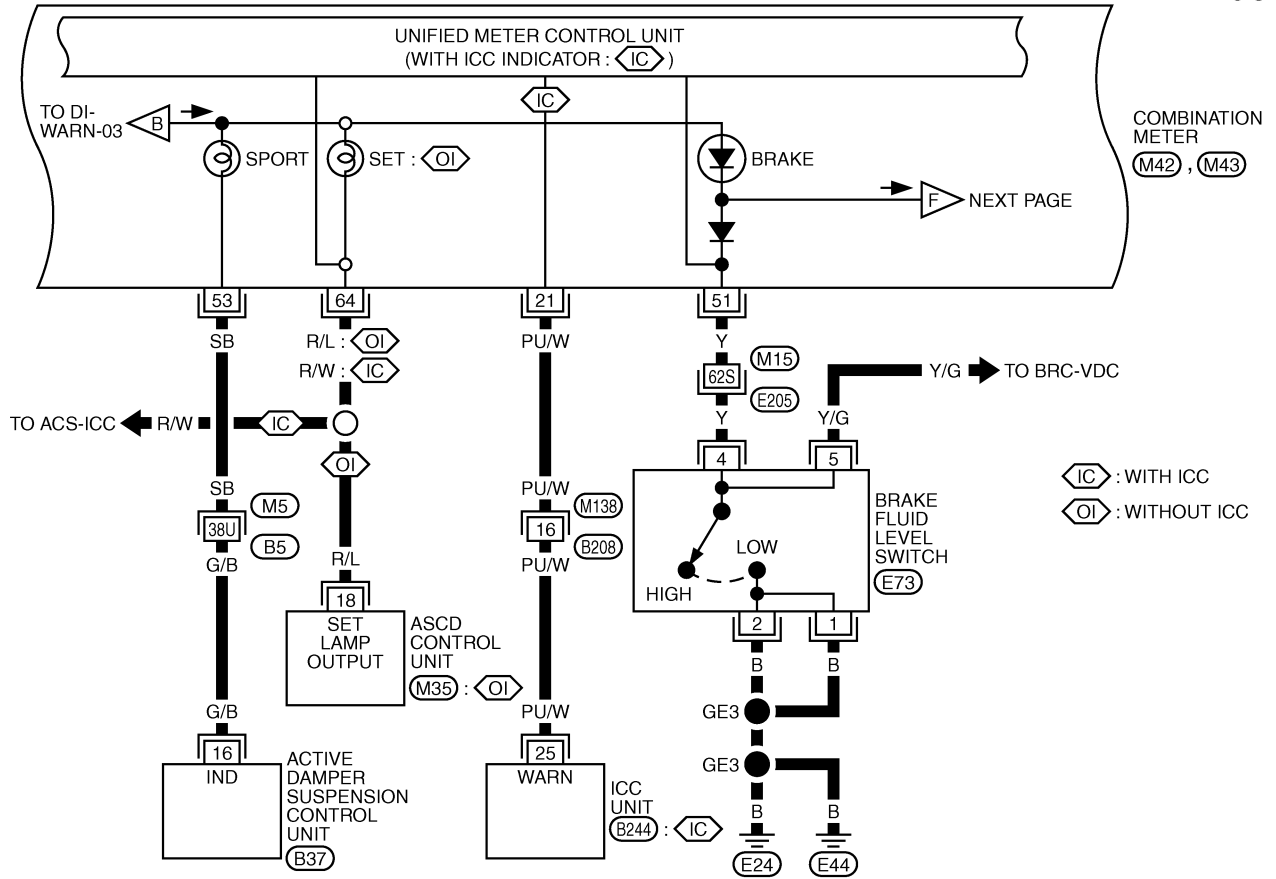
REFER TO THE FOLLOWING.
(E218) -ELECTRICAL UNITS

A
B
C
D
E
F
G
H
I
J
L
M

DI

WARNING LAMPS

DI-WARN-06



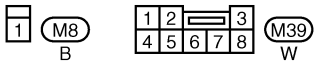
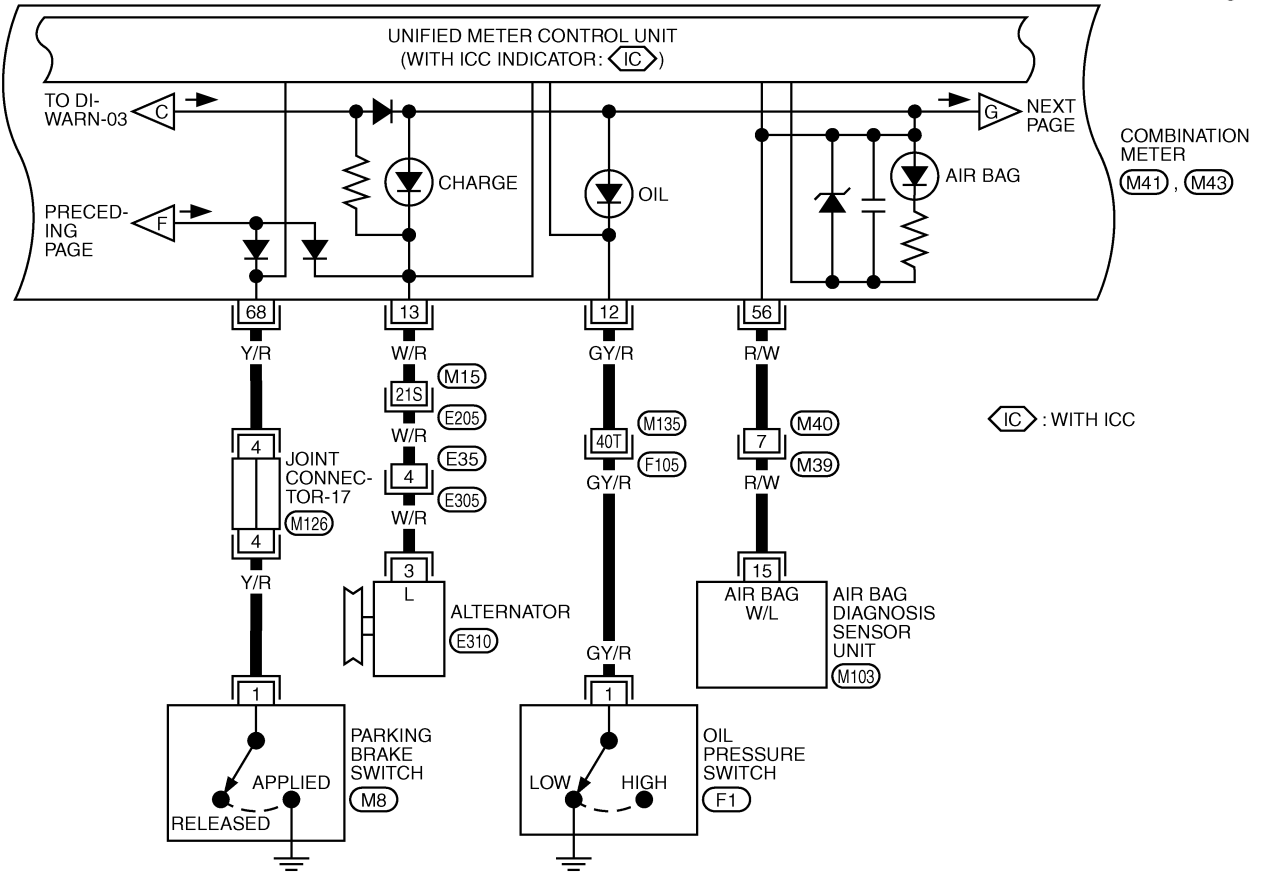
REFER TO THE FOLLOWING.

- (M5, E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (B244) -ELECTRICAL UNITS

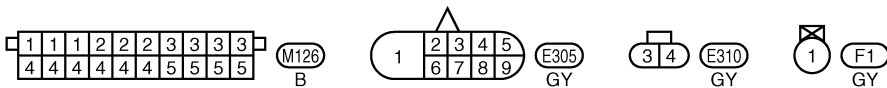
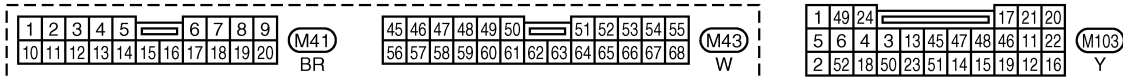
TKWM0211E

WARNING LAMPS

DI-WARN-07



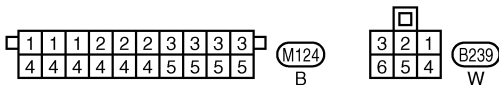
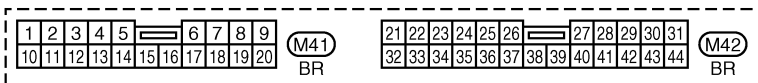
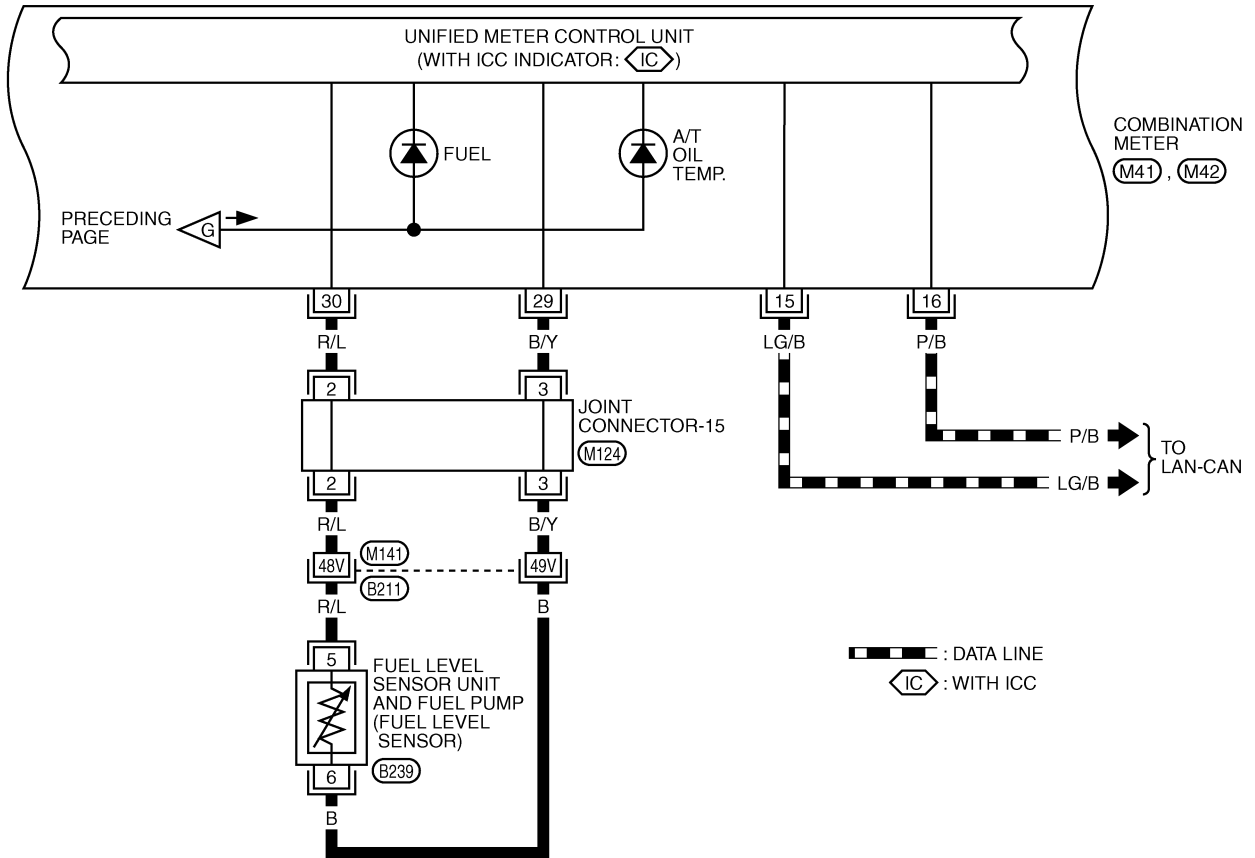
REFER TO THE FOLLOWING.
(E205), (F105) -SUPER MULTIPLE JUNCTION (SMJ)



TKWM0212E

WARNING LAMPS

DI-WARN-08

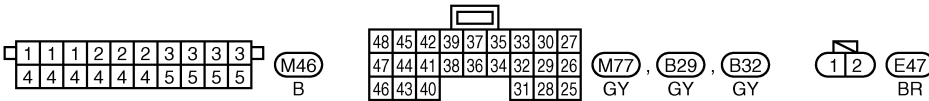
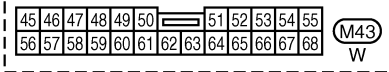
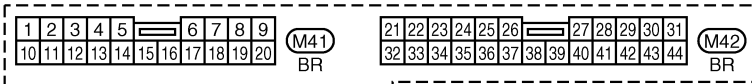
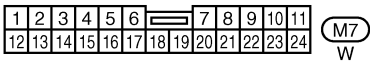
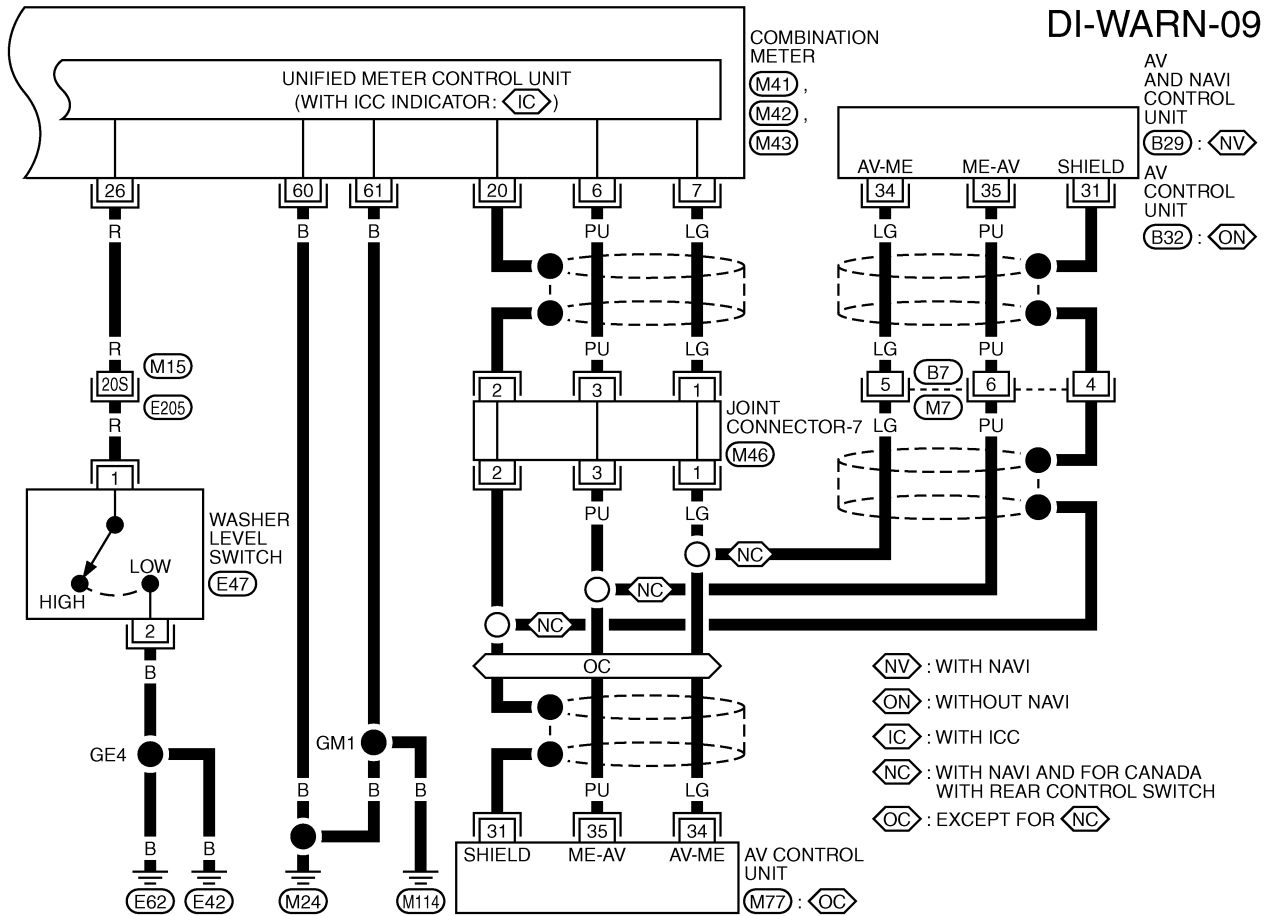


REFER TO THE FOLLOWING.
 (B211) -SUPER MULTIPLE JUNCTION (SMJ)

TKWM0213E

WARNING LAMPS

DI-WARN-09



REFER TO THE FOLLOWING.
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)

TKWM0214E

EKS0010L

Terminals and Reference Value for BCM

TERMI-NAL	WIRE COLOR	ITEM	CONDITION		DATA (DC)
			IGNITION SWITCH	OPERATION	
33	W	Rear door switch (LH)	OFF	Rear door switch LH	ON (open) Approx. 0
				OFF (closed) Approx. 12	
37	W/G	Passenger door switch	OFF	Passenger door switch	ON (open) Approx. 0
				OFF (closed) Approx. 12	
111	P/B	Door warning lamp	OFF	Door switch warning	ON (open) Approx. 0
				OFF (closed) Approx. 12	

WARNING LAMPS

TERMI- NAL	WIRE COLOR	ITEM	CONDITION		DATA (DC)
			IGNITION SWITCH	OPERATION	
142	W/R	Driver door switch	OFF	Driver door switch	ON (open) Approx. 0
					OFF (closed) Approx. 12
143	W/L	Rear door switch (RH)	OFF	Rear door switch RH	ON (open) Approx. 0
					OFF (closed) Approx. 12

Work Flow

EKS001R1

1. Check the trouble symptom and customer's requests.
2. Understand the outline of system. Refer to [DI-27, "System Description"](#) .
3. Perform the preliminary check. Refer to [DI-58, "Preliminary Check"](#)
4. Referring to Trouble diagnosis chart, repair or replace the cause of the incident. Refer to [DI-43, "Trouble Diagnosis for Door Warning Lamp"](#)
5. Does warning chime system operate normally? If it operates normally, GO TO step 6. If not, GO TO step 4.
6. Inspection END.

Preliminary Check

EKS001A0

Perform preliminary check, refer to [DI-58, "Preliminary Check"](#)

CONSULT-II Function

EKS001R3

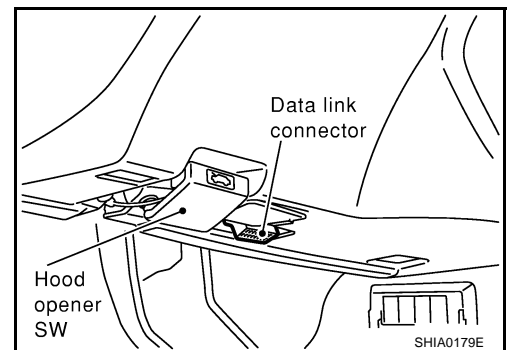
- CONSULT-II executes the following functions by combining data reception and command transmission via the communication line from BCM. IVMS communication inspection, work support (only function setting of seats and steering wheel), self-diagnosis, data monitor, and active test display.

DIAGNOSTIC ITEMS DESCRIPTION

IVMS diagnosis position	Diagnosis mode	Description
DOOR OPEN- WARN	Data monitor	The input data to the BCM control unit is displayed in real time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
BCM PART NUMBER		Displays BCM part No.

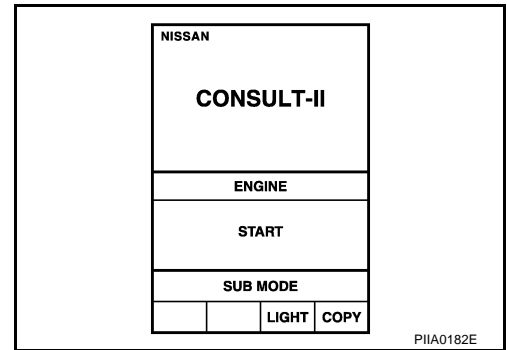
CONSULT-II BASIC OPERATION PROCEDURE

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



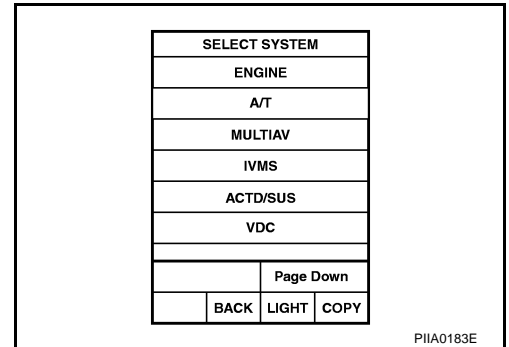
WARNING LAMPS

2. Touch "START".



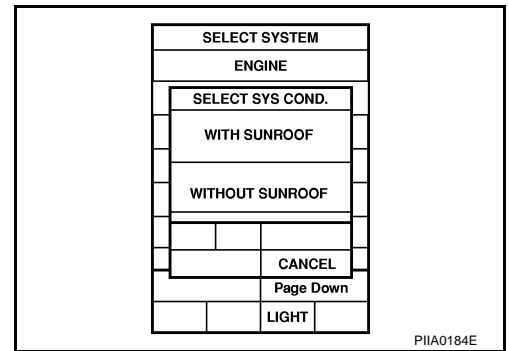
A
B
C
D

3. Touch "IVMS".



E
F
G

4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".



H
I
J

6. Select the desired part to be diagnosed on the "SELECT TEST ITEM" screen.

DATA MONITOR

Operation Procedure

1. Touch "DOOR OPEN WARNING" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch "MAINSIGNALS" or "SELECTIONFROMMENU" on "DATAMONITOR" screen.

MAIN SIGNALS	Monitors the main items.
SELECTION FROM MENU	Selects and monitors the items.

4. Touch "START".
5. If "SELECTION FROM MENU" is selected, touch the desired monitor item. If "MAIN SIGNALS" is selected, the main item required to control is monitored.
6. During monitoring, touching "COPY" can start recording the monitor item status.

DI

L
M

WARNING LAMPS

Data Monitor Item

Monitored item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.

ACTIVE TEST

Operation Procedure

1. Touch "DOOR OPEN WARNING" 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.

Active Test Item

Test item.	Malfunction detecting condition
DR OPN WARN LAMP	This test is able to check door warning lamp operation. Door warning lamp indicate when touch "ON" on CONSULT-II screen.

On Board Diagnosis

EKS001R4

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

- Front map lamps and step lamps (all seats) act as the indicators for the on board diagnosis.

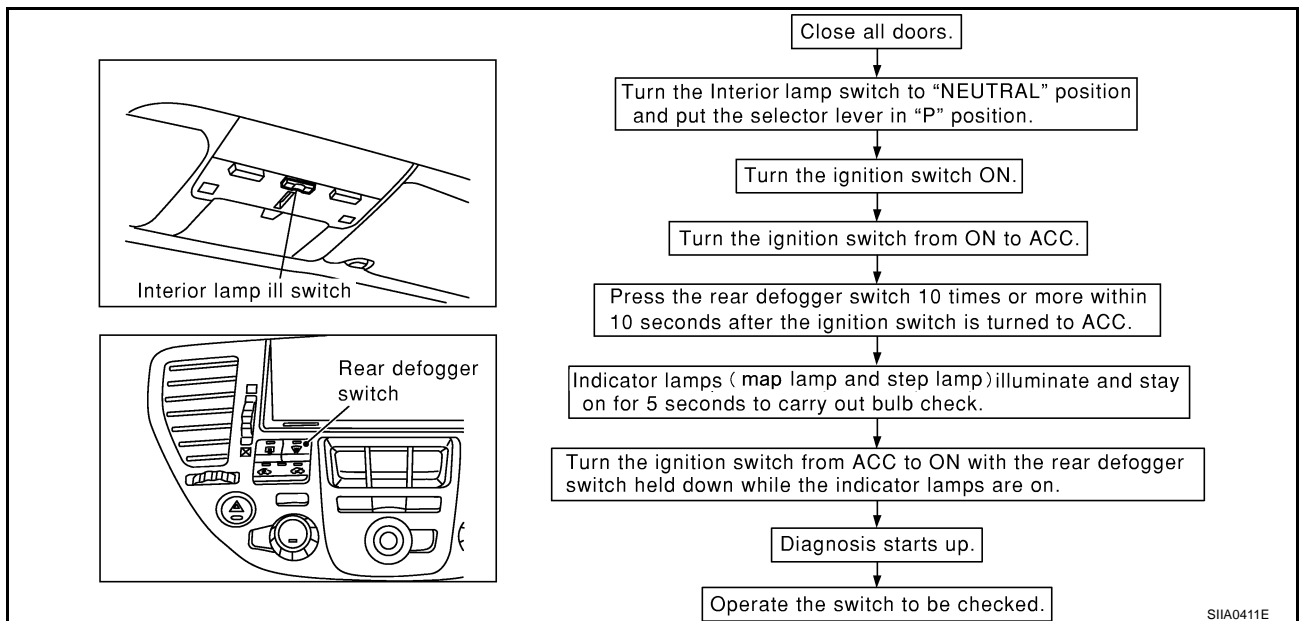
DIAGNOSIS ITEM

Diagnosis item	Description
Switch monitor	Monitoring conditions of switches connected to BCM.

SWITCH MONITOR

- Perform the diagnosis on the switch system to each control unit.

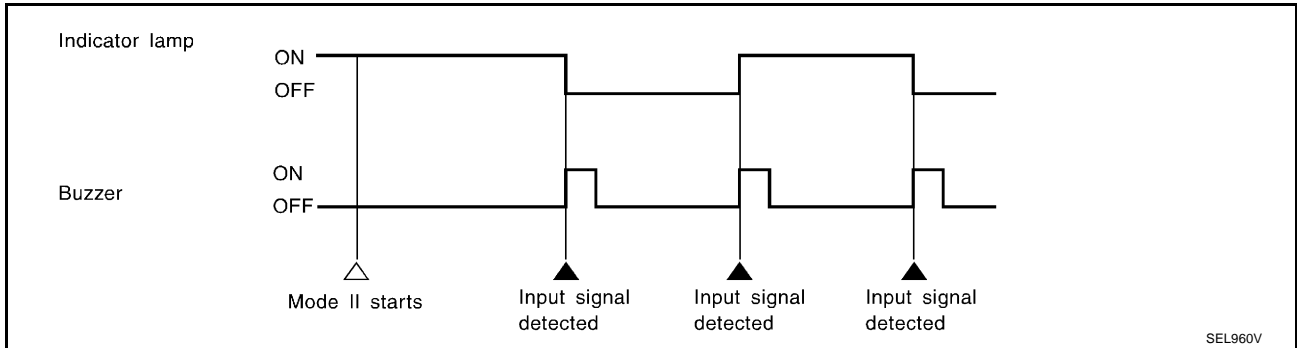
How to Perform Switch Monitor



WARNING LAMPS

Description

- In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the front map lamp and front step lamps with buzzer.



Switch Monitor Item

- The status of the switch (except the ignition switch, interior lamp switch, and map lamp switch) as input to each control unit can be monitored.

BCM	Front door switch (driver side)
	Front door switch (passenger side)
	Rear door switch LH
	Rear door switch RH

Cancel of Switch Monitor

- Turn ignition switch OFF
- Drive the vehicle at more than 7 km/h (4MPH).

Trouble Diagnosis for Door Warning Lamp

EKS0010Q

Symptom	Diagnostic procedure and repair order
Door warning lamp does not illuminate with any of doors are open.	<ul style="list-style-type: none"> Check combination meter circuit. Refer to DI-44, "Inspection/Combination Meter Circuit". Check front door switch. Refer to DI-44, "Inspection/Front Door Switch". Check rear door switch. Refer to DI-45, "Inspection/Rear Door Switch". If the above systems work properly, replace the BCM.
Door warning lamp illuminates constantly.	<ul style="list-style-type: none"> Check combination meter circuit. Refer to DI-44, "Inspection/Combination Meter Circuit". Check front door switch. Refer to DI-44, "Inspection/Front Door Switch". Check rear door switch. Refer to DI-45, "Inspection/Rear Door Switch". If the above systems work properly, replace the BCM.

WARNING LAMPS

EKS0010R

Inspection/Combination Meter Circuit

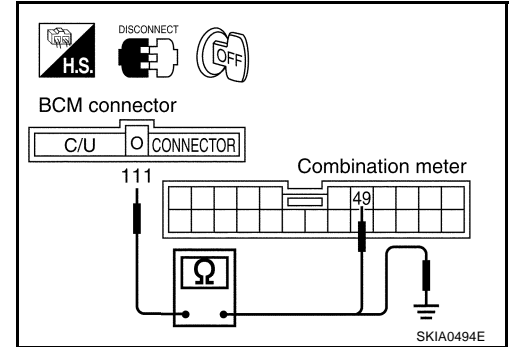
1. CHECK DOOR WARNING LAMP INPUT SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM connector and combination meter connector.
3. Check the following.
 - Continuity between BCM harness connector M4 terminal 111(P/B) and combination meter harness connector M43 terminal 49(P/B).
 - Continuity between BCM harness connector M4 terminal 111(P/B) and ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
M4	111(P/B)	M43	49(P/B)	Yes
M4	111(P/B)	Ground		No

OK or NG

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



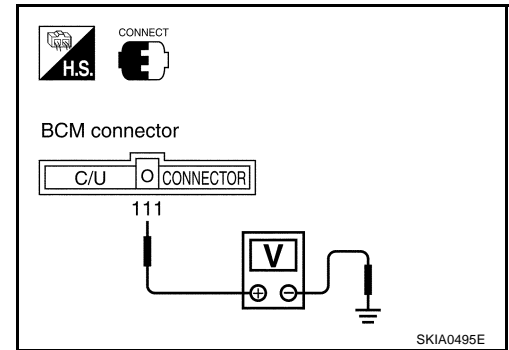
2. CHECK DOOR WARNING LAMP

1. Connect combination meter harness connector.
2. Turn ignition switch ON.
3. Check voltage between BCM harness connector M4 terminal 111(P/B) and ground.

Battery voltage should exist.

OK or NG

- OK >> Combination meter is OK.
 NG >> Replace combination meter.



Inspection/Front Door Switch

EKS0010S

1. CHECK FRONT DOOR SWITCH OPERATION

- 📱 With CONSULT-II
 - See "DOOR SW" on DATA MONITOR in DATA MONITOR mode.
- 🕒 Without CONSULT-II
 - Check front door switches in Switch monitor mode. Refer to [DI-42. "On Board Diagnosis"](#).

OK or NG

- OK >> Front door switch is OK.
 NG >> GO TO 2.

DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
DOOR SW-RR	OFF
DOOR SW-RL	OFF
RECORD	

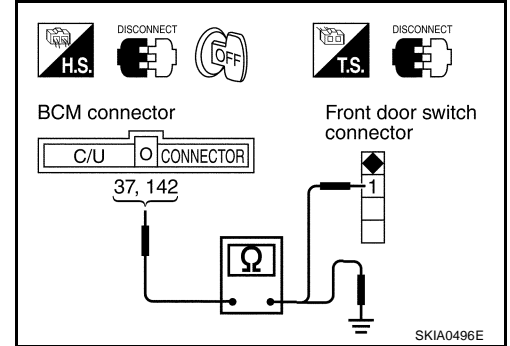
SEL498W

WARNING LAMPS

2. FRONT DOOR SWITCH OPEN OR SHORT CIRCUIT CHECK

1. Disconnect BCM connector and front door switches connector.
2. Turn ignition switch OFF.
3. Check the following.
 - Continuity between BCM harness connector B4, M4 terminals 37(W/G),142(W/R) and front door switch harness connector B220(driver side) terminal1(W/G),B20 (passenger side) terminal 1(W/R).
 - Check continuity between BCM harness connector terminals 37,142 and body ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
M4	37(W/G)	B220 (driver side)	1(W/G)	Yes
B4	142(W/R)	B20 (Passenger side)	1(W/R)	
M4	37	Ground		No
B4	142	Ground		



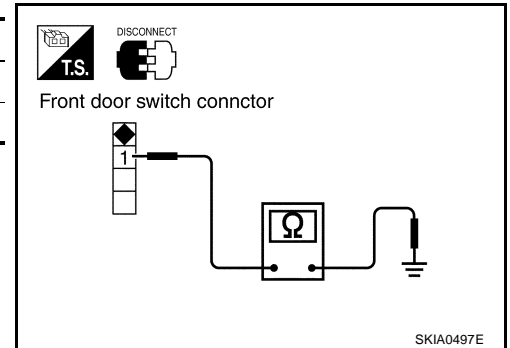
OK or NG

- OK >> GO TO 3.
- NG >> Repair or replace harness.

3. CHECK FRONT DOOR SWITCH (DRIVER SIDE OR PASSENGER SIDE)

Check continuity between front door switch harness connector B20(driver side),B220(passenger side) terminal 1 and body ground.

	Terminal		Condition	Continuity
	Front door switch	1	Ground	Pressed
	1	Ground	Released	Yes



OK or NG

- OK >> Front door switch is OK.
- NG >> Replace front door switch.

Inspection/Rear Door Switch

1. CHECK REAR DOOR SWITCH OPERATION

- 📱 With CONSULT-II
 - See "DOOR SW" in DATA MONITOR mode.
- 🚫 Without CONSULT-II
 - Check rear doors switches in Switch monitor mode. Refer to [DI-42, "On Board Diagnosis"](#).

OK or NG

- OK >> Rear door switch is OK.
- NG >> GO TO 2.

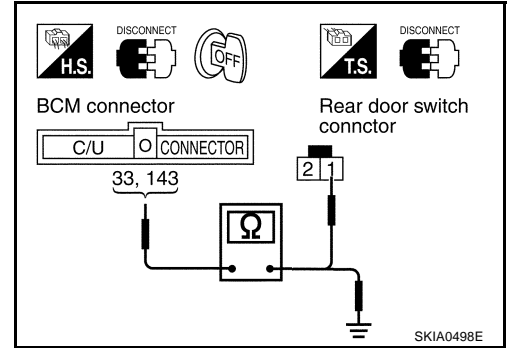
DATA MONITOR	
MONITOR	
DOOR SW-DR	OFF
DOOR SW-AS	OFF
DOOR SW-RR	OFF
DOOR SW-RL	OFF
RECORD	

WARNING LAMPS

2. CHECK REAR DOOR SWITCH INPUT SIGNAL

1. Disconnect BCM connector and rear door switches connector.
2. Turn ignition switch OFF.
3. Check the following.
 - Continuity between BCM harness connector B4, M4 terminals 143(W/L), 33 (W) and rear door switch RH harness connector D82 terminal 1(W) or rear door switch LH harness connector D62 terminal 1(W).
 - Continuity between BCM harness connector terminal 33(W),143 (W/L)and body ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
M4	33 (W)	D62 (LH)	1 (W)	Yes
B4	143 (W/L)	D82 (RH)	1 (W)	
M4	33 (W)	Ground		No
B4	143 (W/L)	Ground		



OK or NG

- OK >> GO TO 3.
- NG >> Repair or replace harness.

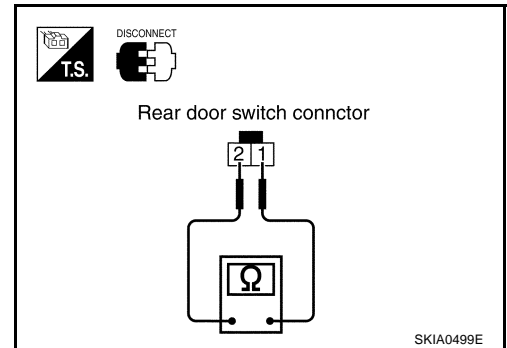
3. CHECK REAR DOOR SWITCH INSPECTION

Check continuity between rear door switch (LH or RH) harness connector D62(LH), D82(RH) terminal 2 and 1.

	Terminal		Condition	Continuity
	1	2		
Rear door switch	1	2	Pressed	No
			released	Yes

OK or NG

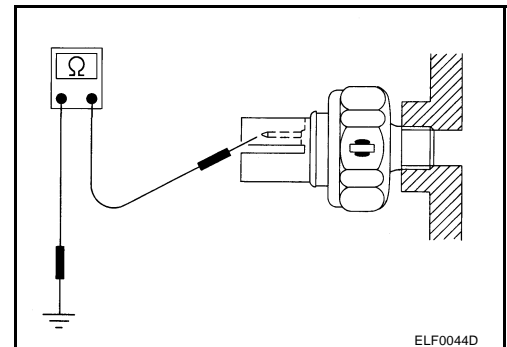
- OK >> Check harness for open between rear door switch and ground.
- NG >> Replace rear door switch.



Electrical Components Inspection OIL PRESSURE SWITCH

Check continuity between the oil pressure switch and body ground.

	Oil pressure MPa (kg/cm ²)	Continuity
Engine not running	Less than 0.02 - 0.029 (0.2-0.3)	Yes
Engine running	More than 0.02 - 0.029 (0.2-0.3) o	No



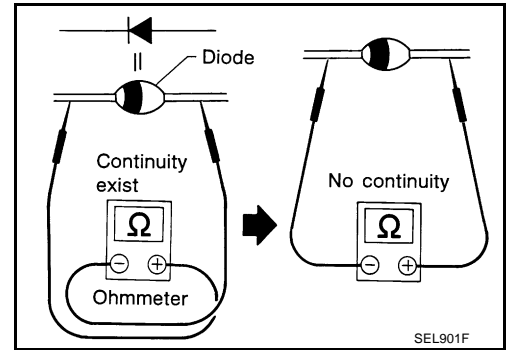
WARNING LAMPS

DIODE CHECK

- Check continuity using an ohmmeter.
- Diode is functioning properly if test results are as shown in the figure at left.
- Check diodes at the combination meter harness connector instead of on the combination meter assembly. Refer to [DI-31](#), "[Wiring Diagram — WARN —](#)".

NOTE:

Specification may vary depending on the type of tester. Before performing this inspection, be sure to refer to the instruction manual for the tester to be used.



A
B
C
D
E
F
G
H
I
J
DI
L
M

A/T INDICATOR

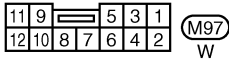
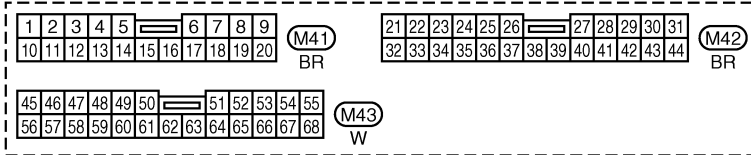
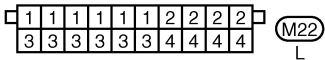
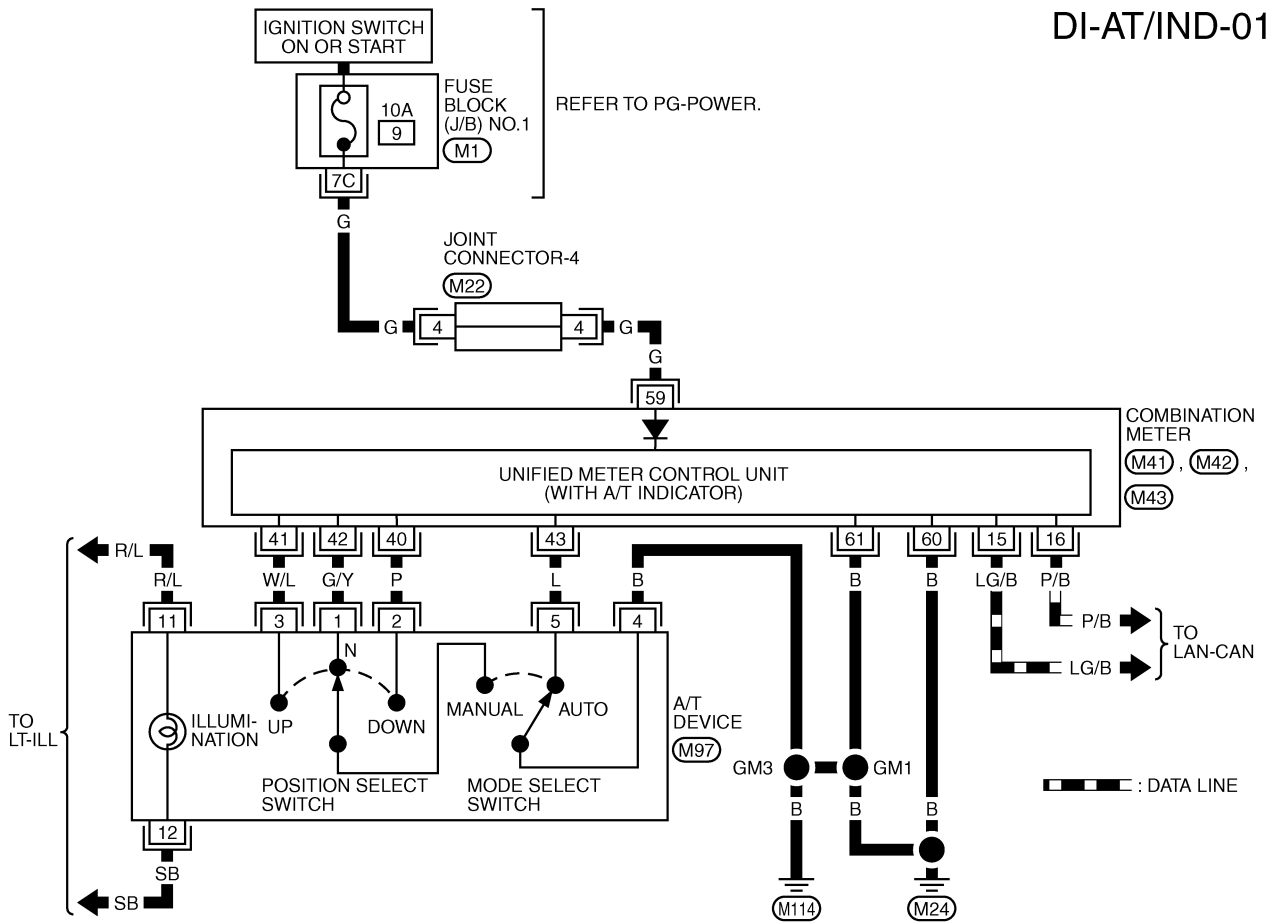
PF#24814

EKS0017M

DI-AT/IND-01

A/T INDICATOR

Wiring Diagram — AT/IND —



REFER TO THE FOLLOWING.

(M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWM0076E

A/T INDICATOR

Trouble Diagnosis SYMPTOM CHART

EKS001BV

Symptom		Possible cause
A/T indicator lamp is abnormal.	All the lamps inactive Partially inactive	A/T indicator dose not illuminate. Refer to DI-49, "A/T Indicator Does Not Illuminate" .
	Segment is missing	<ul style="list-style-type: none"> ● Combination meter self-diagnosis mode. Refer to DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display" . ● Check the connector conditions in combination meter. If the above system is OK, replace unified meter control unit (sub) and meter and gauge assembly.

A/T Indicator Does Not Illuminate

EKS001BV

1. TCM CONTROL UNIT SYSTEM INSPECTION

Perform TCM self-diagnosis. Refer to [AT-67, "CONSULT-II"](#) in AT section.

OK or NG

- OK >> Go to 2.
- NG >> Go to TCM trouble diagnosis.

2. SELF-DIAGNOSIS INSPECTION

Perform combination meter self-diagnosis mode. Refer to [DI-17, "Meter/Gauges Operation, Odo/Trip Meter, A/T Indicator and ICC System Display"](#) .

OK or NG

- OK >> A/T indicator is OK
- NG >> Replace combination meter control unit (sub) and meter and gauge assembly.

A
B
C
D
E
F
G
H
I
J
L
M

DI

WARNING CHIME

WARNING CHIME

PFPP:24814

System Description FUNCTION

EKS0010V

Item	Description
Ignition key warning chime	Sounds warning chime when driver's door is opened with key in ignition key cylinder and ignition switch "OFF" or "ACC" position.
Light warning chime	Sounds warning chime when driver's door is opened with lighting switch in the 1st or 2nd position and ignition switch "OFF" or "ACC" position.
Seat belt warning chime	Sounds warning chime for about 6 seconds if ignition switch is turned "ON" when driver's seat belt is unfastened

Power is supplied at all times

- through 10A fuse [No.3, located in the fuse block (J/B) NO.1]
- to BCM terminal 105.
- through 10A fuse [No. 8, located in the fuse block (J/B) NO.1]
- to key switch terminal 3.
- through 10A fuse [No. 6, located in the fuse block (J/B) NO.1]
- to warning chime terminal 1, and
- through warning chime terminal 3
- to BCM terminal 12
- through 15A fuse [No.54, located in the fuse, fusible link and relay block (J/B)]
- to tail lamp relay terminal 2 and 6 [located in fuse, fusible link and relay block (J/B)].

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

- through 10A fuse [No.1, located in the fuse block (J/B) NO.1]
- to BCM terminal 68.

Ground is supplied

- to BCM terminal 56 and 113
- through body grounds M24 and M114.

When a signal, or combination of signals, is received by the BCM, the warning chime will sound.

IGNITION KEY WARNING CHIME

With ignition switch in OFF or ACC position, and the driver's door open, the warning chime will sound. Power is supplied

- through key switch and key lock solenoid (key switch) terminal 4
- to BCM terminal 69, and

Ground is supplied

- to BCM terminal 142
- through front door (driver side) switch terminal 1.

Front door switch (driver side) is case ground.

LIGHT WARNING CHIME

With ignition switch OFF or ACC position, driver's door open, and lighting switch in 1ST or 2ND position, warning chime will sound. [Except when head lamp battery saver control operates (for 45 seconds after ignition switch is turned to OFF or ACC position) and head-lamps do not illuminate.] Power is supplied

- from tail lamp relay [located in fuse, fusible link and relay block (J/B)] terminal 12R
- to BCM terminal 3,

Ground is supplied

- from door switch terminal 1
- to BCM terminal 142.

Front door switch (driver side) is case ground.

WARNING CHIME

SEAT BELT WARNING CHIME

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

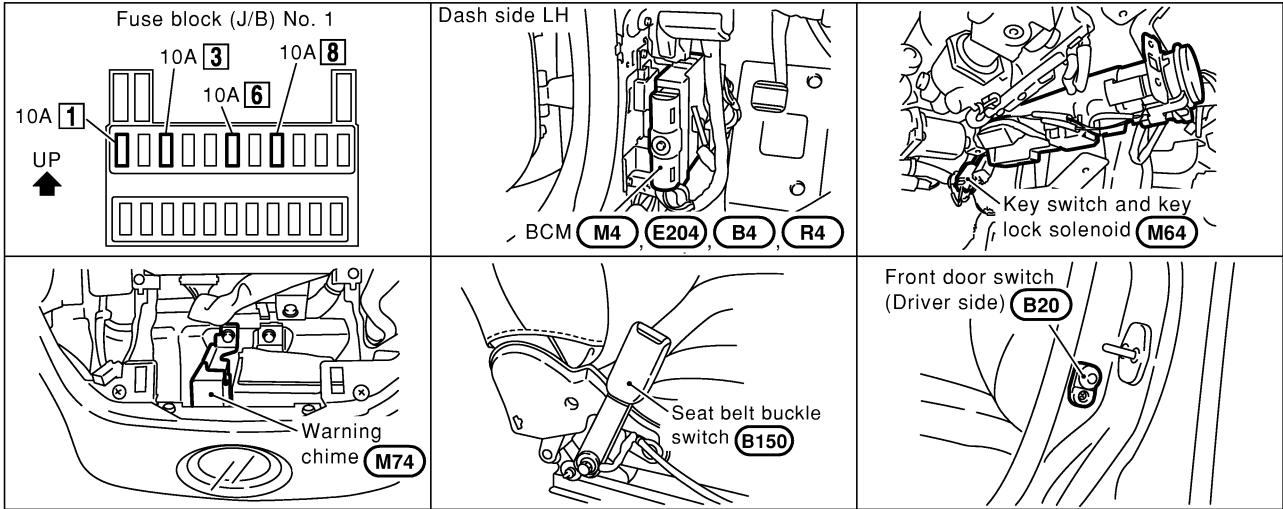
Ground is supplied

- from seat belt buckle switch terminal 41
- to BCM terminal 147

Seat belt terminal 15A is grounded through body ground B17 and B57.

Component Parts and Harness Connector Location

EKS0010W



SKIA0502E

Major Component Parts and Function

EKS0010X

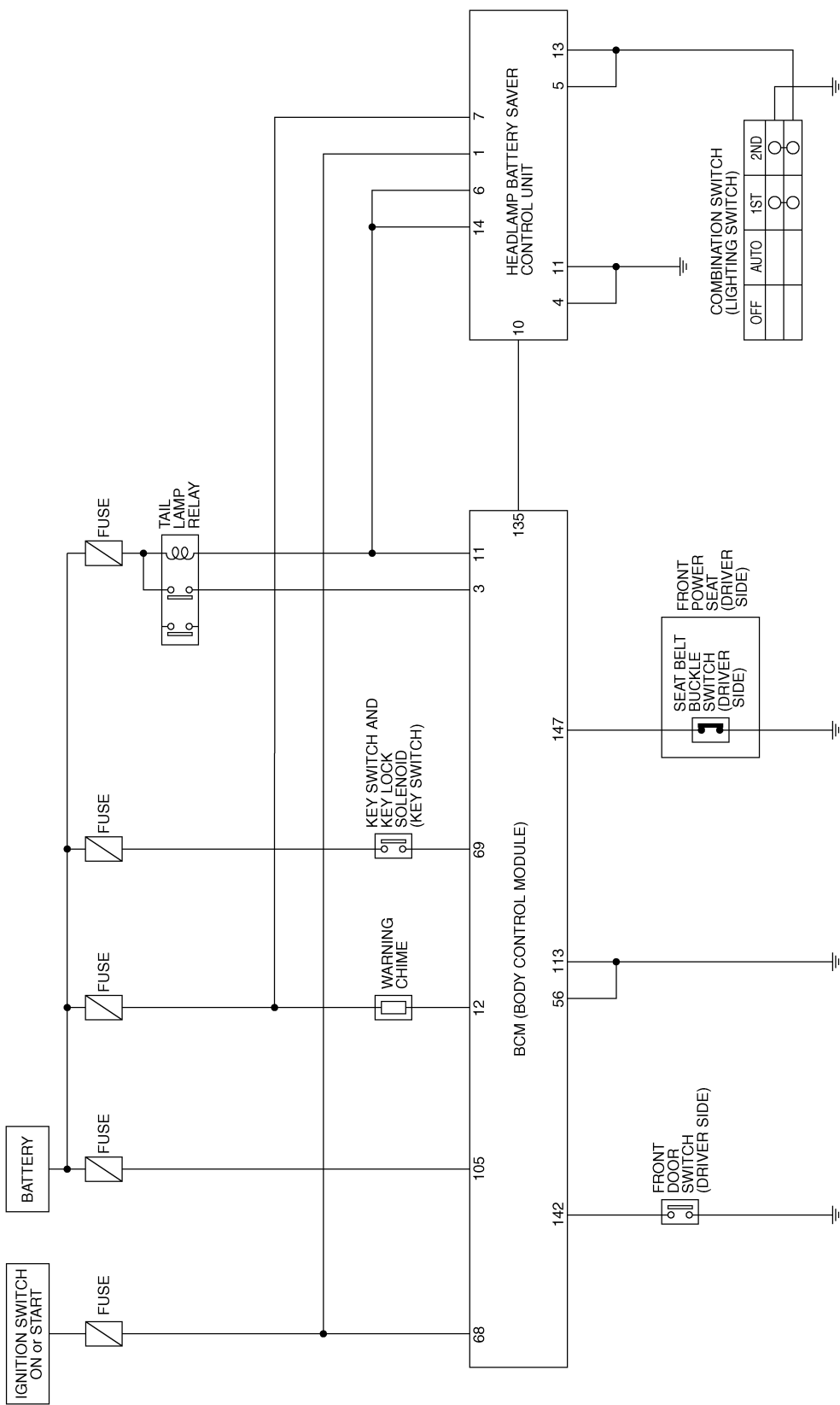
Components	Functions
BCM	It operates the warning chime intermittently by signals from the ignition switch, key detection switch, lighting switch, or front door switch (driver side) or seat belt buckle switch (driver side).
Warning chime	It generates intermittent sounds by signals from the BCM.

A
B
C
D
E
F
G
H
I
J
DI
L
M

WARNING CHIME

Schematic

EKS0019J



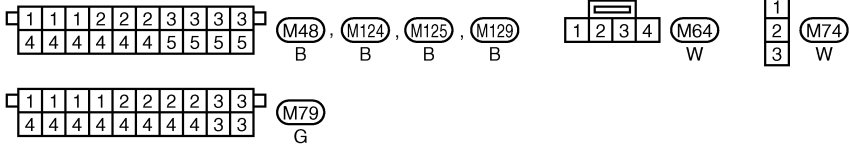
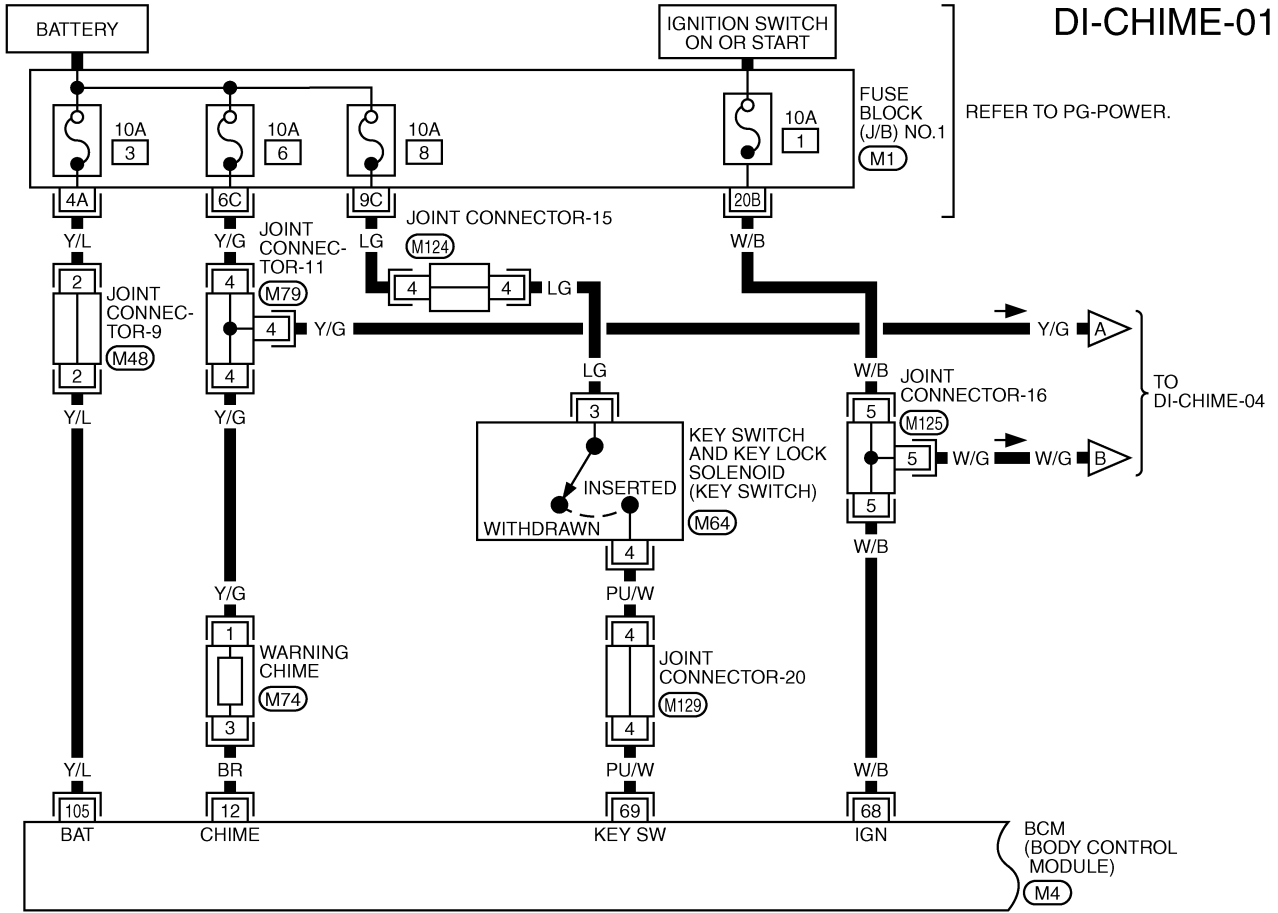
TKWM0070E

WARNING CHIME

Wiring Diagram — CHIME —

EKS0019K

DI-CHIME-01



REFER TO THE FOLLOWING.

(M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(M4) - ELECTRICAL UNITS

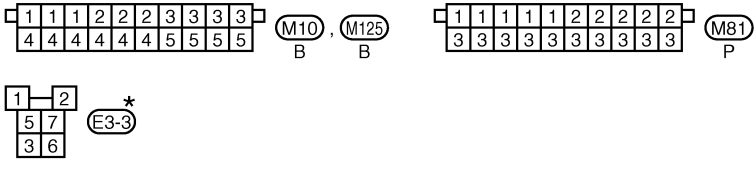
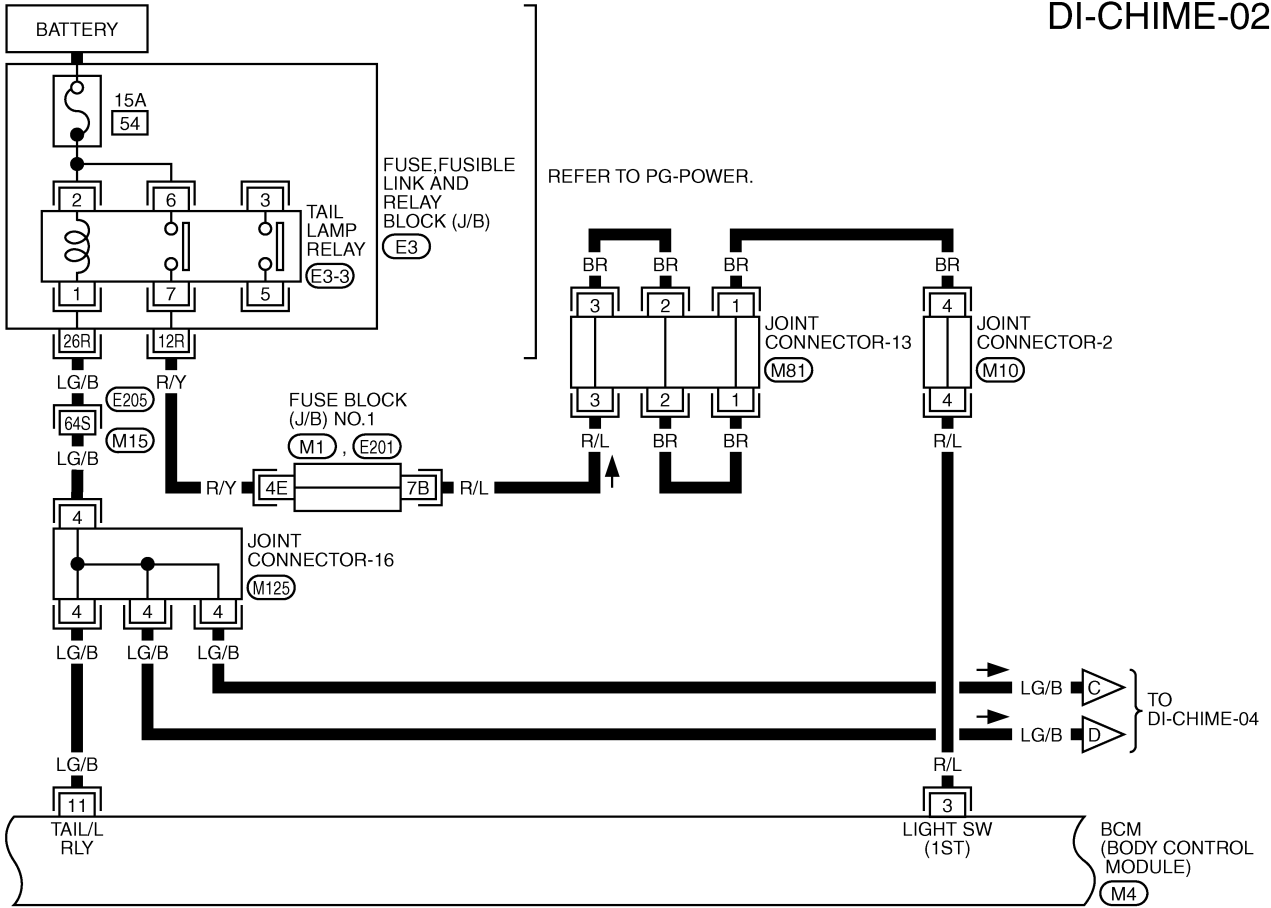
A
B
C
D
E
F
G
H
I
J
L
M

DI

TKWM0071E

WARNING CHIME

DI-CHIME-02



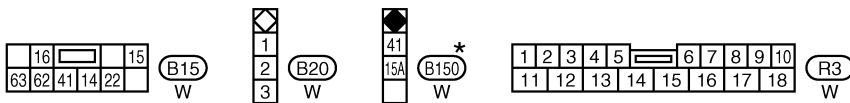
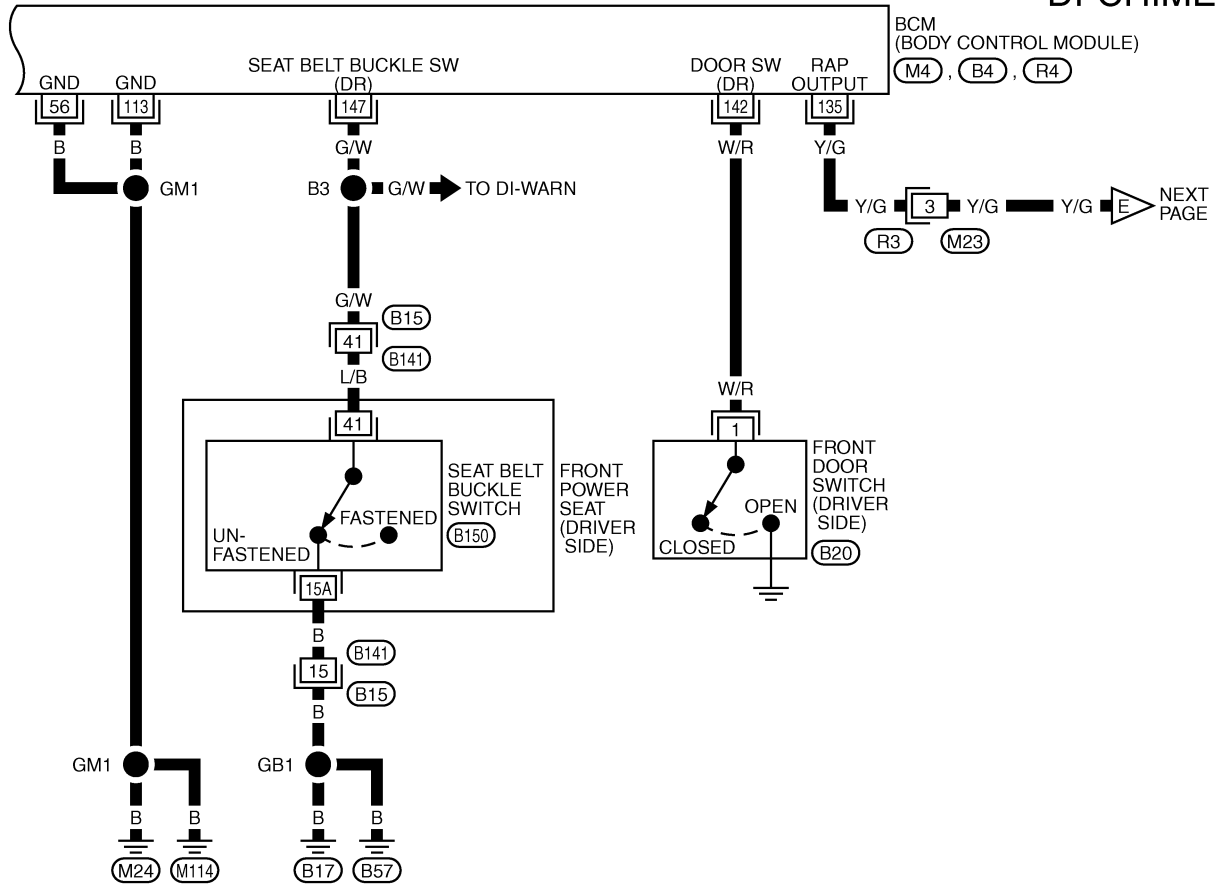
- REFER TO THE FOLLOWING.
- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
 - (M1) , (E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
 - (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)
 - (M4) -ELECTRICAL UNITS

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

TKWM0073E

WARNING CHIME

DI-CHIME-03



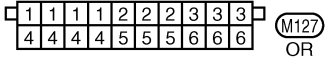
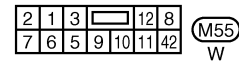
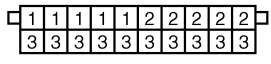
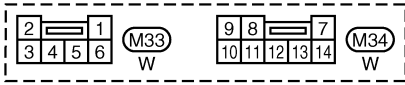
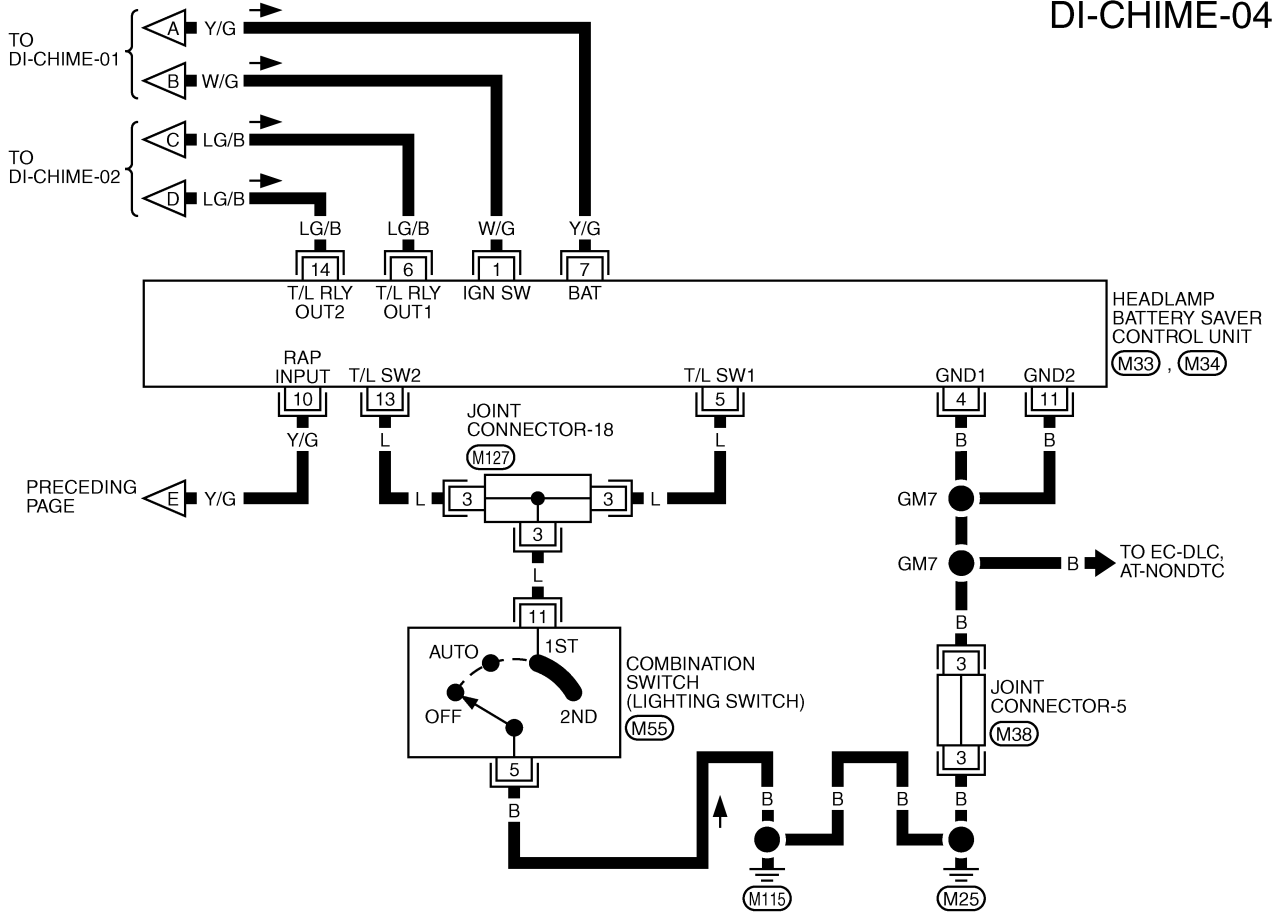
REFER TO THE FOLLOWING.
 (M4), (B4), (R4)
 -ELECTRICAL UNITS

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

TKWM0074E

WARNING CHIME

DI-CHIME-04



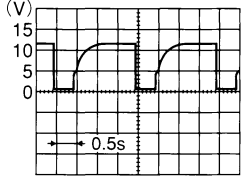
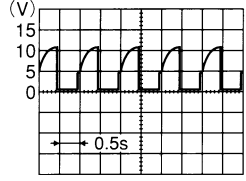
TKWM0075E

EKS0010Z

Terminals and Reference Value Chart for BCM

TERMI-NAL	WIRE COLOR	ITEM	CONDITION		Voltage (V)
3	R/L	Tail lamp relay	Lighting switch, Position:1ST,2ND	ON	Approx. 12
				OFF	Approx. 0
11	LG/B	Tail lamp relay control signal	Lighting switch, Position: 1ST.2ND	ON	Approx. 0
				OFF	Approx. 12

WARNING CHIME

TERMI- NAL	WIRE COLOR	ITEM	CONDITION		Voltage (V)
12	BR	Warning chime input signal	(Ignition key warning chime) Front door (driver side): OPEN Lighting switch: OFF	Key is inserted.	 ELN0529D
				Key is removed.	Approx. 12
			(Light warning chime) Lighting switch, Position 1ST, 2ND	Front door (driver side): Open	 ELN0530D
				Front door (driver side): Closed	Approx. 12
56	B	Ground	—		Approx. 0
68	W/B	Ignition switch ON	Ignition switch is in "ON" position		Approx. 12
69	PU/W	Key switch	Key is removed (key switch: OFF).		Approx. 0
			Key is inserted (key switch: ON).		Approx. 12
105	Y/L	Power source (BAT)	—		Approx. 12
113	B	Ground	—		Approx. 0
135	Y/G	Rap signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Approx.0
				ON or START	Approx.12
142	W/R	Front door switch (driver side)	ON (Open)		Approx. 0
			OFF (Closed)		Approx. 12
147	G/W	Seat belt buckle switch (driver side)	Ignition switch is "ON" position	Fasten	Approx. 5
				Unfasten	Approx. 0

Work Flow

EKS001QX

1. Check the trouble symptom and customer's requests.
2. Understand the outline of system. Refer to [DI-50, "System Description"](#) .
3. Perform the preliminary check. Refer to [DI-58, "Preliminary Check"](#)
4. Referring to Trouble diagnosis chart, repair or replace the cause of the incident. Refer to [DI-62, "Symptom Chart"](#)
5. Does warning chime system operate normally? If it operates normally, GO TO step 6. If not, GO TO step 4.
6. Inspection END.

WARNING CHIME

EKS001QY

Preliminary Check INSPECTION FOR POWER SUPPLY AND GROUND CIRCUIT

Inspection procedure

1. CHECK FUSES.

- Check that any of the following fuses for the BCM is blown.

UNIT	POWER SOURCE	FUSE No.
BCM	Battery	3
	Ignition switch ON or START	1
Warning chime	Battery	6

Refer to [DI-53, "Wiring Diagram — CHIME —"](#)

OK or NG

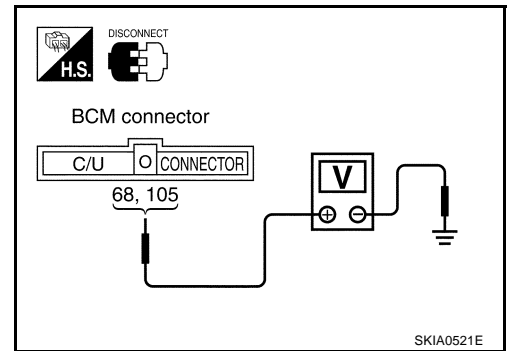
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to [PG-2, "POWER SUPPLY ROUTING"](#)

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect BCM connector.
2. Check voltage between BCM connector M4 terminal 68(W/B),105(Y/L) and ground.

Terminals			Ignition switch position		
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)				
M4	68 (W/B)	Ground	0V	0V	Battery voltage
M4	105 (Y/L)	Ground	Battery voltage	Battery voltage	Battery voltage



OK or NG

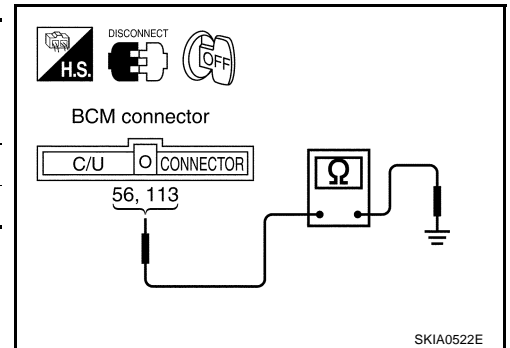
OK >> GO TO 3.

NG >> Check harness for open or short between BCM and fuse.

3. GROUND CIRCUIT CHECK

Check continuity between BCM harness connector M4 terminals 56, 113 and body ground.

Terminals			Continuity
(+)		(-)	
Connector	Terminal		
M4	56	Ground	Yes
M4	113	Ground	Yes



OK or NG

OK >> Inspection end.

NG >> Check harness ground circuit.

CONSULT-II Function

EKS001QZ

- CONSULT-II executes the following functions by combining data reception and command transmission via the communication line from BCM. IVMS communication inspection, work support (only function setting of seats and steering wheel), self-diagnosis, data monitor, and active test display.

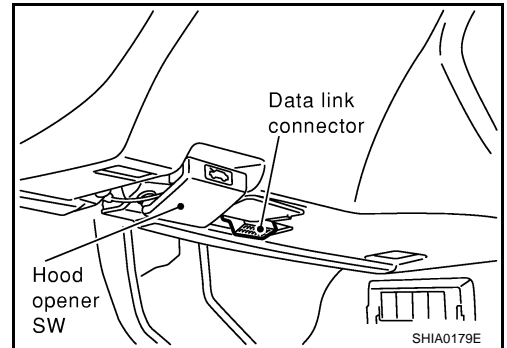
WARNING CHIME

DIAGNOSTIC ITEMS DESCRIPTION

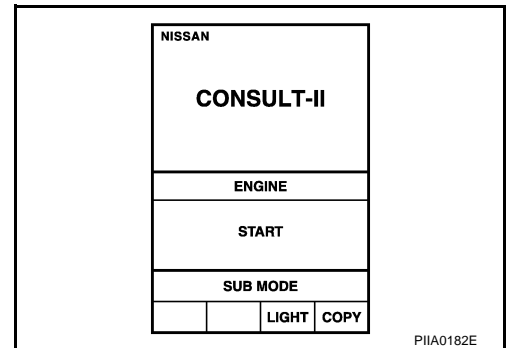
IVMS diagnosis position	Diagnosis mode	Description
IGN KEY WAR-NALM	Data monitor	The input data to the BCM control unit is displayed in real time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
LIGHT WAR-NALM	Data monitor	The input data to the BCM control unit is displayed in real time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
SEAT BELT TIMER	Data monitor	The input data to the BCM control unit is displayed in real time.
	Active test	Operation of electrical loads can be checked by sending driving signal to them.
BCM PART NUMBER		Displays BCM part No.

CONSULT-II BASIC OPERATION PROCEDURE

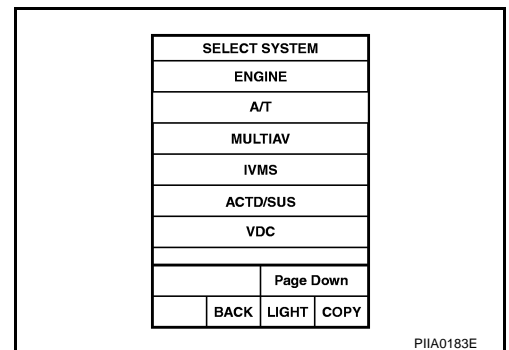
1. With the ignition switch OFF, connect CONSULT-II to the data link connector, and turn the ignition switch ON.



2. Touch "START".

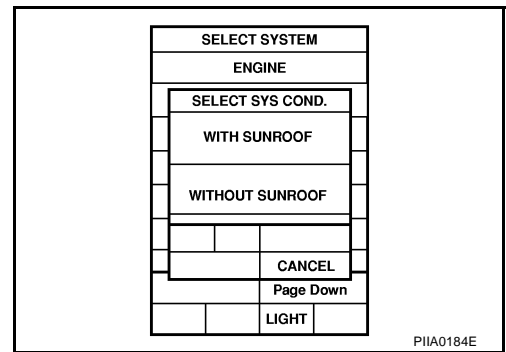


3. Touch "IVMS".



WARNING CHIME

4. Check the model specification, touch either "WITH SUNROOF" or "WITHOUT SUNROOF".
5. Touch "OK". If the selection is wrong, touch "CANCEL".



6. Select the desired part to be diagnosed on the "SELECT TEST ITEM" screen.

DATA MONITOR

Operation Procedure

1. Touch "IGN WARN ALM", "LIGHT WARN ALM" or "SEAT BELT WARM" on "SELECT TEST ITEM" screen.
2. Touch "DATA MONITOR" on "SELECT DIAG MODE" screen.
3. Touch "MAINSIGNALS" or "SELECTIONFROMMENU" on "DATAMONITOR" screen.

MAIN SIGNALS	Monitors the main items.
SELECTION FROM MENU	Selects and monitors the items.

4. Touch "START".
5. If "SELECTION FROM MENU" is selected, touch the desired monitor item. If "MAIN SIGNALS" is selected, the main item required to control is monitored.
6. During monitoring, touching "COPY" can start recording the monitor item status.

Data Monitor Item (Key Warning Chime)

Monitored item	Description
IGN KEY SW	Indicates [ON/OFF] condition of electronic key switch.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.

Data Monitor Item (Light Warning Chime)

Monitored item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
HD/LAMP 1ST SW	Indicates [ON/OFF] condition of lighting switch.

Data Monitor Item (Seat Belt Warning Chime)

Monitored item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
SEAT BELT SW	Indicates [ON/OFF] condition of fastening belt buckle switch.

ACTIVE TEST

Operation Procedure

1. Touch "IGN WARN ALM", "LIGHT WARN ALM" or "SEAT BELT WARM" 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

Active Test Item (Key Warning Chime)

Test item.	Malfunction detecting condition
CHIME	This test is able to check key warning chime operation. Key warning chime sounds for 2 seconds after touching "ON" on CONSULT-II screen.

Active Test Item (Light Warning Chime)

Test item.	Malfunction detecting condition
CHIME	This test is able to check Light warning chime operation. Light warning chime sounds for 2 seconds after touching "ON" on CONSULT-II screen.

Active Test Item (Seat Belt Warning Chime)

Test item.	Malfunction detecting condition
CHIME	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.

On Board Diagnosis

EKS001R0

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

- Front map lamps and step lamps (all seats) act as the indicators for the on board diagnosis.

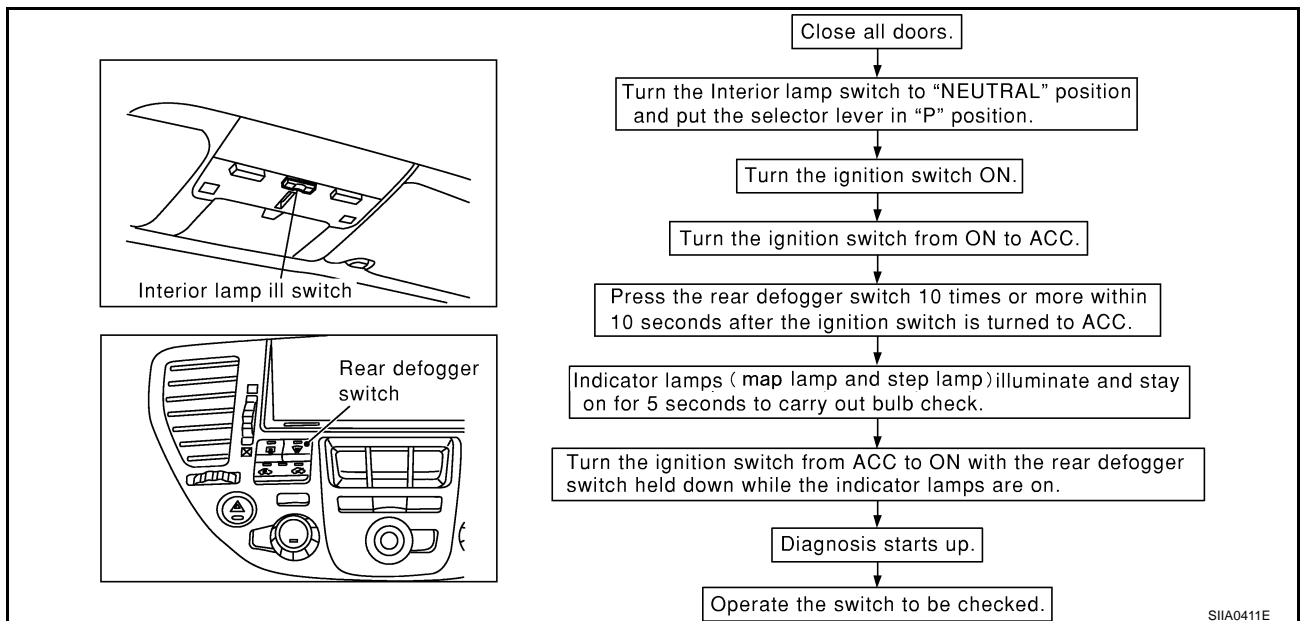
DIAGNOSIS ITEM

Diagnosis item	Description
Switch monitor	Monitoring conditions of switches connected to BCM.

SWITCH MONITOR

- Perform the diagnosis on the switch system to each control unit.

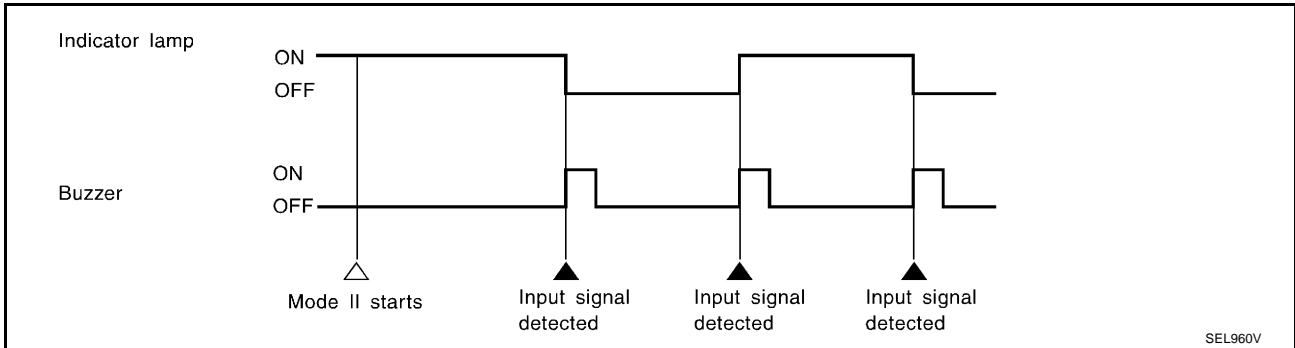
How to Perform Switch Monitor



WARNING CHIME

Description

- In this mode, when BCM detects the input signal from a switch in IVMS as shown below, the detection is indicated by the front map lamp and front step lamps with buzzer.



Switch Monitor Item

- The status of the switch (except the ignition switch, interior lamp ill switch, and map lamp switch) as input to each control unit can be monitored.

BCM	Driver door switch
	Lighting switch (1ST)
	Seat belt buckle switch

Cancel of Switch Monitor

- Turn ignition switch OFF
- Drive the vehicle at more than 7 km/h (4MPH).

Symptom Chart

EKS00114

Symptom	Possible cause and repair order
All warning chime does not activate	<ul style="list-style-type: none"> Warning chime circuit check. Refer to DI-62. "Warning Chime Circuit Check" Front door switch (driver side) check. Refer to DI-64. "Front Door Switch (Driver side) Check" . <p>If the above systems are work properly, replace the BCM.</p>
Light warning chime does not activate (headlamp system is properly).	<ul style="list-style-type: none"> Lighting switch input signal check. Refer to DI-66. "Lighting Switch Input Signal Check" <p>If the above systems are work properly, replace the BCM.</p>
Key warning chime does not activate.	<ul style="list-style-type: none"> Key switch insert signal check. Refer to DI-65. "Key Switch Insert Signal Check" . <p>If the above systems are work properly, replace the BCM.</p>
Seat belt warning chime does not activate.	<ul style="list-style-type: none"> Check seat belt buckle switch input signal check. Refer to DI-67. "Seat Belt Buckle Switch Check" <p>If the above systems are work properly, replace the BCM.</p>
With the ignition switch turned OFF and the door closed (driver side), turning the lighting switch ON (1st) activates the chime.	<ul style="list-style-type: none"> Door switch (driver side) check. Refer to DI-64. "Front Door Switch (Driver side) Check" . <p>If the above systems are work properly, replace the BCM.</p>

Warning Chime Circuit Check

EKS00115

1. CHECK FUSES

- Check 10A fuse [NO.6 located in fuse block (J/B) NO.1]

OK or NG

OK >> GO TO 2.

NG >> Replace the fuse.

WARNING CHIME

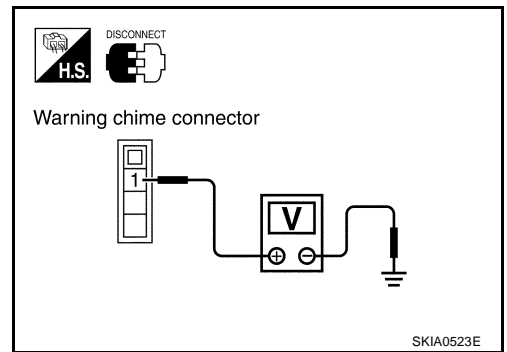
2. POWER SUPPLY CIRCUIT CHECK

1. Turn ignition switch OFF.
2. Disconnect warning chime connector.
3. Check voltage between warning chime harness connector M74 terminal 1(Y/G) and body ground.

Battery voltage should exist.

OK or NG

- OK >> GO TO 3.
NG >> Check harness for open or short between fuse and warning chime.



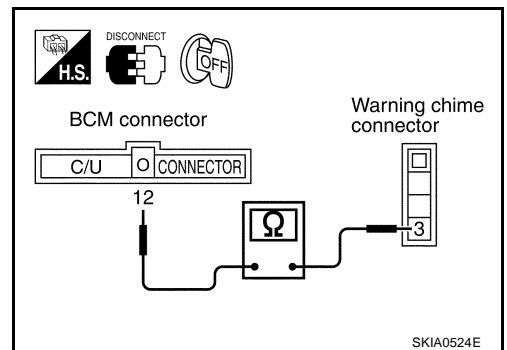
3. WARNING CHIME OPEN OR SHORT CIRCUIT CHECK

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M4 terminal 12(BR) and body ground.

Continuity should not exist.

OK or NG

- OK >> GO TO 4.
NO >> Repair or replace harness.



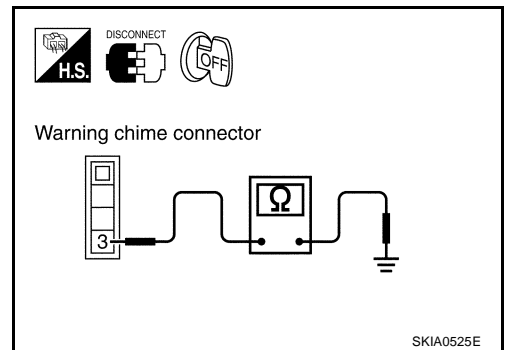
4. WARNING CHIME GROUND OPEN CIRCUIT CHECK

1. Check continuity between warning chime harness connector M74 terminal 3(BR) and BCM harness connector M4 terminal 12(BR).

Continuity should exist.

OK or NG

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



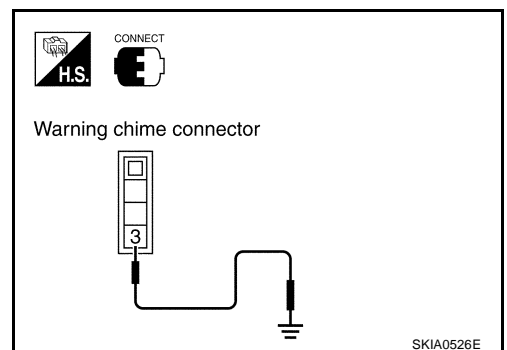
5. CHECK WARNING CHIME OPERATION

1. Connect warning chime connector.
2. Ground warning chime harness connector M74 terminal 3 (BR).

Warning chime should operate.

OK or NG

- OK >> Replace BCM.
NG >> Replace warning chime.



WARNING CHIME

EKS00116

Front Door Switch (Driver side) Check

1. CHECK FRONT DOOR SWITCH (DRIVER SIDE) INPUT SIGNAL

 With CONSULT-II

- Check front door switch ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.

When driver's door is open :DOOR SW-DR ON

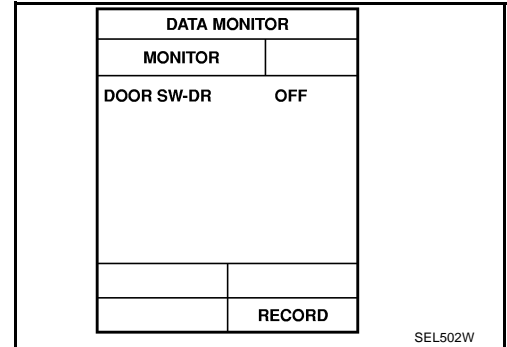
When driver's door is closed :DOOR SW-DR OFF

 Without CONSULT-II

- Check front door switch (driver side) in SWITCH MONITOR mode, refer to [DI-61, "On Board Diagnosis"](#).

OK or NG

- OK >> Front door switch (driver side) is OK.
- NG >> GO TO 2.



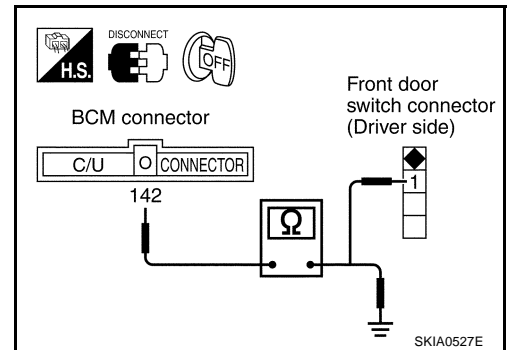
2. CHECK DOOR SWITCH OPEN OR SHORT CIRCUIT

1. Disconnect BCM connector and front door switch (driver side) connector.
2. Check the following.
 - Continuity harness between BCM harness connector M4 terminal 142(W/R) and door switch (driver side) connector B20 terminal 1(W/R).
 - Continuity harness between BCM harness connector M4 terminal 142(W/R) and body ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
M4	142 (W/R)	B20	1 (W/R)	Yes
M4	142 (W/R)	Ground		No

OK or NG

- OK >> GO TO 3.
- NG >> Repair or replace harness.



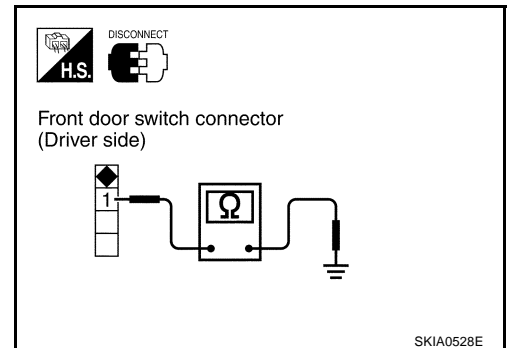
3. CHECK DOOR SWITCH (DRIVER SIDE)

Check continuity between front door switch (driver side) harness connector B20 terminal 1(W/R) and body ground.

Terminals			Condition	Continuity
(+)		(-)		
Connector	Terminal (Wire color)	(-)		
B20	1 (W/R)	Ground	Door is opened	Yes
			Door is closed	No

OK or NG

- OK >> Front door switch (driver side) is OK.
- No >> Replace front door switch (driver side).



WARNING CHIME

Key Switch Insert Signal Check

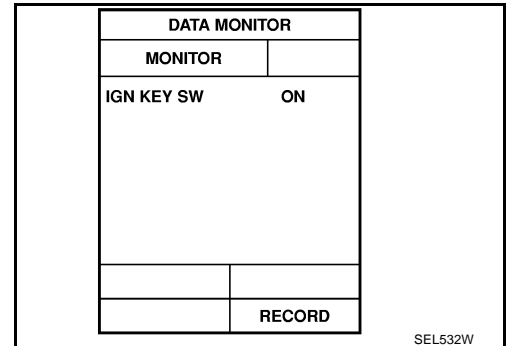
EKS00117

1. CHECK KEY SWITCH INPUT SIGNAL

 With CONSULT-II

- Check Key switch ("IGN KEY SW") in "DATA MONITOR" mode with CONSULT-II.

When key is inserted to ignition key cylinder :IGN KEY SW ON
When key is removed to ignition key cylinder :IGN KEY SW OFF



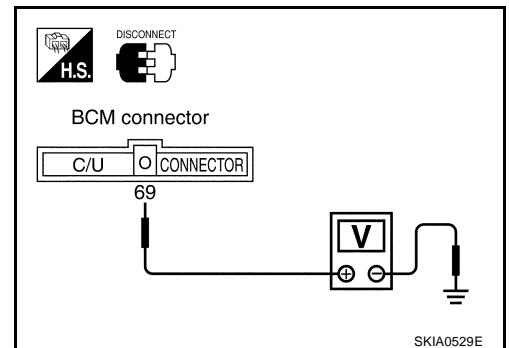
 Without CONSULT-II

1. Disconnect the BCM connector.
2. Check voltage between BCM harness connector M4 terminal 69 (PU/W) and body ground.

Condition of key switch Voltage [V]:
key is inserted : Approx. 12
key is removed : Approx. 0

OK or NG

- OK >> Key switch is OK.
NG >> GO TO 2.



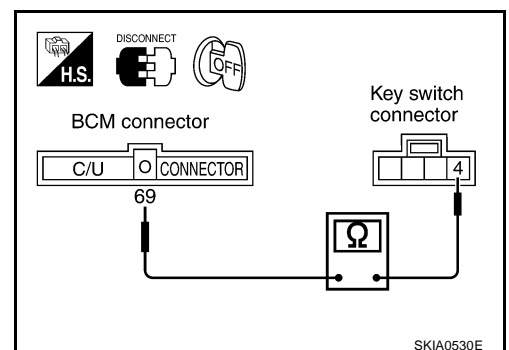
2. CHECK KEY SWITCH CIRCUIT

1. Remove the key from the ignition key cylinder.
2. Disconnect the key switch connector.
3. Check continuity between BCM harness connector M4 terminal 69 (PU/W) and key switch harness connector terminal 4(PU/W).

Continuity should exist.

OK or NG

- OK >> GO TO 3.
NG >> Repair or replace harness.



WARNING CHIME

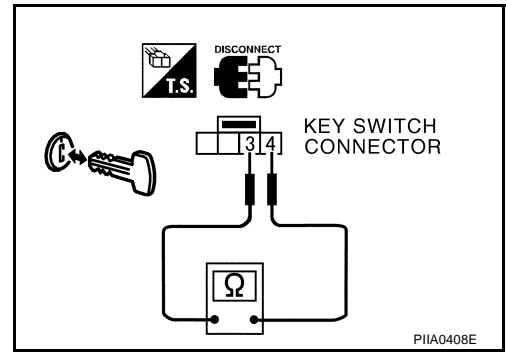
3. CHECK KEY SWITCH (INSERT)

1. Check continuity between key switch harness connector terminals 3 and 4.

Terminals			Condition	Continuity
(+)		(-)		
Connector	Terminal	Terminal		
M64	3	4	key is inserted	Yes
			key is removed	No

OK or NG

- OK >> Inspection end.
- NG >> Replace switch.



Lighting Switch Input Signal Check

EKS00118

1. CHECK LIGHTING SWITCH INPUT SIGNAL

With CONSULT-II

- Check Lighting switch ("HD/LMP 1ST SW") in "DATA MONITOR" mode with CONSULT-II.

When lighting switch is 1ST or 2ND :HD/LMP 1ST SW ON

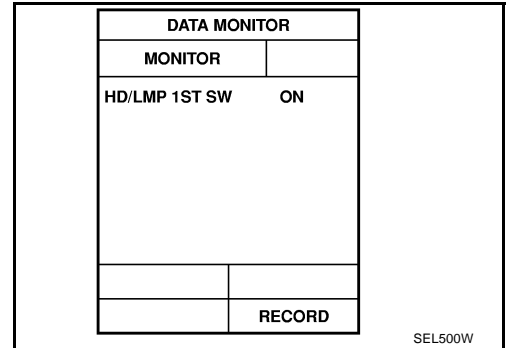
When lighting switch is OFF :HD/LMP 1ST SW OFF

Without CONSULT-II

1. Check lighting switch in Switch monitor mode, refer to [DI-61](#), "On Board Diagnosis".

OK or NG

- OK >> Lighting switch is OK.
- NG >> GO TO 2.



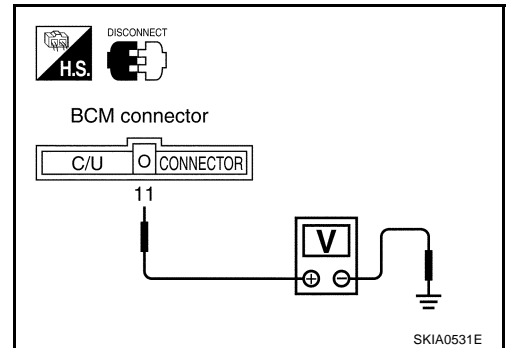
2. CHECK TAIL LAMP RELAY CONTROL SIGNAL

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. Check voltage between BCM harness connector M4 terminal 11 (LG/B) and body ground.

Condition of lighting switch Voltage [V]
1ST or 2ND : Approx. 12
OFF : Approx. 0

OK or NG

- OK >> Inspection end.
- NG >> Check harness for open or short between BCM and tail lamp relay.



WARNING CHIME

EKS001F7

Seat Belt Buckle Switch Check

1. CHECK SEAT BELT BUCKLE SWITCH INPUT SIGNAL

① With CONSULT-II

- Check seat belt buckle switch ("SEAT BELT SW") in "DATA MONITOR" mode with CONSULT-II.

When seat belt fastened :SEAT BELT SW ON

When seat belt unfastened :SEAT BELT SW OFF

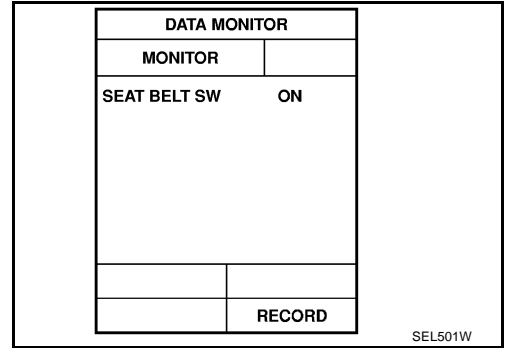
② Without CONSULT-II

Check seat belt buckle switch in Switch monitor mode, refer to [DI-61, "On Board Diagnosis"](#).

OK or NG

OK >> Seat belt buckle switch is OK.

NG >> GO TO 2



2. CHECK SEAT BELT BUCKLE SWITCH

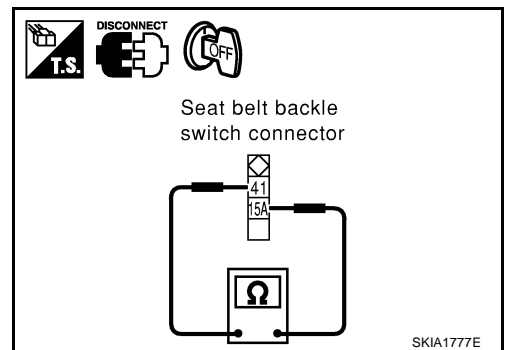
Check continuity seat belt buckle switch.

Terminals (Wire color)		Condition	Continuity
41 (L/B)	15A (B)	Fastened	No
		Unfastened	Yes

OK or NG

OK >> GO TO 3

NG >> Replace seat belt buckle switch.



3. CHECK SEAT BELT BUCKLE SWITCH CIRCUIT

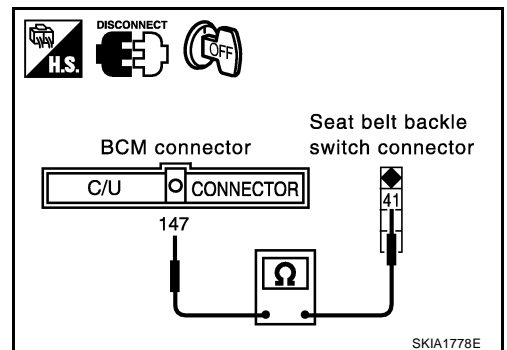
Check continuity between BCM harness connector B150 terminal 147(G/W) and seat belt buckle switch harness connector B150 terminal 41(L/B).

Continuity should exist.

OK or NG

OK >> Check seat belt buckle switch ground circuit.

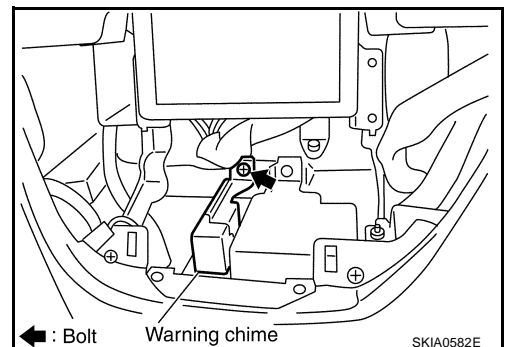
NG >> Repair harness or connector.



Removal and Installation of Warning Chime

EKS00119

- Remove the cluster lid C, refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#).
- Remove bolt (1), and remove warning chime.



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

PFP:28395

System Description INTEGRATED SWITCH SYSTEM

EKS00187

Using the multifunction switch at the center of the instrument panel, the controls of the following systems are centralized:

- Auto A/C system
- Vehicle information system
- Audio system
- Navigation system
- Hazard switch

The multifunction switch can operate and check the vehicle condition and each setting (vehicle electrical system).

PRECAUTION OF LCD MONITOR

- When passenger compartment temperature is low, the LCD monitor sometimes dims because of the brightness of the back light (small fluorescent light) integrated into the LCD monitor decrease. In this case, the refreshing rate of the picture also becomes low because of the low response of the LCD monitor. When passenger compartment becomes warm, however, the LCD recovers the normal display.
- Sometimes, black or bright dots peculiar to LCD monitor can be seen on the display.
- Back light sometimes flickers or darkens according to the total consumption hours and the number of ON and OFF switching. In this case, the back light should be replaced. (LCD monitor assembly)

POWER SUPPLY AND GROUND

Power Is Supplied At All Times

- through 15 A fuse [NO.52, located in fuse, fusible link and relay box (J/B)]
- to AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) terminal 2 and 3, and
- to display terminal 21 and 23.

When Ignition Switch is in ACC or ON Position, Power is Supplied

- through 10 A fuse [NO.21, located in fuse block (J/B) NO.1]
- to AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) terminal 6, and
- to display terminal 19, and
- to multifunction switch terminal 1.

When Ignition Switch is in ON or START Position, Power is Supplied

- through 10 A fuse [NO.1, located in fuse block (J/B) NO.1]
- to AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) terminal 27.

Ground is Supplied

- to AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) terminal 1 and 4
- through body grounds B17 and B57, and
- to multifunction switch terminal 2 and
- to display terminal 22 and 24
- through body grounds M24 and M114.

AV COMMUNICATION LINE

AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) is controlled the following unit with AV communication line.

- Display
- Multifunction switch
- Low tire pressure warning control unit

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

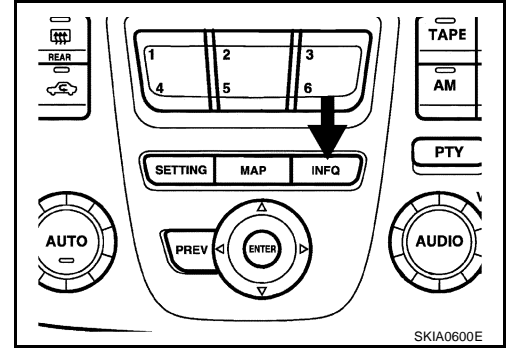
- Audio amp (Bose speaker amp.)
- Rear view camera control unit (with navigation system)
- Voice activated control module

VEHICLE INFORMATION SYSTEM

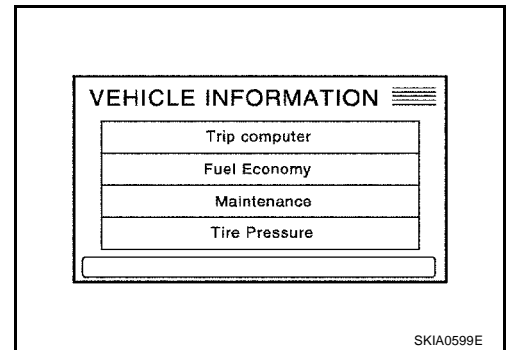
AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) is communicating with BCM and combination meter.

Setting of electric system can be changed by multifunction switch. The signal is sent to BCM through AV and NAVI control unit or AV control unit to change vehicle electric system setting.

1. Press "INFO" switch to display vehicle information display.



2. Select "Trip Computer", "Fuel Economy", "Maintenance" or "Tire pressure".



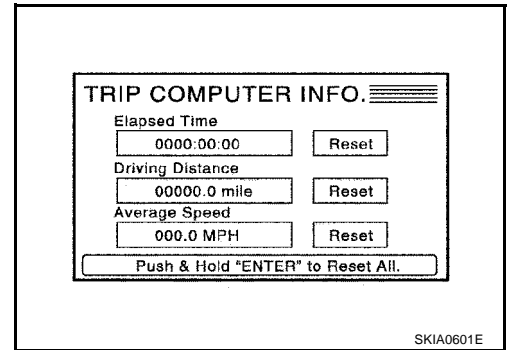
Display items	Display/Setting contents
Trip Computer	Elapsed Time
	Driving Distance
	Average speed
Fuel Economy	Average Fuel Economy (MPG)
	Distance to Empty (Miles)
	Fuel Economy (MPG)
Maintenance (with Maintenance information*)	Maintenance intervals of engine oil and setting of oil change cycle
	Maintenance intervals of oil filter and setting of filter replacement cycle
	Maintenance intervals of tire and setting of tire replacement cycle
Tire Pressure	Tire pressure information.

*:Maintenance information displays the change cycle of engine oil, oil filter and tire on LCD monitor depending on the driving distance specified by a driver or a technician.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

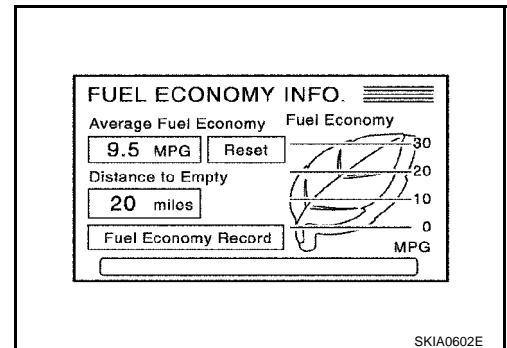
Trip Computer Information

1. Select "Trip Computer"
2. Elapsed time, Driving distance and Average speed are displayed as Trip Computer information.

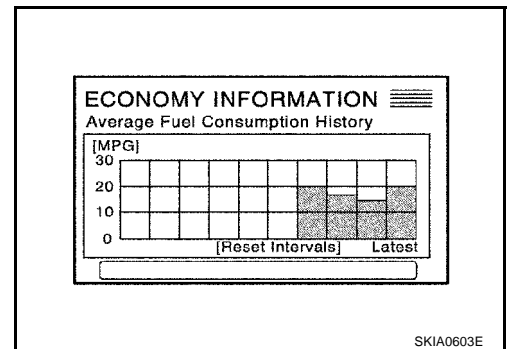


Fuel Economy Information

1. Select "Fuel Economy"
2. Average Fuel Economy, Distance to Empty, Fuel Economy are displayed as Fuel Economy information.

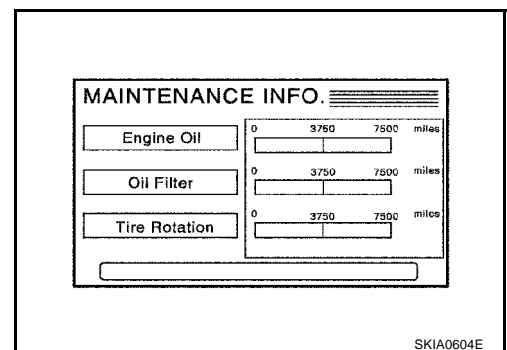


3. Select "Fuel Economy Record". The average fuel consumption history will be displayed in graph along with the average for the previous Reset – to – Reset period.



Maintenance Information

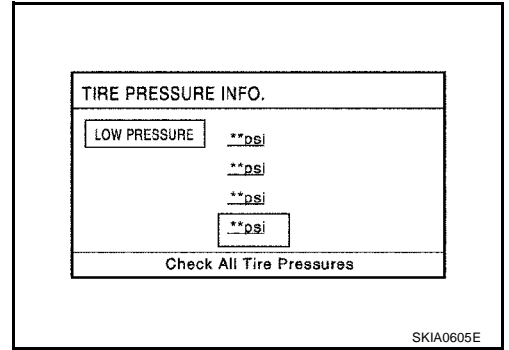
1. Select "Maintenance"
2. Engine Oil, Oil Filter and Tire Rotation are displayed as Maintenance information.



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

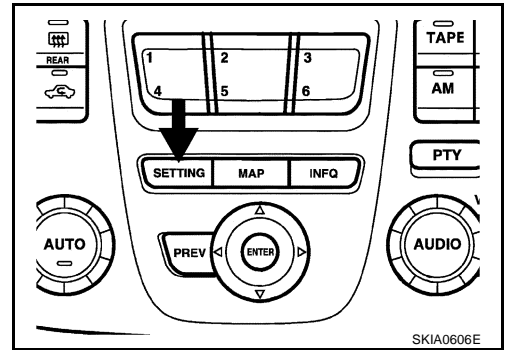
Tire Pressure

1. Select "Tire Pressure"
2. Tire pressure displayed as Tire pressure information

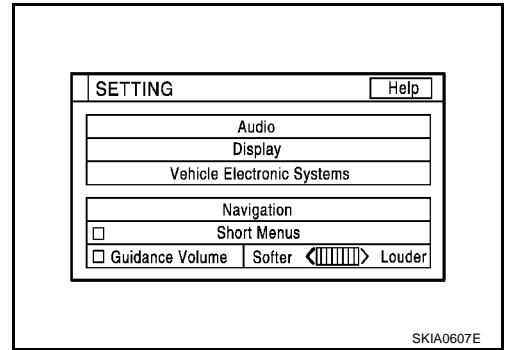


SETTING OF VEHICLE STATUS

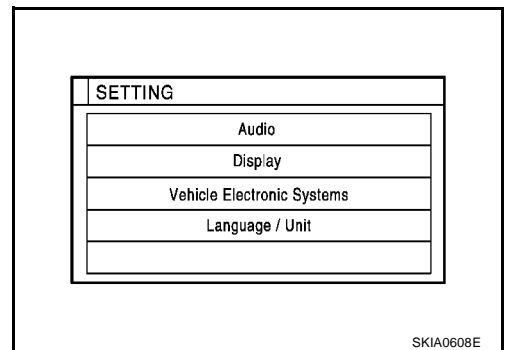
1. Press "SETTING" switch to display vehicle information display.



2. Select "Vehicle Electronic System".
 - with navigation system



- without navigation system



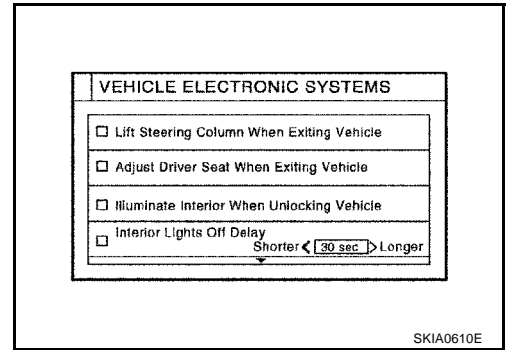
3. Select a vehicle status shown on the display.

A
B
C
D
E
F
G
H
I
J
DI
L
M

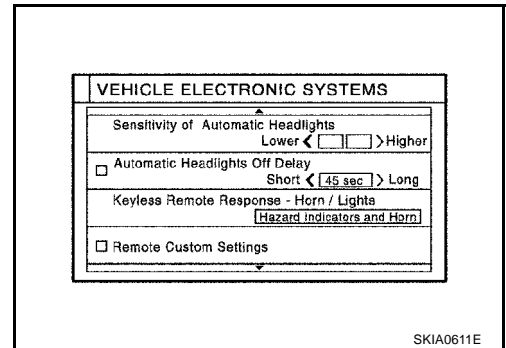
VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Adjustable vehicle status

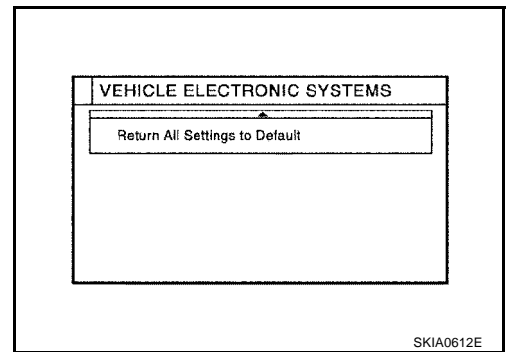
- Lift Steering Column When Exiting Vehicle.
- Adjust Driver Seat When Exiting Vehicle
- Illuminate Interior When Unlocking Vehicle
- Interior Lights Off Delay



- Sensitivity of Automatic Headlights
- Automatic Headlights Off Delay
- Key Remote Response-Horn/Lights
- Remote Custom Settings



- Return All Setting to Default



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Adjustable vehicle status			
Setting items	Setting variations	Initial setting	Operation
Lift Steering Column When Exiting Vehicle.	ON/OFF	ON	<p>If this key is illuminated in green, the steering column automatically tilts up when the driver gets out, and returns to the original position when the driver gets on.</p> <p>Details;</p> <ul style="list-style-type: none"> ● If the door is closed, the steering column tilts up when the ignition key is removed from key cylinder. ● If the door is open, the steering column tilts up when the ignition key is turned to OFF position.
Adjust Driver Seat When Exiting Vehicle	ON/OFF	ON	<p>If this key is illuminated in green, the driver's seat automatically slides backward when the driver gets out, and returns to the original position when the driver gets on.</p> <p>Details; the same as above</p>
Illuminate Interior When Unlocking Vehicle	ON/OFF	ON	<p>If this key is illuminated in green, the interior lights are lit automatically when the door unlocked with a ignition key or a remote controller.</p>
Interior Lights Off Delay	OFF/15/30/45 sec.	30 sec.	<p>If this key is illuminated in green, the interior lights remain on in accordance with length of adjusted time after the driver's door is unlocked, the driver's door closed or the ignition key is removed from the key cylinder.</p>
Sensitivity of Automatic Headlights	1/2/3/4	3	<p>Sensitivity of turning on/off the automatic headlights can be adjusted.</p>
Automatic Headlights Off Delay	OFF/20/45/90/120/150/180 sec.	45 sec.	<p>If this key is illuminated in green, the automatic headlights stay on in accordance with the lights of adjusted time after the ignition key is turned to OFF while headlights switch is in the AUTO position.</p>
Key Remote Response-Horn/Lights	Hazard indicators only /Hazard indicators and horn	15 min.	<p>Hazard indicators Only;</p> <ul style="list-style-type: none"> ● Locking doors: The hazard indicators flash twice when lock the doors by using the remote controller. ● Unlocking doors: No response. <p>Hazard indicators and horn;</p> <ul style="list-style-type: none"> ● Locking doors: The hazard indicators flash twice and horn sounds once when lock the doors by using the remote controller. ● Unlocking doors; The hazard indicators flash once when unlock the doors by using the remote controller.

A
B
C
D
E
F
G
H
I
J
DI
L
M

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Setting items	Setting variations	Initial setting	Operation
Remote Custom Settings	ON/OFF	ON	<p>If this key is illuminated in green, the driving position -seat and steering column- and the audio setting -current source and radio station presets- are set to the same condition you made last time by identifying the remote controller ID.</p> <p>This function operates when unlock the doors by using the remote controller.</p> <p>NOTE: It is necessary to memorize the driving position before using this function</p>
Return All Settings to Default	non	non	If this key is selected, all vehicle electronic systems setting are return to default.

WARNING INDICATIONS

When combination meter receives warning signal from some control units or sensors, then combination meter warning lamp is illuminated.

Then combination meter sends warning signal to AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) to display warning indications on the screen.

Warning indicators	Warning lamps in instrument panel	Warning detection and cancel conditions		Cases of malfunction
MALFUNCTION	SERVICE ENGINE SOON	Detection condition	Warning lamp ON signal is detected while engine is running.	ECM malfunction
		Cancel condition	Warning lamp OFF signal is detected.	
ENGINE OIL PRESSURE	Engine oil pressure	Detection condition	Warning lamp ON signal is detected for at least approx. 5 seconds while engine is running. [Engine oil pressure: MAX. approx.29kPa(0.3 kg/cm ² ,4psi)]	Engine oil pressure decreases.
		Cancel condition	Warning lamp OFF signal is detected. [Engine oil pressure: MIN. approx.29kPa(0.3kg/cm ² ,4psi)]	
SUPPLEMENTAL AIR BAG	Air bag	Detection condition	Warning lamp ON signal is detected for at least approx. 10 seconds after ignition switch is turned ON.	SRS air bag system malfunction
		Cancel condition	Warning lamp OFF signal is detected.	
LOW BRAKE FLUID	Brake	Detection condition	Warning lamp ON signal (fluid level) is detected.	Low brake fluid level
		Cancel condition	Warning lamp OFF signal is detected.	
OVERHEATING	-	Detection condition	Engine coolant temperature as being approx. 119°C (246°F) min.	Engine cooling system malfunction
		Cancel condition	engine coolant temperature as being approx. 105°C(221°F) max.	
CHARGE	Charge	Detection condition	Warning lamp ON signal is detected while engine is running. Charging system malfunction	Charging system malfunction
		Cancel condition	Warning lamp OFF signal is detected.	

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Warning indicators	Warning lamps in instrument panel	Warning detection and cancel conditions		Cases of malfunction	
LOW WASHER FLUID	-	Detection condition	Washer liquid level falls below approx. 0.4 ℓ.(7/8USqt,3/4 Imp pt)	Low washer liquid level	A
		Cancel condition	Except above condition.		B
LOW FUEL	Fuel level	Detection condition	After warning lamp ON signal is detected, vehicle is driven for over specified distance. (Fuel level: Approx. 14.0 ℓ 14-3/4 USqt,12-3/8 Imp pt)	Low fuel level	C
		Cancel condition	Warning lamp OFF signal is detected.		D
PARKING BRAKE	Brake	Detection condition	Parking brake ON signal is detected while vehicle is running [approx. 5 km/h(3MPH)or faster].	Parking brake remains engaged.	E
		Cancel condition	Vehicle is stopped, or parking brake OFF signal is detected.		F
DOOR OPEN	Door	Detection condition	Vehicle is running [approx. 5 km/h(3MPH) or faster] and door ajar of any of the doors is detected.	Door is open	G
		Cancel condition	Vehicle is stopped and all the doors lock.		H
ANTI-LOCK BRAKE	ABS	Detection condition	Warning lamp ON signal is detected when engine is running.	ABS control system malfunction	I
		Cancel condition	Warning lamp OFF signal is detected.		J
VEHICLE DYNAMIC CONTROL	VDC	Detection condition	Warning lamp ON signal is detected when engine is running.	VDC system malfunction	
		Cancel condition	Warning lamp OFF signal is detected.		
AUTOMATIC TRANSMISSION OIL TEMPERATURE	AT CHECK	Detection condition	Warning lamp ON signal is detected after ignition switch is turned ON.	TCM system malfunction	DI
		Cancel condition	Warning lamp OFF signal is detected.		L
TIRE PRESSURE	Tire Pressure	Detection condition	Warning lamp ON signal is detected after ignition switch is turned ON.	Low tire pressure warning control unit system malfunction	M
		Cancel condition	Warning lamp OFF signal is detected.		
CRUISE CONTROL	SET	Detection condition	Warning lamp ON signal is detected after ignition switch is turned ON.	ASCD system malfunction	
		Cancel condition	Warning lamp OFF signal is detected.		

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Precautions for AV and NAVI Control Unit or AV Control Unit Replacement

EKS001R8

- When replacing the AV and NAVI control unit, eject the map DVD-ROM before disconnecting the battery.
- The AV and NAVI control unit or AV control unit has the following information stored in its memory. Record the memory contents before replacing the control unit, and input them in the new unit as necessary.

<FM-AM>

- Preset frequency
- Area for indicating station, selection of overlapped stations

<CD>

- Program status

<Sound quality>

- Volume balance memory set values
- Equalizer memory set values

<Image quality>

- Brightness of light when ON/OFF
- Dimming switching
- Display color switching

**<Navigation mode>
(With navigation system)**

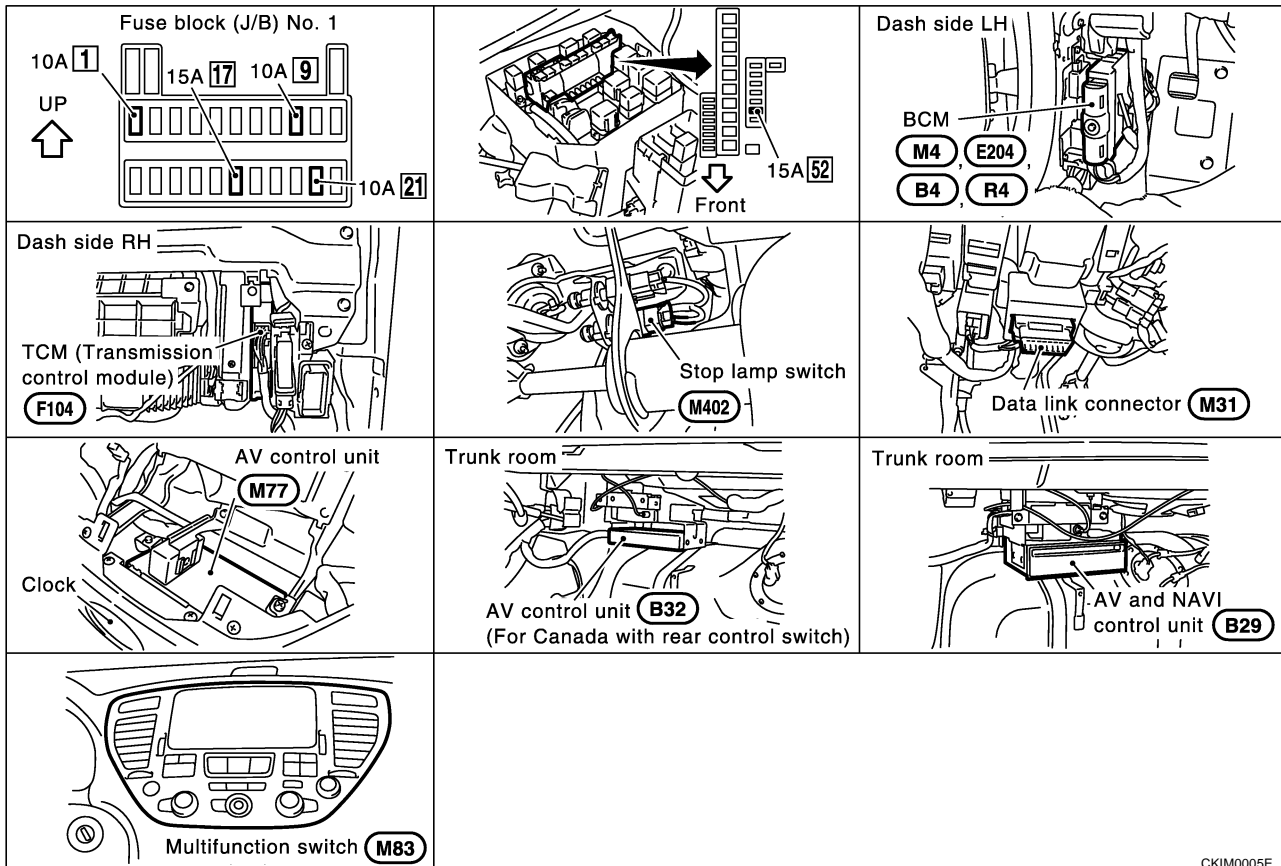
- Latest status (map screen/bird view™, reduced scale, rotation angle of map screen, route guide ON/OFF, track ON/OFF, etc.)
- Current position
- Destination, passing point 1 - 5
- Registered places, their names, etc.

NOTE:

Only removing the battery does not erase the memory.

Component Parts and Harness Connector and Harness Connector Location

EKS001JU



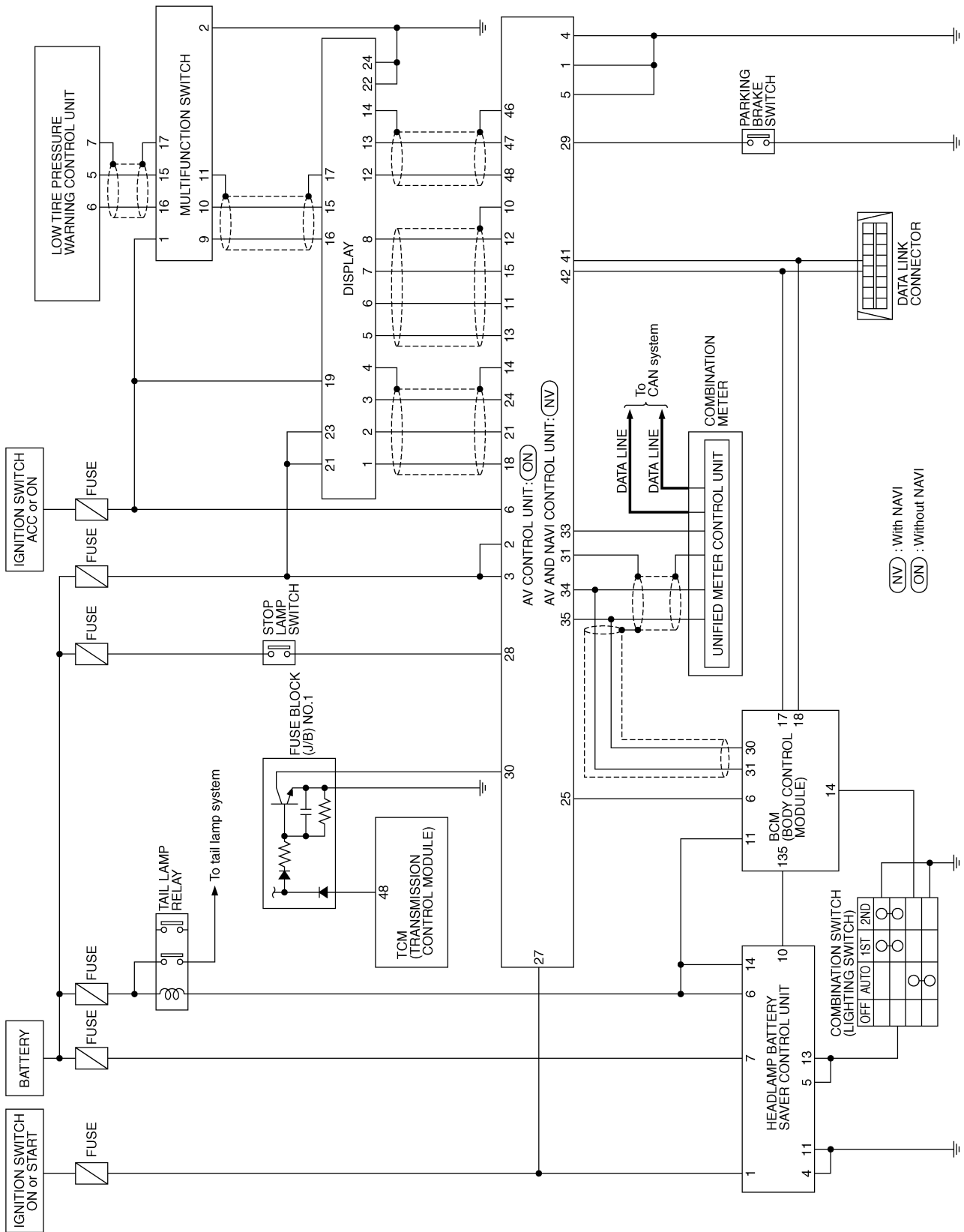
CKIM0005E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Schematic

EKS00188

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



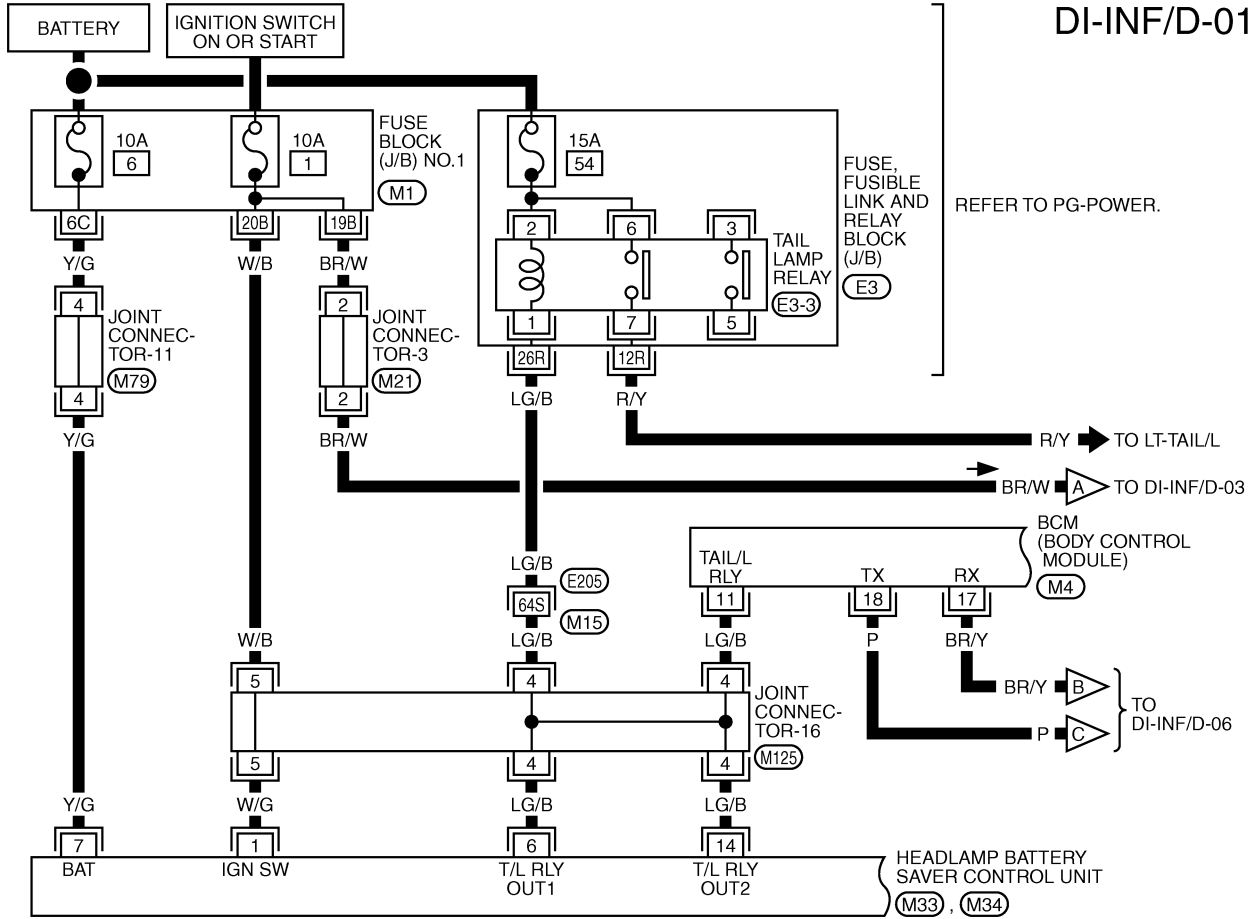
TKWM0077E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Wiring Diagram — INF/D — without Navigation System and For CANADA without Rear Control Switch

EKS001BT

DI-INF/D-01

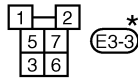
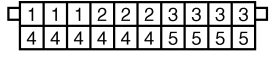
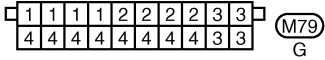
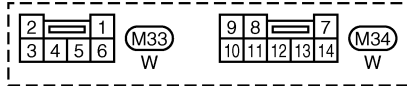
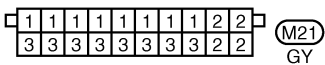


REFER TO PG-POWER.

TO LT-TAIL/L
TO DI-INF/D-03

BCM (BODY CONTROL MODULE) (M4)
TO DI-INF/D-06

HEADLAMP BATTERY SAVER CONTROL UNIT (M33, M34)



REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)
- (M4) -ELECTRICAL UNITS

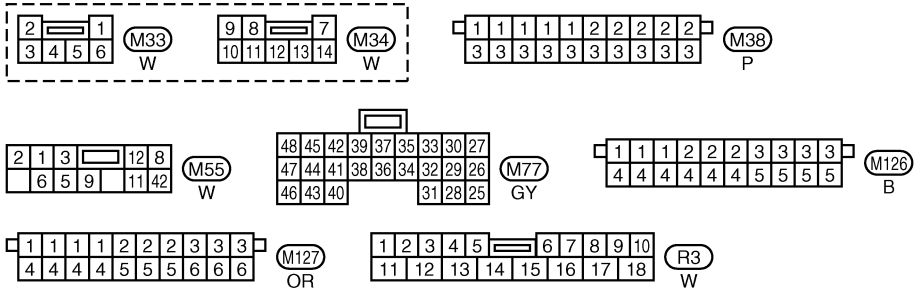
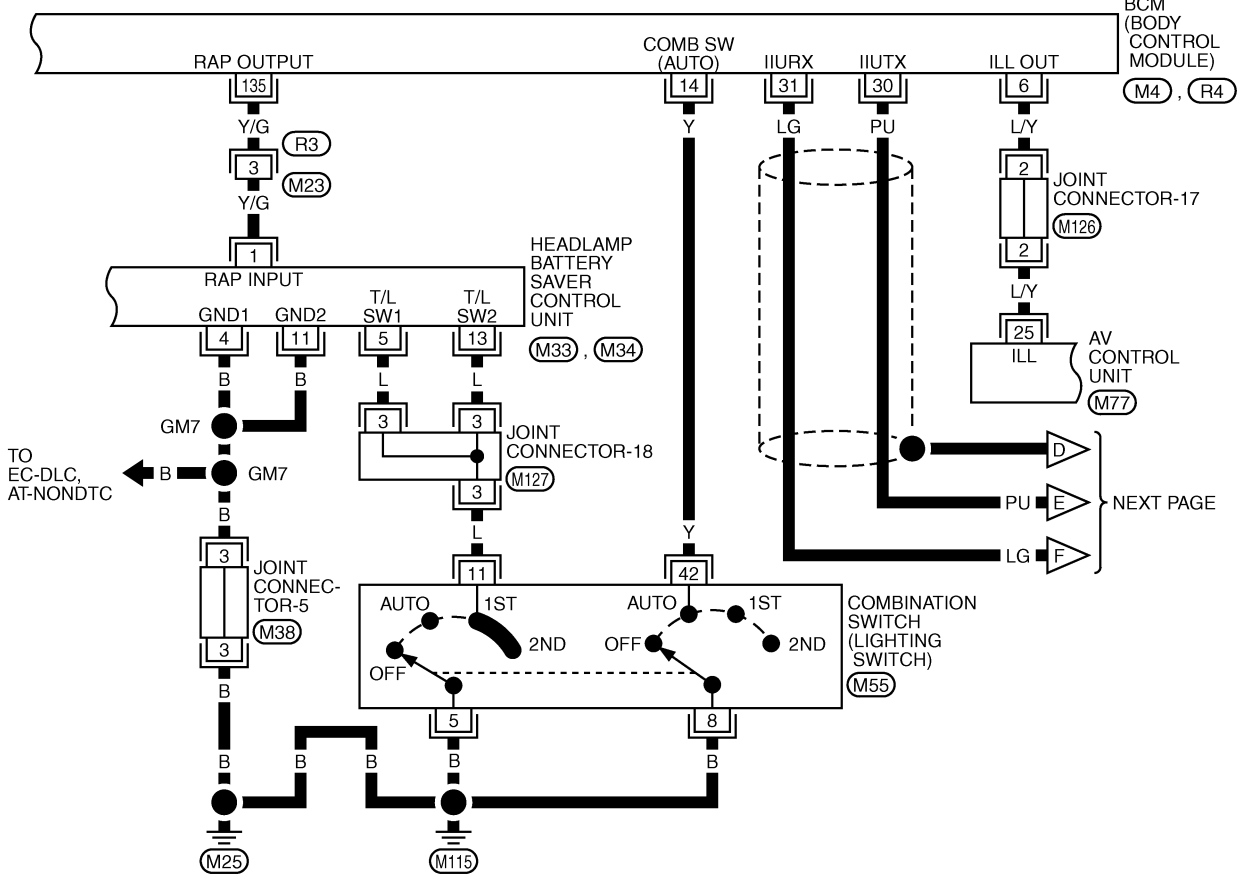
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWM0079E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-02

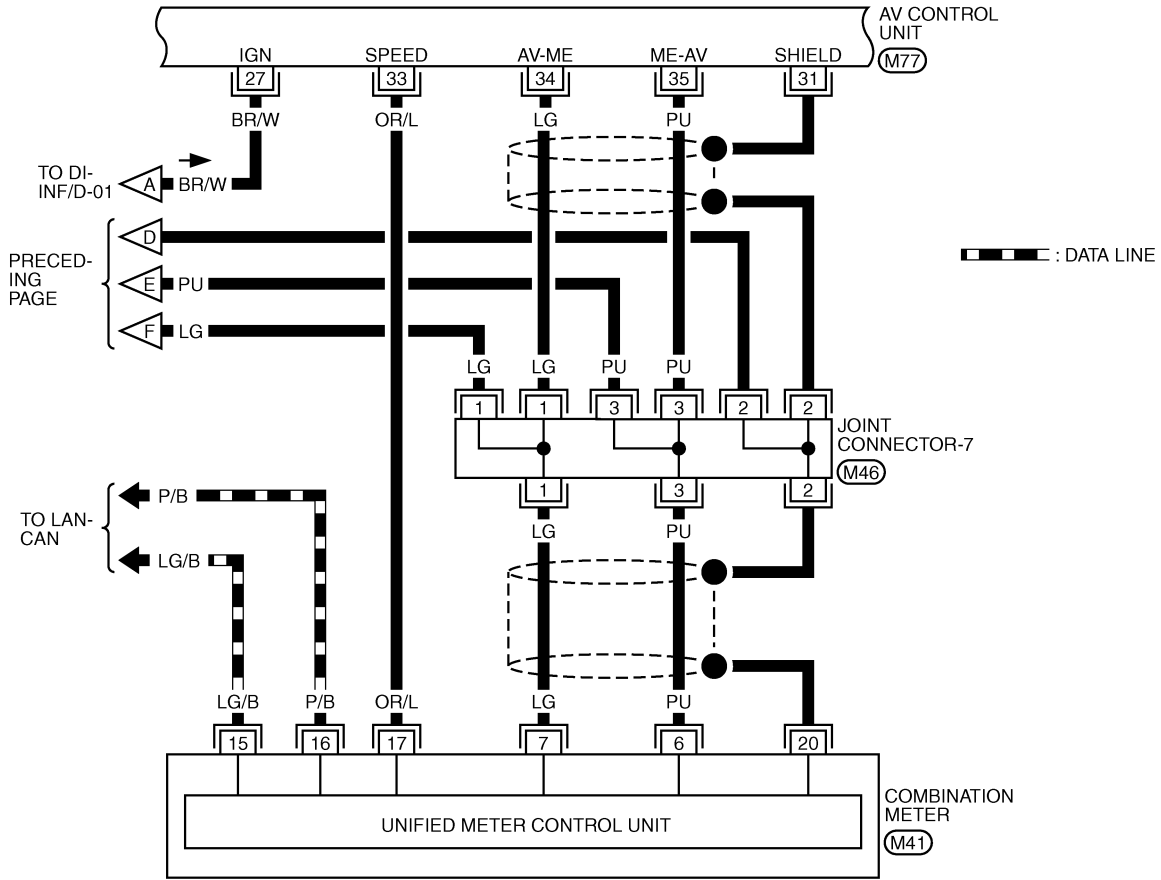
A
B
C
D
E
F
G
H
I
J
DI
L
M



REFER TO THE FOLLOWING.
 (M4), (R4) -ELECTRICAL UNITS

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-03



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

(M41) BR

1	1	1	2	2	2	3	3	3	3
4	4	4	4	4	4	5	5	5	5

(M46) B

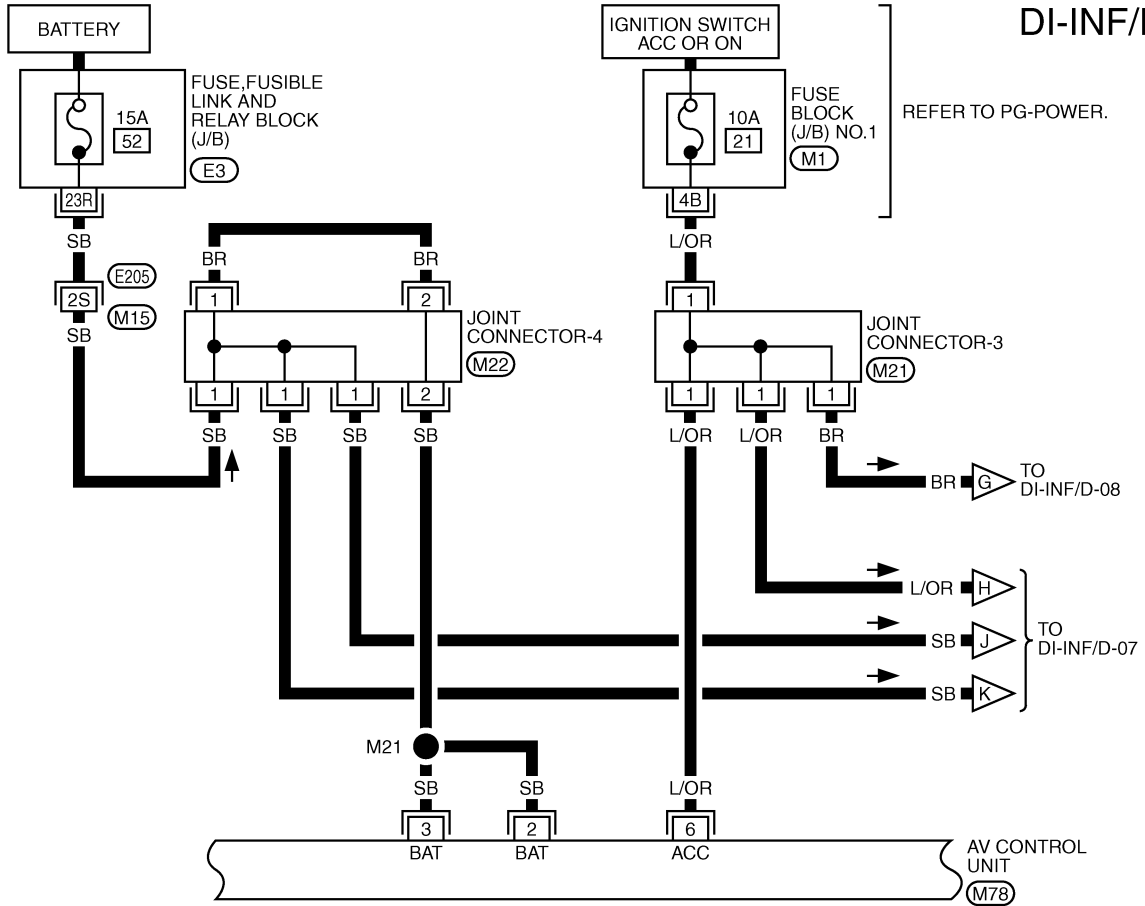
48	45	42	39	37	35	33	30	27
47	44	41	38	36	34	32	29	26
46	43	40				31	28	25

(M77) GY

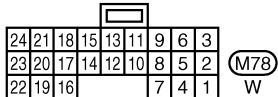
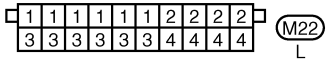
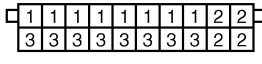
TKWM0081E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-04



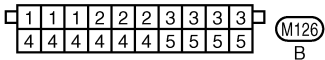
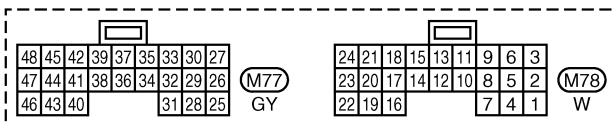
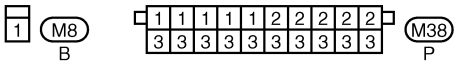
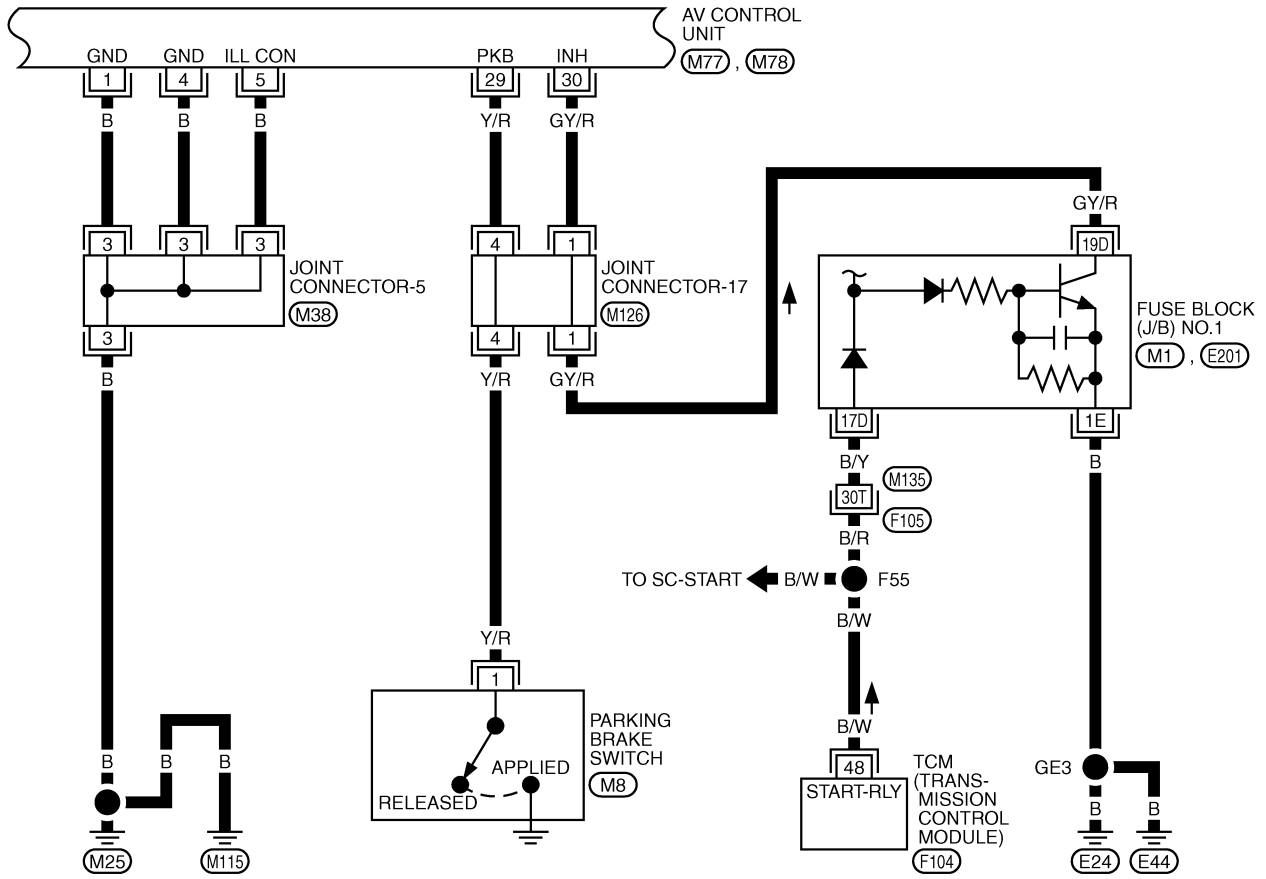
A
B
C
D
E
F
G
H
I
J
L
M



REFER TO THE FOLLOWING.
 (E205) -SUPER MULTIPLE JUNCTION (SMJ)
 (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
 (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)

DI

TKWM0082E



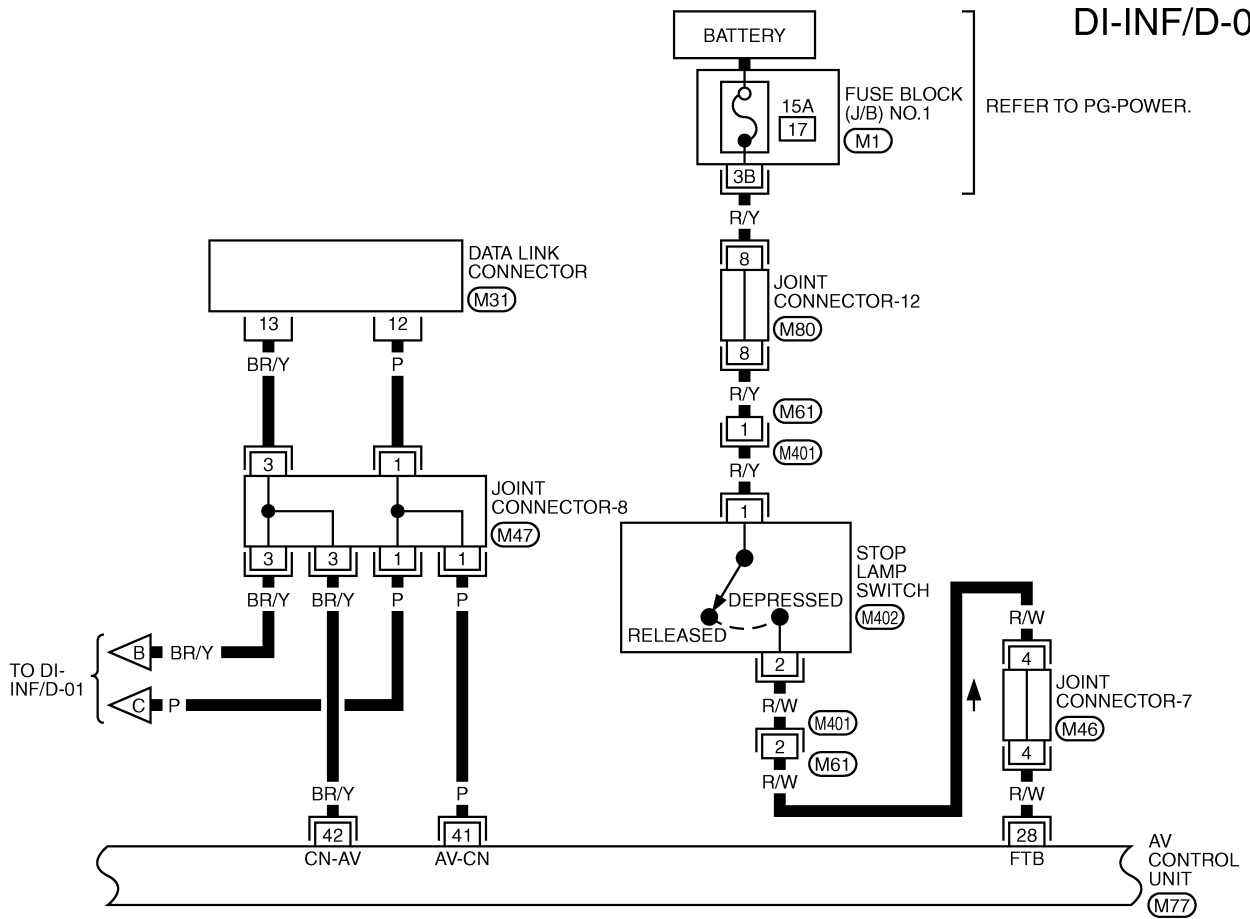
REFER TO THE FOLLOWING.

- (F105) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1, E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (F104) -ELECTRICAL UNITS

TKWM0083E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

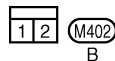
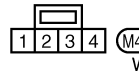
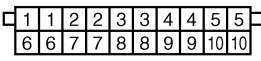
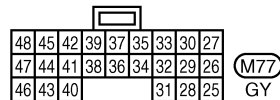
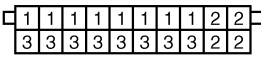
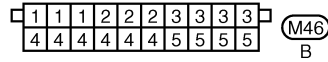
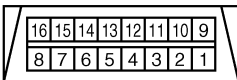
DI-INF/D-06



REFER TO PG-POWER.

TO DI-INF/D-01

AV CONTROL UNIT (M77)



REFER TO THE FOLLOWING.

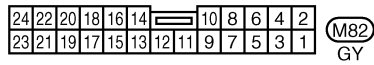
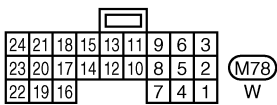
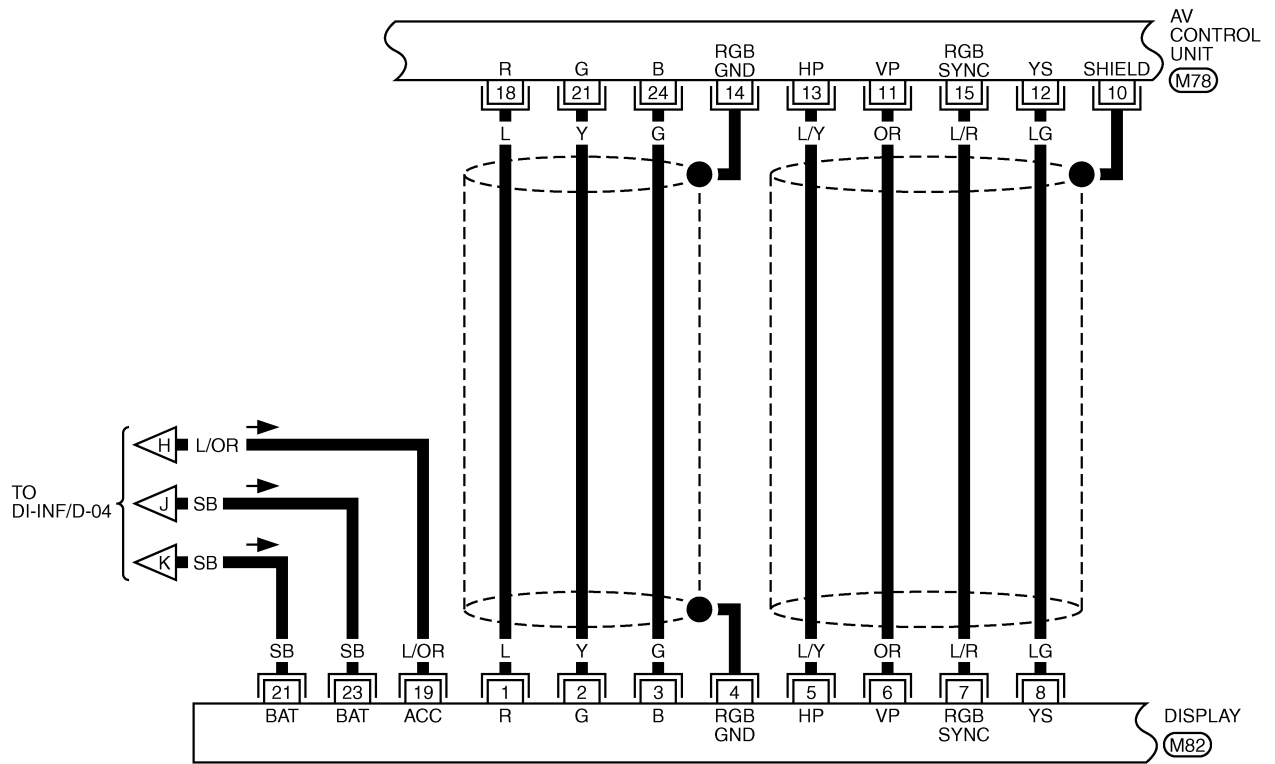
(M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

A
B
C
D
E
F
G
H
I
J
L
M

DI

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

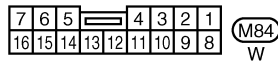
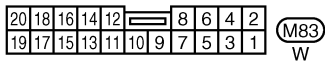
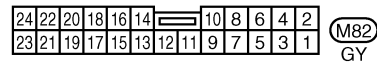
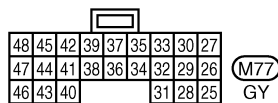
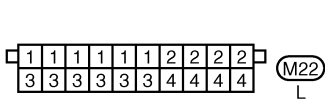
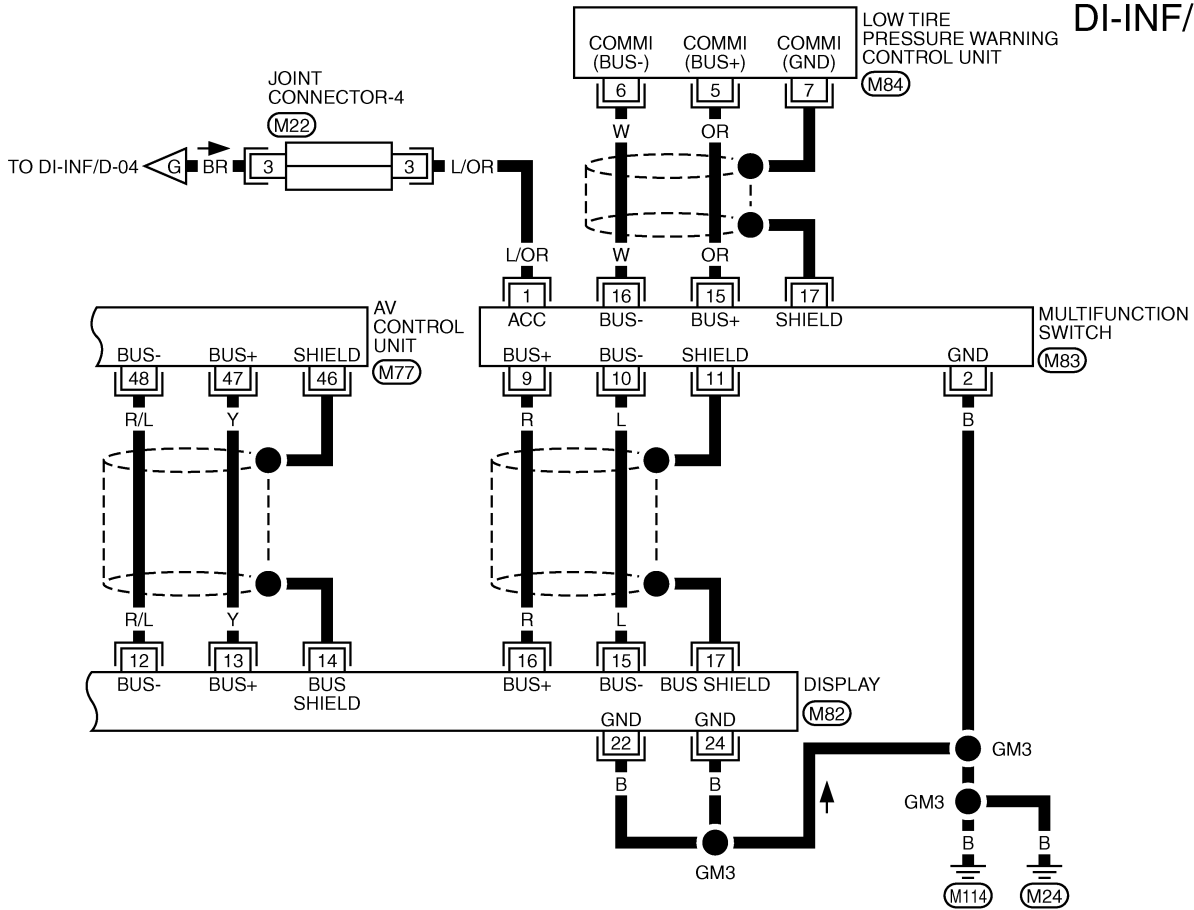
DI-INF/D-07



TKWM0086E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-08



A
B
C
D
E
F
G
H
I
J
L
M

DI

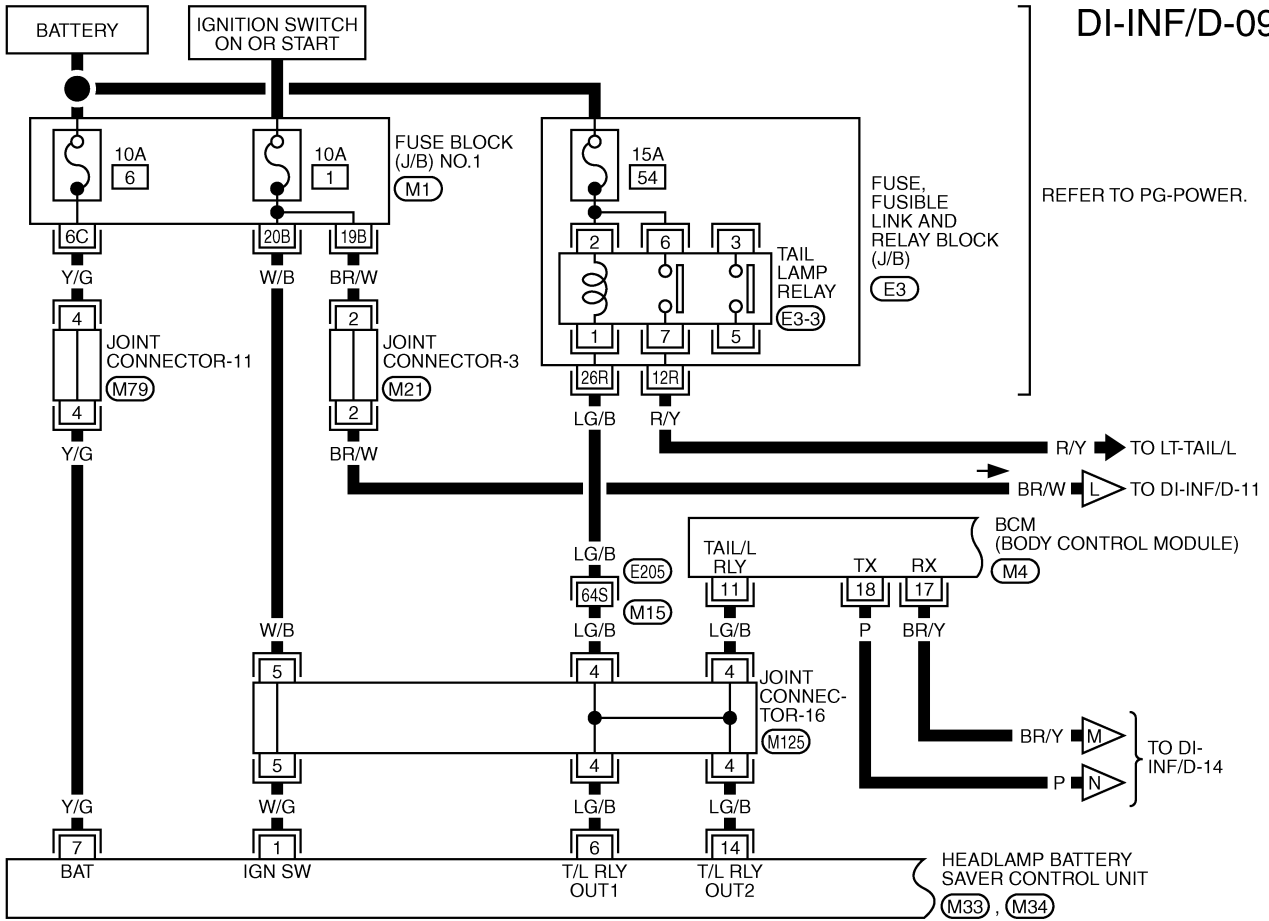
TKWM0087E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Wiring Diagram — INF/D — with Navigation System For CANADA with Rear Control Switch

EKS001BU

DI-INF/D-09



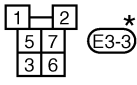
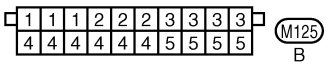
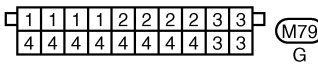
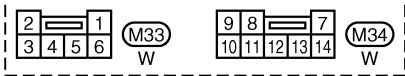
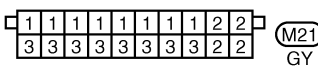
REFER TO PG-POWER.

TO LT-TAIL/L
TO DI-INF/D-11

BCM (BODY CONTROL MODULE) (M4)

TO DI-INF/D-14

HEADLAMP BATTERY SAVER CONTROL UNIT (M33), (M34)



REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)
- (M4) -ELECTRICAL UNITS

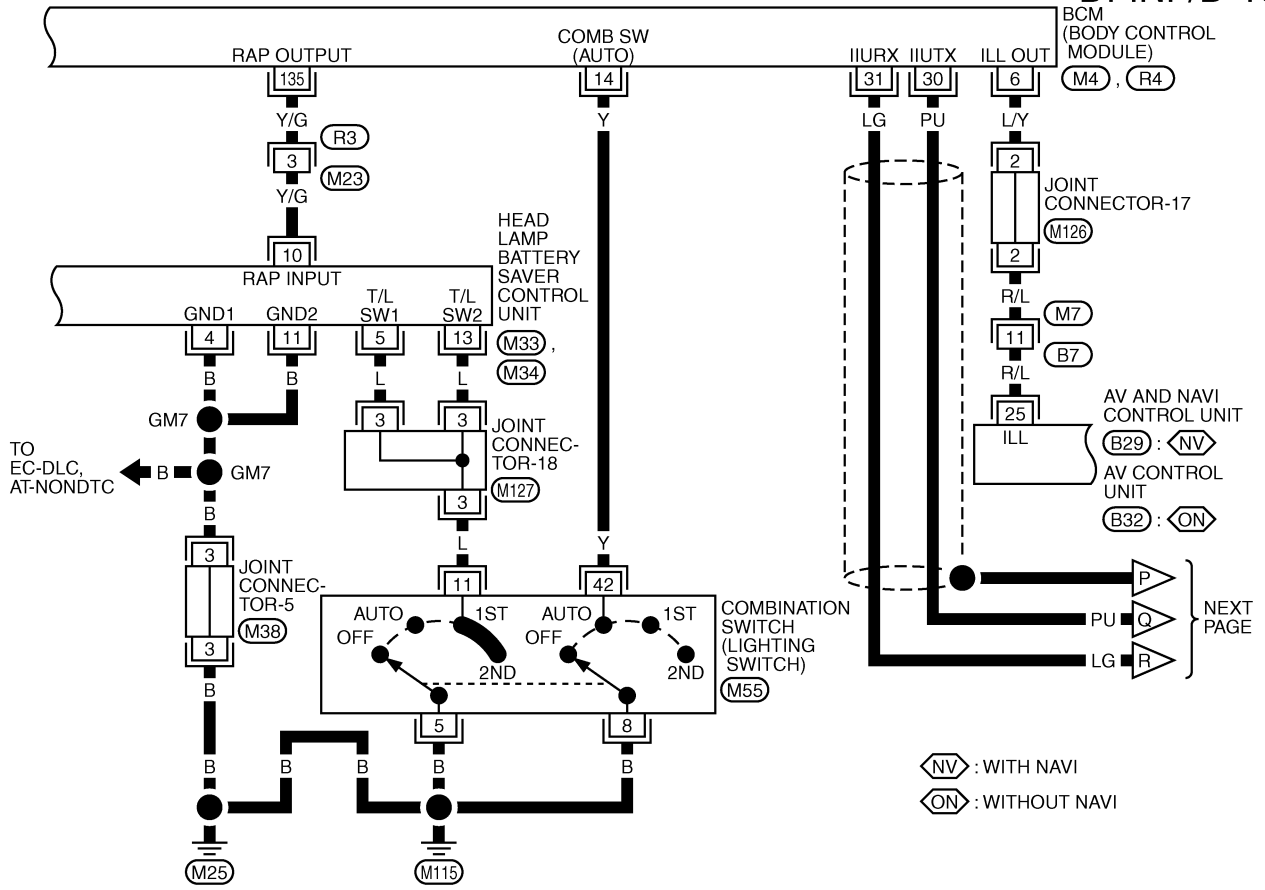
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

TKWWM0088E

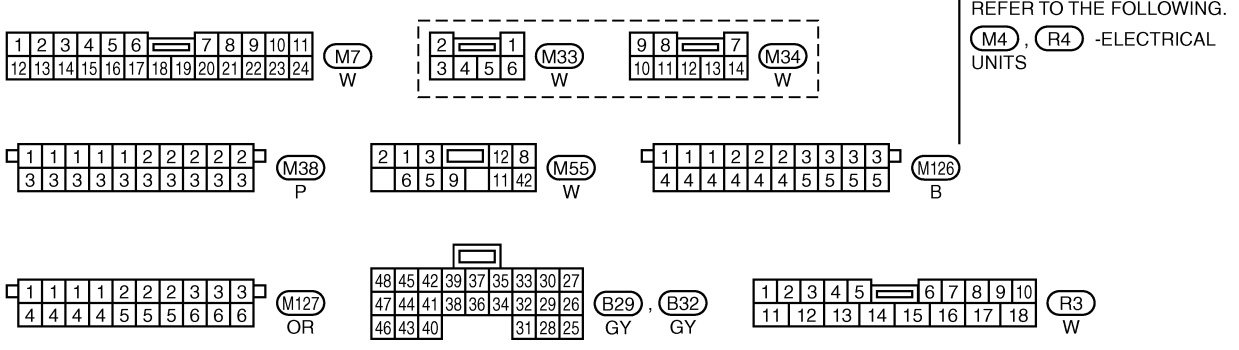
VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-10

A
B
C
D
E
F
G
H
I
J
L
M



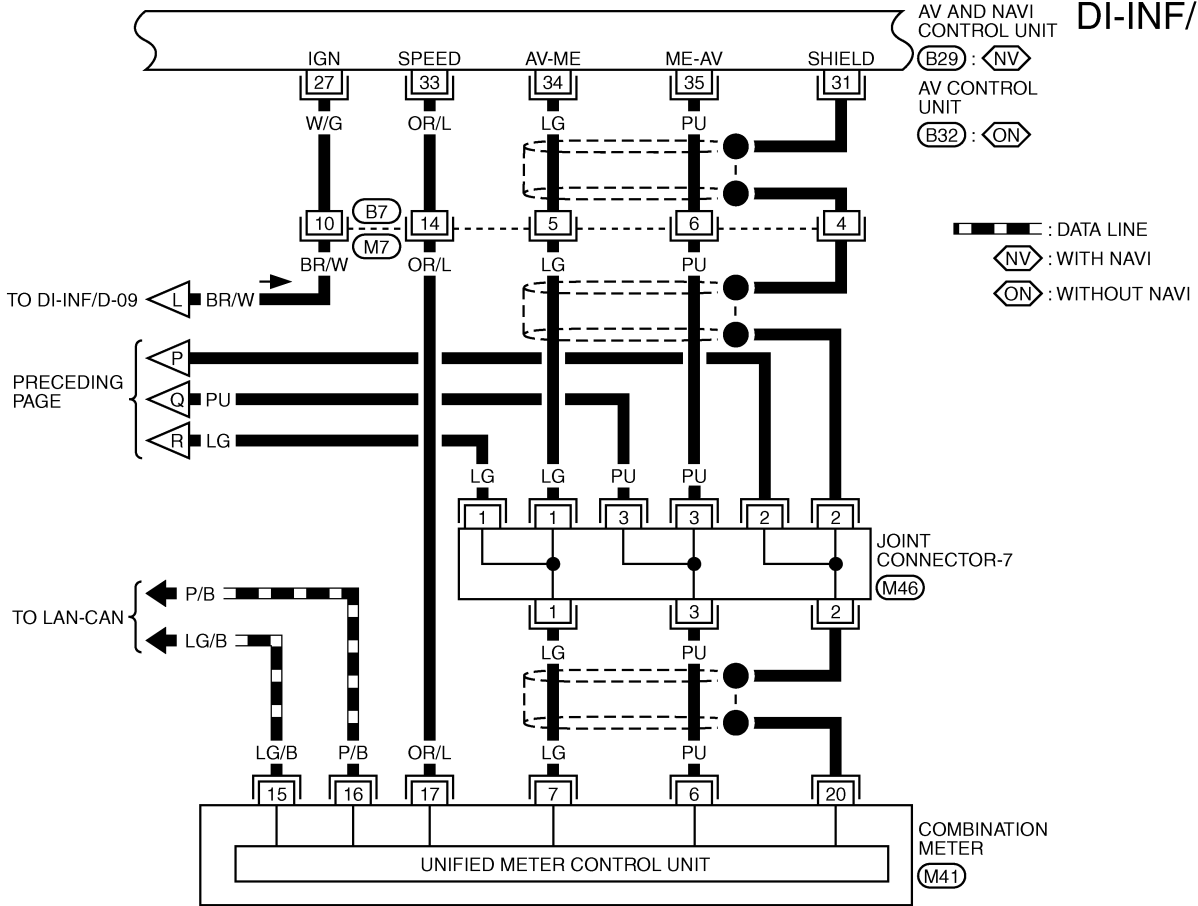
NEXT PAGE
P
Q
R



TKWMO089E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-11



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

(M7) W

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

(M41) BR

1	1	1	2	2	2	3	3	3
4	4	4	4	4	4	5	5	5

(M46) B

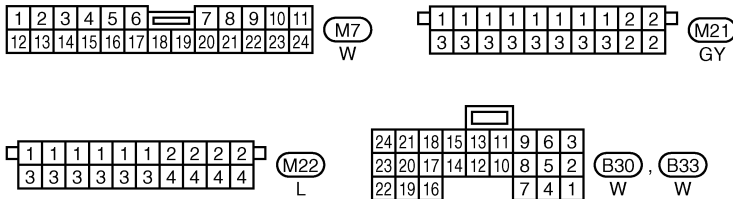
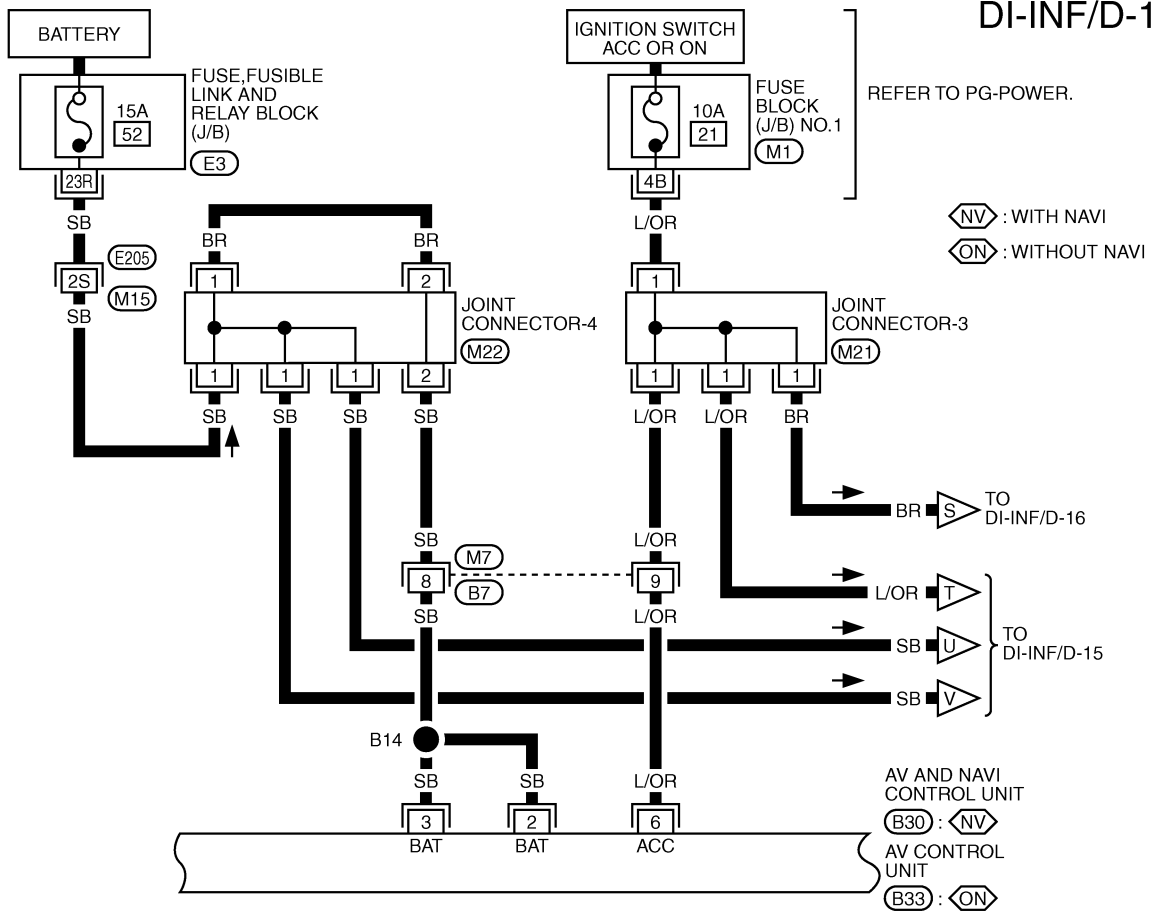
48	45	42	39	37	35	33	30	27
47	44	41	38	36	34	32	29	26
46	43	40				31	28	25

(B29) GY, (B32) GY

TKWM0090E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-12



REFER TO THE FOLLOWING.

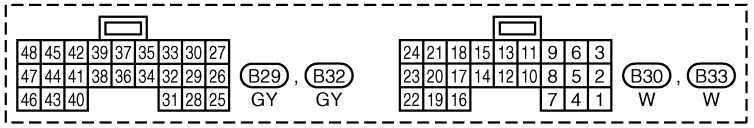
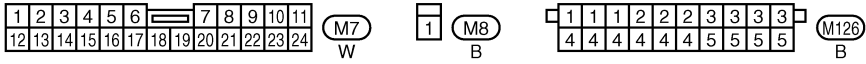
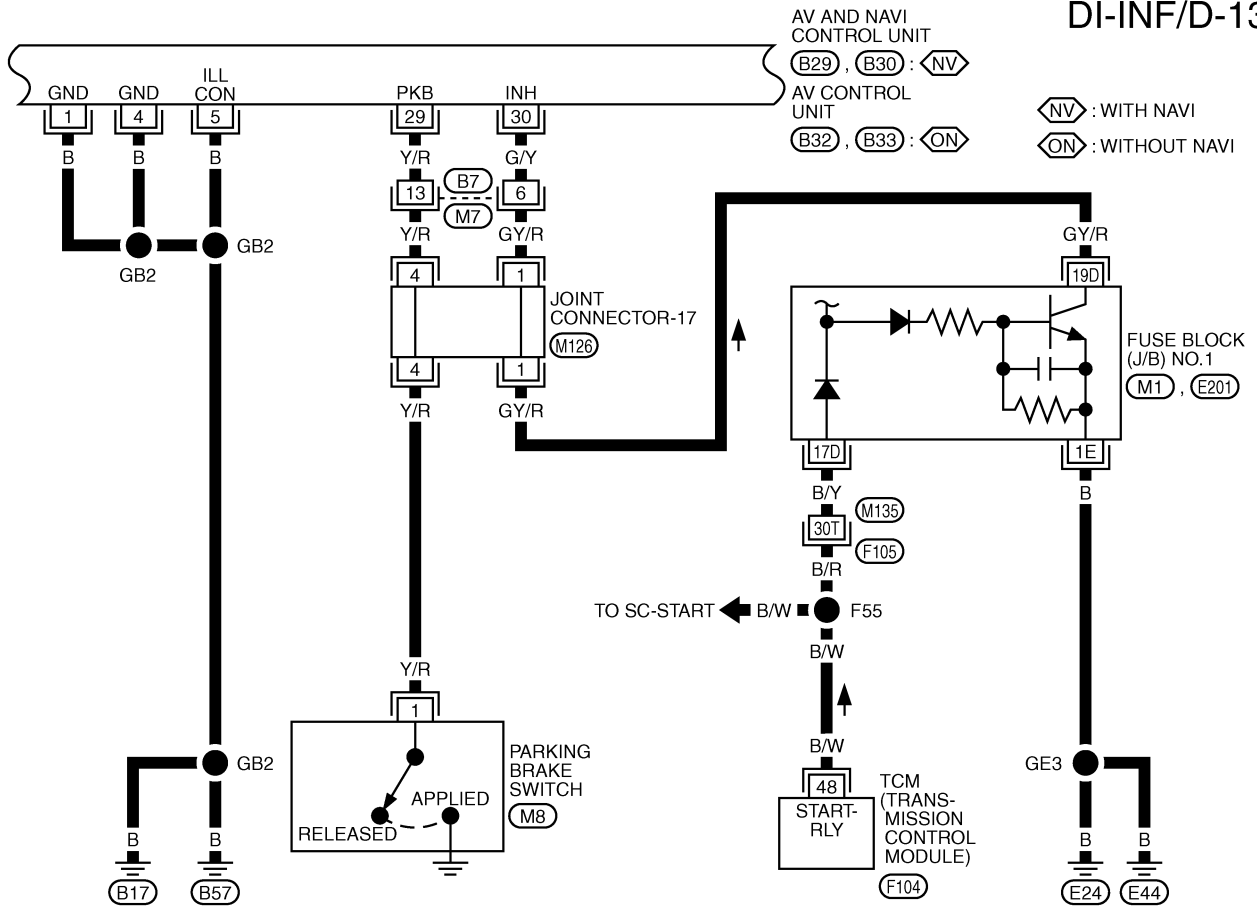
- E205 -SUPER MULTIPLE JUNCTION (SMJ)
- M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- E3 -FUSE, FUSIBLE LINK AND RELAY BLOCK (J/B)

TKWM0091E

A
B
C
D
E
F
G
H
I
J
DI
L
M

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-13



REFER TO THE FOLLOWING.

(F105) -SUPER MULTIPLE JUNCTION (SMJ)

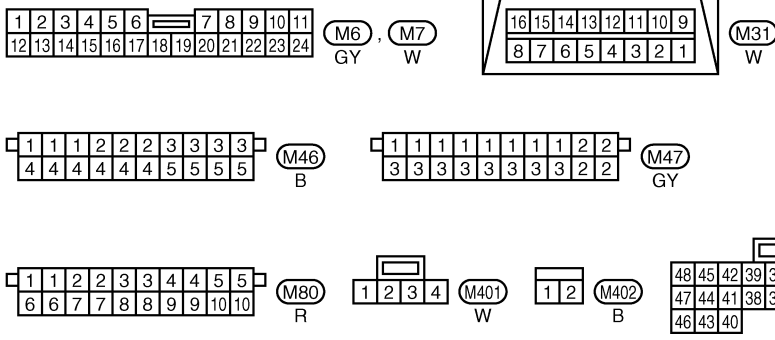
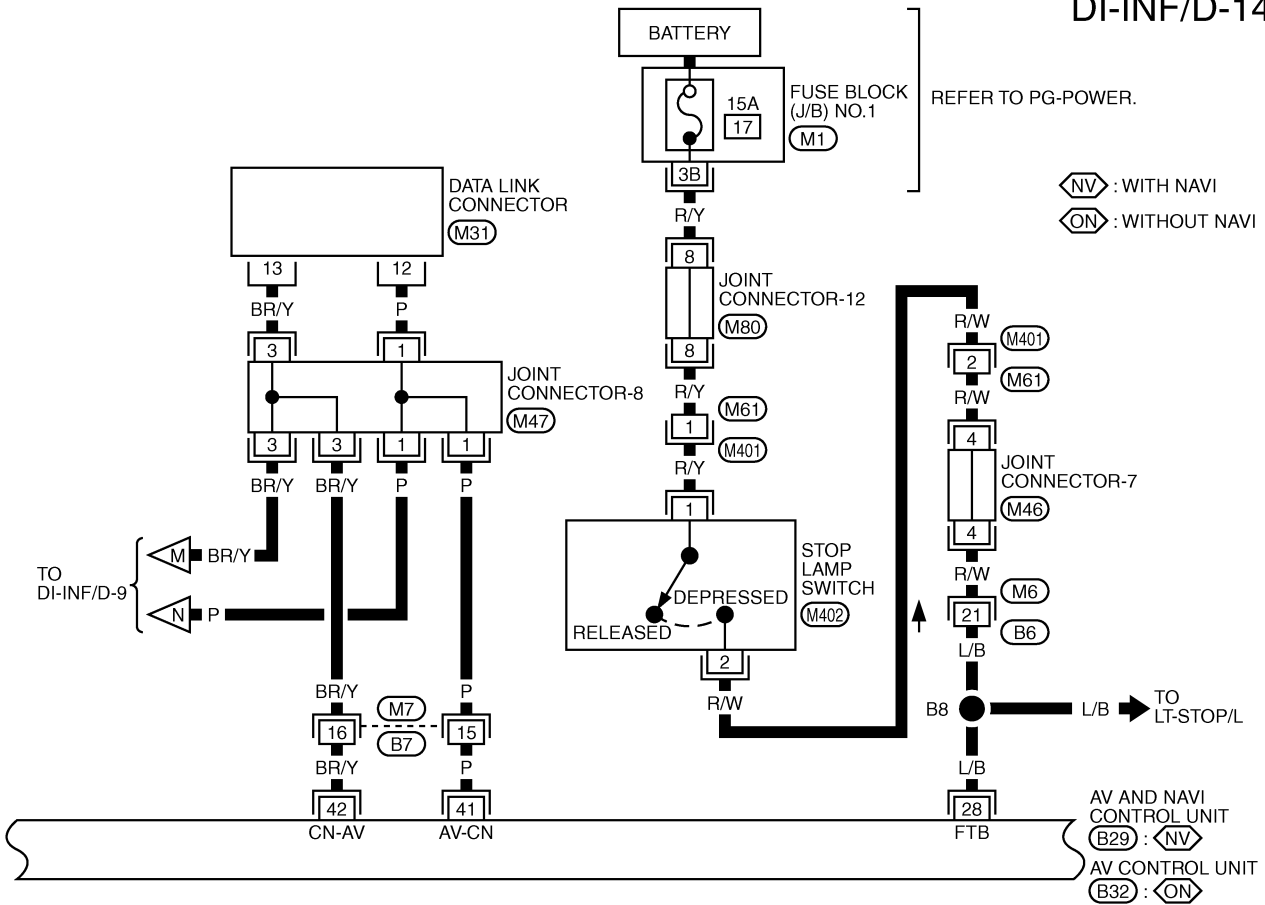
(M1), (E201) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

(F104) -ELECTRICAL UNITS

TKWM0092E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-14

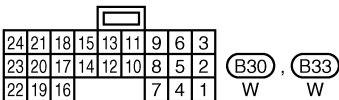
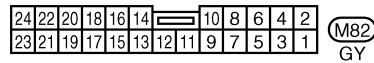
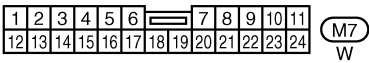
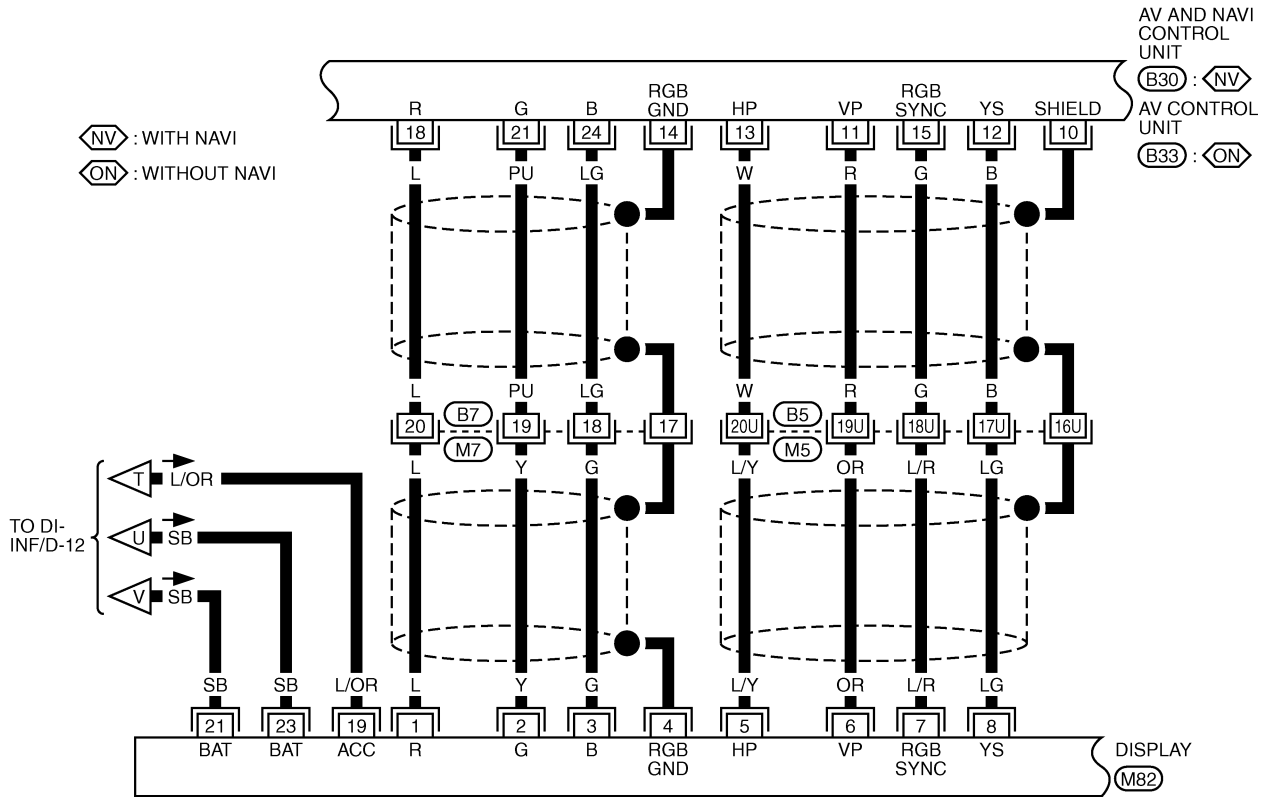


REFER TO THE FOLLOWING.
 M1 - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWM0173E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

DI-INF/D-15

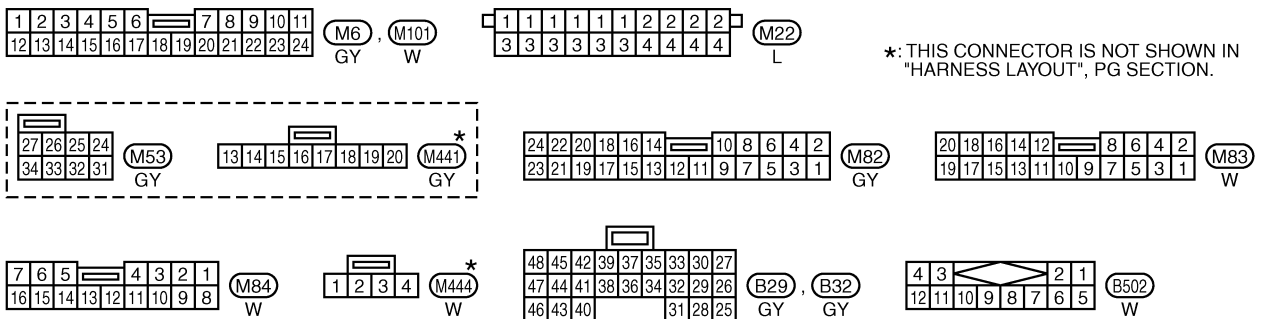
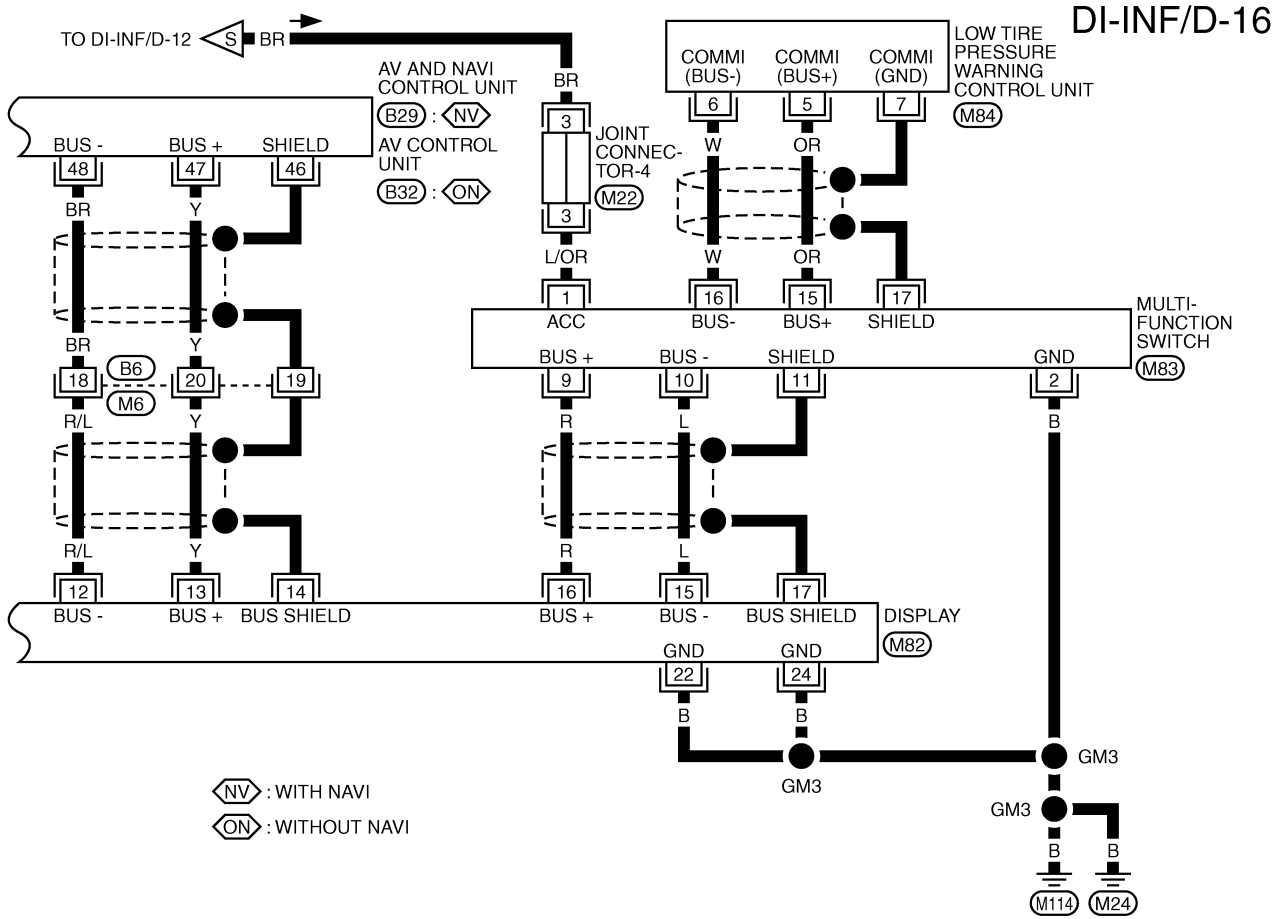


REFER TO THE FOLLOWING.

(M5) -SUPER MULTIPLE JUNCTION (SMJ)

TKWM0178E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM



TKWM0179E

Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit

EKS001JJ

*1:With navigation system and For CANADA with rear control switch.

*2:Without navigation system and For CANADA without rear control switch.

TERMINALS			SIGNAL	SIGNAL INPUT/OUTPUT	CONDITION		VOLTAGE	EXAMPLE OF SYMPTOM
TERMINAL	WIRE COLOR	(+)			IGNITION SWITCH	OPERATION		
			1	(B)			ground	Ground

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

TERMINALS			SIGNAL	SIGNAL INPUT/OUTPUT	CONDITION		VOLTAGE	EXAMPLE OF SYMPTOM
(+)		(-)			IGNITION SWITCH	OPERATION		
TERMINAL	WIRE COLOR							
2	(SB)	ground	Battery power	Input	OFF	—	Battery voltage	System does not work properly.
3	(SB)							
4	(B)	ground	Ground	—	ON	—	Approx. 0 V	—
5	(B)	ground	Illumination ground	—	ON	—	Approx. 0 V	—
6	(L/OR)	ground	ACC signal	Input	ACC	—	Battery voltage	System does not work properly.
10	—	ground	RGB Ground	—	ON	—	Approx. 0 V	—
11	(R):*1 (OR):*2	10	Vertical synchronizing signal	Input	ON	—	<p style="text-align: center;">signal - 2</p>	Superimposed screen is rolling.
12	(B):*1 (LG):*2	10	RGB area signal	Output	ON	Press the "info" switch.	<p style="text-align: center;">signal - 7</p>	RGB screen is not shown.
13	(W):*1 (L/Y):*2	10	Horizontal synchronizing signal	Input	ON	Adjust sound volume while rear view screen is shown.	<p style="text-align: center;">signal - 6</p>	RGB screen is not shown.
14	—	ground	shield ground	—	—	—	—	—
15	(G):*1 (L/R):*2	10	RGB synchronizing signal	Output	ON	Press the "MAP" switch.	<p style="text-align: center;">signal - 5</p>	RGB screen is rolling.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

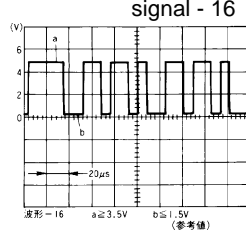
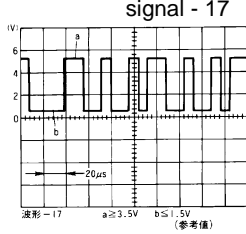
TERMINALS			SIGNAL	SIGNAL INPUT/OUTPUT	CONDITION		VOLTAGE	EXAMPLE OF SYMPTOM
(+)		(-)			IGNITION SWITCH	OPERATION		
TERMINAL	WIRE COLOR							
18	(L)	14	RGB signal (R: red)	Output	ON	Select "SCREEN ADJUSTMENT" of CONFIRMATION/ADJUSTMENT function.	<p style="font-size: small;">波形-1 0.6V ≦ a ≦ 0.8V (参考値) SKIA0165J</p>	RGB screen looks bluish.
21	(PU)	14	RGB signal (G: green)	Output	ON	Select "SCREEN ADJUSTMENT" of CONFIRMATION/ADJUSTMENT function.	<p style="font-size: small;">波形-3 0.6V ≦ a ≦ 0.8V (参考値) SKIA0166J</p>	RGB screen looks reddish.
24	(LG)	14	RGB signal (B: blue)	Output	ON	Select "SCREEN ADJUSTMENT" of CONFIRMATION/ADJUSTMENT function.	<p style="font-size: small;">波形-4 0.6V ≦ a ≦ 0.8V (参考値) SKIA0167J</p>	RGB screen looks yellowish.
25	(R/L)	ground	Illumination control signal	Input	ON	Lighting switch ON (position 1st)	Approx. 3.5V or more	Screen does not switch between daytime mode and nighttime mode.
						Optical sensor is exposed to light.	Approx. 1.5V or less	
27	(W/B):*1 (BR/W):*2	ground	Ignition signal	Input	ON	—	Battery voltage	A/C operation is not possible. Vehicle information setting is not possible.
28	(L/B):*1 (R/W):*2	ground	Brake signal	Input	OFF	Depress brake pedal.	Battery voltage	Vehicle running/stopped judgment is not correct.
						Release brake pedal.	Approx. 3.0V or less	
29	(Y/R)	ground	Parking Brake signal	Input	ON	Parking brake pedal is depressed.	Approx. 1.5V or less	Vehicle running/stopped judgment is not correct.
						Parking brake pedal is not depressed.	Approx. 3.5V or more	

A
B
C
D
E
F
G
H
I
J
DI
L
M

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

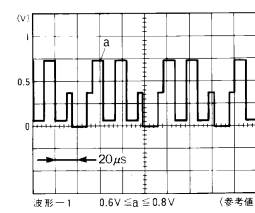
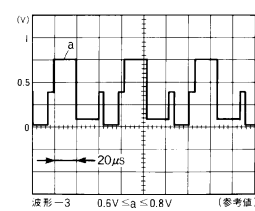
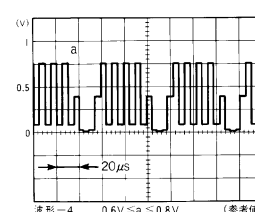
TERMINALS			SIGNAL	SIGNAL INPUT/OUTPUT	CONDITION		VOLTAGE	EXAMPLE OF SYMPTOM
(+)		(-)			IGNITION SWITCH	OPERATION		
TERMINAL	WIRE COLOR							
30	(G/Y):*1 (OY/R):*2	ground	Park/neutral position (PNP) signal	Input	ON	AT selector lever in P- or N-position	Approx. 1.5V or less	Vehicle running/stopped judgment is not correct.
					—	AT selector lever in any position other than P and N	Approx. 3.5V or more	
31	—	—	Shield ground	—	—	—	—	—
33	(OR/L)	ground	Vehicle speed signal (8-pulse)	Input	ON	When vehicle speed is approx. 40 km/h (25MPH)		vehicle electronic system does not indicate the correct position.
34	(LG)	ground	Communication signal (AV - ME)	Output	ON	Display the vehicle information screen.		Vehicle information screen is not shown.
35	(PU)	ground	Communication signal (ME - AV)	Input	ON	Perform various settings on the vehicle information screen.		Vehicle information screen is not shown.
41	(P)	ground	CONSULT-II communication signal (AV - CN)	Output	ON	Perform CONSULT-II.		Diagnosis with CONSULT-II is not possible.
42	(BR/Y)	ground	CONSULT-II communication signal (CN - AV)	Input	ON	Perform CONSULT-II.		Diagnosis with CONSULT-II is not possible.
46	—	—	Shield ground	—	—	—	—	—

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

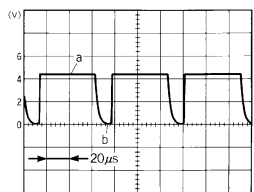
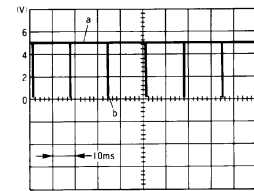
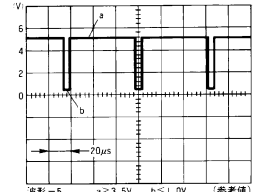
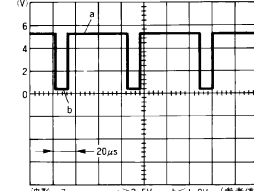
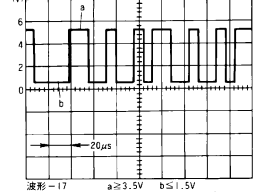
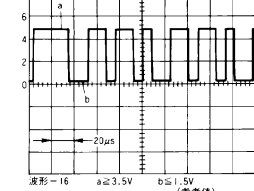
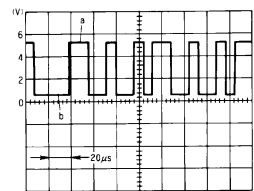
TERMINALS			SIGNAL	SIGNAL INPUT/OUTPUT	CONDITION		VOLTAGE	EXAMPLE OF SYMPTOM
(+)		(-)			IGNITION SWITCH	OPERATION		
TERMINAL	WIRE COLOR							
47	(Y)	ground	Communication signal (+)	Input/output	ON	—	 <p style="font-size: small;">signal - 16 波形 - 16 a ≥ 3.5V b ≤ 1.5V (参考値) SKIA0175J</p>	System does not work properly.
48	(BR):*1 (R/L):*2	ground	Communication signal (-)	Input/output	ON	—	 <p style="font-size: small;">signal - 17 波形 - 17 a ≥ 3.5V b ≤ 1.5V (参考値) SKIA0176J</p>	System does not work properly.

Terminals and Reference Value for Display

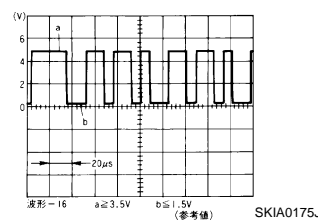
EKS00189

TERMINALS			SIGNAL	CONDITION		DATA
(+)		(-)		IGNITION SWITCH	OPERATION	
TERMINAL	WIRE COLOR					
1	L	Ground	RGB signal (R: Red)	ON	Move to "Screen Adjustment" in the check/adjustment function.	 <p style="font-size: small;">波形 - 1 0.6V ≤ a ≤ 0.8V (参考値) SKIA0165J</p>
2	Y	Ground	RGB signal (G: Green)	ON	Move to "Screen Adjustment" in the check/adjustment function.	 <p style="font-size: small;">波形 - 3 0.6V ≤ a ≤ 0.8V (参考値) SKIA0166J</p>
3	G	Ground	RGB signal (B: Blue)	ON	Move to "Screen Adjustment" in the check/adjustment function.	 <p style="font-size: small;">波形 - 4 0.6V ≤ a ≤ 0.8V (参考値) SKIA0167J</p>
4	—	Ground	Signal ground	ON	—	Approx. 0V

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

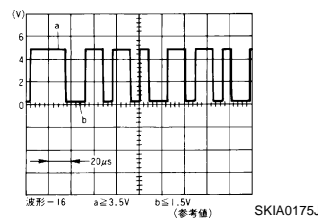
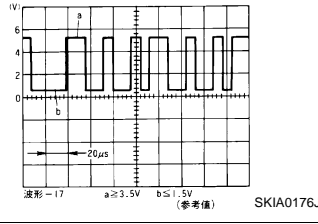
TERMINALS			SIGNAL	CONDITION		DATA
(+)		(-)		IGNITION SWITCH	OPERATION	
TERMINAL	WIRE COLOR					
5	L/Y	Ground	Horizontal synchronizing signal	ON	ON screen, the volume can be adjusted.	 <p>波形-6 a ≥ 3.85V b ≤ 1.0V (参考値) SKIA0163J</p>
6	OR	Ground	Vertical synchronizing signal	ON	—	 <p>波形-2 a ≥ 3.85V b ≤ 1.0V (参考値) SKIA0161J</p>
7	L/R	Ground	RGB synchronizing signal	ON	Press the map switch.	 <p>波形-5 a ≥ 3.5V b ≤ 1.0V (参考値) SKIA0164J</p>
8	LG	Ground	RGB area signal	ON	Press the vehicle information switch.	 <p>波形-7 a ≥ 3.5V b ≤ 1.0V (参考値) SKIA0162J</p>
12	R/L	Ground	Communication signal (-)	ON	—	 <p>波形-17 a ≥ 3.5V b ≤ 1.5V (参考値) SKIA0176J</p>
13	Y	Ground	Communication signal (+)	ON	—	 <p>波形-16 a ≥ 3.5V b ≤ 1.5V (参考値) SKIA0175J</p>
14	—	—	Shield ground	—	—	—
15	L	Ground	Communication signal (-)	ON	—	 <p>波形-17 a ≥ 3.5V b ≤ 1.5V (参考値) SKIA0176J</p>

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

TERMINALS			SIGNAL	CONDITION		DATA
(+)		(-)		IGNITION SWITCH	OPERATION	
TERMINAL	WIRE COLOR					
16	R	Ground	Communication signal (+)	ON	—	
17	—	Ground	Shield ground	—	—	—
19	L/OR	Ground	ACC Power	ACC	—	Battery voltage
21	SB	Ground	Power source	OFF	—	Battery voltage
23	SB					
22	B	Ground	Ground	—	—	—
24	B					

Terminals and Reference Value for Multifunction Switch

EKS0018A

TERMINALS			SIGNAL	CONDITION		DATA
(+)		(-)		IGNITION SWITCH	OPERATION	
TERMINAL	WIRE COLOR					
1	L/OR	Ground	ACC	ACC	—	Battery voltage
2	B	Ground	Ground	ON	—	Apporox. 0V
9	R	Ground	Communication signal (+)	ON	—	
10	L	Ground	Communication signal (-)	ON	—	
11	—	Ground	Shield ground	ON	—	—

On Board Self-Diagnosis Function (without Navigation System)

EKS001G9

DESCRIPTION

- Diagnosis function consists of the self-diagnosis mode performed automatically and the CONFIRMATION/ADJUSTMENT mode operated manually.
- Self-diagnosis mode checks for connections between the units constituting this system, analyzes each individual unit at the same time, and displays the results on the LCD screen.
- CONFIRMATION/ADJUSTMENT mode is used to perform trouble diagnosis that require operation and judgment by an operator (trouble that cannot be automatically judged by the system), to check/change the set value.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

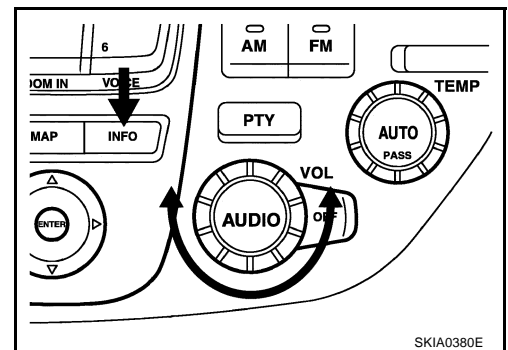
DIAGNOSIS ITEM

Mode		Description
Self-diagnosis		<ul style="list-style-type: none"> ● AV Control unit diagnosis. ● Analyzes connection between the AV and NAVI control unit and the GPS antenna connection between the AV and NAVI control unit and each unit, and operation of each unit.
CONFIRMATION/ ADJUSTMENT	Display Diagnosis	Color tone and shading of the screen can be checked by the display of a color bar and a gray scale.
	Vehicle Signals	Analyzes the following vehicle signals: Vehicle speed signal, parking brake signal, light signal, ignition switch signal, and reverse signal.
	Speaker Test	Checks the connection of each speaker using a test tone.
	Auto Climate Control	Turns all A/C screens on display and A/C switch indicator lamp on.

Self-Diagnosis Mode (without Navigation System) OPERATION PROCEDURE

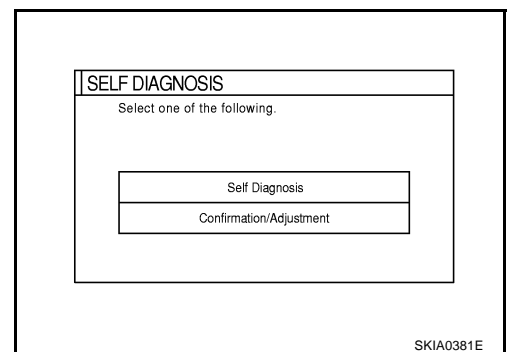
EKS001GA

1. Start the engine.
2. Turn the audio system off.
3. While pressing the "INFO" switch, turn the volume control dial clockwise or counterclockwise for 30 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pressing "PREV" switch.



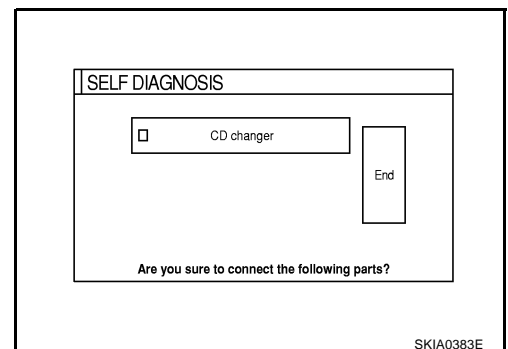
SKIA0380E

4. The initial trouble diagnosis screen will be shown, and items "SELF-DIAGNOSIS" and "CONFIRMATION/ADJUSTMENT" will become selective.



SKIA0381E

5. Perform self-diagnosis by selecting the "SELF-DIAGNOSIS".
 - Self-diagnosis subdivision screen will be shown and the operation enters the self-diagnosis mode.
 - A bar graph shown below the self-diagnosis subdivision screen indicates progress of the diagnosis.
6. When the self-diagnosis completes, optional part confirmation screen will be shown.
 - When connection of an optional part is judged faulty, a screen to check if the optional part is fitted on the vehicle or not will be shown. When fitted, select the switch of the part on the screen and press "END". Then the "Self diagnosis" screen will be shown.
 - When the optional part is connected normally, the switch for the part will not appear on the screen.



SKIA0383E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

7. On the "Self diagnosis" screen, each unit name will be colored according to the diagnosis result, as follows.

Green : No malfunctioning.

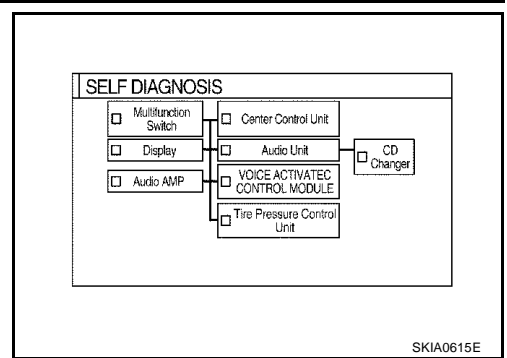
Yellow : Cannot be judged by self-diagnosis results.

Red : Unit is malfunctioning.

- If several malfunctions are present in a unit, color of its switch on the screen will be either red, yellow, or gray, determined by the malfunction of the highest priority.

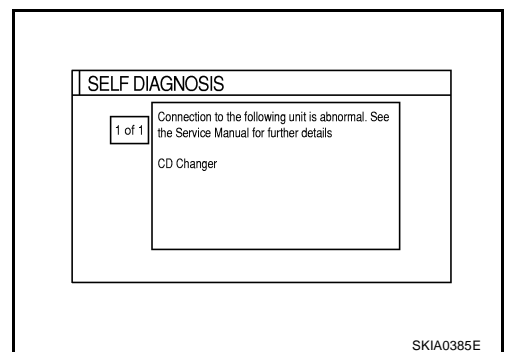
CAUTION:

- "Tire Pressure Control Unit" on the screen will be illuminated in yellow when performing self-diagnosis with ignition switch in ACC position.
- Connection malfunction of AV control unit (Center control unit) and Voice activated control module, which may be displayed when self-diagnosis is performed on vehicles without voice activated control module, does not voice activated control module indicate error.



8. Select a switch on the "Self diagnosis" screen and comments for the diagnosis results will be shown.

- When the switch is green, the following comment will be shown. "Self-diagnosis" was successful. Further diagnosis and adjustments are recommended. Follow the "confirmation and adjustments" menu or refer to the service manual.
- When the switch is yellow, the following comment will be shown. "Connection to the following unit is abnormal. See the service manual for further details".
- When the switch is red, the following comment will be shown. "Center Control Unit is abnormal".



SELF-DIAGNOSIS RESULT

Quick Reference Table

1. Select an applicable diagnosis No. in the diagnosis result quick reference table.
2. Find estimated malfunctioning system in the diagnosis No. table and perform check by referring to the AV communication line circuit diagram.
3. Turn the ignition switch to OFF and perform self-diagnosis again.

Switch color	Screen switch								Diagnosis No.
	Center control unit *	Display	Multifunction switch	Tire pressure control unit	Audio unit	CD auto changer	Audio amp.	Voice activated control module	
Red	×								1
	×	×							2
	×		×						3
	×			×					4
	×				×	×			5
	×					×			6
Yellow	×						×		7
	×							×	8
	×				×	×	×		9
	×		×	×	×	×	×		10
	×	×	×	×	×	×	×		11
	×	×	×	×	×	×	×	×	12

*: Center control unit = AV control unit

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

CAUTION:

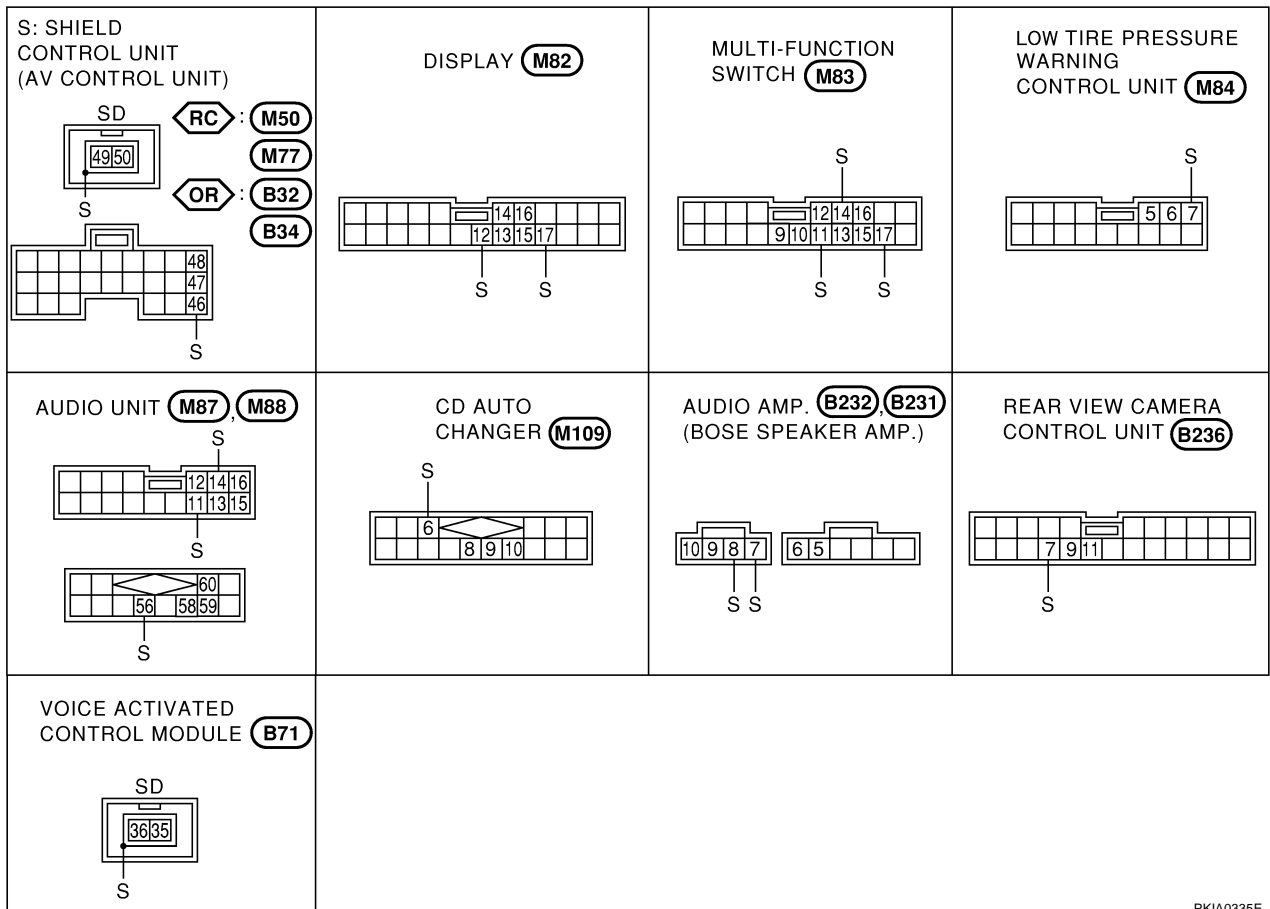
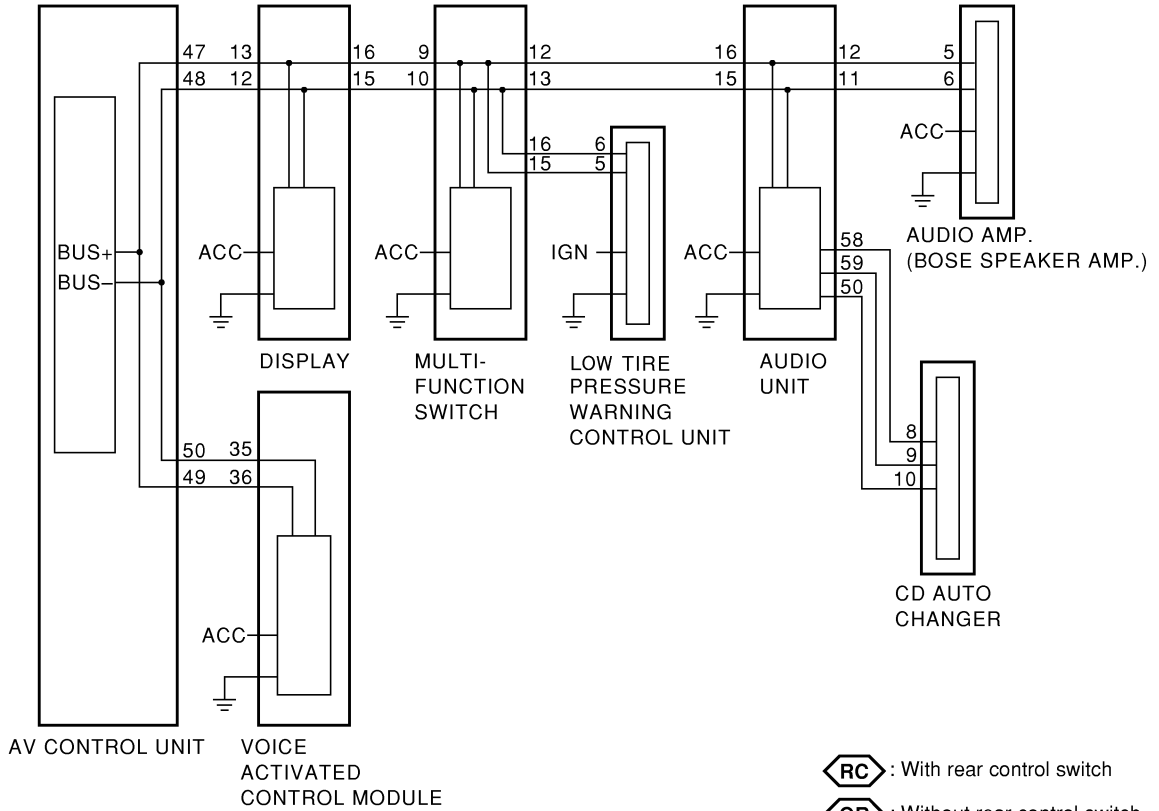
When an error is in the AV communication line, it cannot be detected on the screen because self-diagnosis is inoperative. However, the error can be detected with CONSULT-II.

Diagnosis No.

Diagnosis No.	Possible cause
1	AV control unit malfunction.
2	Display power supply and ground circuit.
3	Multifunction switch power supply and ground circuit.
4	Low tire pressure warning control unit power supply and ground circuit. AV communication line between low tire pressure warning control unit and multifunction switch.
5	Audio unit power supply and ground circuit.
6	CD auto changer power supply and ground circuit. AV communication line between CD auto changer and audio unit.
7	Audio amplifier power supply and ground circuit. AV communication line between audio amplifier and audio unit, Audio amplifier internal communication circuit
8	Voice activated control module power supply and ground circuit. AV communication line between voice activated control module and AV control unit.
9	AV communication line between audio unit and multifunction switch. Audio unit internal communication circuit.
10	AV communication line between multifunction switch and display. Multifunction switch internal communication circuit.
11	AV communication line between display and the AV control unit. Display internal communication circuit.
12	AV communication line circuit malfunction. 1. Disconnect the AV control unit M50 or B34 (for CANADA with rear control switch) connector, perform self-diagnosis. If the Voice activated control module is displayed in yellow as a result of self-diagnosis, check for short the communication circuits between AV control unit and Voice activated control module. 2. Check for any incidents in the communication circuits between the AV control unit and display, voice activated control unit and display, display and multifunction switch, multifunction switch and low tire pressure warning control unit, multifunction switch and audio unit, audio unit and audio amplifier. 3. If the malfunction cannot be solved by the procedure above, the internal communication circuit of the AV control unit is malfunctioning.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

AV COMMUNICATION LINE CIRCUIT DIAGRAM (WITHOUT NAVIGATION SYSTEM)



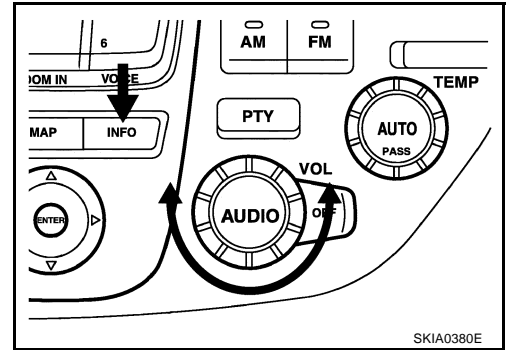
PKIA0335E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

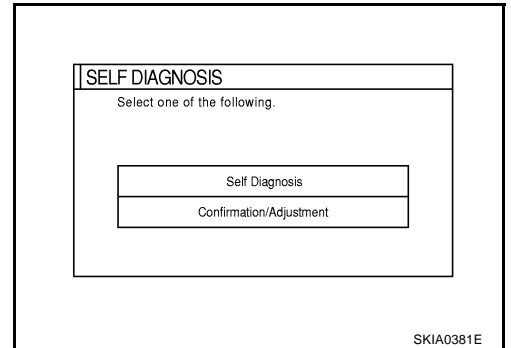
EKS001GB

CONFIRMATION/ADJUSTMENT Mode (without Navigation System) OPERATION PROCEDURE

1. Start the engine.
2. Turn the audio system off.
3. While pressing the "INFO" switch, turn the volume control dial clockwise or counterclockwise for 30 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pressing "PREV" switch.

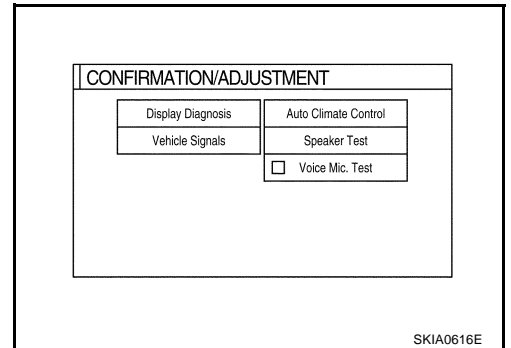


4. The initial trouble diagnosis screen will be shown, and items "SELF-DIAGNOSIS" and "CONFIRMATION/ADJUSTMENT" will become selective.

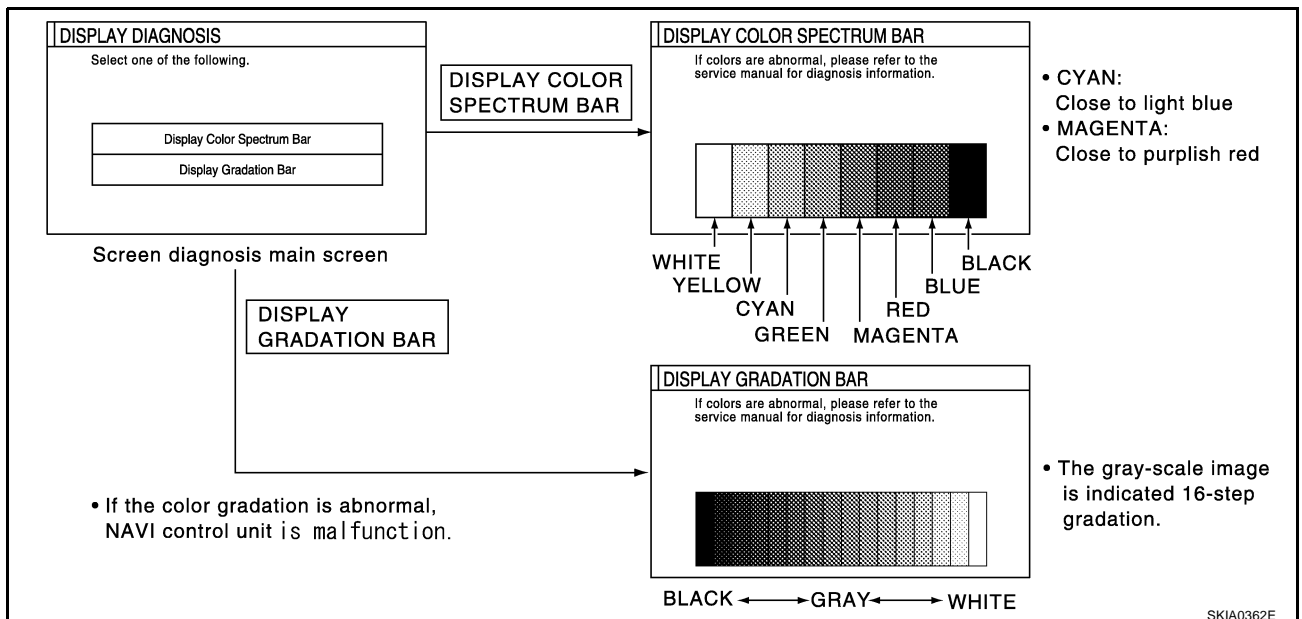


5. When "CONFIRMATION/ADJUSTMENT" is selected on the initial trouble diagnosis screen, the operation will enter the CONFIRMATION/ADJUSTMENT mode. In this mode, check and adjustment of each item will become possible.

6. Select each switch on "CONFIRMATION/ADJUSTMENT" screen to display the relevant diagnosis screen.



DISPLAY DIAGNOSIS



SKIA0362E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

CAUTION:

When Display Color Spectrum Bar screen is completed after "PREV" switch is pressed, the screen color changes once. This is not abnormal.

- When RGB signal error occurred in the RGB system, tone of the color bar will change as follows.

R (red) signal error : Screen looks bluish
G (green) signal error : Screen looks yellowish
B (blue) signal error : Screen looks reddish

- When the color of the screen looks unusual, refer to [DI-127, "Color of RGB Image Is Not Proper"](#).

VEHICLE SIGNALS

- A comparison check can be made of each actual vehicle signal and the signals recognized by the system.

VEHICLE SIGNALS	
Vehicle Speed	-
Parking Brake	ON
Light	OFF
IGN	OFF

SKIA0617E

Diagnosis item	Display	Condition	Remarks
Vehicle speed signal	ON	Vehicle speed > 0 km/h (0 MPH)	Changes in indication may be delayed by approx. 1.5 seconds. This is normal.
	OFF	Vehicle speed = 0 km/h (0 MPH)	
	-	Ignition switch in ACC position	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Light	ON	Lighting switch ON	
	OFF	Lighting switch OFF	-
IGN switch	ON	Ignition switch ON	-
	OFF	Ignition switch ACC or OFF	-

- If vehicle speed is NG, refer to [DI-123, "Vehicle Speed Signal Check"](#).
- If parking brake is NG, refer to [DI-124, "Parking Brake Signal Check"](#).
- If light is NG, refer to [DI-125, "Illumination Control Signal Check"](#).
- If IGN is NG, refer to [DI-125, "Ignition Signal Check"](#).

SPEAKER TEST

- For the details, refer to [DI-105, "SPEAKER TEST"](#).

AUTO CLIMATE CONTROL

- For the details, refer to [ATC-48, "Self-diagnosis Function"](#).

CONSULT-II Function (without Navigation System)

EKS001GC

OPERATION PROCEDURE

- Turn the ignition switch OFF.
- Connect CONSULT-II to vehicle side data link connector.
- Turn the ignition switch ON.
- Touch "START" and then "MULTI AV SYSTEM" on the CONSULT-II screen.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

SELF-DIAG RESULTS

- Checks for connection between each unit and analyzes each individual unit, then displays the results on the screen.

Items Shown

Items shown	Malfunctioning part/reference page
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	-
HEAD UNIT ABNORMAL	AV control unit malfunction
AUDIO HEAD UNIT ABNORMAL CON- NECTION	Refer to DI-101, "SELF-DIAGNOSIS RESULT"
AIR COMP RECEIVER ABNORMAL CONNECTION	Refer to DI-101, "SELF-DIAGNOSIS RESULT" .
BOSE AMP ABNORMAL CONNECTION	Refer to DI-101, "SELF-DIAGNOSIS RESULT" .
BOSE AMP ABNORMAL	Bose amp. malfunction
VOICE UNIT ABNORMAL CONNec- TION	Refer to DI-101, "SELF-DIAGNOSIS RESULT" .
VOICE UNIT ABNORMAL	Voice activated control module malfunction
PANEL SW ABNORMAL CONNECTION (MULTIFUNCTION SW)	Refer to DI-101, "SELF-DIAGNOSIS RESULT" .

DATA MONITOR

- Displays status of the vehicle signal input to the AV and NAVI control unit. (Refer to [DI-104, "CONFIRMATION/ADJUSTMENT Mode \(without Navigation System\)"](#) for operation conditions for the connections to be indicated.)
- For each signal, a comparison of actual operating status and the status recognized by the system can be checked.

DATA MONITOR			
MONITOR			
VHCL SPD SIG	OFF		
BREAK	ON		
MTR ILL DIM	OFF		
IGN SW	ON		
		RECORD	
MODE	BACK	LIGHT	COPY

SKIA0618E

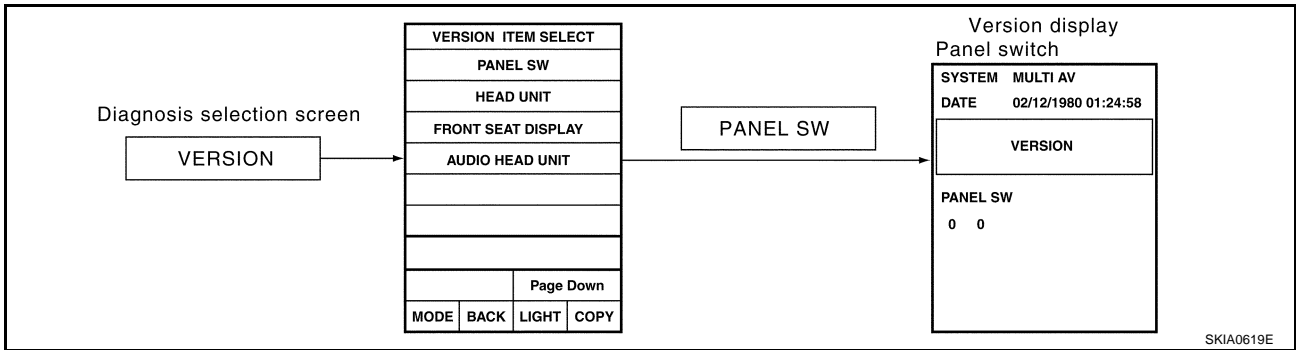
Data monitor item	Condition	Remarks
VHCL SPD SIG	ON	Vehicle speed > 0 km/h (0 MPH)
	OFF	Vehicle speed = 0 km/h (0 MPH)
	-	Ignition switch in ACC position
BRAK	ON	Parking brake is applied.
	OFF	Parking brake is released.
MTR ILL DIM	ON	Lighting switch ON
	OFF	Lighting switch OFF
IGN SW	ON	Ignition switch ON
	OFF	Ignition switch ACC or OFF

Changes in indication may be delayed by approx. 1.5 seconds. This is normal.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

VERSION

Displays version of each unit connected to the AV and NAVI control unit.



Version	Remarks
"PANEL SW"	Multifunction switch
"HEAD UNIT"	AV control unit
"FRONT SEAT DISPLAY"	Display
"AUDIO HEAD UNIT"	-
"AIR COMP RECEIVER"	Low Tire Pressure Warning Control Unit
"BOSE AMP"	-
"VOICE UNIT"	Voice Activated Control Unit

On Board Self-Diagnosis Function (with Navigation System) DESCRIPTION

EKS001HM

- Diagnosis function consists of the self-diagnosis mode performed automatically and the CONFIRMATION/ADJUSTMENT mode operated manually.
- Self-diagnosis mode checks for connections between the units constituting this system, analyzes each individual unit at the same time, and displays the results on the LCD screen.
- CONFIRMATION/ADJUSTMENT mode is used to perform trouble diagnosis that require operation and judgment by an operator (trouble that cannot be automatically judged by the system), to check/change the set value, and to display the History of Errors of the navigation system.

DIAGNOSIS ITEM

Mode	Description
Self-diagnosis	<ul style="list-style-type: none"> ● AV and NAVI Control unit diagnosis (DVD-ROM drive will not be diagnosed when no map DVD-ROM is in it.) ● Analyzes connection between the AV and NAVI control unit and the GPS antenna connection between the AV and NAVI control unit and each unit, and operation of each unit.

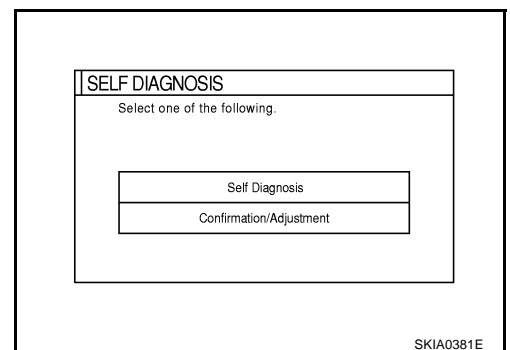
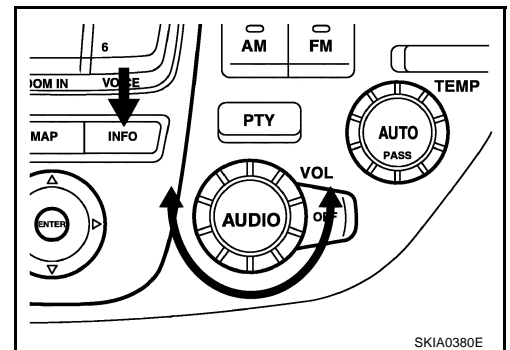
VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Mode		Description	
CONFIRMATION/ ADJUSTMENT	Display diagnosis	Color tone and shading of the screen can be checked by the display of a color bar and a gray scale.	
	Vehicle signals	Analyzes the following vehicle signals: Vehicle speed signal, parking brake signal, light signal, ignition switch signal, and reverse signal.	
	Speaker Test	Checks the connection of each speaker using a test tone.	
	Auto Climate Control	Turns all A/C screens on display and A/C switch indicator lamp on.	
	Navigation	Display Longitude & Latitude	Display the map. Use the joystick to adjust position. Longitude and latitude will be displayed.
		Speed Calibration	Under ordinary conditions, the navigation system distance measuring function will automatically compensate for minute decreases in wheel and tire diameter caused by tire wear or low pressure. Speed calibration immediately restores system accuracy in cases such as when distance calibration is needed because of the use of tire chains in inclement weather.
		Angle Adjustment	Corrects difference between actual turning angle of a vehicle and turning angle of the car mark on the display.
		Initialize Location	This mode is for initializing the current location. Use when the vehicle is transported a long distance on a trailer, etc.
	History of Errors	Diagnosis results previously stored in the memory (before turning ignition switch ON) are displayed in this mode. Time and location when/where the errors occurred are also displayed.	
Rear View Camera	Changes position of the aiming line overlapped on the rear view image.		

Self-Diagnosis Mode (with Navigation System) OPERATION PROCEDURE

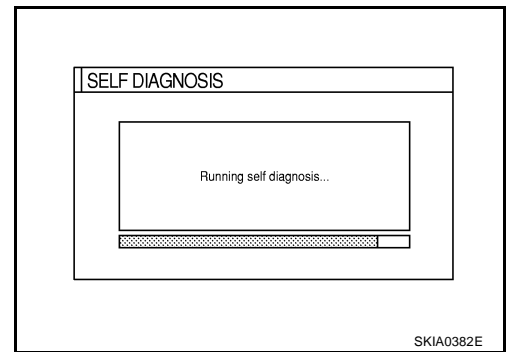
EKS001HN

1. Start the engine.
2. Turn the audio system off.
3. While pressing the "INFO" switch, turn the volume control dial clockwise or counterclockwise for 30 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pressing "PREV" switch.
4. The initial trouble diagnosis screen will be shown, and items "SELF-DIAGNOSIS" and "CONFIRMATION/ADJUSTMENT" will become selective.

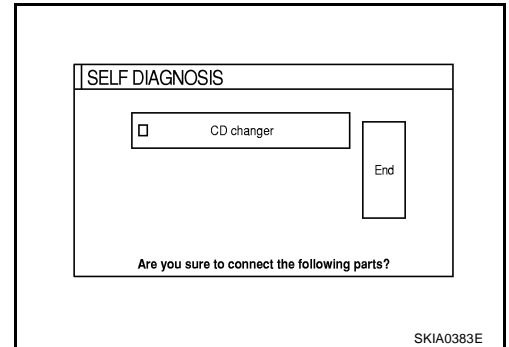


VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

5. Perform self-diagnosis by selecting the "SELF-DIAGNOSIS".
 - Self-diagnosis subdivision screen will be shown and the operation enters the self-diagnosis mode.
 - A bar graph shown below the self-diagnosis subdivision screen indicates progress of the diagnosis.



6. When the self-diagnosis completes, optional part confirmation screen will be shown.
 - When connection of an optional part is judged faulty, a screen to check if the optional part is fitted on the vehicle or not will be shown. When fitted, select the switch of the part on the screen and press "END". Then the "Self diagnosis" screen will be shown.
 - When the optional part is connected normally, the switch for the part will not appear on the screen.



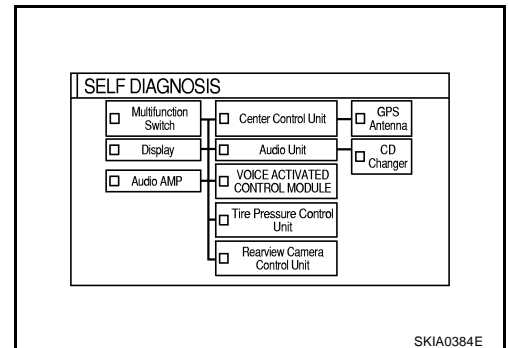
7. On the "Self diagnosis" screen, each unit name will be colored according to the diagnosis result, as follows.

- Green** : No malfunctioning.
- Yellow** : Cannot be judged by self-diagnosis results.
- Red** : Unit is malfunctioning.
- Gray** : Diagnosis has not been done.

- If several malfunctions are present in a unit, color of its switch on the screen will be either red, yellow, or gray, determined by the maleficent of the highest priority.

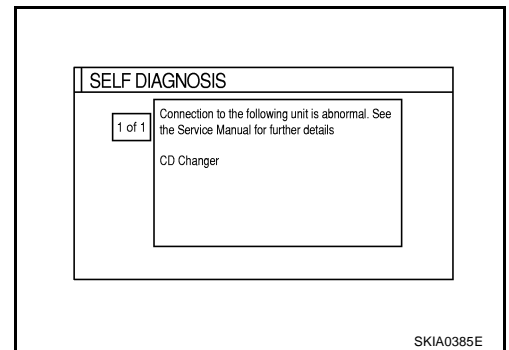
CAUTION:

"Tire Pressure Control Unit" on the screen will be illuminated in yellow when performing self-diagnosis with ignition switch in ACC position.



8. Select a switch on the "Self diagnosis" screen and comments for the diagnosis results will be shown.

- When the switch is green, the following comment will be shown. "Self-diagnosis was successful. Further diagnosis and adjustments are recommended. Follow the "confirmation and adjustments" menu or refer to the service manual."
- When the switch is yellow, the following comment will be shown. "Connection to the following unit is abnormal. See the service manual for further details".
- When the switch is red, the following comment will be shown. "Center Control Unit is abnormal".
- When the switch is gray, the following comment will be shown. "Self-diagnosis for DVD-ROM DRIVER of NAVI was not conducted because no DVD-ROM was available."



A
B
C
D
E
F
G
H
I
J
DI
L
M

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

SELF-DIAGNOSIS RESULT

Quick Reference Table

1. Select an applicable diagnosis No. in the diagnosis result quick reference table.
2. Find estimated malfunctioning system in the diagnosis No. table and perform check by referring to the AV communication line circuit diagram.
3. Turn the ignition switch to OFF and perform self-diagnosis again.

Screen switch											Diagnosis No.
Switch color	Center control unit *	Display	Multifunction switch	Tire pressure control unit	Audio unit	CD auto changer	Audio amp.	Rearview camera control unit	Voice activated control module	GPS antenna	
Red	×										1
Grey	×										2
Yellow	×	×									3
	×		×								4
	×			×							5
	×				×	×					6
						×					7
	×						×				8
	×							×			9
	×								×		10
	×									×	11
	×					×	×	×	×		12
	×			×	×	×	×	×	×		13
	×			×	×	×	×	×	×		14
	×	×	×	×	×	×	×	×	×		15
×	×	×	×	×	×	×	×	×	×	16	

*:center control unit = AV and NAVI control unit

CAUTION:

When an error is in the AV communication line, it cannot be detected on the screen because self-diagnosis is inoperative. However, the error can be detected with CONSULT-II.

Diagnosis No.

Diagnosis No.	Possible cause
1	AV and NAVI control unit malfunction.
2	No map CD-ROM is inserted in the AV and NAVI control unit.
3	Display power supply and ground circuit.
4	Multifunction switch power supply and ground circuit.
5	Low tire pressure warning control unit power supply and ground circuit. AV communication line between low tire pressure warning control unit and multifunction switch.
6	Audio unit power supply and ground circuit.
7	CD auto changer power supply and ground circuit. AV communication line between CD auto changer and audio unit.
8	Audio amplifier power supply and ground circuit.
9	Rearview camera control unit power supply and ground circuit.
10	Voice activated control module power supply and ground circuit. AV communication line between voice activated control unit and AV and NAVI control unit.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Diagnosis No.	Possible cause	
11	<p>GPS antenna system</p> <ol style="list-style-type: none"> 1. Visually check for a broken wire in the GPS antenna coaxial cable. 2. Disconnect the GPS antenna connector, and check that approximately 5V is supplied from the AV and NAVI control unit. If not, the AV and NAVI control unit is malfunctioning. If 5V is supplied, replace the GPS antenna. If the connection is still abnormal after the replacement of the GPS antenna, AV and NAVI control unit is malfunctioning. 	A B
12	AV communication line between audio amplifier and audio unit, Audio amplifier internal communication circuit.	C
13	AV communication line between audio unit and multifunction switch, Audio unit communication circuit.	
14	AV communication line between multifunction switch and display, Multifunction switch internal communication circuit.	D
15	AV communication line between display and the AV and NAVI control unit, Display internal communication circuit.	D
16	<p>AV communication line circuit malfunction.</p> <ol style="list-style-type: none"> 1. Disconnect the AV and NAVI control unit M50 connector, perform self-diagnosis. If the Voice activated control module is displayed in yellow as a result of self-diagnosis, check for short of the communication circuits between AV and NAVI control unit and Voice activated control module. 2. Check for any incidents in the communication circuits between the AV and NAVI control unit and display, voice activated control unit and display, display and multifunction switch, multifunction switch and low tire pressure warning control unit, multifunction switch and audio unit, audio unit and audio amplifier (Bose speaker amp.), audio amplifier and rear view camera control unit. 3. If the malfunction cannot be solved by the procedure above, the internal communication circuit of the AV and NAVI control unit is malfunctioning. 	E F G

A

B

C

D

E

F

G

H

I

J

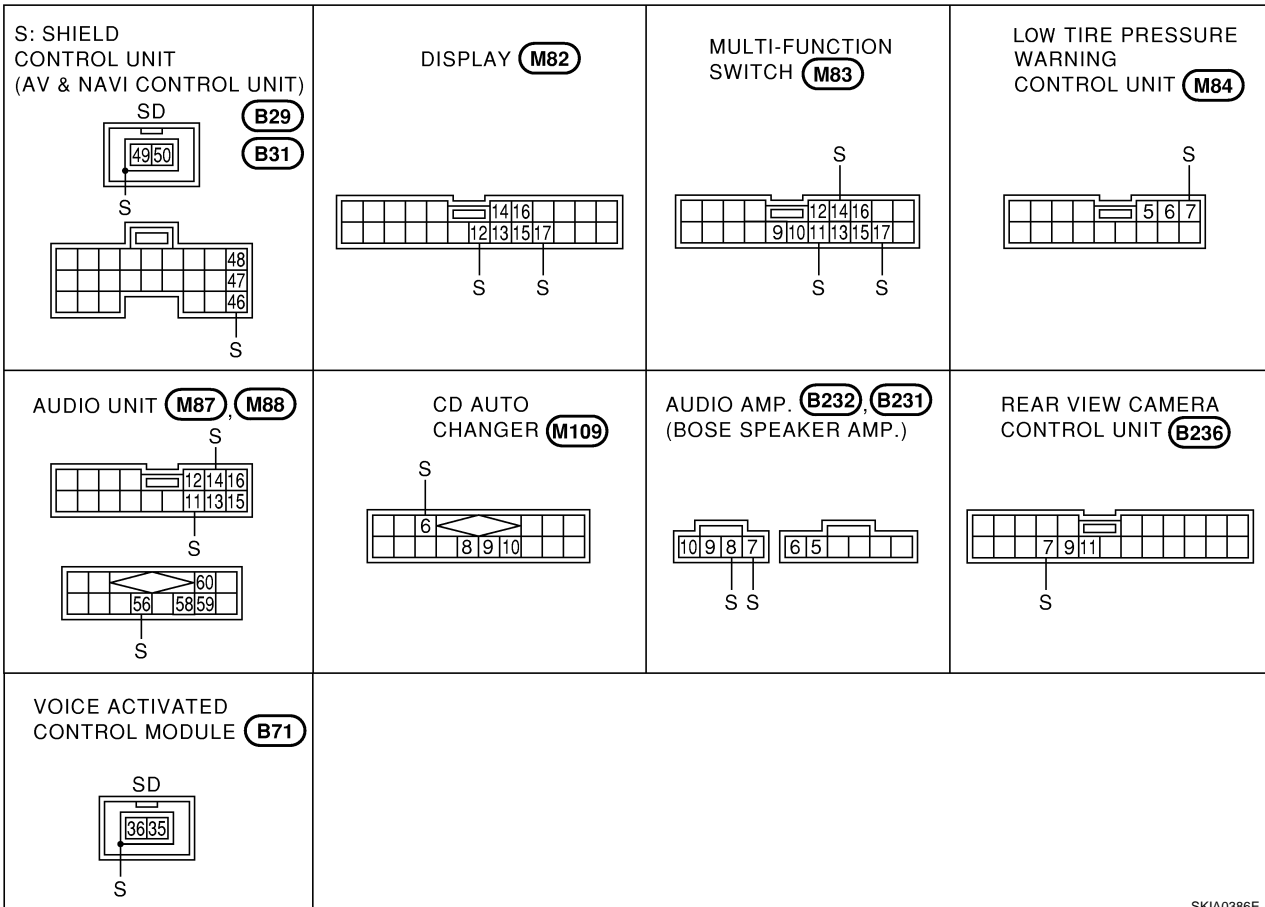
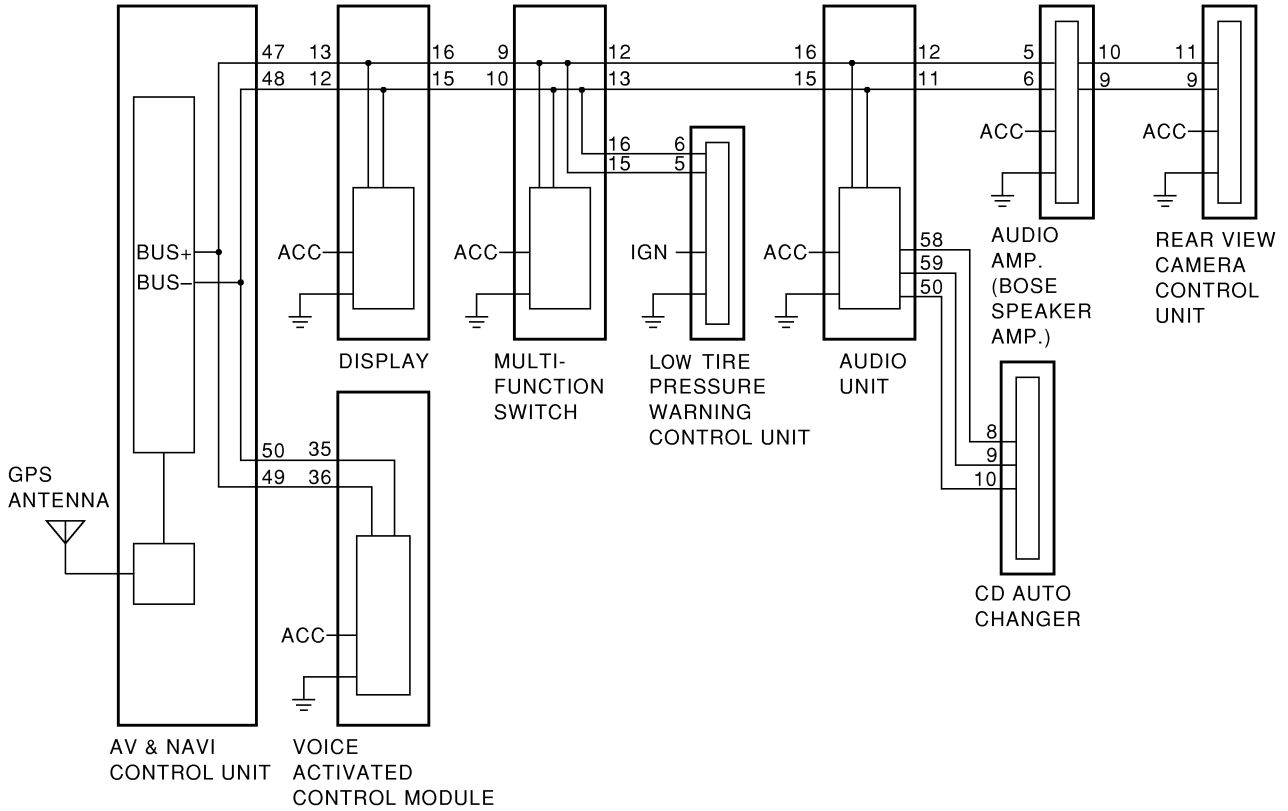
DI

L

M

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

AV COMMUNICATION LINE CIRCUIT DIAGRAM (WITH NAVIGATION SYSTEM)



SKIA0386E

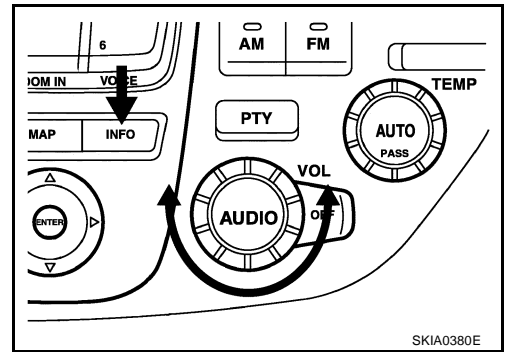
VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

CONFIRMATION/ADJUSTMENT Mode (with Navigation System)

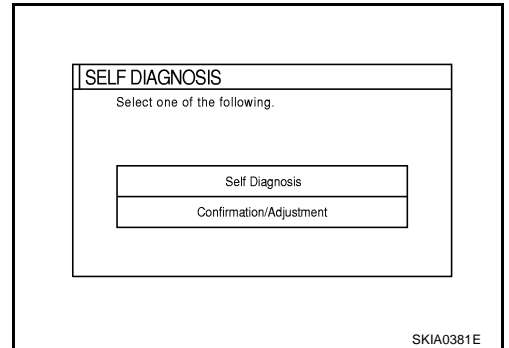
EKS001HO

OPERATION PROCEDURE

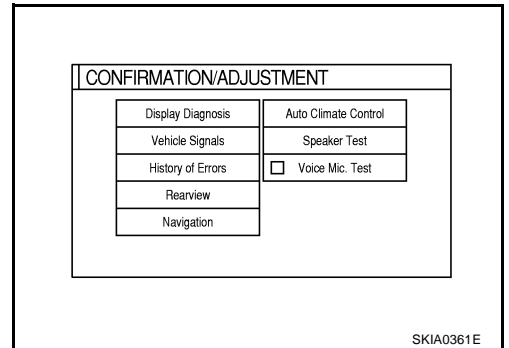
1. Start the engine.
2. Turn the audio system off.
3. While pressing the "INFO" switch, turn the volume control dial clockwise or counterclockwise for 30 clicks or more. (When the self-diagnosis mode is started, a short beep will be heard.)
 - Shifting from current screen to previous screen is performed by pressing "PREV" switch.



4. The initial trouble diagnosis screen will be shown, and items "SELF-DIAGNOSIS" and "CONFIRMATION/ADJUSTMENT" will become selective.

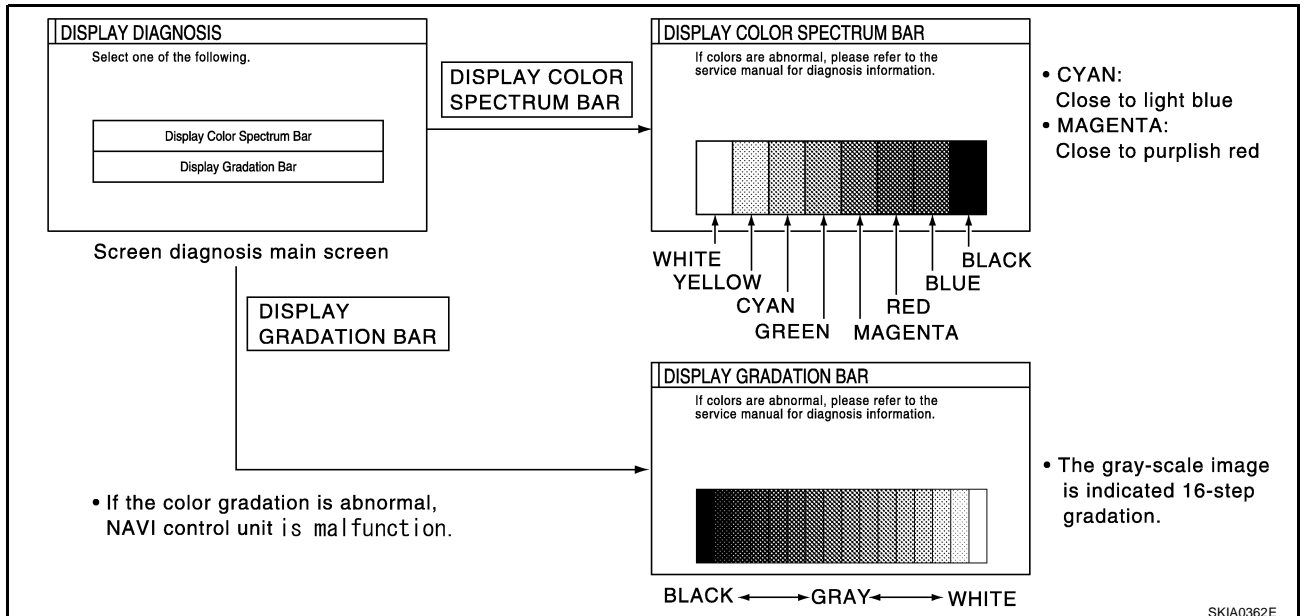


5. When "CONFIRMATION/ADJUSTMENT" is selected on the initial trouble diagnosis screen, the operation will enter the CONFIRMATION/ADJUSTMENT mode. In this mode, check and adjustment of each item will become possible.



6. Select each switch on "CONFIRMATION/ADJUSTMENT" screen to display the relevant diagnosis screen.

DISPLAY DIAGNOSIS



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

CAUTION:

When Display Color Spectrum Bar screen is completed after "PREV" switch is pressed, the screen color changes once. This is not abnormal.

- When RGB signal error occurred in the RGB system, tone of the color bar will change as follows.

R (red) signal error : Screen looks bluish
G (green) signal error : Screen looks yellowish
B (blue) signal error : Screen looks reddish

- When the color of the screen looks unusual, refer to [DI-127, "Color of RGB Image Is Not Proper"](#) .

VEHICLE SIGNALS

- A comparison check can be made of each actual vehicle signal and the signals recognized by the system.

VEHICLE SIGNALS	
Vehicle Speed	-
Parking Brake	ON
Light	OFF
IGN	OFF
Reverse	-

SKIA0363E

Diagnosis item	Display	Condition	Remarks
Vehicle speed	ON	Vehicle speed > 0 km/h (0 MPH)	Changes in indication may be delayed by approx. 1.5 seconds. This is normal.
	OFF	Vehicle speed = 0km/h (0 MPH)	
	-	Ignition switch in ACC position	
Parking brake	ON	Parking brake is applied.	
	OFF	Parking brake is released.	
Lights	ON	Lighting switch ON	
	OFF	Lighting switch OFF	
IGN	ON	Ignition switch ON	-
	OFF	Ignition switch ACC or OFF	
Reverse	ON	Selector lever in R-position	Changes in indication may be delayed by approx. 1.5 seconds. This is normal.
	OFF	Selector lever in other than R-position	
	-	Ignition switch in ACC position	

- If vehicle speed is NG, refer to [DI-123, "Vehicle Speed Signal Check"](#) .
- If parking brake is NG, refer to [DI-124, "Parking Brake Signal Check"](#) .
- If light is NG, refer to [DI-125, "Illumination Control Signal Check"](#) .
- If IGN is NG, refer to [DI-125, "Ignition Signal Check"](#) .
- If reverse is NG, refer to [AV-78, "Reverse Signal Check"](#) .

SPEAKER TEST

- Refer to [DI-114, "SPEAKER TEST"](#) for the details.

AUTO CLIMATE CONTROL

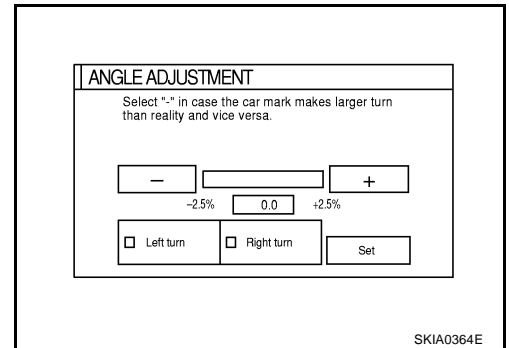
- Refer to "ATC Automatic Air Conditioner [ATC-48, "Self-diagnosis Function"](#) for the details.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

NAVIGATION

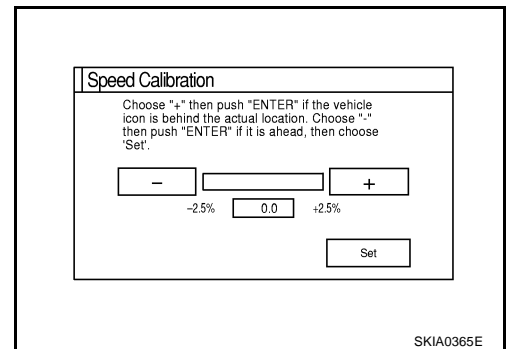
Angle Adjustment

- Adjusts turning angle output detected by the gyroscope.

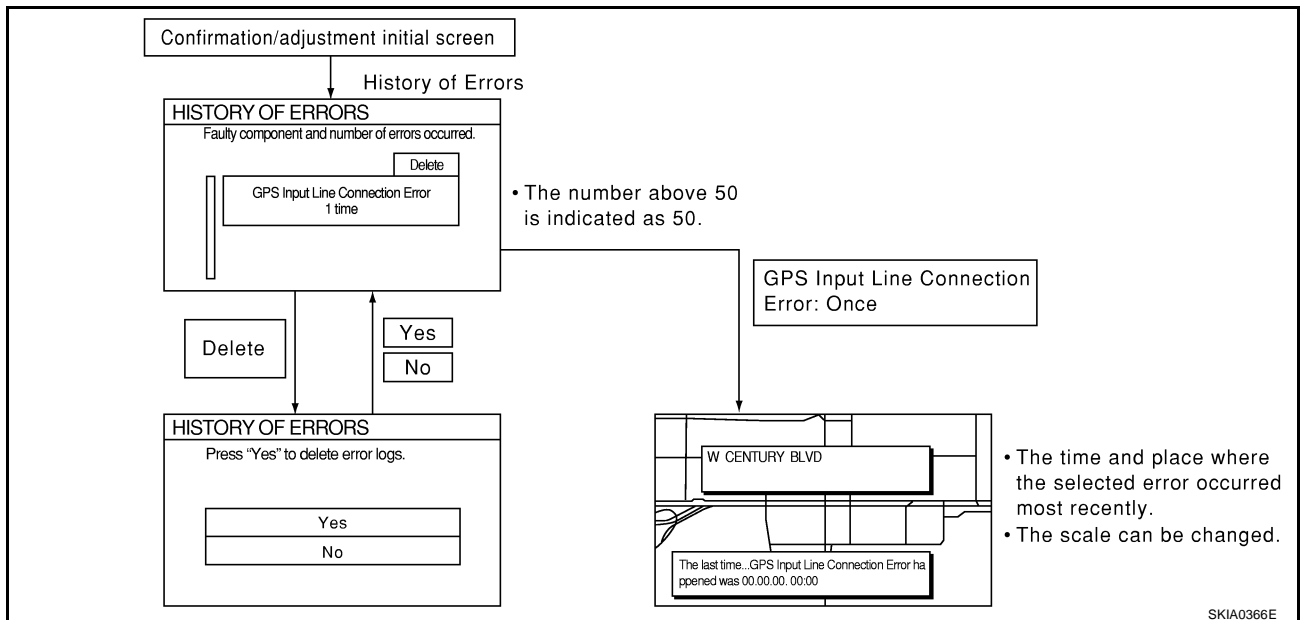


SPEED CALIBRATION

- During normal driving, distance error caused by tire wear and tire pressure change is automatically adjusted for by the automatic distance correction function. This function, on the other hand, is for immediate adjustment, in cases such as driving with tire chain fitted on tires.



HISTORY OF ERRORS



DIAGNOSIS BY HISTORY OF ERRORS

The "Self-diagnosis" results indicate whether an error occurred during the period from when the ignition switch is turned to ON until "Self-diagnosis" is completed.

If an error occurred before the ignition switch was turned to ON and does not occur again until the "Self-diagnosis" is completed, the diagnosis result will be judged normal. Therefore, those errors in the past, which cannot be found by the "Self-diagnosis," must be found by diagnosing the "History of Errors".

The History of Errors displays the time and place of the most recent occurrence of that error. However, take note of the following points.

- Correct time of the error occurrence may not be displayed when the GPS antenna substrate within the AV and NAVI control unit has malfunctioned.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

- Place of the error occurrence is represented by the position of the current-location mark at the time when the error occurred. If the current-location mark has deviated from the correct position, then the place of the error occurrence cannot be located correctly.
- The maximum number of occurrences which can be stored is 50. For the 51st and later occurrences, the displayed number remains 50.

When a reproducible malfunction occurred but its cause cannot be identified because several errors are present, record the item, number and place (longitude/latitude) of error occurrence (or delete the History of Errors), then turn the ignition switch from OFF to ON to reproduce the malfunction. Check the History of Errors to find the items which show an increased number of occurrences, and diagnose the item.

Error item	Possible causes	Example of symptom
	Action/symptom	
Gyro sensor disconnected	Communications malfunction between AV and NAVI control unit and internal gyro	<ul style="list-style-type: none"> ● Navigation location detection performance has deteriorated. (Angular velocity cannot be detected.)
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference. 	
GPS disconnected	Communication error between AV and NAVI control unit and internal GPS substrate	<ul style="list-style-type: none"> ● Navigation location detection performance has deteriorated. (Location correction using GPS is not performed.) ● GPS receiving status remains gray.
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference. 	
GPS transmission cable malfunction	Malfunctioning transmission wires to AV and NAVI control unit and internal GPS substrate	<ul style="list-style-type: none"> ● During self-diagnosis, GPS diagnosis is not performed.
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference. 	
GPS input line connection error	Malfunctioning receiving wires to AV and NAVI control unit and internal GPS substrate	<ul style="list-style-type: none"> ● Navigation location detection performance has deteriorated. (Location correction using GPS is not performed.) ● GPS receiving status remains gray.
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference. 	
GPS TCX0 over GPS TCX0 under	Oscillating frequency of the GPS substrate frequency synchronizing oscillation circuit exceeded (or below) the specification	<ul style="list-style-type: none"> ● Navigation location detection performance has deteriorated. (Location correction using GPS is not performed.) ● GPS receiving status remains gray.
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference, or the AV and NAVI control unit may have been subjected to excessively high or low temperatures. 	
GPS ROM malfunction GPS RAM malfunction	Contents of ROM (or RAM) in GPS substrate are malfunctioning.	<ul style="list-style-type: none"> ● Location detection accuracy of the navigation system will deteriorate, depending on the failed area in the memory, because GPS cannot make correct positioning. (Location correction using GPS is not performed.)
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference. 	

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Error item	Possible causes	Example of symptom
	Action/symptom	
GPS RTC malfunction	Clock IC in GPS substrate is malfunctioning.	<ul style="list-style-type: none"> ● Correct time may not be displayed. ● After the power is turned on, the system always takes some time until GPS positioning becomes possible. (The GPS receiver starts positioning without re-collecting the whole satellite information when it judged the data stored in the receiver is correct.) ● Correct time of error occurrence may not be stored in the "History of Errors".
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When the AV and NAVI control unit is judged normal by self-diagnosis, the symptom may be intermittent, caused by strong radio interference. 	
GPS antenna disconnected	Malfunctioning connection between GPS substrate in AV and NAVI control unit and GPS antenna.	<ul style="list-style-type: none"> ● Navigation location detection performance has deteriorated. (Location correction using GPS is not performed.) ● GPS receiving status remains gray.
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When connection between AV and NAVI control unit and GPS antenna is judged normal by self-diagnosis, the symptom may be intermittent, caused by impact or vibration. 	
Low voltage of GPS	The power voltage supplied to the GPS circuit board has decreased.	<ul style="list-style-type: none"> ● Navigation location detection performance has deteriorated. (Location correction using GPS is not performed.) ● GPS receiving status remains gray.
	<ul style="list-style-type: none"> ● Perform self-diagnosis. ● When connection between AV and NAVI control unit and GPS antenna is judged normal by self-diagnosis, the symptom may be intermittent, caused by impact or vibration. 	
DVD-ROM Malfunction DVD-ROM Read error DVD-ROM Response Error	Malfunctioning AV and NAVI control unit	-
	Dedicated map DVD-ROM is in the system, but the data cannot be read.	<ul style="list-style-type: none"> ● The map of a particular location cannot be displayed. ● Specific guidance information cannot be displayed. ● Map display is slow. ● Guidance information display is slow. ● System has been affected by vibration.
	<ul style="list-style-type: none"> ● Is map DVD-ROM damaged, warped, or dirty? - If damaged or warped, the map DVD-ROM is malfunctioning. - If dirty, wipe the DVD-ROM clean with a soft cloth. ● Perform self-diagnosis. ● When AV and NAVI control unit is judged normal by self-diagnosis, the symptom is judged intermittent, caused by vibration. 	

REAR VIEW CAMERA

- Refer to [DI-113, "CONFIRMATION/ADJUSTMENT Mode \(with Navigation System\)"](#) for the details.

CONSULT-II Function (with Navigation System) OPERATION PROCEDURE

EKS001HP

1. Turn the ignition switch OFF.
2. Connect CONSULT-II to Data Link Connector.
3. Turn the ignition switch ON.
4. Touch "START" and then "MULTI AV SYSTEM" on the CONSULT-II screen.

SELF-DIAG RESULTS

- Checks for connection between each unit and analyzes each individual unit, then displays the results on the screen.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Items Shown

Items shown	Malfunctioning part/reference page
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	—
HEAD UNIT ABNORMAL	AV and NAVI control unit malfunction
MAP DISC NO INSERT	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
MAP DISC ABNORMAL	MAP DVD-ROM malfunction.
MAP DISC DRIVER ABNORMAL 1	—
MAP DISC OR DRIVER ABNORMAL	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
GPS ANTENNA NO CONNECTION	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
AUDIO HEAD UNIT ABNORMAL CON- NECTION	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
AIR COMP RECEIVER ABNORMAL CONNECTION	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
BOSE AMP ABNORMAL CONNECTION	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
BOSE AMP ABNORMAL	Bose speaker amp. malfunction.
VOICE UNIT ABNORMAL CONNEC- TION	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
VOICE UNIT ABNORMAL	Voice activated control module malfunction.
REAR VIEW CAMERA ABNORMAL CONNECTION	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .
PANEL SW ABNORMAL CONNECTION (MULTIFUNCTION SW)	Refer to DI-110, "SELF-DIAGNOSIS RESULT" .

DATA MONITOR

- Displays status of the vehicle signal input to the AV and NAVI control unit. (Refer to [DI-113, "CONFIRMATION/ADJUSTMENT Mode \(with Navigation System\)"](#) for operation conditions for the connections to be indicated.)

DATA MONITOR			
MONITOR			
VHCL SPD SIG	OFF		
BREAK	ON		
MTR ILL DIM	OFF		
IGN SW	ON		
R POSI SIG	OFF		
		RECORD	
MODE	BACK	LIGHT	COPY

PKIA0239E

- For each signal, a comparison of actual operating status and the status recognized by the system can be checked.

Data monitor item	Condition	Remarks
VHCL SPD SIG	ON	Vehicle speed > 0 km/h (0 MPH)
	OFF	Vehicle speed = 0 km/h (0 MPH)
	-	Ignition switch in ACC position
BRAK	ON	Parking brake is applied.
	OFF	Parking brake is released.
MTR ILL DIM	ON	Lighting switch ON
	OFF	Lighting switch OFF
IGN SW	ON	Ignition switch ON
	OFF	Ignition switch ACC or OFF

Changes in indication may be delayed by approx. 1.5 seconds. This is normal.

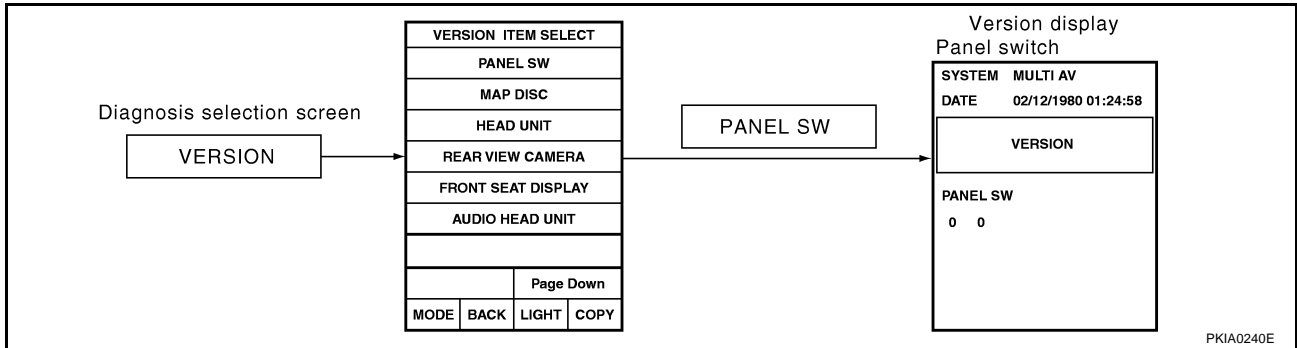
VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Data monitor item	Condition	Remarks
R POSI SIG	ON	Selector lever in R-position
	OFF	Selector lever in other than R-position
	-	Ignition switch in ACC position

Changes in indication may be delayed by approx. 1.5 seconds. This is normal.

VERSION

Displays version of each unit connected to the AV and NAVI control unit.



Version	Remarks
"PANEL SW"	Multifunction switch
"MAP DISK"	Map Disc
"HEAD UNIT"	AV and NAVI control unit
"REAR VIEW CAMERA"	-
"FRONT SEAT DISPLAY"	Display
"AUDIO HEAD UNIT"	-
"AIR COMP RECEIVER"	Low tire Pressure Warning Control Unit
"BOSE AMP"	-
"VOICE UNIT"	Voice Activated Control Module

Multifunction Switch Self-Diagnosis Function

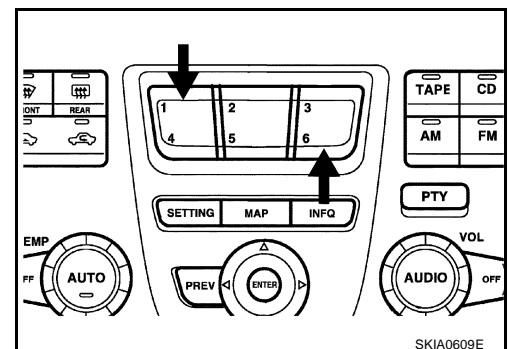
EKS0018C

It can check ON/OFF operation of each switch in the multifunction switch and diagnose the input signals to the rear control switch (audio) and steering switch (audio).

STARTING THE SELF-DIAGNOSIS MODE

1. Turn ignition switch from OFF to ACC,
2. Within 10 seconds press and hold the function switches "1" and "6" simultaneously for 5 seconds.

Then the self-diagnosis operates.



EXITING THE SELF-DIAGNOSIS MODE

- Turn ignition switch OFF, or press and hold the function switches "1" and "6" simultaneously for 5 seconds. Then the self-diagnosis ends.

DIAGNOSIS FUNCTION

- It can illuminate all the indicators (LED) in the multifunction switch.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

- It can check for continuity of the switches by sounding the buzzer when the multifunction switch is pressed.
- It can check for continuity of harness between multifunction switch and rear control switch (audio), or steering switch (audio).

Power Supply and Ground Circuit Check for AV and NAVI Control Unit or AV Control Unit

EKS001GD

1. CHECK FUSE.

Check AV and NAVI control unit or AV control unit fuses are not blown.

Unit	Power source	Fuse No.
AV and NAVI control unit or AV control unit	Battery power	47
	Ignition switch ACC or ON	21

OK or NG

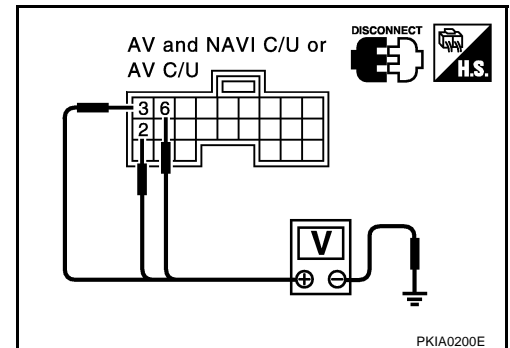
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to [PG-2](#), "[POWER SUPPLY ROUTING](#)".

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect the connector B30, M78 or B33.
 - B30 : AV and NAVI control unit
 - M78 : AV control unit (without rear control switch)
 - B33 : AV control unit (with rear control switch)
2. Check voltage between the following harness connector terminal and ground.

Terminals		(-)	Power source	Ignition switch	Reference voltage (V)
(+) Connector					
Terminal (wire color)					
B30, M78, B33	2(SB), 3(SB)	Ground	Battery power	OFF	Approx. 12
B30, M78, B33	6(L/OR)	Ground	ACC power	ACC	Approx. 12



OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short between AV and NAVI control unit or AV control unit and fuse.

3. GROUND CIRCUIT CHECK

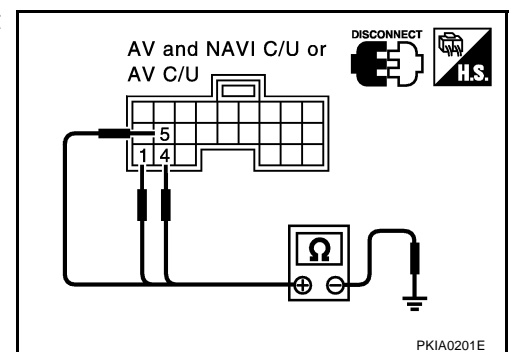
Check continuity between the following AV and NAVI control unit connector or AV control unit and ground.

Terminals		(-)	Ignition switch	Continuity
(+) Connector				
Terminal (wire color)				
B30, M78, B33	1(B), 4(B), 5(B)	Ground	OFF	Yes

OK or NG

OK >> inspection end.

NG >> Replace AV and NAVI control unit or AV control unit ground circuit harness.



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Power Supply and Ground Circuit Check for Display

EKS001BQ

1. CHECK FUSES.

- Check that the following fuses in display is blown.

Unit	Power source	Fuse No.
Display	Battery power	52
	Ignition switch ACC or ON	21

OK or NG

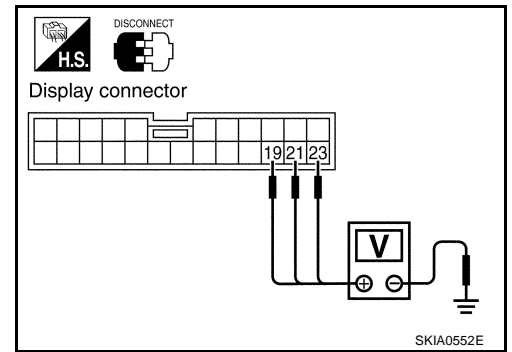
OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to [PG-2](#), "[POWER SUPPLY ROUTING](#)".

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect display connector.
2. Check voltage between display connector M82 terminals 19(L/OR),21(SB),23(SB) and ground.

Terminals		Ignition switch position			
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)				
M82	19(L/OR)	Ground	0V	Battery voltage	Battery voltage
	21(SB)	Ground	Battery voltage	Battery voltage	Battery voltage
	23(SB)	Ground	Battery voltage	Battery voltage	Battery voltage



OK or NG

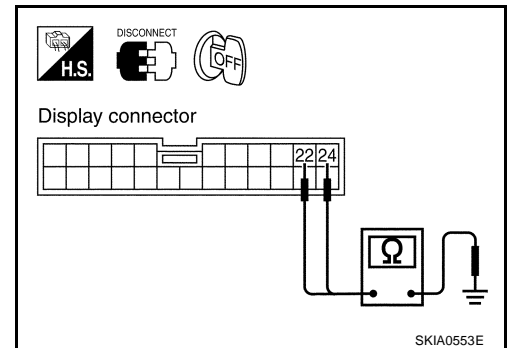
OK >> GO TO 3.

NG >> Check harness for open or short between display and fuse.

3. GROUND CIRCUIT CHECK

1. Check continuity between display connector M82 terminal 22,24 and body ground.

Terminals		(-)	Continuity
(+)			
Connector	Terminal (Wire color)		
M82	22	Ground	Yes
M82	24	Ground	Yes



OK or NG

OK >> Inspection end.

NG >> Check ground harness.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Power Supply and Ground Circuit Check for Multifunction Switch

EKS0018D

1. CHECK FUSES.

- Check that the following fuses.

Unit	Power source	Fuse No.
Multifunction switch	Ignition switch ACC or ON	21

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to [PG-2](#), "[POWER SUPPLY ROUTING](#)".

2. POWER SUPPLY CIRCUIT CHECK

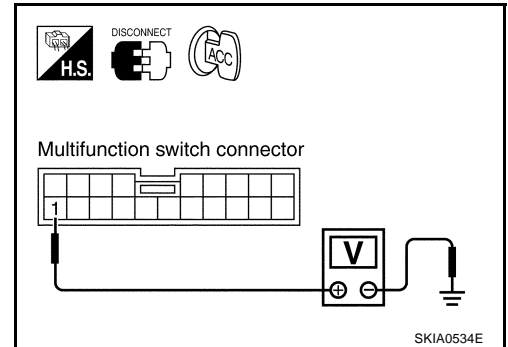
1. Disconnect multifunction switch connector.
2. Check voltage between multifunction switch harness connector M83 terminal 1 (L/OR) and ground.

Terminals		Ignition switch position			
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)				
M83	1 (L/OR)	Ground	0V	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check harness for open or short between multifunction switch and fuse.



3. GROUND CIRCUIT CHECK

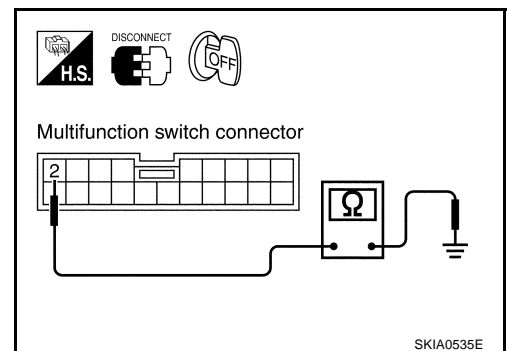
1. Check continuity between multifunction switch harness connector M83 terminal 2 (B) and ground.

Terminals		Continuity	
(+)			
Connector	Terminal	(-)	
M83	2	Ground	Yes

OK or NG

OK >> Multifunction switch is OK.

NG >> Check ground harness.



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

EKS001GE

Vehicle Speed Signal Check

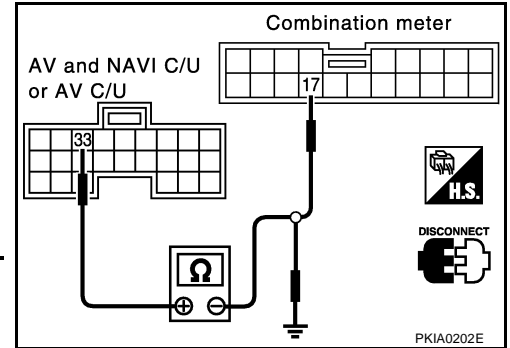
1. HARNESS CHECK

1. Disconnect the following connector B29,M77,B32 and combination meter connector M41.
 - B29: AV and NAVI control unit connector
 - M77: AV control unit connector (without rear control switch)
 - B32: AV control unit connector (with rear control switch)
2. Check continuity between the following harness connector and ground.

Terminals		(-)	Continuity
AV and NAVI control unit or AV control unit(+)	Connector		
	Terminal (wire color)		
B29,M77,B32	33(OR/L)	Ground	No

3. Check continuity between AV and NAVI control unit or AV control unit and combination meter.

Terminals				Continuity
AV and NAVI control unit or AV control unit(+)		Combination meter(-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B29,M77,B32	33(OR/L)	M41	17(OR/L)	Yes



OK or NG

OK >> GO TO 2.

- NG >> ● Check harness for open or short between AV and NAVI control unit or AV control unit and combination meter.
- Check connector housings for disconnected or loose terminals.

2. VEHICLE SPEED SIGNAL CHECK 1

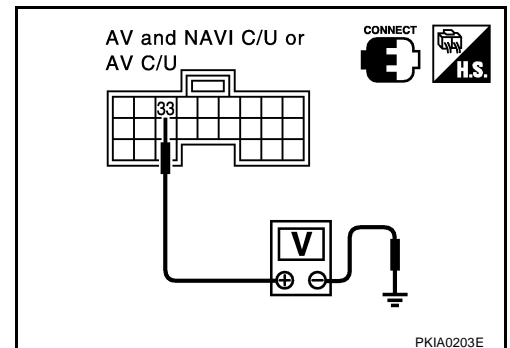
1. Connect AV and NAVI control unit connector or AV control unit connector and combination meter.
2. Check voltage between the following connector and ground.

Terminals			voltage (V)
(+) Terminal (wire color)		(-)	
Connector	Terminal (wire color)		
B30, M78, B33	33(OR/L)	Ground	Approx. 3.5 or more

OK or NG

OK >> GO TO 3.

- NG >> Replace AV and NAVI control unit or AV control unit.



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

DI

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

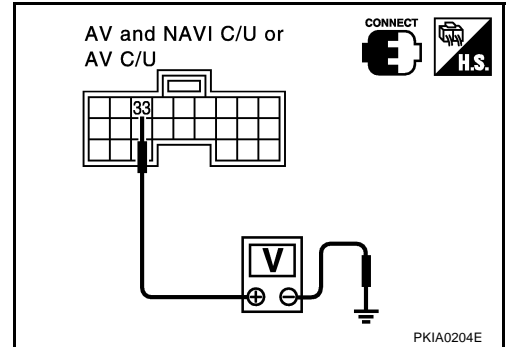
3. VEHICLE SPEED SIGNAL CHECK 2

1. Connect combination meter connector.
2. While driving vehicle at a constant speed, check voltage signal between the following connector and ground.

Terminals		(-)	voltage (V)
(+) Terminal (wire color)			
Connector	Terminal (wire color)		
B30, M78, B33	33(OR/L)	Ground	Refer to DI-93 , " Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit ".

OK or NG

- OK >> Replace AV and NAVI control unit or AV control unit.
 NG >> Check combination meter system. refer to [DI-21](#), "[Inspection/Vehicle Speed Signal](#)".



Parking Brake Signal Check

EKS001GF

1. PARKING BRAKE CHECK

Depress parking brake pedal and check if brake warning lamp comes on.

OK or NG

- OK >> GO TO 2.
 NG >> Check parking brake system. refer to [PB-3](#), "[PARKING BRAKE SYSTEM](#)".

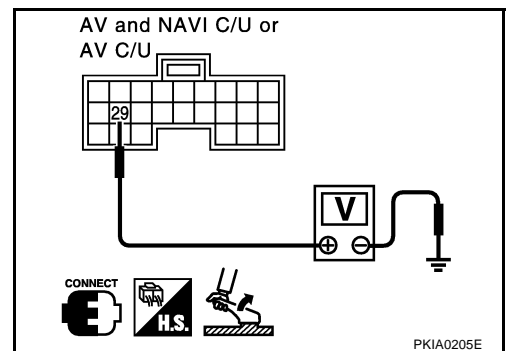
2. PARKING BRAKE SIGNAL CHECK

1. Turn ignition switch ON.
2. Check voltage between the following connector B29, M77 or B32 and ground, while depressing parking brake pedal.
 - B29: AV and NAVI control unit connector
 - M77: AV control unit connector (without rear control switch)
 - B32: AV control unit connector (with rear control switch)

Terminals			Parking brake	
(+) Terminal (wire color)		(-)		
Connector	Terminal (wire color)		Release	Depress
B29, M77, B32	29(Y/R)	Ground	Approx. 3.5V or more	Approx. 1.5V or less

OK or NG

- OK >> Replace AV and NAVI control unit or AV control unit.
 NG >> Check harness for open or short between AV and NAVI control unit or AV control unit and parking brake switch.



VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

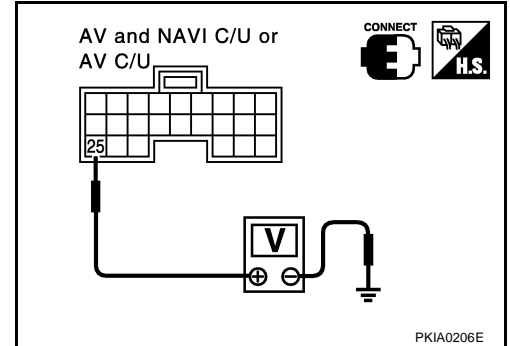
Illumination Control Signal Check

EKS001GG

1. ILLUMINATION CONTROL SIGNAL CHECK

1. Turn ignition switch ON
2. Check voltage between the following connector B29, M77 or B32 and ground.
 - B29 : AV and NAVI control unit connector
 - M77 : AV control unit connector (without rear control switch)
 - B32 : AV control unit connector (with rear control switch)

Terminals			Light Switch	
(+)		(-)	ON	OFF
Connector	Terminal (wire color)		ON	OFF
B29, M77, B32	25(R/L)	Ground	Approx. 3.5V or more	Approx. 1.5V or less



OK or NG

- OK >> Replace AV and NAVI control unit or AV control unit.
 NG >> Check harness for open or short between AV and NAVI control unit or AV control unit and BCM.

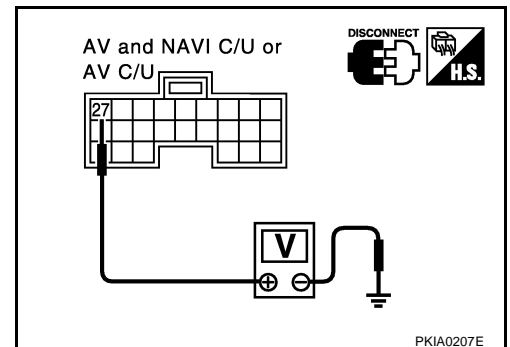
Ignition Signal Check

EKS001GH

1. IGNITION SIGNAL CHECK

1. Disconnect the following connector B29, M77 or B32.
 - B29 : AV and NAVI control unit connector
 - M77 : AV control unit connector (without rear control switch)
 - B32 : AV control unit connector (with rear control switch)
2. Check voltage between AV and NAVI control unit connector or AV control unit connector and ground.

Terminals			Ignition switch position	
(+)		(-)	ON	OFF
Connector	Terminal (wire color)		ON	OFF
B29, M77, B32	27(BR/W)	Ground	Battery voltage	0V



OK or NG

- OK >> Replace AV and NAVI control unit or AV control unit.
 NG >> Check harness for open or short between AV and NAVI control unit or AV control unit and fuse.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

EKS001GJ

RGB Screen Is Not Shown

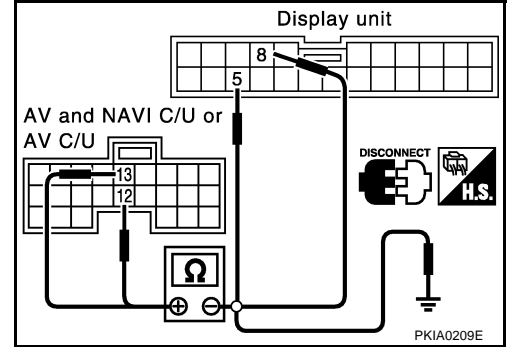
1. HARNESS CHECK

1. Turn ignition switch OFF
2. Disconnect the following connector B30, M78, B33 and Display connector M82.
 - B30: AV and NAVI control unit connector
 - M78: AV control unit connector (without rear control switch)
 - B33: AV control unit connector (with rear control switch)
3. Check continuity between AV and NAVI control unit or AV control unit and ground.

Terminals			Continuity
AV and NAVI control unit(+)		(-)	
Connector	Terminal (wire color)		
B30, M78, B33	12(B),13(W)		Ground

4. Check continuity between AV and NAVI control unit or AV control unit and Display.

Terminals				Continuity
AV and NAVI control unit (+)		Display (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B30, M78, B33	12 (B)	M82	8 (LG)	Yes
	13 (W)	M82	5 (L/Y)	Yes



OK or NG

OK >> GO TO 2.

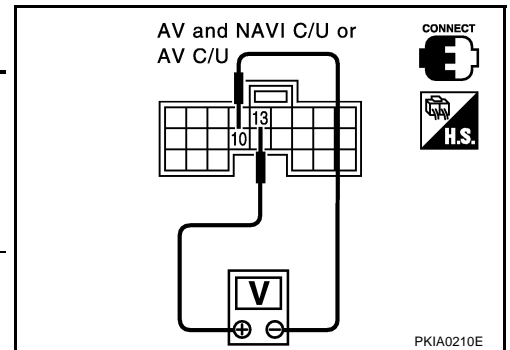
NG >> ● Check harness for open or short between AV and NAVI control unit or AV control unit and Display.

- Check connector housings for disconnected or loose terminals.

2. HORIZONTAL SYNCHRONIZATION SIGNAL CHECK

1. Connect AV and NAVI control unit connector and Display connector.
2. Check voltage between AV and NAVI control unit or AV control unit connector terminals 13(W) and 10.

Terminals				Voltage (v)
AV and NAVI control unit or AV control unit (+)		AV and NAVI control unit or AV control unit (-)		
Connector	Terminal (wire color)	Connector	Terminal	
B30, M78, B33	13 (W)	B30, M78, B33	10	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .



OK or NG

OK >> GO TO 3.

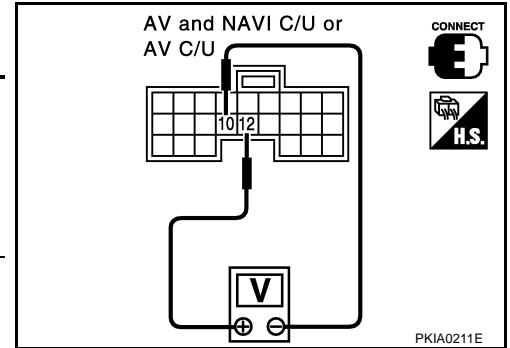
NG >> Replace Display.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

3. RGB AREA SIGNAL CHECK

1. Press "INFO" switch.
2. Check voltage between AV and NAVI control unit or AV control unit connector terminals 12(B) and 10.

Terminals				Voltage (v)
AV and NAVI control unit or AV control unit (+)		AV and NAVI control unit or AV control unit (-)		
Connector	Terminal (wire color)	Connector	Terminal	
B30, M78, B33	12 (B)	B30, M78, B33	10	Refer to DI-93 , " Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit ".



OK or NG

- OK >> Replace Display
- NG >> Replace AV and NAVI control unit or AV control unit

Color of RGB Image Is Not Proper

EKS001GK

1. COLOR BAR DIAGNOSIS CHECK

Check color tone by "SCREEN ADJUSTMENT" of CONFIRMATION/ADJUSTMENT function.

OK or NG

- OK >> Inspection end.
- NG >> GO TO 2.

A
B
C
D
E
F
G
H
I
J
L
M

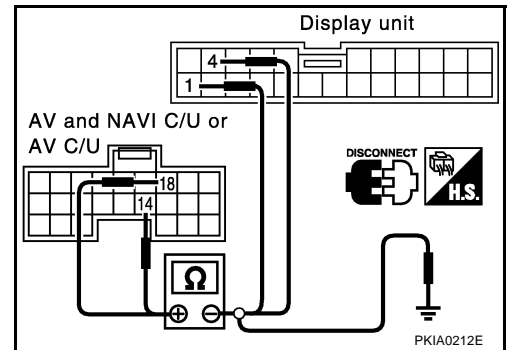
DI

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

2. HARNESS CHECK

1. Turn ignition switch OFF.
2. Disconnect the following connector B29, M77 or B32 and Display connector M82.
 - B29: AV and NAVI control unit connector
 - M77: AV control unit connector (without rear control switch)
 - B32: AV control unit connector (with rear control switch)
3. Check continuity between AV and NAVI control unit or AV control unit and Display.
4. Check continuity between AV and NAVI control unit AV control unit connector and ground.
 - When the screen looks bluish

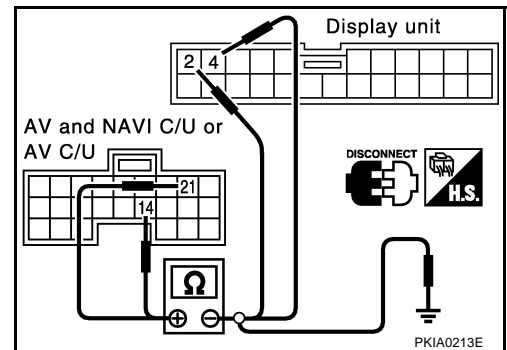
Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		Display (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B30, M78, B33 B30	18 (L)	M82	1 (L)	Yes
	14	M82	4	Yes



Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		(-)		
Connector	Terminal (wire color)			
B30, M78, M33	14, 18 (L)	Ground		No

- When the screen looks reddish

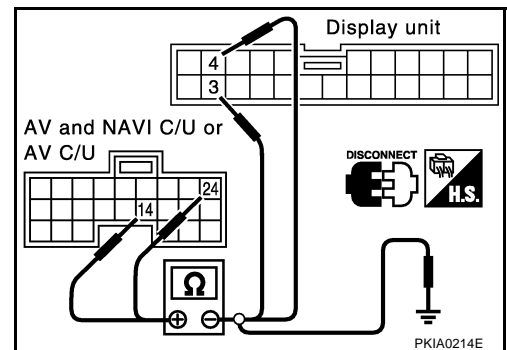
Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		Display (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B30, M78, B33	21 (PU)	M82	2 (Y)	Yes
	14	M82	4	Yes



Terminals				Continuity
AV and NAVI control unit or AV control unit(+)		(-)		
Connector	Terminal (wire color)			
B30, M78, B33	14, 21 (PU)	Ground		No

- When the screen looks yellowish

Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		Display (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B30, M78, B33	24 (LG)	M82	3 (G)	Yes
	14	M82	4	Yes



Terminals				Continuity
AV and NAVI control unit or AV control unit(+)		(-)		
Connector	Terminal (wire color)			
B30, M78, B33	14, 24 (LG)	Ground		No

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

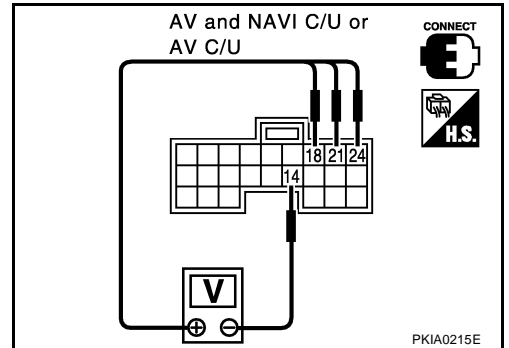
OK or NG

- OK >> GO TO 3.
 NG >> ● Check harness for open or short between AV and NAVI control unit or AV control unit and Display.
 ● Check connector housings for disconnected or loose terminals.

3. RGB SIGNAL CHECK

1. Connect AV and NAVI control unit or AV control unit connector and Display connector.
 2. Turn ignition switch ON
 3. Display "Color bar" by "CONFIRMATION/ADJUSTMENT" mode.
 4. Check voltage between AV and NAVI control unit or AV control unit connector terminals 18(L), 21(PU), 24() and 14.
- When the screen looks bluish

Terminals				voltage (v)
AV and NAVI control unit or AV control unit (+)		AV and NAVI control unit or AV control unit (-)		
Connector	Terminal (wire color)	Connector	Terminal	
B30, M78, B33	18 (L)	B30, M78, B33	14	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .



- When the screen looks reddish

Terminals				voltage (v)
AV and NAVI control unit or AV control unit (+)		AV and NAVI control unit or AV control unit (-)		
Connector	Terminal (wire color)	Connector	Terminal	
B30, M78, B33	21 (PU)	B30, M78, B33	14	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .

- When the screen looks yellowish

Terminals				voltage (v)
AV and NAVI control unit or AV control unit (+)		AV and NAVI control unit or AV control unit (-)		
Connector	Terminal (wire color)	Connector	Terminal	
B30, B33	24 (LG)	B30, M78, B33	14	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .
M78	24 (G)			

OK or NG

- OK >> Replace Display
 NG >> Replace AV and NAVI control unit or AV control unit

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

EKS001GL

RGB Screen Is Rolling

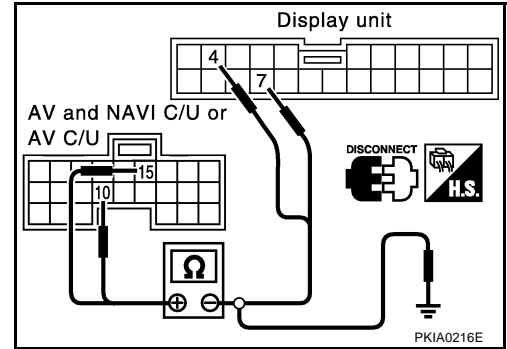
1. HARNESS CHECK

1. Turn ignition switch OFF.
2. Disconnect the following connector B30,M78 or B33 and display connector M82.
 - B29: AV and NAVI control unit connector
 - M77: AV control unit connector (without rear control switch)
 - B32: AV control unit connector (with rear control switch)
3. Check continuity between AV and NAVI control unit or AV control unit connector and ground.

Terminals			Continuity
AV and NAVI control unit or AV control unit (+)		(-)	
Connector	Terminal		
B30, B33	10,15 (G)	Ground	No
M78	10,15(L/R)	Ground	No

4. Check continuity between AV and NAVI control unit or AV control unit and Display.

Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		Display (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B30,B33	15 (G)	M82	7 (L/R)	Yes
M78	15 (L/R)		4	Yes
B30, M78, B33	10	M82	4	Yes



OK or NG

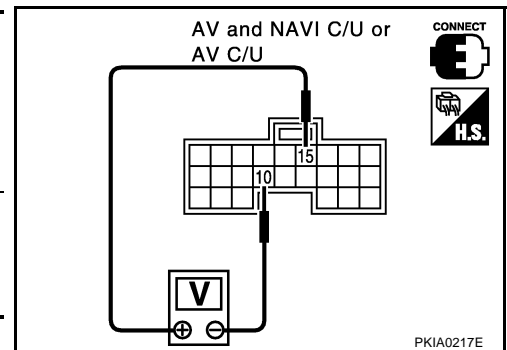
OK >> GO TO 2.

- NG >> ● Check harness for open or short between AV and NAVI control unit or AV control unit and Display.
- Check connector housings for disconnected or loose terminals.

2. RGB SYNCHRONIZING SIGNAL CHECK

1. Connect AV and NAVI control unit or AV control unit connector and Display connector.
2. Turn ignition switch ON.
3. Check voltage between AV and NAVI control unit or AV control unit connector terminal 15 and 10.

Terminals				Reference signal
AV and NAVI control unit or AV control unit (+)		AV and NAVI control unit or AV control unit (-)		
Connector	Terminal (wire color)	Connector	Terminal	
B30, B33	15 (G)	B30, B33	10	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .
M78	15(L/R)	M78		



OK or NG

OK >> Replace Display.

NG >> Replace AV and NAVI control unit or AV control unit.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

No Fuel Information Is Displayed/No Warning Message Is Displayed.

EKS001G0

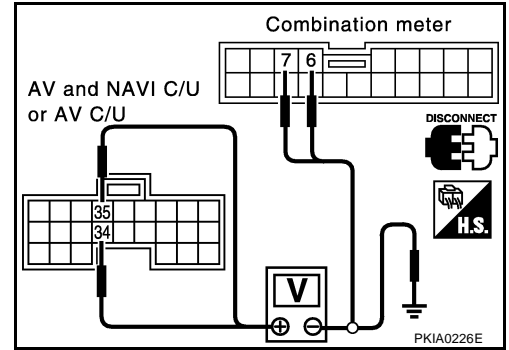
1. HARNESS CHECK

1. Disconnect the following connector, combination meter connector M41 and BCM connector M4.
 - B29: AV and NAVI control unit connector
 - M77: AV control unit connector (without rear control switch)
 - B32: AV control unit connector (with rear control switch)
2. Check continuity between AV and NAVI control unit or AV control unit connector and ground.

Terminals		(-)	Continuity
AV and NAVI control unit or AV control unit (+)	Connector		
	Terminal (wire color)		
B29, M77, B32	34 (LG),35 (PU)	Ground	No

3. Check continuity between AV and NAVI control unit or AV control unit and combination meter.

Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		Combination meter (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B29, M77, B32	34 (LG)	M41	7 (LG)	Yes
	35 (PU)	M41	6 (PU)	Yes



OK or NG

- OK >> GO TO 2.
 NG >> ● Check harness for open or short between AV and NAVI control unit and combination meter.
 ● Check connector housings for disconnected or loose terminals.

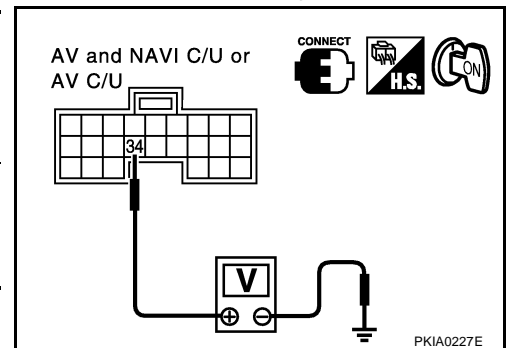
2. COMMUNICATION SIGNAL (AV-ME) CHECK

1. Connect combination meter connector, BCM connector, and AV and NAVI control unit connector or AV control unit connector.
2. Turn the ignition switch ON.
3. Check voltage between AV and NAVI control unit or AV control unit terminal 34(LG) and ground.

Terminals		(-)	Voltage (V)
AV and NAVI control unit or AV control unit (+)	Connector		
	Terminal (wire color)		
B29, M77, B32	34 (LG)	Ground	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .

OK or NG

- OK >> GO TO 3.
 NG >> Replace AV and NAVI control unit or AV control unit.

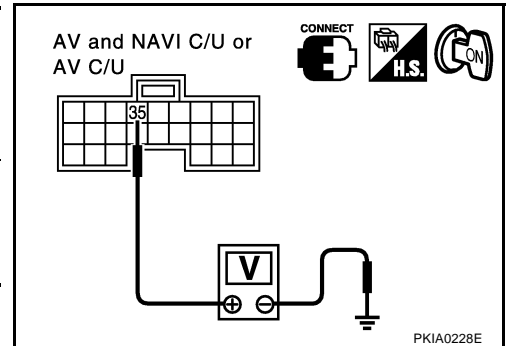


VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

3. COMMUNICATION SIGNAL (ME-AV) CHECK

1. Turn ignition switch to ON and display "VEHICLE ELECTRONIC SYSTEMS" screen.
2. Check voltage between AV and NAVI control unit or AV control unit connector terminal 35(PU) and ground.

Terminals		(-)	Voltage (V)
AV and NAVI control unit or AV control unit (+)	Terminal (wire color)		
Connector	Terminal (wire color)	Ground	Refer to DI-93. "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .
B29, M77, B32	35 (PU)		



OK or NG

- OK >> Replace AV and NAVI control unit or AV control unit.
- NG >> Replace combination meter.

Vehicle Condition Setting Is Not Possible.

EKS001GP

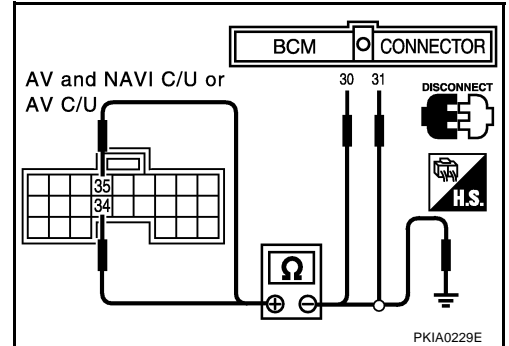
1. HARNESS CHECK

1. Disconnect the following connector, combination meter connector M41 and BCM connector M4.
 - B29: AV and NAVI control unit connector
 - M77: AV control unit connector (without rear control switch)
 - B32: AV control unit connector (with rear control switch)
2. Check continuity between AV and NAVI control unit or AV control unit connector terminal 34(LG), and ground.

Terminals		(-)	Continuity
AV and NAVI control unit or AV control unit(+)	Terminal (wire color)		
Connector	Terminal (wire color)	Ground	No
B29, M77, B32	34 (LG),35 (PU)		

3. Check continuity AV and NAVI control unit or AV control unit connector and BCM.

Terminals				Continuity
AV and NAVI control unit or AV control unit (+)		BCM (-)		
Connector	Terminal (wire color)	Connector	Terminal (wire color)	
B29, M77, B32	34 (LG)	M4	31 (LG)	Yes
	35 (PU)	M4	30 (PU)	Yes



OK or NG

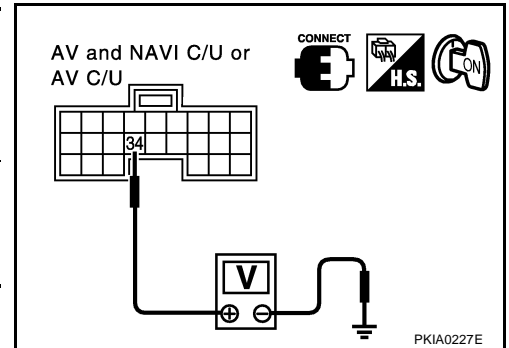
- OK >> GO TO 2.
- NG >>
 - Check harness for open or short between AV and NAVI control unit or AV control unit and BCM.
 - Check connector housings for disconnected or loose terminals.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

2. COMMUNICATION SIGNAL (AV-ME) CHECK

1. Connect AV and NAVI control unit or AV control unit, combination meter connector and BCM connector.
2. Turn ignition switch ON.
3. Check voltage signal between AV and NAVI control unit or AV control unit connector terminal 34(LG) and ground.

Terminals		(-)	Reference signal
AV and NAVI control unit or AV control unit (+)	Connector		
	Terminal (wire color)		
B29, M77, B32	34 (LG)	Ground	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .



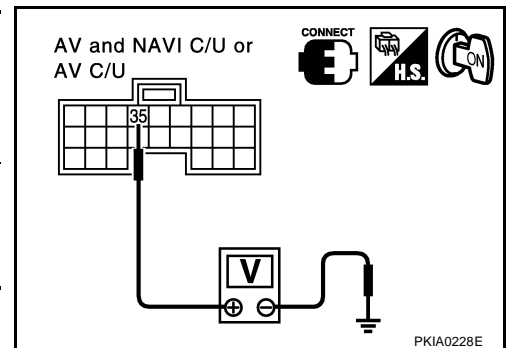
OK or NG

- OK >> GO TO 3.
 NG >> Replace AV and NAVI control unit or AV control unit

3. COMMUNICATION SIGNAL (ME-AV) CHECK

1. Turn ignition switch to ON and display "VEHICLE ELECTRONIC SYSTEMS" screen.
2. Check voltage signal between AV and NAVI control unit or AV control unit connector terminal 35(PU) and ground.

Terminals		(-)	Reference signal
AV and NAVI control unit or AV control unit (+)	Connector		
	Terminal (wire color)		
B29, M77, B32	35 (PU)	Ground	Refer to DI-93, "Terminals and Reference Value for AV and NAVI Control Unit and AV Control Unit" .



OK or NG

- OK >> Replace AV and NAVI control unit or AV control unit
 NG >> Replace BCM

Multifunction Switch Does Not Operate.

EKS0018E

Inspection procedure

1. MULTIFUNCTION SWITCH SELF-DIAGNOSIS

- Perform multifunction switch self-diagnosis. Refer to [DI-119, "Multifunction Switch Self-Diagnosis Function"](#).

Is self-diagnosis result OK?

- OK >> GO TO 2.
 NG >> Replace multifunction switch.

2. POWER AND GROUND CIRCUIT CHECK

- Check power and ground circuit. Refer to [DI-122, "Power Supply and Ground Circuit Check for Multifunction Switch"](#).

OK or NG

- OK >> GO TO 3
 NG >> Repair or replace harness.

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

3. COMMUNICATION CIRCUIT SELF-DIAGNOSIS

1. Perform the self-diagnosis mode in the self-diagnosis function (If the self-diagnosis cannot be activated with the multifunction switch, check with CONSULT-II). Refer to [DI-108, "Self-Diagnosis Mode \(with Navigation System\)"](#) and [DI-100, "Self-Diagnosis Mode \(without Navigation System\)"](#) .

Is self-diagnosis result OK?

- OK >> Replace display
- NG >> With the self-diagnosis results, check the malfunction part.

Multifunction Switch Indicator Does Not illuminate.

EKS0018F

1. MULTIFUNCTION SWITCH SELF-DIAGNOSIS

1. Perform the multifunction switch self-diagnosis. Refer to [DI-119, "Multifunction Switch Self-Diagnosis Function"](#) .

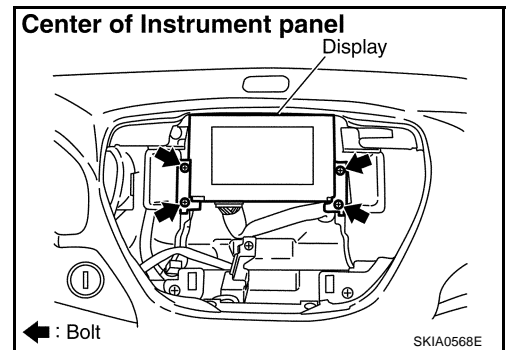
Is the self-diagnosis result OK?

- OK >> Replace switch of the malfunctioning indicator
- NG >> Replace multifunction switch.

Removal and Installation of Display

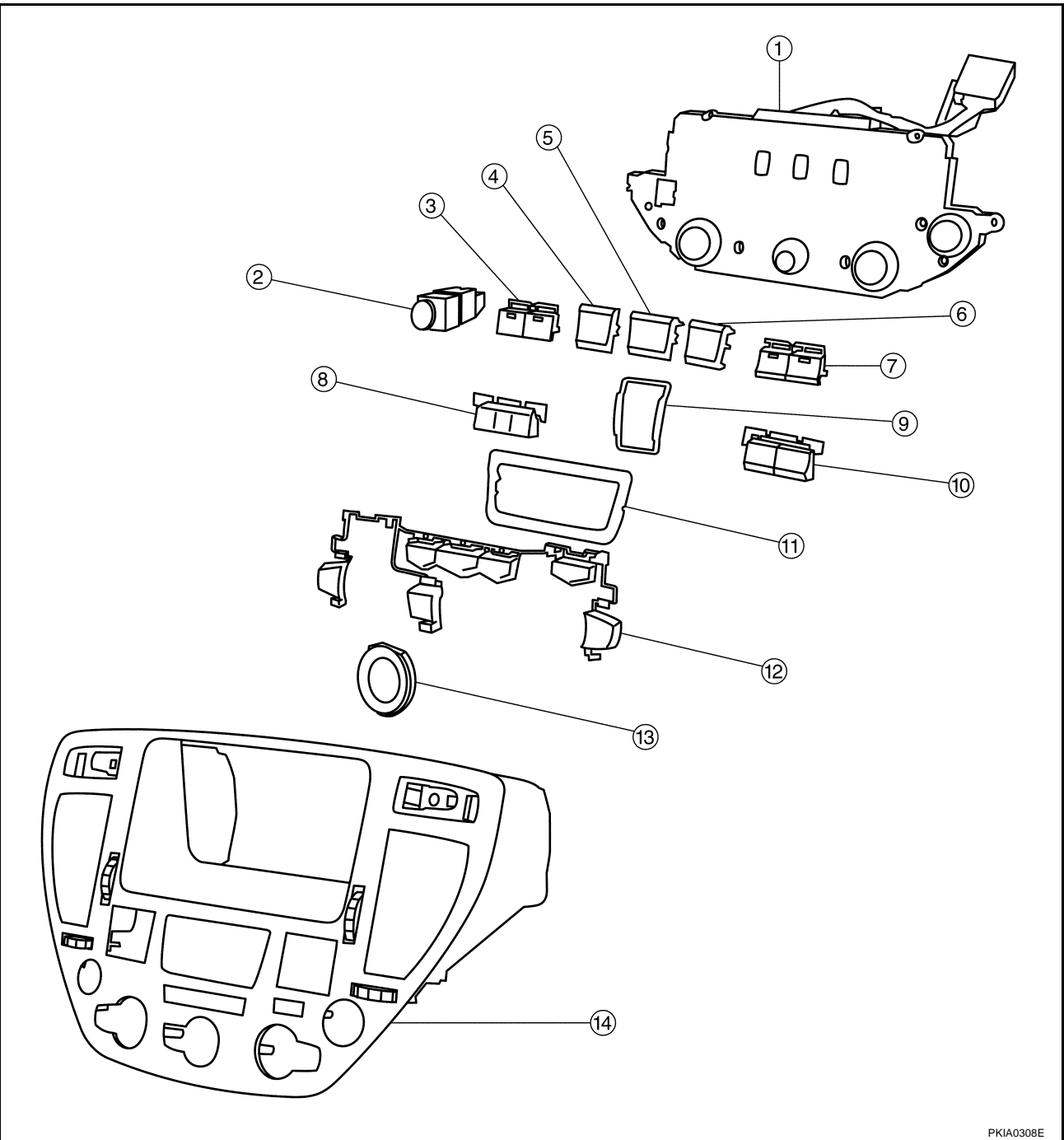
EKS0018L

1. Remove the cluster lid C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#)
2. Remove the screws (2), and remove the display.



Disassembly and Assembly for Multifunction Switch

EKS0018M



A
B
C
D
E
F
G
H
I
J
DI
L
M

- | | | |
|------------------------------------|-------------------------|---------------------|
| 1. Multifunction switch | 6. Function switch | 11. Escutcheon |
| 2. Hazard switch | 7. TAPE and DISC switch | 12. Switch assembly |
| 3. Defroster, rear defogger switch | 8. A/C switch | 13. Escutcheon |
| 4. Function switch | 9. Escutcheon | 14. Cluster lid C |
| 5. Function switch | 10. AM and FM switch | |

1. Remove the screw (7)
2. Remove the switches.

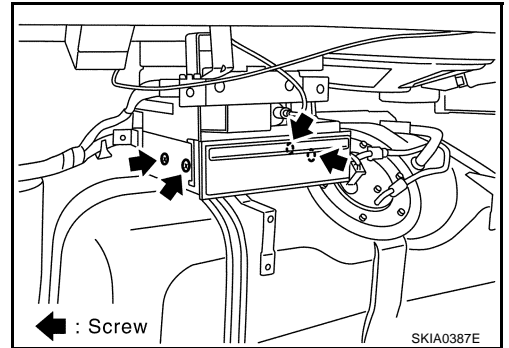
PKIA0308E

VEHICLE INFORMATION AND INTEGRATED SWITCH SYSTEM

Removal and Installation of AV and NAVI Control Unit and AV Control Unit (For CANADA with Rear Control Switch)

EKS001G0

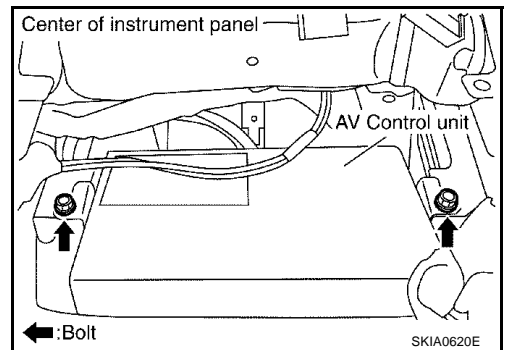
1. Remove the trunk compartment trim. Refer to [EI-51, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) .
2. Remove the screws (4) and remove the AV and NAVI control unit or AV control unit (For CANADA with rear control unit).



Removal and Installation of AV Control Unit (without Navigation System and without Rear Control Switch)

EKS001F6

1. Remove cluster lid C. Refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#) .
2. Remove warning chime. Refer to [DI-67, "Removal and Installation of Warning Chime"](#) .
3. Remove tire pressuer warning control unit. Refer to [WT-8, "TIRE PRESSURE WARNING CONTROL UNIT"](#) .
4. Remove the screws (2), and remove AV control unit.



CLOCK

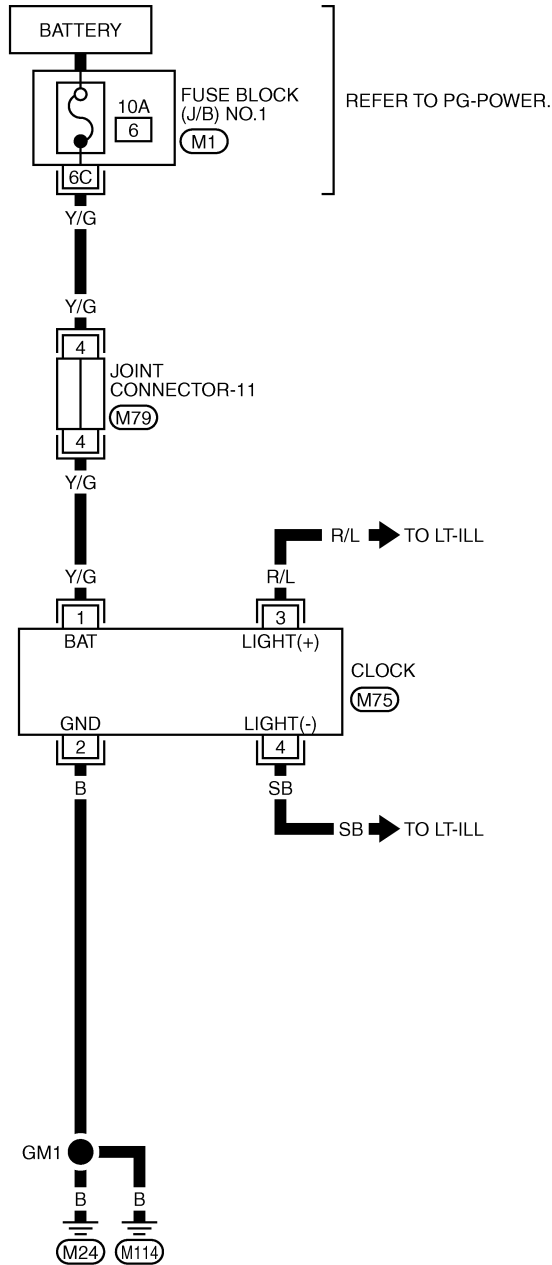
PFP:25820

CLOCK

Wiring Diagram — CLOCK —

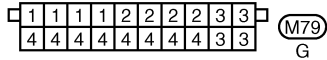
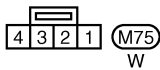
EKS001B7

DI-CLOCK-01



REFER TO PG-POWER.

A
B
C
D
E
F
G
H
I
J
DI
L
M



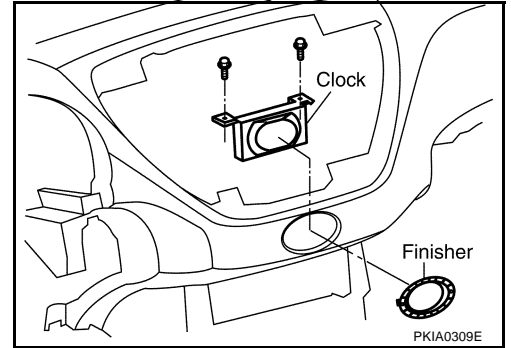
REFER TO THE FOLLOWING.
 (M1) - FUSE BLOCK-JUNCTION BOX (J/B) NO.1

CLOCK

Removal and Installation

EKS001B8

1. Remove the cluster lid C, refer to [IP-10, "INSTRUMENT PANEL ASSEMBLY"](#)
2. Remove the screws (2), and remove clock.



REAR VIEW MONITOR

REAR VIEW MONITOR

PFP:28260

System Description

EKS0012G

- The rear view monitor is equipped to check the rearward of the vehicle with display when A/T selector lever is in R position.
- The lines of vehicle sides and the distance from the rear end of the vehicle are provided on display as a guide. It allows the driver to know the distance between the vehicle and a rearward object, and the width of the vehicle much easier.

POWER SUPPLY AND GROUND

Power is supplied at all time

- through 15 A fuse [NO.52, located in fuse, fusible link and relay block (J/B)]
- to rear view camera control unit terminal 2.

When ignition switch is ACC or ON position, power is supplied

- through 10 A fuse [NO.21, located in fuse block (J/B) NO.1]
- to rear view camera control unit terminal4.

When Ignition switch is ON or START position, power is supplied

- through 10 A fuse [NO.9, located in fuse block (J/B) NO.1]
- to back-up lamp relay terminal 2 and 5.

Ground is supplied

- to rear view camera control unit terminal 1
- through body ground B217 and b256,and
- to rear view camera terminal 2
- through body ground B17 and B57.

AV COMMUNICATION LINE

Rear view camera control unit is controlled the following units with AV communication line.

- AV and NAVI control unit
- Display
- Multifunction switch

REAR VIEW CAMERA OPERATION

When A/T selector lever is reverse position

- through back-up lamp relay terminal 1
- to TCM terminal 41.

Then back-up lamp relay is energized,

- from back-up lamp terminal 3
- to rear view camera control unit terminal 10.

Then, camera ON signal is sent

- through rear view camera control unit terminal 6
- to rear view camera terminal 1.

An image taken by rear view camera is sent

- through rear view camera terminal 3 and 4
- to rear view camera control unit terminal 18 and 16.

Then an image is sent

- through rear view camera control unit terminal 22 and 24
- to the display terminal 9 and 10.

An image of rear view will be projected on the display.

Rear View Camera Guide Line

Using AV communication line (refer to [DI-112, "AV COMMUNICATION LINE CIRCUIT DIAGRAM \(with NAVIGATION SYSTEM\)"](#)), rear view guideline signal is sent

- from AV and NAVI control unit terminal 47 and 48

A
B
C
D
E
F
G
H
I
J

DI

L

M

REAR VIEW MONITOR

- through display, multifunction switch, audio unit and audio amp.(Bose speaker amp.)
- to rear view camera control unit terminal 11 and 9. Refer to Rear view guideline will be projected on the display.

FUNCTION OF BACKLIGHT CORRECTION

When visibility of rear view image projected on the display is not good caused by backlight, the rear view image projected on the display can be adjusted by pushing “ENTER” bottom.

When “ENTER” bottom is pushed, using AV communication line, backlight correction signal is sent

- From multifunction switch terminal 12 and 13
- through audio unit and audio amp.(Bose speaker amp.)
- to rear view camera control unit terminal 11 and 9.

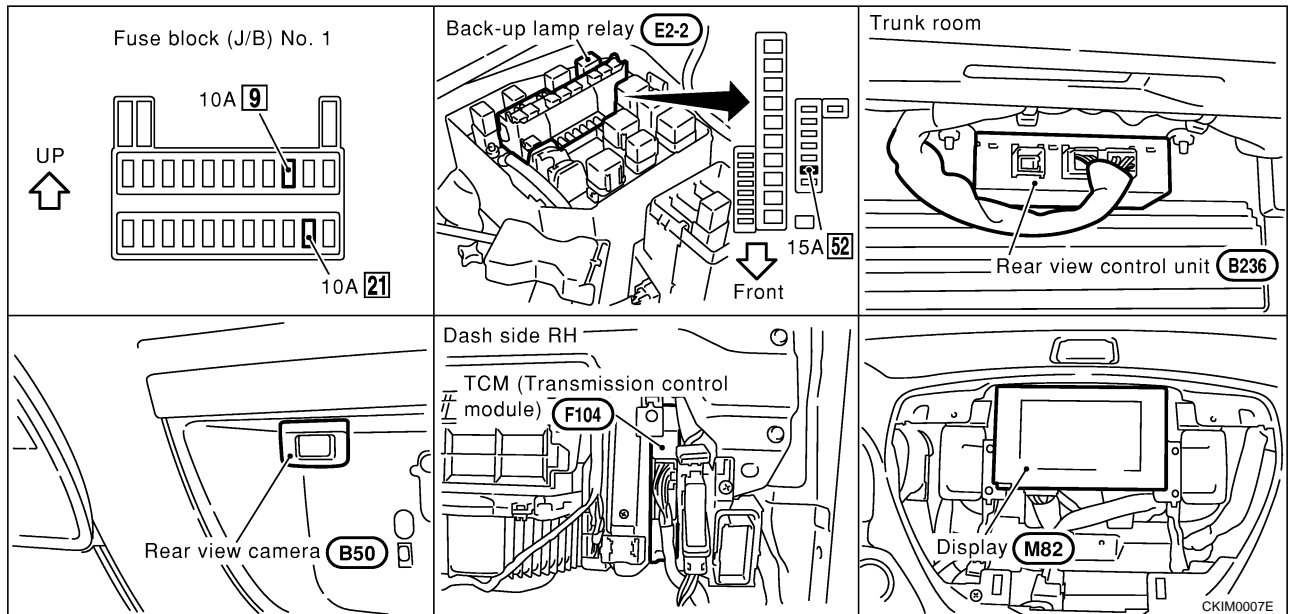
Then, backlight correction signal is sent

- through rear view camera control unit terminal 8
- to rear view camera terminal 5.

An iris function of rear view camera will be operated, and visibility of rear view image projected on the display will be imaged.

Component Parts and Harness Connector Location

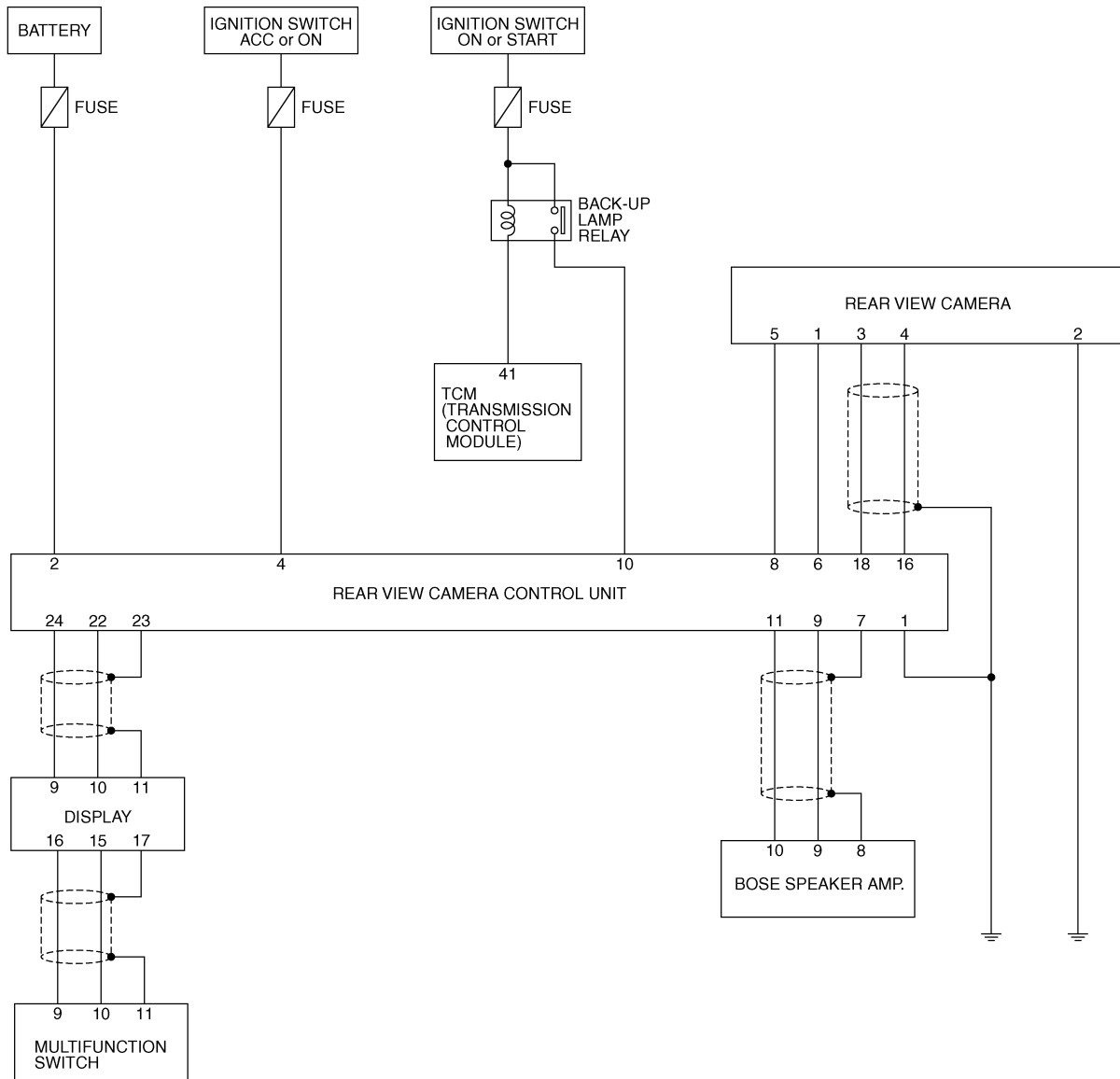
EKS0012H



REAR VIEW MONITOR

Schematic

EKS00121



A
B
C
D
E
F
G
H
I
J
DI
L
M

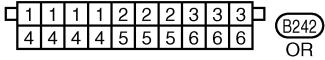
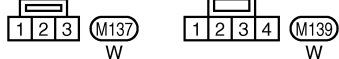
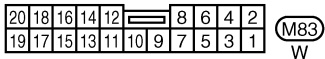
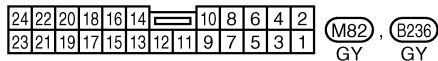
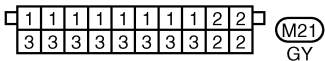
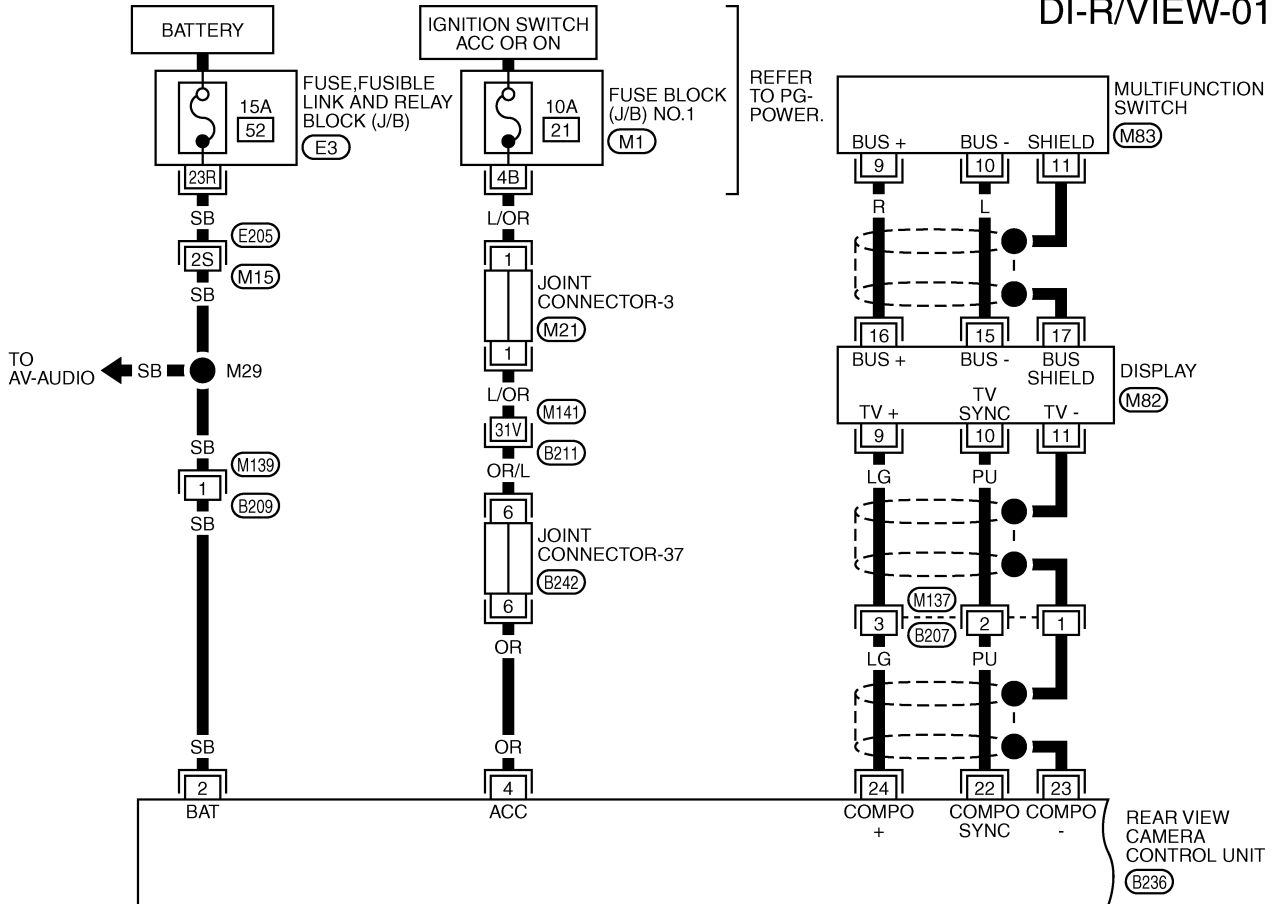
TKWM0094E

REAR VIEW MONITOR

EKS001BY

Wiring Diagram — R/VIEW —

DI-R/VIEW-01



REFER TO THE FOLLOWING.

(E205), (B211) -SUPER MULTIPLE JUNCTION (SMJ)

(M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

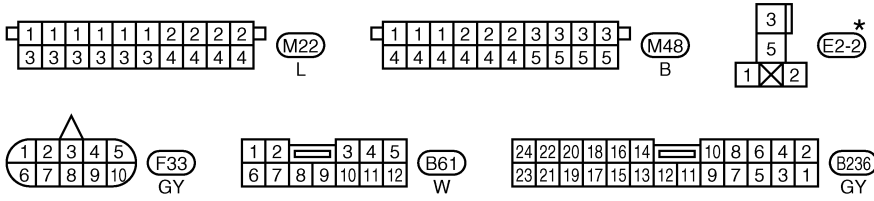
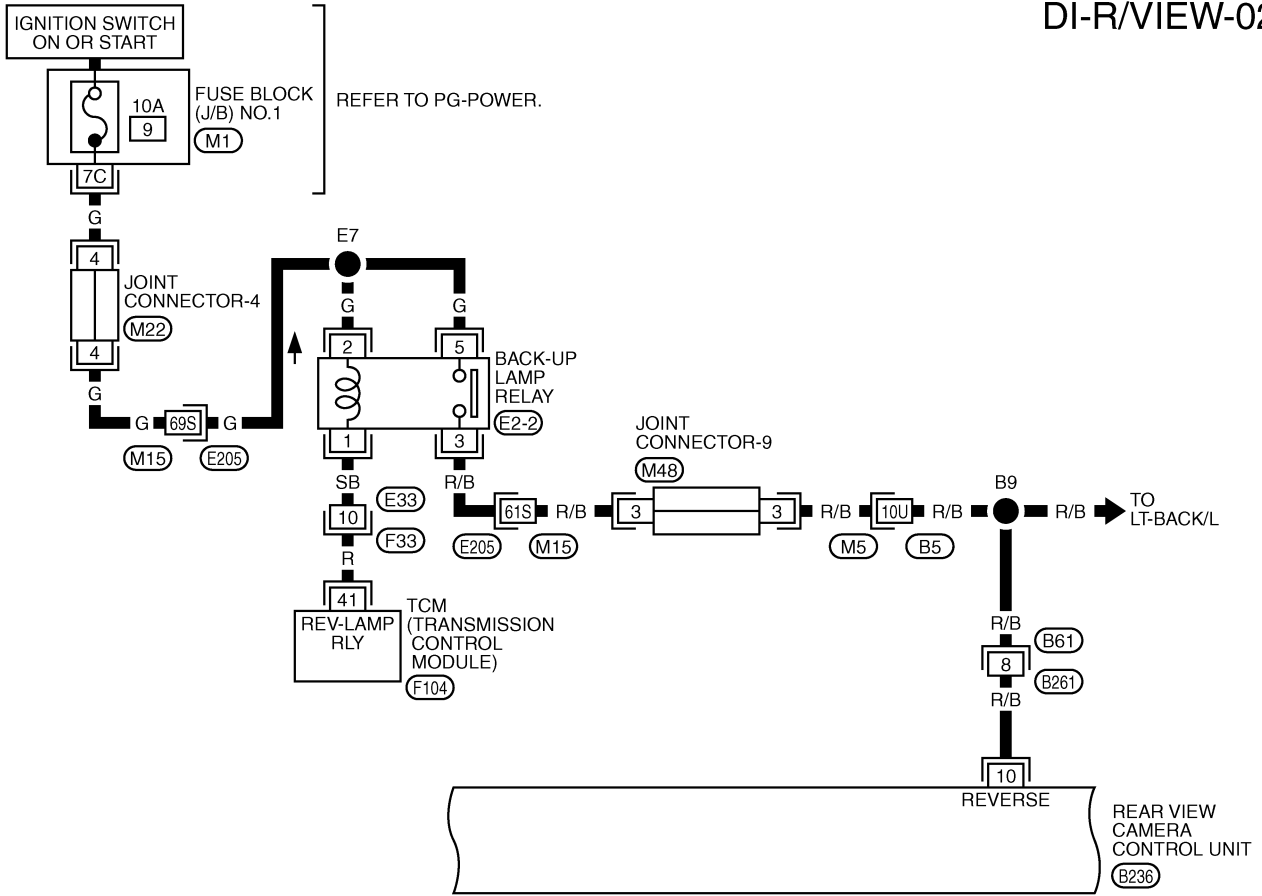
(E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)

TKWM0095E

REAR VIEW MONITOR

DI-R/VIEW-02

A
B
C
D
E
F
G
H
I
J
L
M



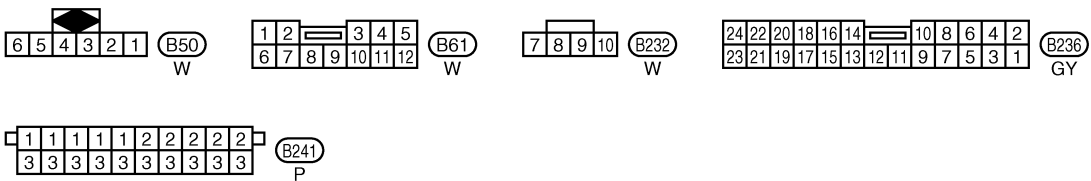
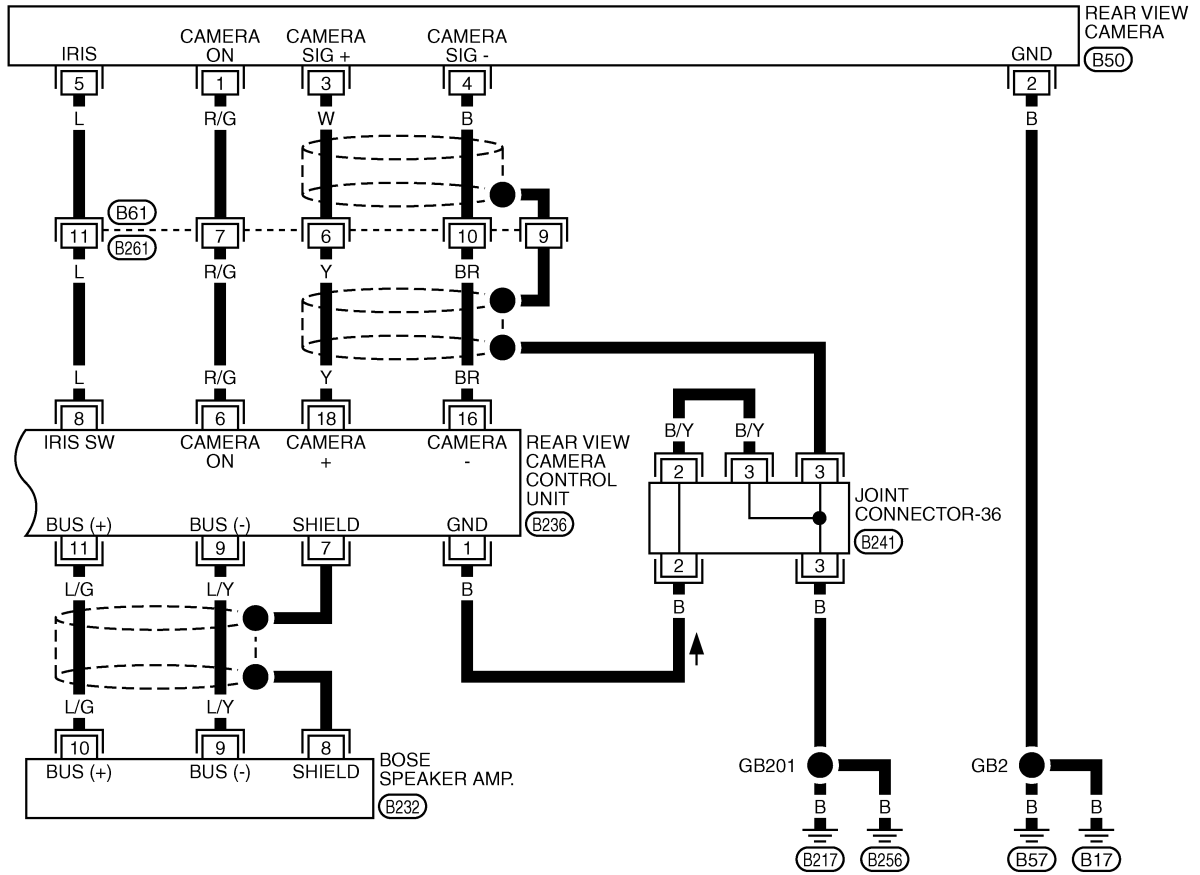
REFER TO THE FOLLOWING.

- (M5, E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (F104) -ELECTRICAL UNITS

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

REAR VIEW MONITOR

DI-R/VIEW-03



TKWM0097E

Terminals and Reference Value for Rear View Camera Control Unit

EKS0012J

TERMINALS			ITEM	CONDITION		Voltage (V)
(+)		(-)		Ignition switch	Operation	
TER-MINAL	WIRE COLOR					
1	B	Ground	Ground	ON	—	—
2	SB	Ground	Battery Power	OFF	—	Battery voltage
4	OR	Ground	ACC Power	ACC	—	Battery voltage
6	R/G	Ground	Camera Power output	ON	A/T selector lever R-position	Approx. 9V
7	—	Ground	Shield ground	ON	—	—

REAR VIEW MONITOR

TERMINALS			ITEM	CONDITION		Voltage (V)
(+)		(-)		Igni- tion switch	Operation	
TER- MINAL	WIRE COLOR					
8	L	Ground	Iris ON signal	ON	A/T selector lever R-position When the rear view monitor ON...iris OFF	Approx. 0V
					After the above, press the central control switch OK button...iris ON	Approx. 9V
9	L/Y	Ground	Communication signal (-)	ON	—	
10	R/B	Ground	Reverse signal input	ON	A/T selector lever R-position	Battery voltage
					A/T selector lever in other than R- position	Approx. 0V
11	L/G	Ground	Communication signal (+)	ON	—	
16	BR	Ground	Shield ground	ON	—	Approx. 0V
18	Y	Ground	Camera image input	ON	A/T selector lever R-position	
22	PU	Ground	Composite image synchronization signal output	ON	A/T selector lever R-position	
23	—	Ground	Shield ground	ON	—	—
24	LG	Ground	Composite image Output	ON	A/T selector lever R-position	

A
B
C
D
E
F
G
H
I
J
DI
L
M

REAR VIEW MONITOR

Self-Diagnosis Function DESCRIPTION

EKS0012K

- Diagnosis function has 2 modes; self-diagnosis mode and Confirmation/adjustment mode.
- Self-diagnosis mode checks connections between AV&NAVI control unit and rear view camera control unit, and shows the results on the display screen.
- The Confirmation/Adjustment mode adjusts the guidelines which overlap rear view monitor image.

DIAGNOSIS ITEM

Mode		Description
Self-diagnosis		Check connection between AV&NAVI control unit and rear view camera control unit.
Confirmation/Adjustment	Rearview	It can adjust the guidelines which overlap the rear view monitor image.

Self-Diagnosis Mode OPERATION PROCEDURE

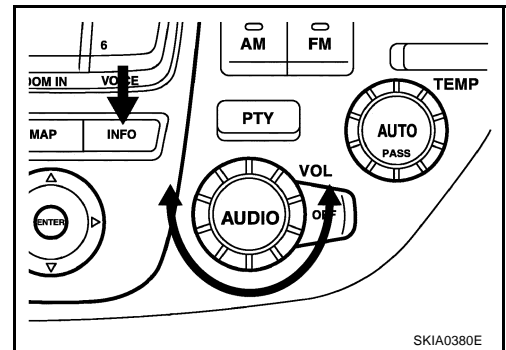
EKS001FE

- For the starting procedure of the self-diagnosis mode and self-diagnosis results, refer to [DI-108, "Self-Diagnosis Mode \(with Navigation System\)"](#).

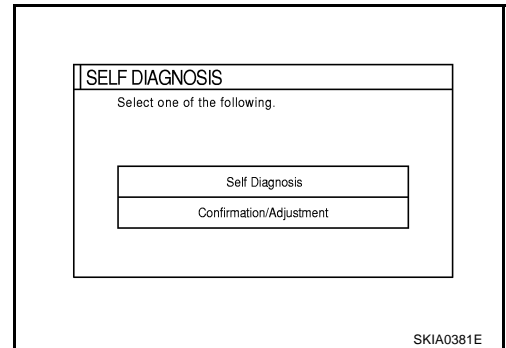
Confirmation/Adjustment Mode OPERATION PROCEDURE

EKS001FF

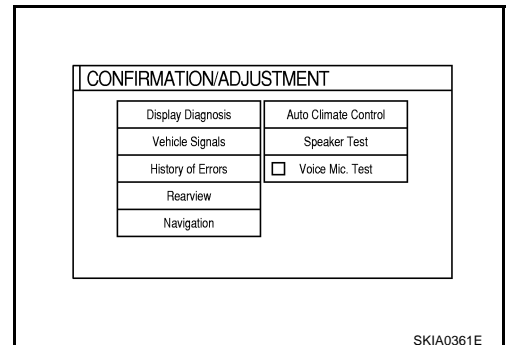
1. Start the engine.
2. Turn OFF the audio system.
3. While pressing the "INFO" switch, turn volume control dial clockwise counter clockwise for 30 clicks or more (When self-diagnosis mode is activated, a short beep will be heard.)
- To return to the previous screen, press "PREV" switch.



4. The initial trouble diagnosis screen is displayed for selecting "self-diagnosis" or "Confirmation/Adjustment" modes.



5. Select "confirmation/Adjustment" In this mode, check and adjustment of each item will become possible.
6. Select each switch on the "CONFIRMATION/ADJUSTMENT" screen to display the relevant diagnosis screen.



REAR VIEW MONITOR

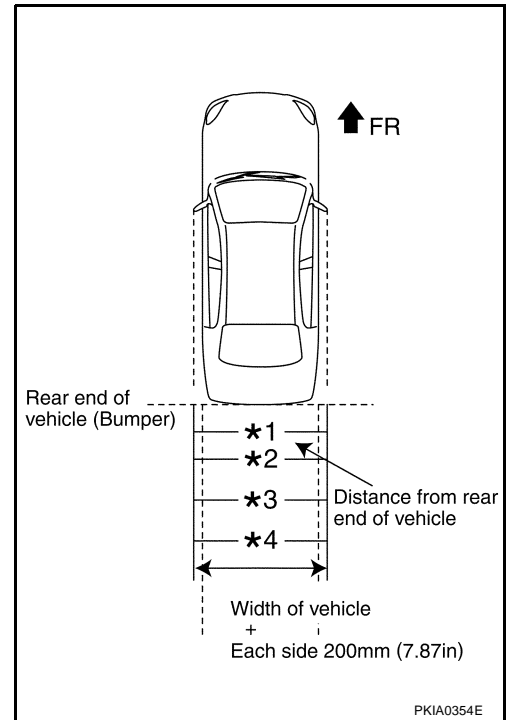
EKS001FG

Side Distance Guideline Correction

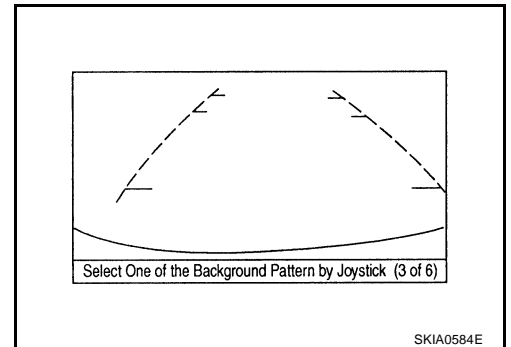
- This mode is used to modify the side distance guidelines if they are dislocated from the rear view monitor image, because of variations of body/camera mounting conditions.

Side distance guideline correction procedure

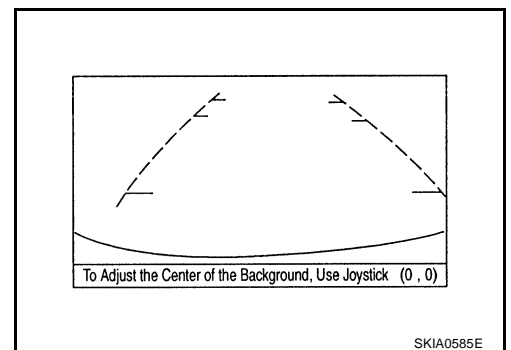
1. Create a correction line to modify the screen.
Draw lines on the rearward of the vehicle passing through the following points: 0.2 m (7.87 inch) from both sides of the vehicle, and
 - *1: 0.45 m (1.5 feet)
 - *2: 0.91m (3.0 feet)
 - *3: 2.13m (7.0 feet)
 - *4: 3.04 m (10 feet)and from the rear end of the bumper
2. Select "REARVIEW" in "Confirmation/Adjustment mode".



3. Using the joy stick, select the pattern closest to the prepared correction line among the 6 guideline patterns, then press "ENTER" button.



4. Carefully adjust the vertically and horizontally in the range of -8 - 8. Align it with the prepared line, and press the ENTER button.
5. The adjustment is completed.



REAR VIEW MONITOR

EKS0012N

Power Supply and Ground Circuit Check

1. CHECK THE FUSES.

- Check that the fuses for rear view camera control unit is blown.

Unit	Power source	Fuse No.
Rear view camera control unit	Battery Power	52
	Ignition switch ACC or ON	21

OK or NG

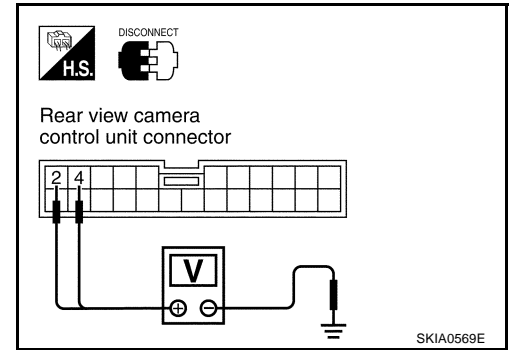
OK >> GO TO 2.

NO >> If fuse is blown, be sure to eliminate cause of problem before installing new fuse. Refer to [PG-2](#), "[POWER SUPPLY ROUTING](#)"

2. POWER SUPPLY CIRCUIT CHECK

1. Disconnect camera controller connector.
2. Check voltage rear view camera control unit B236 terminal 2(SB) and 4(OR), and ground.

Terminals		(-)	OFF	ACC	ON
(+) Connector					
Terminal (Wire color)					
B236	2(SB)	Ground	Battery voltage	Battery voltage	Battery voltage
B236	4(OR)	Ground	0V	Battery voltage	Battery voltage



OK or NG

OK >> GO TO 3.

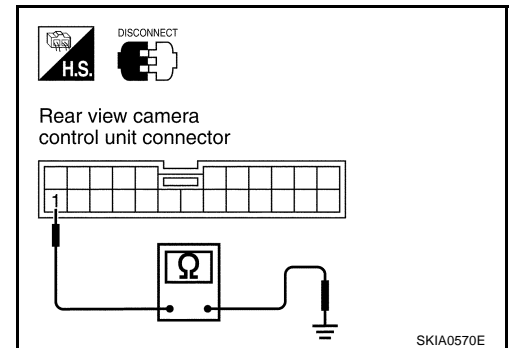
NO >> Check harness for open or short between rear view camera control unit and fuse.

3. GROUND CIRCUIT CHECK

Check the following.

- Continuity between rear view camera control unit harness connector B236 terminal 1(B) and ground.
- Continuity between rear view camera harness connector B50 terminal 2 (B) and ground.

Terminals		(-)	Continuity
(+) Connector			
Terminal (Wire color)			
B236	1(B)	Ground	Yes
B50	2 (B)	Ground	Yes



OK or NG

OK >> Inspection end.

NG >> Check ground harness.

REAR VIEW MONITOR

Rear View Is Not Displayed With The A/T Selector Lever In R-position.

EKS00120

1. BACKUP LAMP INSPECTION

1. Turn ignition switch ON position.
2. Shift A/T selector lever to R-position.

Dose backup lamp illuminate?

- YES >> GO TO 2.
 NO >> Check backup lamp system.

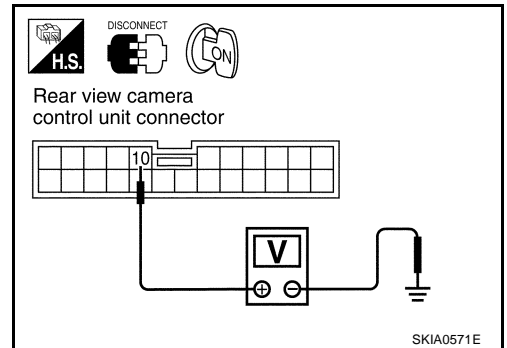
2. CHECK REVERSE POSITION INPUT SIGNAL

1. Disconnect rear view camera control unit connector.
2. Turn ignition switch ON position.
3. Shift the A/T selector lever to R-position.
4. Check voltage between rear view camera control unit harness connector B236 terminal 10(R/B) and ground.

Battery voltage should exist.

OK or NG

- OK >> GO TO 3.
 NG >> Check harness for open or short between rear view camera control unit and back up lamp relay.



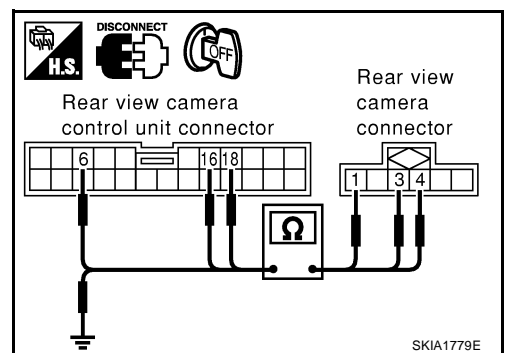
3. CHECK REAR VIEW CAMERA CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector and rear view camera connector.
3. Check the following.
 - Continuity between rear view camera harness connector B50 terminal 1(R/G) and rear view camera control unit harness connector B236 terminal 6(R/G).
 - Continuity between rear view camera harness connector B50 terminal 3(W) and rear view camera control unit harness connector B236 terminal 18(Y).
 - Continuity between rear view camera harness connector B50 terminal 4(B) and rear view camera control unit harness connector B236 terminal 16(BR).

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
B50	1 (R/G)	B236	6 (R/G)	Yes
B50	3 (W)	B236	18 (Y)	Yes
B50	4 (B)	B236	16 (BR)	Yes

OK or NG

- OK >> GO TO 4.
 NG >> Repair or replace harness.



4. CHECK POWER SUPPLY AND GROUND CIRCUIT

Power supply and ground circuit check. Refer to [DI-148, "Power Supply and Ground Circuit Check"](#).

OK or NG

- OK >> GO TO 5.
 NG >> Repair or replace power supply and ground circuit.

REAR VIEW MONITOR

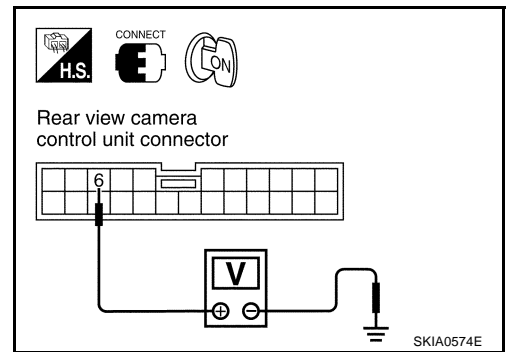
5. CHECK REAR VIEW CAMERA CONTROL UNIT OUTPUT SIGNAL

1. Connect rear view camera control unit connector.
2. Turn ignition switch ON.
3. Shift A/T selector lever to R-position.
4. Check voltage between rear view camera control unit harness connector B236 terminal 6(R/G) and ground.

Approx. 9V

OK or NG

- OK >> GO TO 6.
NG >> Replace rear view camera control unit.



6. CHECK REAR VIEW CAMERA SIGNAL

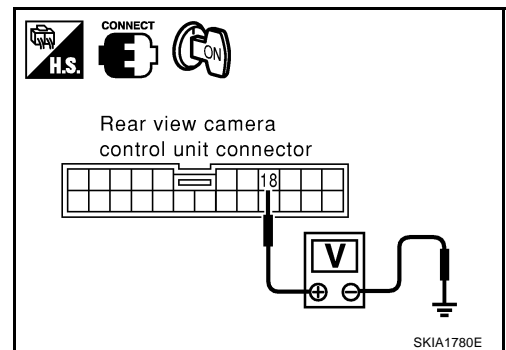
1. Connect the rear view camera connector.
2. Check voltage between rear view camera control unit harness connector B236 terminal 18(Y) and ground.

18 - Ground

:Refer to [DI-144, "Terminals and Reference Value for Rear View Camera Control Unit"](#) .

OK or NG

- OK >> Replace rear view camera control unit.
NG >> Replace rear view camera.



The Backlight Correction Does Not Work When The ENTER Switch Is Pressed.

EKS0012P

1. CHECK MULTIFUNCTION SWITCH

Perform multifunction switch self-diagnosis, refer to [DI-119, "Multifunction Switch Self-Diagnosis Function"](#) .

OK or NG

- OK >> GO TO 2.
NG >> Replace multifunction switch.

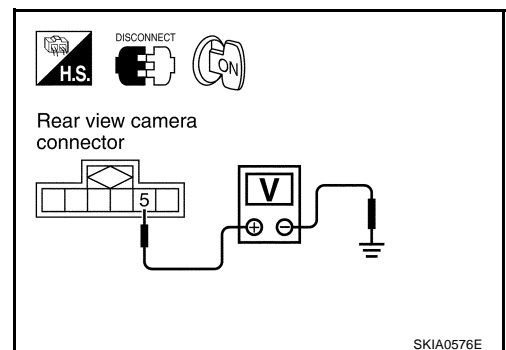
2. CHECK REAR VIEW CAMERA IRIS SIGNAL

1. Disconnect rear view camera connector.
2. Turn ignition switch ON.
3. Shift the A/T selector lever to R-position.
4. Check voltage between rear view camera B50 harness connector terminal 5(L) and ground.

Battery voltage should exist.

OK or NG

- OK >> Replace rear view camera.
NG >> GO TO 3.



REAR VIEW MONITOR

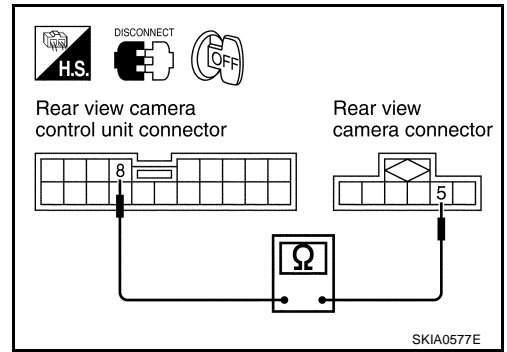
3. CHECK REAR VIEW CAMERA IRIS SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector.
3. Check continuity between rear view camera control unit harness connector B236 terminal 8(L) and the rear view camera harness connector B50 terminal 5(L).

Continuity should exist.

OK or NG

- OK >> Replace rear view camera control unit.
 NG >> Repair or replace harness.



EKS0012Q

The Rear View Image Is Distorted.

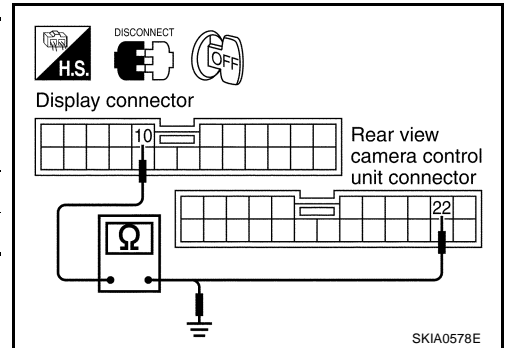
1. CHECK SYNCHRO SIGNAL OPEN OR SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect rear view camera control unit connector and display.
3. Check the following
 - Continuity between rear view camera control unit harness connector B236 terminal 22 (PU) and display harness connector M82 terminal 10 (PU).
 - Continuity between rear view camera control unit harness connector B236 terminal 22 (PU) and ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal	
B236	22 (PU)	M82	10 (PU)	Yes
B236	22 (PU)	Ground		No

OK or NG

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

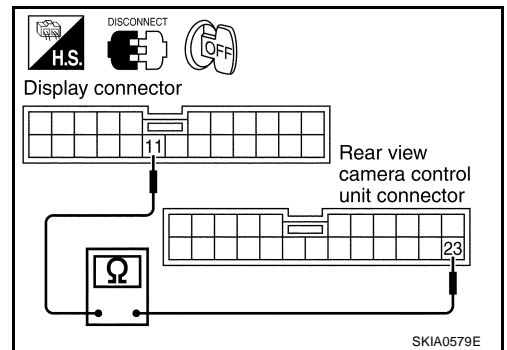


2. CHECK VIDEO SIGNAL GROUND CIRCUIT

Check continuity between rear view camera control unit B236 harness connector terminal 23 and display harness connector M82 terminal 11.

OK or NG

- OK >> GO TO 3.
 NG >> Repair or replace harness.



REAR VIEW MONITOR

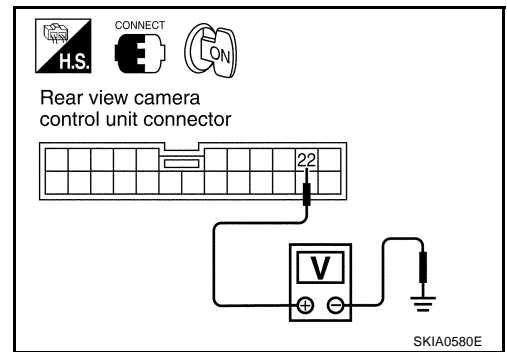
3. CHECK REAR VIEW CONTROL UNIT SYNCHRO SIGNAL

1. Connect rear view camera control unit connector.
2. Turn ignition switch ON.
3. Check signal between rear view camera control unit harness connector B236 terminal 22 (PU) and ground.

22 - Ground :Refer to [DI-144, "Terminals and Reference Value for Rear View Camera Control Unit"](#) .

OK or NG

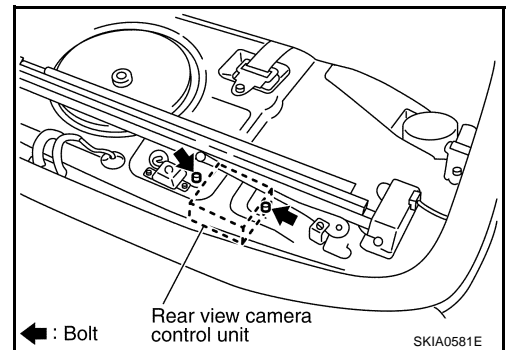
- OK >> Replace rear view camera control unit.
- NG >> Replace display.



Removal and Installation of Rear View Camera Control Unit

EKS0012R

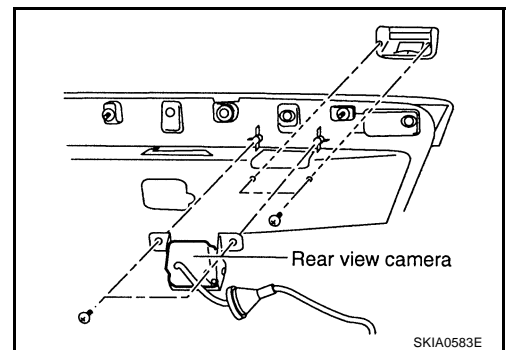
1. Remove the trunk trim. Refer to [EI-51, "TRUNK ROOM TRIM & TRUNK LID FINISHER"](#) .
2. Remove the rear parcel shelf finisher. Refer to [EI-40, "REAR PARCEL SHELF FINISHER"](#) .
3. Remove the screws (2), and remove rear view camera control unit.



Removal and Installation of Rear View Camera

EKS0012W

1. Remove the license plate finisher. Refer to [EI-30, "LICENSE LAMP FINISHER"](#) .
2. Remove the screws (2), and remove the rear view monitor camera.
3. Remove the screws (2), and remove the rear view monitor camera cover.



VOICE ACTIVATED CONTROL SYSTEM

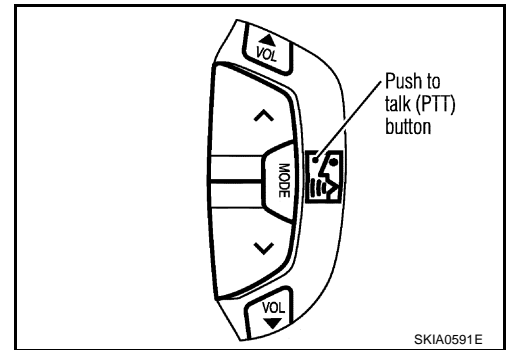
VOICE ACTIVATED CONTROL SYSTEM

PF2:28337

System Description OUT LINE

EKS0017C

- The VACS (Voice-Activated Control System) provides a safe and convenient way of controlling vehicle systems such as the audio, auto A/C and navigation (if so equipped). The system is controlled by the PTT (Push to talk) button. Voice commands are picked up by a microphone. When giving a command, voice feedback will be heard through the speaker, and messages will be shown on the display. Voice feedback can be turned off. Personal directories of nametags for radio station presets can be created, and spoken command help is provided.
- Refer to Owner's Manual for audio system operating instructions.



Power is supplied at all times.

- through 15A fuse (No. 52, located in fuse, fusible link and relay block).
- to Voice Activated Control Module terminal 13.

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

- through 10A fuse [No. 21, located in the fuse block (J/B) No,1].
- to Voice Activated Control Module terminal 20.

Ground is also supplied

- to Voice Activated Control Module terminal 14
- through body grounds B57 and B17.

VOICE ACTIVATED CONTROL FUNCTION

When PTT switch pushed ON, signal is sent

- from steering switch terminal 2
- to multifunction switch terminal 7, then
- to voice activated control module
- via AV and NAVI control unit with AV communication line.

Voice activated control module displays "LISTENING" on screen when PTT switch is ON.

When any voice is input into microphone, voice signal is sent

- from microphone terminal 4 and 5
- to voice activated control module terminal 33 and 34.

When voice activated control module identifies voice signal as a command, it sends the signal

- from voice activated control module terminal 35 and 36
- to AV and NAVI control unit terminal 49 and 50 with AV communication line.

Then AV and NAVI control unit sends operational signal

- to display and audio unit and performs the voice command.

While voice activated control system is in operation, voice activated control module sends voice signal

- from voice activated control module terminal 25 and 26
- to Bose speaker amp. terminal 26 and 42, and guides various operations.

Also at the same time voice activated control module sends mute signal

- from voice activated control module terminal 27
- to audio unit terminal 9

in order to prevent any noise input into microphone.

AV COMMUNICATION LINE

Voice Activated Control Module is connected with the following units through AV Communication Line.

- AV and NAVI control unit (with navigation system)
- AV control unit (without navigation system)
- Display

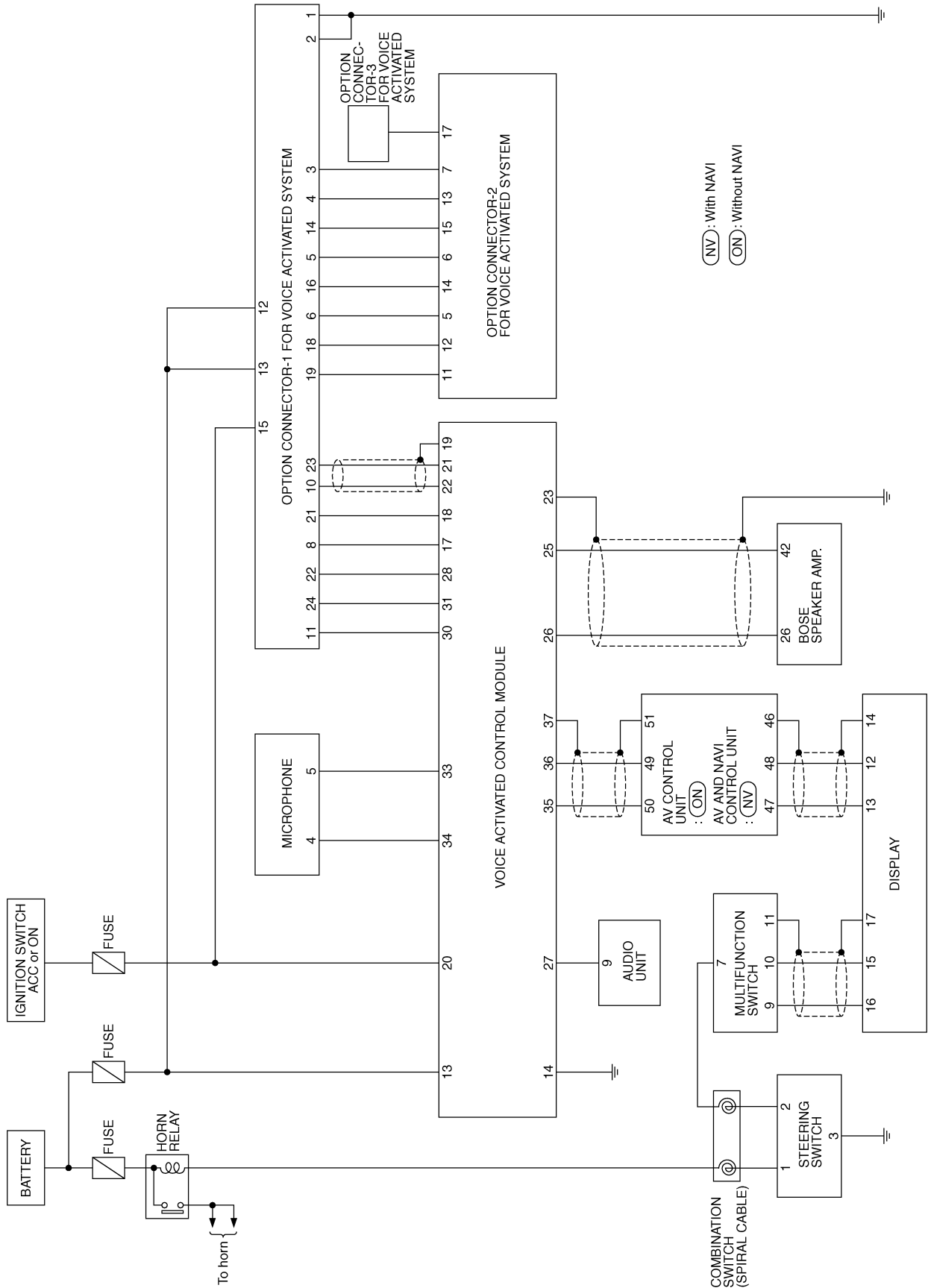
VOICE ACTIVATED CONTROL SYSTEM

- Audio unit
- Multifunction Switch

VOICE ACTIVATED CONTROL SYSTEM

Schematic

EKS001BR



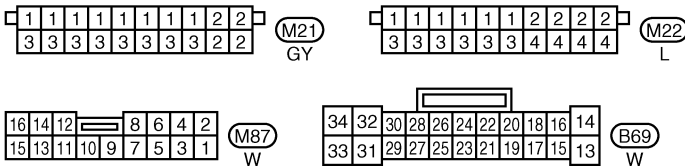
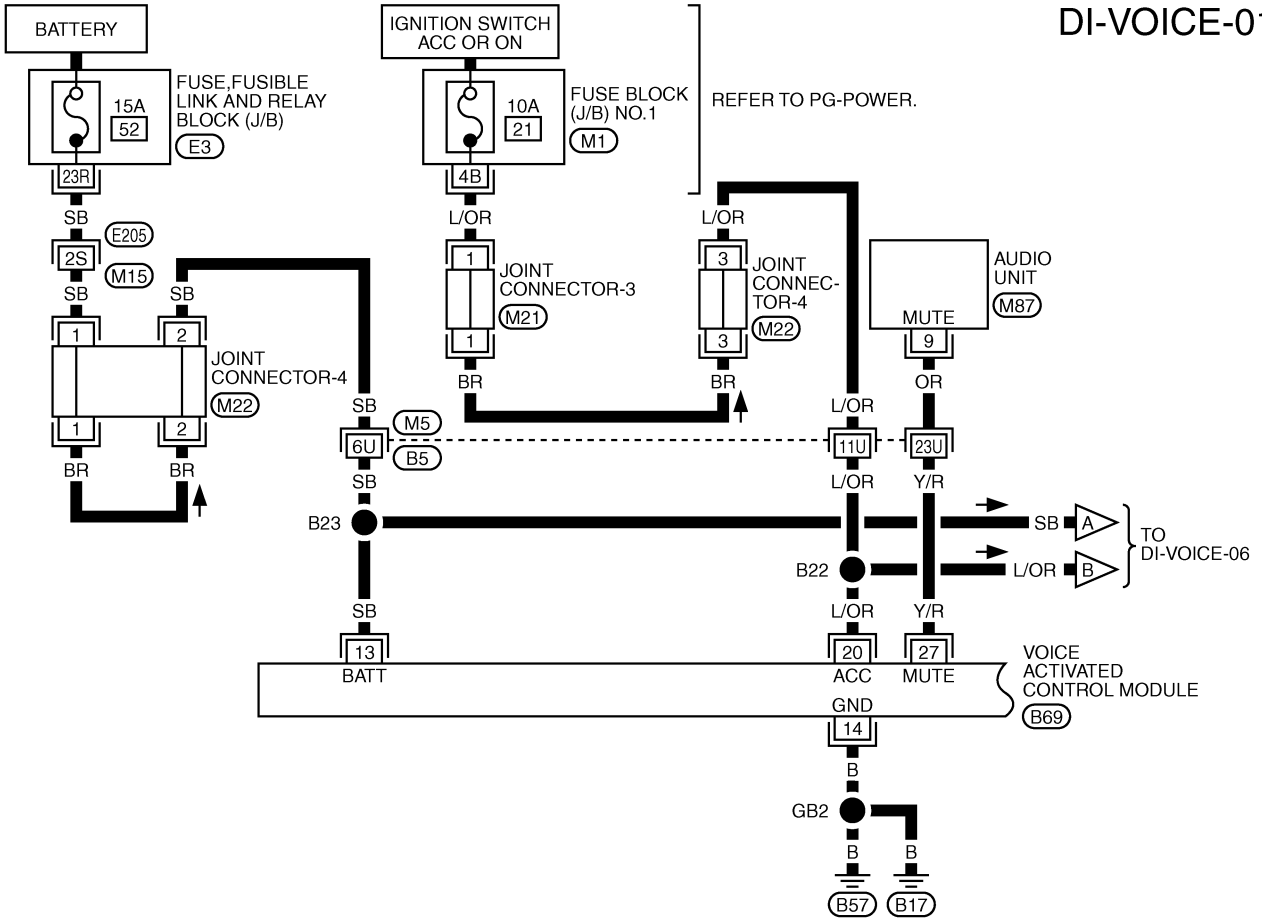
A
B
C
D
E
F
G
H
I
J
DI
L
M

VOICE ACTIVATED CONTROL SYSTEM

EKS0017D

Wiring Diagram — VOICE —

DI-VOICE-01



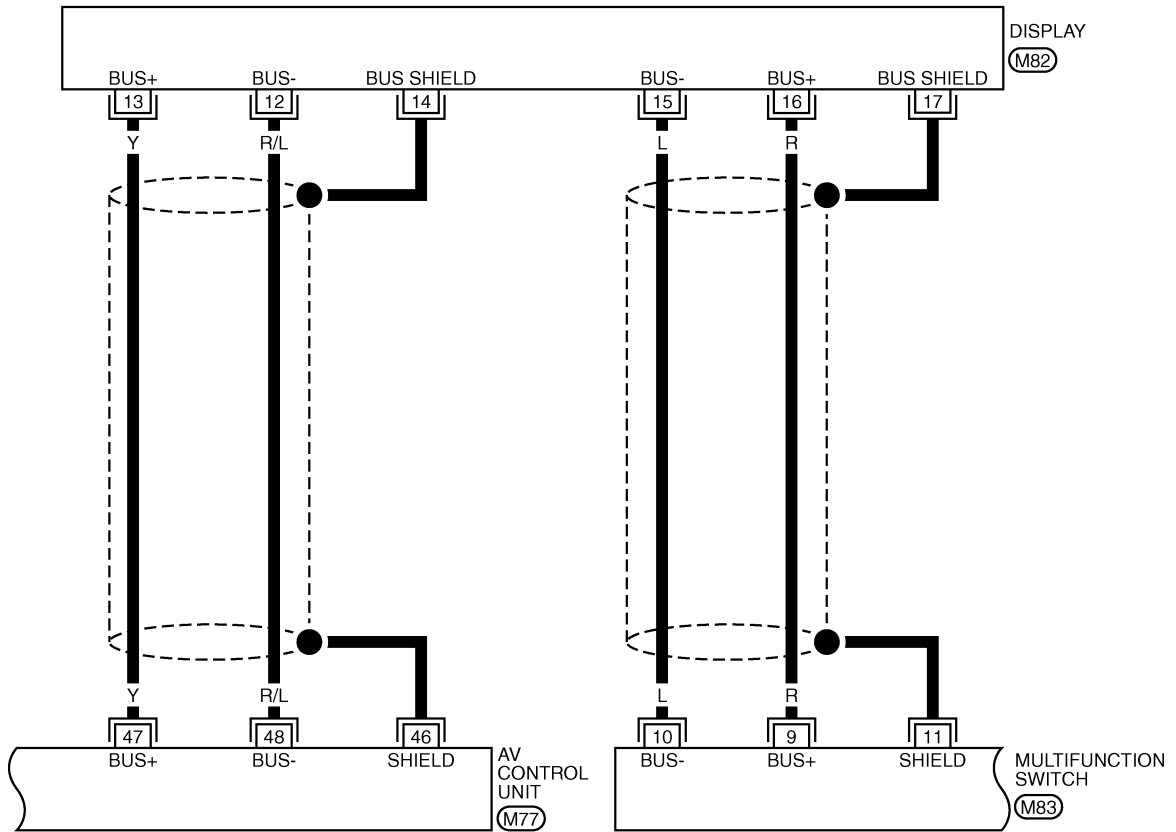
REFER TO THE FOLLOWING.

- (M5), (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (M1) -FUSE BLOCK-JUNCTION BOX (J/B) NO.1
- (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)

TKWM0099E

VOICE ACTIVATED CONTROL SYSTEM

DI-VOICE-03



48	45	42	39	37	35	33	30	27
47	44	41	38	36	34	32	29	26
46	43	40				31	28	25

(M77) GY

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

(M82) GY

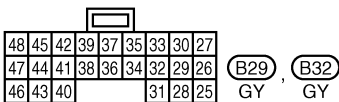
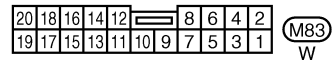
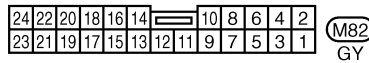
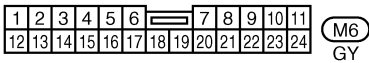
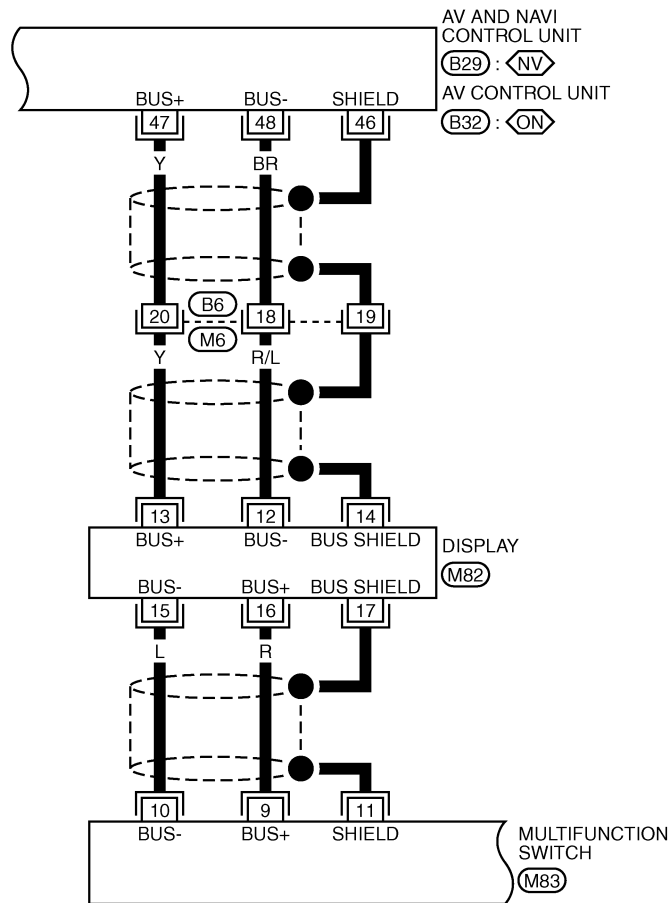
20	18	16	14	12	8	6	4	2		
19	17	15	13	11	10	9	7	5	3	1

(M83) W

TKWM0183E

VOICE ACTIVATED CONTROL SYSTEM

DI-VOICE-04

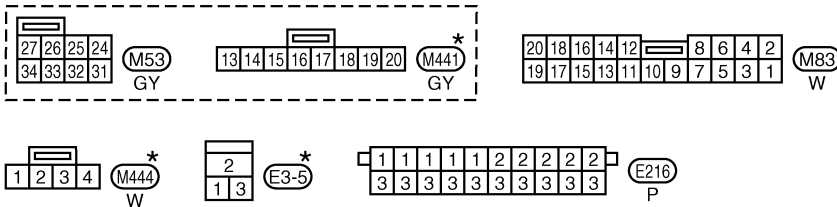
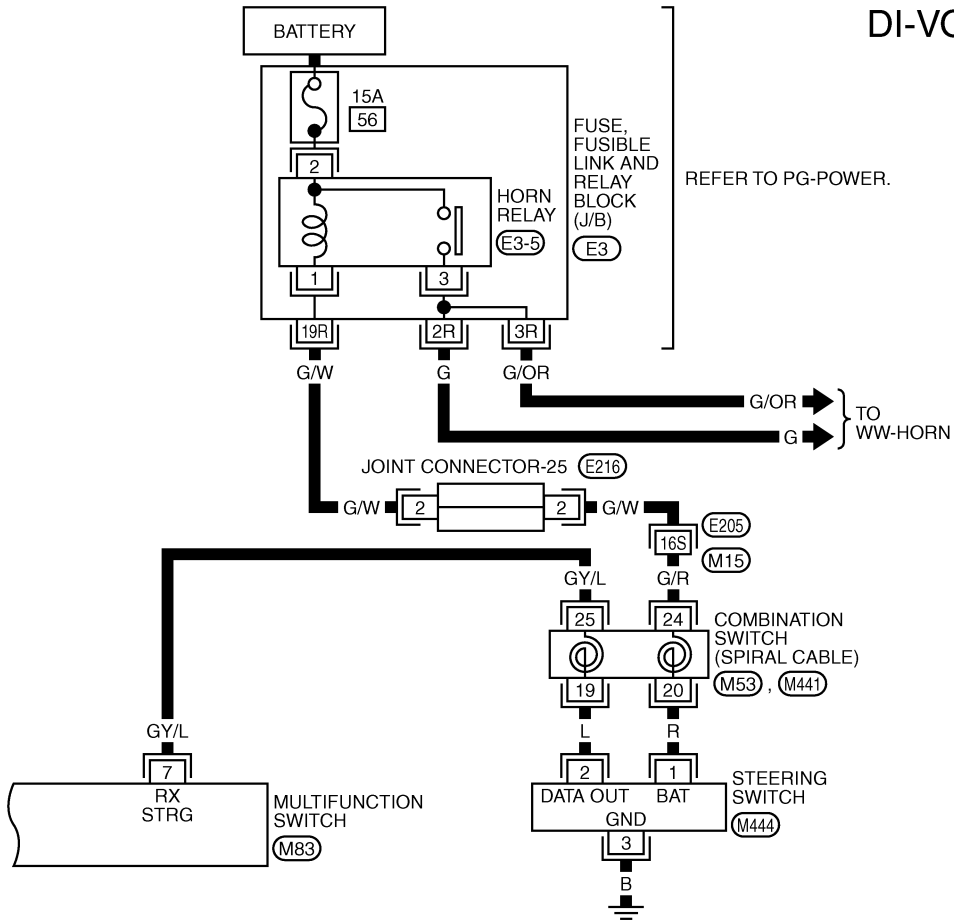


A
B
C
D
E
F
G
H
I
J
DI
L
M

TKWM0184E

VOICE ACTIVATED CONTROL SYSTEM

DI-VOICE-05



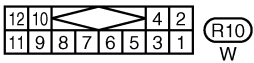
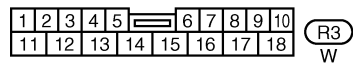
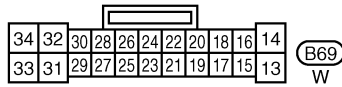
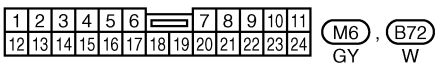
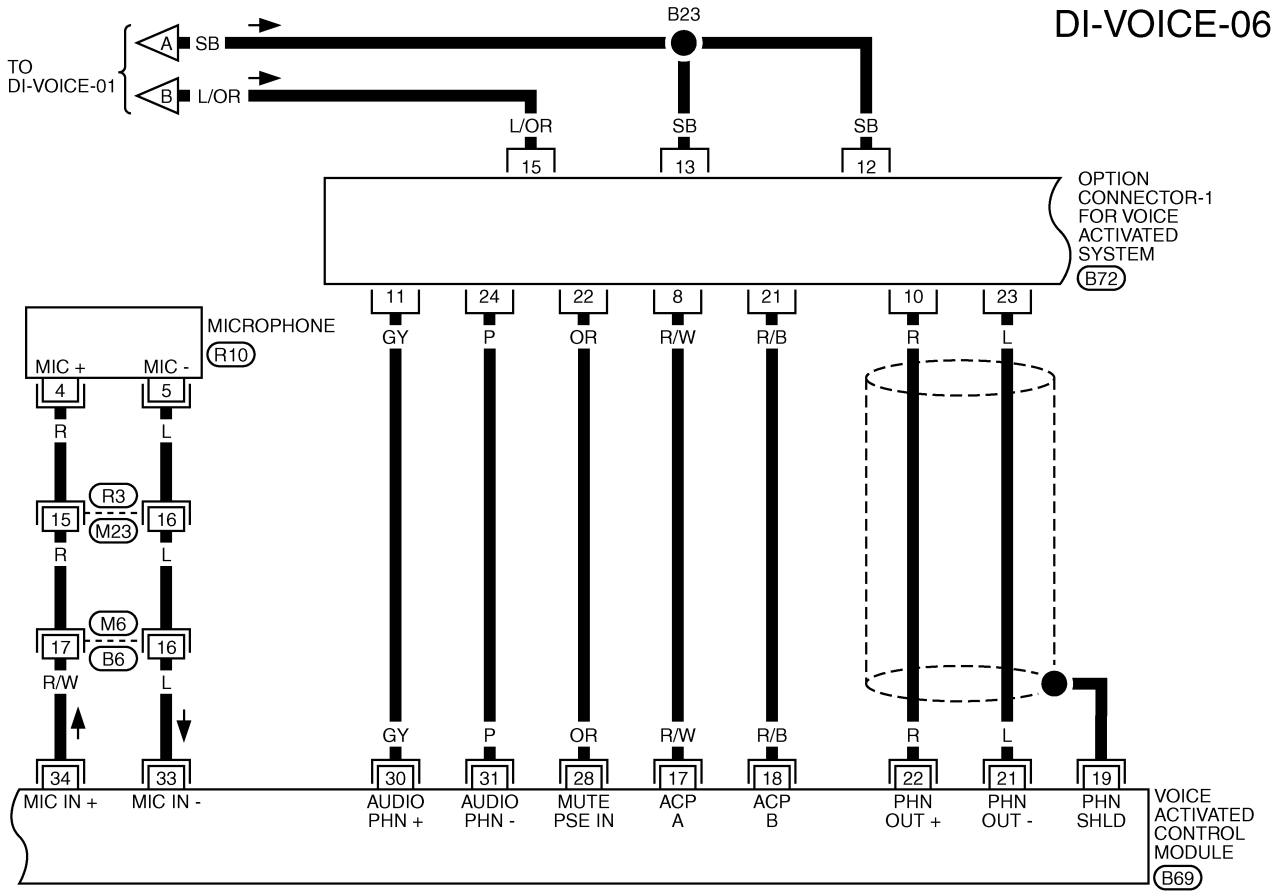
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

REFER TO THE FOLLOWING.

- (E205) -SUPER MULTIPLE JUNCTION (SMJ)
- (E3) -FUSE,FUSIBLE LINK AND RELAY BLOCK (J/B)

TKWM0103E

VOICE ACTIVATED CONTROL SYSTEM

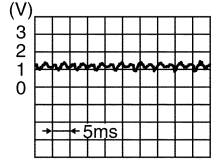
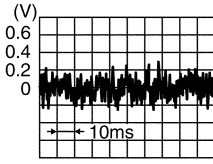
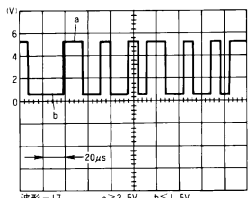
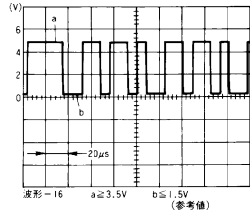


A
B
C
D
E
F
G
H
I
J
L
M

DI

TKWM0101E

VOICE ACTIVATED CONTROL SYSTEM

Terminals				ITEM	CONDITION	Voltage (Approx.)
(+)		(-)				
TERMINAL	WIRE COLOR	TERMINAL	WIRE COLOR			
26	R	25	L/OR	Audio output (+) / Audio output (-)	voice guide operate	 <p style="text-align: right; font-size: small;">PKIA0355E</p>
27	Y/L	Ground	-	Mute	PTT switch (not operate → operate)	5V → 0V
34	R/W	33	L	Mic input (+) / Mic output (-)	Voice mic test oper- ate.	 <p style="text-align: right; font-size: small;">PKIA0356E</p>
35	PU	Ground	-	Communication signal (-)	-	 <p style="text-align: right; font-size: x-small;">SKIA0176J</p>
36	LG	35	PU	Communication signal (+)	-	 <p style="text-align: right; font-size: x-small;">SKIA0175J</p>
37	-	-	-	Shield ground	-	-

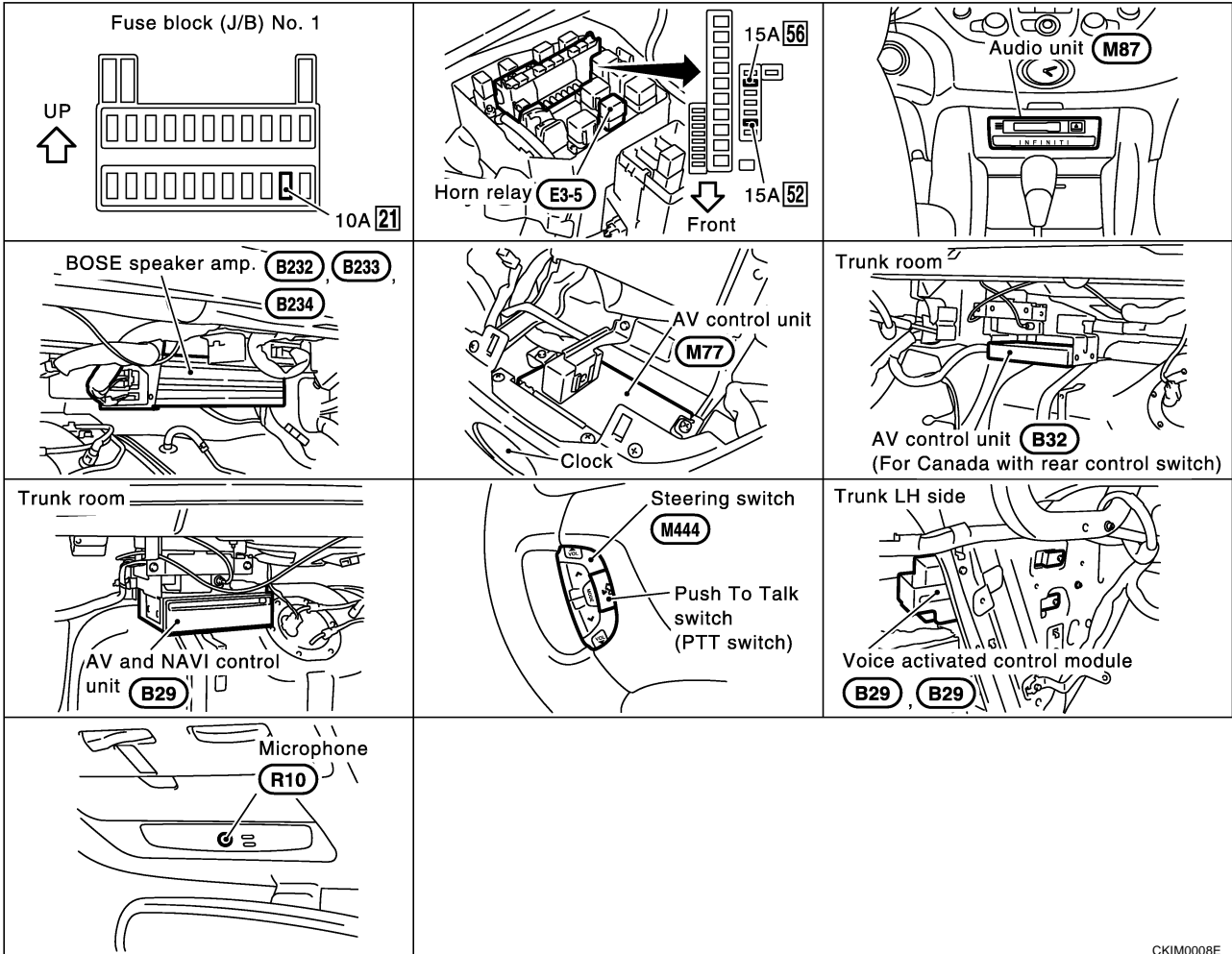
A
B
C
D
E
F
G
H
I
J
DI
L
M

DI

VOICE ACTIVATED CONTROL SYSTEM

Component Parts and Harness Connector Location

EKS0017F



CKIM0008E

Trouble Diagnoses

THIS CONDITION IS NOT ABNORMAL

EKS0017G

Example of Basic Operational Errors

The system should respond correctly to all voice commands. Follow the solutions given in this guide for the appropriate error any of the following symptom is encountered.

Where the solutions are listed by number, try each solution in turn, starting with number one, until the symptom is resolved.

VOICE ACTIVATED CONTROL SYSTEM

Symptom	Remedy
Displays "COMMAND NOT RECOGNIZED" or the system does not interpret the command correctly.	<ol style="list-style-type: none"> 1. Ensure that the command is valid, see Command list (Refer to Owner's Manual). 2. Ensure that the command is given after the tone while "LISTENING" is displayed. 3. Speak clearly without pausing between words and at a level appropriate to the ambient noise level. 4. Ensure that the ambient noise level is not excessive, for example, windows open or defrost on. <p>NOTE: If it is too noisy too use the microphone, it is likely that voice commands will not be recognized.</p> <ol style="list-style-type: none"> 5. If optional words of the command have been omitted, then the command should be tried with these in place. 6. If a number of commands have been given in rapid succession resulting in the message "COMMAND NOT RECOGNIZED" to be displayed, then allow the system to recover (approximately one minute) before trying the command again. 7. If the system consistently does not recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker.
Displays "NO SPEECH DETECTED"	<ol style="list-style-type: none"> 1. Ensure that the command is given after the tone while "LISTENING" is displayed. 2. Ensure that the command is given within a maximum of five seconds from the end of the tone. <p>NOTE: Be sure you know what to say before pressing the Voice button.</p>
Displays "NAMETAG NOT UNIQUE"	<ol style="list-style-type: none"> 1. This response will be received when storing a nametag if the nametag being given has already been stored. This can be confirmed by giving the Radio Directory command. 2. If this response is received and the nametag has not been used already, then it is too similar to an existing nametag or voice grammar and an alternative should be used.
The system consistently selects the wrong nametag.	<ol style="list-style-type: none"> 1. Ensure that the nametag requested matches what was originally stored. This can be confirmed by giving the Radio Directory command. 2. Delete one of the nametags being confused and replace it with a different nametag.

Self-Diagnosis Function DESCRIPTION

EKS001AT

- Diagnosis function consists of the self-diagnosis mode, and the "CONFIRMATION/ADJUSTMENT" mode.
- Self-diagnosis mode checks for connection between AV and NAVI control unit (with navigation system) or AV control unit (without navigation system) and voice activated control module and analyzes each unit, then displays the results.
- "CONFIRMATION/ADJUSTMENT" function analyzes each microphone.

DIAGNOSIS ITEM

Mode	Description				
Self-diagnosis	<ul style="list-style-type: none"> ● Checks for the connections between AV AND NAVI control unit or AV control unit and voice activated control module. ● Performs the unit diagnosis of voice activated control module. 				
CONFIRMATION/ ADJUSTMENT	<table border="1"> <thead> <tr> <th>Mode</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Voice Mic. Test</td> <td> <ul style="list-style-type: none"> ● Checks microphone. </td> </tr> </tbody> </table>	Mode	Description	Voice Mic. Test	<ul style="list-style-type: none"> ● Checks microphone.
Mode	Description				
Voice Mic. Test	<ul style="list-style-type: none"> ● Checks microphone. 				

Self-Diagnosis Mode OPERATION PROCEDURE

EKS001AU

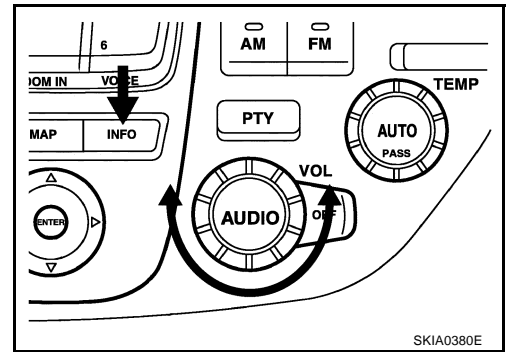
- To start the self-diagnosis mode and to check the diagnosis result, refer to [DI-108, "Self-Diagnosis Mode \(with Navigation System\)"](#), or [DI-100, "Self-Diagnosis Mode \(without Navigation System\)"](#).

VOICE ACTIVATED CONTROL SYSTEM

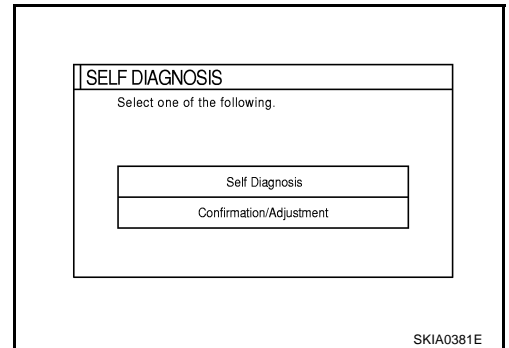
EKS001AV

Confirmation/Adjustment Mode OPERATION PROCEDURE

1. Start the engine.
2. Turn the audio system off.
3. While pressing the "INFO" switch, turn the volume control dial clockwise or counterclockwise for 30 clicks or more.



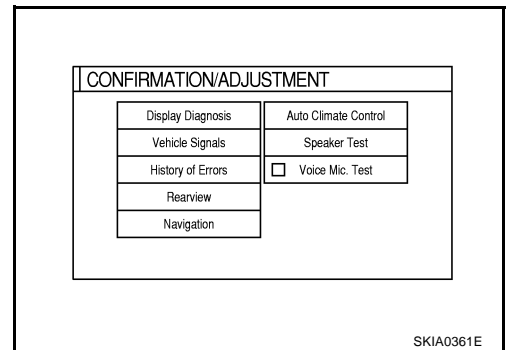
4. The initial trouble diagnosis screen will be shown, and items "SELF-DIAGNOSIS" and "CONFIRMATION/ADJUSTMENT" will become selective.
5. When "CONFIRMATION/ADJUSTMENT" is selected on the trouble diagnosis screen, the operation will enter the CONFIRMATION/ADJUSTMENT mode. In this mode, check and adjustment of each item will become possible.



6. When "Voice Mic. Test" is selected with joystick, icon indicator turns on (green) and voice input into microphone is sent out through speakers.

NOTE:

Voice from speakers may sound echoic.



Power Supply and Ground Circuit Check

EKS001AW

1. FUSE CHECK

- Check the following fuse of voice activated control module for discontinuity.

Unit	Power source	Fuse NO.
Voice Activated Control Module	Battery power	52
	Ignition switch ACC or ON	21

OK or NG

OK >> GO TO 2.

NG >> If fuse is blown, be sure eliminate case of problem before installing new fuse. Refer to [PG-2, "POWER SUPPLY ROUTING"](#)

VOICE ACTIVATED CONTROL SYSTEM

2. POWER SUPPLY CIRCUIT CHECK

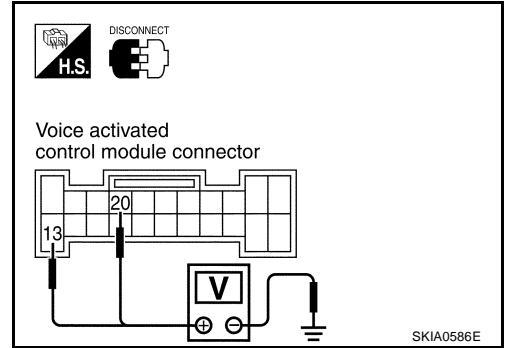
Check voltage between voice activated control module harness connector B69 terminal 13(SB), 20 (L/OR) and ground.

Terminals		Ignition switch position			
(+)		(-)	OFF	ACC	ON
Connector	Terminal (Wire color)				
B69	13(SB)	Ground	Battery voltage	Battery voltage	Battery voltage
B69	20(L/OR)	Ground	0V	Battery voltage	Battery voltage

OK or NG

OK >> GO TO 3.

NG >> Check between harness voice activated control module and fuse.



3. GROUND CIRCUIT CHECK

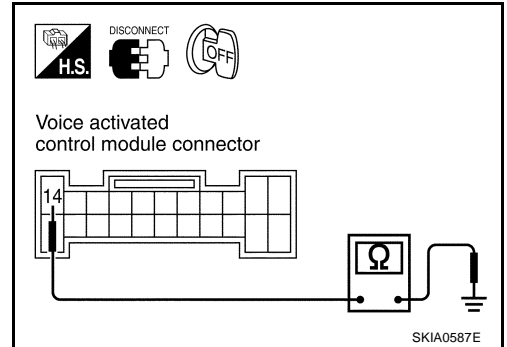
Check continuity between voice activated control module harness connector B69 terminal 14 (B) and ground.

Terminals		Continuity	
(+)			
Connector	Terminal (Wire color)	(-)	
B69	14(B)	Ground	Yes

OK or NG

OK >> Inspection end.

NG >> Check ground harness.



Voice Command Not Identified (With Voice Activated Control System in Operation)

EKS001B0

1. CHECK MICROPHONE OPERATION

- Select "Voice Mic. Test" of "CONFIRMATION/ADJUSTMENT" mode. Refer to [DI-166. "Confirmation/Adjustment Mode"](#).
- Speak to microphone, and check if the sound is heard from (right) instrument speaker.

OK or NG

OK >> Replace voice activated control module.

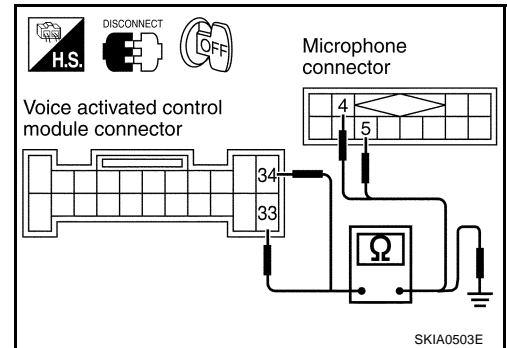
NG >> GO TO 2.

VOICE ACTIVATED CONTROL SYSTEM

2. MICROPHONE CIRCUIT CHECK

1. Disconnect voice activated control module connector.
2. Check the following.
 - Continuity between voice activated control module harness connector B69 terminal 33(L) and microphone connector R10 terminal 5(L).
 - Continuity between voice activated control module harness connector B69 terminal 34(R/W) and microphone harness connector R10 terminal 4 (R).
 - Continuity between voice activated control module harness connector B69 terminal 33(L),34(R/W) and ground.

Terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
B69	33 (L)	R10	5 (L)	Yes
B69	34 (R/W)	R10	4 (R)	Yes
B69	33 (L)	Ground		No
B69	34 (R/W)			



OK or NG

- OK >> Replace microphone.
- NG >> Repair or replace harness.

No Guide Sound or Beeps

1. CHECK GUIDE SOUND SETTING

Check volume setting of voice activated control system if set as 0 (zero).

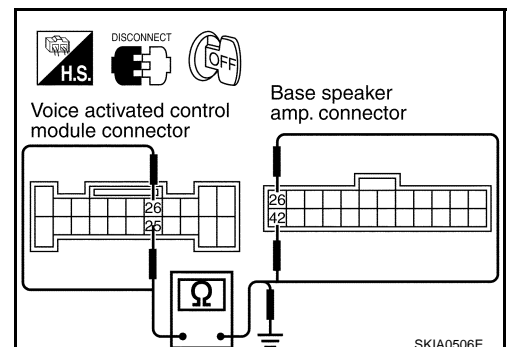
OK or NG

- OK >> GO TO 2.
- NG >> adjust volume.

2. CHECK BOSE SPEAKER AMP. CIRCUIT

1. Disconnect voice activated control module connector and Bose speaker amp. connector.
2. Check the following.
 - Continuity between voice activated control module harness connector B69 terminal 25 (L) and Bose speaker amp. harness connector B234 terminal 42 (OR/L)
 - Continuity between voice activated control module harness connector B69 terminal 26 (R) and Bose speaker amp. harness connector B234 terminal 26 (W/L)
 - Continuity between voice activated control module harness connector B69 terminal 25 (L) and ground.
 - Continuity between voice activated control module harness connector B69 terminal 26 (R) and ground.

terminals				Continuity
(+)		(-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
B69	25 (L)	B234	42 (OR/L)	Yes
B69	26 (R)	B234	26 (W/L)	Yes
B69	25 (L)	Ground		No
B69	26 (R)			



OK or NG

- OK >> GO TO 3.
- NG >> Repair or replace harness.

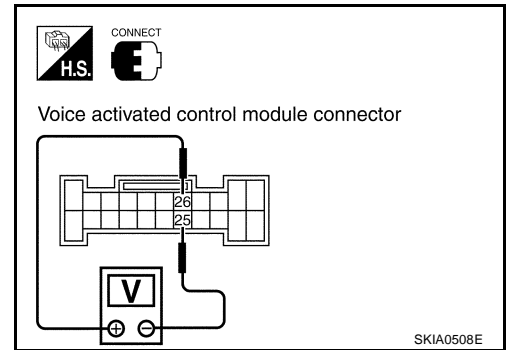
VOICE ACTIVATED CONTROL SYSTEM

3. CHECK VOICE SIGNAL

1. Connect voice activated control module connector and Bose speaker amp.
2. Turn ignition switch ON.
3. The Speaker Adaptation (SA) mode ON and voice guide signal sent out, check signal between voice activated control module harness connector B69 terminal 25(L) and 26(R)

26(R) – 25(L)

[:Refer to DI-162, "Terminals and Reference Values for Voice Activated Control Module"](#)



OK or NG

- OK >> Replace Bose speaker amp.
NG >> Replace voice activated control module.

Voice Activated Control System Not Starting PTT Switch Pushed ON

EKS001AY

1. CHECK PTT SWITCH OPERATION

Check PTT switch operation with self-diagnosis of multifunction switch. Refer to [DI-119, "Multifunction Switch Self-Diagnosis Function"](#).

OK or NG

- OK >> GO TO 2.
NG >> Replace steering switch.

2. CHECK MULTIFUNCTION SWITCH AND VOICE ACTIVATED CONTROL MODULE

Start self-diagnosis mode. Refer to [DI-108, "Self-Diagnosis Mode \(with Navigation System\)"](#) or [DI-100, "Self-Diagnosis Mode \(without Navigation System\)"](#).

Does self-diagnosis mode start?

- YES >> GO TO 3.
NO >> Replace multifunction switch.

3. CHECK VOICE ACTIVATED CONTROL MODULE

Check voice activated control module with self-diagnosis mode started in previous step2

OK or NG

- OK >> ● Replace AV and NAVI control unit (with navigation system), or
● Replace AV control unit (without navigation system).
NG >> GO TO 4.

4. POWER SUPPLY AND GROUND CIRCUIT CHECK

Check power supply and ground circuit of voice activated control module. Refer to [DI-166, "Power Supply and Ground Circuit Check"](#).

OK or NG

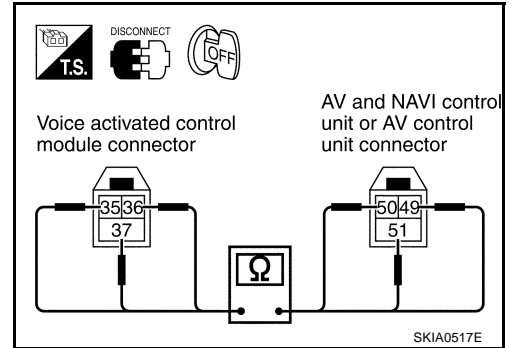
- OK >> GO TO 5.
NG >> Repair or replace harness.

VOICE ACTIVATED CONTROL SYSTEM

5. AV COMMUNICATION LINE CHECK

- Disconnect the following connector and voice activated control module connector M71.
 - B31 connector: AV and NAVI control unit (with navigation system)
 - M50 connector: AV control unit (without navigation system and without rear control switch)
 - B34 connector: AV control unit (For Canada without navigation system and with rear control switch)
- Check continuity between AV and NAVI control unit or AV control unit and voice activated control module.

		Terminals		Continuity
Voice activated control module		AV and NAVI control unit (with navigation system) or AV control unit (without navigation system)		
(+) (+)		(-) (-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
B71	35(PU)	B31,B34,M50	50(PU)	Yes
	36(LG)	B31,B34,M50	49(LG)	Yes
	37	B31,B34,M50	51	Yes
	35(PU)	B31,B34,M50	51	No
	36(LG)	B31,B34,M50	51	No



OK or NG

- OK >> Replace voice activated control module.
- NG >> Repair or replace harness.

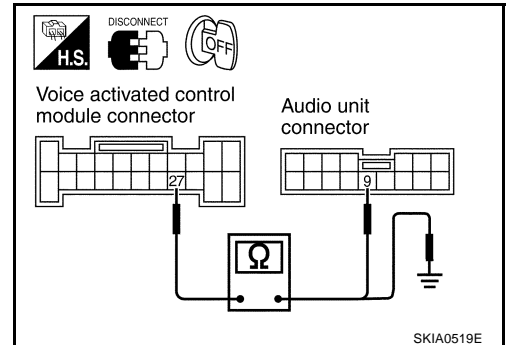
Audio Not Muted with PTT Switch Pushed ON

EKS001AZ

1. AUDIO UNIT CIRCUIT CHECK

- Disconnect voice activated control module connector and Audio unit connector.
- Check the following.
 - Continuity between voice activated control module harness connector B69 terminal 27 (Y/R) and Audio unit harness connector M87 terminal 9 (OR).
 - Continuity between voice activated control unit terminal 27 (Y/R) and ground.

		Terminals		Continuity
Voice activated control module		Audio unit		
(+) (+)		(-) (-)		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
B69	27(Y/R)	M87	9 (OR)	Yes
		Ground		No



OK or NG

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

VOICE ACTIVATED CONTROL SYSTEM

2. CHECK AUDIO UNIT MUTE SIGNAL

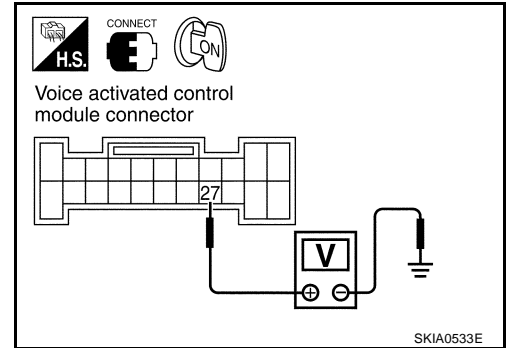
1. Connect voice activated control module connector and audio unit connector.
2. Turn ignition switch ON.
3. Check voltage between voice activated control module harness connector B69 terminal 27 (Y/R) and ground.

Terminals			PTT switch condition	Voltage (V)
(+)		(-)		
Connector	Terminal (Wire color)			
B69	27(Y/R)	Ground	ON	Approx. 5
			OFF	Approx. 0

OK or NG

OK >> Replace audio Unit.

NG >> Replace voice activated control Module.



EKS001BP

Audio Mute Not Released

1. AUDIO UNIT MUTE SIGNAL CIRCUIT

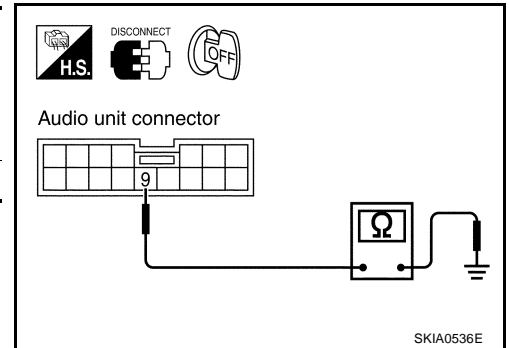
1. Disconnect voice activated control module connector and audio unit connector.
2. Check continuity between audio unit harness connector M87 terminal 9 (OR) and ground.

Terminals			Continuity
(+)		(-)	
Connector	Terminal (wire color)		
M87	9 (OR)	Ground	No

OK or NG

OK >> GO TO 2.

NG >> Repair and replace harness.



SKIA0536E

VOICE ACTIVATED CONTROL SYSTEM

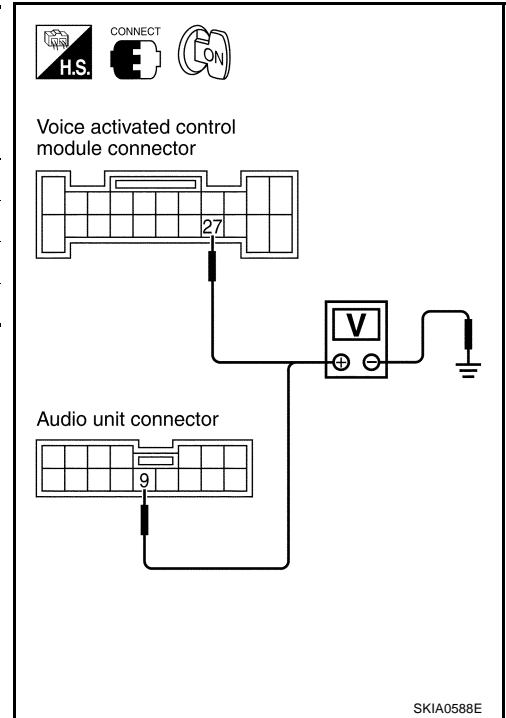
2. CHECK MUTE SIGNAL

1. Connect voice activated control module connector and audio unit connector.
2. Turn ignition switch ON.
3. Check the following.
 - Voltage between voice activated control module harness connector B69 terminal 27 (Y/R) and ground.
 - Voltage between audio unit harness connector M87 terminal 9 (OR) and ground.

	Terminals			PTT switch condition	Voltage (V)
	(+)		(-)		
	Connector	Terminal (Wire color)			
Voice activated control module	B69	27(Y/R)	Ground	ON	Approx.5
				OFF	Approx.0
Audio Unit	M87	9 (OR)	Ground	ON	Approx.5
				OFF	Approx.0

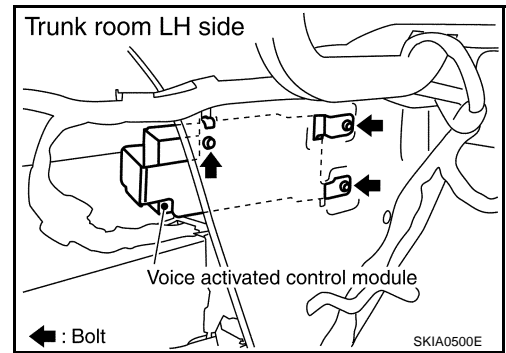
OK or NG

- OK >> Replace audio Unit.
 NG >> Replace voice activated control module.



Removal and Installation for Voice Activated Control Module

1. Remove trunk trim. Refer to [BL-94, "TRUNK LID"](#).
2. Remove voice activated control module.



3. Remove bracket from voice activated control module.

