SECTION LAN

LAN SYSTEM

CONTENTS

LAN

CAN

PRECAUTIONS

PFP:00001

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

EKS006SI

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

WARNING:

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

IVMS (LAN)

PFP:28491

Overall Description

EKS001PD

OUTLINE

The In-Vehicle Multiplexing System, IVMS (LAN system), consists of a BCM (Body Control Module) and four LCUs (Local Control Units). Some switches and electrical loads are connected to each LCU. Some electrical systems are directly connected to the BCM. Control of each LCU, (which is provided by a switch and electrical load), is accomplished by the BCM, via multiplex data lines (A-1, A-2 or A-3) connected between them.

BCM (BODY CONTROL MODULE)

The BCM, which is a master unit of the IVMS (LAN), consists of microprocessor, memory and communication LSI sections and has communication and control functions. It receives data signals from the LCUs and sends electrical load data signals to them.

LCU (LOCAL CONTROL UNIT)

The LCUs, which are slave units of the BCM, have only a communication function and consist of communication LSI and input-output interface circuits. They receive data signals from the BCM, control the ON/OFF operations of electrical loads and the sleep operation, as well as send switch signals to the BCM.

CONTROLLED SYSTEMS

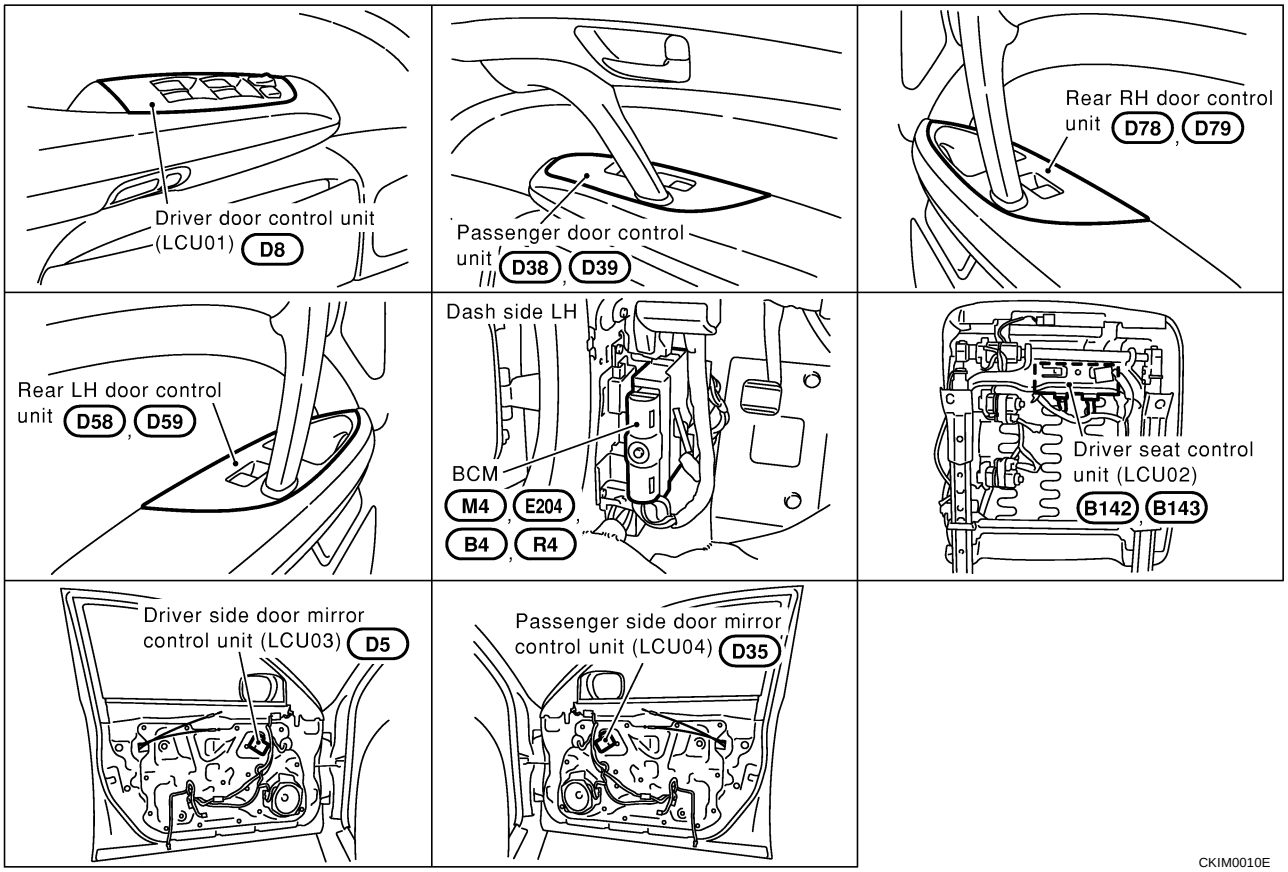
The IVMS controls several body-electrical systems. The systems included in the IVMS are as follows:

- Power window system (Refer to GW-16, "POWER WINDOW SYSTEM")
- Power door lock system (Refer to BL-19, "POWER DOOR LOCK SYSTEM")
- Remote keyless entry system (Refer to BL-53, "REMOTE KEYLESS ENTRY SYSTEM")
- Vehicle security (Theft warning) system (Refer to BL-155, "VEHICLE SECURITY (THEFT WARNING) SYSTEM")
- Reverse interlock door mirror system (Refer to GW-80, "REVERSE INTERLOCK DOOR MIRROR SYSTEM")
- Interior room lamp (Refer to LT-82, "INTERIOR ROOM LAMP")
- Step lamp (Refer to LT-110, "STEP LAMP")
- Illumination (Refer to LT-132, "ILLUMINATION")
- Automatic drive positioner (Refer to SE-13, "AUTOMATIC DRIVE POSITIONER")
- Auto light (Refer to LT-6, "HEADLAMP (FOR USA)")
- Door warning lamp (Refer to DI-28, "WARNING LAMPS")
- Ignition key warning chime (Refer to DI-50, "WARNING CHIME")
- Light warning chime (Refer to DI-50, "WARNING CHIME")
- Seat belt warning chime (Refer to DI-50, "WARNING CHIME")
- Front wiper and washer system (Refer to WW-3, "FRONT WIPER AND WASHER SYSTEM")
- Rear window defogger (Refer to GW-60, "REAR WINDOW DEFOGGER")
- Trouble diagnosis system
  —with CONSULT-II
  —ON BOARD

Also, IVMS has the “sleep/wake-up control” function. IVMS puts itself (the whole IVMS system) to sleep under certain conditions to prevent unnecessary power consumption. Then, when a certain input is detected, the system wakes itself up. For more detailed information, refer to “Sleep/Wake-up Control”.

Component Parts and Harness Connector Location

EKS001PE

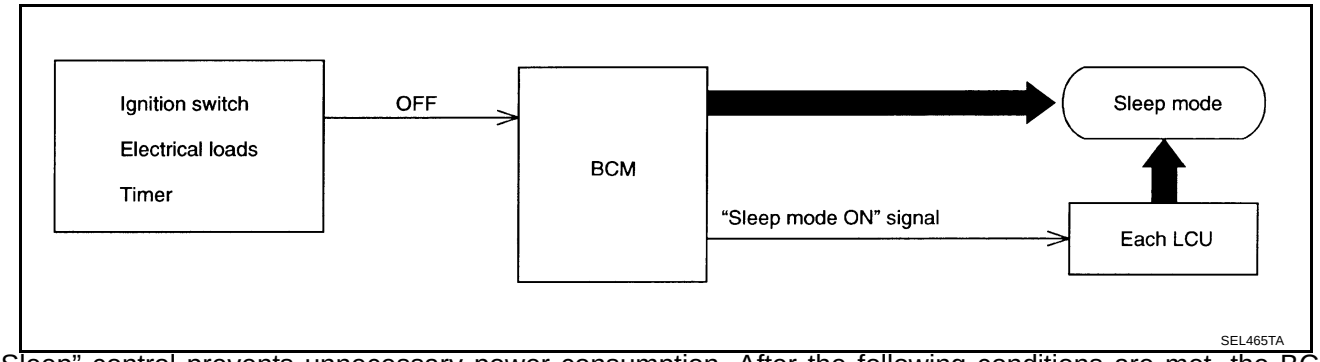


CKIM0010E

Sleep/Wake-up Control

EKS001PF

SLEEP CONTROL

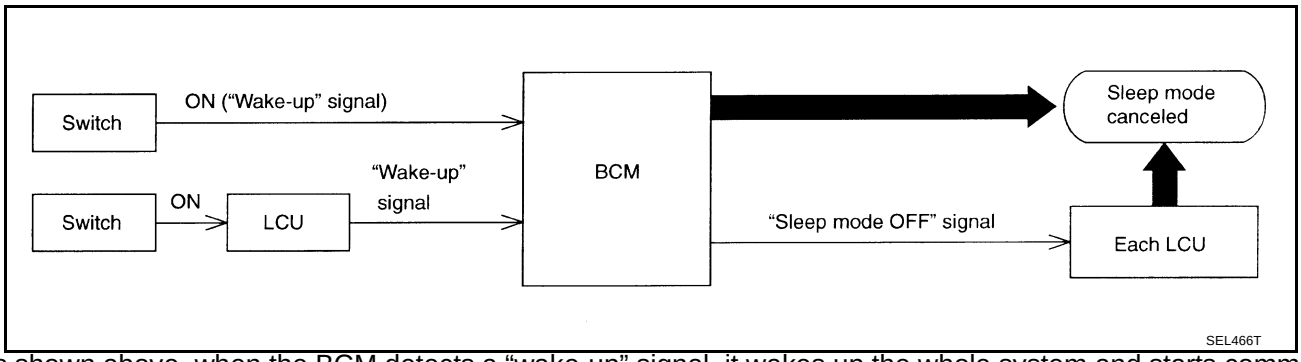


SEL465TA

"Sleep" control prevents unnecessary power consumption. After the following conditions are met, the BCM suspends the communication between itself and all LCUs. The whole IVMS is set in the "sleep" mode.

- Ignition switch "OFF"
- All electrical loads (in the IVMS) "OFF"
- Timer "OFF"

WAKE-UP CONTROL



As shown above, when the BCM detects a "wake-up" signal, it wakes up the whole system and starts communicating again. The "sleep" mode of all LCUs is now canceled, and the BCM returns to the normal control mode. When any one of the following switches are turned ON, the "sleep" mode is canceled:

- All switches combined or connected with BCM
- All switches combined or connected with LCU

Fail-safe System

EKS001PG

Fail-safe system operates when the signal from LCU is judged to be malfunctioning by BCM. If LCU sends no signal or an irregular signal to BCM a certain number of times in succession, the IVMS is set in a fail-safe condition. In the fail-safe condition, the electrical loads controlled by the switch on the questionable LCU will be operated at fail-safe mode.

CONSULT-II Function

EKS001R9

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
IVMS– COMM CHECK	IVMS– COMM DIAGNOSIS	Diagnosis of continuity in the communication line(s), and of the function of the IVMS-communication interface between the body control module and the local control units, accomplished by transmitting a signal from the body control module to the local control units.
	WAKE–UP DIAGNOSIS	Diagnosis of the"wake-up" function of local control units by having a technician input the switch data into the local control unit that is in the temporary "sleep" condition.
Each system inspection	Work support	Changes the setting for each function.
	Self-diagnosis results	Carries out self-diagnosis.
	Data monitor	Displays data relative to the body control module (BCM) input signals and various control related data for each system.
	Active test	Turns on/off actuators, relay and according to the commands transmitted by the CONSULT-II unit.
BCM PART NUMBER		Displays BCM part No.

DIAGNOSTIC ITEMS APPLICATION

Test item	Diagnosed system	MODE					
		IVMS COMM DIAGNOSIS	WAKE-UP DIAGNOSIS	SELF DIAGNOSTIC RESULTS	DATA MONITOR	ACTIVE TEST	WORK SUPPORT
IVMS-COMM CHECK	IVMS communication and wake-up function	×	×				
DOOR LOCK	Power door lock system			×	×	×	
AUTO DRIVE POSITIONER	Automatic drive positioner / Reverse interlock door mirror system			×	×	×	×
WIPER	Front wiper and washer system				×	×	×
REAR DEFOGGER	Rear window defogger				×	×	
IGN KEY WARN ALM	Warning chime				×	×	
LIGHT WARN ALM	Warning chime				×	×	
SEAT BELT TIMER	Warning chime				×	×	
THEFT WARNING SYSTEM	Vehicle security (Theft warning) system				×	×	×
STEP LAMP	Step lamps				×	×	
MULTI-REMOTE CONT-SYS	Remote keyless entry system				×	×	×
INTERIOR ILLUMINATION	Interior room lamp				×	×	×
SUNROOF RELAY	Sunroof				×	×	
DOOR OPEN WARNING	Warning lamps				×	×	
AUTO LIGHT SYSTEM	Headlamp				×	×	×

X: Applicable
For diagnostic item in each control system, read the CONSULT-ll Operation Manual.

On Board Diagnosis

EKS001RA

ON BOARD DIAGNOSTIC RESULTS INDICATOR LAMP

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

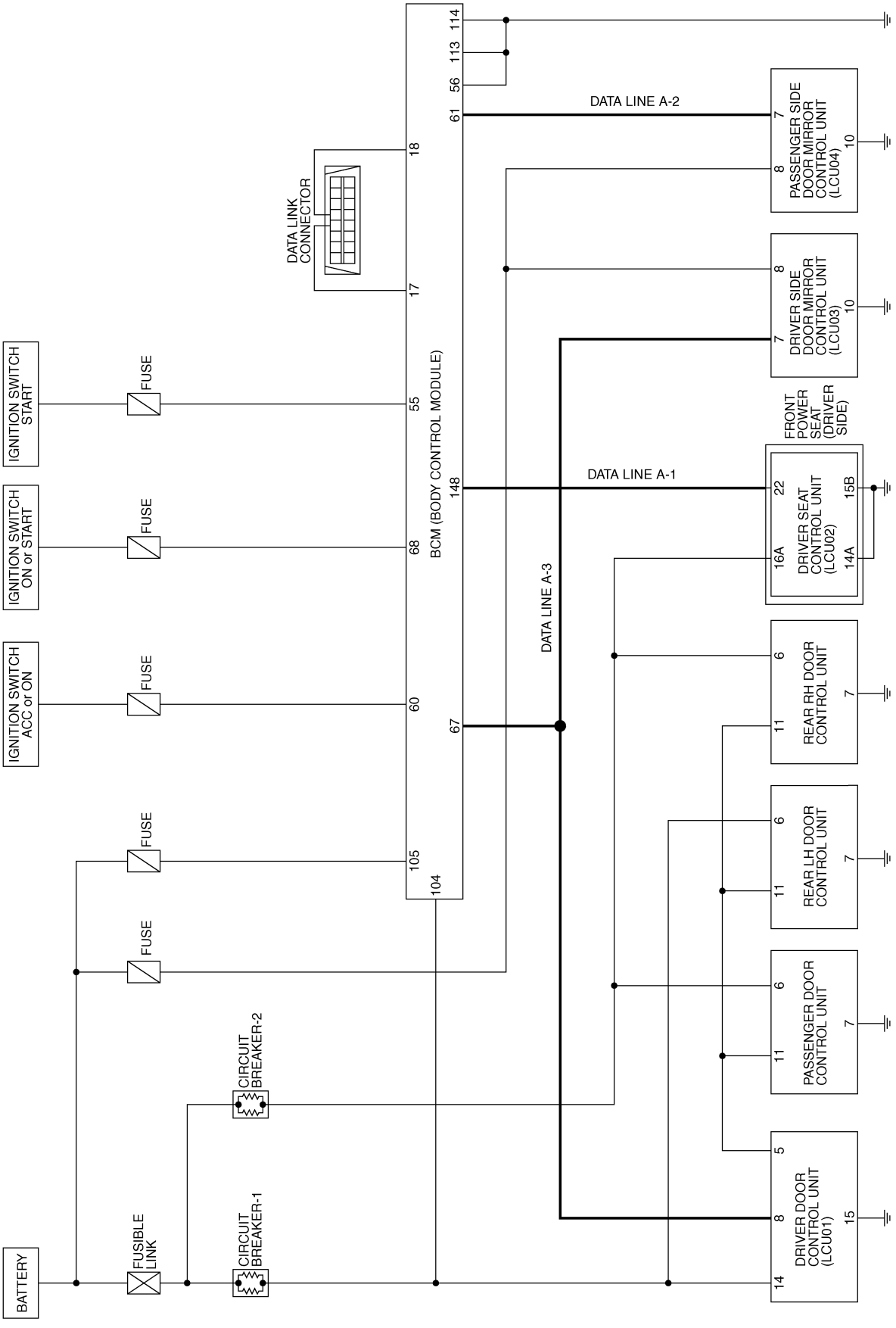
DIAGNOSIS ITEM

Diagnosis item	Content
IVMS communication diagnosis	Diagnosis any error or inability of communication between BCM and LCUs.
Switch monitor	Monitoring conditions of switches connected to BCM, LCUs and door control units.
Power door lock system self-diagnosis	Diagnose malfunctions in the each door lock actuator system.
Auto drive positioner self-diagnosis	Diagnose malfunctions in the each motor and sensor in the electrical load parts of the driver power seat system (sliding, reclining, and lifter [front/rear]), of the steering wheel system (tilt, telescoping), and of door mirror.

Schematic

EKS001PJ

POWER SUPPLY, GROUND AND COMMUNICATION CIRCUITS



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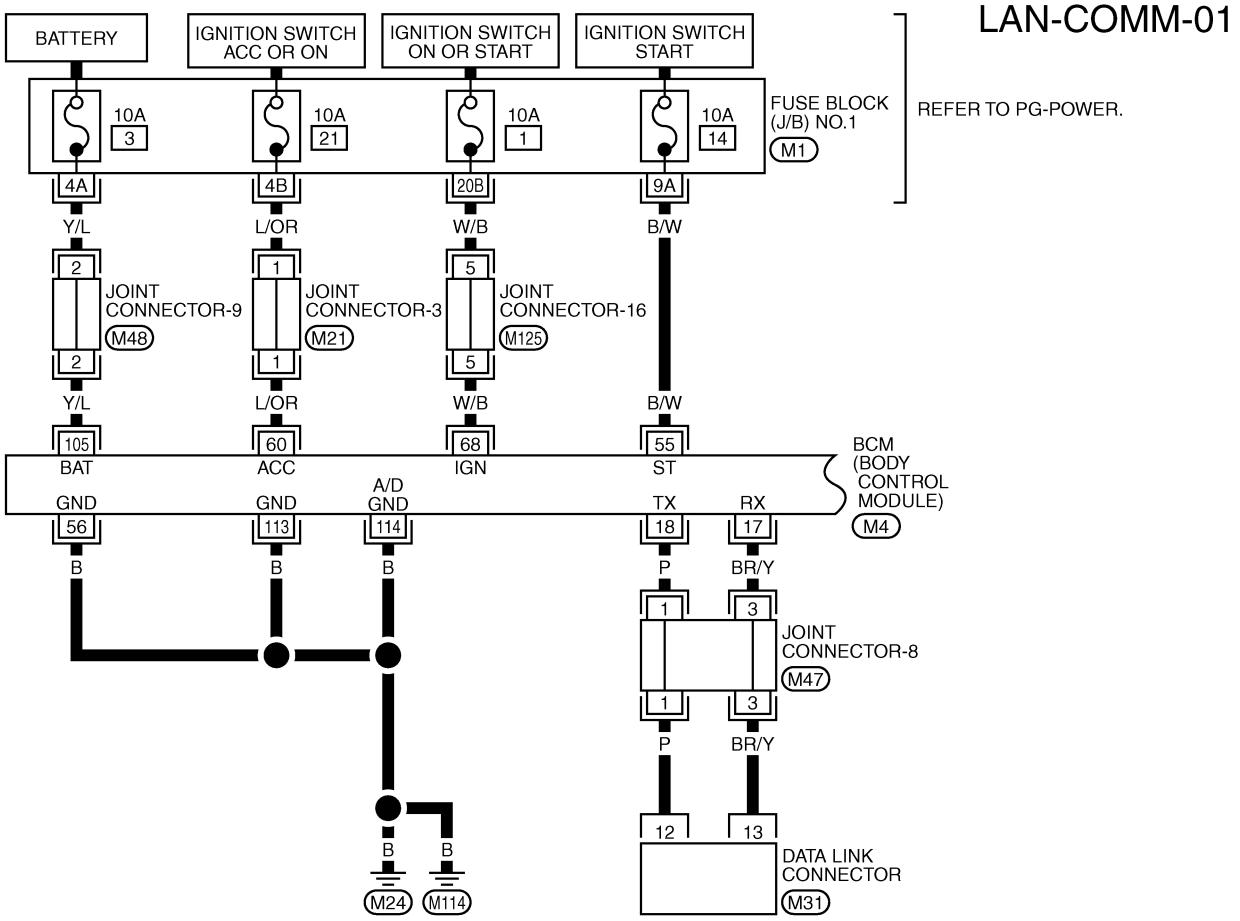
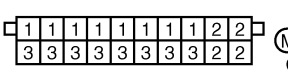
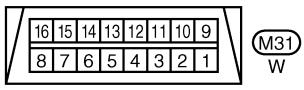
Wiring Diagram - COMM -

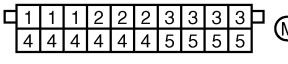
EKS001PK

POWER SUPPLY, GROUND AND COMMUNICATION CIRCUITS







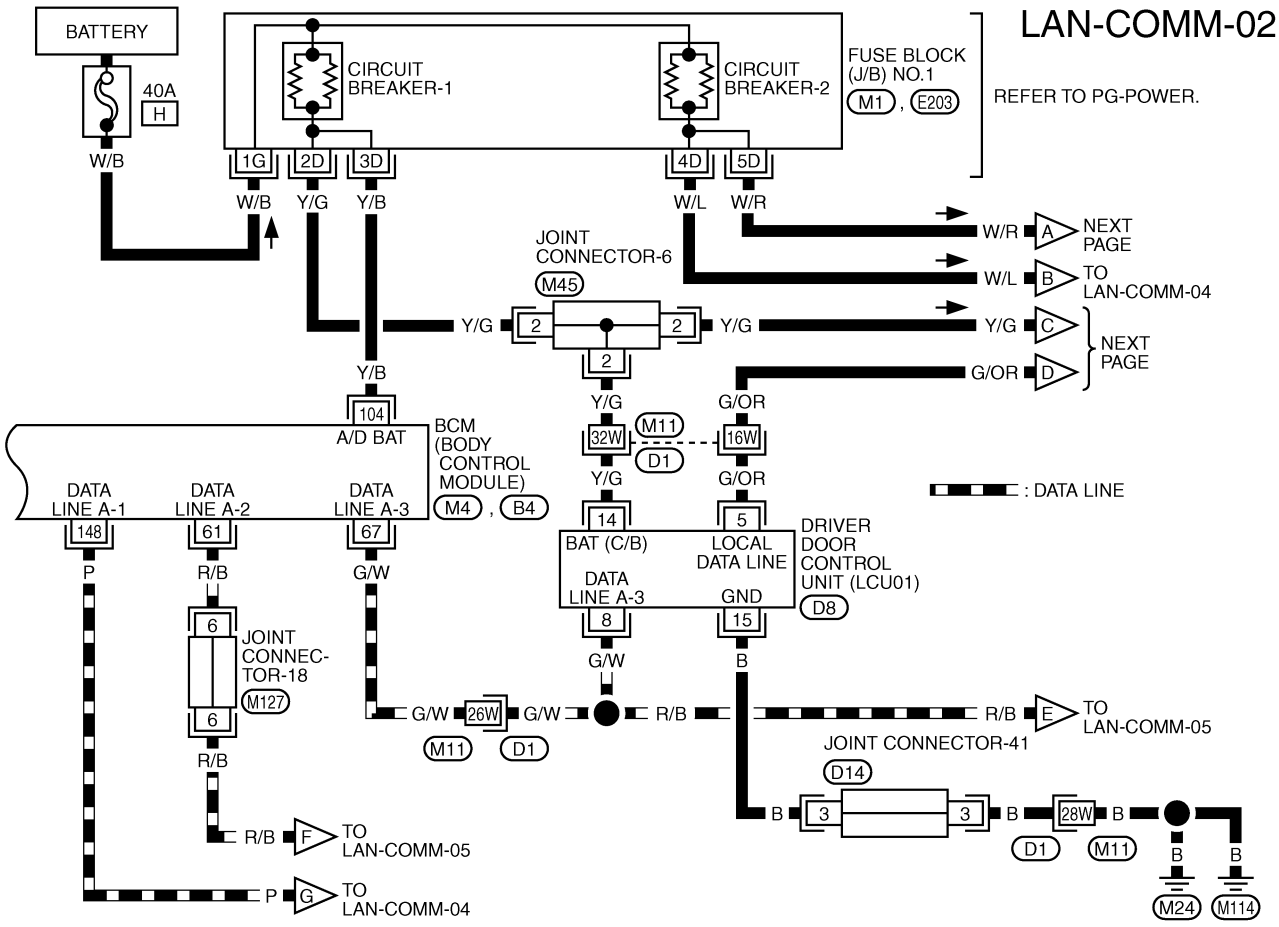


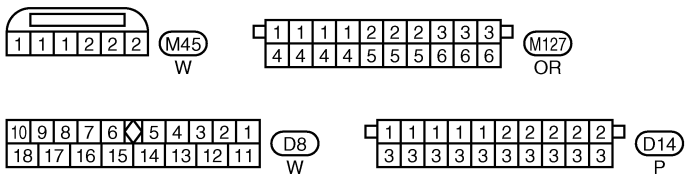
REFER TO THE FOLLOWING.

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

M4 -ELECTRICAL UNITS

TKWM0434E





REFER TO THE FOLLOWING.

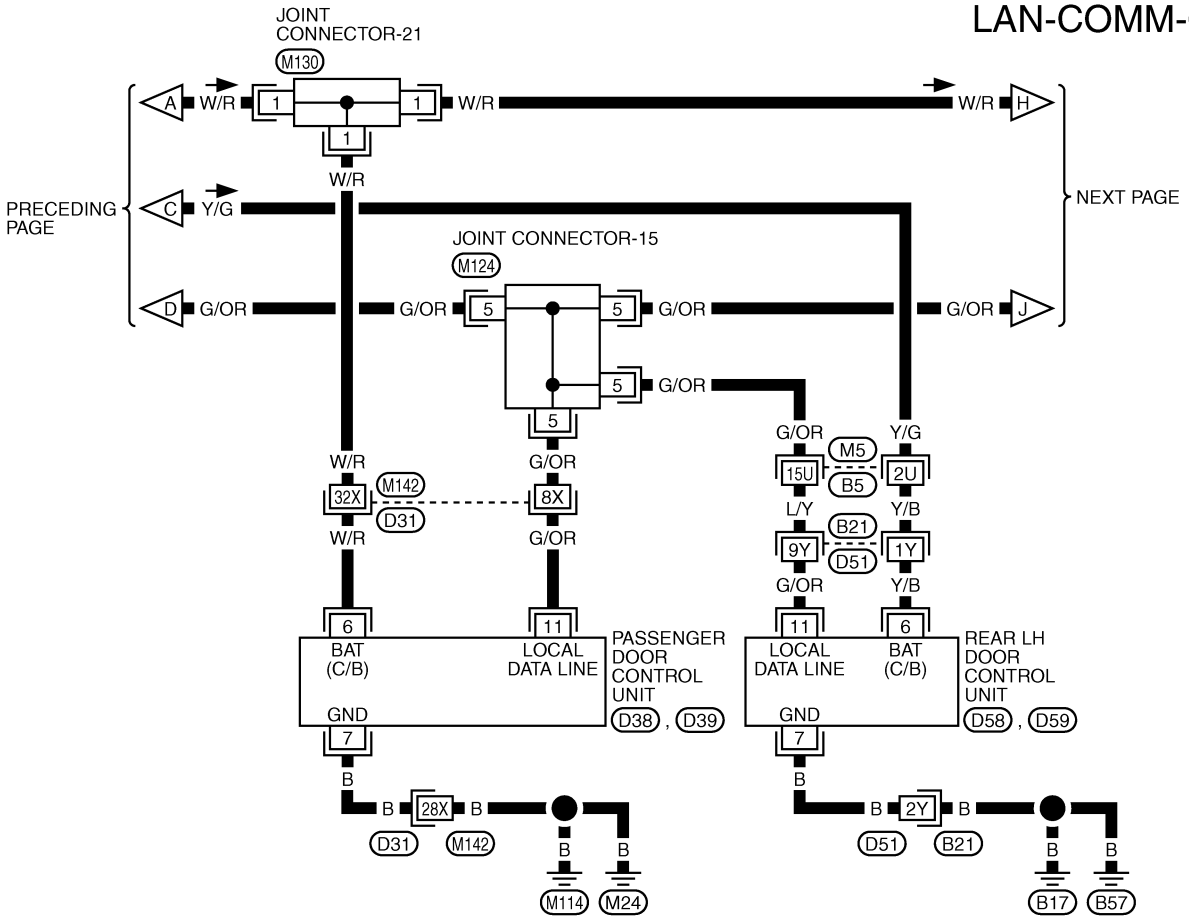
D1 -SUPER MULTIPLE JUNCTION (SMJ)

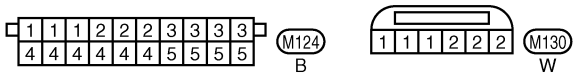
M1 , E203 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

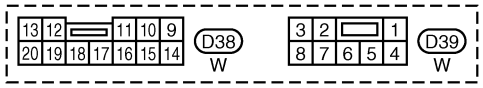
M4 , B4 -ELECTRICAL UNITS

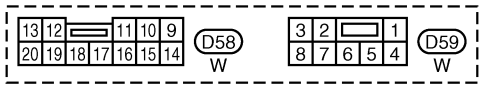
TKWM0258E

LAN-COMM-03









REFER TO THE FOLLOWING.
M5 , B21 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

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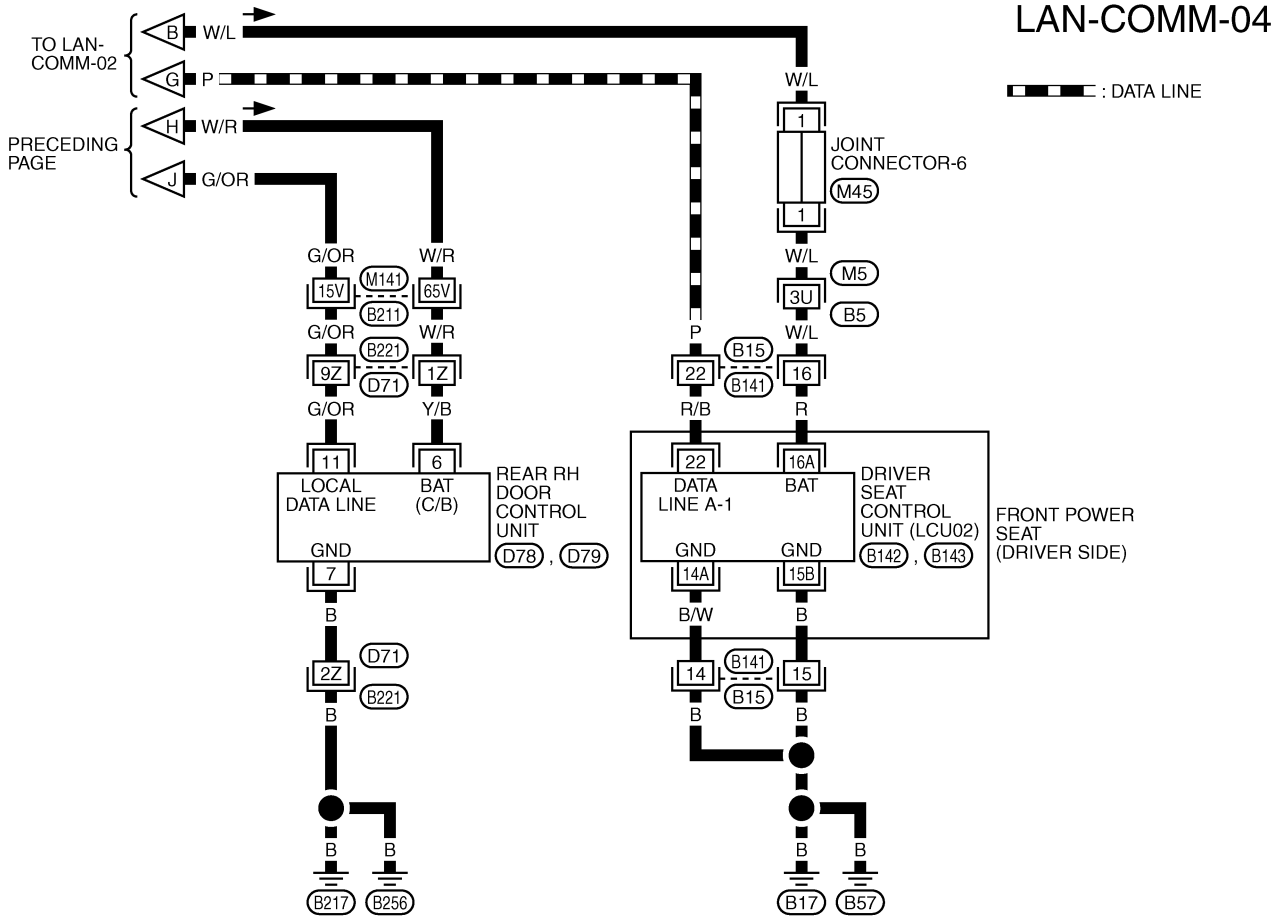
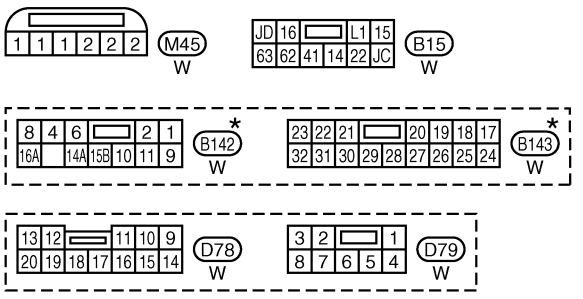
LAN-COMM-04



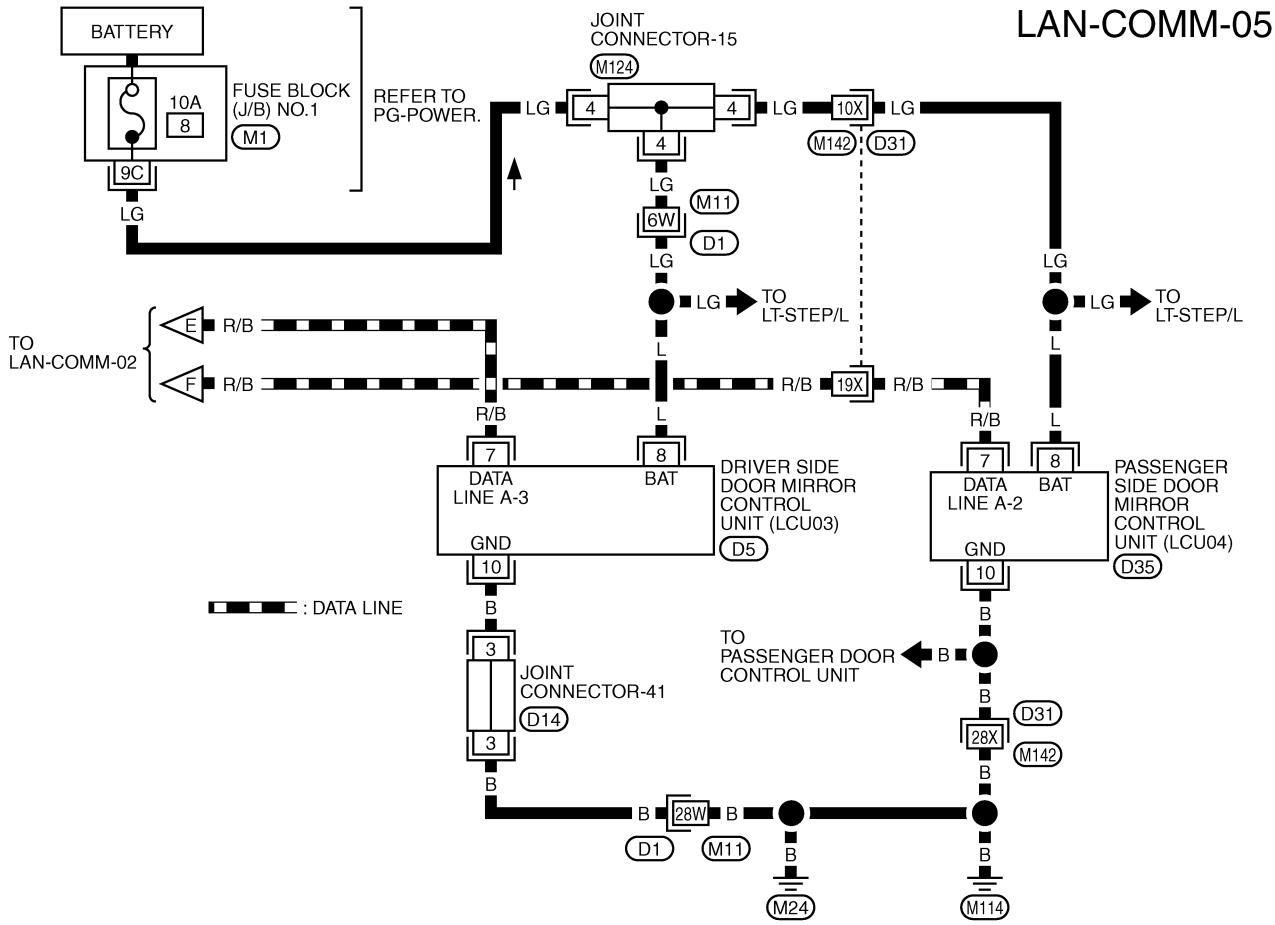


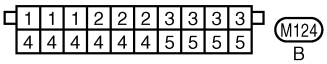
★: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

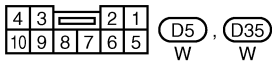
REFER TO THE FOLLOWING.
M5 , B211 , B221 -SUPER MULTIPLE JUNCTION (SMJ)

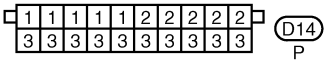
TKWM0436E

LAN-COMM-05









REFER TO THE FOLLOWING.

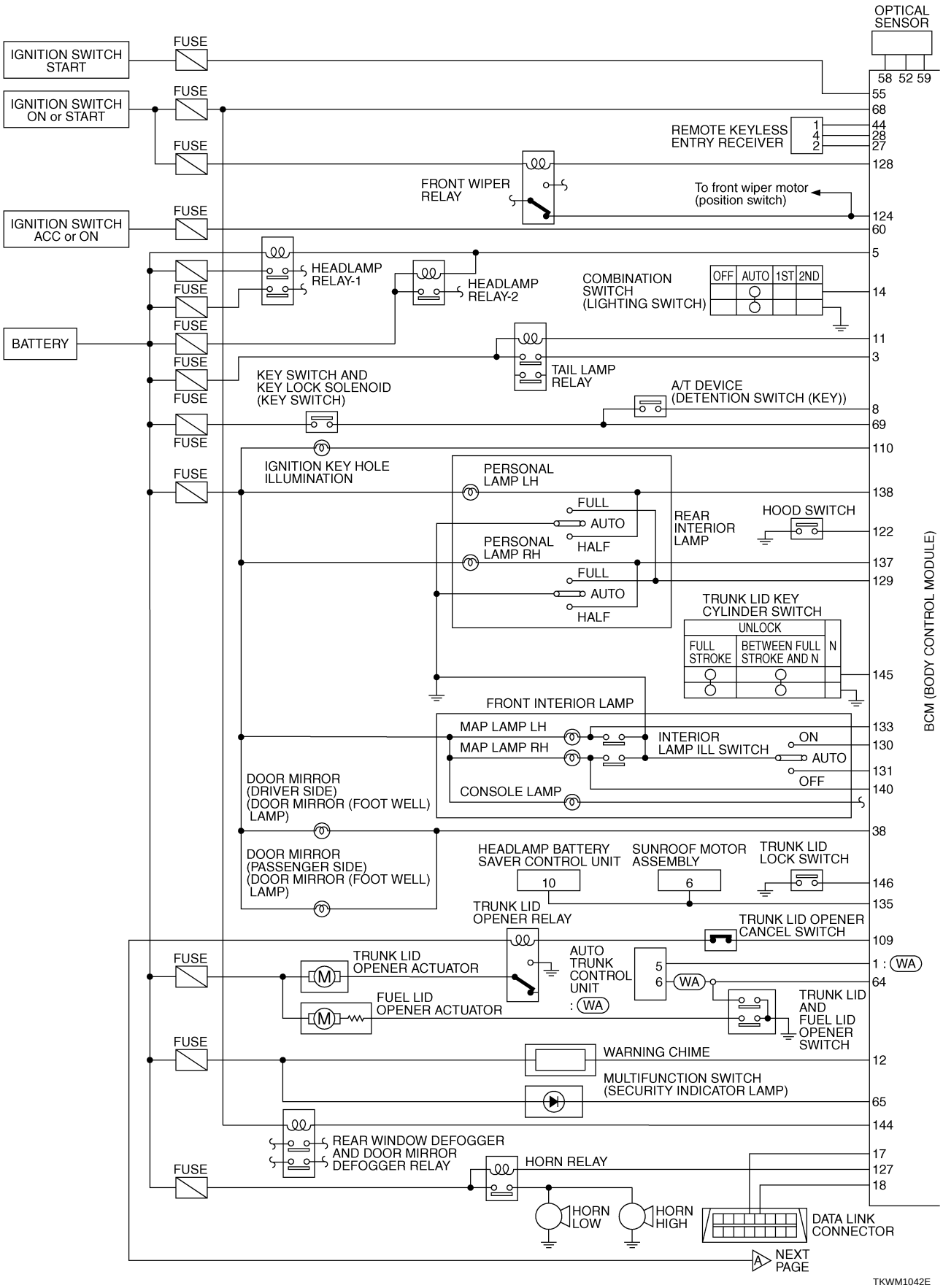
D1 , D31 -SUPER MULTIPLE JUNCTION (SMJ)

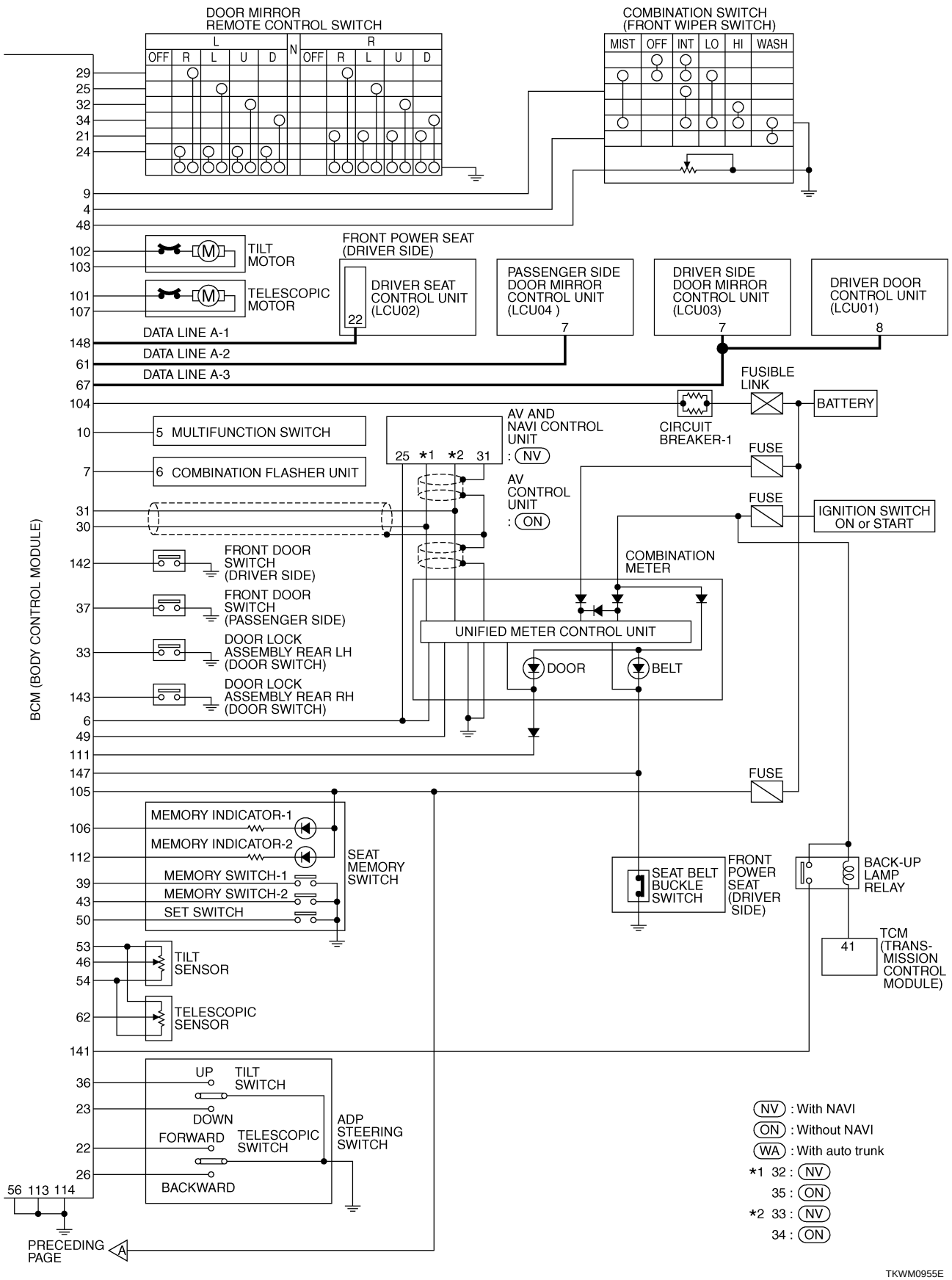
M1 -FUSE BLOCK-JUNCTION BOX (J/B) NO.1

TKWM0437E

Schematic - BCM -

EKS001PL




DOOR MIRROR REMOTE CONTROL SWITCH
L
N
R
OFF R L U D
OFF R L U D
COMBINATION SWITCH (FRONT WIPER SWITCH)
MIST OFF INT LO HI WASH
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25
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34
21
24
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4
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102
103
101
107
TILT MOTOR
TELESCOPIC MOTOR
FRONT POWER SEAT (DRIVER SIDE)
DRIVER SEAT CONTROL UNIT (LCU02)
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PASSENGER SIDE DOOR MIRROR CONTROL UNIT (LCU04)
7
DRIVER SIDE DOOR MIRROR CONTROL UNIT (LCU03)
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DRIVER DOOR CONTROL UNIT (LCU01)
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67
DATA LINE A-1
DATA LINE A-2
DATA LINE A-3
FUSIBLE LINK
104
BATTERY
CIRCUIT BREAKER-1
10
5 MULTIFUNCTION SWITCH
7
6 COMBINATION FLASHER UNIT
AV AND NAVI CONTROL UNIT : NV
25 *1 *2 31
AV CONTROL UNIT : ON
FUSE
FUSE
IGNITION SWITCH ON or START
31
30
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37
33
143
FRONT DOOR SWITCH (DRIVER SIDE)
FRONT DOOR SWITCH (PASSENGER SIDE)
DOOR LOCK ASSEMBLY REAR LH (DOOR SWITCH)
DOOR LOCK ASSEMBLY REAR RH (DOOR SWITCH)
COMBINATION METER
UNIFIED METER CONTROL UNIT
DOOR
BELT
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111
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105
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BCM (BODY CONTROL MODULE)
MEMORY INDICATOR-1
MEMORY INDICATOR-2
MEMORY SWITCH-1
MEMORY SWITCH-2
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SEAT BELT BUCKLE SWITCH
FRONT POWER SEAT (DRIVER SIDE)
BACK-UP LAMP RELAY
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TCM (TRANS-MISSION CONTROL MODULE)
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TILT SENSOR
TELESCOPIC SENSOR
141
UP TILT SWITCH
DOWN
FORWARD TELESCOPIC SWITCH
BACKWARD
ADP STEERING SWITCH
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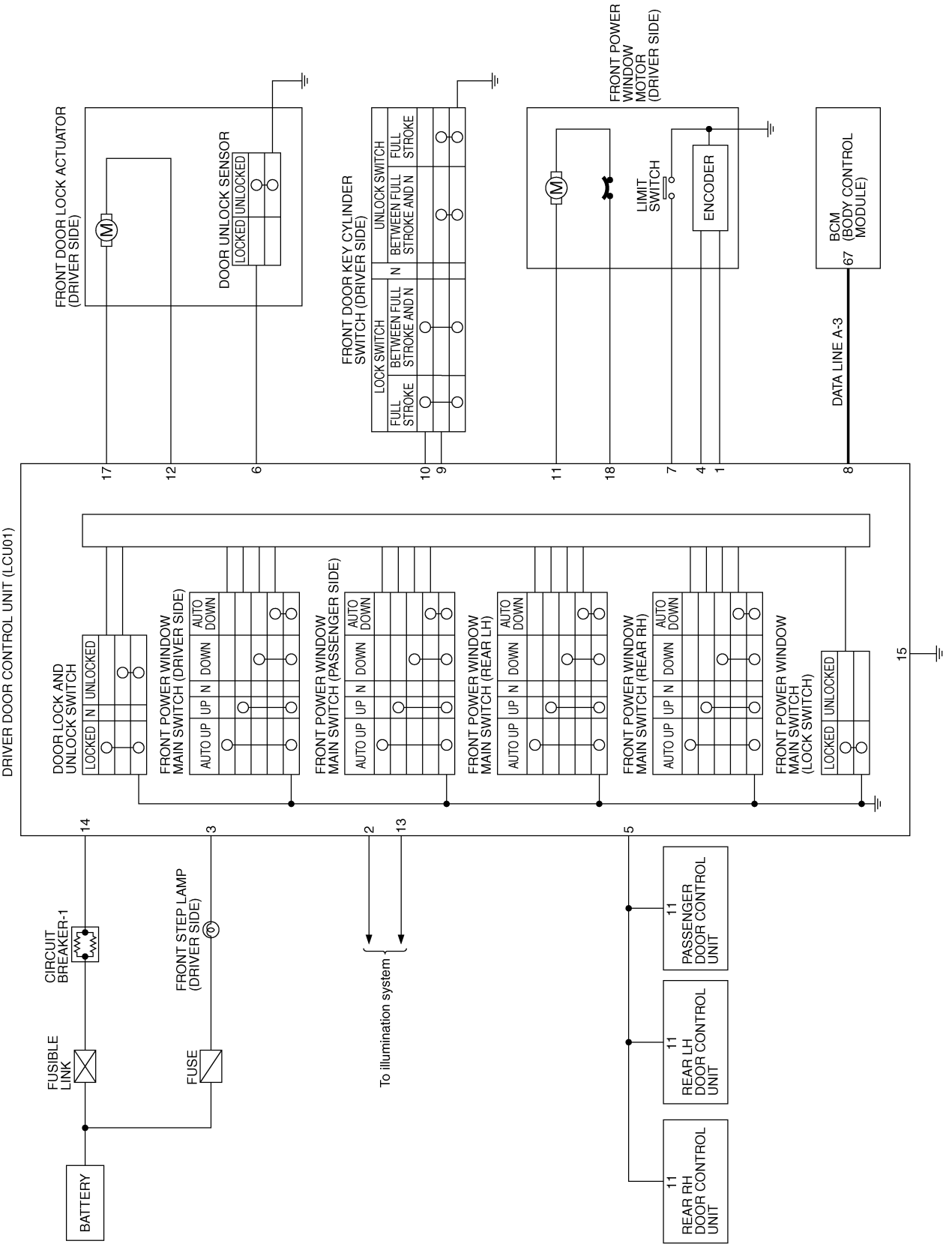
22
26
56 113 114
PRECEDING PAGE
A
NV : With NAVI
ON : Without NAVI
WA : With auto trunk
*1 32 : NV
35 : ON
*2 33 : NV
34 : ON
TKWM0955E

Schematic - LCU01 -

DRIVER'S DOOR CONTROL UNIT

EKS001PM



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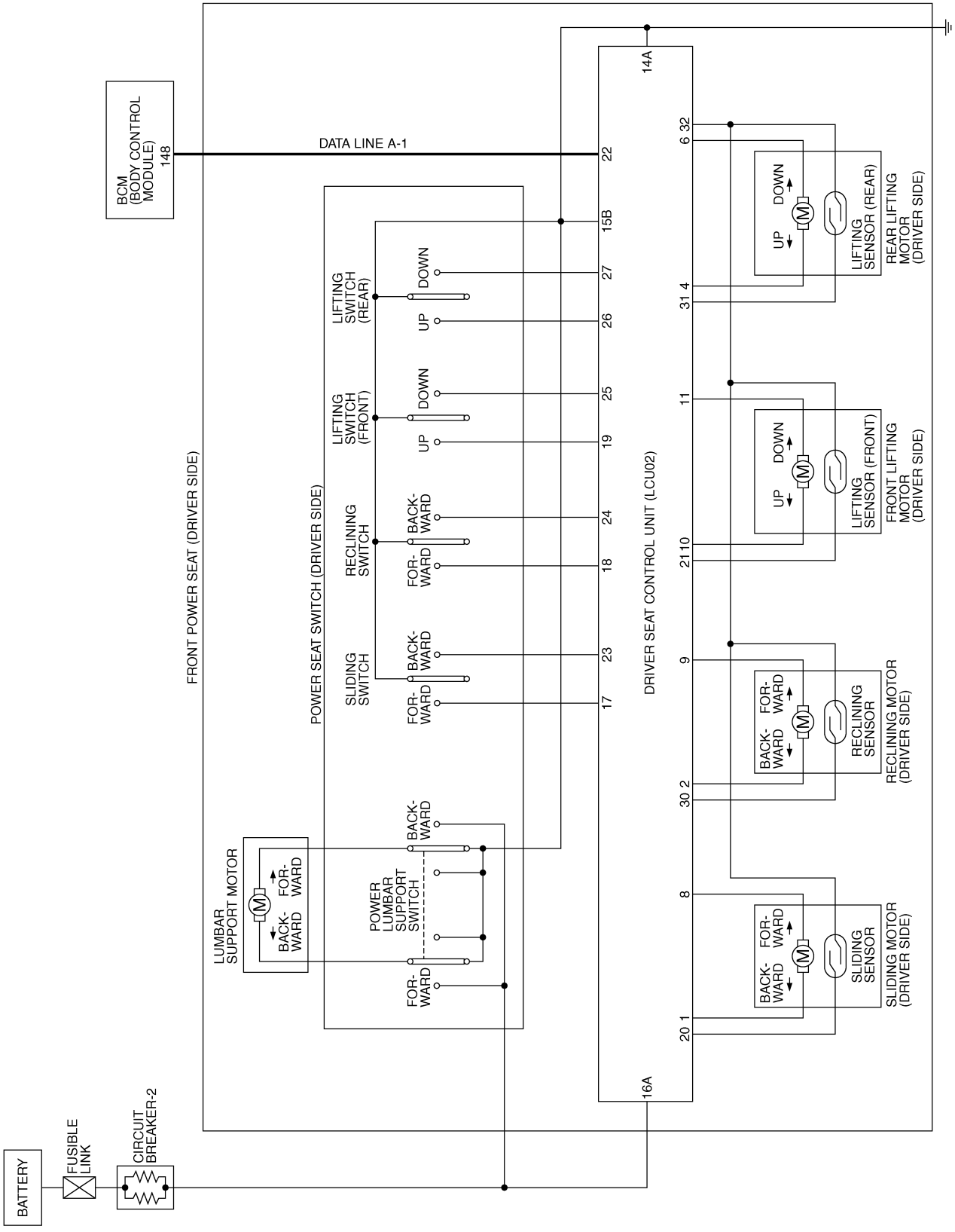
Schematic - LCU02 -
DRIVER'S SEAT CONTROL UNIT

EKS001PN



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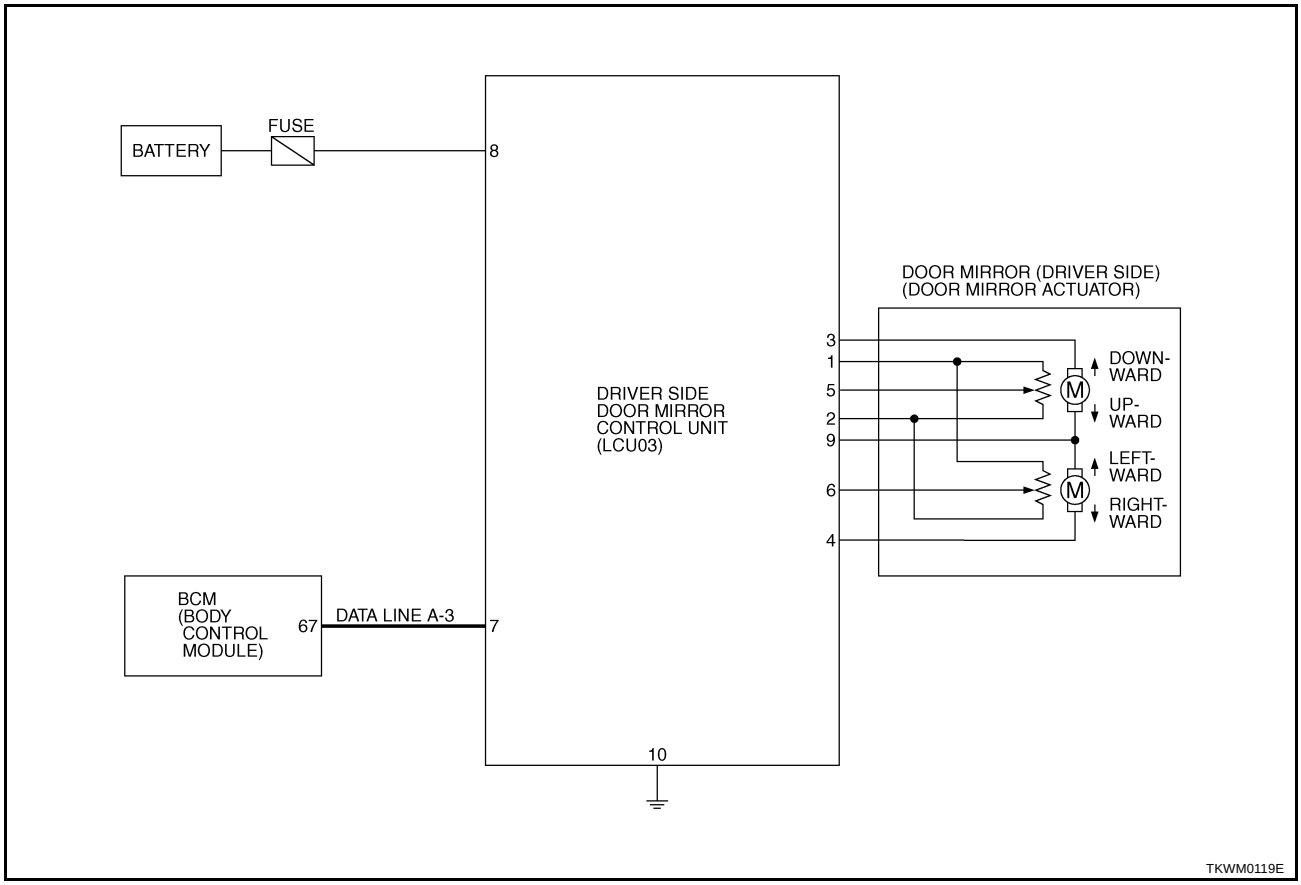
Schematic - LCU03 -

EKS001PO

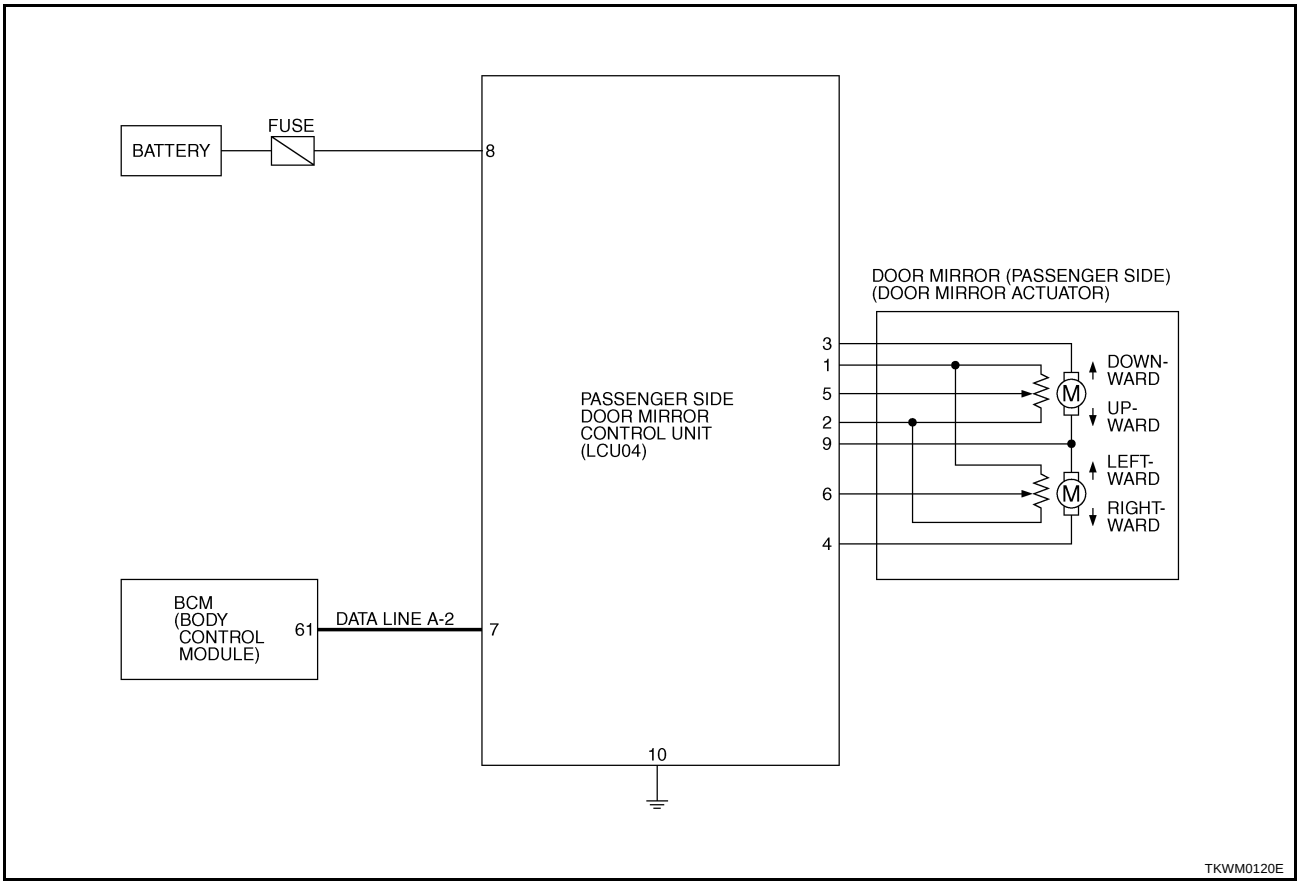
DRIVER'S SIDE DOOR MIRROR CONTROL UNIT



Schematic - LCU04 -

EKS001PP

PASSENGER SIDE DOOR MIRROR CONTROL UNIT



PRECAUTIONS

PFP:00001

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

EKS006SJ

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

WARNING:

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

Precautions For Trouble Diagnosis

EKS001PR

CAN SYSTEM

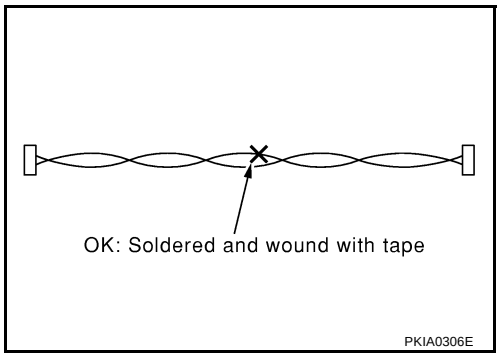
- Do not apply voltage of 7.0 V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0 V or less.

Precautions For Harness Repair

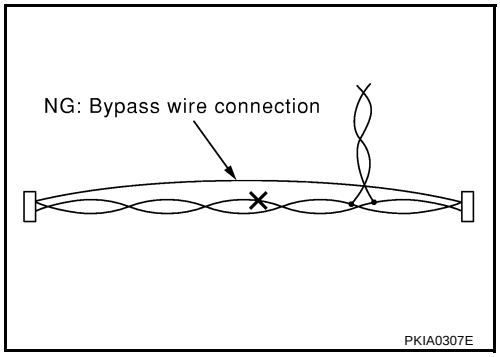
EKS001PS

CAN SYSTEM

- Solder the repaired parts, and wrap with tape. [Frays of twisted line must be within 110 mm (4.33 in)]



- Do not perform bypass wire connections for the repair parts. (The spliced wire will become separated and the characteristics of twisted line will be lost.)



CAN COMMUNICATION

PFP:23710

System Description

EKS001PT

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

CAN Communication Unit

EKS00GFJ

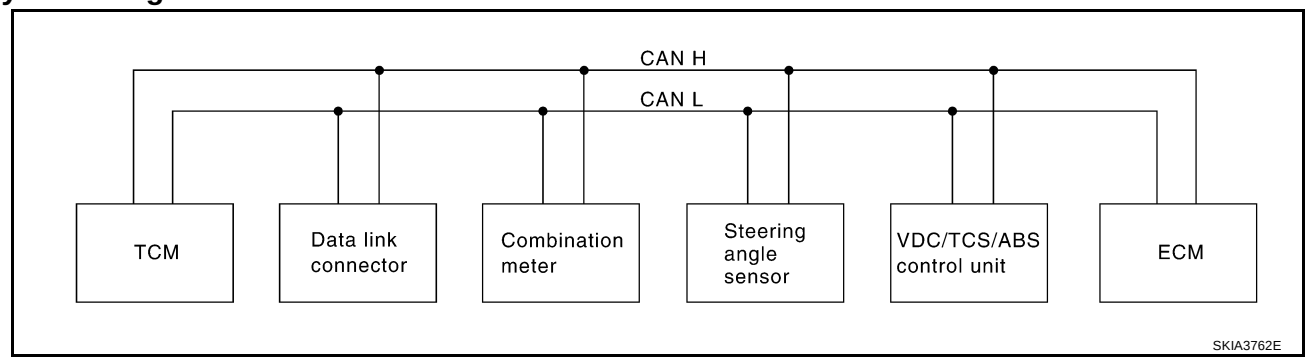
Go to CAN system, when selecting your CAN system type from the following table.

Body type	Sedan	
Axle	2WD	
Engine	VK45DE	
Transmission	A/T	
Brake control	VDC	
ICC system		×
CAN system type	1	2
CAN system trouble diagnosis	LAN-24	LAN-42

×: Applicable

TYPE 1

System Diagram



Input/output Signal Chart

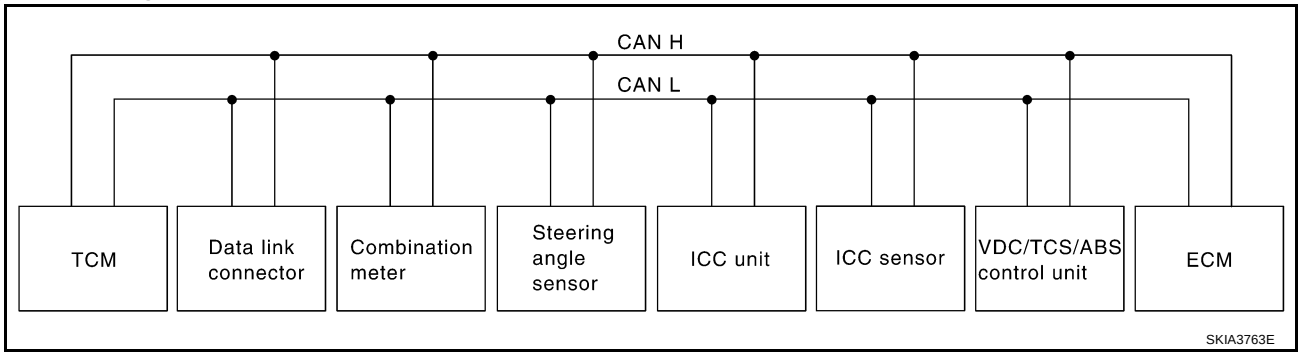
T: Transmit R: Receive

Signals	TCM	Combination meter	Steering angle sensor	VDC/TCS/ABS control unit	ECM
Engine speed signal	R	R		R	T
Engine coolant temperature signal		R			T
Accelerator pedal position signal	R			R	T
Battery voltage signal	R				T
Closed throttle position signal	R				T
Wide open throttle position signal	R				T
Fuel consumption monitor signal		R			T
Current gear position signal	T	R		R	R
Next gear position signal	T			R	R
Shift change signal	T			R	R
Shift pattern signal	T				R
Steering wheel angle sensor signal			T	R	

Signals	TCM	Combination meter	Steering angle sensor	VDC/TCS/ABS control unit	ECM
Air conditioner switch signal		T			R
Headlamp switch signal		T			R
Rear window defogger switch signal		T			R
Stop lamp switch signal	R	T			
Vehicle speed signal		R		T	
	R	T			R
A/T position indicator lamp signal	T	R			
Manual mode signal	R	T			
Not Manual mode signal	R	T			
Manual mode shift up signal	R	T			
Manual mode shift down signal	R	T			
Manual mode indicator signal	T	R			
Output shaft revolution signal	T				R
Turbine revolution signal	T				R
A/T CHECK indicator lamp signal	T	R			

TYPE 2

System Diagram



Input/output Signal Chart

T: Transmit R: Receive

Signals	TCM	Combination meter	Steering angle sensor	ICC unit	ICC sensor	VDC/ TCS/ABS control 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					T
Accelerator pedal position signal	R			R		R	T
Battery voltage signal	R						T
Closed throttle position signal	R			R			T
Wide open throttle position signal	R						T
Fuel consumption monitor signal		R					T
Current gear position signal	T	R		R		R	R
Next gear position signal	T					R	R
Shift change signal	T					R	R
Shift pattern signal	T						R

Signals	TCM	Combination meter	Steering angle sensor	ICC unit	ICC sensor	VDC/ TCS/ABS control unit	ECM
Steering wheel angle sensor signal			T			R	
Air conditioner switch signal		T					R
Headlamp switch signal		T					R
Rear window defogger switch signal		T					R
Stop lamp switch signal	R	T					
Vehicle speed signal		R		R		T	
	R	T					R
A/T position indicator lamp signal	T	R		R			
Manual mode signal	R	T					
Not Manual mode signal	R	T					
Manual mode shift up signal	R	T					
Manual mode shift down signal	R	T					
Manual mode indicator signal	T	R					
Output shaft revolution signal	T			R			R
Turbine revolution signal	T			R			R
A/T CHECK indicator lamp signal	T	R					

CAN SYSTEM (TYPE 1)

PFP:23710

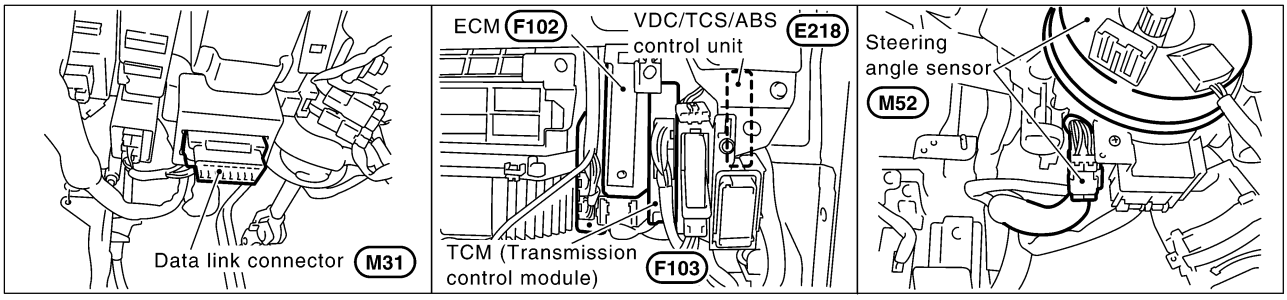
System Description

EKS003L7

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.

Component Parts and Harness Connector Location

EKS003L8

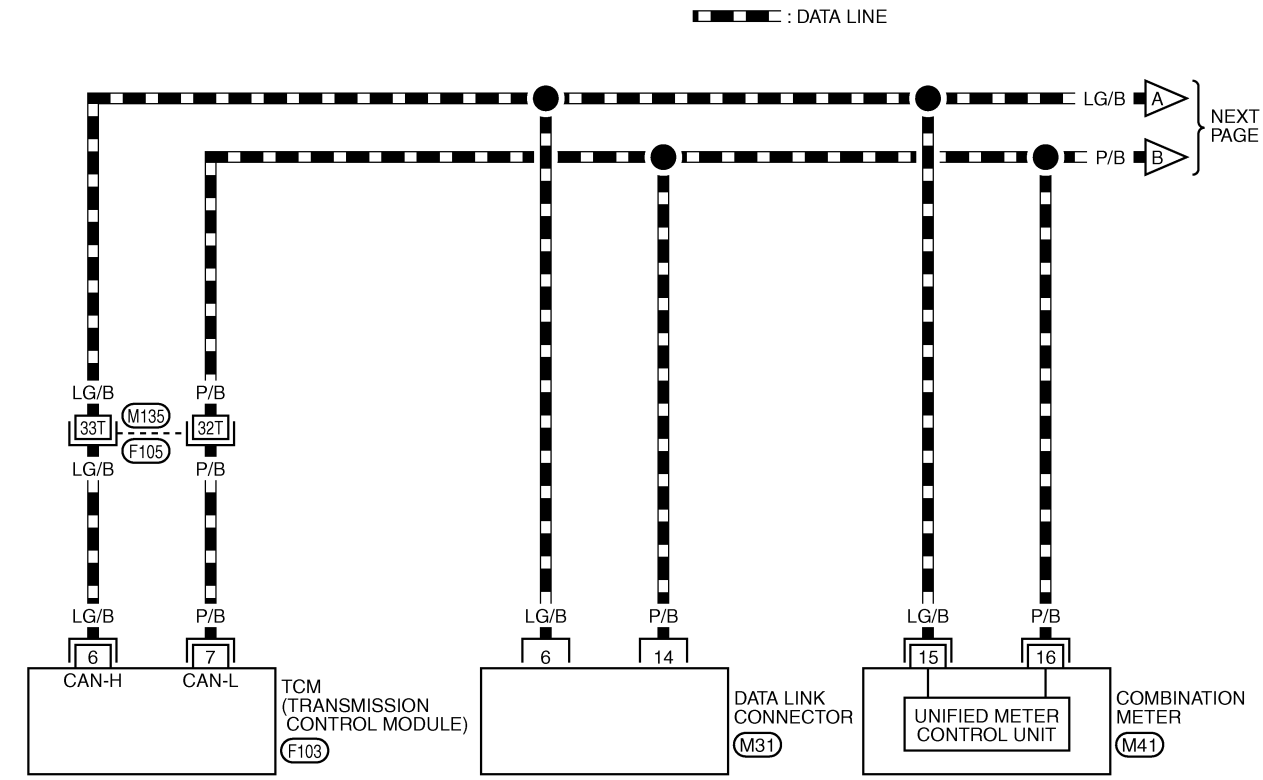


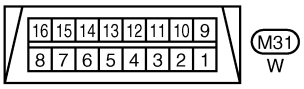
SKIA3772E

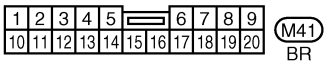
Wiring Diagram — CAN —

EKS003L9

LAN-CAN-01







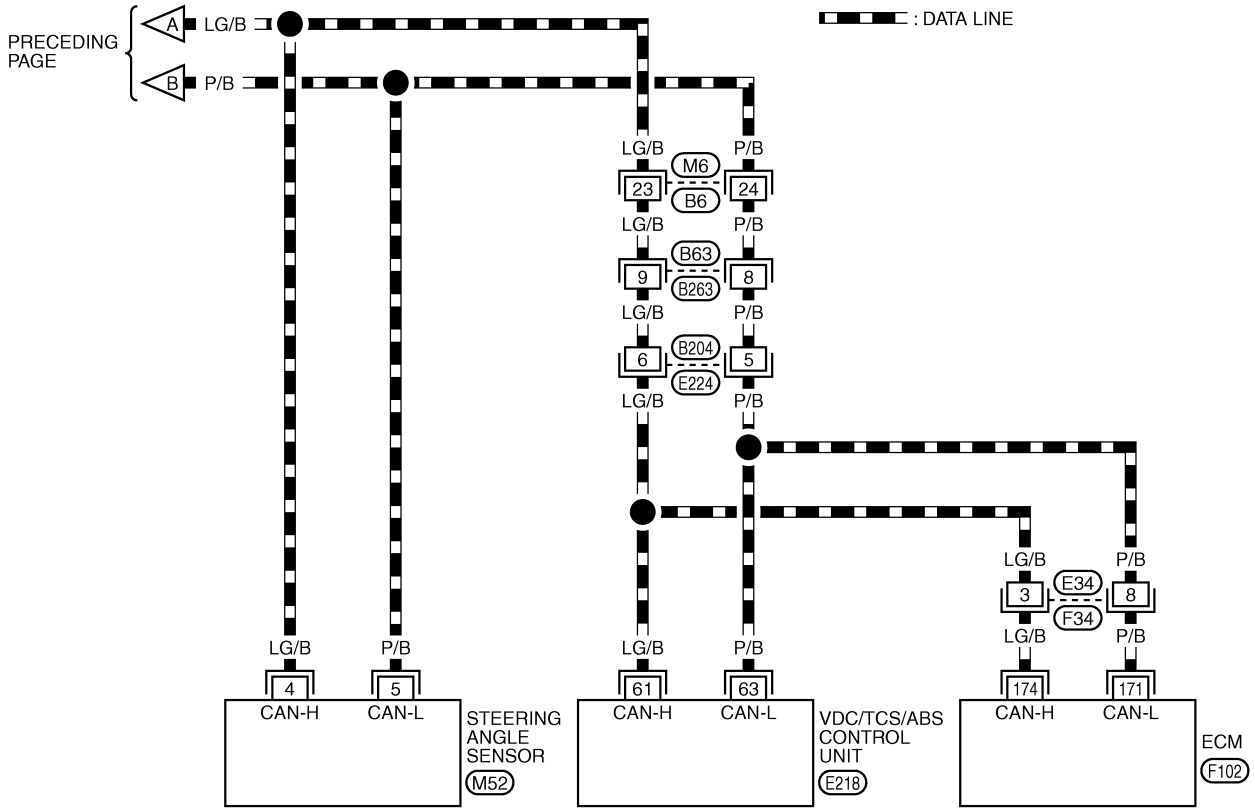
REFER TO THE FOLLOWING.

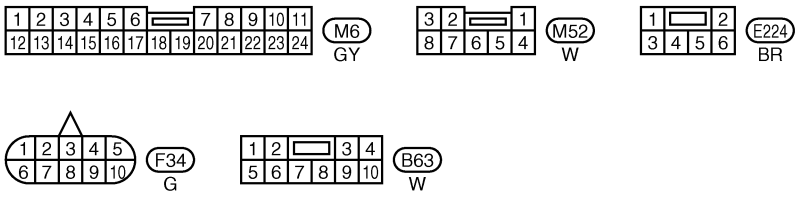
F105 -SUPER MULTIPLE JUNCTION (SMJ)

F103 -ELECTRICAL UNITS

TKWM1043E

LAN-CAN-02





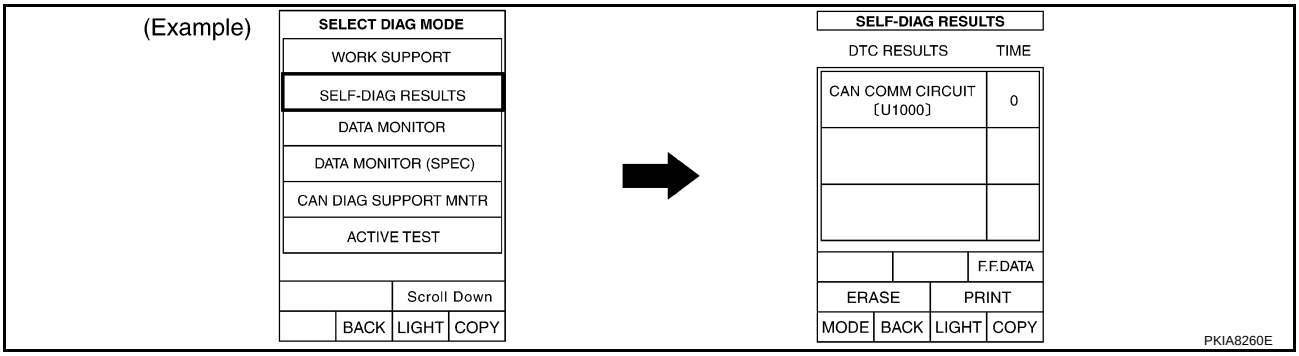
REFER TO THE FOLLOWING.
E218 , F102 -ELECTRICAL UNITS

TKWM0259E

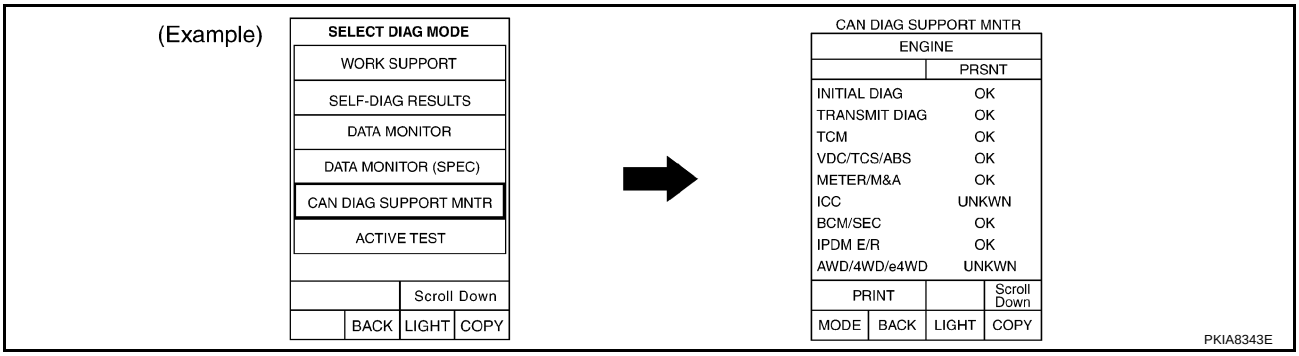
Work Flow

EKS003LA

1. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “VDC”, and “A/T” displayed on CONSULT-II.



2. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “VDC”, and “A/T” displayed on CONSULT-II.



3. Attach the printed sheet of “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-28, "CHECK SHEET" .
4. Based on the data monitor results, put marks “v” onto the items with “NG” or “UNKWN” in the check sheet table. Refer to LAN-28, "CHECK SHEET" .

   NOTE:
   If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” as “CAN DIAG SUPPORT MNTR” for the diagnosed control unit, replace the control unit.
5. According to the check sheet results (example), start inspection. Refer to LAN-29, "CHECK SHEET RESULTS (EXAMPLE)" .

CHECK SHEET

NOTE:

If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” as “CAN DIAG SUPPORT MNTR” for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–

Symptoms :

Attach copy of ENGINE SELF-DIAG RESULTS

Attach copy of VDC SELF-DIAG RESULTS

Attach copy of A/T SELF-DIAG RESULTS

Attach copy of ENGINE CAN DIAG SUPPORT MNTR

Attach copy of VDC CAN DIAG SUPPORT MNTR

Attach copy of A/T CAN DIAG SUPPORT MNTR

PKIA8654E

CHECK SHEET RESULTS (EXAMPLE)

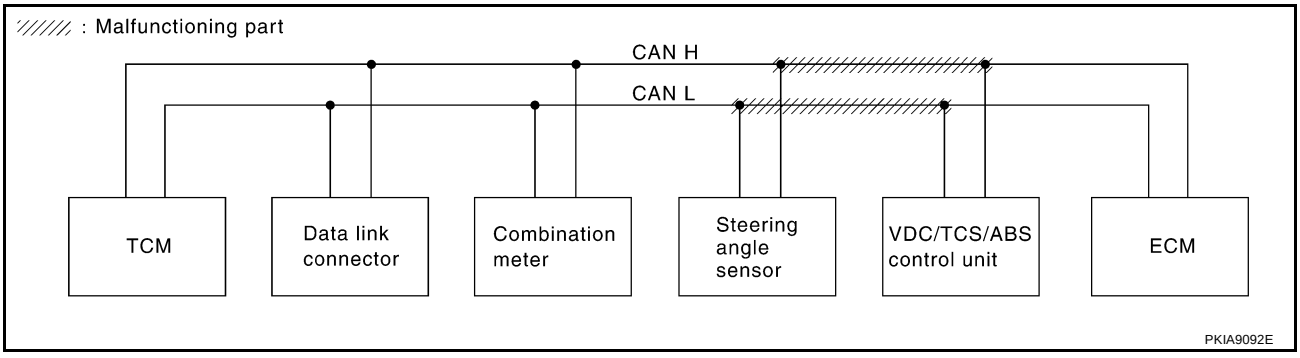
NOTE:
If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” as “CAN DIAG SUPPORT MNTR” for the diagnosed control unit, replace the control unit.

Case 1

Check harness between VDC/TCS/ABS control unit and steering angle sensor. Refer to LAN-32, "Circuit Check Between VDC/TCS/ABS Control Unit and Steering Angle Sensor" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	UNKWN	—

PKIA8655E



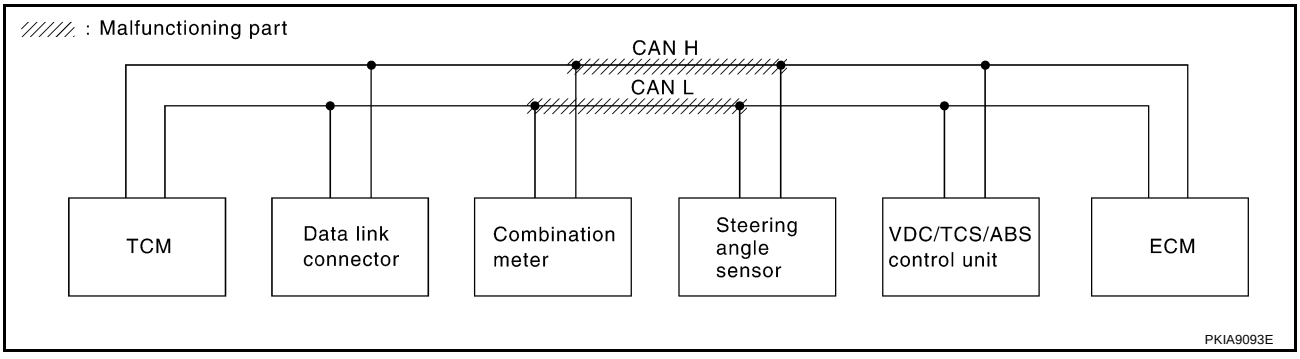
PKIA9092E

Case 2

Check harness between steering angle sensor and combination meter. Refer to LAN-34, "Circuit Check Between Steering Angle Sensor and Combination Meter" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓
A/T	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	UNKWN	—

PKIA8656E



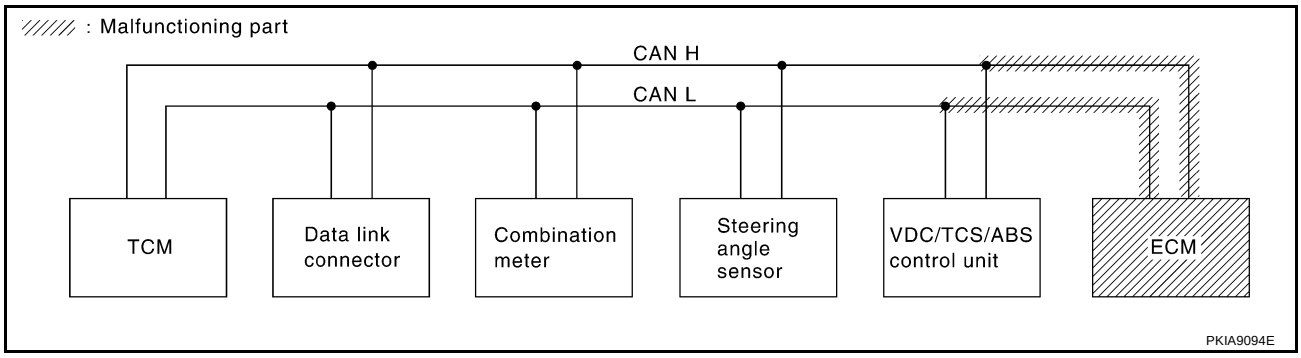
PKIA9093E

Case 3

Check ECM circuit. Refer to LAN-34, "ECM Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN ✓	–	UNKWN ✓	–	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN ✓	–	UNKWN	UNKWN	UNKWN
A/T	NG	UNKWN	UNKWN ✓	UNKWN	–	UNKWN	–

PKIA8657E



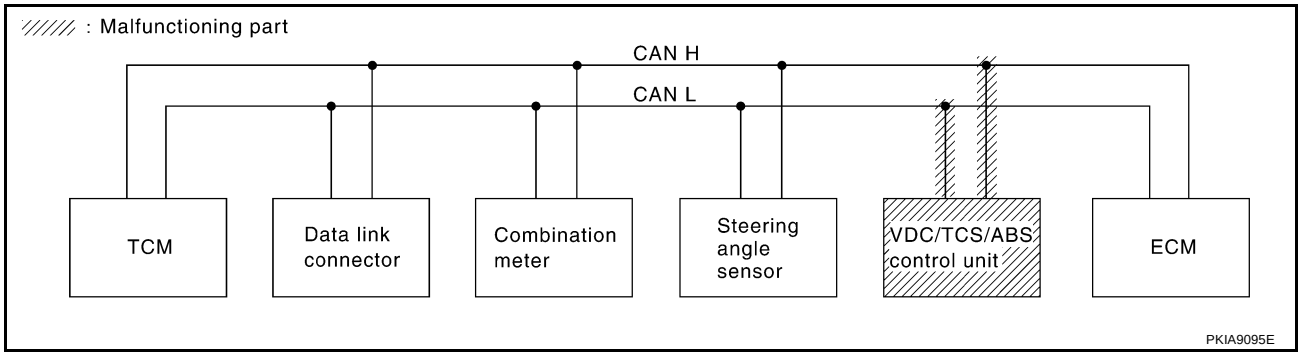
PKIA9094E

Case 4

Check VDC/TCS/ABS control unit circuit. Refer to LAN-35, "VDC/TCS/ABS Control Unit Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN ✓	–	UNKWN	UNKWN
VDC	NG	UNKWN ✓	UNKWN ✓	–	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	NG	UNKWN	UNKWN	UNKWN ✓	–	UNKWN	–

PKIA8658E



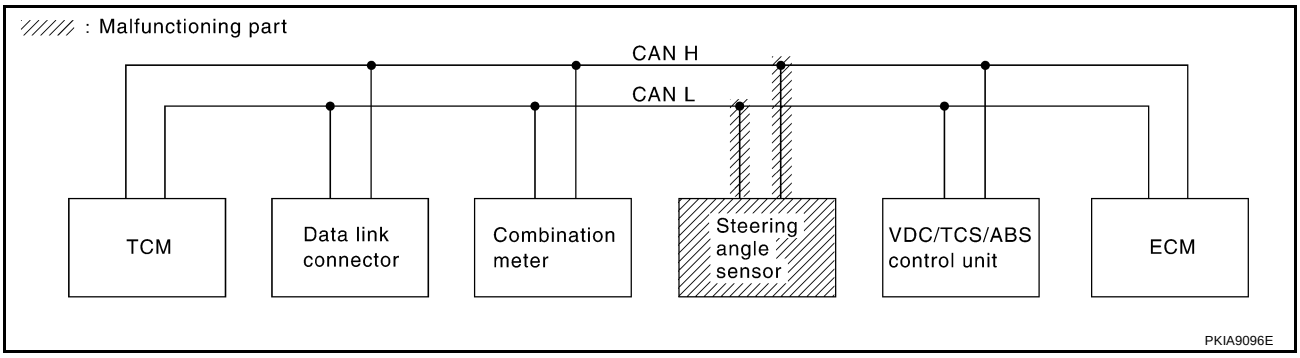
PKIA9095E

Case 5

Check steering angle sensor circuit. Refer to LAN-35, "Steering Angle Sensor Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–

PKIA8659E



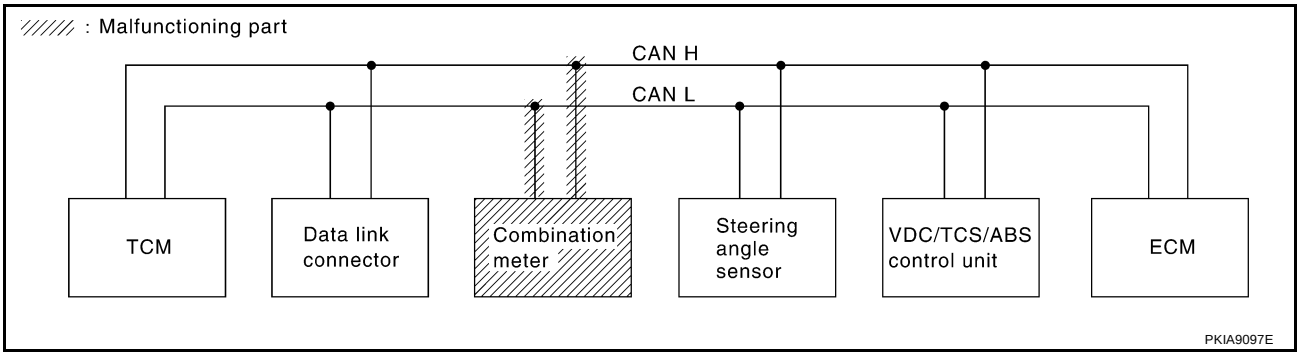
PKIA9096E

Case 6

Check combination meter circuit. Refer to LAN-36, "Combination Meter Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	UNKWN	UNKWN	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	UNKWN	–

PKIA8660E



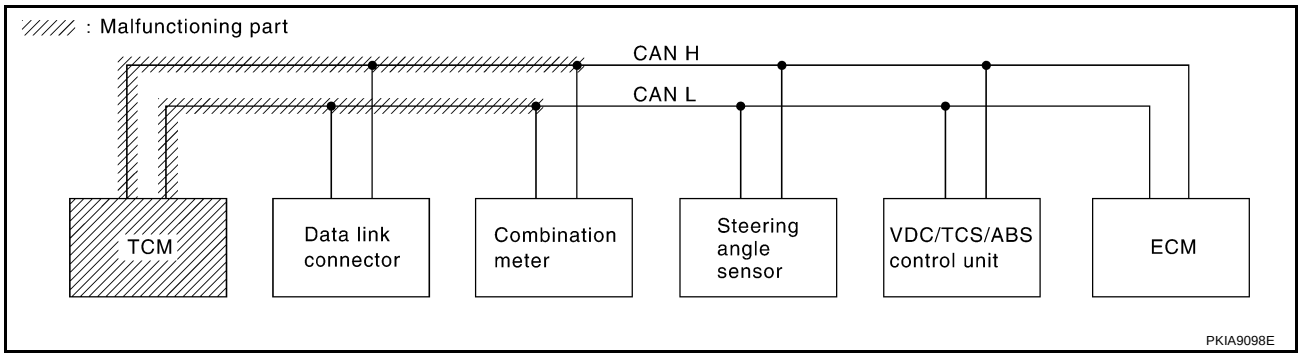
PKIA9097E

Case 7

Check TCM circuit. Refer to LAN-36, "TCM Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	UNKWN	UNKWN ✓
VDC	NG	UNKWN	UNKWN	–	UNKWN	UNKWN	UNKWN ✓
A/T	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	–	UNKWN ✓	–

PKIA8661E



PKIA9098E

Case 8

Check CAN communication circuit. Refer to LAN-37, "CAN Communication Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR						
	Initial diagnosis	Transmit diagnosis	Receive diagnosis				
			ECM	VDC/TCS /ABS	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN ✓	–	UNKWN ✓	–	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN ✓	UNKWN ✓	–	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	–	UNKWN ✓	–

PKIA8662E

Circuit Check Between VDC/TCS/ABS Control Unit and Steering Angle Sensor

EKS003LB

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(control unit side, sensor side and harness side)

- VDC/TCS/ABS control unit
- Steering angle sensor
- Between VDC/TCS/ABS control unit and steering angle sensor

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

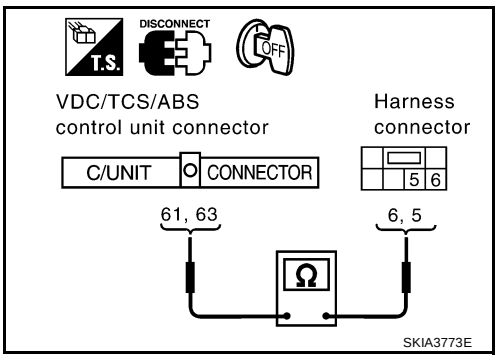
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect VDC/TCS/ABS control unit connector and harness connector E224.
2. Check continuity between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B), 63 (P/B) and harness connector E224 terminals 6 (LG/B), 5 (P/B).

61 (LG/B) – 6 (LG/B) : Continuity should exist.
63 (P/B) – 5 (P/B) : Continuity should exist.

OK or NG

OK >> GO TO 3.
NG >> Repair harness.



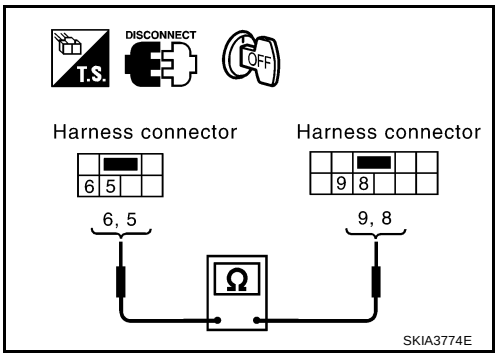
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B263.
2. Check continuity between harness connector B204 terminals 6 (LG/B), 5 (P/B) and harness connector B263 terminals 9 (LG/B), 8 (P/B).

6 (LG/B) – 9 (LG/B) : Continuity should exist.
5 (P/B) – 8 (P/B) : Continuity should exist.

OK or NG

OK >> GO TO 4.
NG >> Repair harness.



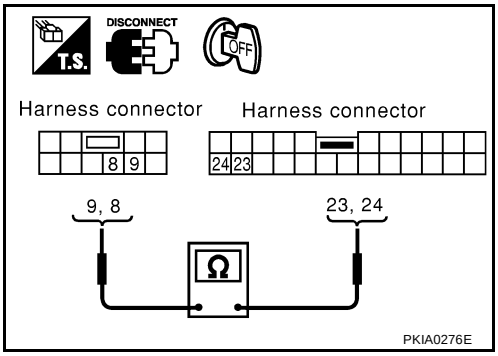
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B6.
2. Check continuity between harness connector B63 terminals 9(LG/B), 8 (P/B) and harness connector B6 terminals 23(LG/B), 24 (P/B).

9(LG/B) – 23(LG/B) : Continuity should exist.
8(P/B) – 24(P/B) : Continuity should exist.

OK or NG

OK >> GO TO 5.
NG >> Repair harness.



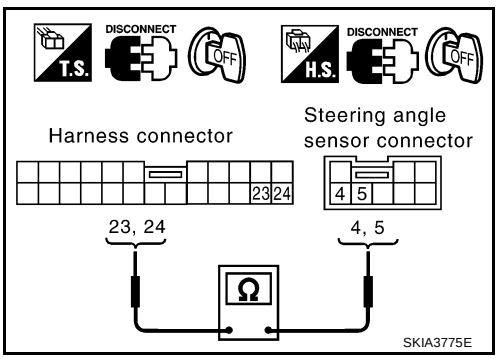
5. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check continuity between harness connector M6 terminals 23(LG/B), 24 (P/B) and steering angle sensor harness connector M52 terminals 4 (LG/B), 5 (P/B).

23(LG/B) – 4(LG/B) : Continuity should exist.
24(P/B) – 5(P/B) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-27, "Work Flow" .
NG >> Repair harness.



Circuit Check Between Steering Angle Sensor and Combination Meter

EKS003LC

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection. (sensor side, meter side and harness side)

– Steering angle sensor
– Combination meter

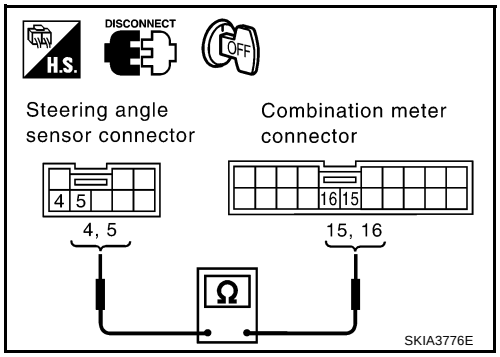
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector, steering angle sensor connector and combination meter connector.
2. Check continuity between steering angle sensor harness connector M52 terminals 4 (LG/B), 5 (P/B) and combination meter harness connector M41 terminals 15(LG/B), 16 (P/B).

4(LG/B) – 15(LG/B) : Continuity should exist.
5(P/B) – 16(P/B) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-27, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

EKS003LD

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection. (control module side and harness side)

– ECM
– Harness connector F34
– Harness connector E34

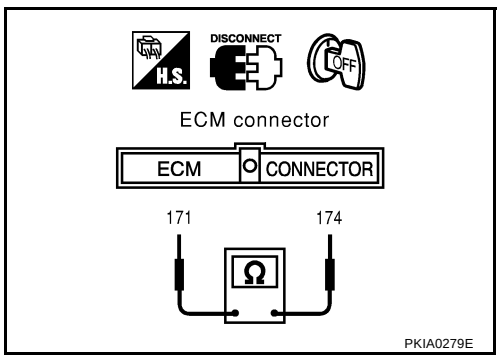
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F102 terminals 174(LG/B) and 171(P/B).

174(LG/B) – 171(P/B) : Approx. 108 – 132Ω



OK or NG

OK >> Replace ECM.
NG >> Repair harness between VDC/TCS/ABS control unit and ECM.

VDC/TCS/ABS Control Unit Circuit Check

EKS003LE

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check the terminals and connector of VDC/TCS/ABS control unit for damage, bend and loose connection. (control unit side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

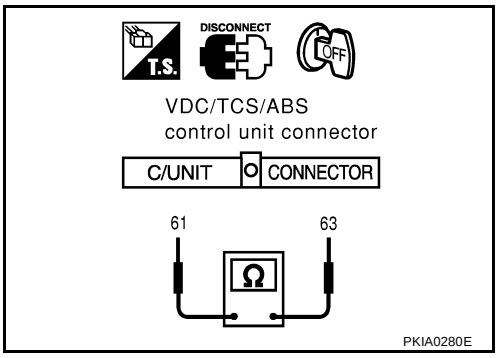
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect VDC/TCS/ABS control unit connector.
2. Check resistance between VDC/TCS/ABS control unit harness connector E218 terminals 61(LG/B) and 63(P/B).

61(LG/B) – 63(P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace VDC/TCS/ABS control unit.
NG >> Repair harness between ECM and VDC/TCS/ABS control unit.



Steering Angle Sensor Circuit Check

EKS003LF

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check the terminals and connector of steering angle sensor for damage, bend and loose connection.(sensor side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

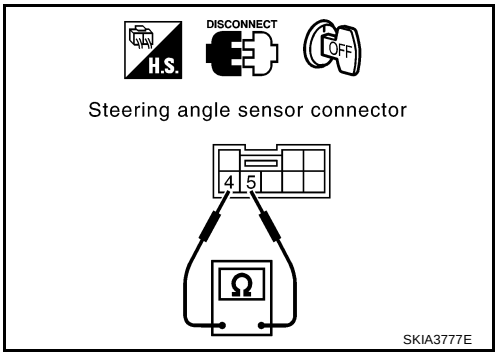
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M52 terminals 4(LG/B) and 5(P/B).

4(LG/B) – 5(P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between combination meter and steering angle sensor.



Combination Meter Circuit Check

EKS003LG

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check terminals and connector of combination meter for damage, bend and loose connection.(meter side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

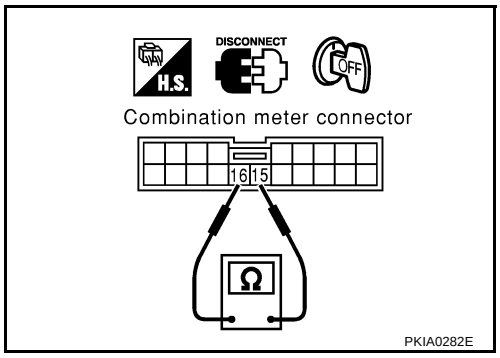
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M41 terminals 15 (LG/B) and 16 (P/B).

15(LG/B) – 16(P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace combination meter.
NG >> Repair harness between steering angle sensor and combination meter.



TCM Circuit Check

EKS003LH

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(control module side and harness side)

- TCM
- Harness connector F105
- Harness connector M135

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

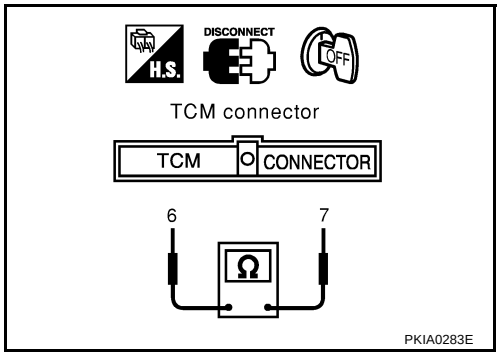
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 6 (LG/B) and 7(P/B).

6(LG/B) – 7(P/B) : Approx. 108 – 132Ω

OK or NG

OK >> Replace TCM.
NG >> Repair harness between combination meter and TCM.



CAN Communication Circuit Check

EKS003LI

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(control module side, control unit side, meter side, sensor side and harness side)

- TCM
- Combination meter
- Steering angle sensor
- VDC/TCS/ABS control unit
- ECM
- Between TCM and ECM

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

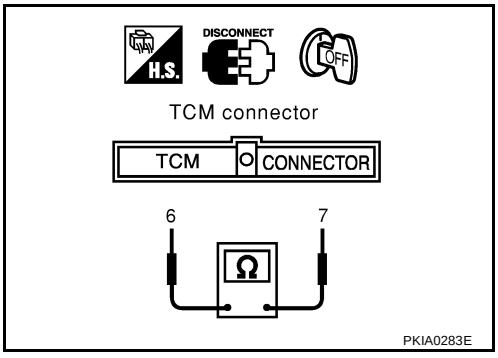
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector and harness connector F105.
2. Check continuity between TCM harness connector F103 terminals 6 (LG/B) and 7(P/B).

6(LG/B) – 7(P/B) : Continuity should not exist.

OK or NG

OK >> GO TO 3.
NG >> Repair harness between TCM and harness connector F105.



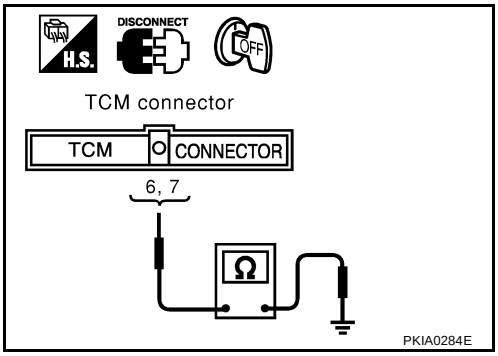
3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 6 (LG/B), 7 (P/B) and ground.

6(LG/B) – ground : Continuity should not exist.
7(P/B) – ground : Continuity should not exist.

OK or NG

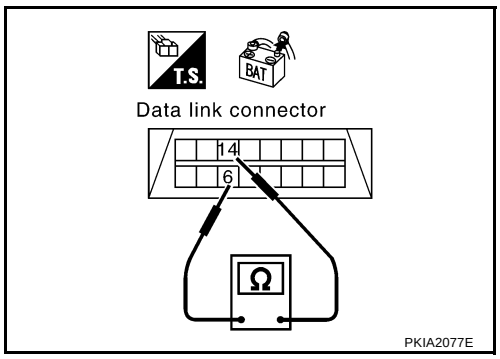
OK >> GO TO 4.
NG >> Repair harness between TCM and harness connector F105.



4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect combination meter connector, steering angle sensor connector and harness connector M6.
2. Check continuity between Data Link Connector M31 terminals 6 (LG/B) and 14(P/B).

6(LG/B) – 14(P/B) : Continuity should not exist.



OK or NG

OK >> GO TO 5.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

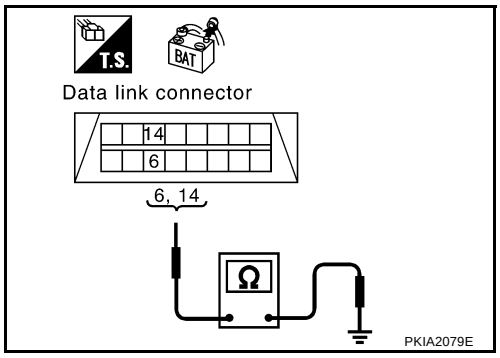
- Harness between harness connector M6 and harness connector M135
- Harness between harness connector M6 and Data Link Connector
- Harness between harness connector M6 and combination meter
- Harness between harness connector M6 and steering angle sensor

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between Data Link Connector M31 terminals 6 (LG/B), 14(P/B) and ground.

6(LG/B) – ground : Continuity should not exist.

14(P/B) – ground : Continuity should not exist.



OK or NG

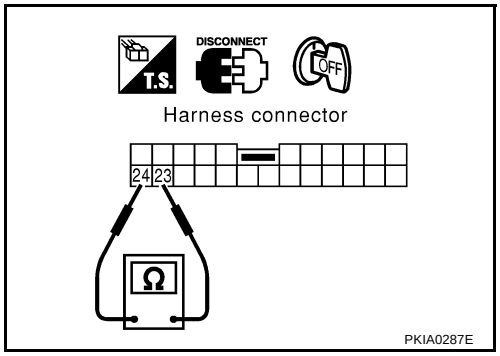
OK >> GO TO 6.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector M6 and harness connector M135
- Harness between harness connector M6 and Data Link Connector
- Harness between harness connector M6 and combination meter
- Harness between harness connector M6 and steering angle sensor

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B63.
2. Check continuity between harness connector B6 terminals 23(LG/B) and 24(P/B).

23(LG/B) – 24(P/B) : Continuity should not exist.



OK or NG

OK >> GO TO 7.
NG >> Repair harness between harness connector B6 and harness connector B63.

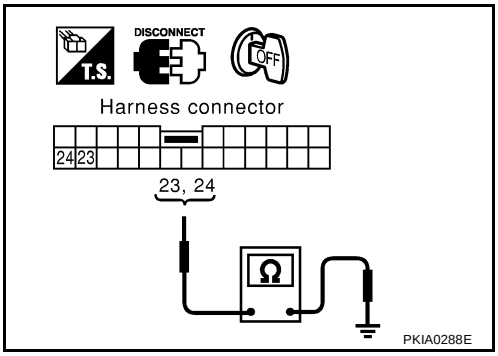
7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B6 terminals 23(LG/B), 24(P/B) and ground.

23(LG/B) – ground : Continuity should not exist.
24(P/B) – ground : Continuity should not exist.

OK or NG

OK >> GO TO 8.
NG >> Repair harness between harness connector B6 and harness connector B63.



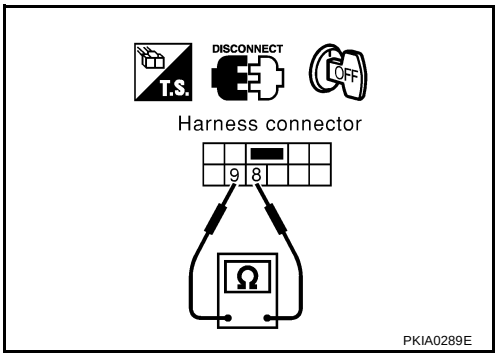
8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B204.
2. Check continuity between harness connector B263 terminals 9(LG/B) and 8(P/B).

9(LG/B) – 8(P/B) : Continuity should not exist.

OK or NG

OK >> GO TO 9.
NG >> Repair harness between harness connector B263 and harness connector B204.



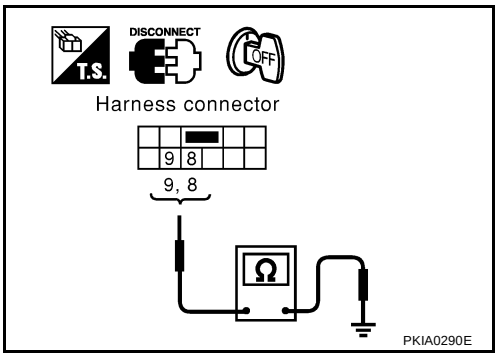
9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B263 terminals 9(LG/B), 8(P/B) and ground.

9(LG/B) – ground : Continuity should not exist.
8(P/B) – ground : Continuity should not exist.

OK or NG

OK >> GO TO 10.
NG >> Repair harness between harness connector B263 and harness connector B204.



10. CHECK HARNESS FOR SHORT CIRCUIT

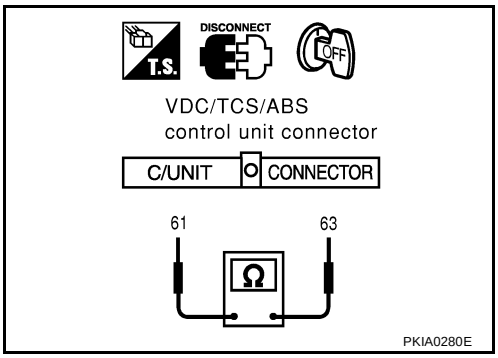
1. Disconnect VDC/TCS/ABS control unit connector and harness connector E34.
2. Check continuity between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B) and 63(P/B).

61(LG/B) – 63(P/B) : Continuity should not exist.

OK or NG

OK >> GO TO 11.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector E34 and harness connector E224
- Harness between harness connector E34 and VDC/TCS/ABS control unit

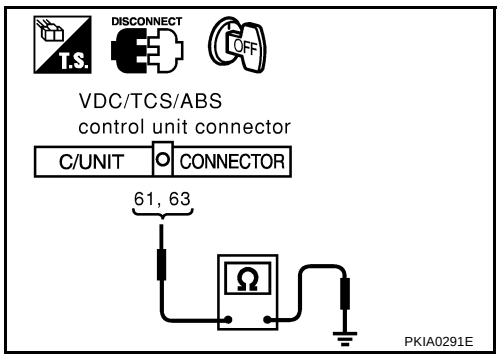


11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B), 63(P/B) and ground.

61(LG/B) – ground : Continuity should not exist.

63(P/B) – ground : Continuity should not exist.



OK or NG

OK >> GO TO 12.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector E34 and harness connector E224
- Harness between harness connector E34 and VDC/TCS/ABS control unit

12. CHECK HARNESS FOR SHORT CIRCUIT

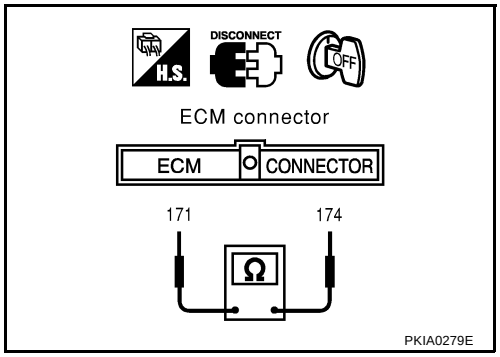
1. Disconnect ECM connector.
2. Check continuity between ECM harness connector F102 terminals 174 (LG/B) and 171(P/B).

174(LG/B) – 171(P/B) : Continuity should not exist.

OK or NG

OK >> GO TO 13.

NG >> Repair harness between ECM and harness connector F34.



13. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F102 terminals 174 (LG/B), 171 (P/B) and ground.

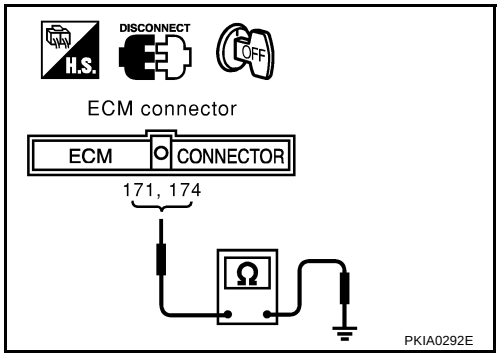
174(LG/B) – ground : Continuity should not exist.

171(P/B) – ground : Continuity should not exist.

OK or NG

OK >> GO TO 14.

NG >> Repair harness between ECM and harness connector F34.



14. ECM/TCM INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-41, "ECM/TCM INTERNAL CIRCUIT INSPECTION"

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-27, "Work Flow" .

NG >> Replace ECM and/or TCM.

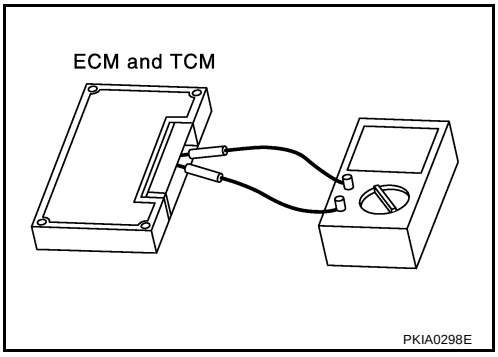
Component Inspection

EKS003LJ

ECM/TCM INTERNAL CIRCUIT INSPECTION

- Remove ECM and TCM from vehicle.
- Check resistance between ECM terminals 174 and 171.
- Check resistance between TCM terminals 6 and 7.

Unit	Terminal	Resistance value (Ω)
ECM	174 – 171	Approx. 108 - 132
TCM	6 – 7	



CAN SYSTEM (TYPE 2)

PFP:23710

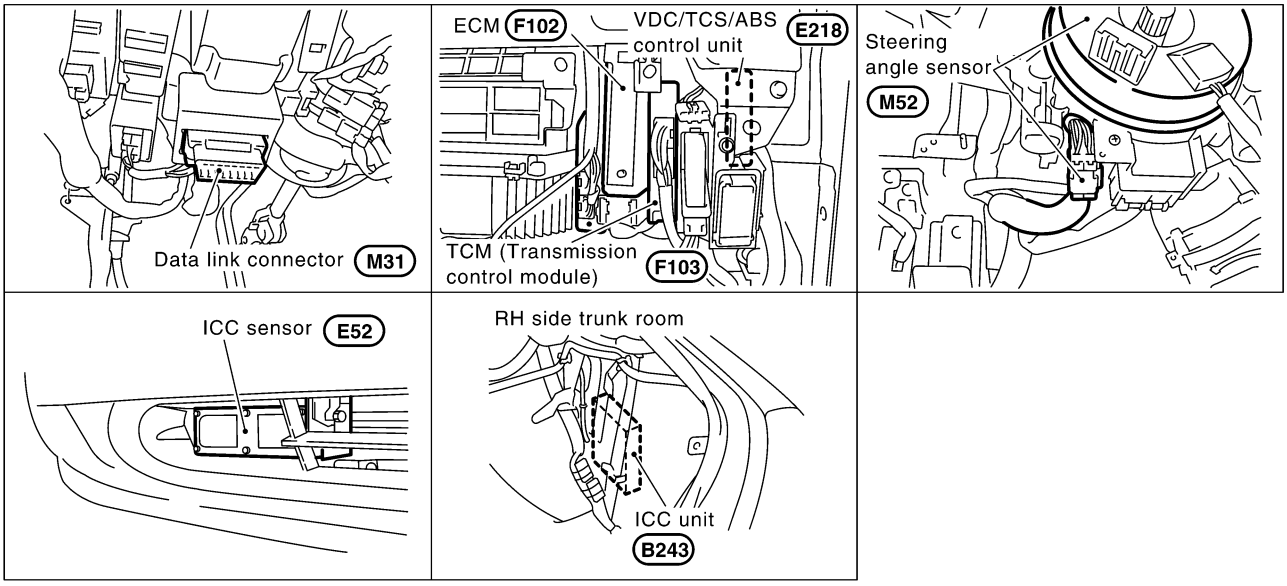
System Description

EKS003LX

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.

Component Parts and Harness Connector Location

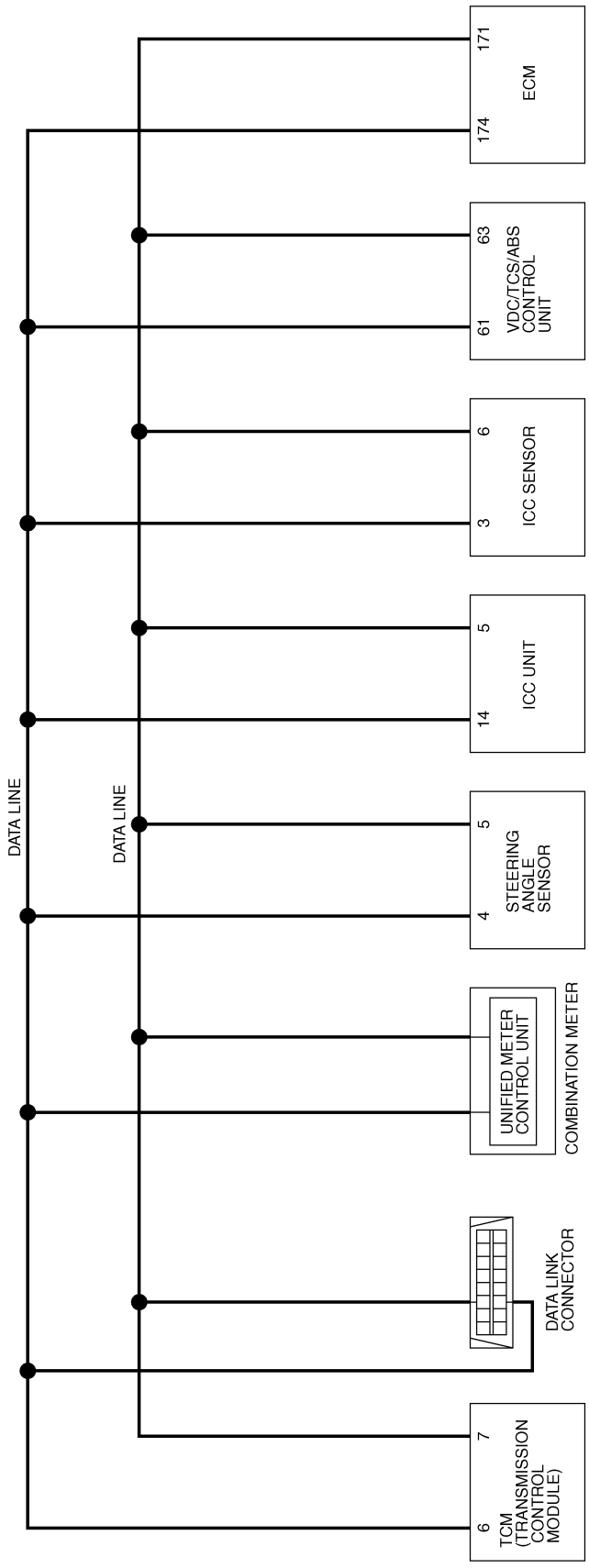
EKS003LY



SKIA3778E

Schematic

EKS003SF

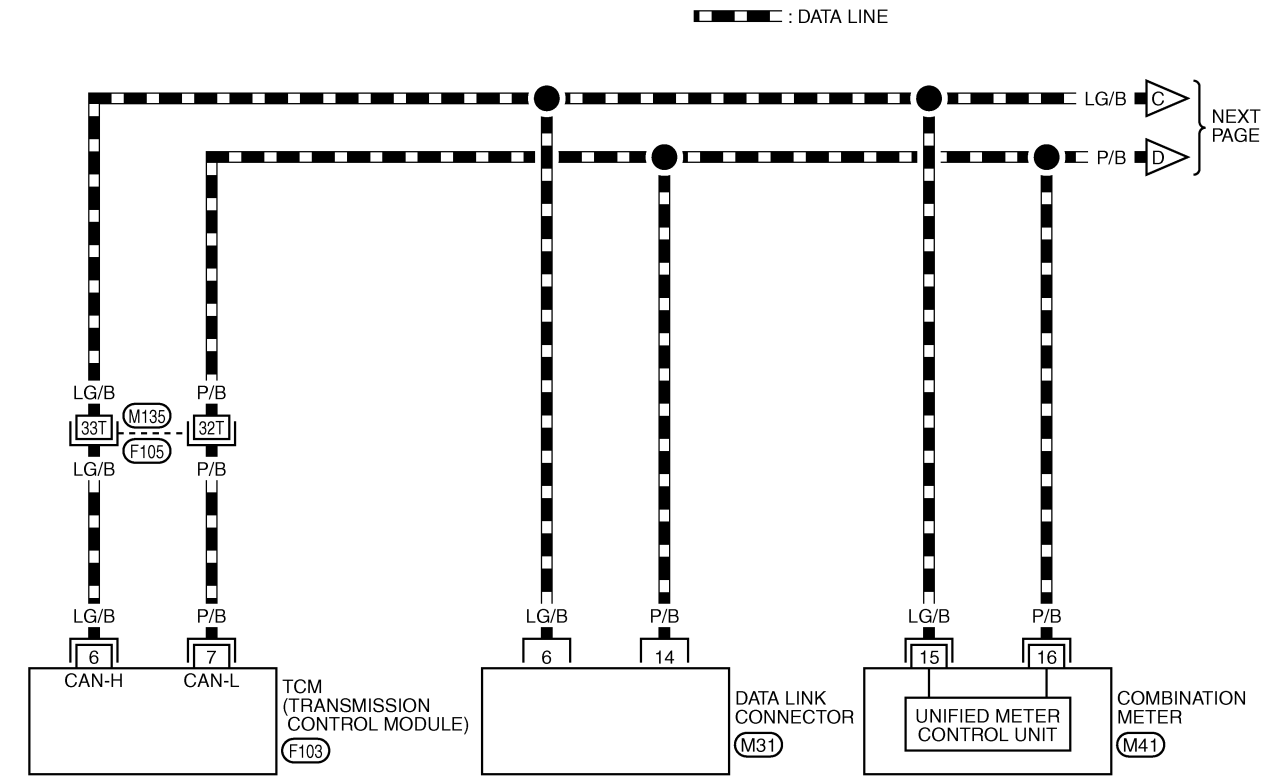


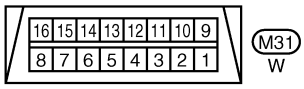
TKWM1044E

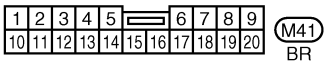
Wiring Diagram — CAN —

EKS003LZ

LAN-CAN-03







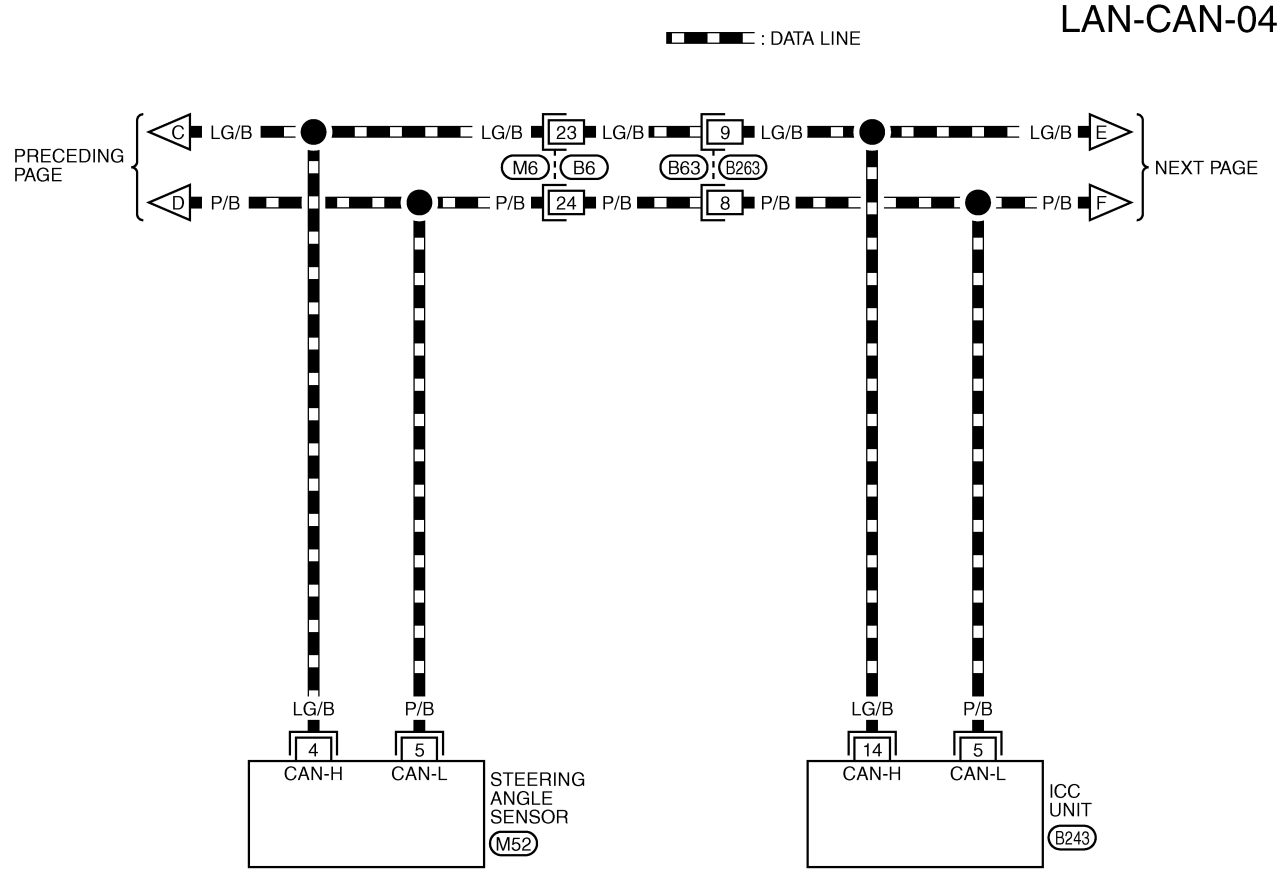
REFER TO THE FOLLOWING.

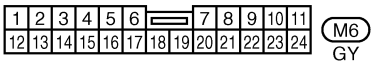
F105 -SUPER MULTIPLE JUNCTION (SMJ)

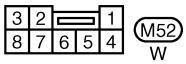
F103 -ELECTRICAL UNITS

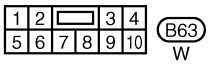
TKWM1045E

LAN-CAN-04



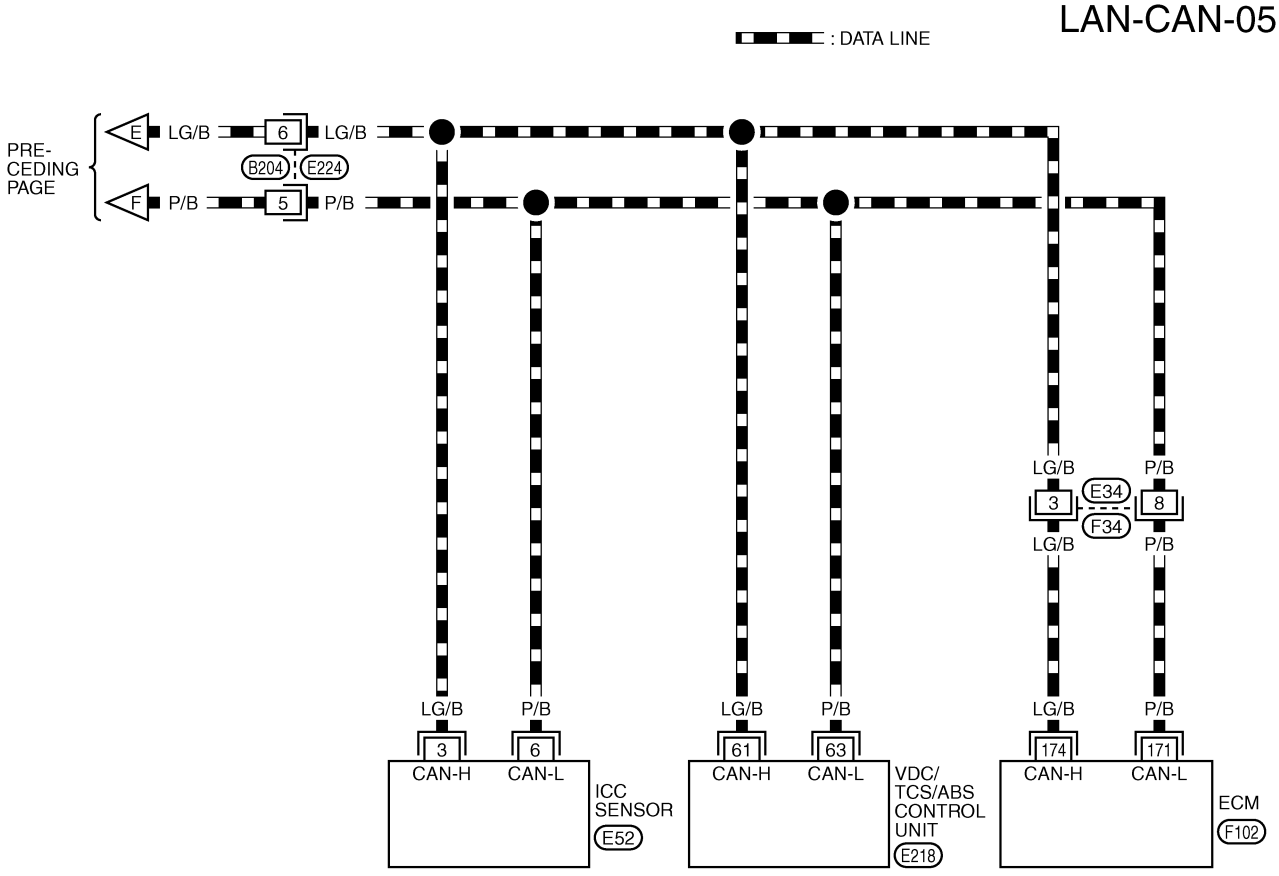


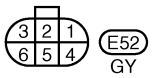


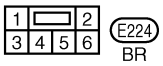


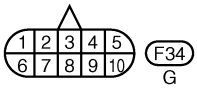
REFER TO THE FOLLOWING.
B243 -ELECTRICAL UNITS

TKWM0367E









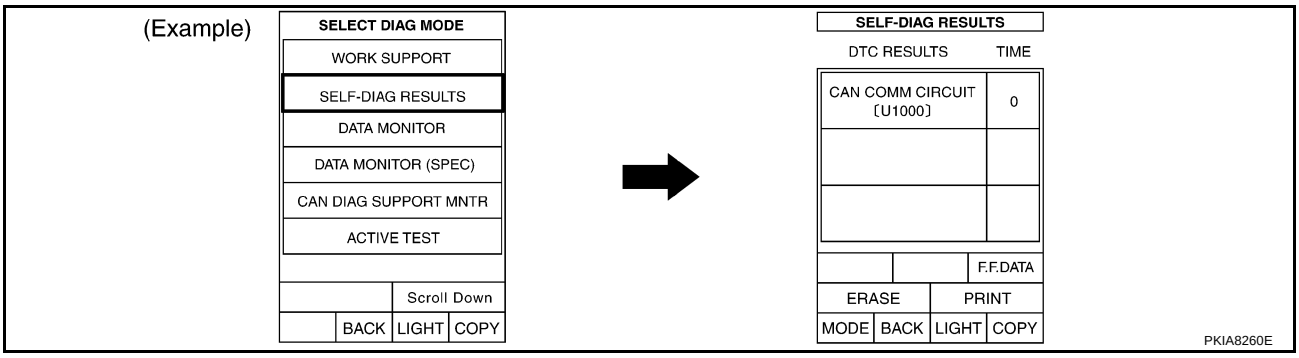
REFER TO THE FOLLOWING.
E218 , F102 -ELECTRICAL UNITS

TKWM0260E

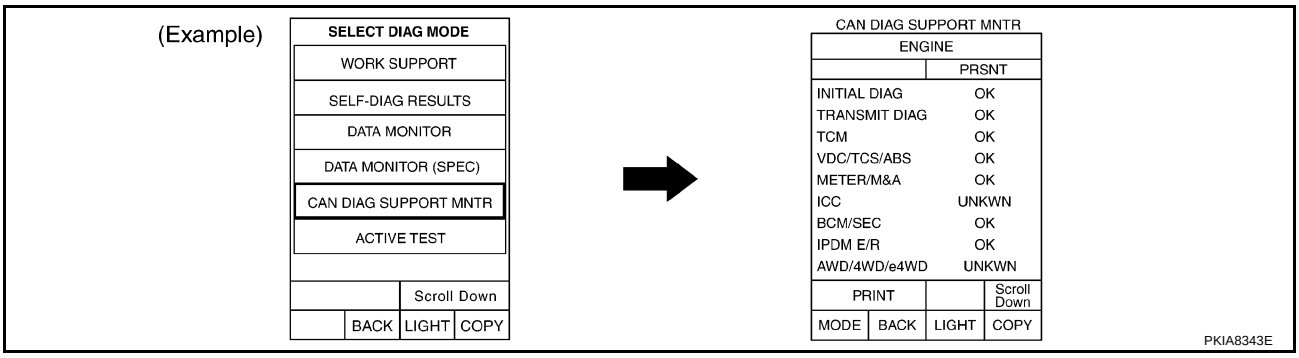
Work Flow

EKS003M0

1. Print all the data of “SELF-DIAG RESULTS” for “ENGINE”, “VDC”, “ICC”, and “A/T” displayed on CONSULT-II.



2. Print all the data of “CAN DIAG SUPPORT MNTR” for “ENGINE”, “VDC”, “ICC”, and “A/T” displayed on CONSULT-II.



3. Attach the printed sheet of “SELF-DIAG RESULTS” and “CAN DIAG SUPPORT MNTR” onto the check sheet. Refer to LAN-48, "CHECK SHEET" .
4. Based on the data monitor results, put marks “v” onto the items with “NG” or “UNKWN” in the check sheet table. Refer to LAN-48, "CHECK SHEET" .

   NOTE:
   If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” as “CAN DIAG SUPPORT MNTR” for the diagnosed control unit, replace the control unit.
5. According to the check sheet results (example), start inspection. Refer to LAN-49, "CHECK SHEET RESULTS (EXAMPLE)" .

CHECK SHEET

NOTE:

If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” as “CAN DIAG SUPPORT MNTR” for the diagnosed control unit, replace the control unit.

Check sheet table

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	—	—	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—

Symptoms :

Attach copy of ENGINE SELF-DIAG RESULTS

Attach copy of VDC SELF-DIAG RESULTS

Attach copy of ICC SELF-DIAG RESULTS

Attach copy of A/T SELF-DIAG RESULTS

Attach copy of ENGINE CAN DIAG SUPPORT MNTR

Attach copy of VDC CAN DIAG SUPPORT MNTR

Attach copy of ICC CAN DIAG SUPPORT MNTR

Attach copy of A/T CAN DIAG SUPPORT MNTR

PKIA8663E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

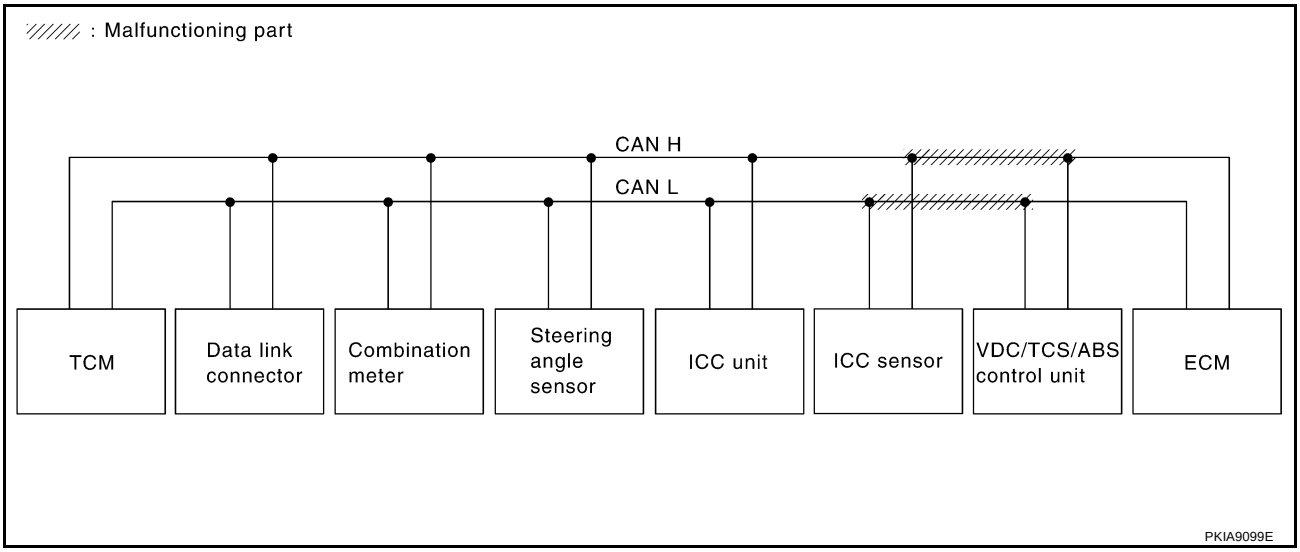
If “NG” is displayed on “INITIAL DIAG (Initial diagnosis)” as “CAN DIAG SUPPORT MNTR” for the diagnosed control unit, replace the control unit.

Case 1

Check harness between VDC/TCS/ABS control unit and ICC sensor. Refer toLAN-59, "Circuit Check Between VDC/TCS/ABS Control Unit and ICC Sensor" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN	–	–	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
ICC	NG	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN ✓	UNKWN ✓	–	–	–	UNKWN	–

PKIA8664E

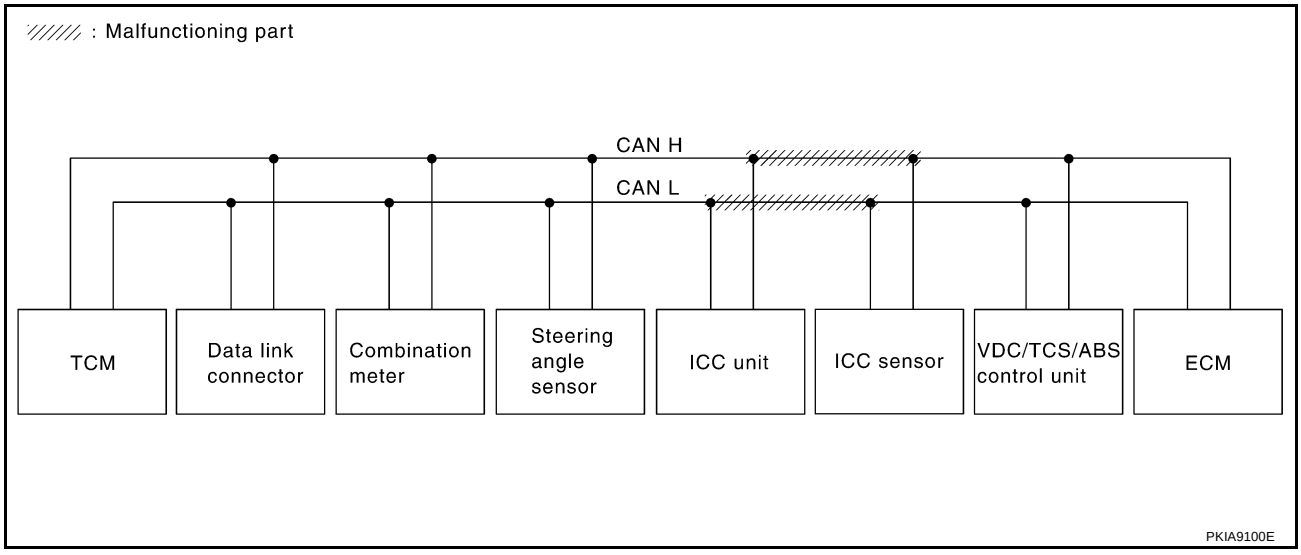


Case 2

Check harness between ICC sensor and ICC unit. Refer toLAN-60, "Circuit Check Between ICC sensor and ICC Unit" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8665E

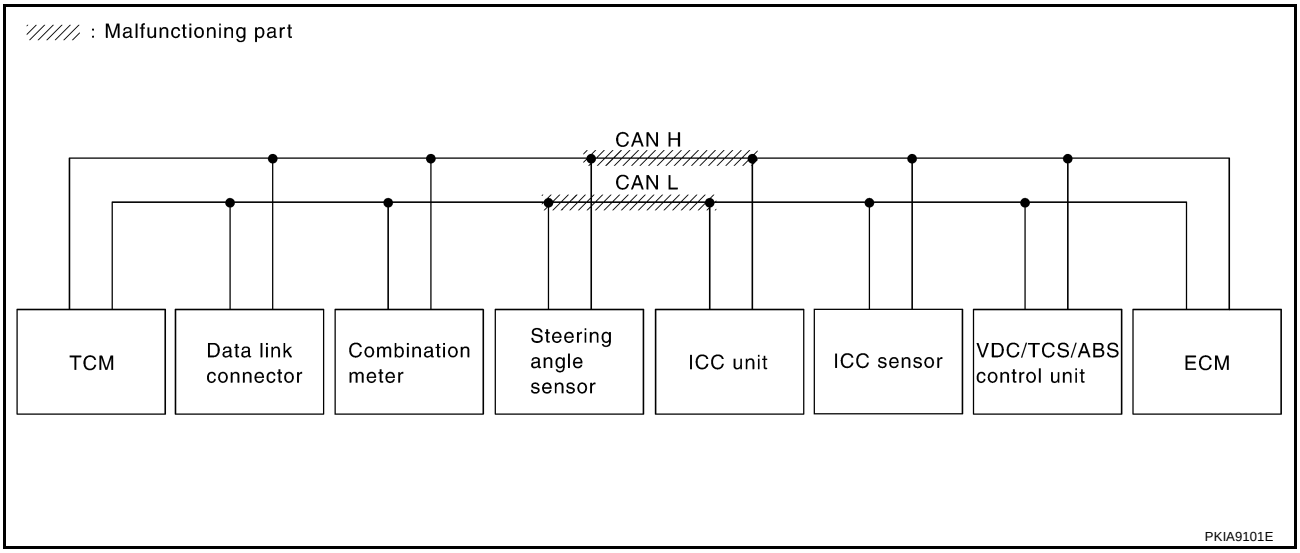


Case 3

Check harness between ICC unit and steering angle sensor. Refer toLAN-61, "Circuit Check Between ICC Unit and Steering Angle Sensor" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN ✓
A/T	NG	UNKWN	UNKWN ✓	UNKWN ✓	–	–	–	UNKWN	–

PKIA8666E

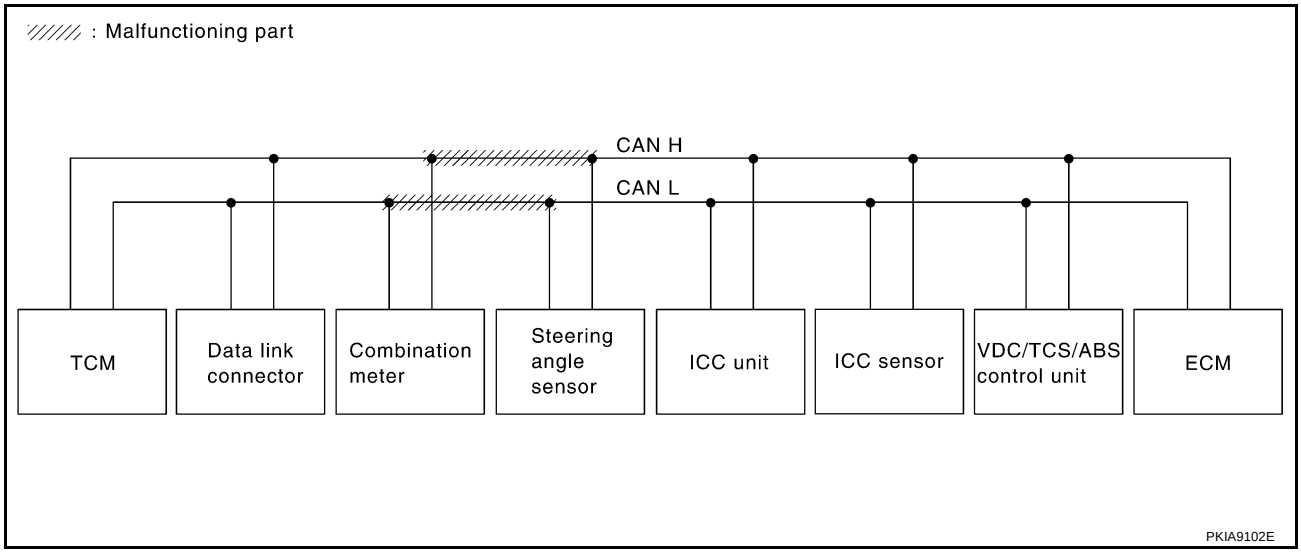


Case 4

Check harness between steering angle sensor and combination meter. Refer to LAN-62, "Circuit Check Between Steering Angle Sensor and Combination Meter" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN ✓	UNKWN ✓
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN ✓
A/T	NG	UNKWN	UNKWN ✓	UNKWN ✓	–	–	–	UNKWN	–

PKIA8667E

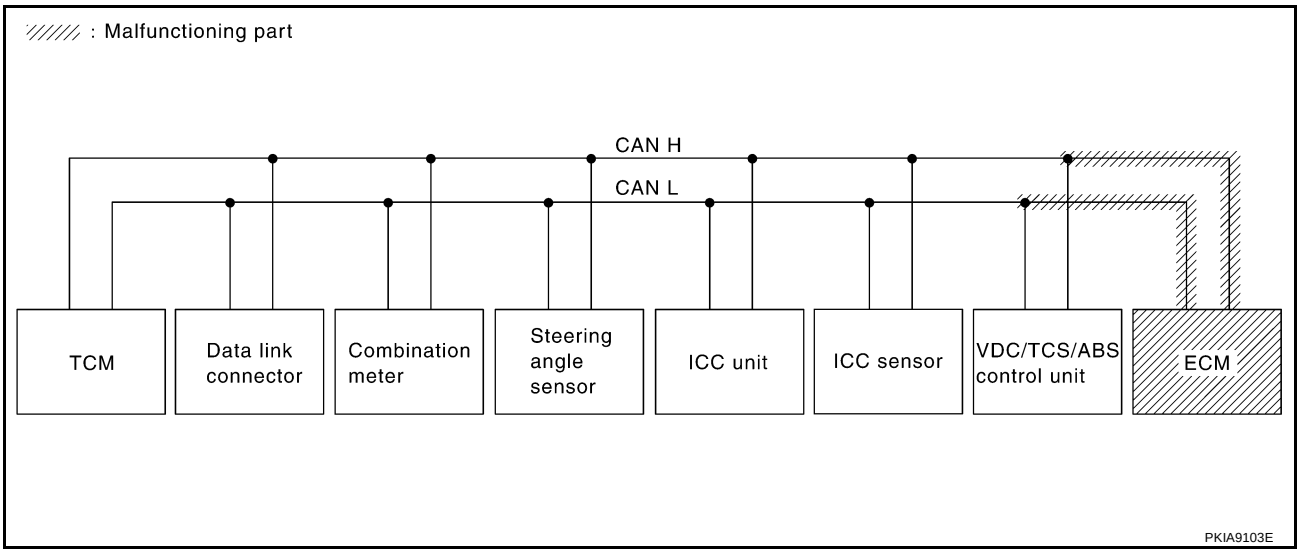


Case 5

Check ECM circuit. Refer to LAN-62, "ECM Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR							
	Initial diagnosis	Transmit diagnosis	Receive diagnosis					
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN ✓	–	UNKWN ✓	–	–	–	UNKWN ✓	UNKWN ✓
VDC	NG	UNKWN	UNKWN ✓	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN ✓	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN ✓	UNKWN	–	–	–	UNKWN	–

PKIA8668E



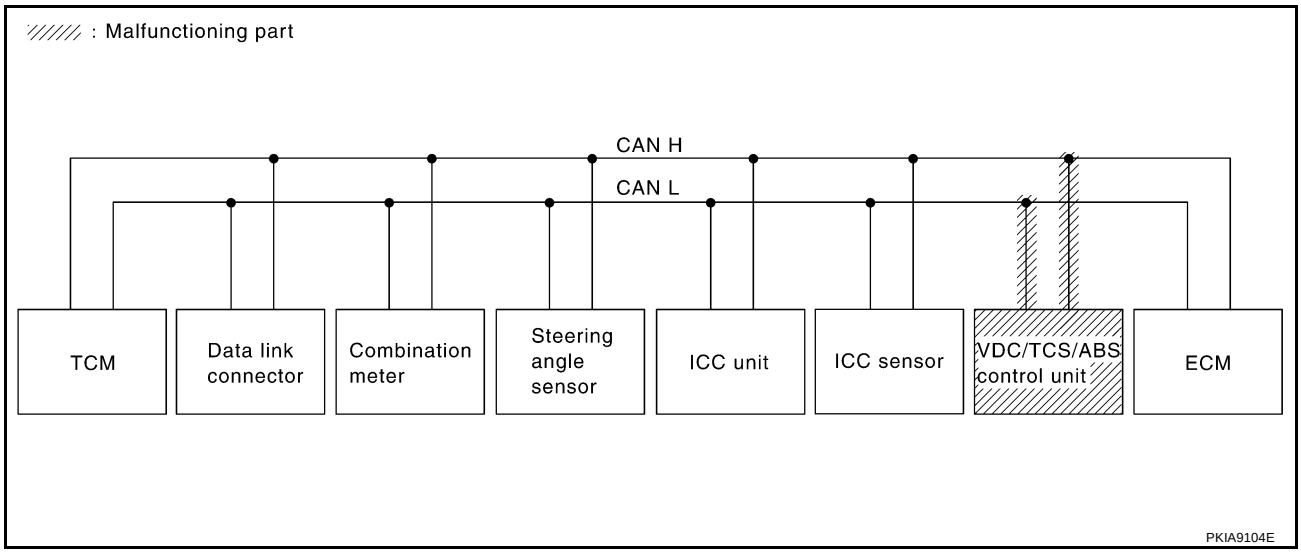
PKIA9103E

Case 6

Check VDC/TCS/ABS control unit circuit. Refer to LAN-63, "VDC/TCS/ABS Control Unit Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN ✓	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN ✓	UNKWN ✓	–	–	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
ICC	NG	UNKWN	UNKWN	UNKWN ✓	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN ✓	–	–	–	UNKWN	–

PKIA8669E

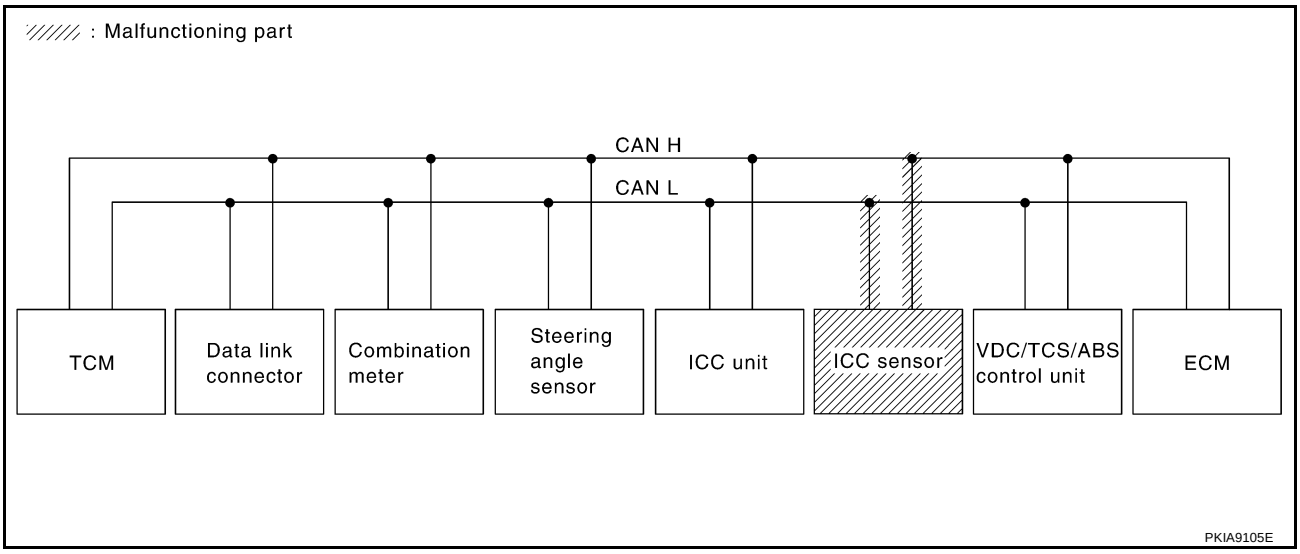


Case 7

Check ICC sensor circuit. Refer to LAN-63, "ICC Sensor Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8670E



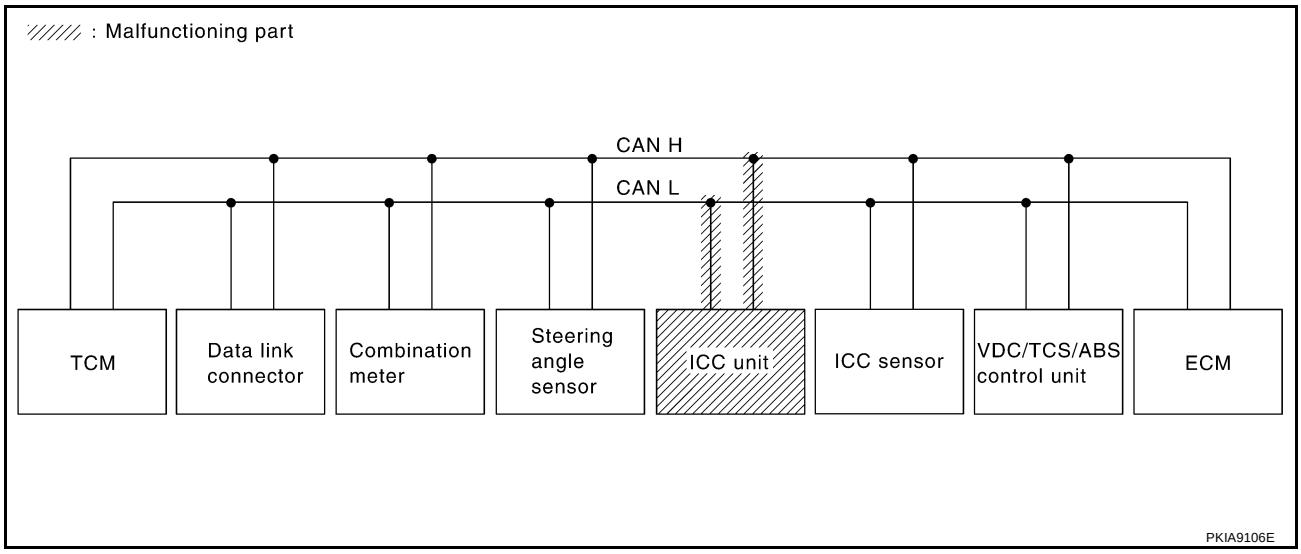
PKIA9105E

Case 8

Check ICC unit circuit. Refer to LAN-64, "ICC Unit Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN ✓	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	–	–	–	UNKWN ✓
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8671E

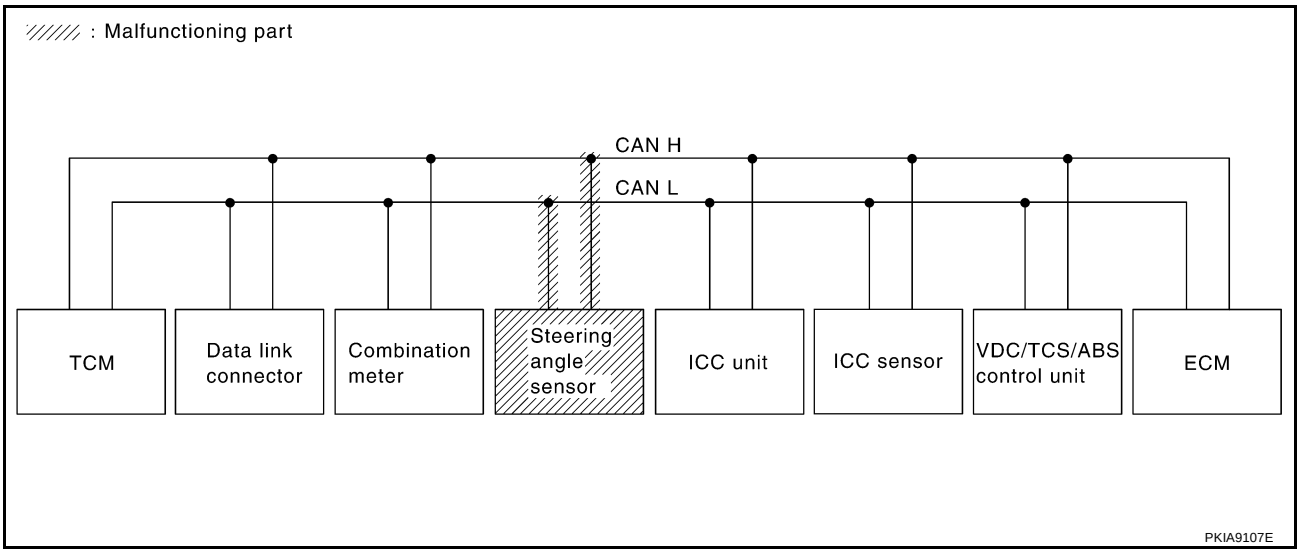


Case 9

Check steering angle sensor circuit. Refer to LAN-64, "Steering Angle Sensor Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8672E

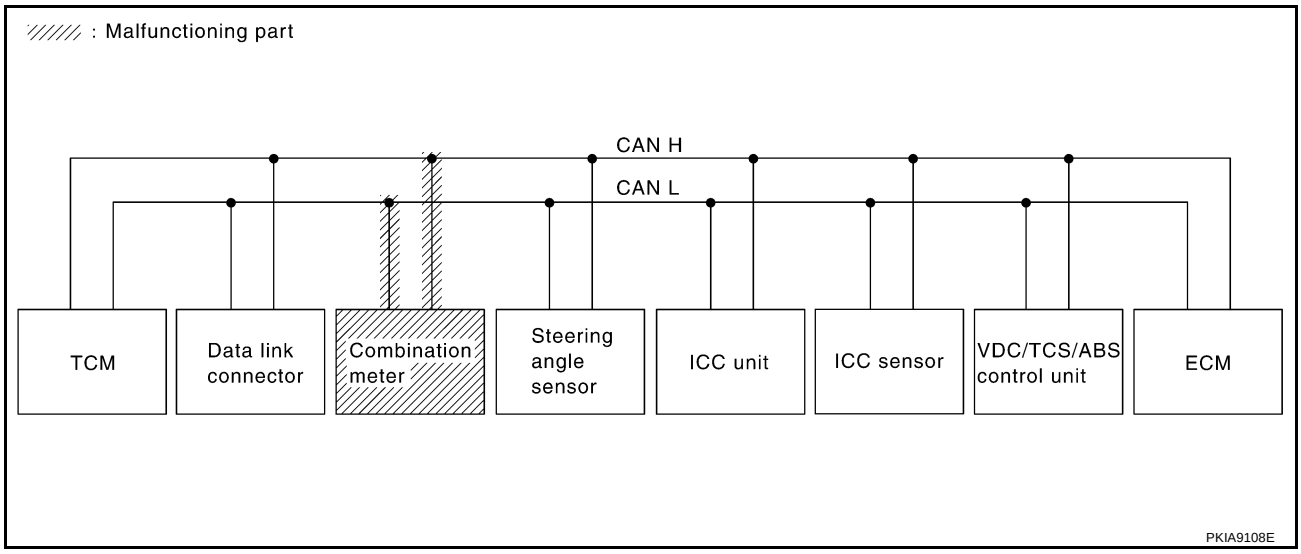


Case 10

Check combination meter circuit. Refer to LAN-65, "Combination Meter Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8673E



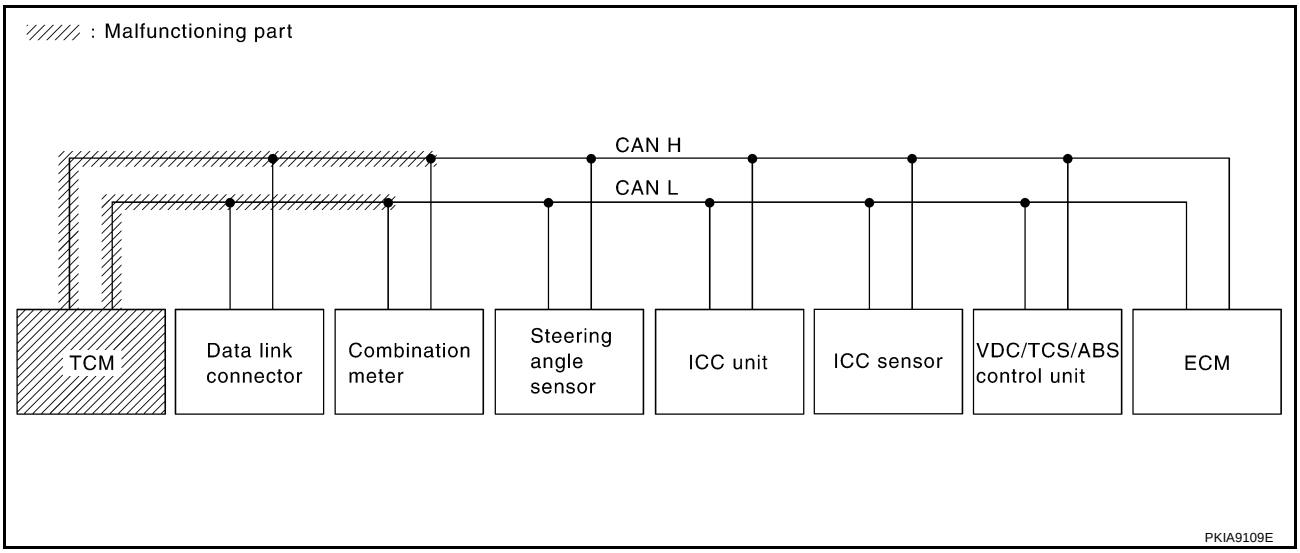
PKIA9108E

Case 11

Check TCM circuit. Refer to LAN-65, "TCM Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8674E



PKIA9109E

Case 12

Check CAN communication circuit. Refer to LAN-66, "CAN Communication Circuit Check" .

SELECT SYSTEM screen	CAN DIAG SUPPORT MNTR								
	Initial diagnosis	Transmit diagnosis	Receive diagnosis						
			ECM	VDC/TCS /ABS	ICC SENSOR	ICC	STRG	METER /M&A	TCM
ENGINE	NG	UNKWN	–	UNKWN	–	–	–	UNKWN	UNKWN
VDC	NG	UNKWN	UNKWN	–	–	UNKWN	UNKWN	UNKWN	UNKWN
ICC	NG	UNKWN	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN
A/T	NG	UNKWN	UNKWN	UNKWN	–	–	–	UNKWN	–

PKIA8675E

Circuit Check Between VDC/TCS/ABS Control Unit and ICC Sensor

EKS003N8

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection. (control unit side, sensor side and harness side)

– VDC/TCS/ABS control unit

– ICC sensor

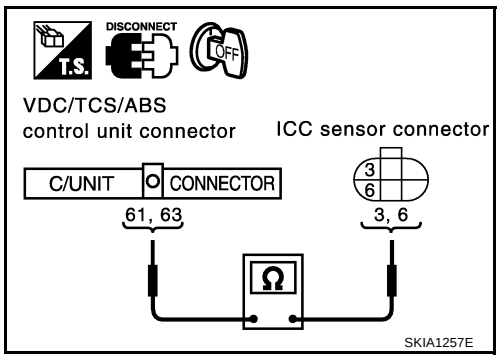
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector, VDC/TCS/ABS control unit connector and ICC sensor connector.
2. Check continuity between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B), 63 (P/B) and ICC sensor harness connector E52 terminals 3 (LG/B), 6 (P/B).

61(LG/B) – 3(LG/B) : Continuity should exist.
63(P/B) – 6(P/B) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-47, "Work Flow" .
NG >> Repair harness.

Circuit Check Between ICC sensor and ICC Unit

EKS003N9

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(sensor side, unit side and harness side)

- ICC sensor
- ICC unit
- Between ICC sensor and ICC unit

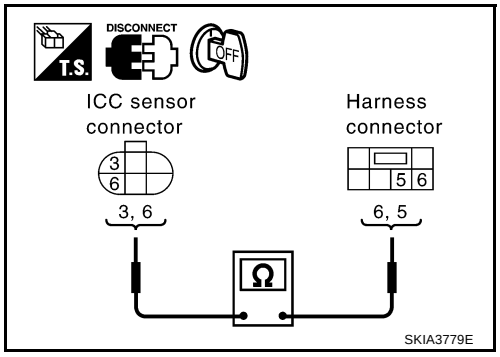
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC sensor connector and harness connector E224.
2. Check continuity between ICC sensor harness connector E52 terminals 3(LG/B), 6 (P/B) and harness connector E224 terminals 6 (LG/B), 5 (P/B).

3 (LG/B) – 6 (LG/B) : Continuity should exist.
6 (P/B) – 5 (P/B) : Continuity should exist.



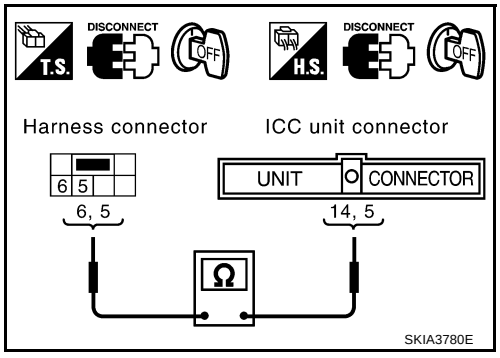
OK or NG

OK >> GO TO 3.
NG >> Repair harness.

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC unit connector.
2. Check continuity between harness connector B204 terminals 6 (LG/B), 5 (P/B) and ICC unit connector B243 terminals 14 (LG/B), 5 (P/B).

6 (LG/B) – 14 (LG/B) : Continuity should exist.
5 (P/B) – 5 (P/B) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-47, "Work Flow" .
NG >> Repair harness.

Circuit Check Between ICC Unit and Steering Angle Sensor

EKS003M1

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(unit side, sensor side and harness side)

- ICC unit
- Steering angle sensor
- Between ICC unit and steering angle sensor

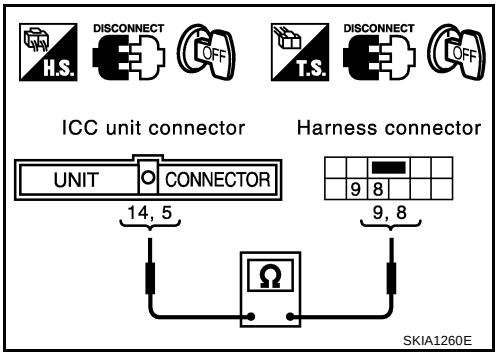
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC unit connector and harness connector B263.
2. Check continuity between ICC unit harness connector B243 terminals 14 (LG/B), 5 (P/B) and harness connector B263 terminals 9 (LG/B), 8 (P/B).

14 (LG/B) – 9 (LG/B) : Continuity should exist.
5 (P/B) – 8 (P/B) : Continuity should exist.



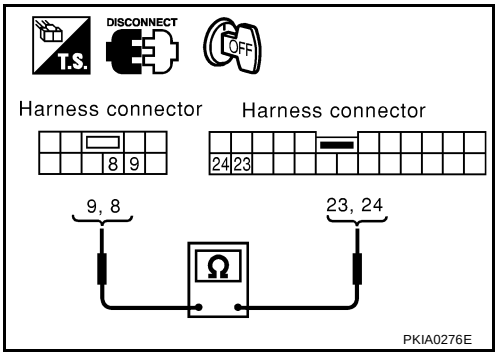
OK or NG

OK >> GO TO 3.
NG >> Repair harness.

3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B6.
2. Check continuity between harness connector B63 terminals 9(LG/B), 8 (P/B) and harness connector B6 terminals 23(LG/B), 24 (P/B).

9 (LG/B) – 23 (LG/B) : Continuity should exist.
8 (P/B) – 24 (P/B) : Continuity should exist.



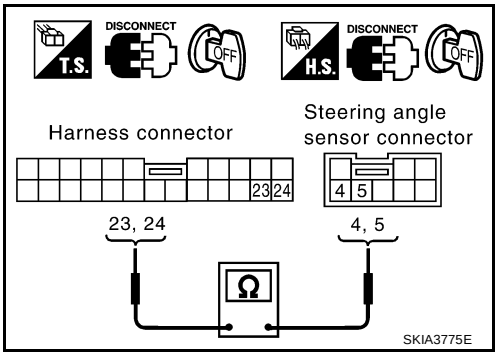
OK or NG

OK >> GO TO 4.
NG >> Repair harness.

4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check continuity between harness connector M6 terminals 23(LG/B), 24 (P/B) and steering angle sensor harness connector M52 terminals 4 (LG/B), 5 (P/B).

23 (LG/B) – 4 (LG/B) : Continuity should exist.
24 (P/B) – 5 (P/B) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-47, "Work Flow" .
NG >> Repair harness.

Circuit Check Between Steering Angle Sensor and Combination Meter

EKS003M2

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection. (sensor side, meter side and harness side)

– Steering angle sensor
– Combination meter

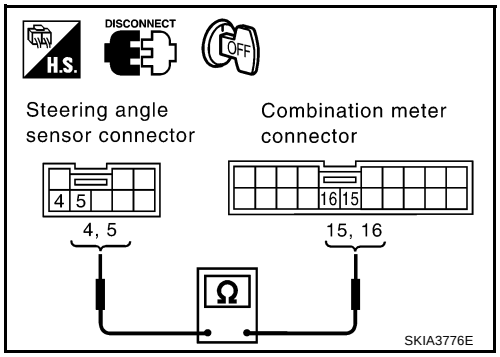
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector, steering angle sensor connector and combination meter connector.
2. Check continuity between steering angle sensor harness connector M52 terminals 4 (LG/B), 5 (P/B) and combination meter harness connector M41 terminals 15(LG/B), 16 (P/B).

4 (LG/B) – 15 (LG/B) : Continuity should exist.
5 (P/B) – 16 (P/B) : Continuity should exist.



OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-47, "Work Flow" .
NG >> Repair harness.

ECM Circuit Check

EKS003M3

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection. (control module side and harness side)

– ECM
– Harness connector F34
– Harness connector E34

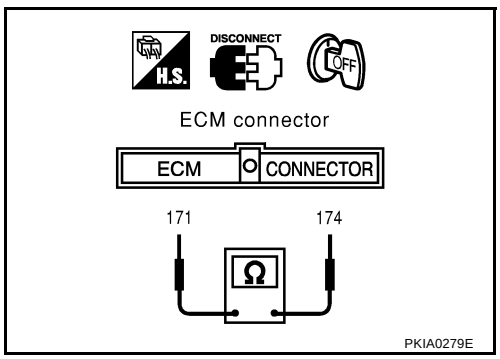
OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector F102 terminals 174 (LG/B) and 171 (P/B).

174 (LG/B) – 171 (P/B) : Approx. 108 – 132Ω



OK or NG

OK >> Replace ECM.
NG >> Repair harness between VDC/TCS/ABS control unit and ECM.

VDC/TCS/ABS Control Unit Circuit Check

EKS003M4

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check the terminals and connector of VDC/TCS/ABS control unit for damage, bend and loose connection. (control unit side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

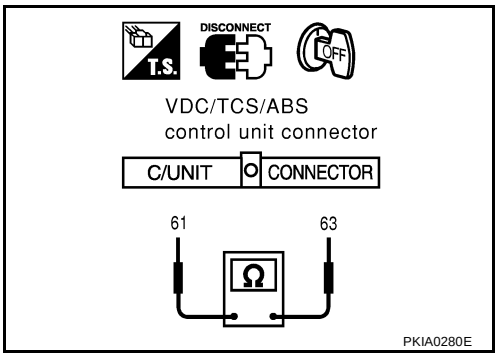
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect VDC/TCS/ABS control unit connector.
2. Check resistance between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B) and 63 (P/B).

61 (LG/B) – 63 (P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace VDC/TCS/ABS control unit.
NG >> Repair harness between ECM and VDC/TCS/ABS control unit.



ICC Sensor Circuit Check

EKS003NB

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check the terminals and connector of ICC sensor for damage, bend and loose connection.(sensor side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

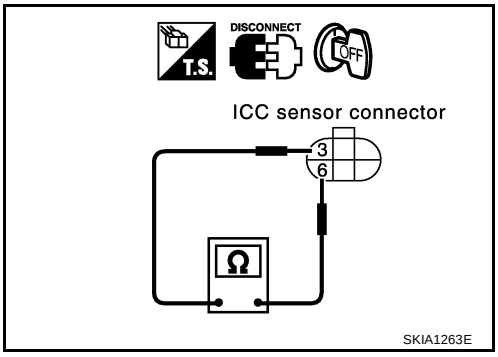
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC sensor connector.
2. Check resistance between ICC sensor harness connector E52 terminals 3 (LG/B) and 6 (P/B).

3 (LG/B) – 6 (P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace ICC sensor.
NG >> Repair harness between VDC/TCS/ABS control unit and ICC sensor.



ICC Unit Circuit Check

EKS003NC

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check the terminals and connector of ICC unit for damage, bend and loose connection. (unit side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

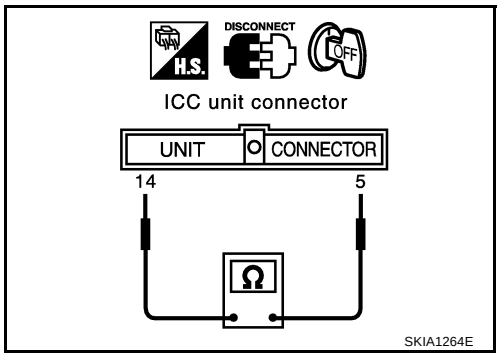
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ICC unit connector.
2. Check resistance between ICC unit harness connector B243 terminals 14 (LG/B) and 5 (P/B).

14 (LG/B) – 5 (P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace ICC unit.
NG >> Repair harness between ICC sensor and ICC unit.



Steering Angle Sensor Circuit Check

EKS003M5

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check the terminals and connector of steering angle sensor for damage, bend and loose connection.(sensor side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

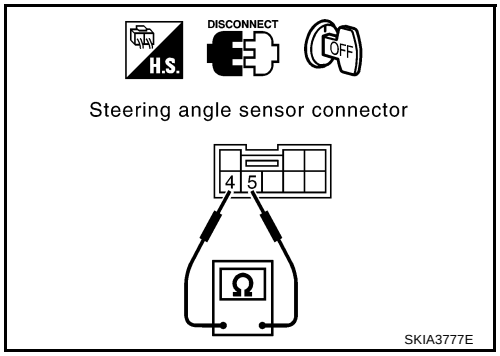
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M52 terminals 4 (LG/B) and 5 (P/B).

4 (LG/B) – 5 (P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace steering angle sensor.
NG >> Repair harness between combination meter and steering angle sensor.



Combination Meter Circuit Check

EKS003M6

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check terminals and connector of combination meter for damage, bend and loose connection.(meter side and harness side)

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

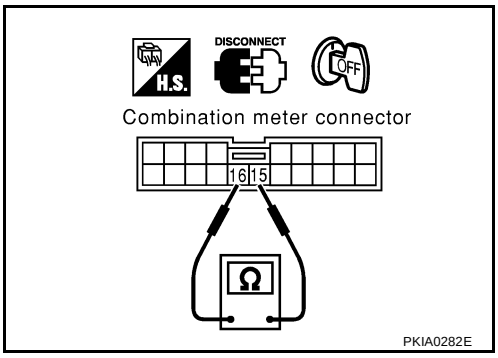
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M41 terminals 15 (LG/B) and 16 (P/B).

15 (LG/B) – 16 (P/B) : Approx. 54 – 66Ω

OK or NG

OK >> Replace combination meter.
NG >> Repair harness between steering angle sensor and combination meter.



TCM Circuit Check

EKS003M7

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(control module side and harness side)

- TCM
- Harness connector F105
- Harness connector M135

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

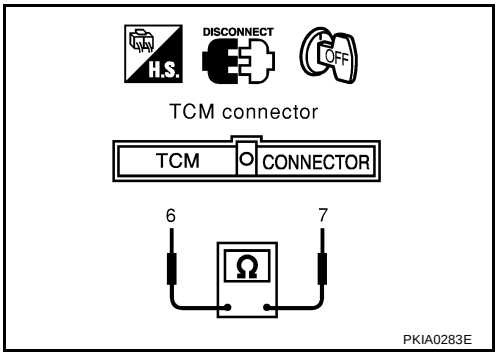
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect TCM connector.
2. Check resistance between TCM harness connector F103 terminals 6 (LG/B) and 7(P/B).

6 (LG/B) – 7 (P/B) : Approx. 108 – 132Ω

OK or NG

OK >> Replace TCM.
NG >> Repair harness between combination meter and TCM.



CAN Communication Circuit Check

EKS003M8

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Check following terminals and connector for damage, bend and loose connection.(control module side, control unit side, unit side, meter side, sensor side and harness side)

- TCM
- Combination meter
- Steering angle sensor
- ICC unit
- ICC sensor
- VDC/TCS/ABS control unit
- ECM
- Between TCM and ECM

OK or NG

OK >> GO TO 2.
NG >> Repair terminal or connector.

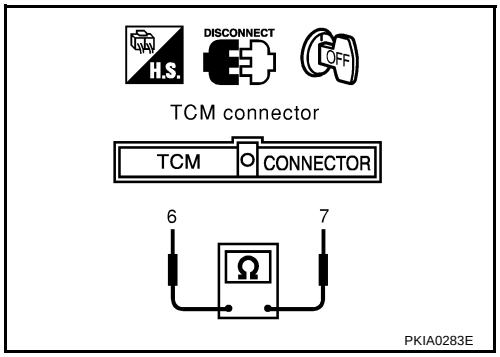
2. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect TCM connector and harness connector F105.
2. Check continuity between TCM harness connector F103 terminals 6 (LG/B) and 7(P/B).

6 (LG/B) – 7 (P/B) : Continuity should not exist.

OK or NG

OK >> GO TO 3.
NG >> Repair harness between TCM and harness connector F105.



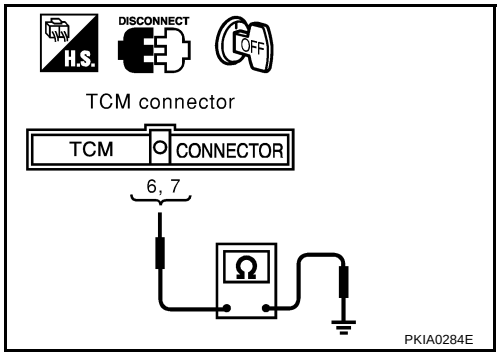
3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 6 (LG/B), 7 (P/B) and ground.

6 (LG/B) – ground : Continuity should not exist.
7 (P/B) – ground : Continuity should not exist.

OK or NG

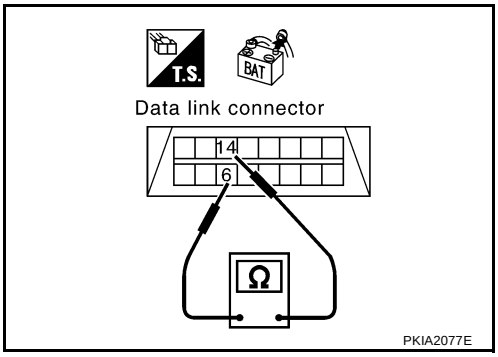
OK >> GO TO 4.
NG >> Repair harness between TCM and harness connector F105.



4. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect combination meter connector, steering angle sensor connector and harness connector M6.
2. Check continuity between Data Link Connector M31 terminals 6 (LG/B) and 14 (P/B).

6 (LG/B) – 14 (P/B) : Continuity should not exist.



OK or NG

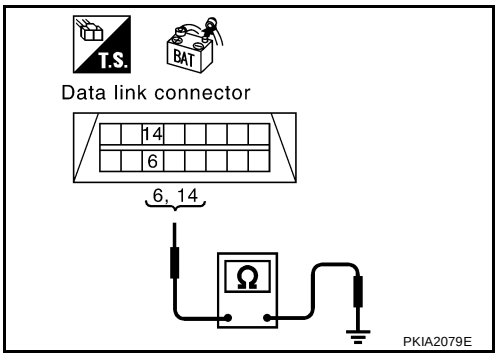
OK >> GO TO 5.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector M6 and harness connector M135
- Harness between harness connector M6 and Data Link Connector
- Harness between harness connector M6 and combination meter
- Harness between harness connector M6 and steering angle sensor

5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between Data Link Connector M31 terminals 6 (LG/B), 14 (P/B) and ground.

6 (LG/B) – ground : Continuity should not exist.
14 (P/B) – ground : Continuity should not exist.



OK or NG

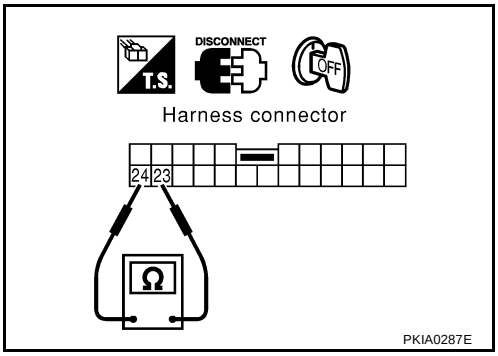
OK >> GO TO 6.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector M6 and harness connector M135
- Harness between harness connector M6 and Data Link Connector
- Harness between harness connector M6 and combination meter
- Harness between harness connector M6 and steering angle sensor

6. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B63.
2. Check continuity between harness connector B6 terminals 23 (LG/B) and 24 (P/B).

23 (LG/B) – 24 (P/B) : Continuity should not exist.



OK or NG

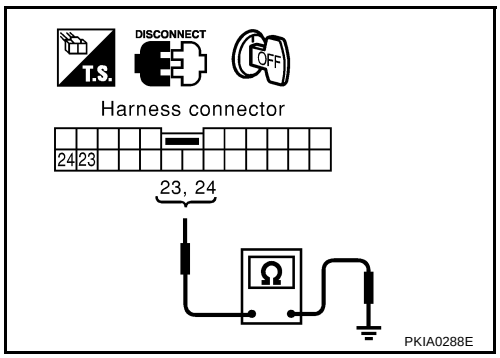
OK >> GO TO 7.
NG >> Repair harness between harness connector B6 and harness connector B63.

7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B6 terminals 23 (LG/B), 24 (P/B) and ground.

23 (LG/B) – ground : Continuity should not exist.

24 (P/B) – ground : Continuity should not exist.



OK or NG

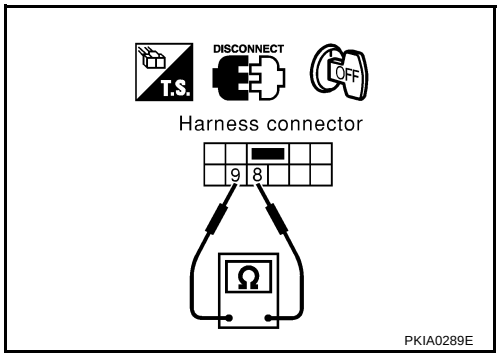
OK >> GO TO 8.

NG >> Repair harness between harness connector B6 and harness connector B63.

8. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect harness connector B204 and ICC unit connector.
2. Check continuity between harness connector B263 terminals 9 (LG/B) and 8 (P/B).

9 (LG/B) – 8 (P/B) : Continuity should not exist.



OK or NG

OK >> GO TO 9.

NG >> Check the following harnesses. If any harness is damaged, repair the harness.

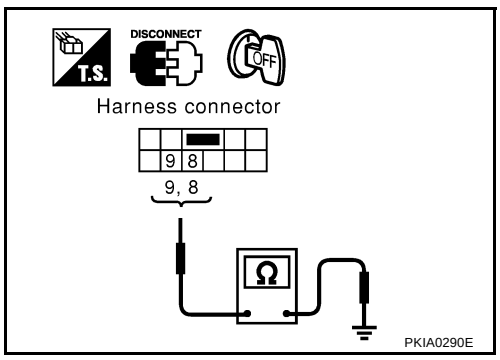
- Harness between harness connector B263 and harness connector B204
- Harness between harness connector B263 and ICC unit

9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B263 terminals 9 (LG/B), 8 (P/B) and ground.

9 (LG/B) – ground : Continuity should not exist.

8 (P/B) – ground : Continuity should not exist.



OK or NG

OK >> GO TO 10.

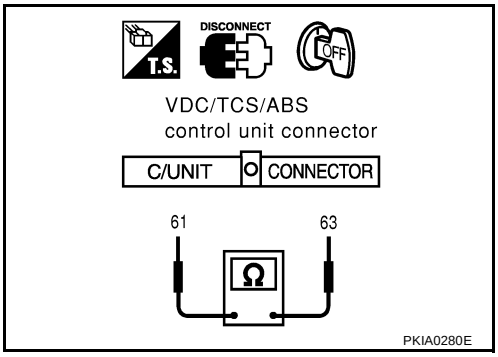
NG >> Check the following harnesses. If any harness is damaged, repair the harness.

- Harness between harness connector B263 and harness connector B204
- Harness between harness connector B263 and ICC unit

10. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ICC sensor connector, VDC/TCS/ABS control unit connector and harness connector E34.
2. Check continuity between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B) and 63 (P/B).

61 (LG/B) – 63 (P/B) : Continuity should not exist.



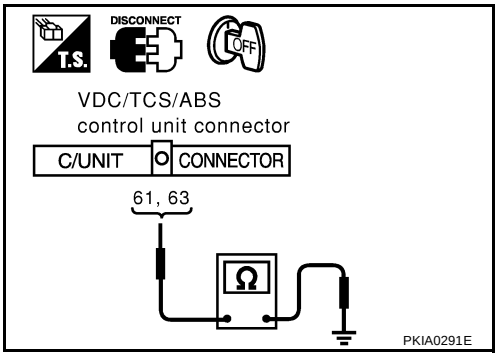
OK or NG

OK >> GO TO 11.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between harness connector E34 and harness connector E224
- Harness between harness connector E34 and VDC/TCS/ABS control unit
- Harness between harness connector E34 and ICC sensor

11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between VDC/TCS/ABS control unit harness connector E218 terminals 61 (LG/B), 63 (P/B) and ground.

61 (LG/B) – ground : Continuity should not exist.
63 (P/B) – ground : Continuity should not exist.



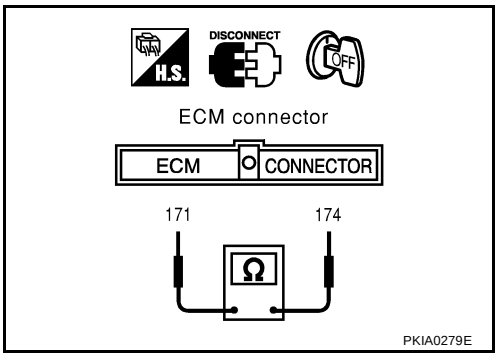
OK or NG

OK >> GO TO 12.
NG >> Check the following harnesses. If any harness is damaged, repair the harness.
- Harness between harness connector E34 and harness connector E224
- Harness between harness connector E34 and VDC/TCS/ABS control unit
- Harness between harness connector E34 and ICC sensor

12. CHECK HARNESS FOR SHORT CIRCUIT

1. Disconnect ECM connector.
2. Check continuity between ECM harness connector F102 terminals 174 (LG/B) and 171(P/B).

174(LG/B) – 171(P/B) : Continuity should not exist.



OK or NG

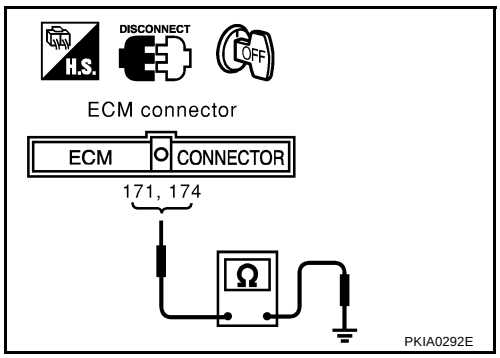
OK >> GO TO 13.
NG >> Repair harness between ECM and harness connector F34.

13. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between ECM harness connector F102 terminals 174 (LG/B), 171 (P/B) and ground.

174(LG/B) – ground : Continuity should not exist.

171(P/B) – ground : Continuity should not exist.



OK or NG

OK >> GO TO 14.

NG >> Repair harness between ECM and harness connector F34.

14. ECM/TCM INTERNAL CIRCUIT INSPECTION

Check components inspection. Refer to LAN-70, "ECM/TCM INTERNAL CIRCUIT INSPECTION"

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-47, "Work Flow" .

NG >> Replace ECM and/or TCM.

Component Inspection

EKS003M9

ECM/TCM INTERNAL CIRCUIT INSPECTION

- Remove ECM and TCM from vehicle.
- Check resistance between ECM terminals 174 and 171.
- Check resistance between TCM terminals 6 and 7.

Unit	Terminal	Resistance value (Ω)
ECM	174 – 171	Approx. 108 - 132
TCM	6 – 7