

SECTION **LAN**
LAN SYSTEM

A
B
C

CONTENTS

D
E

CAN

PRECAUTIONS	5	IPDM E/R Circuit Check	49	F
Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	5	CAN Communication Circuit Check	50	
Precautions When Using CONSULT-II	5	IPDM E/R Ignition Relay Circuit Check	50	
CHECK POINTS FOR USING CONSULT-II	5	Component Inspection	51	G
Precautions For Trouble Diagnosis	5	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	51	
CAN SYSTEM	5	CAN SYSTEM (TYPE 2)	52	H
Precautions For Harness Repair	6	System Description	52	
CAN SYSTEM	6	Component Parts and Harness Connector Location	52	
CAN COMMUNICATION	7	Schematic	53	
System Description	7	Wiring Diagram - CAN -	54	I
CAN Communication Unit	7	Work Flow	57	
TYPE 1	9	CHECK SHEET	58	
TYPE 2/TYPE 3/TYPE 4	11	CHECK SHEET RESULTS (EXAMPLE)	60	J
TYPE 5/TYPE 6	14	Circuit Check Between TCM and Data Link Connector	71	
TYPE 7/TYPE 8/TYPE 9/TYPE 10/TYPE 11/TYPE 12	17	Circuit Check Between Data Link Connector and IPDM E/R	72	
TYPE 13	21	ECM Circuit Check	73	
CAN SYSTEM (TYPE 1)	24	TCM Circuit Check	74	
System Description	24	Combination Meter Circuit Check	74	L
Component Parts and Harness Connector Location	24	BCM Circuit Check	75	
Schematic	25	Data Link Connector Circuit Check	75	
Wiring Diagram - CAN -	26	Front Air Control Circuit Check	76	M
Work Flow	29	ABS Actuator and Electric Unit (Control Unit) Circuit Check	76	
CHECK SHEET	30	IPDM E/R Circuit Check	77	
CHECK SHEET RESULTS (EXAMPLE)	32	CAN Communication Circuit Check	78	
Circuit Check Between TCM and Data Link Connector	43	IPDM E/R Ignition Relay Circuit Check	78	
Circuit Check Between Data Link Connector and IPDM E/R	44	Component Inspection	79	
ECM Circuit Check	45	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	79	
TCM Circuit Check	46	CAN SYSTEM (TYPE 3)	80	
Combination Meter Circuit Check	46	System Description	80	
BCM Circuit Check	47	Component Parts and Harness Connector Location	80	
Data Link Connector Circuit Check	47	Schematic	81	
Front Air Control Circuit Check	48	Wiring Diagram - CAN -	82	
ABS Actuator and Electric Unit (Control Unit) Circuit Check	48	Work Flow	85	
		CHECK SHEET	86	
		CHECK SHEET RESULTS (EXAMPLE)	88	

LAN

Circuit Check Between TCM and Driver Seat Control Unit	101	Circuit Check Between TCM and Data Link Connector	163
Circuit Check Between Driver Seat Control Unit and Data Link Connector	102	Circuit Check Between Data Link Connector and IPDM E/R	164
Circuit Check Between Data Link Connector and IPDM E/R	103	ECM Circuit Check	165
ECM Circuit Check	104	TCM Circuit Check	166
TCM Circuit Check	104	Combination Meter Circuit Check	166
Driver Seat Control Unit Circuit Check	105	BCM Circuit Check	167
Combination Meter Circuit Check	105	Data Link Connector Circuit Check	167
BCM Circuit Check	106	Steering Angle Sensor Circuit Check	168
Data Link Connector Circuit Check	106	Front Air Control Circuit Check	168
Front Air Control Circuit Check	107	ABS Actuator and Electric Unit (Control Unit) Circuit Check	169
ABS Actuator and Electric Unit (Control Unit) Circuit Check	107	IPDM E/R Circuit Check	169
IPDM E/R Circuit Check	108	CAN Communication Circuit Check	170
CAN Communication Circuit Check	108	IPDM E/R Ignition Relay Circuit Check	171
IPDM E/R Ignition Relay Circuit Check	109	Component Inspection	171
Component Inspection	109	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	171
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	109	CAN SYSTEM (TYPE 6)	172
CAN SYSTEM (TYPE 4)	110	System Description	172
System Description	110	Component Parts and Harness Connector Location	172
Component Parts and Harness Connector Location	110	Schematic	173
Schematic	111	Wiring Diagram - CAN -	174
Wiring Diagram - CAN -	112	Work Flow	177
Work Flow	115	CHECK SHEET	179
CHECK SHEET	117	CHECK SHEET RESULTS (EXAMPLE)	181
CHECK SHEET RESULTS (EXAMPLE)	119	Circuit Check Between TCM and Driver Seat Control Unit	196
Circuit Check Between TCM and Driver Seat Control Unit	133	Circuit Check Between Driver Seat Control Unit and Data Link Connector	197
Circuit Check Between Driver Seat Control Unit and Data Link Connector	134	Circuit Check Between Data Link Connector and IPDM E/R	198
Circuit Check Between Data Link Connector and IPDM E/R	135	ECM Circuit Check	199
ECM Circuit Check	136	TCM Circuit Check	199
TCM Circuit Check	136	Driver Seat Control Unit Circuit Check	200
Driver Seat Control Unit Circuit Check	137	Combination Meter Circuit Check	200
Combination Meter Circuit Check	137	Display Control Unit Circuit Check	201
Display Control Unit Circuit Check	138	BCM Circuit Check	201
BCM Circuit Check	138	Data Link Connector Circuit Check	202
Data Link Connector Circuit Check	139	Steering Angle Sensor Circuit Check	202
Front Air Control Circuit Check	139	Front Air Control Circuit Check	203
ABS Actuator and Electric Unit (Control Unit) Circuit Check	140	ABS Actuator and Electric Unit (Control Unit) Circuit Check	203
IPDM E/R Circuit Check	140	IPDM E/R Circuit Check	204
CAN Communication Circuit Check	141	CAN Communication Circuit Check	204
IPDM E/R Ignition Relay Circuit Check	141	IPDM E/R Ignition Relay Circuit Check	205
Component Inspection	142	Component Inspection	205
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	142	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	205
CAN SYSTEM (TYPE 5)	143	CAN SYSTEM (TYPE 7)	206
System Description	143	System Description	206
Component Parts and Harness Connector Location	143	Component Parts and Harness Connector Location	206
Schematic	144	Schematic	207
Wiring Diagram - CAN -	145	Wiring Diagram - CAN -	208
Work Flow	148	Work Flow	211
CHECK SHEET	149	CHECK SHEET	212
CHECK SHEET RESULTS (EXAMPLE)	151	CHECK SHEET RESULTS (EXAMPLE)	214
		Circuit Check Between TCM and Data Link Con-	

connector	226	Data Link Connector	292	
Circuit Check Between Data Link Connector and IPDM E/R	227	Circuit Check Between Data Link Connector and IPDM E/R	293	A
ECM Circuit Check	228	ECM Circuit Check	294	
TCM Circuit Check	229	TCM Circuit Check	294	B
Combination Meter Circuit Check	229	Driver Seat Control Unit Circuit Check	295	
BCM Circuit Check	230	Combination Meter Circuit Check	295	
Data Link Connector Circuit Check	230	Display Control Unit Circuit Check	296	C
Front Air Control Circuit Check	231	BCM Circuit Check	296	
Transfer Control Unit Circuit Check	231	Data Link Connector Circuit Check	297	
ABS Actuator and Electric Unit (Control Unit) Circuit Check	232	Front Air Control Circuit Check	297	D
IPDM E/R Circuit Check	232	Transfer Control Unit Circuit Check	298	
CAN Communication Circuit Check	233	ABS Actuator and Electric Unit (Control Unit) Circuit Check	298	
IPDM E/R Ignition Relay Circuit Check	234	IPDM E/R Circuit Check	299	E
Component Inspection	234	CAN Communication Circuit Check	299	
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	234	IPDM E/R Ignition Relay Circuit Check	300	
CAN SYSTEM (TYPE 8)	235	Component Inspection	300	F
System Description	235	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	300	
Component Parts and Harness Connector Location	235	CAN SYSTEM (TYPE 10)	301	G
Schematic	236	System Description	301	
Wiring Diagram - CAN -	237	Component Parts and Harness Connector Location	301	
Work Flow	240	Schematic	302	
CHECK SHEET	241	Wiring Diagram - CAN -	303	H
CHECK SHEET RESULTS (EXAMPLE)	243	Work Flow	306	
Circuit Check Between TCM and Driver Seat Control Unit	257	CHECK SHEET	307	
Circuit Check Between Driver Seat Control Unit and Data Link Connector	258	CHECK SHEET RESULTS (EXAMPLE)	309	I
Circuit Check Between Data Link Connector and IPDM E/R	259	Circuit Check Between TCM and Differential Lock Control Unit	323	
ECM Circuit Check	260	Circuit Check Between Differential Lock Control Unit and Data Link Connector	324	J
TCM Circuit Check	260	Circuit Check Between Data Link Connector and IPDM E/R	325	
Driver Seat Control Unit Circuit Check	261	ECM Circuit Check	326	LAN
Combination Meter Circuit Check	261	TCM Circuit Check	326	
BCM Circuit Check	262	Differential Lock Control Unit Circuit Check	327	
Data Link Connector Circuit Check	262	Combination Meter Circuit Check	327	L
Front Air Control Circuit Check	263	BCM Circuit Check	328	
Transfer Control Unit Circuit Check	263	Data Link Connector Circuit Check	328	
ABS Actuator and Electric Unit (Control Unit) Circuit Check	264	Front Air Control Circuit Check	329	M
IPDM E/R Circuit Check	264	Transfer Control Unit Circuit Check	329	
CAN Communication Circuit Check	265	ABS Actuator and Electric Unit (Control Unit) Circuit Check	330	
IPDM E/R Ignition Relay Circuit Check	265	IPDM E/R Circuit Check	330	
Component Inspection	266	CAN Communication Circuit Check	331	
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	266	IPDM E/R Ignition Relay Circuit Check	331	
CAN SYSTEM (TYPE 9)	267	Component Inspection	332	
System Description	267	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	332	
Component Parts and Harness Connector Location	267	CAN SYSTEM (TYPE 11)	333	
Schematic	268	System Description	333	
Wiring Diagram - CAN -	269	Component Parts and Harness Connector Location	333	
Work Flow	272	Schematic	334	
CHECK SHEET	274	Wiring Diagram - CAN -	335	
CHECK SHEET RESULTS (EXAMPLE)	276	Work Flow	338	
Circuit Check Between TCM and Driver Seat Control Unit	291	CHECK SHEET	339	
Circuit Check Between Driver Seat Control Unit and Data Link Connector	292	CHECK SHEET RESULTS (EXAMPLE)	342	
Circuit Check Between Data Link Connector and IPDM E/R	293	Circuit Check Between TCM and Differential Lock Control Unit	342	
ECM Circuit Check	294			
TCM Circuit Check	294			
Driver Seat Control Unit Circuit Check	295			
Combination Meter Circuit Check	295			
Display Control Unit Circuit Check	296			
BCM Circuit Check	296			
Data Link Connector Circuit Check	297			
Front Air Control Circuit Check	297			
Transfer Control Unit Circuit Check	298			
ABS Actuator and Electric Unit (Control Unit) Circuit Check	298			
IPDM E/R Circuit Check	299			
CAN Communication Circuit Check	299			
IPDM E/R Ignition Relay Circuit Check	300			
Component Inspection	300			
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	300			

Control Unit	358	Display Control Unit Circuit Check	402
Circuit Check Between Differential Lock Control Unit and Driver Seat Control Unit	359	BCM Circuit Check	402
Circuit Check Between Driver Seat Control Unit and Data Link Connector	360	Data Link Connector Circuit Check	403
Circuit Check Between Data Link Connector and IPDM E/R	360	Front Air Control Circuit Check	403
ECM Circuit Check	361	Transfer Control Unit Circuit Check	404
TCM Circuit Check	362	ABS Actuator and Electric Unit (Control Unit) Circuit Check	404
Differential Lock Control Unit Circuit Check	362	IPDM E/R Circuit Check	405
Driver Seat Control Unit Circuit Check	363	CAN Communication Circuit Check	406
Combination Meter Circuit Check	363	IPDM E/R Ignition Relay Circuit Check	406
BCM Circuit Check	364	Component Inspection	407
Data Link Connector Circuit Check	364	ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	407
Front Air Control Circuit Check	365	CAN SYSTEM (TYPE 13)	408
Transfer Control Unit Circuit Check	365	System Description	408
ABS Actuator and Electric Unit (Control Unit) Circuit Check	366	Component Parts and Harness Connector Location	408
IPDM E/R Circuit Check	366	Schematic	409
CAN Communication Circuit Check	367	Wiring Diagram - CAN -	410
IPDM E/R Ignition Relay Circuit Check	368	Work Flow	413
Component Inspection	368	CHECK SHEET	414
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	368	CHECK SHEET RESULTS (EXAMPLE)	416
CAN SYSTEM (TYPE 12)	369	Circuit Check Between TCM and Driver Seat Control Unit	431
System Description	369	Circuit Check Between Driver Seat Control Unit and Data Link Connector	432
Component Parts and Harness Connector Location	369	Circuit Check Between Data Link Connector and IPDM E/R	433
Schematic	370	ECM Circuit Check	434
Wiring Diagram - CAN -	371	TCM Circuit Check	434
Work Flow	374	Driver Seat Control Unit Circuit Check	435
CHECK SHEET	376	Combination Meter Circuit Check	435
CHECK SHEET RESULTS (EXAMPLE)	379	BCM Circuit Check	436
Circuit Check Between TCM and Differential Lock Control Unit	396	Data Link Connector Circuit Check	436
Circuit Check Between Differential Lock Control Unit and Driver Seat Control Unit	397	Steering Angle Sensor Circuit Check	437
Circuit Check Between Driver Seat Control Unit and Data Link Connector	398	Front Air Control Circuit Check	437
Circuit Check Between Data Link Connector and IPDM E/R	398	Transfer Control Unit Circuit Check	438
ECM Circuit Check	399	ABS Actuator and Electric Unit (Control Unit) Circuit Check	438
TCM Circuit Check	400	IPDM E/R Circuit Check	439
Differential Lock Control Unit Circuit Check	400	CAN Communication Circuit Check	439
Driver Seat Control Unit Circuit Check	401	IPDM E/R Ignition Relay Circuit Check	440
Combination Meter Circuit Check	401	Component Inspection	440
		ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION	440

PRECAUTIONS

PFP:00001

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

UKS001AE

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 When Using CONSULT-II

UKS001AF

When connecting CONSULT-II to data link connector, connect them through CONSULT-II CONVERTER.

CAUTION:

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

CHECK POINTS FOR USING CONSULT-II

1. Has CONSULT-II been used without connecting CONSULT-II CONVERTER on this vehicle?
 - If YES, GO TO 2.
 - If NO, GO TO 5.
2. Is there any indication other than indications relating to CAN communication system in the self-diagnosis results?
 - If YES, GO TO 3.
 - If NO, GO TO 4.
3. Based on self-diagnosis results unrelated to CAN communication, carry out the inspection.
4. Malfunctions may be detected in self-diagnosis depending on control units carrying out CAN communication. Therefore, erase the self-diagnosis results.
5. Diagnose CAN communication system. Refer to [LAN-7, "CAN Communication Unit"](#) .

Precautions For Trouble Diagnosis CAN SYSTEM

UKS001AG

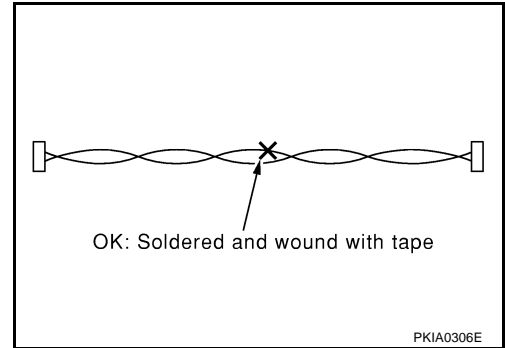
- Do not apply voltage of 7.0V or higher to the measurement terminals.
- Use the tester with its open terminal voltage being 7.0V or less.
- Be sure to turn ignition switch off and disconnect negative battery terminal before checking the circuit.

A
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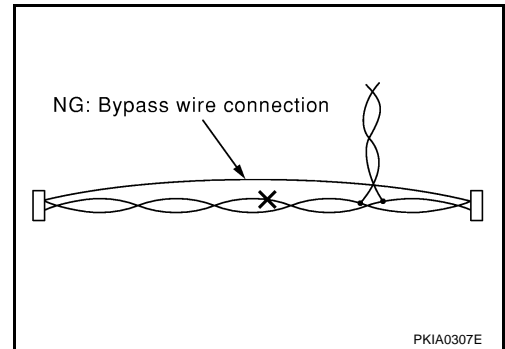
LAN

Precautions For Harness Repair 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

System Description

UKS001AI

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

UKS001AJ

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

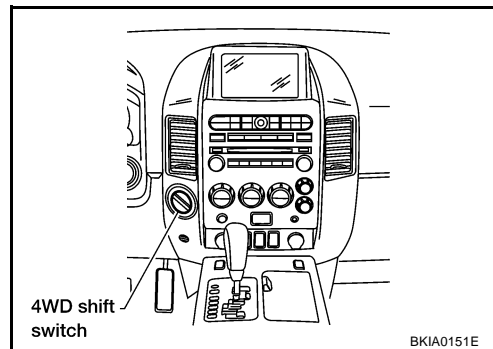
Body type	Truck												
Axle	2WD						4WD						
Engine	VK56DE												
Transmission	A/T												
Brake control	ABS	ABLS			VDC		ABLS					VDC	
Electronic locking rear differential										×	×	×	
Automatic drive positioner			×	×		×		×	×		×	×	×
Navigation system				×		×			×			×	
CAN system type	1	2	3	4	5	6	7	8	9	10	11	12	13
CAN system trouble diagnosis	LAN-24	LAN-52	LAN-80	LAN-110	LAN-143	LAN-172	LAN-206	LAN-235	LAN-267	LAN-301	LAN-333	LAN-369	LAN-408

×: Applicable

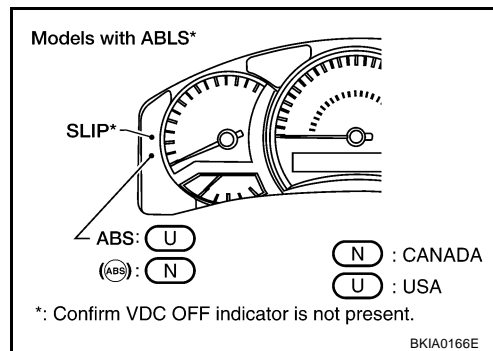
NOTE:

Confirming the presence of the following items helps to identify CAN system type.

- Models with 4WD



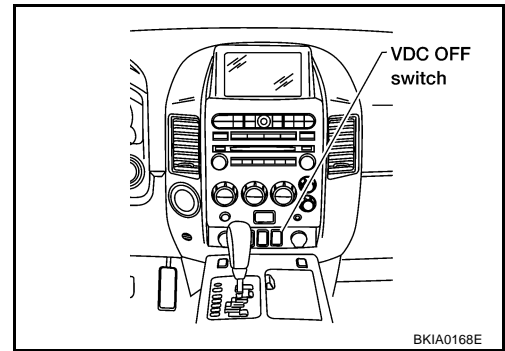
- Models with ABLS



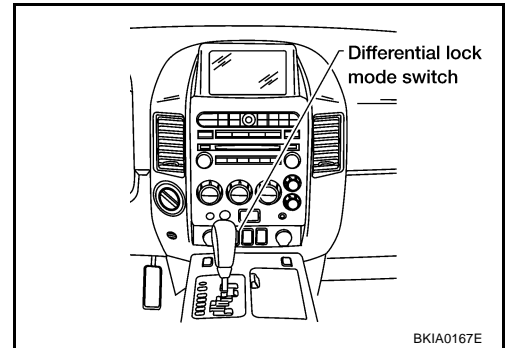
CAN COMMUNICATION

[CAN]

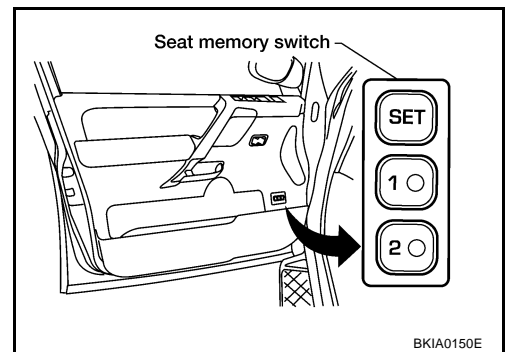
- Models with VDC



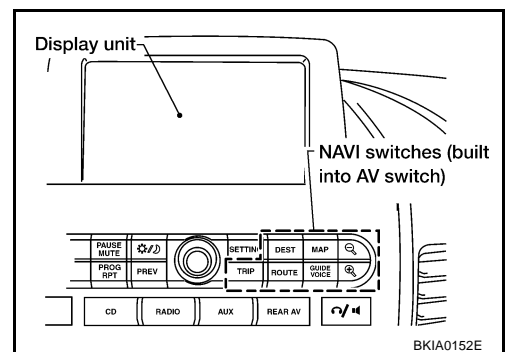
- Models with electronic locking rear differential



- Models with automatic drive positioner



- Models with navigation system



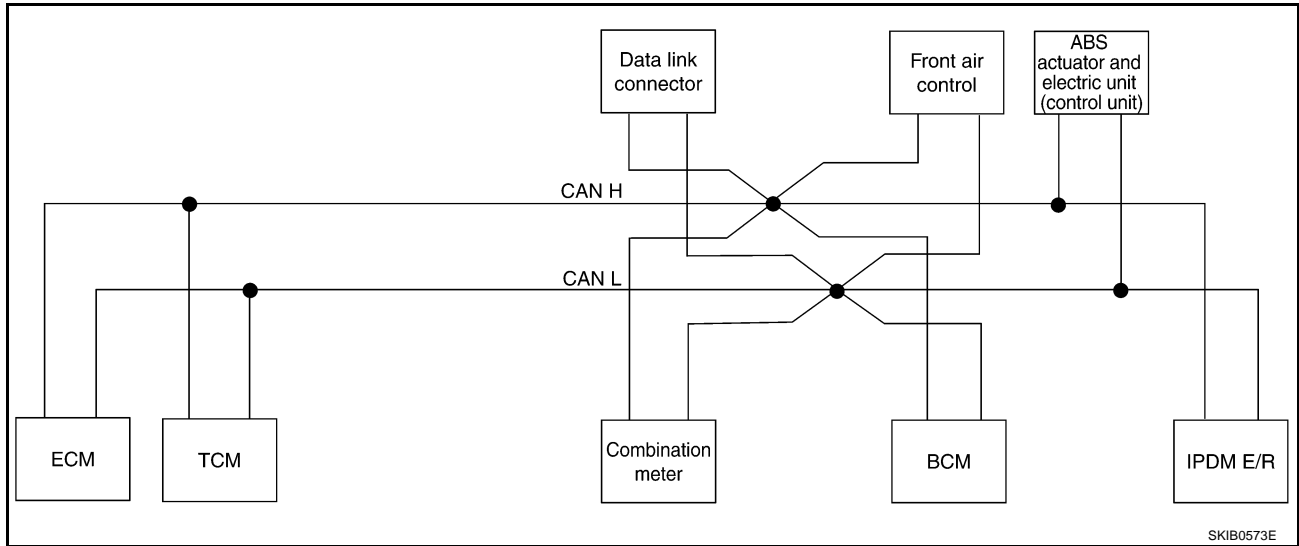
CAN COMMUNICATION

[CAN]

TYPE 1

System diagram

- Type 1



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Combina- tion meter	BCM	Front air control	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R
Engine speed signal	T	R	R		R		
Engine status signal	T			R	R		
Engine coolant temperature signal	T	R	R		R		
A/T self-diagnosis signal	R	T					
Accelerator pedal position signal	T	R					
Closed throttle position signal	T	R					
Wide open throttle position signal	T	R					
Battery voltage signal	T	R					
Ignition switch signal				T			R
Stop lamp switch signal		R	T				
Fuel consumption monitor signal	T		R				
			T				
Turbine revolution signal	R	T					
Output shaft revolution signal	R	T					
A/C switch signal	R			T	R		
A/C compressor request signal	T						R
Blower fan motor switch signal	R			T	R		
Cooling fan speed request signal	T				R		R
Position light request signal			R	T			R
Low beam request signal				T			R
Low beam status signal	R						T
High beam request signal			R	T			R
High beam status signal	R						T
Front fog light request signal				T			R

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Combina- tion meter	BCM	Front air control	ABS actu- ator and electric unit (con- trol unit)	IPDM E/R
Day time running light request signal				T			R
Rear window defogger request signal				T	R		R
Rear window defogger status signal				R			T
Vehicle speed signal			R		R	T	
	R	R	T	R	R		
Sleep wake up signal			R	T			R
Door switch signal			R	T			R
Turn indicator signal			R	T			
Buzzer output signal			R	T			
Fuel level sensor signal	R		T				
ASCD SET lamp signal	T		R				
ASCD CRUISE lamp signal	T		R				
Malfunction indicator lamp signal	T		R				
Front wiper request signal				T			R
Front wiper stop position signal				R			T
Theft warning horn request signal				T			R
Horn chirp signal				T			R
ABS warning lamp signal			R			T	
Brake warning lamp signal			R			T	
ASCD operation signal	T	R					
ASCD OD cancel request	T	R					
A/T CHECK indicator lamp signal		T	R				
A/T position indicator lamp signal		T	R				
Tire pressure signal			R	T			
1st position switch signal ^{*1}		R	T				
4th position switch signal ^{*1}		R	T				
Manual mode switch signal ^{*2}		R	T				
Not manual mode switch signal ^{*2}		R	T				
Manual mode shift up signal ^{*2}		R	T				
Manual mode shift down signal ^{*2}		R	T				
Tow mode switch signal		R	T				
A/T fluid temperature sensor signal		T	R				
Seat belt buckle switch signal			T	R			

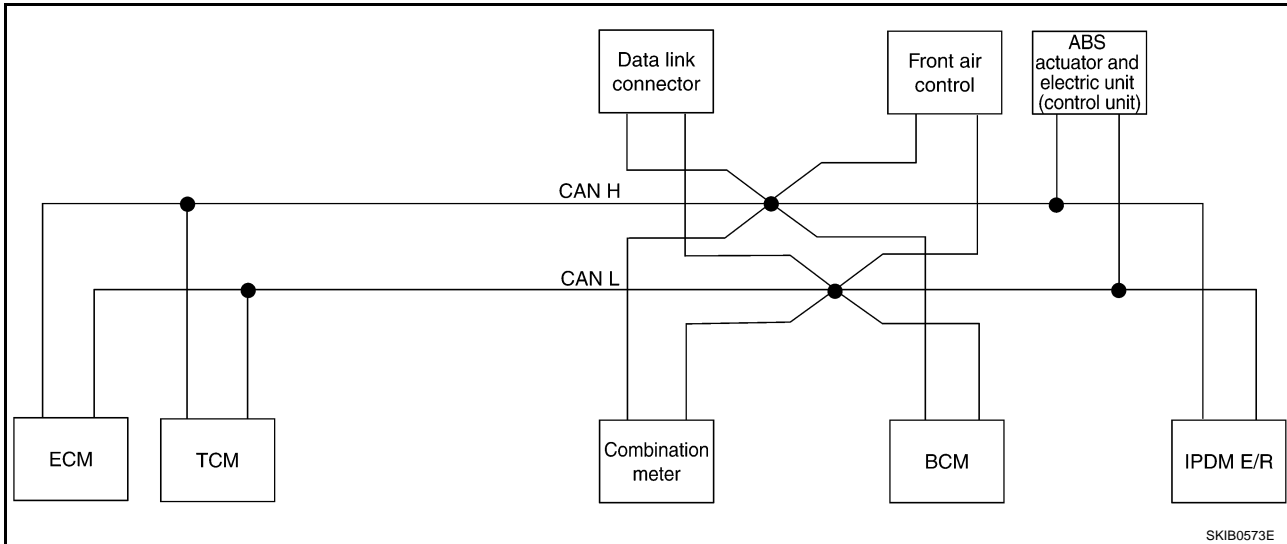
*1: Floor shift model only.

*2: Column shift model only.

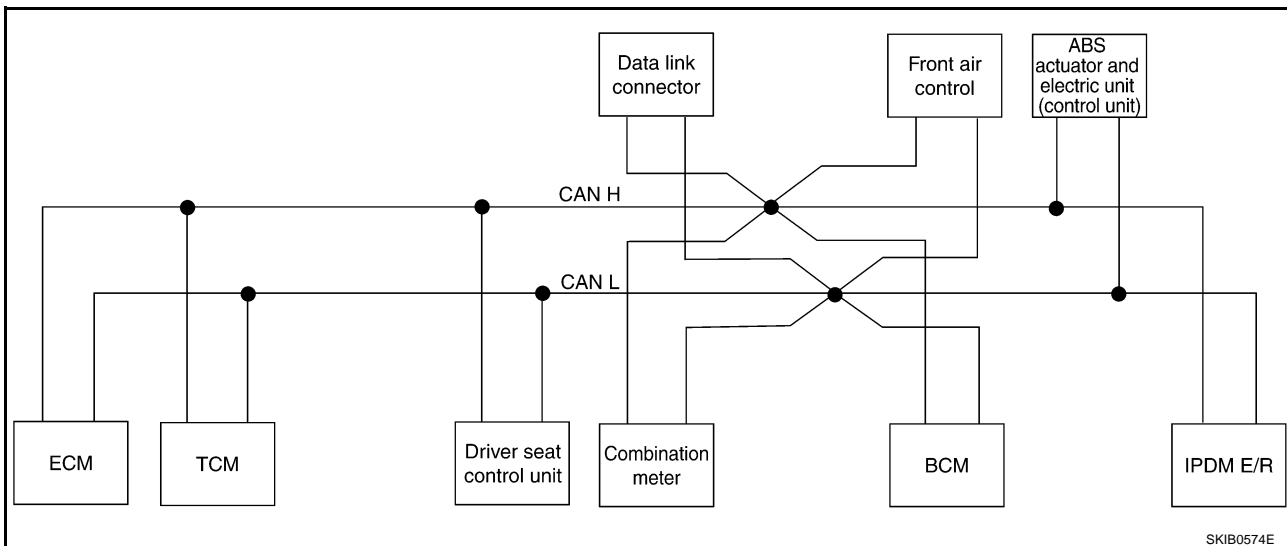
TYPE 2/TYPE 3/TYPE 4

System diagram

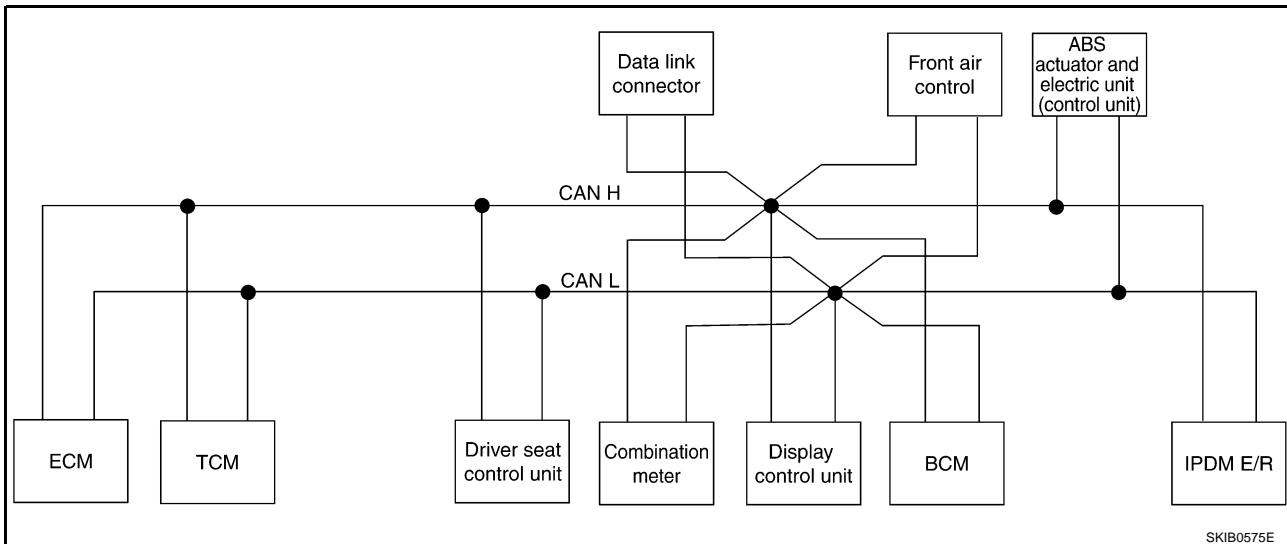
- Type 2



- Type 3



- Type 4



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E
F
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LAN

CAN COMMUNICATION

[CAN]

Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Driver seat control unit	Combination meter	Display control unit	BCM	Front air control	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R		R	R		R	R	
Engine status signal	T					R	R		
Engine coolant temperature signal	T	R		R			R		
A/T self-diagnosis signal	R	T							
Accelerator pedal position signal	T	R						R	
Closed throttle position signal	T	R							
Wide open throttle position signal	T	R							
Battery voltage signal	T	R							
Key switch signal			R			T			
Ignition switch signal			R			T			R
P range signal		T	R					R	
Stop lamp switch signal		R		T					
Fuel consumption monitor signal	T			R					
				T	R				
Turbine revolution signal	R	T							
Output shaft revolution signal	R	T							
A/C switch signal	R					T			
A/C compressor request signal	T								R
Blower fan motor switch signal	R					T	R		
A/C switch/indicator signal					T		R		
					R		T		
Cooling fan speed request signal	T						R		R
Position light request signal				R		T			R
Low beam request signal						T			R
Low beam status signal	R								T
High beam request signal				R		T			R
High beam status signal	R								T
Front fog light request signal						T			R
Day time running light request signal						T			R
Rear window defogger request signal						T	R		R
Rear window defogger status signal						R			T
Vehicle speed signal				R			R	T	
	R	R	R	T	R	R	R		
Sleep wake up signal			R	R		T			R
Door switch signal			R	R	R	T			R
Turn indicator signal				R		T			
Key fob ID signal			R			T			
Key fob door unlock signal			R			T			
Buzzer output signal				R		T			

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Driver seat control unit	Combination meter	Display control unit	BCM	Front air control	ABS actuator and electric unit (control unit)	IPDM E/R
Fuel level sensor signal	R			T					
Fuel level low warning signal				T	R				
ASCD SET lamp signal	T			R					
ASCD CRUISE lamp signal	T			R					
Malfunction indicator lamp signal	T			R					
Front wiper request signal						T			R
Front wiper stop position signal						R			T
Theft warning horn request signal						T			R
Horn chirp signal						T			R
ABS warning lamp signal				R				T	
Brake warning lamp signal				R				T	
SLIP indicator lamp signal				R				T	
System setting signal			R		T				
			T		R				
Distance to empty signal				T	R				
ASCD operation signal	T	R							
ASCD OD cancel request	T	R							
A/T CHECK indicator lamp signal		T		R					
A/T position indicator lamp signal		T		R					
Tire pressure signal				R		T			
Tire pressure data signal					R	T			
1st position switch signal* ¹		R		T					
4th position switch signal* ¹		R		T					
Manual mode switch signal* ²		R		T					
Not manual mode switch signal* ²		R		T					
Manual mode shift up signal* ²		R		T					
Manual mode shift down signal* ²		R		T					
Tow mode switch signal		R		T					
A/T fluid temperature sensor signal		T		R					
Seat belt buckle switch signal				T		R			

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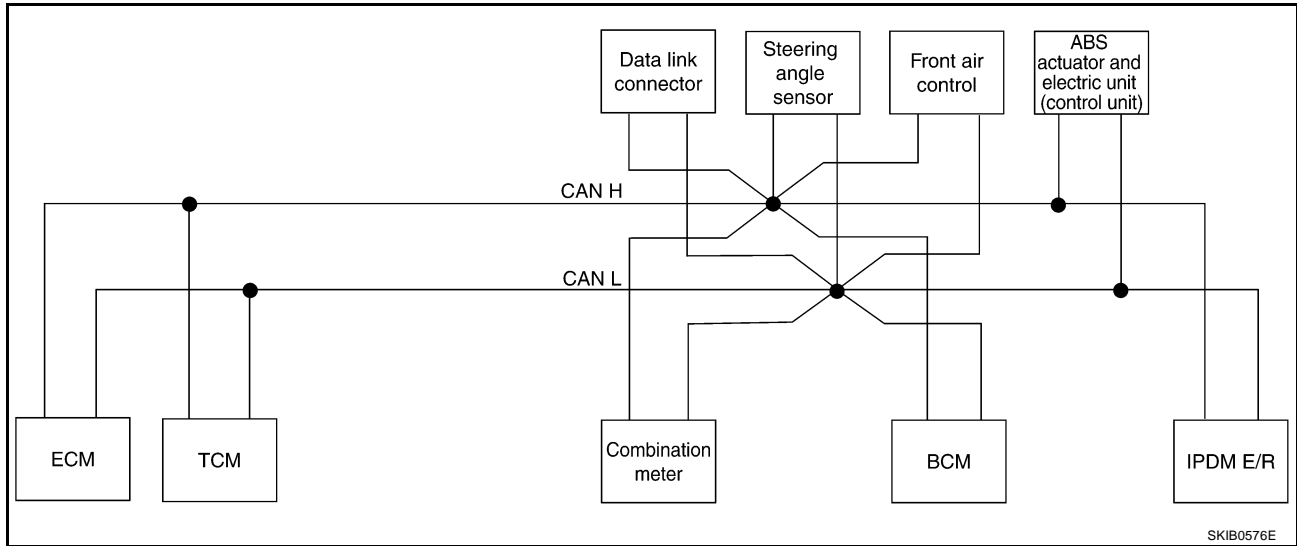
*1: Floor shift model only.

*2: Column shift model only.

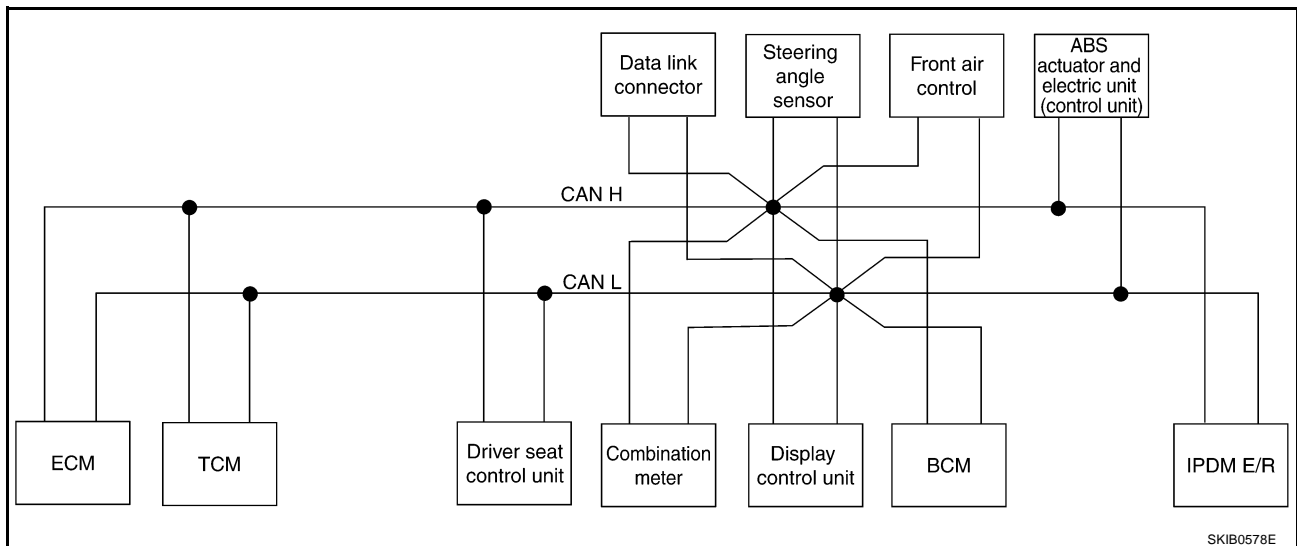
TYPE 5/TYPE 6

System diagram

- Type 5



- Type 6



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Driver seat control unit	Combination meter	Display control unit	BCM	Steering angle sensor	Front air control	ABS actuator and electric unit (control unit)	IPDM E/R
Engine speed signal	T	R		R	R			R	R	
Engine status signal	T					R		R		
Engine coolant temperature signal	T			R				R		
A/T self-diagnosis signal	R	T								
Accelerator pedal position signal	T	R							R	
Closed throttle position signal	T	R								
Wide open throttle position signal	T	R								

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Driver seat control unit	Combination meter	Display control unit	BCM	Steering angle sensor	Front air control	ABS actuator and electric unit (control unit)	IPDM E/R
Battery voltage signal	T	R								
Key switch signal			R			T				
Ignition switch signal			R			T				R
P range signal		T	R						R	
Stop lamp switch signal		R		T						
Fuel consumption monitor signal	T			R						
				T	R					
Turbine revolution signal	R	T								
Output shaft revolution signal	R	T								
A/C switch signal	R					T				
A/C compressor request signal	T									R
Blower fan motor switch signal	R					T		R		
A/C switch/indicator signal					T			R		
					R			T		
Cooling fan speed request signal	T							R		R
Position light request signal				R		T				R
Low beam request signal						T				R
Low beam status signal	R									T
High beam request signal				R		T				R
High beam status signal	R									T
Front fog light request signal						T				R
Day time running light request signal						T				R
Rear window defogger request signal						T		R		R
Rear window defogger status signal						R				T
Vehicle speed signal				R				R	T	
	R	R	R	T	R	R		R		
Sleep wake up signal			R	R		T				R
Door switch signal			R	R	R	T				R
Turn indicator signal				R		T				
Key fob ID signal			R			T				
Key fob door unlock signal			R			T				
Buzzer output signal				R		T				
Fuel level sensor signal	R			T						
Fuel level low warning signal				T	R					
ASCD SET lamp signal	T			R						
ASCD CRUISE lamp signal	T			R						
Malfunction indicator lamp signal	T			R						
Front wiper request signal						T				R
Front wiper stop position signal						R				T
Theft warning horn request signal						T				R

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CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Driver seat control unit	Combination meter	Display control unit	BCM	Steering angle sensor	Front air control	ABS actuator and electric unit (control unit)	IPDM E/R
Horn chirp signal						T				R
Steering angle sensor signal							T		R	
ABS warning lamp signal				R					T	
VDC OFF indicator lamp signal				R					T	
SLIP indicator lamp signal				R					T	
Brake warning lamp signal				R					T	
System setting signal			R		T					
			T		R					
Distance to empty signal				T	R					
ASCD operation signal	T	R								
ASCD OD cancel request	T	R								
A/T CHECK indicator lamp signal		T		R						
A/T position indicator lamp signal		T		R						
Tire pressure signal				R		T				
Tire pressure data signal					R	T				
1st position switch signal ^{*1}		R		T						
4th position switch signal ^{*1}		R		T						
Manual mode switch signal ^{*2}		R		T						
Not manual mode switch signal ^{*2}		R		T						
Manual mode shift up signal ^{*2}		R		T						
Manual mode shift down signal ^{*2}		R		T						
Tow mode switch signal		R		T						
A/T fluid temperature sensor signal		T		R						
Seat belt buckle switch signal				T		R				

*1: Floor shift model only.

*2: Column shift model only.

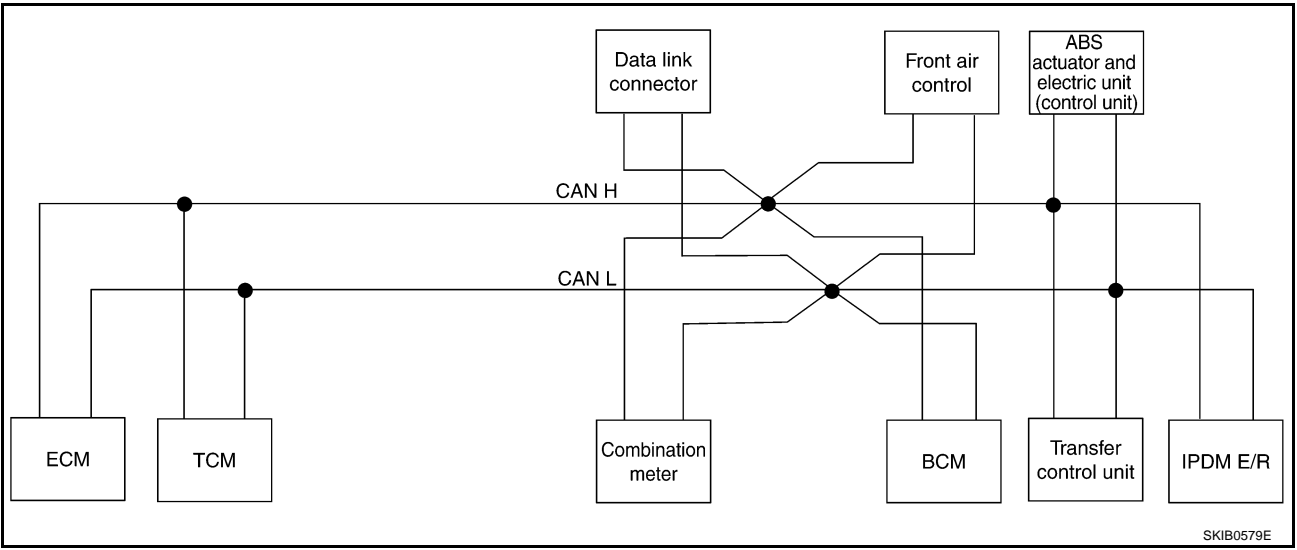
CAN COMMUNICATION

[CAN]

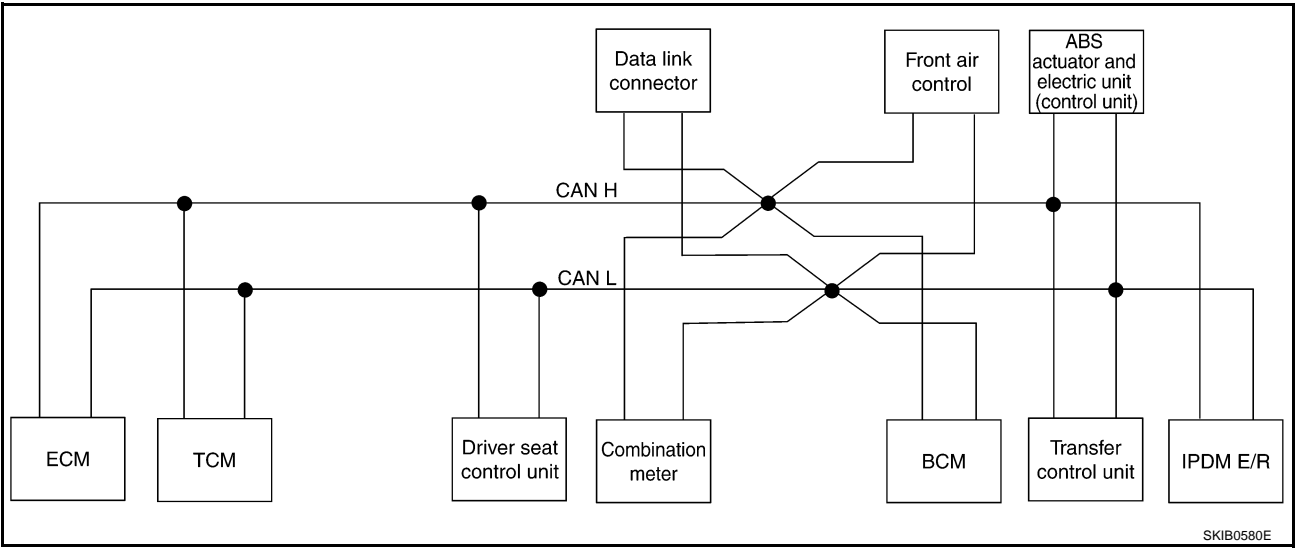
TYPE 7/TYPE 8/TYPE 9/TYPE 10/TYPE 11/TYPE 12

System diagram

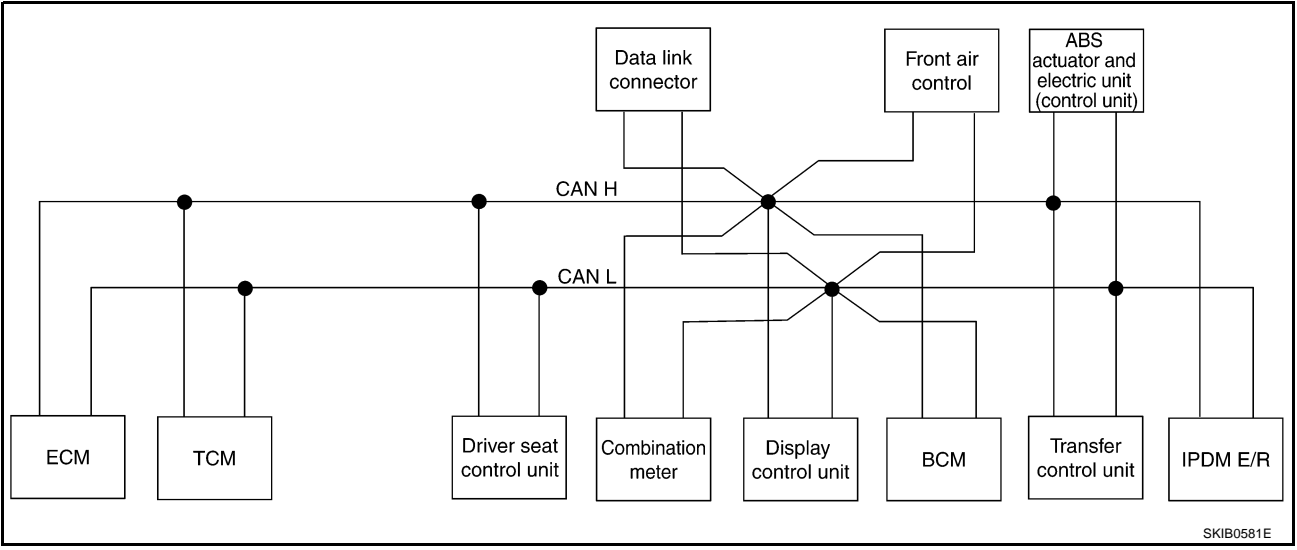
- Type 7



- Type 8



- Type 9



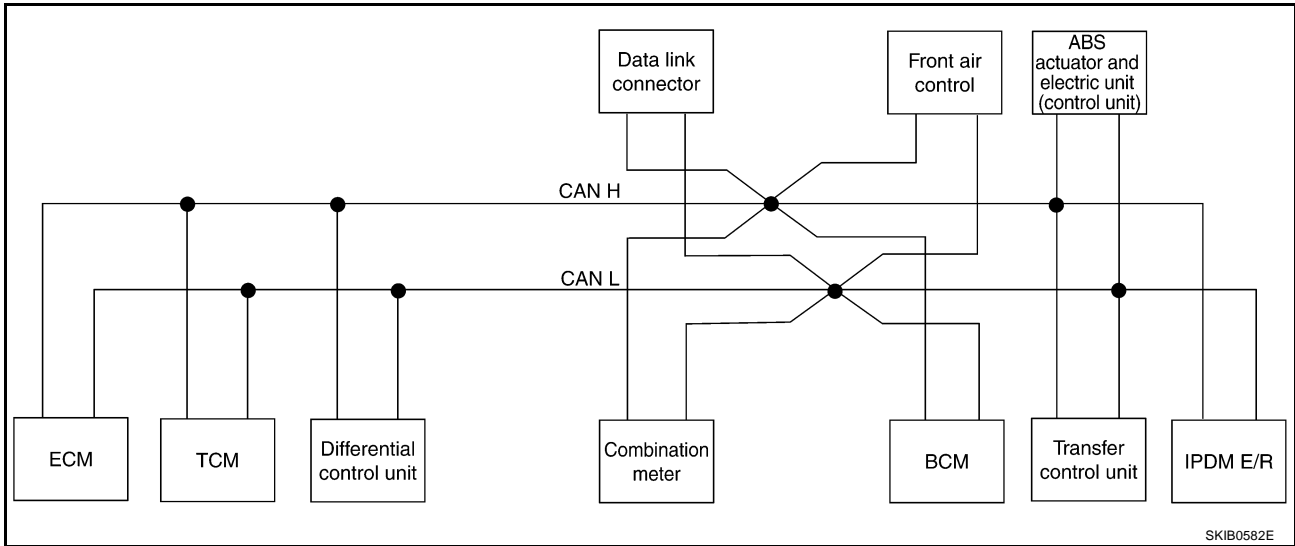
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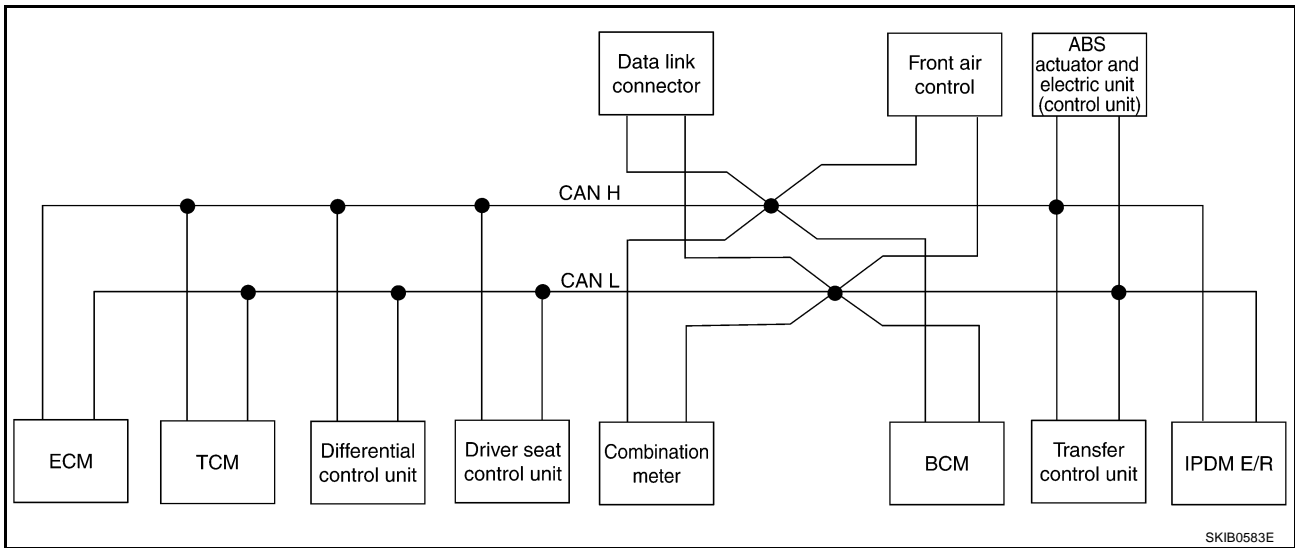
CAN COMMUNICATION

[CAN]

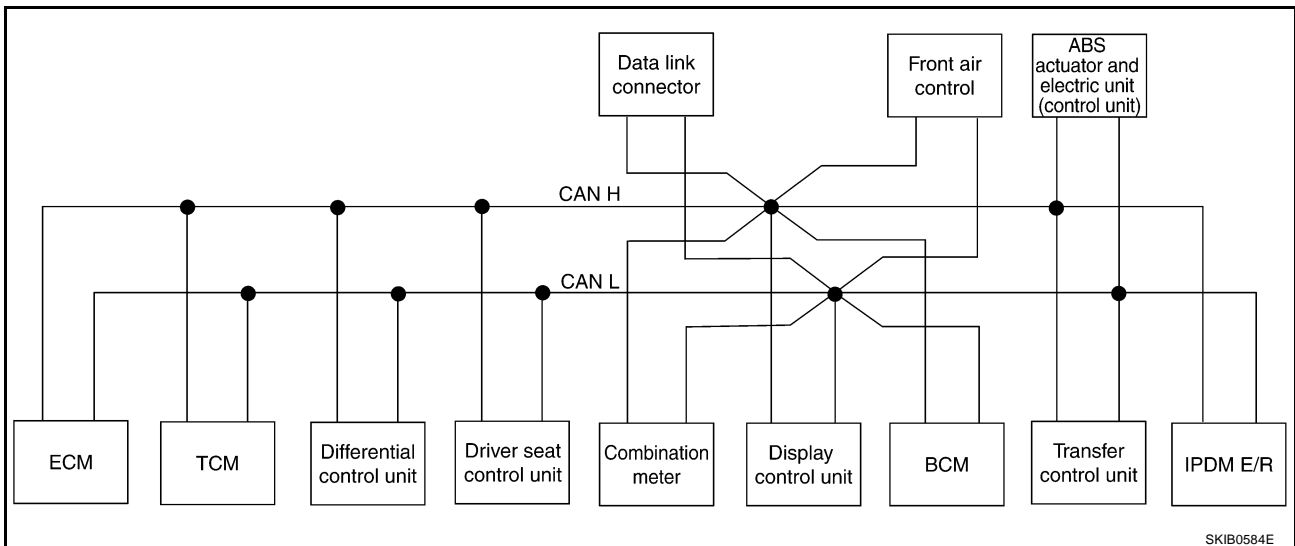
- Type 10



- Type 11



- Type 12



CAN COMMUNICATION

[CAN]

Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Differential lock control unit	Driver seat control unit	Combination meter	Display control unit	BCM	Front air control	Transfer control unit	ABS actuator and electric unit (control unit)	IPDM E/R
A/T self-diagnosis signal	R	T									
Stop lamp switch signal		R			T						
									R	T	
Battery voltage signal	T	R									
Key switch signal				R			T				
Ignition switch signal				R			T				R
P range signal		T		R						R	
Closed throttle position signal	T	R									
Wide open throttle position signal	T	R									
Engine speed signal	T	R			R	R		R	R	R	
Engine status signal	T						R	R			
Engine coolant temperature signal	T				R			R			
Accelerator pedal position signal	T	R								R	
Fuel consumption monitor signal	T				R						
					T	R					
Turbine revolution signal	R	T									
Output shaft revolution signal	R	T									
A/C switch signal	R						T				
A/C compressor request signal	T										R
Blower fan motor switch signal	R						T	R			
A/C switch/indicator signal						T		R			
						R		T			
Cooling fan speed request signal	T							R			R
Position light request signal					R		T				R
Low beam request signal							T				R
Low beam status signal	R										T
High beam request signal					R		T				R
High beam status signal	R										T
Front fog light request signal							T				R
Day time running light request signal							T				R
Rear window defogger request signal							T	R			R
Rear window defogger status signal							R				T
Vehicle speed signal			R		R			R	R	T	
	R	R		R	T	R	R	R			
Sleep wake up signal				R	R		T				R
Door switch signal				R	R	R	T				R
Key fob ID signal				R			T				

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CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Differential lock control unit	Driver seat control unit	Combination meter	Display control unit	BCM	Front air control	Transfer control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Key fob door unlock signal				R			T				
Buzzer output signal					R		T				
Fuel level sensor signal	R				T						
ASCD SET lamp signal	T				R						
ASCD CRUISE lamp signal	T				R						
Malfunction indicator lamp signal	T				R						
Fuel level low warning signal					T	R					
Front wiper request signal							T				R
Front wiper stop position signal							R				T
Theft warning horn request signal							T				R
Horn chirp signal							T				R
ABS warning lamp signal					R					T	
SLIP indicator lamp signal					R					T	
Brake warning lamp signal					R					T	
System setting signal				R		T					
				T		R					
Distance to empty signal					T	R					
ASCD operation signal	T	R									
ASCD OD cancel request	T	R									
A/T CHECK indicator lamp signal		T			R						
A/T position indicator lamp signal		T			R				R		
Tire pressure signal					R		T				
Tire pressure data signal						R	T				
1st position switch signal ^{*1}		R			T						
4th position switch signal ^{*1}		R			T						
Manual mode switch signal ^{*2}		R			T						
Not manual mode switch signal ^{*2}		R			T						
Manual mode shift up signal ^{*2}		R			T						
Manual mode shift down signal ^{*2}		R			T						
Tow mode switch signal		R			T						
A/T fluid temperature sensor signal		T			R						
4WD shift switch signal	R		R						T		
Seat belt buckle switch signal					T		R				
Differential lock switch signal			T							R	
Differential lock indicator signal			T							R	

*1: Floor shift model only.

*2: Column shift model only.

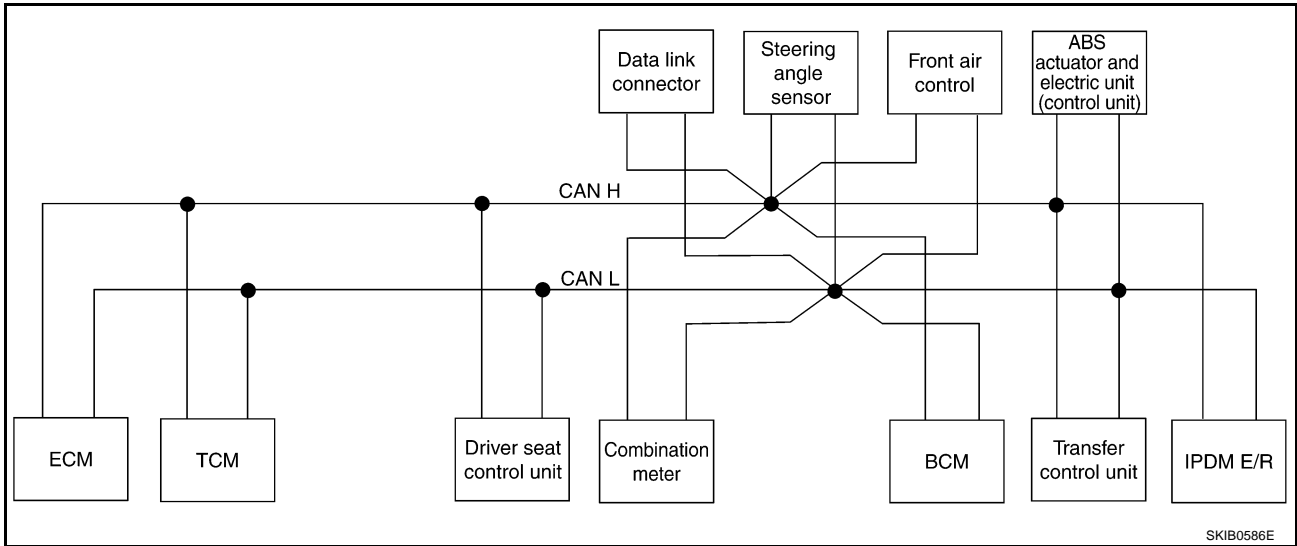
CAN COMMUNICATION

[CAN]

TYPE 13

System diagram

- Type 13



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	Driver seat control unit	Combination meter	BCM	Steering angle sensor	Front air control	Transfer control unit	ABS actuator and electric unit (control unit)	IPDM E/R
A/T self-diagnosis signal	R	T								
Stop lamp switch signal		R		T				R	T	
Battery voltage signal	T	R								
Key switch signal			R		T					
Ignition switch signal			R		T					R
P range signal		T	R						R	
Closed throttle position signal	T	R								
Wide open throttle position signal	T	R								
Engine speed signal	T	R		R			R	R	R	
Engine status signal	T				R		R			
Engine coolant temperature signal	T			R			R			
Accelerator pedal position signal	T	R							R	
Fuel consumption monitor signal	T			R						
Turbine revolution signal	R	T								
Output shaft revolution signal	R	T								
A/C switch signal	R				T		R			
A/C compressor request signal	T									R
Blower fan motor switch signal	R				T		R			
Cooling fan speed request signal	T						R			R
Position light request signal				R	T					R

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Driver seat control unit	Combina-tion meter	BCM	Steer-ing angle sensor	Front air control	Trans-fer control unit	ABS actua-tor and elec-tric unit (con-trol unit)	IPDM E/R
Low beam request signal					T					R
Low beam status signal	R									T
High beam request signal				R	T					R
High beam status signal	R									T
Front fog light request signal					T					R
Day time running light request signal					T					R
Rear window defogger request signal					T		R			R
Rear window defogger status signal					R					T
Vehicle speed signal				R			R	R	T	
	R	R	R	T	R		R			
Sleep wake up signal			R	R	T					R
Door switch signal			R	R	T					R
Key fob ID signal			R		T					
Key fob door unlock signal			R		T					
Buzzer output signal				R	T					
Fuel level sensor signal	R			T						
ASCD SET lamp signal	T			R						
ASCD CRUISE lamp signal	T			R						
Malfunction indicator lamp signal	T			R						
Fuel level low warning signal				T						
Front wiper request signal					T					R
Front wiper stop position signal					R					T
Theft warning horn request signal					T					R
Horn chirp signal					T					R
Steering angle sensor signal						T			R	
ABS warning lamp signal				R					T	
VDC OFF indicator lamp signal				R					T	
SLIP indicator lamp signal				R					T	
Brake warning lamp signal				R					T	
ASCD operation signal	T	R								
ASCD OD cancel request	T	R								
A/T CHECK indicator lamp signal		T		R						
A/T position indicator lamp signal		T		R				R		
Tire pressure signal				R	T					
1st position switch signal* ¹		R		T						
4th position switch signal* ¹		R		T						
Manual mode switch signal* ²		R		T						
Not manual mode switch signal* ²		R		T						

CAN COMMUNICATION

[CAN]

Signals	ECM	TCM	Driver seat control unit	Combination meter	BCM	Steering angle sensor	Front air control	Transfer control unit	ABS actuator and electric unit (control unit)	IPDM E/R
Manual mode shift up signal ^{*2}		R		T						
Manual mode shift down signal ^{*2}		R		T						
Tow mode switch signal		R		T						
A/T fluid temperature sensor signal		T		R						
4WD shift switch signal	R							T		
Seat belt buckle switch signal				T	R					

*1: Floor shift model only.

*2: Column shift model only.

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CAN SYSTEM (TYPE 1)

PF2:23710

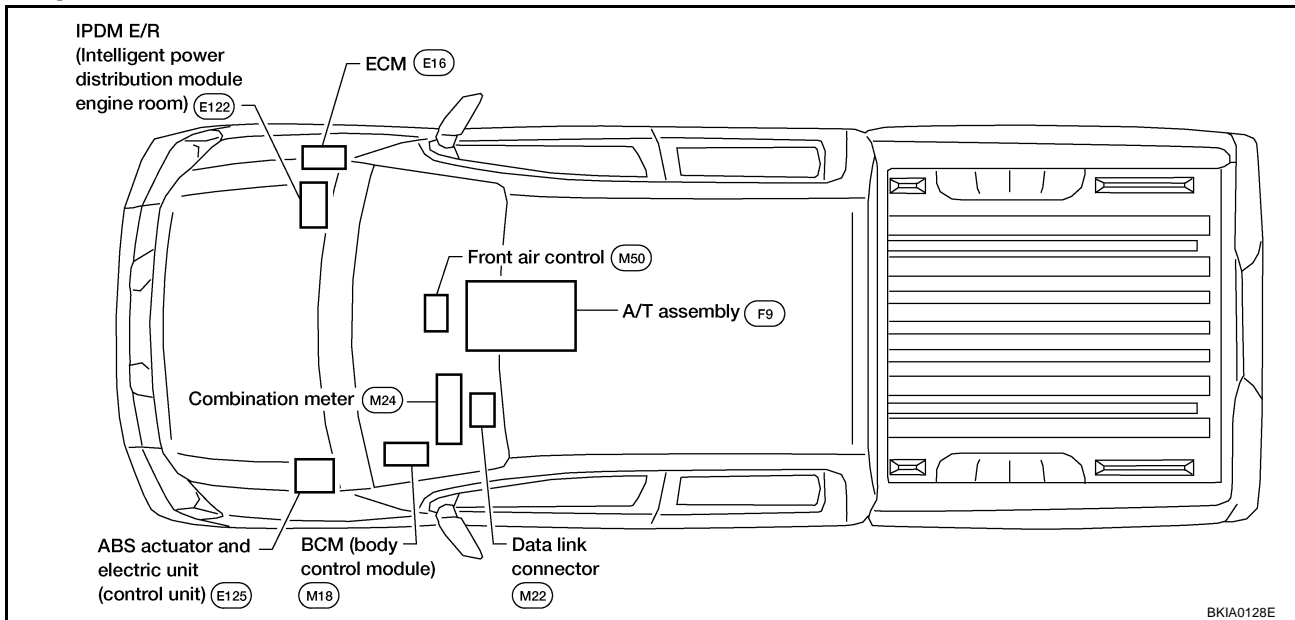
System Description

UKS001AK

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

UKS001AL

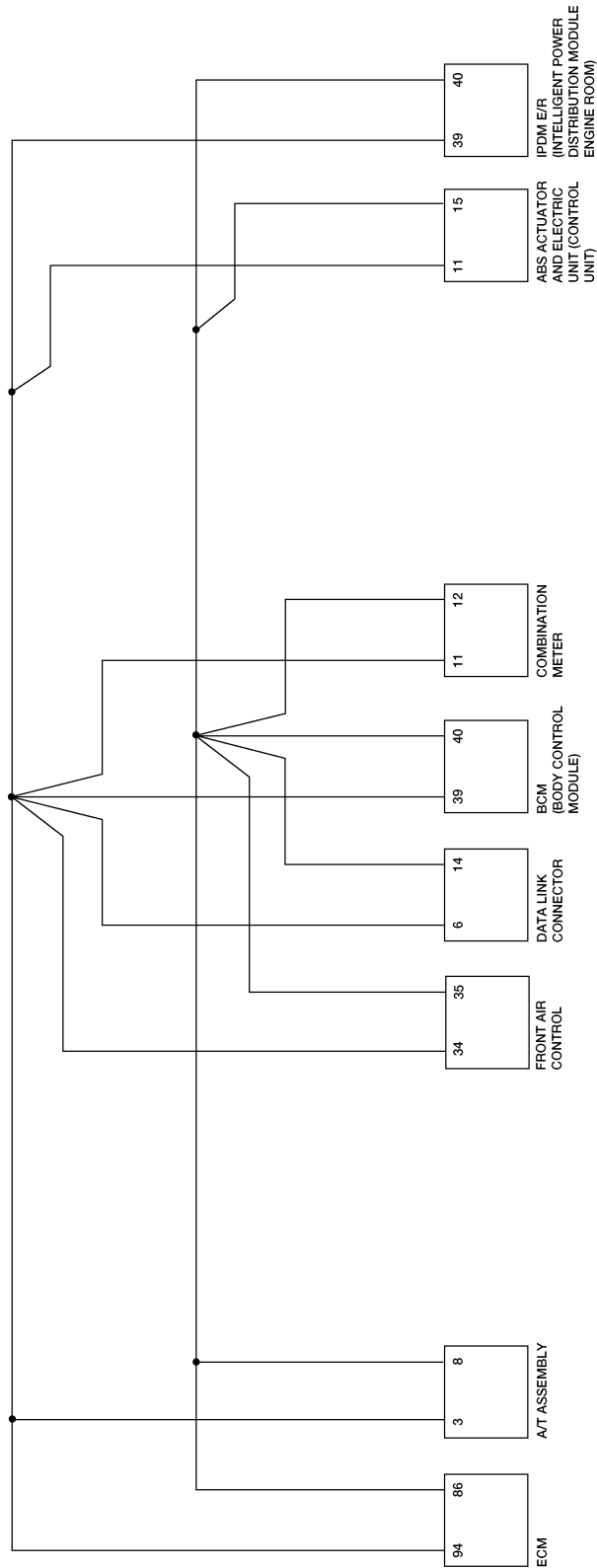


CAN SYSTEM (TYPE 1)

[CAN]

Schematic

UKS001AM



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BKWA0130E

CAN SYSTEM (TYPE 1)

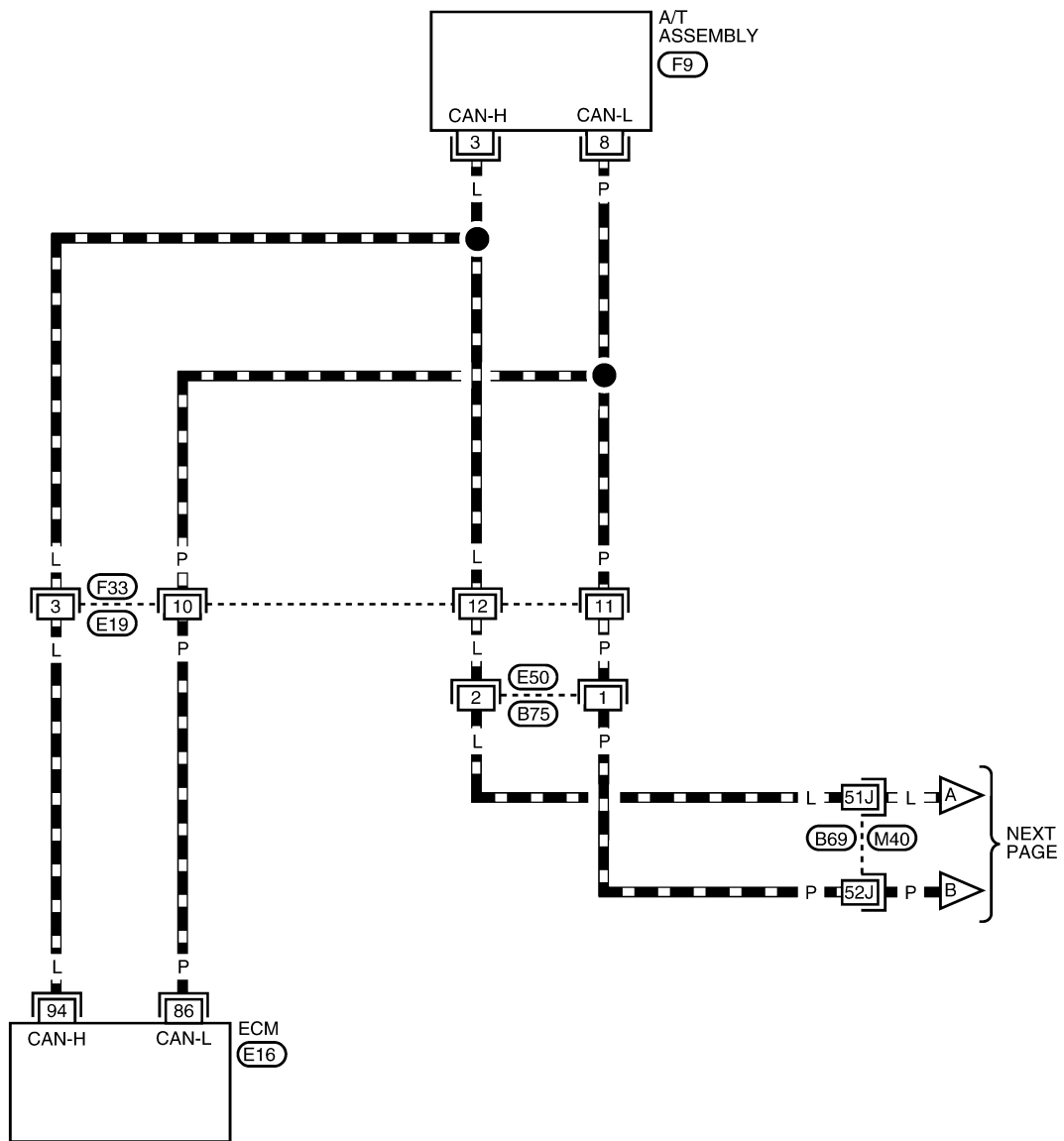
[CAN]

Wiring Diagram - CAN -

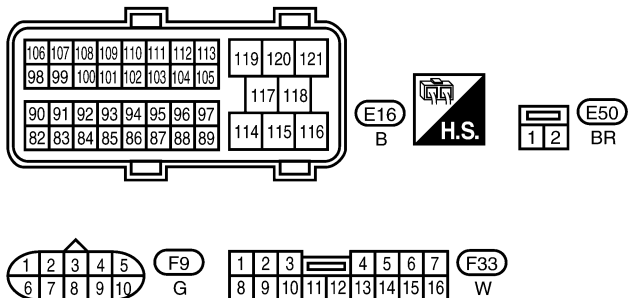
UKS001AN

LAN-CAN-01

▬ : DATA LINE



NEXT PAGE



REFER TO THE FOLLOWING.

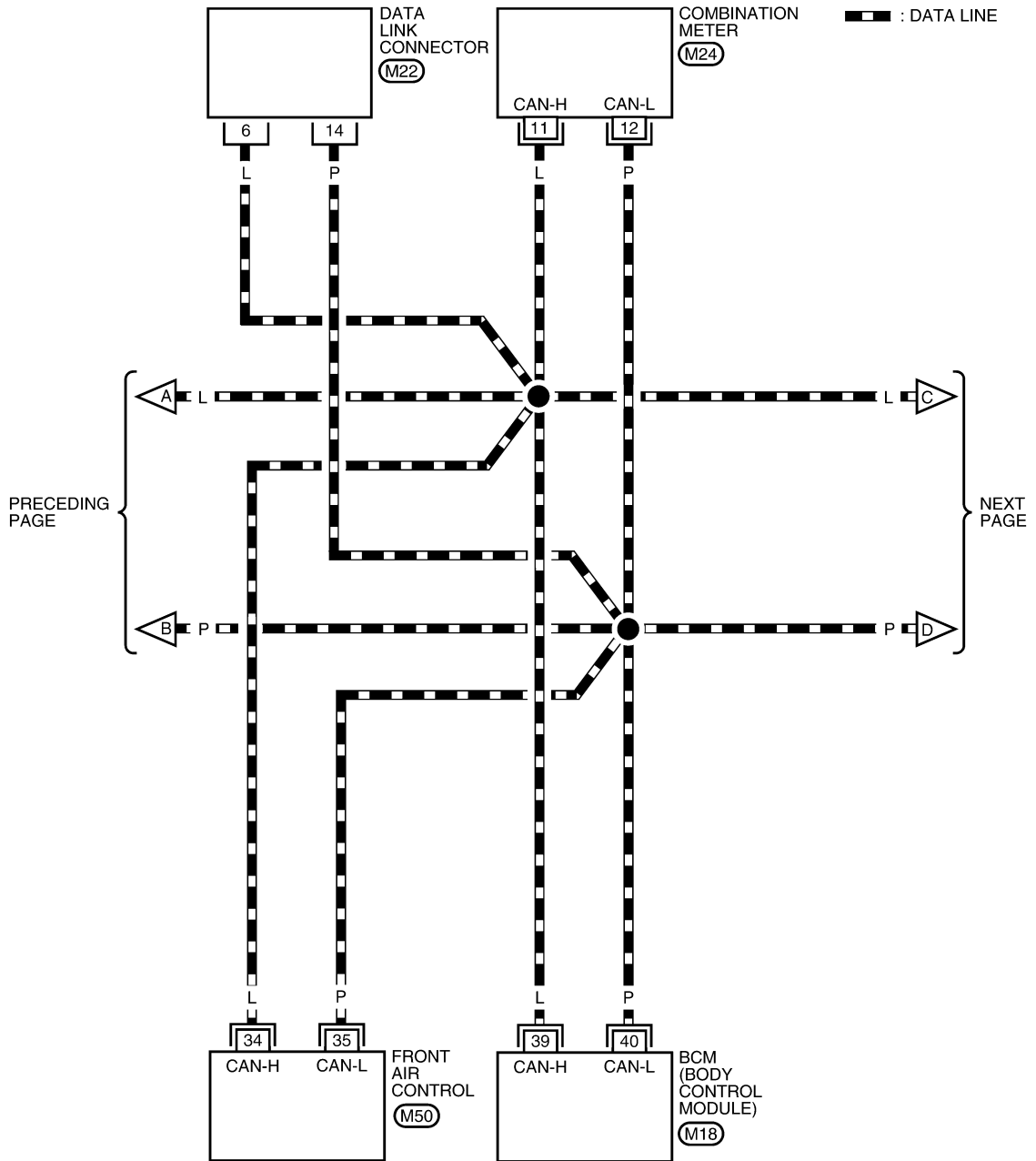
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0425E

CAN SYSTEM (TYPE 1)

[CAN]

LAN-CAN-02



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

(M18)
W



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

(M22)
W

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

(M24)
W

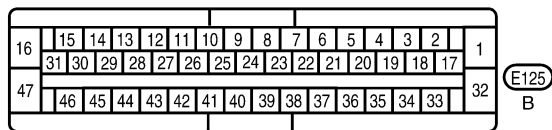
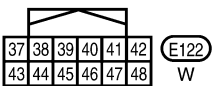
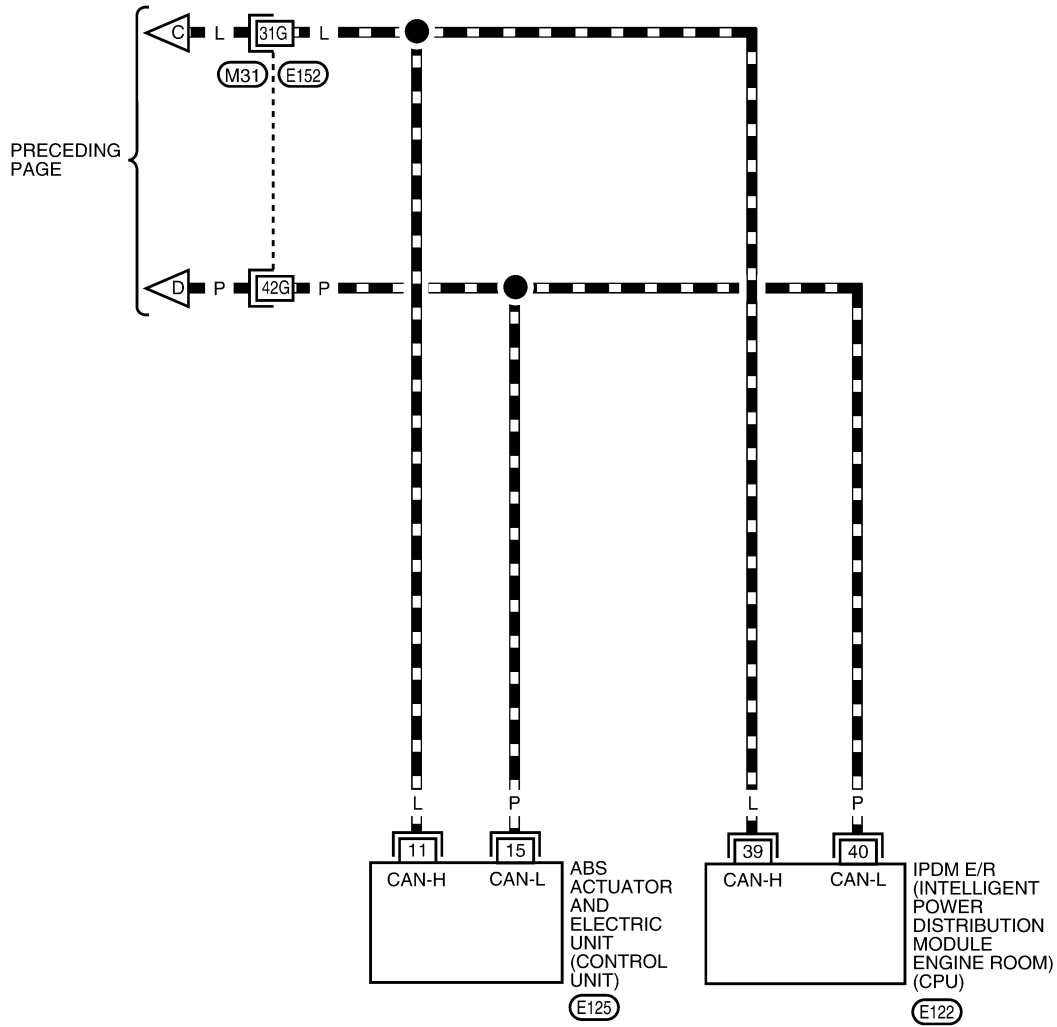
27	28	29	30	31	32	33	34	35
36	37	38	39	40	41	42	43	44

(M50)
W

BKWA0426E

LAN-CAN-03

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0427E

Work Flow

- When there are no indications of "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN CONSULT-II	➔	SELECT SYSTEM
ENGINE		ENGINE
START (NISSAN BASED VHCL)		A/T
START (RENAULT BASED VHCL)		ABS
SUB MODE		AIR BAG
LIGHT COPY		BCM
		METER A/C AMP
		BACK LIGHT COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	➔	SELF-DIAG RESULTS
WORK SUPPORT		DTC RESULTS TIME
SELF-DIAG RESULTS		CAN COMM CIRCUIT [U1000] 0
DATA MONITOR		F.F.DATA
DATA MONITOR (SPEC)		ERASE PRINT
CAN DIAG SUPPORT MNTR		MODE BACK LIGHT COPY
ACTIVE TEST		
Scroll Down		
BACK LIGHT COPY		

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	➔	CAN DIAG SUPPORT MNTR
WORK SUPPORT		ENGINE
SELF-DIAG RESULTS		PRSRNT
DATA MONITOR		INITIAL DIAG OK
DATA MONITOR (SPEC)		TRANSMIT DIAG OK
CAN DIAG SUPPORT MNTR		TCM OK
ACTIVE TEST		VDC/TCS/ABS OK
Scroll Down		METER/M&A OK
BACK LIGHT COPY		ICC UNKWN
		BCM/SEC OK
		IPDM E/R OK
		AWD/4WD/e4WD UNKWN
		PRINT Scroll Down
		MODE BACK LIGHT COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-30, "CHECK SHEET"](#).

- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-30, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-32, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

CAN SYSTEM (TYPE 1)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

CAN SYSTEM (TYPE 1)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

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IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

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A/T
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MNTR

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BCM
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HVAC
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ABS
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IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6628E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

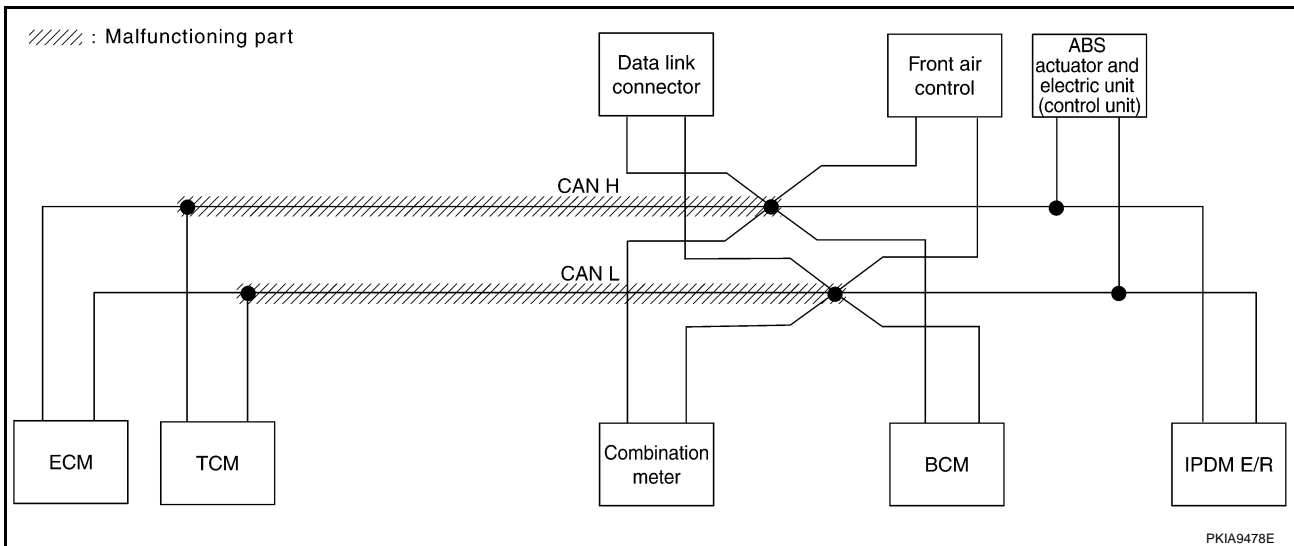
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-43, "Circuit Check Between TCM and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	—	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—

PKIB6629E



CAN SYSTEM (TYPE 1)

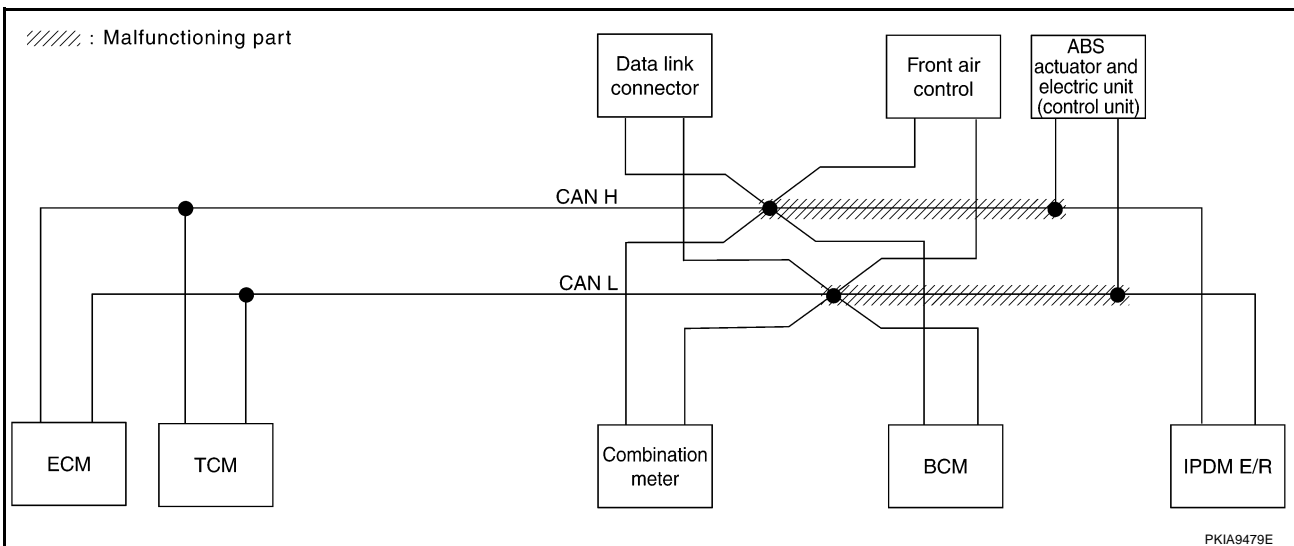
[CAN]

Case 2

Check harness between data link connector and IPDM E/R. Refer to [LAN-44, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

PKIB6630E

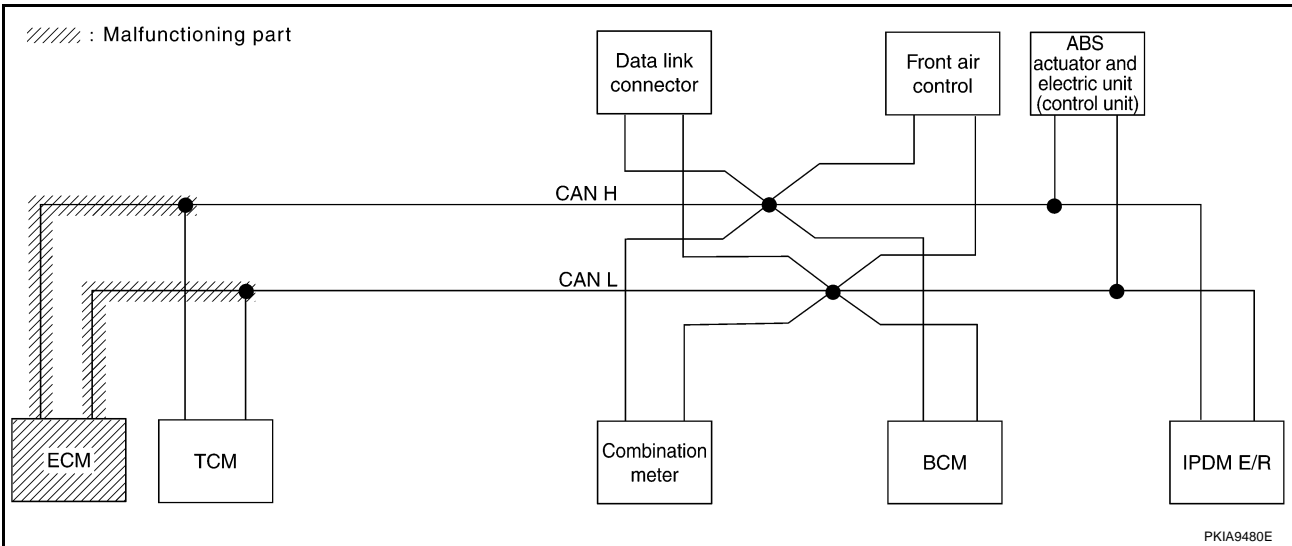


Case 3

Check ECM circuit. Refer to [LAN-45, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	-	NG	UNKWN ✓	-	UNKWN ✓	UNKWN ✓	UNKWN ✓	-	UNKWN ✓
A/T	-	NG	UNKWN	UNKWN ✓	-	UNKWN	-	-	-
BCM	No indication	NG	UNKWN	UNKWN ✓	-	UNKWN	-	-	UNKWN
HVAC	No indication	-	UNKWN	UNKWN ✓	-	-	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	UNKWN ✓	-	-	-	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN ✓	-	-	UNKWN	-	-

PKIB6631E

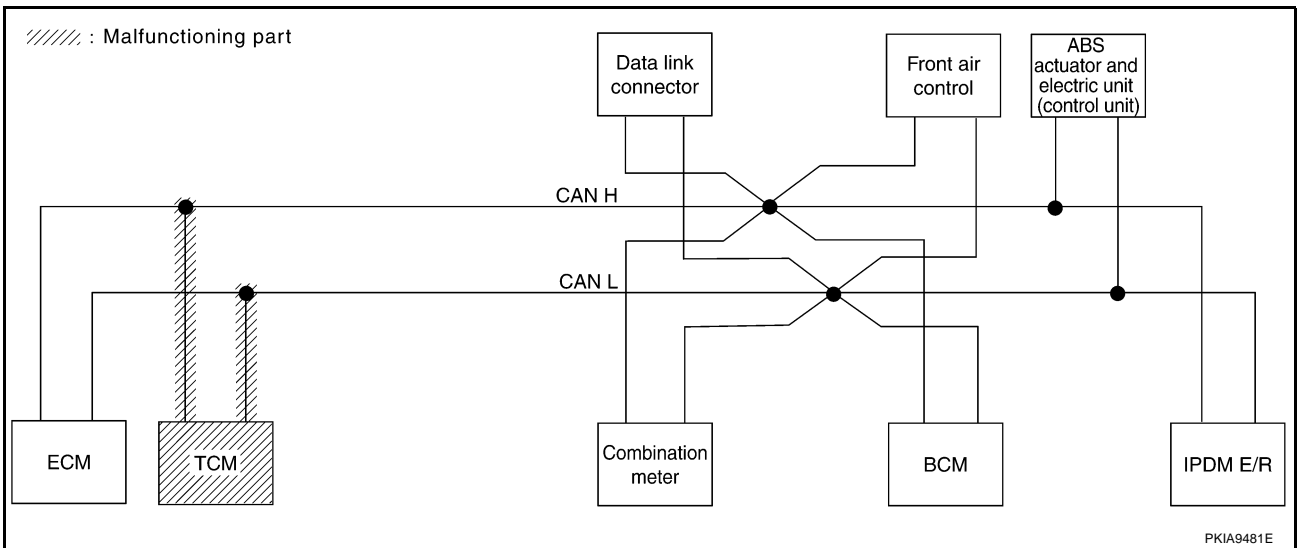


Case 4

Check TCM circuit. Refer to [LAN-46, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN
A/T	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	-
BCM	No indication	NG	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN
HVAC	No indication	-	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	-

PKIB6632E

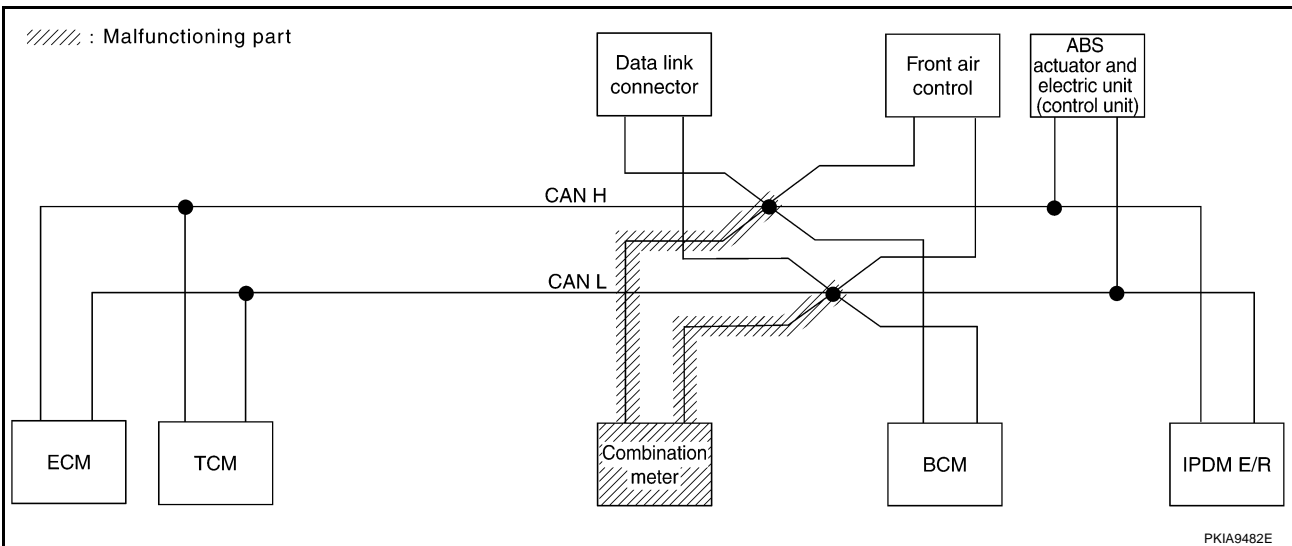


Case 5

Check combination meter circuit. Refer to [LAN-46, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN ✓	UNKWN	-	UNKWN
A/T	-	NG	UNKWN	UNKWN	-	UNKWN ✓	-	-	-
BCM	No indication	NG	UNKWN	UNKWN	-	UNKWN ✓	-	-	UNKWN
HVAC	No indication	-	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	-

PKIB6633E



CAN SYSTEM (TYPE 1)

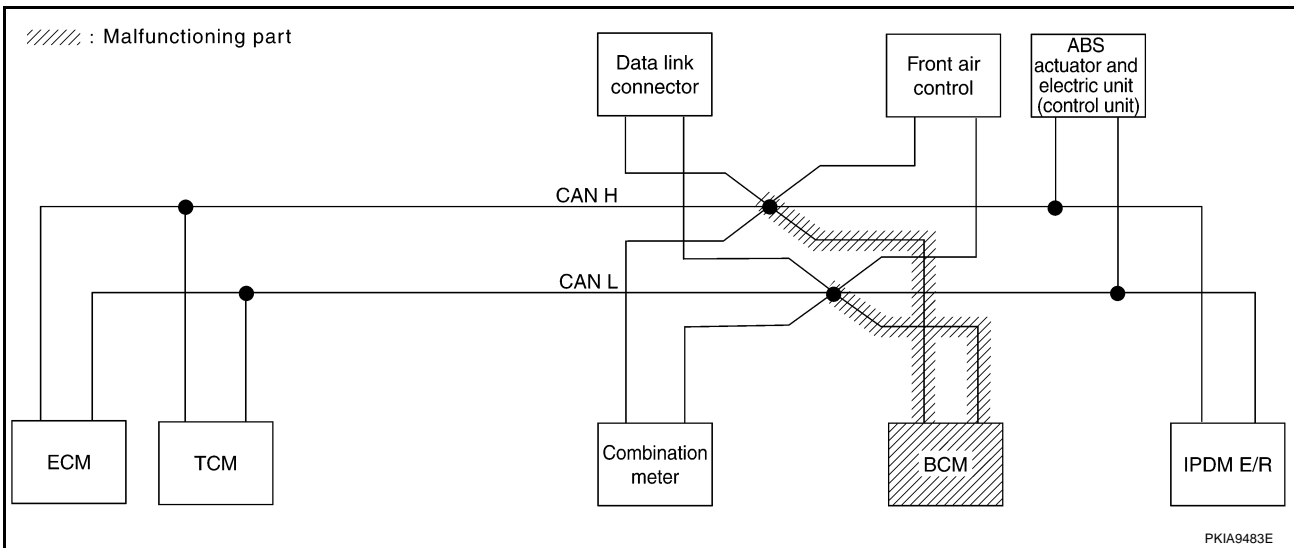
[CAN]

Case 6

Check BCM circuit. Refer to [LAN-47, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	—

PKIB6634E



CAN SYSTEM (TYPE 1)

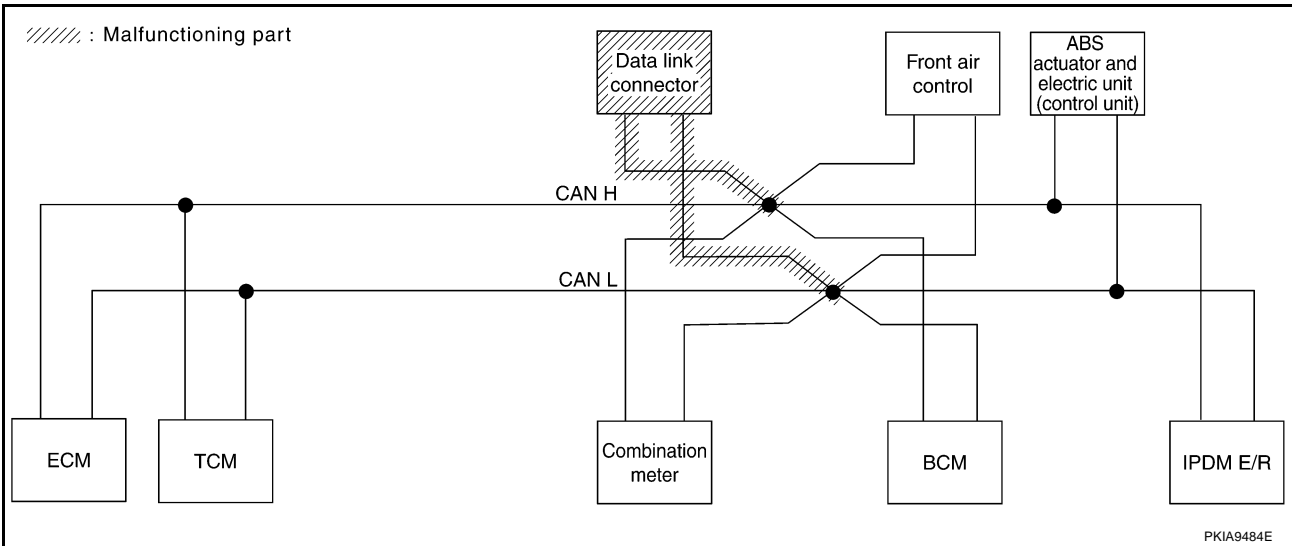
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-47, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

PKIB6635E

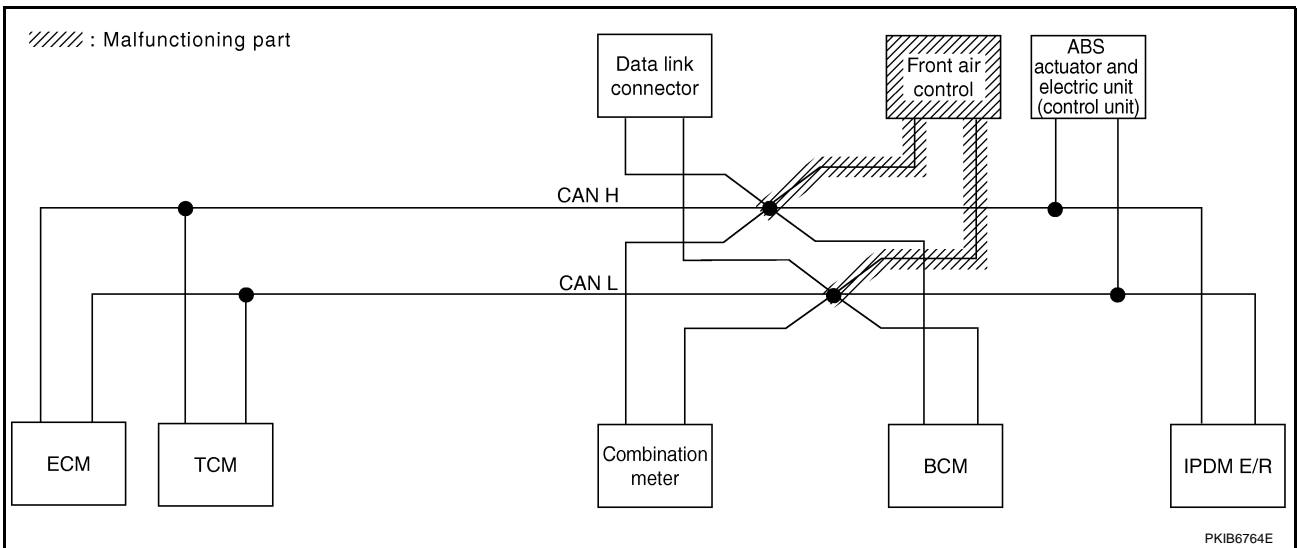


Case 8

Check front air control circuit. Refer to [LAN-48, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN
A/T	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	-
BCM	No indication	NG	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN
HVAC	No indication ✓	-	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	-

PKIB6636E



CAN SYSTEM (TYPE 1)

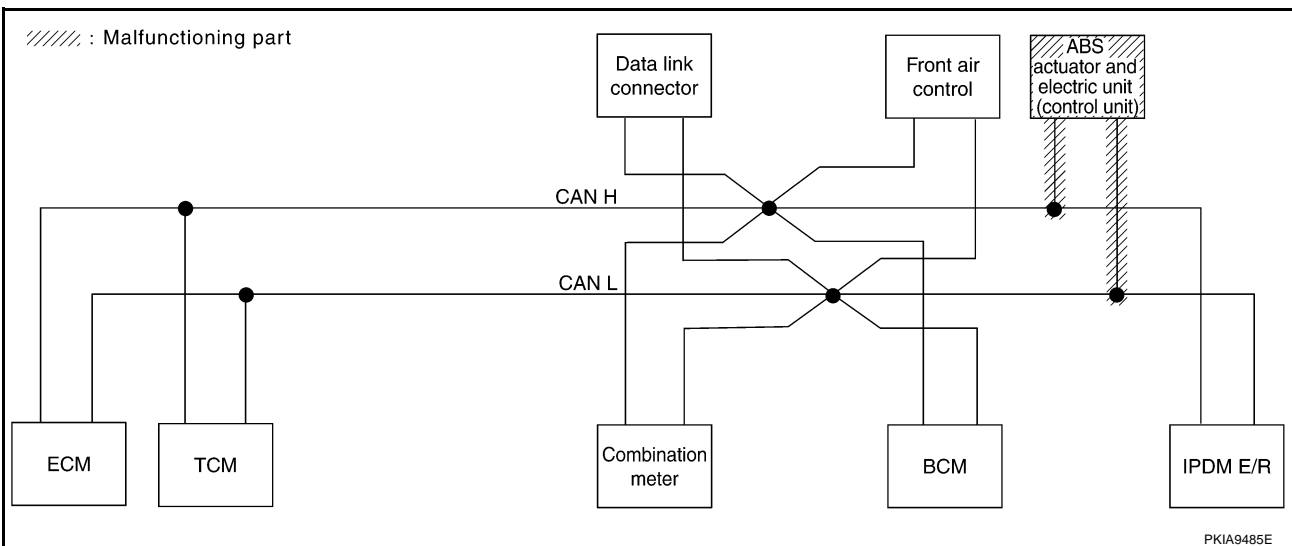
[CAN]

Case 9

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-48, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

PKIB6637E



CAN SYSTEM (TYPE 1)

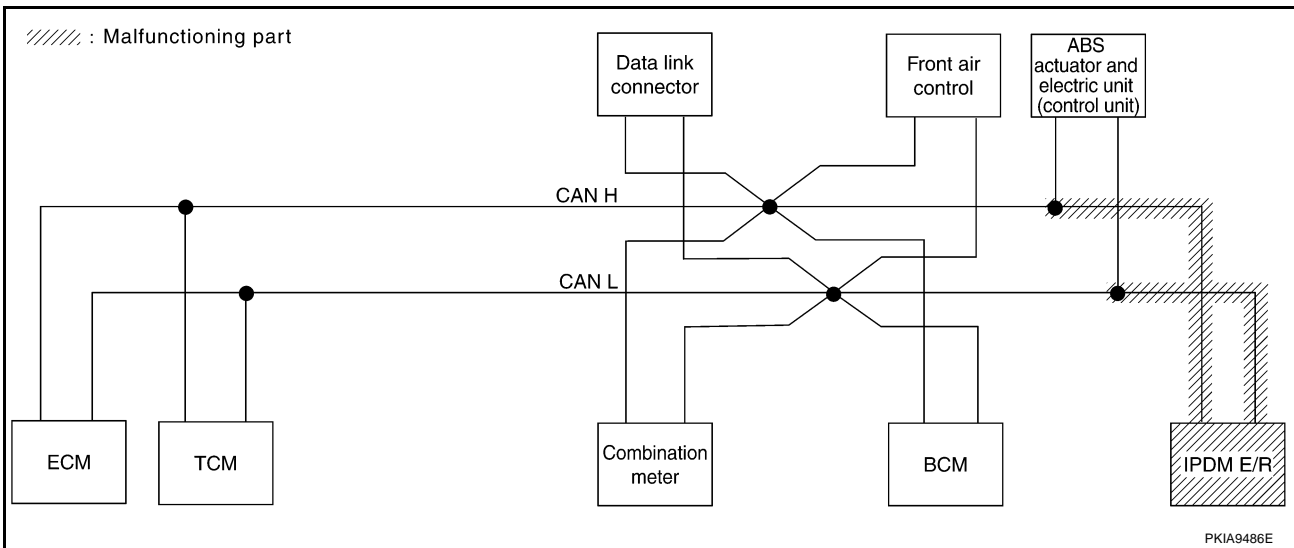
[CAN]

Case 10

Check IPDM E/R circuit. Refer to [LAN-49, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

PKIB6638E



CAN SYSTEM (TYPE 1)

[CAN]

Case 11

Check CAN communication circuit. Refer to [LAN-50, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—
BCM	No indication 	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication 	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG 	UNKW N	UNKW N	—	—	—	—	—
IPDM E/R	No indication 	—	UNKW N	UNKW N	—	—	UNKW N	—	—

PKIB6639E

Case 12

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-50, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	—	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—

PKIB6640E

Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-50, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS/ ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN
A/T	-	NG	UNKWN	✓	-	✓	-	-	-
BCM	No indication	NG	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN
HVAC	No indication	-	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-
ABS	-	NG	UNKWN	✓	-	-	-	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	-

PKIB6641E

Circuit Check Between TCM and Data Link Connector

UKS001AP

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E34
 - Harness connector B40
 - Harness connector B69
 - Harness connector M40

OK or NG

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

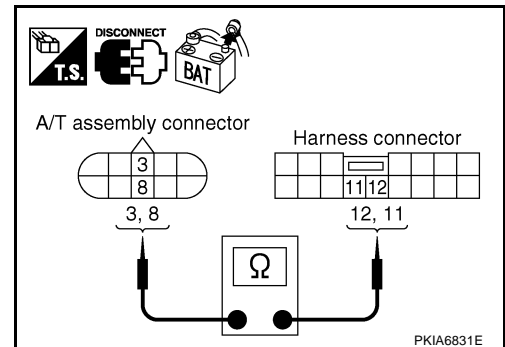
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

3 (L) - 12 (L) : Continuity should exist.
8 (P) - 11 (P) : Continuity should exist.

OK or NG

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



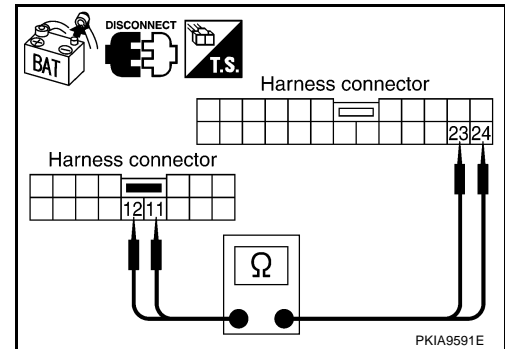
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E34.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E34 terminals 24 (L), 23 (P).

12 (L) - 24 (L) : Continuity should exist.
11 (P) - 23 (P) : Continuity should exist.

OK or NG

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



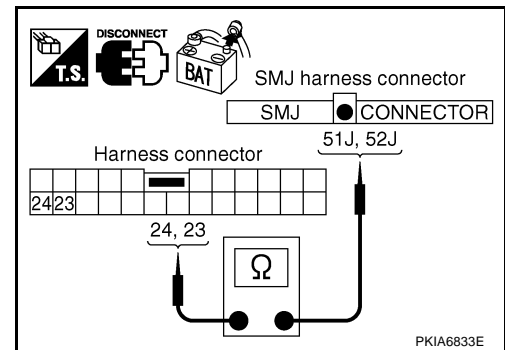
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B69.
2. Check continuity between harness connector B40 terminals 24 (L), 23 (P) and harness connector B69 terminals 51J (L), 52J (P).

24 (L) - 51J (L) : Continuity should exist.
23 (P) - 52J (P) : Continuity should exist.

OK or NG

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



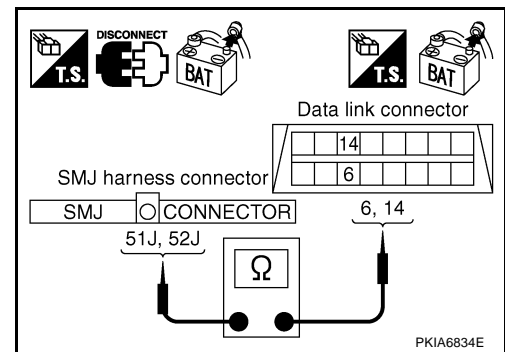
5. CHECK HARNESS FOR OPEN CIRCUIT

Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.
52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-29, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS001A0

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

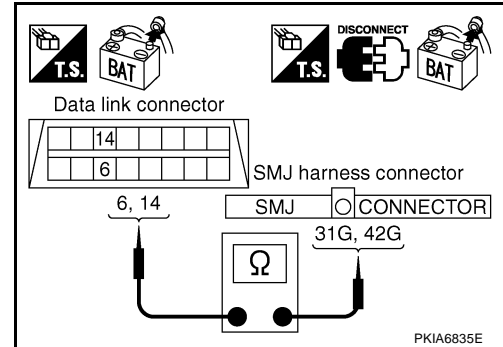
6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

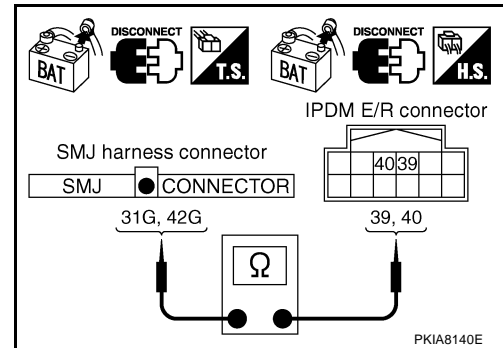
31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-29, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

A
B
C
D
E
F
G
H
I
J

LAN

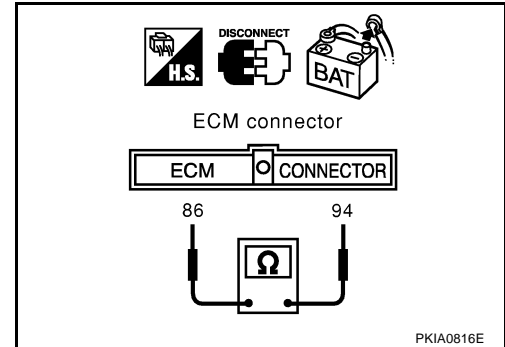
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.



UKS001AS

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

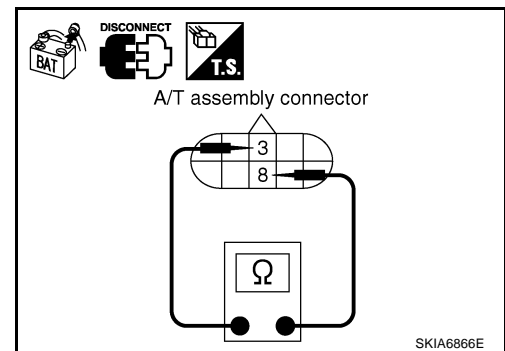
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



UKS001AT

Combination Meter Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

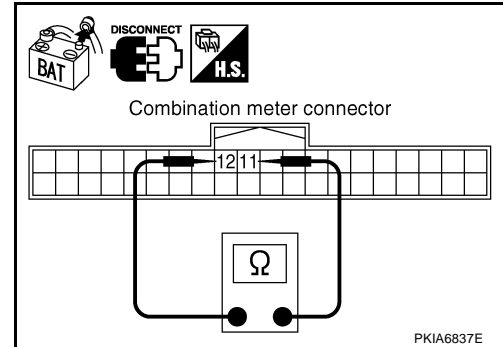
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



UKS001AU

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

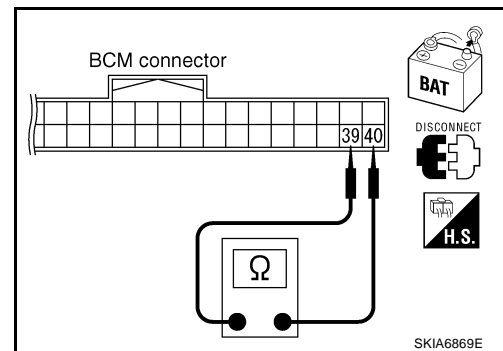
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



UKS001AV

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

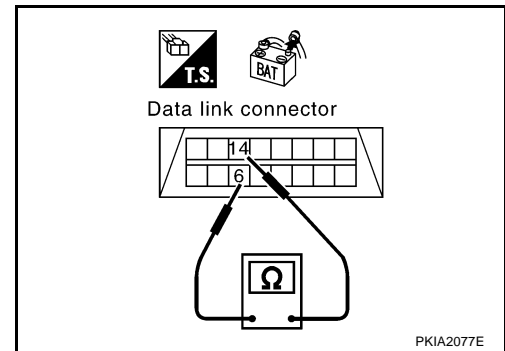
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-29, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

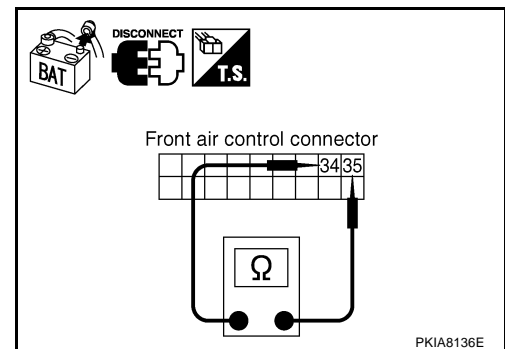
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

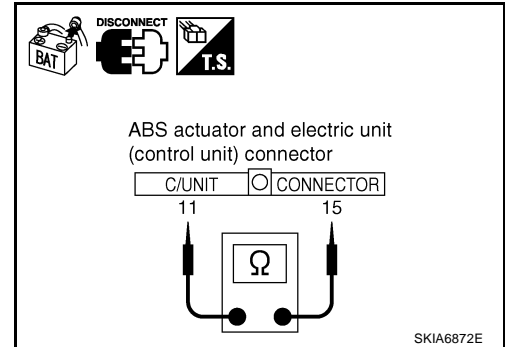
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



UKS001AY

IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

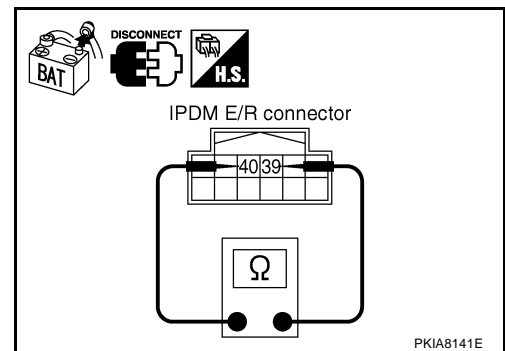
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



PKIA8141E

CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Combination meter
 - BCM
 - Front air control
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

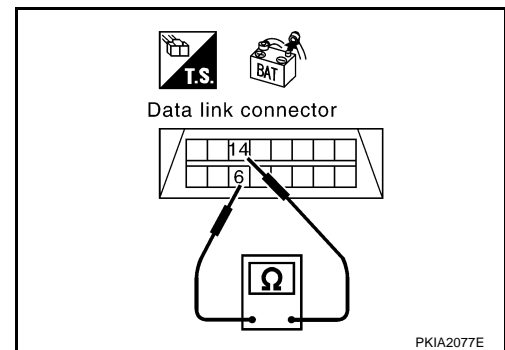
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

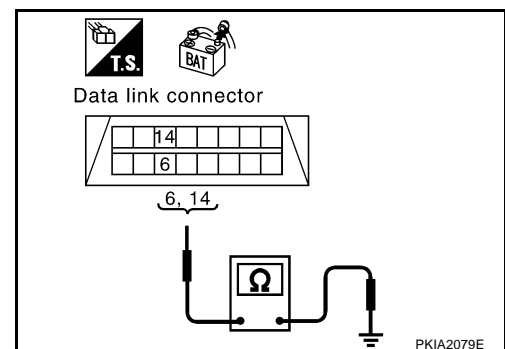
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-51, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .
 NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

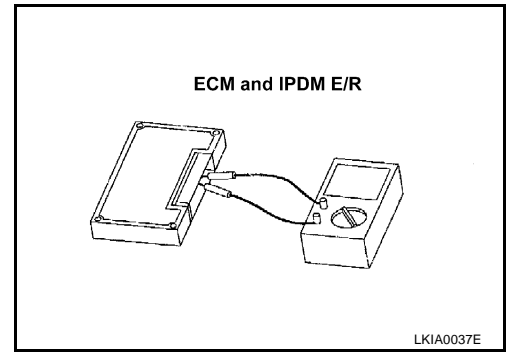
- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#) .

UKS001B1

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



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CAN SYSTEM (TYPE 2)

PF2:23710

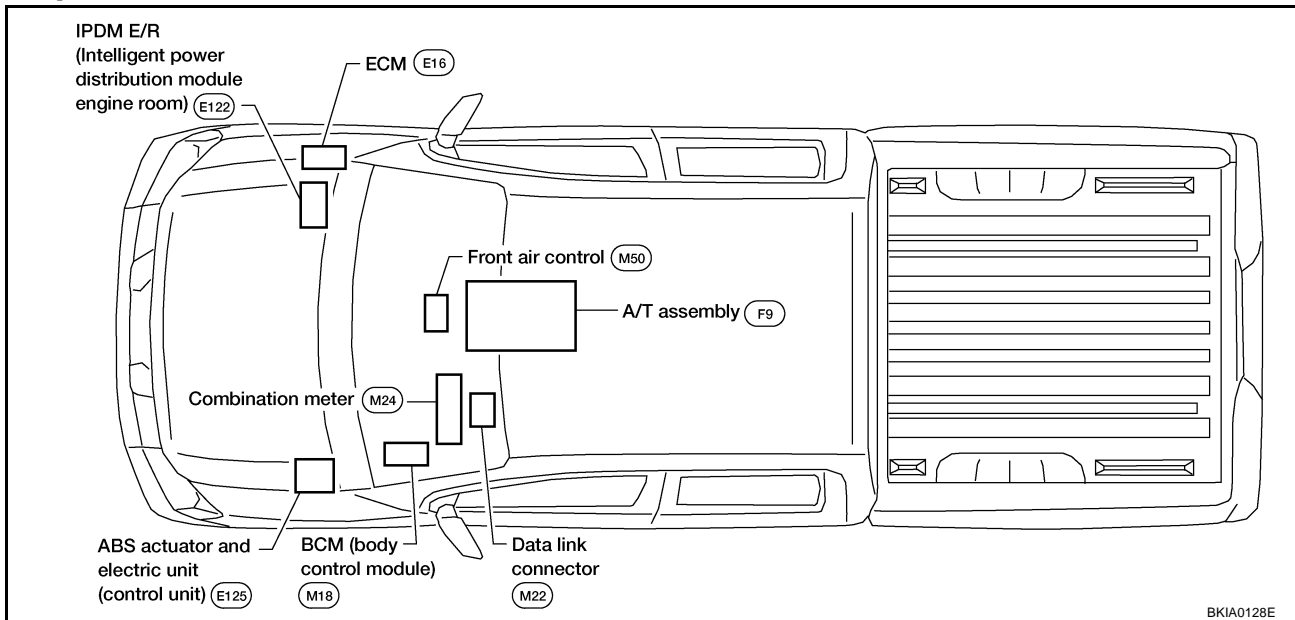
System Description

UKS003A0

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

UKS003AP

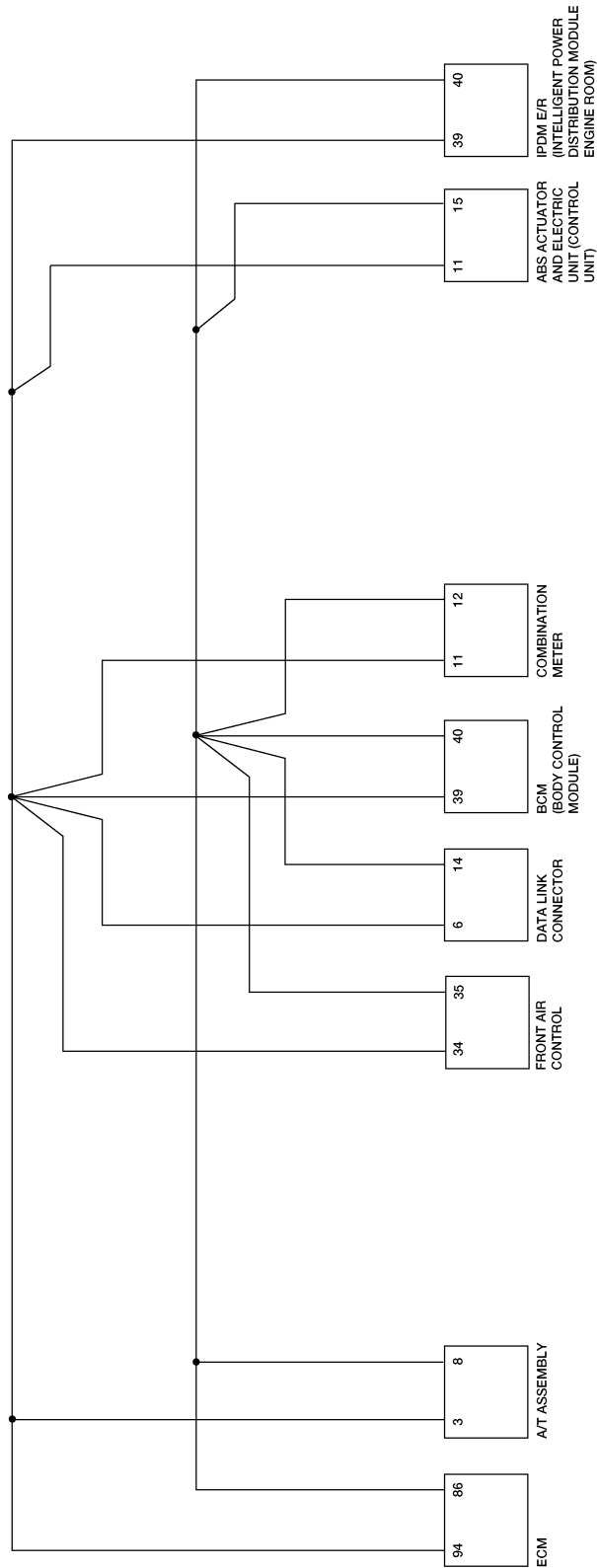


CAN SYSTEM (TYPE 2)

[CAN]

Schematic

UKS003A0



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BKWA0130E

CAN SYSTEM (TYPE 2)

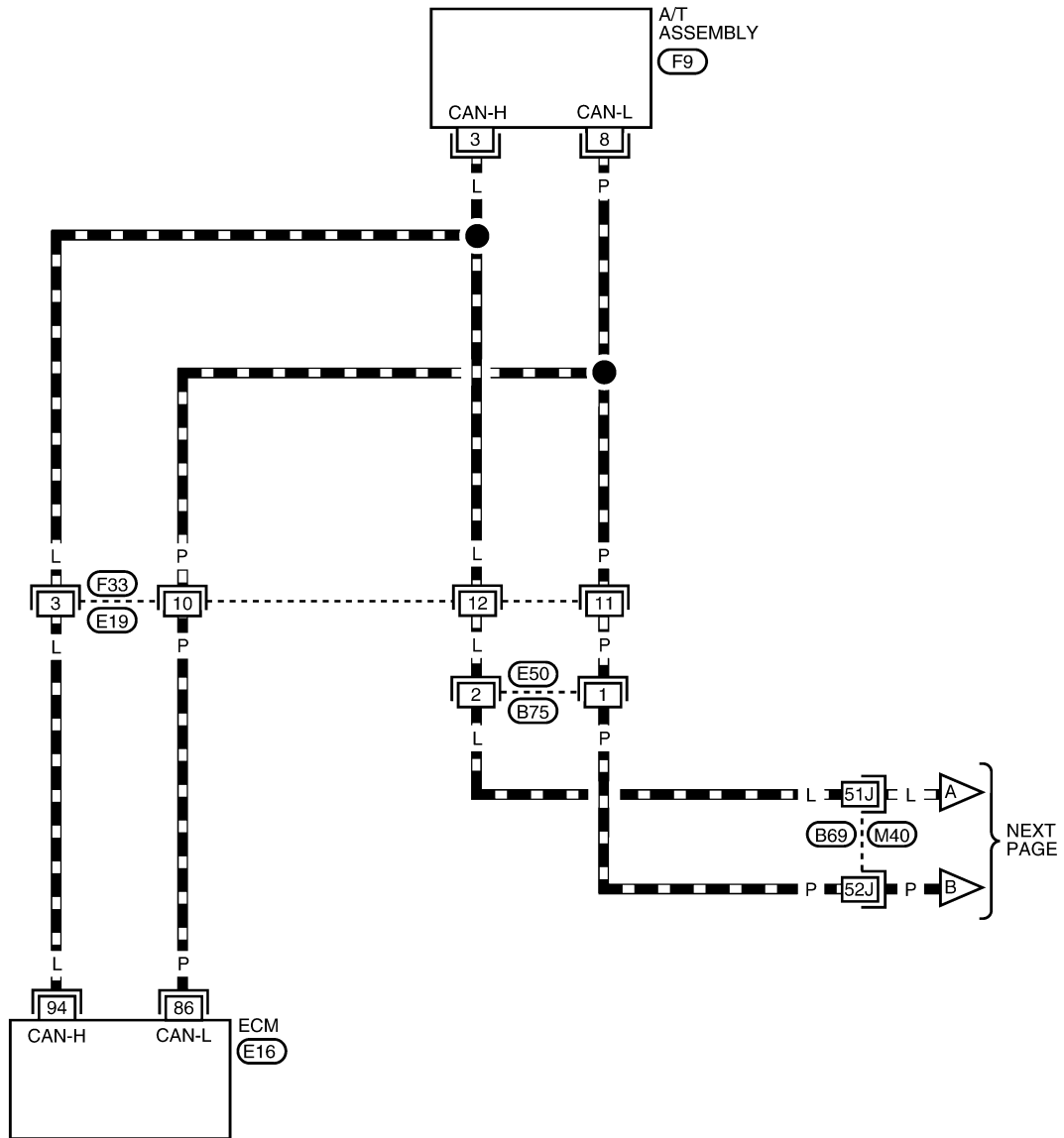
[CAN]

Wiring Diagram - CAN -

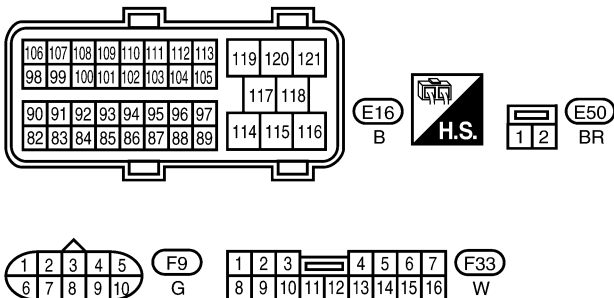
UKS003AR

LAN-CAN-04

▬ : DATA LINE



NEXT PAGE



REFER TO THE FOLLOWING.

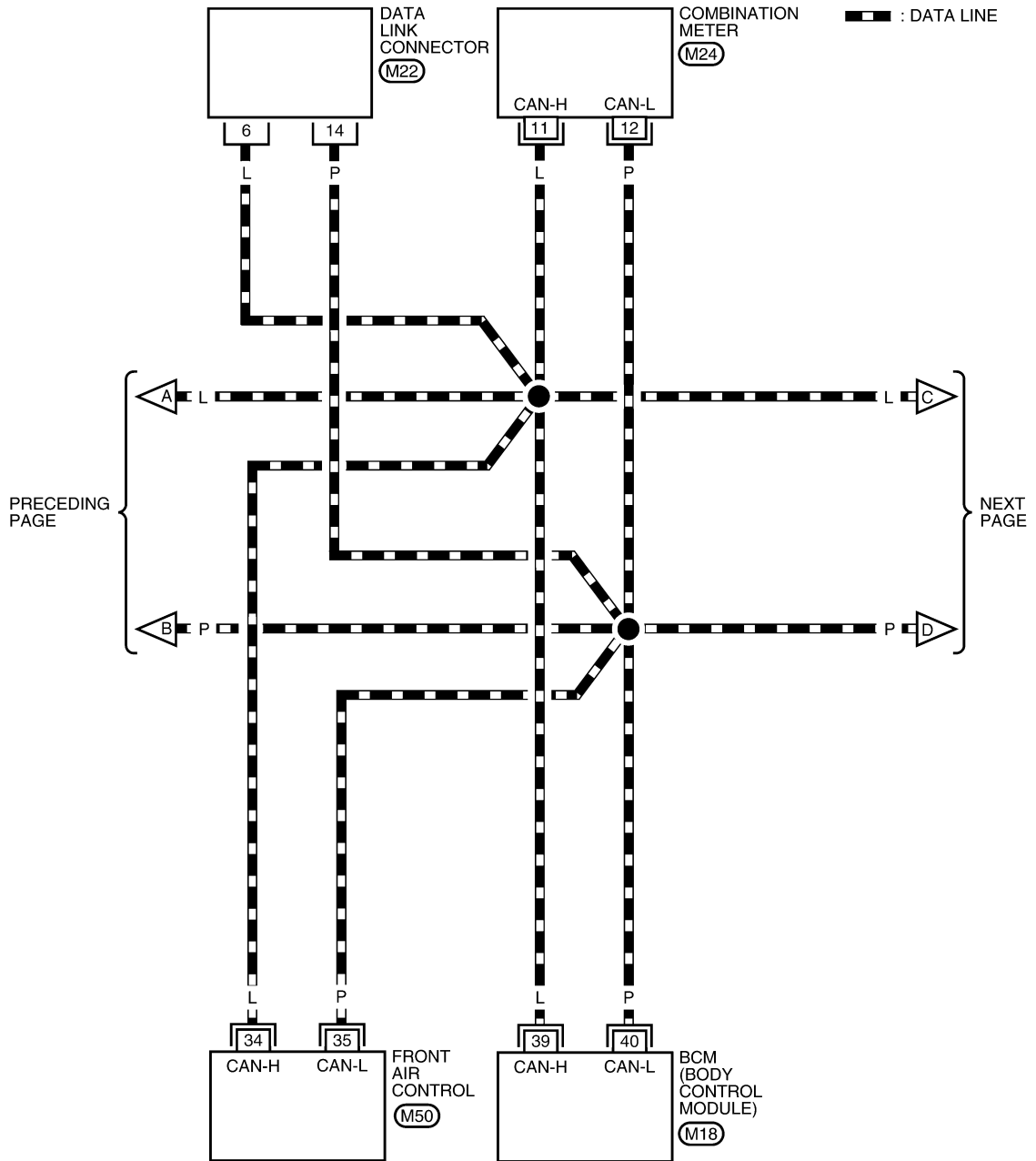
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0535E

CAN SYSTEM (TYPE 2)

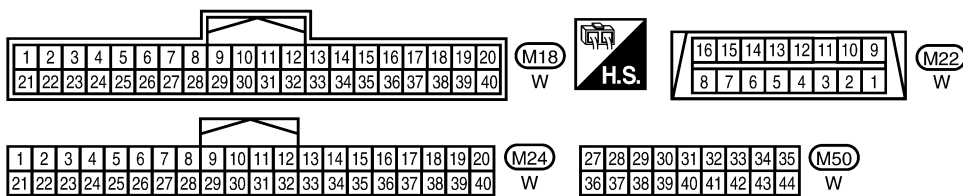
[CAN]

LAN-CAN-05



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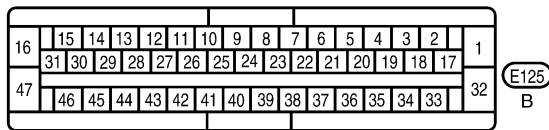
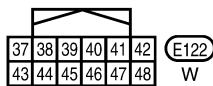
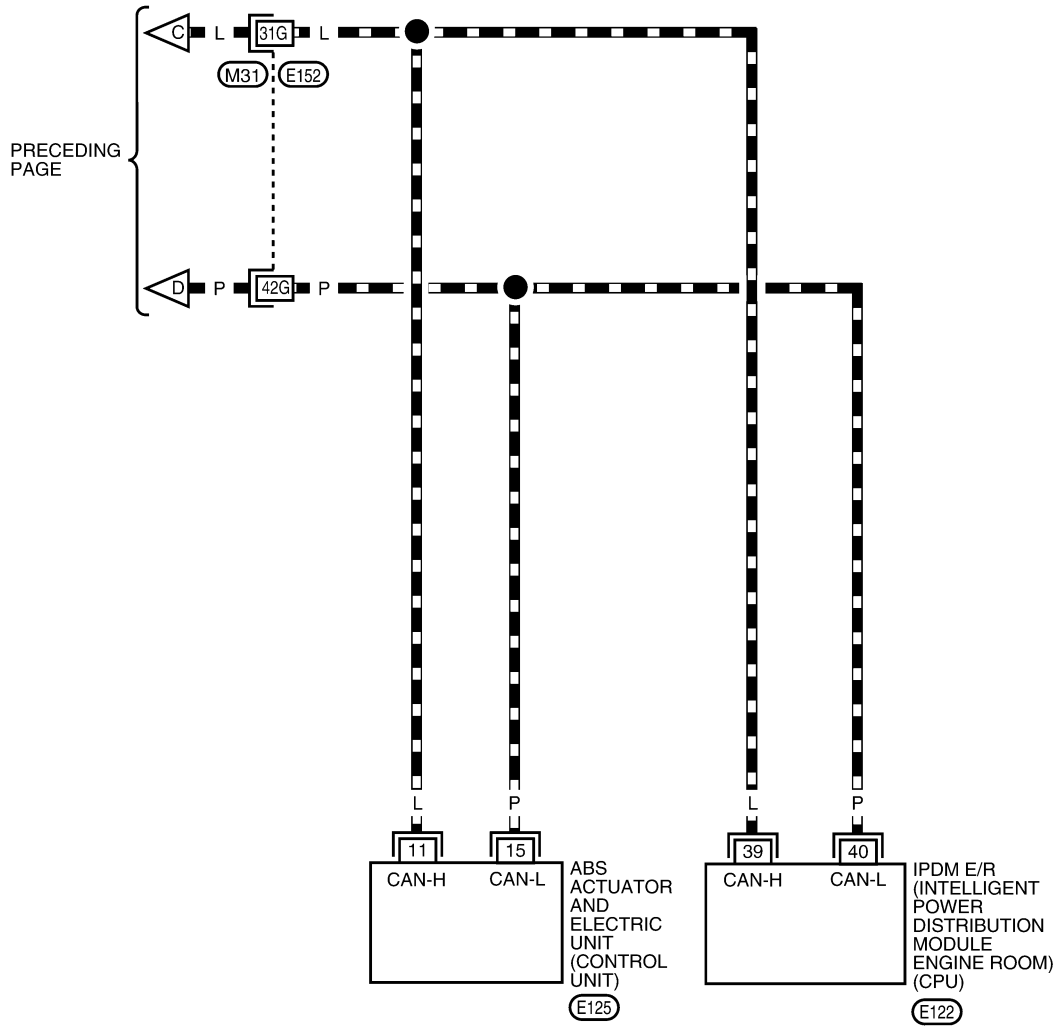
LAN



BKWA0536E

LAN-CAN-06

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0537E

Work Flow

- When there are no indications of "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN CONSULT-II	➔	SELECT SYSTEM
ENGINE		ENGINE
START (NISSAN BASED VHCL)		A/T
START (RENAULT BASED VHCL)		ABS
SUB MODE		AIR BAG
LIGHT COPY		BCM
		METER A/C AMP
		BACK LIGHT COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	➔	SELF-DIAG RESULTS
WORK SUPPORT		DTC RESULTS TIME
SELF-DIAG RESULTS		CAN COMM CIRCUIT [U1000] 0
DATA MONITOR		
DATA MONITOR (SPEC)		
CAN DIAG SUPPORT MNTR		F.F.DATA
ACTIVE TEST		ERASE PRINT
Scroll Down		MODE BACK LIGHT COPY
BACK LIGHT COPY		

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	➔	CAN DIAG SUPPORT MNTR
WORK SUPPORT		ENGINE
SELF-DIAG RESULTS		PRSNR
DATA MONITOR		INITIAL DIAG OK
DATA MONITOR (SPEC)		TRANSMIT DIAG OK
CAN DIAG SUPPORT MNTR		TCM OK
ACTIVE TEST		VDC/TCS/ABS OK
Scroll Down		METER/M&A OK
BACK LIGHT COPY		ICC UNKWN
		BCM/SEC OK
		IPDM E/R OK
		AWD/4WD/e4WD UNKWN
		PRINT Scroll Down
		MODE BACK LIGHT COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-58, "CHECK SHEET"](#).

- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-58, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-60, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

CAN SYSTEM (TYPE 2)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

CAN SYSTEM (TYPE 2)

[CAN]

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Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
HVAC
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6628E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

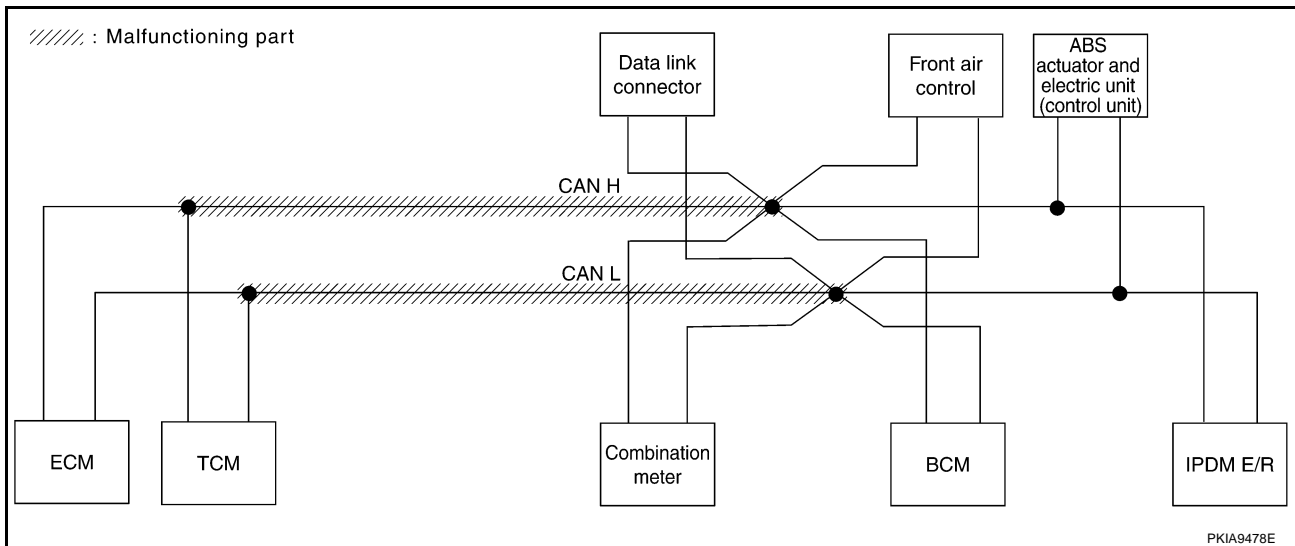
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-71, "Circuit Check Between TCM and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN ✓	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—

SKIB2704E



CAN SYSTEM (TYPE 2)

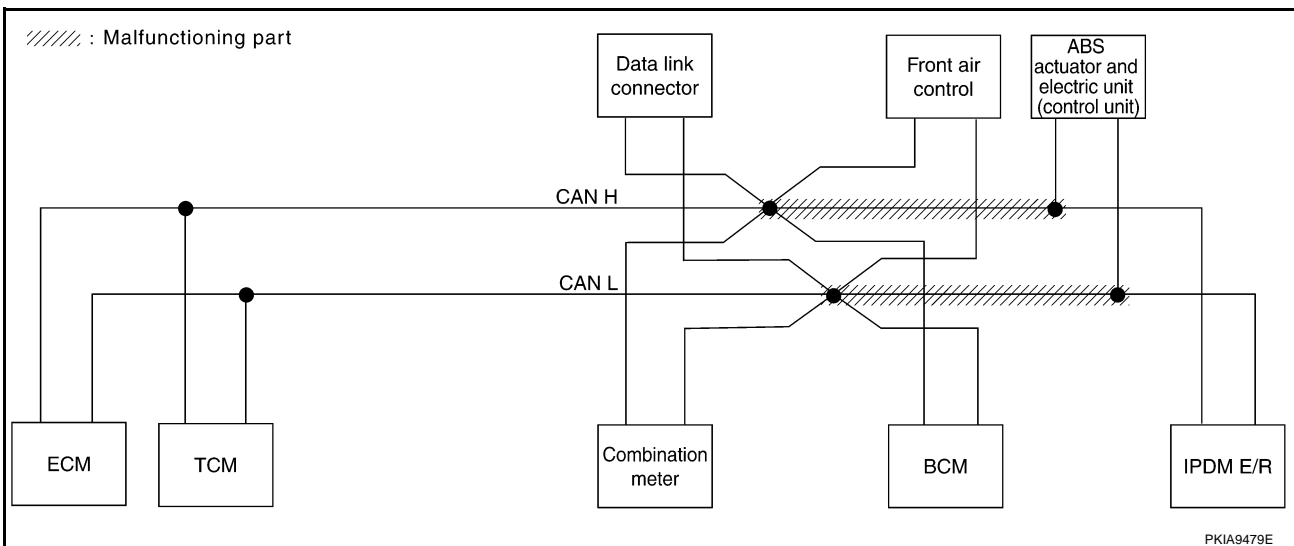
[CAN]

Case 2

Check harness between data link connector and IPDM E/R. Refer to [LAN-72, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2705E



CAN SYSTEM (TYPE 2)

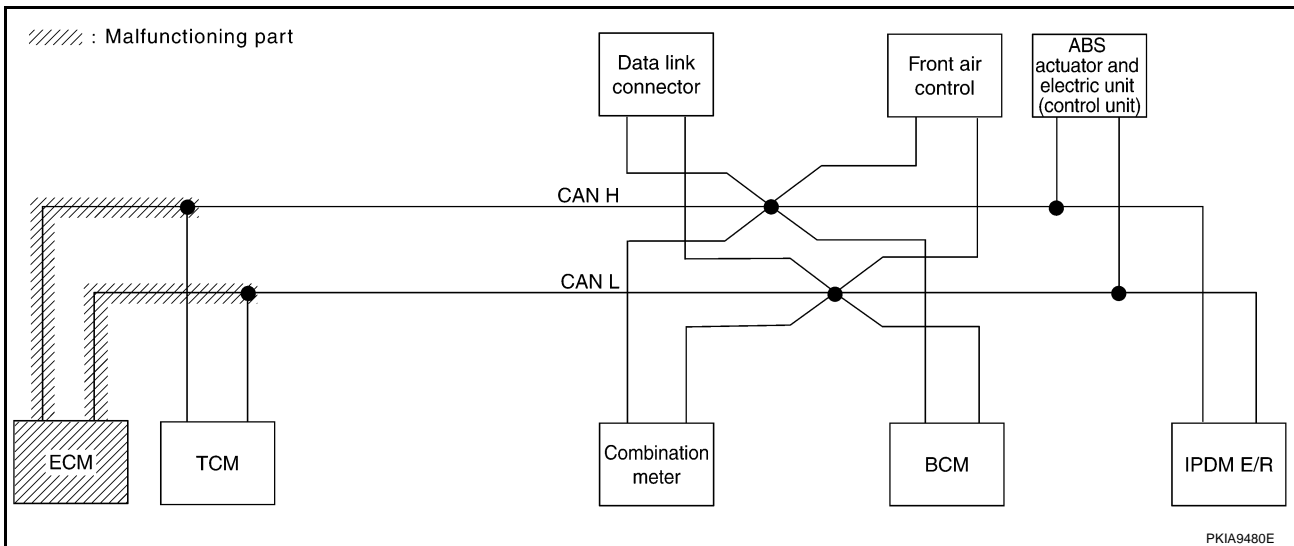
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-73, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—

SKIB2706E



PKIA9480E

CAN SYSTEM (TYPE 2)

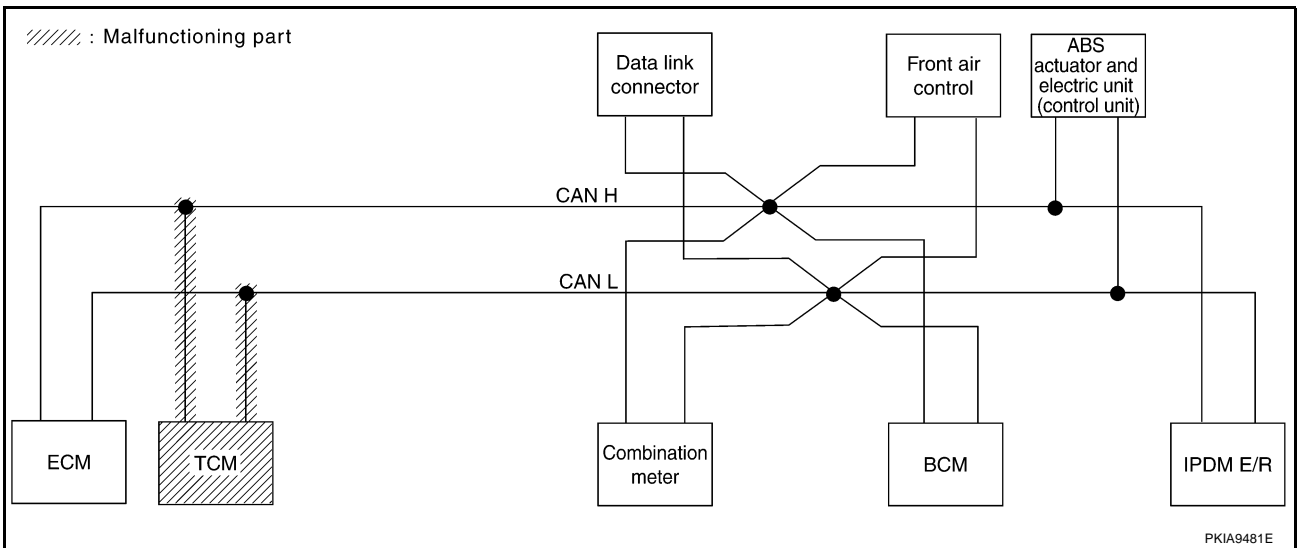
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-74, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2707E



CAN SYSTEM (TYPE 2)

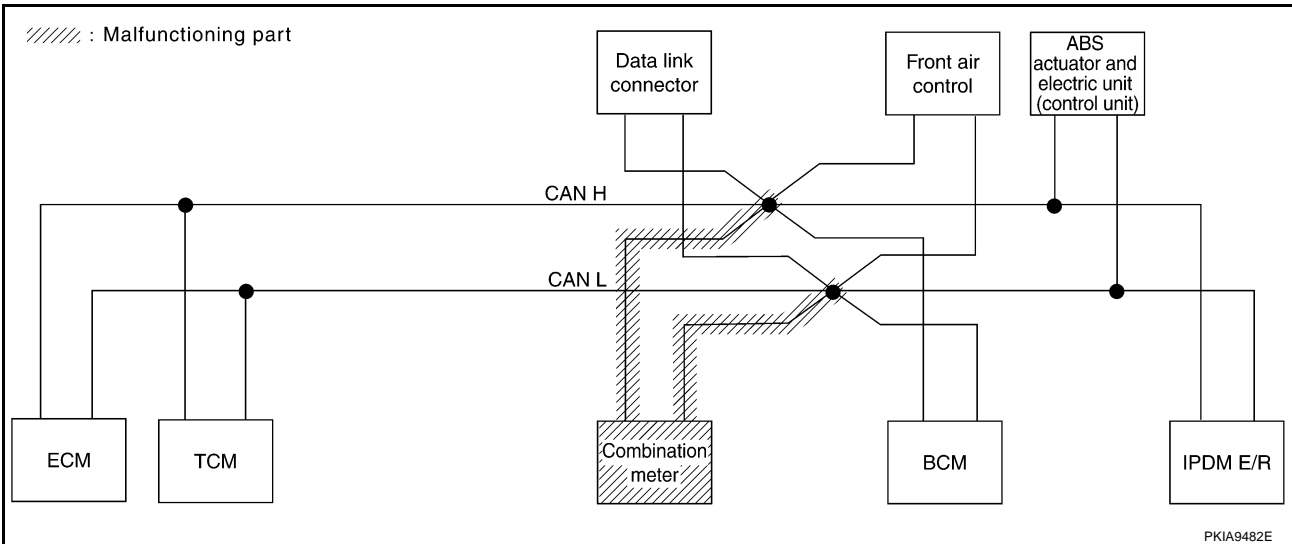
[CAN]

Case 5

Check combination meter circuit. Refer to [LAN-74, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2708E



PKIA9482E

CAN SYSTEM (TYPE 2)

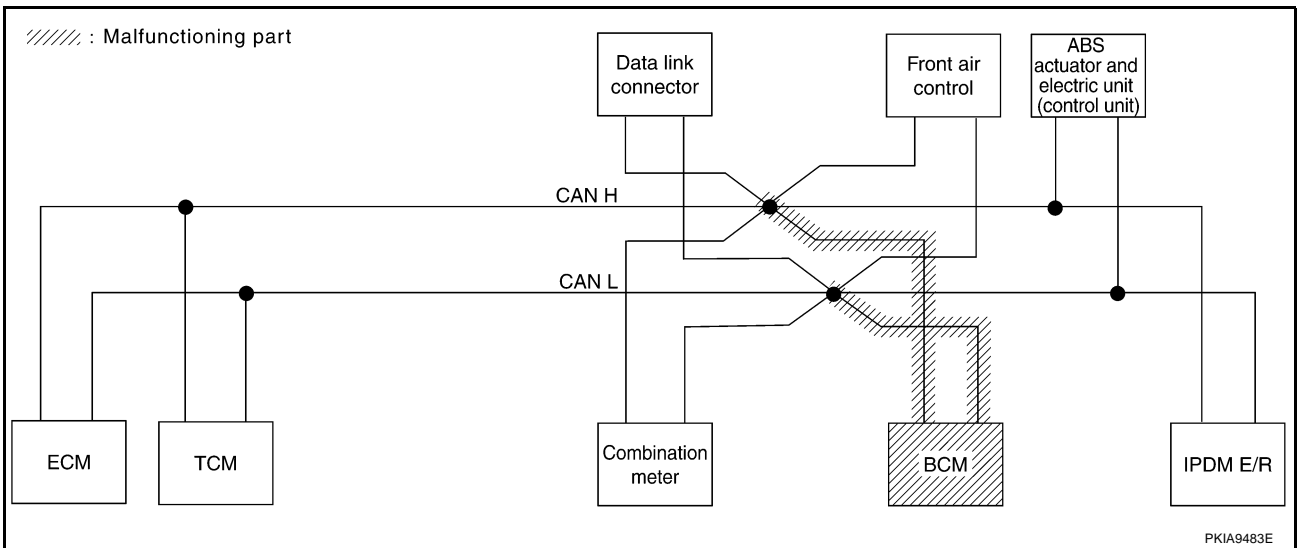
[CAN]

Case 6

Check BCM circuit. Refer to [LAN-75, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	—

SKIB2709E



CAN SYSTEM (TYPE 2)

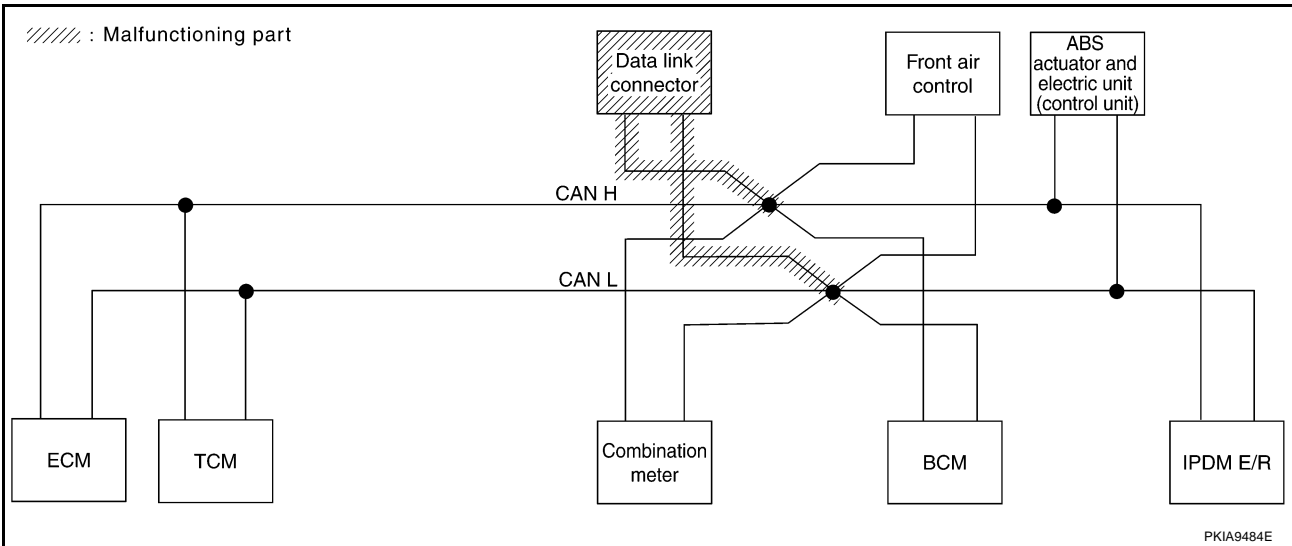
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-75, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2710E



PKIA9484E

CAN SYSTEM (TYPE 2)

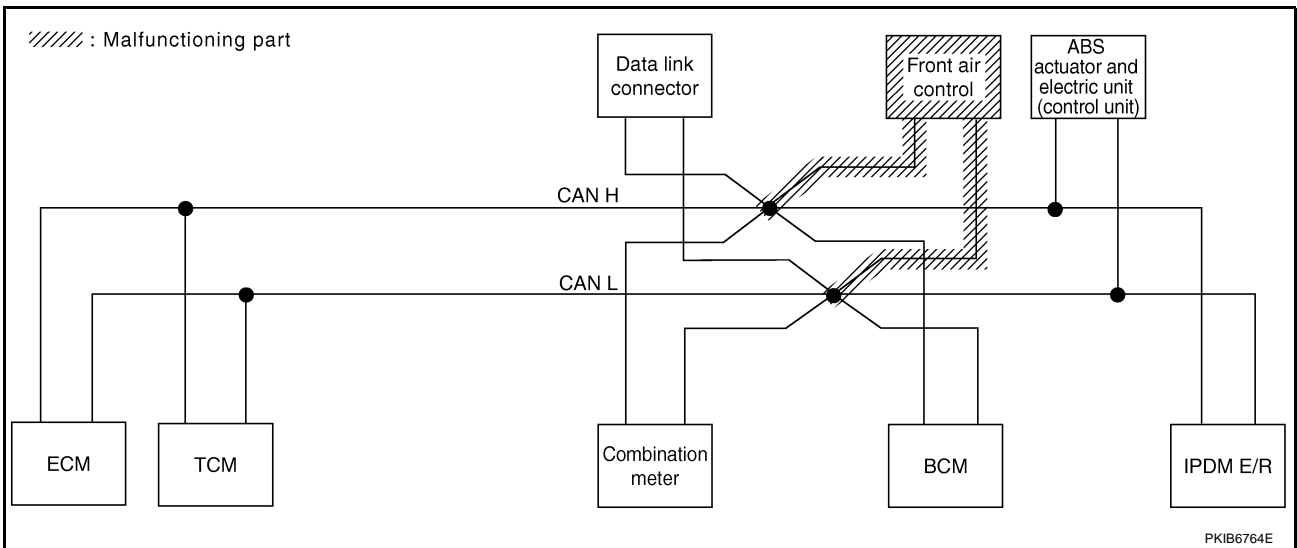
[CAN]

Case 8

Check front air control circuit. Refer to [LAN-76, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

PKIB6774E



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CAN SYSTEM (TYPE 2)

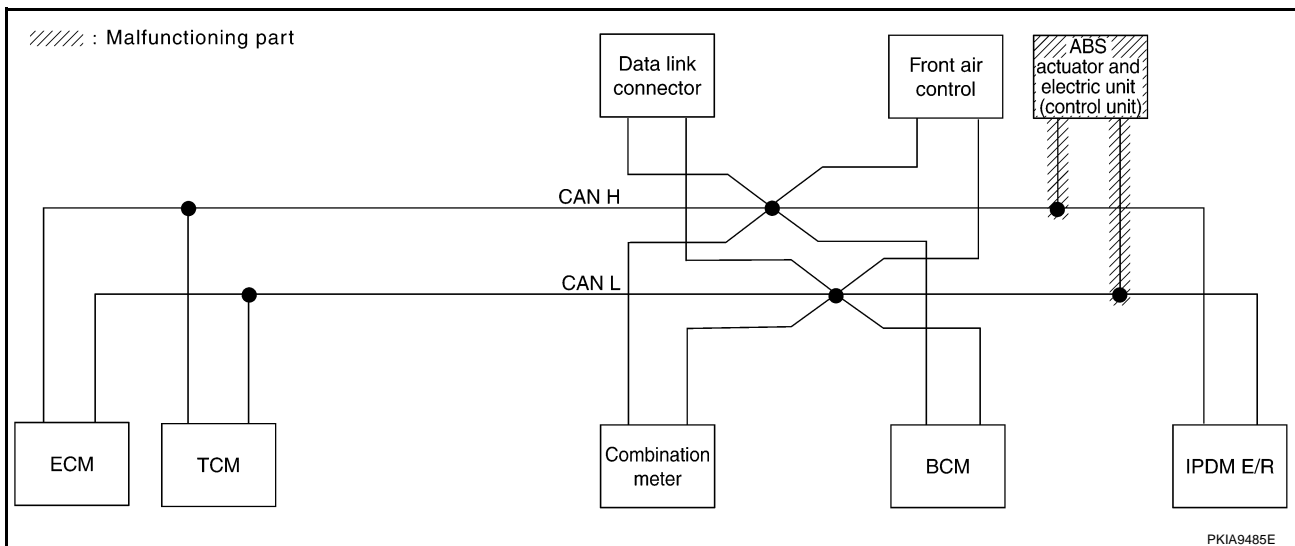
[CAN]

Case 9

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-76, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	✓	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2711E



PKIA9485E

CAN SYSTEM (TYPE 2)

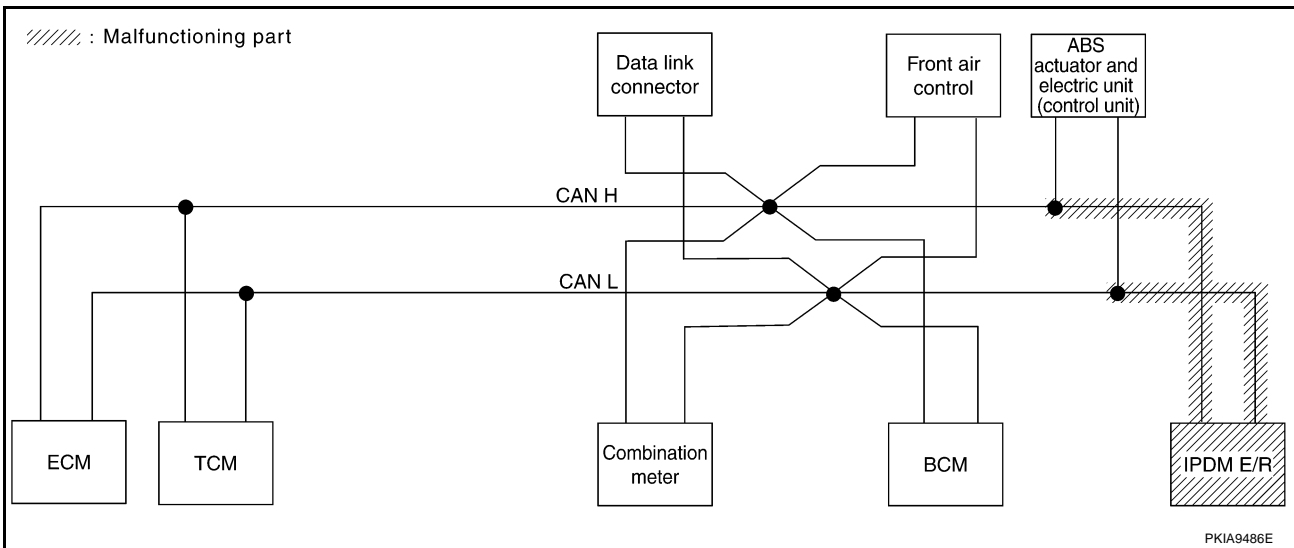
[CAN]

Case 10

Check IPDM E/R circuit. Refer to [LAN-77, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2712E



CAN SYSTEM (TYPE 2)

[CAN]

Case 11

Check CAN communication circuit. Refer to [LAN-78, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	—
BCM	No indication ✓	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—
IPDM E/R	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	—

SKIB2713E

Case 12

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-78, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—

SKIB2714E

Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-78, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2715E

Circuit Check Between TCM and Data Link Connector

UKS003AT

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E34
 - Harness connector B40
 - Harness connector B69
 - Harness connector M40

OK or NG

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

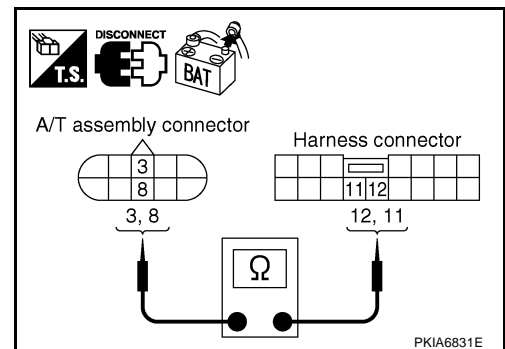
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

3 (L) - 12 (L) : Continuity should exist.
8 (P) - 11 (P) : Continuity should exist.

OK or NG

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



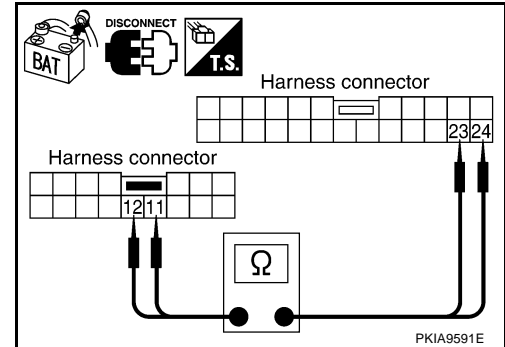
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E34.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E34 terminals 24 (L), 23 (P).

12 (L) - 24 (L) : Continuity should exist.
11 (P) - 23 (P) : Continuity should exist.

OK or NG

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



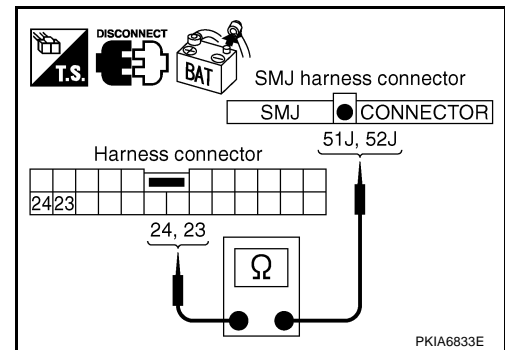
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B69.
2. Check continuity between harness connector B40 terminals 24 (L), 23 (P) and harness connector B69 terminals 51J (L), 52J (P).

24 (L) - 51J (L) : Continuity should exist.
23 (P) - 52J (P) : Continuity should exist.

OK or NG

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



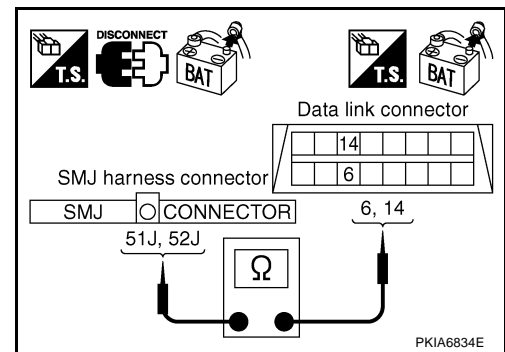
5. CHECK HARNESS FOR OPEN CIRCUIT

Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.
52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-57, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS003AU

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

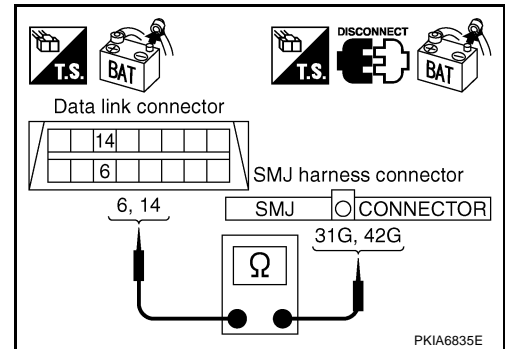
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.
14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



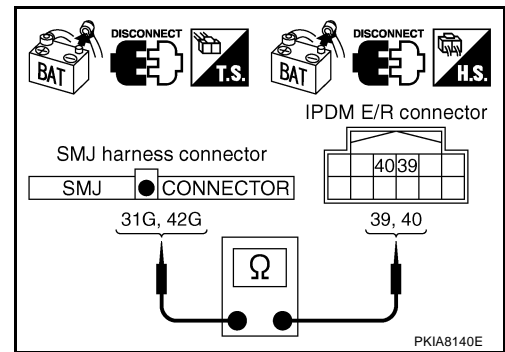
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.
42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-57, "Work Flow"](#).
- NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

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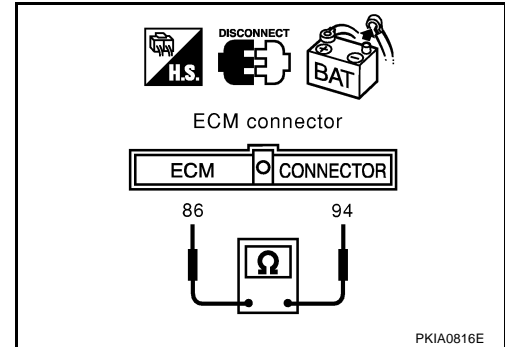
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.



UKS003AW

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

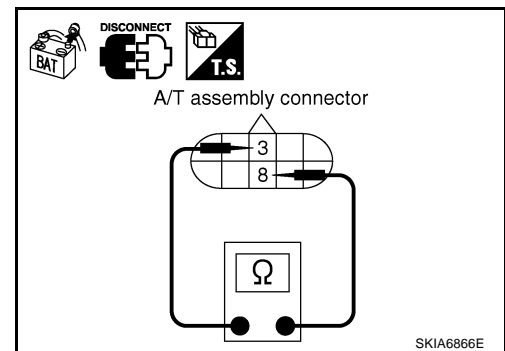
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



UKS003AX

Combination Meter Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

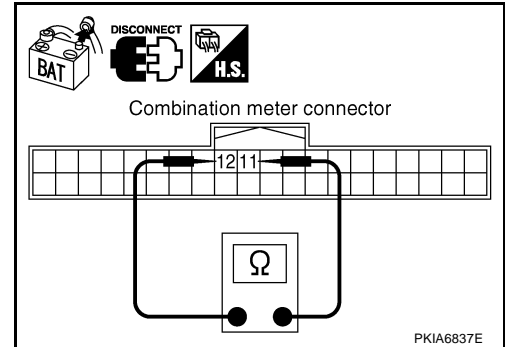
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



UKS003AY

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

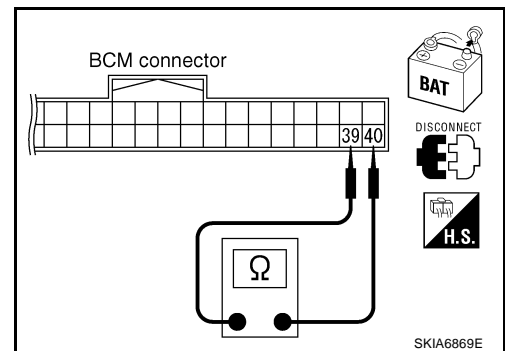
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



UKS003AZ

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

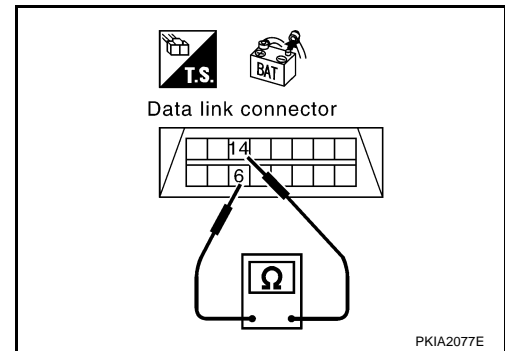
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-57, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

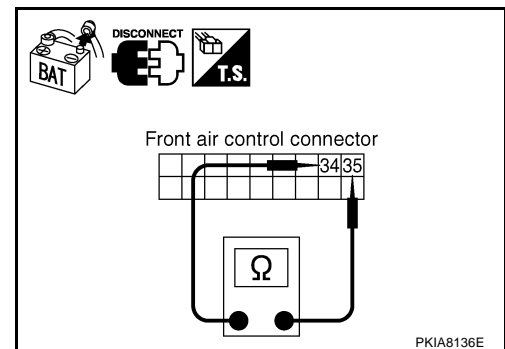
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

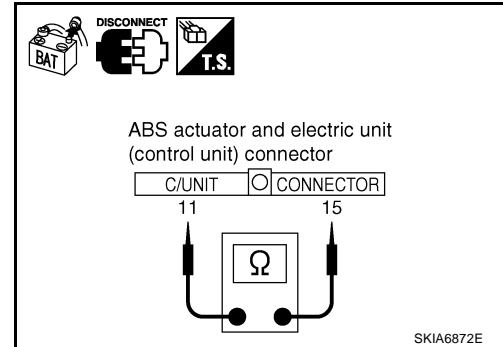
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



UKS003B1

IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

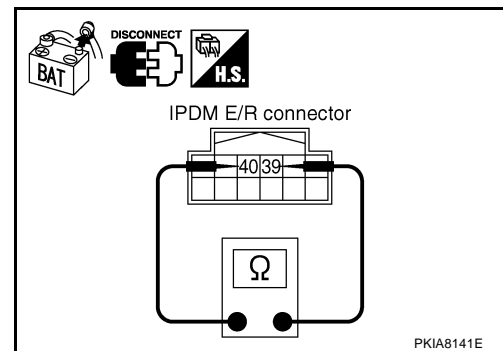
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



PKIA8141E

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CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Combination meter
 - BCM
 - Front air control
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

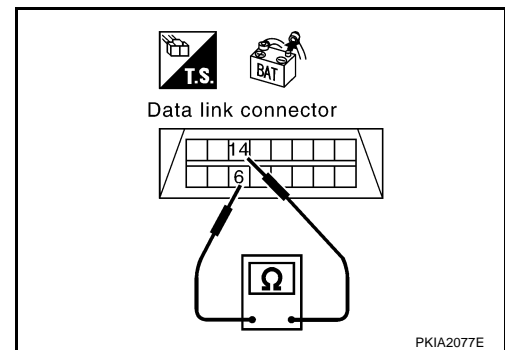
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

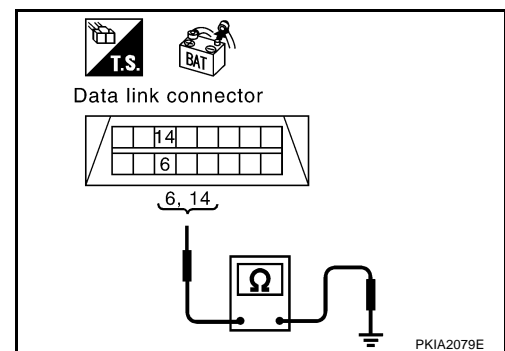
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-79, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .
 NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

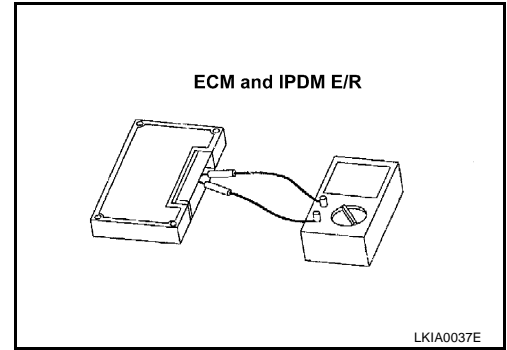
- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#) .

Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



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CAN SYSTEM (TYPE 3)

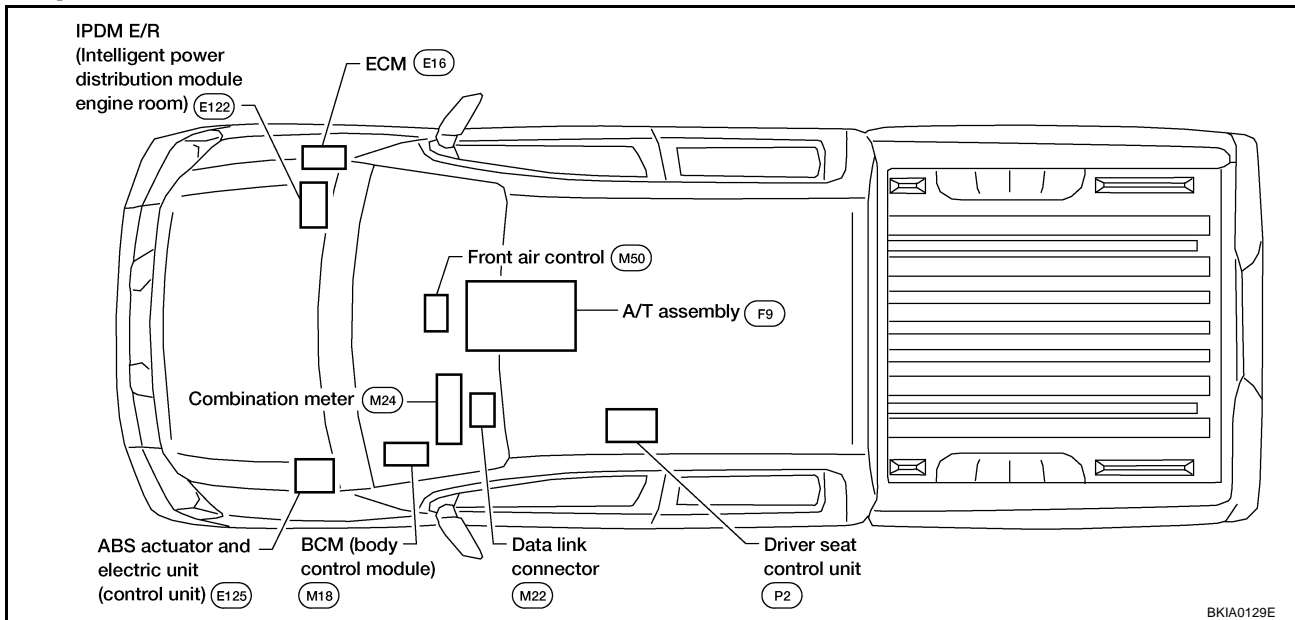
System Description

UKS003A5

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

UKS003A6

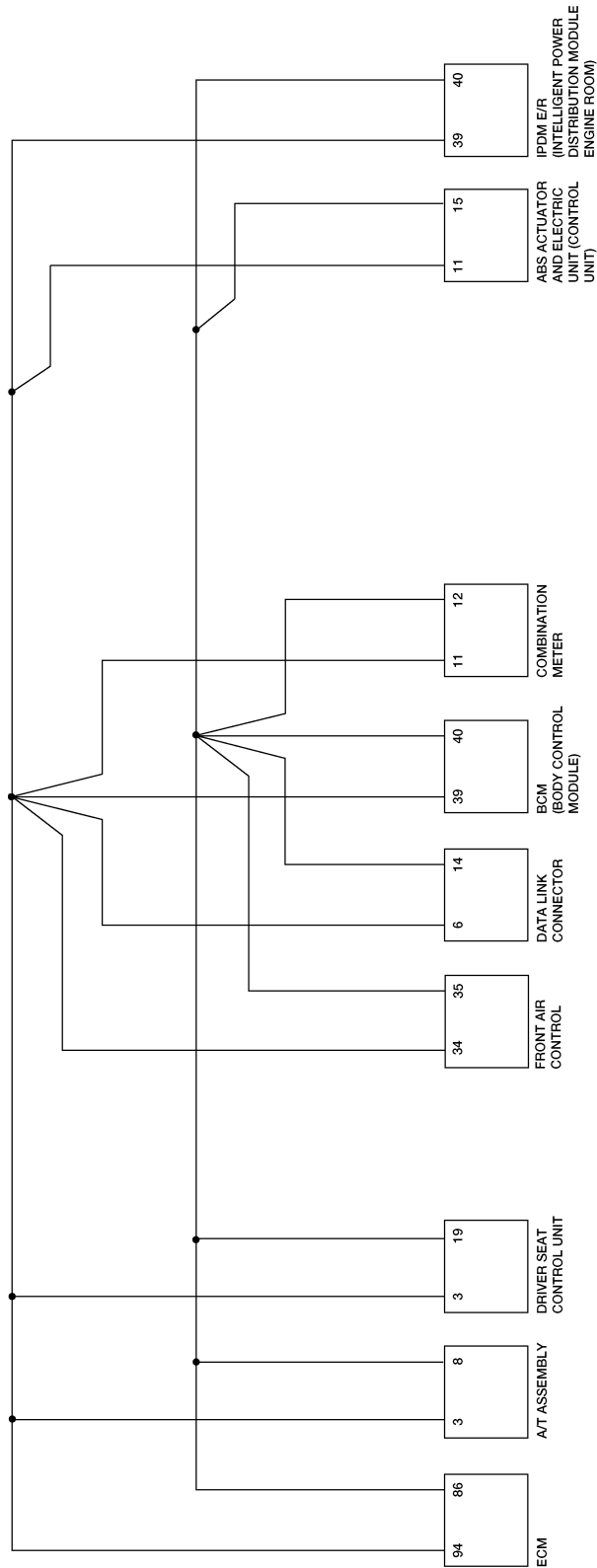


CAN SYSTEM (TYPE 3)

[CAN]

Schematic

UKS003A7



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CAN SYSTEM (TYPE 3)

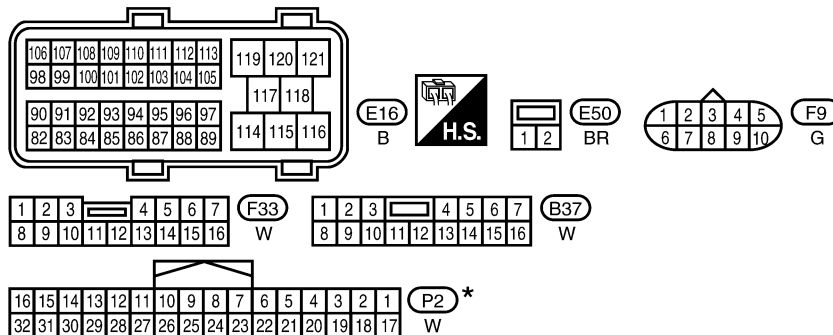
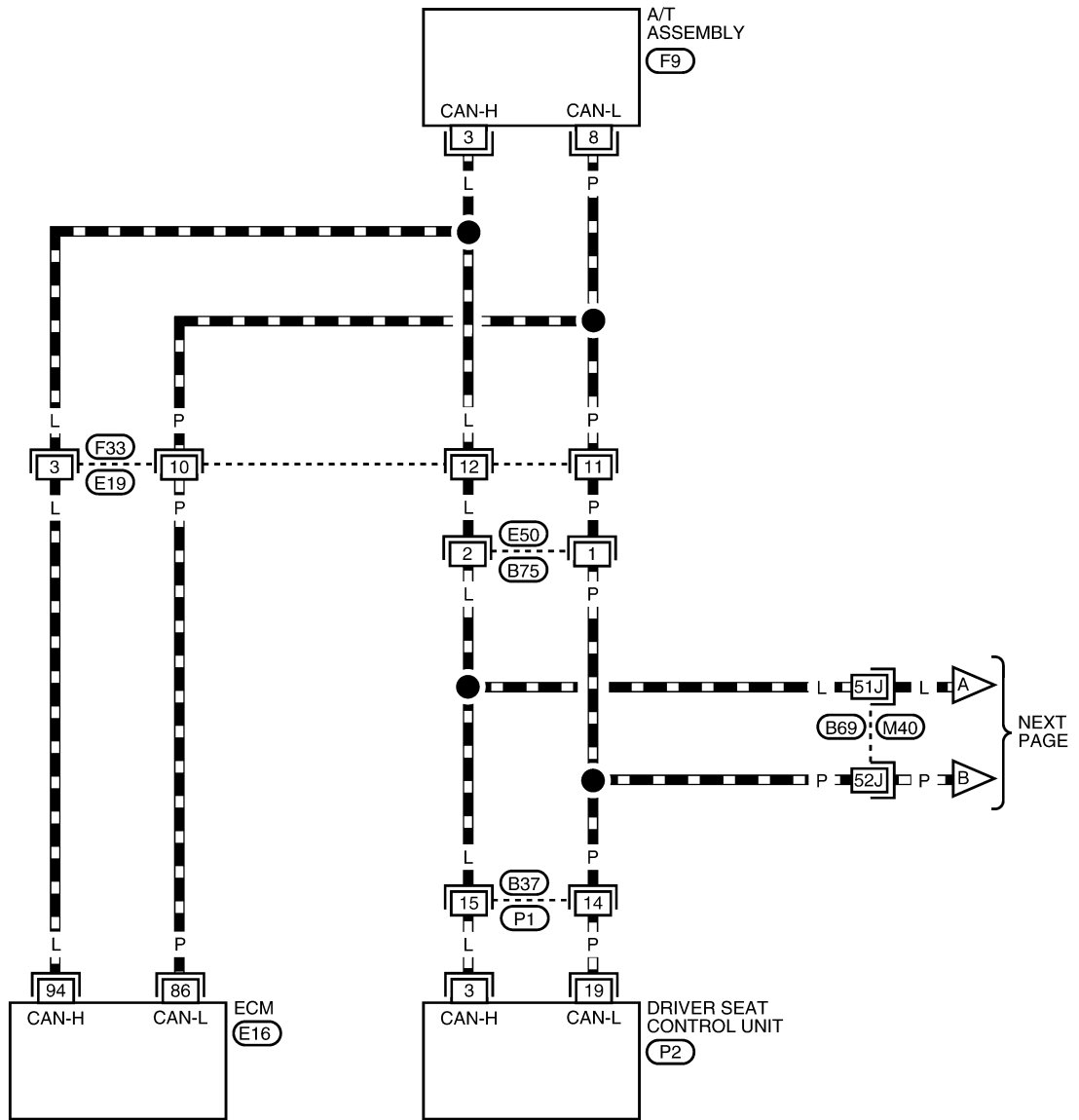
[CAN]

Wiring Diagram - CAN -

UKS003A8

LAN-CAN-07

▬ : DATA LINE



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

REFER TO THE FOLLOWING.

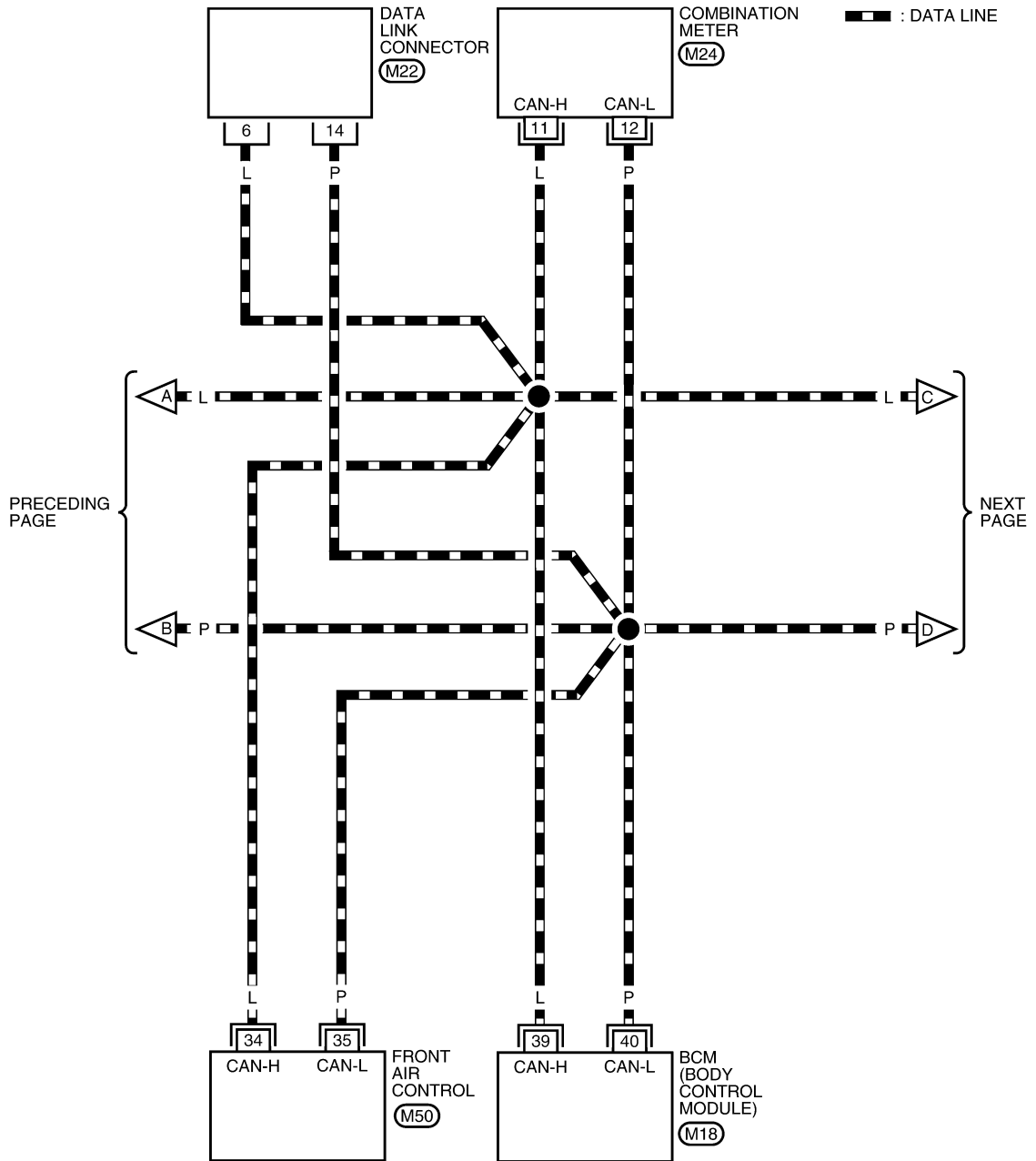
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0428E

CAN SYSTEM (TYPE 3)

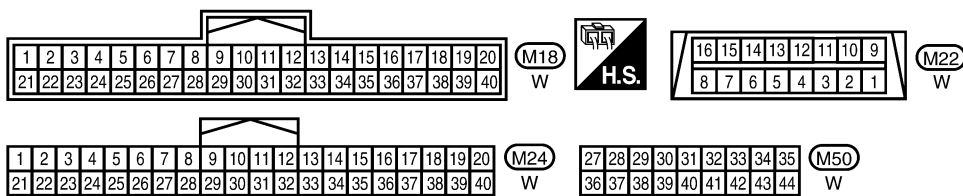
[CAN]

LAN-CAN-08



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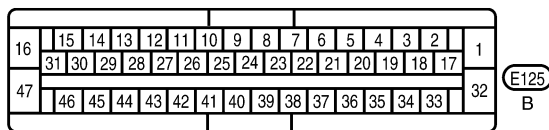
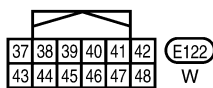
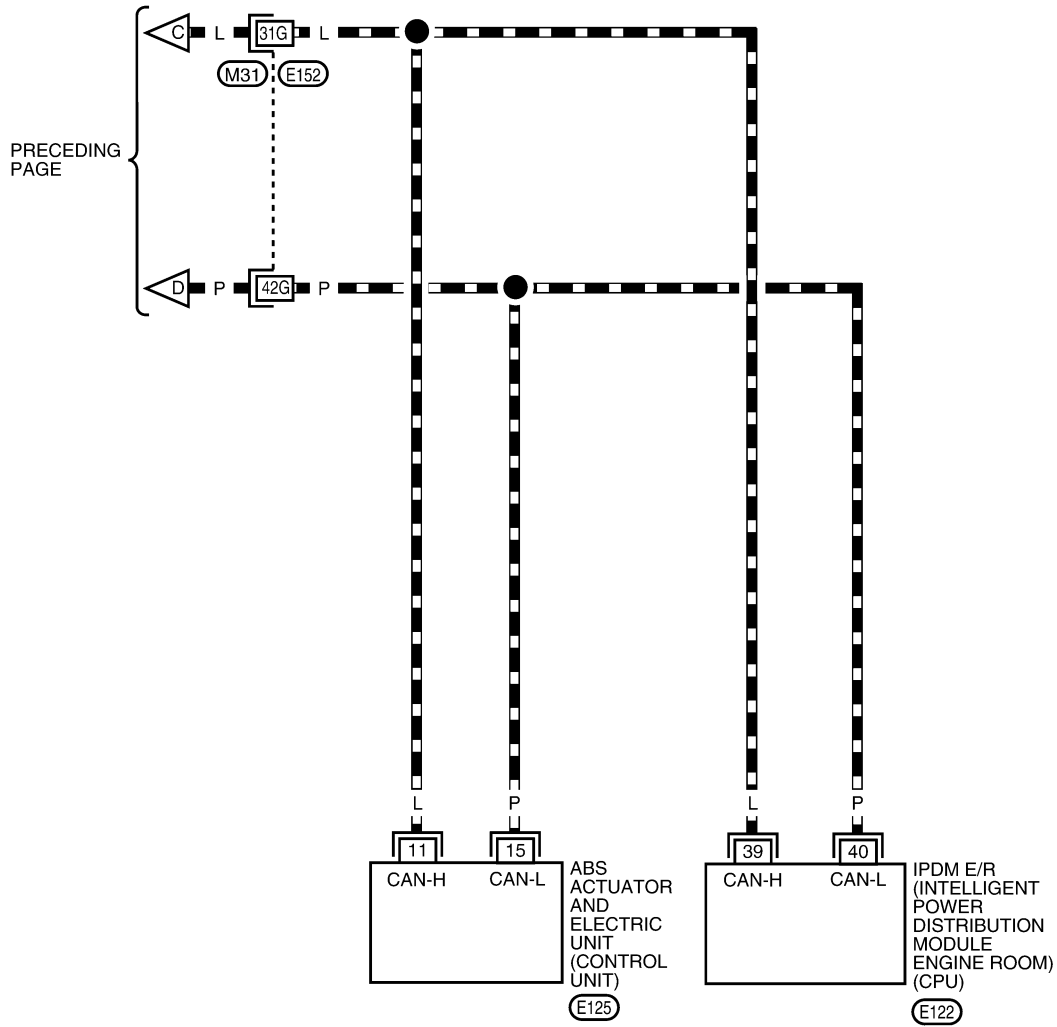
LAN



BKWA0429E

LAN-CAN-09

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0430E

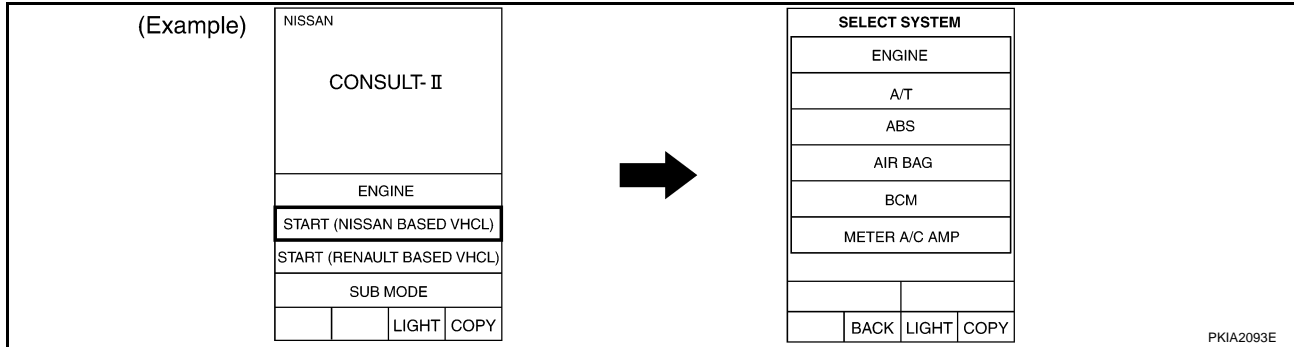
CAN SYSTEM (TYPE 3)

[CAN]

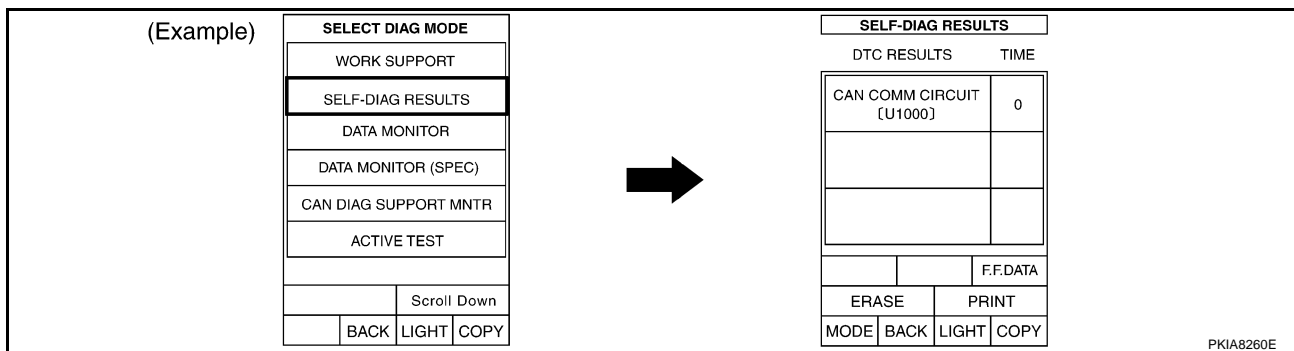
UKS003A9

Work Flow

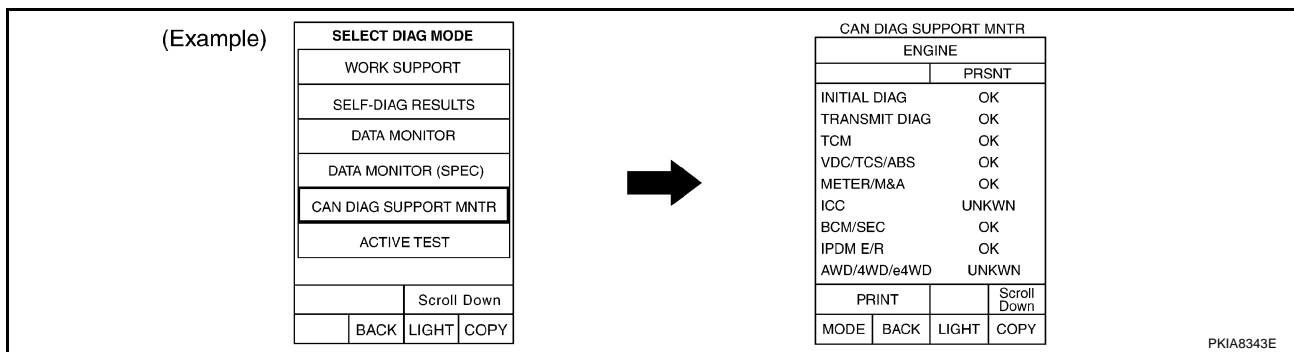
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-86, "CHECK SHEET"](#) .

- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-86, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-88, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

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CAN SYSTEM (TYPE 3)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

Symptoms :

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SELECT SYSTEM

Attach copy of
SELECT SYSTEM

CAN SYSTEM (TYPE 3)

[CAN]

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SELF-DIAG RESULTS

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SELF-DIAG RESULTS

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SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

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HVAC
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CAN DIAG SUPPORT
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CHECK SHEET RESULTS (EXAMPLE)

NOTE:

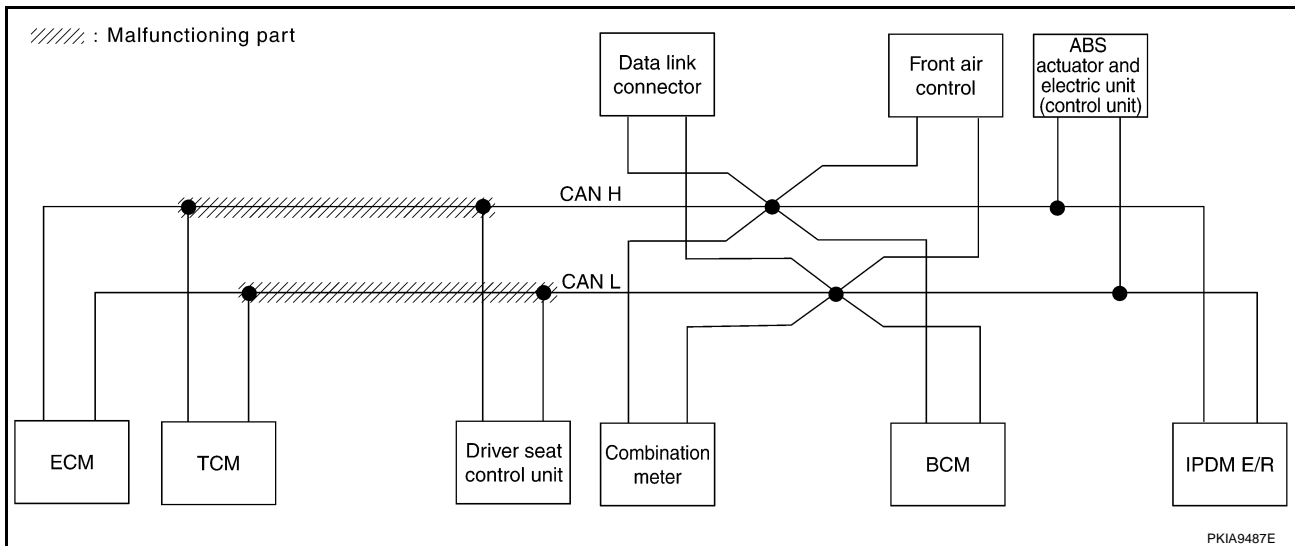
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and driver seat control unit. Refer to [LAN-101, "Circuit Check Between TCM and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—

SKIB2717E



CAN SYSTEM (TYPE 3)

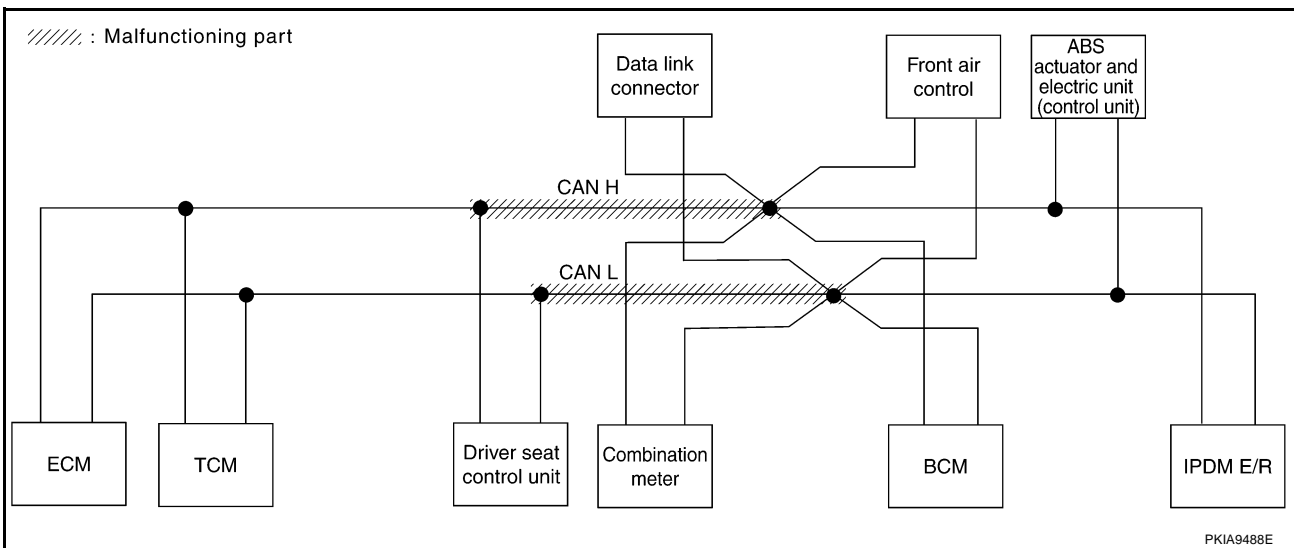
[CAN]

Case 2

Check harness between driver seat control unit and data link connector. Refer to [LAN-102, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—

SKIB2718E



CAN SYSTEM (TYPE 3)

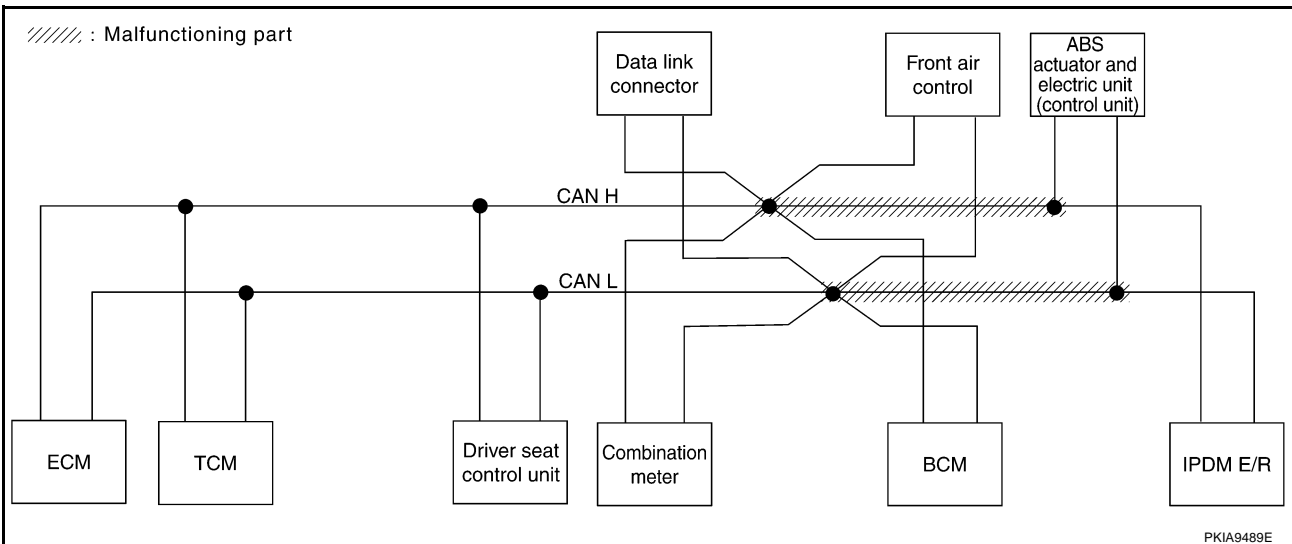
[CAN]

Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-103, "Circuit Check Between Data Link Connector and IPDM E/R"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2719E



PKIA9489E

CAN SYSTEM (TYPE 3)

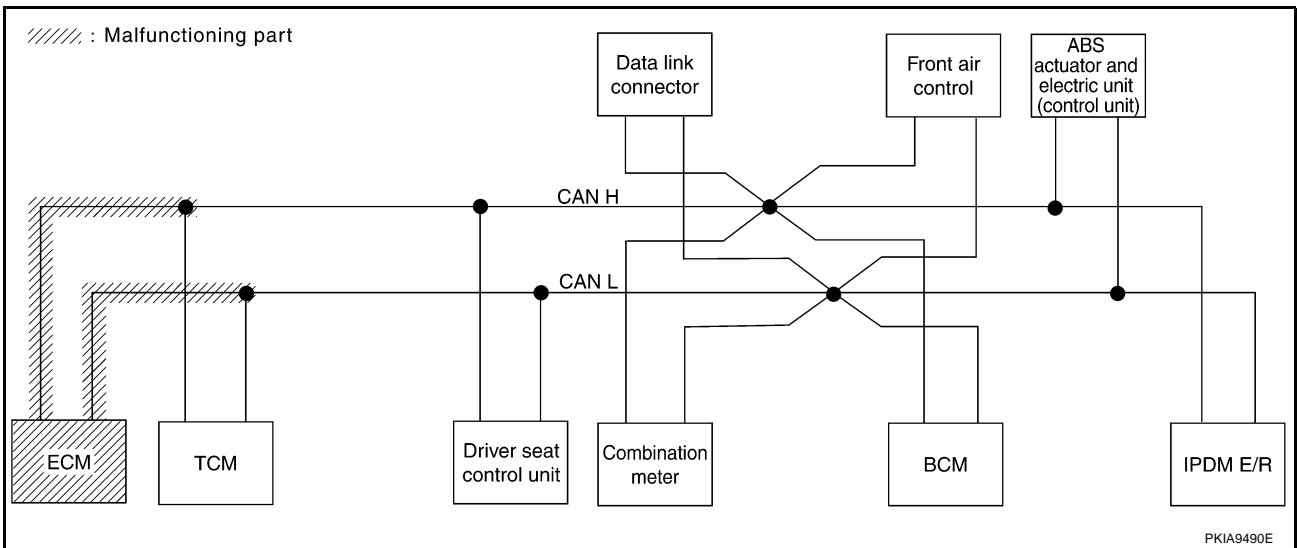
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-104, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—

SKIB2720E



CAN SYSTEM (TYPE 3)

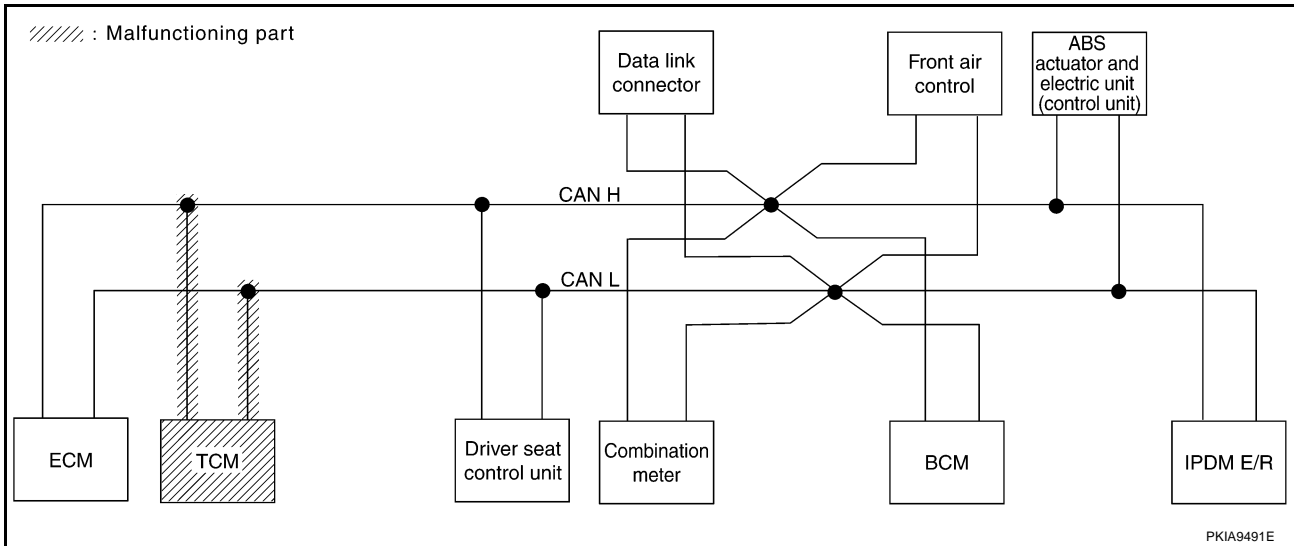
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-104, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2721E



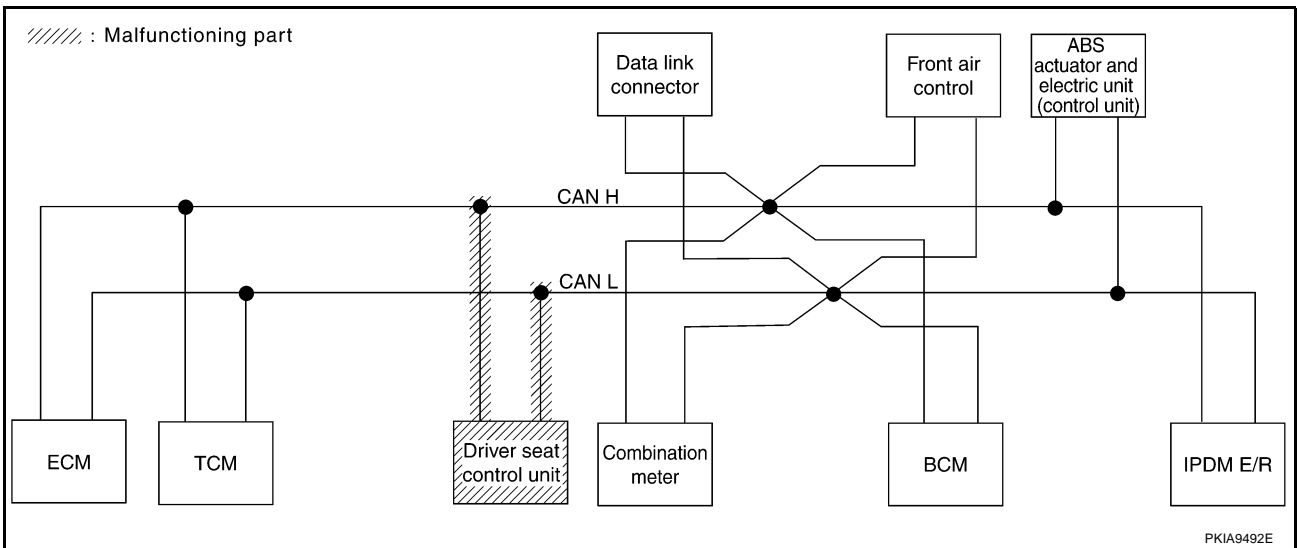
PKIA9491E

Case 6

Check driver seat control unit circuit. Refer to [LAN-105, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2722E



CAN SYSTEM (TYPE 3)

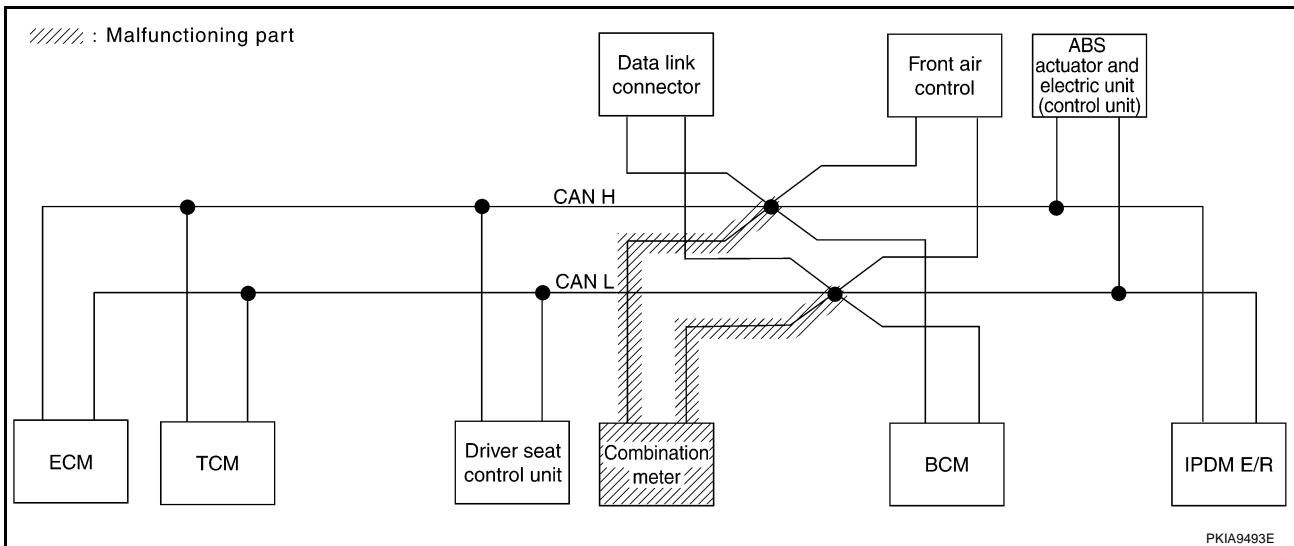
[CAN]

Case 7

Check combination meter circuit. Refer to [LAN-105, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2723E



PKIA9493E

CAN SYSTEM (TYPE 3)

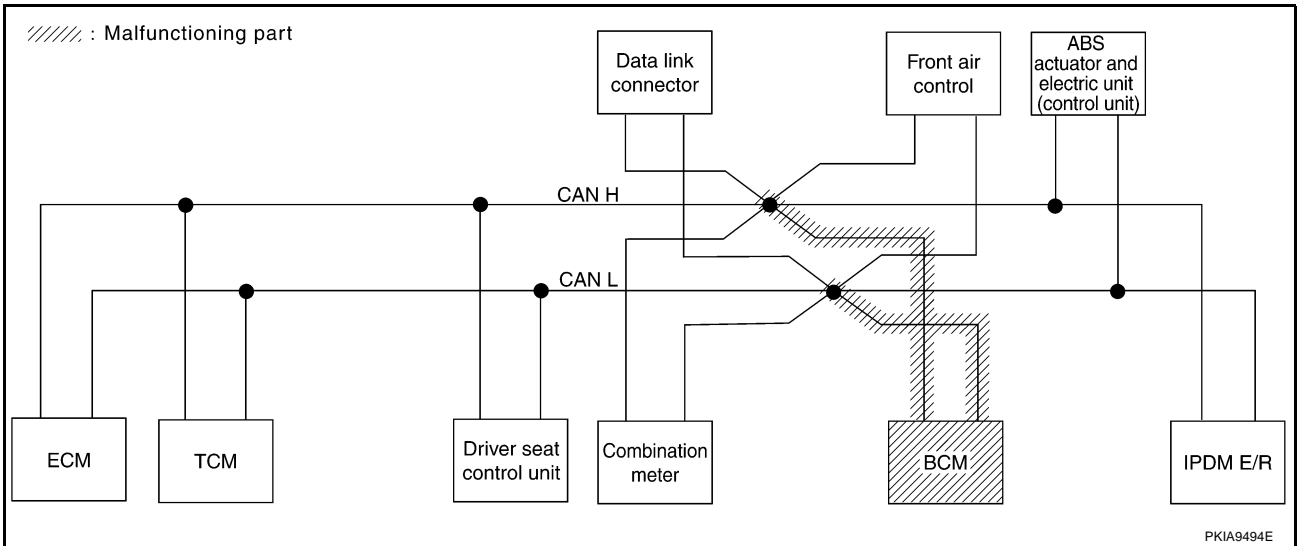
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-106, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2724E



CAN SYSTEM (TYPE 3)

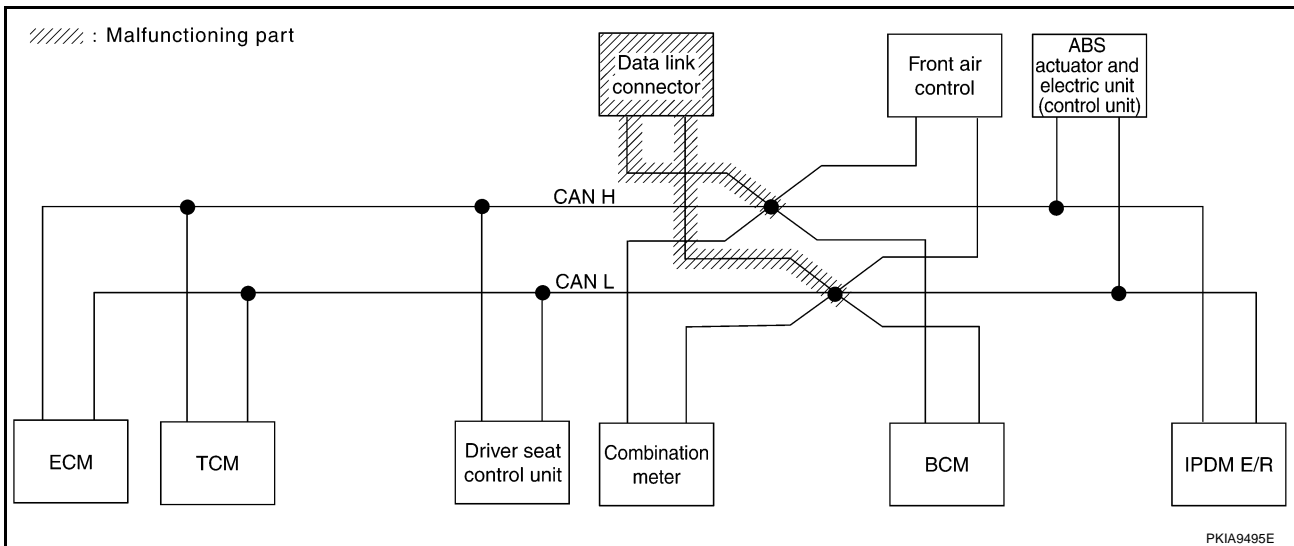
[CAN]

Case 9

Check data link connector circuit. Refer to [LAN-106, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2725E



CAN SYSTEM (TYPE 3)

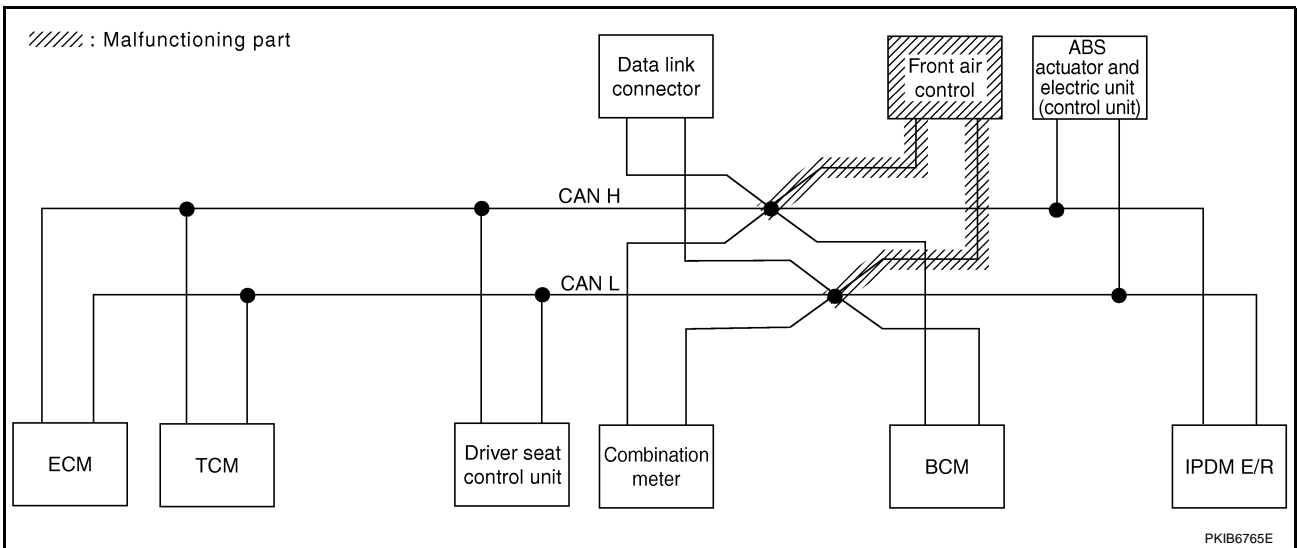
[CAN]

Case 10

Check front air control circuit. Refer to [LAN-107, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

PKIB6775E



CAN SYSTEM (TYPE 3)

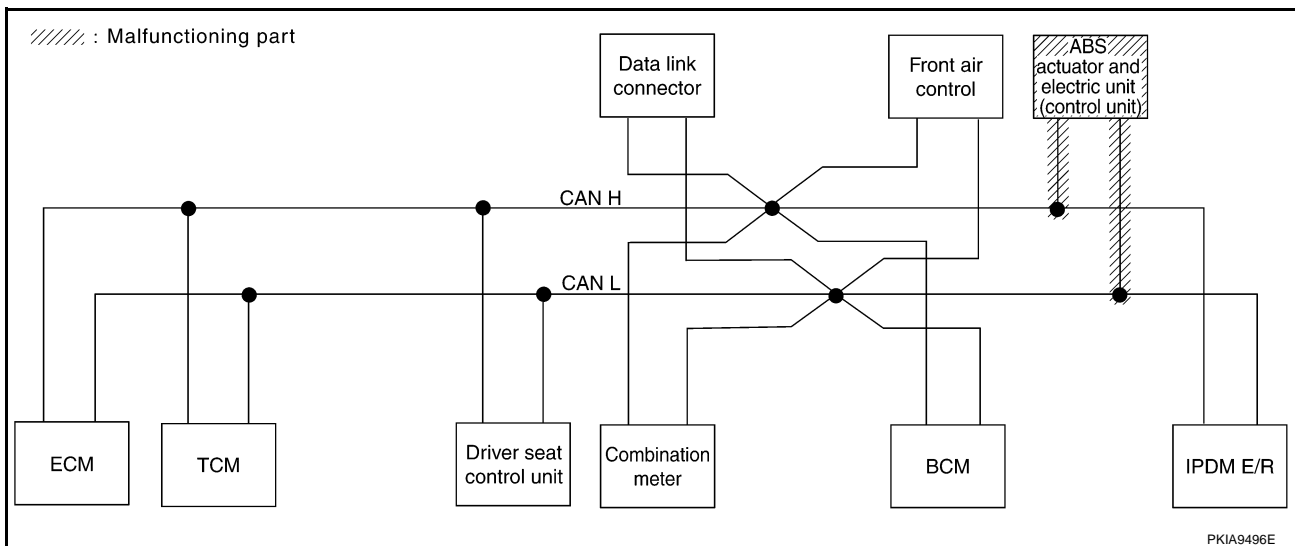
[CAN]

Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-107, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—
ABS	—	NG ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2726E



CAN SYSTEM (TYPE 3)

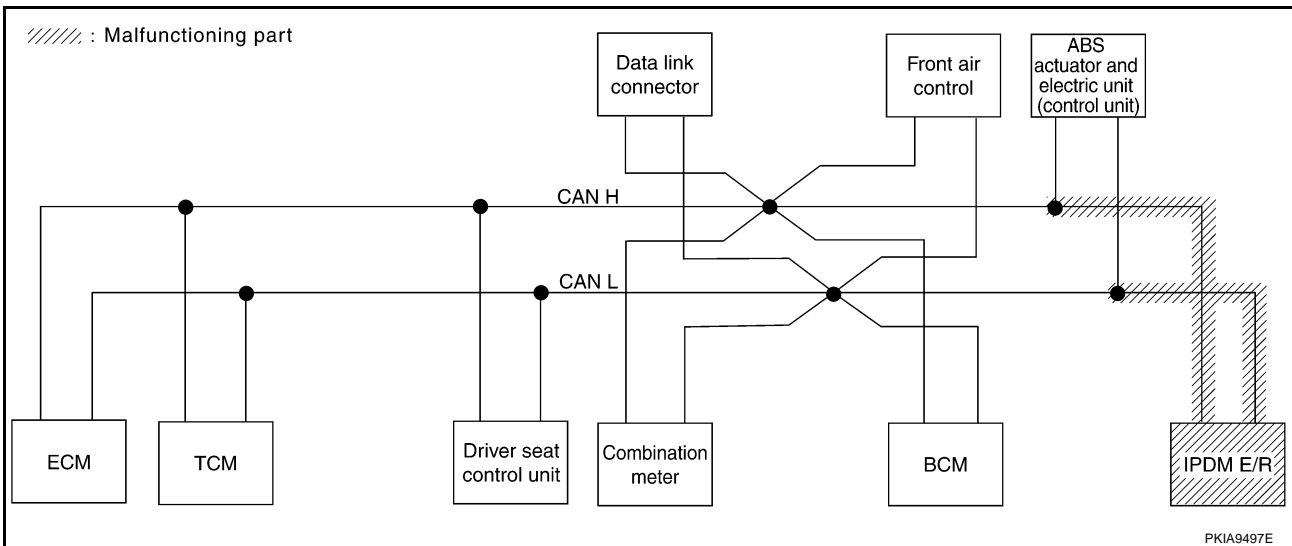
[CAN]

Case 12

Check IPDM E/R circuit. Refer to [LAN-108, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2727E



PKIA9497E

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

LAN

CAN SYSTEM (TYPE 3)

[CAN]

Case 13

Check CAN communication circuit. Refer to [LAN-108, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—

SKIB2728E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-109, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—

SKIB2729E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-109, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR							
		Initial diagnosis	Transmit diagnosis	Receive diagnosis					
				ECM	TCM	METER /M&A	BCM/SEC	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—

SKIB2730E

Circuit Check Between TCM and Driver Seat Control Unit

UKS003AA

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

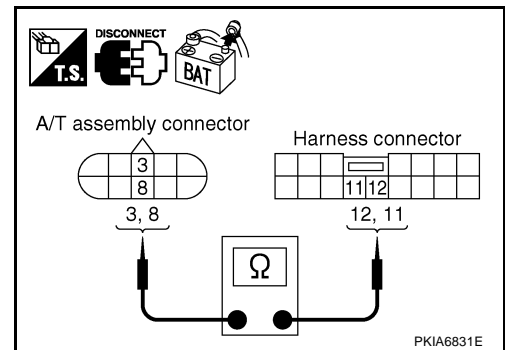
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

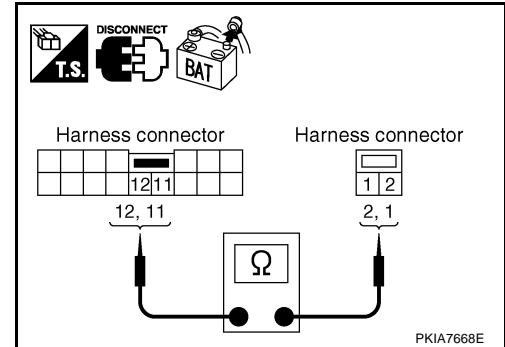
12 (L) - 2 (L) : Continuity should exist.

11 (P) - 1 (P) : Continuity should exist.

OK or NG

OK >> GO TO 4.

NG >> Repair harness.



4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B37 terminals 15 (L), 14 (P).

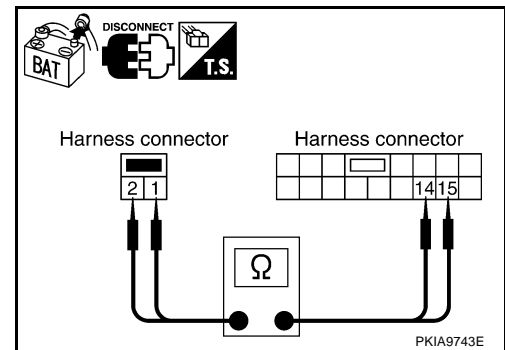
2 (L) - 15 (L) : Continuity should exist.

1 (P) - 14 (P) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-85, "Work Flow"](#).

NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and Data Link Connector

UKS003AB

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

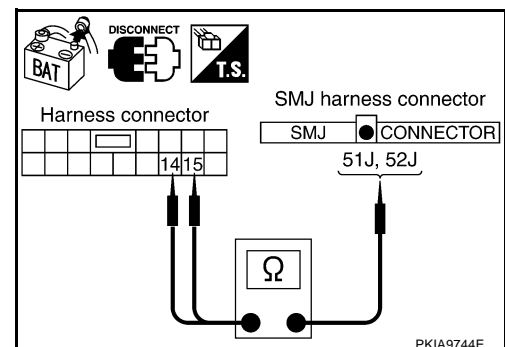
15 (L) - 51J (L) : Continuity should exist.

14 (P) - 52J (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



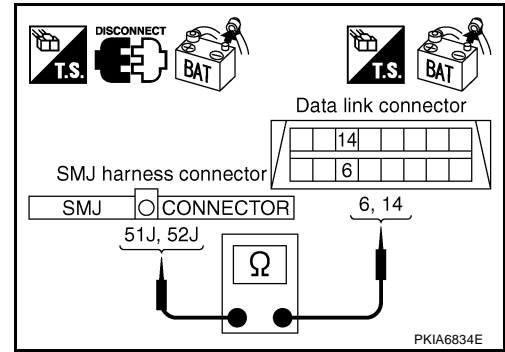
3. CHECK HARNESS FOR OPEN CIRCUIT

Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

- 51J (L) - 6 (L) : Continuity should exist.**
- 52J (P) - 14 (P) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-85, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS003AC

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

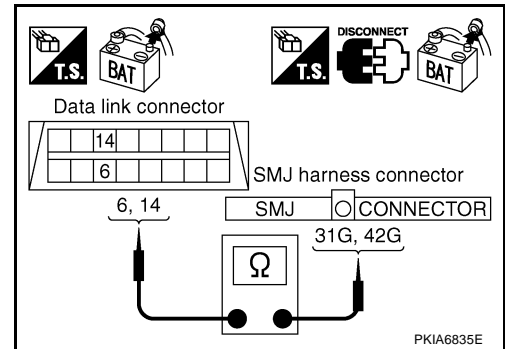
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

- 6 (L) - 31G (L) : Continuity should exist.**
- 14 (P) - 42G (P) : Continuity should exist.**

OK or NG

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



LAN

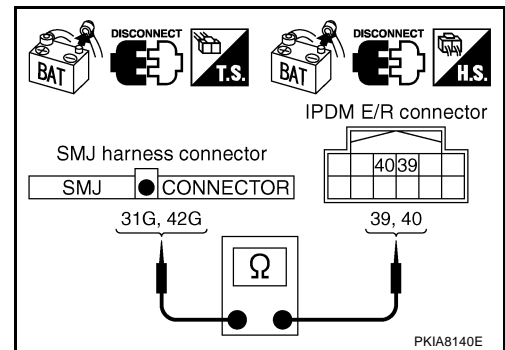
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

- 31G (L) - 39 (L) : Continuity should exist.**
- 42G (P) - 40 (P) : Continuity should exist.**

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-85, "Work Flow"](#).
- NG >> Repair harness.



ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

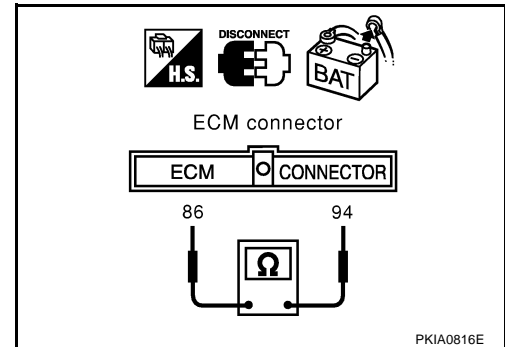
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

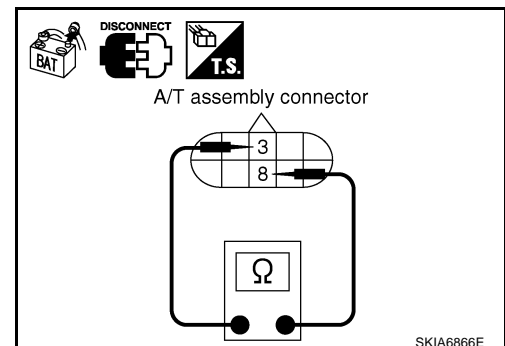
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Driver Seat Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

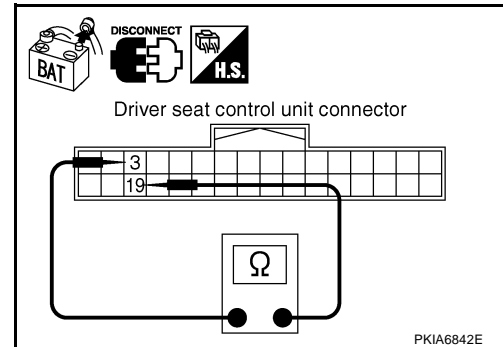
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

OK >> Replace driver seat control unit.

NG >> Repair harness between driver seat control unit and harness connector B69.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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

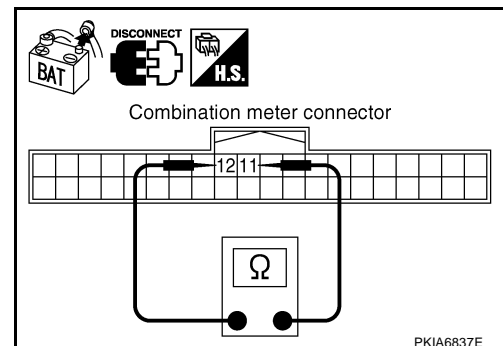
1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

OK >> Replace combination meter.

NG >> Repair harness between combination meter and data link connector.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

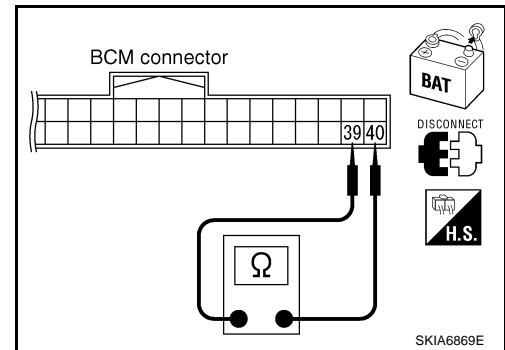
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



UKS003AI

Data Link Connector Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

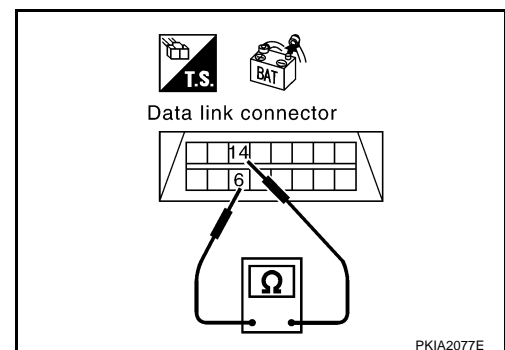
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-85, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

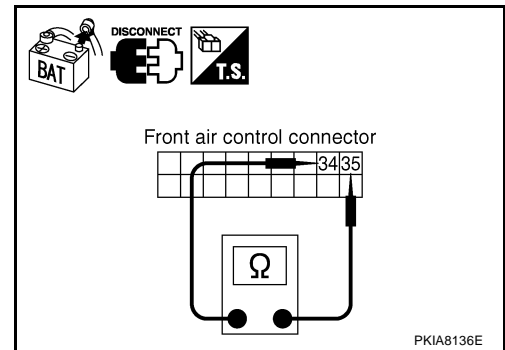
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

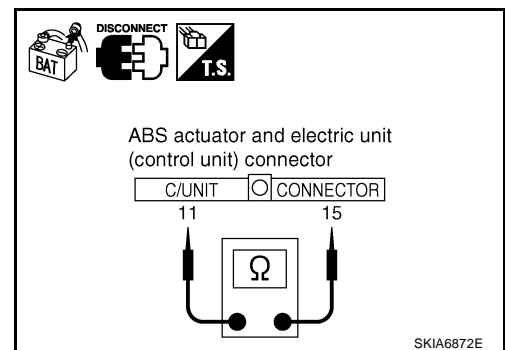
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

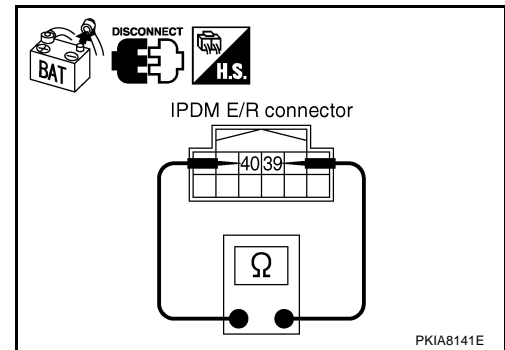
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Driver seat control unit
 - Combination meter
 - BCM
 - Front air control
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

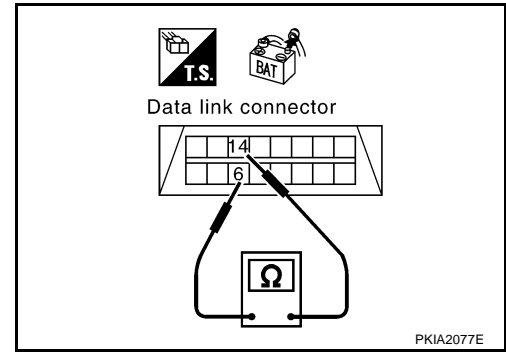
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

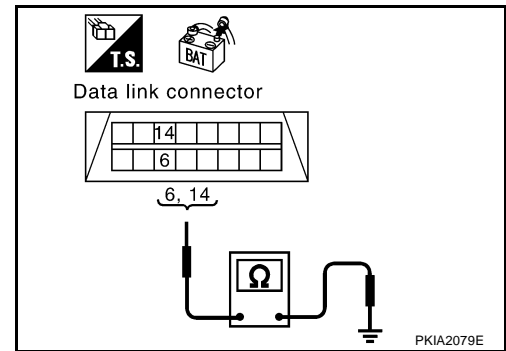
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-109, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).
- NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

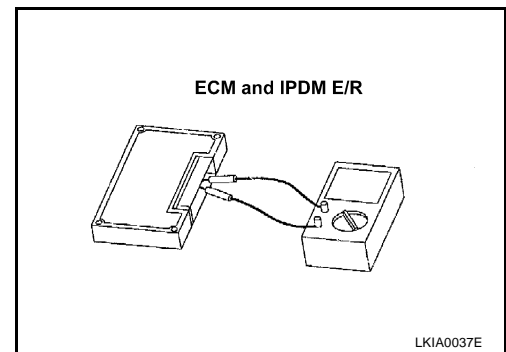
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

**Component Inspection
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



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CAN SYSTEM (TYPE 4)

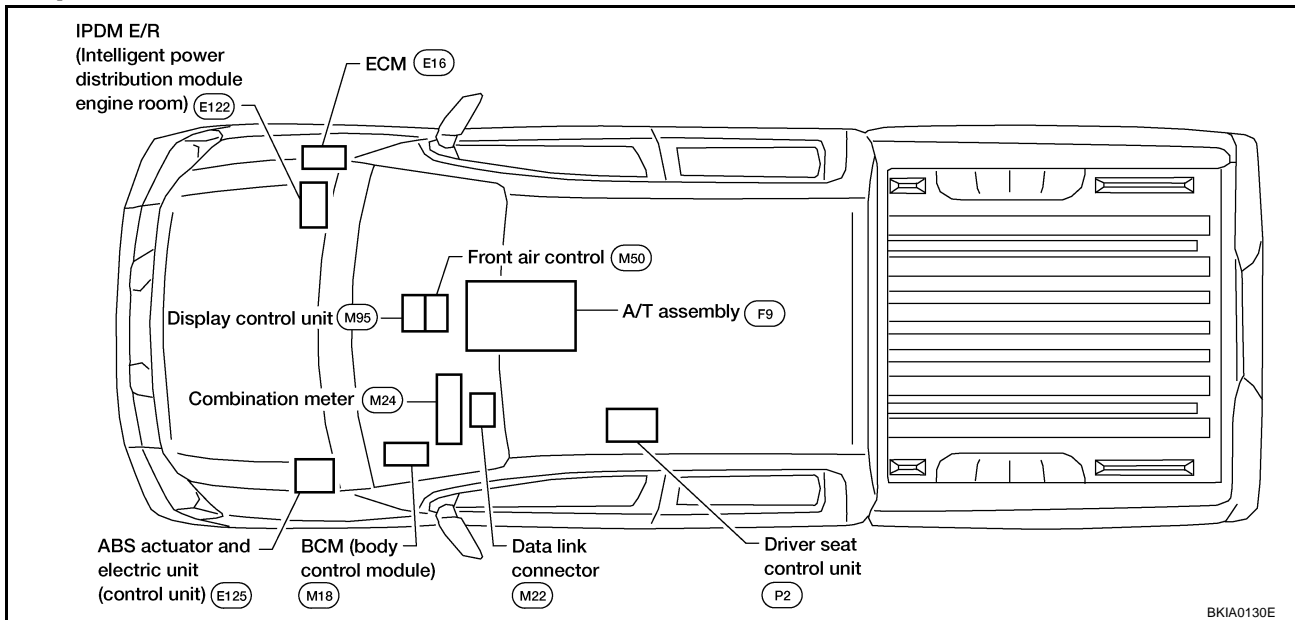
System Description

UKS0039K

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

UKS0039L

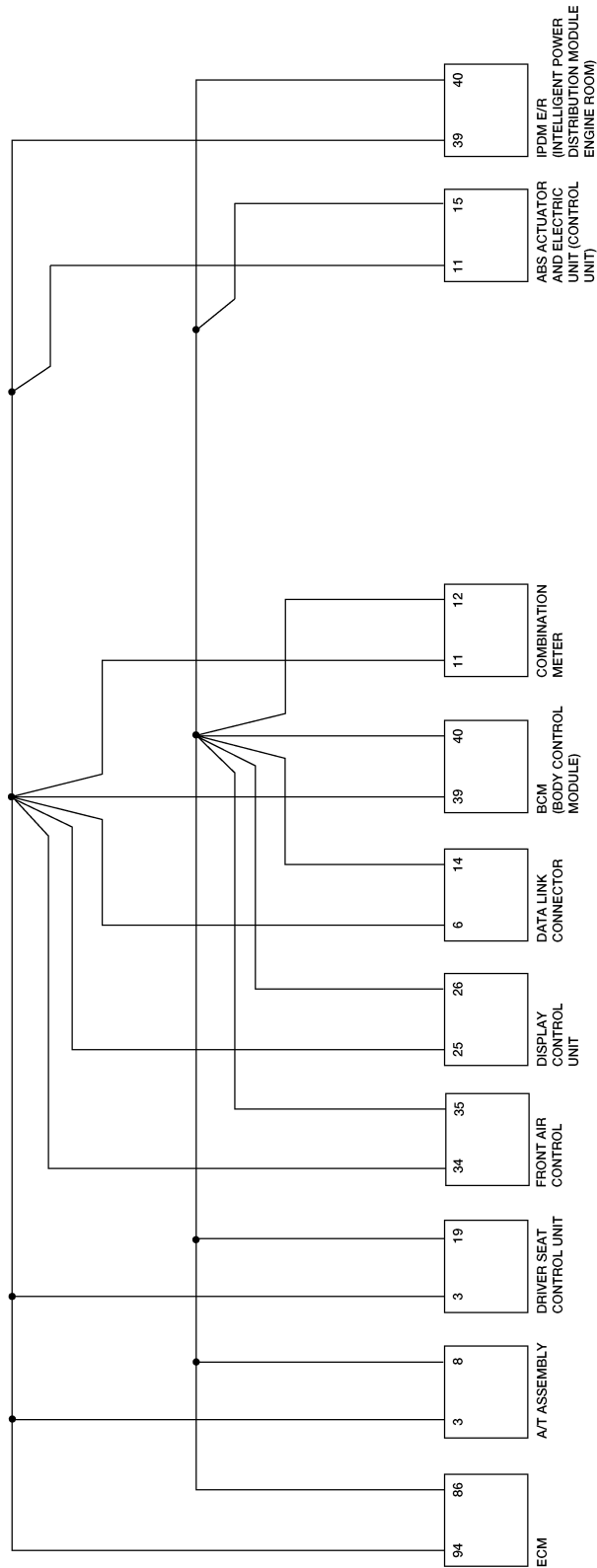


CAN SYSTEM (TYPE 4)

[CAN]

Schematic

UKS0039M



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CAN SYSTEM (TYPE 4)

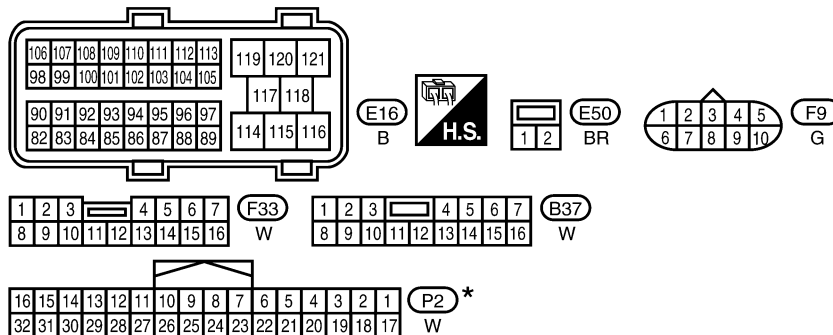
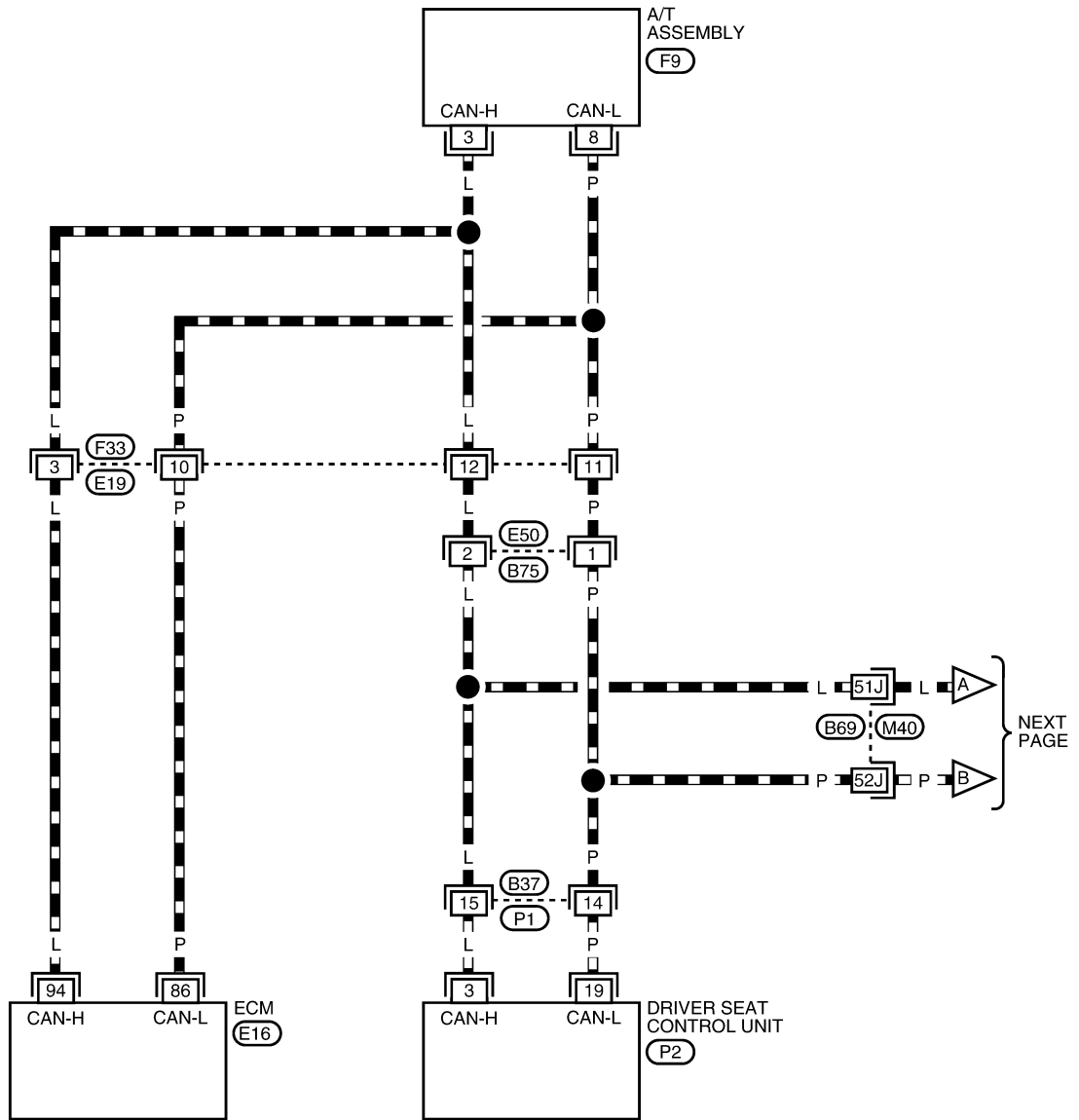
[CAN]

Wiring Diagram - CAN -

UKS0039N

LAN-CAN-10

▬ : DATA LINE



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

REFER TO THE FOLLOWING.

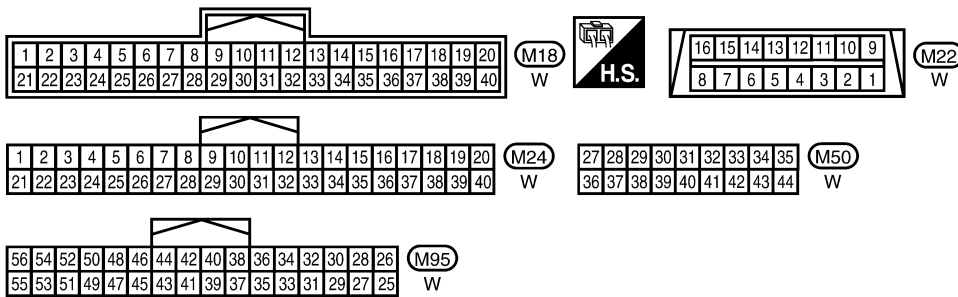
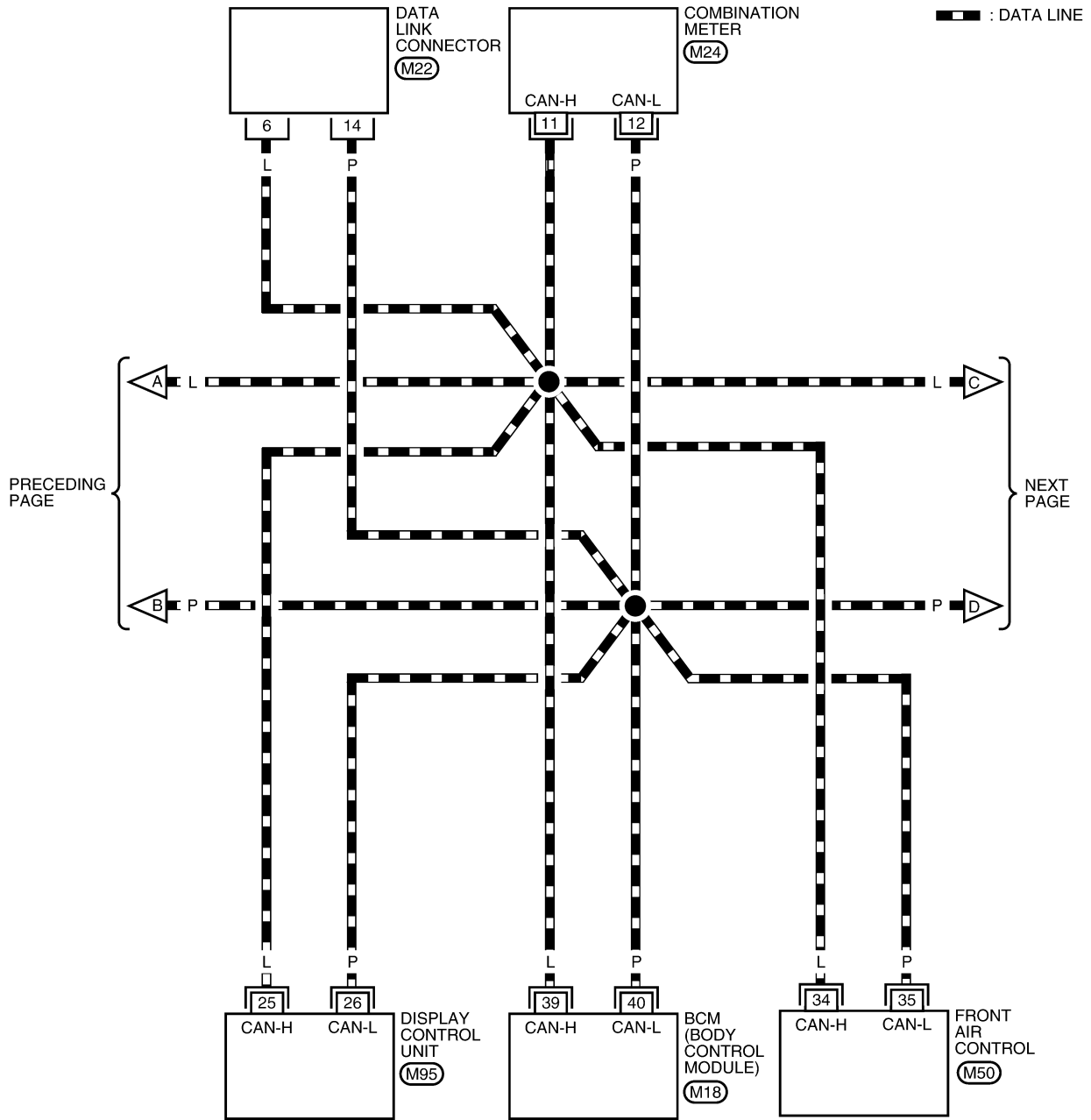
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

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CAN SYSTEM (TYPE 4)

[CAN]

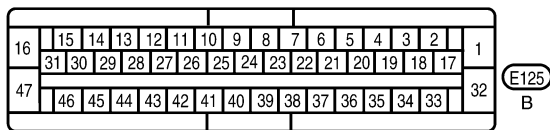
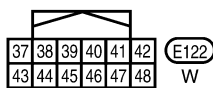
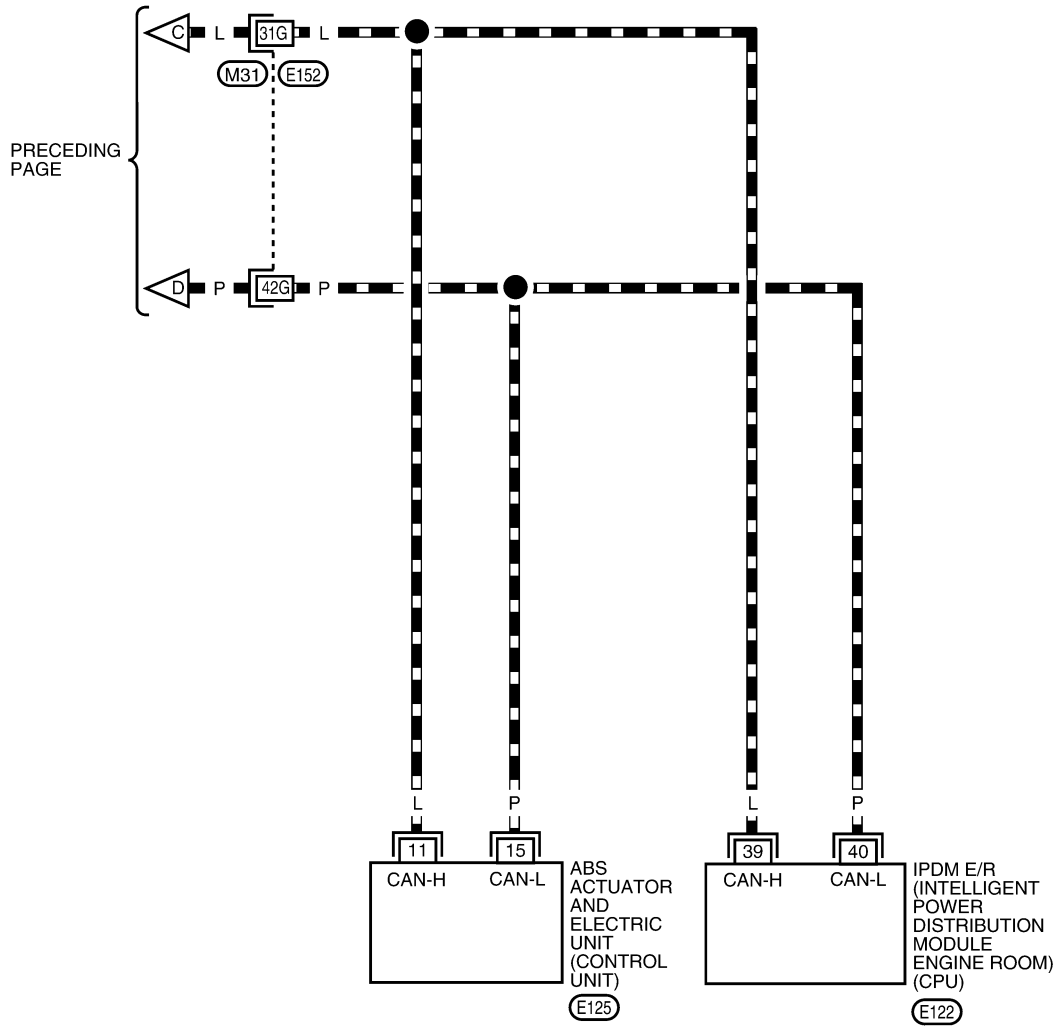
LAN-CAN-11



BKWA0432E

LAN-CAN-12

▬ : DATA LINE

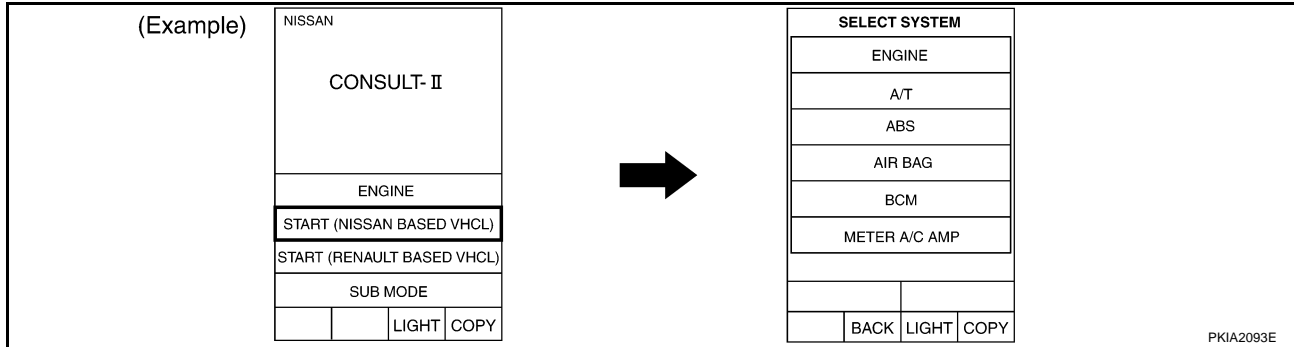


REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

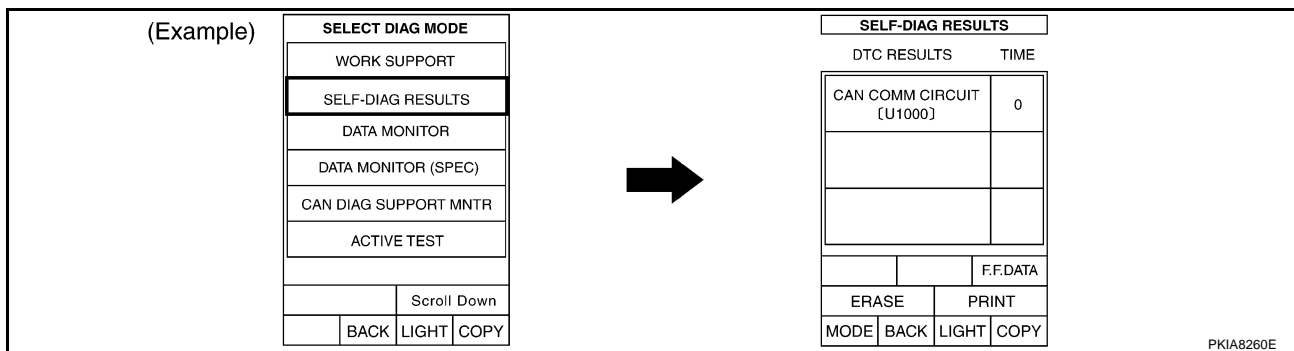
BKWA0433E

Work Flow

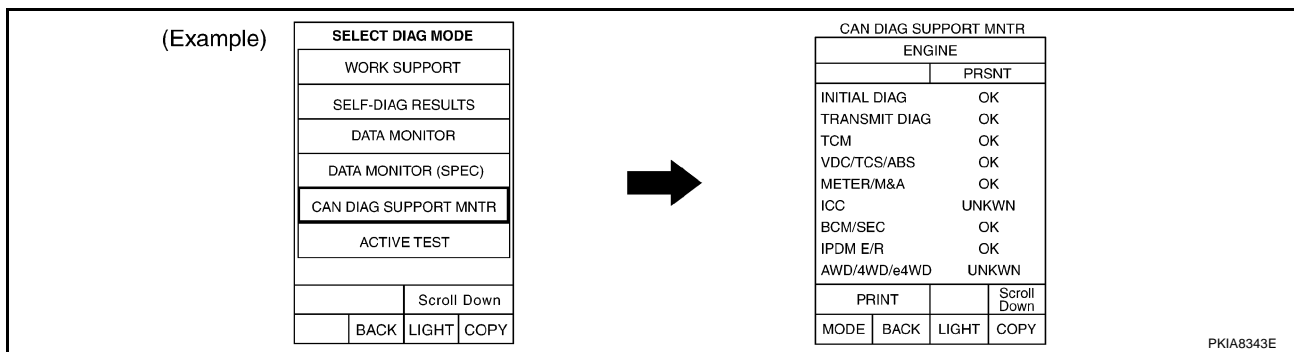
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-117, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-117, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-148, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-117, "CHECK SHEET"](#) .

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CAN SYSTEM (TYPE 4)

[CAN]

-
8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-117, "CHECK SHEET"](#) .

NOTE:

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-148, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-119, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 4)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" 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	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

SKIB2731E

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CAN SYSTEM (TYPE 4)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

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A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
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HVAC
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CHECK SHEET RESULTS (EXAMPLE)

NOTE:

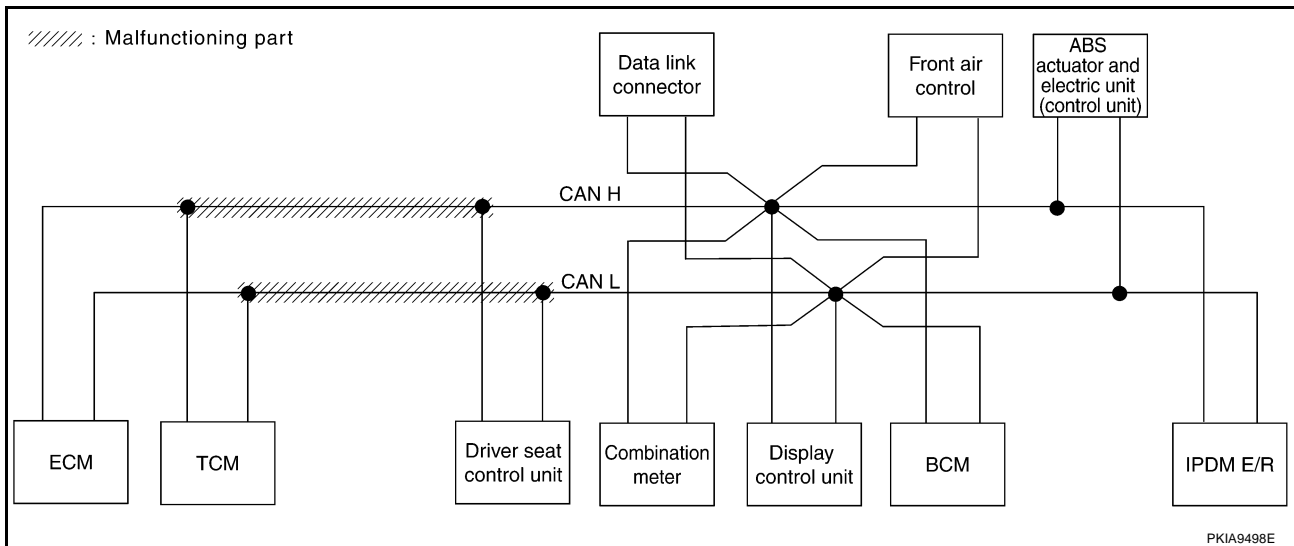
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and driver seat control unit. Refer to [LAN-133, "Circuit Check Between TCM and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—

SKIB2732E



CAN SYSTEM (TYPE 4)

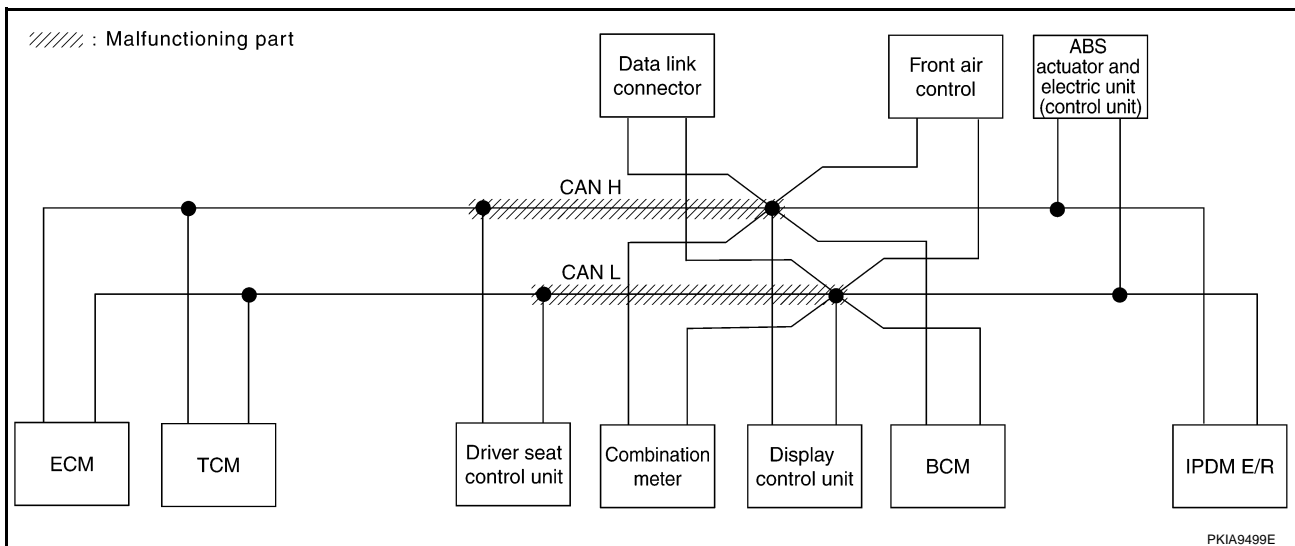
[CAN]

Case 2

Check harness between driver seat control unit and data link connector. Refer to [LAN-134, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—

SKIB2733E



PKIA9499E

CAN SYSTEM (TYPE 4)

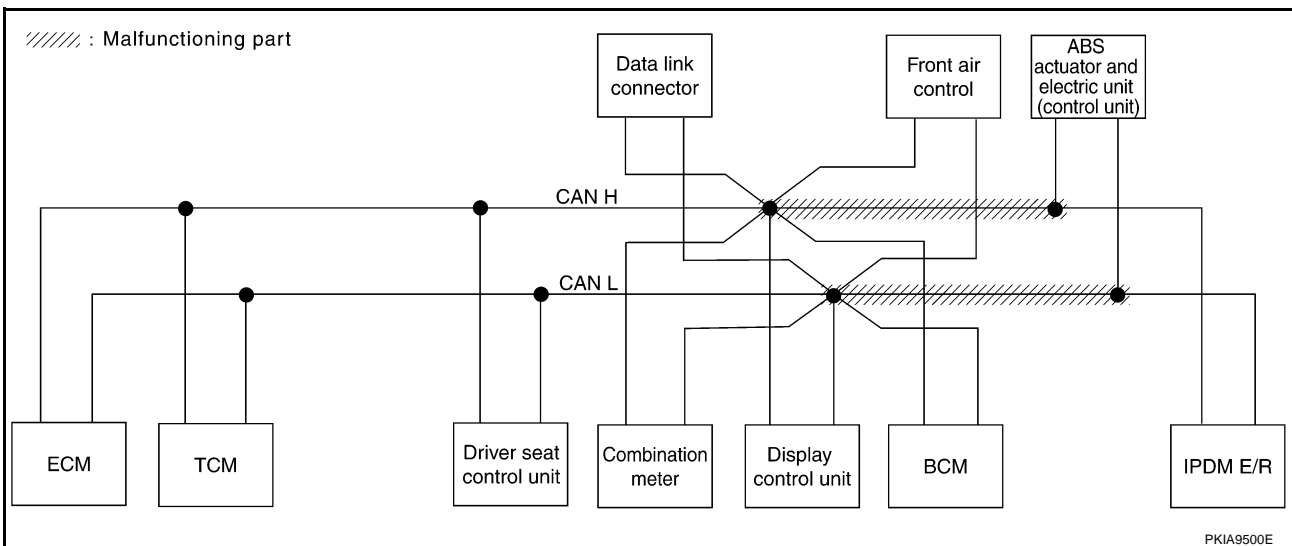
[CAN]

Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-135, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—

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CAN SYSTEM (TYPE 4)

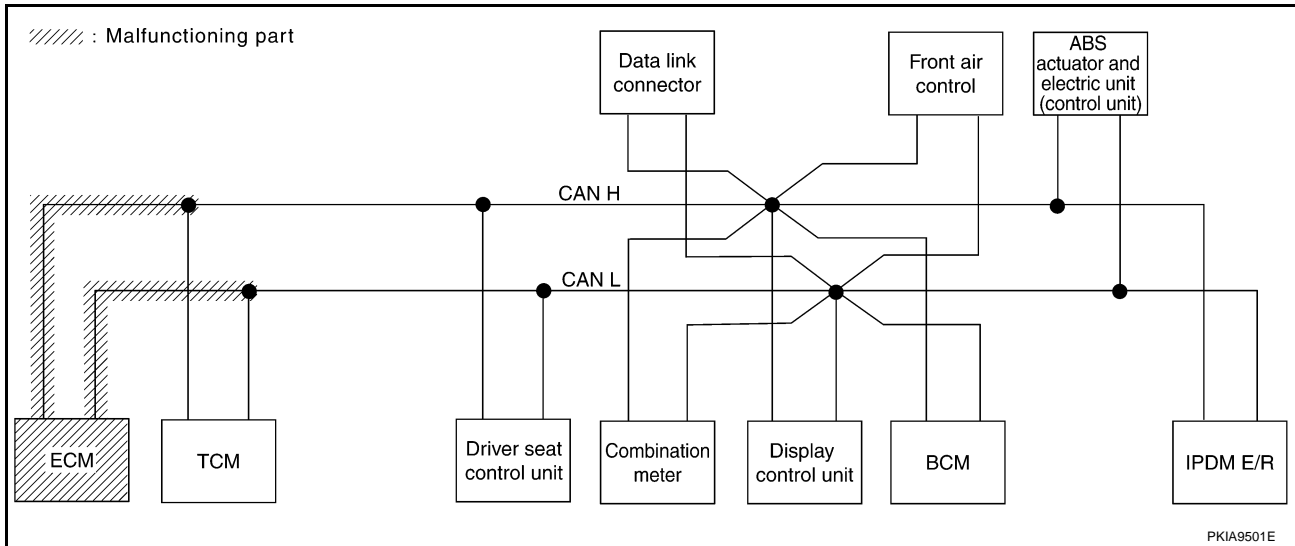
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-136, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—	

SKIB2735E



CAN SYSTEM (TYPE 4)

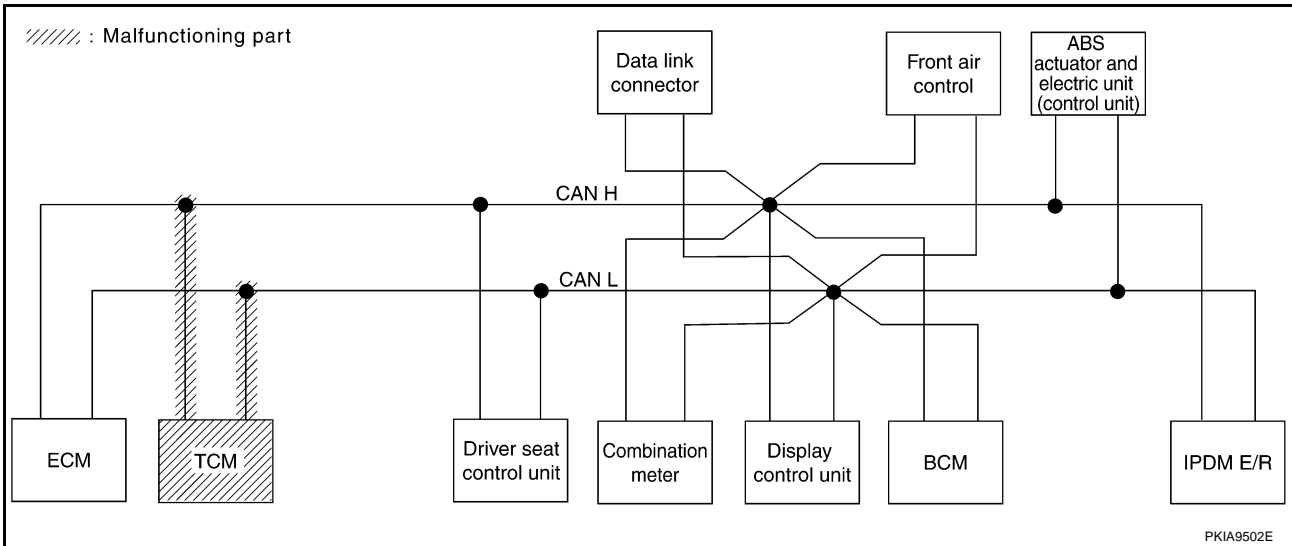
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-136, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	—	—	UNKWN ✓	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2736E



CAN SYSTEM (TYPE 4)

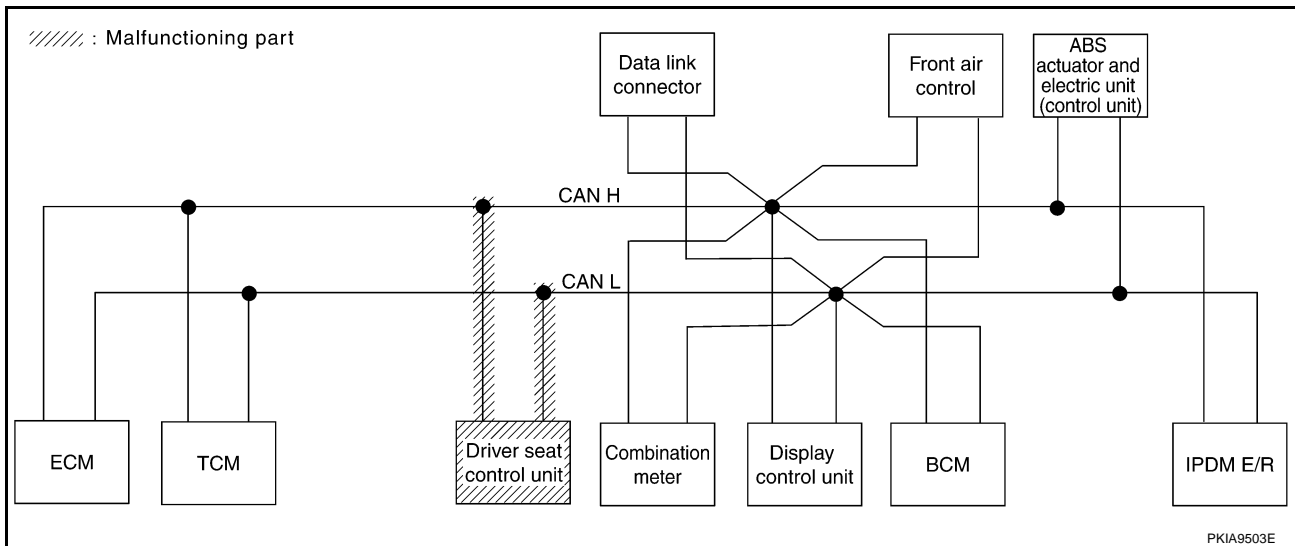
[CAN]

Case 6

Check driver seat control unit circuit. Refer to [LAN-137, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2737E



CAN SYSTEM (TYPE 4)

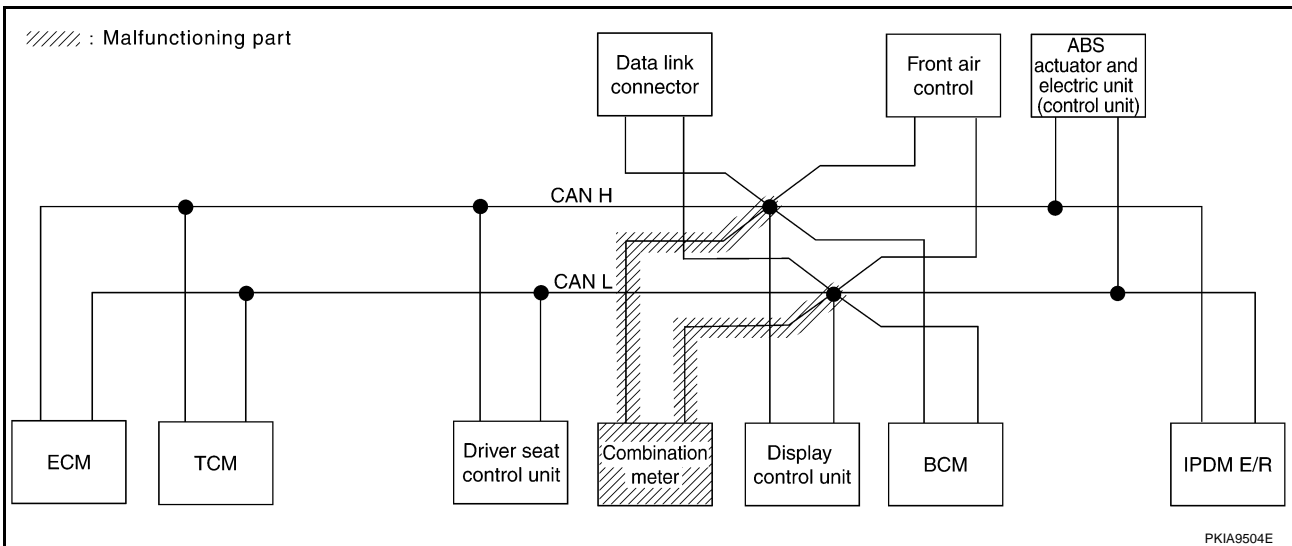
[CAN]

Case 7

Check combination meter circuit. Refer to [LAN-137, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5 ✓	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2738E



CAN SYSTEM (TYPE 4)

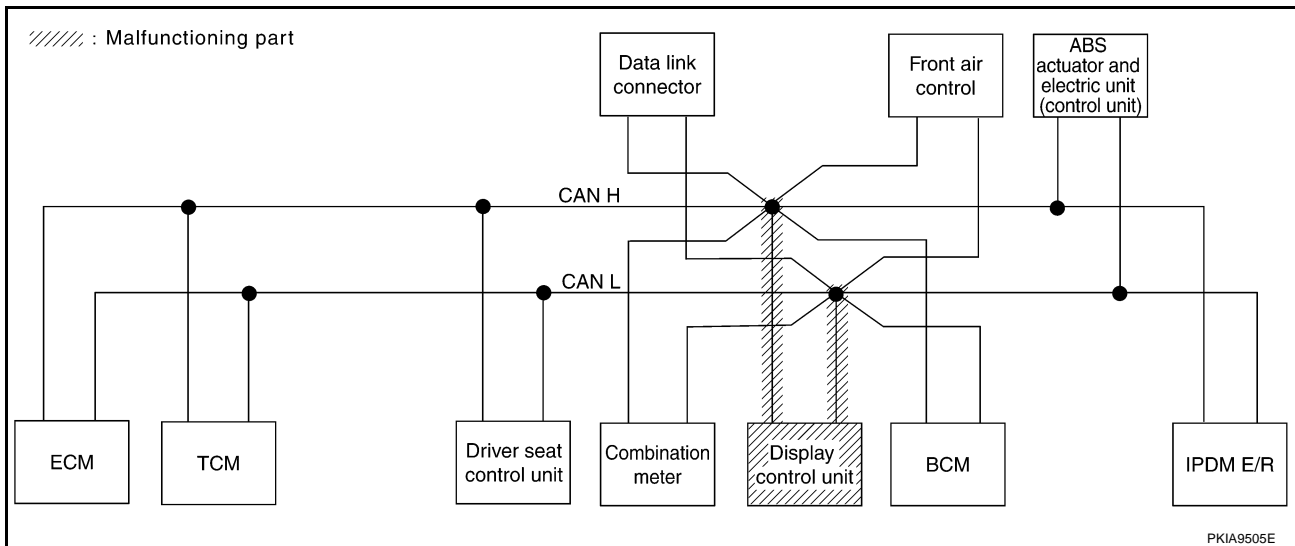
[CAN]

Case 8

Check display control unit circuit. Refer to [LAN-138, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN _{TRC} 1 ✓	CAN _{TRC} 3 ✓	—	CAN _{TRC} 5 ✓	—	CAN _{TRC} 2 ✓	CAN _{TRC} 4 ✓	—	CAN _{TRC} 7 ✓	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2739E



CAN SYSTEM (TYPE 4)

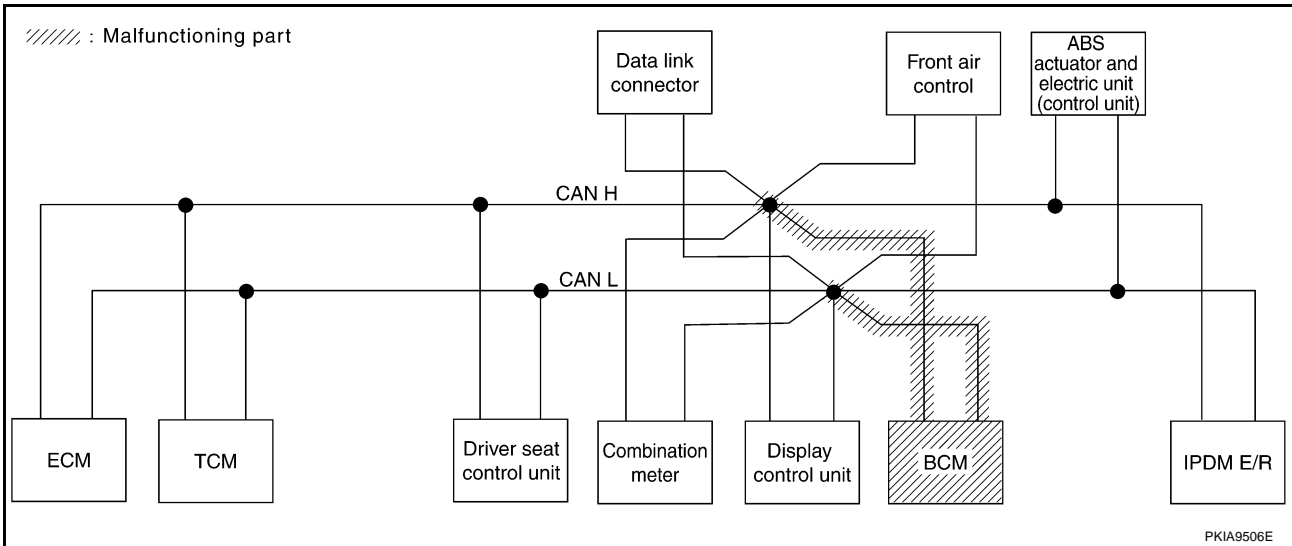
[CAN]

Case 9

Check BCM circuit. Refer to [LAN-138, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2740E



CAN SYSTEM (TYPE 4)

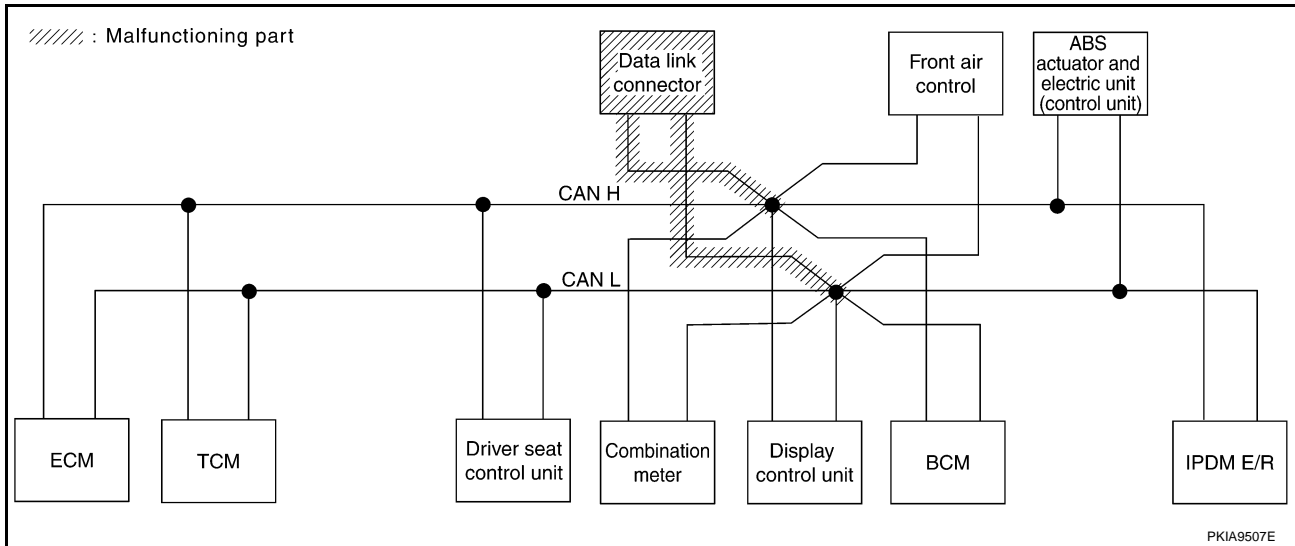
[CAN]

Case 10

Check data link connector circuit. Refer to [LAN-139, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2742E



CAN SYSTEM (TYPE 4)

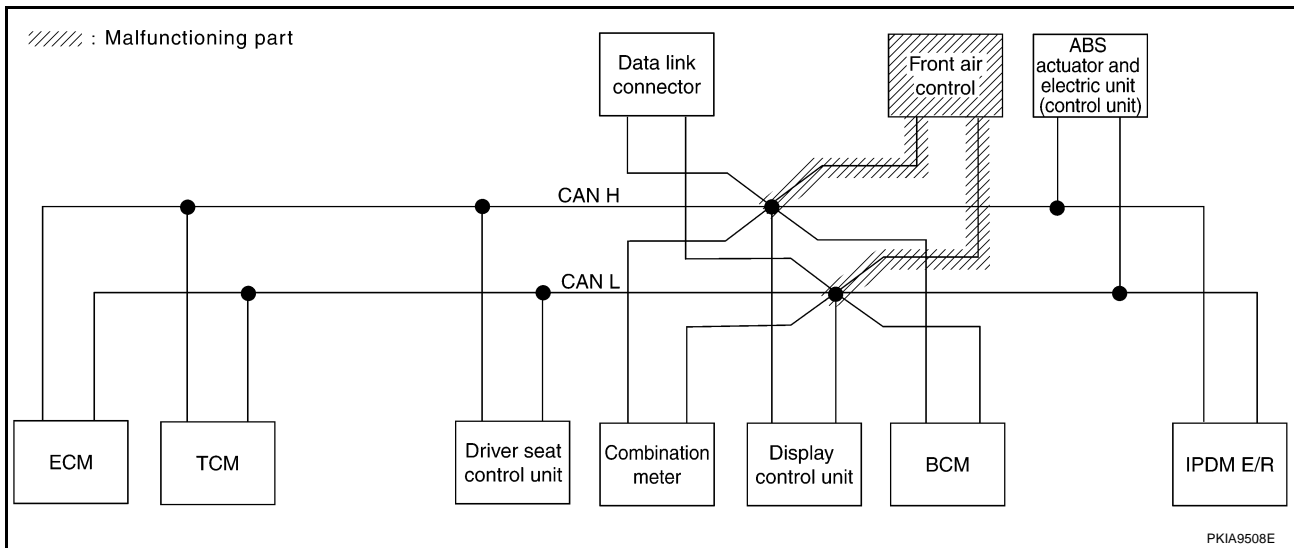
[CAN]

Case 11

Check front air control circuit. Refer to [LAN-139, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—

SKIB2743E



CAN SYSTEM (TYPE 4)

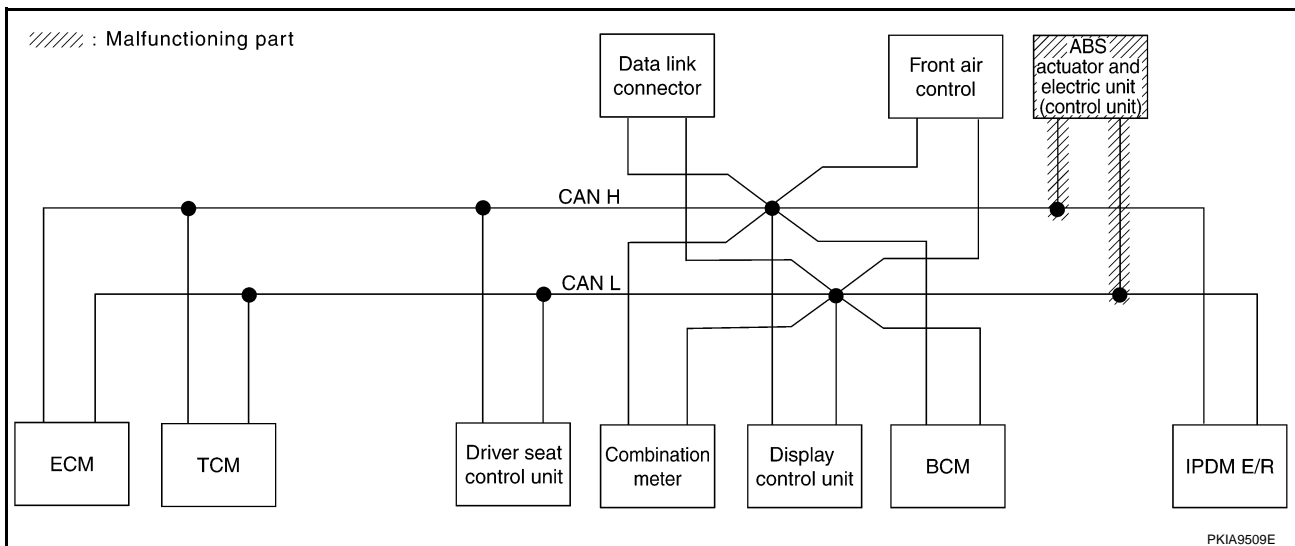
[CAN]

Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-140, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—

SKIB2744E



CAN SYSTEM (TYPE 4)

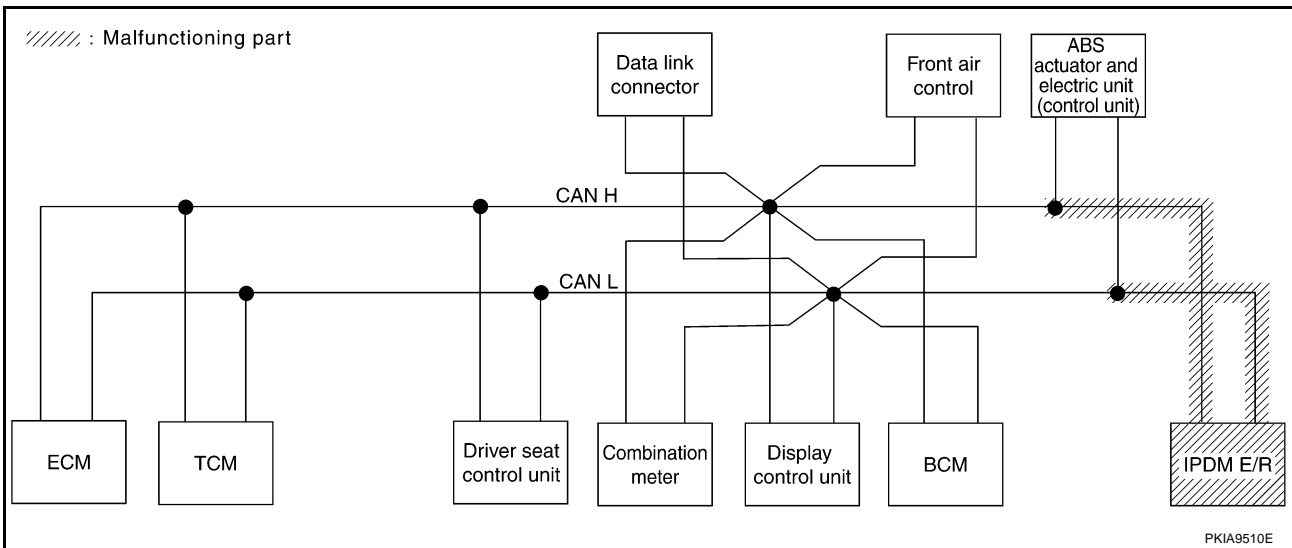
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-140, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—

SKIB2745E



CAN SYSTEM (TYPE 4)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-141, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	UNKW N	UNKW N	
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	UNKW N	
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	

SKIB2746E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-141, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	UNKW N	UNKW N	
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	UNKW N	
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	

SKIB2747E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-141, "IPDM E/R Ignition Relay Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	Front air control	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

SKIB2748E

Circuit Check Between TCM and Driver Seat Control Unit

UKS0039P

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

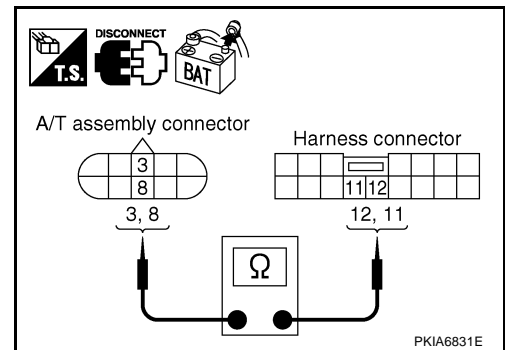
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



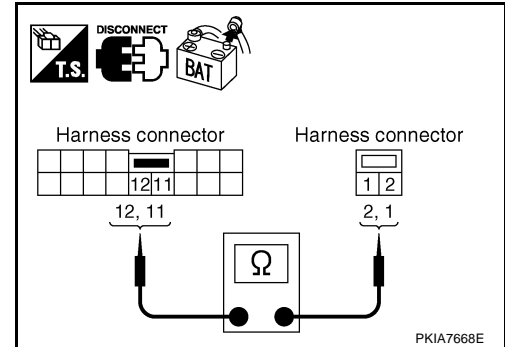
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



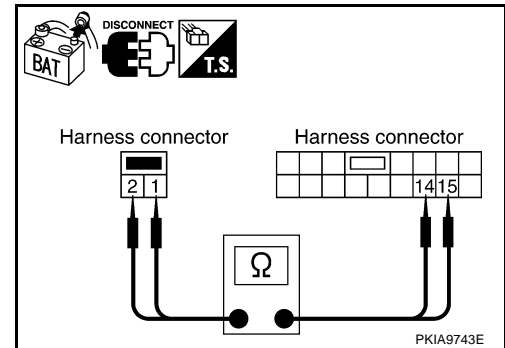
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B37 terminals 15 (L), 14 (P).

2 (L) - 15 (L) : Continuity should exist.
1 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-115, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and Data Link Connector

UKS00390

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

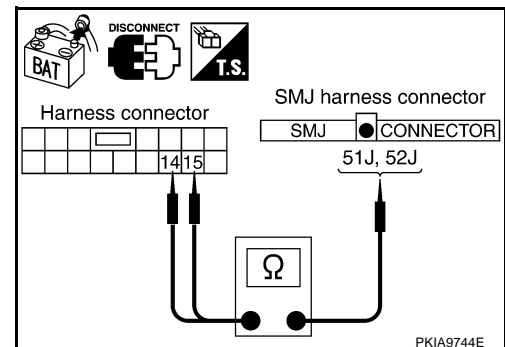
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

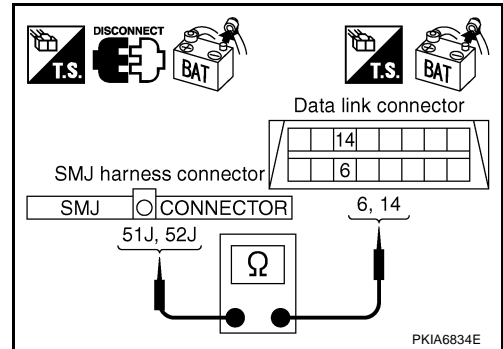
Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.

52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-115, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS0039R

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

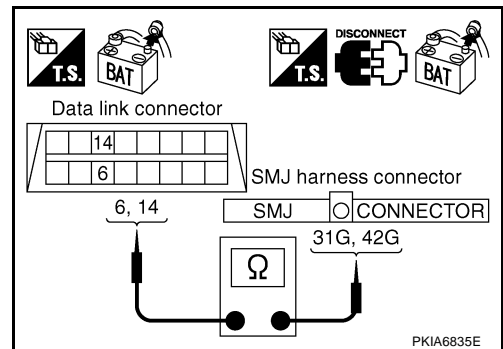
1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

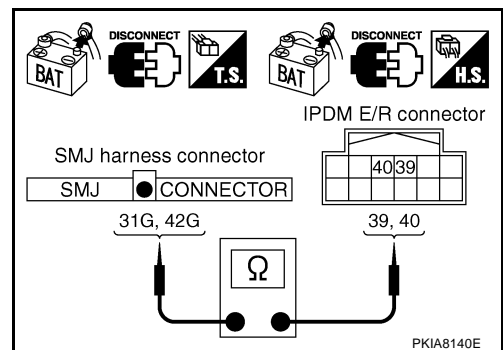
1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-115, "Work Flow"](#).
- NG >> Repair harness.



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

LAN

ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

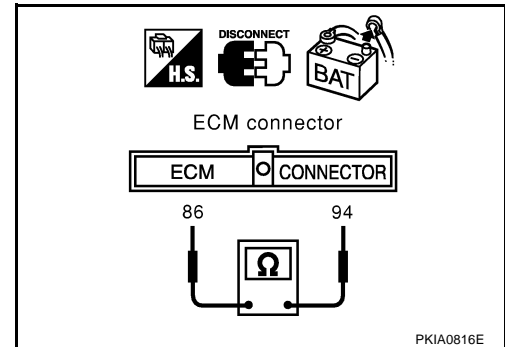
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

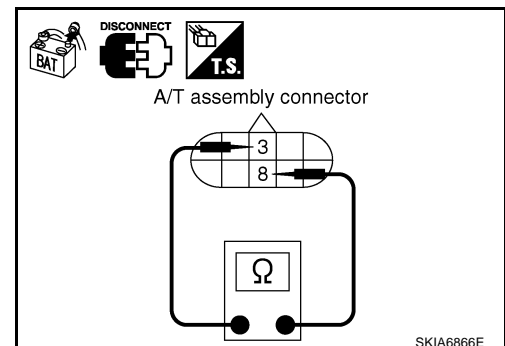
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Driver Seat Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

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

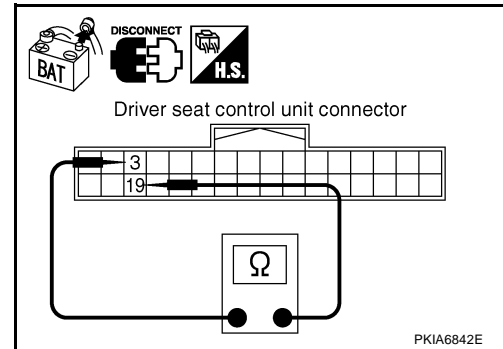
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B69.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

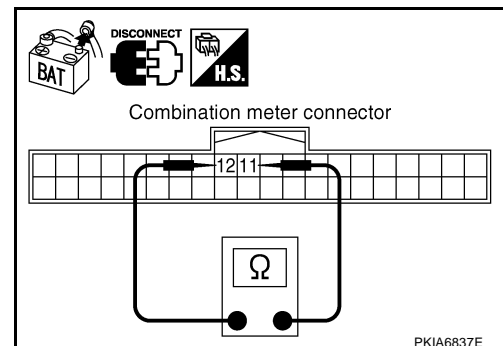
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



Display Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display 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.

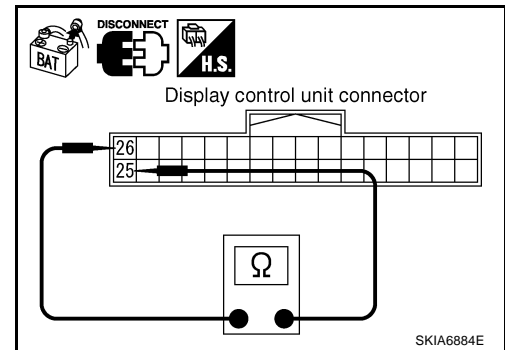
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M95 terminals 25 (L) and 26 (P).

25 (L) - 26 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace display control unit.
NG >> Repair harness between display control unit and data link connector.



UKS0039X

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

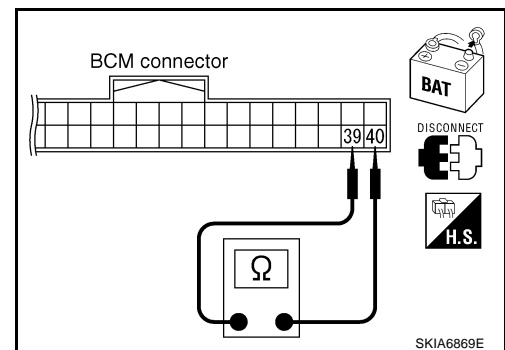
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
NG >> Repair harness between BCM and data link connector.



Data Link Connector Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

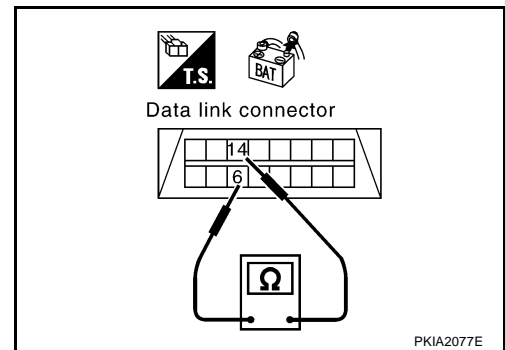
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-115, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.

**Front Air Control Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

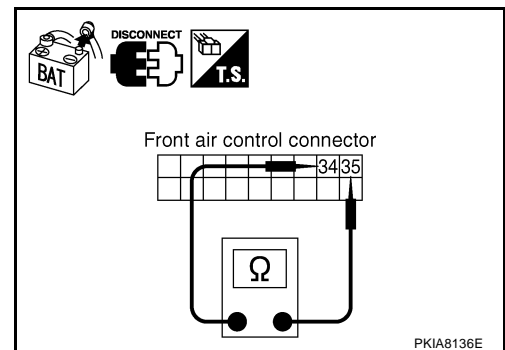
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



ABS Actuator and Electric Unit (Control Unit) Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

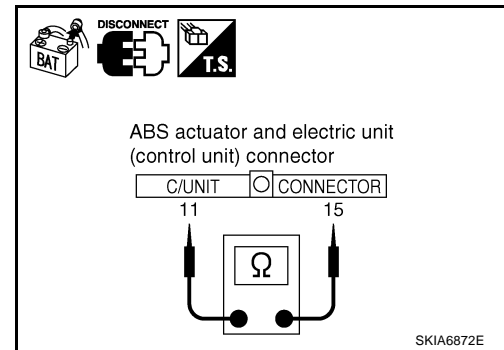
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.

**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

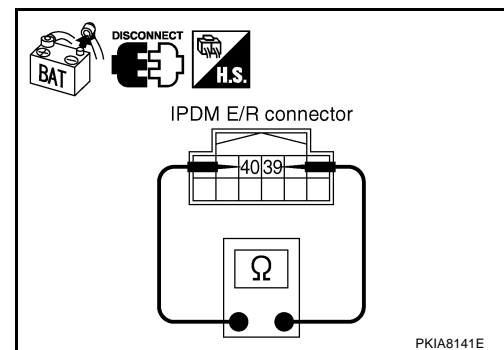
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



CAN Communication Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Driver seat control unit
 - Combination meter
 - Display control unit
 - BCM
 - Front air control
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

OK >> GO TO 2.

NG >> Repair or replace as necessary.

2. CHECK HARNESS FOR SHORT CIRCUIT

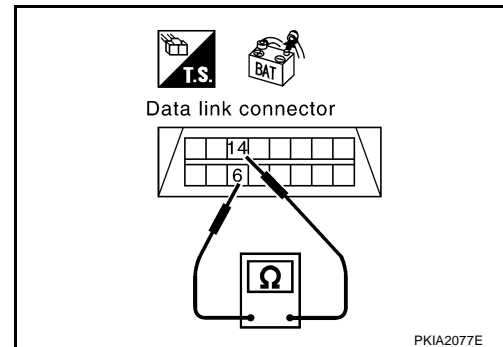
With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.

**3. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

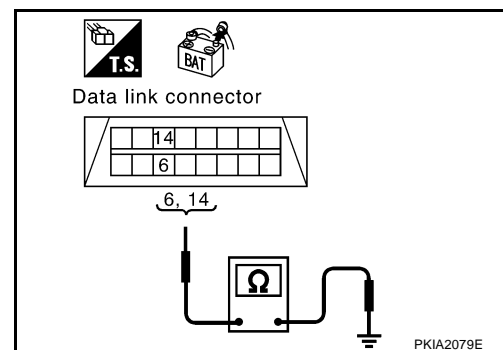
6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

OK >> Check ECM and IPDM E/R. Refer to [LAN-142, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

NG >> Repair harness.

**IPDM E/R Ignition Relay Circuit Check**

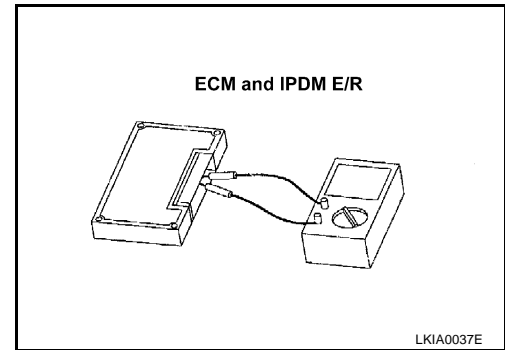
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

Component Inspection**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



CAN SYSTEM (TYPE 5)

PFP:23710

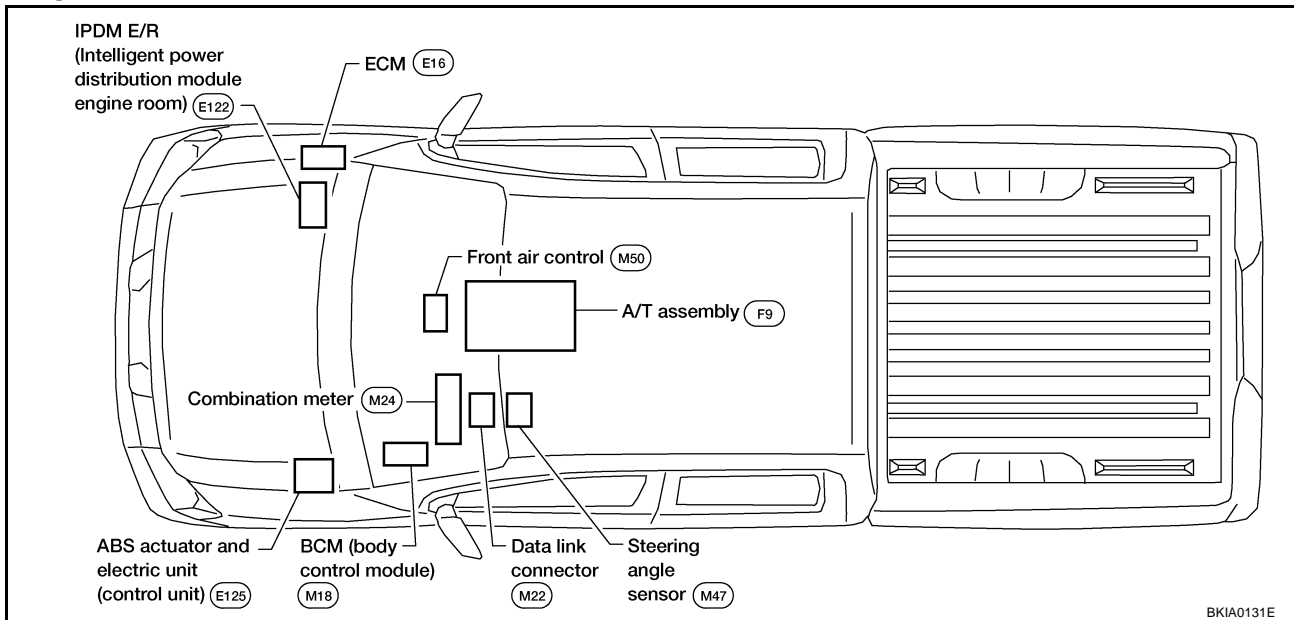
System Description

UKS00392

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

UKS00393



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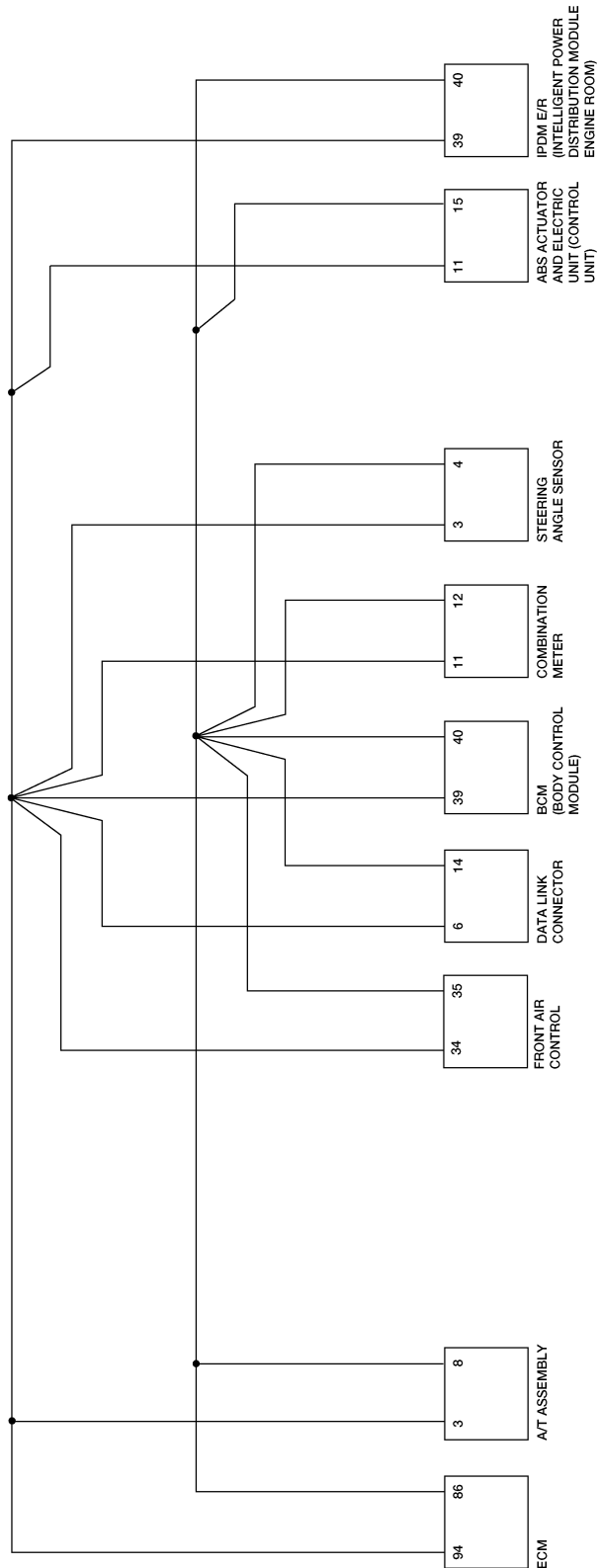
LAN

CAN SYSTEM (TYPE 5)

[CAN]

Schematic

UKS00394



BKWA0136E

CAN SYSTEM (TYPE 5)

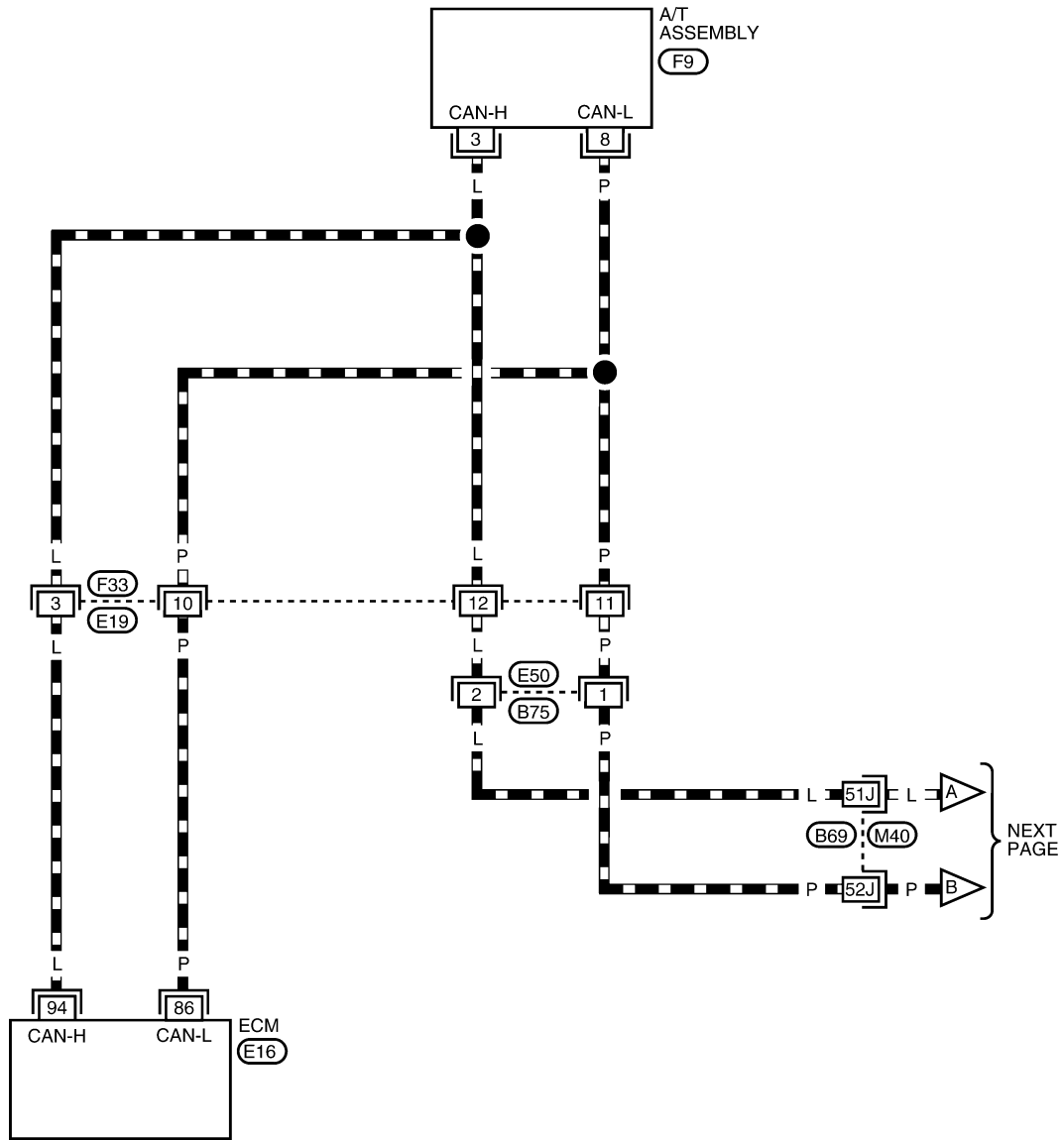
[CAN]

Wiring Diagram - CAN -

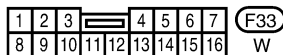
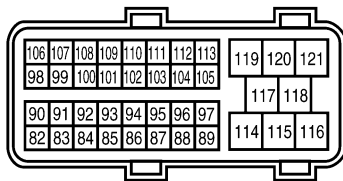
UKS00395

LAN-CAN-13

— : DATA LINE



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REFER TO THE FOLLOWING.

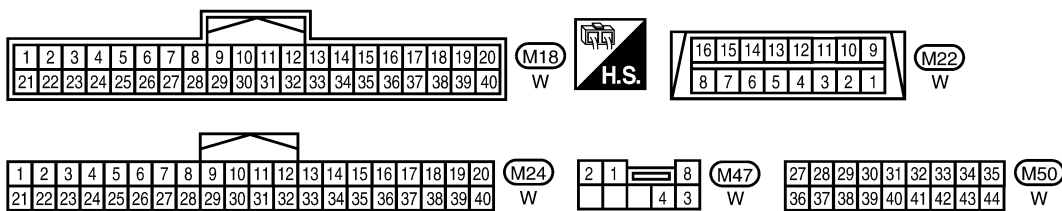
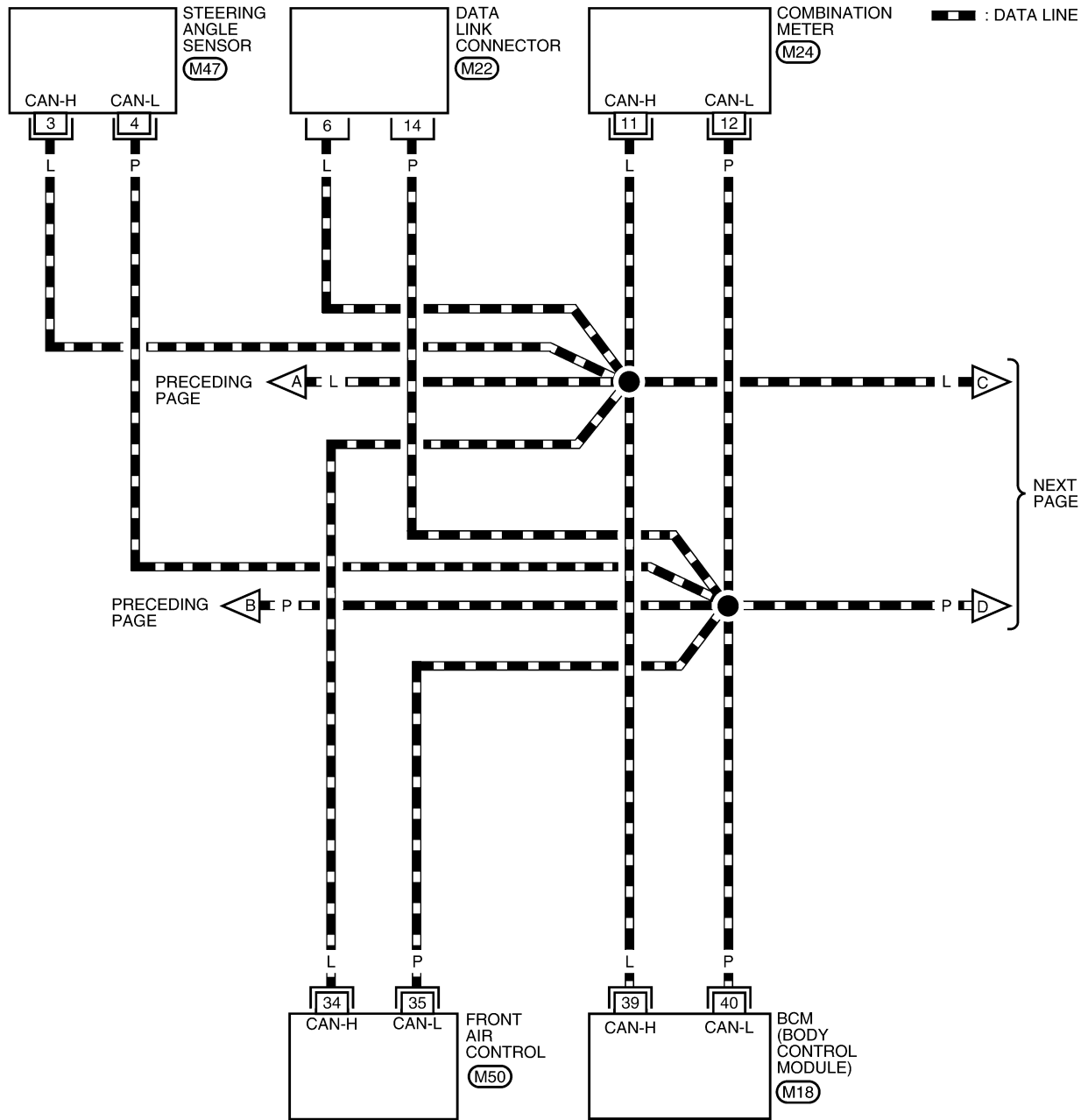
M40 - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0434E

CAN SYSTEM (TYPE 5)

[CAN]

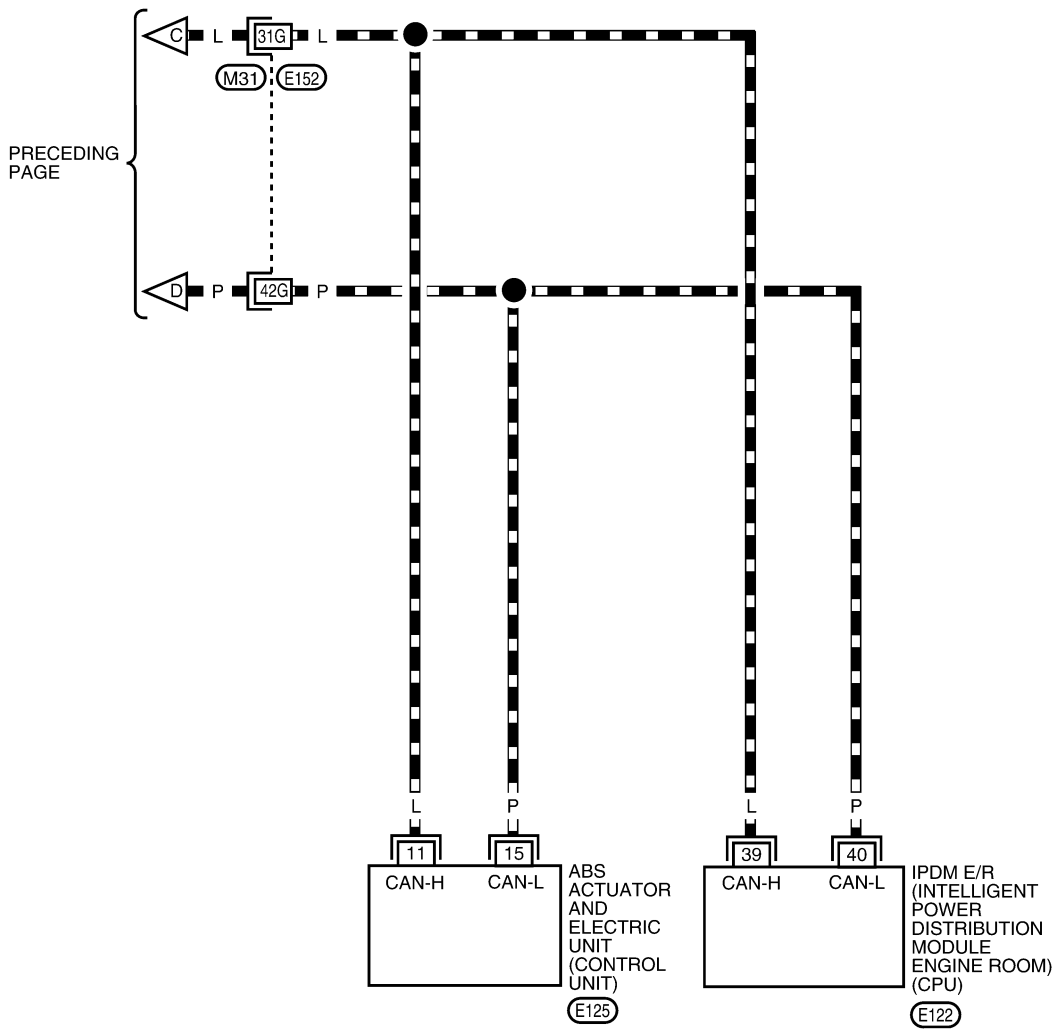
LAN-CAN-14



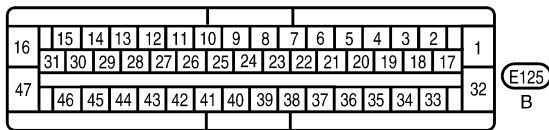
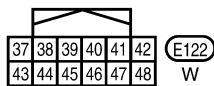
BKWA0435E

LAN-CAN-15

▬ : DATA LINE



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REFER TO THE FOLLOWING.
(M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0436E

Work Flow

- When there are no indications of "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)	NISSAN CONSULT-II ENGINE START (NISSAN BASED VHCL) START (RENAULT BASED VHCL) SUB MODE LIGHT COPY	➔	SELECT SYSTEM ENGINE A/T ABS AIR BAG BCM METER A/C AMP BACK LIGHT COPY	PKIA2093E
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- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)	SELECT DIAG MODE WORK SUPPORT SELF-DIAG RESULTS DATA MONITOR DATA MONITOR (SPEC) CAN DIAG SUPPORT MNTR ACTIVE TEST Scroll Down BACK LIGHT COPY	➔	SELF-DIAG RESULTS DTC RESULTS TIME CAN COMM CIRCUIT [U1000] 0 F.F.DATA ERASE PRINT MODE BACK LIGHT COPY	PKIA8260E
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- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)	SELECT DIAG MODE WORK SUPPORT SELF-DIAG RESULTS DATA MONITOR DATA MONITOR (SPEC) CAN DIAG SUPPORT MNTR ACTIVE TEST Scroll Down BACK LIGHT COPY	➔	CAN DIAG SUPPORT MNTR ENGINE PRSNT INITIAL DIAG OK TRANSMIT DIAG OK TCM OK VDC/TCS/ABS OK METER/M&A OK ICC UNKWN BCM/SEC OK IPDM E/R OK AWD/4WD/e4WD UNKWN PRINT Scroll Down MODE BACK LIGHT COPY	PKIA8343E
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- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-149, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-149, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-151, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 5)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

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LAN

CAN SYSTEM (TYPE 5)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
HVAC
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6658E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

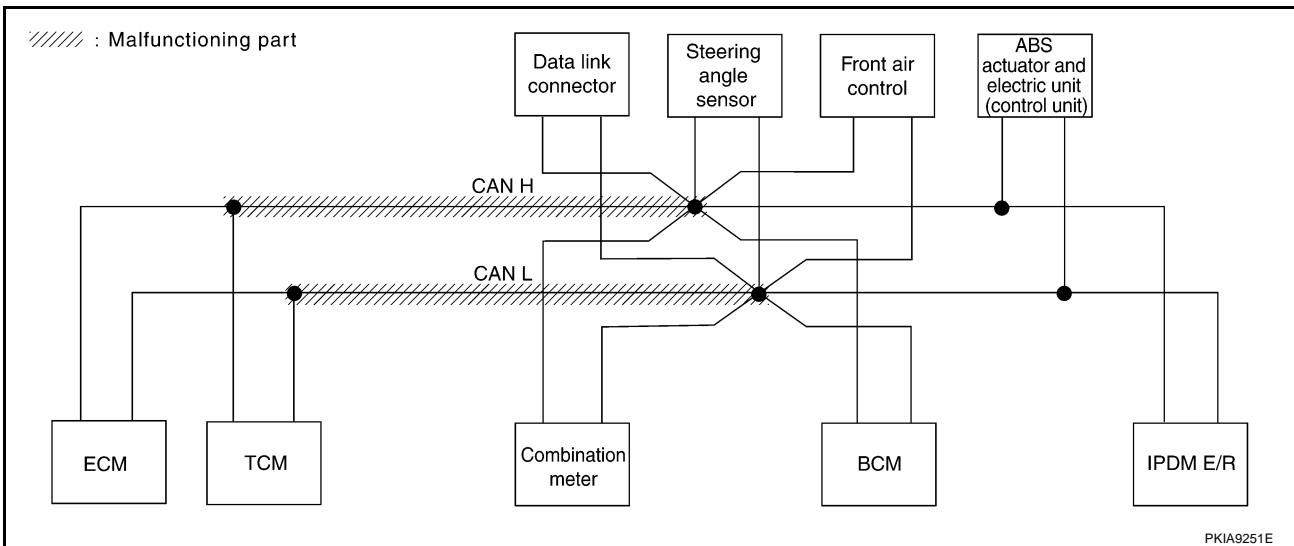
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-163, "Circuit Check Between TCM and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN ✓	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—

PKIB6643E



CAN SYSTEM (TYPE 5)

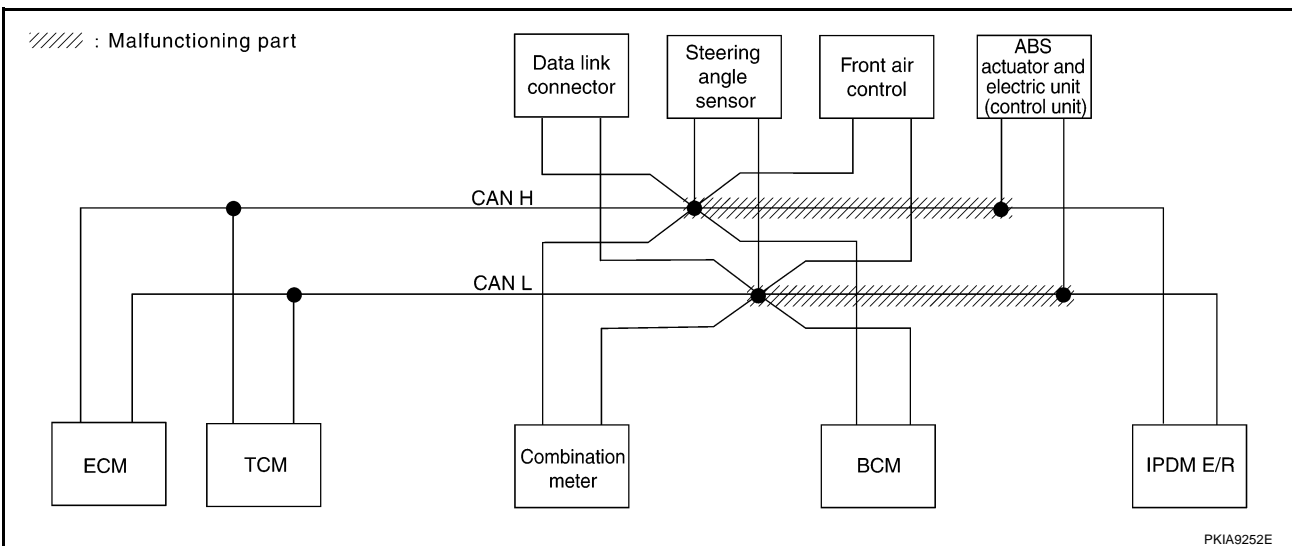
[CAN]

Case 2

Check harness between data link connector and IPDM E/R. Refer to [LAN-164, "Circuit Check Between Data Link Connector and IPDM E/R"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN ✓	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN ✓	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN ✓	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6644E



PKIA9252E

CAN SYSTEM (TYPE 5)

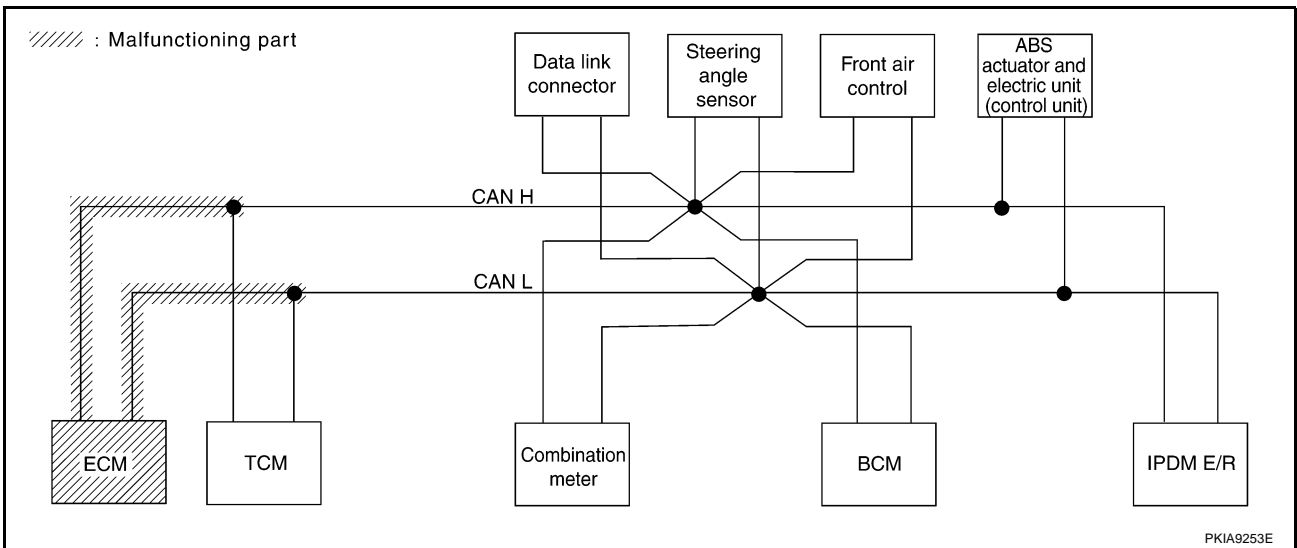
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-165, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW ^N	—	UNKW ^N	UNKW ^N	UNKW ^N	—	UNKW ^N	UNKW ^N
A/T	—	NG	UNKW ^N	UNKW ^N	—	UNKW ^N	—	—	UNKW ^N	—
BCM	No indication	NG	UNKW ^N	UNKW ^N	—	UNKW ^N	—	—	—	UNKW ^N
HVAC	No indication	—	UNKW ^N	UNKW ^N	—	—	UNKW ^N	—	UNKW ^N	—
ABS	—	NG	UNKW ^N	UNKW ^N	UNKW ^N	—	—	UNKW ^N	—	—
IPDM E/R	No indication	—	UNKW ^N	UNKW ^N	—	—	UNKW ^N	—	—	—

PKIB6645E



PKIA9253E

CAN SYSTEM (TYPE 5)

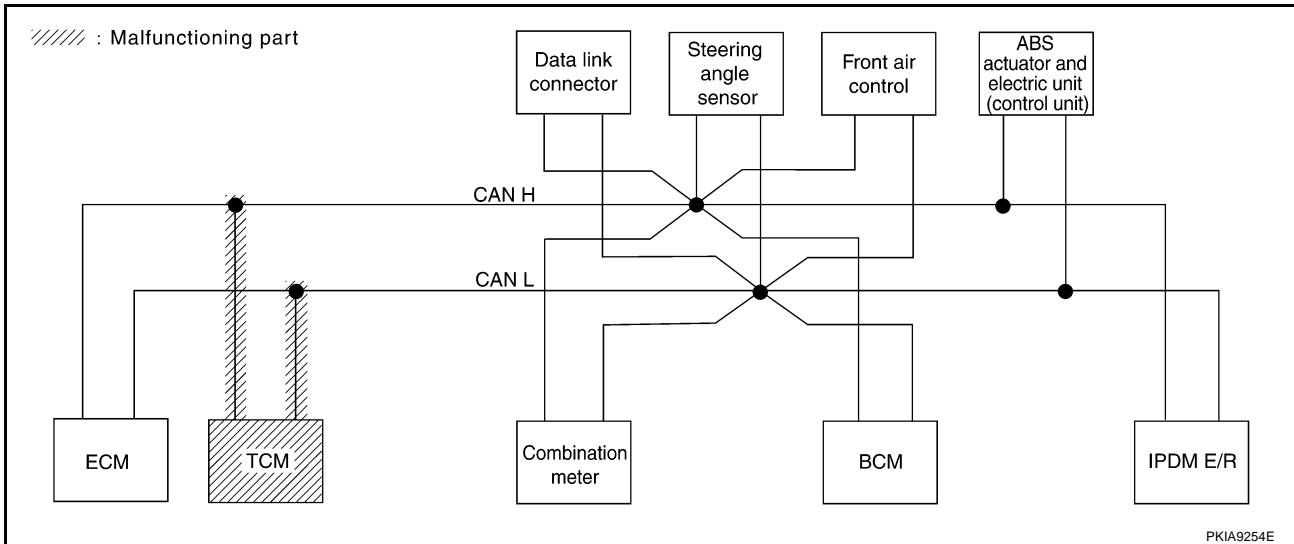
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-166, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6646E



PKIA9254E

CAN SYSTEM (TYPE 5)

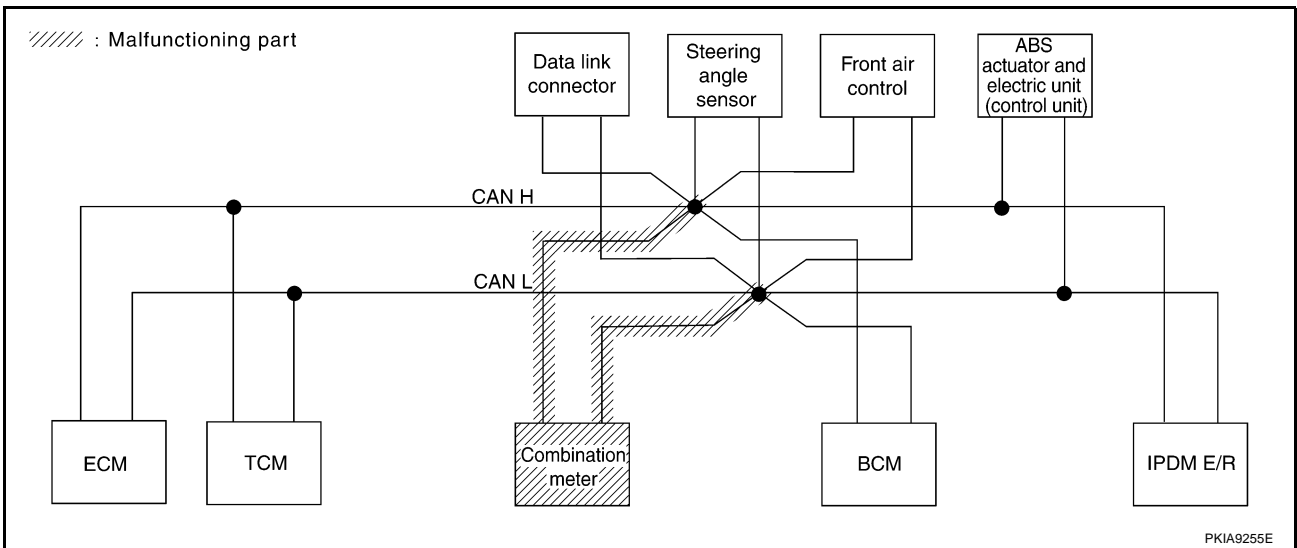
[CAN]

Case 5

Check combination meter circuit. Refer to [LAN-166, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						IPDM E/R
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6647E



CAN SYSTEM (TYPE 5)

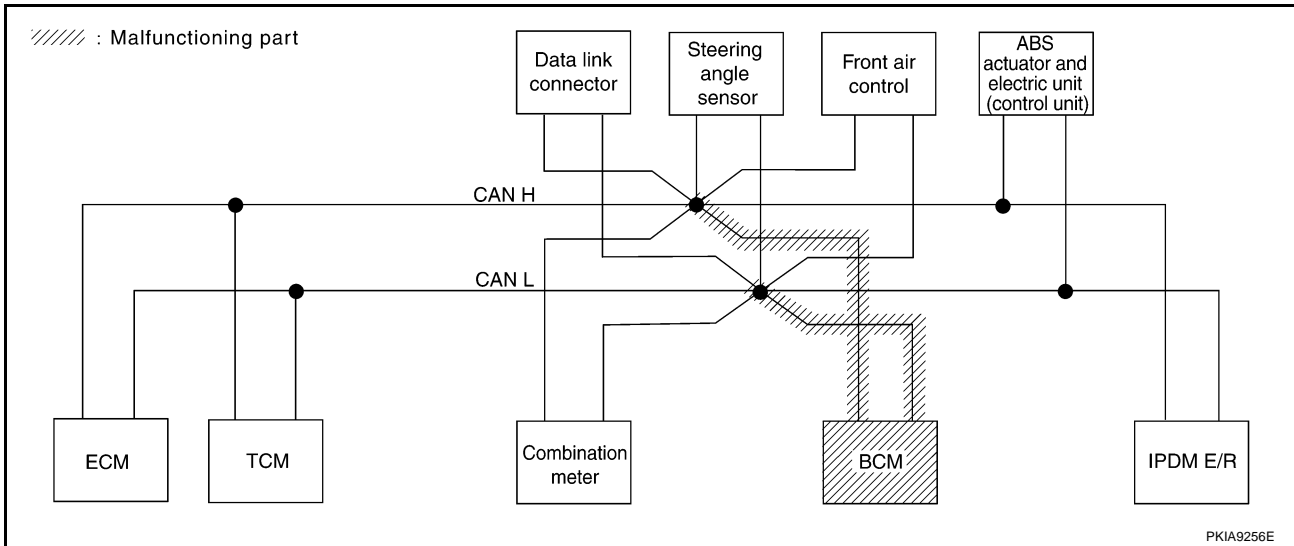
[CAN]

Case 6

Check BCM circuit. Refer to [LAN-167, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	—	—

PKIB6648E



PKIA9256E

CAN SYSTEM (TYPE 5)

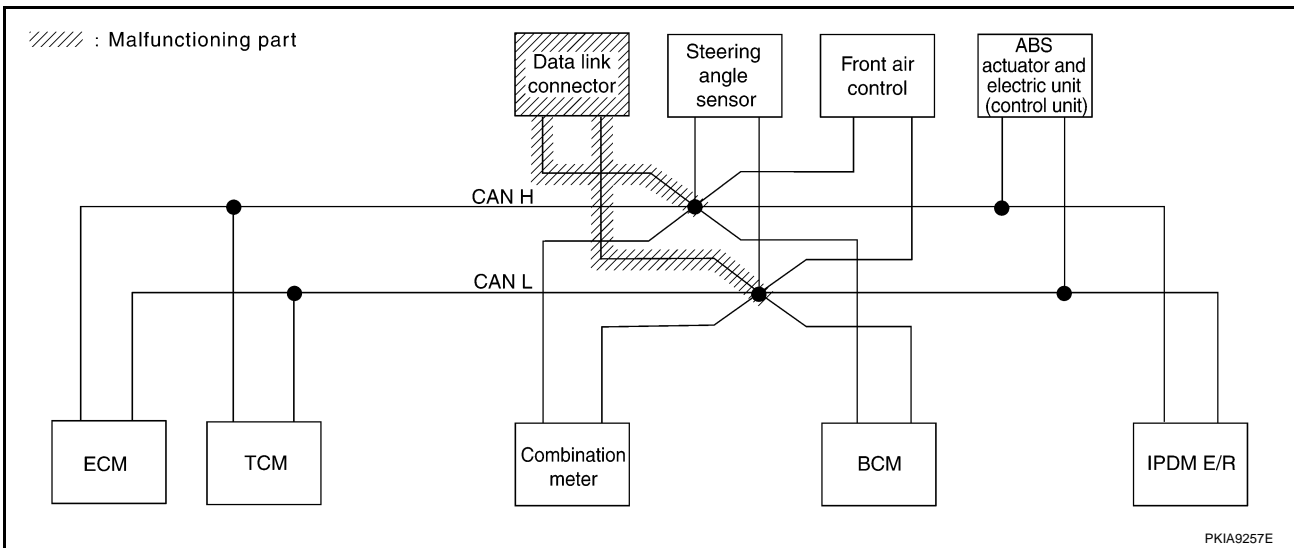
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-167, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6649E



CAN SYSTEM (TYPE 5)

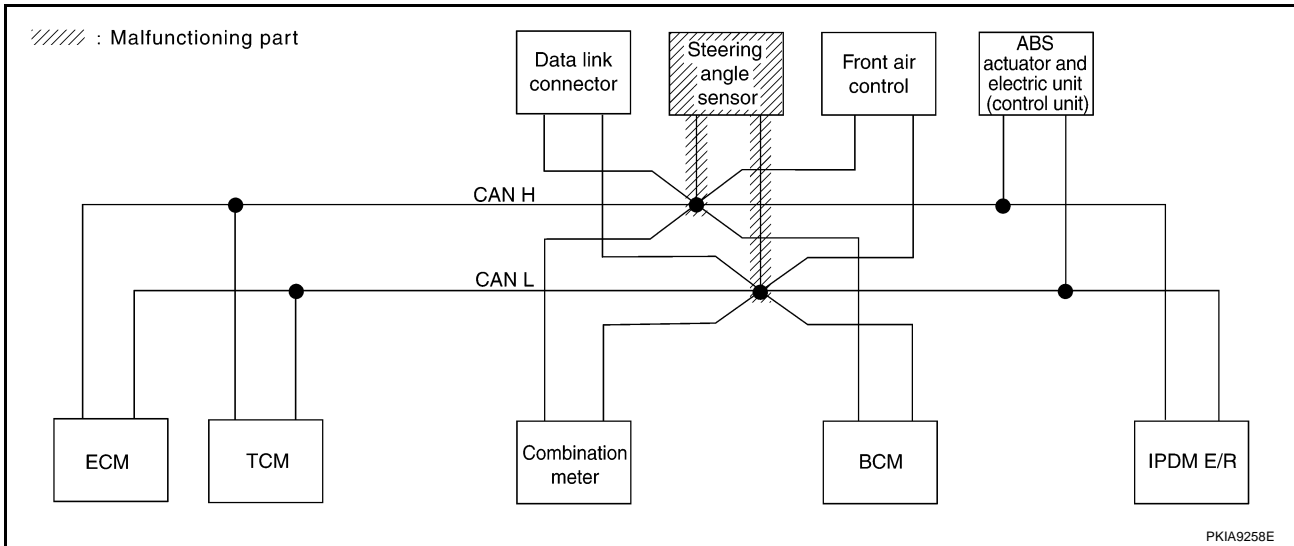
[CAN]

Case 8

Check steering angle sensor circuit. Refer to [LAN-168, "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6650E



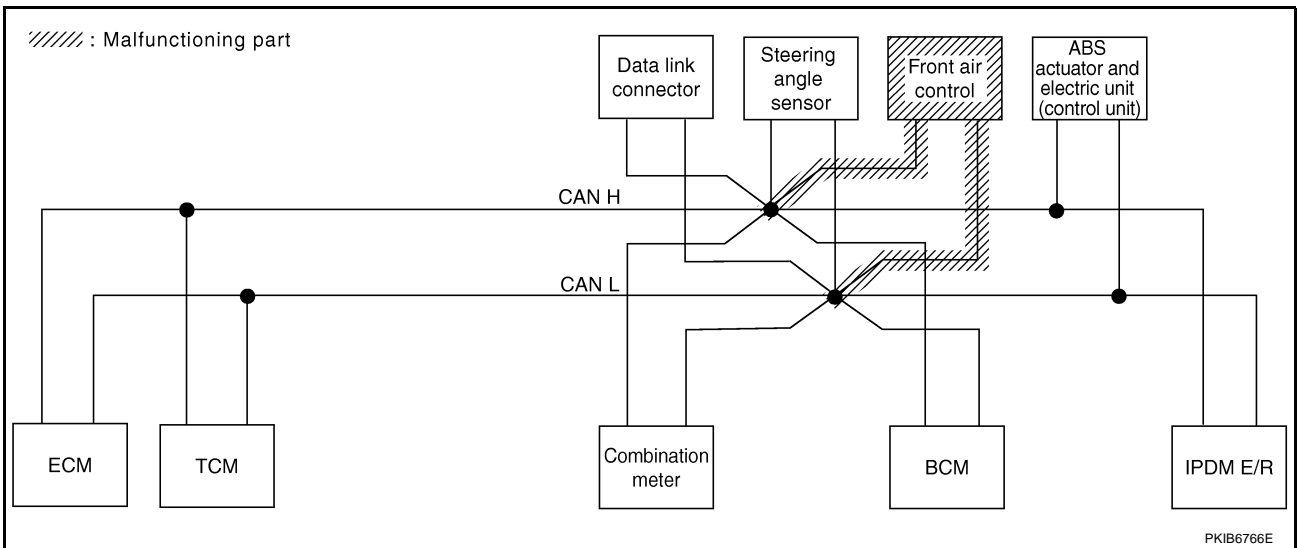
PKIA9258E

Case 9

Check front air control circuit. Refer to [LAN-168, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN ✓	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6651E



CAN SYSTEM (TYPE 5)

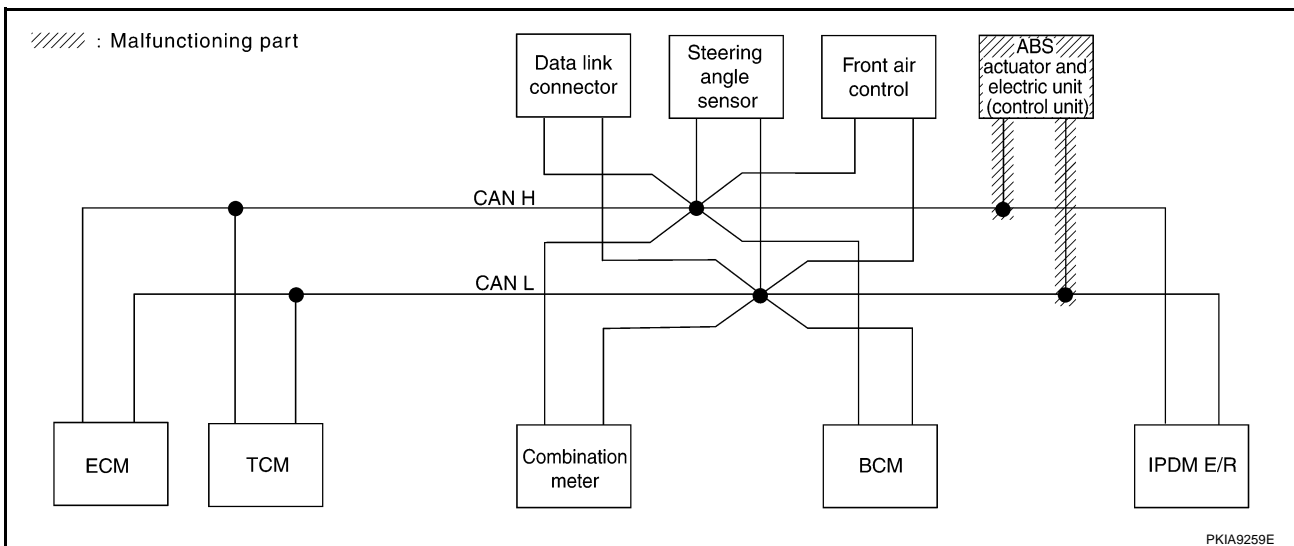
[CAN]

Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-169, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6652E



PKIA9259E

CAN SYSTEM (TYPE 5)

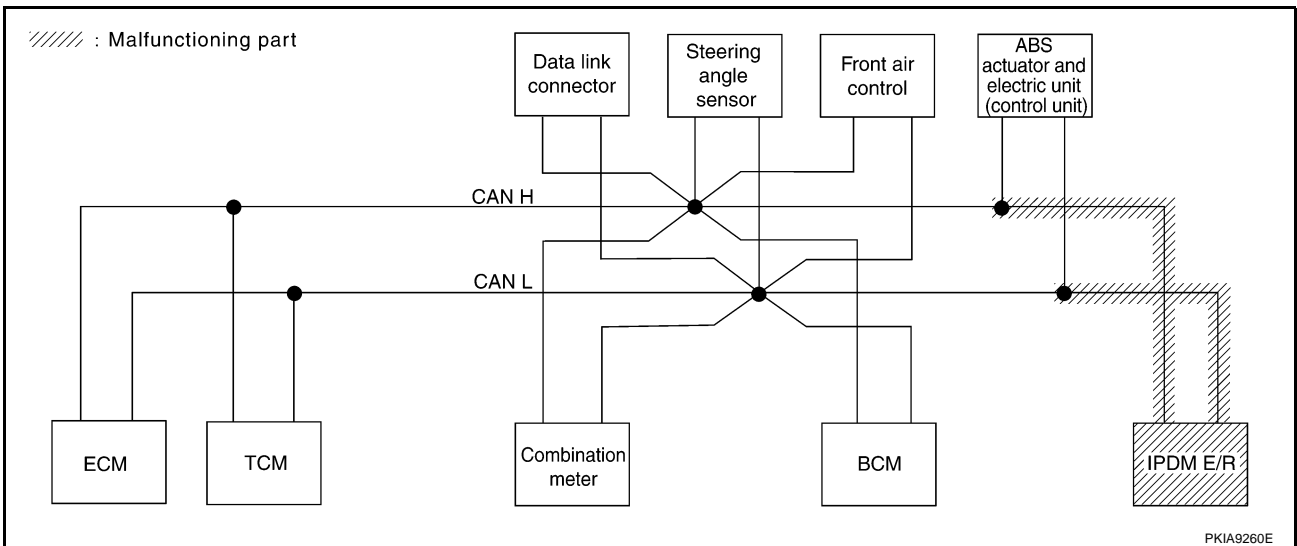
[CAN]

Case 11

Check IPDM E/R circuit. Refer to [LAN-169, "IPDM E/R Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						IPDM E/R
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6653E



PKIA9260E

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CAN SYSTEM (TYPE 5)

[CAN]

Case 12

Check CAN communication circuit. Refer to [LAN-170, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N	—
BCM	No indication 	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N
HVAC	No indication 	—	UNKW N	UNKW N	—	—	UNKW N	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	UNKW N	—	—
IPDM E/R	No indication 	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—

PKIB6654E

Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-171, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	—	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	UNKW N	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—

PKIB6655E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-171, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER /M&A	BCM/SEC	STRG	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UN KN ✓W	—	UN KN ✓W	—	—	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ABS	—	NG	UNKWN	UN KN ✓W	UNKWN	—	—	UN KN ✓W	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6656E

Circuit Check Between TCM and Data Link Connector

UKS00397

1. CHECK CONNECTOR

- Turn ignition switch OFF.
- Disconnect the negative battery terminal.
- Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75
 - Harness connector B69
 - Harness connector M40

OK or NG

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

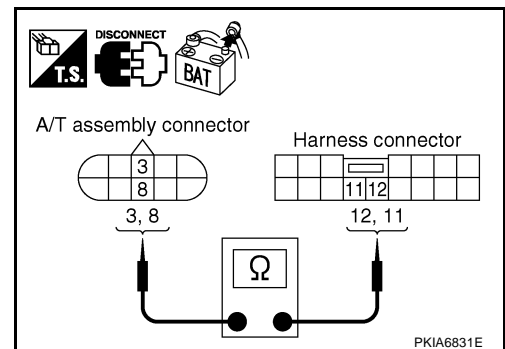
2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect A/T assembly connector and harness connector F33.
- Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

3 (L) - 12 (L) : Continuity should exist.
8 (P) - 11 (P) : Continuity should exist.

OK or NG

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



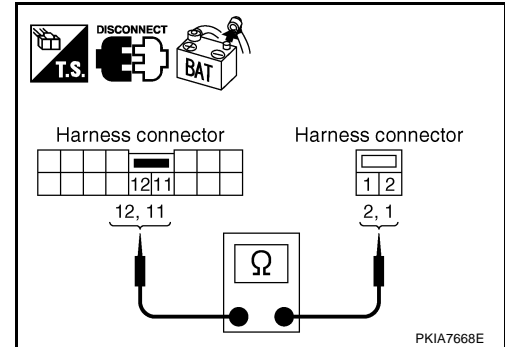
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



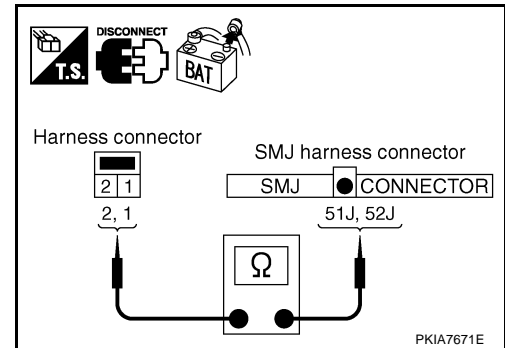
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B69.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B69 terminals 51J (L), 52J (P).

2 (L) - 51J (L) : Continuity should exist.
1 (P) - 52J (P) : Continuity should exist.

OK or NG

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



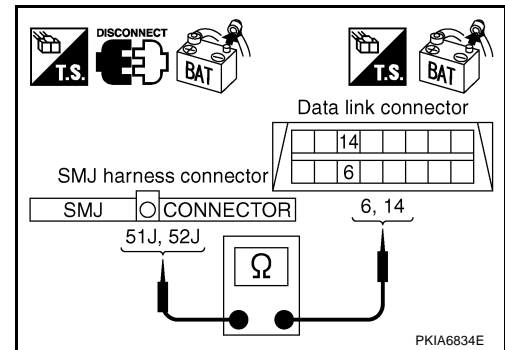
5. CHECK HARNESS FOR OPEN CIRCUIT

Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.
52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-148, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS00398

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

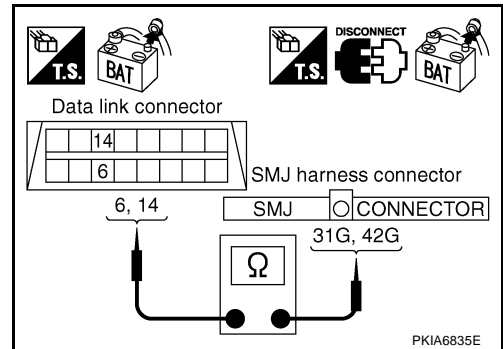
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.
14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



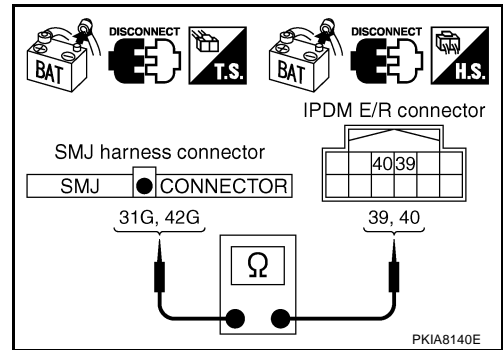
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.
42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-148, "Work Flow"](#).
- NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

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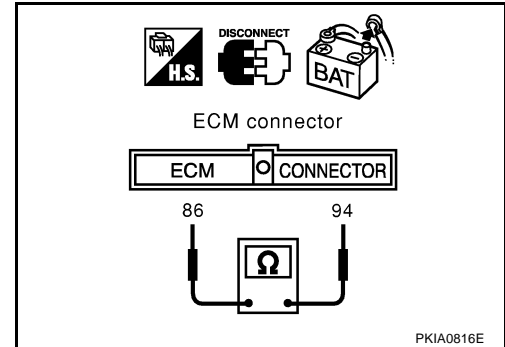
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.



UKS0039A

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

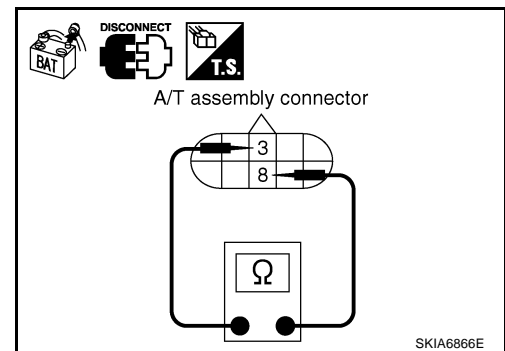
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



UKS0039B

Combination Meter Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

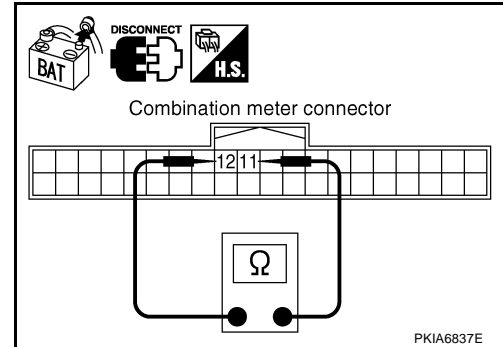
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



UKS0039C

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

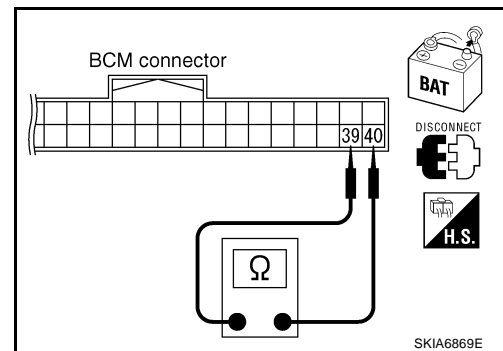
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



UKS0039D

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

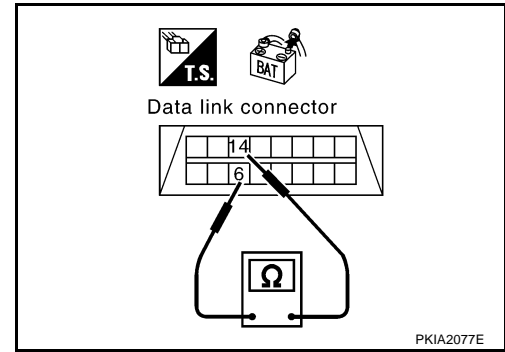
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-148, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



UKS0039E

Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check 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.

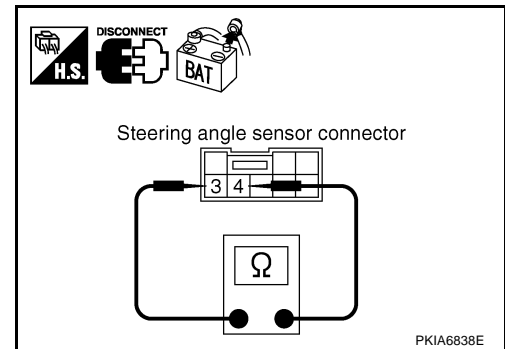
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M47 terminals 3 (L) and 4 (P).

3 (L) - 4 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace steering angle sensor.
 NG >> Repair harness between steering angle sensor and data link connector.



UKS003KP

Front Air Control Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

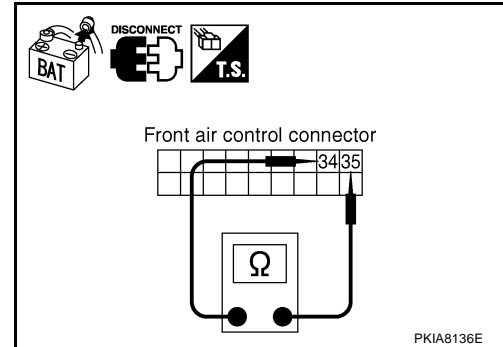
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

UKS0039F

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

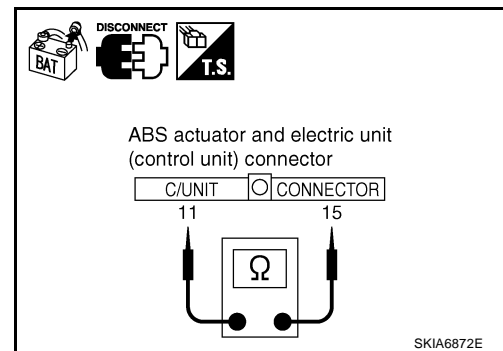
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check

UKS0039G

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

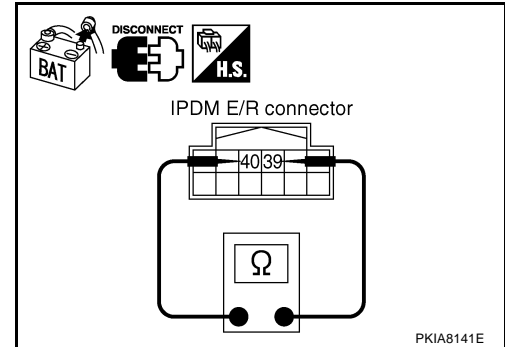
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



UKS0039H

CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Combination meter
 - BCM
 - Steering angle sensor
 - Front air control
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

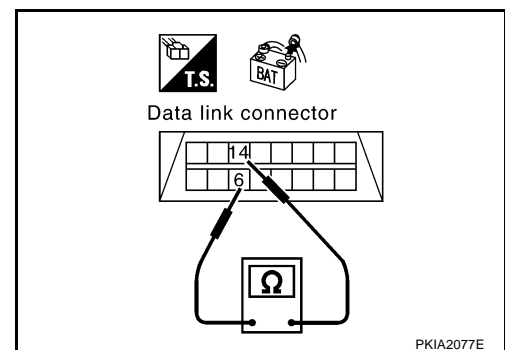
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

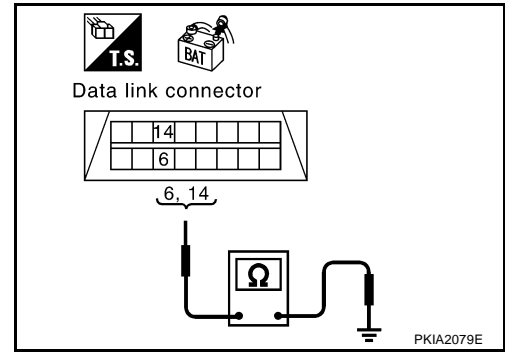
6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

OK >> Check ECM and IPDM E/R. Refer to [LAN-171, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

NG >> Repair harness.



UKS0039I

IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

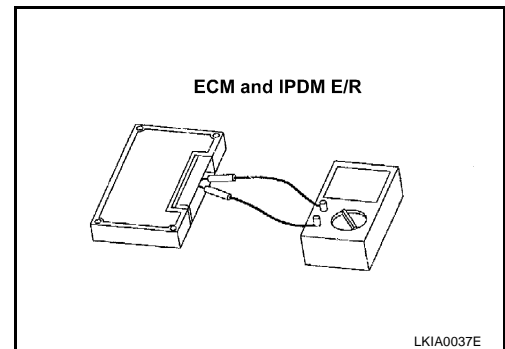
UKS0039J

Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



LKIA0037E

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CAN SYSTEM (TYPE 6)

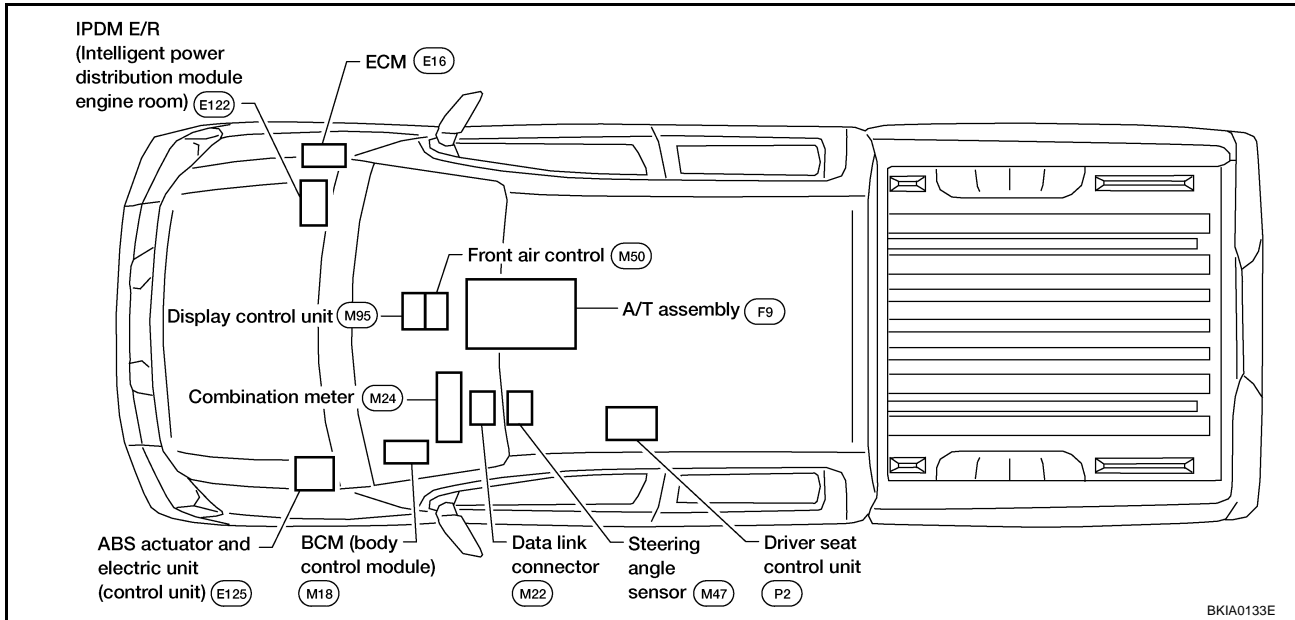
System Description

UKS001F1

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

UKS001F2

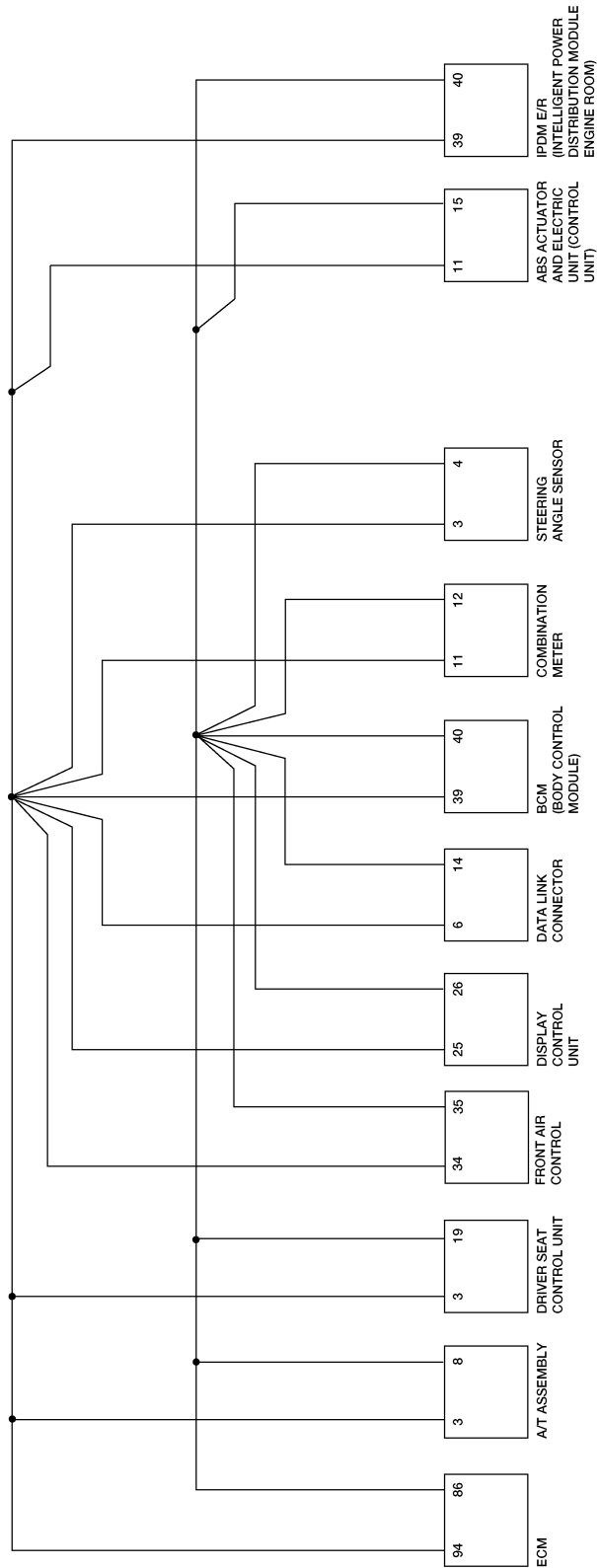


CAN SYSTEM (TYPE 6)

[CAN]

Schematic

UKS001F3



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CAN SYSTEM (TYPE 6)

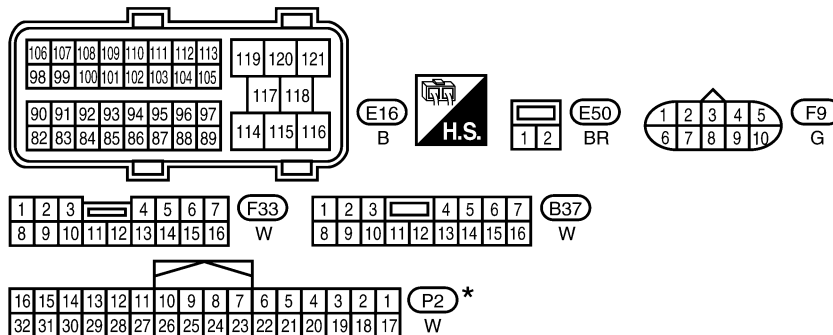
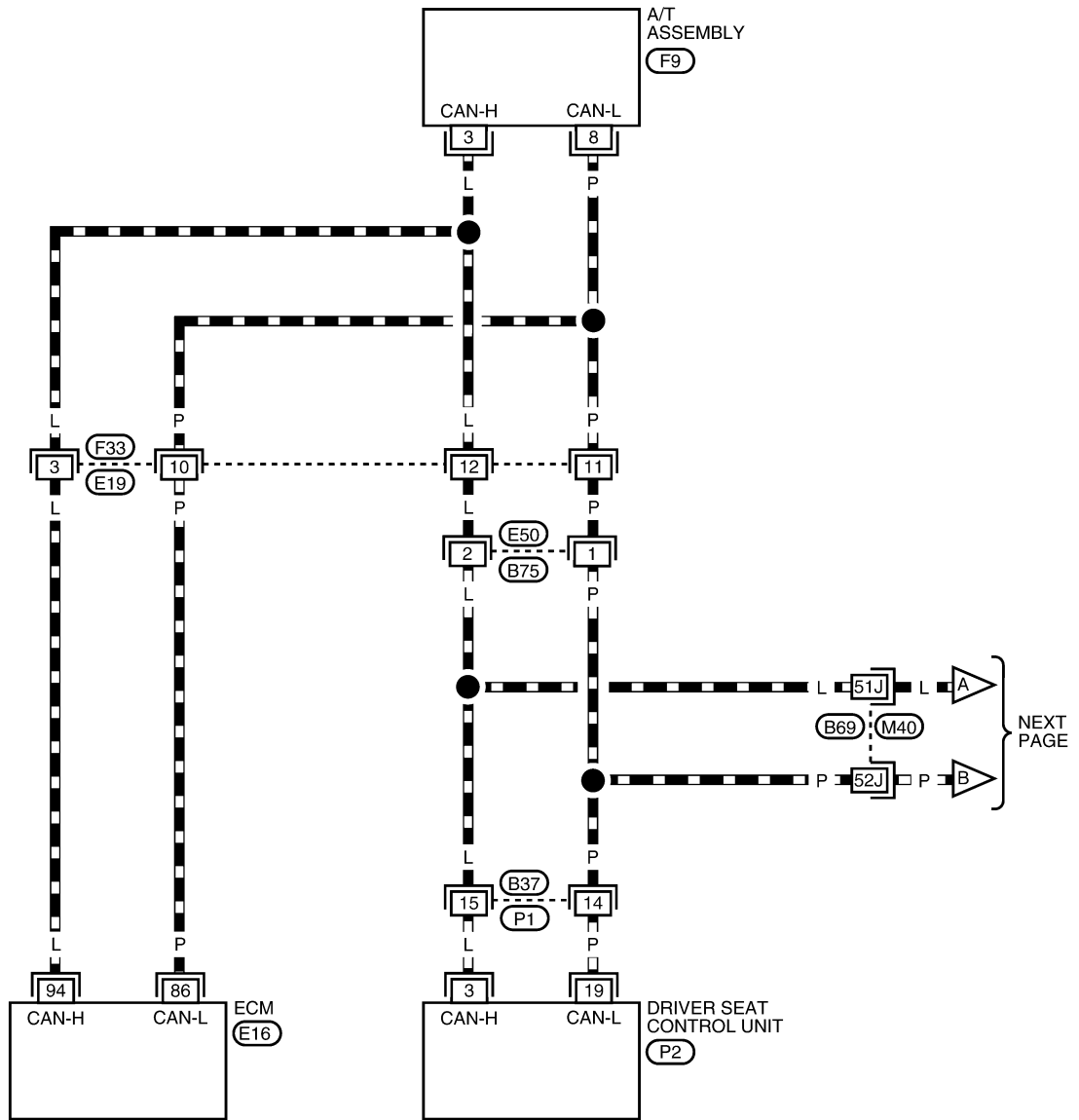
[CAN]

UKS001F4

Wiring Diagram - CAN -

LAN-CAN-16

▬ : DATA LINE



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

REFER TO THE FOLLOWING.

(M40) - SUPER MULTIPLE JUNCTION (SMJ)

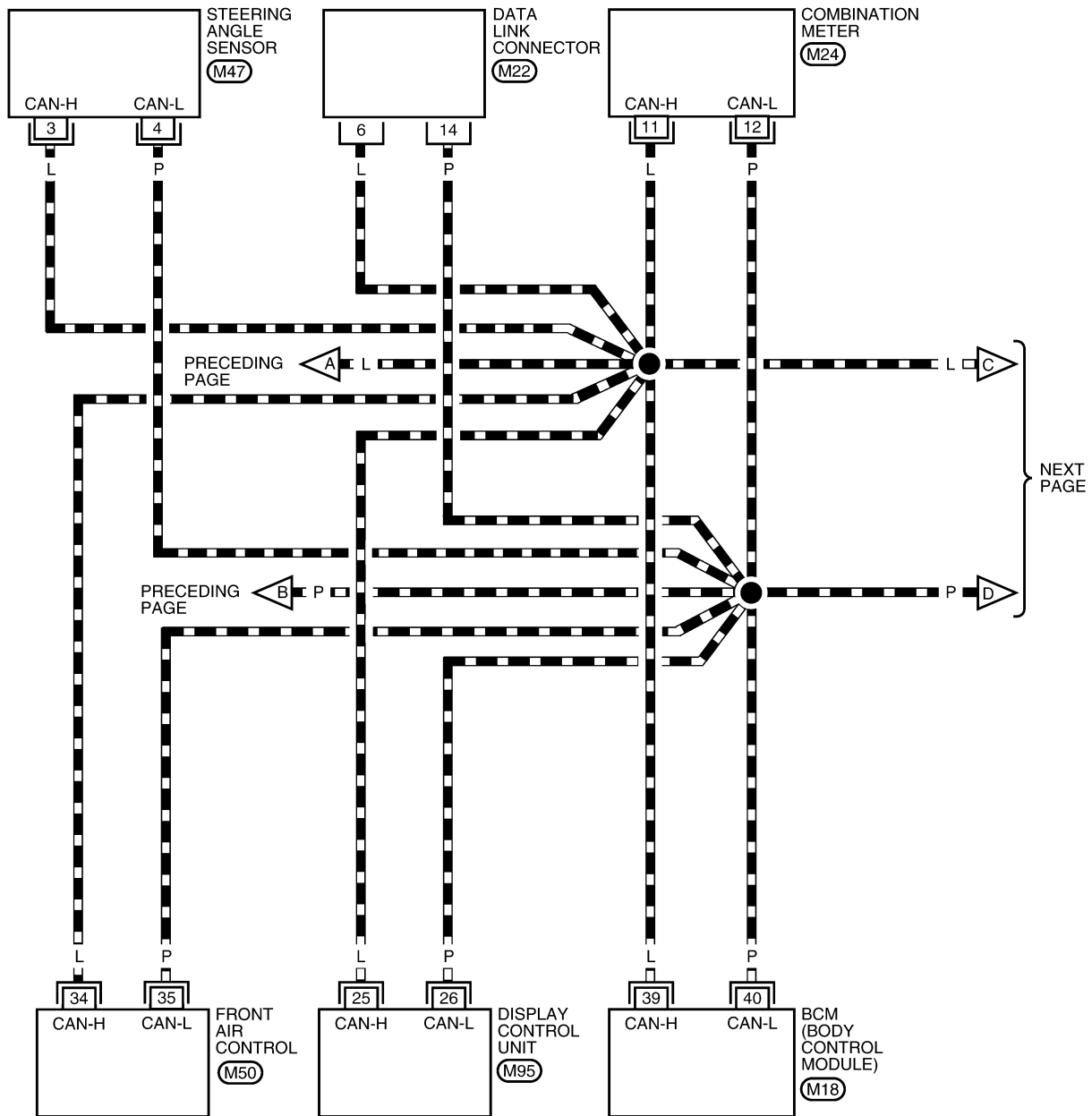
BKWA0440E

CAN SYSTEM (TYPE 6)

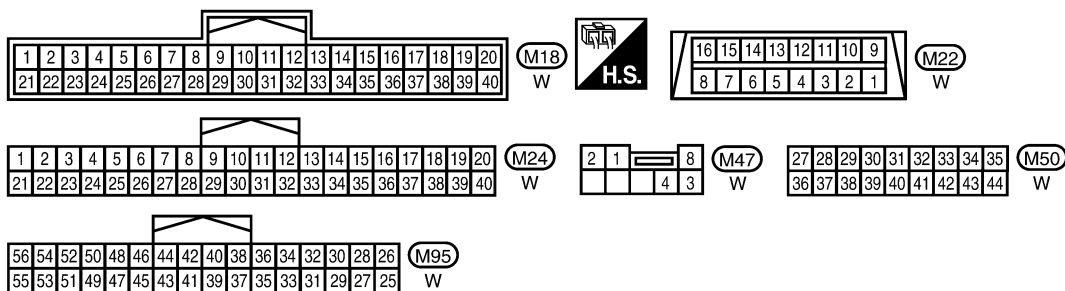
[CAN]

LAN-CAN-17

— : DATA LINE



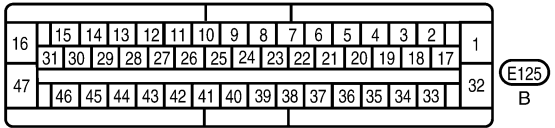
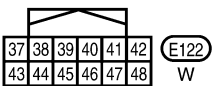
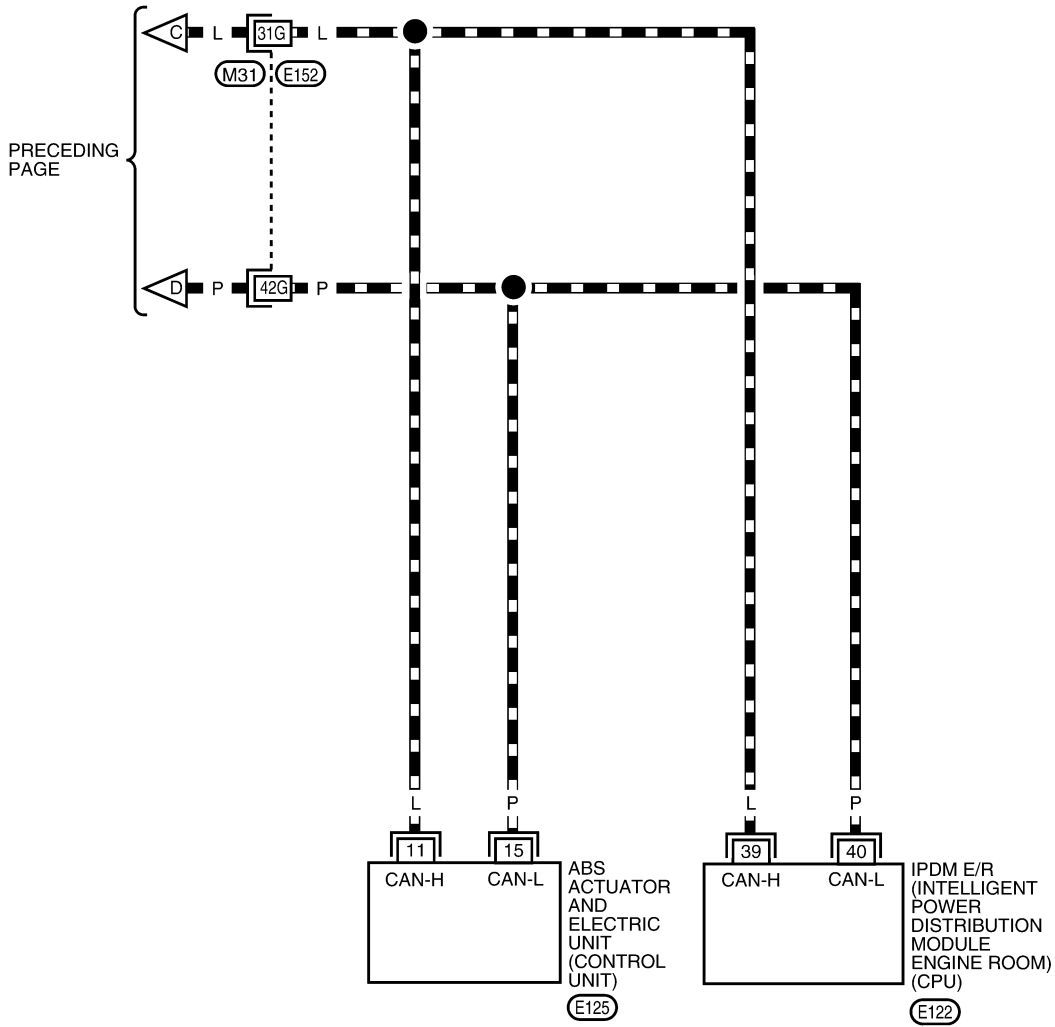
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LAN-CAN-18

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

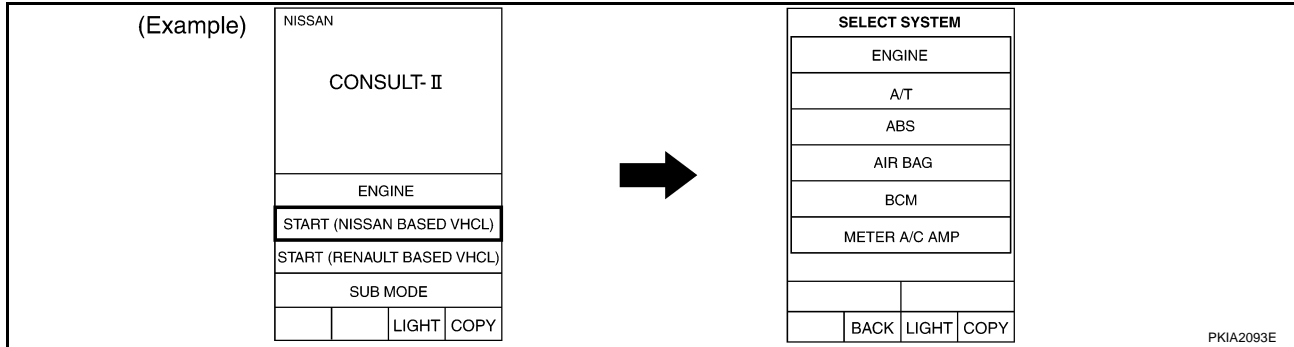
CAN SYSTEM (TYPE 6)

[CAN]

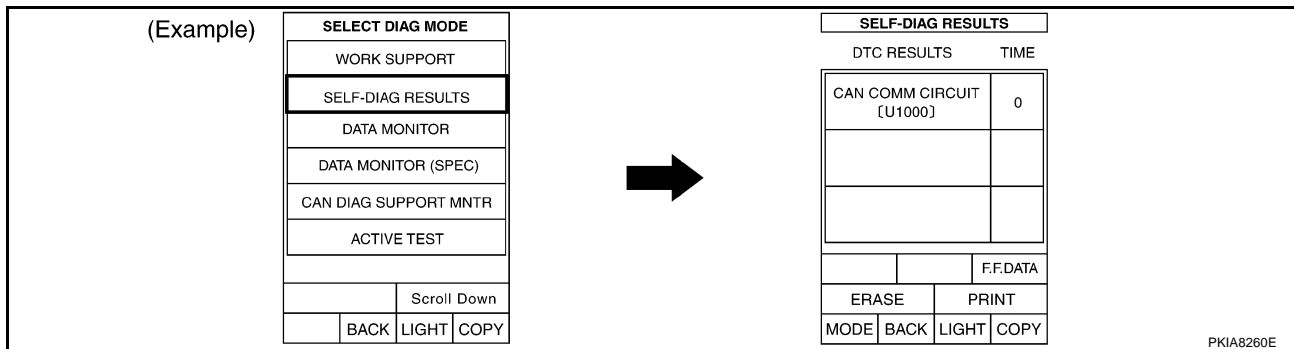
UKS001F5

Work Flow

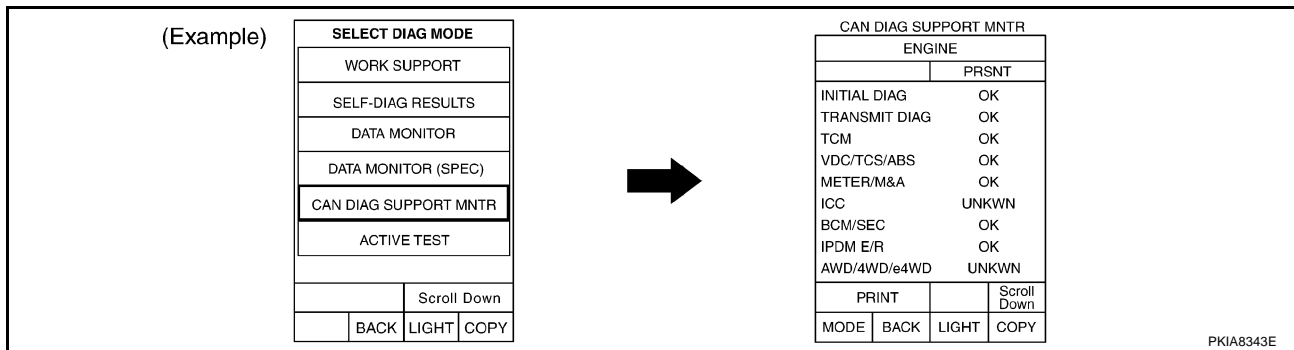
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-179, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-179, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-148, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-179, "CHECK SHEET"](#) .

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CAN SYSTEM (TYPE 6)

[CAN]

-
8. Mark the “NG” or “UNKWN” item of the check sheet table with “v” from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-179, "CHECK SHEET"](#) .

NOTE:

If “NG” is displayed on “CAN COMM” as “CAN DIAG SUPPORT MONITOR” for the diagnosed control unit, replace the control unit. Refer to [AV-148, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-181, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 6)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN	UNKWN
A/T	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	-	-	UNKWN	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	UNKWN	UNKWN	-	UNKWN	-	-	-	-
Display control unit	-	CAN COMM	CAN CIRC 1	CAN CIRC 3	-	CAN CIRC 5	-	CAN CIRC 2	-	CAN CIRC 4	-	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	-	UNKWN	-	-	-	-	-	UNKWN
HVAC	No indication	-	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	-	UNKWN	-
ABS	-	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	-

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

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CAN SYSTEM (TYPE 6)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

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A/T
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

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CAN SYSTEM (TYPE 6)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

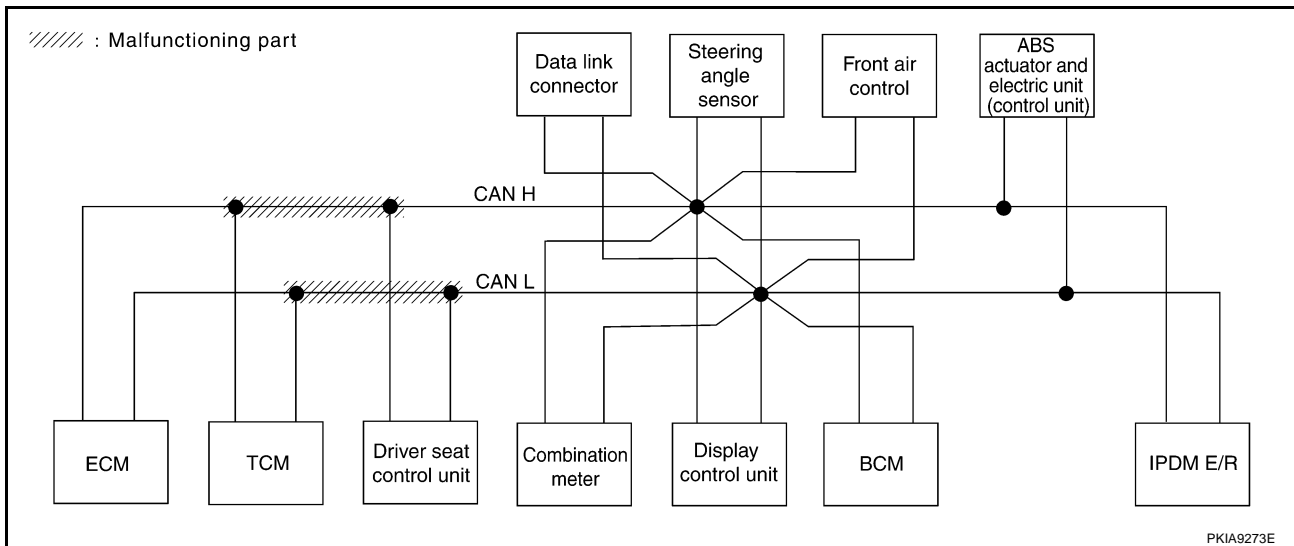
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and driver seat control unit. Refer to [LAN-196, "Circuit Check Between TCM and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6659E



CAN SYSTEM (TYPE 6)

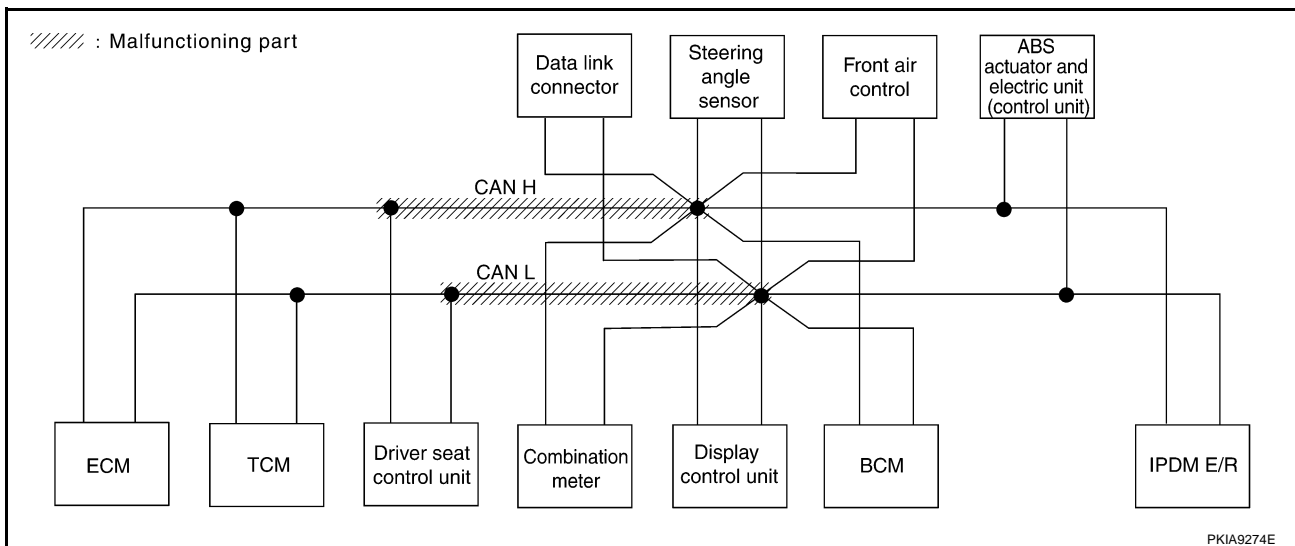
[CAN]

Case 2

Check harness between driver seat control unit and data link connector. Refer to [LAN-197, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	✓	—	✓	—	—	✓	✓
A/T	—	NG	UNKWN	UNKWN	—	✓	—	—	—	—	✓	—
AUTO DRIVE POS.	✓ No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	✓ CAN CIRC 3	—	✓ CAN CIRC 5	—	✓ CAN CIRC 2	—	✓ CAN CIRC 4	—	✓ CAN CIRC 7
BCM	✓ No indication	NG	UNKWN	✓	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	✓ No indication	—	UNKWN	✓	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	✓	✓	—	—	—	UNKWN	—	—	—
IPDM E/R	✓ No indication	—	UNKWN	✓	—	—	—	UNKWN	—	—	—	—

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PKIA9274E

CAN SYSTEM (TYPE 6)

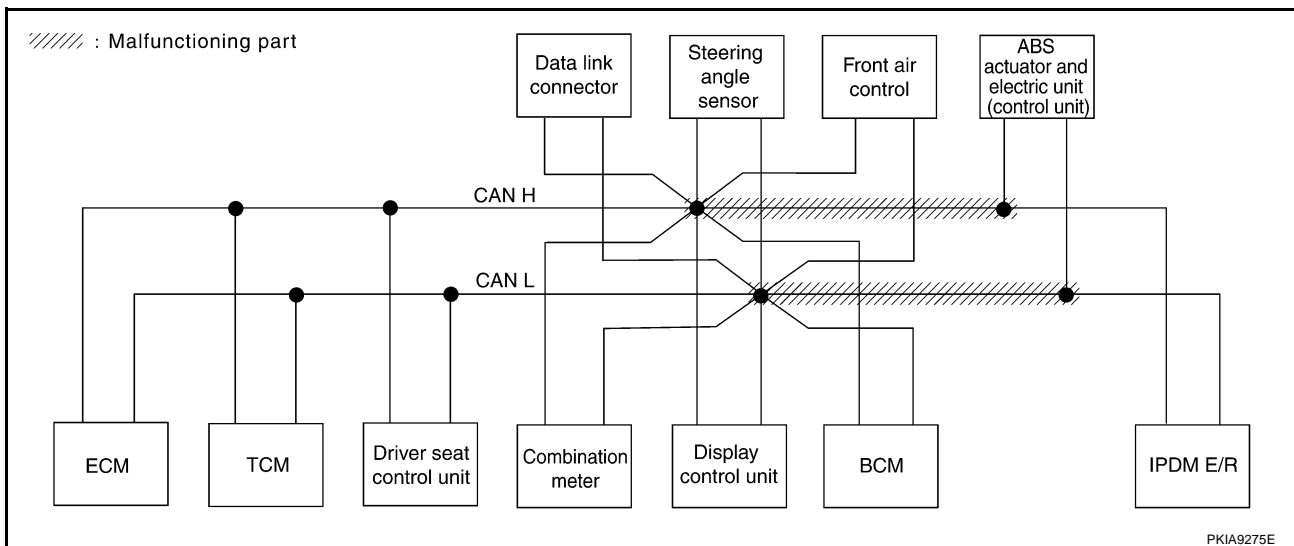
[CAN]

Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-198, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

PKIB661E



CAN SYSTEM (TYPE 6)

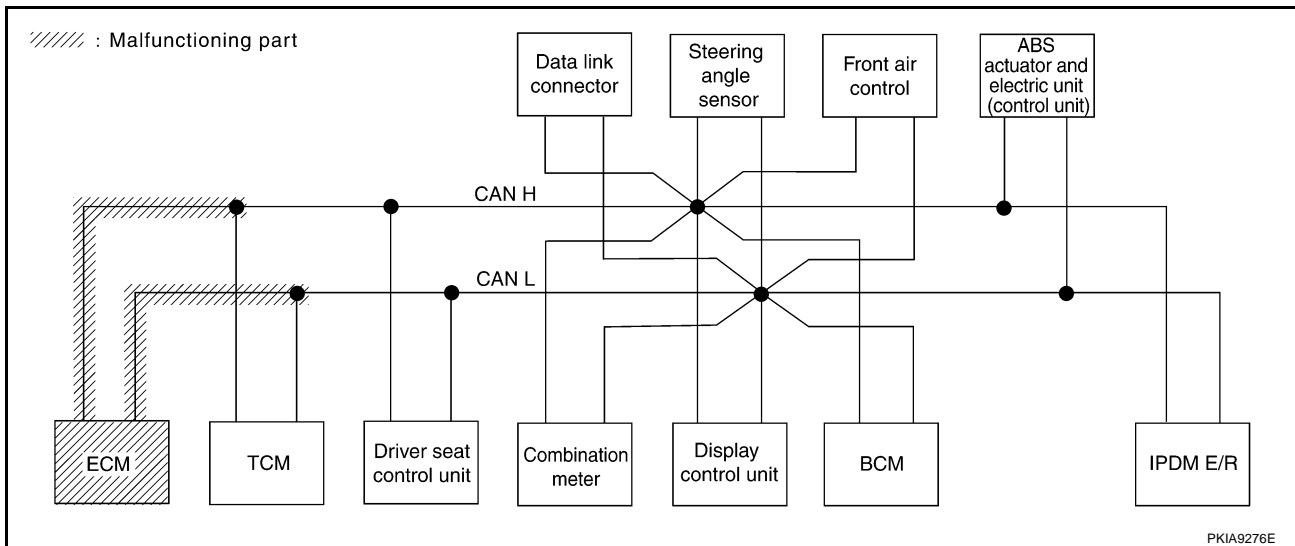
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-199, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N
A/T	—	NG	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—
AUTO DRIVE POS.	No indication	NG	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	—	—	—	—	—	UNKW [✓] N
HVAC	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	—
IPDM E/R	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	—	—

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CAN SYSTEM (TYPE 6)

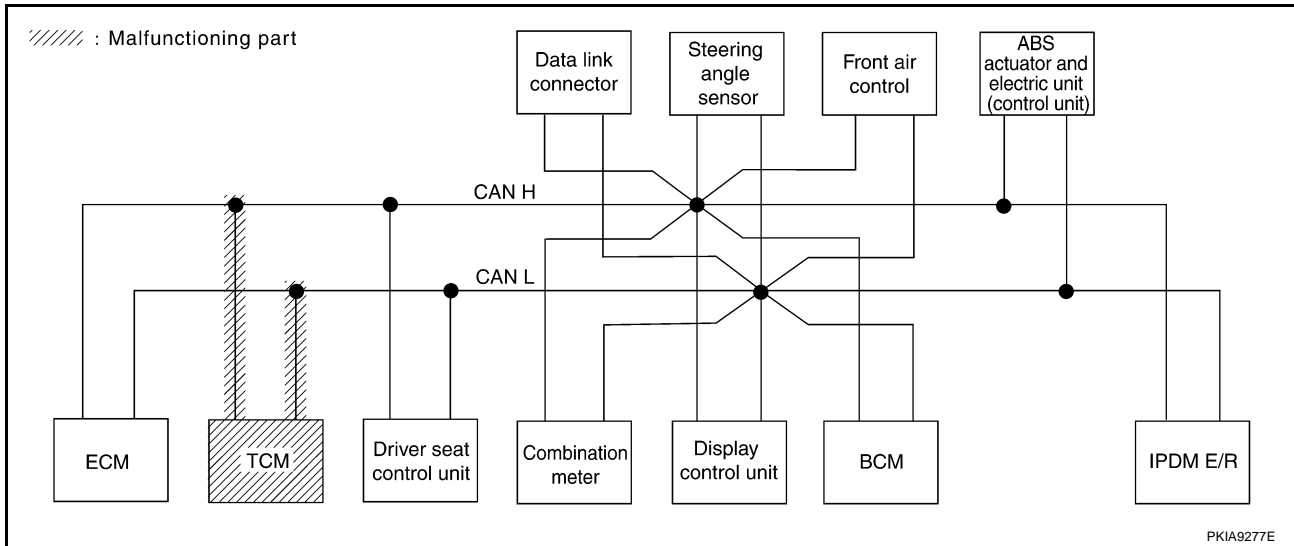
[CAN]

Case 5

Check TCM circuit. Refer to [LAN-199, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 6)

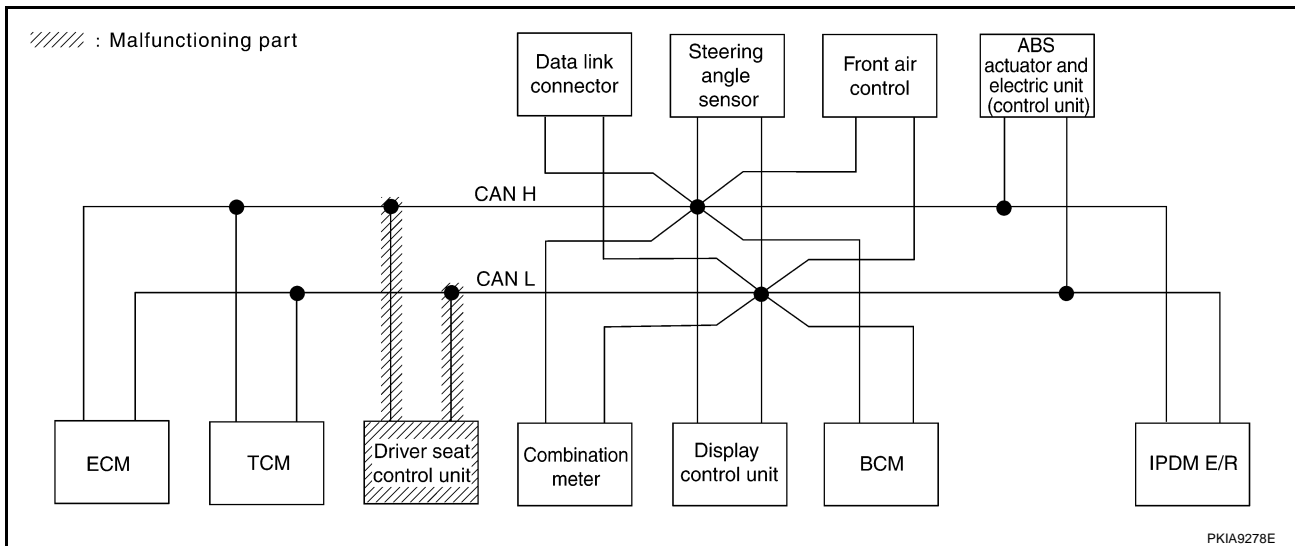
[CAN]

Case 6

Check driver seat control unit circuit. Refer to [LAN-200, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6664E



CAN SYSTEM (TYPE 6)

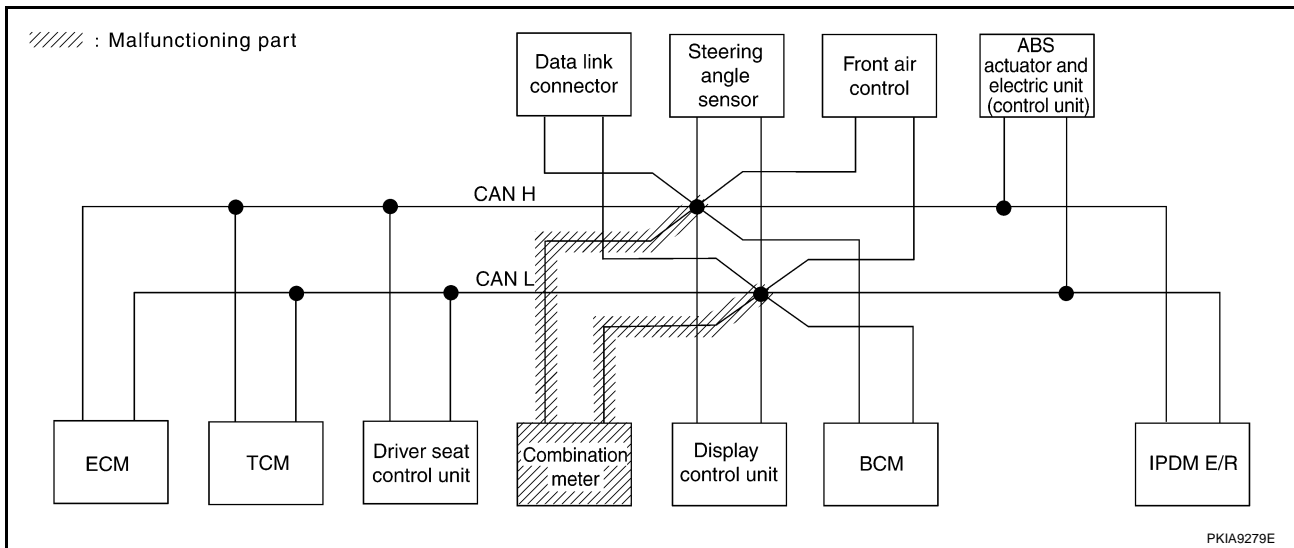
[CAN]

Case 7

Check combination meter circuit. Refer to [LAN-200, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	✓	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	✓	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	✓	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	✓	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

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CAN SYSTEM (TYPE 6)

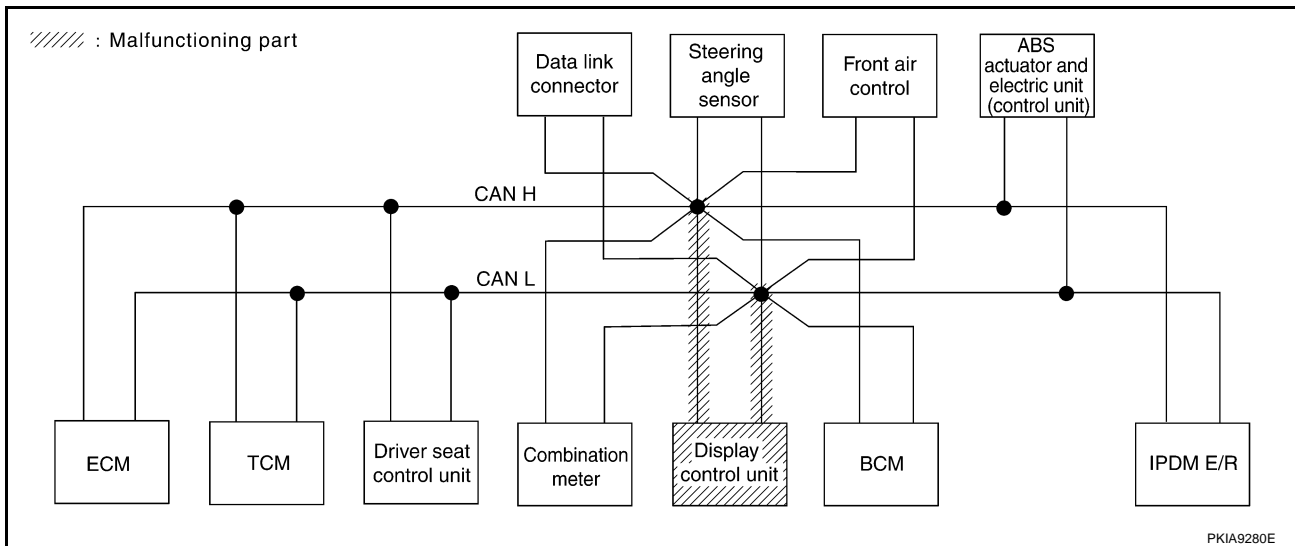
[CAN]

Case 8

Check display control unit circuit. Refer to [LAN-201, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB666E



CAN SYSTEM (TYPE 6)

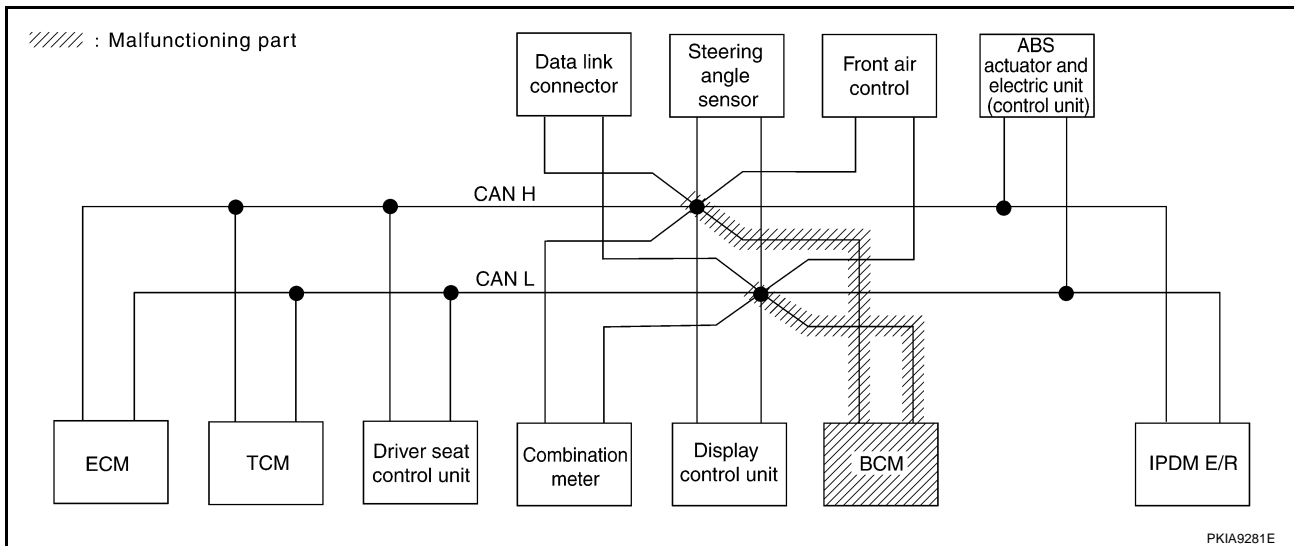
[CAN]

Case 9

Check BCM circuit. Refer to [LAN-201, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2 ✓	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN ✓	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN ✓	—	—	—	—

PKIB6667E



CAN SYSTEM (TYPE 6)

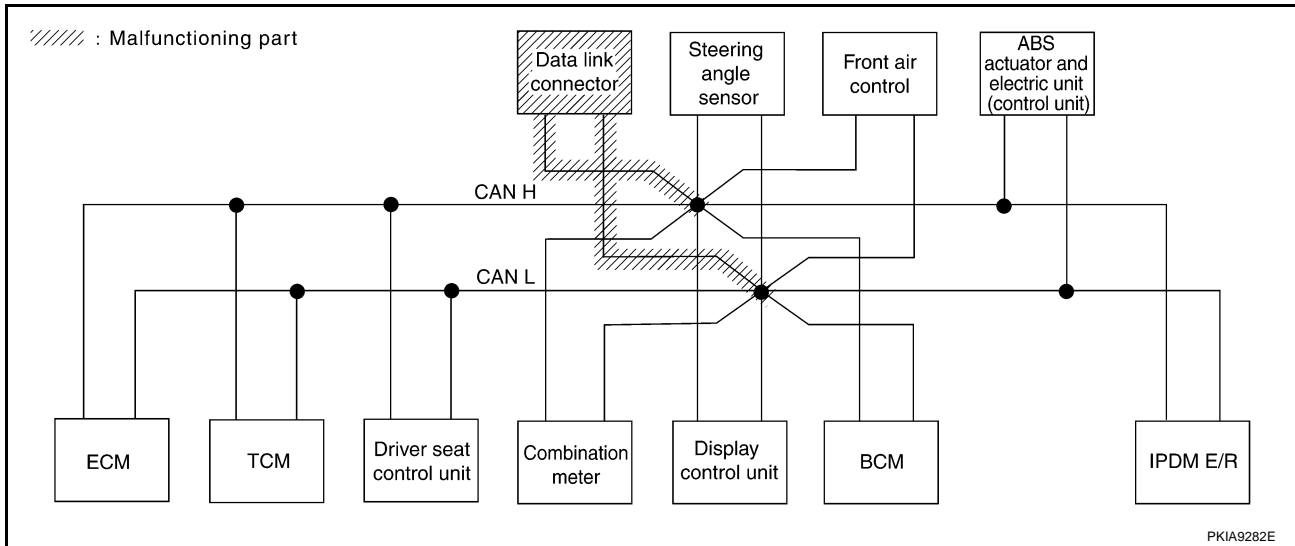
[CAN]

Case 10

Check data link connector circuit. Refer to [LAN-202, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6668E



CAN SYSTEM (TYPE 6)

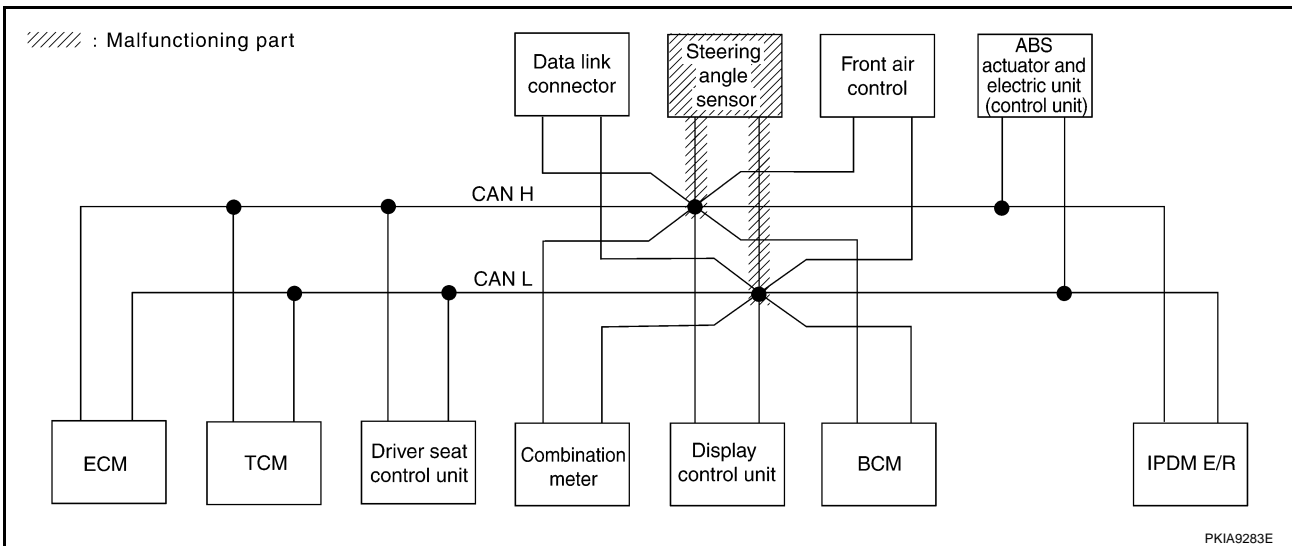
[CAN]

Case 11

Check steering angle sensor circuit. Refer to [LAN-202. "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6669E



CAN SYSTEM (TYPE 6)

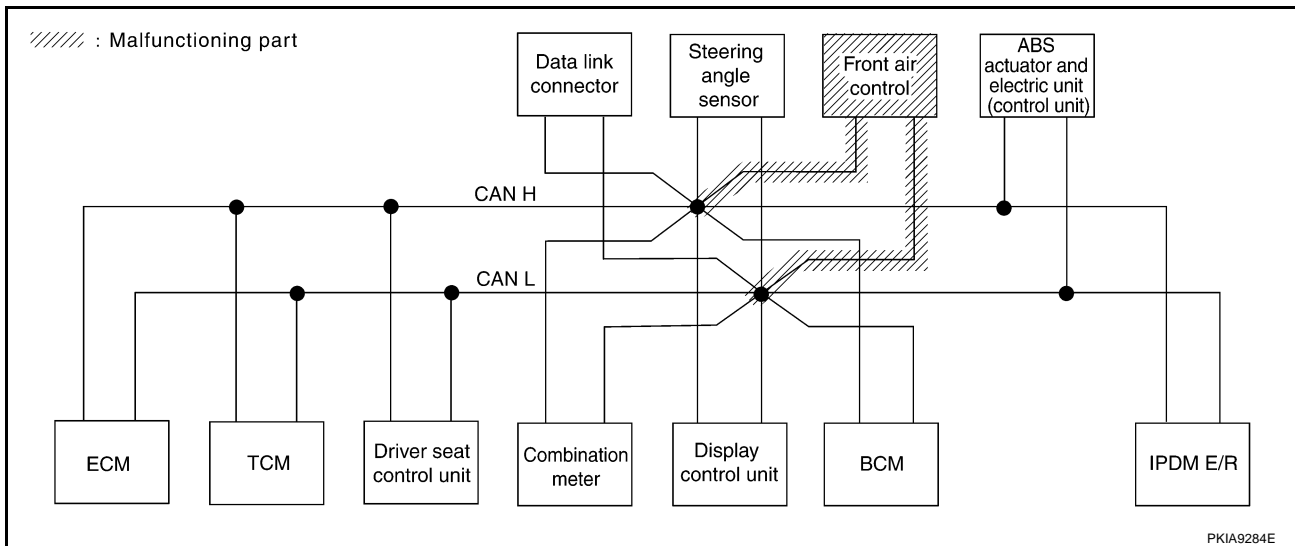
[CAN]

Case 12

Check front air control circuit. Refer to [LAN-203, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6670E



CAN SYSTEM (TYPE 6)

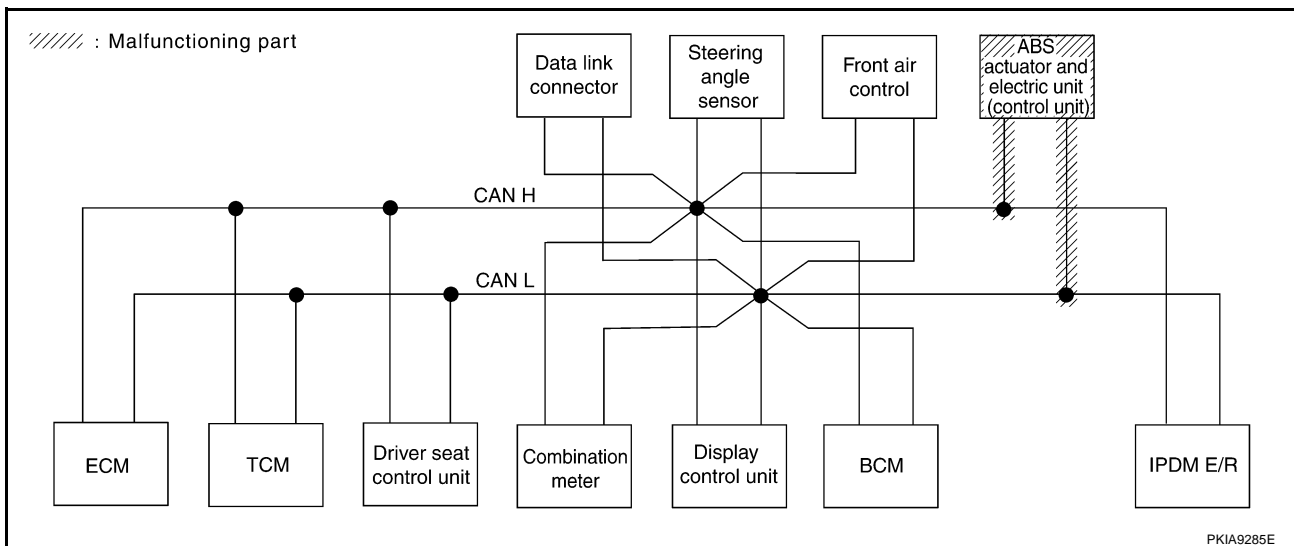
[CAN]

Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-203, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6671E



CAN SYSTEM (TYPE 6)

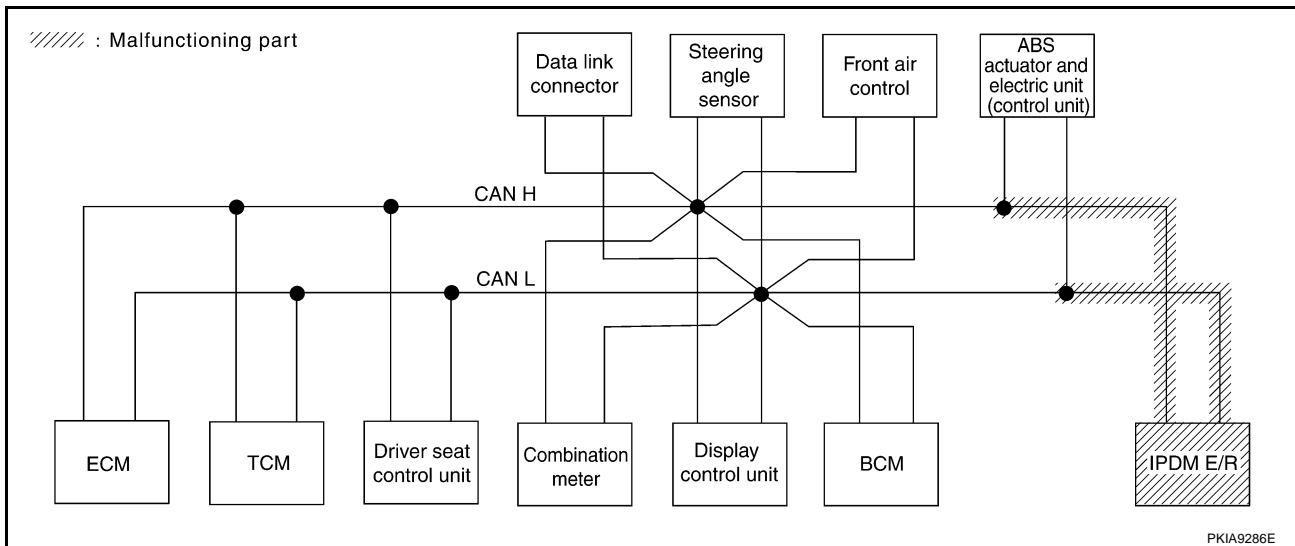
[CAN]

Case 14

Check IPDM E/R circuit. Refer to [LAN-204, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7 ✓	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN ✓	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	

PKIB6672E



CAN SYSTEM (TYPE 6)

[CAN]

Case 15

Check CAN communication circuit. Refer to [LAN-204, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS		
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	—	UNKW N	
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	—	

PKIB6673E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-205, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS		
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	UNKW N	UNKW N	
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	—	UNKW N	
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	—	

PKIB6674E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-205, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM/SEC	STRG	Front air control	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW	—	UNKW	UNKW	—	UNKW	—	—	UNKW	UNKW
A/T	—	NG	UNKW	UNKW	—	UNKW	—	—	—	—	UNKW	—
AUTO DRIVE POS.	No indication	NG	UNKW	—	UNKW	UNKW	—	UNKW	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	—	CAN CIRC 4	—	CAN CIRC 7
BCM	No indication	NG	UNKW	UNKW	—	UNKW	—	—	—	—	—	UNKW
HVAC	No indication	—	UNKW	UNKW	—	—	UNKW	UNKW	—	—	UNKW	—
ABS	—	NG	UNKW	UNKW	UNKW	—	—	—	UNKW	—	—	—
IPDM E/R	No indication	—	UNKW	UNKW	—	—	—	UNKW	—	—	—	—

PKIB6675E

Circuit Check Between TCM and Driver Seat Control Unit

UKS0023H

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

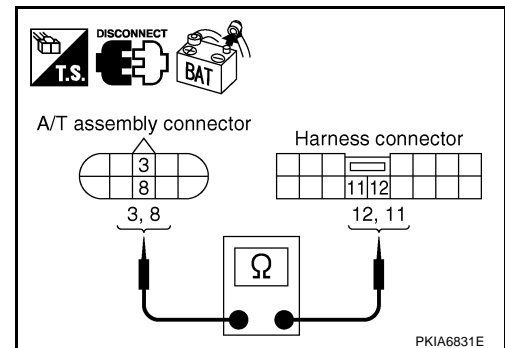
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



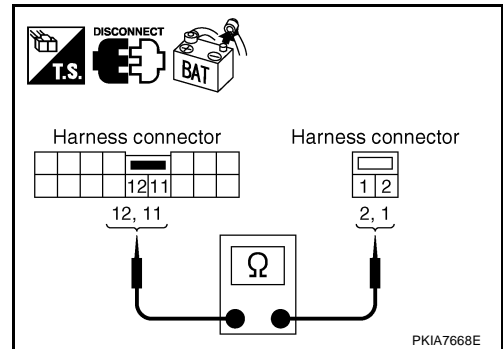
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



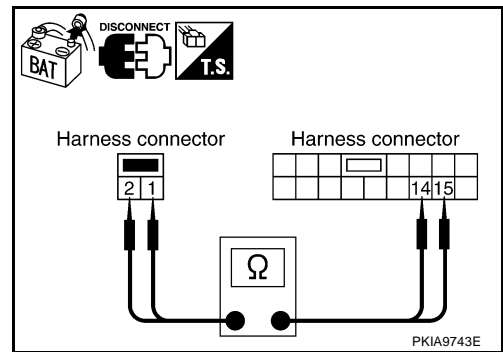
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B37 terminals 15 (L), 14 (P).

2 (L) - 15 (L) : Continuity should exist.
1 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-177, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and Data Link Connector

UKS0023I

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

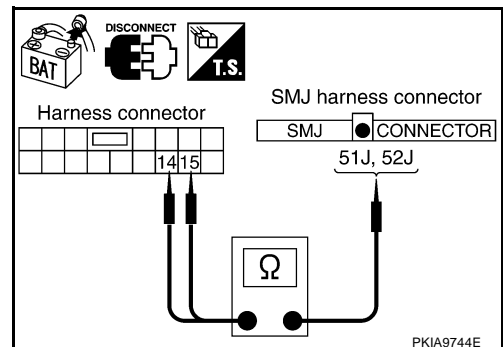
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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



A
B
C
D
E
F
G
H
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J
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M

LAN

3. CHECK HARNESS FOR OPEN CIRCUIT

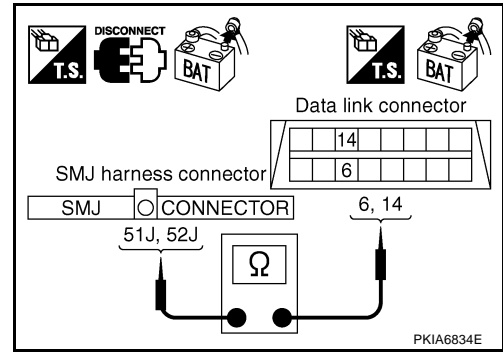
Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.

52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-177, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS0023J

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

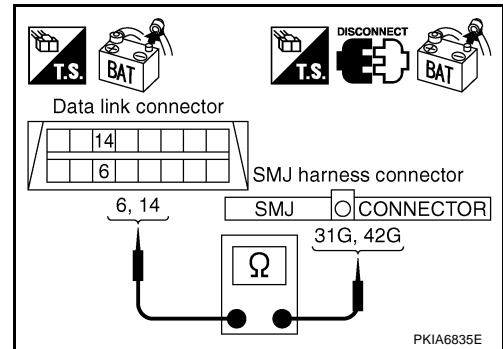
1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

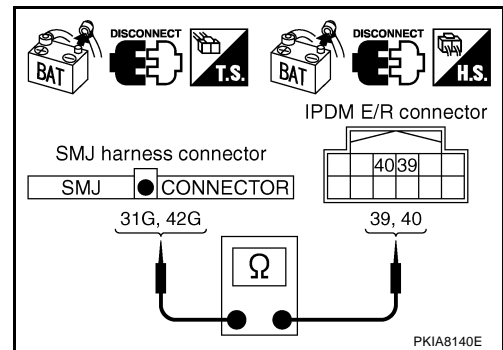
1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-177, "Work Flow"](#).
- NG >> Repair harness.



ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

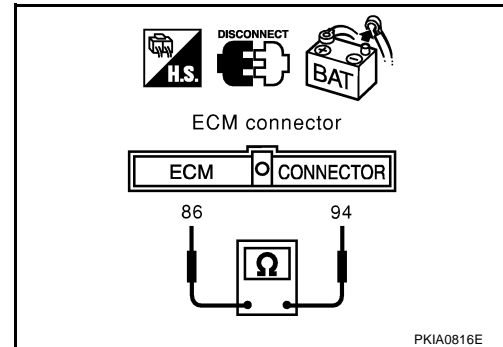
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

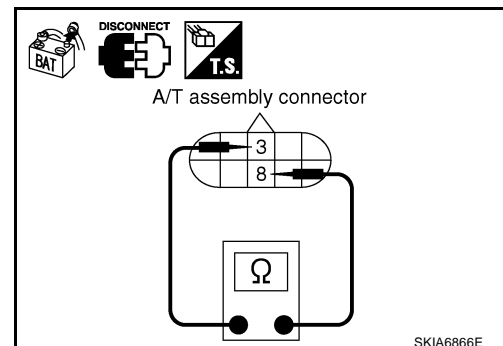
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Driver Seat Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

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

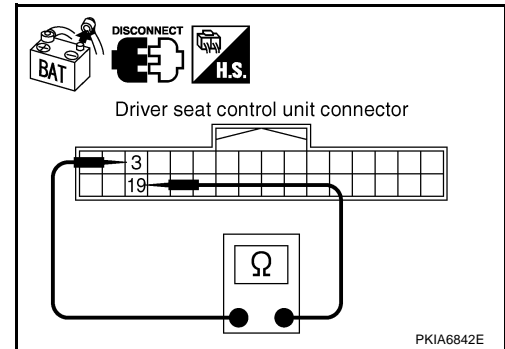
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B69.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

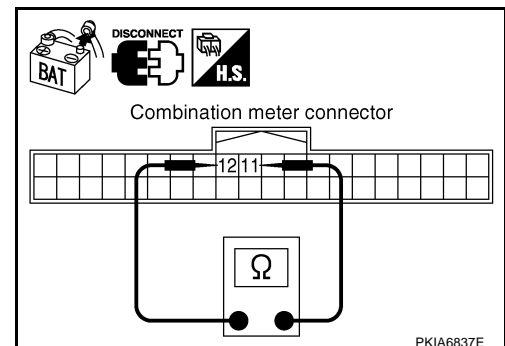
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



Display Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display 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.

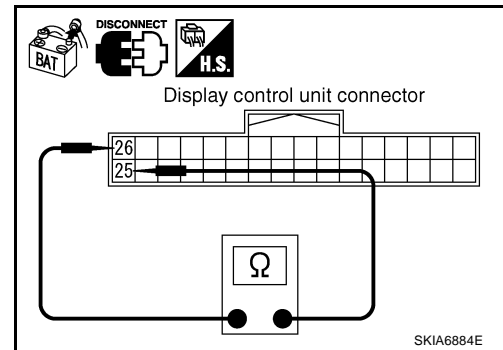
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M95 terminals 25 (L) and 26 (P).

25 (L) - 26 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace display control unit.
 NG >> Repair harness between display control unit and data link connector.

**BCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

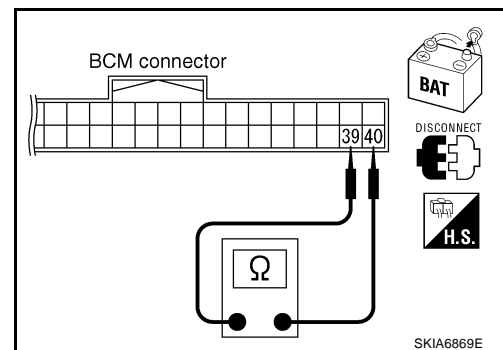
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

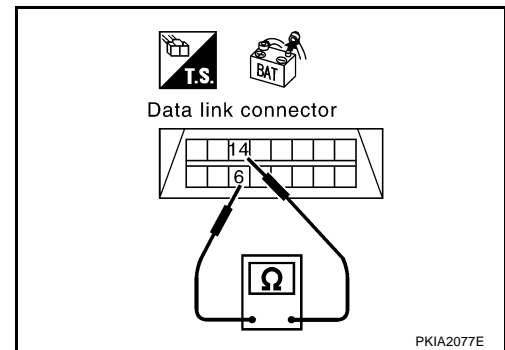
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-177, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Steering Angle Sensor Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check 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.

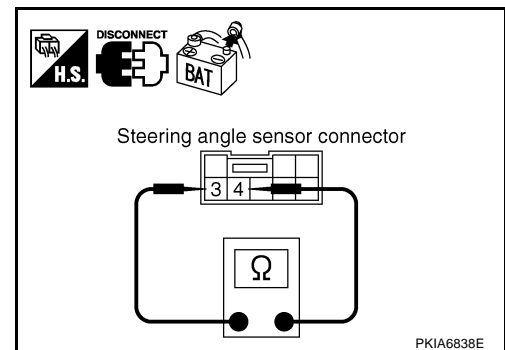
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M47 terminals 3 (L) and 4 (P).

3 (L) - 4 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace steering angle sensor.
 NG >> Repair harness between steering angle sensor and data link connector.



Front Air Control Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

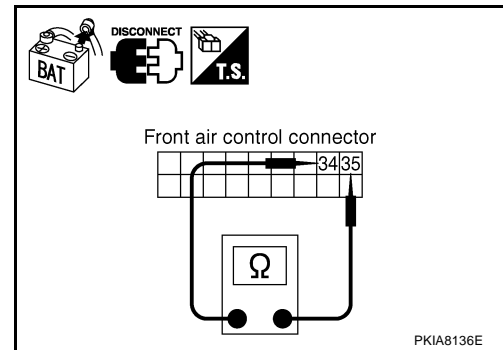
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

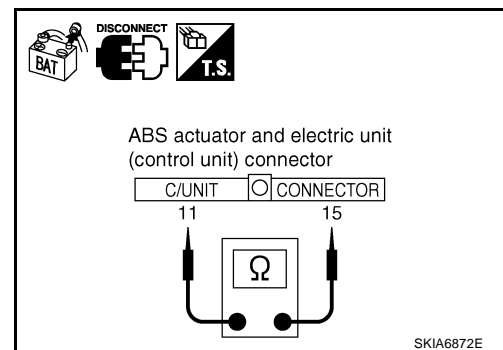
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

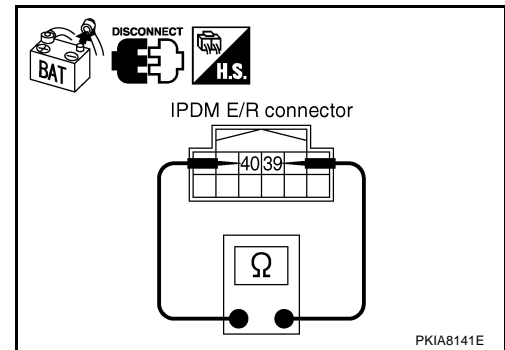
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Driver seat control unit
 - Combination meter
 - Display control unit
 - BCM
 - Steering angle sensor
 - Front air control
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

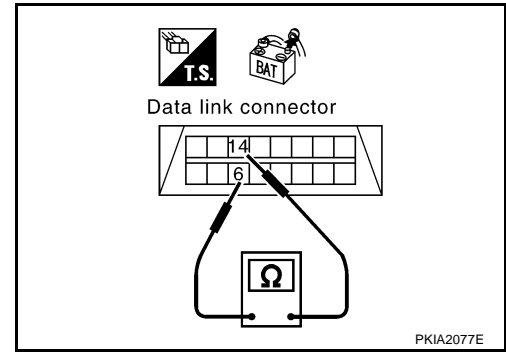
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

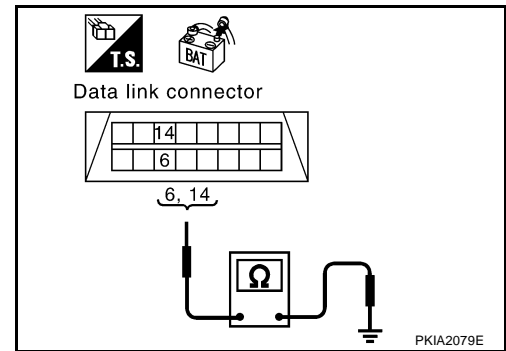
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-205, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).
- NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

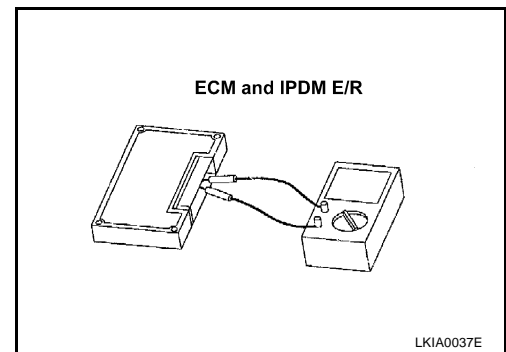
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

**Component Inspection
ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



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CAN SYSTEM (TYPE 7)

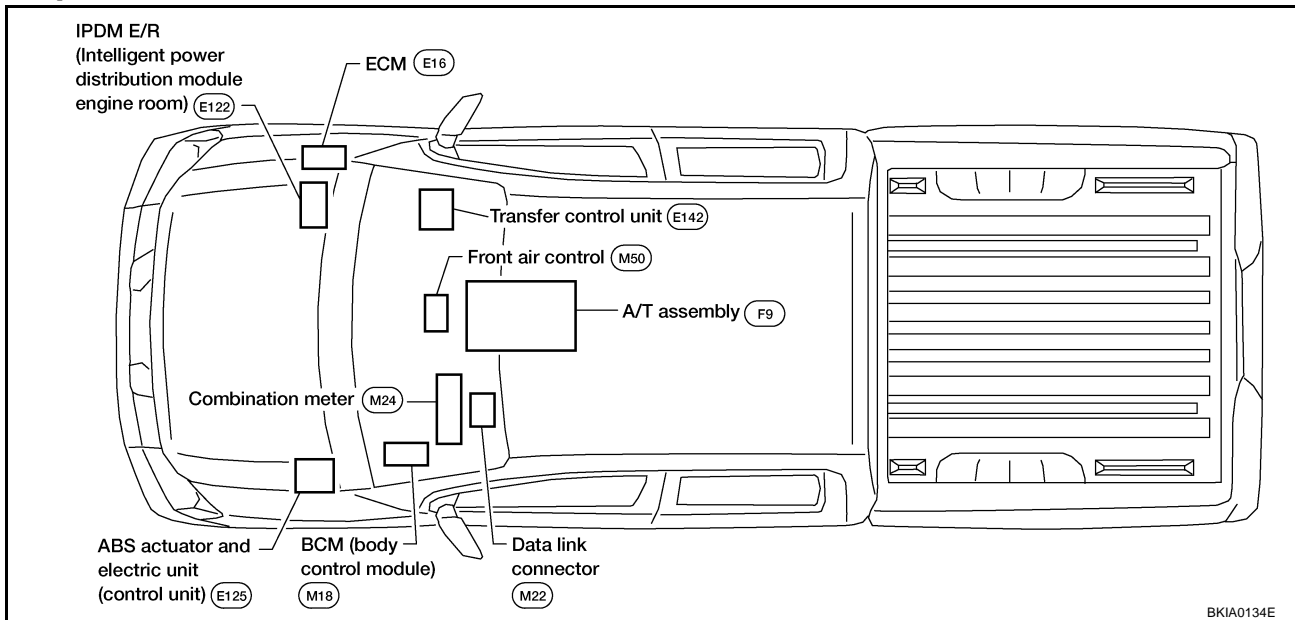
System Description

UKS001FN

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

UKS001FO

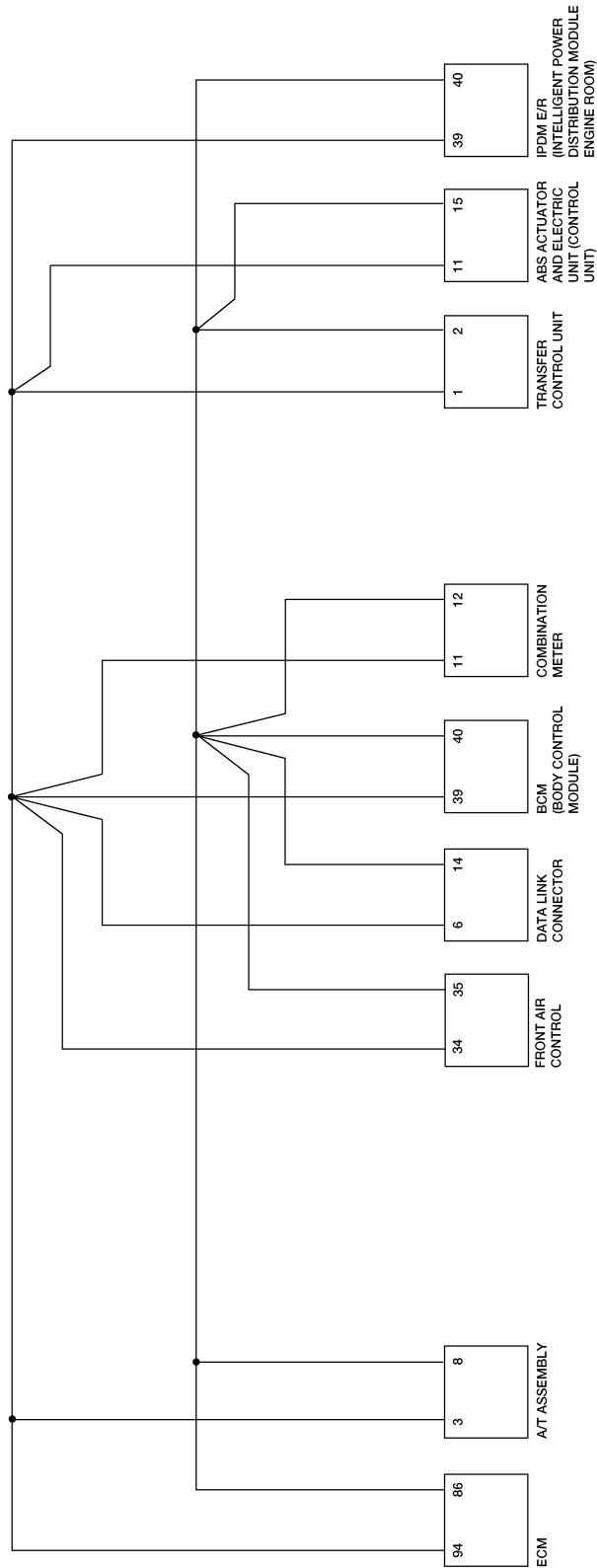


CAN SYSTEM (TYPE 7)

[CAN]

Schematic

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CAN SYSTEM (TYPE 7)

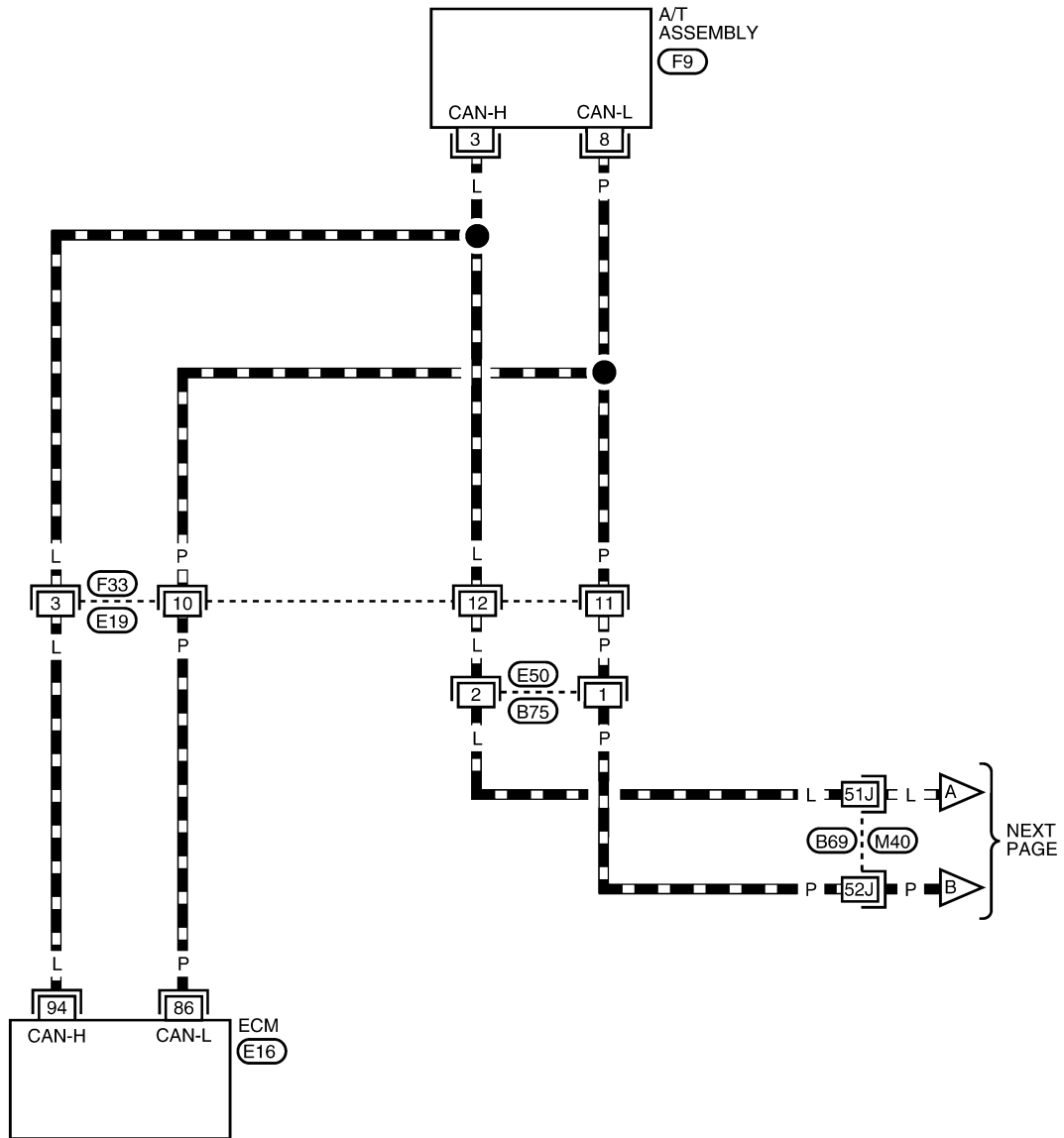
[CAN]

Wiring Diagram - CAN -

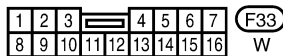
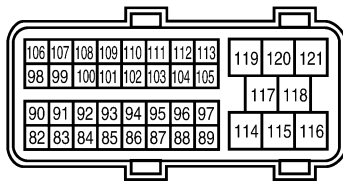
UKS001FQ

LAN-CAN-19

▬ : DATA LINE



NEXT PAGE



REFER TO THE FOLLOWING.

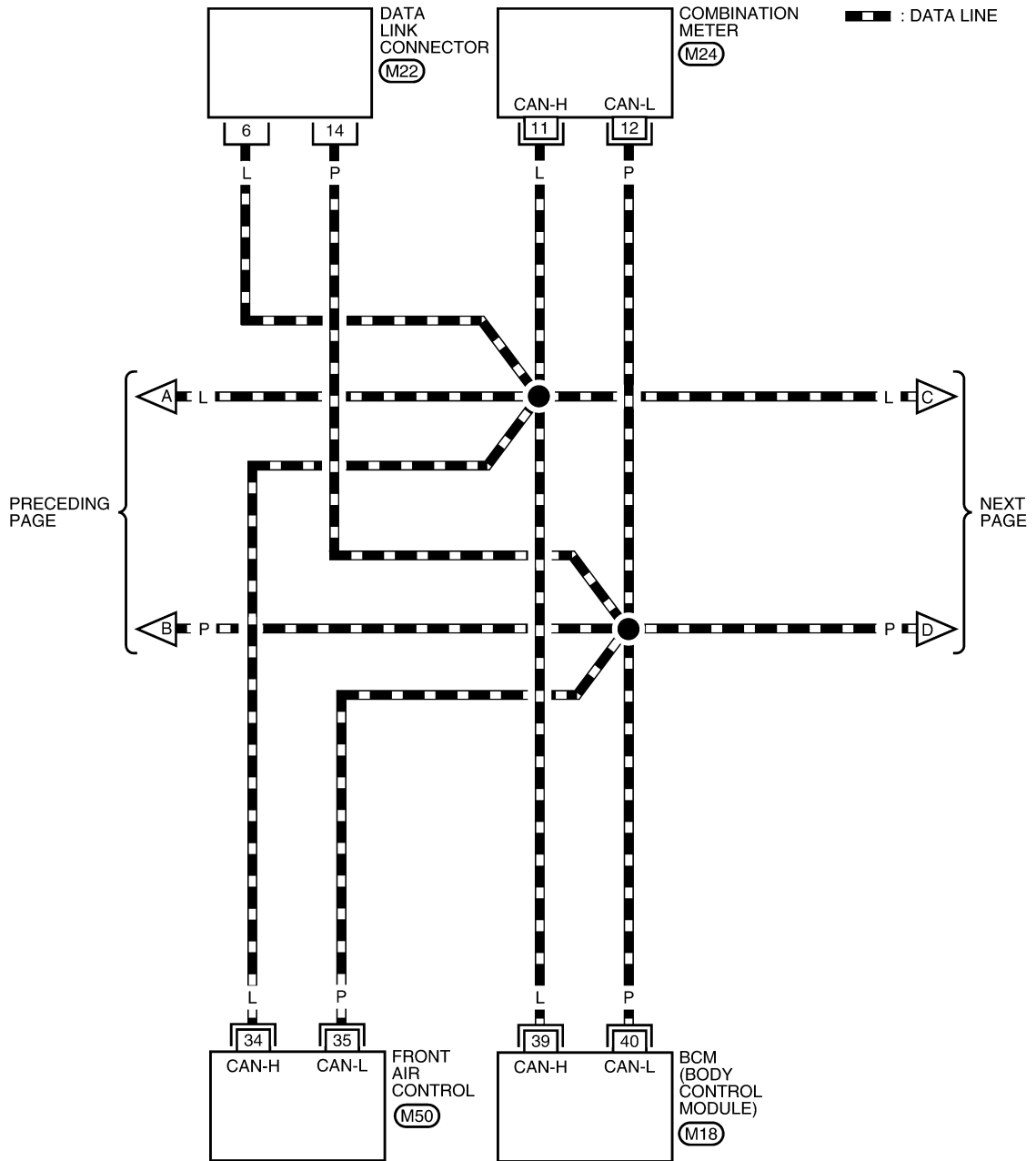
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0443E

CAN SYSTEM (TYPE 7)

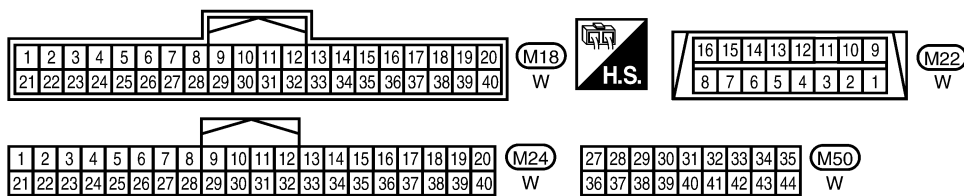
[CAN]

LAN-CAN-20



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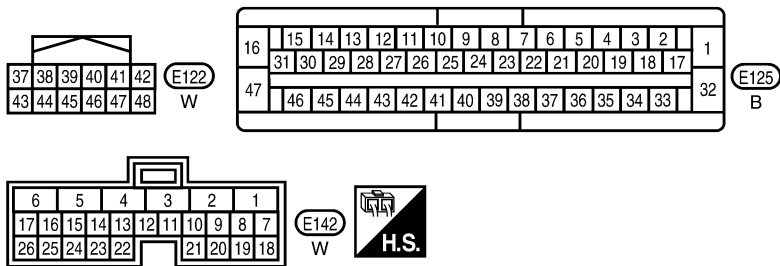
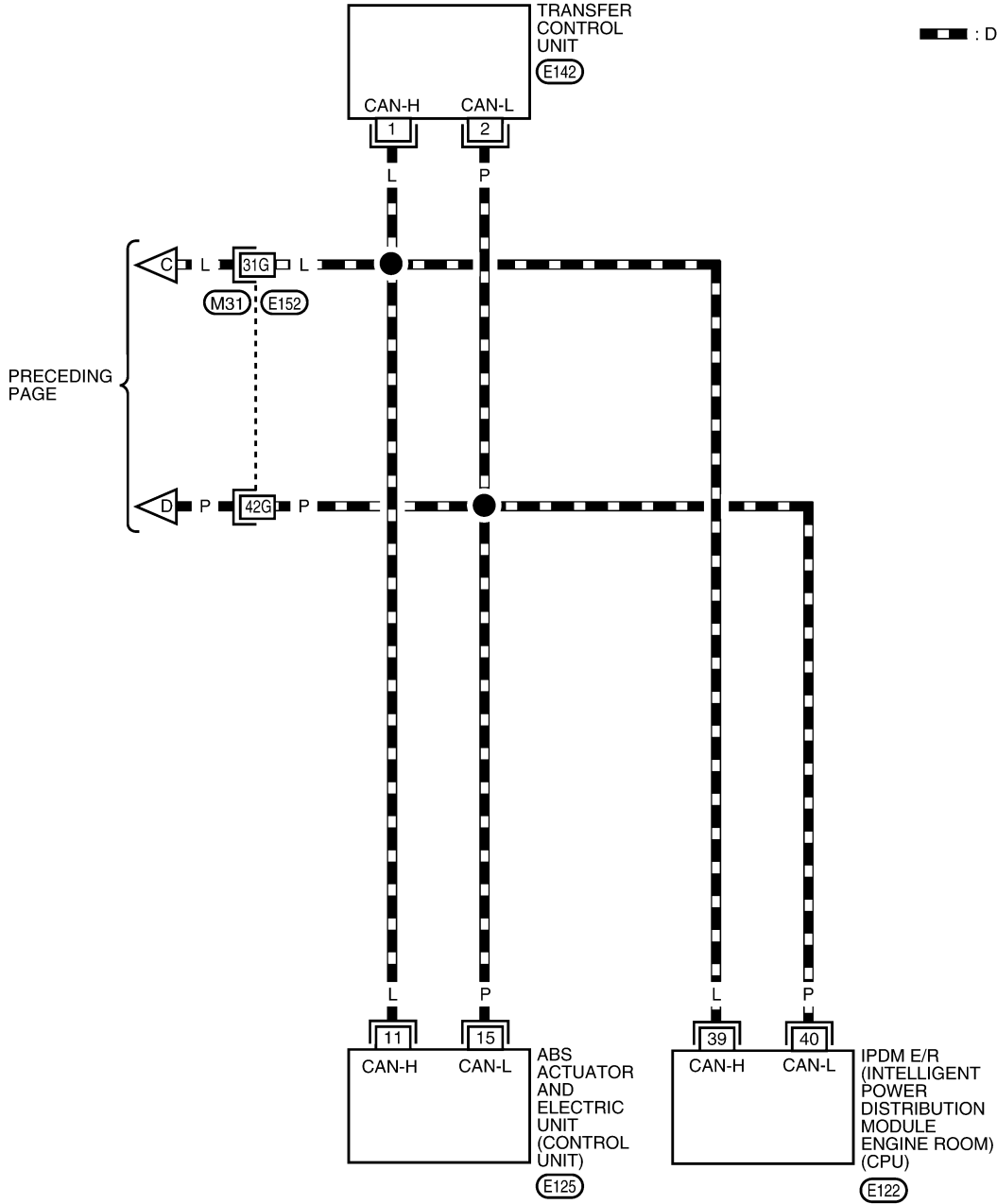
LAN



BKWA0444E

LAN-CAN-21

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0445E

Work Flow

- When there are no indications of "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)

NISSAN CONSULT-II	➔	SELECT SYSTEM
ENGINE		ENGINE
START (NISSAN BASED VHCL)		A/T
START (RENAULT BASED VHCL)		ABS
SUB MODE		AIR BAG
LIGHT COPY		BCM
		METER A/C AMP
		BACK LIGHT COPY

PKIA2093E

- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	➔	SELF-DIAG RESULTS
WORK SUPPORT		DTC RESULTS TIME
SELF-DIAG RESULTS		CAN COMM CIRCUIT [U1000] 0
DATA MONITOR		F.F.DATA
DATA MONITOR (SPEC)		ERASE PRINT
CAN DIAG SUPPORT MNTR		MODE BACK LIGHT COPY
ACTIVE TEST		
Scroll Down		
BACK LIGHT COPY		

PKIA8260E

- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)

SELECT DIAG MODE	➔	CAN DIAG SUPPORT MNTR
WORK SUPPORT		ENGINE
SELF-DIAG RESULTS		PRSRNT
DATA MONITOR		INITIAL DIAG OK
DATA MONITOR (SPEC)		TRANSMIT DIAG OK
CAN DIAG SUPPORT MNTR		TCM OK
ACTIVE TEST		VDC/TCS/ABS OK
Scroll Down		METER/M&A OK
BACK LIGHT COPY		ICC UNKWN
		BCM/SEC OK
		IPDM E/R OK
		AWD/4WD/e4WD UNKWN
		PRINT Scroll Down
		MODE BACK LIGHT COPY

PKIA8343E

- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-212, "CHECK SHEET"](#).

- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-212, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-214, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

CAN SYSTEM (TYPE 7)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

SKIB2749E

CAN SYSTEM (TYPE 7)

[CAN]

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Attach copy of
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SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
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CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

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BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
HVAC
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

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ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6772E

CAN SYSTEM (TYPE 7)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

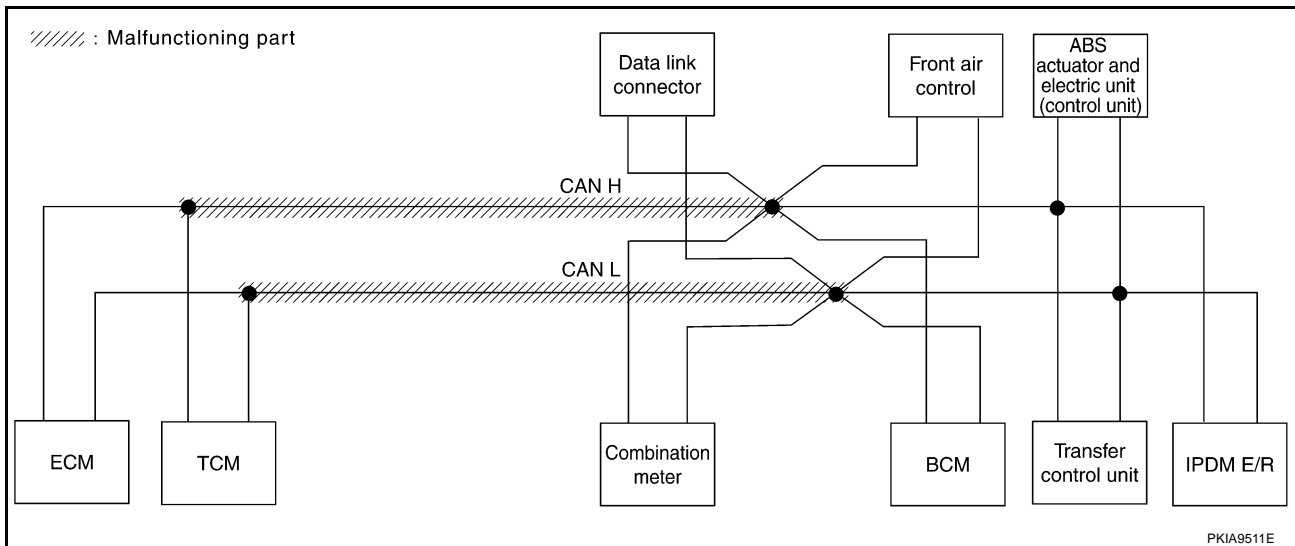
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and data link connector. Refer to [LAN-226, "Circuit Check Between TCM and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

SKIB2750E



PKIA9511E

CAN SYSTEM (TYPE 7)

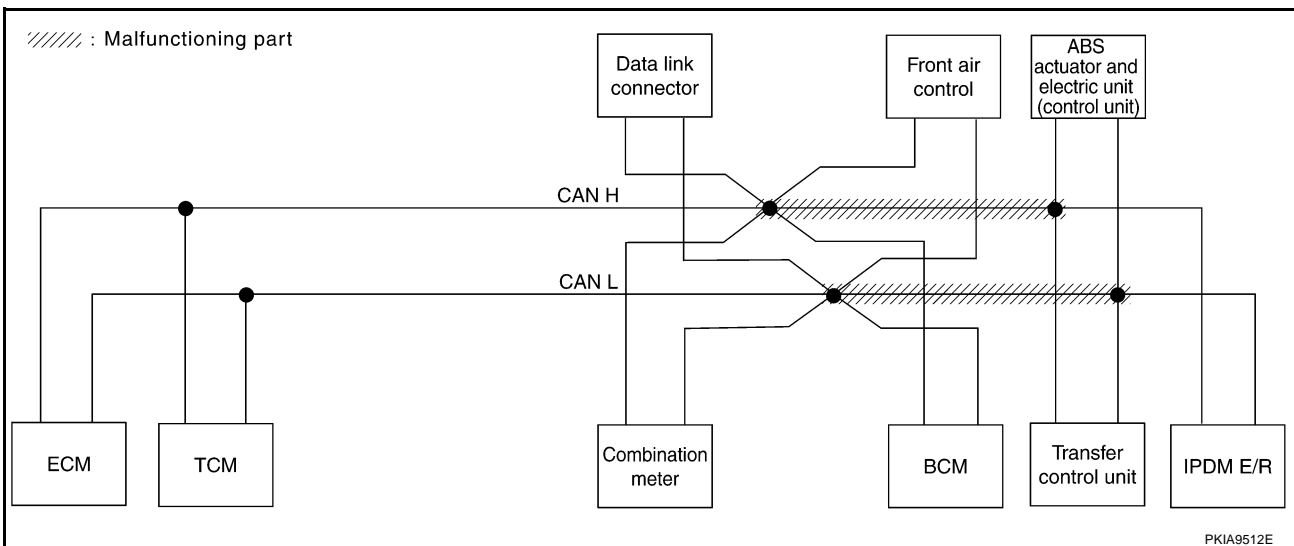
[CAN]

Case 2

Check harness between data link connector and IPDM E/R. Refer to [LAN-227, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						IPDM E/R
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

SKIB2751E



CAN SYSTEM (TYPE 7)

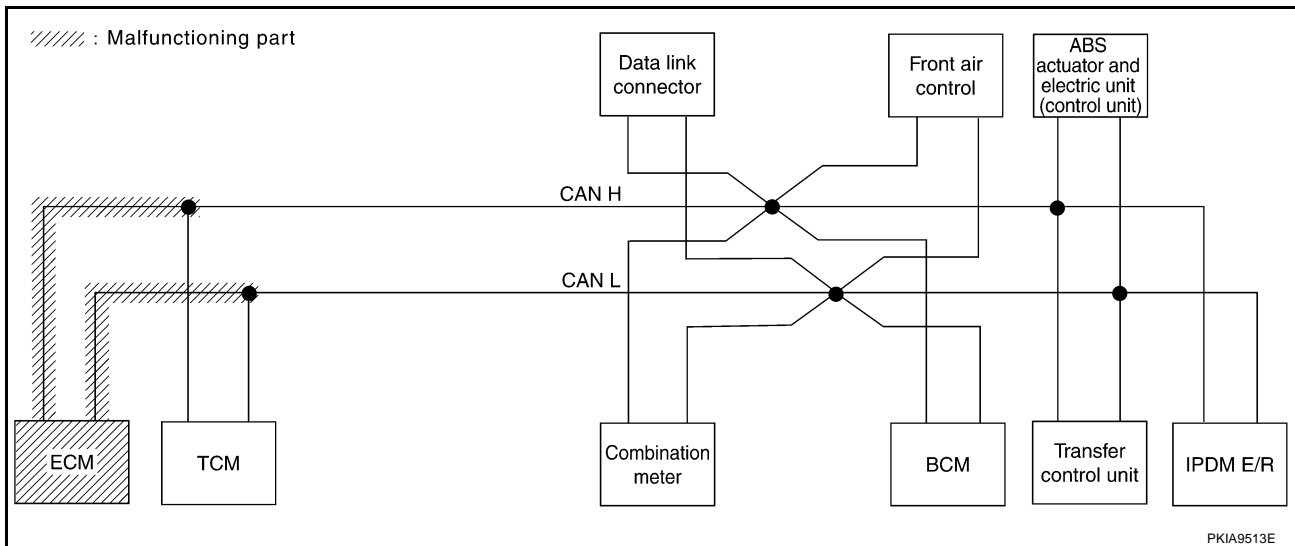
[CAN]

Case 3

Check ECM circuit. Refer to [LAN-228, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	

SKIB2752E



PKIA9513E

CAN SYSTEM (TYPE 7)

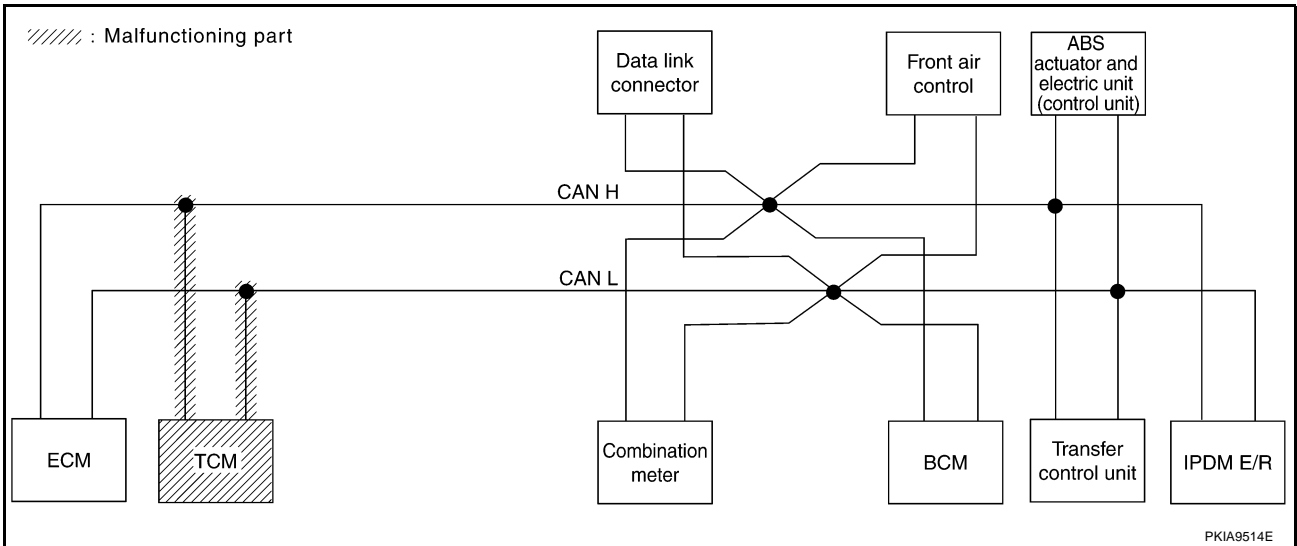
[CAN]

Case 4

Check TCM circuit. Refer to [LAN-229, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2753E



CAN SYSTEM (TYPE 7)

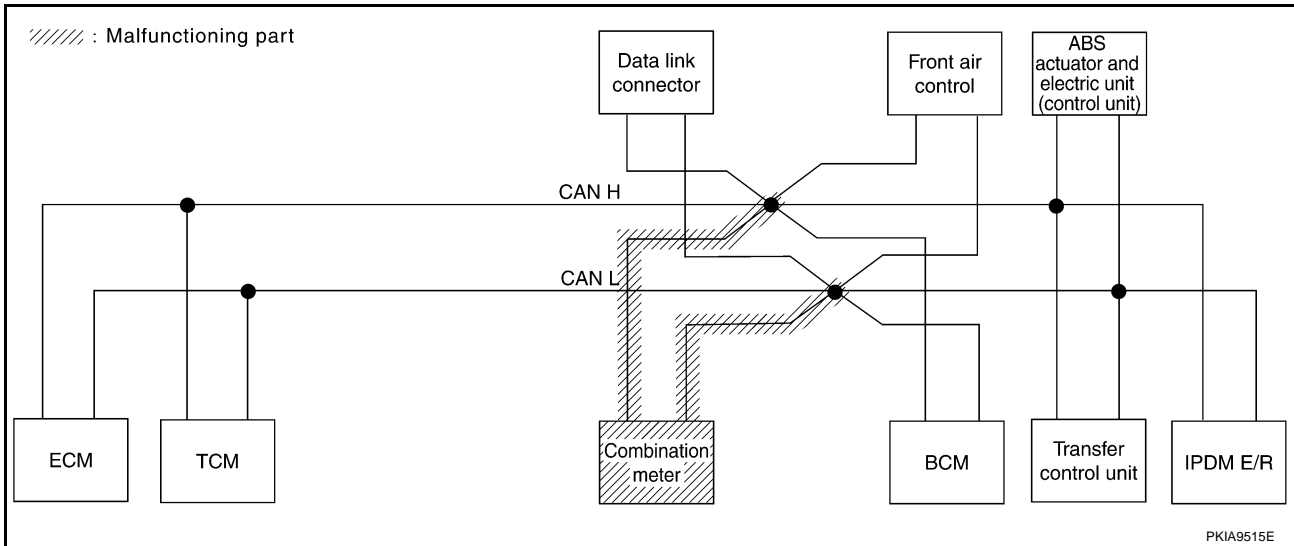
[CAN]

Case 5

Check combination meter circuit. Refer to [LAN-229, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2754E



PKIA9515E

CAN SYSTEM (TYPE 7)

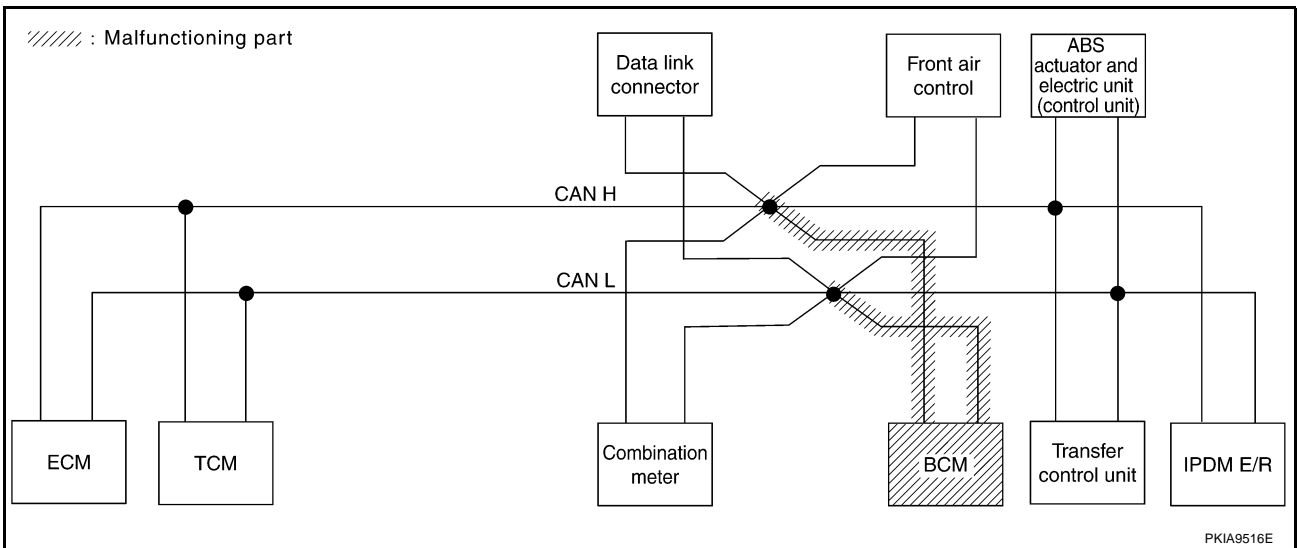
[CAN]

Case 6

Check BCM circuit. Refer to [LAN-230, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						IPDM E/R
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

SKIB2755E



CAN SYSTEM (TYPE 7)

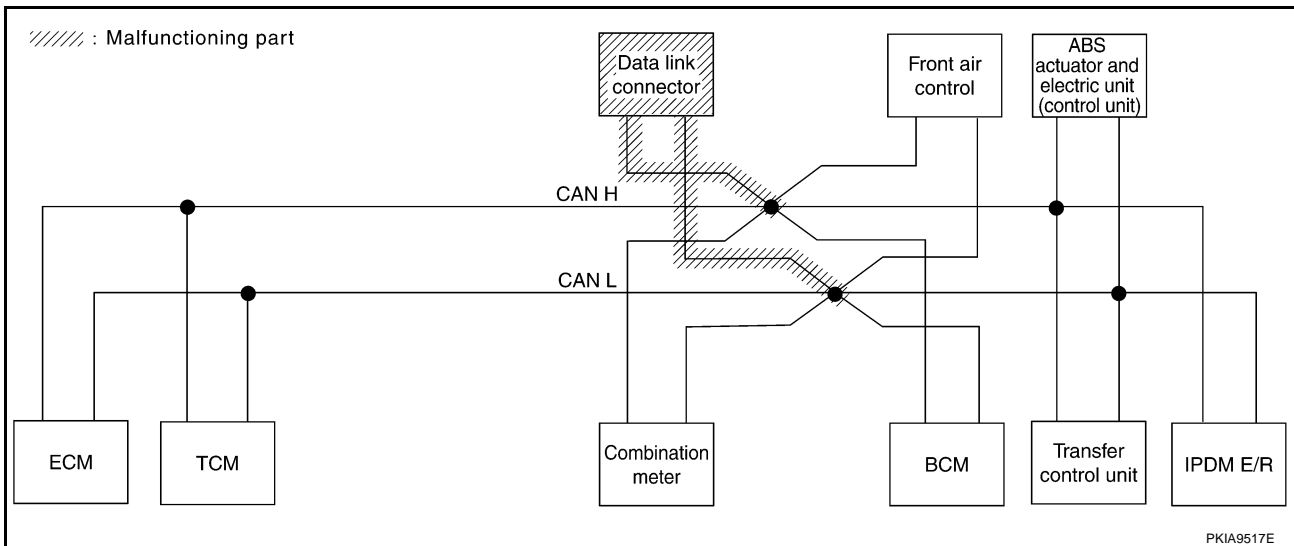
[CAN]

Case 7

Check data link connector circuit. Refer to [LAN-230, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2756E



PKIA9517E

CAN SYSTEM (TYPE 7)

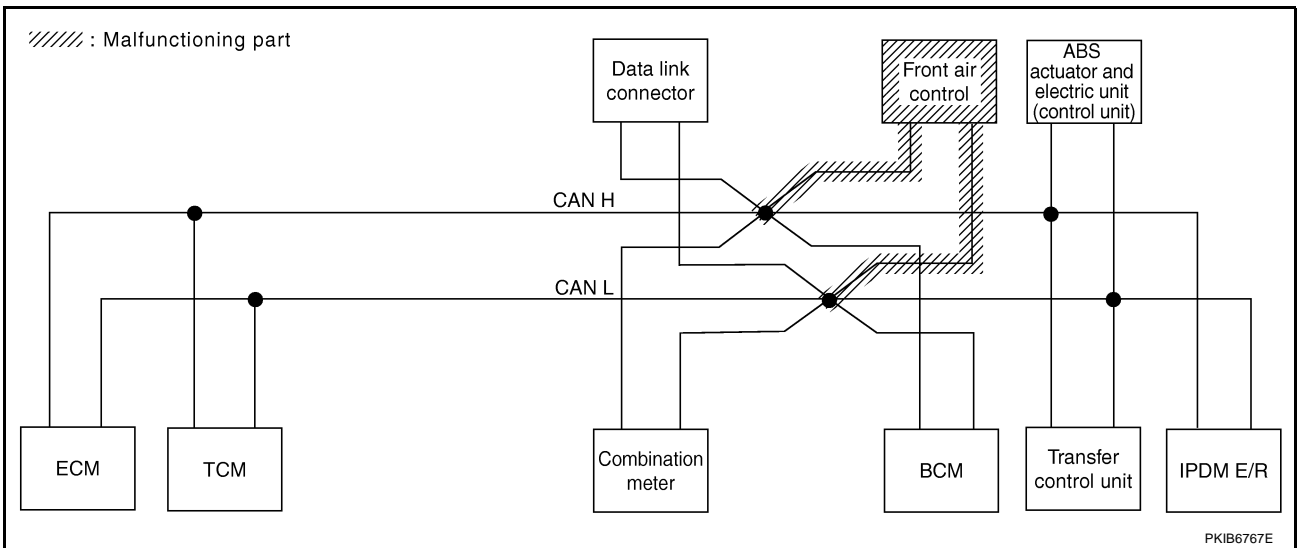
[CAN]

Case 8

Check front air control circuit. Refer to [LAN-231, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB6776E



CAN SYSTEM (TYPE 7)

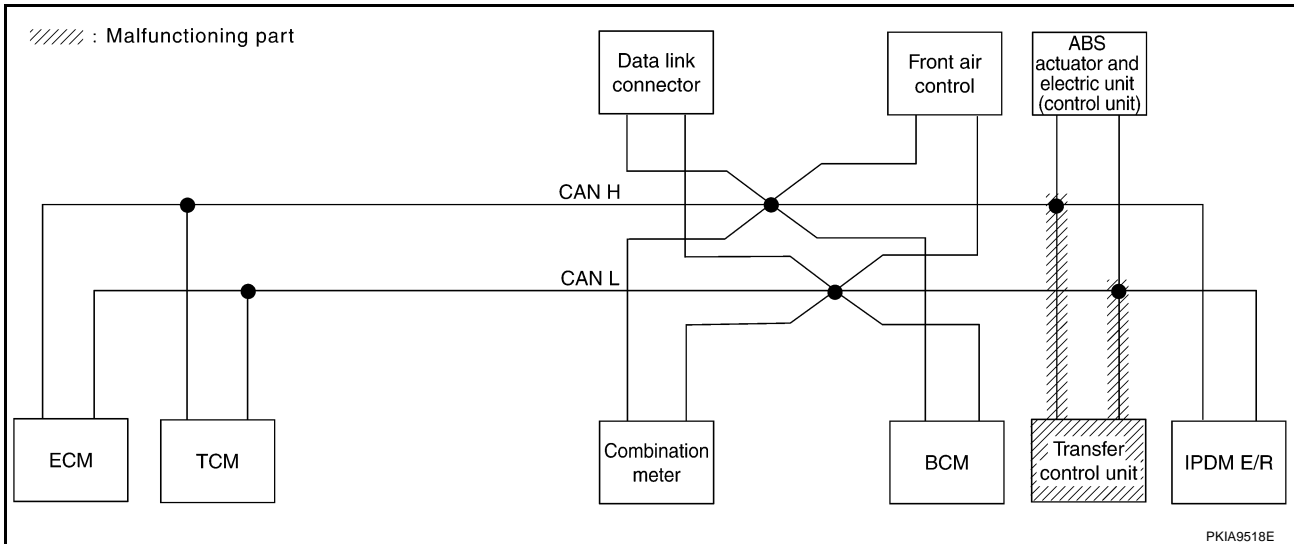
[CAN]

Case 9

Check transfer control unit circuit. Refer to [LAN-231, "Transfer Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN ✓	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN ✓	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2757E



PKIA9518E

CAN SYSTEM (TYPE 7)

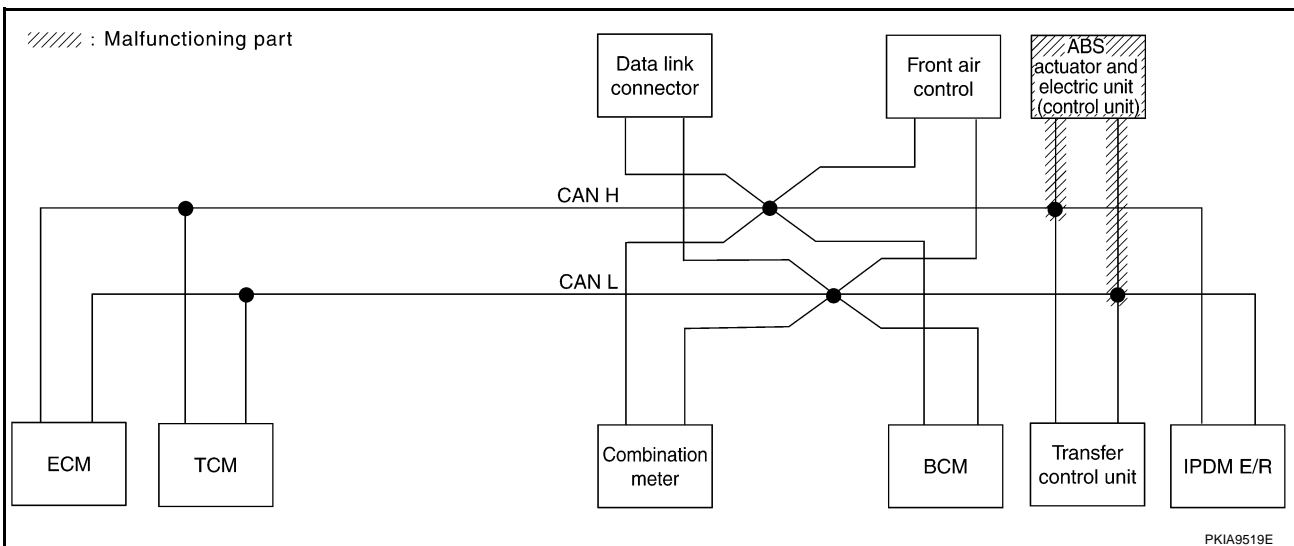
[CAN]

Case 10

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-232, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2758E



CAN SYSTEM (TYPE 7)

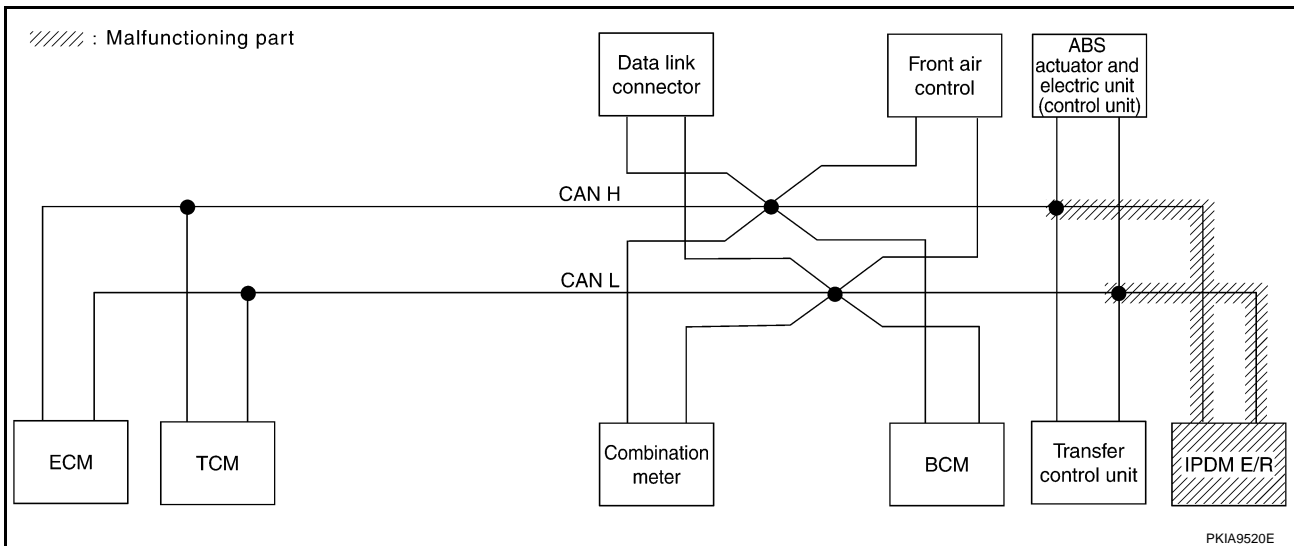
[CAN]

Case 11

Check IPDM E/R circuit. Refer to [LAN-232, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN ✓	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2759E



PKIA9520E

CAN SYSTEM (TYPE 7)

[CAN]

Case 12

Check CAN communication circuit. Refer to [LAN-233, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—
BCM	No indication ✓	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N
HVAC	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	UNKW N	—
ABS	—	NG ✓	UNKW N	UNKW N	UNKW N	—	—	UNKW N	—	—
IPDM E/R	No indication ✓	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—

SKIB2760E

Case 13

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-234, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	UNKW N	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	UNKW N	—	—	—

SKIB2761E

Case 14

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-234, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2762E

Circuit Check Between TCM and Data Link Connector

UKS001FS

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75
 - Harness connector B69
 - Harness connector M40

OK or NG

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

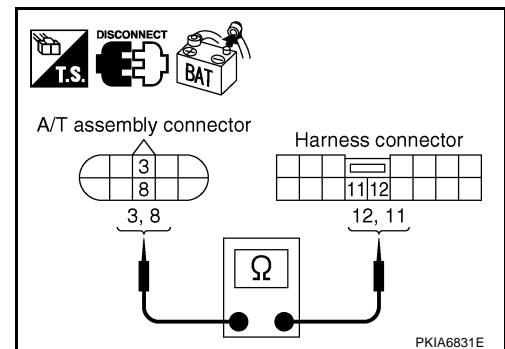
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

3 (L) - 12 (L) : Continuity should exist.
8 (P) - 11 (P) : Continuity should exist.

OK or NG

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



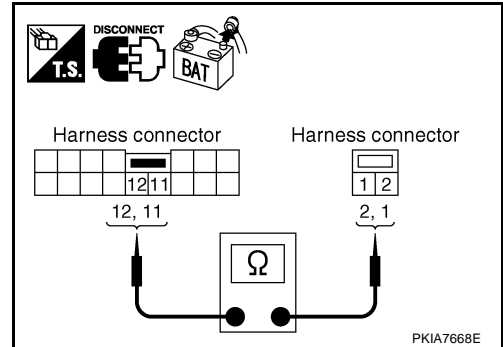
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



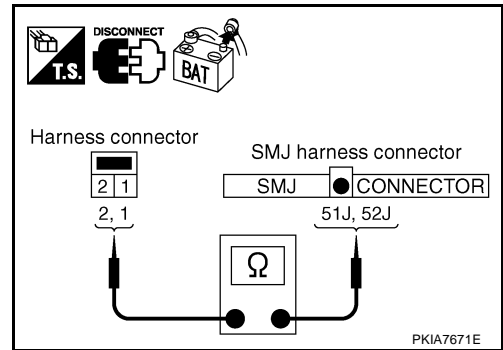
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B69.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B69 terminals 51J (L), 52J (P).

2 (L) - 51J (L) : Continuity should exist.
1 (P) - 52J (P) : Continuity should exist.

OK or NG

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



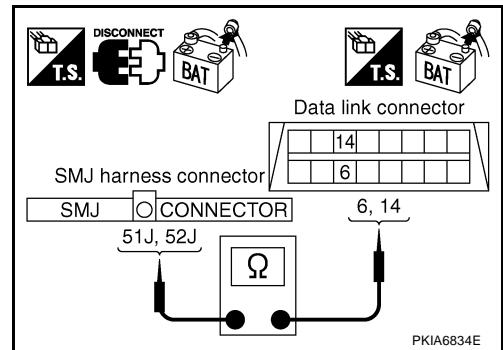
5. CHECK HARNESS FOR OPEN CIRCUIT

Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.
52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-211, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS001FT

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

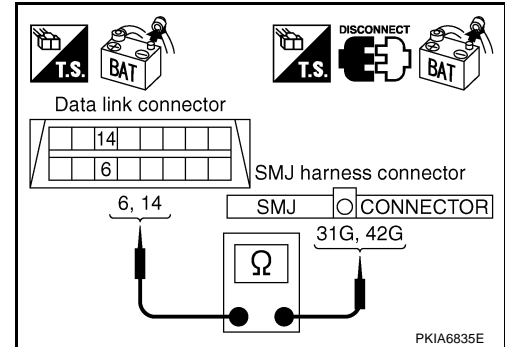
6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

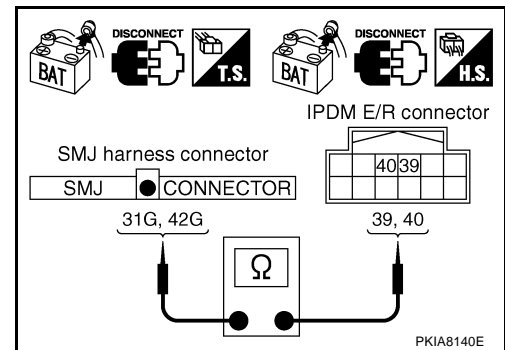
31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-211, "Work Flow"](#).

NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

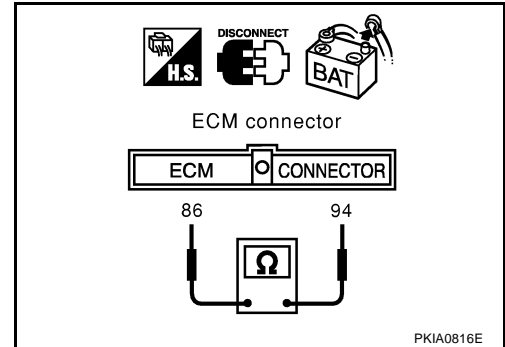
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.



UKS001FV

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

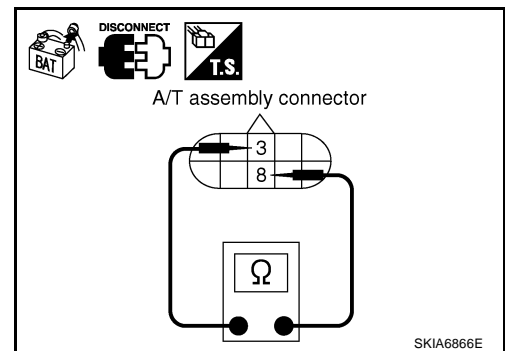
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



UKS001FW

Combination Meter Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

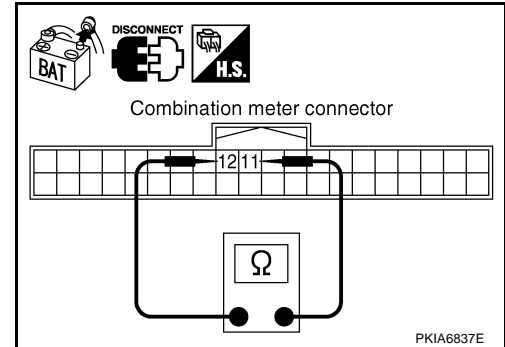
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



UKS001FX

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

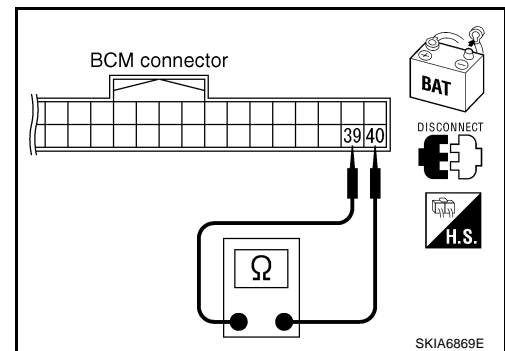
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



UKS001FY

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

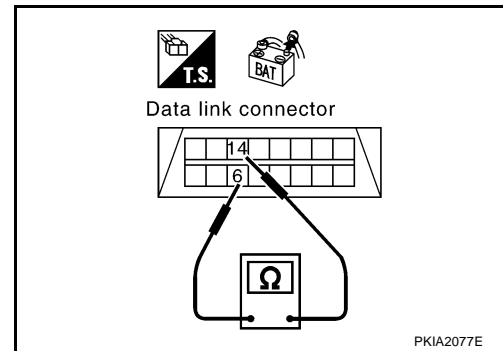
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-211, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

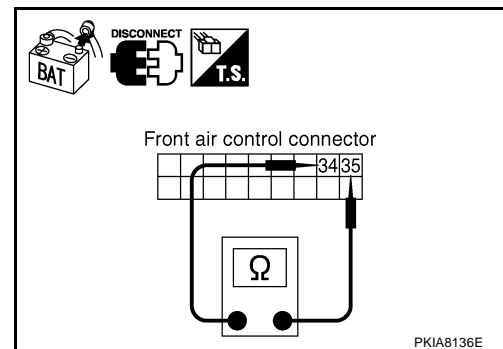
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



Transfer Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

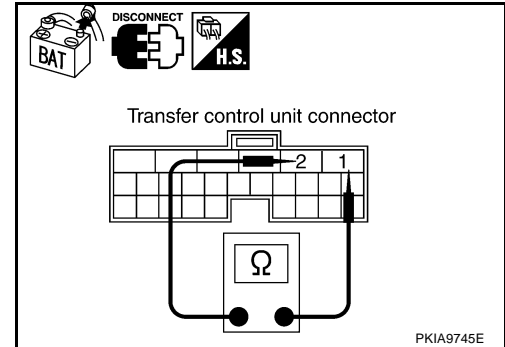
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

UKS001G1

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

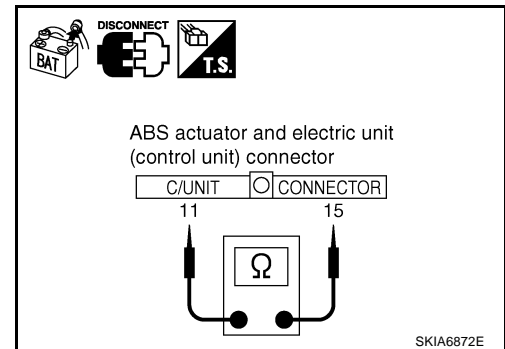
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check

UKS001G2

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

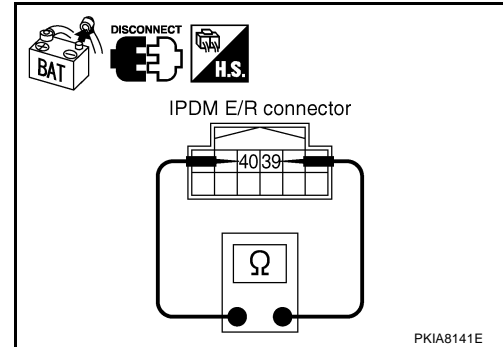
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



UKS001G3

CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Combination meter
 - BCM
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

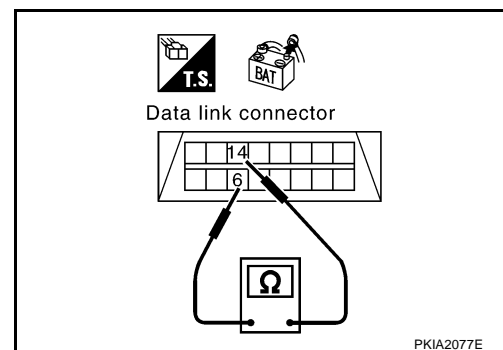
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



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3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

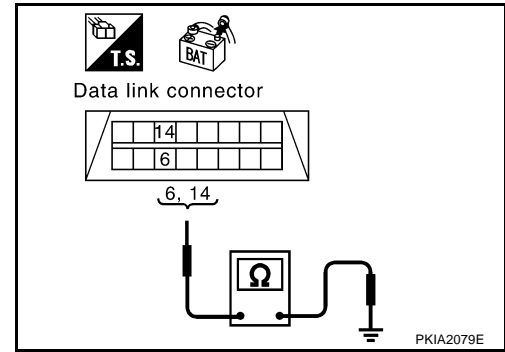
6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

OK >> Check ECM and IPDM E/R. Refer to [LAN-234, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

NG >> Repair harness.



UKS001G4

IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

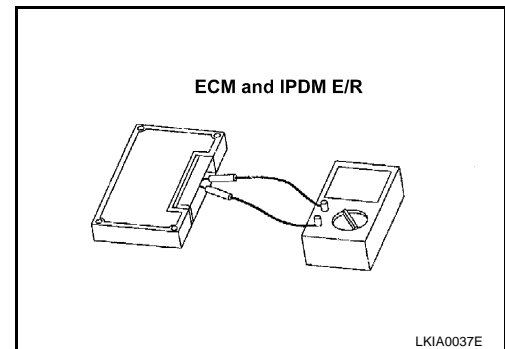
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

UKS001G5

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



CAN SYSTEM (TYPE 8)

PFP:23710

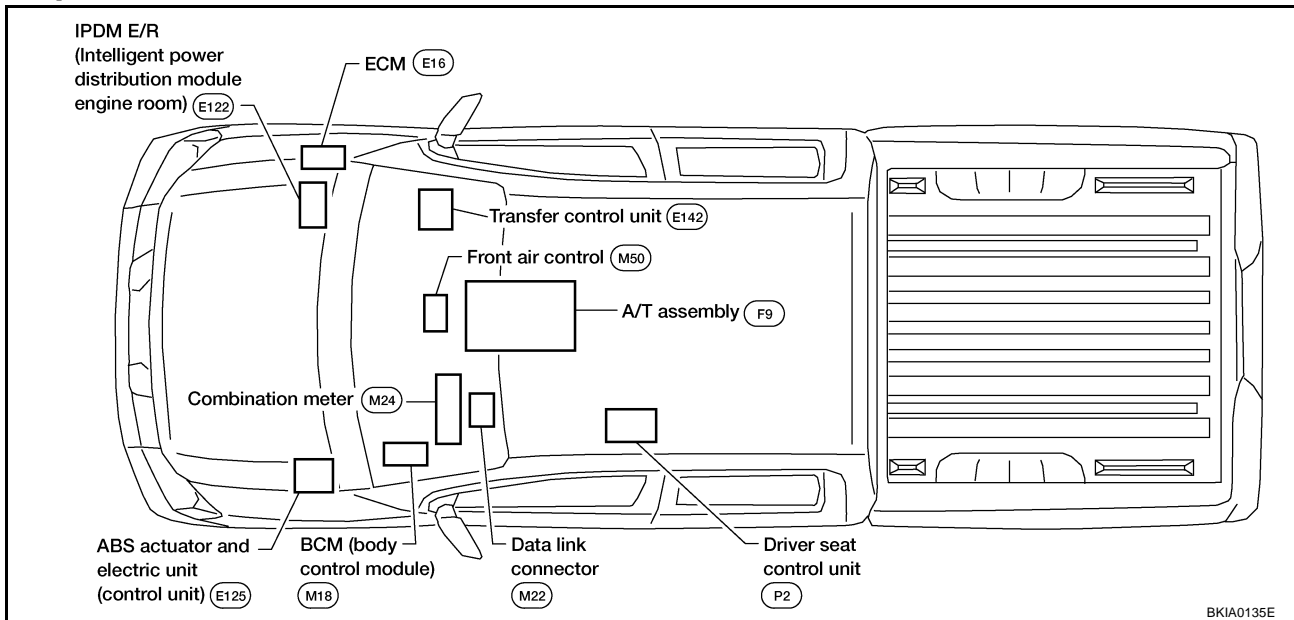
System Description

UKS001G6

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

UKS001G7



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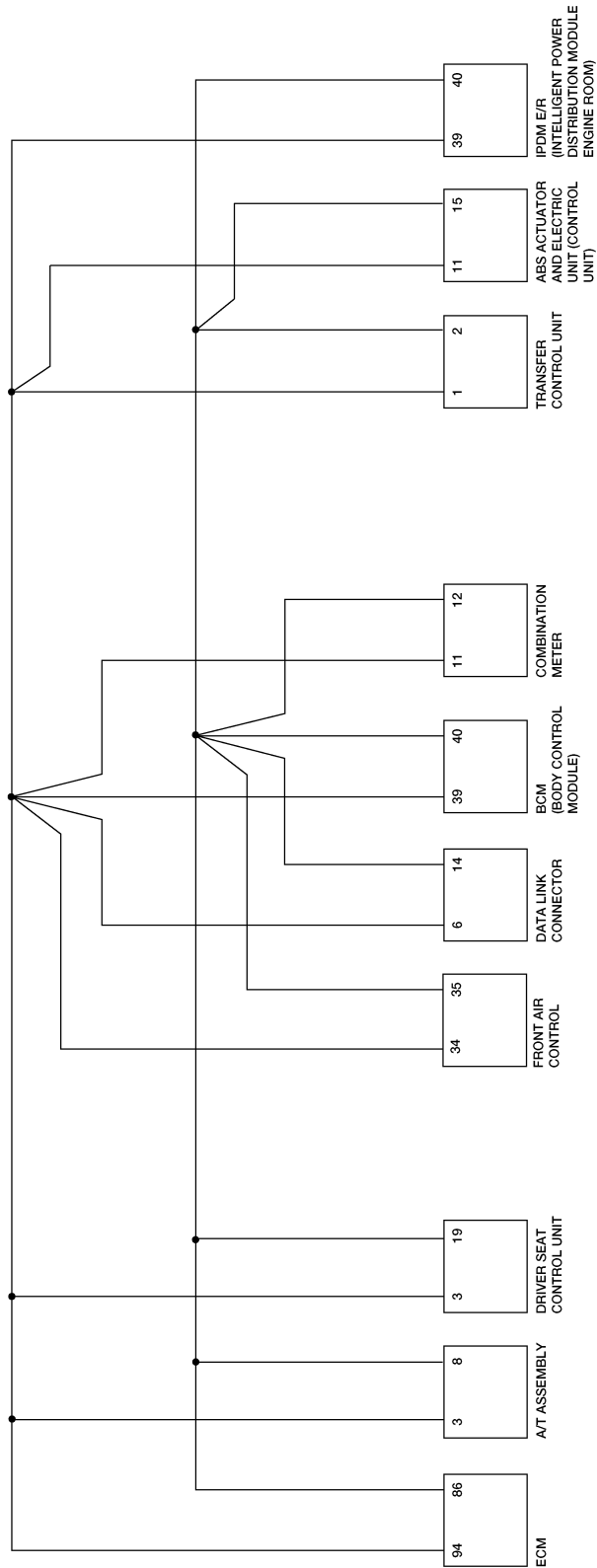
LAN

CAN SYSTEM (TYPE 8)

[CAN]

Schematic

UKS001G8



BKWA0144E

CAN SYSTEM (TYPE 8)

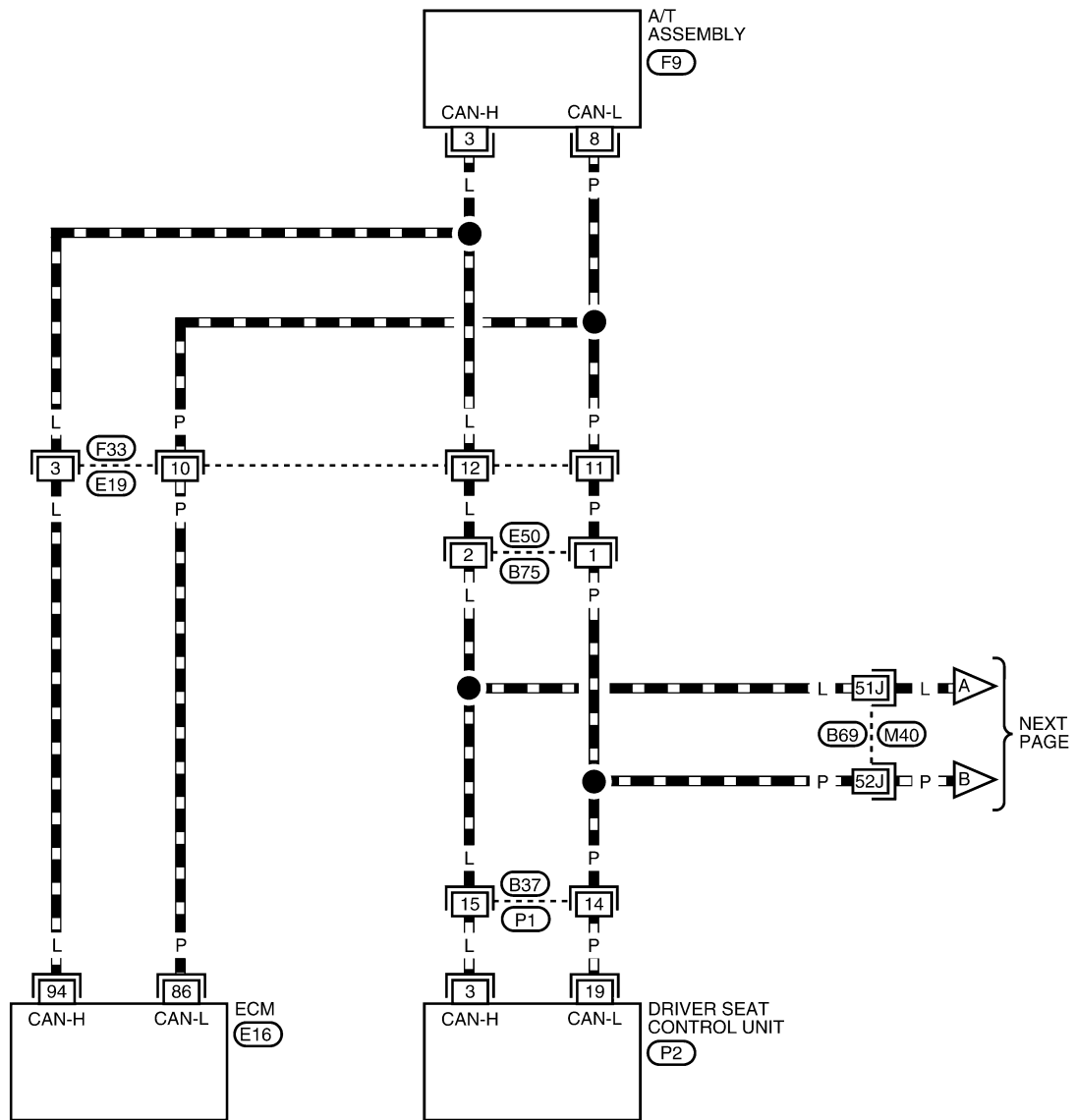
[CAN]

Wiring Diagram - CAN -

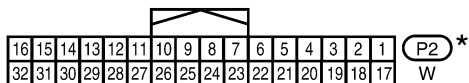
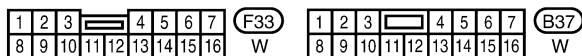
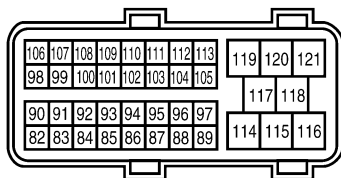
UKS001G9

LAN-CAN-22

— : DATA LINE



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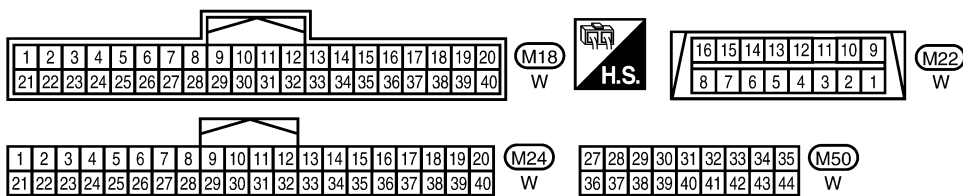
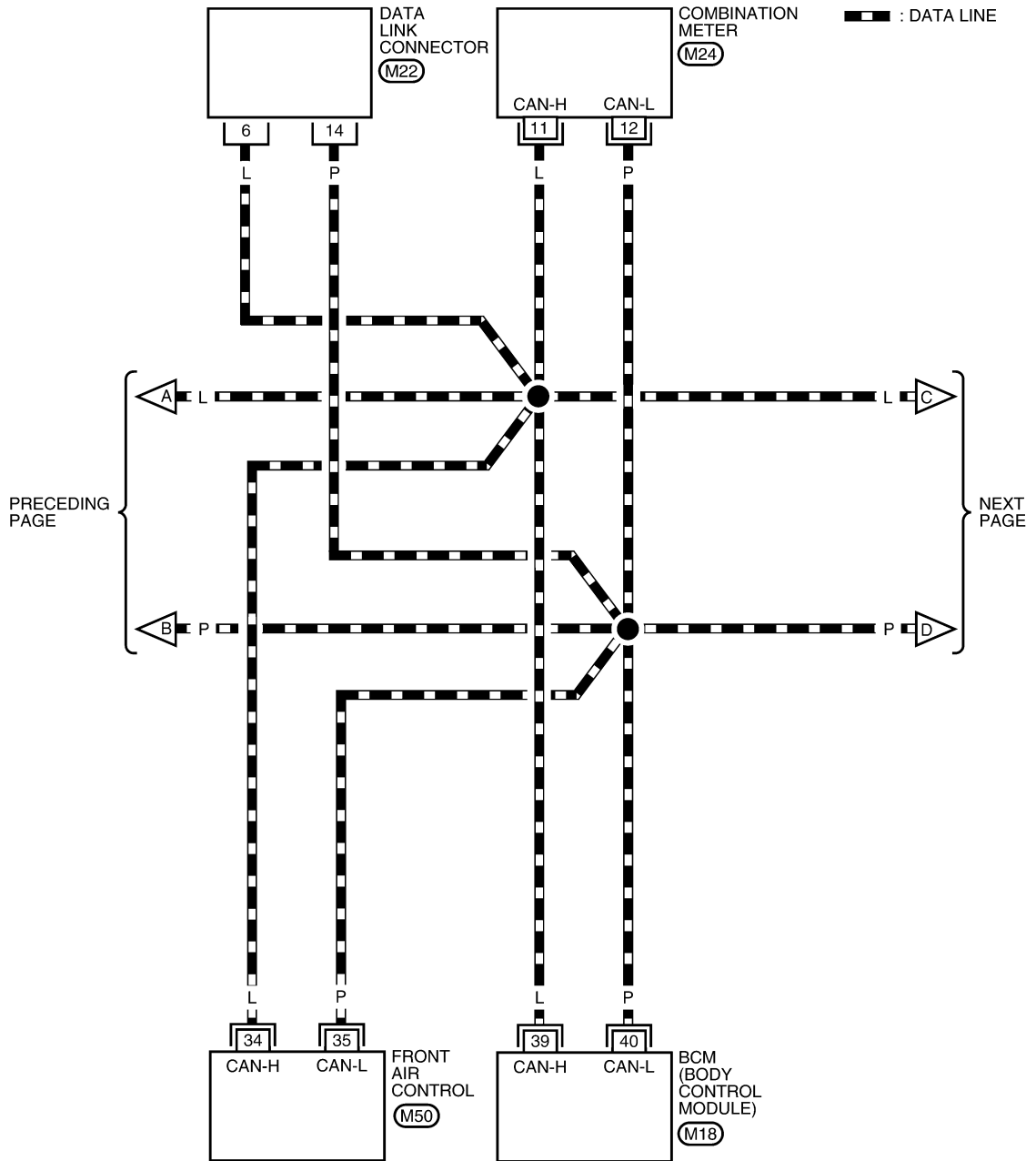
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

REFER TO THE FOLLOWING.

(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0446E

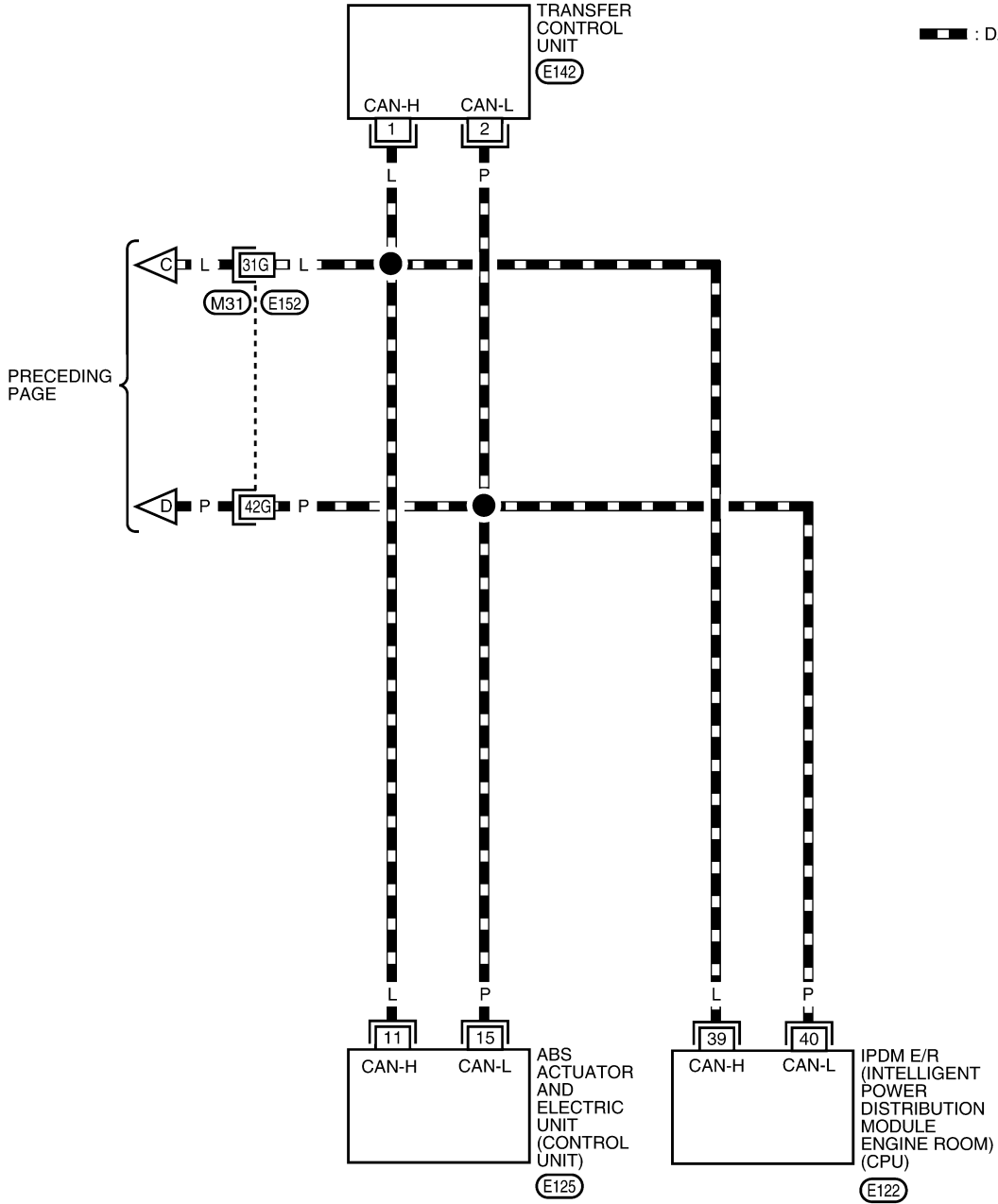
LAN-CAN-23



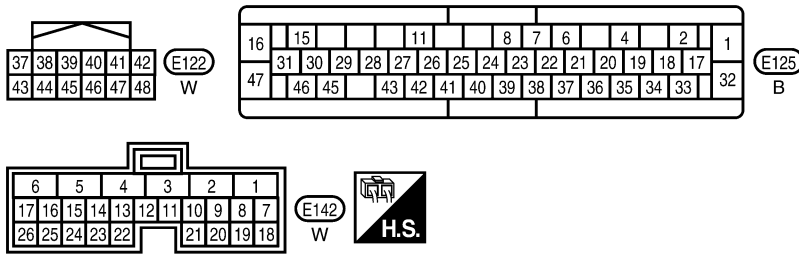
BKWA0447E

LAN-CAN-24

▬ : DATA LINE



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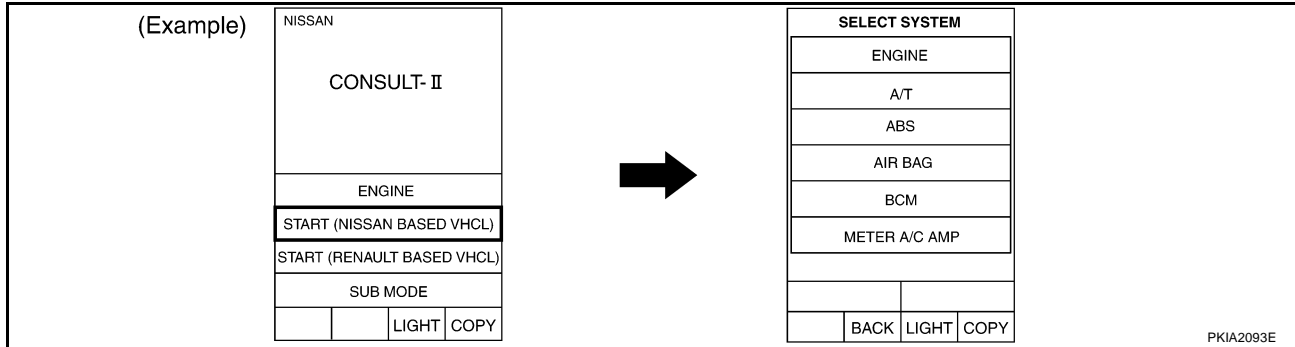


REFER TO THE FOLLOWING.
(M31) - SUPER MULTIPLE JUNCTION (SMJ)

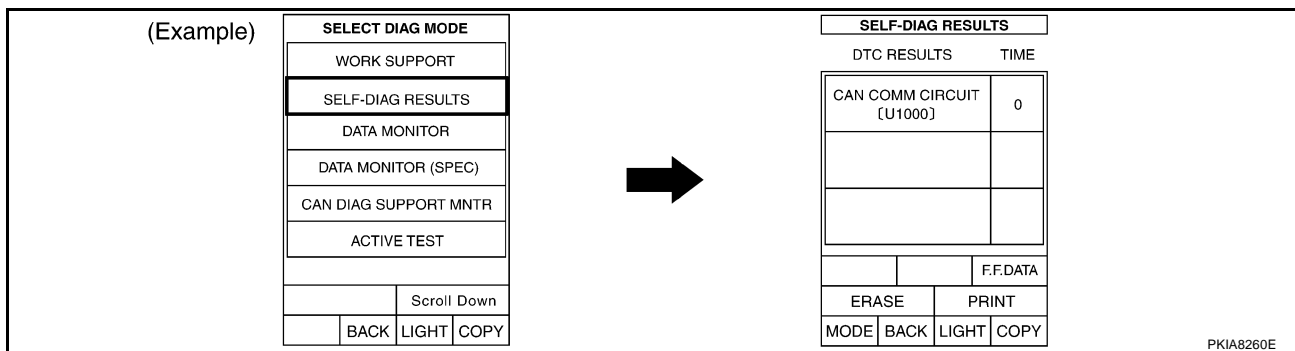
BKWA0448E

Work Flow

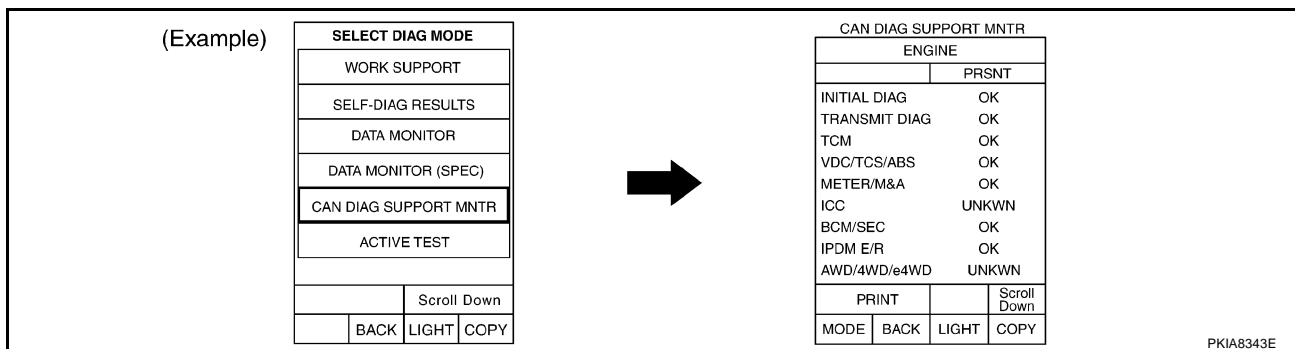
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-241, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-241, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-243, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 8)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

SKIB2765E

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LAN

CAN SYSTEM (TYPE 8)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
HVAC
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6773E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

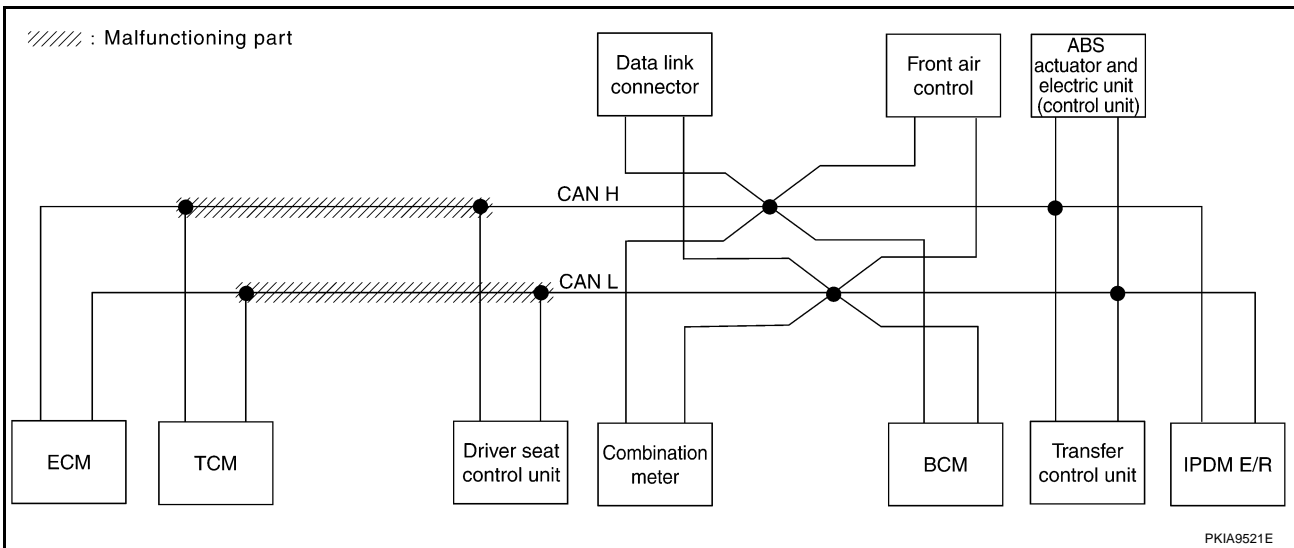
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and driver seat control unit. Refer to [LAN-257, "Circuit Check Between TCM and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—

SKIB2766E



CAN SYSTEM (TYPE 8)

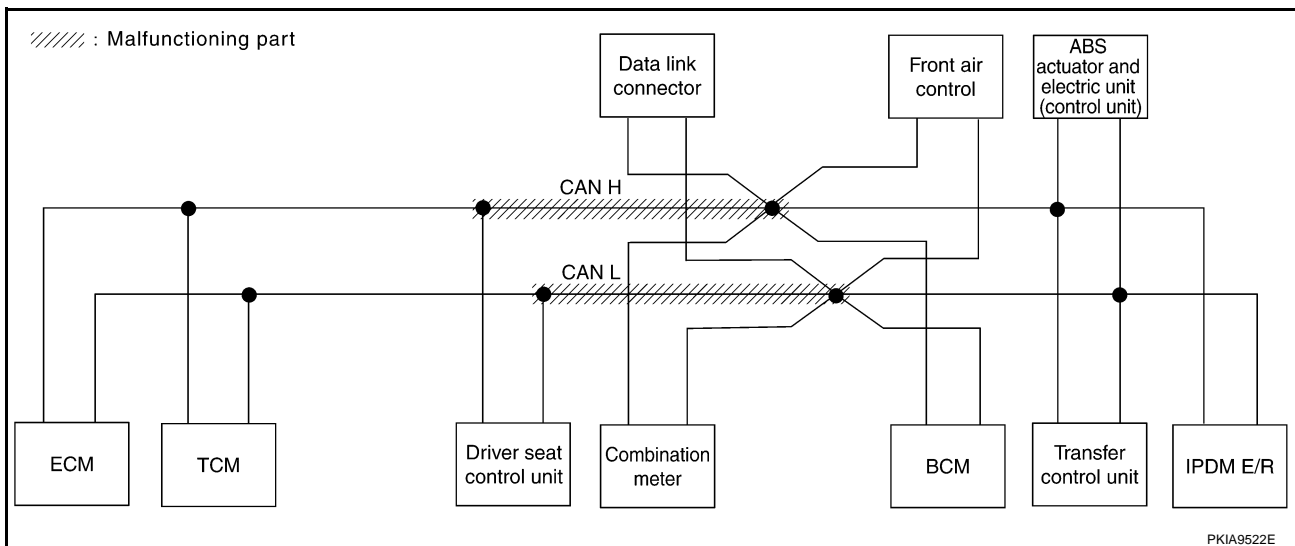
[CAN]

Case 2

Check harness between driver seat control unit and data link connector. Refer to [LAN-258, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	

SKIB2767E



PKIA9522E

CAN SYSTEM (TYPE 8)

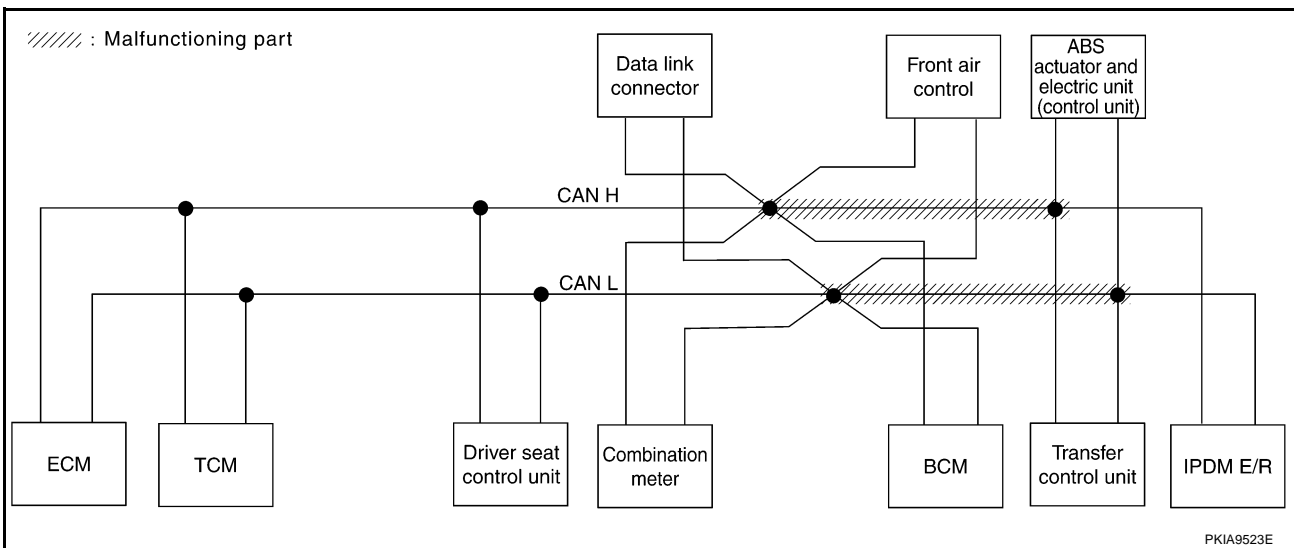
[CAN]

Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-259, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

SKIB2768E



CAN SYSTEM (TYPE 8)

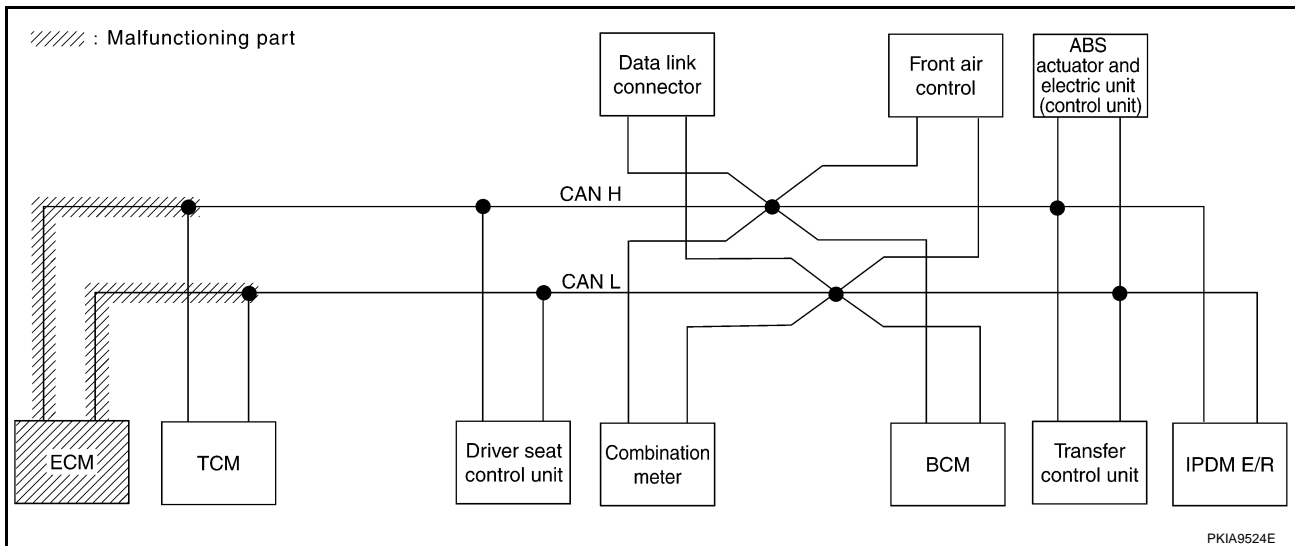
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-260, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	

SKIB2769E



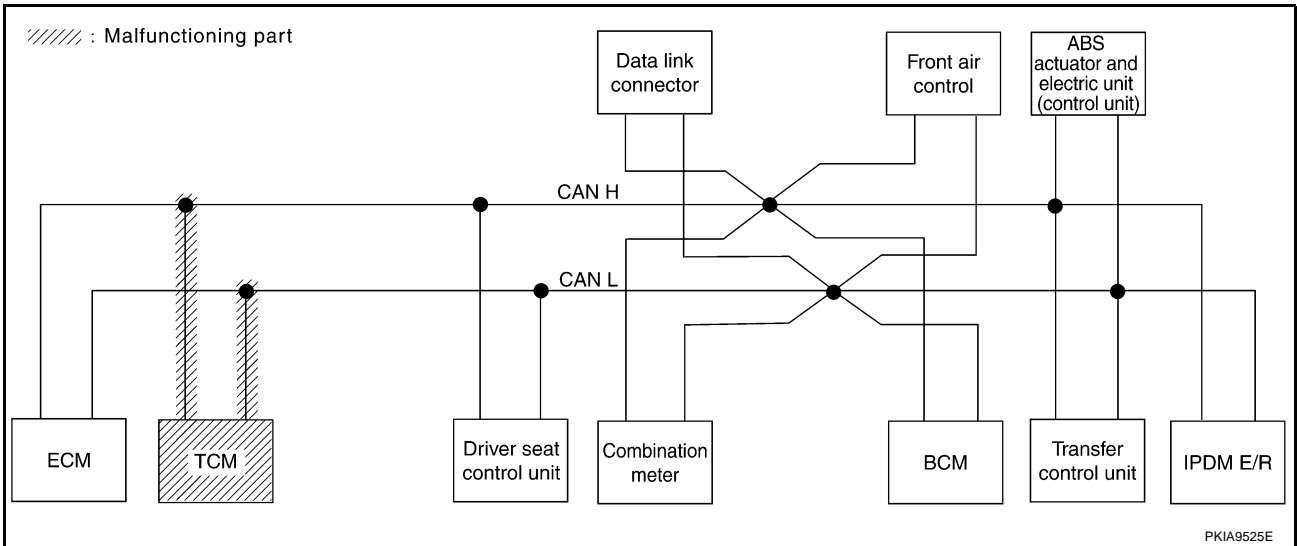
PKIA9524E

Case 5

Check TCM circuit. Refer to [LAN-260, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2770E



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CAN SYSTEM (TYPE 8)

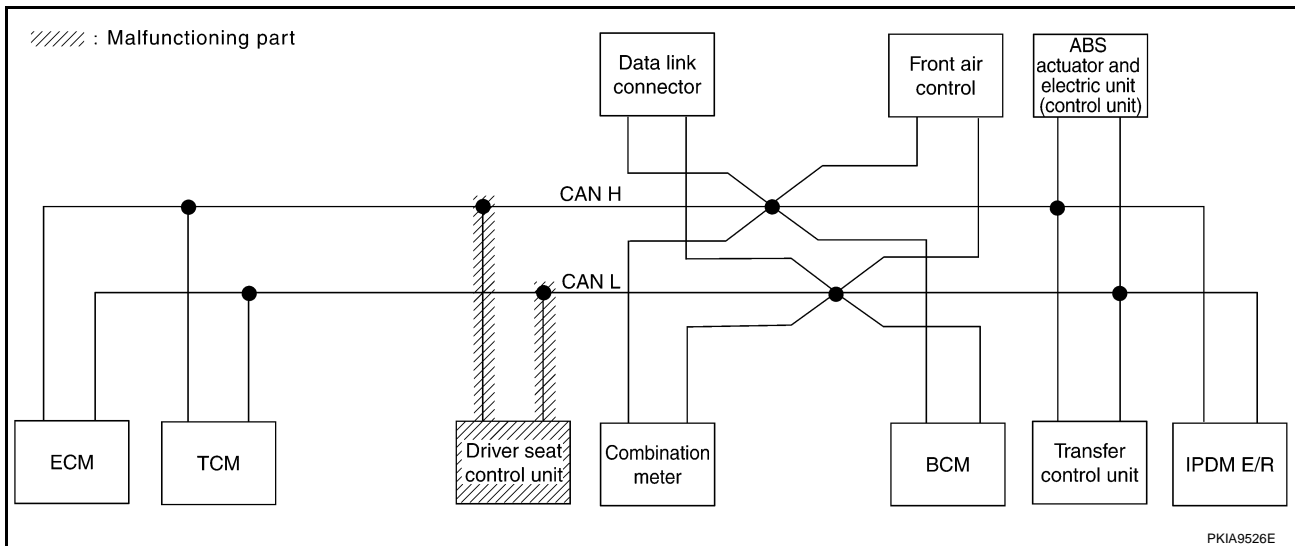
[CAN]

Case 6

Check driver seat control unit circuit. Refer to [LAN-261, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2771E



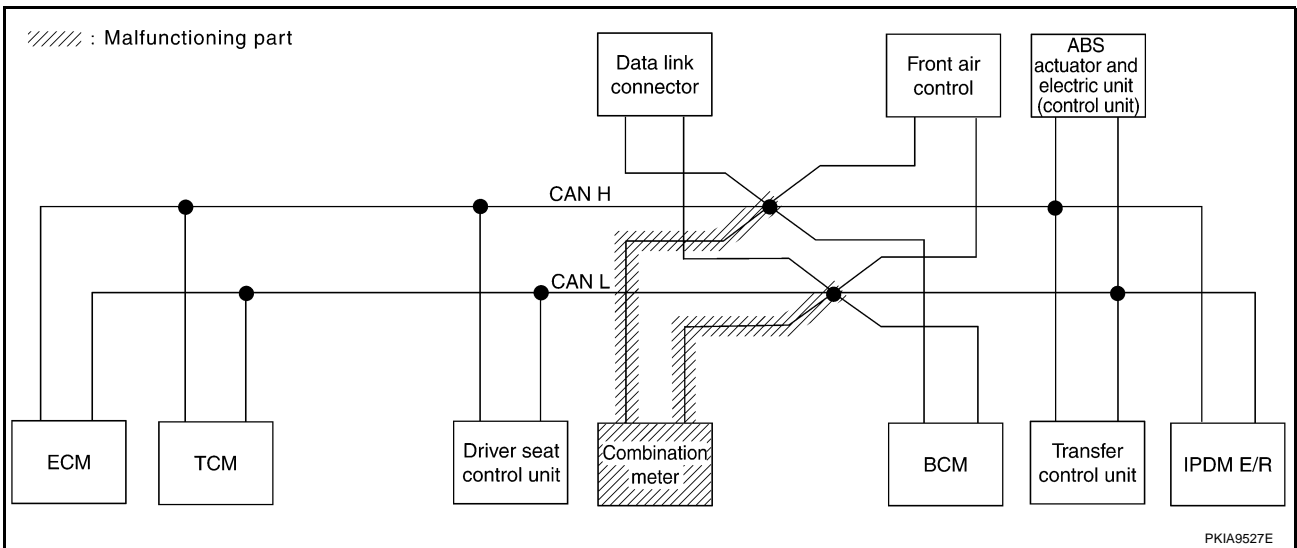
PKIA9526E

Case 7

Check combination meter circuit. Refer to [LAN-261, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2773E



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CAN SYSTEM (TYPE 8)

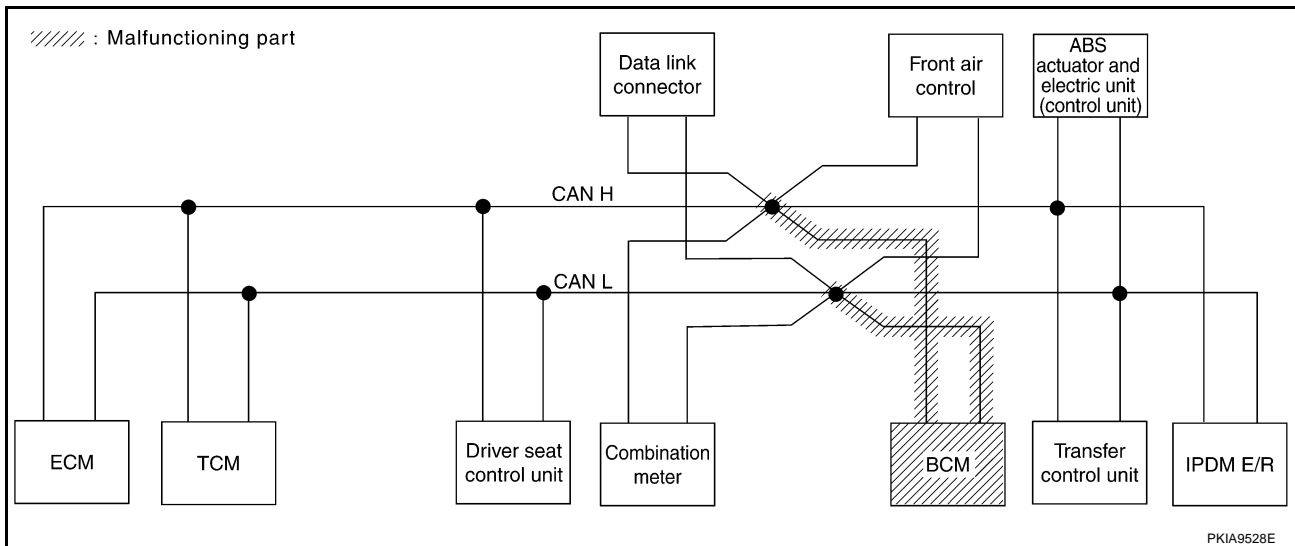
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-262, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	—	—	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	—	—	—	

SKIB2774E



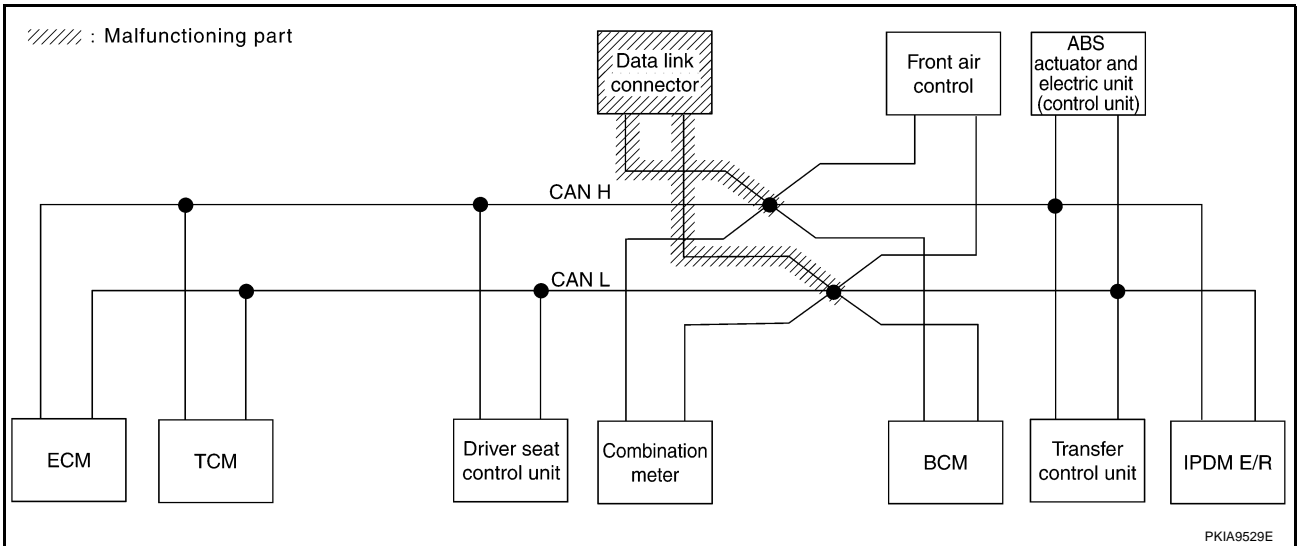
PKIA9528E

Case 9

Check data link connector circuit. Refer to [LAN-262. "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2775E



CAN SYSTEM (TYPE 8)

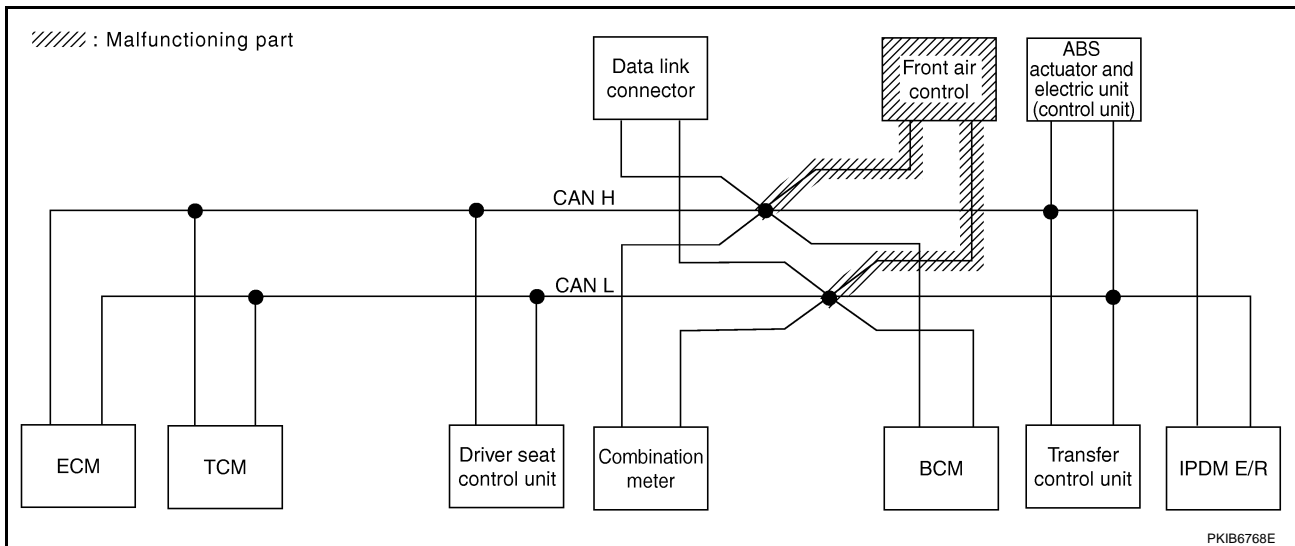
[CAN]

Case 10

Check front air control circuit. Refer to [LAN-263, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

PKIB677E



PKIB676E

CAN SYSTEM (TYPE 8)

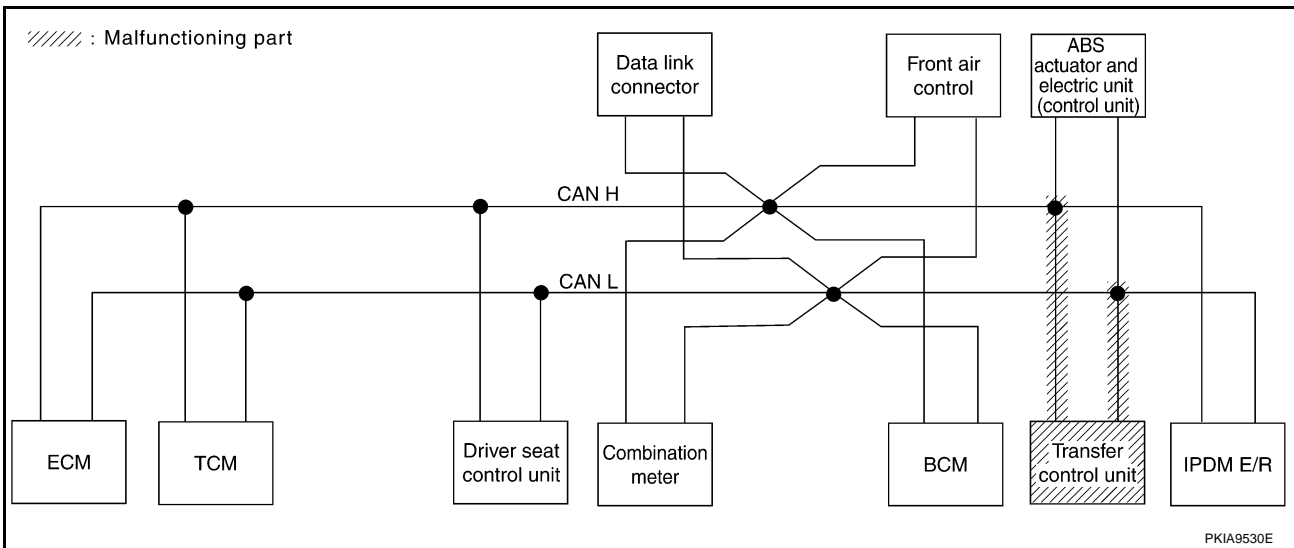
[CAN]

Case 11

Check transfer control unit circuit. Refer to [LAN-263, "Transfer Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2776E



CAN SYSTEM (TYPE 8)

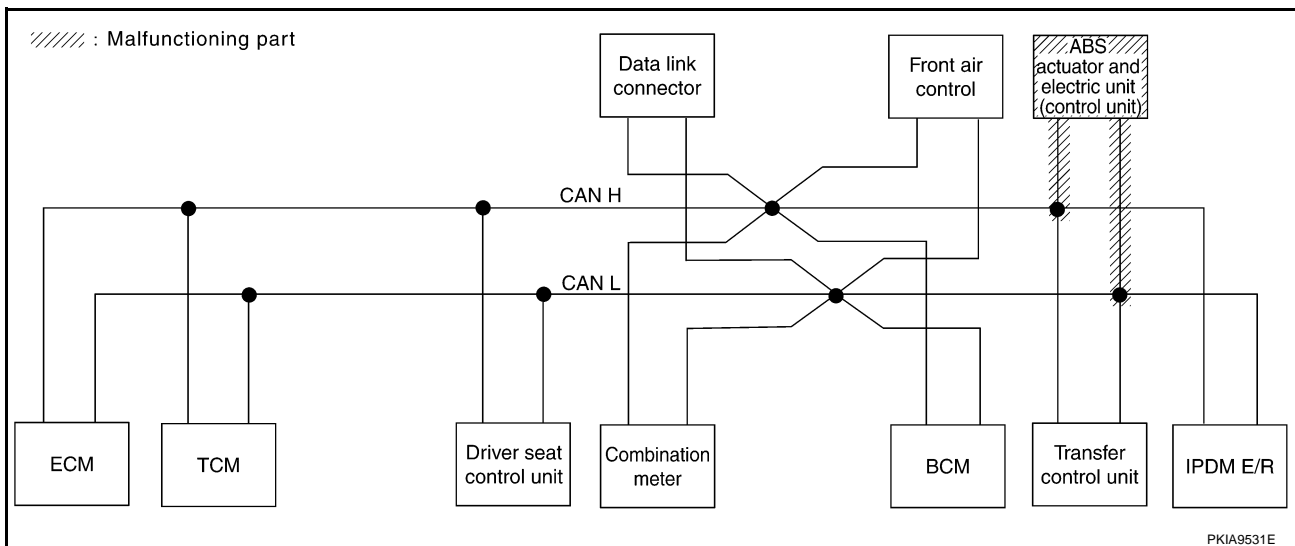
[CAN]

Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-264, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	

SKIB2777E



PKIA9531E

CAN SYSTEM (TYPE 8)

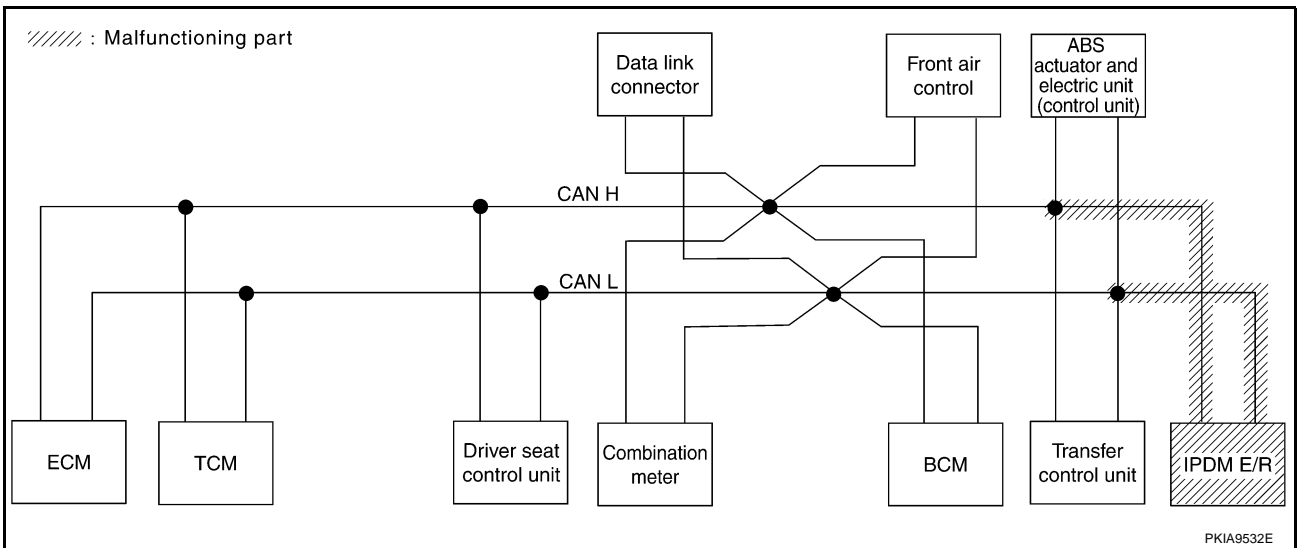
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-264, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

SKIB2778E



CAN SYSTEM (TYPE 8)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-265, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	-	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	-	NG	UNKW N	UNKW N	-	UNKW N	-	UNKW N	UNKW N	-
AUTO DRIVE POS.	No indication	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	-	-	-
BCM	No indication	NG	UNKW N	UNKW N	-	UNKW N	-	-	-	UNKW N
HVAC	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	UNKW N	-
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	UNKW N	-
ABS	-	NG	UNKW N	UNKW N	UNKW N	-	-	UNKW N	-	-
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	-	-

SKIB2779E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-265, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	-	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	-	NG	UNKW N	UNKW N	-	UNKW N	-	UNKW N	UNKW N	-
AUTO DRIVE POS.	No indication	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	-	-	-
BCM	No indication	NG	UNKW N	UNKW N	-	UNKW N	-	-	-	UNKW N
HVAC	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	UNKW N	-
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	UNKW N	-
ABS	-	NG	UNKW N	UNKW N	UNKW N	-	-	UNKW N	-	-
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	-	-

SKIB2780E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-265, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR								
		Initial diagnosis	Transmit diagnosis	Receive diagnosis						
				ECM	TCM	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	✓	—	✓	—	✓	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	✓	UNKWN	—	—	✓	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—

SKIB2781E

Circuit Check Between TCM and Driver Seat Control Unit

UKS001GB

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

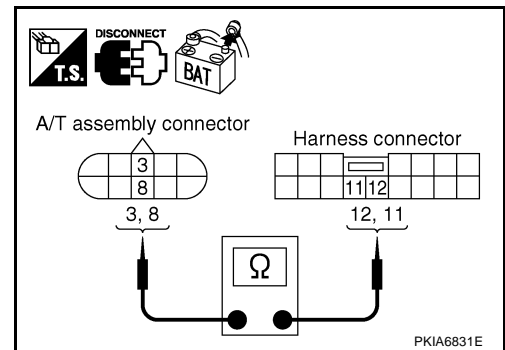
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



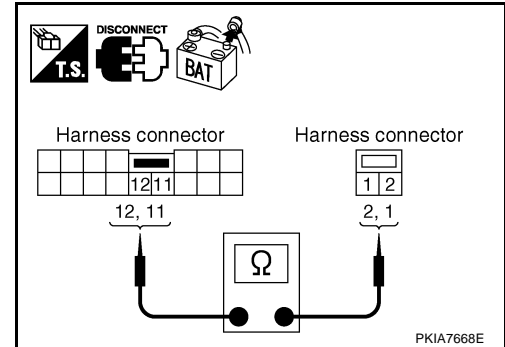
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



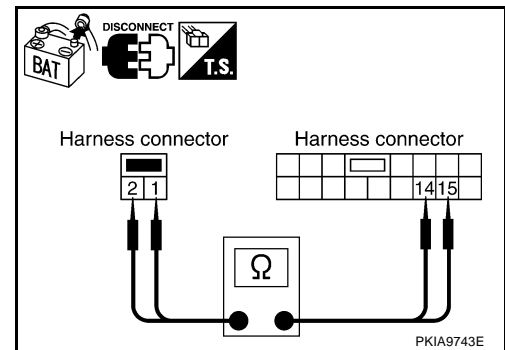
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B37 terminals 15 (L), 14 (P).

2 (L) - 15 (L) : Continuity should exist.
1 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-240, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and Data Link Connector

UKS001GC

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

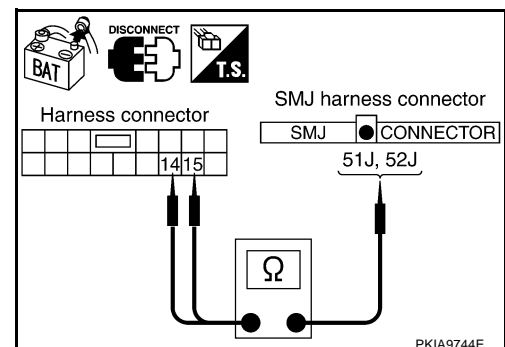
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

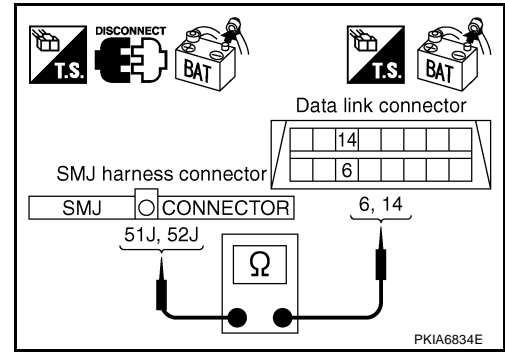
Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.

52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-240, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS001GD

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

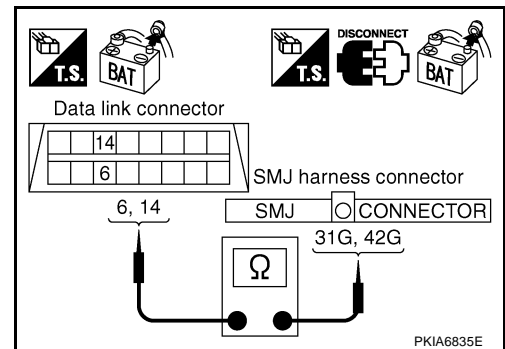
1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

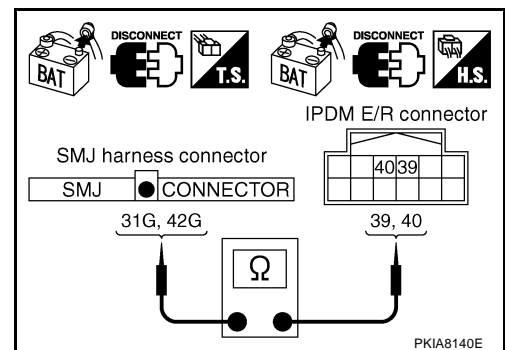
1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-240, "Work Flow"](#).
- NG >> Repair harness.



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

ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

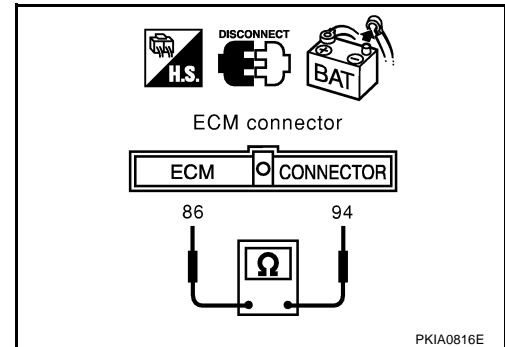
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

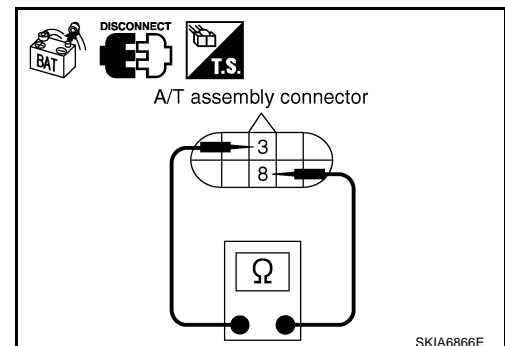
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Driver Seat Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

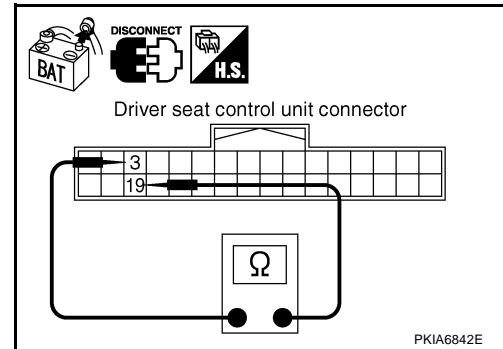
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

OK >> Replace driver seat control unit.

NG >> Repair harness between driver seat control unit and harness connector B69.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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

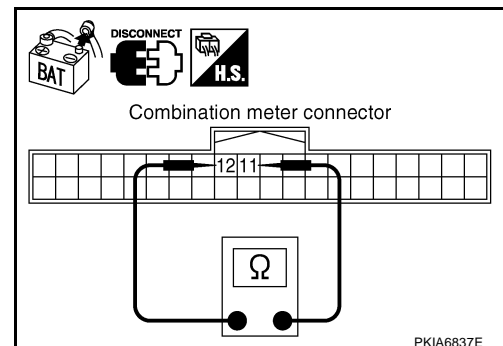
1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

OK >> Replace combination meter.

NG >> Repair harness between combination meter and data link connector.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

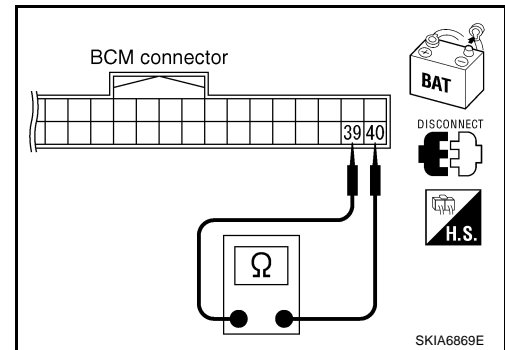
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

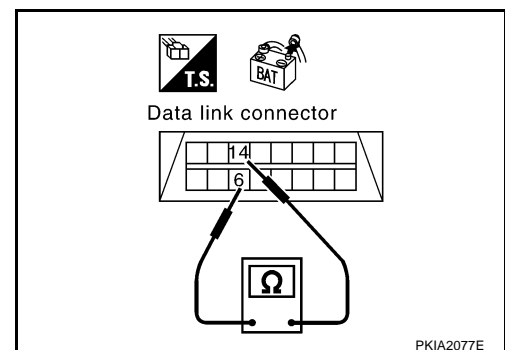
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-240, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

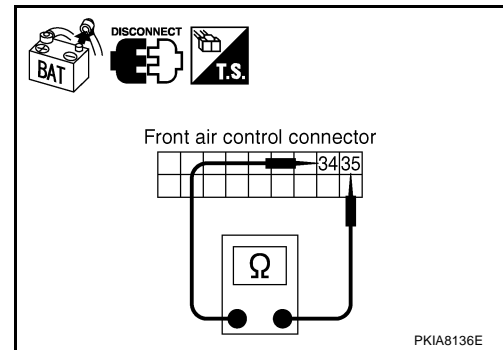
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.

**Transfer Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

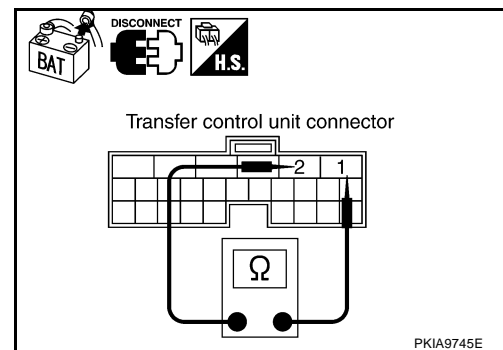
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.



ABS Actuator and Electric Unit (Control Unit) Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

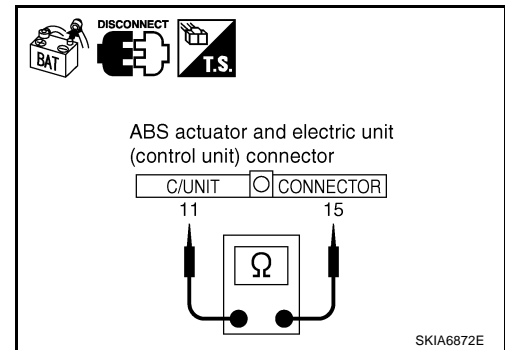
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.

**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

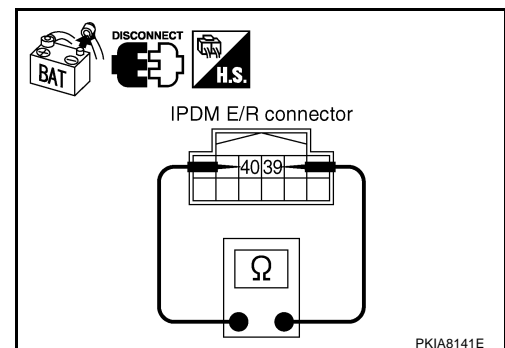
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



CAN Communication Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Driver seat control unit
 - Combination meter
 - BCM
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

OK >> GO TO 2.

NG >> Repair or replace as necessary.

2. CHECK HARNESS FOR SHORT CIRCUIT

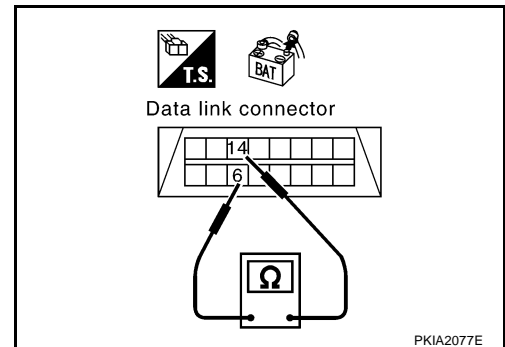
With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.

**3. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

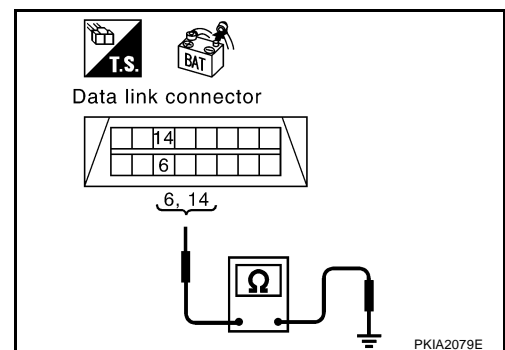
6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

OK >> Check ECM and IPDM E/R. Refer to [LAN-266, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

NG >> Repair harness.

**IPDM E/R Ignition Relay Circuit Check**

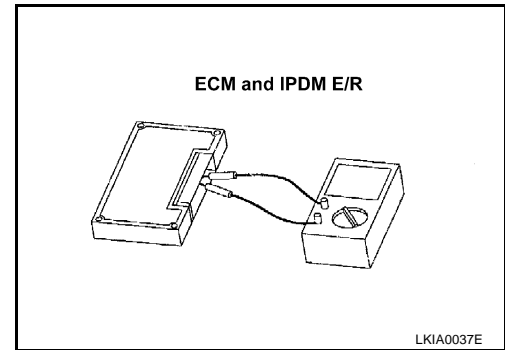
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

Component Inspection**ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION**

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	

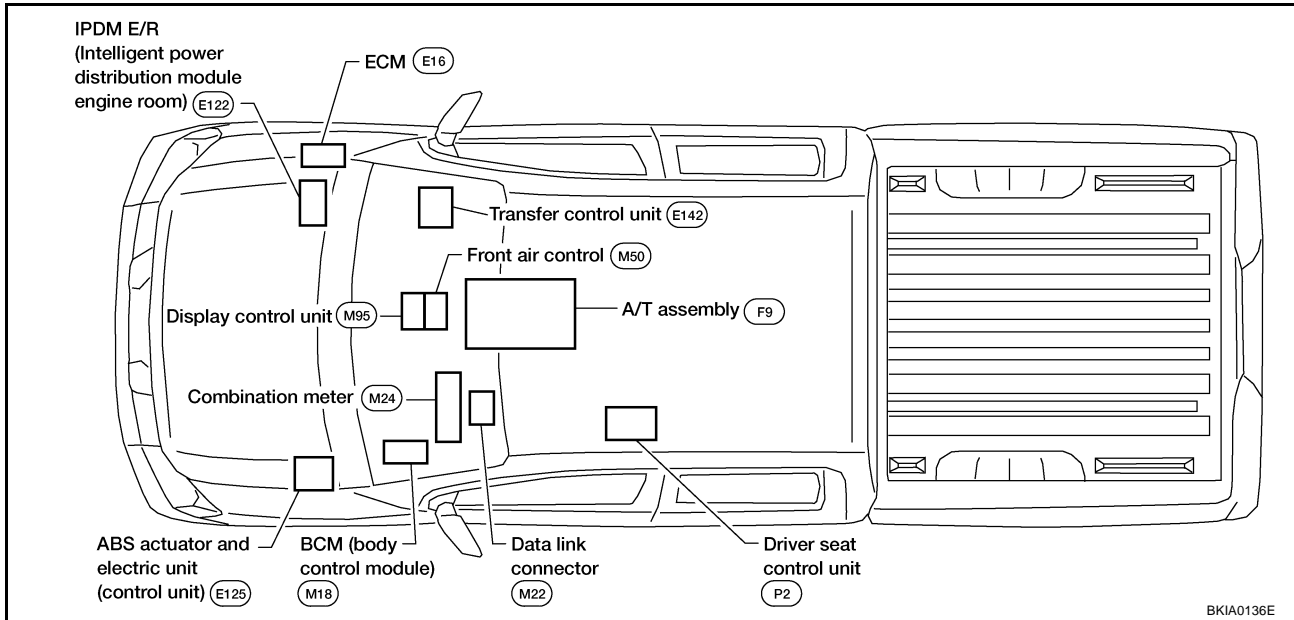


CAN SYSTEM (TYPE 9)

System Description

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



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

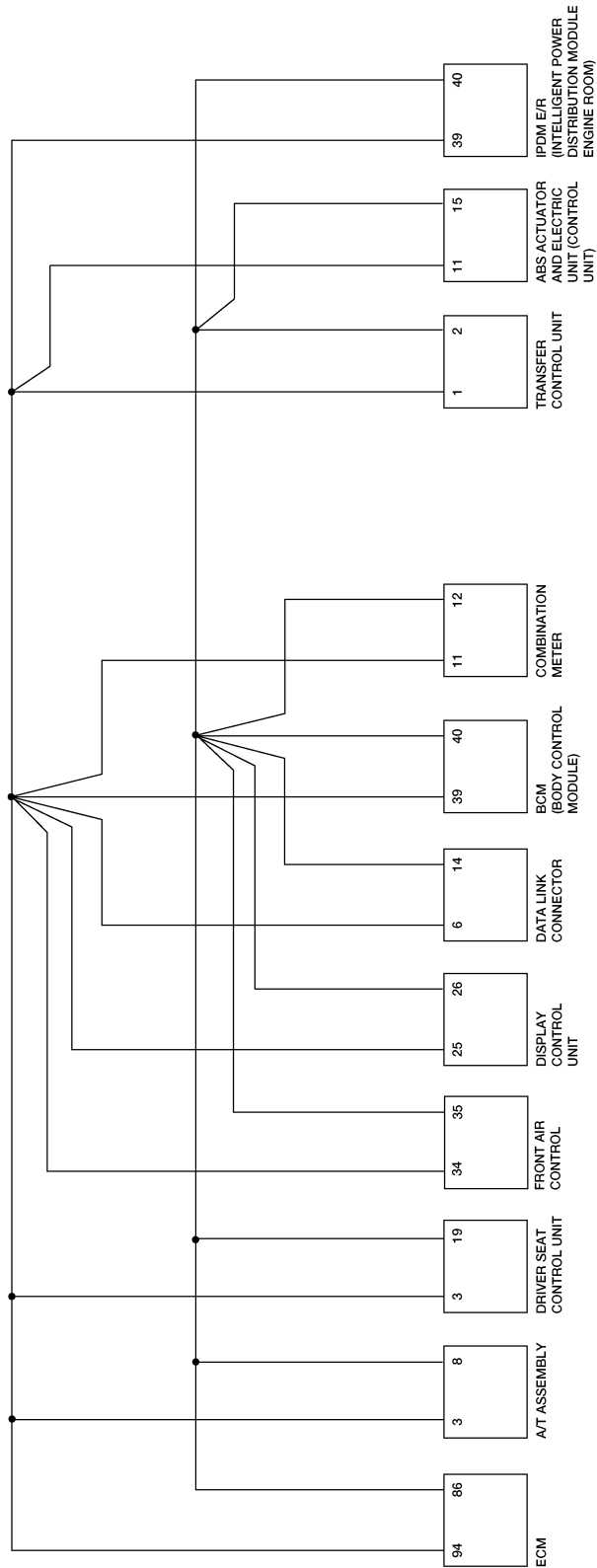
LAN

CAN SYSTEM (TYPE 9)

[CAN]

Schematic

UKS001GT



BKWA0146E

CAN SYSTEM (TYPE 9)

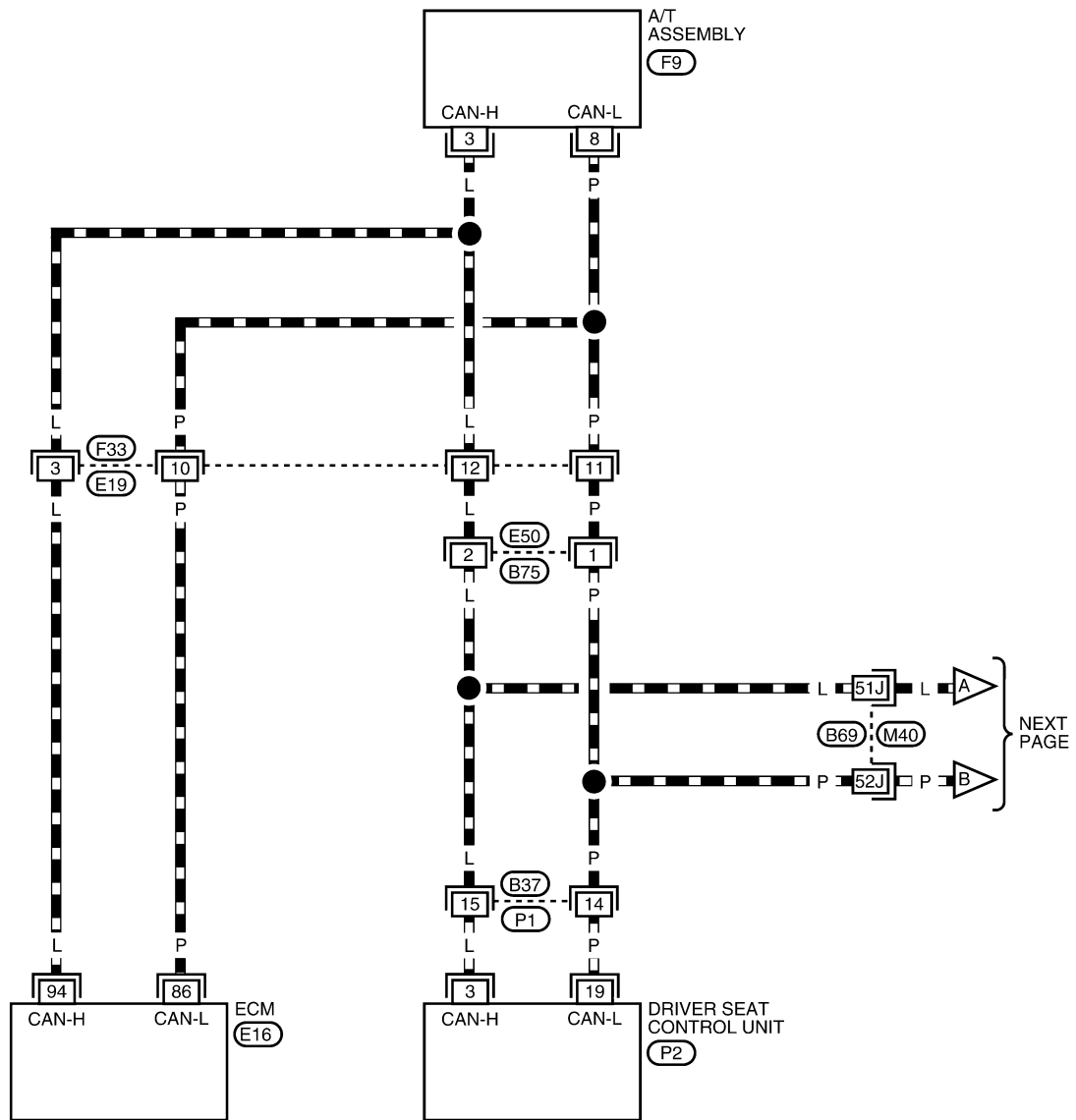
[CAN]

Wiring Diagram - CAN -

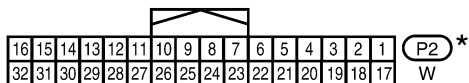
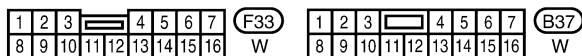
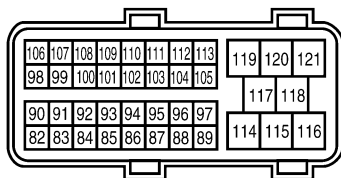
UKS001GU

LAN-CAN-25

— : DATA LINE



A
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I
J
LAN
L
M



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

REFER TO THE FOLLOWING.

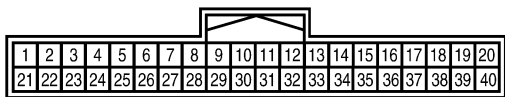
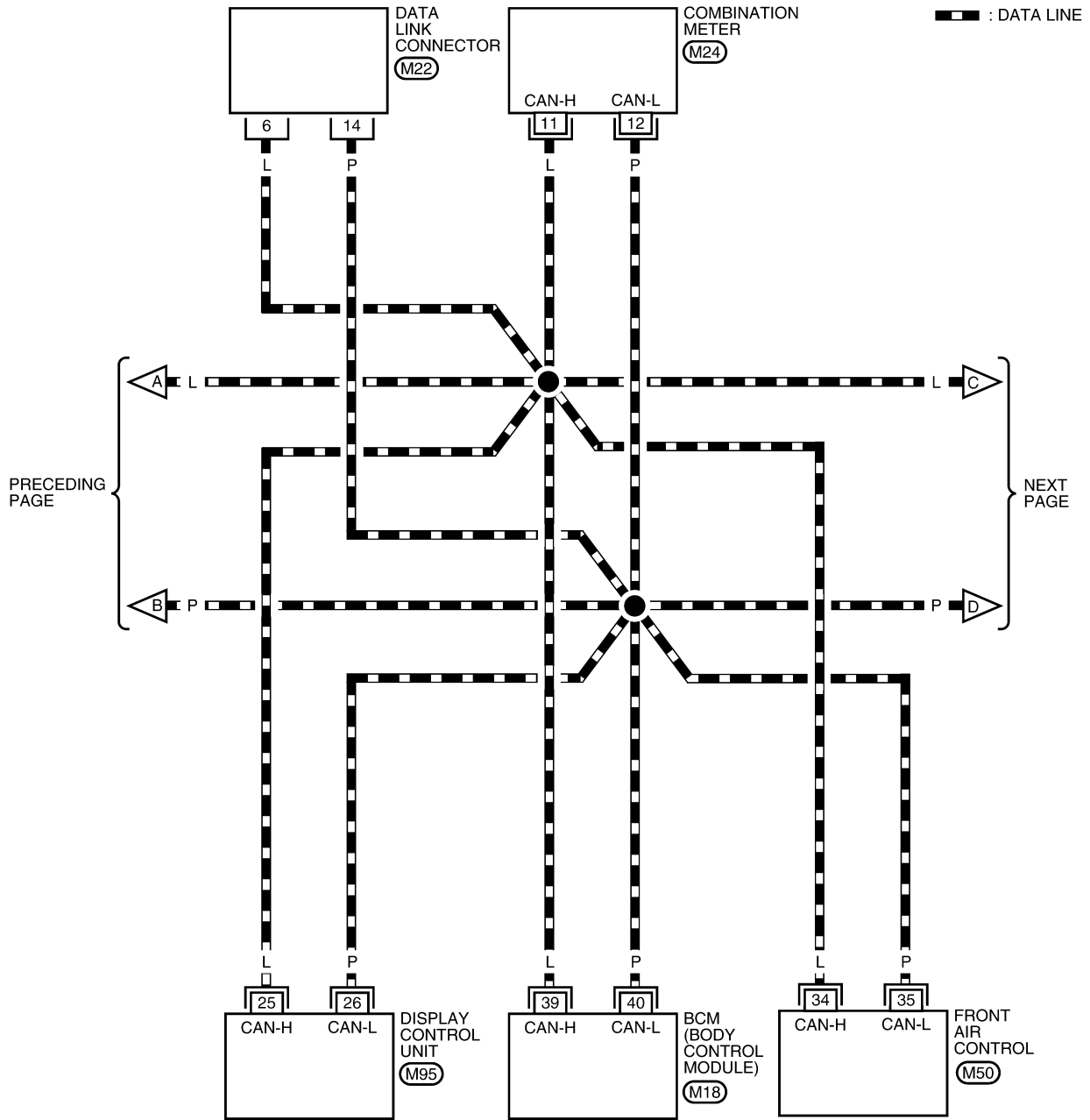
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0449E

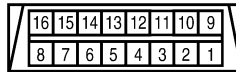
CAN SYSTEM (TYPE 9)

[CAN]

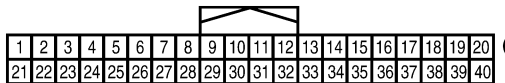
LAN-CAN-26



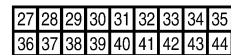
(M18)
W



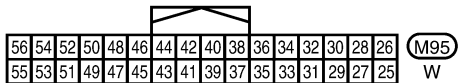
(M22)
W



(M24)
W



(M50)
W



(M95)
W

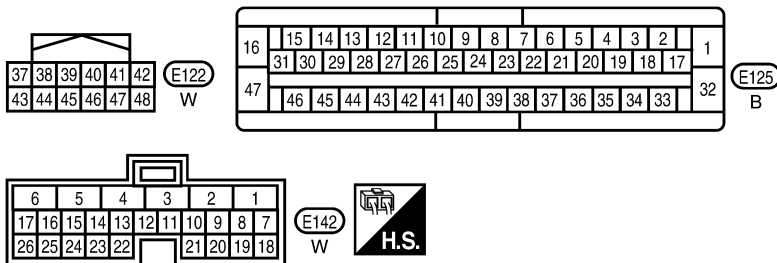
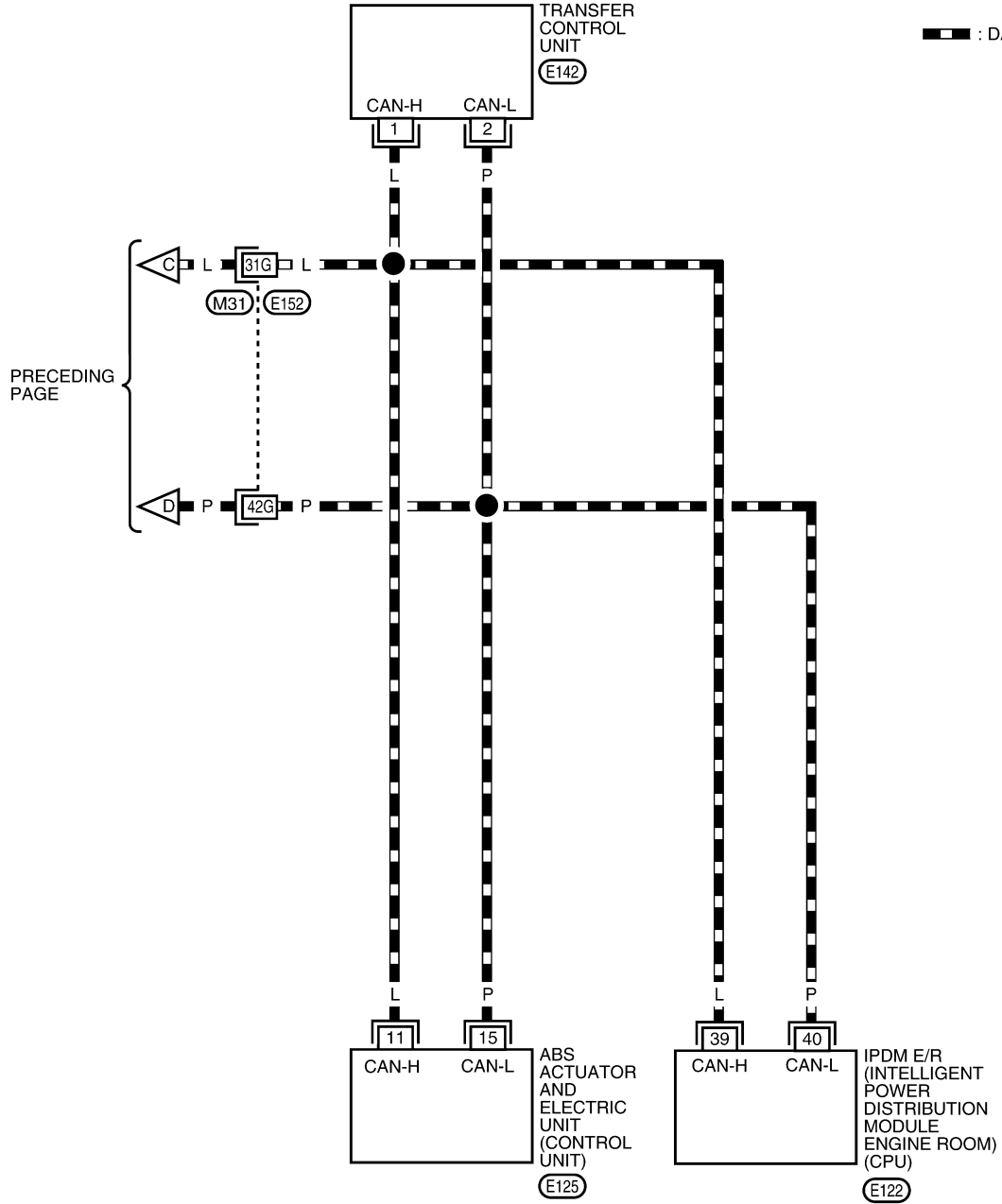
BKWA0450E

CAN SYSTEM (TYPE 9)

[CAN]

LAN-CAN-27

— : DATA LINE

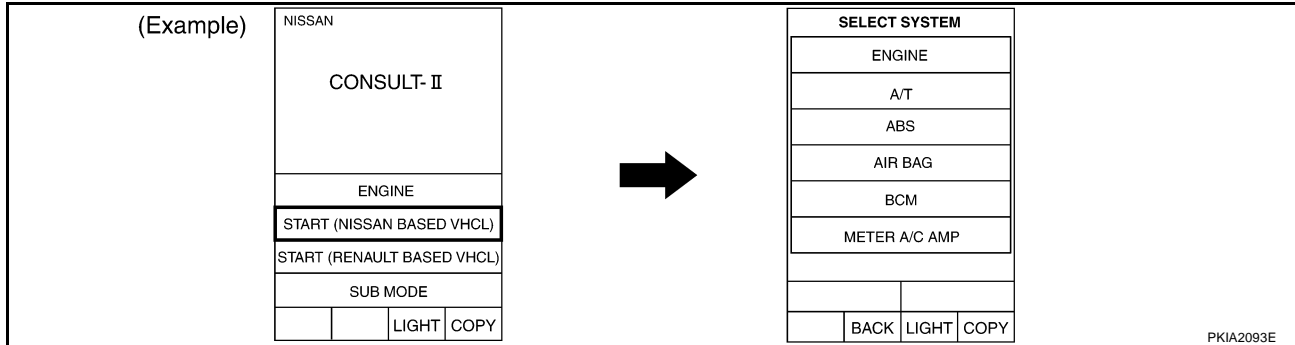


REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

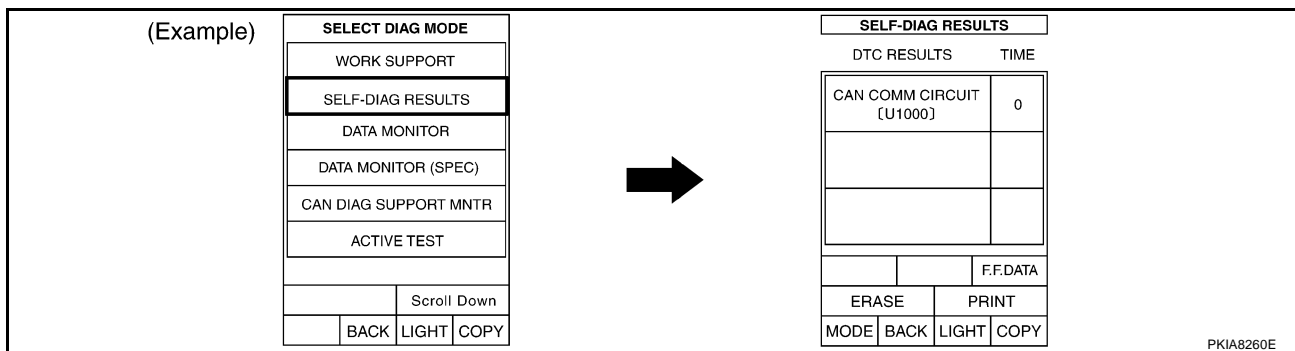
BKWA0451E

Work Flow

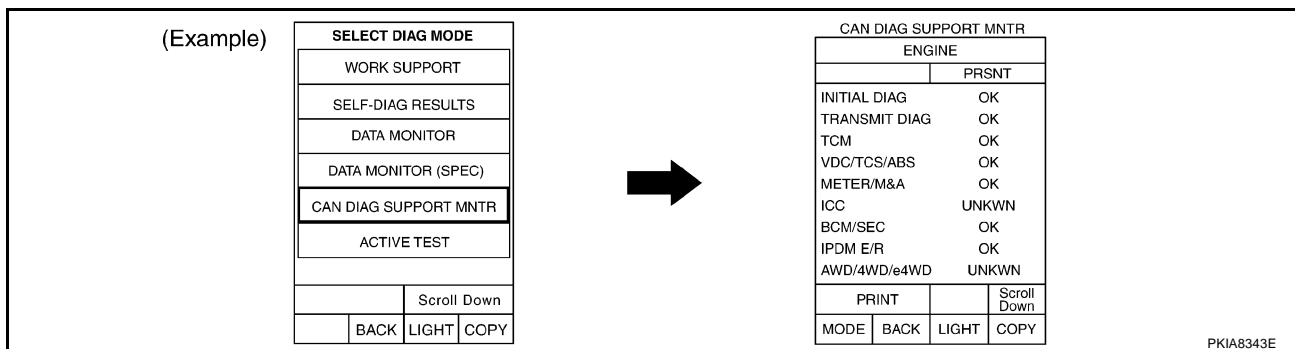
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-274, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-274, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-148, "CAN Communication Line Check"](#) .
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-274, "CHECK SHEET"](#) .

CAN SYSTEM (TYPE 9)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-274, "CHECK SHEET"](#) .

NOTE:

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-148, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-276, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

E

F

G

H

I

J

LAN

L

M

CAN SYSTEM (TYPE 9)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

SKIB2782E

CAN SYSTEM (TYPE 9)

[CAN]

A
B
C
D
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M

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of A/T SELF-DIAG RESULTS	Attach copy of AUTO DRIVE POS. SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of HVAC SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	Attach copy of IPDM E/R SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of A/T CAN DIAG SUPPORT MNTR	Attach copy of AUTO DRIVE POS. CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of HVAC CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	Attach copy of IPDM E/R CAN DIAG SUPPORT MNTR

LAN

PKIB6773E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

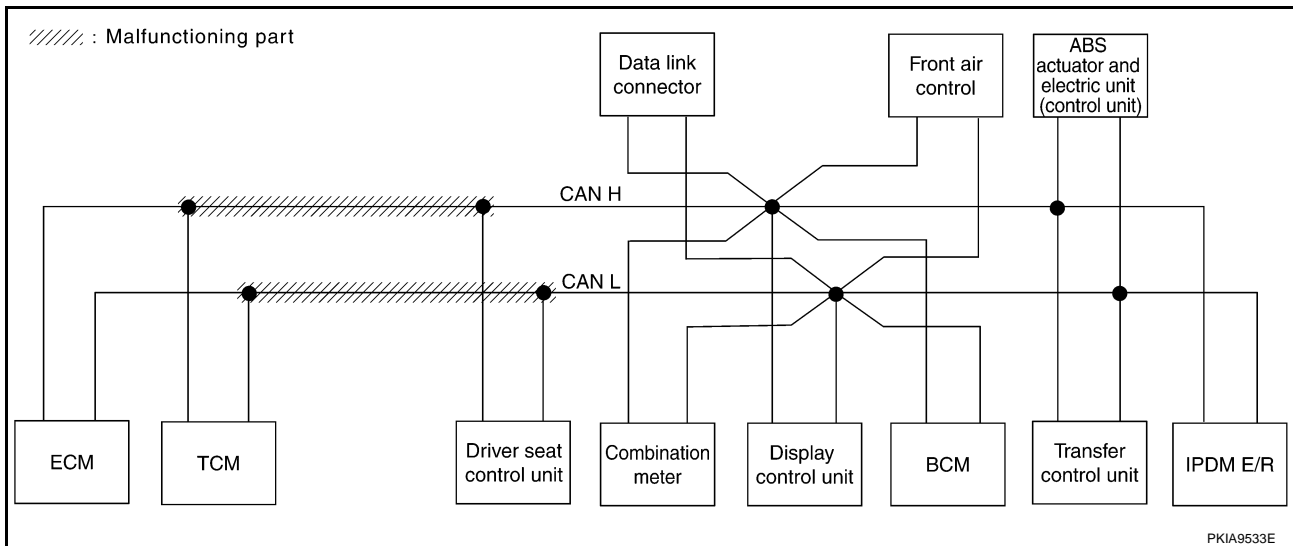
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and driver seat control unit. Refer to [LAN-291, "Circuit Check Between TCM and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UN KN ✓WN	—	UN KN ✓WN	—	UN KN ✓WN	UN KN ✓WN	UN KN ✓WN
A/T	—	NG	UNKWN	UNKWN	—	UN KN ✓WN	—	—	—	UN KN ✓WN	UN KN ✓WN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UN KN ✓WN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UN KN ✓WN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UN KN ✓WN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UN KN ✓WN	UN KN ✓WN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UN KN ✓WN	UN KN ✓WN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UN KN ✓WN	—	—	—	UNKWN	—	—	—	—

SKIB2783E



CAN SYSTEM (TYPE 9)

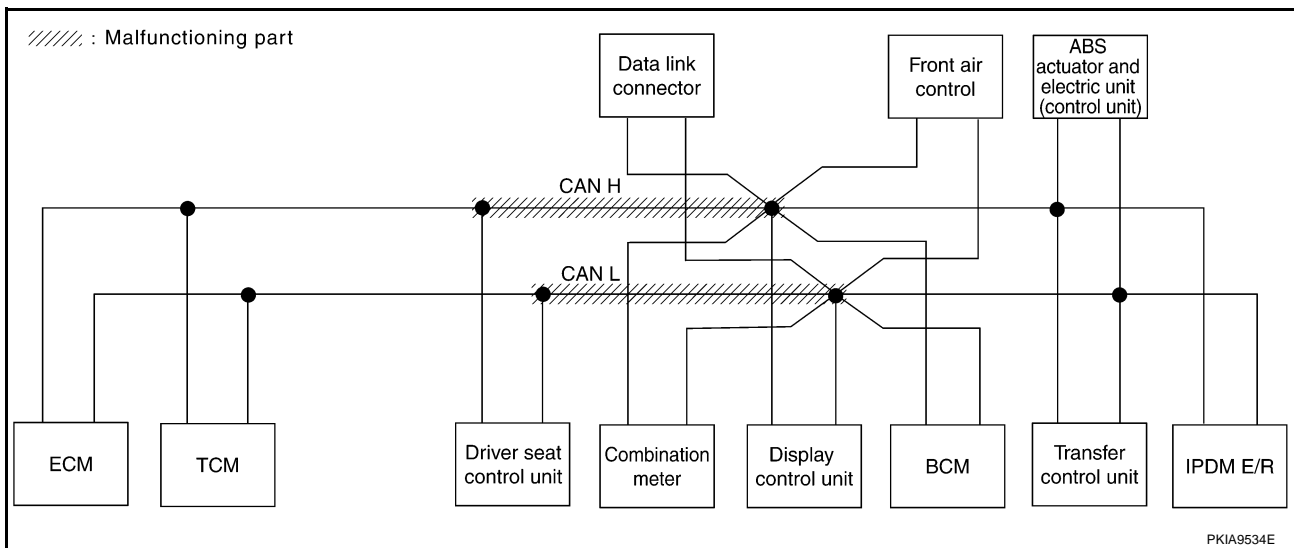
[CAN]

Case 2

Check harness between driver seat control unit and data link connector. Refer to [LAN-292, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	✓	—	✓	—	—	✓	✓	✓
A/T	—	NG	UNKWN	UNKWN	—	✓	—	—	—	—	✓	✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	✓	—	UNKWN	—	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	✓	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	✓	✓	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	✓	✓	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	✓	—	—	—	UNKWN	—	—	—	—	—

SKIB2784E



CAN SYSTEM (TYPE 9)

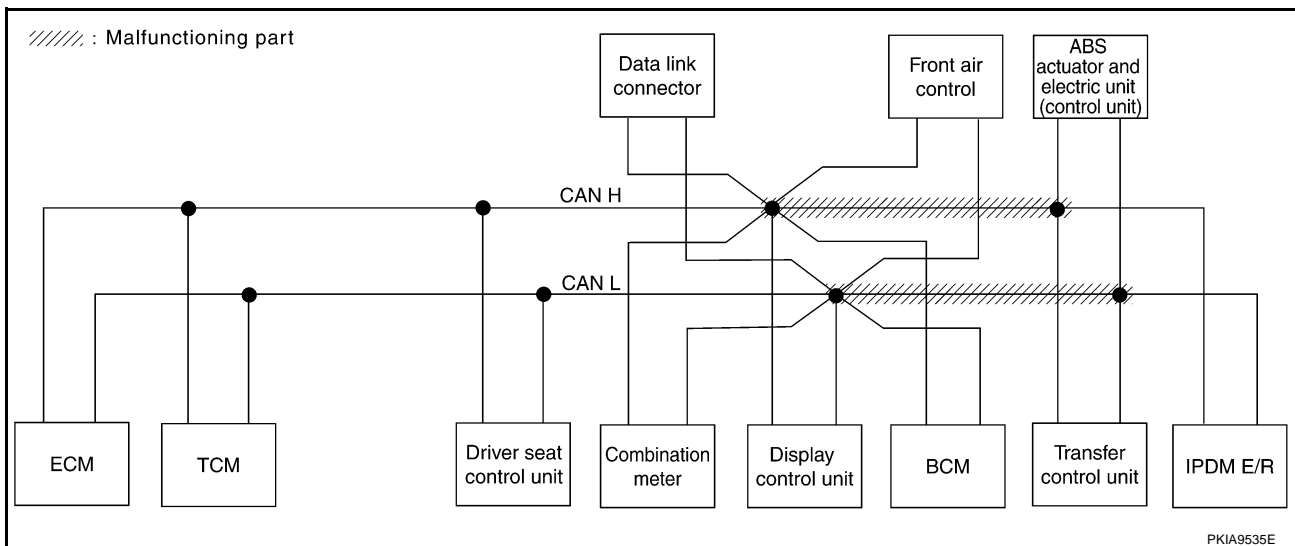
[CAN]

Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-293, "Circuit Check Between Data Link Connector and IPDM E/R"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

SKIB2785E



PKIA9535E

CAN SYSTEM (TYPE 9)

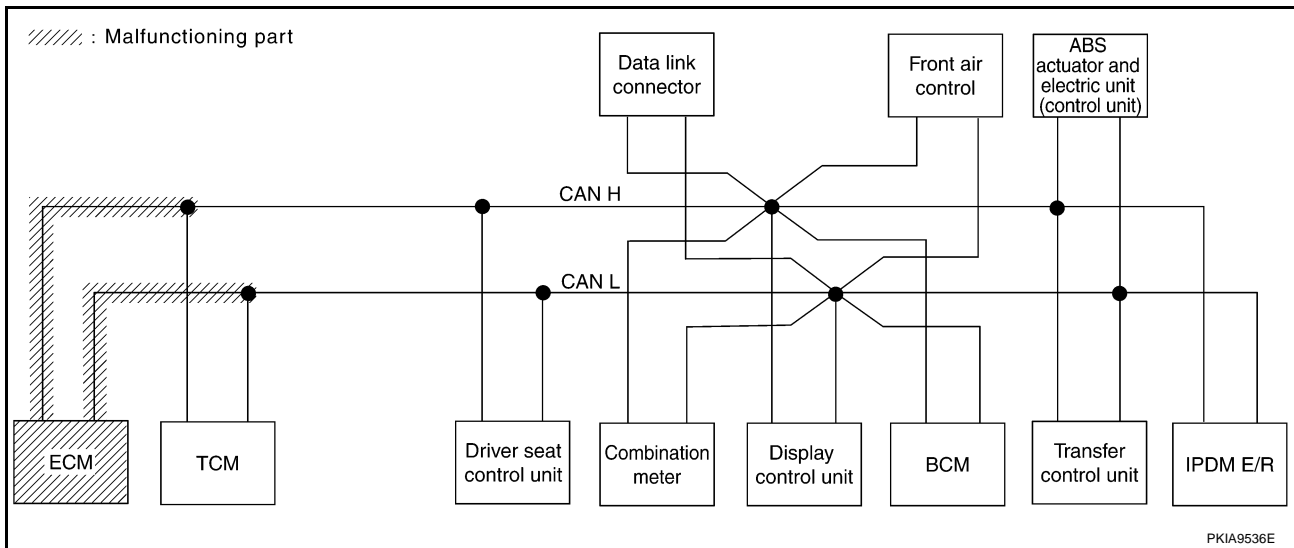
[CAN]

Case 4

Check ECM circuit. Refer to [LAN-294, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3 ✓	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—	—

SKIB2786E

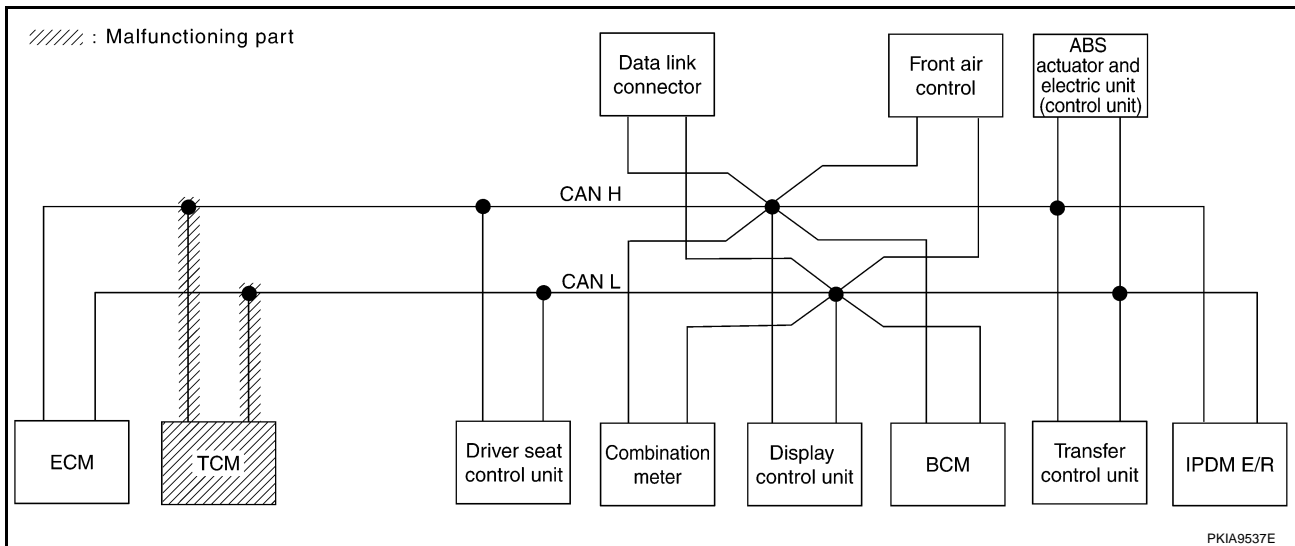


Case 5

Check TCM circuit. Refer to [LAN-294, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2787E



CAN SYSTEM (TYPE 9)

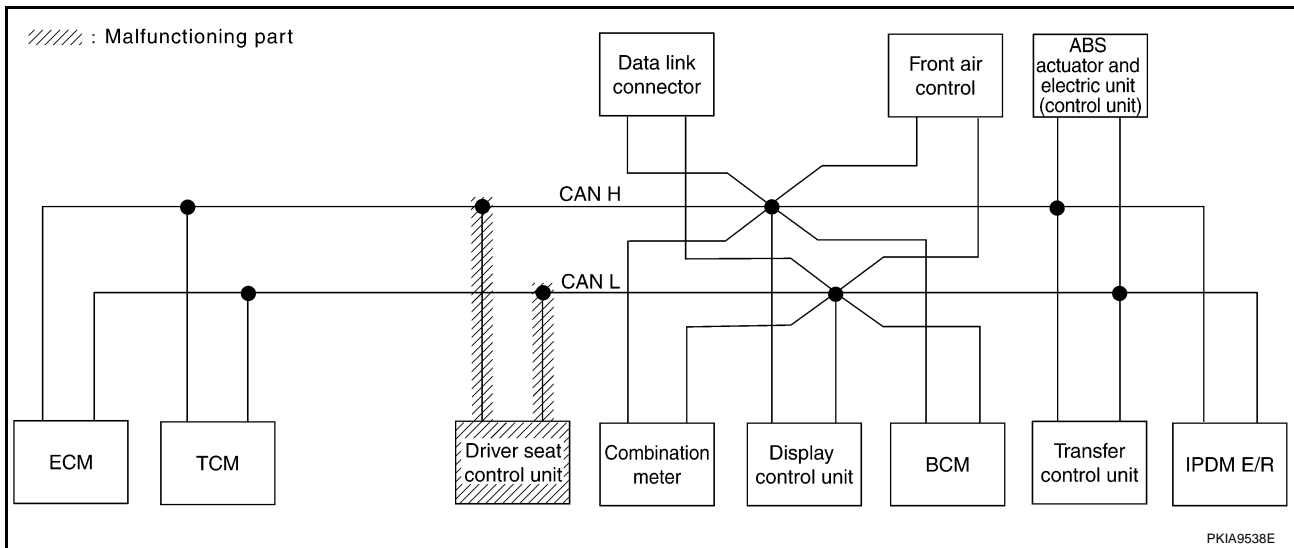
[CAN]

Case 6

Check driver seat control unit circuit. Refer to [LAN-295, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2788E



CAN SYSTEM (TYPE 9)

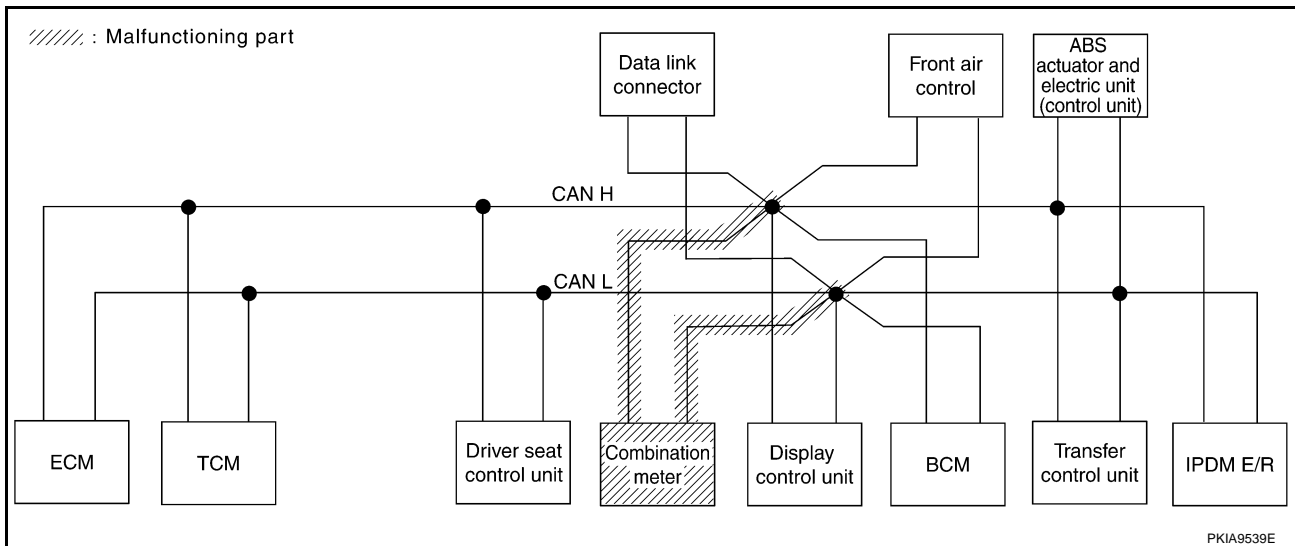
[CAN]

Case 7

Check combination meter circuit. Refer to [LAN-295, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2789E



CAN SYSTEM (TYPE 9)

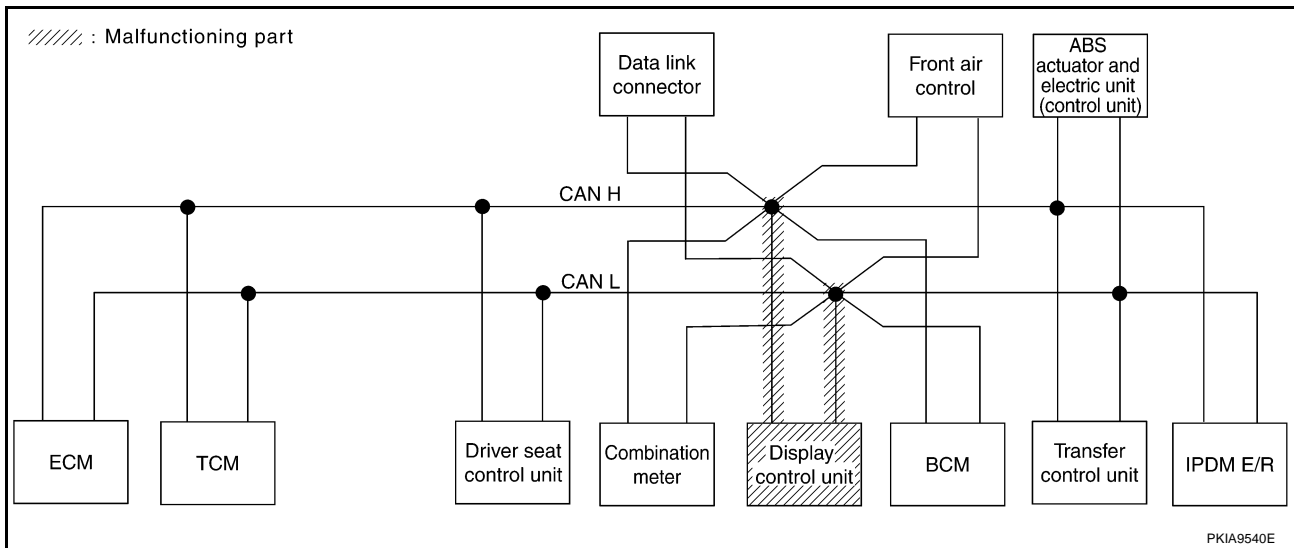
[CAN]

Case 8

Check display control unit circuit. Refer to [LAN-296, "Display Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CRC 1 ✓	CAN CRC 3 ✓	—	CAN CRC 5 ✓	—	CAN CRC 2 ✓	CAN CRC 4 ✓	—	—	CAN CRC 7 ✓
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN ✓	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2790E



CAN SYSTEM (TYPE 9)

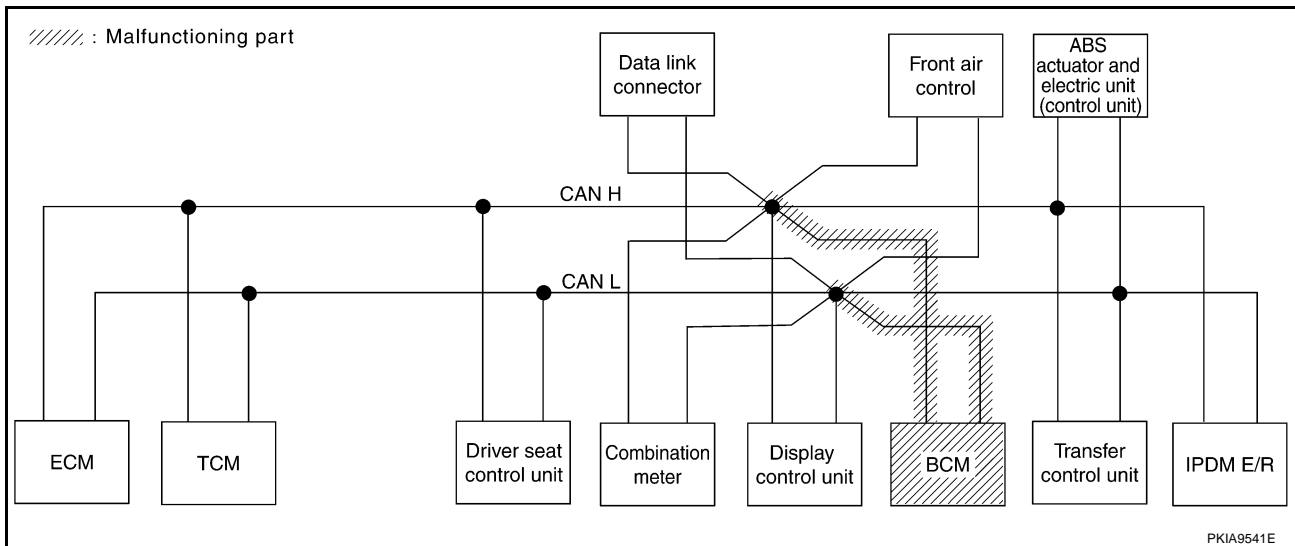
[CAN]

Case 9

Check BCM circuit. Refer to [LAN-296, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2791E



CAN SYSTEM (TYPE 9)

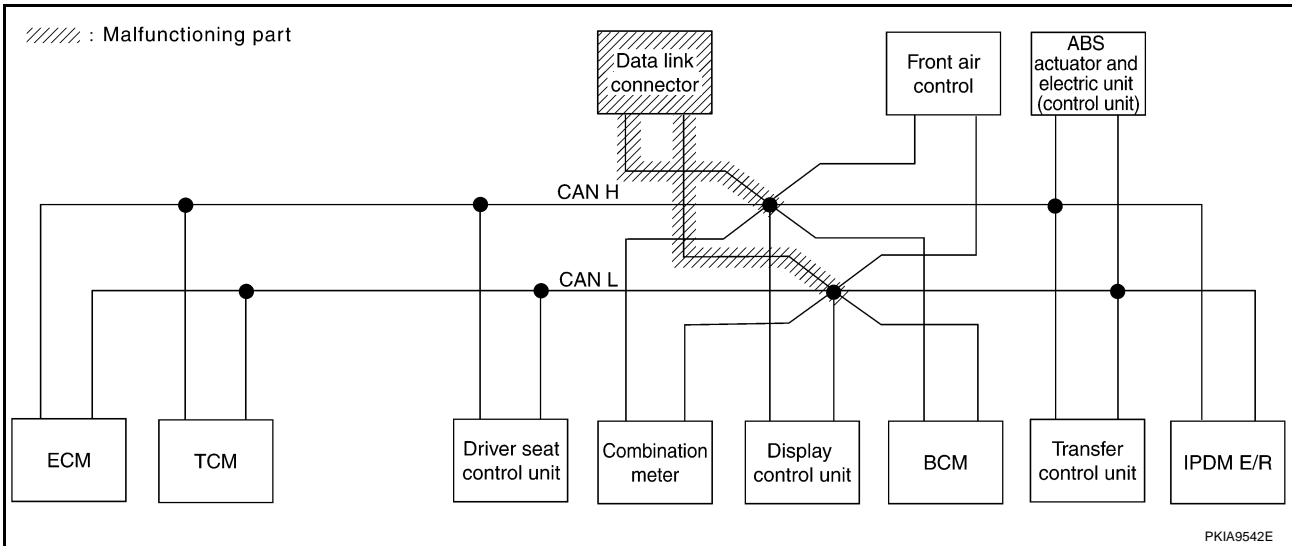
[CAN]

Case 10

Check data link connector circuit. Refer to [LAN-297, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2792E



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CAN SYSTEM (TYPE 9)

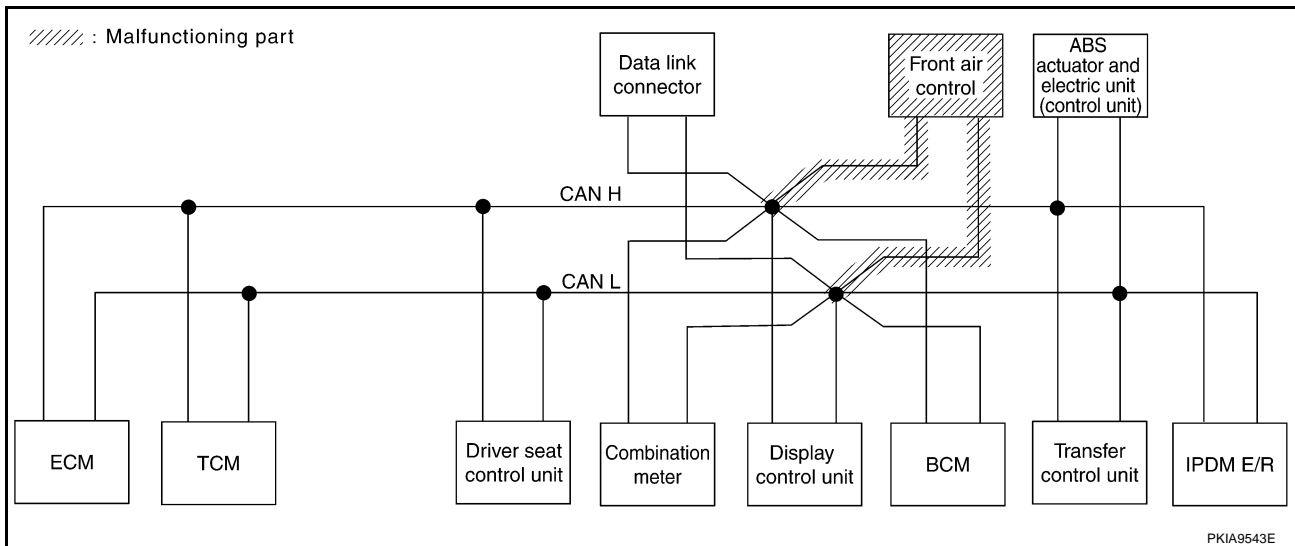
[CAN]

Case 11

Check front air control circuit. Refer to [LAN-297, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4 ✓	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2794E



CAN SYSTEM (TYPE 9)

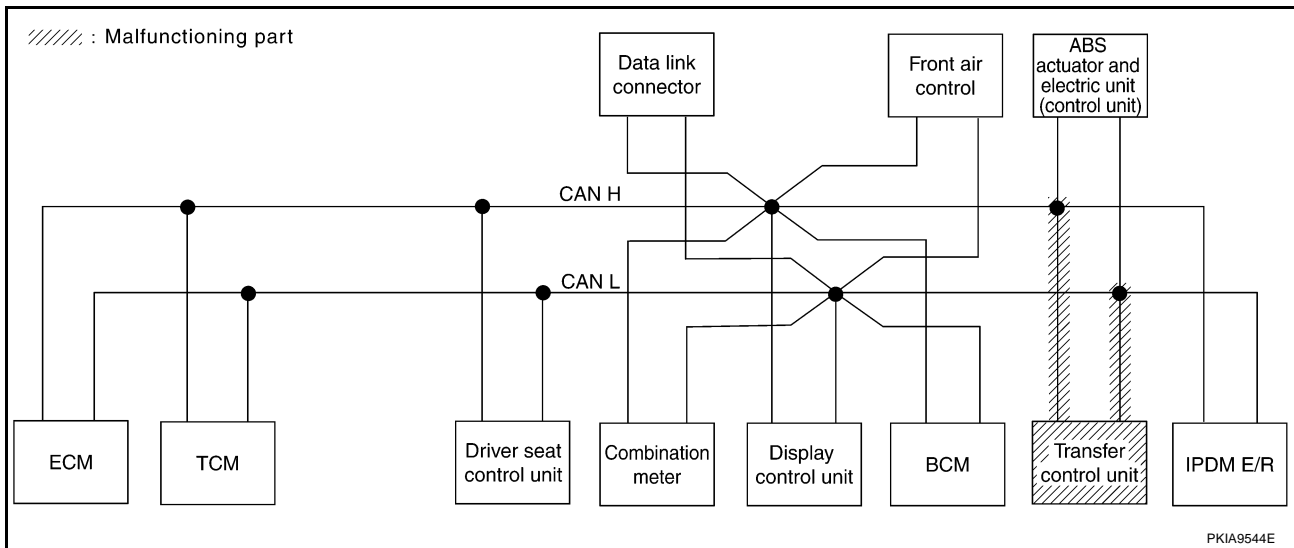
[CAN]

Case 12

Check transfer control unit circuit. Refer to [LAN-298, "Transfer Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2795E



CAN SYSTEM (TYPE 9)

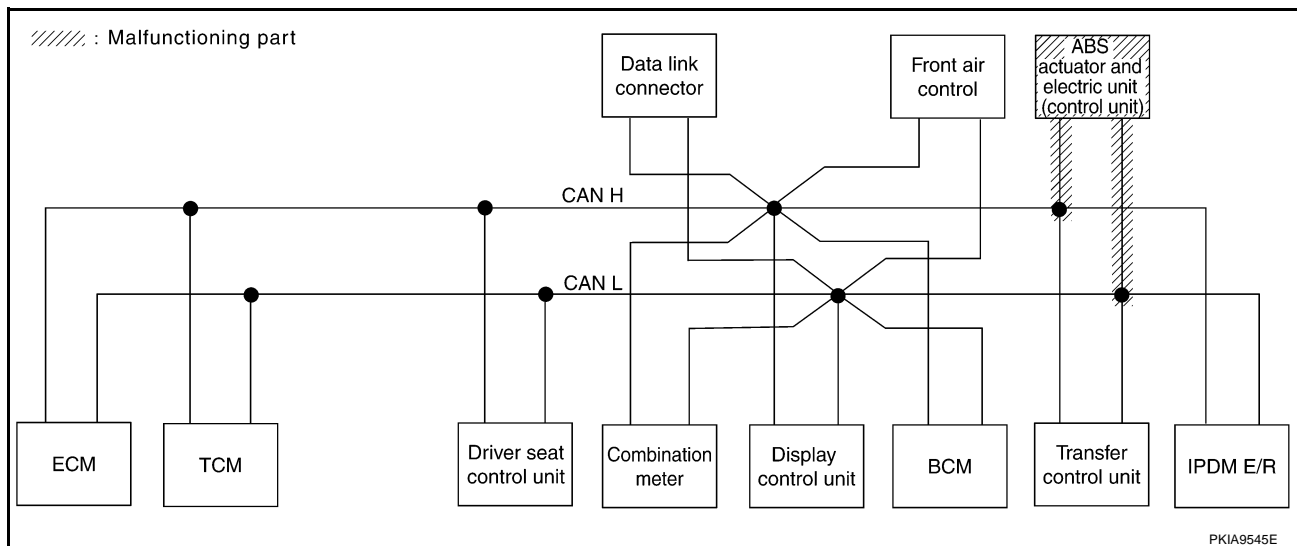
[CAN]

Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-298, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

SKIB2796E



CAN SYSTEM (TYPE 9)

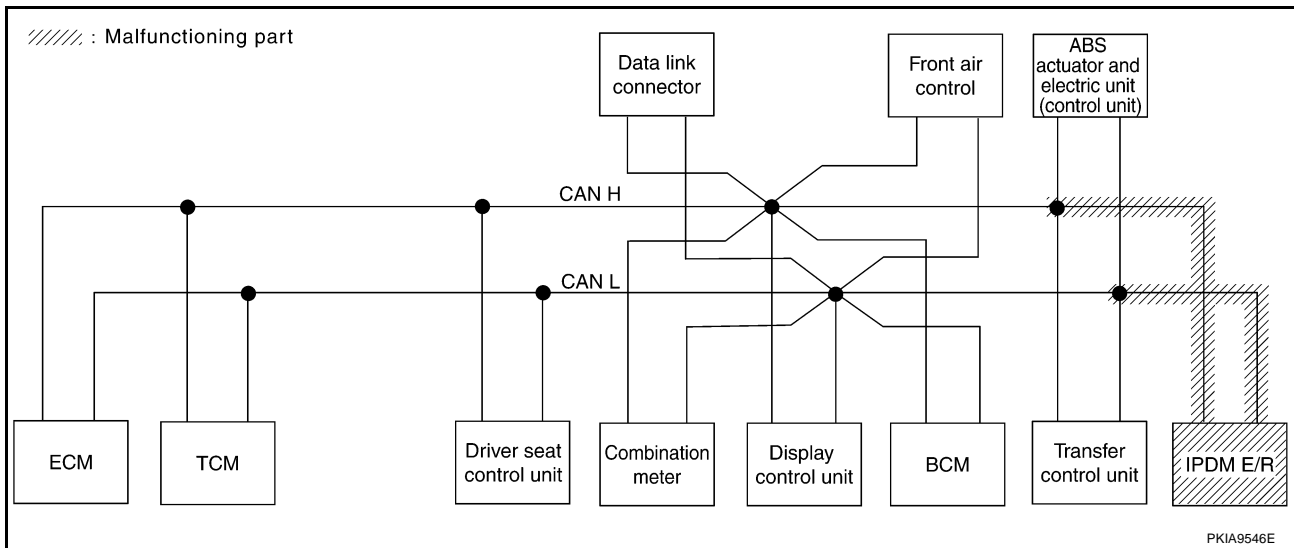
[CAN]

Case 14

Check IPDM E/R circuit. Refer to [LAN-299, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

SKIB2797E



CAN SYSTEM (TYPE 9)

[CAN]

Case 15

Check CAN communication circuit. Refer to [LAN-299, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	—	UNKW N	
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—	—	UNKW N	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	—	

SKIB2798E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-300, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	
A/T	—	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	UNKW N	UNKW N	—	
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	UNKW N	—	UNKW N	—	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKW N	UNKW N	—	UNKW N	—	—	—	—	—	UNKW N	
HVAC	No indication	—	UNKW N	UNKW N	—	—	UNKW N	UNKW N	—	—	UNKW N	—	
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	—	UNKW N	—	
ABS	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—	—	

SKIB2799E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-300, "IPDM E/R Ignition Relay Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

SKIB2800E

Circuit Check Between TCM and Driver Seat Control Unit

UKS001GW

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

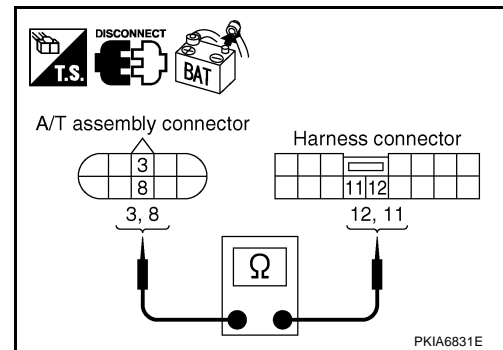
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



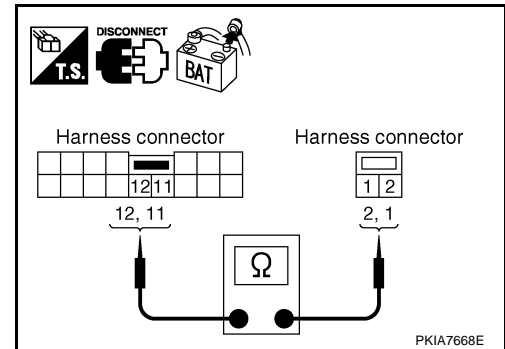
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



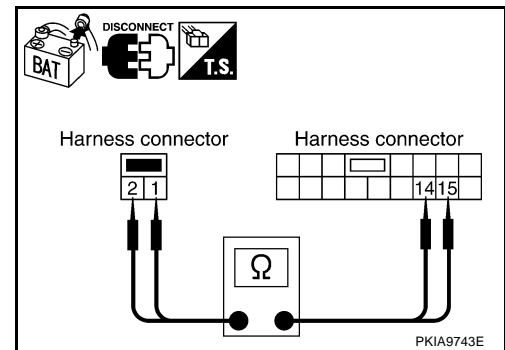
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B37 terminals 15 (L), 14 (P).

2 (L) - 15 (L) : Continuity should exist.
1 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-272, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and Data Link Connector

UKS001GX

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

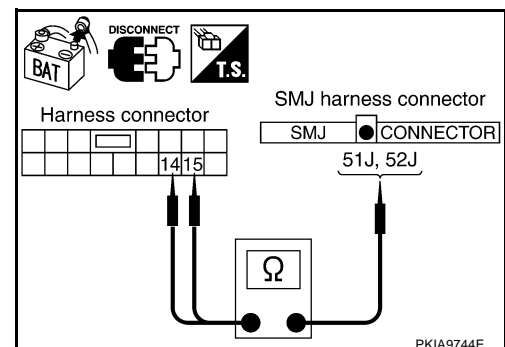
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

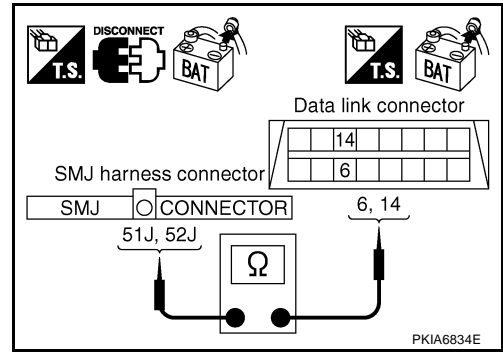
Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.

52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-272, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS001GY

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

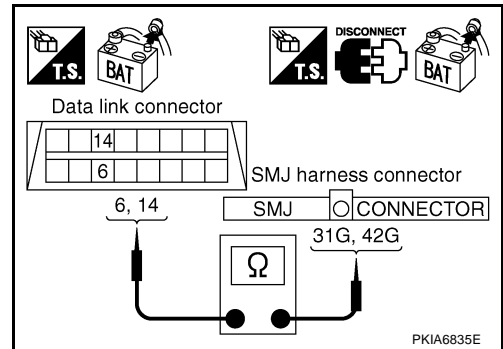
1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

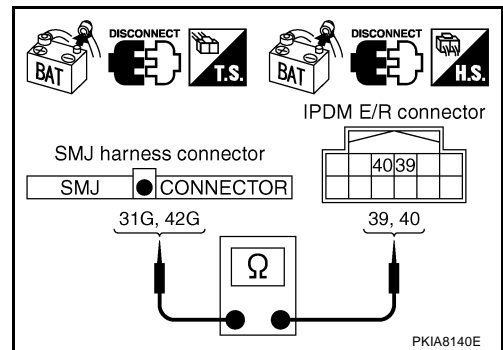
1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-272, "Work Flow"](#).
- NG >> Repair harness.



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ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

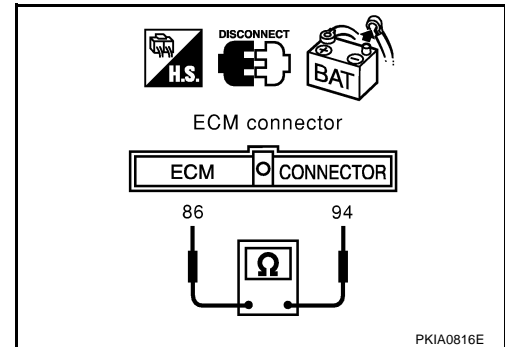
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

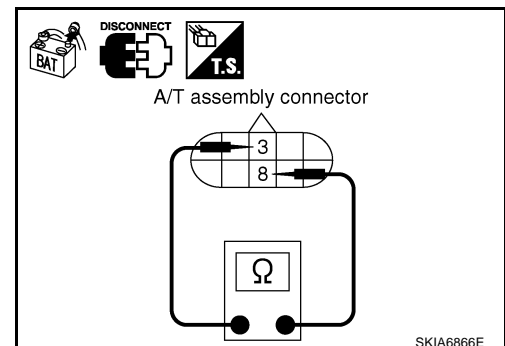
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Driver Seat Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

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

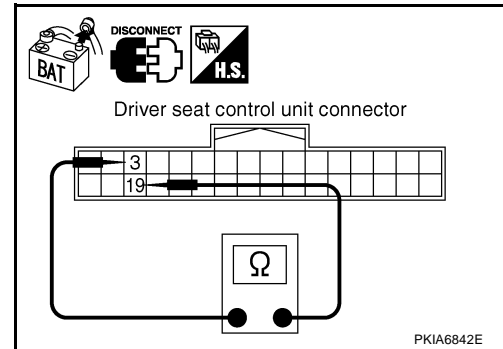
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B69.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

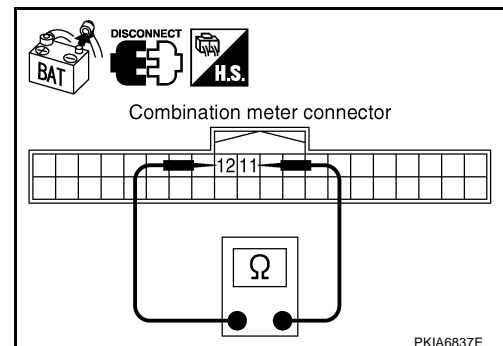
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



Display Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display 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.

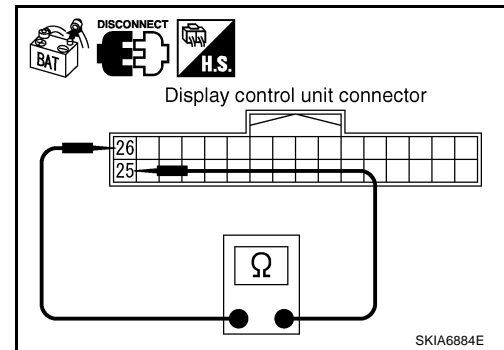
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M95 terminals 25 (L) and 26 (P).

25 (L) - 26 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace display control unit.
NG >> Repair harness between display control unit and data link connector.



BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

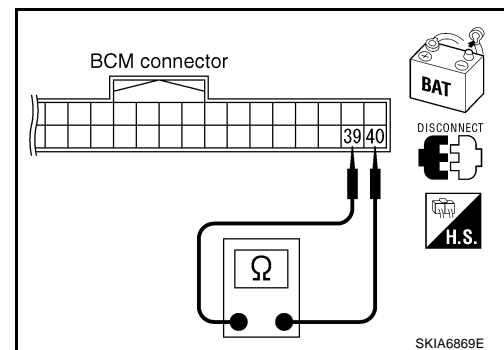
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
NG >> Repair harness between BCM and data link connector.



Data Link Connector Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

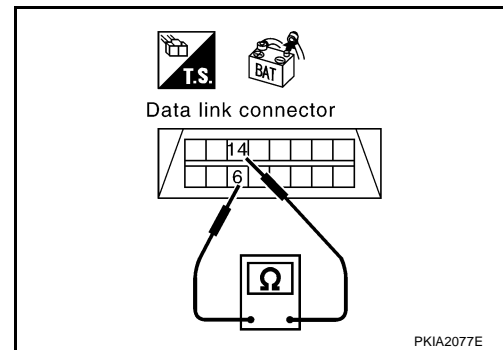
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-272, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.

**Front Air Control Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

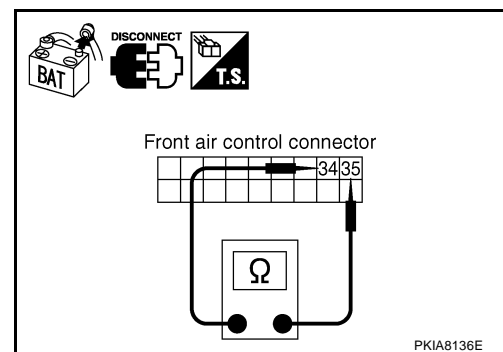
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



Transfer Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

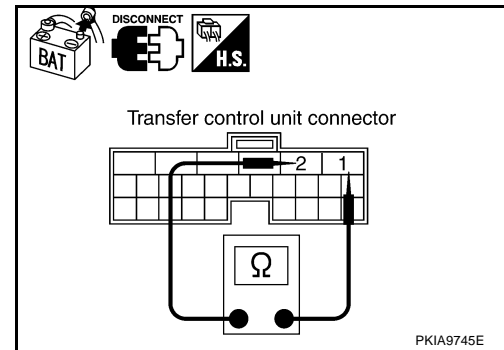
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

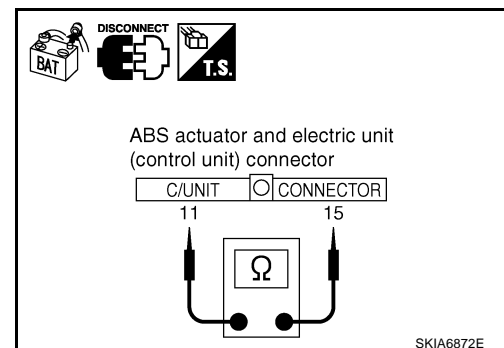
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

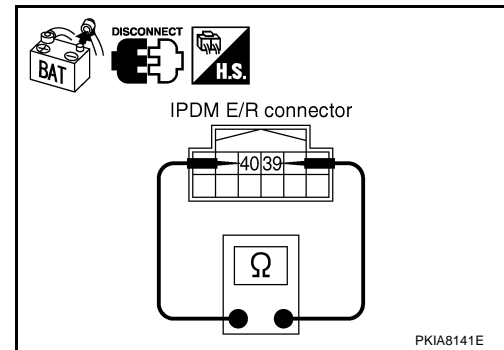
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Driver seat control unit
 - Combination meter
 - Display control unit
 - BCM
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

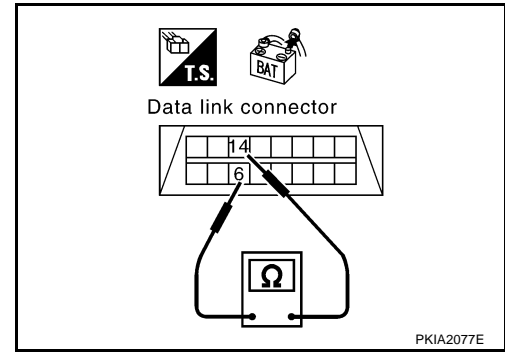
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

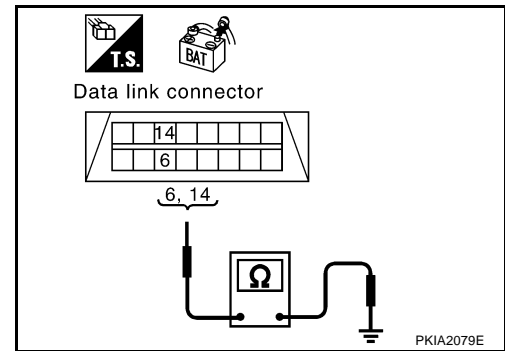
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-300, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).
- NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

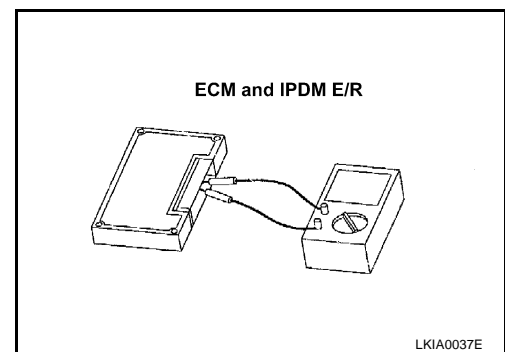
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



CAN SYSTEM (TYPE 10)

PF2:23710

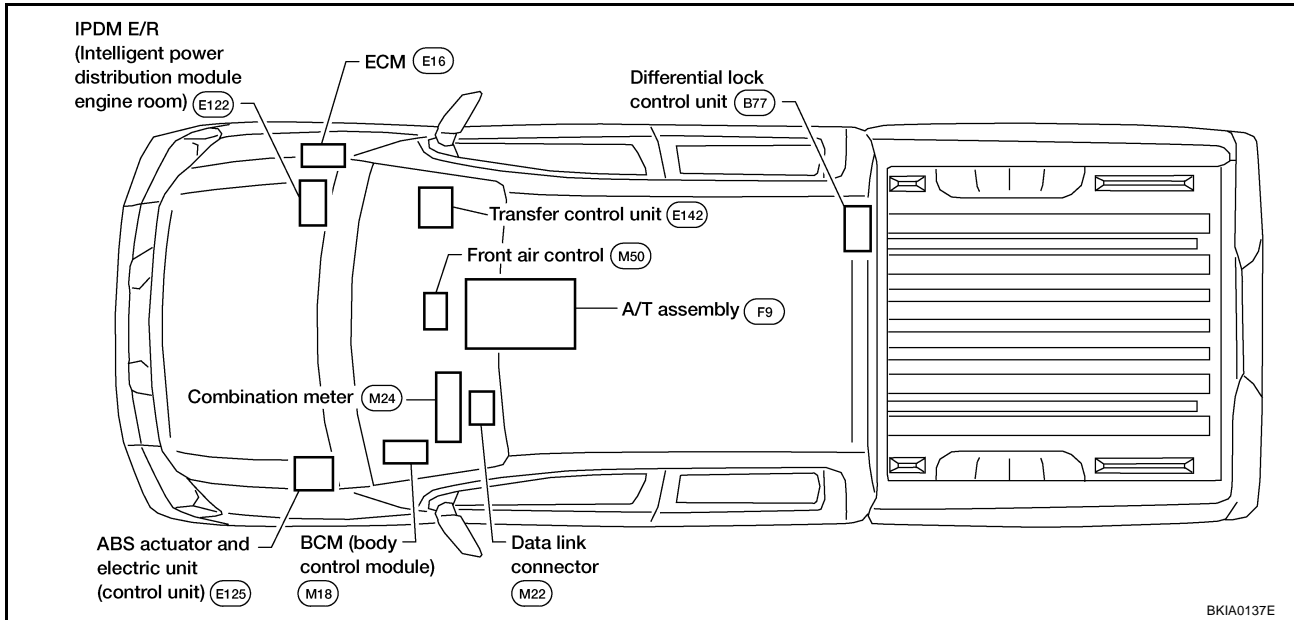
System Description

UKS001HE

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

UKS001HF



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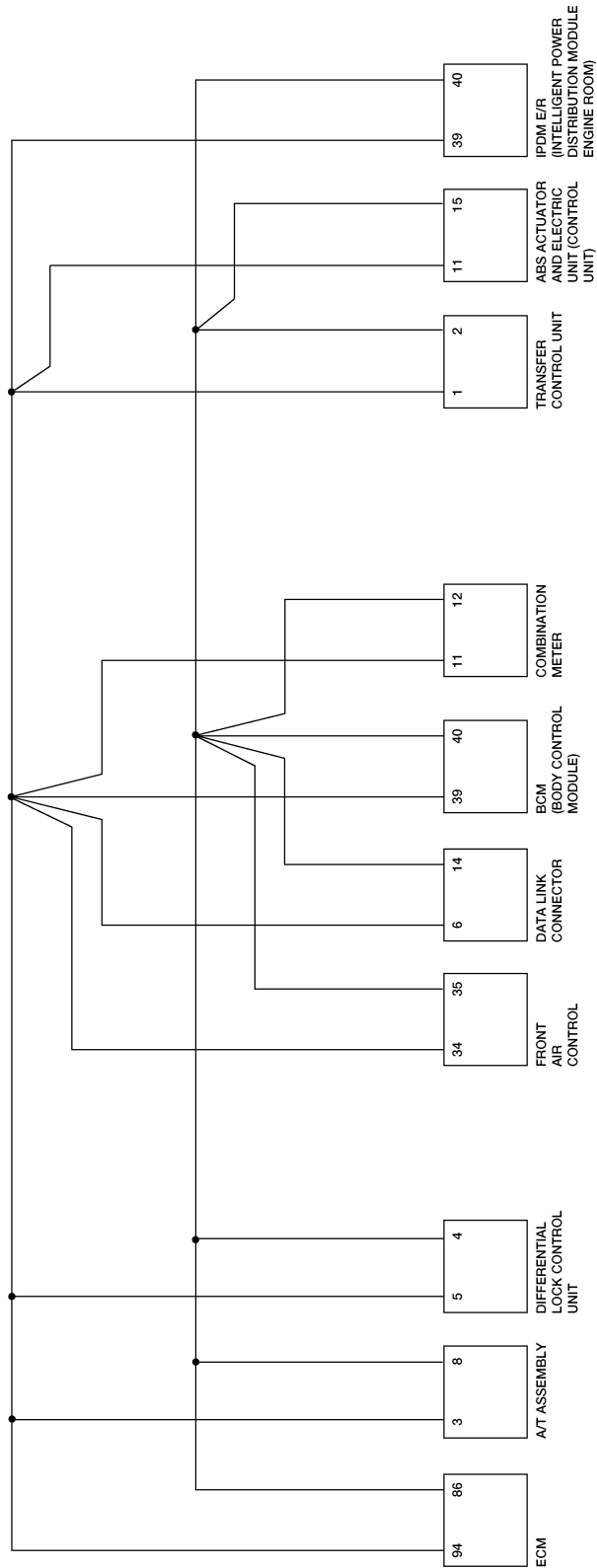
LAN

CAN SYSTEM (TYPE 10)

[CAN]

Schematic

UKS001HG



BKWA0148E

CAN SYSTEM (TYPE 10)

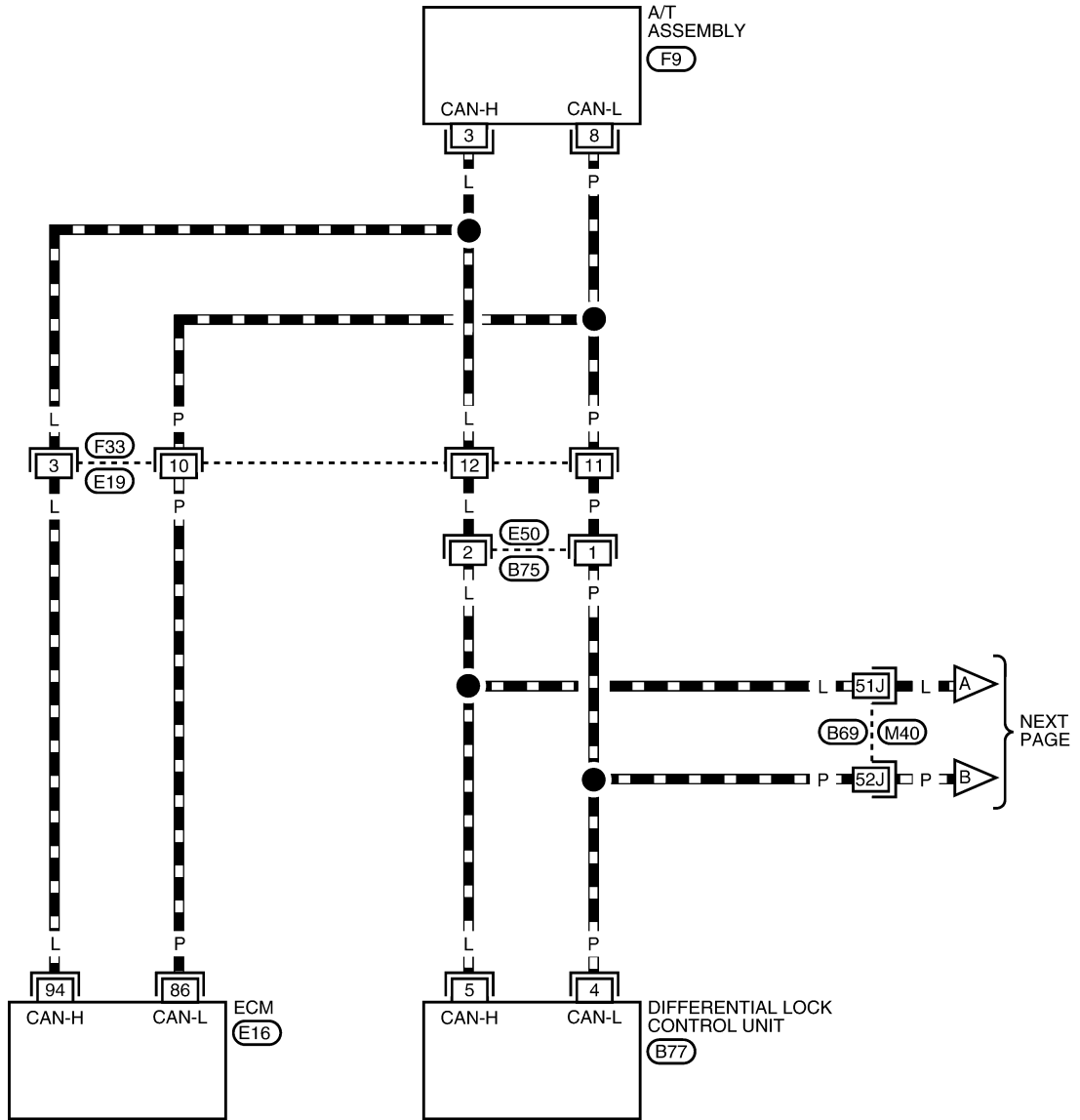
[CAN]

Wiring Diagram - CAN -

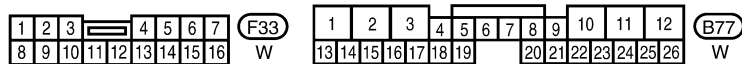
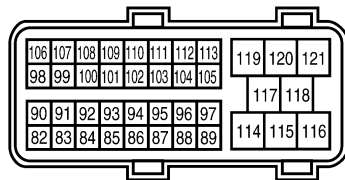
UKS001HH

LAN-CAN-28

— : DATA LINE



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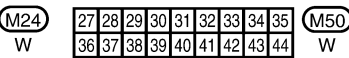
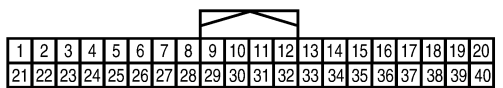
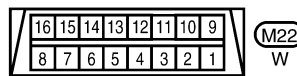
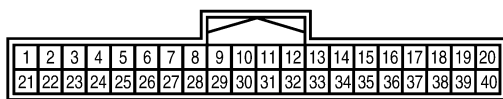
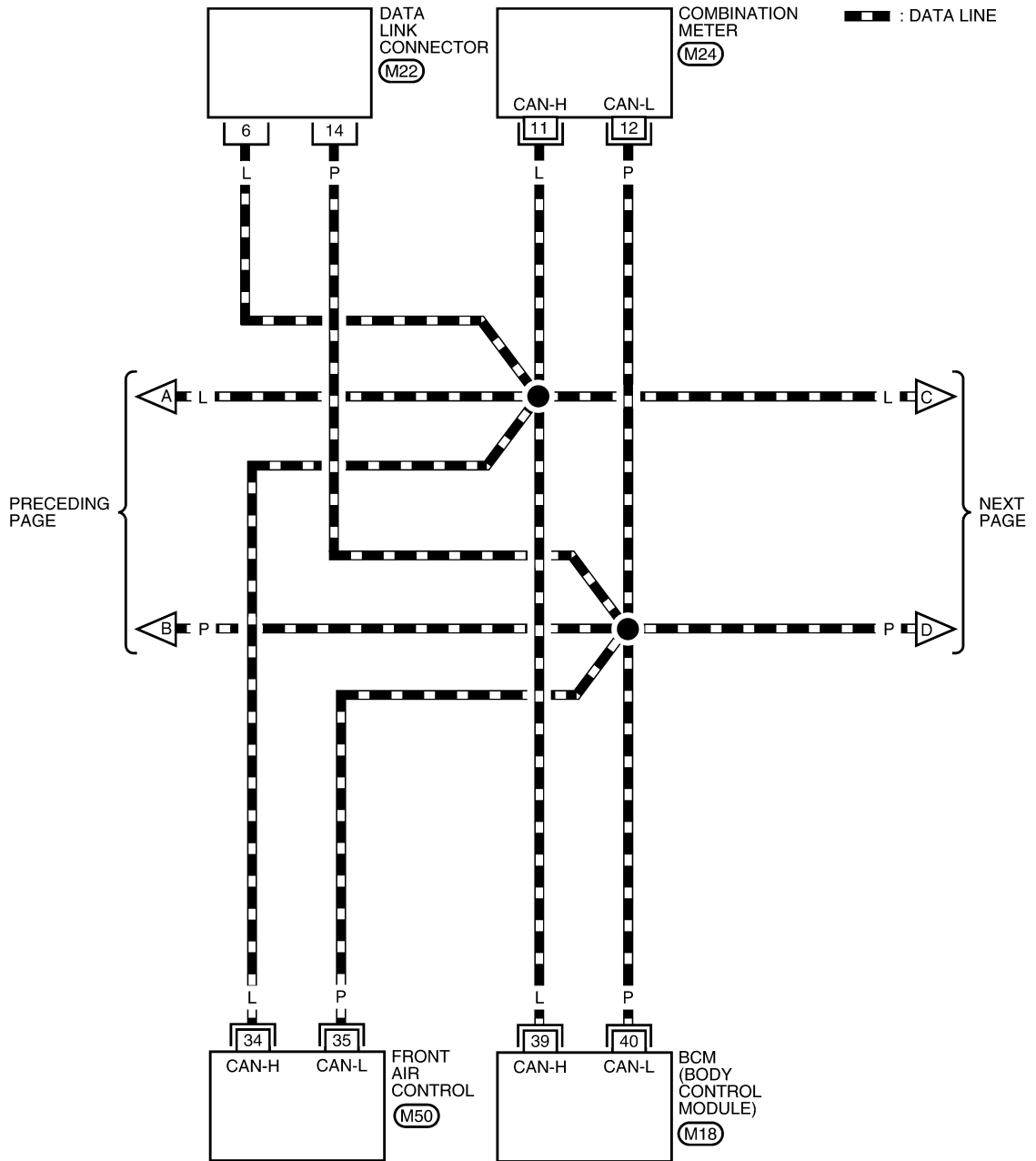


REFER TO THE FOLLOWING.

M40 - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0452E

LAN-CAN-29

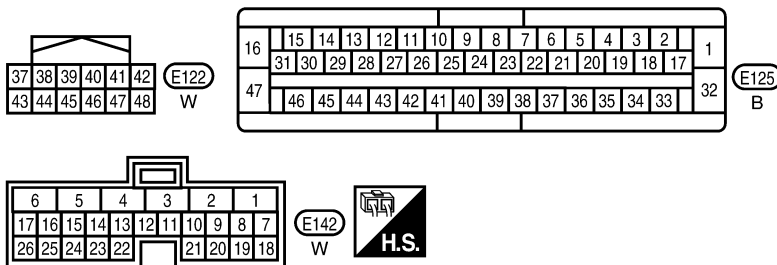
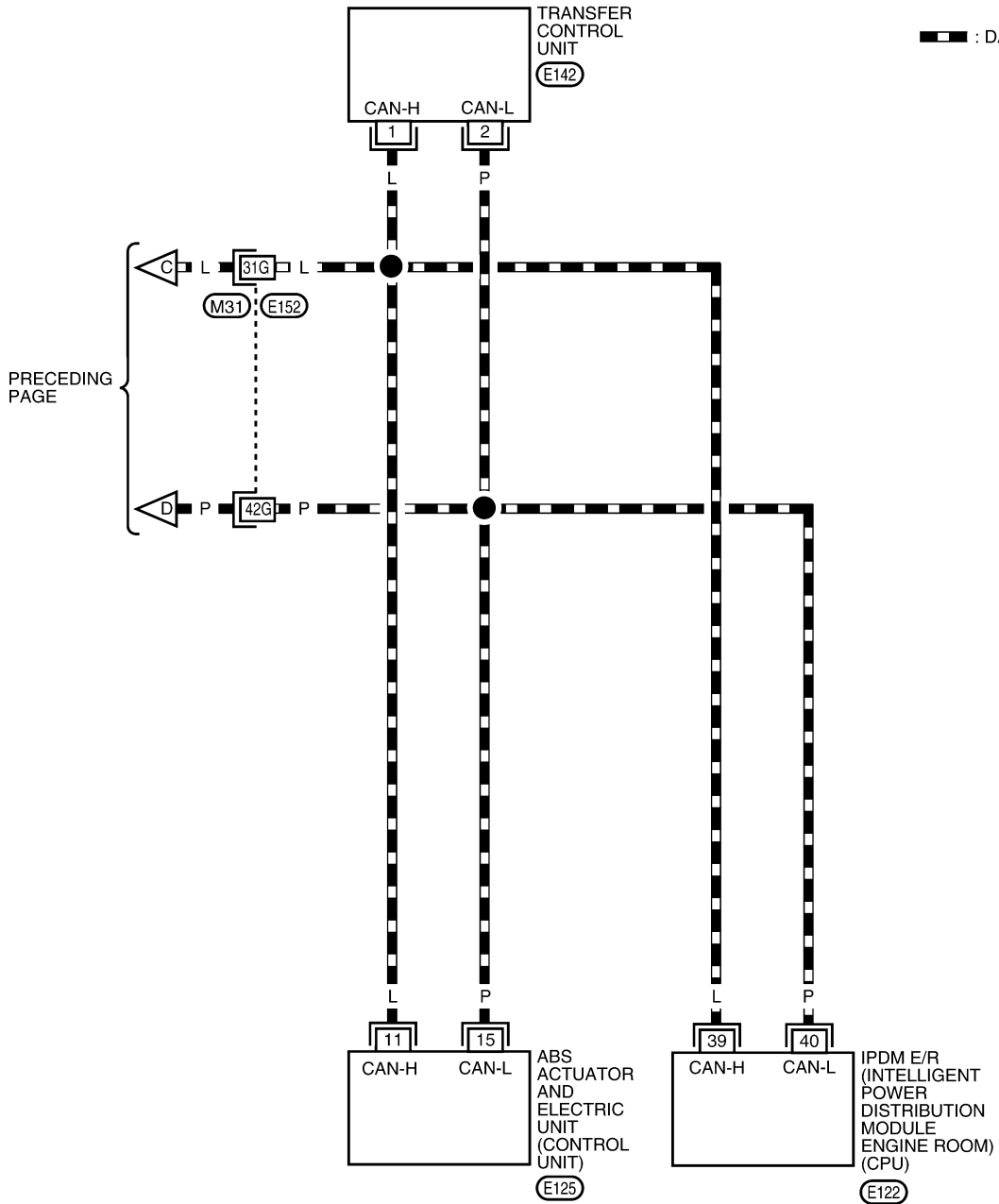


CAN SYSTEM (TYPE 10)

[CAN]

LAN-CAN-30

▬ : DATA LINE



REFER TO THE FOLLOWING.
 (M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0454E

Work Flow

- When there are no indications of "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">NISSAN</td></tr> <tr><td colspan="2" style="text-align: center;">CONSULT-II</td></tr> <tr><td colspan="2" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="2" style="text-align: center;">START (NISSAN BASED VHCL)</td></tr> <tr><td colspan="2" style="text-align: center;">START (RENAULT BASED VHCL)</td></tr> <tr><td colspan="2" style="text-align: center;">SUB MODE</td></tr> <tr><td style="width: 50%;"></td><td style="width: 50%; text-align: center;">LIGHT COPY</td></tr> </table>	NISSAN		CONSULT-II		ENGINE		START (NISSAN BASED VHCL)		START (RENAULT BASED VHCL)		SUB MODE			LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="3" style="text-align: center;">SELECT SYSTEM</td></tr> <tr><td colspan="3" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="3" style="text-align: center;">A/T</td></tr> <tr><td colspan="3" style="text-align: center;">ABS</td></tr> <tr><td colspan="3" style="text-align: center;">AIR BAG</td></tr> <tr><td colspan="3" style="text-align: center;">BCM</td></tr> <tr><td colspan="3" style="text-align: center;">METER A/C AMP</td></tr> <tr><td colspan="3" style="text-align: center;"> </td></tr> <tr><td colspan="3" style="text-align: center;"> </td></tr> <tr><td style="width: 33%;"></td><td style="width: 33%; text-align: center;">BACK</td><td style="width: 33%; text-align: center;">LIGHT COPY</td></tr> </table>	SELECT SYSTEM			ENGINE			A/T			ABS			AIR BAG			BCM			METER A/C AMP										BACK	LIGHT COPY	PKIA2093E
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- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "DIFF LOCK", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="2" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="2" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="2" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="2" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="2" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="2" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="2" style="text-align: center;"> </td></tr> <tr><td colspan="2" style="text-align: center;">Scroll Down</td></tr> <tr><td style="width: 50%;"></td><td style="width: 50%; text-align: center;">BACK LIGHT COPY</td></tr> </table>	SELECT DIAG MODE		WORK SUPPORT		SELF-DIAG RESULTS		DATA MONITOR		DATA MONITOR (SPEC)		CAN DIAG SUPPORT MNTR		ACTIVE TEST				Scroll Down			BACK LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="2" style="text-align: center;">DTC RESULTS TIME</td></tr> <tr><td style="width: 70%;">CAN COMM CIRCUIT [U1000]</td><td style="width: 30%; text-align: center;">0</td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td colspan="2" style="text-align: center;">F.F.DATA</td></tr> <tr><td colspan="2" style="text-align: center;">ERASE PRINT</td></tr> <tr><td style="width: 33%;">MODE</td><td style="width: 33%; text-align: center;">BACK</td><td style="width: 33%; text-align: center;">LIGHT COPY</td></tr> </table>	SELF-DIAG RESULTS		DTC RESULTS TIME		CAN COMM CIRCUIT [U1000]	0					F.F.DATA		ERASE PRINT		MODE	BACK	LIGHT COPY	PKIA8260E
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- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "DIFF LOCK", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">SELECT DIAG MODE</td></tr> <tr><td colspan="2" style="text-align: center;">WORK SUPPORT</td></tr> <tr><td colspan="2" style="text-align: center;">SELF-DIAG RESULTS</td></tr> <tr><td colspan="2" style="text-align: center;">DATA MONITOR</td></tr> <tr><td colspan="2" style="text-align: center;">DATA MONITOR (SPEC)</td></tr> <tr><td colspan="2" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="2" style="text-align: center;">ACTIVE TEST</td></tr> <tr><td colspan="2" style="text-align: center;"> </td></tr> <tr><td colspan="2" style="text-align: center;">Scroll Down</td></tr> <tr><td style="width: 50%;"></td><td style="width: 50%; text-align: center;">BACK LIGHT COPY</td></tr> </table>	SELECT DIAG MODE		WORK SUPPORT		SELF-DIAG RESULTS		DATA MONITOR		DATA MONITOR (SPEC)		CAN DIAG SUPPORT MNTR		ACTIVE TEST				Scroll Down			BACK LIGHT COPY	➔	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td colspan="2" style="text-align: center;">CAN DIAG SUPPORT MNTR</td></tr> <tr><td colspan="2" style="text-align: center;">ENGINE</td></tr> <tr><td colspan="2" style="text-align: center;">PRSN</td></tr> <tr><td>INITIAL DIAG</td><td style="text-align: center;">OK</td></tr> <tr><td>TRANSMIT DIAG</td><td style="text-align: center;">OK</td></tr> <tr><td>TCM</td><td style="text-align: center;">OK</td></tr> <tr><td>VDC/TCS/ABS</td><td style="text-align: center;">OK</td></tr> <tr><td>METER/M&A</td><td style="text-align: center;">OK</td></tr> <tr><td>ICC</td><td style="text-align: center;">UNKWN</td></tr> <tr><td>BCM/SEC</td><td style="text-align: center;">OK</td></tr> <tr><td>IPDM E/R</td><td style="text-align: center;">OK</td></tr> <tr><td>AWD/4WD/e4WD</td><td style="text-align: center;">UNKWN</td></tr> <tr><td colspan="2" style="text-align: center;">PRINT</td></tr> <tr><td style="width: 33%;">MODE</td><td style="width: 33%; text-align: center;">BACK</td><td style="width: 33%; text-align: center;">LIGHT COPY</td></tr> </table>	CAN DIAG SUPPORT MNTR		ENGINE		PRSN		INITIAL DIAG	OK	TRANSMIT DIAG	OK	TCM	OK	VDC/TCS/ABS	OK	METER/M&A	OK	ICC	UNKWN	BCM/SEC	OK	IPDM E/R	OK	AWD/4WD/e4WD	UNKWN	PRINT		MODE	BACK	LIGHT COPY	PKIA8343E
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- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-307, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-307, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-309, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 10)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

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

LAN

CAN SYSTEM (TYPE 10)

[CAN]

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of A/T SELF-DIAG RESULTS	Attach copy of DIFF LOCK SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of HVAC SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	Attach copy of IPDM E/R SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of A/T CAN DIAG SUPPORT MNTR	Attach copy of DIFF LOCK CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of HVAC CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	Attach copy of IPDM E/R CAN DIAG SUPPORT MNTR

PKIB6677E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

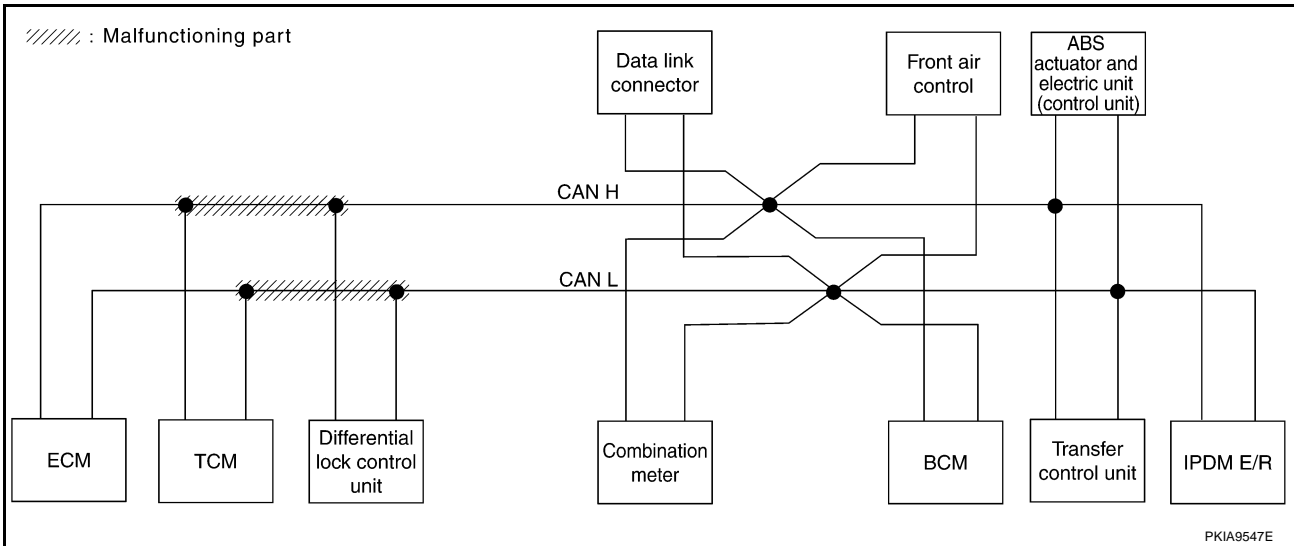
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and differential lock control unit. Refer to [LAN-323, "Circuit Check Between TCM and Differential Lock Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB678E

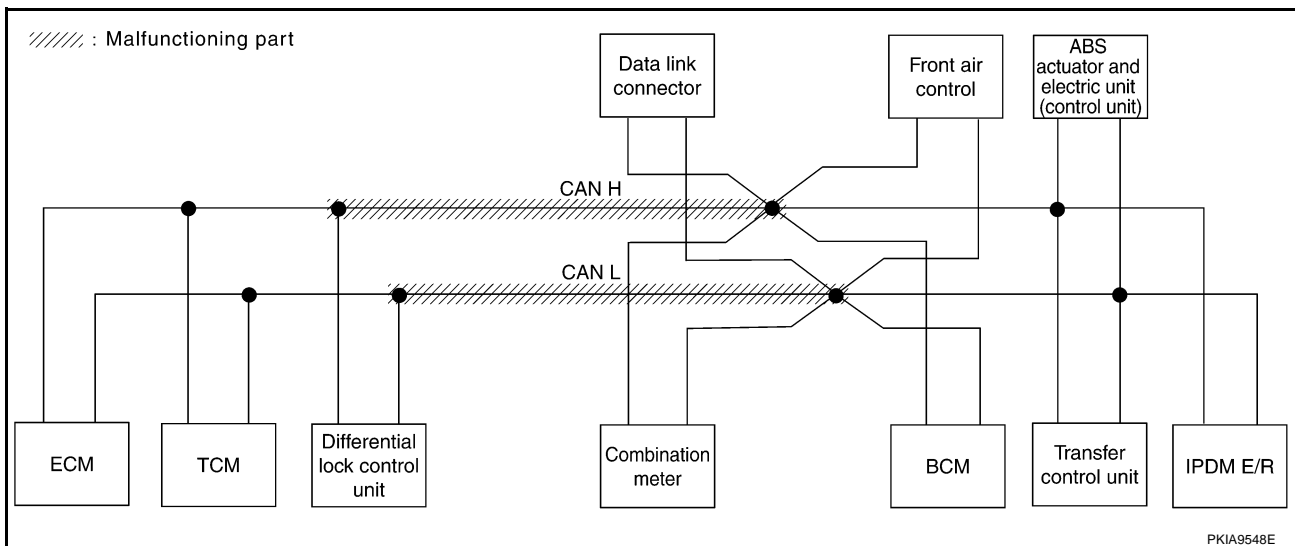


Case 2

Check harness between differential lock control unit and data link connector. Refer to [LAN-324, "Circuit Check Between Differential Lock Control Unit and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6679E

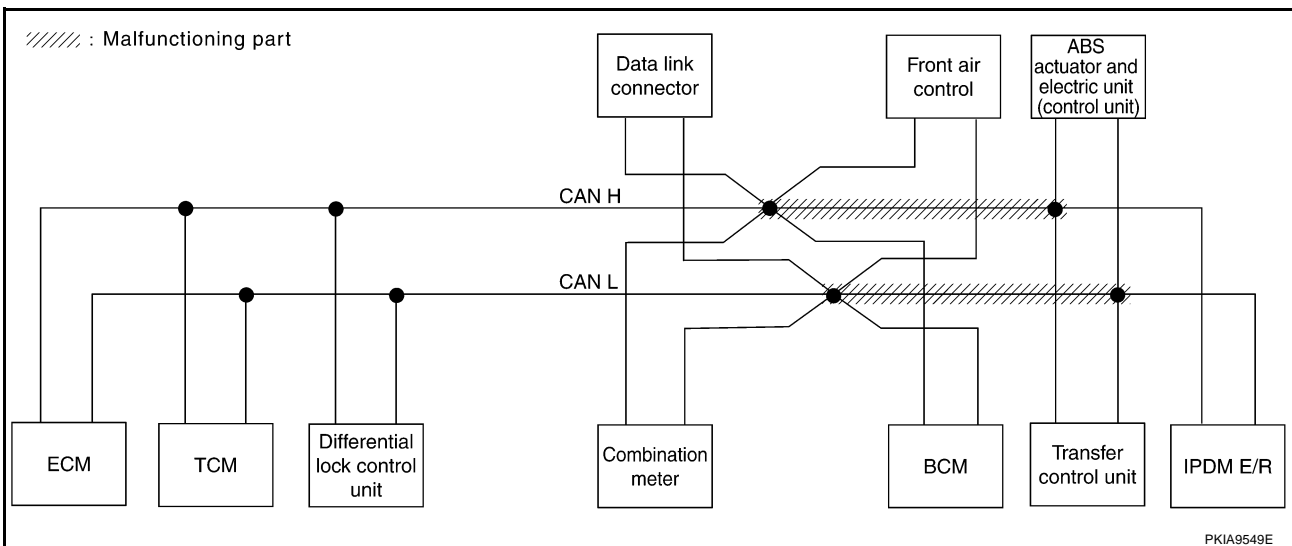


Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-325, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—	—

PKIB6680E

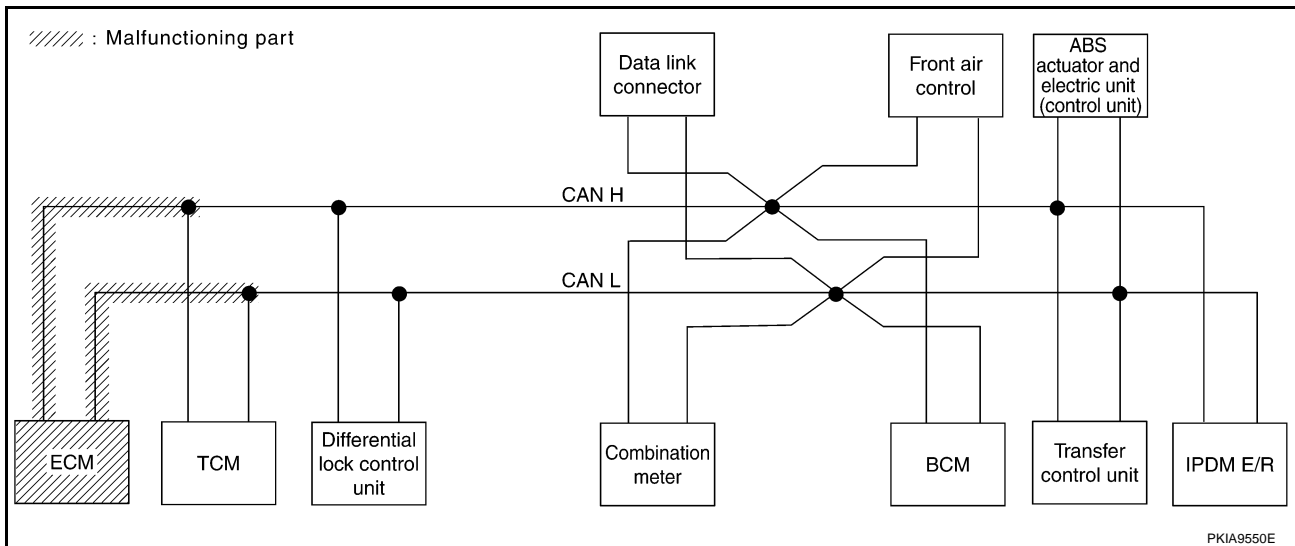


Case 4

Check ECM circuit. Refer to [LAN-326, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	
A/T	—	NG	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	—	
DIFF LOCK	—	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	UNKW [✓] N	—	
BCM	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	—	UNKW [✓] N	
HVAC	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	UNKW [✓] N	—	
ALL MODE AWD/4WD	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	
IPDM E/R	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	—	

PKIB6681E

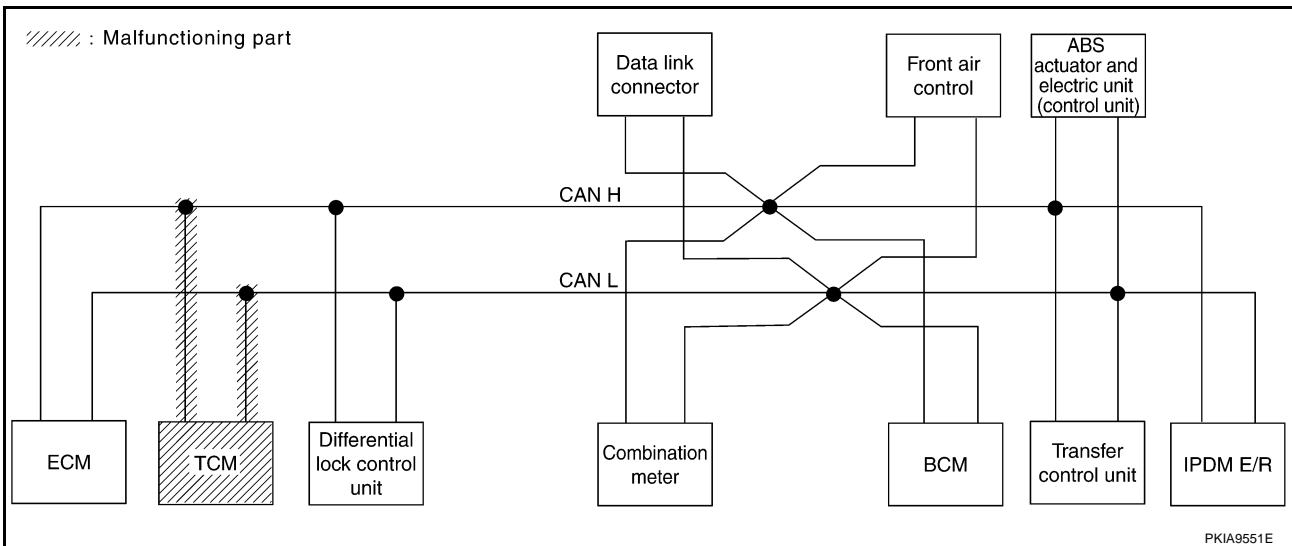


Case 5

Check TCM circuit. Refer to [LAN-326, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6682E

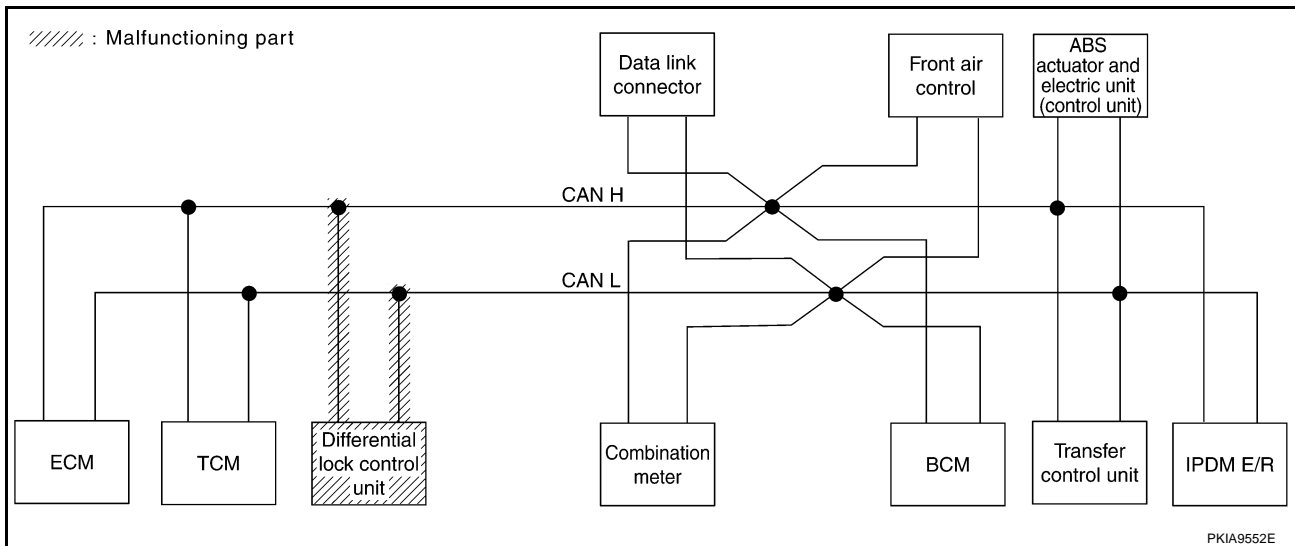


Case 6

Check differential lock control unit circuit. Refer to [LAN-327, "Differential Lock Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	UNKWN ✓	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6683E

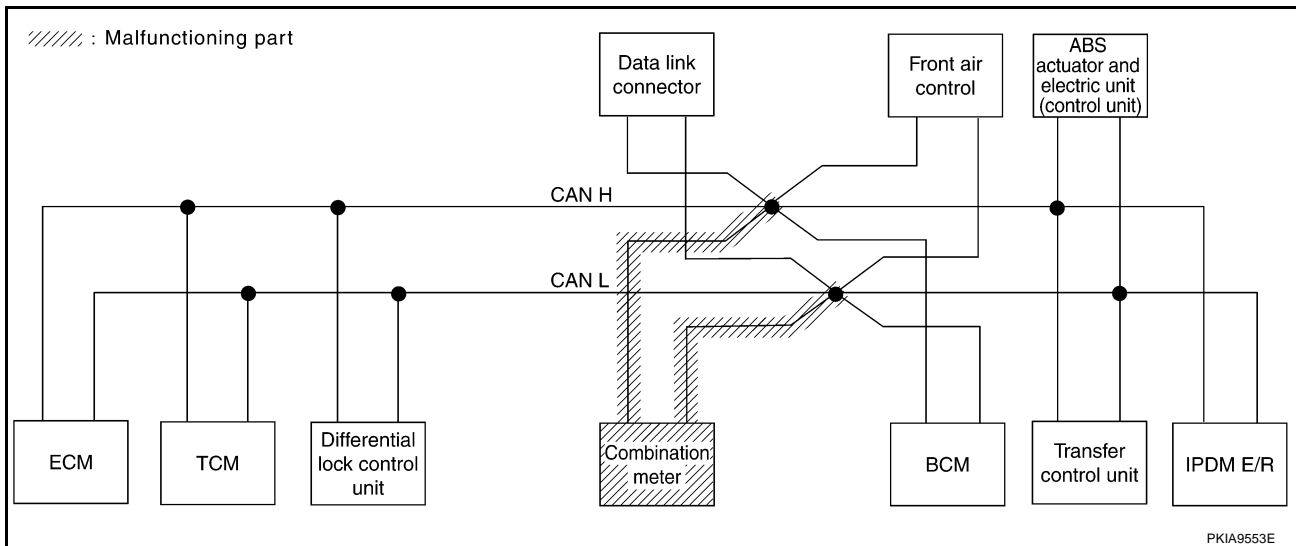


Case 7

Check combination meter circuit. Refer to [LAN-327, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN ✓	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN ✓	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6684E

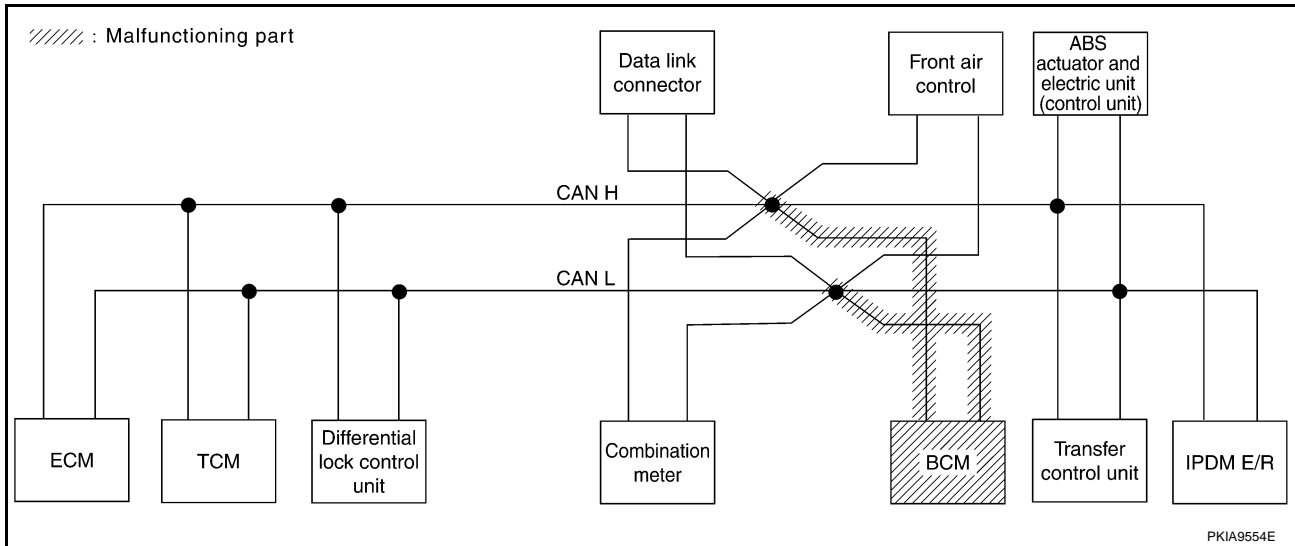


Case 8

Check BCM circuit. Refer to [LAN-328, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6685E

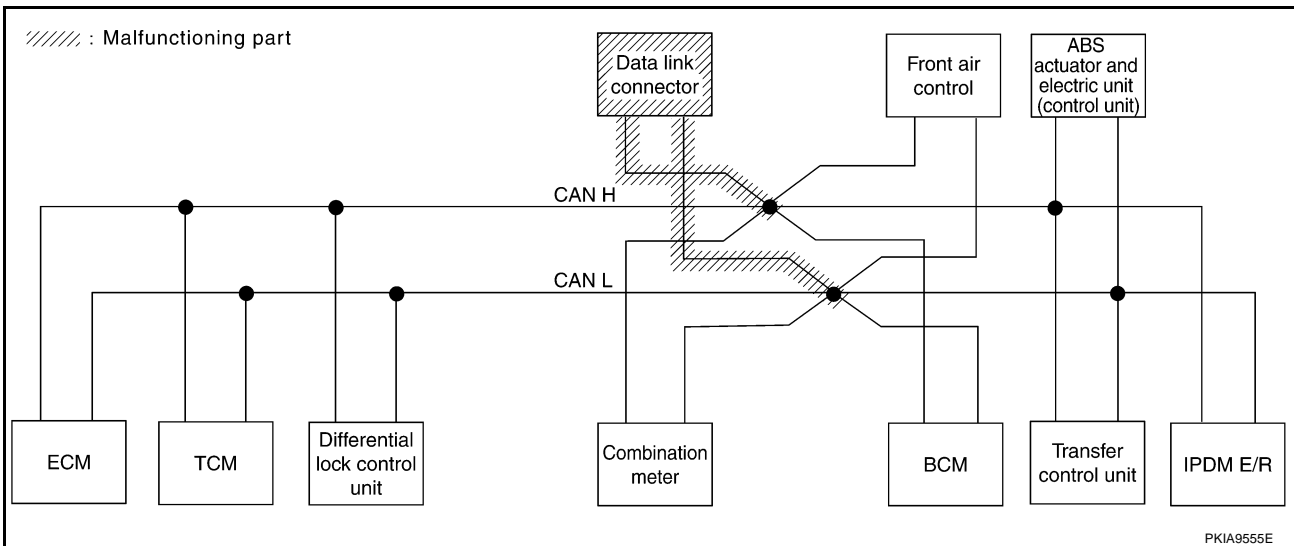


Case 9

Check data link connector circuit. Refer to [LAN-328, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6686E

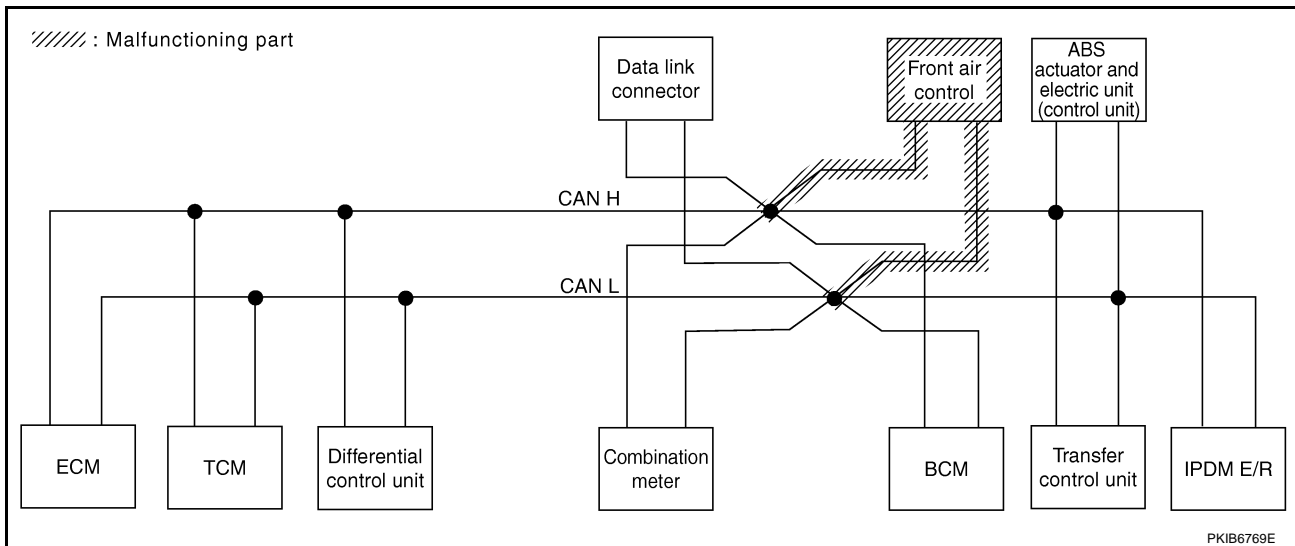


Case 10

Check front air control circuit. Refer to [LAN-329, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6687E

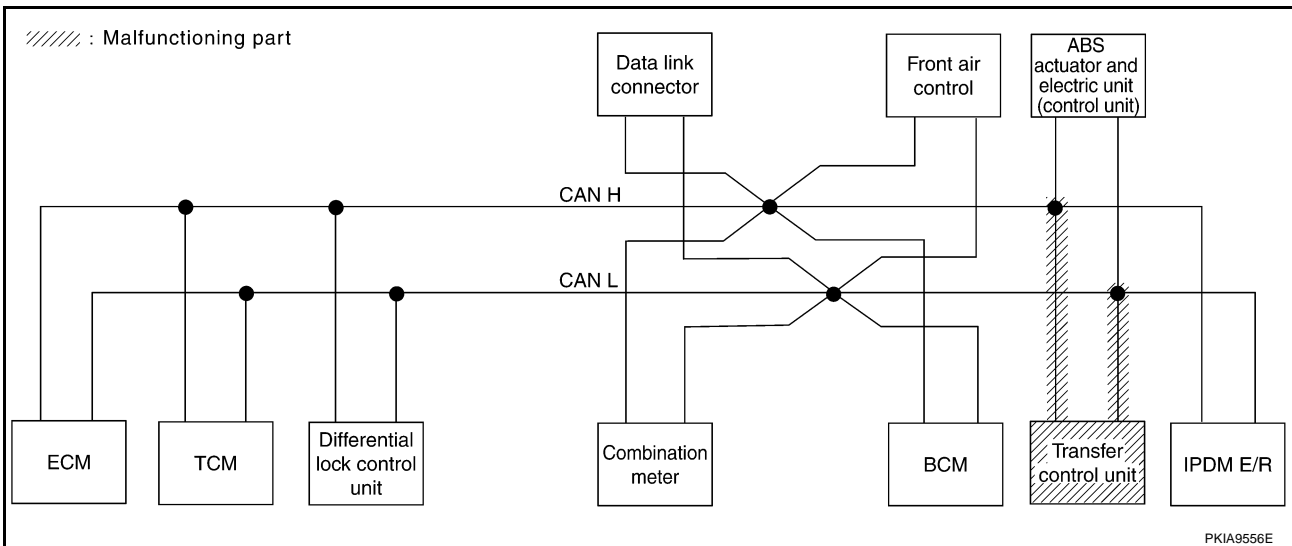


Case 11

Check transfer control unit circuit. Refer to [LAN-329, "Transfer Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB668E

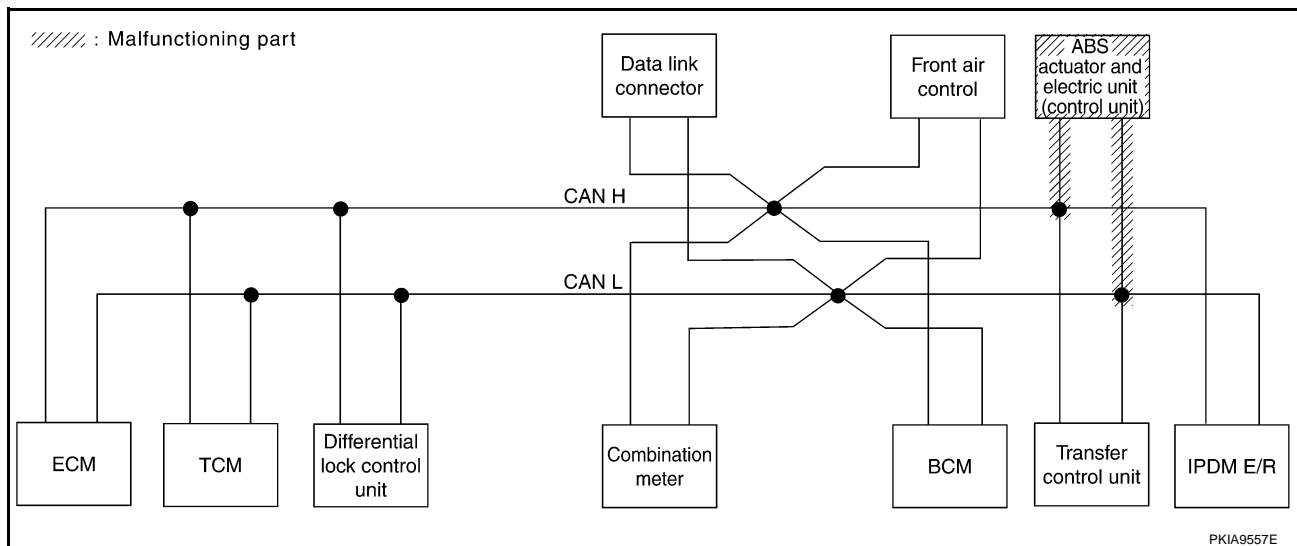


Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-330, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	✓	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6689E



CAN SYSTEM (TYPE 10)

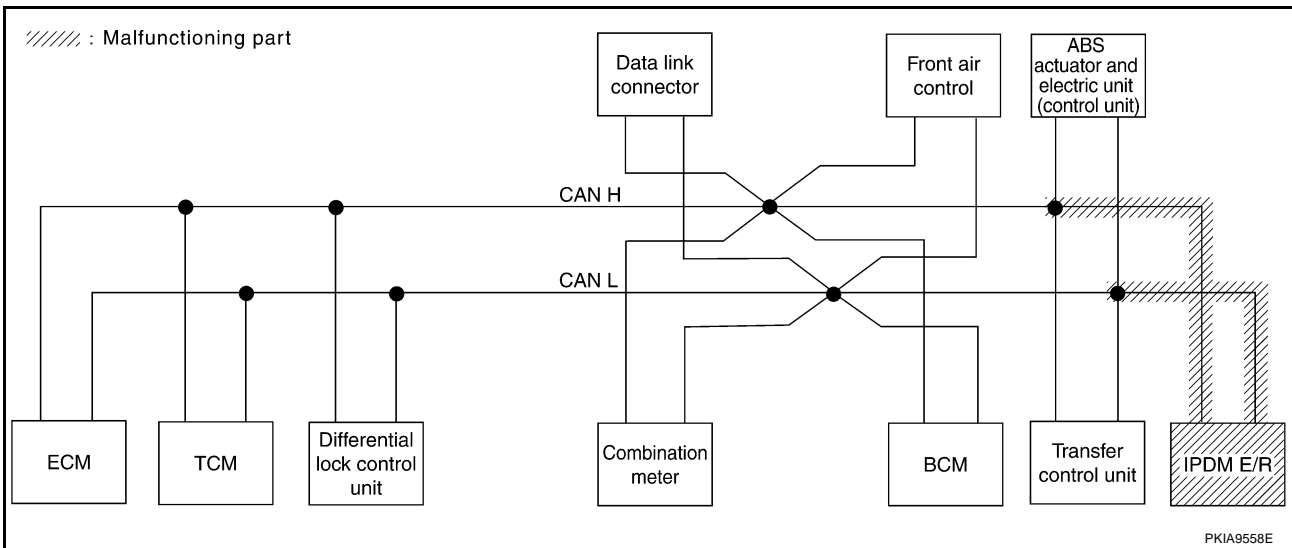
[CAN]

Case 13

Check IPDM E/R circuit. Refer to [LAN-330, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6690E



CAN SYSTEM (TYPE 10)

[CAN]

Case 14

Check CAN communication circuit. Refer to [LAN-331, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKW N	-	UNKW N	-	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	
A/T	-	NG	UNKW N	UNKW N	-	-	UNKW N	-	UNKW N	UNKW N	-	
DIFF LOCK	-	NG	UNKW N	UNKW N	-	-	-	-	UNKW N	UNKW N	-	
BCM	No indication ✓	NG	UNKW N	UNKW N	-	-	UNKW N	-	-	-	UNKW N	
HVAC	No indication ✓	-	UNKW N	UNKW N	-	-	-	UNKW N	-	UNKW N	-	
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	-	UNKW N	-	
ABS	-	NG ✓	UNKW N	UNKW N	UNKW N	UNKW N	-	-	UNKW N	-	-	
IPDM E/R	No indication ✓	-	UNKW N	UNKW N	-	-	-	UNKW N	-	-	-	

PKIB6691E

Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-331, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	-	NG	UNKW N	-	UNKW N	-	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N	
A/T	-	NG	UNKW N	UNKW N	-	-	UNKW N	-	UNKW N	UNKW N	-	
DIFF LOCK	-	NG	UNKW N	UNKW N	-	-	-	-	UNKW N	UNKW N	-	
BCM	No indication	NG	UNKW N	UNKW N	-	-	UNKW N	-	-	-	UNKW N	
HVAC	No indication	-	UNKW N	UNKW N	-	-	-	UNKW N	-	UNKW N	-	
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	-	UNKW N	-	
ABS	-	NG	UNKW N	UNKW N	UNKW N	UNKW N	-	-	UNKW N	-	-	
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	-	UNKW N	-	-	-	

PKIB6692E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-331, "IPDM E/R Ignition Relay Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	—	UNKWN ✓	—	UNKWN ✓	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	UNKWN ✓	—	—	UNKWN ✓	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6693E

Circuit Check Between TCM and Differential Lock Control Unit

UKS0020I

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

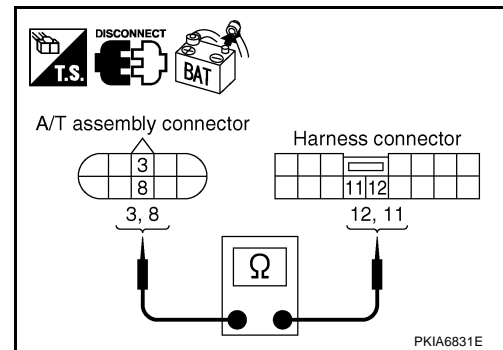
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



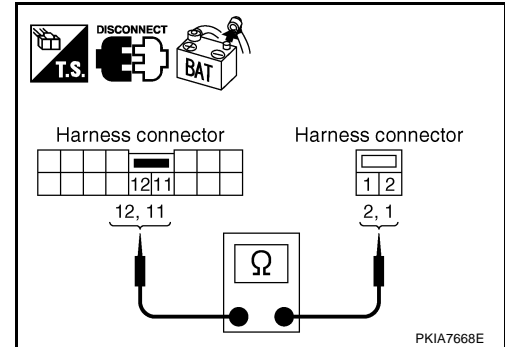
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



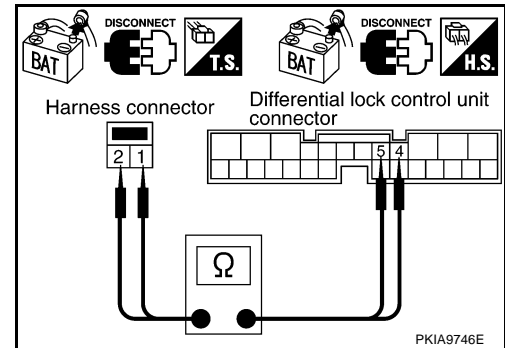
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and differential lock control unit harness connector B77 terminals 5 (L), 4 (P).

2 (L) - 5 (L) : Continuity should exist.
1 (P) - 4 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-306, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Differential Lock Control Unit and Data Link Connector

UKS001HJ

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

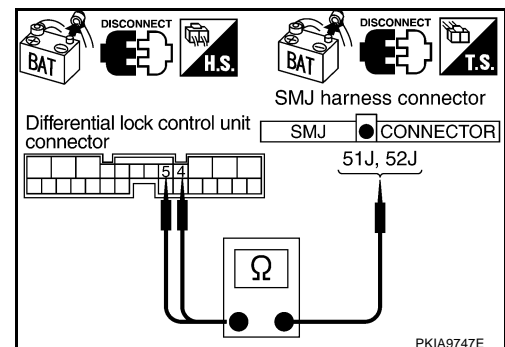
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector and harness connector B69.
2. Check continuity between differential lock control unit harness connector B77 terminals 5 (L), 4 (P) and harness connector B69 terminals 51J (L), 52J (P).

5 (L) - 51J (L) : Continuity should exist.
4 (P) - 52J (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

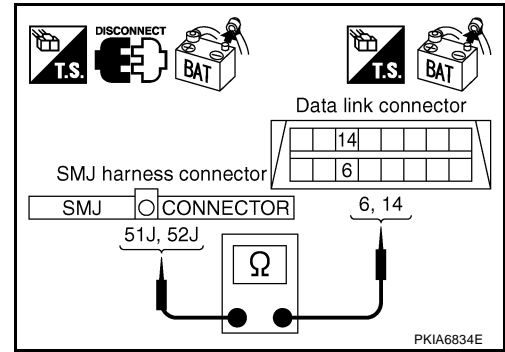
Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.

52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-306, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS001HK

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

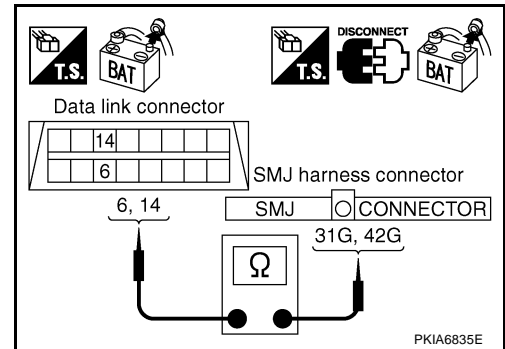
1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

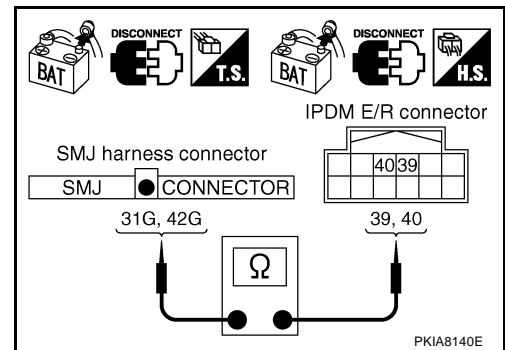
1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-306, "Work Flow"](#).
- NG >> Repair harness.



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ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

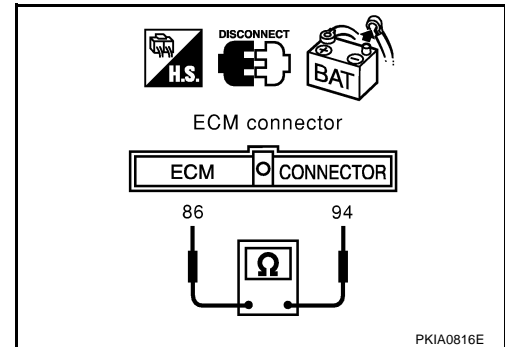
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

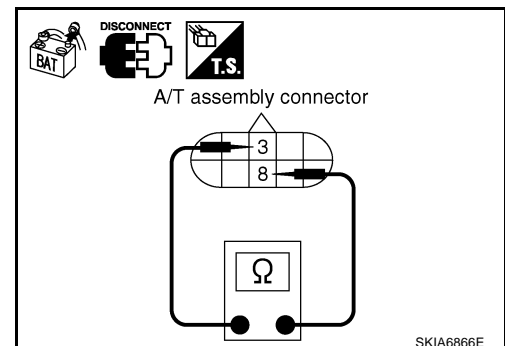
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Differential Lock Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of differential lock 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.

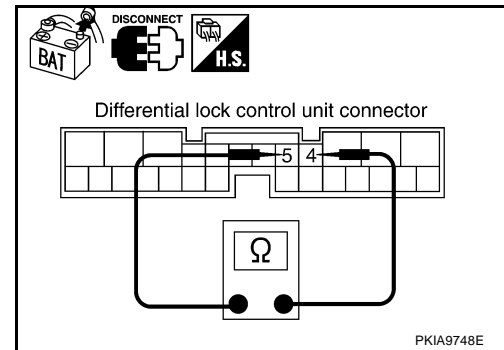
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector.
2. Check resistance between differential lock control unit harness connector B77 terminals 5 (L) and 4 (P).

5 (L) - 4 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace differential lock control unit.
 NG >> Repair harness between differential lock control unit and harness connector B75.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

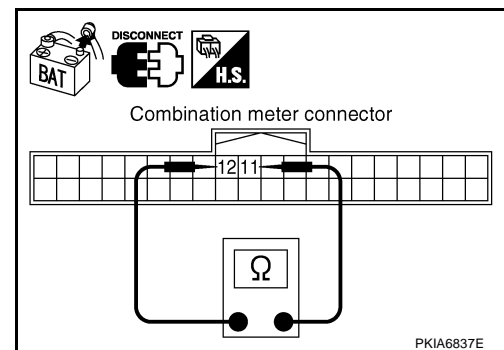
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

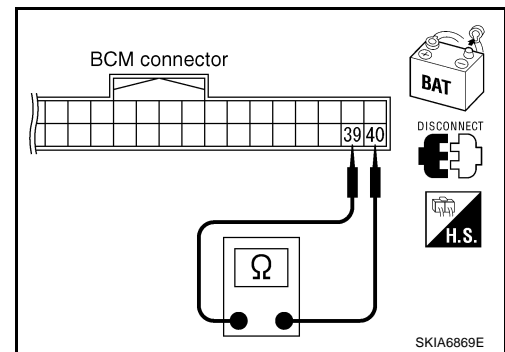
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

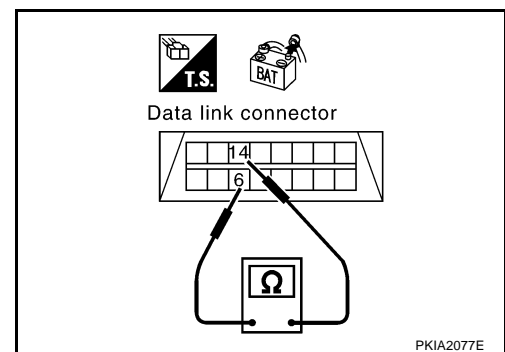
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-306, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

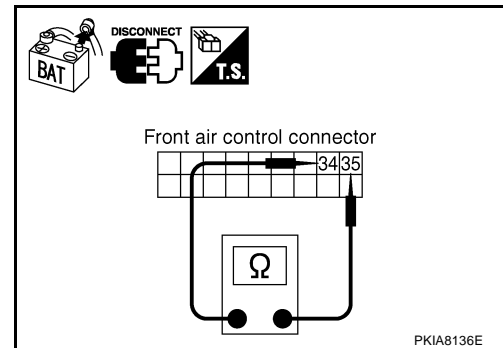
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.

**Transfer Control Unit Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

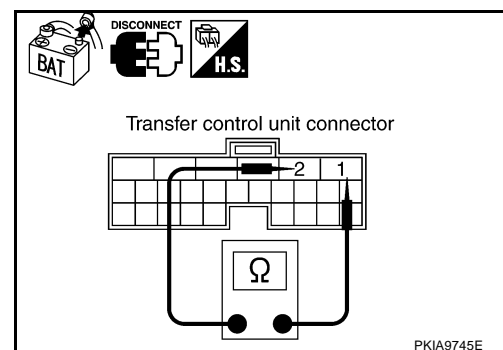
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.



ABS Actuator and Electric Unit (Control Unit) Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

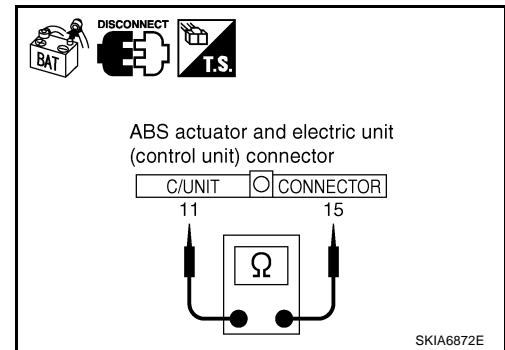
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.

**IPDM E/R Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

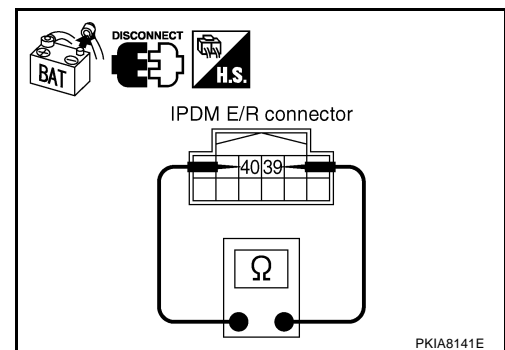
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



CAN Communication Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Differential lock control unit
 - Combination meter
 - BCM
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

OK >> GO TO 2.

NG >> Repair or replace as necessary.

2. CHECK HARNESS FOR SHORT CIRCUIT

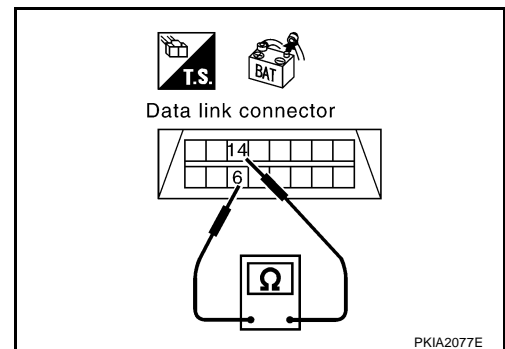
With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.

**3. CHECK HARNESS FOR SHORT CIRCUIT**

Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

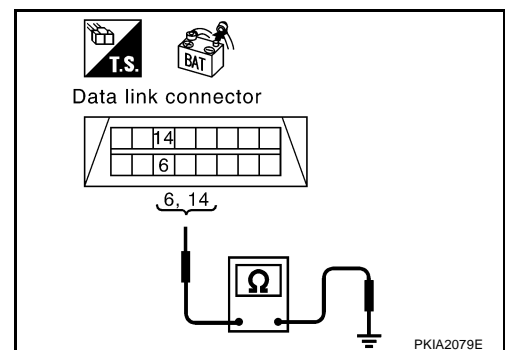
6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

OK >> Check ECM and IPDM E/R. Refer to [LAN-332, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).

NG >> Repair harness.

**IPDM E/R Ignition Relay Circuit Check**

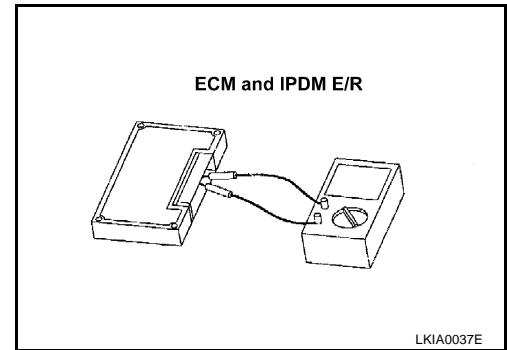
Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



CAN SYSTEM (TYPE 11)

PFP:23710

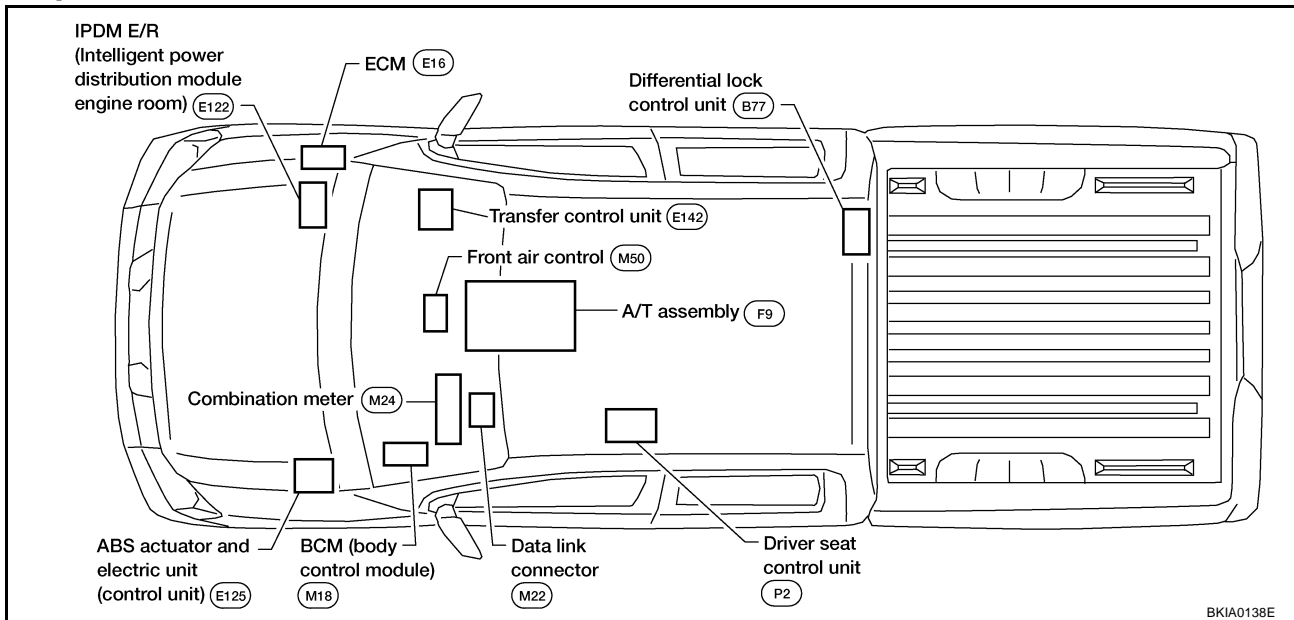
System Description

UKS001HX

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

UKS001HY



BKIA0138E

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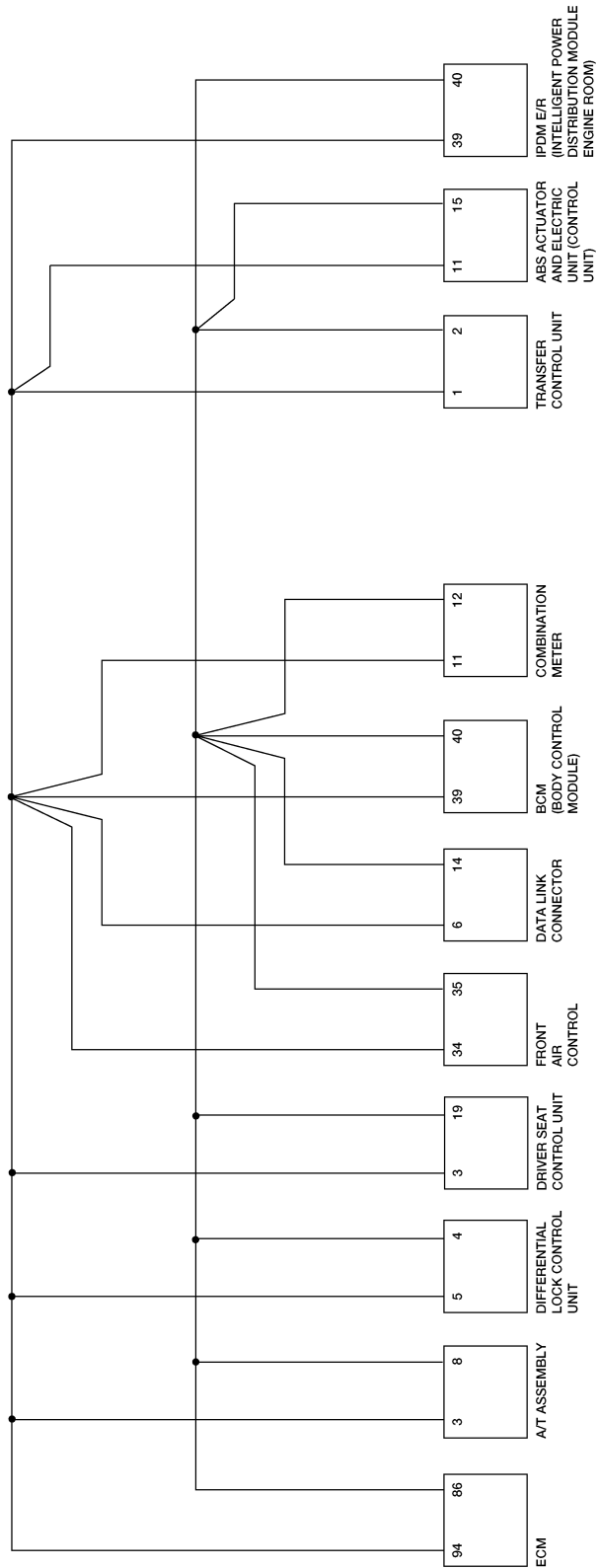
LAN

CAN SYSTEM (TYPE 11)

[CAN]

Schematic

UKS001HZ



BKWA0152E

CAN SYSTEM (TYPE 11)

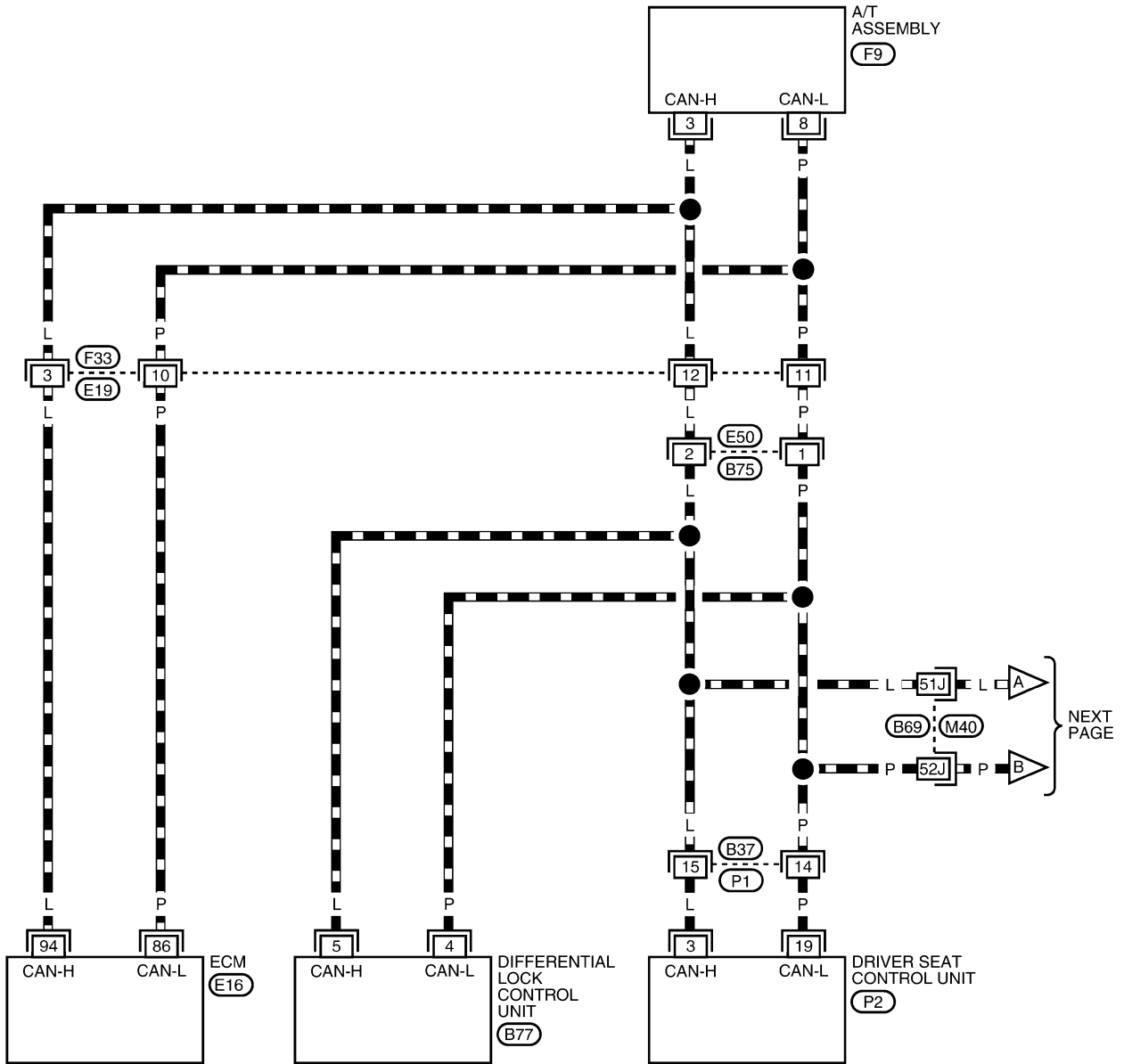
[CAN]

Wiring Diagram - CAN -

UKS00110

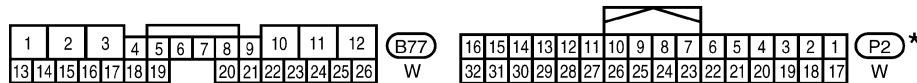
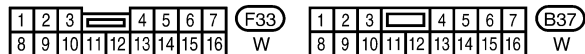
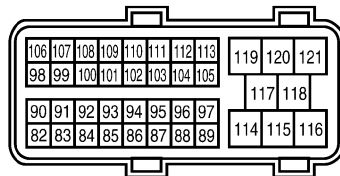
LAN-CAN-31

— : DATA LINE



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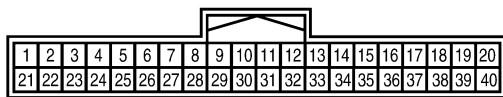
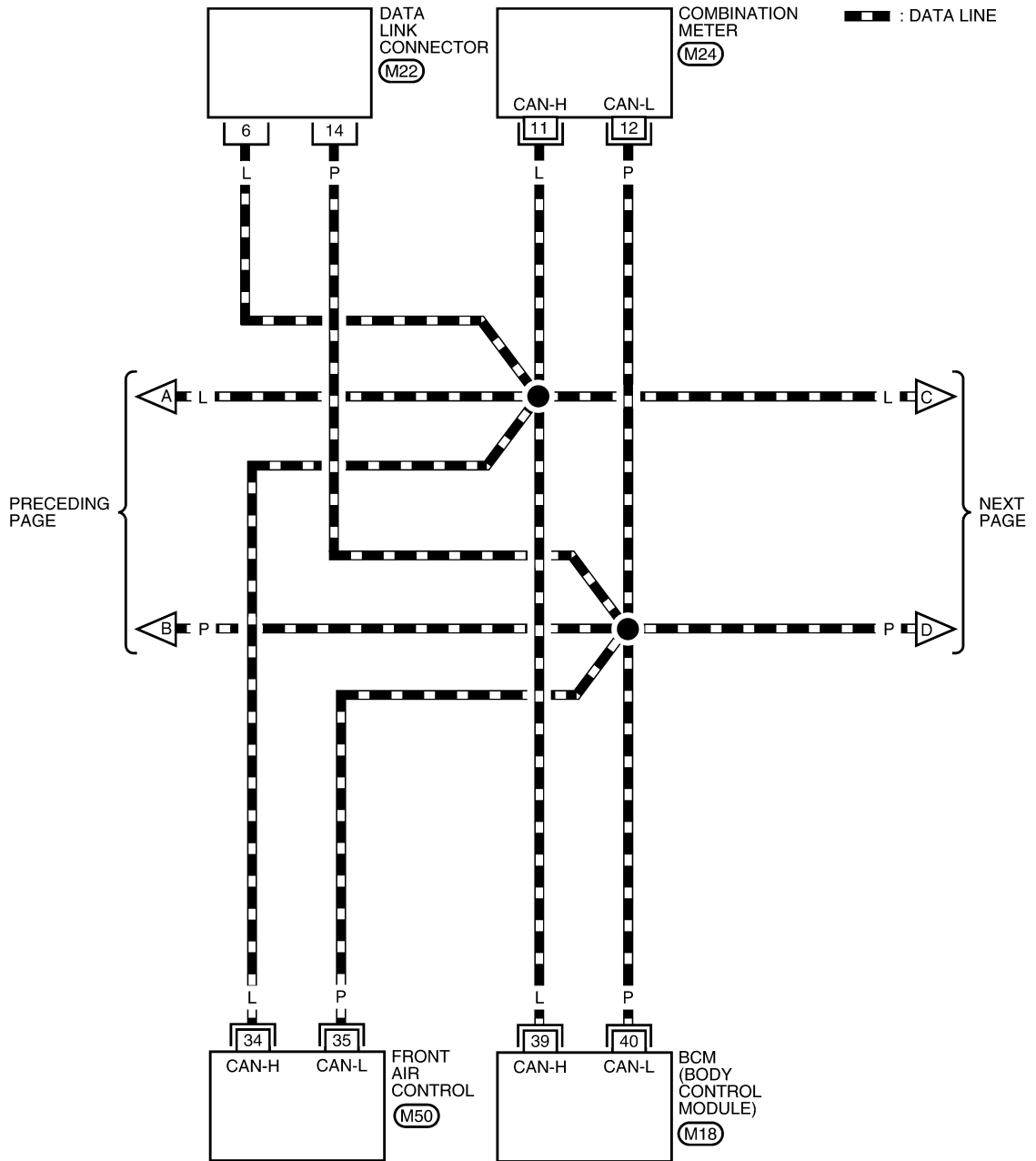
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

REFER TO THE FOLLOWING.

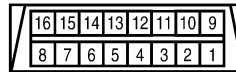
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0455E

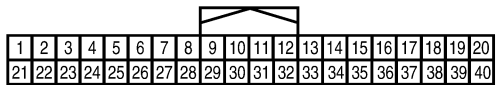
LAN-CAN-32



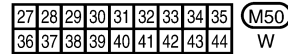
(M18)
W



(M22)
W



(M24)
W



(M50)
W

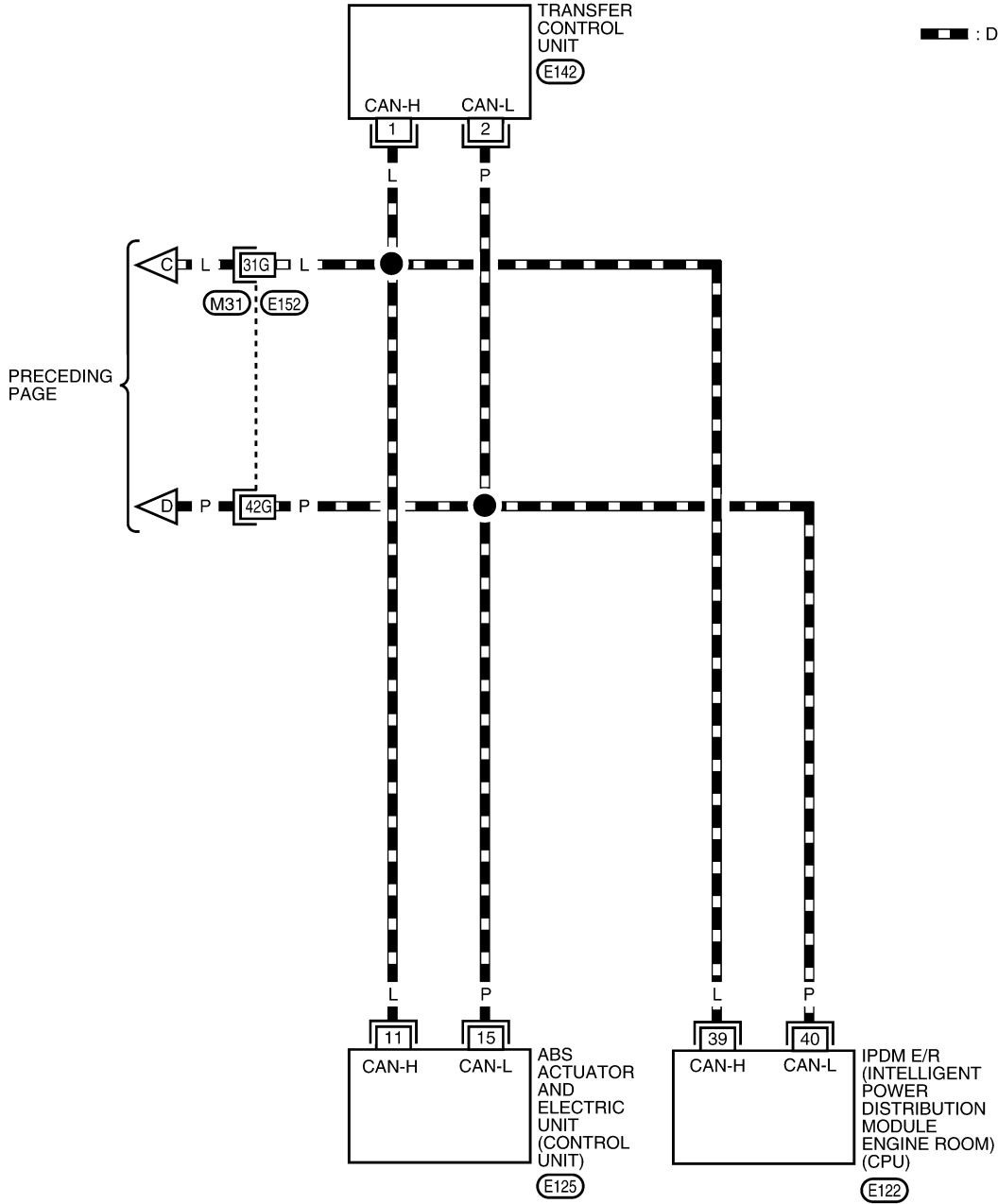
BKWA0456E

CAN SYSTEM (TYPE 11)

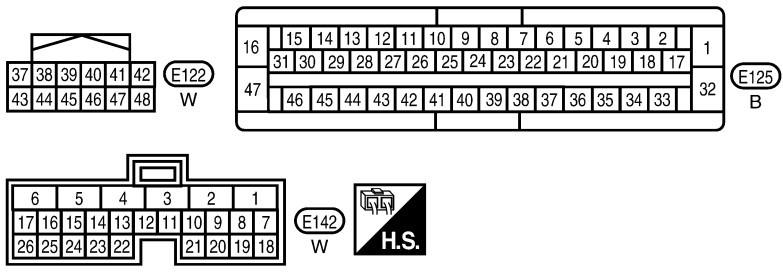
[CAN]

LAN-CAN-33

▬ : DATA LINE



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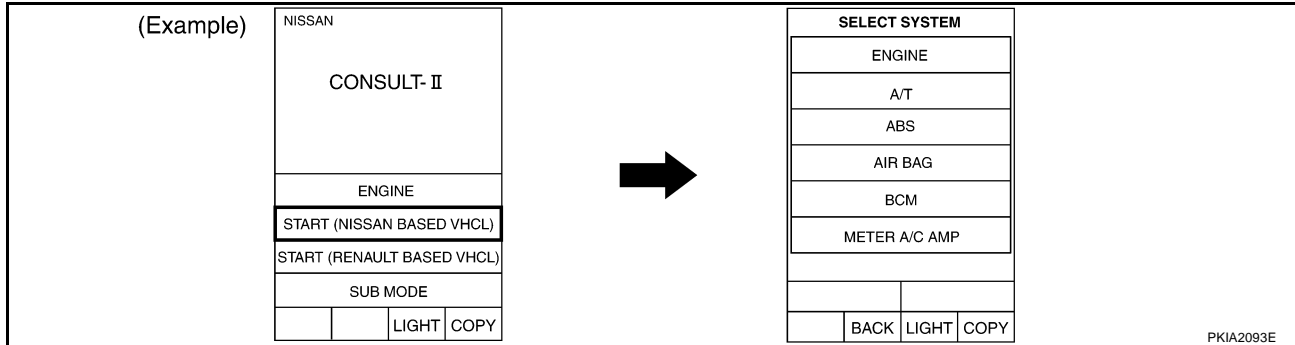


REFER TO THE FOLLOWING.
(M31) - SUPER MULTIPLE JUNCTION (SMJ)

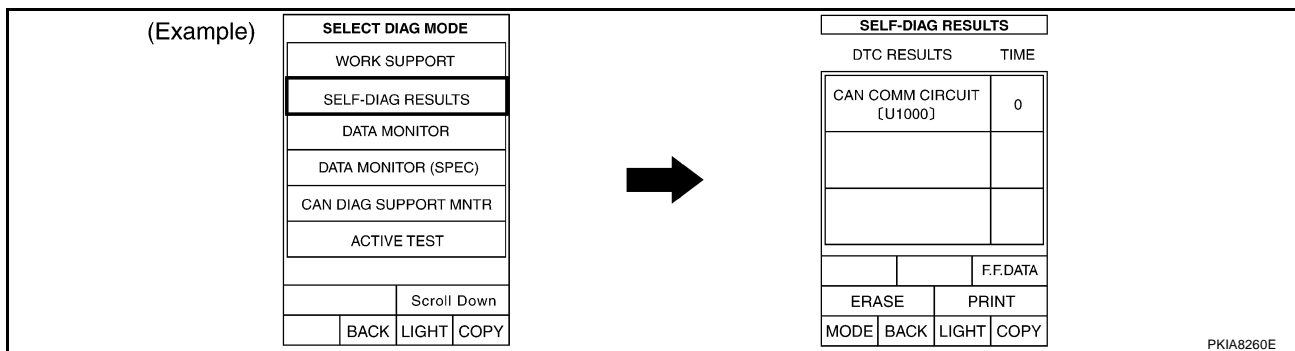
BKWA0457E

Work Flow

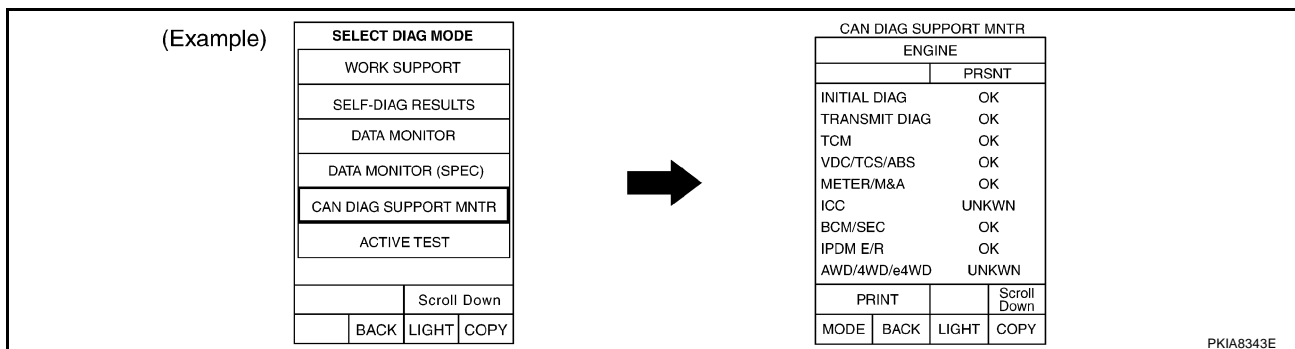
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "DIFF LOCK", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "DIFF LOCK", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-339, "CHECK SHEET"](#) .
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-339, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-342, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

CAN SYSTEM (TYPE 11)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

PKIB6694E

A
B
C
D
E
F
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H
I
J
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M

LAN

CAN SYSTEM (TYPE 11)

[CAN]

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
DIFF LOCK
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

PKIB6695E

CAN SYSTEM (TYPE 11)

[CAN]

A
B
C
D
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J
LAN
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M

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
DIFF LOCK
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
HVAC
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6696E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

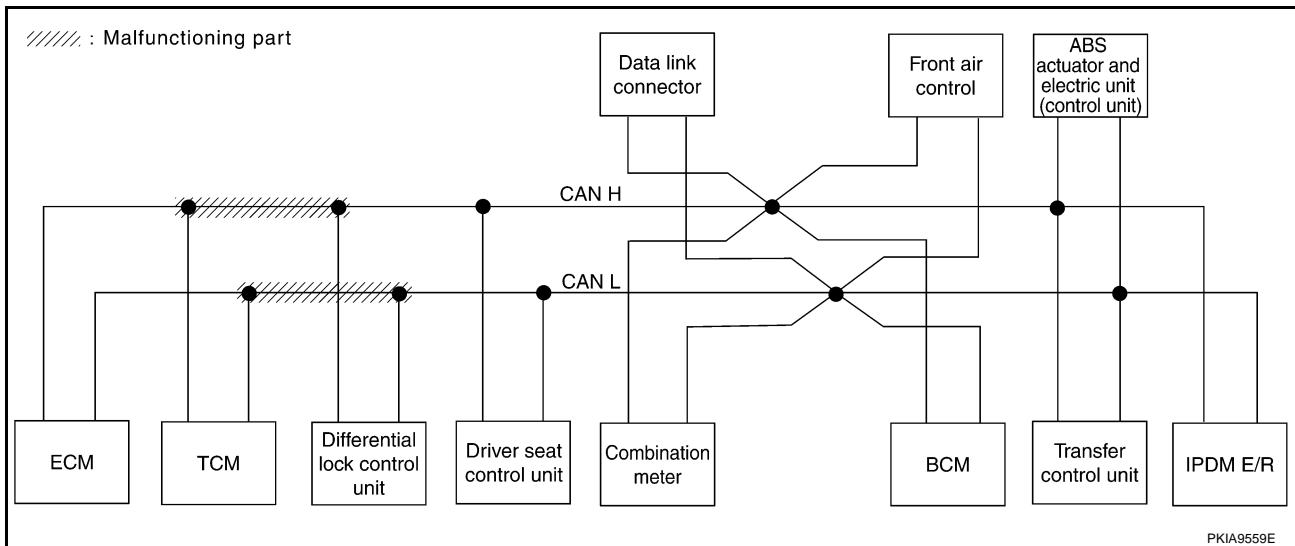
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and differential lock control unit. Refer to [LAN-358, "Circuit Check Between TCM and Differential Lock Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6697E



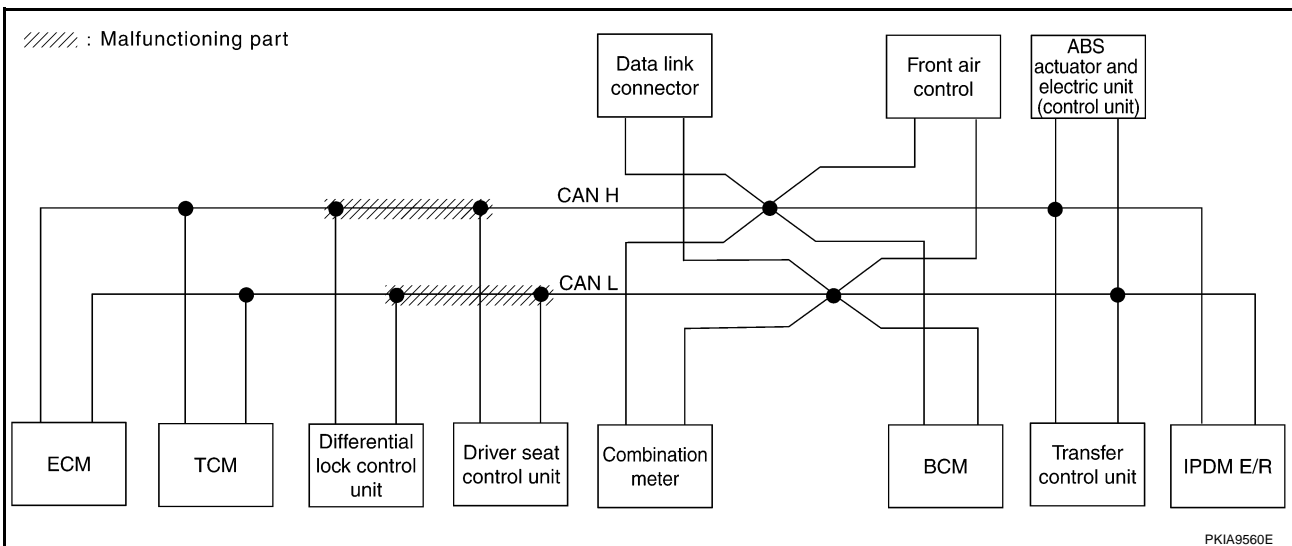
PKIA9559E

Case 2

Check harness between differential lock control unit and driver seat control unit. Refer to [LAN-359, "Circuit Check Between Differential Lock Control Unit and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—	

PKIB6698E

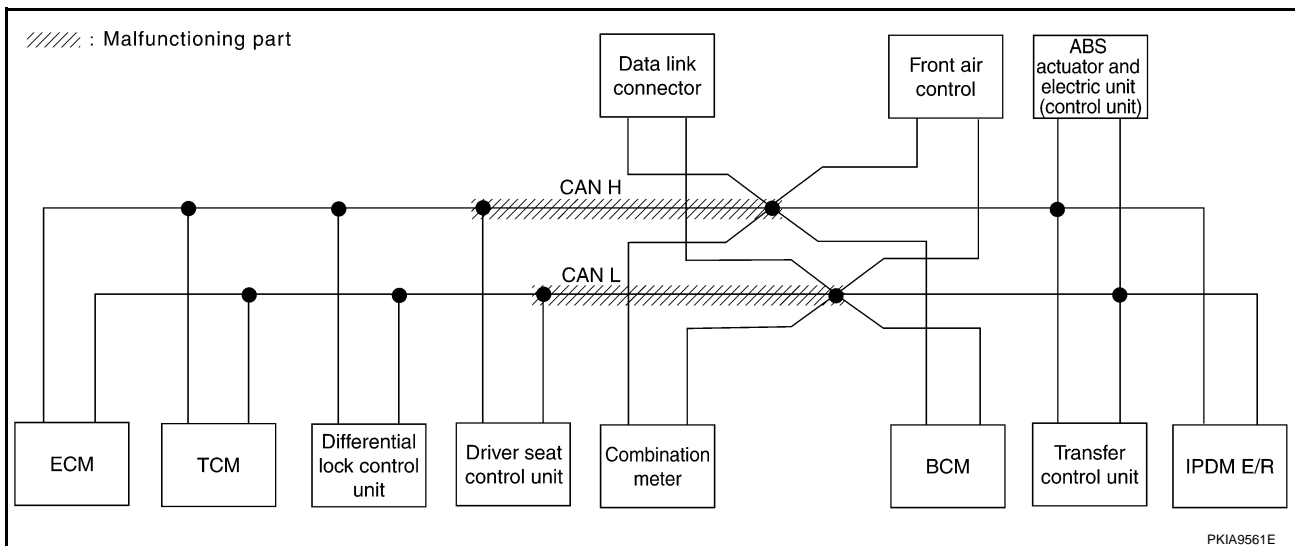


Case 3

Check harness between driver seat control unit and data link connector. Refer to [LAN-360, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	UNKWN ✓	—
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—
BCM	No indication	NG	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	UNKWN ✓	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	—	—

PKIB6699E



CAN SYSTEM (TYPE 11)

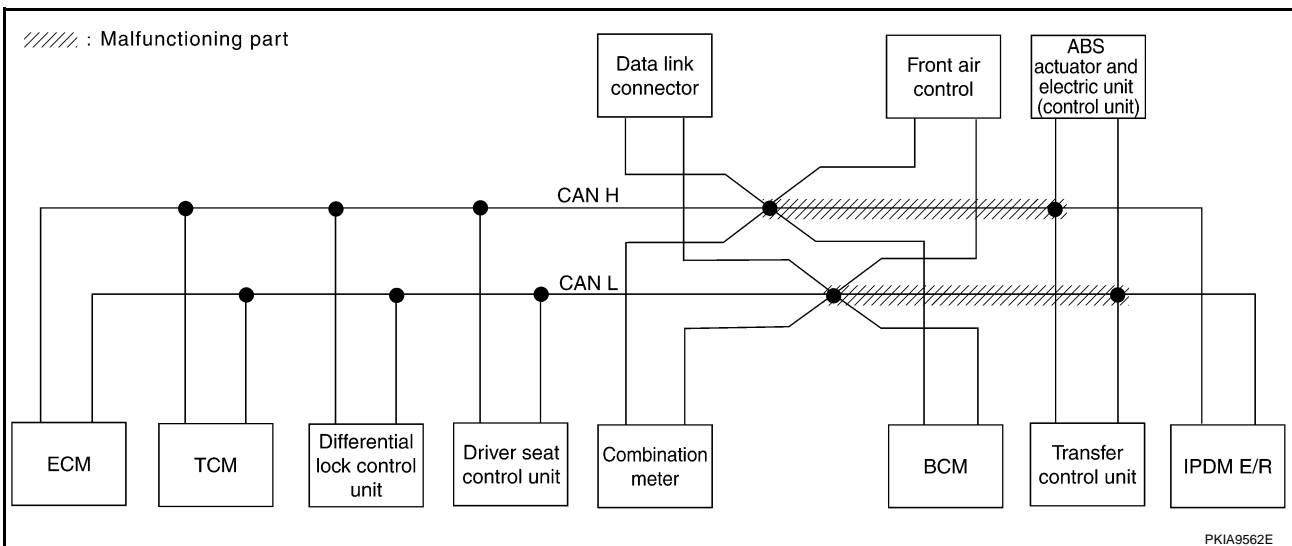
[CAN]

Case 4

Check harness between data link connector and IPDM E/R. Refer to [LAN-360, "Circuit Check Between Data Link Connector and IPDM E/R"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

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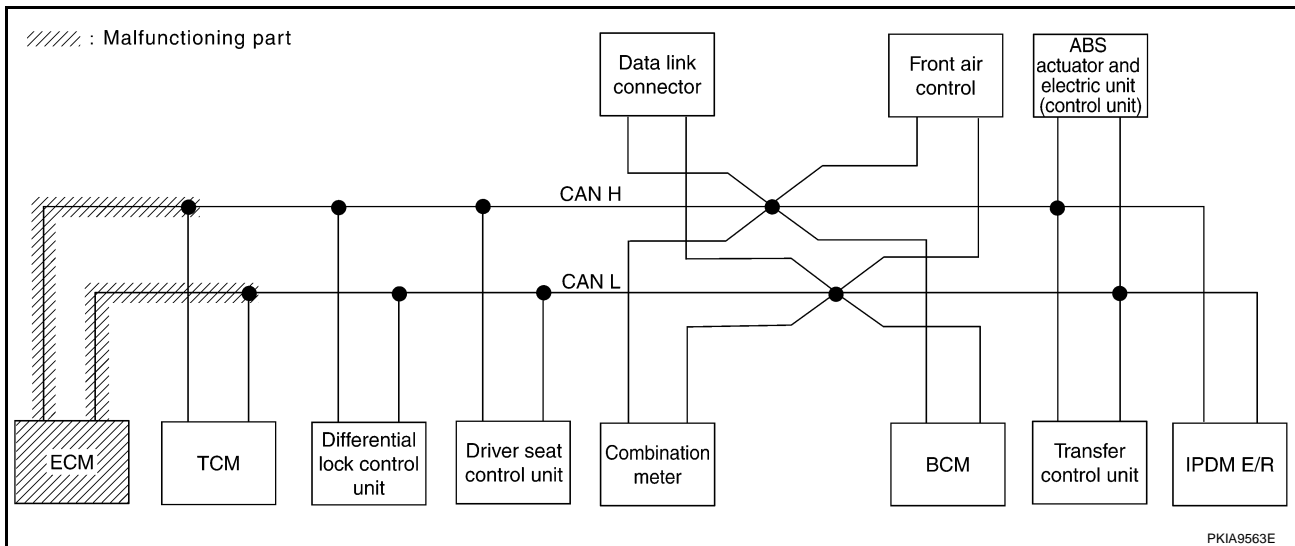


Case 5

Check ECM circuit. Refer to [LAN-361, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	
A/T	—	NG	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	—	
DIFF LOCK	—	NG	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	UNKW [✓] N	—	
AUTO DRIVE POS.	No indication	NG	UNKW [✓] N	—	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	—	—	—	
BCM	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	—	UNKW [✓] N	
HVAC	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	UNKW [✓] N	—	
ALL MODE AWD/4WD	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	
IPDM E/R	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	—	UNKW [✓] N	—	—	—	

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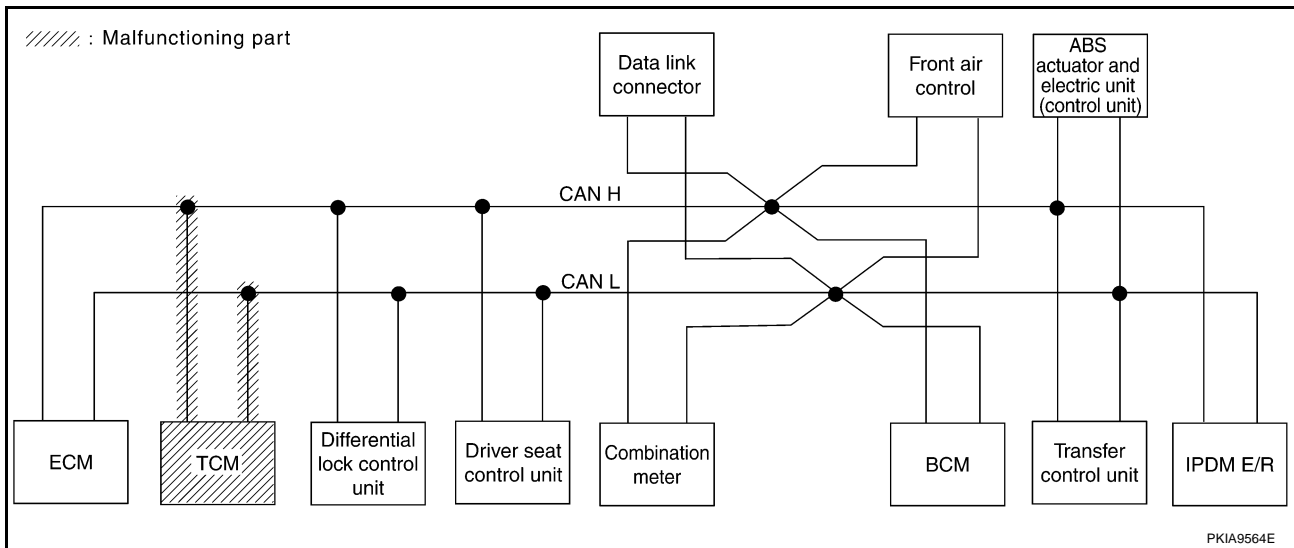


Case 6

Check TCM circuit. Refer to [LAN-362, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	—	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6702E

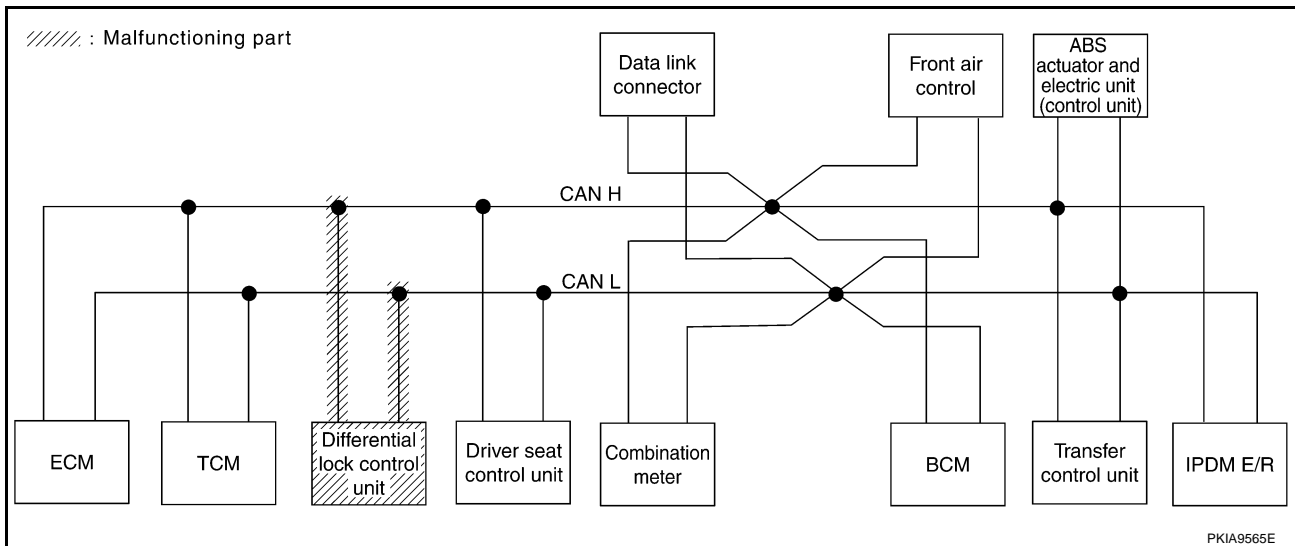


Case 7

Check differential lock control unit circuit. Refer to [LAN-362, "Differential Lock Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6703E

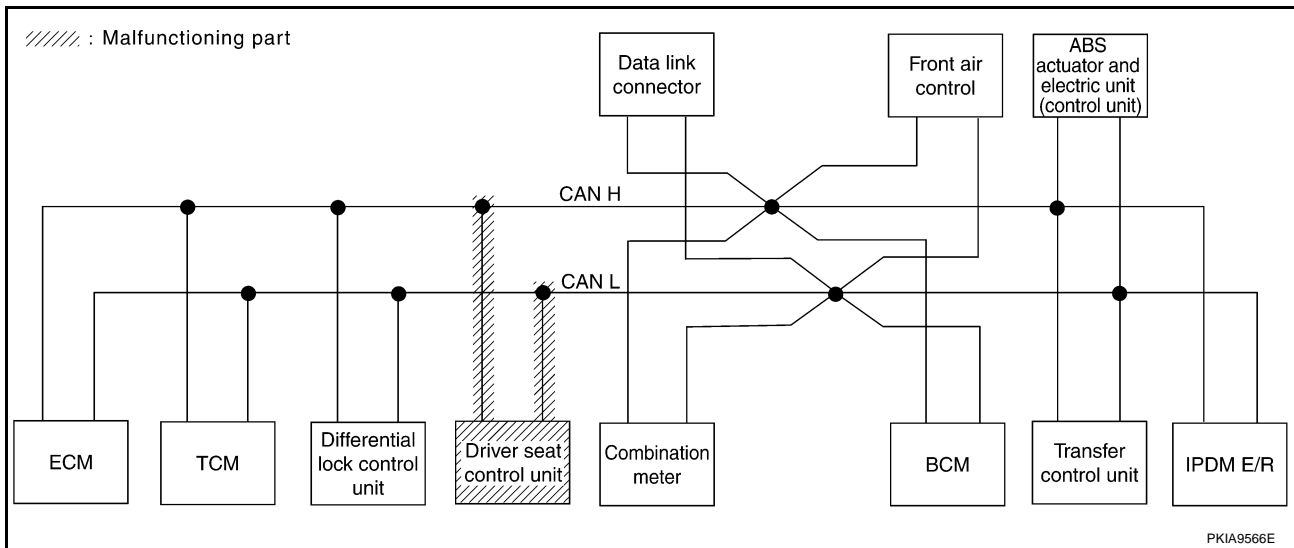


Case 8

Check driver seat control unit circuit. Refer to [LAN-363, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

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CAN SYSTEM (TYPE 11)

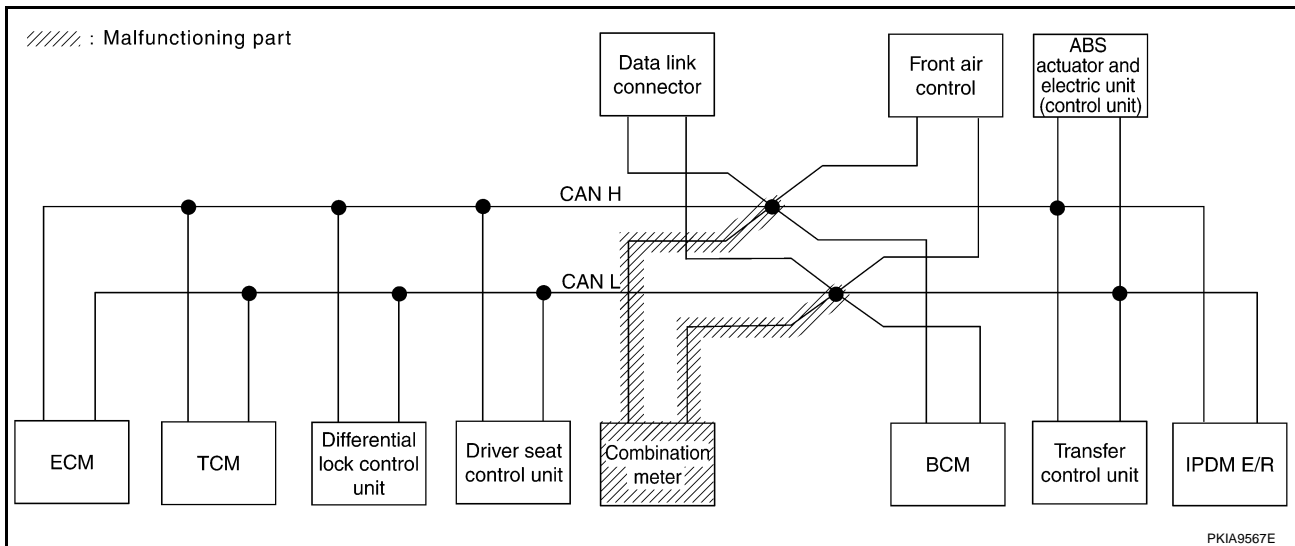
[CAN]

Case 9

Check combination meter circuit. Refer to [LAN-363, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN ✓	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN ✓	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN ✓	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

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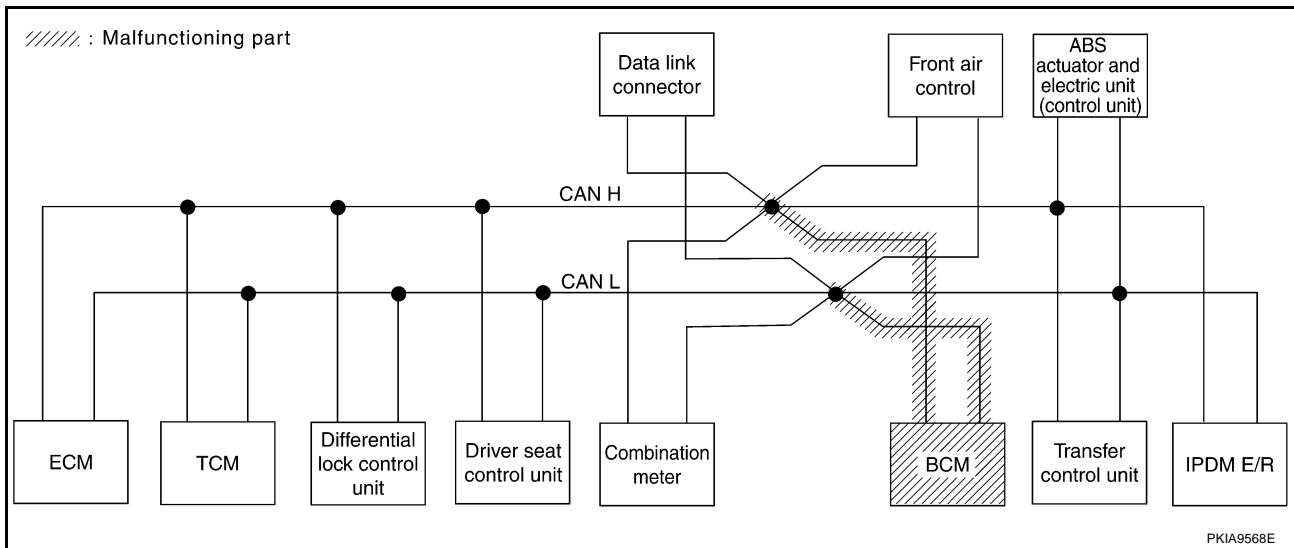


Case 10

Check BCM circuit. Refer to [LAN-364, "BCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—

PKIB6706E



CAN SYSTEM (TYPE 11)

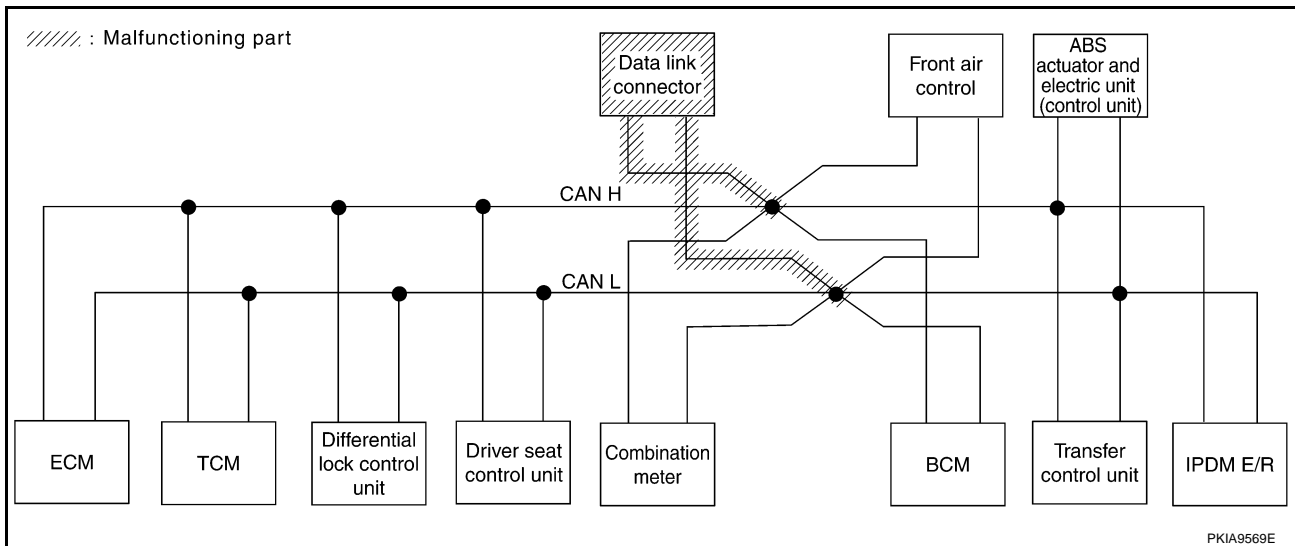
[CAN]

Case 11

Check data link connector circuit. Refer to [LAN-364, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

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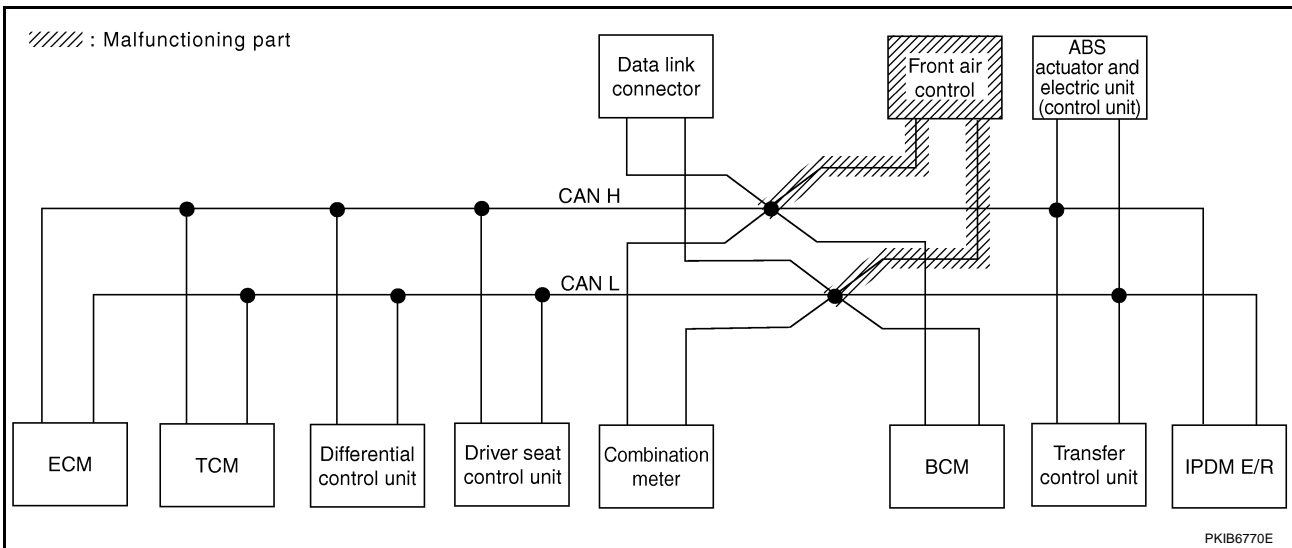


Case 12

Check front air control circuit. Refer to [LAN-365, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6708E

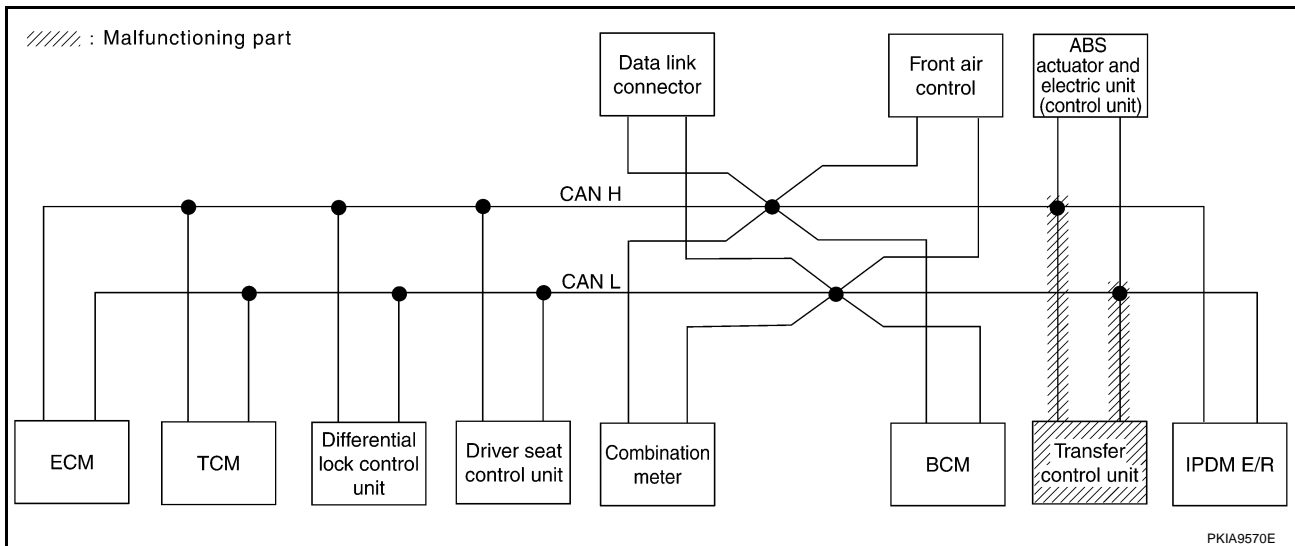


Case 13

Check transfer control unit circuit. Refer to [LAN-365, "Transfer Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	

PKIB6709E



CAN SYSTEM (TYPE 11)

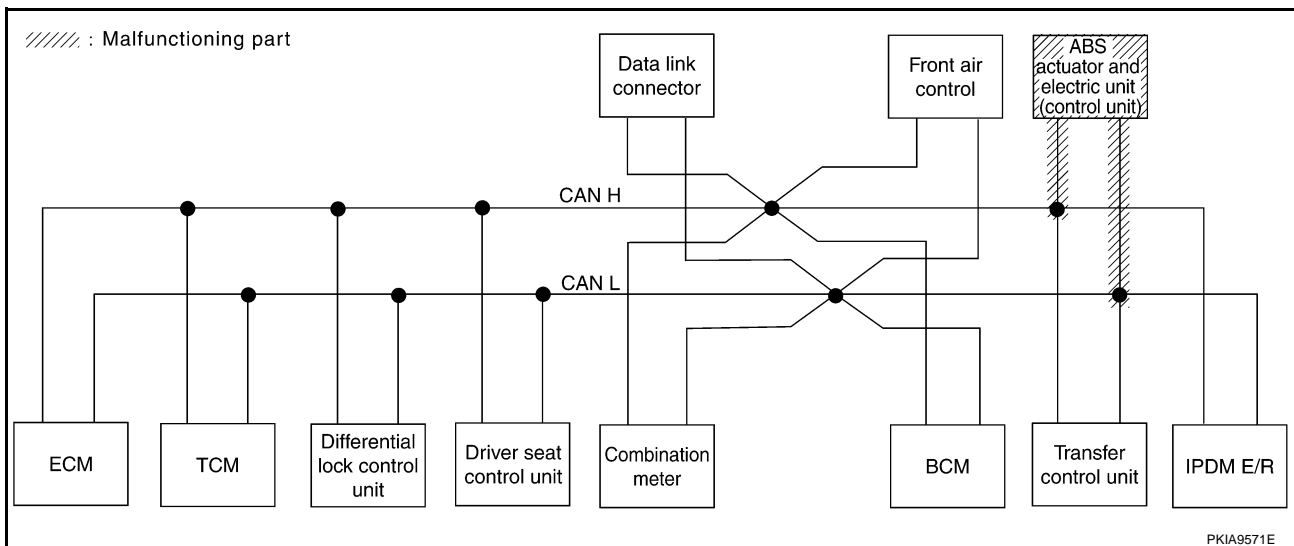
[CAN]

Case 14

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-366, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6710E



PKIA9571E

CAN SYSTEM (TYPE 11)

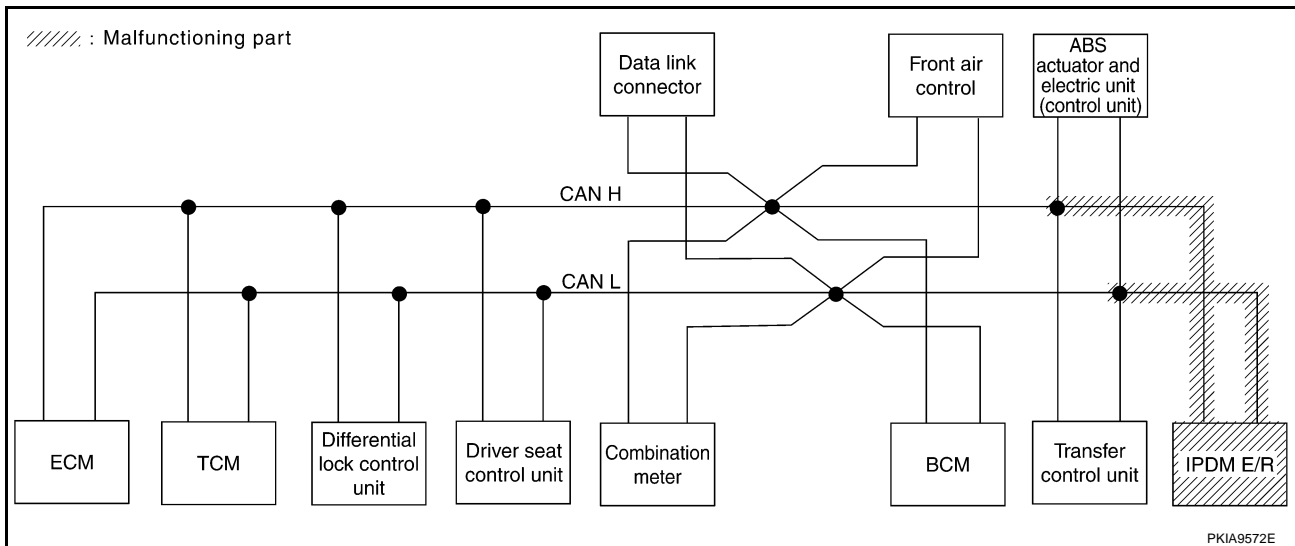
[CAN]

Case 15

Check IPDM E/R circuit. Refer to [LAN-366, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN ✓
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN ✓
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6711E



CAN SYSTEM (TYPE 11)

[CAN]

Case 16

Check CAN communication circuit. Refer to [LAN-367, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	—	UNKW N	—	UNKW N	UNKW N	—
DIFF LOCK	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indicat ion	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—
BCM	No indicat ion	NG	UNKW N	UNKW N	—	—	UNKW N	—	—	—	UNKW N
HVAC	No indicat ion	—	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	UNKW N	—	—	UNKW N	—	—
IPDM E/R	No indicat ion	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—

PKIB6712E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-368, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	—	UNKW N	—	UNKW N	UNKW N	—
DIFF LOCK	—	NG	UNKW N	UNKW N	—	—	—	—	UNKW N	UNKW N	—
AUTO DRIVE POS.	No indicat ion	NG	UNKW N	—	UNKW N	—	UNKW N	UNKW N	—	—	—
BCM	No indicat ion	NG	UNKW N	UNKW N	—	—	UNKW N	—	—	—	UNKW N
HVAC	No indicat ion	—	UNKW N	UNKW N	—	—	—	UNKW N	—	UNKW N	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	UNKW N	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	UNKW N	—	—	UNKW N	—	—
IPDM E/R	No indicat ion	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—	—

PKIB6713E

Case 18

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-368, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	DIFF LOCK	METER/M&A	BCM/SEC	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	UNKWN	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	UNKWN	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—	—	—

PKIB6714E

Circuit Check Between TCM and Differential Lock Control Unit

UKS0020K

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

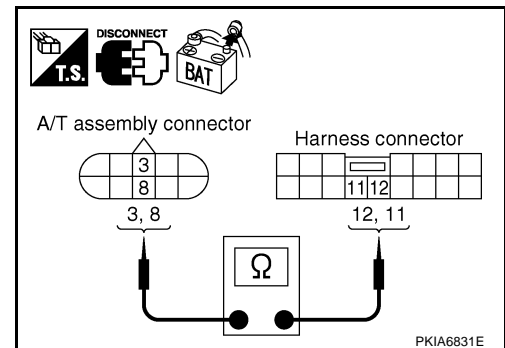
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



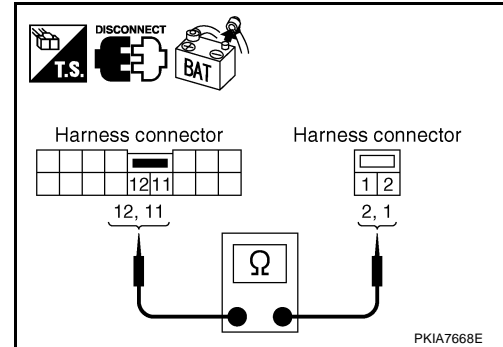
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



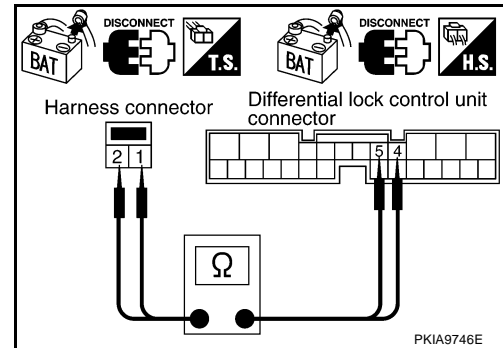
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and differential lock control unit harness connector B77 terminals 5 (L), 4 (P).

2 (L) - 5 (L) : Continuity should exist.
1 (P) - 4 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-338, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Differential Lock Control Unit and Driver Seat Control Unit

UKS00112

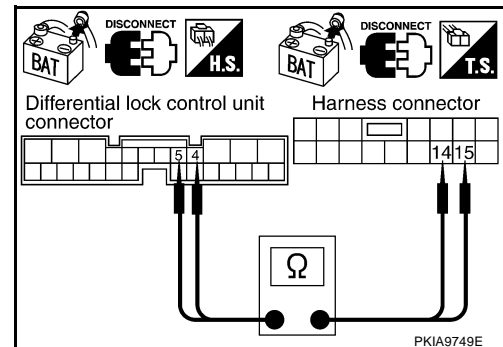
1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect differential lock control unit connector and harness connector B37.
4. Check continuity between differential lock control unit harness connector B77 terminals 5 (L), 4 (P) and harness connector B37 terminals 15 (L), 14 (P).

5 (L) - 15 (L) : Continuity should exist.
4 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-338, "Work Flow"](#).
 NG >> Repair harness.



A
B
C
D
E
F
G
H
I
J

LAN

L
M

Circuit Check Between Driver Seat Control Unit and Data Link Connector**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

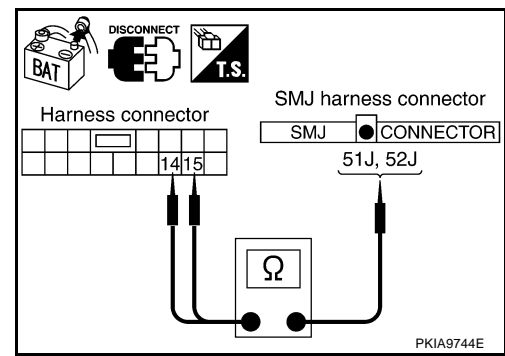
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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

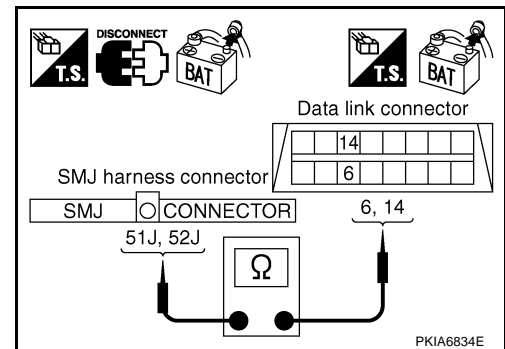
**3. CHECK HARNESS FOR OPEN CIRCUIT**

- Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.
52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-338, "Work Flow"](#).
 NG >> Repair harness.

**Circuit Check Between Data Link Connector and IPDM E/R****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

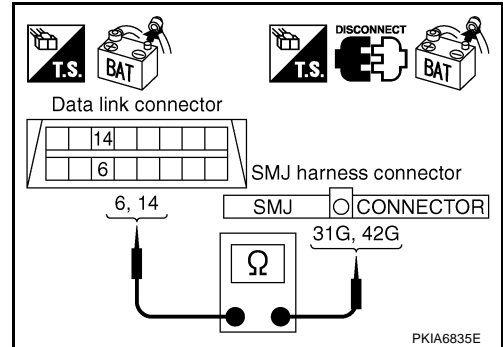
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.
14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



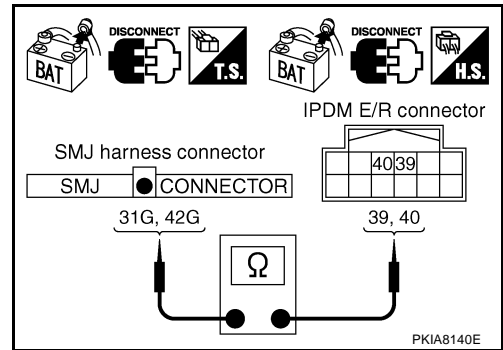
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.
42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-338, "Work Flow"](#).
- NG >> Repair harness.



ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

A
B
C
D
E
F
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H
I
J

LAN

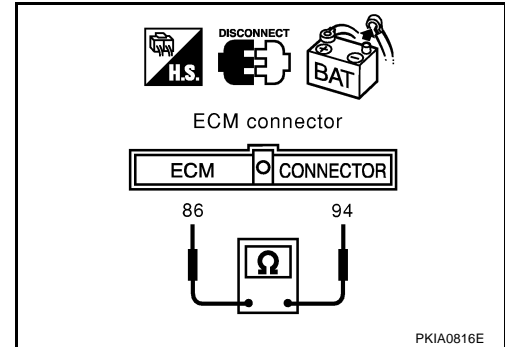
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.



UKS00116

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

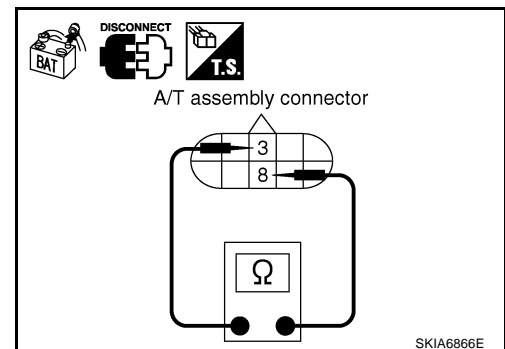
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



UKS0020L

Differential Lock Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of differential lock 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.

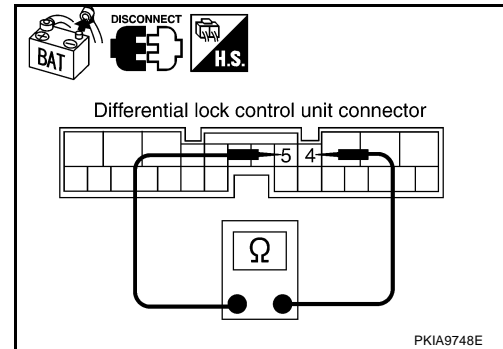
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector.
2. Check resistance between differential lock control unit harness connector B77 terminals 5 (L) and 4 (P).

5 (L) - 4 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace differential lock control unit.
 NG >> Repair harness between differential lock control unit and harness connector B75.



UKS00117

Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

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

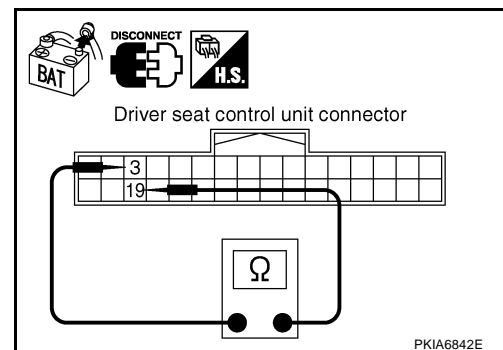
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B69.



UKS00118

Combination Meter Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

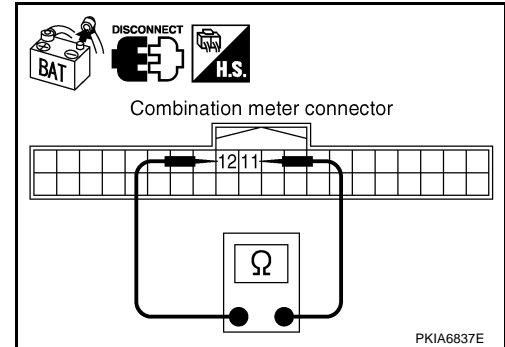
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



UKS00119

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

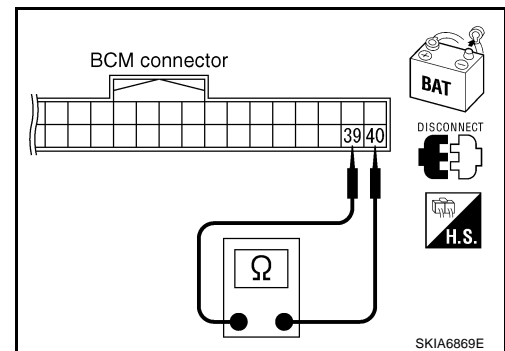
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.



UKS0011A

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

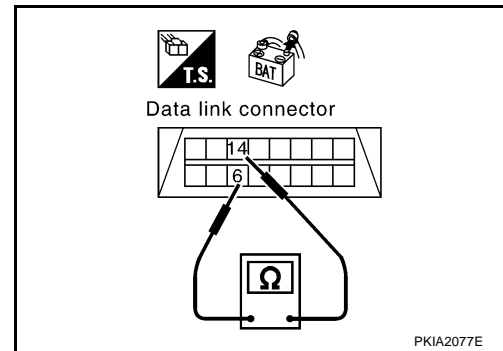
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-338, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Front Air Control Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

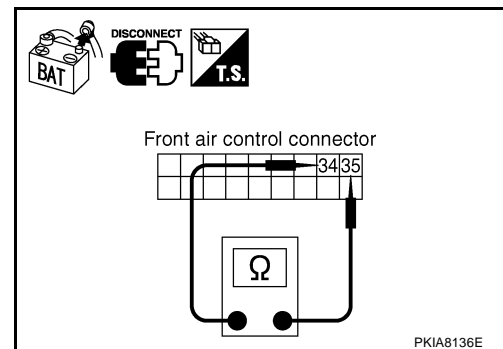
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



Transfer Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

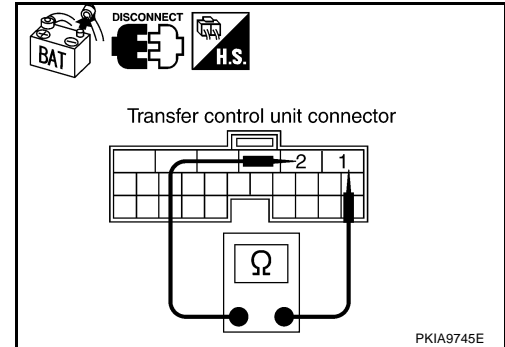
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.



ABS Actuator and Electric Unit (Control Unit) Circuit Check

UKS001D

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

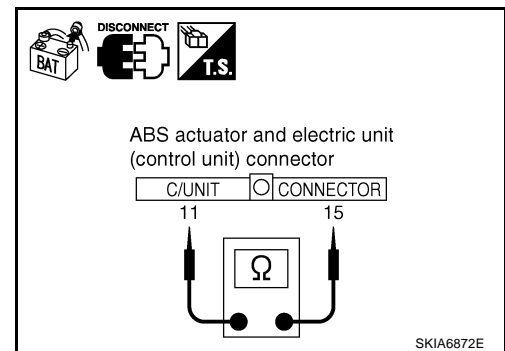
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check

UKS001E

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

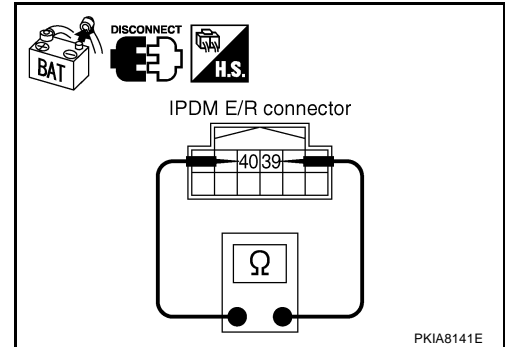
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



UKS0011F

CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Differential lock control unit
 - Driver seat control unit
 - Combination meter
 - BCM
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

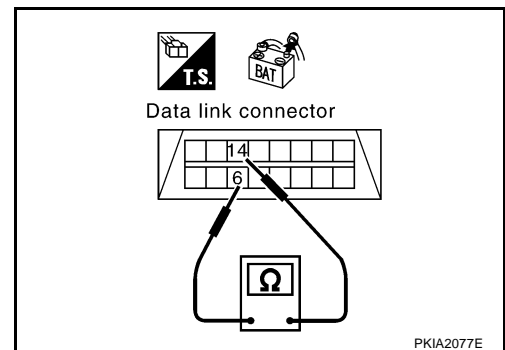
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

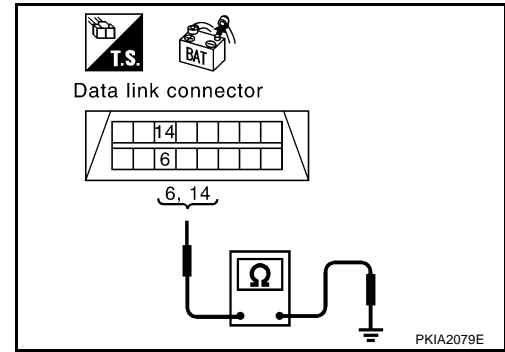
6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

OK >> Check ECM and IPDM E/R. Refer to [LAN-368, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#) .

NG >> Repair harness.



UKS001G

IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#) .
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#) .

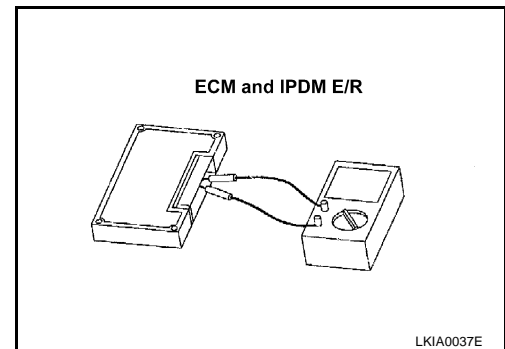
Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

UKS001H

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



CAN SYSTEM (TYPE 12)

PFP:23710

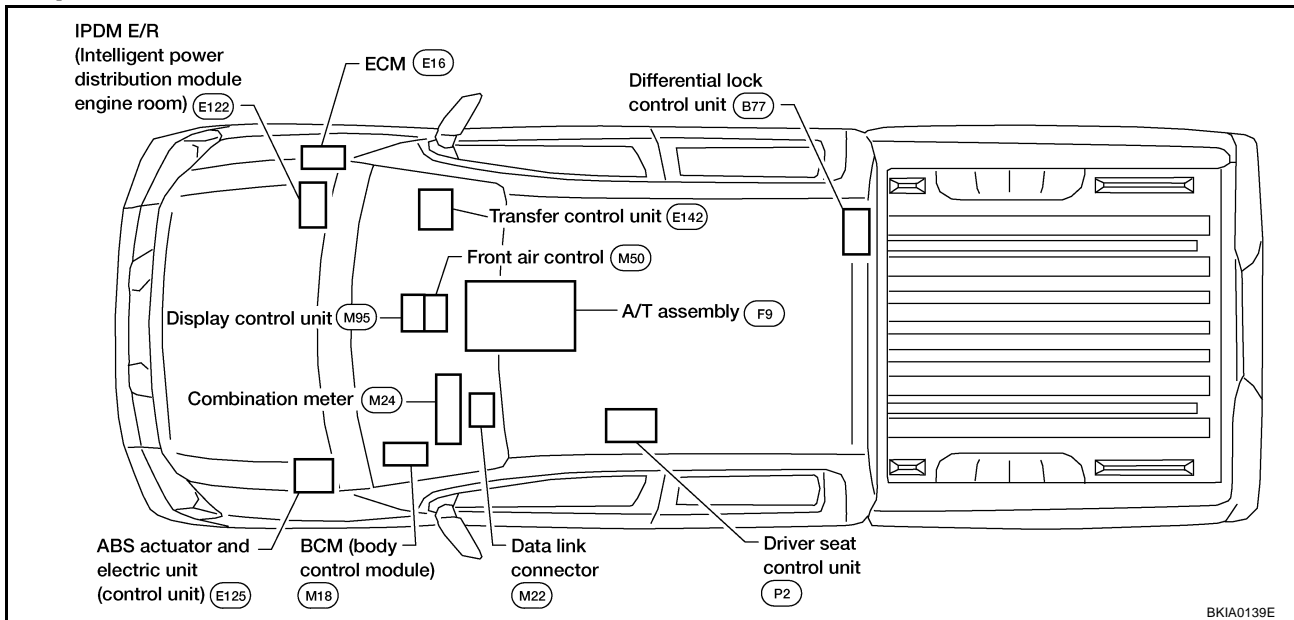
System Description

UKS001II

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

UKS001II



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

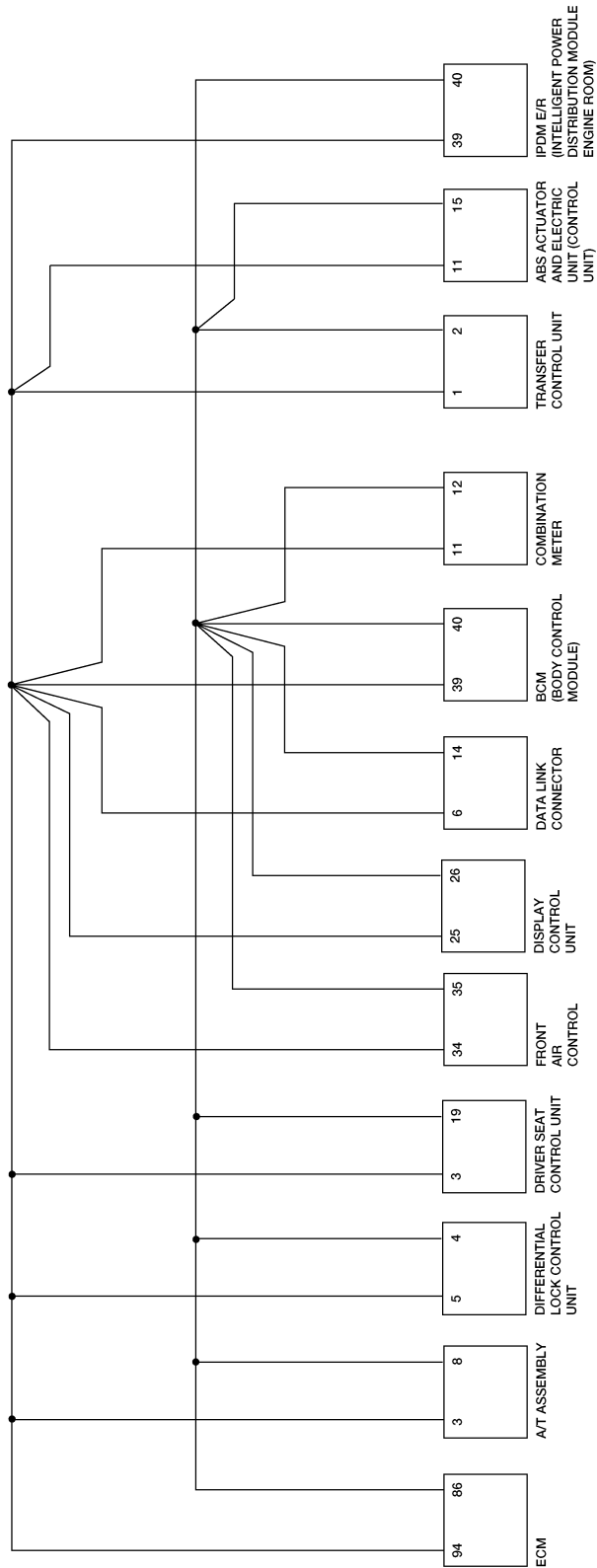
LAN

CAN SYSTEM (TYPE 12)

[CAN]

Schematic

UKS001IK



BKWA0156E

CAN SYSTEM (TYPE 12)

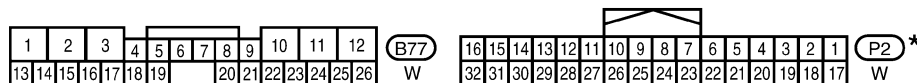
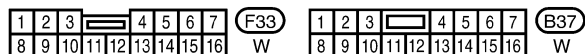
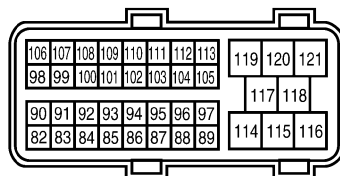
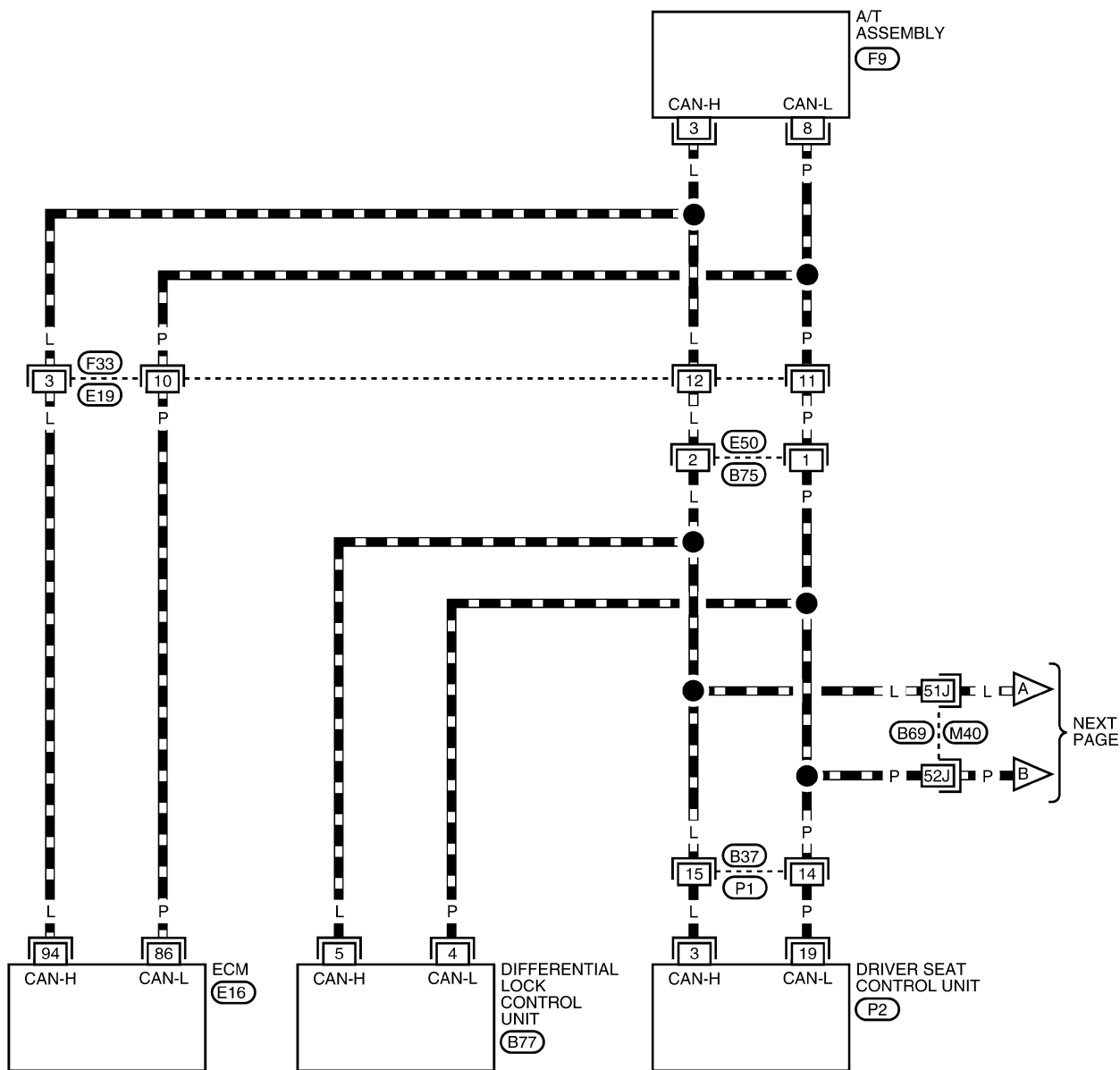
[CAN]

Wiring Diagram - CAN -

UKS001L

LAN-CAN-34

— : DATA LINE



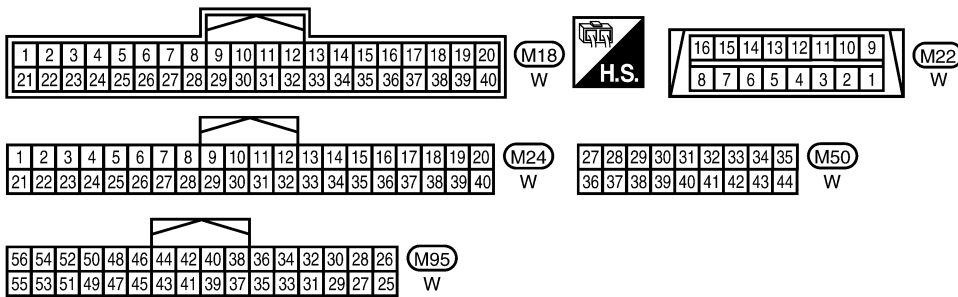
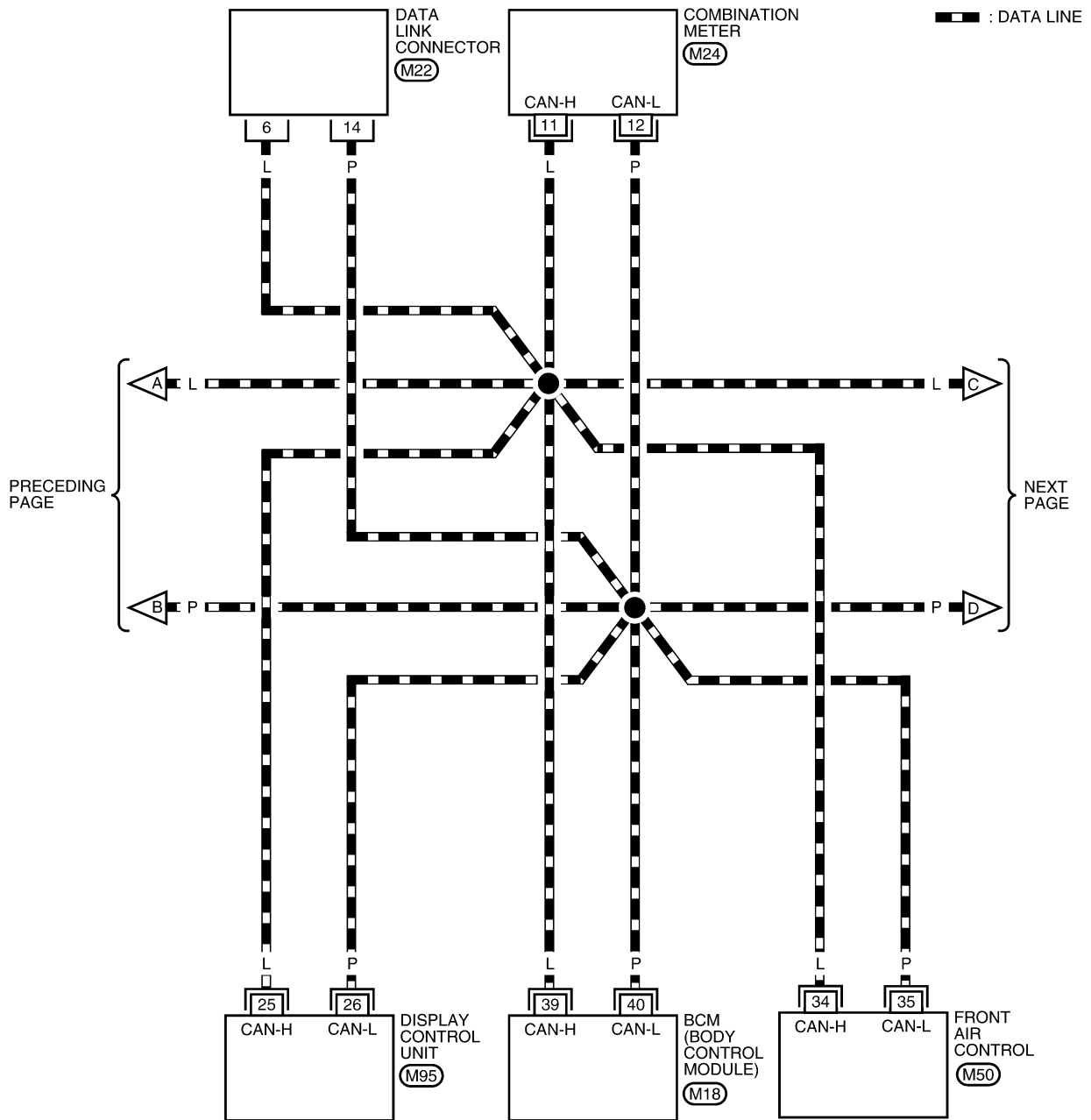
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

REFER TO THE FOLLOWING.

(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0458E

LAN-CAN-35



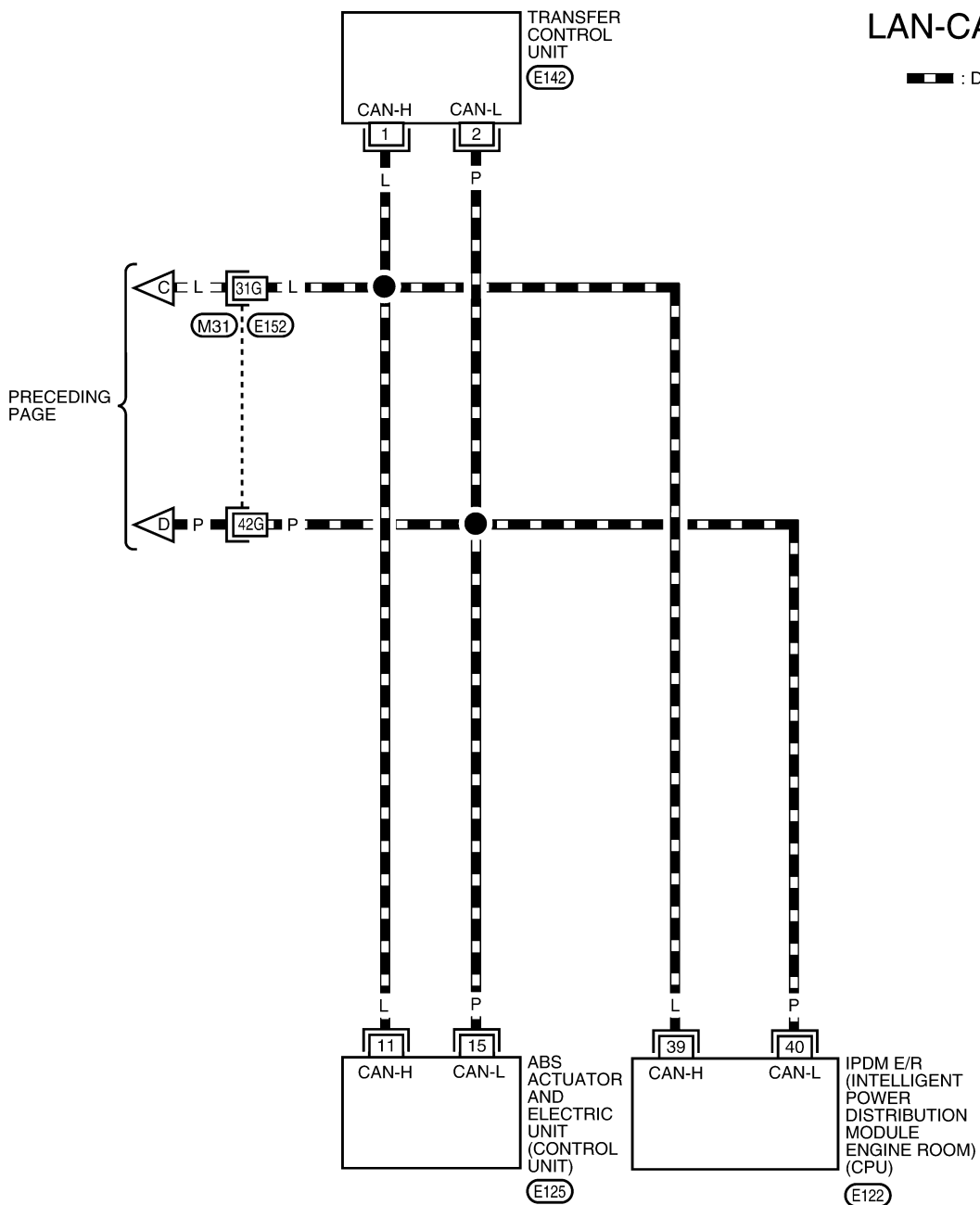
BKWA0459E

CAN SYSTEM (TYPE 12)

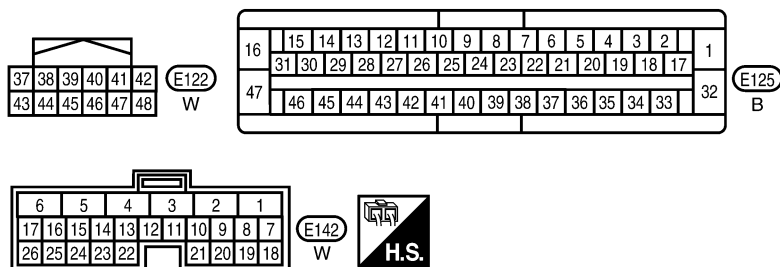
[CAN]

LAN-CAN-36

— : DATA LINE



A
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D
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I
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LAN
L
M



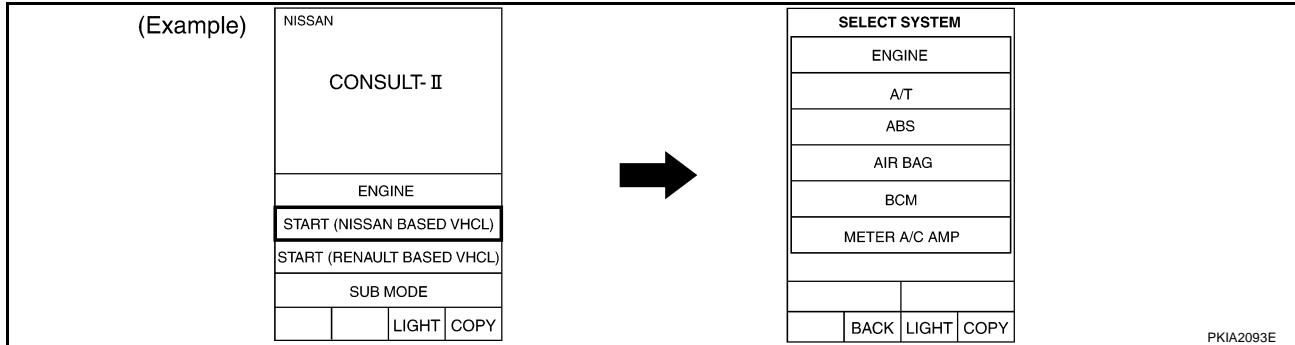
REFER TO THE FOLLOWING.

(M31) - SUPER MULTIPLE JUNCTION (SMJ)

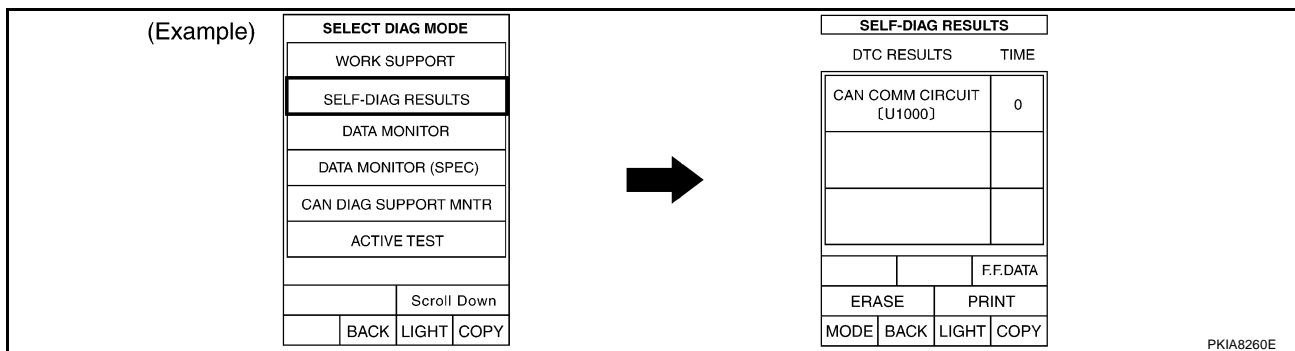
BKWA0460E

Work Flow

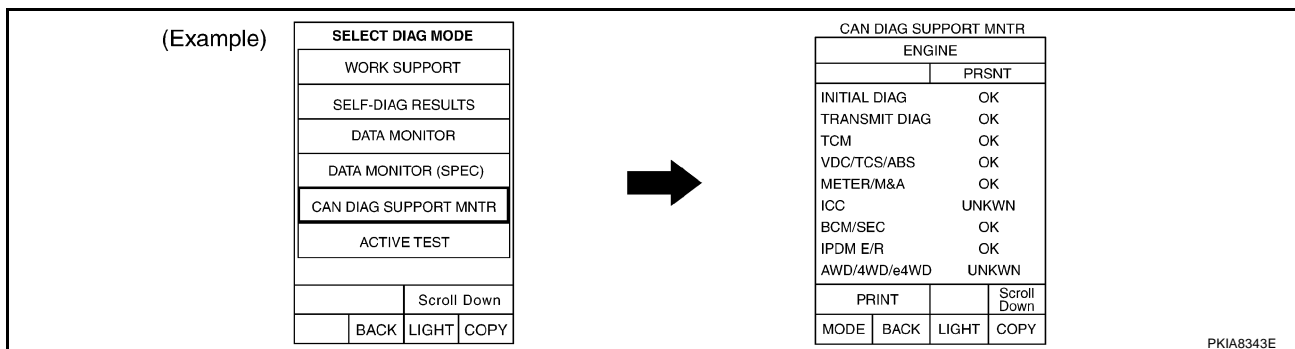
- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".



- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "DIFF LOCK", "AUTO DRIVE POS.", "BCM", "HAVC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "DIFF LOCK", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.



- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-376, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-376, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- Check CAN communication line of the navigation system. Refer to [AV-148, "CAN Communication Line Check"](#).
- Attach the CAN DIAG SUPPORT MONITOR check sheet onto the check sheet. Refer to [LAN-376, "CHECK SHEET"](#).

CAN SYSTEM (TYPE 12)

[CAN]

8. Mark the "NG" or "UNKWN" item of the check sheet table with "v" from the result of CAN DIAG SUPPORT MONITOR check sheet. Refer to [LAN-376, "CHECK SHEET"](#) .

NOTE:

If "NG" is displayed on "CAN COMM" as "CAN DIAG SUPPORT MONITOR" for the diagnosed control unit, replace the control unit. Refer to [AV-148, "CAN Communication Line Check"](#) .

9. According to the check sheet results (example), start inspection. Refer to [LAN-379, "CHECK SHEET RESULTS \(EXAMPLE\)"](#) .

A

B

C

D

E

F

G

H

I

J

LAN

L

M

CAN SYSTEM (TYPE 12)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

Attach copy of
display control unit
CAN DIAG SUPPORT MONITOR check sheet

CAN SYSTEM (TYPE 12)

[CAN]

A
B
C
D
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J
LAN
L
M

Attach copy of
ENGINE
SELF-DIAG RESULTS

Attach copy of
A/T
SELF-DIAG RESULTS

Attach copy of
DIFF LOCK
SELF-DIAG RESULTS

Attach copy of
AUTO DRIVE POS.
SELF-DIAG RESULTS

Attach copy of
BCM
SELF-DIAG RESULTS

Attach copy of
HVAC
SELF-DIAG RESULTS

Attach copy of
ALL MODE AWD/4WD
SELF-DIAG RESULTS

Attach copy of
ABS
SELF-DIAG RESULTS

Attach copy of
IPDM E/R
SELF-DIAG RESULTS

PKIB6695E

CAN SYSTEM (TYPE 12)

[CAN]

Attach copy of
ENGINE
CAN DIAG SUPPORT
MNTR

Attach copy of
A/T
CAN DIAG SUPPORT
MNTR

Attach copy of
DIFF LOCK
CAN DIAG SUPPORT
MNTR

Attach copy of
AUTO DRIVE POS.
CAN DIAG SUPPORT
MNTR

Attach copy of
BCM
CAN DIAG SUPPORT
MNTR

Attach copy of
HVAC
CAN DIAG SUPPORT
MNTR

Attach copy of
ALL MODE AWD/4WD
CAN DIAG SUPPORT
MNTR

Attach copy of
ABS
CAN DIAG SUPPORT
MNTR

Attach copy of
IPDM E/R
CAN DIAG SUPPORT
MNTR

PKIB6696E

CAN SYSTEM (TYPE 12)

[CAN]

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

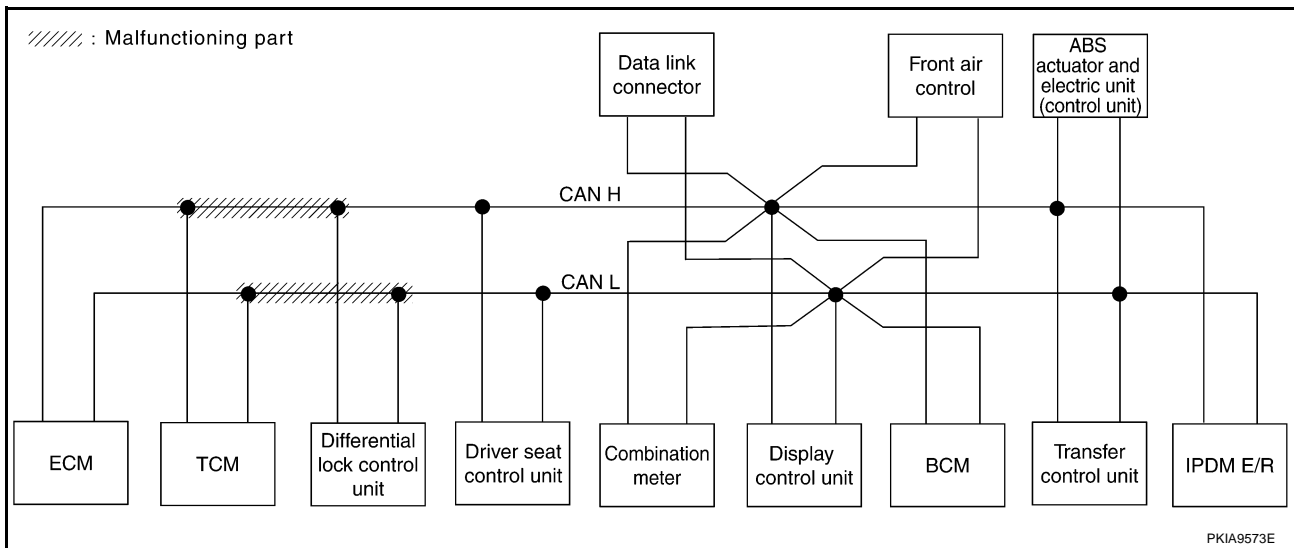
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" or "CAN COMM" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and differential lock control unit. Refer to [LAN-396, "Circuit Check Between TCM and Differential Lock Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	✓	—	✓	—	✓	✓	✓
A/T	—	NG	UNKWN	UNKWN	—	—	✓	—	—	—	✓	✓	—
DIFF LOCK	—	NG	UNKWN	✓	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	✓	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	✓	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	✓	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	✓	✓	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	✓	✓	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	✓	—	—	—	—	UNKWN	—	—	—	—

PKIB6726E



CAN SYSTEM (TYPE 12)

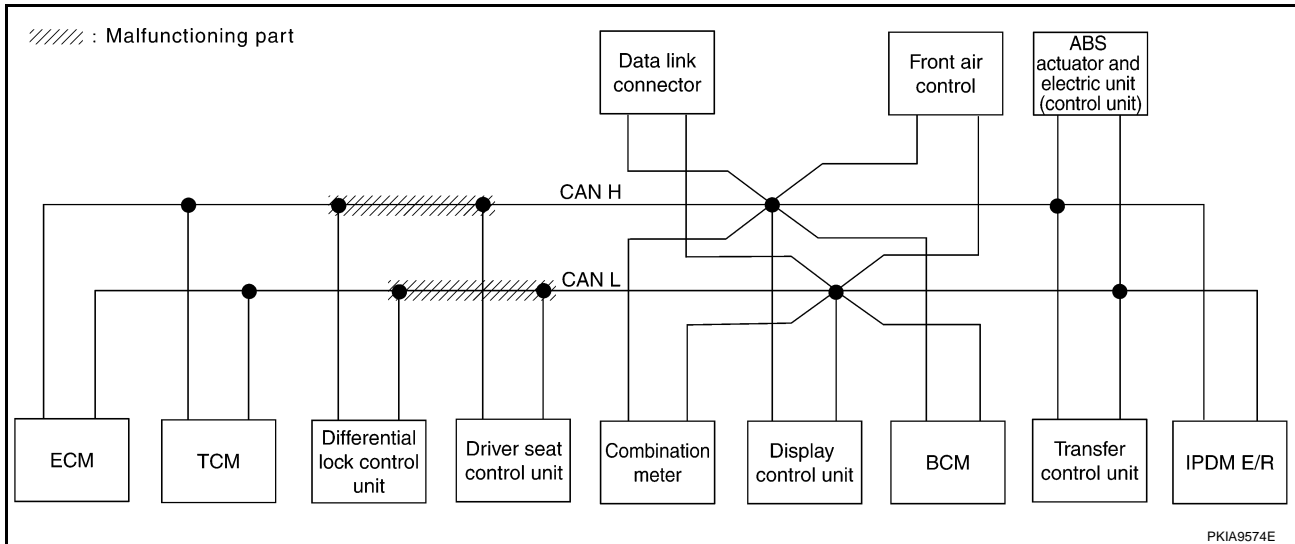
[CAN]

Case 2

Check harness between differential lock control unit and driver seat control unit. Refer to [LAN-397, "Circuit Check Between Differential Lock Control Unit and Driver Seat Control Unit"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	—	—

PKIB6727E



CAN SYSTEM (TYPE 12)

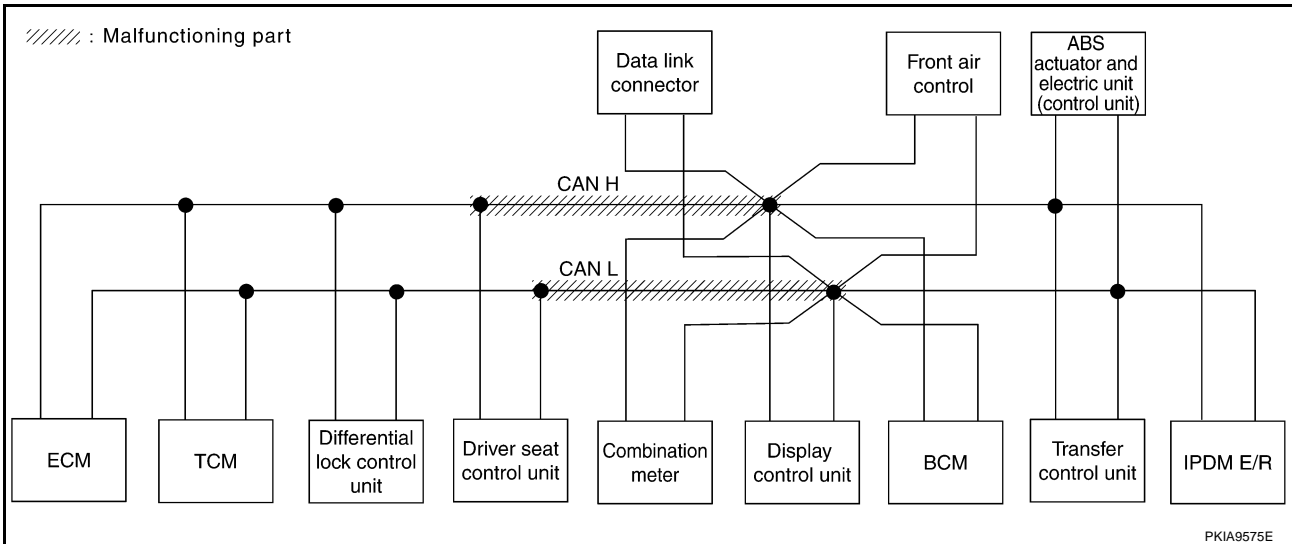
[CAN]

Case 3

Check harness between driver seat control unit and data link connector. Refer to [LAN-398, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	—	—

PKIB6728E



PKIA9575E

CAN SYSTEM (TYPE 12)

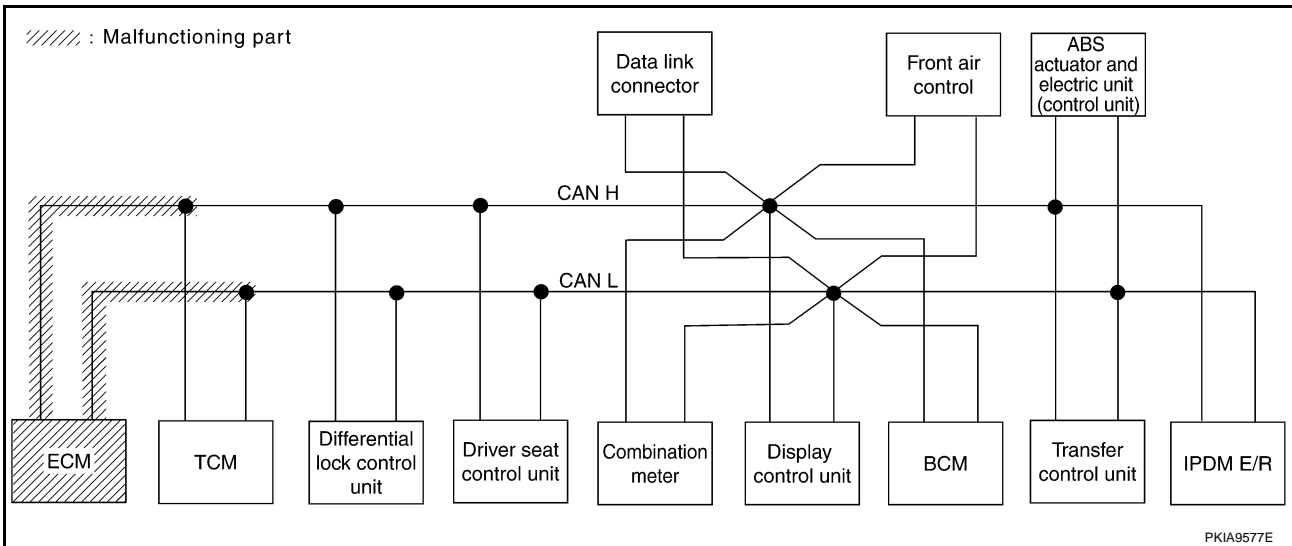
[CAN]

Case 5

Check ECM circuit. Refer to [LAN-399, "ECM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR															
		Initial diagnosis	Transmit diagnosis	Receive diagnosis													
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R				
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN	UNKWN	—	—	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	UNKWN	UNKWN	—	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	—	CAN CIRC 2	CAN CIRC 4	—	—	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—	—	—	—	—

PKIB6730E



PKIA9577E

CAN SYSTEM (TYPE 12)

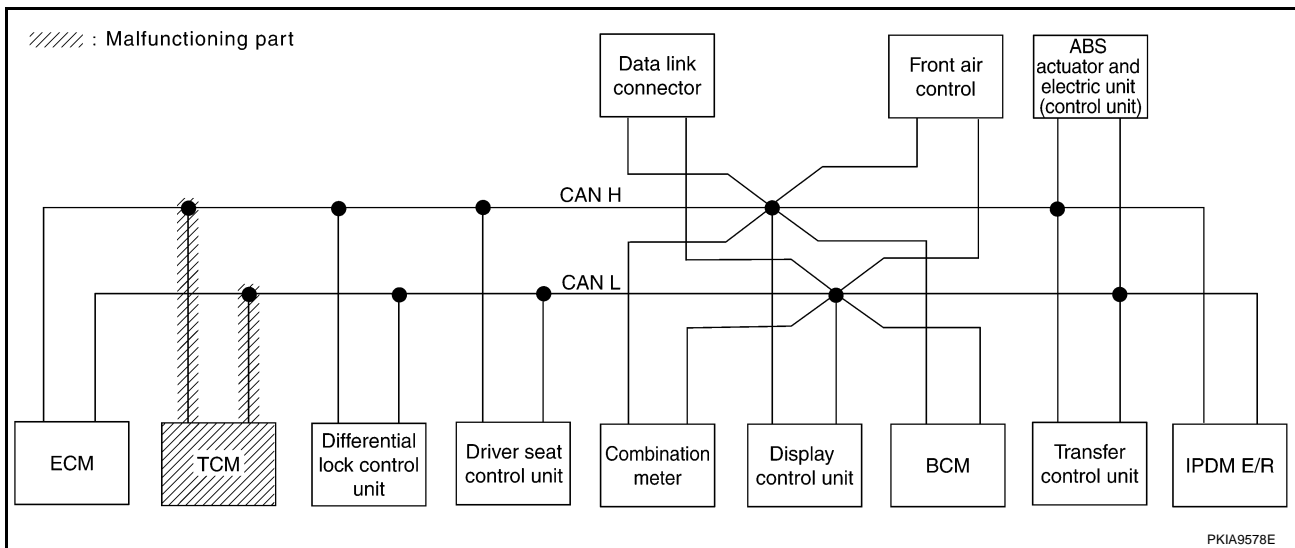
[CAN]

Case 6

Check TCM circuit. Refer to [LAN-400, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

PKIB6731E



PKIA9578E

CAN SYSTEM (TYPE 12)

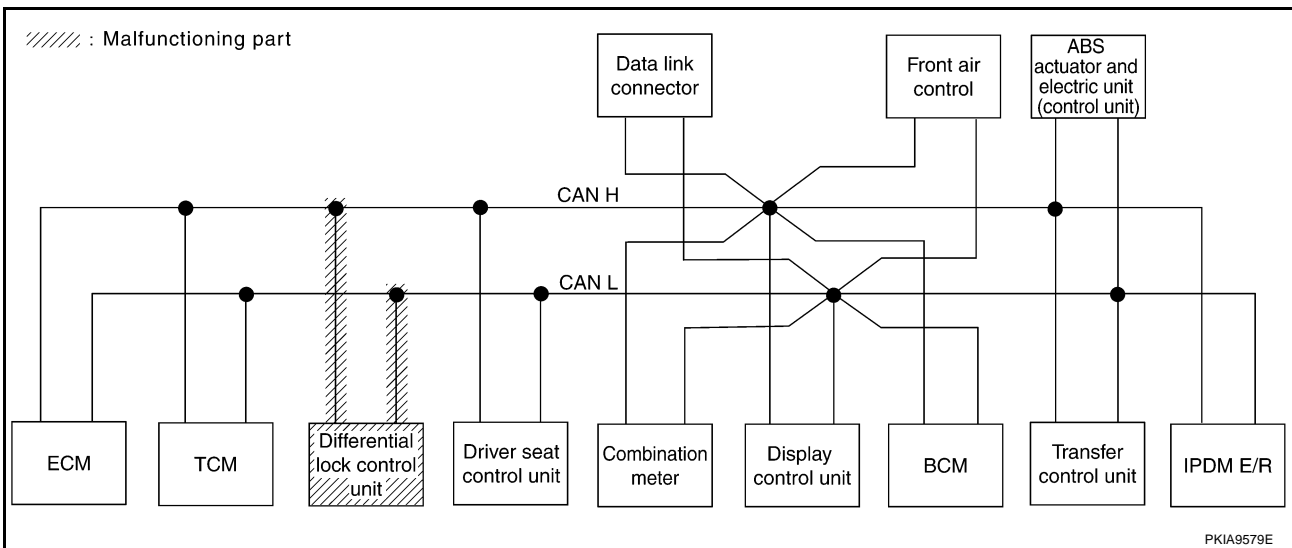
[CAN]

Case 7

Check differential lock control unit circuit. Refer to [LAN-400, "Differential Lock Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN ✓	UNKWN ✓	—	—	—	—	—	—	UNKWN ✓	UNKWN ✓	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

PKIB6732E



PKIA9579E

CAN SYSTEM (TYPE 12)

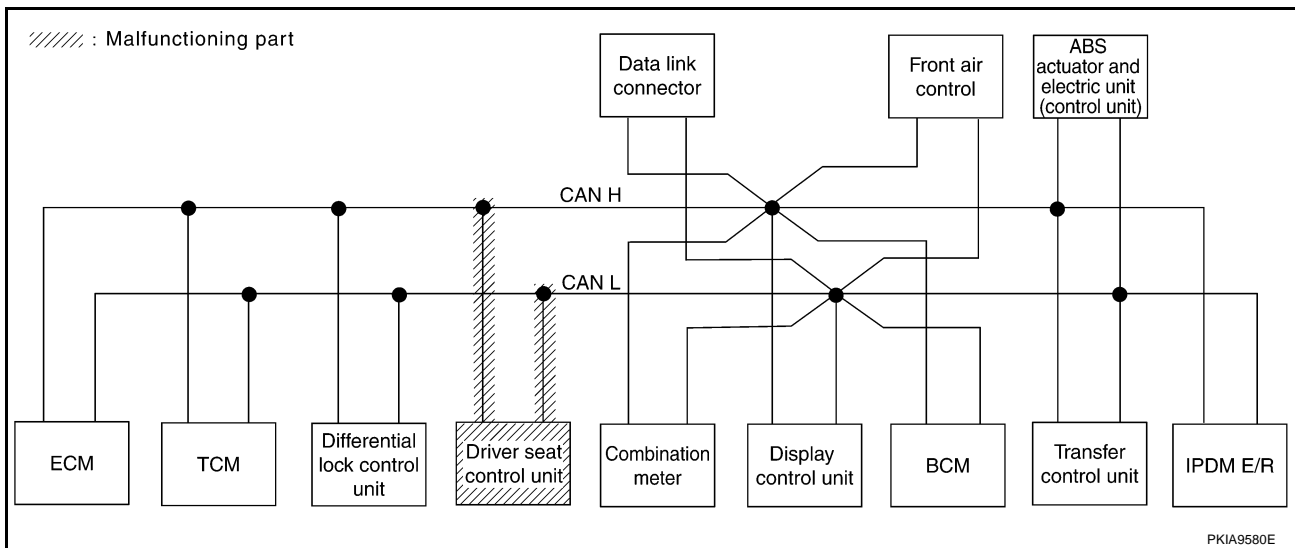
[CAN]

Case 8

Check driver seat control unit circuit. Refer to [LAN-401, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	—	—

PKIB6733E



PKIA9580E

CAN SYSTEM (TYPE 12)

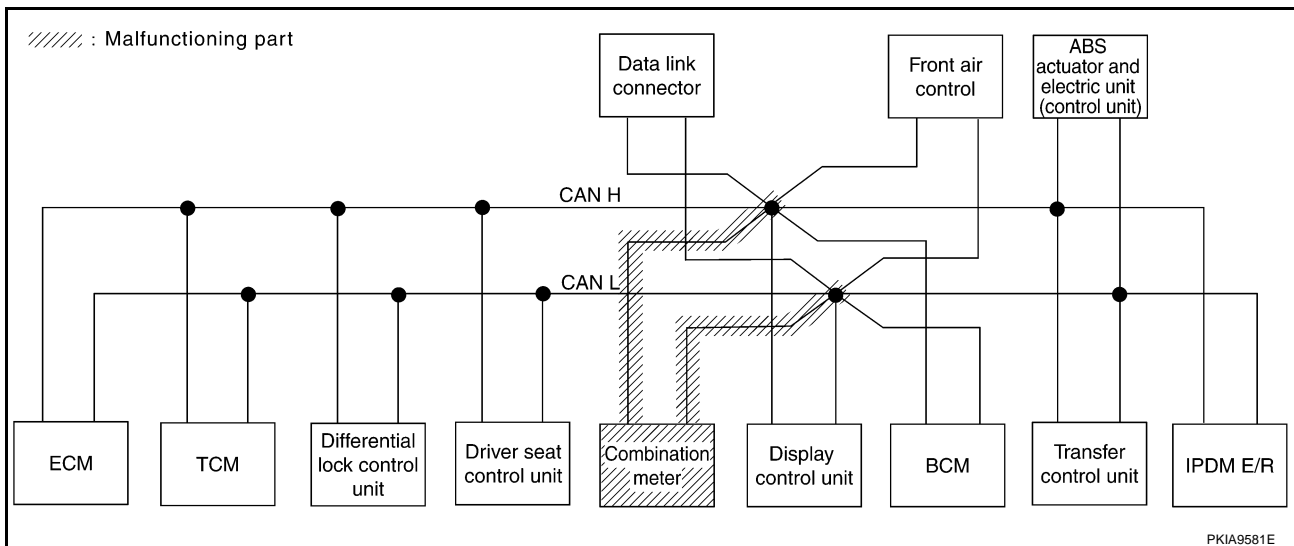
[CAN]

Case 9

Check combination meter circuit. Refer to [LAN-401, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

PKIB6734E



CAN SYSTEM (TYPE 12)

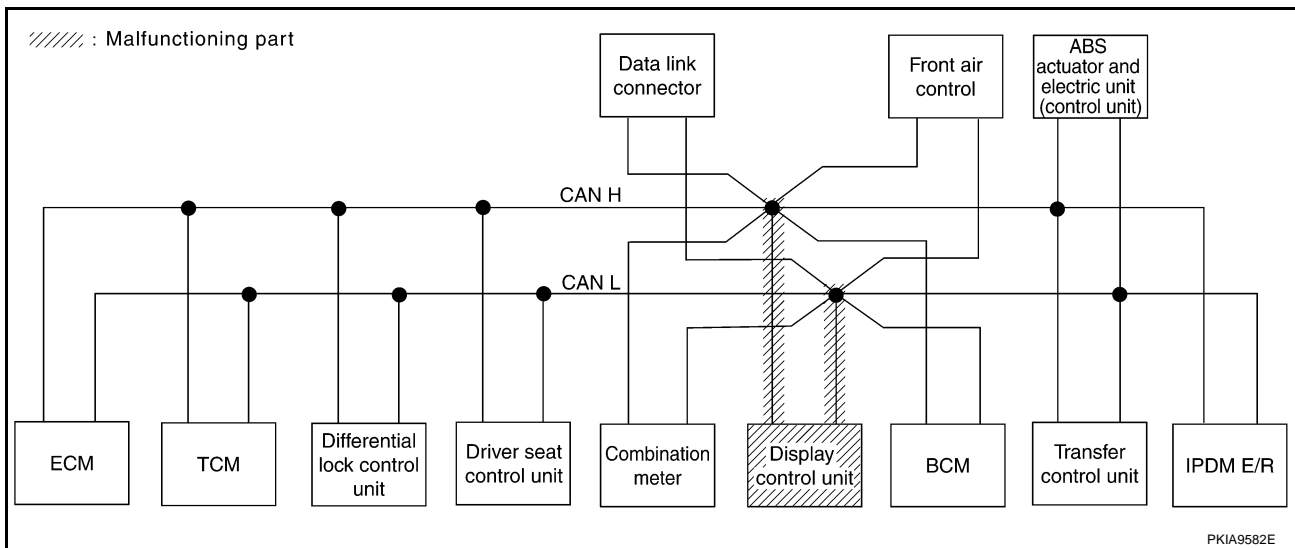
[CAN]

Case 10

Check display control unit circuit. Refer to [LAN-402, "Display Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	—	—

PKIB6735E



PKIA9582E

CAN SYSTEM (TYPE 12)

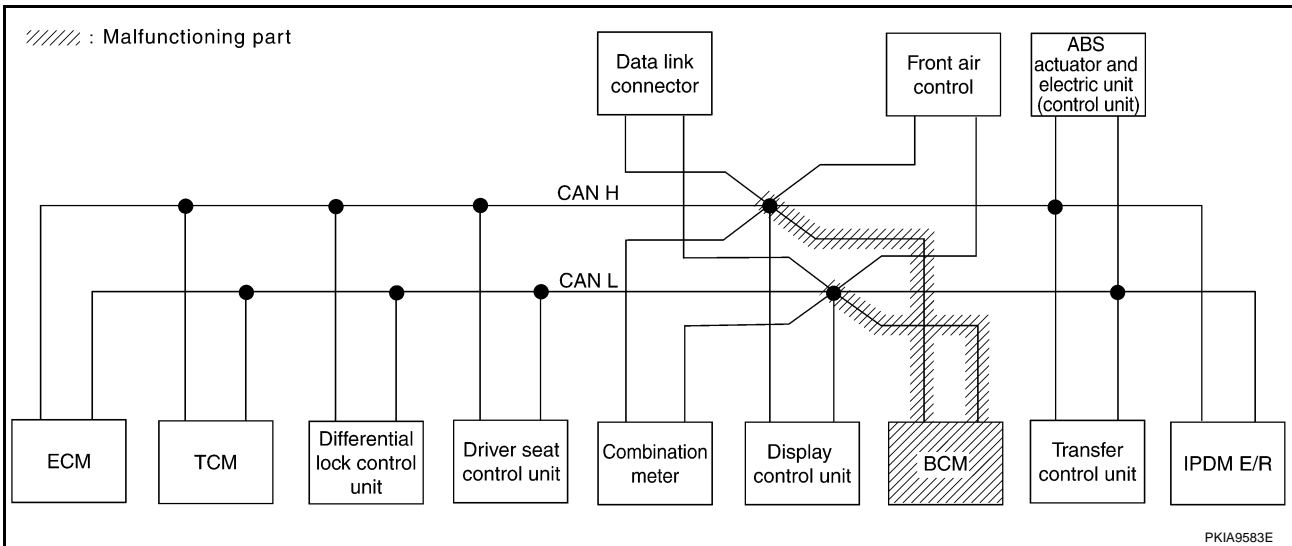
[CAN]

Case 11

Check BCM circuit. Refer to [LAN-402, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN ✓	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	UNKWN	UNKWN	—	
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN ✓	—	—	—	
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN ✓	—	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN ✓	—	—	—	—	—	

PKIB6736E



PKIA9583E

CAN SYSTEM (TYPE 12)

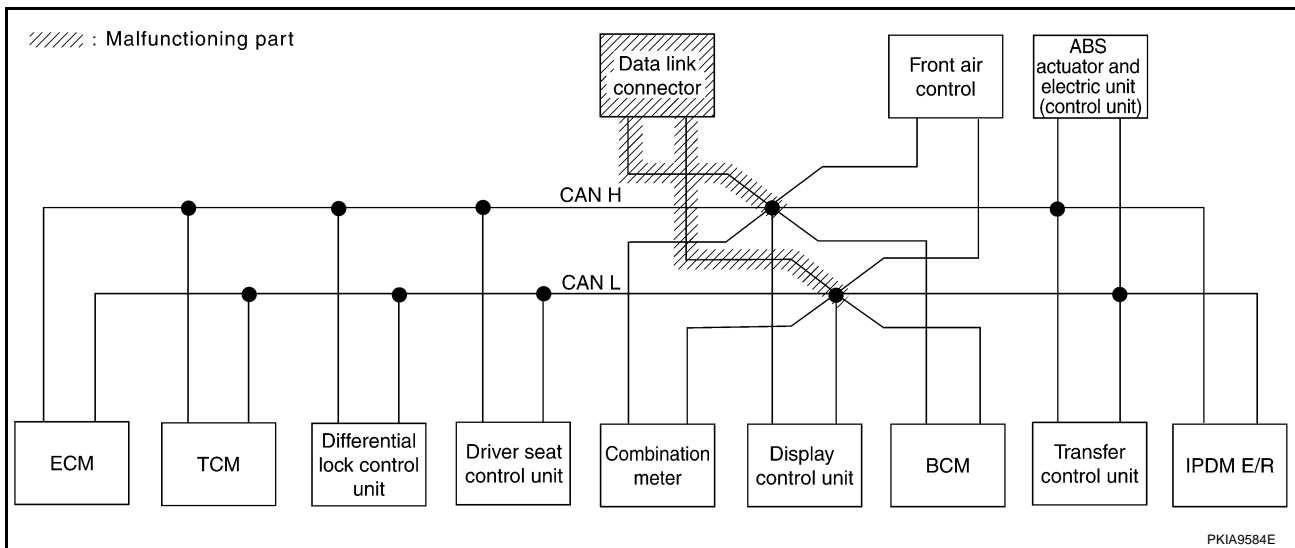
[CAN]

Case 12

Check data link connector circuit. Refer to [LAN-403, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	UNKWN	—
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	—	—

PKIB6737E



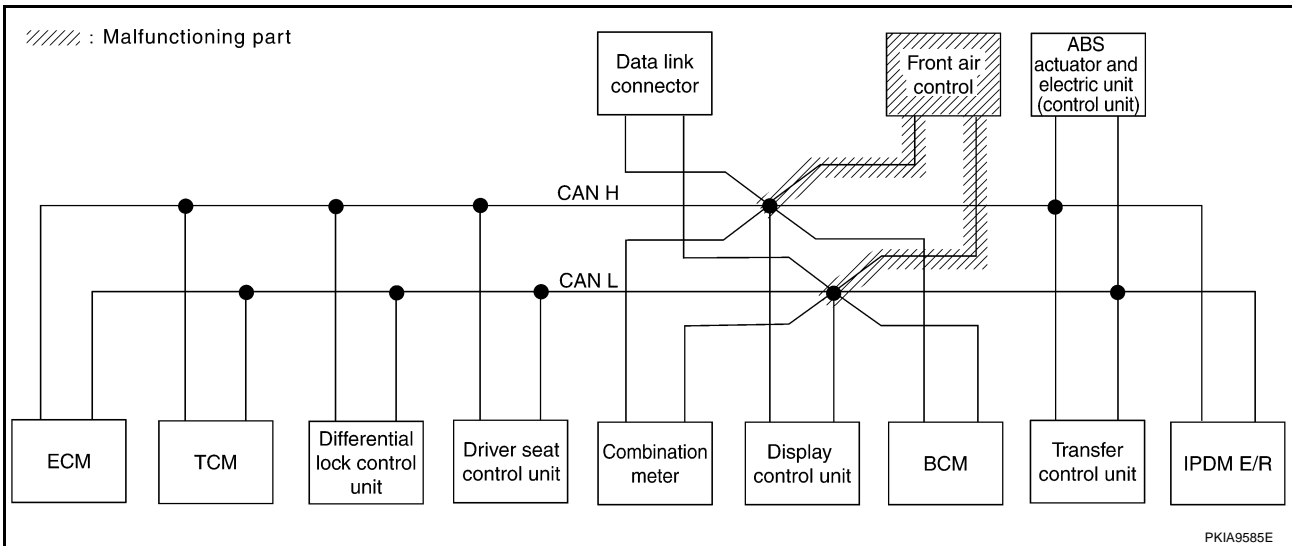
PKIA9584E

Case 13

Check front air control circuit. Refer to [LAN-403, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

PKIB6738E



CAN SYSTEM (TYPE 12)

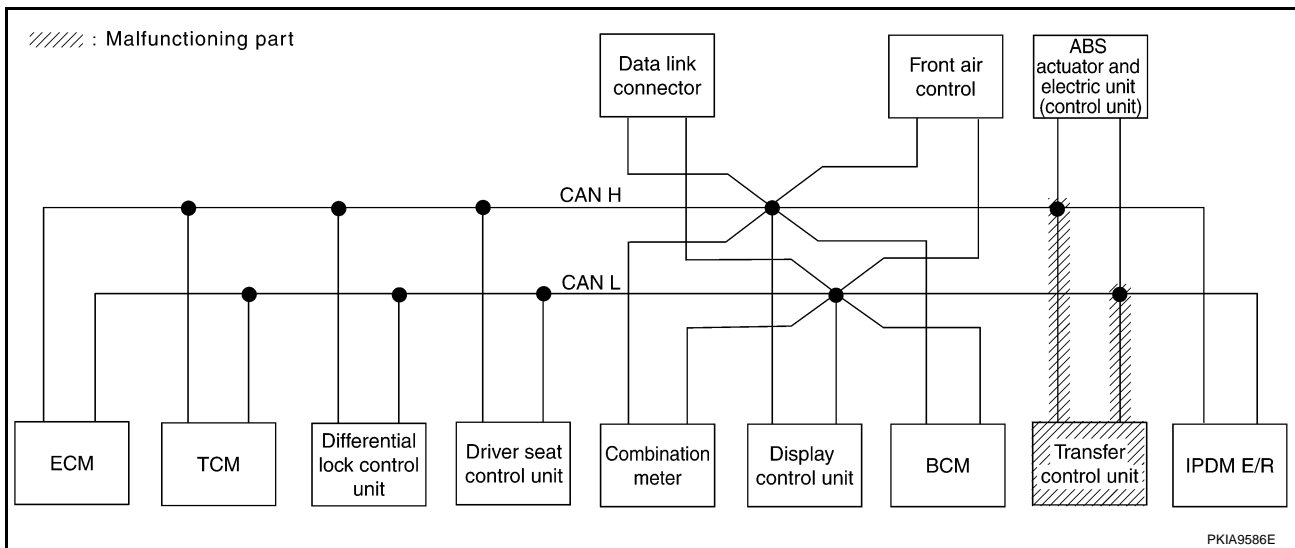
[CAN]

Case 14

Check transfer control unit circuit. Refer to [LAN-404, "Transfer Control Unit Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR												
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									IPDM E/R	
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS		
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—	—

PKIB6739E



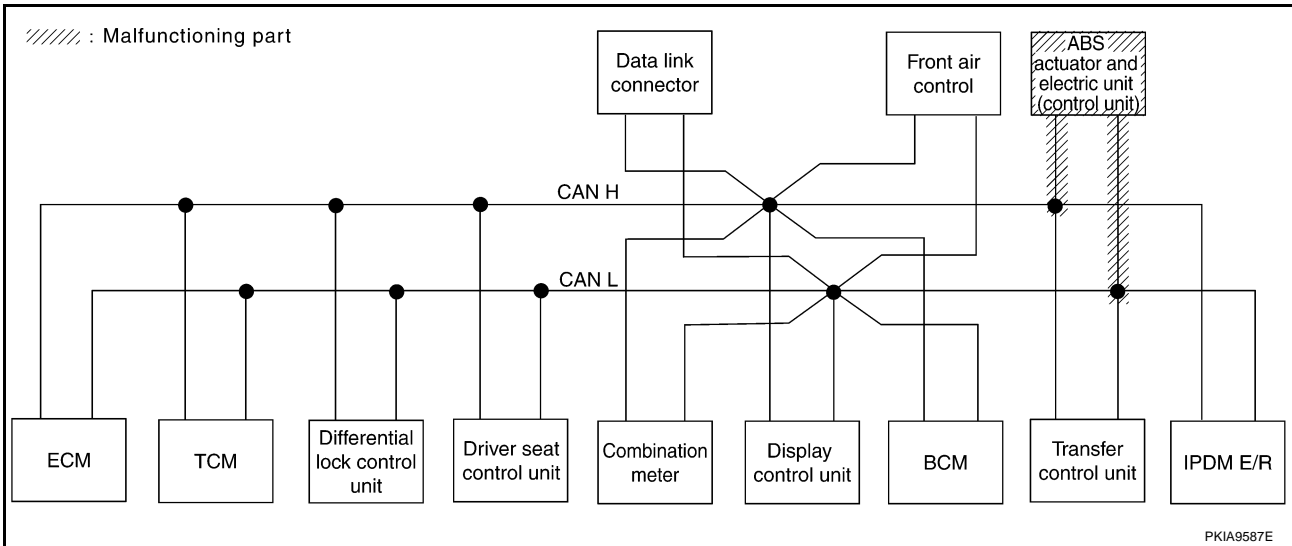
PKIA9586E

Case 15

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-404, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	UNKWN	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	✓	UNKWN	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

PKIB6740E



CAN SYSTEM (TYPE 12)

[CAN]

Case 17

Check CAN communication circuit. Refer to [LAN-406, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	UNKW N	UNKW N	—	—
DIFF LOCK	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	UNKW N	UNKW N	—	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	—	—	UNKW N	—
HVAC	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	—	—	—	UNKW N	—	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	UNKW N	—	—	—	—	—	UNKW N	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	—	—	—	—

PKIB6742E

Case 18

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-406, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR													
		Initial diagnosis	Transmit diagnosis	Receive diagnosis											
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	UNKW N	UNKW N
A/T	—	NG	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	UNKW N	UNKW N	—	—
DIFF LOCK	—	NG	UNKW N	UNKW N	—	—	—	—	—	—	—	UNKW N	UNKW N	—	—
AUTO DRIVE POS.	No indication	NG	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	UNKW N	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	—	CAN CIRC 7	—
BCM	No indication	NG	UNKW N	UNKW N	—	—	UNKW N	—	—	—	—	—	—	UNKW N	—
HVAC	No indication	—	UNKW N	UNKW N	—	—	—	UNKW N	UNKW N	—	—	—	UNKW N	—	—
ALL MODE AWD/4WD	—	NG	UNKW N	UNKW N	UNKW N	—	—	—	—	—	—	—	UNKW N	—	—
ABS	—	NG	UNKW N	UNKW N	UNKW N	UNKW N	—	—	—	—	—	UNKW N	—	—	—
IPDM E/R	No indication	—	UNKW N	UNKW N	—	—	—	—	UNKW N	—	—	—	—	—	—

PKIB6743E

Case 19

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-406, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR											
		Initial diagnosis	Transmit diagnosis	Receive diagnosis									
				ECM	TCM	DIFF LOCK	METER /M&A	DISPLAY	BCM /SEC	Front air control	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN ✓	—	—	UNKWN ✓	—	—	—	UNKWN ✓	UNKWN	—
DIFF LOCK	—	NG	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	—	UNKWN	—	UNKWN	—	—	—	—
Display control unit	—	CAN COMM	CAN CIRC 1	CAN CIRC 3	—	—	CAN CIRC 5	—	CAN CIRC 2	CAN CIRC 4	—	—	CAN CIRC 7
BCM	No indication	NG	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	—	UNKWN	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	UNKWN ✓	—	—	—	—	UNKWN ✓	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	—	—	UNKWN	—	—	—	—

PKIB6744E

Circuit Check Between TCM and Differential Lock Control Unit

UKS0020F

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

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

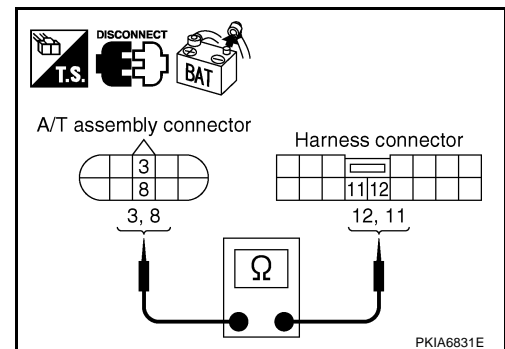
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

3 (L) - 12 (L) : Continuity should exist.
8 (P) - 11 (P) : Continuity should exist.

OK or NG

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



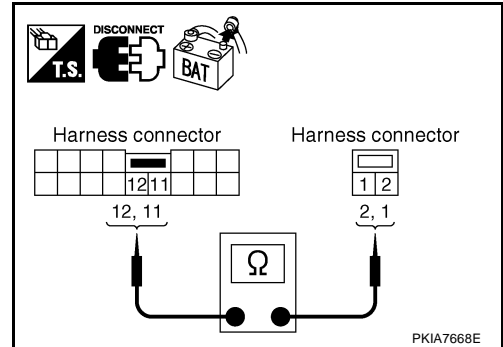
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



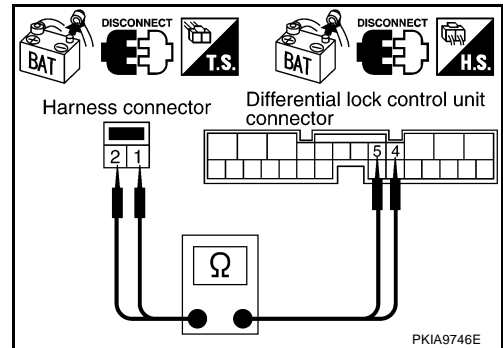
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and differential lock control unit harness connector B77 terminals 5 (L), 4 (P).

2 (L) - 5 (L) : Continuity should exist.
1 (P) - 4 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-374, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Differential Lock Control Unit and Driver Seat Control Unit

UKS001IN

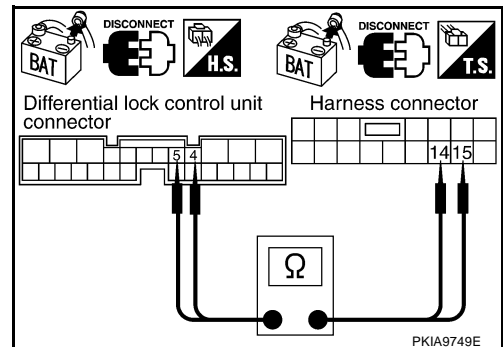
1. CHECK HARNESS FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect differential lock control unit connector and harness connector B37.
4. Check continuity between differential lock control unit harness connector B77 terminals 5 (L), 4 (P) and harness connector B37 terminals 15 (L), 14 (P).

5 (L) - 15 (L) : Continuity should exist.
4 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-374, "Work Flow"](#).
 NG >> Repair harness.



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Circuit Check Between Driver Seat Control Unit and Data Link Connector**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

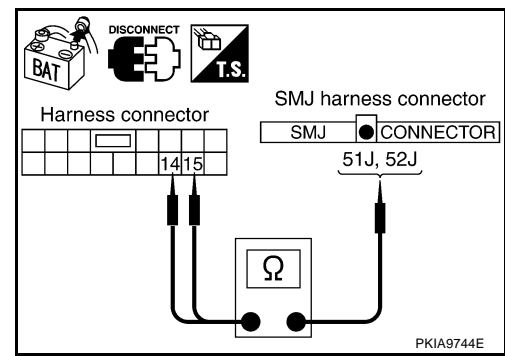
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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

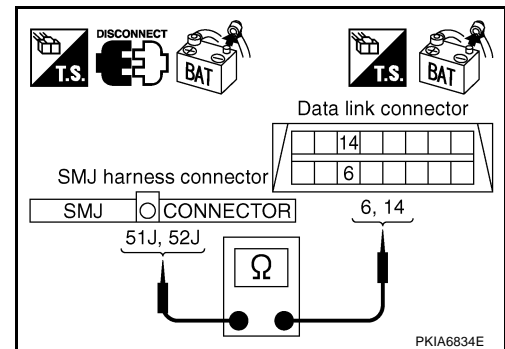
**3. CHECK HARNESS FOR OPEN CIRCUIT**

Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.
52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-374, "Work Flow"](#).
 NG >> Repair harness.

**Circuit Check Between Data Link Connector and IPDM E/R****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

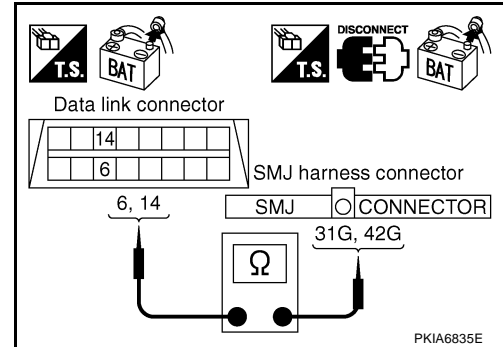
6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

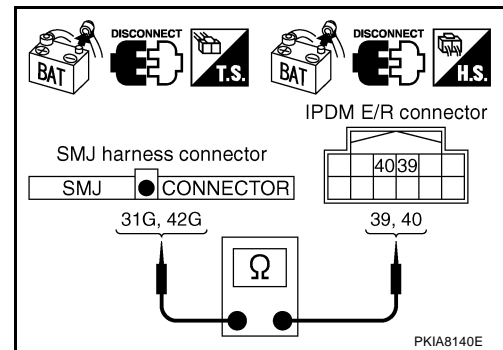
31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to [LAN-374, "Work Flow"](#).

NG >> Repair harness.



UKS0011Q

ECM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

LAN

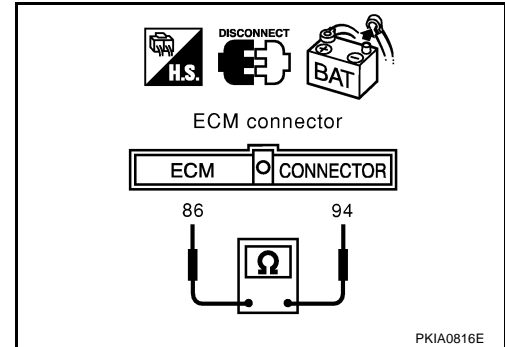
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.



UKS0011R

TCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

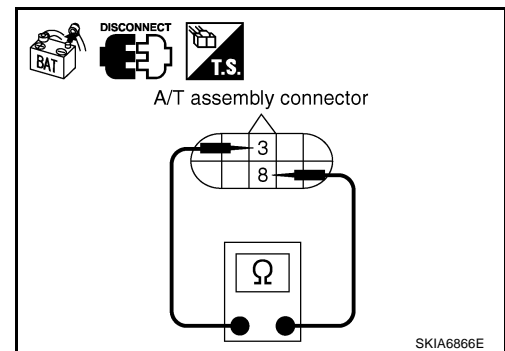
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



UKS0020G

Differential Lock Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of differential lock 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.

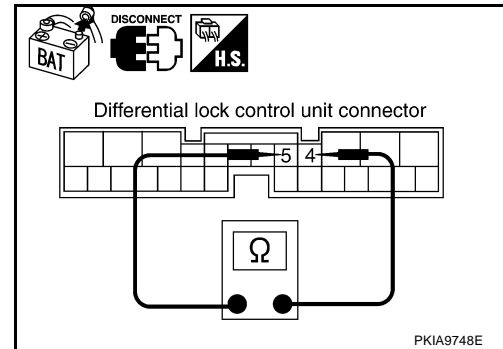
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect differential lock control unit connector.
2. Check resistance between differential lock control unit harness connector B77 terminals 5 (L) and 4 (P).

5 (L) - 4 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace differential lock control unit.
 NG >> Repair harness between differential lock control unit and harness connector B75.



UKS001S

Driver Seat Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

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

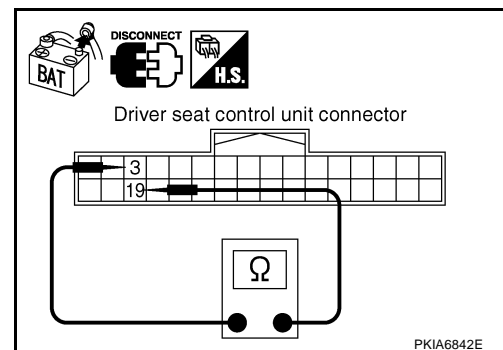
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace driver seat control unit.
 NG >> Repair harness between driver seat control unit and harness connector B69.



UKS001T

Combination Meter Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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.

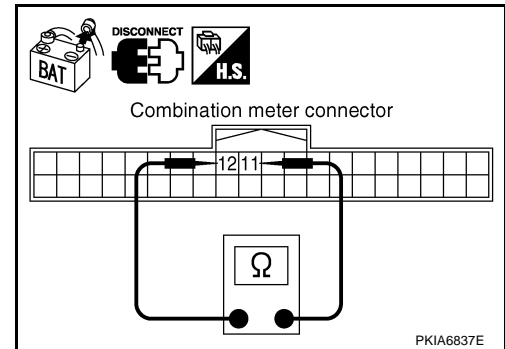
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace combination meter.
 NG >> Repair harness between combination meter and data link connector.



UKS001IU

Display Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of display 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.

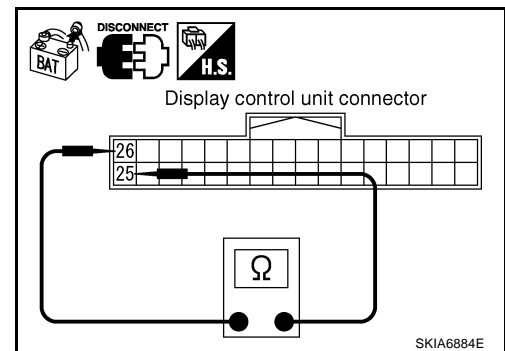
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect display control unit connector.
2. Check resistance between display control unit harness connector M95 terminals 25 (L) and 26 (P).

25 (L) - 26 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace display control unit.
 NG >> Repair harness between display control unit and data link connector.



UKS001IV

BCM Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

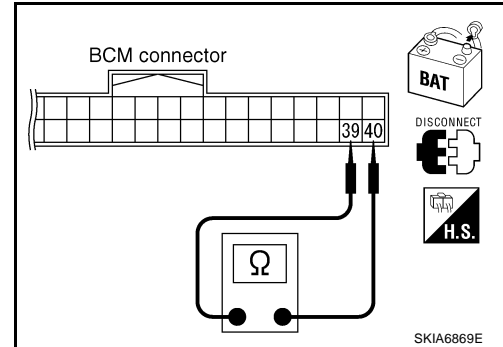
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#).
- NG >> Repair harness between BCM and data link connector.



UKS001IW

Data Link Connector Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

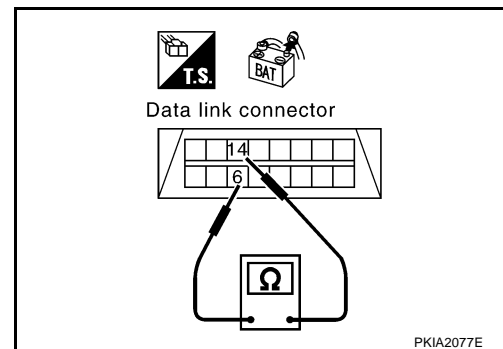
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-374, "Work Flow"](#).
- NG >> Repair harness between data link connector and combination meter.



UKS0020H

Front Air Control Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

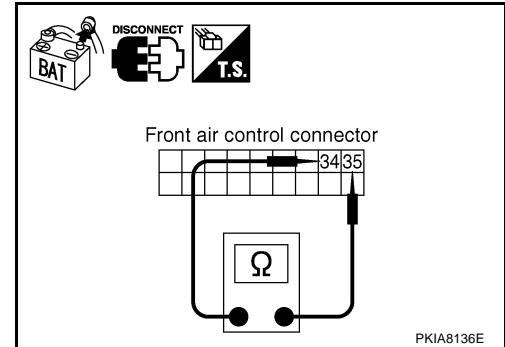
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



UKS001Z

Transfer Control Unit Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

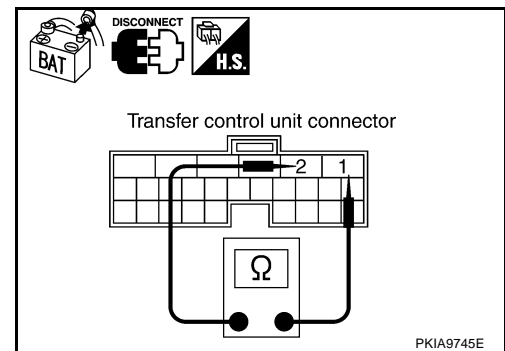
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.



UKS001J0

ABS Actuator and Electric Unit (Control Unit) Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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

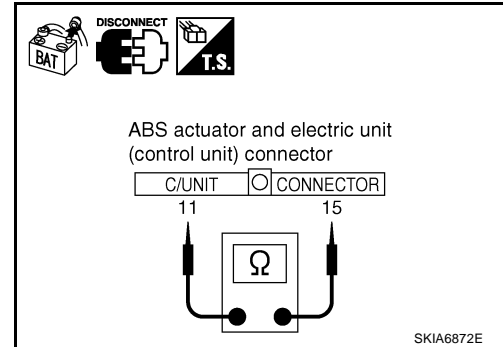
1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P)

: Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



UKS001J1

IPDM E/R Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

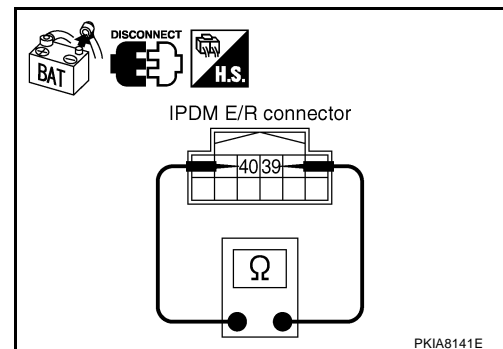
1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P)

: Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.



PKIA8141E

CAN Communication Circuit Check

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Differential lock control unit
 - Driver seat control unit
 - Combination meter
 - Display control unit
 - BCM
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

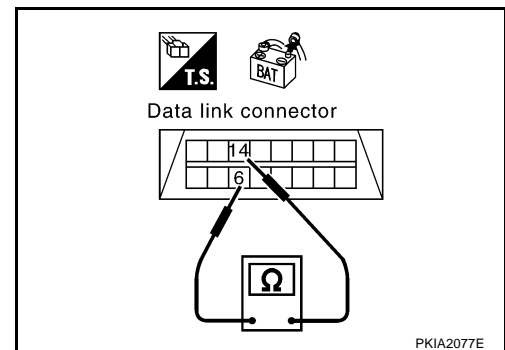
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

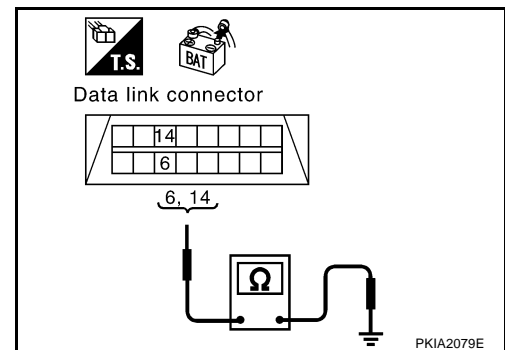
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-407, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).
 NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

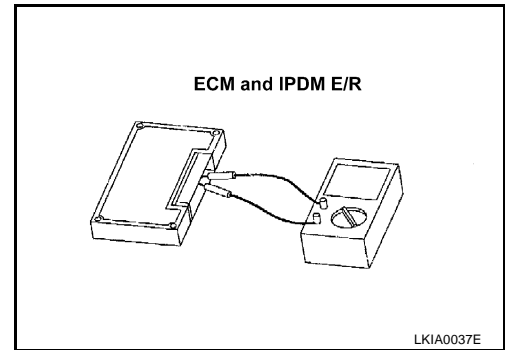
- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

Component Inspection

ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	



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CAN SYSTEM (TYPE 13)

PFP:23710

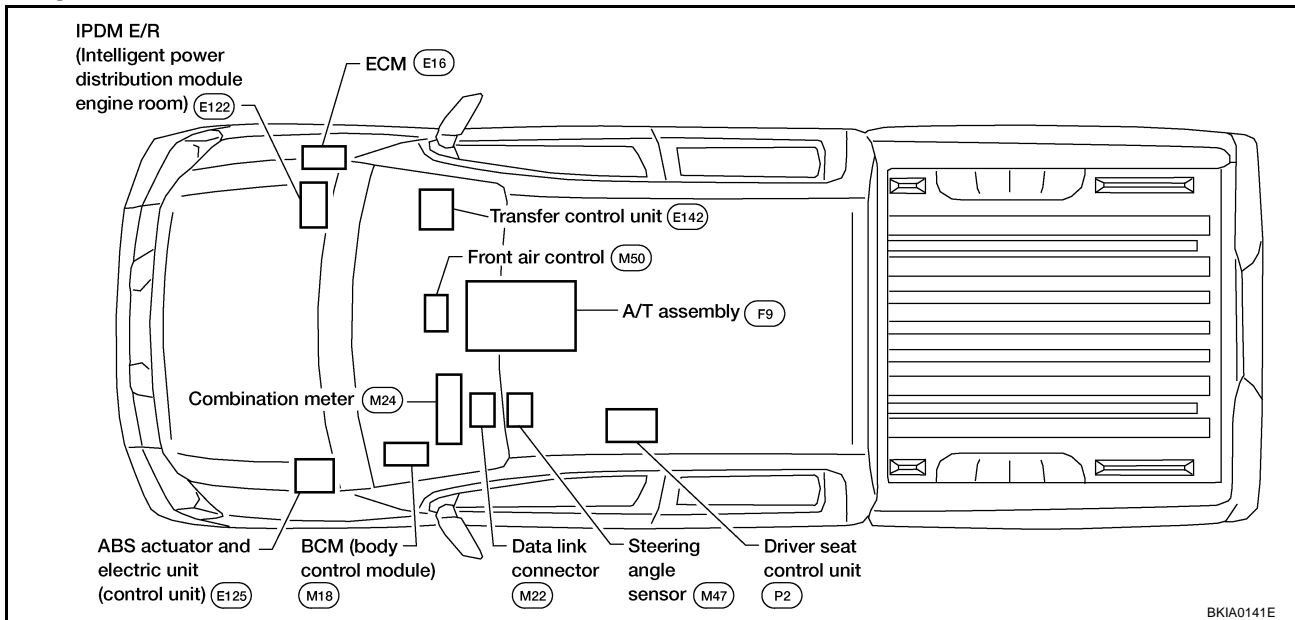
System Description

UKS0038H

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

UKS0038I

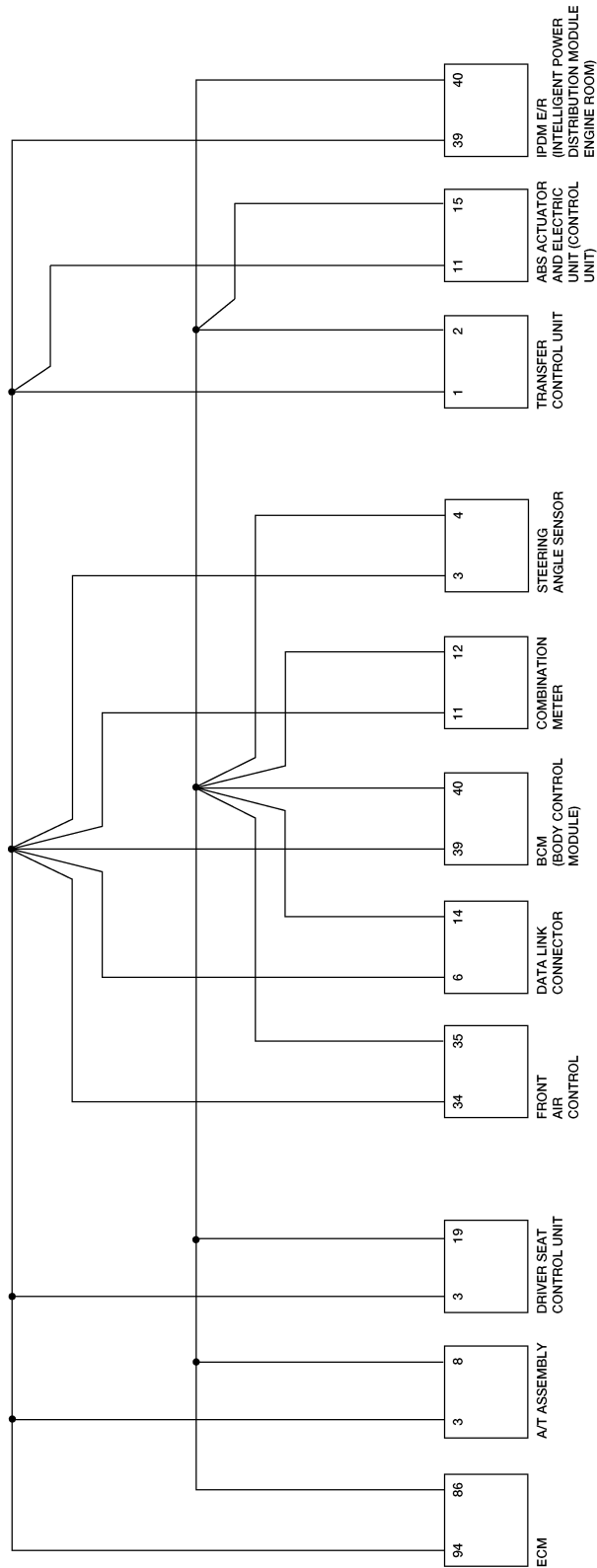


CAN SYSTEM (TYPE 13)

[CAN]

Schematic

UKS0038J



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BKWA0164E

CAN SYSTEM (TYPE 13)

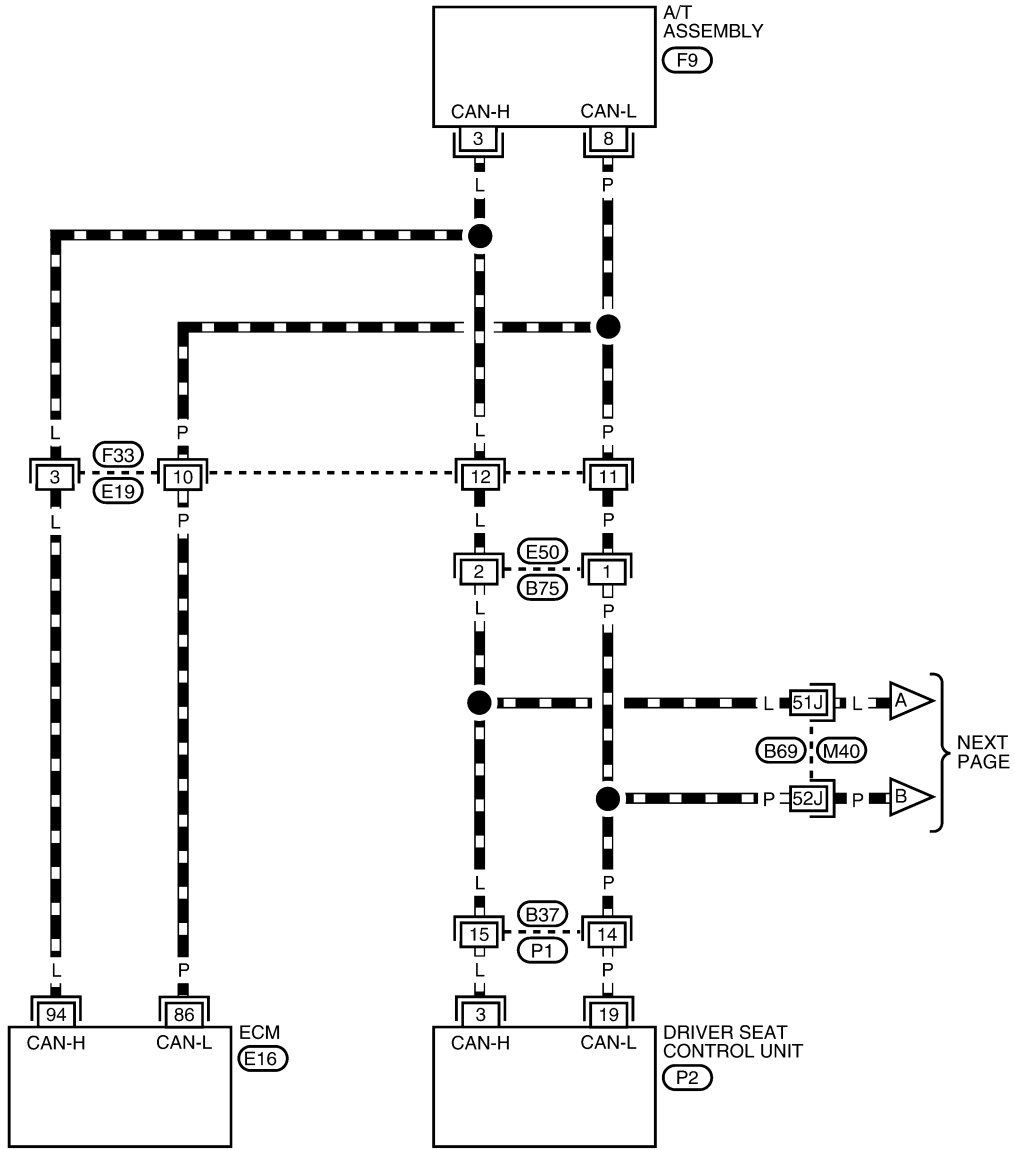
[CAN]

UKS0038K

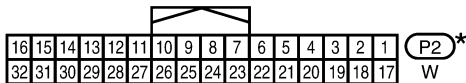
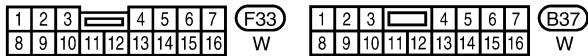
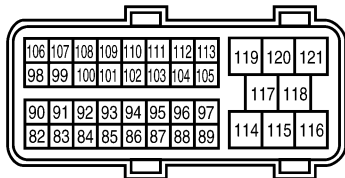
Wiring Diagram - CAN -

LAN-CAN-37

▬ : DATA LINE



NEXT PAGE



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

REFER TO THE FOLLOWING.

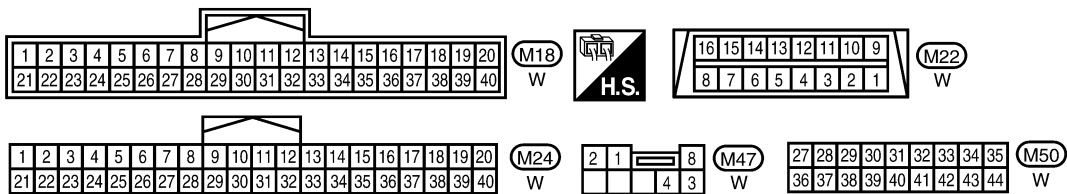
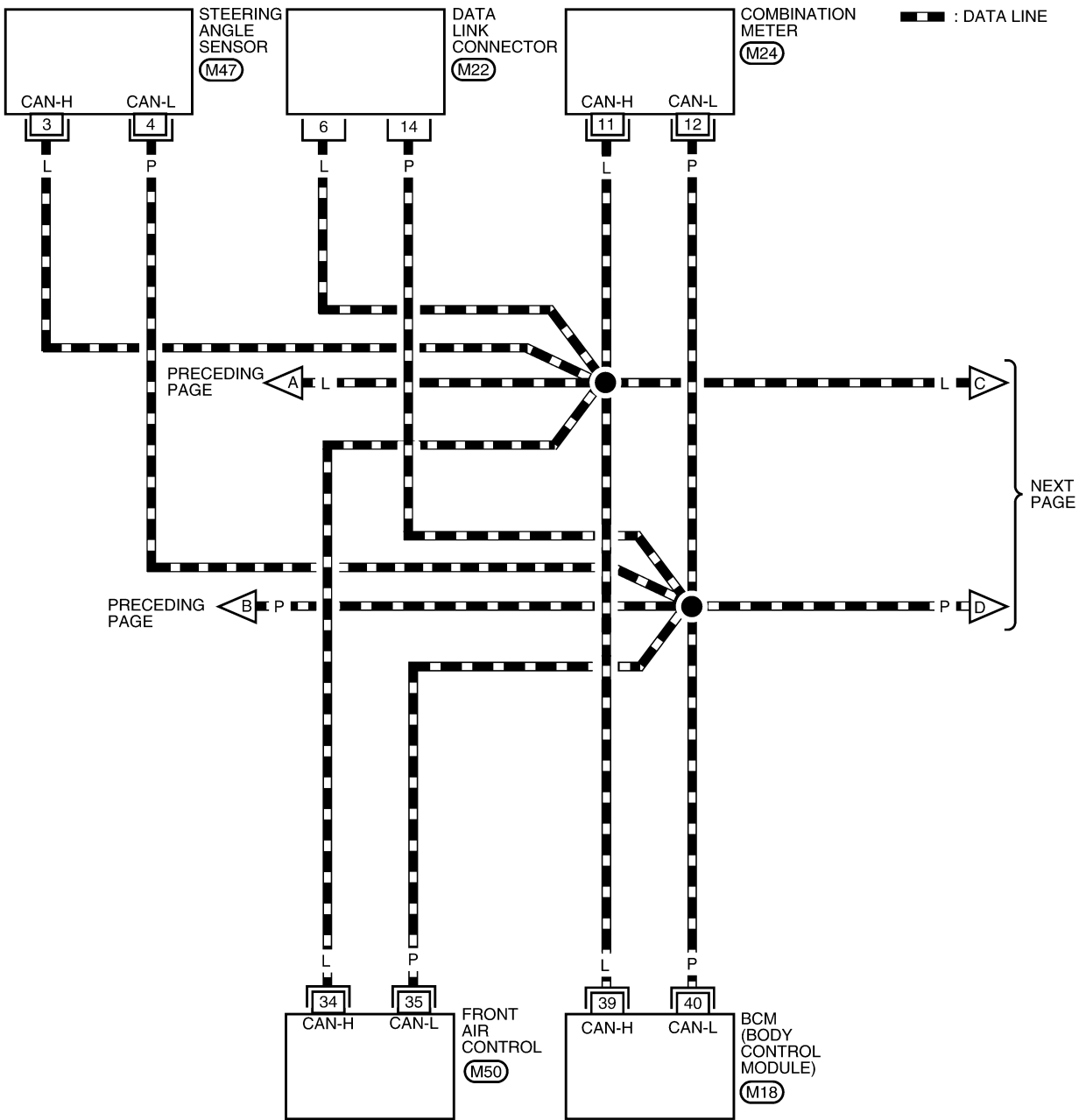
(M40) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0464E

CAN SYSTEM (TYPE 13)

[CAN]

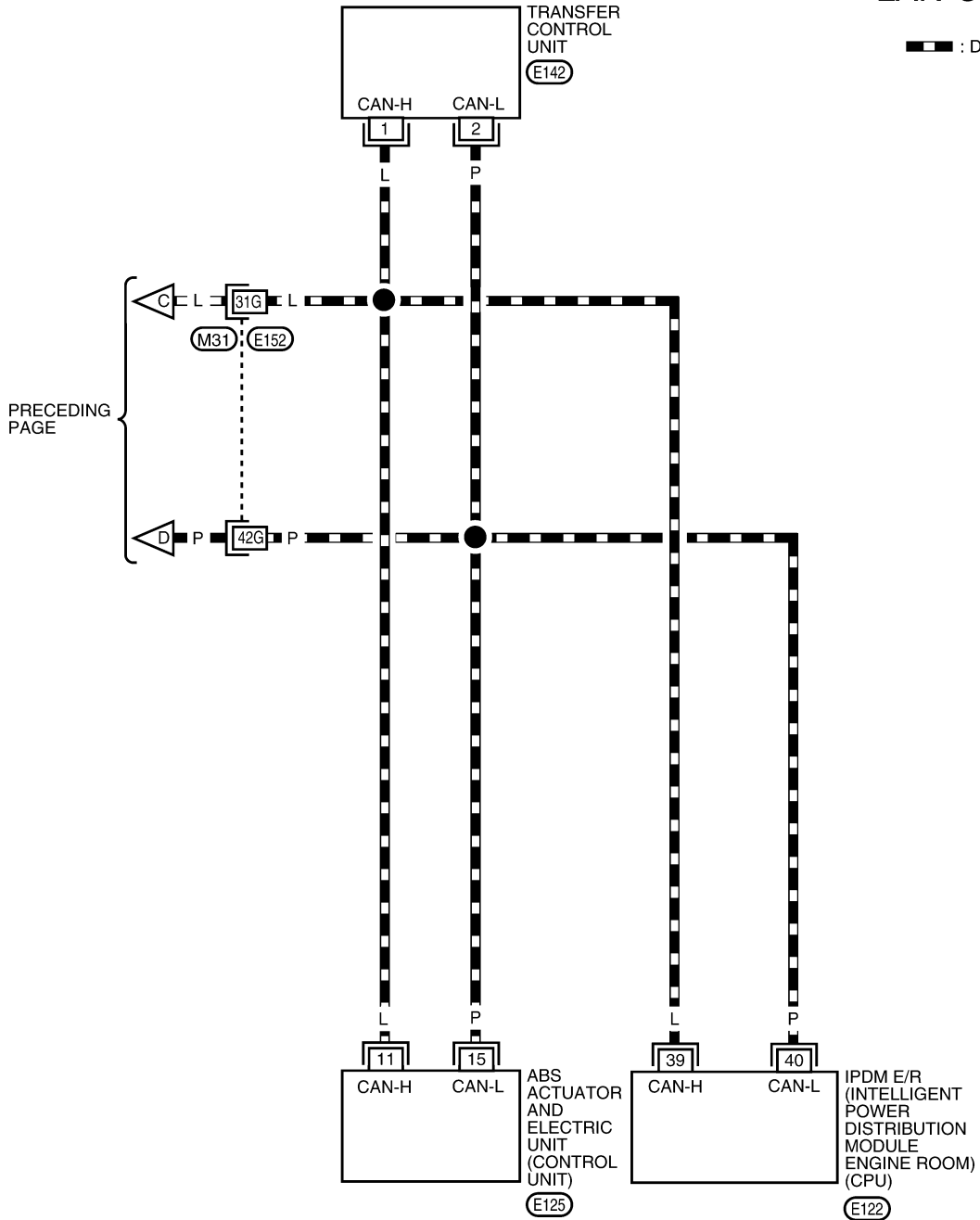
LAN-CAN-38



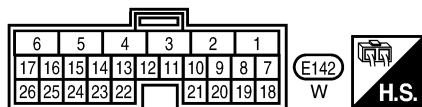
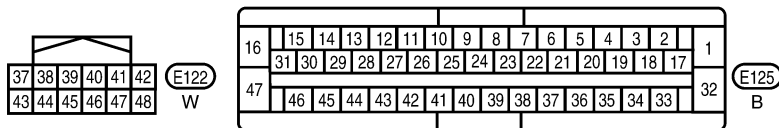
BKWA0465E

LAN-CAN-39

— : DATA LINE



PRECEDING PAGE



REFER TO THE FOLLOWING.

(M31) - SUPER MULTIPLE JUNCTION (SMJ)

BKWA0466E

Work Flow

- When there are no indications of "AUTO DRIVE POS.", "BCM", "HVAC" or "IPDM E/R" on "SELECT SYSTEM" display of CONSULT-II, print the "SELECT SYSTEM".

(Example)	NISSAN CONSULT-II ENGINE START (NISSAN BASED VHCL) START (RENAULT BASED VHCL) SUB MODE LIGHT COPY	➔	SELECT SYSTEM ENGINE A/T ABS AIR BAG BCM METER A/C AMP BACK LIGHT COPY	PKIA2093E
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- Print all the data of "SELF-DIAG RESULTS" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)	SELECT DIAG MODE WORK SUPPORT SELF-DIAG RESULTS DATA MONITOR DATA MONITOR (SPEC) CAN DIAG SUPPORT MNTR ACTIVE TEST Scroll Down BACK LIGHT COPY	➔	SELF-DIAG RESULTS DTC RESULTS TIME CAN COMM CIRCUIT [U1000] 0 F.F.DATA ERASE PRINT MODE BACK LIGHT COPY	PKIA8260E
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- Print all the data of "CAN DIAG SUPPORT MNTR" for "ENGINE", "A/T", "AUTO DRIVE POS.", "BCM", "HVAC", "ALL MODE AWD/4WD", "ABS" and "IPDM E/R" displayed on CONSULT-II.

(Example)	SELECT DIAG MODE WORK SUPPORT SELF-DIAG RESULTS DATA MONITOR DATA MONITOR (SPEC) CAN DIAG SUPPORT MNTR ACTIVE TEST Scroll Down BACK LIGHT COPY	➔	CAN DIAG SUPPORT MNTR ENGINE PRSNT INITIAL DIAG OK TRANSMIT DIAG OK TCM OK VDC/TCS/ABS OK METER/M&A OK ICC UNKWN BCM/SEC OK IPDM E/R OK AWD/4WD/e4WD UNKWN PRINT Scroll Down MODE BACK LIGHT COPY	PKIA8343E
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- Attach the printed sheet of "SELECT SYSTEM", "SELF-DIAG RESULTS" and "CAN DIAG SUPPORT MNTR" onto the check sheet. Refer to [LAN-414, "CHECK SHEET"](#).
- Based on the indications of "SELECT SYSTEM" and the results of "CAN DIAG SUPPORT MNTR", puts a check mark onto the items with "No indication", "NG", or "UNKWN" in the check sheet table. Refer to [LAN-414, "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.
- The "CAN DIAG SUPPORT MNTR" items, which are not in check sheet table, are not related to diagnostic procedure on service manual.
So it is not necessary to check the status of the "CAN DIAG SUPPORT MNTR" items not in check sheet table.

- According to the check sheet results (example), start inspection. Refer to [LAN-416, "CHECK SHEET RESULTS \(EXAMPLE\)"](#).

CAN SYSTEM (TYPE 13)

[CAN]

CHECK SHEET

NOTE:

If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" 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	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

Symptoms :

Attach copy of
SELECT SYSTEM

Attach copy of
SELECT SYSTEM

CAN SYSTEM (TYPE 13)

[CAN]

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

Attach copy of ENGINE SELF-DIAG RESULTS	Attach copy of A/T SELF-DIAG RESULTS	Attach copy of AUTO DRIVE POS. SELF-DIAG RESULTS	Attach copy of BCM SELF-DIAG RESULTS
Attach copy of HVAC SELF-DIAG RESULTS	Attach copy of ALL MODE AWD/4WD SELF-DIAG RESULTS	Attach copy of ABS SELF-DIAG RESULTS	Attach copy of IPDM E/R SELF-DIAG RESULTS
Attach copy of ENGINE CAN DIAG SUPPORT MNTR	Attach copy of A/T CAN DIAG SUPPORT MNTR	Attach copy of AUTO DRIVE POS. CAN DIAG SUPPORT MNTR	Attach copy of BCM CAN DIAG SUPPORT MNTR
Attach copy of HVAC CAN DIAG SUPPORT MNTR	Attach copy of ALL MODE AWD/4WD CAN DIAG SUPPORT MNTR	Attach copy of ABS CAN DIAG SUPPORT MNTR	Attach copy of IPDM E/R CAN DIAG SUPPORT MNTR

LAN

PKIB6773E

CHECK SHEET RESULTS (EXAMPLE)

NOTE:

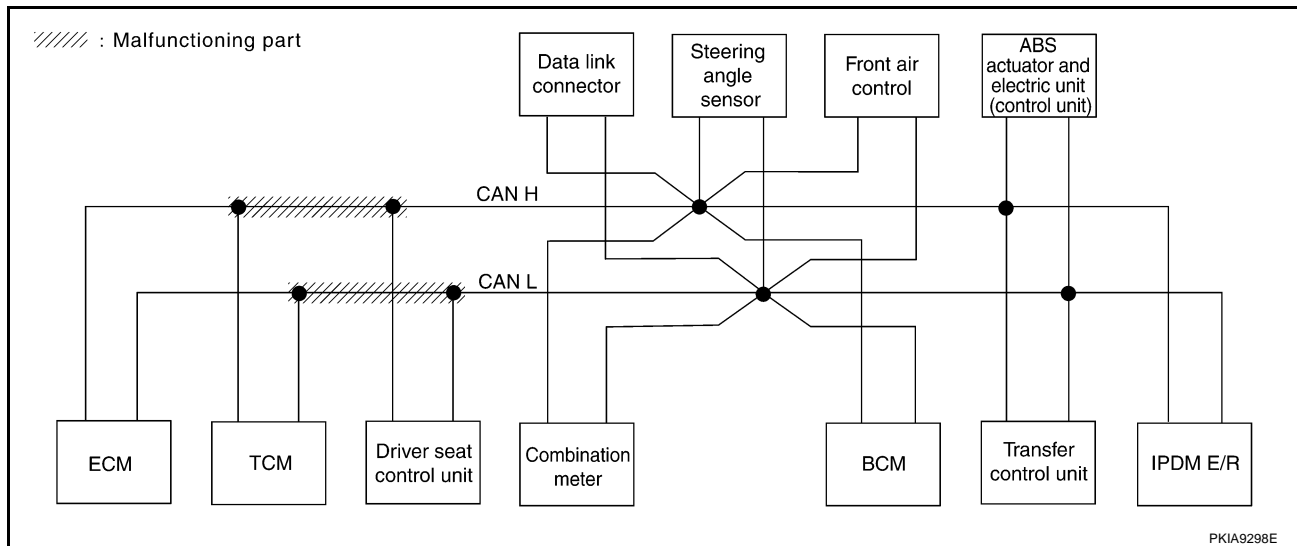
If "NG" is displayed on "INITIAL DIAG (Initial diagnosis)" for the diagnosed control unit, replace the control unit.

Case 1

Check harness between TCM and driver seat control unit. Refer to [LAN-431, "Circuit Check Between TCM and Driver Seat Control Unit"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	—	

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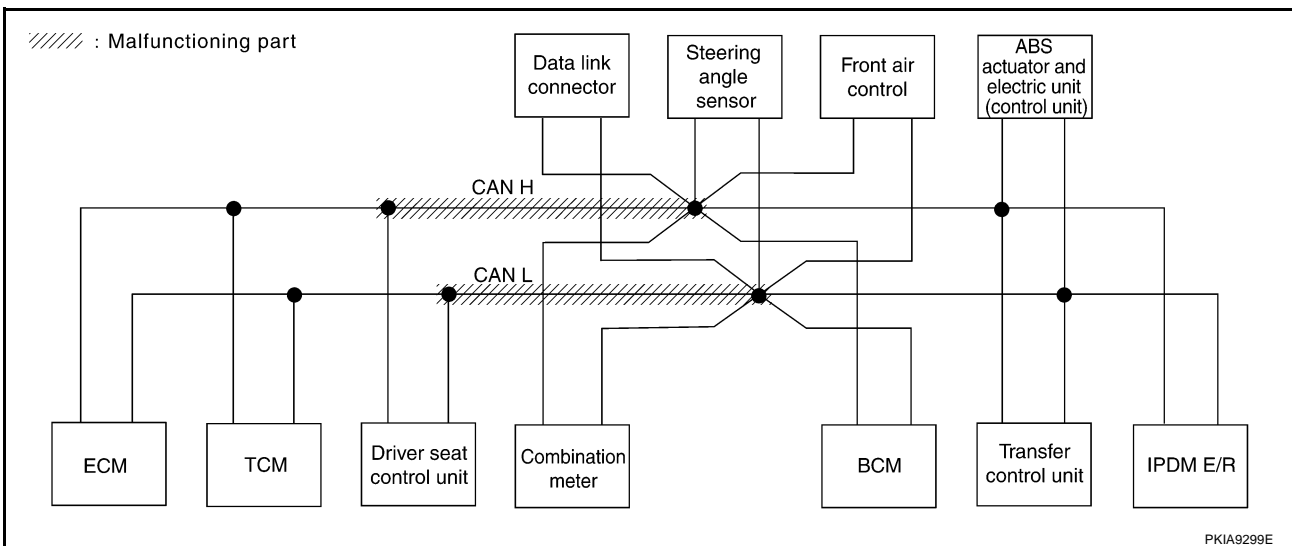


Case 2

Check harness between driver seat control unit and data link connector. Refer to [LAN-432, "Circuit Check Between Driver Seat Control Unit and Data Link Connector"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN ✓	—	UNKWN ✓	UNKWN ✓	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN ✓	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN ✓	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN ✓	—	—	UNKWN	—	—	—	—	

PKIB6747E



CAN SYSTEM (TYPE 13)

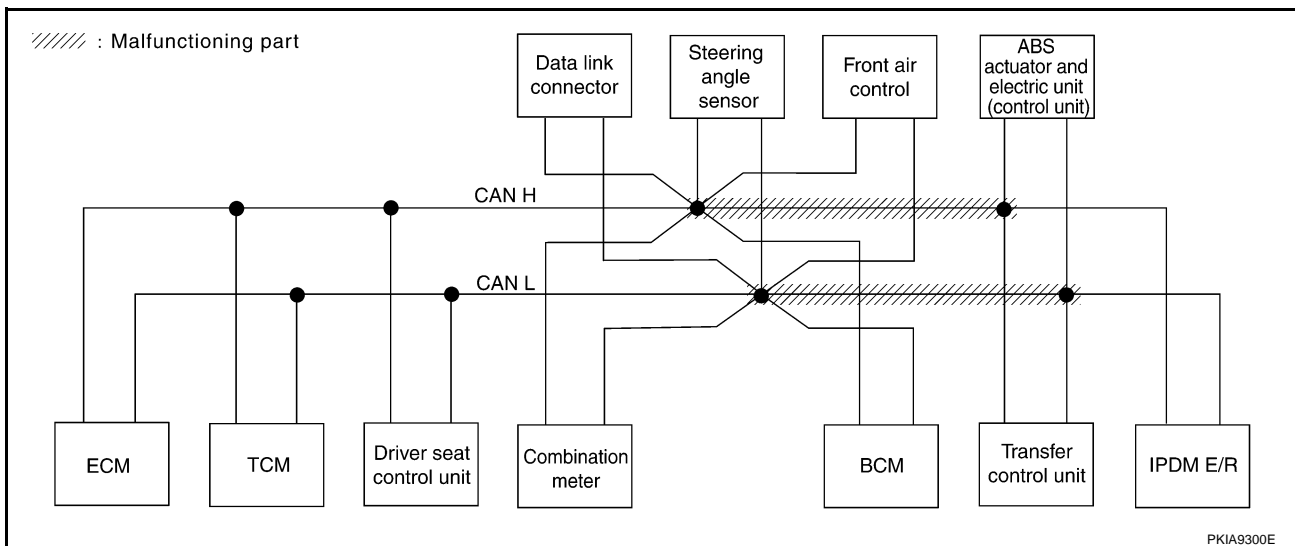
[CAN]

Case 3

Check harness between data link connector and IPDM E/R. Refer to [LAN-433, "Circuit Check Between Data Link Connector and IPDM E/R"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR									
		Initial diagnosis	Transmit diagnosis	Receive diagnosis							
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—

PKIB6748E



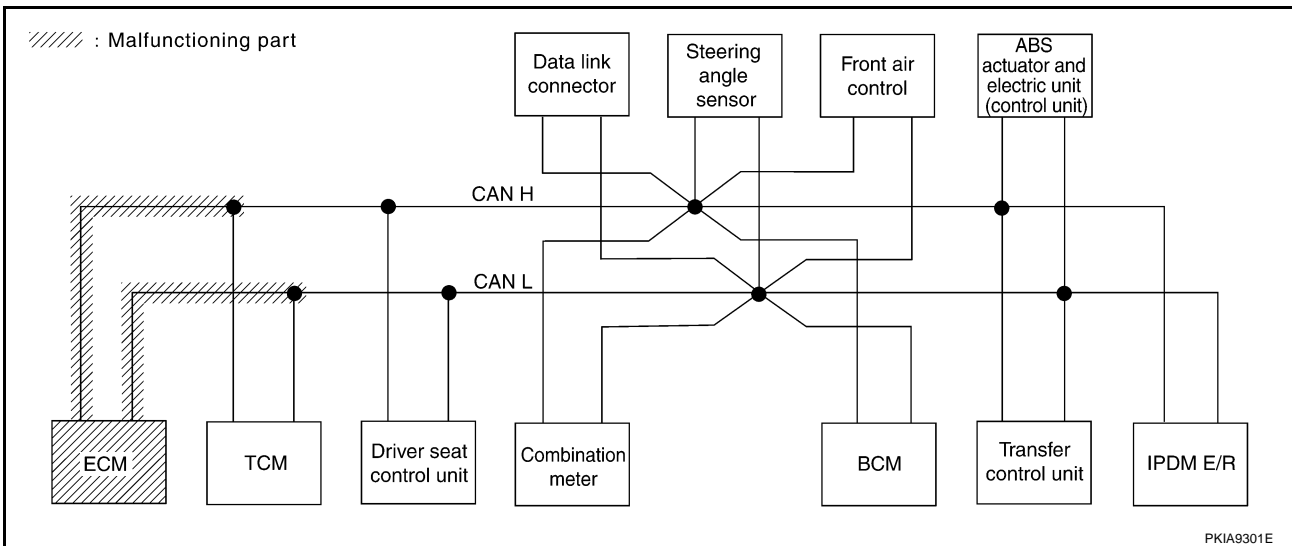
PKIA9300E

Case 4

Check ECM circuit. Refer to [LAN-434, "ECM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	
A/T	—	NG	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	
AUTO DRIVE POS.	No indication	NG	UNKW [✓] N	—	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	—	
BCM	No indication	NG	UNKW [✓] N	UNKW [✓] N	—	UNKW [✓] N	—	—	—	—	UNKW [✓] N	
HVAC	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	UNKW [✓] N	—	
ALL MODE AWD/4WD	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	—	—	UNKW [✓] N	—	
ABS	—	NG	UNKW [✓] N	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	UNKW [✓] N	—	—	
IPDM E/R	No indication	—	UNKW [✓] N	UNKW [✓] N	—	—	UNKW [✓] N	—	—	—	—	

PKIB6749E

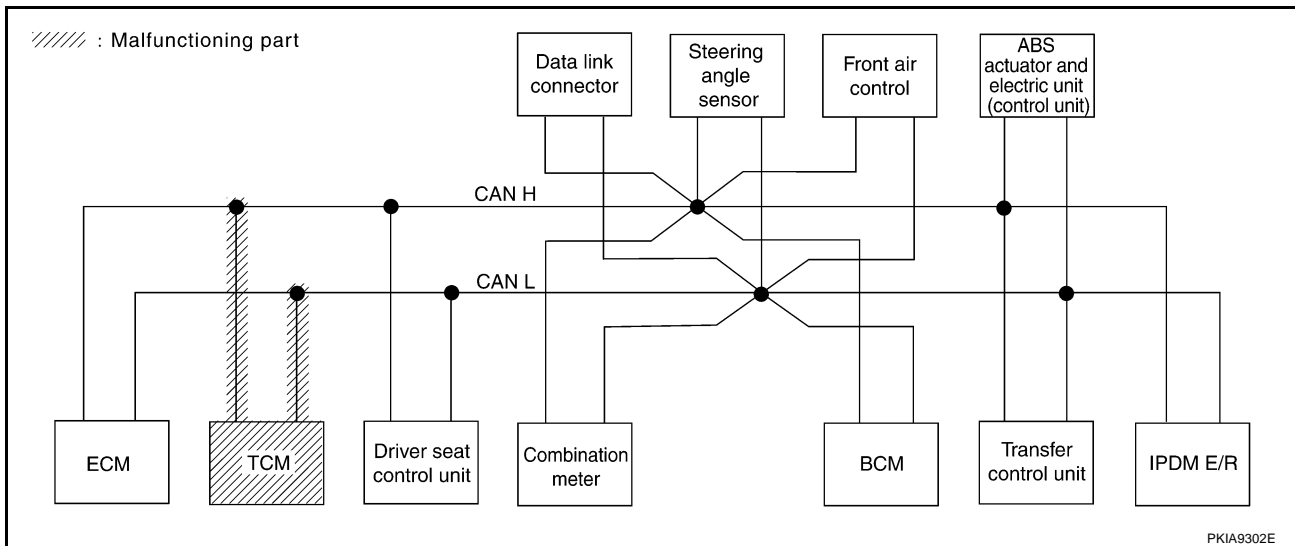


Case 5

Check TCM circuit. Refer to [LAN-434, "TCM Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN ✓	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN ✓	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN ✓	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6750E

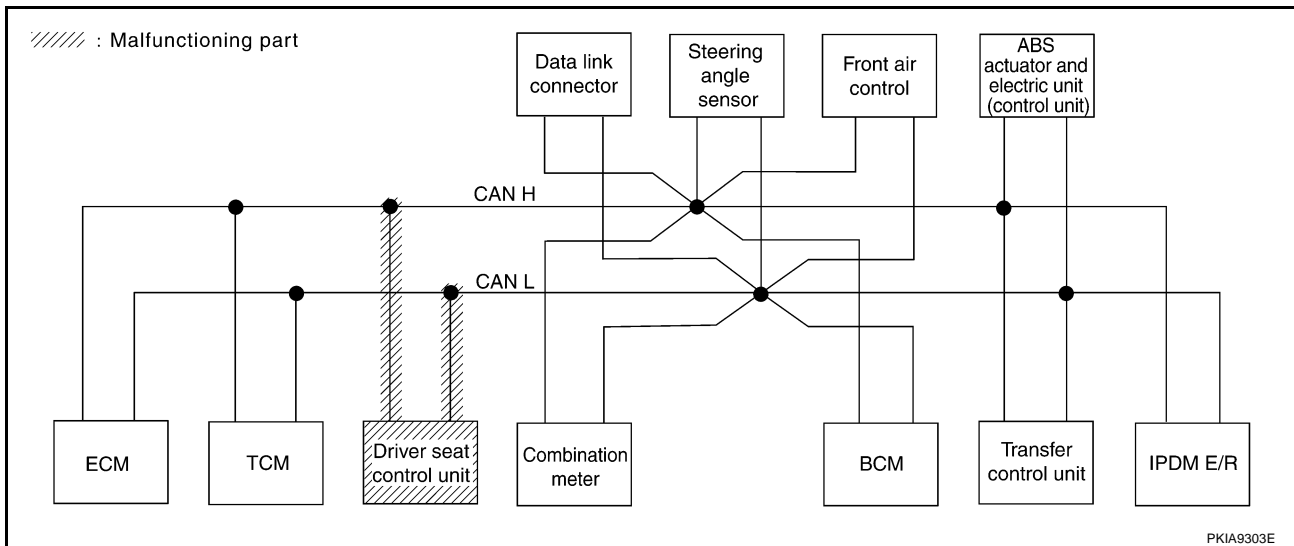


Case 6

Check driver seat control unit circuit. Refer to [LAN-435, "Driver Seat Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6751E

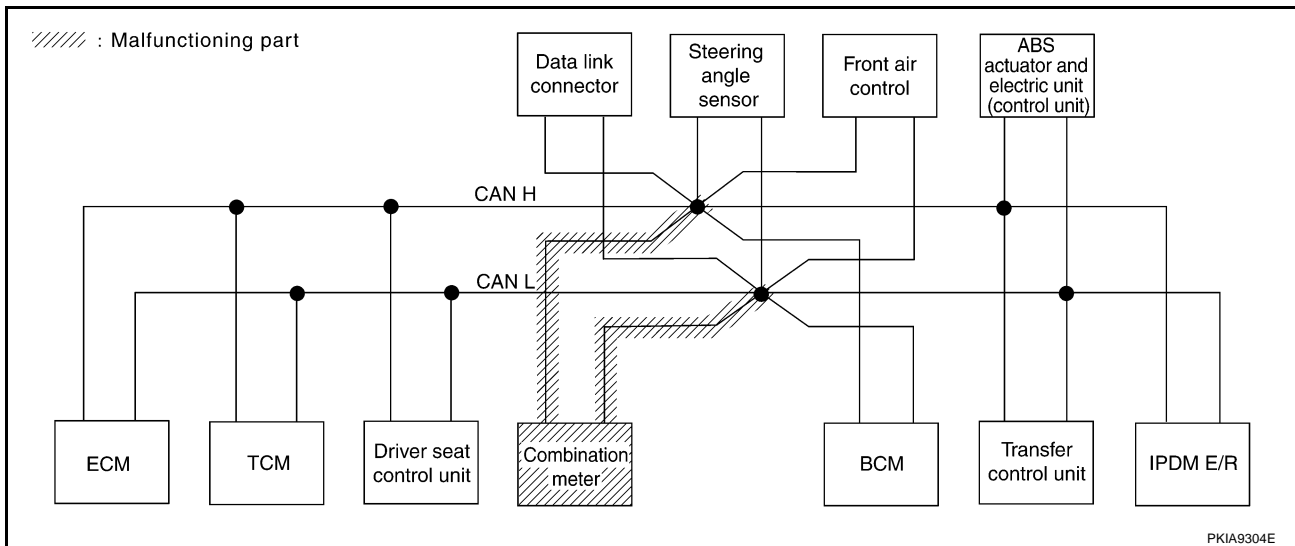


Case 7

Check combination meter circuit. Refer to [LAN-435, "Combination Meter Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN ✓	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN ✓	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6752E



CAN SYSTEM (TYPE 13)

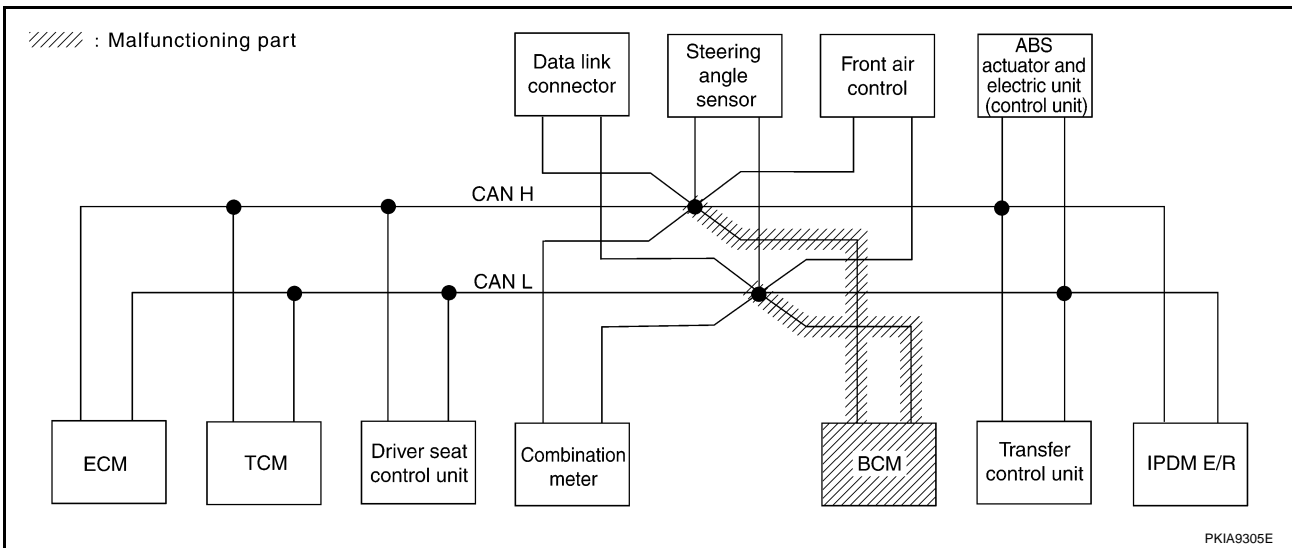
[CAN]

Case 8

Check BCM circuit. Refer to [LAN-436, "BCM Circuit Check"](#).

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6753E



CAN SYSTEM (TYPE 13)

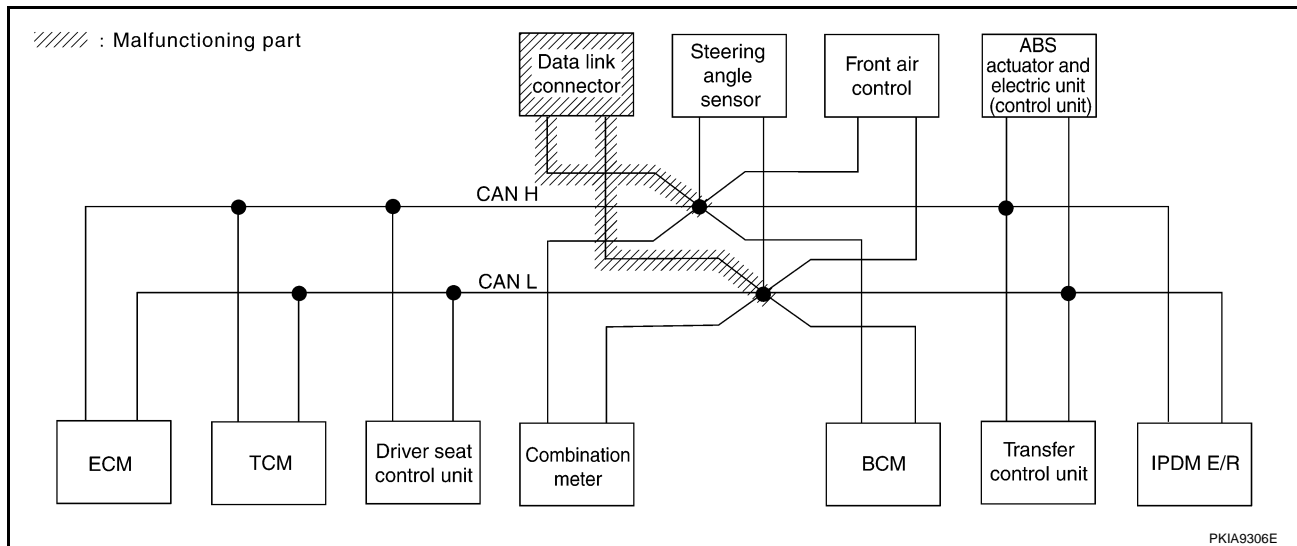
[CAN]

Case 9

Check data link connector circuit. Refer to [LAN-436, "Data Link Connector Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication ✓	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication ✓	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6754E



PKIA9306E

CAN SYSTEM (TYPE 13)

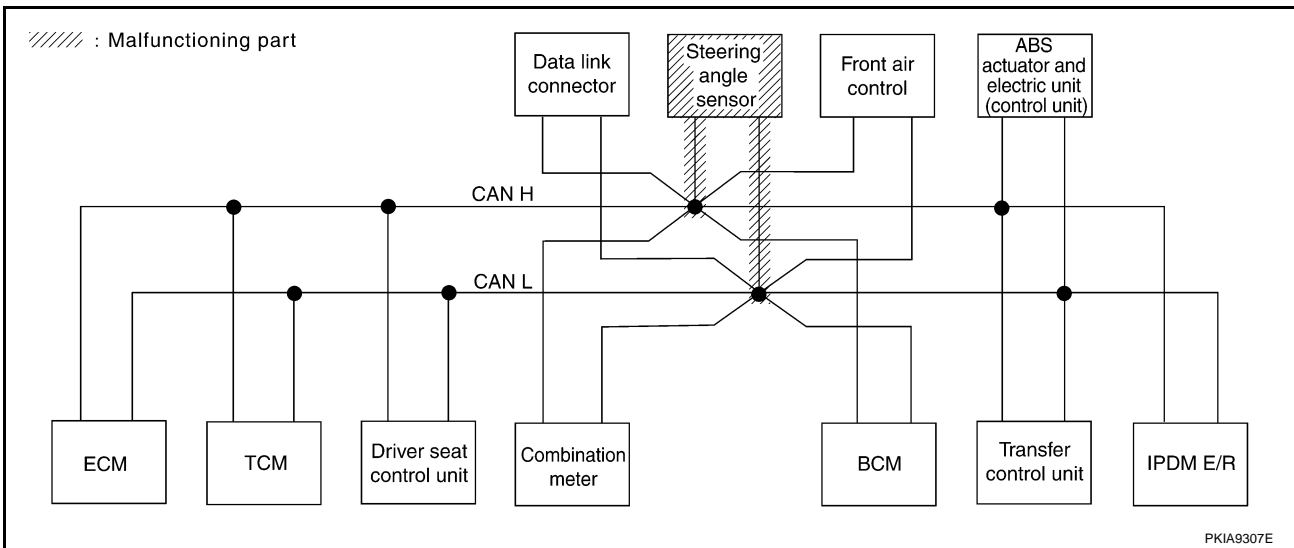
[CAN]

Case 10

Check steering angle sensor circuit. Refer to [LAN-437. "Steering Angle Sensor Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6756E

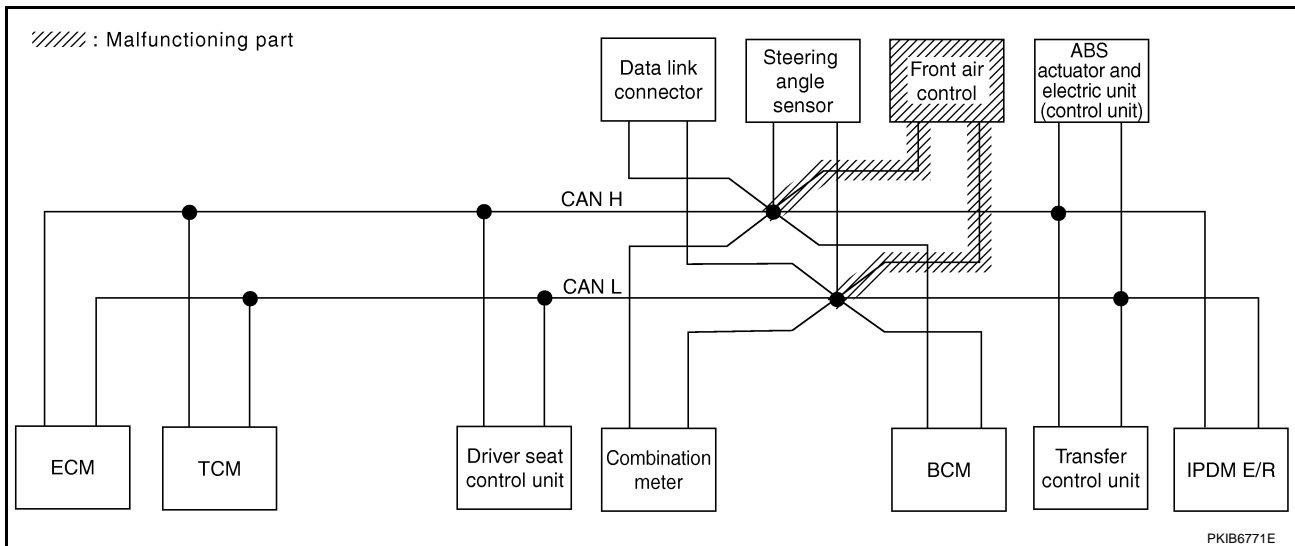


Case 11

Check front air control circuit. Refer to [LAN-437, "Front Air Control Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6755E



CAN SYSTEM (TYPE 13)

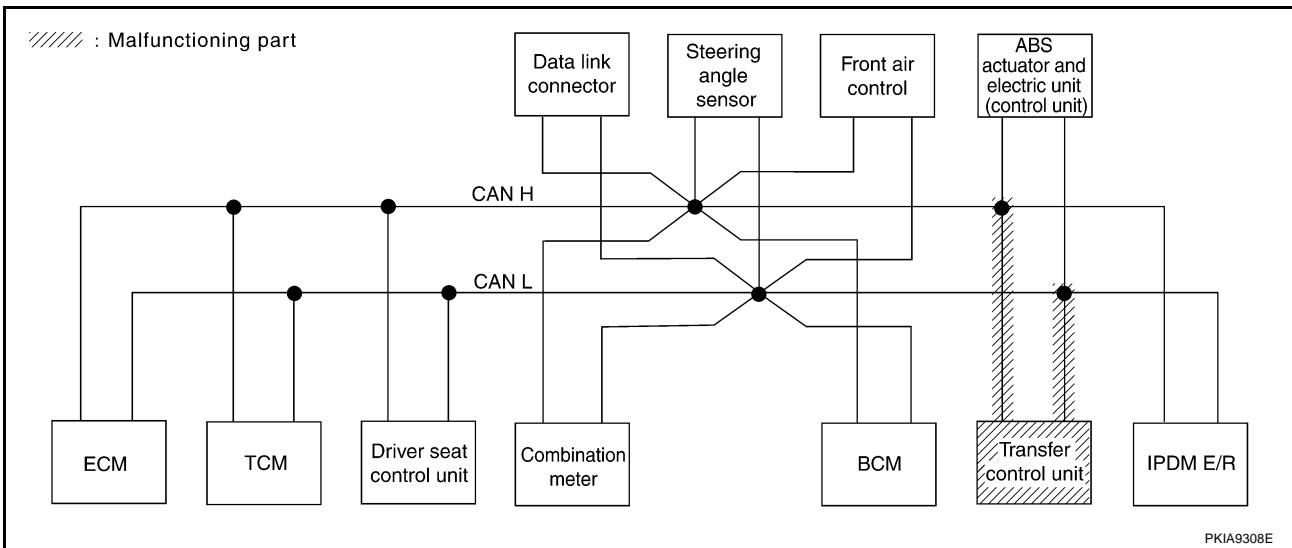
[CAN]

Case 12

Check transfer control unit circuit. Refer to [LAN-438, "Transfer Control Unit Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6757E

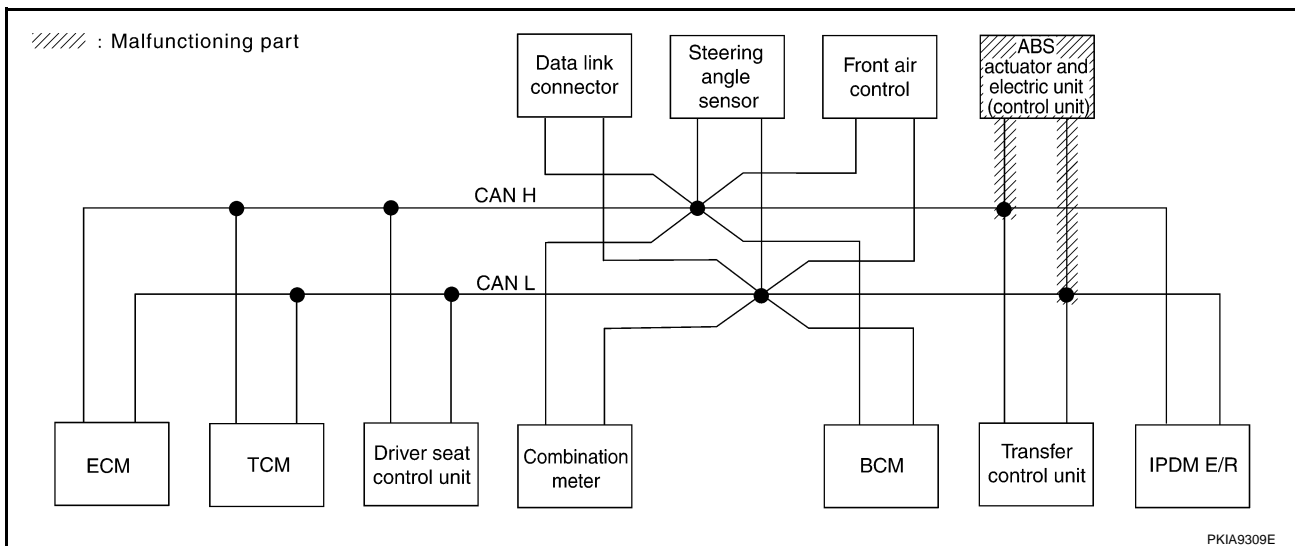


Case 13

Check ABS actuator and electric unit (control unit) circuit. Refer to [LAN-438, "ABS Actuator and Electric Unit \(Control Unit\) Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6758E



CAN SYSTEM (TYPE 13)

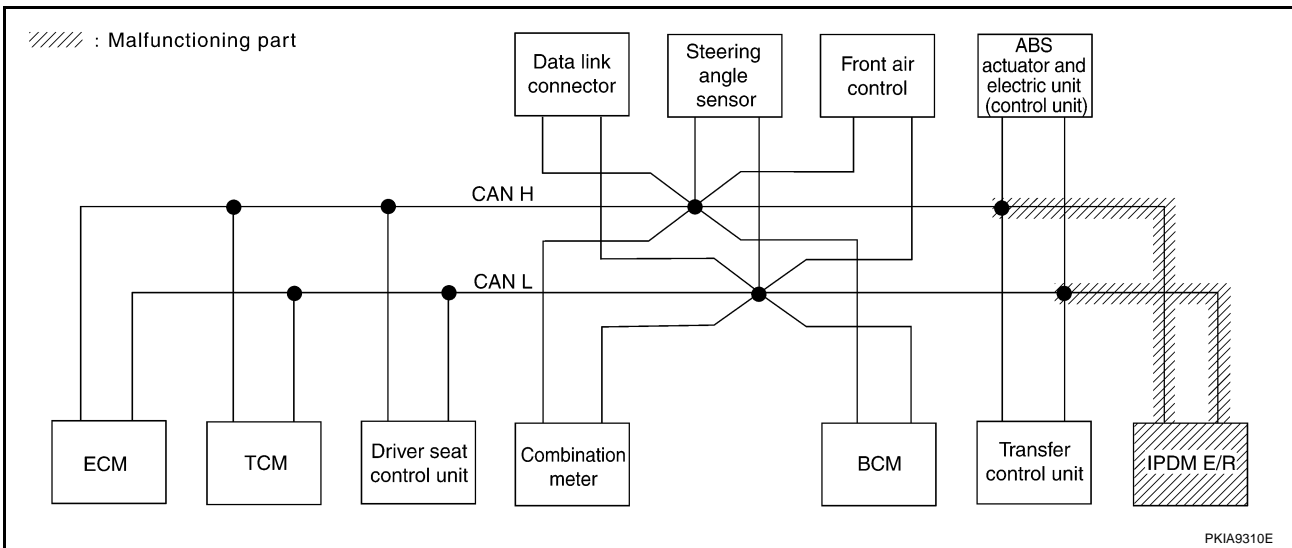
[CAN]

Case 14

Check IPDM E/R circuit. Refer to [LAN-439, "IPDM E/R Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN ✓	
A/T	—	NG	UNKWN	UNKWN	—	UNKWN	—	—	UNKWN	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN ✓	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	—	
IPDM E/R	No indication ✓	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6759E



CAN SYSTEM (TYPE 13)

[CAN]

Case 15

Check CAN communication circuit. Refer to [LAN-439, "CAN Communication Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	-	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	-	UNKW N	UNKW N	UNKW N	
A/T	-	NG	UNKW N	UNKW N	-	UNKW N	-	-	UNKW N	UNKW N	-	
AUTO DRIVE POS.	No indication	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	-	-	-	-	
BCM	No indication	NG	UNKW N	UNKW N	-	UNKW N	-	-	-	-	UNKW N	
HVAC	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	-	UNKW N	-	
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	-	UNKW N	-	
ABS	-	NG	UNKW N	UNKW N	UNKW N	-	-	UNKW N	UNKW N	-	-	
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	-	-	-	

PKIB6760E

Case 16

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to [LAN-440, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	-	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	-	UNKW N	UNKW N	UNKW N	
A/T	-	NG	UNKW N	UNKW N	-	UNKW N	-	-	UNKW N	UNKW N	-	
AUTO DRIVE POS.	No indication	NG	UNKW N	-	UNKW N	UNKW N	UNKW N	-	-	-	-	
BCM	No indication	NG	UNKW N	UNKW N	-	UNKW N	-	-	-	-	UNKW N	
HVAC	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	-	UNKW N	-	
ALL MODE AWD/4WD	-	NG	UNKW N	UNKW N	UNKW N	-	-	-	-	UNKW N	-	
ABS	-	NG	UNKW N	UNKW N	UNKW N	-	-	UNKW N	UNKW N	-	-	
IPDM E/R	No indication	-	UNKW N	UNKW N	-	-	UNKW N	-	-	-	-	

PKIB6761E

Case 17

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to [LAN-440, "IPDM E/R Ignition Relay Circuit Check"](#) .

SELECT SYSTEM screen		CAN DIAG SUPPORT MNTR										
		Initial diagnosis	Transmit diagnosis	Receive diagnosis								
				ECM	TCM	METER/M&A	BCM/SEC	STRG	AWD/4WD/e4WD	VDC/TCS/ABS	IPDM E/R	
ENGINE	—	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	
A/T	—	NG	UNKWN	UNKWN ✓	—	UNKWN ✓	—	—	UNKWN ✓	UNKWN	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	UNKWN	UNKWN	UNKWN	—	—	—	—	
BCM	No indication	NG	UNKWN	UNKWN	—	UNKWN	—	—	—	—	UNKWN	
HVAC	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	UNKWN	—	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	UNKWN	—	—	—	—	UNKWN	—	
ABS	—	NG	UNKWN	UNKWN ✓	UNKWN	—	—	UNKWN ✓	UNKWN ✓	—	—	
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	—	—	—	

PKIB6762E

Circuit Check Between TCM and Driver Seat Control Unit

UKS0038M

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector F33
 - Harness connector E19
 - Harness connector E50
 - Harness connector B75

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector and harness connector F33.
2. Check continuity between A/T assembly harness connector F9 terminals 3 (L), 8 (P) and harness connector F33 terminals 12 (L), 11 (P).

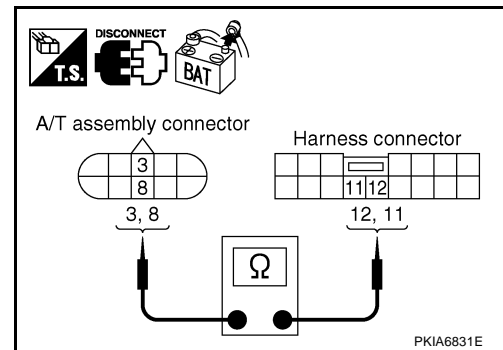
3 (L) - 12 (L) : Continuity should exist.

8 (P) - 11 (P) : Continuity should exist.

OK or NG

OK >> GO TO 3.

NG >> Repair harness.



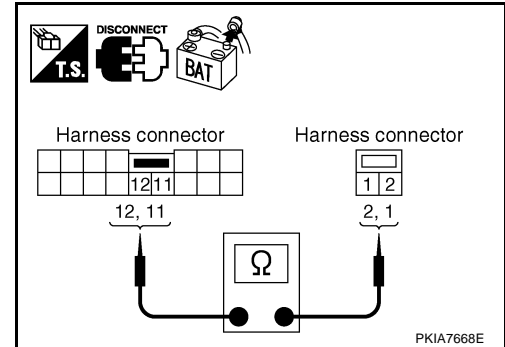
3. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector E50.
2. Check continuity between harness connector E19 terminals 12 (L), 11 (P) and harness connector E50 terminals 2 (L), 1 (P).

12 (L) - 2 (L) : Continuity should exist.
11 (P) - 1 (P) : Continuity should exist.

OK or NG

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



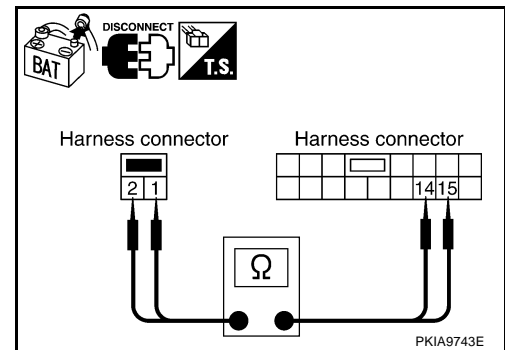
4. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37.
2. Check continuity between harness connector B75 terminals 2 (L), 1 (P) and harness connector B37 terminals 15 (L), 14 (P).

2 (L) - 15 (L) : Continuity should exist.
1 (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-413, "Work Flow"](#).
 NG >> Repair harness.



Circuit Check Between Driver Seat Control Unit and Data Link Connector

UKS0038N

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector B69
 - Harness connector M40

OK or NG

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

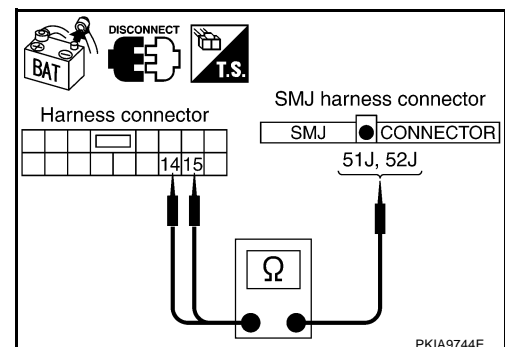
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect harness connector B37 and harness connector B69.
2. Check continuity between harness connector B37 terminals 15 (L), 14 (P) and harness connector B69 terminals 51J (L), 52J (P).

15 (L) - 51J (L) : Continuity should exist.
14 (P) - 52J (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

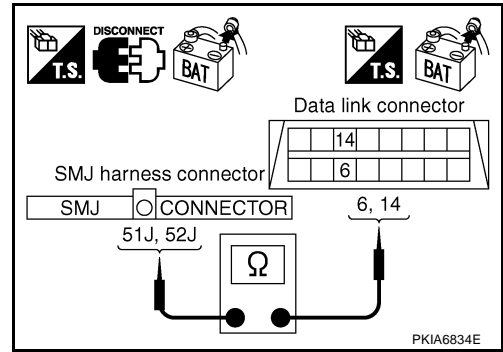
Check continuity between harness connector M40 terminals 51J (L), 52J (P) and data link connector M22 terminals 6 (L), 14 (P).

51J (L) - 6 (L) : Continuity should exist.

52J (P) - 14 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-413, "Work Flow"](#).
- NG >> Repair harness.



Circuit Check Between Data Link Connector and IPDM E/R

UKS00380

1. CHECK CONNECTOR

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
 - Harness connector M31
 - Harness connector E152

OK or NG

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

2. CHECK HARNESS FOR OPEN CIRCUIT

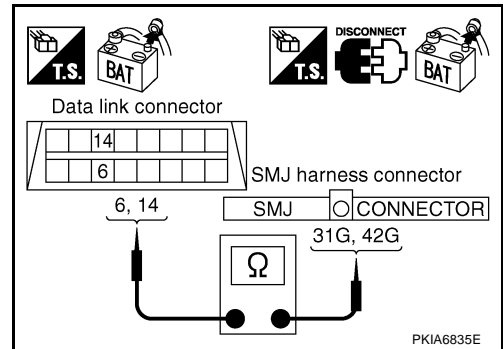
1. Disconnect harness connector M31.
2. Check continuity between data link connector M22 terminals 6 (L), 14 (P) and harness connector M31 terminals 31G (L), 42G (P).

6 (L) - 31G (L) : Continuity should exist.

14 (P) - 42G (P) : Continuity should exist.

OK or NG

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



3. CHECK HARNESS FOR OPEN CIRCUIT

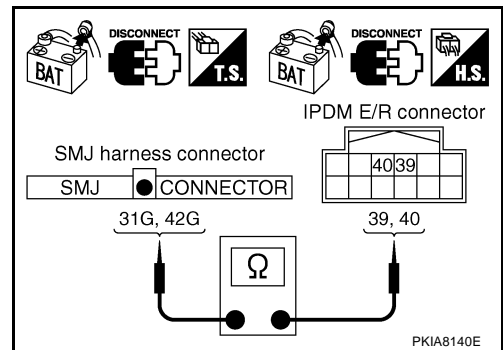
1. Disconnect IPDM E/R connector.
2. Check continuity between harness connector E152 terminals 31G (L), 42G (P) and IPDM E/R harness connector E122 terminals 39 (L), 40 (P).

31G (L) - 39 (L) : Continuity should exist.

42G (P) - 40 (P) : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to [LAN-413, "Work Flow"](#).
- NG >> Repair harness.



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ECM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
 - ECM connector
 - Harness connector E19
 - Harness connector F33

OK or NG

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

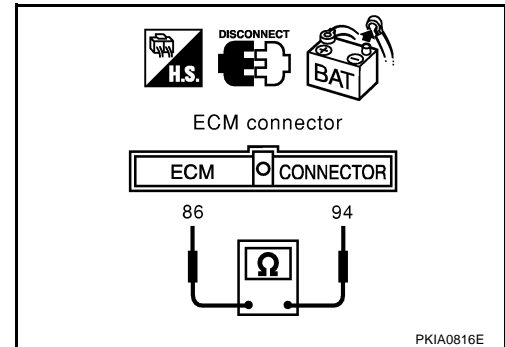
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ECM connector.
2. Check resistance between ECM harness connector E16 terminals 94 (L) and 86 (P).

94 (L) - 86 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace ECM.
 NG >> Repair harness between ECM and A/T assembly.

**TCM Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of A/T assembly for damage, bend and loose connection (control module side and harness side).

OK or NG

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

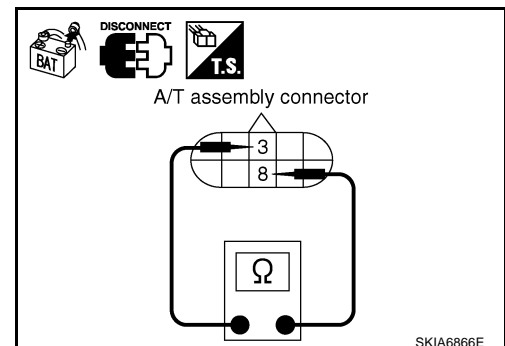
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect A/T assembly connector.
2. Check resistance between A/T assembly harness connector F9 terminals 3 (L) and 8 (P).

3 (L) - 8 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace A/T assembly.
 NG >> Repair harness between A/T assembly and harness connector F33.



Driver Seat Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check following terminals and connectors for damage, bend and loose connection (control unit side and harness side).
 - Driver seat control unit connector
 - Harness connector P1
 - Harness connector B37

OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

2. CHECK HARNESS FOR OPEN CIRCUIT

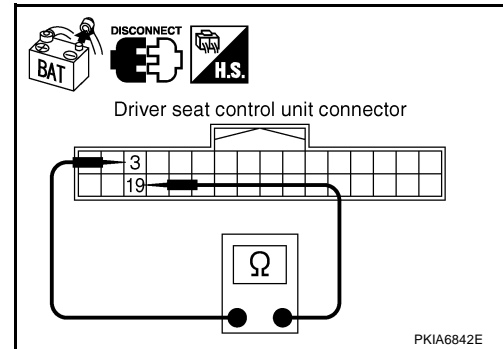
1. Disconnect driver seat control unit connector.
2. Check resistance between driver seat control unit harness connector P2 terminals 3 (L) and 19 (P).

3 (L) - 19 (P) : Approx. 54 - 66 Ω

OK or NG

OK >> Replace driver seat control unit.

NG >> Repair harness between driver seat control unit and harness connector B69.

**Combination Meter Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. 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

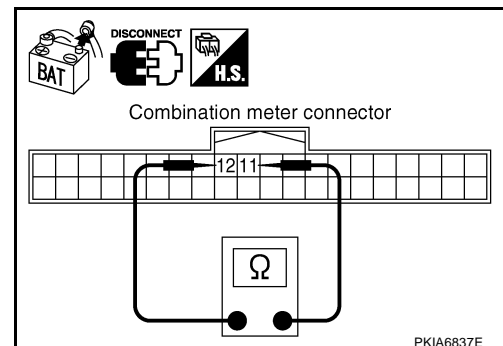
1. Disconnect combination meter connector.
2. Check resistance between combination meter harness connector M24 terminals 11 (L) and 12 (P).

11 (L) - 12 (P) : Approx. 54 - 66 Ω

OK or NG

OK >> Replace combination meter.

NG >> Repair harness between combination meter and data link connector.



BCM Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of BCM for damage, bend and loose connection (control module side and harness side).

OK or NG

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

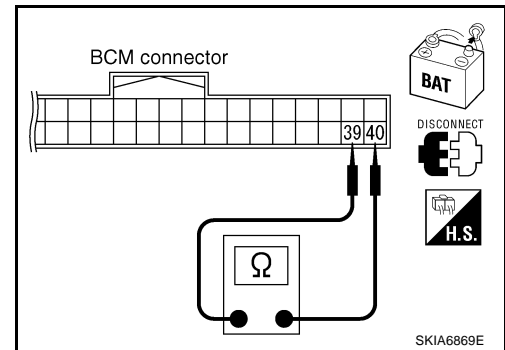
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect BCM connector.
2. Check resistance between BCM harness connector M18 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace BCM. Refer to [BCS-20, "Removal and Installation of BCM"](#) .
 NG >> Repair harness between BCM and data link connector.

**Data Link Connector Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check the terminals and connector of data link connector for damage, bend and loose connection (connector side and harness side).

OK or NG

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

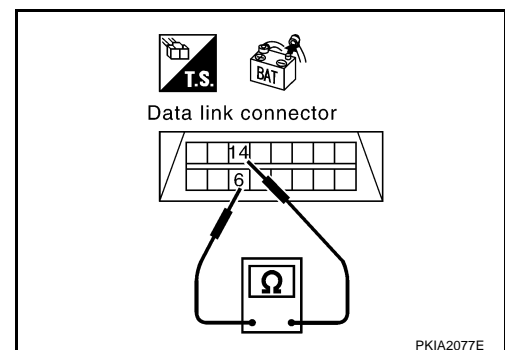
2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Diagnose again. Refer to [LAN-413, "Work Flow"](#) .
 NG >> Repair harness between data link connector and combination meter.



Steering Angle Sensor Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check 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.

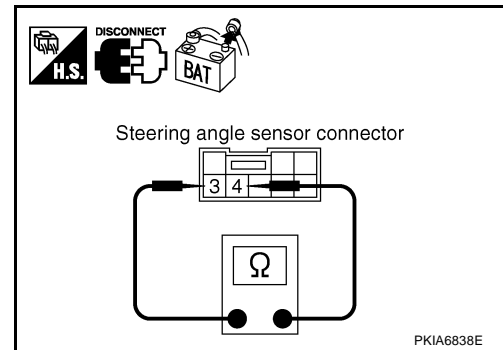
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect steering angle sensor connector.
2. Check resistance between steering angle sensor harness connector M47 terminals 3 (L) and 4 (P).

3 (L) - 4 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace steering angle sensor.
 NG >> Repair harness between steering angle sensor and data link connector.

**Front Air Control Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of front air control for damage, bend and loose connection (unit side and harness side).

OK or NG

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

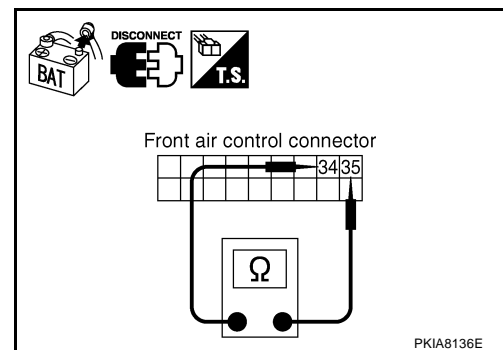
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect front air control connector.
2. Check resistance between front air control harness connector M50 terminals 34 (L) and 35 (P).

34 (L) - 35 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace front air control.
 NG >> Repair harness between front air control and data link connector.



Transfer Control Unit Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of transfer 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.

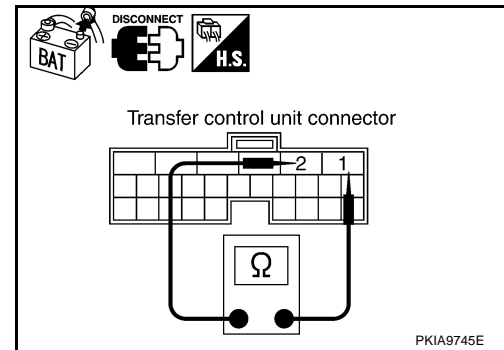
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect transfer control unit connector.
2. Check resistance between transfer control unit harness connector E142 terminals 1 (L) and 2 (P).

1 (L) - 2 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace transfer control unit.
 NG >> Repair harness between transfer control unit and harness connector E152.

**ABS Actuator and Electric Unit (Control Unit) Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of ABS actuator and electric unit (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.

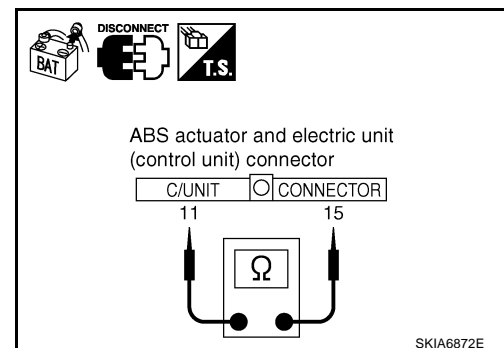
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect ABS actuator and electric unit (control unit) connector.
2. Check resistance between ABS actuator and electric unit (control unit) harness connector E125 terminals 11 (L) and 15 (P).

11 (L) - 15 (P) : Approx. 54 - 66 Ω

OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
 NG >> Repair harness between ABS actuator and electric unit (control unit) and harness connector E152.



IPDM E/R Circuit Check**1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).

OK or NG

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

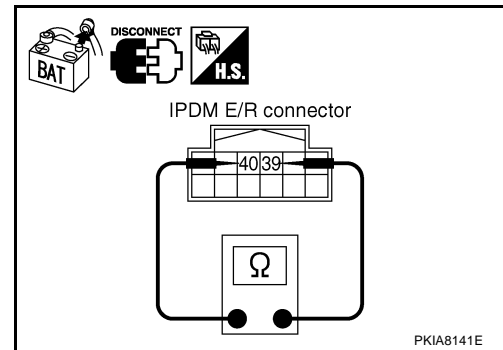
2. CHECK HARNESS FOR OPEN CIRCUIT

1. Disconnect IPDM E/R connector.
2. Check resistance between IPDM E/R harness connector E122 terminals 39 (L) and 40 (P).

39 (L) - 40 (P) : Approx. 108 - 132 Ω

OK or NG

- OK >> Replace IPDM E/R.
 NG >> Repair harness between IPDM E/R and harness connector E152.

**CAN Communication Circuit Check****1. CHECK CONNECTOR**

1. Turn ignition switch OFF.
2. Disconnect the negative battery terminal.
3. Disconnect the following module and control unit connectors and check terminals for deformation, disconnection, looseness or damage.
 - ECM
 - A/T assembly
 - Driver seat control unit
 - Combination meter
 - BCM
 - Steering angle sensor
 - Front air control
 - Transfer control unit
 - ABS actuator and electric unit (control unit)
 - IPDM E/R

OK or NG

- OK >> GO TO 2.
 NG >> Repair or replace as necessary.

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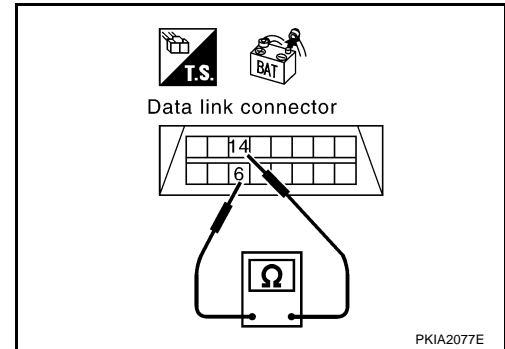
2. CHECK HARNESS FOR SHORT CIRCUIT

With all module and control unit connectors disconnected, check continuity between data link connector M22 terminals 6 (L) and 14 (P).

6 (L) - 14 (P) : Continuity should not exist.

OK or NG

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



3. CHECK HARNESS FOR SHORT CIRCUIT

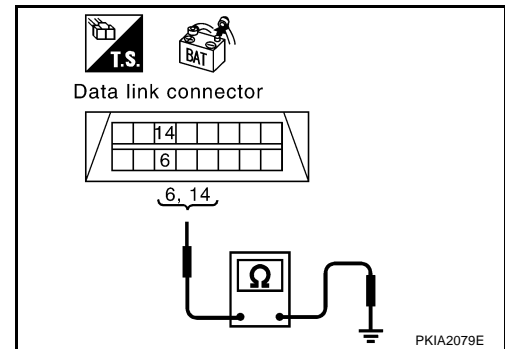
Check continuity between data link connector M22 terminals 6 (L), 14 (P) and ground.

6 (L) - Ground : Continuity should not exist.

14 (P) - Ground : Continuity should not exist.

OK or NG

- OK >> Check ECM and IPDM E/R. Refer to [LAN-440, "ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION"](#).
- NG >> Repair harness.



IPDM E/R Ignition Relay Circuit Check

Check the following. If no malfunction is found, replace the IPDM E/R.

- IPDM E/R power supply circuit. Refer to [PG-26, "IPDM E/R Power/Ground Circuit Inspection"](#).
- Ignition power supply circuit. Refer to [PG-13, "IGNITION POWER SUPPLY — IGNITION SW. IN ON AND/OR START"](#).

UKS00390

Component Inspection ECM/IPDM E/R INTERNAL CIRCUIT INSPECTION

UKS00391

- Remove ECM and IPDM E/R from vehicle.
- Check resistance between ECM terminals 94 and 86.
- Check resistance between IPDM E/R terminals 39 and 40.

Unit	Terminal	Resistance value (Ω) (Approx.)
ECM	94 - 86	108 - 132
IPDM E/R	39 - 40	

