# SECTION LAN SYSTEM

А

В

С

D

Е

# CONTENTS

# CAN

PRECAUTIONS	
Precautions for Supplemental Restraint System	
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	
SIONER"	
Precautions When Using CONSULT-II	
CHECK POINTS FOR USING CONSULT-II	
Precautions for Trouble Diagnosis	
CAN SYSTEM 5	
Precautions for Harness Repair 6	
CAN SYSTEM 6	
TROUBLE DIAGNOSES WORK FLOW	
When Displaying CAN Communication System	
Errors	
WHEN A MALFUNCTION IS DETECTED BY	
CAN COMMUNICATION SYSTEM7	
WHEN A MALFUNCTION IS DETECTED	
EXCEPT CAN COMMUNICATION SYSTEM 7	
TROUBLE DIAGNOSIS FLOW CHART 8	
Diagnosis Procedure9	
SELECTING CAN SYSTEM TYPE (HOW TO	
USE SPECIFICATION TABLE)	
ACQUISITION OF DATA BY CONSULT-II 10	
HOW TO USE CHECK SHEET TABLE 12	
CAN Diagnostic Support Monitor 19	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR ECM 19	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR INTELLIGENT KEY UNIT 20	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR TCM 21	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR LOW TIRE PRESSURE	
WARNING CONTROL UNIT 21	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR BCM 22	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR UNIFIED METER AND A/	
C AMP	
DESCRIPTION OF "CAN DIAG SUPPORT	

MNTR" SCREEN FOR DRIVER SEAT CON-	F
TROL UNIT24	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR <sup>#</sup> SCREEN FOR AWD CONTROL UNIT 24	G
DESCRIPTION OF "CAN DIAG SUPPORT	Н
MNTR" SCREEN FOR IPDM E/R 26	
DESCRIPTION OF "CAN DIAG SUPPORT	
MNTR" SCREEN FOR DISPLAY CONTROL	
UNIT27	
DESCRIPTION OF "CANDIAG MNTR" SCREEN	
FOR DISPLAY UNIT 28	J
CAN COMMUNICATION29	
System Description	
CAN Communication Unit29	LAN
TYPE 1/TYPE 2/TYPE 3	
TYPE 4/TYPE 5	
TYPE 6/TYPE 7/TYPE 8	
1 YPE 9/1 YPE 10	
CAN STSTEM (TYPE 1)	
Schomatic 44	ь.л.
Wiring Diagram - CAN -	IVI
Check Sheet 40	
CHECK SHEET RESULTS (EXAMPLE) 51	
Inspection Between TCM and Data Link Connector	
Circuit	
Inspection Between Data Link Connector and ABS	
Actuator and Electric Unit (Control Unit) Circuit 62	
ECM Circuit Inspection	
TCM Circuit Inspection64	
BCM Circuit Inspection64	
Display Unit Circuit Inspection65	
Data Link Connector Circuit Inspection65	
Unified Meter and A/C Amp. Circuit Inspection 66	
ABS Actuator and Electric Unit (Control Unit) Circuit	
Inspection	
IPDM E/R Circuit Inspection67	

CAN Communication Circuit Inspection	68
IPDM E/R Ignition Relay Circuit Inspection	72
CAN SYSTEM (TYPE 2)	73
Component Parts and Harness Connector Location	n73
Schematic	74
Wiring Diagram - CAN	75
Check Sheet	80
CHECK SHEET RESULTS (EXAMPLE)	82
Inspection Between TCM and Data Link Connecto	r
Circuit	96
Inspection Between Data Link Connector and Drive	۶r
Seat Control Unit Circuit	96
Inspection Between Driver Seat Control Unit and	1
ABS Actuator and Electric Unit (Control Unit) Circuit	it 97
ECM Circuit Inspection	98
Intelligent Key Unit Circuit Inspection	99
TCM Circuit Inspection	99
BCM Circuit Inspection	. 100
Display Unit Circuit Inspection	. 100
Data Link Connector Circuit Inspection	. 101
Unified Meter and A/C Amp. Circuit Inspection	. 101
Driver Seat Control Unit Circuit Inspection	. 102
ABS Actuator and Electric Unit (Control Unit) Circul	
Inspection	.102
IPDM E/R CIrcuit Inspection	103
IDDM E/P Ignition Polov Circuit Inspection	103
	100
Component Parts and Harnoss Connector Location	n 109
Schematic	1109
Wiring Diagram - CAN -	111
Check Sheet	116
CHECK SHEET RESULTS (EXAMPLE)	118
Inspection Between TCM and Data Link Connecto	r
Circuit	132
Inspection Between Data Link Connector and Drive	er
Seat Control Unit Circuit	. 132
Inspection Between Driver Seat Control Unit and	1
ABS Actuator and Electric Unit (Control Unit) Circui	it 133
ECM Circuit Inspection	. 134
Intelligent Key Unit Circuit Inspection	. 135
TCM Circuit Inspection	. 135
BCM Circuit Inspection	. 136
Display Control Unit Circuit Inspection	. 136
Data Link Connector Circuit Inspection	. 137
Unified Meter and A/C Amp. Circuit Inspection	. 137
Driver Seat Control Unit Circuit Inspection	. 138
ABS Actuator and Electric Unit (Control Unit) Circuit	it
Inspection	. 138
IPDM E/R Circuit Inspection	. 139
CAN Communication Circuit Inspection	. 139
IPDM E/R Ignition Relay Circuit Inspection	. 144
CAN SYSTEM (TYPE 4)	. 145
	145
	. 140
Chack Shoot	141
	152
Inspection Between TCM and Data Link Connecto	. 100 r
in opeonen between i om and bata Link Connecto	•

Circuit171
$\label{eq:link} Inspection \\ Between \\ Data \\ Link \\ Connector \\ and \\ Driver$
Seat Control Unit Circuit171
Inspection Between Driver Seat Control Unit and
ABS Actuator and Electric Unit (Control Unit) Circuit 172
ECM Circuit Inspection173
Intelligent Key Unit Circuit Inspection174
TCM Circuit Inspection174
Low Tire Pressure Warning Control Unit Circuit
Inspection175
BCM Circuit Inspection175
Display Unit Circuit Inspection176
Data Link Connector Circuit Inspection
Unified Meter and A/C Amp. Circuit Inspection 177
Steering Angle Sensor Circuit Inspection
Driver Seat Control Unit Circuit Inspection
ABS Actuator and Electric Unit (Control Unit) Circuit
Inspection
IPDM E/R Circuit Inspection
CAN Communication Circuit Inspection
CAN SYSTEM (TYPE 5)
CAN STSTEM (TTPE 5)
Component Paris and Hamess Connector Location 185
Schemalic
Chook Shoot
Inspection Botween TCM and Data Link Connector
Circuit 211
Inspection Between DataLink Connector and Driver
Seat Control Unit Circuit 211
Inspection Between Driver Seat Control Unit and
ABS Actuator and Electric Unit (Control Unit) Circuit 212
FCM Circuit Inspection 213
Intelligent Key Unit Circuit Inspection 214
TCM Circuit Inspection 214
Low Tire Pressure Warning Control Unit Circuit
Inspection 215
BCM Circuit Inspection
Display Control Unit Circuit Inspection
Data Link Connector Circuit Inspection
Unified Meter and A/C Amp. Circuit Inspection217
Steering Angle Sensor Circuit Inspection
Driver Seat Control Unit Circuit Inspection
ABS Actuator and Electric Unit (Control Unit) Circuit
Inspection
IPDM E/R Circuit Inspection
CAN Communication Circuit Inspection219
IPDM E/R Ignition Relay Circuit Inspection224
CAN SYSTEM (TYPE 6)
Component Parts and Harness Connector Location 225
Schematic226
Wiring Diagram - CAN227
Check Sheet231
CHECK SHEET RESULTS (EXAMPLE)233
Inspection Between TCM and Data Link Connector
Circuit246
Circuit
Circuit246 Inspection Between Data Link Connector and AWD Control Unit Circuit246

	Inspection Between AWD Control Unit and ABS	
	Actuator and Electric Unit (Control Unit) Circuit	248
	ECM Circuit Inspection	248
	TCM Circuit Inspection	249
	BCM Circuit Inspection	249
	Display Unit Circuit Inspection	250
	Data Link Connector Circuit Inspection	250
	Unified Meter and A/C Amp. Circuit Inspection	251
	AWD Control Unit Circuit Inspection	251
	ABS Actuator and Electric Unit (Control Unit) Circuit	
	Inspection	252
	IPDM E/R Circuit Inspection	252
	CAN Communication Circuit Inspection	253
	IPDM E/R Ignition Relay Circuit Inspection	257
C	AN SYSTEM (TYPE 7)	258
	Component Parts and Harness Connector Location	258
	Schematic	259
	Wiring Diagram - CAN	260
	Check Sheet	265
	CHECK SHEET RESULTS (EXAMPLE)	268
	Inspection Between TCM and Data Link Connector	
	Circuit	284
	Inspection Between Data Link Connector and Driver	
	Seat Control Unit Circuit	284
	Inspection Between Driver Seat Control Unit and	
	AWD Control Unit Circuit	285
	Inspection Between AWD Control Unit and ABS	
	Actuator and Electric Unit (Control Unit) Circuit	286
	ECM Circuit Inspection	286
	Intelligent Key Unit Circuit Inspection	287
	TCM Circuit Inspection	287
	BCM Circuit Inspection	288
	Display Unit Circuit Inspection	288
	Data Link Connector Circuit Inspection	289
	Unified Meter and A/C Amp. Circuit Inspection	289
	Driver Seat Control Unit Circuit Inspection	290
	AWD Control Unit Circuit Inspection	290
	ABS Actuator and Electric Unit (Control Unit) Circuit	
		291
	IPDM E/R Circuit Inspection	291
	CAN Communication Circuit Inspection	292
~	IPDM E/R Ignition Relay Circuit Inspection	297
C		298
	Component Parts and Harness Connector Location	298
		299
	Wiring Diagram - CAN	300
		305
	CHECK SHEET RESULTS (EXAMPLE)	308
	Inspection Between 1 Civi and Data Link Connector	~~ <i>(</i>
	Circuit	324
	Inspection Between Data Link Connector and Driver	<u> </u>
	Seat Control Unit Circuit	s24
	AWD Control Unit Circuit	າປະ
	AvvD Control Unit Circuit	520
	Actuator and Electric Unit (Control Unit and ABS	ろつと
	ECM Circuit Inspection	376 376
	Low Orcur Inspection	372 207
	TCM Circuit Inspection	১∠1 ২০7
		J∠1

BCM Circuit Inspection	328	
Display Control Unit Circuit Inspection	328	A
Data Link Connector Circuit Inspection	329	
Unified Meter and A/C Amp. Circuit Inspection	329	
Driver Seat Control Unit Circuit Inspection	330	R
AWD Control Unit Circuit Inspection	330	D
ABS Actuator and Electric Unit (Control Unit) Circuit		
Inspection	331	
IPDM E/R Circuit Inspection	331	С
CAN Communication Circuit Inspection	332	
IPDM E/R Ignition Relay Circuit Inspection	337	
CAN SYSTEM (TYPE 9)	338	D
Component Parts and Harness Connector Location	338	
Schematic	339	
Wiring Diagram - CAN -	340	_
Check Sheet	345	
CHECK SHEET RESULTS (EXAMPLE)	348	
Inspection Between TCM and Data Link Connector	040	
Circuit	366	F
Inspection Between Data Link Connector and Driver		
Seat Control Unit Circuit	366	
Inspection Between Driver Seat Control Unit and	000	G
AWD Control Unit Circuit	367	0
Inspection Between AWD Control Unit and ABS	007	
Actuator and Electric Unit (Control Unit) Circuit	368	
FCM Circuit Inspection	368	
Intelligent Key Unit Circuit Inspection	369	
TCM Circuit Inspection	369	
Low Tire Pressure Warning Control Unit Circuit	000	
Inspection	370	
BCM Circuit Inspection	370	
Display Unit Circuit Inspection	371	J
Data Link Connector Circuit Inspection	371	
Unified Meter and A/C Amp. Circuit Inspection	372	
Steering Angle Sensor Circuit Inspection	372	ΙΔ
Driver Seat Control Unit Circuit Inspection	373	
AWD Control Unit Circuit Inspection	373	
ABS Actuator and Electric Unit (Control Unit) Circuit		
Inspection	374	L
IPDM E/R Circuit Inspection	374	
CAN Communication Circuit Inspection	375	
IPDM E/R Ignition Relay Circuit Inspection	381	M
CAN SYSTEM (TYPE 10)	382	
Component Parts and Harness Connector Location	382	
Schematic	383	
Wiring Diagram - CAN	384	
Check Sheet	389	
CHECK SHEET RESULTS (EXAMPLE)	392	
Inspection Between TCM and Data Link Connector		
Circuit	410	
Inspection Between Data Link Connector and Driver		
Seat Control Unit Circuit	410	
Inspection Between Driver Seat Control Unit and		
AWD Control Unit Circuit	411	
Inspection Between AWD Control Unit and ABS		
Actuator and Electric Unit (Control Unit) Circuit	412	
ECM Circuit Inspection	412	
Intelligent Key Unit Circuit Inspection		
Intelligent Key Onit Oncut Inspection	413	

Low Tire Pressure Warning Control Unit Circuit	
Inspection	.414
BCM Circuit Inspection	.414
Display Control Unit Circuit Inspection	.415
Data Link Connector Circuit Inspection	.415
Unified Meter and A/C Amp. Circuit Inspection	.416
Steering Angle Sensor Circuit Inspection	.416

Driver Seat Control Unit Circuit Inspection	.417
AWD Control Unit Circuit Inspection	.417
ABS Actuator and Electric Unit (Control Unit) Circui	t
Inspection	.418
IPDM E/R Circuit Inspection	.418
CAN Communication Circuit Inspection	.419
IPDM E/R Ignition Relay Circuit Inspection	.425

# PRECAUTIONS

#### PRECAUTIONS PFP:00001 A Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT **BELT PRE-TENSIONER**" AKS007PK The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along В 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 C 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. F 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. F 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 AKS004YM When connecting CONSULT-II to data link connector, connect them through CONSULT-II CONVERTER. Н **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 Has CONSULT-II been used without connecting CONSULT-II CONVERTER on this vehicle? 1 If YES, GO TO 2. If NO, GO TO 5. Is there any indication other than indications relating to CAN communication system in the self-diagnostic 2. results? LAN If YES, GO TO 3. If NO, GO TO 4. L 3. Based on self-diagnostic 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. Diagnose CAN communication system. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW". Μ 5. **Precautions for Trouble Diagnosis** AKS004YN **CAN SYSTEM** Do not apply voltage of 7.0 V or higher to the measurement terminals. Use the tester with its open terminal voltage being 7.0 V or less. Be sure to turn ignition switch OFF and disconnect the battery cable from the negative terminal before checking the circuit.

#### 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.)



AKS004YO

[CAN]	
TROUBLE DIAGNOSES WORK FLOW PFP:00004	
When Displaying CAN Communication System ErrorsAKSOUCHDWHEN A MALFUNCTION IS DETECTED BY CAN COMMUNICATION SYSTEMAKSOUCHD	A
CAN communication line is open. (CAN H, CAN L, or both)	F
<ul> <li>CAN communication line is shorted. (Ground, between CAN lines, or other harnesses)</li> <li>The areas related to CAN communication of unit is malfunctioning.</li> </ul>	
WHEN A MALFUNCTION IS DETECTED EXCEPT CAN COMMUNICATION SYSTEM	(
• Removal and installation of parts: When the units that perform CAN communication or the sensors related to CAN communication are removed and installed, malfunction may be detected (or DTC other than CAN communication may be detected).	[
• Fuse blown out (removed): CAN communication of the unit may be stopped at such time.	
• Low voltage: If the voltage decreases because of battery discharge when IGN is ON, malfunction may be detected by self-diagnosis according to the units.	E
	ŀ
	(
	ŀ

LAN

L

Μ

#### **TROUBLE DIAGNOSIS FLOW CHART**

Depending on the control unit which performs CAN communication, "U1010" may be indicated as the result of self-diagnosis. Replace the control unit if "U1010" is indicated.



- Step 1: Refer to <u>LAN-9</u>, "SELECTING CAN SYSTEM TYPE (HOW TO USE SPECIFICATION TABLE)".
- Step 2: Refer to LAN-10, "ACQUISITION OF DATA BY CONSULT-II" .
- Step 3: Refer to LAN-12, "HOW TO USE CHECK SHEET TABLE" .
- Step 4: Refer to LAN-13, "Example of Filling in Check Sheet When Initial Conditions Are Reproduced" .
- Step 5: Check and repair according to system diagnosis.

# [CAN]

# Diagnosis Procedure SELECTING CAN SYSTEM TYPE (HOW TO USE SPECIFICATION TABLE)

AKS00CM6

А

#### Determine CAN system type from the equipment of the vehicle to select applicable check sheet.

(Example) Wagon/AWD/VQ35DE/CVT/VDC/With automatic drive positioner/With Intelligent Key system/With low tire pressure В warning system/With navigation system **CAN Communication Unit** Go to CAN system, when selecting your CAN system type from the following table. Body type Wagon Axle 2WD AWD Engine VQ35DE Check basic specifications of the vehicle. СУТ Transmission Brake control ABS VDC ABS VDC Automatic drive positioner × × × × -Select " ×" if it is model with automatic drive positioner. × × × × x × Intelligent Key system × × × × --> Select " ×" if it is model with Intelligent Key system. × × F ➤ Select " ×" if it is model with low tire pressure warning system. Low tire pressure warning system × × × Navigation system × × --- Select " ×" if it is model with navigation system. × × CAN system type 1 2 3 4 5 6 7 8 9 10 Which number is selected when sequentially selecting XΧ XX XX: XX: XX: F XX XX. CAN system trouble diagnosis from the top of the specification table? The number is "CAN system type" of the applicable vehicle. ×: Applicable In the case of this example: It corresponds to type 10. PKIB6152E

Н

LAN

Μ

#### **ACQUISITION OF DATA BY CONSULT-II**

Attach the data acquired by CONSULT-II on the check sheet determined according to CAN system type.(For display control unit, transfer the data from the display screen of the vehicle to "CAN DIAG SUPPORT MONI-TOR Check Sheet". For display unit: Refer to <u>AV-102</u>, "<u>CAN Communication Line Check</u>". For display control unit: Refer to <u>AV-188</u>, "<u>CAN Communication Line Check</u>".)





#### HOW TO USE CHECK SHEET TABLE



- 1. Unit names displayed on CONSULT-II
- "No indication": Put a check mark to it if the unit name described in step 1 is not displayed on "SELECT SYSTEM" screen of CONSULT-II. (Unit communicating with CONSULT-II via CAN communication line) "-": Column not used (Unit communicating with CONSULT-II excluding CAN communication line)
- 3. "NG": Display "NG" when malfunction is detected in the initial diagnosis of the diagnosed unit. Replace the unit if "NG" is displayed.
  - "-": Column not used (Initial diagnosis is not performed.)
- 4. "UNKWN": Display "UNKWN" when the diagnosed unit does not transmit the data normally. Put a check mark to it if "UNKWN" is displayed on CONSULT-II.
- 5. "UNKWN": Display "UNKWN" when the diagnosed unit does not receive the data normally. Put a check mark to it if "UNKWN" is displayed on CONSULT-II.
  - "-": Column not used (It is not necessary for CAN communication trouble diagnosis.)

#### NOTE:

CAN communication diagnosis checks if CAN communication works normally. (Contents of data are not diagnosed.)

- When the initial conditions are reproduced, refer to <u>LAN-13</u>, "Example of Filling in Check Sheet When Initial Conditions Are Reproduced".
- When the initial conditions are not reproduced, refer to <u>LAN-17</u>, "Example of Filling in Check Sheet When <u>Initial Conditions Are Not Reproduced</u>".

#### Example of Filling in Check Sheet When Initial Conditions Are Reproduced



1. Put a check mark to "No indication" if some of unit names listed on the column of diagnosis system selection screen of a check sheet table are not displayed on "SELECT SYSTEM" screen attached to the check sheet.

#### NOTE:

Put a check mark to "No indication" of IPDM E/R because IPDM E/R is not displayed on "SELECT SYS-TEM" screen.

2. Confirm the unit name that "UNKWN" is displayed from the copy of "CAN DIAG SUPPORT MNTR" screen of "ENGINE" attached to the check sheet, and then put a check mark to the check sheet table.

#### NOTE:

In "CAN DIAG SUPPORT MNTR" screen, "UNKWN" is displayed on "VDC/TCS/ABS", "ICC", "IPDM E/R", "AWD/4WD/e4WD" and "EPS". But put a check mark to "VDC/TCS/ABS", "IPDM E/R" and "AWD/4WD/ e4WD" because "UNKWN" is listed on the column of reception diagnosis of the check sheet table.

 Confirm the unit name that "UNKWN" is displayed on the copy of "CAN DIAG SUPPORT MNTR" screen of "INTELLIGENT KEY", "TRANSMISSION", "AIR PRESSURE MONITOR" and "BCM" as well as "ENGINE". And then, put a check mark to the check sheet table.

#### NOTE:

- For "INTELLIGENT KEY", "UNKWN" is not displayed. Do not put a check to it.
- For "TRANSMISSION", "UNKWN" is displayed on "VDC/TCS/ABS" and "ICC". But put a check mark to "VDC/TCS/ABS" because "UNKWN" is listed on the column of reception diagnosis of the check sheet table.
- For "AIR PRESSURE MONITOR", "UNKWN" is not displayed. Do not put a check to it.
- For "BCM", "UNKWN" is displayed on "IPDM E/R". Put a check mark to it.

LAN

Μ



- 4. For display control unit, put a check mark in the following procedure.
- a. Copy to "CAN DIAG SUPPORT MONITOR Check Sheet" (B) from the display screen (A). Refer to <u>AV-188, "CAN Communication Line Check"</u>.
- b. Read "CAN DIAG SUPPORT MONITOR Check Sheet" (B) with "Display control unit Translation Sheet" (C).
- c. Check "UNKWN" with a check mark. Put a check mark to the check sheet table.

#### NOTE:

In "CAN DIAG SUPPORT MONITOR Check Sheet" (B), check marks are put to "CAN CIRC 7" and "CAN CIRC 9". But, in the column of the check sheet table indication in "Display control unit Translation Sheet" (C), "IPDM E/R" is listed only for "CAN CIRC 7". Therefore, put a check mark to "IPDM E/R" because "UNKWN" is listed on the column of reception diagnosis of the check sheet table.



5. Confirm the unit name that "UNKWN" is displayed on the copy of "CAN DIAG SUPPORT MNTR" screen of "METER A/C AMP", "AUTO DRIVE POS.", "ALL MODE AWD/4WD" and "ABS" as well as "ENGINE". And then, put a check mark to the check sheet table.

#### NOTE:

- For "METER A/C AMP", "UNKWN" is displayed on "VDC/TCS/ABS" and "AWD/4WD". Put a check mark to it.
- For "AUTO DRIVE POS.", "UNKWN" is not displayed. Do not put a check to it.
- For "ALL MODE AWD/4WD", "UNKWN" is displayed on "TCM". But, do not put a check mark to their columns of reception diagnosis of the check sheet table because "UNKWN" is not listed.
- For "ABS", "UNKWN" is displayed on "ECM", "TCM", "METER/M&A", "STRG" and "ICC". But put a check mark to "ECM", "TCM" and "STRG" because "UNKWN" is listed on the column of reception diagnosis of the check sheet table.

LAN

L

Μ



#### NOTE:

There is a case that some of "CAN DIAG SUPPORT MNTR" and "SELF-DIAG RESULTS" are not needed for diagnosis. In the case, "UNKWN" and "CAN COMM CIRCUIT [U1000]" in "Check sheet results (example)" change to "–". Then, ignore check marks on the check sheet table.

- 6. Perform system diagnosis for possible causes identified.
- 7. Perform diagnosis again after inspection and repair. Make sure that repair is completely performed, and then end the procedure.

Start CAN system trouble diagnosis if this procedure can be confirmed. LAN-29, "CAN Communication Unit" .

#### Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced



- See "SELF-DIAG RESULTS" of all units attached to the check sheet. If "CAN COMM CIRCUIT", "CAN 1. COMM CIRCUIT [U1000]" or "CAN COMM CIRCUIT [U1001]" is displayed, put a check mark to the appli-Μ cable column of self-diagnostic results of the check sheet table. NOTE:
  - For "ENGINE", "CAN COMM CIRCUIT [U1001]" is displayed. Put a check mark to it.
  - For "INTELLIGENT KEY", "NO DTC IS DETECTED" is displayed. Do not put a check mark to it.
  - For "TRANSMISSION", "CAN COMM CIRCUIT [U1000]" is displayed. Put a check mark to it.
  - For "AIR PRESSURE MONITOR", "NO DTC IS DETECTED" is displayed. Do not put a check mark to it.
  - For "BCM", "NO DTC IS DETECTED" is displayed. Do not put a check mark to it.
  - For "METER A/C AMP", "CAN COMM CIRCUIT [U1000]" is displayed. Put a check mark to it.
  - For "AUTO DRIVE POS.", "NO DTC IS DETECTED" is displayed. Do not put a check mark to it.
  - For "ALL MODE AWD/4WD", "CAN COMM CIRCUIT [U1000]" is displayed. Put a check mark to it.
  - For "ABS", "CAN COMM CIRCUIT [U1000]" is displayed. Put a check mark to it.
  - For "IPDM E/R", "CAN COMM CIRCUIT [U1000]" is displayed. Put a check mark to it.

# **LAN-17**

[CAN]

А

E

Н



#### NOTE:

There is a case that some of "CAN DIAG SUPPORT MNTR" and "SELF-DIAG RESULTS" are not needed for diagnosis. In the case, "UNKWN" and "CAN COMM CIRCUIT [U1000]" in "Check sheet results (example)" change to "–". Then, ignore check marks on the check sheet table.

2. For the selected possible causes, it is expected that malfunctions have been found in the past.

# CAN Diagnostic Support Monitor DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR ECM

Example) CAN D	AG SUPPORT MNTR	CAN DIAG SL	JPPORT MNT	R
	ENGINE	EN	GINE	
	PRSNT		PRSNT	
INITIAL	AG OK	TRANSMIT DIAG	OK	
TRANSM	T DIAG OK	TCM	OK	
TCM	ОК	VDC/TCS/ABS	OK	
VDC/TC:	ABS OK	METER/M&A	OK	
METER/	&A OK	ICC	UNKWN	
ICC	UNKWN	BCM/SEC	OK	
BCM/SE <sup>2</sup>	OK	IPDM E/R	OK	
IPDM E/I	ОК	AWD/4WD/e4WD	OK	
AWD/4W	/e4WD OK	EPS	UNKWN	
PRI	IT Scroll Down	PRINT	Scroll Up	
MODE	BACK LIGHT COPY	MODE BACK	LIGHT COF	ΡY

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description Present			
	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG		
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN		
	ТСМ	Make sure of normal reception from TCM.	OK/UNKWN		
ENGINE	VDC/TCS/ABS	Make sure of normal reception from ABS actuator and electric unit (control unit). (VDC models)	OK/UNKWN		
		VDC/TCS/ABS is not diagnosed. (ABS models)	UNKWN		
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN		
	ICC ICC is not diagnosed.		UNKWN		
	BCM/SEC	Make sure of normal reception from BCM.	OK/UNKWN		
	IPDM E/R	Make sure of normal reception from IPDM E/R.	OK/UNKWN		
	AWD/4WD/e4WD	Make sure of normal reception from AWD control unit.			
	EPS	EPS is not diagnosed.	UNKWN		
Diamiau Daaulta (D			·		

Display Results (Present)

• OK: Normal

NG: Malfunction

• UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

LAN

L

Μ

[CAN]

AKS00CHF

А

В

С

D

# [CAN]

# DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR INTELLIGENT KEY UNIT

imple)	CAN D	IAG SU			
	IN	TELLIG			
			PRSNT	PAST	
	TRANSM	1IT DIAG	OK	OK	
	ECM		OK	OK	
	METER/	M&A	OK	OK	
	BCM/SE	С	OK	OK	
	PRI	NT			
	MODE	BACK	LIGHT	COPY	PKIB6071E

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present	Past
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN/-	
INTELLIGENT KEY	ECM	Make sure of normal reception from ECM.	OK/UNKWN/-	OK/0/1 – 39/–
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN/-	
	BCM/SEC	Make sure of normal reception from BCM.	OK/UNKWN/-	

**Display Results (Present)** 

- OK: Normal
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.
- -: There is no received unit or the unit is not in the condition that reception diagnosis is performed.

#### Display Results (Past)

- OK: Normal
- 0: There is malfunction now.
- 1 39: Displays when it finds malfunction in the past even if it is normal or there is a malfunction at present. Also, displays when diagnosis is not performed. It increase like 0→1→2...38→39 after returning to the normal condition whenever IGN OFF→ON. If it is over 39, it is fixed to 39 until the self-diagnostic results are erased. Keep this condition until resetting it.
- -: Undiagnosed

[CAN]

PKIB6072E

D

F

F

G

Н

#### **DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN** (Example) CAN DIAG SUPPORT MNTR FOR TCM А TRANSMISSION PRSNT INITIAL DIAG OK TRANSMIT DIAG OK ECM OK В OK VDC/TCS/ABS METER/M&A OK UNKWN ICC PRINT

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present
	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN
TRANSMISSION	ECM	Make sure of normal reception from ECM.	OK/UNKWN
	VDC/TCS/ABS	Make sure of normal reception from ABS actuator and electric unit (control unit).	OK/UNKWN
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN
	ICC	ICC is not diagnosed.	UNKWN

#### **Display Results (Present)**

- OK: Normal
- NG: Malfunction
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

# DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR LOW TIRE PRESSURE WARNING CONTROL UNIT

	IN	ITIAL DIAG		ЭK		1
	TF	RANSMIT DIA	.G C	Ж		J
	M	ETER/M&A	C	Ж		
						_
					_	
	Ⅰ ⊢				4	LAN
	–				-	
	Ⅰ ⊢				-	
	∣ ⊢	DDINT			-	
		PRINT				
	M	ODE BAC	K LIGHT	COP	PKIB6073E	
Descri	ption				Present	
						M

MODE BACK LIGHT COPY

CAN DIAG SUPPORT MNTR

AIR PRESSURE MONITOR

PRSNT

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present
AIR PRESSURE MONITOR	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN

#### **Display Results (Present)**

- OK: Normal
- NG: Malfunction
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

# [CAN]

# DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR BCM

amnle)	CAN D	IAG SU			
inpie)	<u> </u>				
		BC	SM		
			PRS	SNT	
	INITIAL I	DIAG	0	ιK	
	TRANSM	/IT DIAG	ιK		
	ECM		0	ιK	
	IPDM E/	R	0	ιK	
	METER/	M&A	0	ιK	
	I-KEY		0	ιK	
	PR	INT			
		-		0.0.00	
	MODE	BACK	LIGHT	COPY	PKIB6074E

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present
	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN
BCM	ECM	Make sure of normal reception from ECM.	OK/UNKWN
DOM	IPDM E/R	Make sure of normal reception from IPDM E/R.	OK/UNKWN
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN
	I-KEY	Make sure of normal reception from Intelligent Key unit.	OK/UNKWN

**Display Results (Present)** 

• OK: Normal

NG: Malfunction

• UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

# DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR UNIFIED METER AND A/C AMP.

(Example)	CAN DIA	AG SU	PPORT	MNTR	C	CAN D	IAG SU	PPORT	MNTR
,	ME	ETER /	A/C AM	Р		Ν	IETER .	A/C AMF	>
			PRSNT	PAST				PRSNT	PAST
	TRANSMIT	T DIAG	OK	OK	IP	PDM E/	R	-	-
	ECM		OK	OK	D	DISPLAY	(	OK	OK
	TCM		OK	OK	1-1	-KEY		-	-
	BCM/SEC		OK	OK	E	PS		-	-
	VDC/TCS//	ABS	OK	OK	A	WD/4W	/D	OK	OK
	IPDM E/R		-	-	e4	4WD		-	-
	DISPLAY		OK	OK	IC	CC		-	-
	I-KEY		-	-		.ANE KE	EEP	-	-
	EPS		-	-	TI	FIRE-P		OK	OK
	PRIN	IT		Scroll Down		PR	INT	Scroll Up	
	MODE E	ЗАСК	LIGHT	COPY	м	NODE	BACK	LIGHT	COPY

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present	Past	E
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN/-		F
	ECM	Make sure of normal reception from ECM.	OK/UNKWN/-		
	ТСМ	Make sure of normal reception from TCM.	OK/UNKWN/-		
	BCM/SEC	Make sure of normal reception from BCM.	OK/UNKWN/-		G
	VDC/TCS/ABS	Make sure of normal reception from ABS actuator and electric unit (control unit).	OK/UNKWN/-		Н
	IPDM E/R	IPDM E/R is not diagnosed.	_		
		Make sure of normal reception from display control unit (with navi- gation system models).	OK/UNKWN/-	OK/0/1 – 39/–	1
AMP	DISPLAT	Make sure of normal reception from display unit (without naviga- tion system models).	OK/UNKWN/-		
	I-KEY	I-KEY is not diagnosed.	_	-	
	EPS	EPS is not diagnosed.	-		
	AWD/4WD	Make sure of normal reception from AWD control unit.	OK/UNKWN/-		
-	e4WD	e4WD is not diagnosed.	_		LA
	ICC	ICC is not diagnosed.	_		
	LANE KEEP	LANE KEEP is not diagnosed.	_		L
	TIRE-P	Make sure of normal reception from low tire pressure warning con- trol unit.	OK/UNKWN/-		

#### **Display Results (Present)**

- OK: Normal
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.
- -: There is no received unit or the unit is not in the condition that reception diagnosis is performed.

#### **Display Results (Past)**

- OK: Normal
- 0: There is malfunction now.
- 1 39: Displays when it finds malfunction in the past even if it is normal or there is a malfunction at present. Also, displays when diagnosis is not performed. It increase like 0→1→2...38→39 after returning to the normal condition whenever IGN OFF→ON. If it is over 39, it is fixed to 39 until the self-diagnostic results are erased. Keep this condition until resetting it.
- -: Undiagnosed

Μ

[CAN]

PKIB6075E

А

В

D

# [CAN]

# DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN

ample)	CAN D	IAG SU			
• •	A	UTO DR	IVE PO	S.	
	INITIAL	DIAG	0	ĸ	
	TRANSM	/IT DIAG	0	ĸ	
	BCM/SE	С	0	ĸ	
	METER/	M&A	ĸ		
	TCM		0	K	
	PR	INT			
	MODE	BACK	LIGHT	COPY	PKIB6076E

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present
AUTO DRIVE POS.	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN
	BCM/SEC	Make sure of normal reception from BCM.	OK/UNKWN
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN
	ТСМ	Make sure of normal reception from TCM.	OK/UNKWN

**Display Results (Present)** 

- OK: Normal
- NG: Malfunction
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

# DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR AWD CONTROL UNIT

(Example)	CAN D	IAG SU			
	ALL	MODE			
			PR	SNT	
	INITIAL I	DIAG			
	TRANSM	/IT DIAG	0	ĸ	
	VDC/TC	S/ABS	0	ĸ	
	ECM OK			ĸ	
	TCM		UNKWN		
	METER/M&A OI			ĸ	
	PR	INT			
	MODE	BACK	LIGHT	COPY	PKIB6077E

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present
	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG
	TRANSMIT DIAG	IAG Make sure of normal transmission.	
	VDC/TCS/ABS	Make sure of normal reception from ABS actuator and electric unit (control unit). (VDC models)	OK/UNKWN
4WD		VDC/TCS/ABS is not diagnosed.(ABS models)	UNKWN
	ECM	Make sure of normal reception from ECM.	OK/UNKWN
	ТСМ	TCM is not diagnosed.	UNKWN
	METER/M&A	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN

#### **Display Results (Present)**

- OK: Normal
- NG: Malfunction
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

#### [CAN]

А

#### DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN FOR ABS ACTUATOR AND ELEC-TRIC UNIT (CONTROL UNIT) ABS models

 (Example)
 CAN DIAG SUPPORT MNTR

 ABS

 INTIAL DIAG
 OK

 TRANSMIT DIAG
 OK

 ECM
 OK

 PRINT
 D

 MODE
 BACK

 D
 PKIA8949E

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present	E
	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG	
ABS	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN	F
	ECM	Make sure of normal reception from ECM.	OK/UNKWN	

Display Results (Present)

• OK: Normal

NG: Malfunction

• UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

#### **VDC** models



"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present	L
	INITIAL DIAG	Make sure that microcomputer in ECU works normally.	OK/NG	
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN	М
	ECM	Make sure of normal reception from ECM.	OK/UNKWN	
	ТСМ	Make sure of normal reception from TCM.	OK/UNKWN	
ADO	METER/M&A	METER/M&A is not diagnosed.	UNKWN	
	STRG	Make sure of normal reception from steering angle sensor.	OK/UNKWN	
	ICC	ICC is not diagnosed.	UNKWN	
	AWD/4WD	Make sure of normal reception from AWD control unit.	OK/UNKWN	

#### **Display Results (Present)**

- OK: Normal
- NG: Malfunction
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

Н

LAN

G

PKIB6079E

MODE BACK LIGHT COPY

#### **DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREEN** CAN DIAG SUPPORT MNTR (Example) FOR IPDM E/R IPDM E/R PRSNT PAST TRANSMIT DIAG OK OK ECM OK OK BCM/SEC OK OK PRINT

"SELECT SYSTEM" screen	"CAN DIAG SUPPORT MNTR" screen	Description	Present	Past
	TRANSMIT DIAG	Make sure of normal transmission.	OK/UNKWN/-	
IPDM E/R	ECM	Make sure of normal reception from ECM.	OK/UNKWN/-	OK/0/1 - 39/-
	BCM/SEC	Make sure of normal reception from BCM.	OK/UNKWN/-	

**Display Results (Present)** 

- OK: Normal
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.
- -: There is no received unit or the unit is not in the condition that reception diagnosis is performed.

#### **Display Results (Past)**

- OK: Normal
- 0: There is malfunction now.
- 1 39: Displays when it finds malfunction in the past even if it is normal or there is a malfunction at present. Also, displays when diagnosis is not performed. It increase like 0→1→2...38→39 after returning to the normal condition whenever IGN OFF→ON. If it is over 39, it is fixed to 39 until the self-diagnostic results are erased. Keep this condition until resetting it.

• -: Undiagnosed

pressure warning control unit.

CAN CIRC 8 is not diagnosed.

CAN CIRC 9 is not diagnosed.

Make sure of normal reception from IPDM E/R.

#### **DESCRIPTION OF "CAN DIAG SUPPORT MNTR" SCREE** FOR DISPLAY CONTROL UNIT

			[0,]
G SUPPORT MNTR" SCREEN IIT	(Example)		
	CAN DIAG S	UPPORT MONITOR	
	CAN_COMM	ОК 0	Delete
	CAN_CIRC_1	OK 0	
	CAN_CIRC_2	OK 0	
	CAN_CIRC_3 CAN_CIRC_4	OK 0	
	CAN_CIRC_5	ОК 0	
	CAN_CIRC_6	OK 0	
	CAN_CIRC_7	OK U	
	CAN_CIRC_9	UNKWN 0	
			PKIB6080E
		"CAN DIAG	
		SUPPORT	Error counter
Description		MONITOR"	(Reference)
		aaraan	(10010100)
		screen	
Make sure that microcomputer in ECU works	normally.	OK/NG	
Make sure of normal transmission.		OK/UNKWN	
Make sure of normal reception from BCM.		OK/UNKWN	
Make sure of normal reception from ECM.		OK/UNKWN	-
CAN CIRC 4 is not diagnosed.		OK	
Make sure of normal reception from unified m amp.	eter and A/C	OK/UNKWN	0/1 – 50
Make sure of normal reception from		OK/UNKWN	

**OK/UNKWN** 

OK

UNKWN

[CAN]

#### **Display Results (Present)**

- OK: Normal
- NG: Malfunction

Unit name

Display control unit

• UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

#### Display Results: Error Counter (Reference)

Diagnosis item

CAN COMM

CAN CIRC 1

CAN CIRC 2

CAN CIRC 3

CAN CIRC 4

CAN CIRC 5

CAN CIRC 6

CAN CIRC 7

CAN CIRC 8

CAN CIRC 9

- 0: It is normal now.
- L 1-50: Displays when it finds malfunction in the past even if it is normal or there is a malfunction at present. Also, displays when diagnosis is not performed. It increase like 0->1->2...49->50 after returning to the normal condition whenever IGN OFF->ON. If it is over 50, it is fixed to 50 until the self-diagnostic results are erased. Keep this condition until resetting it.

LAN

#### DESCRIPTION OF "CAN DIAG MNTR" SCREEN FOR DIS-PLAY UNIT

(Example)

CAN DIAG MNTR CANCOMM OK CAN 1 OK CAN 2 OK

SKIB2447E

Unit name	Diagnosis item	Description	"CAN DIAG MNTR" screen
	CAN COMM	Make sure that microcomputer in ECU works normally.	OK/NG
	CAN 1	Make sure of normal transmission.	OK/UNKWN
	CAN 2	Make sure of normal reception from BCM.	OK/UNKWN
	CAN 3	Make sure of normal reception from ECM.	OK/UNKWN
	CAN 4	CAN 4 is not diagnosed.	ОК
Display unit	CAN 5	Make sure of normal reception from unified meter and A/C amp.	OK/UNKWN
	CAN 6	Make sure of normal reception from low tire pressure warning control unit.	OK/UNKWN
	CAN 7	Make sure of normal reception from IPDM E/R.	OK/UNKWN
-	CAN 8	CAN 8 is not diagnosed.	ОК
	CAN 9	CAN 9 is not diagnosed.	UNKWN

**Display Results (Present)** 

- OK: Normal
- NG: Malfunction
- UNKWN: The diagnosed unit does not transmit or receive the applicable data normally.

# **CAN COMMUNICATION**

# **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.

# **CAN Communication Unit**

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

Body type		Wagon											
Axle		2WD AWD											
Engine		VQ35DE											
Transmission		CVT											
Brake control		ABS		V	DC		ABS		VI				
Automatic drive positioner		×	×	×	×		×	×	×	×			
Intelligent Key system		×	×	×	×		×	×	×	×			
Low tire pressure warning system				×	×				×	×	(		
Navigation system			×		×			×		×			
CAN system type	1	2	3	4	5	6	7	8	9	10	ŀ		
CAN system trouble diagnosis	<u>LAN-</u> <u>43</u>	<u>LAN-</u> <u>73</u>	<u>LAN-</u> <u>109</u>	<u>LAN-</u> <u>145</u>	<u>LAN-</u> <u>185</u>	<u>LAN-</u> 225	<u>LAN-</u> 258	<u>LAN-</u> 298	<u>LAN-</u> <u>338</u>	<u>LAN-</u> <u>382</u>			

×: Applicable

J

LAN

L

Μ

PFP:23710

[CAN]

AKS004YP

А

В

D

С

AKS00ASC

Н

# TYPE 1/TYPE 2/TYPE 3 System Diagram

Type1



• Type2



Type3



# Input/output Signal Chart

Signals	ECM	Intelli- gent Key unit	ТСМ	BCM	Dis- play unit	Dis- play control unit	Uni- fied meter and A/ C amp.	Driver seat control unit	ABS actua- tor and elec- tric unit (con- trol unit)	IPDM E/R	B
A/C compressor request signal	Т									R	
Accelerator pedal position signal	Т		R								D
ASCD CRUISE lamp signal	Т						R				
ASCD SET lamp signal	Т						R				
Closed throttle position signal	Т		R								
Cooling fan speed request signal	Т									R	
Engine and CVT integrated control signal	T R		R T								F
Engine coolant temperature signal	т						R				
Engine speed signal	т	R	R			R	R			,	G
Engine status signal	Т			R							
<u> </u>	т						R				Ц
Fuel consumption monitor signal					R	R	Т				
Malfunction indicator lamp signal	Т						R				
Wide open throttle position signal	т		R								
Door lock/unlock request signal		т		R							
Hazard request signal		Т		R							1
Hazard warning lamp request sig- nal		т		R							J
Ignition knob switch signal		Т		R							LA
Panic alarm request signal		Т		R							
Power window open request signal		Т		R							
Starter permission signal		Т		R							L
CVT self-diagnosis signal	R		Т								
Input shaft revolution signal	R		Т								M
Output shaft revolution signal	R		Т								
CVT position indicator signal			Т				R				
Manual mode indicator signal			Т				R				
P range signal			Т					R			
Second position indicator signal			Т				R				
Door lock/unlock status signal		R		Т							
Door switch signal		R		Т	R	R	R	R		R	
A/C switch signal	R			Т							
Blower fan motor switch signal	R			Т							
Buzzer output signal				Т			R				
Front fog lights request signal				Т						R	
Front wiper request signal				Т						R	
High beam request signal				Т			R			R	

Revision: 2005 August

А

T: Transmit R: Receive

Signals	ECM	Intelli- gent Key unit	ТСМ	BCM	Dis- play unit	Dis- play control unit	Uni- fied meter and A/ C amp.	Driver seat control unit	ABS actua- tor and elec- tric unit (con- trol unit)	IPDM E/R
Horn chirp signal				Т						R
Ignition switch signal				Т				R		R
Key fob door unlock signal				Т				R		
Key fob ID signal				Т				R		
Key switch signal				Т				R		
Low beam request signal				Т						R
Oil pressure switch signal				T R			R			т
Position lights request signal				Т			R			R
Rear window defogger switch sig- nal				Т						R
Sleep request 1 signal				т			R			
Sleep request 2 signal				Т						R
				R	Т	Т		R		
System setting signal				Т	R	R		Т		
Theft warning horn request signal				т						R
Turn indicator signal				Т			R			
A/C switch/indicator signal					T R	T R	R T			
Distance to empty signal					R	R	т			
Fuel level low warning signal					R	R	Т			
Vehicle speed signal	P	P	R	P		P	R	P	Т	
Seat helt huckle switch signal				R		IX .	т Т	K		
Manual mode shift down signal			R				т			
Manual mode shift up signal			R				т			
Manual mode signal			R				т			
Not manual mode signal			R				T			
Second position signal			R				т			
Stop lamp switch signal			R				Т			
Fuel level sensor signal	R						Т			
ABS warning lamp signal							R		т	
Brake warning lamp signal							R		т	
ABS operation signal			R						Т	
Rear window defogger control sig- nal	R				R	R				Т
Front wiper stop position signal				R						Т
High beam status signal	R									Т
Low beam status signal	R									т

# TYPE 4/TYPE 5 System Diagram







# Input/output Signal Chart

Signals	ECM	Intelli- gent Key unit	тсм	Low tire pres- sure warn- ing con- trol unit	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied meter and A/C amp.	Steer- ing angle sen- sor	Driver seat con- trol unit	ABS actu- ator and elec- tric unit (con- trol unit)	IPDM E/R
A/C compressor request signal	Т											R
Accelerator pedal position signal	Т		R								R	
ASCD CRUISE lamp signal	Т							R				
ASCD SET lamp signal	Т							R				
Closed throttle position signal	Т		R									
Cooling fan speed request signal	Т											R

T: Transmit R: Receive

A

В

С

D

Е

F

G

Н

J

LAN

L

[CAN]

Revision: 2005 August

Signals	ECM	Intelli- gent Key unit	тсм	Low tire pres- sure warn- ing con- trol unit	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied meter and A/C amp.	Steer- ing angle sen- sor	Driver seat con- trol unit	ABS actu- ator and elec- tric unit (con- trol unit)	IPDM E/R
Engine and CVT integrated con- trol signal	T R		R T									
Engine coolant temperature sig- nal	Т							R				
Engine speed signal	Т	R	R				R	R			R	
Engine status signal	Т				R							
	Т							R				
Fuel consumption monitor signal						R	R	Т				
Malfunction indicator lamp signal	Т							R				
Wide open throttle position signal	Т		R									
Door lock/unlock request signal		Т			R							
Hazard request signal		Т			R							
Hazard warning lamp request sig- nal		Т			R							
Ignition knob switch signal		Т			R							
Panic alarm request signal		Т			R							
Power window open request sig- nal		Т			R							
Starter permission signal		Т			R							
CVT self-diagnosis signal	R		Т									
Input shaft revolution signal	R		Т									
Output shaft revolution signal	R		Т									
CVT position indicator signal			Т					R			R	
Manual mode indicator signal			Т					R				
P range signal			Т							R	R	
Second position indicator signal			Т					R			R	
Tire pressure data signal				Т		R	R					
Tire pressure signal				Т				R				
Door lock/unlock status signal		R			Т							
Door switch signal		R			Т	R	R	R		R		R
A/C switch signal	R				Т							
Blower fan motor switch signal	R				Т							
Buzzer output signal					Т			R				
Front fog lights request signal					Т							R
Front wiper request signal					Т							R
High beam request signal					Т			R				R
Horn chirp signal					Т							R
Ignition switch signal					Т					R		R
Kev fob door unlock signal					Т					R		

Signals	ECM	Intelli- gent Key unit	тсм	Low tire pres- sure warn- ing con- trol unit	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied meter and A/C amp.	Steer- ing angle sen- sor	Driver seat con- trol unit	ABS actu- ator and elec- tric unit (con- trol unit)	IPDM E/R	A B C
Key fob ID signal					Т					R			
Key switch signal					Т					R			D
Low beam request signal					Т							R	
Oil pressure switch signal					T R			R				Т	E
Position lights request signal					Т			R				R	
Rear window defogger switch sig- nal					Т							R	F
Sleep request 1 signal					Т			R					
Sleep request 2 signal					Т							R	G
					R	Т	Т			R			0
System setting signal					Т	R	R			Т			
Theft warning horn request signal					Т							R	Н
Turn indicator signal					Т			R					
A/C switch/indicator signal						Т	Т	R					1
						R	R	Т					
Distance to empty signal						R	R	Т					
Fuel level low warning signal						R	R	Т					J
Vehicle speed signal	R	R	R	R	R		R	R T		R	Т		
Seat belt buckle switch signal					R			Т					LAN
Manual mode shift down signal			R					Т					
Manual mode shift up signal			R					Т					L
Manual mode signal			R					Т					
Not manual mode signal			R					Т					В. Л.
Second position signal			R					Т					IVI
Stop lamp switch signal			R					Т					
Fuel level sensor signal	R							Т					
Steering angle sensor signal									Т		R		
ABS warning lamp signal								R			Т		
Brake warning lamp signal								R			Т		
SLIP indicator lamp signal								R			Т		
VDC OFF indicator lamp signal								R			Т		
VDC operation signal			R								Т		
Rear window defogger control sig- nal	R					R	R					Т	
Front wiper stop position signal					R							Т	
High beam status signal	R											Т	
Low beam status signal	R											Т	

Revision: 2005 August

# TYPE 6/TYPE 7/TYPE 8 System Diagram

• Type6



Type7



Type8


# Input/output Signal Chart

												/ \
Signals	ECM	Intelli- gent Key unit	тсм	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied meter and A/ C amp.	Driver seat con- trol unit	AWD con- trol unit	ABS actua- tor and elec- tric unit (con- trol unit)	IPDM E/R	B
A/C compressor request signal	Т										R	D
Accelerator pedal position signal	Т		R						R			
ASCD CRUISE lamp signal	Т						R					Е
ASCD SET lamp signal	Т						R					
Closed throttle position signal	Т		R									
Cooling fan speed request signal	Т										R	F
Engine and CVT integrated con-	Т		R									
trol signal	R		Т									G
Engine coolant temperature sig- nal	Т						R					0
Engine speed signal	Т	R	R			R	R		R			Н
Engine status signal	Т			R								
	Т						R					
Fuel consumption monitor signal					R	R	Т					
Malfunction indicator lamp signal	Т						R					
Wide open throttle position signal	Т		R									J
Door lock/unlock request signal		Т		R								0
Hazard request signal		Т		R								
Hazard warning lamp request signal		Т		R								LA
Ignition knob switch signal		Т		R								
Panic alarm request signal		Т		R								L
Power window open request sig- nal		Т		R								
Starter permission signal		Т		R								M
CVT self-diagnosis signal	R		Т									
Input shaft revolution signal	R		Т									
Output shaft revolution signal	R		Т									
CVT position indicator signal			Т				R					
Manual mode indicator signal			Т				R					
P range signal			Т					R				
Second position indicator signal			Т				R					
Door lock/unlock status signal		R		Т								
Door switch signal		R		Т	R	R	R	R			R	
A/C switch signal	R			Т								
Blower fan motor switch signal	R			Т								
Buzzer output signal				Т			R					
Front fog lights request signal				Т							R	

Revision: 2005 August

А

T: Transmit R: Receive

Signals	ECM	Intelli- gent Key unit	тсм	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied meter and A/ C amp.	Driver seat con- trol unit	AWD con- trol unit	ABS actua- tor and elec- tric unit (con- trol unit)	IPDM E/R
Front wiper request signal				Т							R
High beam request signal				Т			R				R
Horn chirp signal				Т							R
Ignition switch signal				Т				R			R
Key fob door unlock signal				Т				R			
Key fob ID signal				Т				R			
Key switch signal				Т				R			
Low beam request signal				Т							R
01				Т			R				
Oil pressure switch signal				R							Т
Position lights request signal				Т			R				R
Rear window defogger switch signal				Т							R
Sleep request 1 signal				Т			R				
Sleep request 2 signal				Т							R
System setting signal				R	Т	Т		R			
System setting signal				Т	R	R		Т			
Theft warning horn request sig- nal				Т							R
Turn indicator signal				Т			R				
A/C awitch/indicator aignal					Т	Т	R				
A/C Switch/indicator signal					R	R	Т				
Distance to empty signal					R	R	Т				
Fuel level low warning signal					R	R	Т				
			R				R		R	Т	
venicie speed signal	R	R		R		R	Т	R			
Seat belt buckle switch signal				R			Т				
Manual mode shift down signal			R				Т				
Manual mode shift up signal			R				Т				
Manual mode signal			R				Т				
Not manual mode signal			R				Т				
Second position signal			R				Т				
Stop lamp switch signal			R				Т		R	Т	
Fuel level sensor signal	R						Т				
AWD lock switch signal							Т		R		
Parking brake switch signal							Т		R		
AWD lock indicator lamp signal							R		Т		
AWD warning lamp signal							R		Т		

Revision: 2005 August

[CAN]

Signals	ECM	Intelli- gent Key unit	тсм	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied meter and A/ C amp.	Driver seat con- trol unit	AWD con- trol unit	ABS actua- tor and elec- tric unit (con- trol unit)	IPDM E/R	Ē
ABS warning lamp signal							R			Т		
Brake warning lamp signal							R			Т		
ABS operation signal			R							Т		
Rear window defogger control signal	R				R	R					Т	E
Front wiper stop position signal				R							Т	
High beam status signal	R										Т	_
Low beam status signal	R										Т	F

## **TYPE 9/TYPE 10** System Diagram

Type9



Type10



[CAN]



Н



J

LAN

# Input/output Signal Chart

[CAN]
-------

										T:	Transm	nit R:F	Receive
Signals	ECM	Intel- ligen t Key unit	тсм	Low tire pres- sure warn ing con- trol unit	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied mete r and A/C amp.	Steer ing angl e sen- sor	Drive r seat con- trol unit	AWD con- trol unit	ABS actu- ator and elec- tric unit (con- trol unit)	IPD M E/ R
A/C compressor request signal	Т												R
Accelerator pedal position signal	Т		R								R	R	
ASCD CRUISE lamp signal	Т							R					
ASCD SET lamp signal	Т							R					
Closed throttle position signal	Т		R										
Cooling fan speed request signal	Т												R
Engine and CVT integrated control	Т		R										
signal	R		Т										
Engine coolant temperature signal	Т							R					
Engine speed signal	Т	R	R				R	R			R	R	
Engine status signal	Т				R								
Eucl consumption monitor signal	Т							R					
						R	R	Т					
Malfunction indicator lamp signal	Т							R					
Wide open throttle position signal	Т		R										
Door lock/unlock request signal		Т			R								
Hazard request signal		Т			R								
Hazard warning lamp request sig- nal		Т			R								
Ignition knob switch signal		Т			R								
Panic alarm request signal		Т			R								
Power window open request signal		Т			R								
Starter permission signal		Т			R								
CVT self-diagnosis signal	R		Т										
Input shaft revolution signal	R		Т										
Output shaft revolution signal	R		Т										
CVT position indicator signal			Т					R				R	
Manual mode indicator signal			Т					R					
P range signal			Т							R		R	
Second position indicator signal			Т					R				R	
Tire pressure data signal				Т		R	R						
Tire pressure signal				Т				R					
Door lock/unlock status signal		R			Т								
Door switch signal		R			Т	R	R	R		R			R
A/C switch signal	R				Т								
Blower fan motor switch signal	R				Т								
Buzzer output signal					Т			R					

Revision: 2005 August

Signals	ECM	Intel- ligen t Key unit	тсм	Low tire pres- sure warn ing con- trol unit	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied mete r and A/C amp.	Steer ing angl e sen- sor	Drive r seat con- trol unit	AWD con- trol unit	ABS actu- ator and elec- tric unit (con- trol unit)	IPD M E/ R	A B C
Front fog lights request signal					Т								R	
Front wiper request signal					Т								R	D
High beam request signal					Т			R					R	
Horn chirp signal					Т								R	
Ignition switch signal					Т					R			R	E
Key fob door unlock signal					Т					R				
Key fob ID signal					Т					R				_
Key switch signal					Т					R				
Low beam request signal					Т								R	
					Т			R						G
Oil pressure switch signal					R								Т	
Position lights request signal					Т			R					R	
Rear window defogger switch sig- nal					Т								R	П
Sleep request 1 signal					Т			R						I
Sleep request 2 signal					Т								R	1
					R	Т	Т			R				
System setting signal					Т	R	R			Т				J
Theft warning horn request signal					Т								R	
Turn indicator signal					Т			R						1 ^
A/C switch/indicator signal						T	T	R T						LA
Distance to empty signal						R	R	т						1
Fuel level low warning signal						R	R	т						
			R					R			R	т		
Vehicle speed signal	R	R		R	R		R	т		R		•		M
Seat belt buckle switch signal					R			т						
Manual mode shift down signal			R					T						
Manual mode shift up signal			R					Т						
Manual mode signal			R					т						
Not manual mode signal			R					Т						
Second position signal			R					Т						
											R	т		
Stop lamp switch signal			R					Т				•		
Fuel level sensor signal	R							Т					L	
AWD lock switch signal								Т			R		<u> </u>	
Parking brake switch signal								Т			R		<u> </u>	
Steering angle sensor signal									Т			R	<u> </u>	
AWD lock indicator lamp signal		_					_	R	_		Т		-	

Revision: 2005 August

2005 Murano

Ν

[CAN]

Signals	ECM	Intel- ligen t Key unit	тсм	Low tire pres- sure warn ing con- trol unit	BCM	Dis- play unit	Dis- play con- trol unit	Uni- fied mete r and A/C amp.	Steer ing angl e sen- sor	Drive r seat con- trol unit	AWD con- trol unit	ABS actu- ator and elec- tric unit (con- trol unit)	IPD M E/ R
AWD warning lamp signal								R			Т		
ABS warning lamp signal								R				Т	
Brake warning lamp signal								R				Т	
SLIP indicator lamp signal								R				Т	
VDC OFF indicator lamp signal								R				Т	
VDC operation signal			R									Т	
Rear window defogger control sig- nal	R					R	R						т
Front wiper stop position signal					R								Т
High beam status signal	R												Т
Low beam status signal	R												Т

[CAN]

# [CAN]



J

Н

I

LAN

L

 $\mathbb{N}$ 

Schematic



TKWB0821E

[CAN]

Wiring Diagram - CAN -



REFER TO THE FOLLOWING.

TKWB0822E

[CAN]



TKWB0823E

[CAN]



TKWB0824E





E225150149148147146145 E9 W H.S. E9 H.S. E9 H.S. E9 H.S. E105 W H.S. E105 W H.S. E105 W H.S. E105 W H.S. E105 W

TKWB0825E

# **Check Sheet**

## NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet tab	ام											
encon oncor lab					CAN DIA	G SUPPOI	RT MNTR					]
	soroon					Red	ceive diagr	osis				
SELECT STOTEN	rscreen	Initial diagnosis	Transmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	I NEGOLI G
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	_	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
FRANSMISSION	No indication	NG	UNKWN	UNKWN	—	-	-	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
ЗСМ	No indication	NG	UNKWN	UNKWN	—	_	—	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	_	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	—	_	_	-	—	-	CAN COMM CIRCUIT (U1000)	-
PDM E/R	No indication	-	UNKWN	UNKWN	_	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
			Att. SELE	ach copy CT SYS	of TEM			A SEI	ttach cop LECT SY	by of STEM		
Display	/ unit Tran	slation S	heet: Rev	vrite the	following	names,	and put	a check r	nark on t	he above	check sheet table	
Confirmation/Ad	justment E	Display	Che	ck sheet	table Dis	splay	Confir	mation/A	djustmer	it Display	Check shee	t table Display
CAN COMM				Initial di	agnosis	e	CAN 5	5 			METE	H/M&A
CAN 2				B		J	CAN C	,			IPDI	M E/R
CAN 3				EC	M		CAN 8	}				-
CAN 4				-	_		CAN 9	)				-
					CAN	Attach displ DIAG MN	n copy of ay unit NTR chec	ck sheet				
					CAN	Attach displ DIAG MN	a copy of lay unit NTR chec	ck sheet				

С D

А

[CAN]

AKS00CHG

J

Attach copy of Attach copy of Attach copy of ENGINÉ TRANSMISSION BCM SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of Attach copy of Attach copy of METER A/C AMP ABS IPDM E/R SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of Attach copy of Attach copy of ENGINE TRANSMISSION всм CAN DIAG SUPPORT CAN DIAG SUPPORT CAN DIAG SUPPORT MNTR MNTR MNTR Attach copy of METER A/C AMP Attach copy of Attach copy of IPDM E/R ABS CAN DIAG SUPPORT CAN DIAG SUPPORT CAN DIAG SUPPORT MNTR MNTR MNTR PKIA8345E

## **CHECK SHEET RESULTS (EXAMPLE)**

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

### Case 1

Г

Check harness between TCM and data link connector. Refer to LAN-62, "Inspection Between TCM and Data Link Connector Circuit" .

					CAN DIA	G SUPPO	RT MNTR					
SELECT SYSTEM	screen	Initial	Tronomit		-	Re	ceive diagn	osis			SELE-DIAG	BESULTS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	-	UNKOVN	-		CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	-	UNKWN	UNKWN	—	CAN COMM CIRCUIT (UN00)	_
BCM	No inditiation	NG	UNKWN	UNKWN	—	—	—	UNKWN	1	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	_	NG	UNKWN	UNKIN	—	UNKWN	—	UNKWN	1	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN		UNKWN	-	UNKWN	—	CAN COMMCIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKIN	-	-	-	-	-	-	CAN COMM CIRCUIT (UN 00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	-	UNKWN	-	-	_	_	CAN COMM CIRCUIT (UN00)	-



А

В

## Case 2

Г

Check harness between data link connector and ABS actuator and electric unit (control unit). Refer to <u>LAN-62</u>, <u>"Inspection Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

					CAN DIA	G SUPPO	RT MNTR					
SELECT SYSTEM	screen	1-11-1	<b>T</b>			Re	ceive diagn	osis			SELE-DIAG	BESULTS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U 000)	—
BCM	No indication	NG	UNKWN	UNKWN	-	_	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	_	CAN COMM CIRCUIT (U 000)	_
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	_	CAN COMM CIRCUIT (U 000)	-
IPDM E/R	ind Nation	—	UNKWN	UNKWN	_	UNKWN	—	-	-	-	CAN COMM CIRCUIT (U 000)	—



# [CAN]

А

В

С

D

Е

F

## Case 3

Check ECM circuit. Refer to LAN-63, "ECM Circuit Inspection" .

					CAN DIA	G SUPPO	RT MNTR					
	A screen		-			Red	ceive diagn	osis				RESULTS
	a screen	Initial diagnosis	lransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		INCOULIO
ENGINE	-	NG	UNKWN	_		UNKIN	_	UNKWN	_	UNKWN	CAN COMMCIRCUIT (U100)	CAN COMMCIRCUIT (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	UNKWN	UNKWN	_	CAN COMMCIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	_	UNKWN	_	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	_	CAN COMMCIRCUIT (U100)	_
ABS	-	NG	UNKWN	UNION	-	_	_	_	_	_	CAN COMMCIRCUIT (U100)	_
IPDM E/R	No indication	_	UNKWN	UNWWN	_	UNKWN	_	_	_	_	CAN COMMCIRCUIT (U100)	_



Μ

## Case 4

Check TCM circuit. Refer to LAN-64, "TCM Circuit Inspection" .

					CAN DIA	G SUPPO	RT MNTR					
SELECT SYSTEM	screen	1	<b>T</b>			Red	eive diagn	osis	_		SELE-DIAG	BESUITS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	—	UNKVN	UNKWN	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U V00)	CAN COMMCIRCUIT (UN01)
TRANSMISSION	No individuation	NG	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 100)	-
BCM	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	—	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKVN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 100)	_
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	UNKWN	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



# [CAN]

А

В

С

D

Е

F

## Case 5

Check BCM circuit. Refer to LAN-64, "BCM Circuit Inspection" .

					CAN DIA	G SUPPOR	RT MNTR					
	screen					Red	eive diagn	osis			SELE-DIAG	BESHITS
SELECT STOLEN	1 Screen	Initial diagnosis	lransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI-DIAC	I ILOOLIO
ENGINE	-	NG	UNKWN	_	UNKWN		1	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
BCM	No inditation	NG	UNKWN	UNKWN		_		UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNK		UNKWN	—	UNKWN	—	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN		UNKWN	_	UNKWN	-	CAN COMICIRCUIT (U 000)	_
ABS	-	NG	UNKWN	UNKWN	-	_	_	-	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	-	UNKWN	_	_	_	_	CAN COMM CIRCUIT	—



Μ

## Case 6

Г

Check display unit circuit. Refer to LAN-65, "Display Unit Circuit Inspection" .

										_		
					CAN DIA	G SUPPO	RT MNTR					
SELECT SYSTEM	Iscreen					Re	ceive diagn	osis				BESUITS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	_	-	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKIN	UNKWN	-	UNKWN	-	UNKWN	-		_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	-	—	-	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	_	UNKWN	—	_	—	_	CAN COMM CIRCUIT (U1000)	_
												PKIB4739E



## Case 7

Check data link connector circuit. Refer to LAN-65, "Data Link Connector Circuit Inspection" .

					CAN DIA	G SUPPOI	RT MNTR					
	1 screen					Red	ceive diagn	osis			SELE-DIAG	BESUITS
	scieen	Initial diagnosis	lransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC	TILOULIO
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	-	_	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No inditation	NG	UNKWN	UNKWN	-	_	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	No inditation	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	_	_	-	_	I	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	-	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	_



Μ

А

В

С

D

Е

F

## Case 8

Г

Check unified meter and A/C amp. circuit. Refer to LAN-66, "Unified Meter and A/C Amp. Circuit Inspection" .

					CAN DIA	G SUPPO	RT MNTR					
SELECT SYSTEM	screen	1	<b>T</b>			Re	ceive diagn	osis			SELE-DIAG	BESULTS
	0010011	diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	—	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	-	-		UNKWN	-	CAN COMMCIRCUIT (UN00)	-
BCM	No indication	NG	UNKWN	UNKWN	-	-	—		-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	—	NG	UNKWN	UNKWN	—	UNKWN	-	UNKWN	-	UNKWN	—	—
METER A/C AMP	No indivation	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	-	—	_	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	—	UNKWN	—	—	—	—	CAN COMM CIRCUIT (U1000)	_



## Case 9

А Check ABS actuator and electric unit (control unit) circuit. Refer to LAN-66, "ABS Actuator and Electric Unit (Control Unit) Circuit Inspection" .

					CAN DIA	G SUPPO	RT MNTR					
SELECT SYSTEM	Iscreen	La Mart	T			Re	ceive diagn	osis			SELE-DIAC	BESUITS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIV	
ENGINE	-	NG	UNKWN	_	UNKWN	UNKWN	_	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN		—	_	UNKWN	UNKWN	_	CAN COMM/CIRCUIT (UN00)	_
BCM	No indication	NG	UNKWN	UNKWN	1	—	—	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	_	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	_	CAN COMM/CIRCUIT (UN00)	_
ABS	-	V	UNKWN	UNKWN	-	-	-	_	-	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	UNKWN	_	_	-	_	CAN COMM CIRCUIT (U1000)	-



Μ

J

## Case 10

#### Check IPDM E/R circuit. Refer to LAN-67, "IPDM E/R Circuit Inspection" .

					CAN DIA	G SUPPOI	RT MNTR					
SELECT SYSTEM	l screen					Red	ceive diagn	osis			SELE-DIAG	BESUITS
OLLEOT OTOTEN	scieen	Initial diagnosis	Iransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI-DIAC	THEODERO
ENGINE	_	NG	UNKWN	_	UNKWN	UNKWN	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCL (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	-	-	_	UNKWN	_	UNKIN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	_	UNKIN	_	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	_	_	_	_	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No inclusion	_	UNKWN	UNKWN	-	UNKWN	_	_	_	-	CAN COMM CIRCUIT	_



# [CAN]

٦

А

## Case 11

Check CAN communication circuit. Refer to LAN-68, "CAN Communication Circuit Inspection" .

					CAN DIA	G SUPPOI	RT MNTR					
SELECT SYSTEM	l screen					Red	ceive diagn	osis			SELE-DIAG	BESUITS
	locen	diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC	I LEGOLIO
ENGINE	-	NG	UNKWN	_	UNKWN	UNKWN	_	UNKWN	-	UNKWN	CAN COMMCIRCUIT (UN00)	CAN COMM CIRCUIT (U 001)
TRANSMISSION	N increation	NG	UNKWN	UNKWN	-	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	-
BCM	N inclusion	NG	UNKWN	UNKWN	_	_	_	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	N increation	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	-	CAN COMICIRCUIT	_
ABS	-	V	UNKWN	UNION	-	_	_	_	-	-	CAN COMM CIRCUIT (U 1000)	_
IPDM E/R	N incluation	-	UNKWN	UNKWN	_	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U 1000)	_
											<b>.</b>	
												PKIB4744E

#### Case 12

Г

G Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to LAN-72, "IPDM E/R Ignition Relay Circuit Inspection"

					CAN DIA	G SUPPO	RT MNTR						
SELECT SYSTEM	screen	1	<b>T</b>			Re	ceive diagn	osis			SELE-DIAG		
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC		
ENGINE	_	NG	UNKWN	_	UNKIN	UNKWN	-	UNKWN	-	UNKWN	CAN COMMCIRCUIT (UN00)	CAN COMMCIRCUIT (UN01)	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	-	
BCM	No indication	NG	UNKWN	UNKWN	_	_	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	-	
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	_	_	
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKIN	UNKWN	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (UN00)	_	
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	CAN COMM CIRCUIT (U1000)	-	
IPDM E/R	No indication	—	UNKWN	UNKWN	_	UNKWN	_	_	-	_	CAN COMM CIRCUIT (U1000)	_	
												PKIB4745E	

Μ

## Case 13

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-72</u>, "IPDM E/R Ignition Relay Circuit Inspection".

					CAN DIA	G SUPPOI	RT MNTR					
SELECT SYSTEM	Iscreen					Red	ceive diagn	osis			SELE-DIAG	RESULTS
	1 Sorcen	diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIAC	
ENGINE	-	NG	UNKWN	—	UNKWN	UNKWN	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	_	_	_	_	-	UNKWN	-	CAN COMM CIRCUIT (UN 00)	_
BCM	No indication	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	—	UNKWN	-	UNKWN	-	UNKWN	_	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	-	-	-	-	_	-	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	UNKWN	_	-	-	-	CAN COMM CIRCUIT (U1000)	_

# Inspection Between TCM and Data Link Connector Circuit

- 1. CHECK HARNESS FOR OPEN CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - 8 (L) 6 (L)
  - 9 (Y) 14 (Y)
- : Continuity should exist.
- : Continuity should exist.

## OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW".

NG >> Repair harness.



# Inspection Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) Circuit

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M9
- Harness connector B2
- Harness connector B4
- Harness connector E105

## OK or NG

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

# LAN-62

AKS00CLR

PKIB4746E

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector M9.
- Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 13 (Y).
  - 6 (L) 1 (L) 14 (Y) - 13 (Y)
- : Continuity should exist.
- : Continuity should exist.

#### OK or NG

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



# 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L) 13 (Y) - 10 (Y)
- : Continuity should exist.

B/

Harness connector

: Continuity should exist.

## OK or NG

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

## 4. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- 2. Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 4 (L) 11 (L) 10 (Y) - 15 (Y)
- : Continuity should exist. : Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW". NG >> Repair harness.



# 1. CHECK CONNECTOR

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

## OK or NG

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



AKS00CLU

Harness connector

PKIB5308

[CAN]

A

В



F

F

- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

## OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



# **TCM Circuit Inspection**

## 1. CHECK CONNECTOR

AKS00CLV

[CAN]

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

## OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect TCM connector.
- Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

## 5 (L) - 6 (Y)

: Approx. 54 - 66Ω

## OK or NG

- OK >> Replace TCM.
- NG >> Repair harness between TCM and BCM.



AKS00CLW

# BCM Circuit Inspection

- 1. CHECK CONNECTOR
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 M34 terminals 39 (L) and 40 (Y).

#### 39 (L) - 40 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16, "Removal and Installa-</u> tion of <u>BCM"</u>.
  - IG >> Repair harness between BCM and harness connector M82.



**Display Unit Circuit Inspection** 

## 1. CHECK CONNECTOR

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

## OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display unit connector.
- 2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

#### 14 (L) - 16 (Y)

## : **Approx. 54 - 66**Ω

## OK or NG

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



# 1. CHECK CONNECTOR

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

## OK or NG

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



[CAN]

AKS00CLX

F

Н

А

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

: Approx. 54 - 66 $\Omega$ 

#### 6 (L) - 14 (Y)

OK or NG

- OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u><u>NOSES WORK FLOW"</u>.
- NG >> Repair harness between data link connector and unified meter and A/C amp.



# Unified Meter and A/C Amp. Circuit Inspection

## 1. CHECK CONNECTOR

AKS00CLZ

AKSOOCMO

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of unified meter and A/C amp. 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 unified meter and A/C amp. connector.
- 2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

#### 1 (L) - 11 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



# ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.

[CAN]

# $\overline{2}$ . 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 E24 terminals 11 (L) and 15 (Y).

#### 11 (L) - 15 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00CM1

F

Н

[CAN]

А

# **IPDM E/R Circuit Inspection**

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side  $_{\rm G}$  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 E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### : Approx. 108 - 132 $\Omega$

## OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



# **CAN Communication Circuit Inspection**

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
- ECM
- TCM
- BCM
- Display unit
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

# 2. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- ECM connector
- Harness connector M82
- BCM connector
- Display unit connector
- Unified meter and A/C amp. connector
- Harness connector M9
- 2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

#### : Continuity should not exist.

## OK or NG

- OK >> GO TO 3.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9



# $\overline{\mathbf{3}}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between	data link connector M24 terminals 6 (I	L),
14 (Y) and ground.		

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

- OK or NG
- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9

## 4. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect TCM connector.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

## OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

> 5 (L) - Ground 6 (Y) - Ground

: Continuity should not exist. : Continuity should not exist.

#### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.





**LAN-69** 

А

F

F

Н

LAN

L

Μ

# 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

## 4 (L) - 10 (Y)

## : Continuity should not exist.

## OK or NG

- OK >> GO TO 7.
- NG >> Repair harness between harness connector B2 and harness connector B4.



Harness connector

# 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- : Continuity should not exist.
- 4 (L) Ground 10 (Y) - Ground
- : Continuity should not exist.

#### OK or NG

- OK >> GO TO 8.
- NG >> Repair harness between harness connector B2 and harness connector B4.

# 8. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector.
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

## 48 (L) - 49 (Y)

## : Continuity should not exist.

## OK or NG

OK >> GO TO 9.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105



PKIB5321E

# 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) Ground 49 (Y) - Ground
- : Continuity should not exist.
- : Continuity should not exist.

OK or NG

- OK >> GO TO 10.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

: Approx. 108 – 132  $\Omega$ 

# 10. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

- Remove ECM and IPDM E/R from vehicle. 1.
- 2. Check resistance between ECM terminals 94 and 86.

94 - 86 : Approx. 108 – 132  $\Omega$ 

3. Check resistance between IPDM E/R terminals 48 and 49.

48 - 49

OK or NG

- OK >> GO TO 11.
- NG >> Replace ECM and/or IPDM E/R.



# 11 CHECK SYMPTOM

- Fill in described symptoms on the column "Symptom" in the check sheet. 1.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

OK or NG

OK >> GO TO 12.

NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced" L

LAN



А

F



# 12. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- TCM
- BCM
- Display unit
- Unified meter and A/C amp.
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

# **IPDM E/R Ignition Relay Circuit Inspection**

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

- IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY IGNITION SW. IN "ON"</u> <u>AND/OR "START"</u>.
## [CAN]



LAN

Н

I

J

L

M

## [CAN]



TKWB0826E

## Wiring Diagram - CAN -



Μ

REFER TO THE FOLLOWING.

TKWB0827E

[CAN]



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 W REFER TO THE FOLLOWING. (M34), (M99), (F103) -ELECTRICAL UNITS

TKWB0828E

[CAN]



TKWB0829E

# LAN-CAN-08





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

TKWB0830E

[CAN]

А

В

# LAN-CAN-09

DATA LINE



TKWB0831E

## **Check Sheet**

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet tabl	е														
			1		CAN	DIAG SU	PPORT I	MNTR							
SELECT SYSTEM	l screen	Initial	Transmit				Receive	diagnosis				SELF-DIAC	RESULTS		
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	E/R				
ENGINE	-	NG	UNKWN	1	-	UNKWN	UNKWN	ı —	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)		
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	UNKWN	ı _	UNKWN	_	-	CAN COMM CIRCUIT (U1000)	_		
TRANSMISSION	No	NG	UNKWN	UNKWN	-	_	_	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT	_		
ВСМ	No	NG	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	_		
Display unit	-	NG	UNKWN	UNKWN	-	_	UNKWN	ı —	UNKWN	-	UNKWN	_	-		
METER A/C AMP	No indication	_	UNKWN	UNKWN	1	UNKWN	UNKWN		_	UNKWN	_	CAN COMM CIRCUIT (U1000)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	ı —	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	_		
ABS	-	NG	UNKWN	UNKWN	_	—	_	_	_	-	_	CAN COMM CIRCUIT (U1000)	_		
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	ı —	_	-	_	CAN COMM CIRCUIT (U1000)	_		
L		1							•		•				
Sumptoma :															
Symptoms :	ymptoms :														
		Γ													
											(				
			SEL	ttach co ECT S۱.	py of /STEM				SELE	ACN COPY	7 of STEM				
		L													
Dienlau	unit Tran	slation 9	heet P	awrite th	e follow	ina nar		t nut e d	heck me	ark on th	e ahovo	check sheet table			
Confirmation/Adi	ustment F	)isplav	Ch	eck she	et table	Display		Confirma	tion/Adi	ustment	Display	Check sheet	t table Display		
CAN COMM		Spidy		Initial	diagno	sis		CAN 5				METE	ER/M&A		
CAN 1				Transm	nit diagn	osis		CAN 6					_		
CAN 2					BCM			CAN 7				IPDI	M E/R		
CAN 3					ECM			CAN 8					_		
CAN 4					_		0	CAN 9					_		
								,							
						At	tach co displav	py of unit							
					CA	N DIAG	MNTF	check s	sheet						
L															
													PKIB4711E		

LAN-80

AKS00A40



٦

### CHECK SHEET RESULTS (EXAMPLE)

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

#### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-96</u>, "Inspection Between TCM and Data <u>Link Connector Circuit</u>".

					CAN	DIAG SU	PPORT N	INTR					
	l soroon		_				Receive	diagnosis					
	1 Screen	Initial Transmit diagnosis diagnosis ECM I-KEY TCM BCM /SEC DISPLAY METER VDC/TCS IPDM /SEC DISPLAY METER VDC/TCS IPDM									IPDM E/R		
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	_	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No inditation	-	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	-	Ι	CAN COMMCIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	—	—	—	UNKWN	UNKWN	Ι	CAN COMMCIRCUIT (U1000)	_
всм	No inditation	NG	UNKWN	UNKWN	UNKWN	—	—	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	_	_	UNKVN	—	UNKWN	-	UNKWN	_	_
METER A/C AMP	No indication	_	UNKWN	UNIWN	—	UNKWN	UNKIN	UNKWN	-	UNKWN		CAN COMMICIRCUIT (U100)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	UNKIN	—	UNKWN	-	-	CAN COMMCIRCUIT (U100)	_
ABS	-	NG	UNKWN	UNKWN	_	-	_	_	-	_	_	CAN COMMCIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	—	UNKWN	—	_	_	-	CAN COMMCIRCUIT (U1000)	_
													PKIB4747E



Check harness between data link connector and driver seat control unit. Refer to <u>LAN-96</u>, "Inspection <u>A</u><u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen						Receive	diagnosis					BESUITS
OLLEON ON OTHER	Screen	diagnosis ECM I-KEY TCM BCM /SEC DISPLAY METER VDC/TCS IPDM /M&A /ABS E/R											INCOULID
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	—	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN001)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	UNKWN	_	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-		_	-	UNKWN		_	CAN COMM CIRCUIT (U 000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	١	-	-	UNKWN		UNKWN	CAN COMM CIRCUIT (U1000)	
Display unit	-	NG	UNKWN	UNKWN	-		UNKWN	-	UNKWN	-	UNKWN	_	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	—		—	CAN COMM CIRCUIT (UN000)	_
AUTO DRIVE POS.	No inditation	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U 000)	-
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	-	_	CAN COMM CIRCUIT (U 000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNKWN	_	_	_	_	CAN COMM CIRCUIT (U 000)	_



 $\mathbb{M}$ 

[CAN]

В

С

D

Е

F

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-</u> <u>97</u>, "Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit".

					CAN	DIAG SU	PPORT N	INTR					
	screen						Receive	diagnosis				SELE-DIAG	RESULTS
SELECTOTOTEN	Screen	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	UNKWN	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	—		Ι	CAN COMM CIRCUIT (U0000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	_	-	-	_	-	_	-	CAN COMM CIRCUIT (U 000)	_
IPDM E/R	No individuation	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	-	CAN COMM CIRCUIT	_



## [CAN]

А

В

С

D

Е

F

#### Case 4

Check ECM circuit. Refer to LAN-98, "ECM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	1NTR					
	scroon		_				Receive	diagnosis					
SELECTOTOTEN	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	THEODERS
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	—		-	UNKWN	CAN COMM CIRCUIT (U 1000)	CAN COMMCIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	_	UNKWN	-	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	_	_	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	_	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	-	_	_	_	-	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNKWN	_	_	_	_	CAN COMMCIRCUIT (UN00)	_



M

Г

Check Intelligent Key unit circuit. Refer to LAN-99, "Intelligent Key Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	scroon		_				Receive	diagnosis					
SELECT STOLEN	screen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	INEGOLIS
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No inditation	_	UNKWN	UNKWN	-	_	UNKWN	_	UNKWN	-	_	CAN COMMCIRCUIT (U N00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	UNKWN	UNKWN	1	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKIN	-	-	—	UNKWN	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	_



## [CAN]

А

В

С

D

Е

F

#### Case 6

Г

Check TCM circuit. Refer to LAN-99, "TCM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen						Receive	diagnosis					RESULTS
	oreen	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC	
ENGINE	-	NG	UNKWN	-	-		UNKWN	_	UNKWN	_	UNKWN	CAN COMMCIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	_	UNKWN	-	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	-	_	-	UNKWN	UNKWN	1	CAN COMMCIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	1	-	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	_	NG	UNKWN	UNKWN	-	1	UNKWN	—	UNKWN	_	UNKWN	—	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	Ι	CAN COMMCIRCUIT (U N00)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	Ι	CAN COMMCIRCUIT (UN00)	_
ABS	_	NG	UNKWN	UNKWN	-	_	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Μ

1

Check BCM circuit. Refer to LAN-100, "BCM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	scroon						Receive	diagnosis					
SELECTOTOTEN	scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		INEGOLIS
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKIN		UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCU (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	—	-	UNKIN	-	UNKWN	Ι	1	CAN COMMCIRCUIT (U100)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	-	-	CAN COMMCIRCUIT (U100)	-
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	-	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	—	UNION	_	_	_	_	CAN COMMCIRCUIT (U100)	_



Check display unit circuit. Refer to LAN-100, "Display Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	screen						Receive	diagnosis					BESUITS
	Screen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG		UNKWN	-	-	UNKWN	_	UNKWN	-	UNKIN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNK	_	UNKWN	_	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	-	_	_	_	—	-	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	—	_	_	CAN COMM CIRCUIT (U1000)	_



M

А

В

С

D

Е

F

Check data link connector circuit. Refer to LAN-101, "Data Link Connector Circuit Inspection" .

												<b>F</b>	
					CAN		Receive	diagnosis					
SELECT SYSTEM	screen	Initial diagnosis	Initial agnosis diagnosis ECM I-KEY TCM BCM DISPLAY METER VDC/TCS IPDM //M&A /ABS E/R									SELF-DIAG	RESULIS
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKWN	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	-	_	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	-
METER A/C AMP	No inditation	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	—
AUTO DRIVE POS.	No indivation	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	—
ABS	_	NG	UNKWN	UNKWN	_	-	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No inditation	-	UNKWN	UNKWN	_	_	UNKWN	-	_	-	-	CAN COMM CIRCUIT (U1000)	—



## [CAN]

А

#### Case 10

Г

Check unified meter and A/C amp. circuit. Refer to LAN-101, "Unified Meter and A/C Amp. Circuit Inspection".

					CAN	DIAG SU	PPORT N	INTR							
SELECT SYSTEM	scroon						Receive	diagnosis					BESUITS		
	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC			
ENGINE	-	NG	UNKWN	_	-	UNKWN	UNKWN	-		-	UNKWN	N CAN COMM CIRCUIT CAN COMMICIRCUIT (U1000) (U1001) CAN COMMICIRCUIT			
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-		-	_	CAN COMMCIRCUIT (UN00)	_		
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	—	-		UNKWN	-	CAN COMMCIRCUIT (UN00)	—		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-		-	UNKWN	CAN COMM CIRCUIT (U1000)	-		
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	-		
METER A/C AMP	No inditation	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	-	—	CAN COMM CIRCUIT (U 100)	-		
ABS	_	NG	UNKWN	UNKWN	_	-	_	-	-	-	_	CAN COMM CIRCUIT (U1000)	-		
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	_		



M

Check driver seat control unit circuit. Refer to LAN-102, "Driver Seat Control Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	lecreen						Receive	diagnosis					BESUITS
	1 Soleen	Initial diagnosis	al Transmit osisdiagnosis ECM I-KEY TCM BCM DISPLAY METER VDC/TCS IF /SEC DISPLAY MAA /ABS E									OLLI DIAC	
ENGINE	-	NG     UNKWN     –     UNKWN     UNKWN     –     UNKWN     – </td <td>CAN COMM CIRCUIT (U1000)</td> <td>CAN COMM CIRCUIT (U1001)</td>									CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-		—	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	—	UNKWN	-	UNKWN	—	UNKWN	—	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	—	I	CAN COMMCIRCUIT (U 1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	-	—	_	_	CAN COMM CIRCUIT (U1000)	_
													PKIB4757E



В

С

D

Е

F

#### Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-102</u>, "ABS Actuator and Electric Unit (<u>Control Unit</u>) <u>Circuit Inspection</u>".

					CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM screen			_	Receive diagnosis										
		Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	S IPDM E/R			
ENGINE	-	NG	UNKWN	_	_	UNKWN	UNKWN		UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	—	-	—	UNKWN	UNKVN	-	CAN COMMCIRCUIT (U100)	_	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	-	
Display unit	-	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	UNKWN	_	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-		-	CAN COMMCIRCUIT (U 1000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_	
ABS	-	V		UNKWN	-	-	—	_	-	—	-	CAN COMMCIRCUIT (U 1000)	-	
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	—	_	_	CAN COMM CIRCUIT (U1000)	_	



Μ

#### Check IPDM E/R circuit. Refer to LAN-103, "IPDM E/R Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM screen		1	-	Receive diagnosis								SELE-DIAG BESULTS		
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC	TILOULIU	
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN		_	CAN COMM CIRCUIT (U1000)	—	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	-	—	—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_	
всм	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN		UNKUN	CAN COMM CIRCUIT (U1000)	_	
Display unit	_	NG	UNKWN	UNKWN	-	-	UNKWN	—	UNKWN	-	UNKUN	—	—	
METER A/C AMP	No indication	-	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	—	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	Ι	UNKWN	UNKWN	—	UNKWN		—	CAN COMM CIRCUIT (U1000)	_	
ABS	-	NG	UNKWN	UNKWN	_	-	_	_	_	_	—	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indivition	-	UNKWN	UNKWN	_	_	UNKWN	-	—	_	_	CAN COMM CIRCUIT (U100)	_	
													PKIB4759E	



А

#### Case 14

Check CAN communication circuit. Refer to LAN-103, "CAN Communication Circuit Inspection" .

				CAN									
SELECT SYSTEM screen	1	-				Receive							
	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R			
ENGINE -	NG	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	-		CAN COMM CIRCUIT (U 000)	CAN COMM CIRCUIT (U 001)	
INTELLIGENT KEY	—	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	—	-	CAN COMM CIRCUIT (U 000)	-	
TRANSMISSION No indivation	NG	UNKWN	UNKWN	—	-	-	—	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 000)	_	
BCM No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	—	
Display unit —	NG	UNKWN	UNHWN	-	—	UNIWN	—	UNIWN	—	UNIOWN	—	—	
METER A/C AMP Not individual	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMY CIRCUIT (U 000)	_	
AUTO DRIVE POS. Not individual	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	_	-	CAN COMIN CIRCUIT (U 000)	_	
ABS —	N	UNKWN	UNKWN	_	-	-	_	-	_	_	CAN COMM CIRCUIT (U 000)	-	
IPDM E/R	—	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT	_	

#### Case 15

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to <u>LAN-108</u>, "IPDM E/R Ignition Relay <u>G</u> <u>Circuit Inspection</u>".

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM screen							Receive						
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	-	_	UNKWN	UNKWN	-	UNKWN	_	UNKWN	CAN COMMCIRCUIT (U 1000)	CAN COMMCIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	_	UNKWN	—	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	_	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	1	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	-		UNKWN	UNKWN	1		-	CAN COMMCIRCUIT (U 1000)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_		UNKWN	_	UNKWN	-	_	CAN COMMCIRCUIT (U 1000)	_
ABS	-	NG	UNKWN	UNKWN	-	-	_	-	-	—	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT	

Μ

Н

L

J

AN

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-108, "IPDM E/R Ignition Relay</u> <u>Circuit Inspection"</u>.

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM screen			_				Receive						
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC	
ENGINE	-	NG	UNKWN	—	_	UNKWN	UNKWN	-	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	-	-	—	—	-	—	UNKWN	-	CAN COMM CIRCUIT (U 100)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	—	—	-	UNKWN		UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	_	NG	UNKWN	UNKWN	—	-	UNKWN	—	UNKWN	—	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	—	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN		Ι	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	_	_	-	_	-	-	_	_	CAN COMMCIRCUIT (UN00)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	-	_	—	_	CAN COMM CIRCUIT (U1000)	_
													PKIB4762E

## Inspection Between TCM and Data Link Connector Circuit

AKS00CLC

- 1. CHECK HARNESS FOR OPEN CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - 8 (L) 6 (L) 9 (Y) - 14 (Y)
- : Continuity should exist. : Continuity should exist.

- OK or NG
- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW"
- NG >> Repair harness.



## Inspection Between Data Link Connector and Driver Seat Control Unit Circuit

AKS00CLD

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M9
- Harness connector B2

## OK or NG

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

## 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector M9.
- 2 Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 13 (Y).
  - 6 (L) 1 (L) 14 (Y) - 13 (Y)
- : Continuity should exist.
- : Continuity should exist.

#### OK or NG

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



## 3. CHECK HARNESS FOR OPEN CIRCUIT

#### 1. Disconnect harness connector B4.

- 2. Check continuity between harness connector B2 terminals 1 (L). 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L)
- : Continuity should exist.
- 13 (Y) 10 (Y)
- : Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

#### Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit AKS00CLE

B/

Harness connector

### 1. CHECK CONNECTOR

LAN

Harness connector

O

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B4
- Harness connector E105

#### OK or NG

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

[CAN]

А

F

Н

L

Μ

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L) 13 (Y) - 10 (Y)

: Continuity should exist. : Continuity should exist.

#### OK or NG

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



## $\mathbf{3}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 4 (L) 11 (L)

## 10 (Y) - 15 (Y)

: Continuity should exist.

: Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.



AKS00CLF

## ECM Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of ECM 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 ECM connector.
- Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



Intelligent Key Unit Circuit Inspection	Λ
1. CHECK CONNECTOR	A
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of Intelligent Key unit for damage, bend and loose connection (control module side and harness side).</li> </ol>	В
OK or NG OK >> GO TO 2. NG >> Repair terminal or connector.	С
2. CHECK HARNESS FOR OPEN CIRCUIT	D
<ol> <li>Disconnect Intelligent Key unit connector.</li> <li>Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).</li> </ol>	E
2 (L) - 3 (Y)     : Approx. 54 - 66Ω       OK or NG     Intelligent Key unit connector	F
OK       >> Replace Intelligent Key unit.         NG       >> Repair harness between Intelligent Key unit and BCM.	G
PKIB5312E	Η
TCM Circuit Inspection       AKSOOCLH         1. CHECK CONNECTOR       AKSOOCLH	I
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).</li> <li>TCM connector</li> <li>Harness connector F102</li> <li>Harness connector M82</li> </ol>	J
$\frac{OK \text{ or } NG}{OK} >> GO TO 2.$	L
NG >> Repair terminal or connector.	N
2. CHECK HARNESS FOR OPEN CIRCUIT	
<ol> <li>Disconnect TCM connector.</li> <li>Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).</li> </ol>	
5 (L) - 6 (Y) : Approx. 54 - $66\Omega$	
OK >> Replace TCM. NG >> Repair harness between TCM and BCM.	

PKIB5313E

[CAN]

## **BCM Circuit Inspection**

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 M34 terminals 39 (L) and 40 (Y).

#### 39 (L) - 40 (Y)

: **Approx. 54 - 66**Ω

#### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16, "Removal and Installa-</u> tion of <u>BCM"</u>.
- NG >> Repair harness between BCM and harness connector M82.



## **Display Unit Circuit Inspection**

### 1. CHECK CONNECTOR

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

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display unit connector.
- 2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

#### 14 (L) - 16 (Y)

: Approx. 54 - 66Ω

#### OK or NG

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



AKS00CLJ

[CAN]

	[CAN]
Data Link Connector Circuit Inspection 1. CHECK CONNECTOR	AKS00CLK
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check data link connector and terminals for damage, bend and loo ness side).</li> </ol>	ose connection (connector side and har-
<u>DK or NG</u> OK >> GO TO 2. NG >> Repair terminal or connector.	
2. CHECK HARNESS FOR OPEN CIRCUIT	
Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).	
OK or NG         OK       >> Diagnose again. Refer to LAN-7, "TROUBLE DIAG-	Data link connector
NG >> Repair harness between data link connector and unified meter and A/C amp.	
Jnified Meter and A/C Amp. Circuit Inspection	SKIA6868E AKS00CLL
<ol> <li>Disconnect the battery cable from the negative terminal.</li> </ol>	
<ol> <li>Check terminals and connector of unified meter and A/C amp. for (meter side and harness side).</li> </ol>	or damage, bend and loose connection
<u>DK or NG</u>	
NG >> Repair terminal or connector.	
2. CHECK HARNESS FOR OPEN CIRCUIT	
1. Disconnect unified meter and A/C amp. connector.	
<ol> <li>Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).</li> </ol>	DISCONNECT IN HS.
1 (L) - 11 (Y) : Approx. 54 - 66Ω	Unified meter and A/C amp.connector
OK or NG OK >> Replace unified meter and A/C amp. NG >> Repair harness between unified meter and A/C amp. and data link connector.	
	SKIA6871E

## Driver Seat Control Unit Circuit Inspection

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 B301
- Harness connector B9

#### 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.
- Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



## ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

#### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E24 terminals 11 (L) and 15 (Y).

#### 11 (L) - 15 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00CLN

**IPDM E/R Circuit Inspection** 

2. Disconnect the battery cable from the negative terminal.

1. CHECK CONNECTOR

1.

Turn ignition switch OFF.

3.	Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side and harness side).	
οк	or NG	С
O N	K >> GO TO 2. G >> Repair terminal or connector.	
2.	CHECK HARNESS FOR OPEN CIRCUIT	D
1. 2.	Disconnect IPDM E/R connector. Check resistance between IPDM E/R harness connector E9 ter- minals 48 (L) and 49 (Y).	E
	48 (L) - 49 (Y) : Approx. 108 - 132Ω	F
<u>OK</u> Ol N	or NG K >> Replace IPDM E/R. 3 >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit). PKIB5317E	G
CA	N Communication Circuit Inspection	
1.	CHECK CONNECTOR	
1. 2. 3. -	Turn ignition switch OFF. Disconnect the battery cable from the negative terminal. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side). ECM Intelligent Key unit	J
-	TCM	1
-	BCM	
-	Display unit	
-	Unified meter and A/C amp.	M
-	Driver seat control unit	
-	ABS actuator and electric unit (control unit)	
-		
_	Between ECM and IPDM E/R	
-	Between ECW and TUM Between ECM and driver aget control unit	
- 04		
N	G >> Repair terminal or connector.	

[CAN]

AKS00CLO

А

В

Ν

- 1. Disconnect following connectors.
- ECM connector
- Intelligent Key unit connector
- Harness connector M82
- BCM connector
- Display unit connector
- Unified meter and A/C amp. connector
- Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

#### : Continuity should not exist.

#### OK or NG

OK >> GO TO 3.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9

#### $\mathbf{3}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

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

#### OK or NG

- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9





- 1. Disconnect TCM connector.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



## 5. CHECK HARNESS FOR SHORT CIRCUIT



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

B

TCM connector

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

#### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.

### 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4 and harness connector B9.
- Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

#### OK or NG

OK >> GO TO 7.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9





А



F

Н

PKIB5319E

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground 10 (Y) - Ground
- : Continuity should not exist.

: Continuity should not exist.

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

## 8. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

#### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) Ground 19 (BR/W) - Ground
- : Continuity should not exist. : Continuity should not exist.

#### OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.





- Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector. 1.
- 2 Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y) : Continuity should not exist.

#### OK or NG

OK or NG

OK

NG

1.

2.

OK >> GO TO 11.

48 (L) - Ground

49 (Y) - Ground

>> GO TO 12.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

## 11. CHECK HARNESS FOR SHORT CIRCUIT



3. Check resistance between IPDM E/R terminals 48 and 49.

#### 48 - 49 : Approx. 108 – 132 $\Omega$

#### OK or NG

OK >> GO TO 13.

94 - 86

NG >> Replace ECM and/or IPDM E/R.



## 13. снеск сумртом

- 1. Fill in described symptoms on the column "Symptom" in the check sheet.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

#### OK or NG

- OK >> GO TO 14.
- NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"



Revision: 2005 August

LKIA0037E

А

## 14. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- Intelligent Key unit
- TCM
- BCM
- Display unit
- Unified meter and A/C amp.
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

#### Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

### **IPDM E/R Ignition Relay Circuit Inspection**

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

- IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY IGNITION SW. IN "ON"</u> <u>AND/OR "START"</u>.

AKS00CLQ
### [CAN]



LAN

L

Μ

J

Н

I

## [CAN]



TKWB0832E

Wiring Diagram - CAN -



TKWB0833E



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 W REFER TO THE FOLLOWING. (M34), (M99), (F103) -ELECTRICAL UNITS

TKWB0834E

[CAN]



TKWB0835E

# LAN-CAN-13





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

TKWB0836E



[CAN]

А

В

## LAN-CAN-14

DATA LINE



TKWB0837E

### **Check Sheet**

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet table	е													
					CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM	screen	Initial	Transmit				Receive	diagnosis		1		SELF-DIAG	RESULTS	
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R			
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	_	UNKWN	CAN COMM CIRCUIT	CAN COMM CIRCUIT (U1001)	
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	UNKWN	_	_	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	-	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_	
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	I	_	-	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display control unit	_	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	_	
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	_	-	CAN COMM CIRCUIT (U1000)	_	
ABS	_	NG	UNKWN	UNKWN	_		_	_	-	_	-	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	UNKWN	-	-	_	-	CAN COMM CIRCUIT (U1000)	_	
			•				•			•		n · · /		
Diantau			A SEL	ttach co .ECT SN	py of /STEM				Atta SELE	ach copy CT SYS	r of TEM			
Display	control u	nit Trans	lation S	heet: Re	ewrite th	e follow	ing nam	ies, and	put a ch	neck ma	rk on th	e above check she	et table.	
Confirmation/Adju	ustment D	vispiay		IECK She	diagnor	Display			uon/Adj	ustment	UISPIAY		R/M&A	
CAN CIBC 1				Transm	nit diagn	osis			03 06					
CAN CIRC 2					BCM			AN CIR	C 7			IPDI	M E/R	
CAN CIRC 3					ECM		C	AN CIR	C 8				_	
CAN CIRC 4					-		С	AN CIR	C 9				_	
				CA	N DIAG	At disp i SUPP(	tach co lay cont ORT M0	py of rol unit DNITOR	check s	sheet				
													PKIB4713E	

AKS00ASK



٦

### **CHECK SHEET RESULTS (EXAMPLE)**

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

#### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-132</u>, "Inspection Between TCM and Data <u>Link Connector Circuit</u>".

					CAN	DIAG SU	PPORT N	INTR					
	screen						Receive	diagnosis					BESHITS
	Scieen	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC	I ILCOLIC
ENGINE	_	NG	UNKWN	—	-	UNKWN	UNKWN	—	UNKVN	-	UNK	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U 101)
INTELLIGENT KEY	No inditation	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	-	-	_	-	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
ВСМ	No inditation	NG	UNKWN	UNKWN	UNKWN	—	-	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN		-	-	UNKIN	-	UNKWN	Ι	UNKWN	_	—
METER A/C AMP	No indication	_	UNKWN		_	UNKWN	UNKIN	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKIN	_	UNKWN	-	-	CAN COMMCIRCUIT (U N00)	-
ABS	-	NG	UNKWN	UNKWN	-	-	-	_	-	-	-	CAN COMM CIRCUIT (UN00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKIN	_	_	-	-	CAN COMM CIRCUIT (UN00)	_



Check harness between data link connector and driver seat control unit. Refer to <u>LAN-132</u>, "Inspection <u>A</u><u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

					CAN	DIAG SU	PPORT N	INTR								
	screen						Receive	diagnosis					BESUITS			
	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R					
ENGINE	_	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	-	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)			
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	_			
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	_	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_			
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	—	UNKWN	-	UNKVN	CAN COMM CIRCUIT (U1000)	-			
Display control unit	_	NG	UNKWN	UNKWN	Ι		UNKWN	-	UNKWN	-	UNKVN	_	—			
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_			
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	_	UNKWN	-	-	CAN COMM CIRCUIT (U 100)	-			
ABS	_	NG	UNKWN	UNKWN	-	_	_	_	_	-	-	CAN COMM CIRCUIT (UN00)	_			
IPDM E/R	No inditation	_	UNKWN	UNKWN	_	-	UNKWN	_	_	-	-	CAN COMM CIRCUIT (U 1000)	_			



 $\mathbb{M}$ 

В

С

D

Е

F

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-</u> <u>133, "Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

					CAN	DIAG SU	PPORT N	INTR					
	screen						Receive	diagnosis				SELE-DIAG	BESUITS
	oreen	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DINC	
ENGINE	_	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	—	UNK	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUI (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	—	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	—	UNKWN	-		CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-		_	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-		-	CAN COMIC CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	-	-	_	-	_	-	CAN COMMCIRCUIT (U 100)	_
IPDM E/R	No inditation	-	UNKWN	UNKWN	_	_	UNKWN	_	-	_	-	CAN COMICIRCUIT (U 100)	_



### [CAN]

А

В

С

D

Е

F

### Case 4

Г

Check ECM circuit. Refer to LAN-134, "ECM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR							
	scroon		_				Receive	diagnosis							
SEELOT STOTEM	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R				
ENGINE	_	NG	UNKIVN	_	-		UNKWN		UNKWN	_	UNKIN	CAN COMM CIRCUIT (U 1000)	CAN COMM CIRCUIT (UN01)		
INTELLIGENT KEY	No indication	-	UNKWN		Ι	-	UNKWN	-	UNKWN	Ι	-	CAN COMMCIRCUIT (U N00)	—		
TRANSMISSION	No indication	NG	UNKWN		Ι	-	_	—	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	—		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	—		
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	-		
METER A/C AMP	No indication	-	UNKWN	UNION	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM/CIRCUIT (U 100)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	_		
ABS	_	NG	UNKWN	UNION	-	-	_	_	-	-	-	CAN COMM CIRCUIT (U 100)	-		
IPDM E/R	No indication	-	UNKWN	UNIWN	_	-	UNKWN	_	_	_	_	CAN COMMCIRCUIT (UN00)	_		



M

Г

Check Intelligent Key unit circuit. Refer to LAN-135, "Intelligent Key Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	scroon						Receive	diagnosis					
ULLEON UNUTLIN	Screen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		INCOULIO
ENGINE	-	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCU (U1001)
INTELLIGENT KEY	No indiviation	_	UNKWN	UNKWN	-	_	UNKWN	-	UNKWN	-	_	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-	—		UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	
BCM	No indication	NG	UNKWN	UNKWN		-	-		UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	
Display control unit	-	NG	UNKWN	UNKWN	-	—	UNKWN	—	UNKWN	-	UNKWN	—	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	_



### [CAN]

А

В

С

D

Е

F

### Case 6

Г

Check TCM circuit. Refer to LAN-135, "TCM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	1NTR							
SELECT SYSTEM	screen						Receive	diagnosis					BESUITS		
	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R				
ENGINE	-	NG	UNKWN	-	-	UNKIN	UNKWN	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMM CIRCUIT (UN01)		
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	UNKWN	_	_	CAN COMM CIRCUIT (U1000)	_		
TRANSMISSION	No inditiation	NG	UNKWN	UNKWN	Ι	-	_	-	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U 100)	—		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN		UNKWN	CAN COMM CIRCUIT (U1000)	—		
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN	-	UNKWN	_	-		
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U 100)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_		UNKWN	—	UNKWN	_	-	CAN COMM CIRCUIT (U 100)	-		
ABS	_	NG	UNKWN	UNKWN	_	-	_	_	_	-	-	CAN COMM CIRCUIT (U1000)	-		
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT (U1000)	-		



M

1

Check BCM circuit. Refer to LAN-136, "BCM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	scroon						Receive	diagnosis					
SELECTOTOTEN	scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	INEGOLIS
ENGINE	-	NG	UNKWN	_	-	UNKWN	UNKIN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCU (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKIN	-	UNKWN	Ι	1	CAN COMM CIRCUIT (U 000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	—	-	UNKWN	UNKWN	1	CAN COMM CIRCUIT (U1000)	_
BCM	No individualion	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKIN	-	UNKWN	-	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKIN	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	-	-	CAN COMIC CIRCUIT (U 000)	-
ABS	-	NG	UNKWN	UNKWN	_	-	_	—	-	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	—	_	_	-	CAN COMIN CIRCUIT	_



### [CAN]

А

В

С

D

Е

F

### Case 8

Check display control unit circuit. Refer to LAN-136, "Display Control Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR							
	scroon		_				Receive	diagnosis							
SELECTOTOTEN	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R				
ENGINE	_	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)		
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_		
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	—		
Display control unit	-	NG	UNKWN	UNKWN	I	-	UNKWN	-	UNKWN	I	UNK	_	-		
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-		
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	-	-	CAN COMM CIRCUIT (U1000)	-		
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT (U1000)	_		



M

1

Check data link connector circuit. Refer to LAN-137, "Data Link Connector Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
	scroon		_				Receive	diagnosis					
GLEEOF GFOTEW	Screen	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIAC	INCOULIO
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKWN	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No inditation	-	UNKWN	UNKWN	—	-	UNKWN	-	UNKWN	Ι	1	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	—	-	_	—	UNKWN	UNKWN	1	CAN COMM CIRCUIT (U1000)	_
BCM	No inditiation	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	Ι
Display control unit	_	NG	UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	-	UNKWN	—	-
METER A/C AMP	No inditation	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	—	UNKWN	UNKWN	-	UNKWN	Ι	Ι	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	_



### [CAN]

А

### Case 10

Г

Check unified meter and A/C amp. circuit. Refer to LAN-137, "Unified Meter and A/C Amp. Circuit Inspection".

					CAN	DIAG SU	PPORT N	INTR							
	screen						Receive	diagnosis					BESUITS		
	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	TCM BCM JSPLAY METER VDC/TCS IPDM //M&A //ABS E/R									
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNK	-	UNKWN	N CAN COMM CIRCUIT CAN COMMCIRCUI (U1000) (U1001) CAN COMMCIRCUIT			
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	UNKIN	_	_	CAN COMM CIRCUIT (UN00)	_		
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	-	—	-	UNKIN	UNKWN	Ι	CAN COMM CIRCUIT (U 1000)	—		
всм	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKIN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—		
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN	-	UNKWN	_	-		
METER A/C AMP	No indivation	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U 1000)	_		
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	—	_	-	CAN COMM CIRCUIT (U1000)	-		
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	-	_	_	CAN COMM CIRCUIT (U1000)	_		



Μ

Check driver seat control unit circuit. Refer to LAN-138, "Driver Seat Control Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen	1	-				Receive	diagnosis				SELE-DIAG	BESULTS
	locio	diagnosis	al Transmit osisdiagnosis ECM I-KEY TCM BCM /SEC DISPLAY METER VDC/TCS IPE /M&A /ABS E/								IPDM E/R	OLLI DIVIC	
ENGINE	-	NG	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-		—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	-
всм	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	—	UNKWN	—	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No inditation	NG	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	—	_	CAN COMM CIRCUIT (U100)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	-	—	_	_	CAN COMM CIRCUIT (U1000)	_
													PKIB4773E



В

С

D

Е

F

### Case 12

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-138</u>, "ABS Actuator and Electric Unit (<u>Control Unit</u>) <u>Circuit Inspection</u>".

					CAN	DIAG SU	PPORT N	INTR					
	sereen		_				Receive	diagnosis					
SELECTOTOTEN	scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R		TREBUEIS
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN		UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	UNKWN	UNKIN	-	CAN COMMCIRCUIT (UN00)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	-	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	Ι	UNKWN	_	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 100)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	N	UNION	UNKWN	-	-	—	_	-	-	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Μ

### Check IPDM E/R circuit. Refer to LAN-139, "IPDM E/R Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen	1	-				Receive	diagnosis				SELE-DIAG	BESULTS
	oreen	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC	
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN		I	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	-	—	—	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN			CAN COMM CIRCUIT (U1000)	_
Display control unit	_	NG	UNKWN	UNKWN	-	-	UNKWN	—	UNKWN	-		—	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	Ι	UNKWN	UNKWN	—	UNKWN		I	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	CAN COMMCIRCUIT (UN00)	_
													PKIB4775E



Н

L

J

AN

Μ

А

### Case 14

Check CAN communication circuit. Refer to LAN-139, "CAN Communication Circuit Inspection" .

				CAN	DIAG SU	IPPORT N	INTR					
SELECT SYSTEM screen	l a iti a l	Transmit				Receive	diagnosis				SELE-DIAG	BESULTS
	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC	
ENGINE -	NG	UNIWN	-	-	UNKIN	UNKWN	-	UNKWN	-		CAN COMM CIRCUIT (UN00)	CAN COMMCIRCUIT (UN01)
		UNKWN	UNKWN	—	—	UNKWN	—	UNKWN	-	-	CAN COMM CIRCUIT (U 100)	_
TRANSMISSION Indivation	NG	UNKWN	UNKWN		-	-	—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U 1000)	_
BCM No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit -	NG	UNKIN	UNIWN	-	—	UNKWN	—	UNKWN	-	UNKIN	—	—
METER A/C AMP Indication		UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 100)	_
AUTO DRIVE POS. No individuation	NG	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	_	-	CAN COMICIRCUIT (UN00)	_
ABS —	V	UNKWN	UNKWN	_	-	-	_	_	-	_	CAN COMM CIRCUIT (U 1000)	_
IPDM E/R Indivation	. –	UNKWN	UNKWN	_	_	UNKWN	_	—	_	_	CAN COMM CIRCUIT	_

### Case 15

G Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to LAN-144, "IPDM E/R Ignition Relay Circuit Inspection".

					CAN	DIAG SU	PPORT N	INTR					
	screen						Receive	diagnosis					BESUITS
	looreen	initiai diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI DINC	
ENGINE	-	NG	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	_	UNKWN		CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	—	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN	-	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-		UNKWN	_	UNKWN	-	-	CAN COMMCIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	-	-	-	—	_	—	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	UNKWN	-	-	_	_	CAN COMM CIRCUIT (U1000)	_

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to LAN-144, "IPDM E/R Ignition Relay Circuit Inspection".

												_	
					CAN	DIAG SU	PPORT N	INTR					
	soroon		_				Receive	diagnosis					
	Scieen	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC	TILOULIU
ENGINE	-	NG	UNKWN	—	_	UNKWN	UNKWN	-	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	Ι	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	-	-	-	-	-		UNKWN	-	CAN COMM CIRCUIT (U 000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN		Ι	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	_	_	-	_	-	_	_	_	CAN COMM CIRCUIT (U 000)	_
IPDM E/R	No indication	—	UNKWN	UNKWN	—	—	UNKWN	—	_	—	—	CAN COMM CIRCUIT (U1000)	_
													PKIB4778E

### Inspection Between TCM and Data Link Connector Circuit

AKS00CKV

- 1. CHECK HARNESS FOR OPEN CIRCUIT
- 1. Turn ignition switch OFF.
- Disconnect the battery cable from the negative terminal. 2.
- 3. Disconnect ECM connector and harness connector M82.
- 4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - 8 (L) 6 (L) 9 (Y) - 14 (Y)
- : Continuity should exist.
  - : Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .
- NG >> Repair harness.



### Inspection Between Data Link Connector and Driver Seat Control Unit Circuit

AKSOOCKW

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- Disconnect the battery cable from the negative terminal. 2.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M9
- Harness connector B2

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

### [CAN]



1. CHECK CONNECTOR

LAN

L

Μ

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B4
- Harness connector E105

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

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L) 13 (Y) - 10 (Y)

: Continuity should exist. : Continuity should exist.

#### OK or NG

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



### $\mathbf{3}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 4 (L) 11 (L)

### 10 (Y) - 15 (Y)

: Continuity should exist.

: Continuity should exist.

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

AKS00CKZ

### ECM Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of ECM 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 ECM connector.
- Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.





	[CAN]
Intelligent Key Unit Circuit Inspection 1. CHECK CONNECTOR	AKS00CL0
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of Intelligent Key unit for damage, bend and loose connermodule side and harness side).</li> <li><u>OK or NG</u></li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or connector.</li> </ol>	ction (control
2. CHECK HARNESS FOR OPEN CIRCUIT	
<ol> <li>Disconnect Intelligent Key unit connector.</li> <li>Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).</li> </ol>	
2 (L) - 3 (Y)       : Approx. 54 - 6622         OK or NG       Intelligent Key unit.         OK       >> Replace Intelligent Key unit.         NG       >> Repair harness between Intelligent Key unit and BCM.	
	PKIB5312E
TCM Circuit Inspection 1. CHECK CONNECTOR	AKS00CL1
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check following terminals and connectors for damage, bend and loose connection (control and harness side).</li> <li>TCM connector</li> <li>Harness connector F102</li> <li>Harness connector M82</li> </ol>	l module side
$\frac{OK \text{ or NG}}{OK} >> \text{ GO TO 2.}$	
NG >> Repair terminal or connector.	
∠. CHECK HARNESS FOR OPEN CIRCUIT	
<ol> <li>Disconnect TCM connector.</li> <li>Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).</li> </ol>	]
5 (L) - 6 (Y) : Approx. 54 - 66Ω	
OK or NG OK >> Replace TCM. NG >> Repair harness between TCM and BCM.	

PKIB5313E

### **BCM Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 M34 terminals 39 (L) and 40 (Y).

#### 39 (L) - 40 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16, "Removal and Installa-</u> tion of <u>BCM"</u>.
- NG >> Repair harness between BCM and harness connector M82.



### **Display Control Unit Circuit Inspection**

### **1. CHECK CONNECTOR**

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

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display control unit connector.
- 2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

#### 25 (L) - 26 (Y)

: Approx. 54 - 66Ω

### OK or NG

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



AKS00CL3

[CAN]

	[•,]
Data Link Connector Circuit Inspection 1. CHECK CONNECTOR	AKS00CL4
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check data link connector and terminals for damage, bend and loose connectio ness side).</li> </ol>	n (connector side and har-
<u>OK or NG</u> OK >> GO TO 2. NG >> Repair terminal or connector.	
Z. CHECK HARNESS FOR OPEN CIRCUIT	
Check resistance between data link connector M24 terminals 6 (L) and 14 (Y). 6 (L) - 14 (Y) : Approx. 54 - 66Ω	T.S.
OK or NG OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u> NOSES WORK FLOW".	
NG >> Repair harness between data link connector and unified meter and A/C amp.	
Unified Meter and A/C Amp. Circuit Inspection 1. CHECK CONNECTOR	SKIA6868E AKS00CL5
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of unified meter and A/C amp. for damage, be (meter side and harness side).</li> <li>OK or NG</li> </ol>	end and loose connection
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of unified meter and A/C amp. for damage, be (meter side and harness side).</li> <li><u>OK or NG</u></li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or connector.</li> </ol>	end and loose connection
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of unified meter and A/C amp. for damage, be (meter side and harness side).</li> <li>OK or NG</li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or connector.</li> <li>CHECK HARNESS FOR OPEN CIRCUIT</li> </ol>	end and loose connection
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of unified meter and A/C amp. for damage, be (meter side and harness side).</li> <li>OK or NG</li> <li>OK or NG</li> <li>OK or NG</li> <li>OK &gt;&gt; GO TO 2. NG &gt;&gt; Repair terminal or connector.</li> <li>CHECK HARNESS FOR OPEN CIRCUIT</li> <li>Disconnect unified meter and A/C amp. connector.</li> <li>Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).</li> </ol>	end and loose connection
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of unified meter and A/C amp. for damage, be (meter side and harness side).</li> <li>OK or NG</li> <li>OK or NG</li> <li>OK &gt;&gt; GO TO 2. NG &gt;&gt; Repair terminal or connector.</li> <li>CHECK HARNESS FOR OPEN CIRCUIT</li> <li>Disconnect unified meter and A/C amp. connector.</li> <li>Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).</li> <li>1 (L) - 11 (Y) : Approx. 54 - 66Ω</li> </ol>	end and loose connection

### **Driver Seat Control Unit Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 B301
- Harness connector B9

#### 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.
- Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



### ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E24 terminals 11 (L) and 15 (Y).

### 11 (L) - 15 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKS00CL7

### **IPDM E/R Circuit Inspection** 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

: Approx. 108 - 132Ω

### OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



### **CAN Communication Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
- ECM
- Intelligent Key unit
- TCM
- BCM
- Display control unit
- Unified meter and A/C amp.
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

### OK or NG

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

L

Μ

[CAN]

А

В

С

D

J

- 1. Disconnect following connectors.
- ECM connector
- Intelligent Key unit connector
- Harness connector M82
- BCM connector
- Display control unit connector
- Unified meter and A/C amp. connector
- Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

### 6 (L) - 14 (Y)

### : Continuity should not exist.

#### OK or NG

OK >> GO TO 3.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display control unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9

### $\mathbf{3}.$ Check harness for short circuit

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

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

### OK or NG

- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display control unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9





Data link connector

14

R۸

PKIB5318E

- 1. Disconnect TCM connector.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

### 5 (L) - 6 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT



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

### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.

### 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4 and harness connector B9.
- 2. Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

### 4 (L) - 10 (Y)

### : Continuity should not exist.

#### OK or NG

OK >> GO TO 7.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9





А

F

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground 10 (Y) - Ground
- : Continuity should not exist.

: Continuity should not exist.

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

### 8. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

#### OK or NG

OK >> GO TO 9.

NG >> Repair harness between driver seat control unit and harness connector B301.



### 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) Ground 19 (BR/W) - Ground
- : Continuity should not exist. : Continuity should not exist.

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.





- Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector. 1.
- 2 Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y) : Continuity should not exist.

#### OK or NG

OK or NG

OK

NG

1.

2.

3.

OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

### 11. CHECK HARNESS FOR SHORT CIRCUIT



### OK or NG

OK >> GO TO 13.

94 - 86

48 - 49

NG >> Replace ECM and/or IPDM E/R.



## 13. снеск сумртом

- 1. Fill in described symptoms on the column "Symptom" in the check sheet.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

#### OK or NG

- OK >> GO TO 14.
- NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"





[CAN]

А

Н

LAN

LKIA0037E

### 14. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- Intelligent Key unit
- TCM
- BCM
- Display control unit
- Unified meter and A/C amp.
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

#### Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

### **IPDM E/R Ignition Relay Circuit Inspection**

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

- IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspection" .
- Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY IGNITION SW. IN "ON"</u> <u>AND/OR "START"</u>.

AKS00CLA
# [CAN]



L

Μ

Н

I

J

Revision: 2005 August

# [CAN]



Wiring Diagram - CAN -



Μ

[CAN]

REFER TO THE FOLLOWING.

TKWB0839E

# LAN-CAN-16

DATA LINE





REFER TO THE FOLLOWING. (M34), (M99), (F103) -ELECTRICAL UNITS

TKWB0840E



[CAN]

# LAN-CAN-17 A

DATA LINE



TKWB0841E

# LAN-CAN-18





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

TKWB0842E



[CAN]

А

В

# LAN-CAN-19

DATA LINE



TKWB0843E

# **Check Sheet**

AKS00AE1

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet tabl	е														
						CAN	DIAG SU	PPORT	INTR						
SELECT SYSTEM	creen	Initial	Transmit		<b></b>		1	Receive	diagnosis I	1	1	1		SELF-DIAG	RESULTS
		diagnosis	diagnosis	ЕСМ	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	_	_	UNKWN	-	UNKWN	-	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No	_	UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	_	_	_	CAN COMM CIRCUIT	_
TRANSMISSION	No	NG	UNKWN	UNKWN	_			-	_	UNKWN	_	UNKWN	_	CAN COMM CIRCUIT	_
AIR PRESSURE MONITOR	No	NG	UNKWN	_	_	_		_	_	UNKWN	_	_		CAN COMM CIRCUIT	_
ВСМ	No	NG	UNKWN	UNKWN	UNKWN	_	_	-	_	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT	_
Display unit	_	NG	UNKWN	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	—	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	_	UNKWN	-	UNKWN	_	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	UNKWN		-	-	_	UNKWN	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	_	UNKWN	_	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
	In one and the			1			<u> </u>		1					(*****	·
Symptoms :															
									Γ						
				Attac	ch copy	of				A	ttach c	opy of			
				SELEU	1515	IEN				SE	LEGIa	SYSIE	<sup>vi</sup>		
							]		L				]		
<b>D</b> iaulas	·· <b>T</b>								· • •	·					
Display	unit Tra	nslatio	n Shee	et: Rew	rite the	followi	ng nam	ies, and	d put a	check	mark o	n the al	pove ch	neck sheet table.	table Diaplay
CONTIRMATION/Adj	ustmen	Displa		Cnec	Initial d		Jispiay is	$-\frac{1}{2}$		ation/A	ajusim	ent Dis	piay		
CAN COMM				Tr	ansmit	diagno	sis	$-\frac{1}{6}$	CAN 6					TIBI	E-P
CAN 2					B	CM			CAN 7					IPDM	E/R
CAN 3					EC	CM			CAN 8						-
CAN 4									CAN 9					_	-
							Δt	tach cc	ov of						
							C C	lisplay	unit						
						CAI	N DIAG	i MNTF	R check	sheet					

PKIB4714E



[CAN]



# **CHECK SHEET RESULTS (EXAMPLE)**

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

#### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-171, "Inspection Between TCM and Data</u> <u>Link Connector Circuit</u>".

						CAN	DIAG SU	PPORT N	INTR						
	oroon							Receive	diagnosis						
SELECT STOTEM'S	000011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	_	NG	UNKWN	_	-	UNKWN	_	UNKWN	_	UNIWN	_	UNIN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	I		—	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (UN00)	_
RANSMISSION	No indication	NG	UNKWN	UNKWN	١	-	-	—	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (UN00)	-
AIR PRESSURE MONITOR	No	NG	UNKWN	—	Ι	-	—	—	—	UNKWN	—	-	-	CAN COMM CIRCUIT (U 100)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	I	-	-	-	UNKWN	_		UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	Ι	NG	UNKWN		-	Ι	UNKWN	UNKWN	—	UNKWN	-		UNKWN	-	_
METER A/C AMP	No indication	_	UNKWN		-		UNKWN	UNKWN	UNKWN	-	_	UNKWN	I	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	Ι	UNIN	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U 100)	_
ABS	Ι	NG	UNKWN	UNKWN	-	UNWN	-	—	-	-	UNKWN	-	-	CAN COMM CIRCUIT (U 000)	_
PDM E/R	No indication	-	UNKWN	UNKWN	I	-	-	UNKWN	_	-	-	-	-	CAN COMM CIRCUIT (U 000)	_



А

В

С

D

F

F

G

Н

Check harness between data link connector and driver seat control unit. Refer to <u>LAN-171</u>, "Inspection <u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						
	lore en	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	—	NG	UNKWN	—	—	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	-	—	—	UNKWN	-	UNKWN	-	-	1	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	-	UNKWN	-	CAN COMP CIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	—	—	—	—	UNKWN	-	—	I	CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	-		CAN COMM CIRCUIT (U1000)	-
Display unit	_	NG	UNKWN	UNKWN	_	—	UNKWN	UNKWN	-	UNKWN	-	_		-	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	—	-	UNKIN	l	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No ind <b>N</b> ation	NG	UNKWN	_	_	UNKWN	_	UNKWN	-	UNKWN	-	-	-	CAN COMMCIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNIWN	—	UNKWN	—	—	—	_	UNKWN	-	l	CAN COMMCIRCUIT (UN00)	_
IPDM E/R	indNation	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	-	_		CAN COMMCIRCUIT (UN00)	_



# [CAN]

#### Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-</u> <u>172</u>, "Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit".

						CAN	DIAG SU	PPORT I	INTR						
SELECT SYSTEM	creen							Receive	diagnosis					SELE-DIA	RESULTS
	breen	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	_	I	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	—	_	UNKWN	_	UNKWN	_	_	—	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	_	UNKWN	_	CAN COMM CIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	_	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	—	_	-	UNKWN	-	_		CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-		_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	l	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKIN	_	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	_	UNKWN	-	UNKWN	_	-	_	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNIWN	_	UNKWN	_	_	_	_	UNKWN	-	-	CAN COMMCIRCUIT (UN00)	_
PDM E/R	N indvation	-	UNKWN	UNKWN	_	-	_	UNKWN	_	_	-	-	_	CAN COMMCIRCUIT (UN00)	_



1

Check ECM circuit. Refer to LAN-173, "ECM Circuit Inspection" .

						CAN	DIAG SU	PPORT I	MNTR						
	creen							Receive	diagnosis	:					
	breen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	-	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	UNKWN	CAN COMMICIRCUIT (UN00)	CAN COMM/CIRCUI (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	-	UNKWN	-	-	—	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKIN	-	-	-	—	-	UNKWN	-	UNKWN	—	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	-	-	-	—	-	UNKWN	-	—	—	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	—	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	—	UNKWN	-	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	—	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	-	-	_	CAN COMM CIRCUIT (U1000)	_
ABS	—	NG	UNKWN	UNION	-	UNKWN	-	—	-	-	UNKWN	—	—	CAN COMMCIRCUIT (UN00)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	-	UNKWN	_	-	-	_	_	CAN COMMCIRCUIT (UN00)	_



# Check Intelligent Key unit circuit. Refer to LAN-174, "Intelligent Key Unit Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM POR	oon [		-					Receive	diagnosis						DECUITO
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOULIG
ENGINE	-	NG	UNKWN	_	—	UNKWN	_	UNKWN	-	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
	No Mation	-	UNKWN	UNKWN	_	-	_	UNKWN		UNKWN	—	-	I	CAN COMM CIRCUIT (UN00)	_
TRANSMISSION	No dication	NG	UNKWN	UNKWN	-	Ι	-	—	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR ind	No dication	NG	UNKWN	-	-		-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
3CM ind	No dication	NG	UNKWN	UNKWN	UNKWN	_	-	_	1	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	Ι	UNKWN	UNKWN		UNKWN	—	—	UNKWN	_	—
METER A/C AMP indi	No dication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	_	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No dication	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	-	-	_	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	-	—	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	—
PDM E/R	No dication	-	UNKWN	UNKWN	_	_	-	UNKWN	I	-	_	_	1	CAN COMM CIRCUIT (U1000)	-



Μ

А

В

С

D

Е

F

G

J

1

Check TCM circuit. Refer to LAN-174, "TCM Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis	:					
	bicch	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		TESOLIS
ENGINE	-	NG	UNKWN	_	_	UNKWN	-	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U100)	CAN COMMCIRCUI (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	_	UNKWN	_	—	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	_	-	-	—	_	UNKWN	—	UNKWN	—	CAN COMM CIRCUIT (U100)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	-	-	_	—	UNKWN	_	—	_	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	—	_	UNKWN	—	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	-	—	UNKWN	—	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	-	-	_	CAN COMMICIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	UNIN	-	—	—	-	UNKWN	—	—	CAN COMM/CIRCUIT (UN00)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	-	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Check low tire pressure warning control unit circuit. Refer to <u>LAN-175</u>, "Low Tire Pressure Warning Control <u>A</u> <u>Unit Circuit Inspection</u>".

						CAN	DIAG SU	IPPORT I	INTR						
SELECT SYSTEM so	reen							Receive	diagnosis					SELE-DIA	
OLLEOT OT OT OT MISS	Joon	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		HEODEIG
ENGINE	-	NG	UNKWN	—	_	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No ndication	-	UNKWN	UNKWN		—	—	UNKWN	-	UNKWN	-	-	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No ndication	NG	UNKWN	UNKWN		-	-	-	-	UNKWN	Ι	UNKWN		CAN COMM CIRCUIT (U1000)	_
	No ndivition	NG	UNKWN	-	-	-	-	-	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U V00)	-
зсм	No ndication	NG	UNKWN	UNKWN	UNKWN	—	—	-	-	UNKWN	I	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	Ι	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN	_	_
METER A/C AMP	No ndication	-	UNKWN	UNKWN	-	UNKWN	UNK	UNKWN	UNKWN	_	-	UNKWN	Ι	CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No ndication	NG	UNKWN	_	-	UNKWN	-	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	-	—	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
PDM E/B	No	—	UNKWN	UNKWN	-	-	_	UNKWN	_	_	_	-	_	CAN COMM CIRCUIT (U1000)	_



1

Check BCM circuit. Refer to LAN-175, "BCM Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						
	breen	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		THEODERS
ENGINE	-	NG	UNKWN	_	_	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUI (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	-	-	-	UNKIN	-	UNKWN		-	I	CAN COMMCIRCUIT (UN00)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	-	—	—	UNKWN	—	UNKWN		CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	-	-	—	—	UNKWN	—	—	Ι	CAN COMM CIRCUIT (U1000)	-
BCM	No individualion	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN		_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKIN	—	UNKWN	-	_	UNKWN	-	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKUN	UNKWN	_	_	UNKWN	I	CAN COMM CIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	-	UNKIN	_	UNKWN	-	-	I	CAN COMM CIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	—	—	UNKWN	—	1	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	-	UNKWN	_	_	_	_		CAN COMMCIRCUIT (UN00)	_



# [CAN]

А

В

С

D

Е

F

G

### Case 9

Г

#### Check display unit circuit. Refer to LAN-176, "Display Unit Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen		_					Receive	diagnosis						DECUITO
	5010011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOULIG
ENGINE	-	NG	UNKWN	—		UNKWN	-	UNKWN		UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No indication	—	UNKWN	UNKWN	1	1		UNKWN	Ι	UNKWN	—		Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	-	UNKWN	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	_	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNIKWN	-	-	UNKIN	UNKIN	-	UNKWN	-		UNKWN	_	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	1	UNKWN	UNKWN	UNKWN	UNKWN	_	-	UNKWN		CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN		UNKWN	_	_	-	_	UNKWN	I	-	CAN COMM CIRCUIT (U1000)	_
PDM E/R	No indication	-	UNKWN	UNKWN		-	-	UNKWN	_	_	-	1	-	CAN COMM CIRCUIT (U1000)	_



M

Check data link connector circuit. Refer to LAN-176, "Data Link Connector Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM	creen							Receive	diagnosis					SELE-DIAG	RESULTS
	lore en	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	GELI-DIAC	THEODERS
ENGINE	_	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indivation	—	UNKWN	UNKWN	-	—	-	UNKWN	-	UNKWN	—	-		CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	_	-	-	_	-	UNKWN	—	UNKWN	_	CAN COMM CIRCUIT (U1000)	-
AIR PRESSURE MONITOR	No inditation	NG	UNKWN	_	—	-	-	_	—	UNKWN	—	—	-	CAN COMM CIRCUIT (U1000)	-
BCM	No inditation	NG	UNKWN	UNKWN	UNKWN	—	-	-	-	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN	-	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No inditation	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	-	-	Ι	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	_	UNKWN	-	_	_	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	-	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_

PKIB4788E



Г

Check unified meter and A/C amp. circuit. Refer to LAN-177, "Unified Meter and A/C Amp. Circuit Inspection".

						CAN	DIAG SU	PPORT I	MNTR						
	creen							Receive	diagnosis						DEQUITO
	oreen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	_	NG	UNKWN	—	_	UNKWN	_	UNKWN	-	UNK	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	_	_	UNKWN	-	UNKWN	—	-	-	CAN COMMCIRCUIT (UN00)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	—	-	UNKWN	_	UNKWN	_	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	_	-	UNKWN	-	-	-	CAN COMMCIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	_	—	-	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	—	-	UNKWN	-	_
METER A/C AMP	No indication		UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	Ι	CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	-	UNKWN	-	UNION	—	-	-	CAN COMM CIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	-	-	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
PDM E/R	No indication	-	UNKWN	UNKWN	-	_	_	UNKWN	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	_



M

PKIB4790E

# Case 12

Г

Check steering angle sensor circuit. Refer to LAN-177, "Steering Angle Sensor Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						DEQUITO
GLEEOTOTOTEM	breen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELI-BIAG NEODELS	
ENGINE	-	NG	UNKWN	—	Ι	UNKWN	-	UNKWN	-	UNKWN	-	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	1	—	-	UNKWN	_	UNKWN	-	—		CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	-	UNKWN	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	I	-	-	—	-	UNKWN	_	—	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	-	_	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	I	-	UNKWN	UNKWN	-	UNKWN	—	—	UNKWN	-	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	I	UNKWN	UNKWN	UNKWN	UNKWN	-	_	UNKWN	l	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_		UNKWN	-	UNKWN	-	UNKWN	_	—	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	_	UNKWN	-	_	-	-	UNKWN	_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	-	UNKWN	_	-	_	_		CAN COMM CIRCUIT (U1000)	_

Steering angle ///////: Malfunctioning part Low tire pressure warning control unit Unified BCM meter and A/C amp. CAN H 44444 'CAN L ABS actuator and Intelligent Data link Driver seat ECM тсм IPDM E/R Display unit electric unit (control unit) Key unit connector control unit PKIB4596E

А

В

С

D

Е

F

G

J

# Case 13

Check driver seat control unit circuit. Refer to LAN-178, "Driver Seat Control Unit Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR							
SELECT SYSTEM	creen	1.19.1	<b>T</b>	Receive diagnosis												
		initiai diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	OLLI DIX		
ENGINE	_	NG	UNKWN	-	—	UNKWN	—	UNKWN	I	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	_	_	UNKWN	1	UNKWN	-	-	—	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-		-	—	I	UNKWN		UNKWN	—	CAN COMM CIRCUIT (U1000)	_	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	-	_	—	١	UNKWN	_	_	—	CAN COMM CIRCUIT (U1000)	-	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	Ι	-	-	I	UNKWN			UNKWN	CAN COMM CIRCUIT (U1000)	-	
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	1	UNKWN	-	-	UNKWN	Ι	—	
METER A/C AMP	No indication		UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	1	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	_	UNKWN	-	UNKWN	—	—	—	CAN COMMCIRCUIT (UN00)	_	
ABS	_	NG	UNKWN	UNKWN	-	UNKWN	_	—	-	-	UNKWN	—	—	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	-	UNKWN	UNKWN	-	Ι	_	UNKWN	-	-	-	-	-	CAN COMM CIRCUIT (U1000)	—	



Μ

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-178</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Inspection".

						CAN	DIAG SU	PPORT N	/INTR							
	creen							Receive	diagnosis							
	lore en	Initial diagnosis	diagnosis	ECM I-KEY		TCM TIRE-P		BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R			
ENGINE	_	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	—	-	-	UNKWN	-	UNKWN	—	—	_	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	-	—	—	UNKWN	—	UNKWN	—	CAN COMM CIRCUIT (U 000)	—	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	—	—	UNKWN	_	—	_	CAN COMM CIRCUIT (U1000)	_	
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	-	-	UNKWN	—	—	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	_	UNKWN	-	_	UNKWN	-	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	—	UNK	_	CAN COMM CIRCUIT (UN00)	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	—	—	—	CAN COMM CIRCUIT (U1000)	_	
ABS	_	V	UNKWN	UNKWN	-	UNION	-	_	_	-	UNYWN	-	—	CAN COMM CIRCUIT (U 000)	_	
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	-	UNKWN	_	-	_	_	_	CAN COMM CIRCUIT (U1000)	_	
															PKIB4792E	



# [CAN]

А

В

С

D

Е

F

G

J

# Case 15

Г

#### Check IPDM E/R circuit. Refer to LAN-179, "IPDM E/R Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR							
	creen		-					Receive	diagnosis							
	breen	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC		
ENGINE	_	NG	UNKWN	_	-	UNKWN	_	UNKWN	I	UNKWN	_	UNKWN	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)	
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN		-	_	UNKWN	-	UNKWN	—	-		CAN COMM CIRCUIT (U1000)	_	
RANSMISSION	No indication	NG	UNKWN	UNKWN	-	Ι	-	—	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-	
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	_	—	-	UNKWN	_	—	UNKIN	CAN COMM CIRCUIT (U1000)	-	
Display unit	-	NG	UNKWN	UNKWN	-	Ι	UNKWN	UNKWN	-	UNKWN	-	-	UNK	_	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	-	UNKWN	-	UNKWN	—	-	_	CAN COMM CIRCUIT (U1000)	-	
ABS	_	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	_	UNKWN	-	—	CAN COMM CIRCUIT (U1000)	_	
PDM E/R	Notindivation	-	UNKWN	UNKWN	_	-	_	UNKWN	_	_	-	—	—	CAN COMM CIRCUIT (U 000)	_	



Μ

L

Check CAN communication circuit. Refer to LAN-179, "CAN Communication Circuit Inspection" .

						CAN	DIAG SU	PPORT I	INTR							
SELECT SYSTEM	screen	1.00.1	<b>T</b>					Receive	diagnosis	;						
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	M DISPLAY METER STRO		STRG	VDC/TCS IPE /ABS E/		SELT-DIAG RESULTS		
ENGINE	-	NG	UNKUN	—	_	UNKWN	-	UNYWN	_	UNKIN	-	UNKWN	UNKVN	CAN COMMCIRCUIT (UN00)	CAN COMMCIRCUIT (UN01)	
INTELLIGENT KEY	No individuation	—	UNKWN	UNKWN	—	-	-	UNKWN	-	UNKWN	-	-		CAN COMMCIRCUIT (UN00)	_	
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	_	-	-	—	-	UNKWN	-	UNKWN		CAN COMMCIRCUIT (UN00)	_	
AIR PRESSURE MONITOR	No inditation	NG	UNKWN	-	_	-	-	—	—	UNKWN	_	—	I	CAN COMMCIRCUIT (UN00)	_	
BCM	No inditation	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	—	UNKWN	CAN COMM CIRCUIT (U1000)	-	
Display unit	-	NG	UNKIN	UNKWN	-	-	UNKIN	UNIN	—	UNKWN	-	-	UNKVN	-	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	Ι	CAN COMM CIRCUIT (UN00)	—	
AUTO DRIVE POS.	No inditation	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (UN00)	_	
ABS	-	V	UNKWN	UNIWN	-	UNKWN	-	—	-	-	UNKWN	-	-	CAN COMM CIRCUIT (UN00)	-	
IPDM E/R	No inditation	-	UNKWN	UNKWN	-	_	_	UNKWN	_	-	-	—	_	CAN COMMCIRCUIT (UN00)	_	
															PKIB4794E	

### Case 17

Г

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to <u>LAN-184</u>, "IPDM E/R Ignition Relay <u>Circuit Inspection</u>".

						CAN	DIAG SU	PPORT N	INTR							
SELECT SYSTEM	screen	1.111.1	<b>T</b>					Receive	diagnosis					SELE-DIAG BESULTS		
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	OLLI DIA		
ENGINE	-	NG	UNKWN	—	_	UNKVN	_	UNKWN	—	UNKWN	-	UNKWN	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMMCIRCUIT (UN01)	
INTELLIGENT KEY	No indication	I	UNKWN	UNKWN	_	_	—	UNKWN	—	UNKWN	_	—	_	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	-	—	-	UNKWN	_	UNKWN	_	CAN COMM CIRCUIT (U1000)	-	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	—	_	_	—	—	UNKWN	_	—	_	CAN COMM CIRCUIT (U1000)	_	
всм	No indication	NG	UNKWN	UNKWN	UNKWN	—	_	—	—	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	-	—	UNKWN	UNKWN	—	UNKWN	—	_	UNKWN	-	—	
METER A/C AMP	No indication	l	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKUN	-	CAN COMM CIRCUIT (U 1000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	_	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U 1000)	_	
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	—	—	—	UNKWN	—	-	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_	
															PKIB4795E	

AKSOOCKD

Н

L

Μ

AKS00CKE

#### Case 18

А Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to LAN-184, "IPDM E/R Ignition Relay Circuit Inspection".

	CAN DIAG SUPPORT MNTR															
	oroon							Receive	diagnosis							
SELECT STSTEMS	Green	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SEE BRANESSER		
ENGINE	-	NG	UNKWN	-	-	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	1	—	_	UNKWN	-	UNKWN	—	-	_	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	-	_	_	-	-	-	-	-	UNKWN	_	CAN COMMCIRCUIT (UN00)	_	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	_	-	-	UNKWN	_	-	_	CAN COMM CIRCUIT (U1000)	-	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	_	-	-	UNKWN	_	-	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-	UNKWN	-	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-	
ABS	-	NG	UNKWN	-	-	UNKWN	_	-	-	_	_	-	—	CAN COMM CIRCUIT (UN00)	_	
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	_	_	-	-	—	CAN COMM CIRCUIT (U1000)	_	

# Inspection Between TCM and Data Link Connector Circuit

# **1. CHECK HARNESS FOR OPEN CIRCUIT**

Turn ignition switch OFF. 1.

8 (L) - 6 (L)

9 (Y) - 14 (Y)

>> Repair harness.

- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- 4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).

LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .



# Inspection Between Data Link Connector and Driver Seat Control Unit Circuit

: Continuity should exist.

: Continuity should exist.

**1. CHECK CONNECTOR** 

- Turn ignition switch OFF. 1.
- 2. Disconnect the battery cable from the negative terminal.
- Check following terminals and connectors for damage, bend and loose connection (connector side and 3. harness side).
- Harness connector M9
- Harness connector B2
- OK or NG

OK or NG OK

NG

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

# LAN-171

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector M9.
- 2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 13 (Y).
  - 6 (L) 1 (L) 14 (Y) - 13 (Y)

: Continuity should exist. : Continuity should exist.

#### OK or NG

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



# 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- 2. Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L)
- : Continuity should exist.
- 13 (Y) 10 (Y)
- : Continuity should exist.

# OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

|Bz Harness connector Harness connector Ω PKIB5308

#### Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit AKS00CKF

# 1. CHECK CONNECTOR

- Turn ignition switch OFF. 1.
- Disconnect the battery cable from the negative terminal. 2.
- Check following terminals and connectors for damage, bend and loose connection (connector side and 3. harness side).
- Harness connector B4
- Harness connector E105

# OK or NG

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

А

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L) 13 (Y) - 10 (Y)
- : Continuity should exist.
- : Continuity should exist.

#### OK or NG

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



ABS actuator and electric unit (control unit) connector

11,15

C/UNIT

Ω

PKIB5309F

AKS00CKH

# 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 4 (L) 11 (L)
  - 10 (Y) 15 (Y)
- : Continuity should exist.

BAT

Harness connector

4

10

: Continuity should exist.

# OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

# **ECM Circuit Inspection**

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of ECM 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 ECM connector.
- 2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



F

Н

LAN

L

Μ

# Intelligent Key Unit Circuit Inspection

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of Intelligent Key unit 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 Intelligent Key unit connector.
- 2. Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).

#### 2 (L) - 3 (Y)

: **Approx. 54 - 66**Ω

#### OK or NG

- OK >> Replace Intelligent Key unit.
- NG >> Repair harness between Intelligent Key unit and BCM.



# **TCM Circuit Inspection**

# **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect TCM connector.
- Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Approx. 54 - 66Ω

#### OK or NG

OK >> Replace TCM.

NG >> Repair harness between TCM and BCM.



AKS00CKJ

[CAN]



Revision: 2005 August

# **Display Unit Circuit Inspection**

# 1. CHECK CONNECTOR

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

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display unit connector.
- Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

#### 14 (L) - 16 (Y)

: Approx. 54 - 66Ω

#### OK or NG

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



# **Data Link Connector Circuit Inspection**

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check data link connector and terminals 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 M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Diagnose again. Refer to <u>LAN-7</u>, "TROUBLE DIAG-NOSES WORK FLOW" .
- NG >> Repair harness between data link connector and unified meter and A/C amp.



AKS00CKN

[CAN]

		[CAN]
Unified Meter and A/C . 1. снеск соллестог	Amp. Circuit Inspection	AKS00CKO
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cab</li> <li>Check terminals and conn (meter side and harness side)</li> <li>OK or NG</li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or explanation</li> </ol>	e from the negative terminal. ector of unified meter and A/C amp. for dam de). connector.	nage, bend and loose connection
2. CHECK HARNESS FOR C	PEN CIRCUIT	
<ol> <li>Disconnect unified meter a</li> <li>Check resistance between connector M49 terminals 1         <ol> <li>L) - 11 (Y)</li> </ol> </li> </ol>	nd A/C amp. connector. unified meter and A/C amp. harness (L) and 11 (Y). : Approx. 54 - 66Ω	Unified meter and A/C amp.connector
OK >> Replace unified me NG >> Repair harness be and data link conne	ter and A/C amp. tween unified meter and A/C amp. ector.	
Steering Angle Sensor 1. снеск соллестог	Circuit Inspection	AKS00CKP
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cab</li> <li>Check terminals and connective side and harness side).</li> <li>OK or NG</li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or explanation.</li> </ol>	e from the negative terminal. ector of steering angle sensor for damage, be connector.	end and loose connection (sensor
2. CHECK HARNESS FOR C	PEN CIRCUIT	
<ol> <li>Disconnect steering angles</li> <li>Check resistance between nector M33 terminals 4 (L)</li> </ol>	sensor connector. steering angle sensor harness con- and 5 (Y).	BAT DISCONNECT
OK or NG OK >> Replace steering a NG >> Repair harness bet link connector.	ngle sensor. ween steering angle sensor and data	Steering angle sensor connector

# Driver Seat Control Unit Circuit Inspection

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 B301
- Harness connector B9

#### 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.
- Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



# ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

# **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E24 terminals 11 (L) and 15 (Y).

# 11 (L) - 15 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



AKSOOCKE

[CAN]

# IPDM E/R Circuit Inspection 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

: Approx. 108 - 132Ω

# OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



# **CAN Communication Circuit Inspection**

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).
- ECM
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit
- OK or NG
  - OK >> GO TO 2.
- NG >> Repair terminal or connector.

AKS00CKS

А

В

С

D

F



J

Μ

# 2. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- ECM connector
- Intelligent Key unit connector
- Harness connector M82
- Low tire pressure warning control unit connector
- BCM connector
- Display unit connector
- Unified meter and A/C amp. connector
- Steering angle sensor connector
- Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 3.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9


# $\overline{3}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between	data link connector	M24 terminals 6 (L),
14 (Y) and ground.		

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

- OK or NG
- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9

### 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect TCM connector. 1.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

: Continuity should not exist.

### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

- 5 (L) Ground
- 6 (Y) Ground
  - : Continuity should not exist.
- OK or NG
- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.







[CAN]

F

F

Н

# 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4 and harness connector B9.
- 2. Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

### OK or NG

- OK >> GO TO 7.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

# 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground
- : Continuity should not exist.
- 10 (Y) Ground
- : Continuity should not exist.

### OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

# 8. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect driver seat control unit connector. 1.
- Check continuity between driver seat control unit harness con-2. nector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

#### OK or NG

- OK >> GO TO 9.
- >> Repair harness between driver seat control unit and har-NG ness connector B301.









# 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) Ground
  - : Continuity should not exist.

19 (BR/W) - Ground : Continuity should not exist.

#### OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.

# 10. CHECK HARNESS FOR SHORT CIRCUIT

Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector. 1.

: Continuity should not exist.

2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### OK or NG

OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

# 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

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

LAN-183

49 (Y) - Ground

#### OK or NG

- OK >> GO TO 12.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105









А

F

E

Н

Μ

# 12. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

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

94 - 86

3. Check resistance between IPDM E/R terminals 48 and 49.

: Approx. 108 – 132 Ω

- OK or NG
- OK >> GO TO 13.

48 - 49

NG >> Replace ECM and/or IPDM E/R.



# 13. снеск сумртом

- 1. Fill in described symptoms on the column "Symptom" in the check sheet.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

: Approx. 108 – 132  $\Omega$ 

OK or NG

OK >> GO TO 14.

NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"

# 14. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

#### Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

# **IPDM E/R Ignition Relay Circuit Inspection**

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

- IPDM E/R power supply circuit. Refer to <u>PG-27</u>, "IPDM E/R Power/Ground Circuit Inspection".
- Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY IGNITION SW. IN "ON"</u> <u>AND/OR "START"</u>.

# LAN-184

AKS00CKU

# [CAN]



LAN

L

Μ

Н

I

J

# [CAN]



Wiring Diagram - CAN -



TKWB0845E

[CAN]

### [CAN]



DATA LINE





REFER TO THE FOLLOWING. (M34), (M99), (F103) -ELECTRICAL UNITS

TKWB0846E



[CAN]

# LAN-CAN-22 A

DATA LINE



TKWB0847E

# LAN-CAN-23





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

TKWB0848E

[CAN]

А

В

# LAN-CAN-24

DATA LINE



TKWB0849E

# **Check Sheet**

AKS00ASJ

### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet tabl	e														
						CAN	DIAG SU	PPORT N	/NTR						
SELECT SYSTEM 8	screen	Initial	Transmit					Receive	diagnosis			- -		SELF-DIA	G RESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	_	-	UNKWN		UNKWN	_	UNKWN	<u> </u>	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	<u> </u>	[ _ ]	<u> </u>	UNKWN	_	UNKWN	_	_	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-	-	- 1	_	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN		_	-		_	_	UNKWN	—	-	_	CAN COMM CIRCUIT (U1000)	-
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	_	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN		-	UNKWN	UNKWN	_	UNKWN		_	UNKWN		_
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	_		UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN			UNKWN		UNKWN	_	UNKWN	<u> </u>	_	-	CAN COMM CIRCUIT (U1000)	-
ABS		NG	UNKWN	UNKWN	['	UNKWN	ſ'	<u> </u>		<u> </u>	UNKWN		-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	-	-	UNKWN	_	_	_	-	_	CAN COMM CIRCUIT (U1000)	_
	indication of the second of th														
Symptoms :	otoms :														
	ptoms :														
	ptoms :														
									Г						
I															
l															
				Attac	ch copy	/ of				А	Attach c	opy of			
l				SELEC	T SYS	TEM				SEI	LECTS	SYSTEM	vi		
l															
l															
									L						
Display	<sup>r</sup> control	unit Tr	anslatio	on She	et: Rew	rite the	follow	ing nan	nes, an	d put a	l check	mark o	n the a	bove check shee	t table.
Confirmation/Adj	ustment	t Displa	ıy	Chec	k sheet	table [	Display		Confirm	ation/A	djustm	ent Dis	play	Check sheet	table Display
CAN COMM					Initial d	iagnosi	is		CAN CI	RC 5				METER	R/M&A
CAN CIRC 1				Tr	ansmit	diagno	sis	C	CAN CI	RC 6				TIR	E-P
CAN CIRC 2					B			<u> </u>	CAN CI	RC 7				IPDN	I E/R
CAN CIRC 3					E	СМ		+		RC 8				-	-
CAN CIRC 4								<u> </u>		НС 9					_
							At	tach cc	py of						
					<b>C</b> A N		displ	ay cont	trol unit	t Dirboo	. shool				
					CAN	DIAG	SUPPL			K Checi	K Srieei	:			

PKIB4717E



[CAN]



### CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-211, "Inspection Between TCM and Data</u> <u>Link Connector Circuit"</u>.

						CAN	DIAG SU	PPORT N	INTR						
	croon							Receive	diagnosis						
SELECT GTOTEMIS	010011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIA	a RESULIS
ENGINE	_	NG	UNKWN	—		UNKWN	_	UNKWN	_	UNK	_	UNIWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN		1	_	UNKWN	_	UNKWN	—	_	_	CAN COMM CIRCUIT (UN00)	_
FRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	I	—	—	—	UNKWN	-	UNKWN	—	CAN COMM CIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	I	1	—	_	—	UNKWN	—	—	—	CAN COMM CIRCUIT (UN00)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	Ι	—	-	—	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKVN	-	-	UNK	UNIN	—	UNKWN	-	-	UNKWN	-	_
METER A/C AMP	No indication	—	UNKWN	UNKVN	I		บทหุ่งท	UNKWN	UNKWN	I	_	UNKWN	—	CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	Ι	UNKIN	-	UNIWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKVN	-	UNKIN	-	—	_	—	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
PDM E/R	No indication	-	UNKWN	UNK		-	-	UNKWN	_	—	-	_	_	CAN COMM CIRCUIT (U1000)	_



В

С

D

F

F

G

Н

А

Check harness between data link connector and driver seat control unit. Refer to <u>LAN-211</u>, "Inspection <u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						
	bicon	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		THEODERG
ENGINE	—	NG	UNKWN	—	—	UNKWN	_	UNKWN	_	UNKWN	—	UNION	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	-	-	—	UNKWN	-	UNKWN	—		1	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	-	CAN COMM CIRCUIT (UN00)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	-	_	—	-	UNKWN	_	—	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	_	—		CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	—	-		-	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNIWN	l	CAN COMP CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indNation	NG	UNKWN	_	_	UNKWN	_	UNKWN	-	UNKWN	-	—	-	CAN COMM CIRCUIT (U 000)	_
ABS	-	NG	UNKWN	UNIWN	-	UNIWN	—	—	—	—	UNKWN	—	1	CAN COMP CIRCUIT (U 000)	—
IPDM E/R	No inditation	_	UNKWN	UNKWN	—	-	_	UNKWN	_	_	—	_		CAN COMY CIRCUIT (U 000)	_



# [CAN]

#### Case 3

Check harness between driver seat control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-</u> <u>A</u> <u>212, "Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

					CAN	DIAG SU	IPPORT I	INTR						
SELECT SYSTEM screen							Receive	diagnosis					SELE-DIA	2 RESULTS
	diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	OLLI DIV	
ENGINE —	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNHWN	UNK	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN 01)
NTELLIGENT KEY No indication		UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	_	-	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION No indication	NG	UNKWN	UNKWN	-	-	-	-	-	UNKWN	-	UNKWN		CAN COMM CIRCUIT (UN00)	_
AIR PRESSURE MONITOR No indication	NG	UNKWN	-	-	-	-	-	_	UNKWN	—	-	-	CAN COMM CIRCUIT (U1000)	-
BCM No indication	NG	UNKWN	UNKWN	UNKWN	_	_	-	-	UNKWN	—	-	UNIÓWN	CAN COMM CIRCUIT (U1000)	-
Display control unit -	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	—	-	UNI	-	_
METER A/C AMP No indicatior		UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	—	—		Ι	CAN COMY CIRCUIT	_
AUTO DRIVE POS. No indication	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	—	-	-	CAN COMM CIRCUIT (U1000)	_
ABS —	NG	UNKWN	UNIWN	-	UNIWN	-	-	-	-	UNKWN	-	-	CAN COMY CIRCUIT (U 000)	-
IPDM E/R		UNKWN	UNKWN	_	-	_	UNKWN	_	_	—	-	_	CAN COMM CIRCUIT (U 000)	-



I

Check ECM circuit. Refer to LAN-213, "ECM Circuit Inspection" .

						CAN	DIAG SU	PPORT I	MNTR						
	creen		_					Receive	diagnosis						
	oreen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIA	a headera
ENGINE	—	NG	UNKWN	—	-	UNKWN	-	UNKWN	-		-	UNKIN	UNKWN	CAN COMM/CIRCUIT (UN00)	CAN COMICIRCUI (UV01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	-	UNKWN	-	UNKWN	-	CAN COMM/CIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	-	-	-	—	-	UNKWN	-	—	-	CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	-	UNKWN	—	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	—	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNWN	-	UNKWN	-	—	-	-	UNKWN	—	-	CAN COMN CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	-	UNKWN	_	-	-	_	-	CAN COMN CIRCUIT (U1000)	_



Г

Check Intelligent Key unit circuit. Refer to LAN-214, "Intelligent Key Unit Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	oreen							Receive	diagnosis						DEQUITO
	Joreen	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		HEODEIO
ENGINE	-	NG	UNKWN	—		UNKWN	-	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	1	_	Ι	UNKWN	-	UNKWN	—	-		CAN COMM CIRCUIT (U 000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	—	-	—	-	UNKWN	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	I	-	-	-	-	UNKWN	_	-	-	CAN COMM CIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN		_	_	—	_	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	-	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	-	_	UNKWN	-		CAN COMM CIRCUIT (U1000)	-
PDM E/R	No indication	_	UNKWN	UNKWN	I	_	-	UNKWN	_	_	-	_	-	CAN COMM CIRCUIT (U1000)	_



Μ

L

А

В

С

D

Е

F

G

J

1

Check TCM circuit. Refer to LAN-214, "TCM Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	ecreen							Receive	diagnosis						
	Solocit	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	—	_	UNKIN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM/CIRCUIT (U100)	CAN COMMCIRCUI (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	—	-	-	UNKWN	-	UNKWN		-	1	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	-	—	—	UNKWN	—	UNKWN		CAN COMMCIRCUIT (U100)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	-	-	-	—	—	UNKWN	—	—	Ι	CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN		_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	—	_	UNKWN	-	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	I	CAN COMM/CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	-	UNKWN	_	UNKWN	-	-	I	CAN COMM/CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	—	—	UNKWN	—	1	CAN COMM/CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	_	-	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Check low tire pressure warning control unit circuit. Refer to <u>LAN-215</u>, "Low Tire Pressure Warning Control <u>A</u> <u>Unit Circuit Inspection</u>".

						0/11	DIAG 30	PPONII							
SELECT SYSTEM so	reen							Receive	diagnosis					SELE-DIA	RESULTS
OLLEON ON ON CHARGE	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
NGINE	_	NG	UNKWN	—	_	UNKWN	_	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No ndication	-	UNKWN	UNKWN		—	—	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
RANSMISSION	No ndication	NG	UNKWN	UNKWN		-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
	No ndivition	NG	UNKWN	-	-	-	-	-	_	UNKWN	-	-	-	CAN COMMCIRCUIT (U 1000)	-
icM ii	No ndication	NG	UNKWN	UNKWN	UNKWN	—	—	-	-	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit		NG	UNKWN	UNKWN	-	-	UNKVN	UNKWN	-	UNKWN	-	-	UNKWN	_	_
IETER A/C AMP	No ndication	-	UNKWN	UNKWN	-	UNKWN	UNKVN	UNKWN	UNKWN	-	-	UNKWN		CAN COMMCIRCUIT (UN00)	-
UTO DRIVE POS.	No ndication	NG	UNKWN	_	-	UNKWN	-	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	-	-	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
PDM E/R	No ndication	I	UNKWN	UNKWN	I	_	—	UNKWN	_	_	-	-	-	CAN COMM CIRCUIT (U1000)	—



Check BCM circuit. Refer to LAN-215, "BCM Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						
	breen	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		A NEODERO
ENGINE	-	NG	UNKWN	_	_	UNKWN	-	บหน่งท	—	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	-	-	-	UNKIN	-	UNKWN		-	I	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	-	—	—	UNKWN	—	UNKWN		CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	—	-	-	—	—	UNKWN	—	—	Ι	CAN COMM CIRCUIT (U1000)	-
BCM	No inditation	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN		_	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	—	_	UNKWN	-	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	l	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	-	UNKWN	_	UNKWN	_	_	-	CAN COMM CIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	—	—	UNKWN	—	1	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	-	UNKWN	_	_	_	_		CAN COMMCIRCUIT (UN00)	_



# [CAN]

А

В

С

D

Е

F

G

### Case 9

Г

Check display control unit circuit. Refer to LAN-216, "Display Control Unit Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen		_					Receive	diagnosis						
SELECT CTOTEM	5010011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIA	RESULIS
ENGINE	-	NG	UNKWN	-	—	UNKWN	_	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	—	_	UNKWN	_	UNKWN	—	-	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	-	UNKWN	-	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	_	—	_	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKIN	UNKWN	-	-	UNKVN	UNKWN	—	UNKIN	-	-		-	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	Ι	CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	-	-	Ι	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	-	-	UNKWN	-		CAN COMM CIRCUIT (U1000)	-
PDM E/R	No indication	_	UNKWN	UNKWN	—	-	-	UNKWN	_	_	-	—	_	CAN COMM CIRCUIT (U1000)	-



M

1

Check data link connector circuit. Refer to LAN-216, "Data Link Connector Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						
	bicch	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	—	_	UNKWN	_	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No ind ation	—	UNKWN	UNKWN	-	—	-	UNKWN	-	UNKWN	—	1		CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indNation	NG	UNKWN	UNKWN	_	-	-	—	-	UNKWN	—	UNKWN		CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No individualition	NG	UNKWN	-	—	-	-	—	—	UNKWN	—	I	Ι	CAN COMM CIRCUIT (U1000)	-
BCM	No ind ation	NG	UNKWN	UNKWN	UNKWN	_	-	—	-	UNKWN	_	1	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	—	I	UNKWN	-	—
METER A/C AMP	No inditation	_	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	-	—	UNKWN	I	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No ind ation	NG	UNKWN	-	_	UNKWN	-	UNKWN	-	UNKWN	-	Ι	I	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	—	—	-	UNKWN	1	1	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No inditation	-	UNKWN	UNKWN	_	_	-	UNKWN	_	-	_	_	_	CAN COMM CIRCUIT (U1000)	-



Г

А Check unified meter and A/C amp. circuit. Refer to LAN-217, "Unified Meter and A/C Amp. Circuit Inspection" .

						CAN	DIAG SU	PPORT I	INTR						
SELECT SYSTEM so	reen		<b>-</b>					Receive	diagnosis					SELE-DIA(	BESUITS
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		THEODERG
ENGINE	-	NG	UNKWN	—	_	UNKWN	_	UNKWN	_	UNKIN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (U1V01)
	No ndication	_	UNKWN	UNKWN	—	_	_	UNKWN	_		_	_	_	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No ndication	NG	UNKWN	UNKWN	_	_	_	_	-		_	UNKWN	_	CAN COMMCIRCUIT (UN00)	_
	No ndication	NG	UNKWN	-	-	_	_	—	—	UNKWN	_	-	-	CAN COMMCIRCUIT (UN00)	-
BCM	No ndication	NG	UNKWN	UNKWN	UNKWN	-	_	_	_	UNKINN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	_		UNKWN	UNKWN	_	UNKIN	—	-	UNKWN	_	_
METER A/C AMP	Nondication		UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No ndication	NG	UNKWN	_	_	UNKWN	-	UNKWN	_		-	_	_	CAN COMMCIRCUIT (UN00)	_
ABS	_	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R in	No ndication	-	UNKWN	UNKWN	-	-	_	UNKWN	_	_	-	-	-	CAN COMM CIRCUIT (U1000)	_



Μ

L

J

PKIB4808E

### Case 12

Г

Check steering angle sensor circuit. Refer to LAN-217, "Steering Angle Sensor Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen							Receive	diagnosis						
GELEOT GTOTEM	breen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIA	A RESULTS
ENGINE	-	NG	UNKWN	—	-	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication		UNKWN	UNKWN	l	—	-	UNKWN	-	UNKWN			I	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN		—	-	—	—	UNKWN	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	I	_	-	—	-	UNKWN	_	—	-	CAN COMM CIRCUIT (U1000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	-	-	UNKWN	—	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	I	-	UNKWN	UNKWN	-	UNKWN	—	—	UNKWN	-	_
METER A/C AMP	No indication		UNKWN	UNKWN	I	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	l	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	l	UNKWN	-	UNKWN	-	UNKWN	-	-	I	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	UNKWN	-	_	_	_		_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	-	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_

Steering angle ar ///////: Malfunctioning part Low tire pressure warning control unit Unified BCM meter and A/C amp. CAN H CAN L HHHA ABS actuator and Intelligent Data link Driver seat Display ECM IPDM E/R тсм electric unit (control unit) Key unit control unit connector control unit PKIB4611E

А

В

С

D

Е

F

G

J

### Case 13

Check driver seat control unit circuit. Refer to LAN-218, "Driver Seat Control Unit Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM	creen		<b>-</b>					Receive	diagnosis					SELE-DIA(	BESHITS
	010011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		THEODERS
ENGINE	_	NG	UNKWN	-		UNKWN	_	UNKWN	_	UNKWN	—	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	-	_	_	UNKWN	_	UNKWN	—	-	—	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι		-	—	—	UNKWN		UNKWN	—	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	I	-	_	—	—	UNKWN	_	_	—	CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	Ι	-	-	-	UNKWN			UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	Ι	NG	UNKWN	UNKWN	I	-	UNKWN	UNKWN	—	UNKWN	-	-	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	I	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN		l	UNKWN	_	UNKWN	_	UNKWN		-	—	CAN COMM CIRCUIT (U100)	_
ABS	-	NG	UNKWN	UNKWN		UNKWN	—	—	—	-	UNKWN	—	—	CAN COMM CIRCUIT (U1000)	—
IPDM E/R	No indication		UNKWN	UNKWN	Ι	-	_	UNKWN	_		-		-	CAN COMM CIRCUIT (U1000)	—



Μ

L

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-218</u>, "ABS Actuator and Electric Unit (Control Unit) Circuit Inspection".

						CAN	DIAG SU	PPORT N	/INTR						
	creen							Receive	diagnosis						
	loreen	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	JELI-DIA	
ENGINE	—	NG	UNKWN	—	—	UNKWN	-	UNKWN	_	UNKWN	-	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	—	-	-	UNKWN	-	UNKWN	-	—	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	-	—	—	UNKWN	-	UNKWN	—	CAN COMM CIRCUIT (UN00)	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	_	—	UNKWN	-	—	_	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	—	-	UNKWN	—	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	_	UNKWN	-	_	UNKWN	-	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	_	CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	—	—	—	CAN COMM CIRCUIT (U1000)	_
ABS	_	V	UNKWN	UNKWN	-	UNIWN	-	_	_	-	UNKWN	-	—	CAN COMM CIRCUIT (UN00)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	_	-	-	_	_	CAN COMM CIRCUIT (U1000)	_
															PKIB4810E



# [CAN]

А

В

С

D

Е

F

G

### Case 15

Г

### Check IPDM E/R circuit. Refer to LAN-219, "IPDM E/R Circuit Inspection" .

						CAN	DIAG SU	PPORT N	INTR						
	creen		-					Receive	diagnosis						
SELECT CTOTEM	5010011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	I NEGOLIG
ENGINE	-	NG	UNKWN	—	-	UNKWN	_	UNKWN	I	UNKWN	_	UNKWN	UNKINN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN		1	_	UNKWN	-	UNKWN	—	-	_	CAN COMM CIRCUIT (U1000)	_
FRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-		UNKWN	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-		-	_	_	_	UNKWN	—	_	-	CAN COMM CIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	—	-	UNKWN	—	-	UNION	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-			_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	_	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	-	UNKWN	-	UNKWN	-	-	_	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN		UNKWN	_	_	-	_	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
PDM E/R	No indication	_	UNKWN	UNKWN	-	-	_	UNKWN	-	_	-	_	_	CAN COMM CIRCUIT	-



Revision: 2005 August

Case 20: Check CAN communication circuit. Refer to LAN-219, "CAN Communication Circuit Inspection" .

						CAN	DIAG SU	PPORT I	INTR						
SELECT SYSTEM S	screen	1.00.1	<b>T</b>					Receive	diagnosis					SELE-DIA	3 RESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	OLLI DIV	
ENGINE	-	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMMCIRCUIT (U1001)
INTELLIGENT KEY	No inditation	—	UNKWN	UNKWN	—	-	-	UNKWN	-	UNKWN	—	_		CAN COMM CIRCUIT (U 100)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	_	-	-	—	-	UNKWN	—	UNKWN		CAN COMM CIRCUIT (U 000)	-
AIR PRESSURE MONITOR	No inditation	NG	UNKWN	-	_	-	-	—	—	UNKWN	—	—	I	CAN COMMCIRCUIT (UN00)	-
BCM	No inditation	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	—	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKVN	UNIWN	—	UNKWN	—	-	UNKWN	-	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT	-
AUTO DRIVE POS.	No indivision	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	—	-	_	CAN COMM CIRCUIT (UN00)	-
ABS	-	V	UNKWN	UNIWN	-	UNKWN	-	—	-	-	UNKON	-	-	CAN COMM CIRCUIT (UN00)	-
IPDM E/R	No indivation	-	UNKWN	UNKWN	-	_	_	UNKWN	_	-	-	_	_	CAN COMM CIRCUIT (U 000)	_
															PKIB4812E

### Case 17

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to <u>LAN-224</u>, "IPDM E/R Ignition Relay <u>Circuit Inspection</u>".

														1	
						CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM 5	screen	1-24-1	Transmit					Receive	diagnosis					SELE-DIAC	BESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	—	—		_	UNKWN	—	UNKWN	-	UNKWN	UNKWN	CAN COMM CIRCUIT (U V00)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	I	UNKWN	UNKWN	—	_	—	UNKWN	—	UNKWN	_	1	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	—	—	—	UNKWN	—	UNKWN	_	CAN COMM CIRCUIT (U1000)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	UNKWN	_	-	—	CAN COMM CIRCUIT (U1000)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	—	_	—	—	UNKWN	—		UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	_	—	UNKWN	UNKWN	—	UNKWN	—	I	UNKWN	_	_
METER A/C AMP	No indication	l	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	_	_			CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	-	_	CAN COMM CIRCUIT (U 1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	—	—	—	UNKWN	1	Ι	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	-	UNKWN	_	—	_	_	_	CAN COMM CIRCUIT (U1000)	_
															PKIB4813E

AKSODAEN

Н

L

### Case 18

А Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to LAN-224, "IPDM E/R Ignition Relay Circuit Inspection".

						CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM S	creen							Receive	diagnosis					SELE-DIA	
OLLEOT OTOTEMIS	oreen .	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	VDC/TCS /ABS	IPDM E/R	JELI-DIA	
ENGINE	—	NG	UNKWN	—	-	UNKWN	_	UNKWN	_	UNKWN	I	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-		—	UNKWN	—	UNKWN		-	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	-	-	-	-	—	-	-		UNKWN	-	CAN COMMCIRCUIT (UN00)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	-	UNKWN	_	-	-	CAN COMM CIRCUIT (U1000)	-
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	I	-	—	-	UNKWN	I	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	I	NG	UNKWN	UNKWN	I	I	UNKWN	UNKWN	—	UNKWN	١	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNKWN	-	1	UNKWN	—	CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	-	UNKWN	_	UNKWN		-	-	CAN COMM CIRCUIT (U1000)	_
ABS	I	NG	UNKWN	—		UNKWN	—	—	—	-		-	—	CAN COMM/CIRCUIT (UN00)	_
PDM E/R	No	-	UNKWN	UNKWN	-	_	_	UNKWN	_	_	_	-	_	CAN COMM CIRCUIT (U1000)	-

# Inspection Between TCM and Data Link Connector Circuit

# **1. CHECK HARNESS FOR OPEN CIRCUIT**

Turn ignition switch OFF. 1.

8 (L) - 6 (L)

9 (Y) - 14 (Y)

- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- 4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).



### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

#### Inspection Between Data Link Connector and Driver Seat Control Unit Circuit AKS00AEN

: Continuity should exist.

: Continuity should exist.

**1. CHECK CONNECTOR** 

- Turn ignition switch OFF. 1.
- 2. Disconnect the battery cable from the negative terminal.
- Check following terminals and connectors for damage, bend and loose connection (connector side and 3. harness side).
- Harness connector M9
- Harness connector B2

#### OK or NG

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

# LAN-211

- 1. Disconnect harness connector M9.
- 2. Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 13 (Y).
  - 6 (L) 1 (L) 14 (Y) - 13 (Y)

: Continuity should exist. : Continuity should exist.

### OK or NG

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



# 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- 2. Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L)
- : Continuity should exist.
- 13 (Y) 10 (Y)
- : Continuity should exist.

### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.
- |Bz Harness connector Harness connector Ω PKIB5308

#### Inspection Between Driver Seat Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit AKS00CHP

## 1. CHECK CONNECTOR

- Turn ignition switch OFF. 1.
- Disconnect the battery cable from the negative terminal. 2.
- Check following terminals and connectors for damage, bend and loose connection (connector side and 3. harness side).
- Harness connector B4
- Harness connector E105

### OK or NG

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

- 1. Disconnect harness connector B4.
- 2 Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L) 13 (Y) - 10 (Y)
- : Continuity should exist.
- : Continuity should exist.

### OK or NG

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



# 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ABS actuator and electric unit (control unit) connector.
- 2. Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 4 (L) 11 (L)
- 10 (Y) 15 (Y)
- : Continuity should exist.
- : Continuity should exist.

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

# **ECM Circuit Inspection**

### 1. CHECK CONNECTOR

- Turn ignition switch OFF. 1.
- Disconnect the battery cable from the negative terminal. 2.
- 3. Check terminals and connector of ECM 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 ECM connector.
- Check resistance between ECM harness connector M80 termi-2. nals 94 (L) and 86 (Y).

### 94 (L) - 86 (Y)

: Approx. 108 - 132 $\Omega$ 

### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



А

[CAN]



AKS00AEO

- LAN

L

Μ

# Intelligent Key Unit Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of Intelligent Key unit 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 Intelligent Key unit connector.
- 2. Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).

#### 2 (L) - 3 (Y)

: **Approx. 54 - 66**Ω

#### OK or NG

- OK >> Replace Intelligent Key unit.
- NG >> Repair harness between Intelligent Key unit and BCM.



# **TCM Circuit Inspection**

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect TCM connector.
- Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

### 5 (L) - 6 (Y)

: Approx. 54 - 66Ω

#### OK or NG

OK >> Replace TCM.

NG >> Repair harness between TCM and BCM.



AKS00CHQ

AKS00AEP



Revision: 2005 August

# **Display Control Unit Circuit Inspection**

### 1. CHECK CONNECTOR

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

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display control unit connector.
- Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

#### 25 (L) - 26 (Y)

: Approx. 54 - 66Ω

#### OK or NG

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



# **Data Link Connector Circuit Inspection**

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check data link connector and terminals 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 M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Diagnose again. Refer to <u>LAN-7</u>, "TROUBLE DIAG-NOSES WORK FLOW" .
- NG >> Repair harness between data link connector and unified meter and A/C amp.



AKS00AES
	[CAN]
Unified Meter and A/C Amp. Circuit Inspection 1. CHECK CONNECTOR	AKS00AEU
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of unified meter and A/C amp. for damage, bence (meter side and harness side).</li> <li><u>OK or NG</u></li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or connector.</li> </ol>	d and loose connection
2. CHECK HARNESS FOR OPEN CIRCUIT	
<ol> <li>Disconnect unified meter and A/C amp. connector.</li> <li>Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).</li> <li>1 (L) - 11 (Y) : Approx. 54 - 66Ω</li> </ol>	S. Unified meter and
OK or NG OK >> Replace unified meter and A/C amp. NG >> Repair harness between unified meter and A/C amp. and data link connector.	
Steering Angle Sensor Circuit Inspection 1. CHECK CONNECTOR	SKIA6871E AKS00AEV
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Check terminals and connector of steering angle sensor for damage, bend and log side and harness side).</li> <li><u>OK or NG</u></li> <li>OK &gt;&gt; GO TO 2.</li> <li>NG &gt;&gt; Repair terminal or connector.</li> </ol>	ose connection (sensor
2. CHECK HARNESS FOR OPEN CIRCUIT	
<ol> <li>Disconnect steering angle sensor connector.</li> <li>Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).</li> <li>4 (L) - 5 (Y) : Approx. 54 - 66Ω</li> </ol>	
OK or NG     Stee       OK     >> Replace steering angle sensor.       NG     >> Repair harness between steering angle sensor and data link connector.	sor connector

# Driver Seat Control Unit Circuit Inspection

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 B301
- Harness connector B9

#### 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.
- Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



# ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E24 terminals 11 (L) and 15 (Y).

### 11 (L) - 15 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.





AKSODAEW

Check terminals and connector of IPDM E/R for damage, bend and loose connection (control module side

#### OK or NG OK >> GOTO2NG >> Repair terminal or connector. 2. CHECK HARNESS FOR OPEN CIRCUIT Disconnect IPDM E/R connector. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y). 48 (L) - 49 (Y) : Approx. 108 - 132 $\Omega$

Disconnect the battery cable from the negative terminal.

#### OK or NG

1.

2.

3.

1.

2.

OK >> Replace IPDM E/R.

**IPDM E/R Circuit Inspection** 

1. CHECK CONNECTOR

and harness side).

Turn ignition switch OFF.

NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



# **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side, sensor side and harness side).
- ECM
- Intelligent Key unit \_
- TCM
- Low tire pressure warning control unit
- BCM
- Display control unit \_
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit
- OK or NG
  - OK >> GO TO 2.
- NG >> Repair terminal or connector.

IPDM E/R connector

4948

Ω



Μ

J

А

В

[CAN]

AKS00AEX

D

С

F

E

Н

PKIB5317E

AKSOOAEY

# 2. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- ECM connector
- Intelligent Key unit connector
- Harness connector M82
- Low tire pressure warning control unit connector
- BCM connector
- Display control unit connector
- Unified meter and A/C amp. connector
- Steering angle sensor connector
- Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y)

: Continuity should not exist.

#### OK or NG

#### OK >> GO TO 3.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display control unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9



# $\overline{3}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between	data link connector M24 terminals 6	(L),
14 (Y) and ground.		

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

- OK or NG
- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display control unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9

# 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect TCM connector. 1.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

LAN-221

- OK or NG
- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.



PKIB5319F





А

F

F

Н

Μ

# 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4 and harness connector B9.
- Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

#### OK or NG

- OK >> GO TO 7.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

# 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground
- : Continuity should not exist. : Continuity should not exist.
- 10 (Y) Ground

# OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

# 8. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect driver seat control unit connector.
- Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

#### OK or NG

- OK >> GO TO 9.
- NG >> Repair harness between driver seat control unit and harness connector B301.







Harness connector

# 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) Ground
  - : Continuity should not exist. : Continuity should not exist.

19 (BR/W) - Ground

#### OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.

# 10. CHECK HARNESS FOR SHORT CIRCUIT

Disconnect ABS actuator and electric unit (control unit) connector and IPDM E/R connector. 1.

: Continuity should not exist.

2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### OK or NG

OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

# 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) Ground
- : Continuity should not exist. : Continuity should not exist.
- 49 (Y) Ground

### OK or NG

- OK >> GO TO 12.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105







А

F

E

Н

LAN-223

# 12. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

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

94 - 86

3. Check resistance between IPDM E/R terminals 48 and 49.

: Approx. 108 – 132 Ω

- OK or NG
- OK >> GO TO 13.

48 - 49

NG >> Replace ECM and/or IPDM E/R.



# 13. снеск сумртом

- 1. Fill in described symptoms on the column "Symptom" in the check sheet.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

: Approx. 108 – 132  $\Omega$ 

OK or NG

OK >> GO TO 14.

NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"

# 14. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display control unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

#### Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

# **IPDM E/R Ignition Relay Circuit Inspection**

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

- IPDM E/R power supply circuit. Refer to <u>PG-27, "IPDM E/R Power/Ground Circuit Inspection"</u>.
- Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY IGNITION SW. IN "ON"</u> <u>AND/OR "START"</u>.

# LAN-224

AKS00CHU

# [CAN]



LAN

Н

I

J

L

 $\mathbb{N}$ 

# Schematic

AKS00AF3

[CAN]



TKWB0850E

# Wiring Diagram - CAN -



Μ

[CAN]

REFER TO THE FOLLOWING.

TKWB0851E

[CAN]



DATA LINE



TKWB0852E

[CAN]



TKWB0853E







TKWB0854E

# **Check Sheet**

# NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen	Initial	Transmit			5014	Receive	diagnosis			19914	SELF-DIAG	RESULTS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	E/R		
INGINE	_	NG	UNKWN	_	UNKWN	UNKWN	-	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
RANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	_	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
СМ	No indication	NG	UNKWN	UNKWN	_	-	_	UNKWN	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
splay unit	_	NG	UNKWN	UNKWN	-	UNKWN	_	UNKWN	-	1	UNKWN	_	—
ETER A/C AMP	No indication	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
L MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	—	_	UNKWN	-	I	_	CAN COMM CIRCUIT (U1000)	_
38	_	NG	UNKWN	UNKWN	_	-	—	-	-	1	-	CAN COMM CIRCUIT (U1000)	_
'DM E/R	No indication	_	UNKWN	UNKWN	_	UNKWN	-	_	-	-	_	CAN COMM CIRCUIT (U1000)	-
	Attach copy of SELECT SYSTEM												
Display	unit Trans	slation S	Sheet: R	ewrite th	e follow	ing nam	nes, and	put a c	heck ma	irk on th	e above		
Confirmation/Adju	ustment D	isplay	Ch	neck she	et table	Display	C	onfirma	tion/Adju	ustment	Display	Check sheet	table Display
CAN COMM				Initial	diagno	sis	С	AN 5				METE	R/M&A
AN 1				Transm	it diagn	osis		AN 6				ייסט	
AN 2 AN 3					ECM			AN 8					
AN 4					_		C	AN 9					_
CAN 4								AN 9					

LAN-231

AKS00AF5

А



### **CHECK SHEET RESULTS (EXAMPLE)**

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to LAN-246, "Inspection Between TCM and Data Link Connector Circuit" .

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen	le Mal	T				Receive	diagnosis				SELE-DIAG	BESUITS
		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	-	UNKWN	UNKWN	—	UNKWN	UNKWN	-	UNKVN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
TRANSMISSION	No indivation	NG	UNKWN	UNKWN	-	—	—	UNKWN	_	UNKWN	Ι	CAN COMM CIRCUIT (U 1000)	
BCM	No individuation	NG	UNKWN	UNKWN	-	—	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN		Ι	UNIWN	-	UNKWN	-	-	UNKWN	_	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	UNIWN	UNWN	UNKWN	—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U 1000)	-
ALL MODE AWD/4WD	Ι	NG	UNKWN		-	-	-	UNKWN	-	-	1	CAN COMM CIRCUIT (U N00)	-
ABS	Ι	NG	UNKWN	UNKWN	-	-	-	-	-	-	I	CAN COMM CIRCUIT (U 1000)	-
IPDM E/R	No indication	-	UNKWN	UNIWN	Ι	UNWN	-	-	-	-	_	CAN COMM CIRCUIT (U 1000)	—



С

А

В

D

F

F

G

Н

J

L

Μ

### Case 2

Check harness between data link connector and AWD control unit. Refer to <u>LAN-246</u>, "Inspection Between <u>Data Link Connector and AWD Control Unit Circuit</u>".

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen						Receive	diagnosis				SELE-DIAG	BESUITS
	boroom	initiai diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DINC	
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNK	-	UNKVN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	—	-	UNKWN	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	-	—	-	UNKWN	-	-	UNKVN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	-	UNKVN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	—	UNKIN		_	CAN COMM CIRCUIT (U 1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	-	-	-	-		-	-	1	CAN COMMCIRCUIT (U 1000)	_
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	I	CAN COMMCIRCUIT (U1000)	_
IPDM E/R	Ng ind ation	_	UNKWN	UNKWN	_	UNKWN	-	-	_	_	_	CAN COMMCIRCUIT (U1000)	_



# [CAN]

А

### Case 3

Check harness between AWD control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-248</u>, <u>"Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen	l a la la	T		_		Receive	diagnosis				SELE-DIAG	
022201 01012		diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIVE	
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKOVN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U 1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	_	UNKWN	—	UNKVN	_	CAN COMM CIRCUIT (U 00)	_
BCM	No indication	NG	UNKWN	UNKWN	—	_	_	UNKWN	-	-	UNKIN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	-	UNKIN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKVN	—	CAN COMM CIRCUIT (U 000)	—
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	-	_	-	-	-	-	CAN COMM CIRCUIT (U 100)	—
IPDM E/R	No inditiation	-	UNKWN	UNKWN	-	UNKWN	-	-	_	-	_	CAN COMM CIRCUIT (U 000)	—



M

### Case 4

Г

Check ECM circuit. Refer to LAN-248, "ECM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	1NTR					
SELECT SYSTEM	screen	1					Receive	diagnosis				SELE-DIAG	BESUITS
	0010011	diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DINC	TILOULIU
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN		UNKWN	UNKINN	-	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMM CIRCUIT (UN01)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	-		UNKWN	-	UNKWN	I	CAN COMMCIRCUIT (UN00)	_
всм	No indication	NG	UNKWN	UNKWN	_	-	-	UNKWN	-		UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	_	NG	UNKWN	UNKWN	—	UNKWN	-	UNKWN	-	-	UNKWN	—	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U 1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	UNKWN	-	-	I	CAN COMM CIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-		CAN COMM CIRCUIT (UN00)	_
IPDM E/R	No indication	_	UNKWN	UNIWN	_	UNKWN	_	—	—	_	_	CAN COMM CIRCUIT (UN00)	_
													PKIB4818E



# [CAN]

А

В

С

D

Е

F

### Case 5

Check TCM circuit. Refer to LAN-249, "TCM Circuit Inspection" .

					CAN	DIAG SU	IPPORT N	1NTR					
SELECT SYSTEM	screen						Receive	diagnosis				SELE-DIAG	BESUITS
	3010011	Initial diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC	
ENGINE	_	NG	UNKWN	_	UNKWN	UNKWN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMM CIRCUIT (UN01)
TRANSMISSION	No individuation	NG	UNKWN	UNKWN	_	-	-	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
BCM	No indication	NG	UNKWN	UNKWN	—	-	—	UNKWN	-		UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	Ι	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN		UNKWN	UNKWN	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	-	_	_	-	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	UNKWN	-	-	_	-	_	CAN COMM CIRCUIT (U1000)	—



Μ

### Case 6

Check BCM circuit. Refer to LAN-249, "BCM Circuit Inspection" .

					CAN	DIAG SU	PPORT N	1NTR					
SELECT SYSTEM	screen						Receive	diagnosis					RESULTS
	3010011	Initial diagnosis	lransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC	I ILCOLIC
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U 1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	_	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No inditation	NG	UNKWN	UNKWN	—	-	—	UNKWN	—	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	-	UNKWN	-	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN		CAN COMM CIRCUIT (UN000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	—	UNKWN	—	-	I	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	-	-	-	-	-	-		CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	UNKWN	-	_	_	-	_	CAN COMM CIRCUIT (UV000)	_
													PKIB4820E



# [CAN]

А

В

С

D

Е

F

### Case 7

Check display unit circuit. Refer to LAN-250, "Display Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM	screen						Receive	diagnosis				SELE-DIAG	BESUITS
SELECT STOLEN	3010011	Initial diagnosis	Transmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	THEODERS
ENGINE	_	NG	UNKWN	-	UNKWN	UNKWN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	-	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNION	-	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U 1000)	-
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	-	—	—	UNKWN	—	-	Ι	CAN COMM CIRCUIT (U1000)	_
ABS	—	NG	UNKWN	UNKWN	-	-	-	-	-	-	Ι	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	UNKWN	-	_	—	-	-	CAN COMM CIRCUIT (U1000)	—



Μ

**LAN-239** 

### Case 8

Check data link connector circuit. Refer to LAN-250, "Data Link Connector Circuit Inspection" .

					CAN	DIAG SU	IPPORT N	INTR					
SELECT SYSTEM	screen	1	<b>.</b>				Receive	diagnosis				SELE-DIAG	BESUITS
	0010011	diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC	I LEGOLI G
ENGINE	-	NG	UNKWN	_	UNKWN	UNKWN	-	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
TRANSMISSION	No indivation	NG	UNKWN	UNKWN	_	_	-	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No individuation	NG	UNKWN	UNKWN	-	-	—	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	-	UNKWN	_	-
METER A/C AMP	No ind ation	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	UNKWN	_	-	_	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	-	-	_	_	_	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indivation	-	UNKWN	UNKWN	-	UNKWN	-		—	-	_	CAN COMM CIRCUIT (U1000)	—



# [CAN]

А

В

С

D

Е

F

### Case 9

Check unified meter and A/C amp. circuit. Refer to LAN-251, "Unified Meter and A/C Amp. Circuit Inspection" .

					CAN	DIAG SU	PPORT N	1NTR					
	scroon						Receive	diagnosis					
SELECT STOTEM	3016611	Initial diagnosis	Transmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	INEGOEIG
ENGINE	_	NG	UNKWN	_	UNKWN	UNKWN	_	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U 000)	_
BCM	No indication	NG	UNKWN	UNKWN	_	-	_	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	_	UNKWN	-	-	UNKWN	_	_
METER A/C AMP	No inditation	_	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	_	UNKWN	—	-	-	CAN COMM CIRCUIT (U 000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	-	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Μ

### Case 10

Check AWD control unit circuit. Refer to LAN-251, "AWD Control Unit Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM screen		la Mal					Receive	diagnosis						
	3010011	Initial diagnosis	lransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI -DIAC		
ENGINE	-	NG	UNKWN	_	UNKWN	UNKWN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_	
ВСМ	No indication	NG	UNKWN	UNKWN	—	-	—	UNKWN	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	—	
Display unit	-	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	-	-	UNKWN	_	—	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U 000)	_	
ALL MODE AWD/4WD	—	NG	UNKWN	-	—	-	—	—	—	—	—	CAN COMM CIRCUIT (U 000)	_	
ABS	_	NG	UNKWN	UNKWN	-	-	-	-	-	-	-	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	UNKWN	_	-	_	-	_	CAN COMM CIRCUIT (U1000)	_	
													PKIB4824E	



# [CAN]

### Case 11

Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-252</u>, "ABS Actuator and Electric Unit (<u>Control Unit</u>) <u>Circuit Inspection</u>".

					CAN	DIAG SU	PPORT N	INTR					
SELECT SYSTEM screen							Receive		SELE-DIAG BESULTS				
		initiai diagnosis	diagnosis	ECM TCM BCM /SEC		DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC		
ENGINE	_	NG	UNKWN	_	UNKWN	UNKWN	—	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	UNKWN	_		_	CAN COMM CIRCUIT (U 000)	_
BCM	No indication	NG	UNKWN	UNKWN	—	-	—	UNKWN		-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	—	NG	UNKWN	UNKWN	—	UNKWN	—	UNKWN	—	—	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKVN	-	CAN COMM CIRCUIT (U 000)	-
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	—	UNKWN	_	—	_	CAN COMM CIRCUIT (U1000)	_
ABS	_	V	UNKIN	UNHWN	_	_	_	_	_	_	_	CAN COMM CIRCUIT (U 000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



M

# Case 12

#### Check IPDM E/R circuit. Refer to LAN-252, "IPDM E/R Circuit Inspection" .

					CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM screen			Transmit diagnosis				Receive	diagnosis						
		Initial diagnosis		ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R			
ENGINE	-	NG	UNKWN	_	UNKWN	UNKWN	_	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	1	CAN COMM CIRCUIT (U1000)	_	
всм	No indication	NG	UNKWN	UNKWN	—	-	—	UNKWN	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	_	UNKWN	_	UNKWN	_	_	UNKWN	_	—	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	—	-	—	UNKWN	—	-	-	CAN COMM CIRCUIT (U1000)	_	
ABS	_	NG	UNKWN	UNKWN	_	-	—	—	-	_	1	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No inditation	-	UNKWN	UNKWN	_	UNKWN	_	_	_	-	_	CAN COMM CIRCUIT (U 100)	_	
													PKIB4826E	



А

### Case 13

Check CAN communication circuit. Refer to LAN-253, "CAN Communication Circuit Inspection" .

					CAN	DIAG SU	IPPORT N	INTR						
SELECT SYSTEM screen		1					Receive							
		Initial diagnosis	diagnosis	ECM	ТСМ	BCM /SEC	DISPLAY	METER /M&A	IETER AWD/4WD /M&A /e4WD		IPDM E/R			
ENGINE	_	NG	UNKIN	_	UNKWN	UNKWN	-	UNION	UNIWN	_	UNKIN	CAN COMMCIRCUIT (UN00)	CAN COMM CIRCUIT (UN01)	
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-	-	UNKWN	—	UNKWN	-	CAN COMMCIRCUIT (UN00)	-	
BCM	No inditation	NG	UNKWN	UNKWN	—	-	-	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	-	
Display unit	_	NG	UNKWN	UNKWN	-	UNKWN	-	UNKWN	_	-	UNKIN	_	_	
METER A/C AMP	No inditation	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (UN00)	_	
ALL MODE AWD/4WD	-	NG	UNKWN	_	_	-	-	_	_	_	-	CAN COMM CIRCUIT (U 100)	-	
ABS	-	V	UNKWN	UNKWN	-	-	-	_	_	_	-	CAN COMMCIRCUIT (UN00)	_	
IPDM E/R	No individual	_	UNKWN	UNKWN	_	UNKWN	_	_	_	_	_		_	

#### Case 14

Γ

G Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to LAN-257, "IPDM E/R Ignition Relay Circuit Inspection".

					CAN	DIAG SU	PPORT N	1NTR						
SELECT SYSTEM scroop							Receive							
OLLEOT OTOTEM	3010011	Initial diagnosis	Iransmit diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		TILOULIU	
ENGINE	_	NG	UNKWN	_	UNKWN	UNKWN	-	UNKWN	UNKIN	_	UNKWN	CAN COMM CIRCUIT (U 100)	CAN COMM CIRCUIT (UV001)	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_	
ВСМ	No indication	NG	UNKWN	UNKWN	-	_	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-	
Display unit	_	NG	UNKWN	UNKWN	_	UNKWN	_	UNKWN	_	_	UNKWN	_	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN		UNKWN	UNKWN	-	UNKVN	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_	
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	-	_	UNKWN	-	_	-	CAN COMM CIRCUIT (U1000)	_	
ABS	_	NG	UNKWN	UNKWN	-	-	_	-	-	-	-	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	-	UNKWN	UNKWN	-	UNKWN	-	_	_	_	_	CAN COMM CIRCUIT (U1000)	_	

Μ

Н

I

J

AN

PKIC6344E

AKS00CJZ

### Case 15

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-257</u>, "IPDM E/R Ignition Relay <u>Circuit Inspection</u>".

					CAN	DIAG SU	PPORT N	INTR						
SELECT SYSTEM screen		1.11.1					Receive		SELE-DIAG BESULTS					
	oreen	initiai diagnosis	diagnosis	ECM	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DINC	TILOULIU	
ENGINE	-	NG	UNKWN	-	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)	
TRANSMISSION	No indication	NG	UNKWN	—		-	—	—	-	UNKWN	1	CAN COMM CIRCUIT (UN00)	—	
всм	No indication	NG	UNKWN	UNKWN	1	-	_	UNKWN	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	_	UNKWN	-	UNKWN	-	-	UNKWN	_	—	
METER A/C AMP	No indication	-	UNKWN	UNKWN	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN		CAN COMM CIRCUIT (U1000)	_	
ALL MODE AWD/4WD	_	NG	UNKWN	_	-	_	_	-	_	-	I	CAN COMM CIRCUIT (U 100)	_	
ABS	-	NG	UNKWN	-	-	-	-	-	-	-	I	CAN COMM CIRCUIT (U 100)	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	UNKWN	_	_	_	_	-	CAN COMM CIRCUIT (U1000)	_	

# Inspection Between TCM and Data Link Connector Circuit

**1. CHECK HARNESS FOR OPEN CIRCUIT** 

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - 8 (L) 6 (L) 9 (Y) - 14 (Y)
- : Continuity should exist. : Continuity should exist.

- OK or NG
- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW"
- NG >> Repair harness.



# Inspection Between Data Link Connector and AWD Control Unit Circuit 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M9
- Harness connector B2
- Harness connector B4
- Harness connector E105

### OK or NG

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

AKSOOCKO

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector M9.
- Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 13 (Y).
  - 6 (L) 1 (L) 14 (Y) - 13 (Y)
- : Continuity should exist.
- : Continuity should exist.

#### OK or NG

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



[CAN]

А

В

F

F

Н

Harness connector

PKIB5308

O

# 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B2 terminals 1 (L), 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L) 13 (Y) - 10 (Y)
- : Continuity should exist.

|Bz

Harness connector

: Continuity should exist.

### OK or NG

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

# 4. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect AWD control unit connector.
- Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and AWD control unit harness connector E111 terminals 8 (L), 16 (Y).
  - 4 (L) 8 (L) 10 (Y) - 16 (Y)

: Continuity should exist. : Continuity should exist.

### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW".
- NG >> Repair harness.



# Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect following connectors.
- ECM
- AWD control unit
- ABS actuator and electric unit (control unit)
- Check continuity between AWD control unit harness connector 4 E111 terminals 8 (L), 16 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 8 (L) 11 (L) 16 (Y) - 15 (Y)

: Continuity should exist. : Continuity should exist.

### OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .
- NG >> Repair harness.

# ECM Circuit Inspection

# 1. CHECK CONNECTOR

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

### OK or NG

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

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect ECM connector. 1.
- Check resistance between ECM harness connector M80 termi-2. nals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132 $\Omega$ 

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.





AKS00CK2

[CAN]

# [CAN]

TCM Circuit Inspection 1. CHECK CONNECTOR	AKSOOCK3
1. Turn ignition switch OFF.	
2. Disconnect the battery cable from the negative terminal.	E
3. Check following terminals and connectors for damage, bend and loose connection (control m and harness side).	odule side
- TCM connector	(
<ul> <li>Harness connector F102</li> </ul>	
- Harness connector M82	r
OK or NG	L
OK >> GO TO 2.	
NG >> Repair terminal or connector.	F
2. CHECK HARNESS FOR OPEN CIRCUIT	
1. Disconnect TCM connector.	F
<ol> <li>Check resistance between TCM harness connector F103 termi- nals 5 (L) and 6 (Y).</li> </ol>	
<b>5 (L) - 6 (Y)</b> : Approx. 54 - 66Ω	(

OK >> Replace TCM.

NG >> Repair harness between TCM and BCM.



# **BCM Circuit Inspection**

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.

М

L

LAN

AKS00CK4

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

### 39 (L) - 40 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16</u>, "Removal and Installation of <u>BCM</u>"
- NG >> Repair harness between BCM and harness connector M82.



# **Display Unit Circuit Inspection**

# 1. CHECK CONNECTOR

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

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display unit connector.
- Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

#### 14 (L) - 16 (Y)

: Approx. 54 - 66Ω

### OK or NG

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



# **Data Link Connector Circuit Inspection**

# 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check data link connector and terminals 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 M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u> NOSES WORK FLOW".
- NG >> Repair harness between data link connector and unified meter and A/C amp.



AKS00CK6



# **ABS Actuator and Electric Unit (Control Unit) Circuit Inspection**

# **1.** CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.
- Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).

#### 11 (L) - 15 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.



# **IPDM E/R Circuit Inspection**

# **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

: Approx. 108 - 132 $\Omega$ 

### OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



[CAN]

AKS00CKA
	[CA	4N]
<mark>САN</mark> 1. сі	Communication Circuit Inspection	S00CKB
1. Tu	urn ignition switch OFF.	
2. Di	isconnect the battery cable from the negative terminal.	
3. CI cc	heck following terminals and connectors for damage, bend and loose connection (control module s ontrol unit side, unit side, meter side and harness side).	side,
E	CM	
T	CM	
B	CM	
Di	isplay unit	
U	nified meter and A/C amp.	
- A\	WD control unit	
A	BS actuator and electric unit (control unit)	
IP		
Be	etween ECM and IPDM E/R	
Be	etween ECM and TCM	
JK or	<u>NG</u>	
UK NG	>> GO TO Z.	
<b>N</b> O		
2. ci	HECK HARNESS FOR SHORT CIRCUIT	
. Di	isconnect following connectors.	
E	CM connector	
Ha	arness connector M82	
B	CM connector	
Di	isplay unit connector	
Uı	nified meter and A/C amp. connector	
Ha	arness connector M9	
2. CI (L	heck continuity between data link connector M24 terminals 6 .) and 14 (Y).	
	6 (L) - 14 (Y) : Continuity should not exist. Data link connector	
DK or		
OK	>> GO TO 3.	
NG	>> Check the following harnesses. If any harness is dam-	

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9

SKIA6868E

### $\overline{\mathbf{3}}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

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

OK or NG

- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and harness connector M9

#### 4. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect TCM connector.
- Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



TCM connecto

BA

#### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

#### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.





### 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4.
- 2 Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

#### OK or NG

- OK >> GO TO 7.
- NG >> Repair harness between harness connector B2 and harness connector B4.



### 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground
- : Continuity should not exist.
- 10 (Y) Ground
- : Continuity should not exist.

#### OK or NG

- OK >> GO TO 8.
- NG >> Repair harness between harness connector B2 and harness connector B4.

### 8. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- 4WD control unit connector
- ABS actuator and electric unit (control unit) connector
- IPDM E/R connector
- Check continuity between IPDM E/R harness connector E9 ter-2. minals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### : Continuity should not exist.

#### OK or NG

- OK >> GO TO 9.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105



# Harness connector Н Ω PKIB5321E

LAN

F

А

### 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

- 48 (L) Ground 49 (Y) - Ground
- : Continuity should not exist.
- : Continuity should not exist.

OK or NG

- OK >> GO TO 10.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

### 10. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

- Remove ECM and IPDM E/R from vehicle. 1.
- 2 Check resistance between ECM terminals 94 and 86.

94 - 86 : Approx. 108 – 132  $\Omega$ 

Check resistance between IPDM E/R terminals 48 and 49. 3.

> 48 - 49 : Approx. 108 – 132  $\Omega$

#### OK or NG

OK >> GO TO 11. >> Replace ECM and/or IPDM E/R. NG



### 11. снеск сумртом

- Fill in described symptoms on the column "Symptom" in the check sheet. 1.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

#### OK or NG

OK >> GO TO 12.

NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"

LAN-256





12	2. CHECK UNIT REPRODUCIBILITY	А
Pe	form the following procedure for each unit, and then perform reproducibility test.	
1.	Turn ignition switch OFF.	
2.	Disconnect the battery cable from the negative terminal.	В
3.	Disconnect the unit connector.	
4.	Connect the battery cable to the negative terminal.	C
5.	Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)	C
6.	Make sure that the same symptom is reproduce.	D
-	TCM	D
-	BCM	
-	Display unit	Е
-	Unified meter and A/C amp.	
-	AWD control unit	
-	ABS actuator and electric unit (control unit)	F
-	ECM	
-	IPDM E/R	
Ch	eck results	G
R N	eproduced>>Install removed unit, and then check the other unit. ot reproduced>>Replace removed unit.	Ц
IP	DM E/R Ignition Relay Circuit Inspection	11
Ch	eck the following. If no malfunction is found, replace the IPDM E/R.	
•	IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspection"	
•	Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON"</u> AND/OR "START""	
		J

LAN

M

### [CAN]





Wiring Diagram - CAN -



LAN-CAN-29



REFER TO THE FOLLOWING.

TKWB0856E

[CAN]



TKWB0857E

[CAN]



TKWB0858E

### [CAN]

А

# LAN-CAN-32

DATA LINE



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

TKWB0859E







TKWB0860E

### Check Sheet

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet tabl	е													
				•	C	CAN DIAG	G SUPPC	DRT MNT	R					
SELECT SYSTEM	screen	Initial	Transmit			1	Rec	eive diagi	nosis				SELF-DIAC	RESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	_	_	_	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	_	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	_	_	UNKWN	_	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	UNKWN	-	UNKWN	_	_	_	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	-	-	-	UNKWN	_	_	_	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	-	-	-	_	_	_	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	-	_	_	_	_	CAN COMM CIRCUIT (U1000)	_
Symptoms :														]
							٦							
				Attach		,f				<b>Atto</b>	ah aanu	of		
			5	SELECT	SYST	, EM				SELEC	T SYS	TEM		
				/0	0.01					OLLL		. =		
							_							
Display	unit Tra	nslatior	Sheet	: Rewrit	e the fo	llowing	names	and p	ut a che	eck mar	k on the	e above	check sheet table	
Confirmation/Adj	ustment	Display	/	Check	sheet ta	able Dis	splay	Cor	firmatio	on/Adju	stment	Display	Check shee	t table Display
CAN COMM				In	itial dia	gnosis		CAI	۷5				METE	R/M&A
CAN 1				Trar	nsmit d	iagnosis	s	CAI	16					
CAN 2					BCI	<u>v</u>		CAN	17				IPD	M E/R
CAN 3					ECN	VI			18 10					
CAN 4			:		_				9					
							Attac	h copy	of					
						CAN	disp AC M	olay uni	t book ob	oot				
						CANI			ieck sh	eel				
L														DKIR4720E

AKS00ASI

А

В

С

D

Е

F

G

Н

J

AN

L

Μ

Attach copy of Attach copy of Attach copy of ENGINÉ INTELLIGENT KEY TRANSMISSION SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of Attach copy of Attach copy of AUTO DRIVE POS. METER A/C AMP всм SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of Attach copy of Attach copy of ALL MODE AWD/4WD IPDM E/R ABS SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS PKIB4721E



٦

#### CHECK SHEET RESULTS (EXAMPLE)

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

#### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-284</u>, "Inspection Between TCM and Data <u>Link Connector Circuit</u>".

		-												
					C	AN DIAG	SUPPC	RT MNT	R					
	screen						Rec	eive diagr	nosis					
	3018611	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	TILOULIO
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	UNKWN	-		CAN COMM CIRCUIT (U1000)	CAN COMN CIRCUIT (UN01)
INTELLIGENT KEY	No individual	_	UNKWN	UNKWN		1	UNKWN	_	UNKWN	I	I	-	CAN COMMCIRCUIT (U1000)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	-	1	—	_	UNKWN	I	UNKWN		CAN COMMCIRCUIT (U1000)	_
всм	No ind ation	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN		-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN		—	-	UNKIN	-	UNKWN	-	-	UNKWN	-	-
METER A/C AMP	No indication	-	UNKWN	UNK	_	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	-	CAN COMMCIRCUIT (U N00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	—	UNKWN	UNKWN	—	UNKWN	-	_	-	CAN COMMCIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN		—	-	-	-	UNKWN	-	-	Ι	CAN COMMCIRCUIT (U 1000)	—
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	_	_	CAN COMM CIRCUIT (U 1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	UNKWN	_	_	_	_	_	CAN COMMCIRCUIT (U100)	_



### [CAN]

#### Case 2

Check harness between data link connector and driver seat control unit. Refer to <u>LAN-284</u>, "Inspection <u>A</u> <u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

SELECT SYSTEM screen    Initial Iransmit diagnosis    Transmit diagnosis    Transmit diagnosis    Transmit diagnosis    SELF-DIAG RESULTS      ENGINE    -    NG    UNKWN    -    -    UNKWN    UNKWN    -    UNKWN    -    UNKWN    -    UNKWN    -    -    -    UNKWN    -    -    -    UNKWN    -    -    -    UNKWN    -    UNKWN    UNKWN    -						C	AN DIAG	SUPPC	ORT MNT	R					
Display unit  -  NG  UNKWN  UNKWN  -  -  UNKWN  -  UNKWN  -  -  -  -  UNKWN  -  UNKWN  -  -  -  UNKWN  -  UNKWN	SELECT SYSTEM	screen		÷ .				Rec	eive diag	nosis				SELE-DIAG	
ENGINE  -  NG  UNKWN  -  -  UNKWN  UNKWN  -  -  -  UNKWN  -  -  -  UNKWN  -		oreen	initiai diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIAC	
No  Intelligent Key  No  Indication  Indit Mathieve  Indication	ENGINE	_	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	UNK	_		CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1 1)
No  No  Indication  NG  UNKWN  UNKWN  Image: Constraint of the state of	NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	_	-	I	CAN COMM CIRCUIT (U1000)	_
NO indication  NG  UNKWN  UNKWN  UNKWN  -  -  UNKWN  -  -  UNKWN  CAN COMM CIRCUIT (U1000)  -    Display unit  -  NG  UNKWN  UNKWN  -  -  UNKWN  -  -  UNKWN  -  -  -  UNKWN  - <td>TRANSMISSION</td> <td>No indication</td> <td>NG</td> <td>UNKWN</td> <td>UNKWN</td> <td>-</td> <td>-</td> <td>-</td> <td>-  </td> <td>UNKWN</td> <td>-</td> <td></td> <td>-</td> <td>CAN COMM CIRCUIT (U 1000)</td> <td>-</td>	TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-		-	CAN COMM CIRCUIT (U 1000)	-
Display unit  -  NG  UNKWN  UNKWN  -  UNKWN  -  UNKWN  -  - <td>BCM</td> <td>No indication</td> <td>NG</td> <td>UNKWN</td> <td>UNKWN</td> <td>UNKWN</td> <td>_</td> <td>-</td> <td>-</td> <td>UNKWN</td> <td>-</td> <td>-</td> <td>UNKWN</td> <td>CAN COMM CIRCUIT (U1000)</td> <td>-</td>	BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
METER A/C AMP  No indication  -  UNKWN  UNKWN  UNKWN  -  UNKWN  UNKWN  -  CAN COMM CIRCUIT  -    AUTO DRIVE POS.  NG  UNKWN  -  -  UNKWN  -  UNKWN  -  -  CAN COMM CIRCUIT  -    ALL MODE AWD/4WD  -  NG  UNKWN  -  -  UNKWN  -  -  -  CAN COMM CIRCUIT  -    ABS  -  NG  UNKWN  -  -  -  -  -  CAN COMM CIRCUIT  -	Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-			-	-
AUTO DRIVE POS.    NG    UNKWN    -    -    UNKWN    -    UNKWN    -    -    -    CAN COMM CIRCUIT    -      ALL MODE AWD/4WD    -    NG    UNKWN    -    -    -    -    -    CAN COMM CIRCUIT    -    -    -    -    -    CAN COMM CIRCUIT    -    -    -    -    -    CAN COMM CIRCUIT    -    <	METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN		-	CAN COMM CIRCUIT (U 000)	_
ALL MODE AWD/4WD  -  NG  UNKWN  -  -  -  -  -  -  CAN COMMY CIRCUIT	AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U 000)	-
ABS - NG UNKWN UNKWN CAN COMY CIRCUIT -	ALL MODE AWD/4WD	_	NG	UNKWN	-	-	_	_	-	-	-	-	-	CAN COMM CIRCUIT (U 000)	_
	ABS	_	NG	UNKWN	UNK	_	_	_	-	-	-	-	-	CAN COMM CIRCUIT (U 000)	-
IPDM E/R Not - UNKWN UNKWN UNKWN CAN COMM CIRCUIT -	IPDM E/R	No indivation	-	UNKWN	UNKWN	_	-	UNKWN	_	-	-	_	_	CAN COMM CIRCUIT	_
															PKIB4831E



#### Case 3

Check harness between driver seat control unit and AWD control unit. Refer to <u>LAN-285</u>, "Inspection Between <u>Driver Seat Control Unit and AWD Control Unit Circuit</u>".

					С	AN DIAC	SUPPO	RT MNT	R					
	ecreen						Rece	eive diag	nosis					
SELECT STOTEM	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	THEODERO
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	UNKWN	_		CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN	-	Ι	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-	-	—	UNKWN	-		Ι	CAN COMM CIRCUIT (U 000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	—	-	UNKWN	-	-		CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	-	UNKWN	-	Ι		-	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	_	UNKWN	UNK	-	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	-	-	_	-	_	_	-	-	-	CAN COMM CIRCUIT (U 000)	_
ABS	—	NG	UNKWN	UNKWN	_	_	—	_	_	-	-	-	CAN COMM CIRCUIT (U 000)	-
IPDM E/R	No inditation	_	UNKWN	UNKWN	-	_	UNKWN	-	_	_	—	_	CAN COMM CIRCUIT	_

PKIB4832E



### [CAN]

А

#### Case 4

Check harness between AWD control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-286</u>, <u>"Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

					C	AN DIAG	SUPPC	DRT MNT	R					
	soroon		_				Rec	eive diag	nosis					
SELECT STOTEM	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	RESOLIS
INGINE	-	NG	UNKWN	_	_	UNKWN	UNKWN	—	UNKWN	UNKWN	-	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMM/CIRCUIT (U1001)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
RANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKVN	-	CAN COMMCIRCUIT (UN00)	_
3CM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	_	UNKWN	_	_	UNKIN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN		-	UNKWN	_	UNKWN	-	-	UNKVN	-	_
IETER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKIN	-	CAN COMM CIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	UNKWN	—	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	Ι	_	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	-	_	_	-	-	_	-	-	CAN COMMCIRCUIT (UN00)	_
PDM E/R	Ind Nation	_	UNKWN	UNKWN	-	-	UNKWN	-	_	_	_	_	CAN COMM CIRCUIT	_



#### Case 5

Г

Check ECM circuit. Refer to LAN-286, "ECM Circuit Inspection" .

					C	CAN DIAC	G SUPPC	RT MNT	R					
SELECT SVSTEM	screen		-				Rec	eive diag	nosis					
SELECT STOLEM	Screen	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	_	UNKIN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMMCIRCUI (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKINN	-	—	UNKWN	—	UNKWN	-	_	1	CAN COMM CIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN		-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (UN00)	_
BCM	No indication	NG	UNKWN		UNKWN	-	-	-	UNKWN	-	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNK	-	-	UNKWN	-	UNKWN	-	_	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN		_	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	—	UNKWN	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKIN	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	_	-	-	-	-	-	_	-	CAN COMM CIRCUIT (UN00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	-	-	_	_	CAN COMM CIRCUIT	_



#### Case 6

Г

Check Intelligent Key unit circuit. Refer to LAN-287, "Intelligent Key Unit Circuit Inspection" .

					C	CAN DIAC	SUPPO	DRT MNT	R					
	screen						Rece	eive diagi	nosis					
SELECT STOTEM	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		THEODERO
ENGINE	-	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No inditation	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMMCIRCUIT (U100)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	_	-	UNKWN	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKUN	_	_	-	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	-	UNKWN	-	-	UNKWN	_	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	—	UNKWN	UNKWN	-	UNKWN	-	-	—	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	-	_	_	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Μ

L

А

В

С

D

Е

F

G

Н

J

PKIB4836E

#### Case 7

Check TCM circuit. Refer to LAN-287, "TCM Circuit Inspection" .

								BT MNIT	8					
							-							
SELECT SYSTEM	screen	Initial	Transmit			1	Rec	eive diag	nosis				SELF-DIAG	RESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	_	-	UNKIN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U 1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		—	UNKWN	_	UNKWN	-	I	1	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No inditation	NG	UNKWN	UNKWN	-	-	-	—	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	UNKWN	-	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNKWN	-	-	Ι	CAN COMMCIRCUIT (UN00)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	Ι	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	_	_	-	_	_	-	—	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



### [CAN]

А

В

С

D

Е

F

G

Н

J

#### Case 8

Г

Check BCM circuit. Refer to LAN-288, "BCM Circuit Inspection" .

					C	CAN DIAC	G SUPPC	ORT MNT	R					
	screen						Rec	eive diagı	nosis					RESULTS
OLLEON ON OTHER	3016611	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		INEGOEIG
ENGINE	-	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMMCIRCUIT (U100)	—
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ВСМ	No individual	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	-	-	UNK	-	UNKWN	-		UNKWN	—	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKIN	UNKWN	—	UNKWN	UNKWN	-	CAN COMMCIRCUIT (U N00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNK	-	UNKWN	-	-	-	CAN COMMCIRCUIT (U100)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	_	-	-	_	—	_	_	CAN COMM CIRCUIT (U1000)	-
PDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	-	_	-	_	_	CAN COMMCIRCUIT (U100)	_



Μ

L

#### Case 9

Г

Check display unit circuit. Refer to LAN-288, "Display Unit Circuit Inspection" .

					C	CAN DIAC	3 SUPPC	RT MNT	R					
	soroon						Rec	eive diag	nosis					
SELECTOTOTEM	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	RESOLIS
ENGINE	-	NG	UNKWN	-	—	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		—	UNKWN	-	UNKWN	_	-	1	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	—	—	—	UNKWN	_	UNKWN	I	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	_	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	_	UNKIN	-	-	UNKVN	-	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNKWN	UNKWN	UNK	_	UNKWN	UNKWN	I	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-		UNKWN	UNKWN	—	UNKWN	—	-	1	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	-	—	-	—	UNKWN	—	-	I	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	-	_	-	_	-	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	UNKWN	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	_

PKIB4838E



#### Case 10

Check data link connector circuit. Refer to LAN-289, "Data Link Connector Circuit Inspection" .

					C	AN DIAC	G SUPPC	RT MNT	R					
SELECT SYSTEM	screen	1-24-1	T				Rec	eive diagi	nosis				SELE-DIAG	BESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DINC	
ENGINE	_	NG	UNKWN	-	—	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No indivision	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indivision	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indivision	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	UNKWN	_	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	-	-	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	-	UNKWN	_	-	-	_	_	CAN COMM CIRCUIT (U1000)	_



Μ

L

А

В

С

D

Е

F

G

J

PKIB4840E

#### Case 11

Check unified meter and A/C amp. circuit. Refer to LAN-289, "Unified Meter and A/C Amp. Circuit Inspection" .

					C		G SUPPC	RT MNT	R					
	soroop						Rec	eive diag	nosis					
SELECTOTOTEM	Screen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	RESOLIS
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKIN	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNK	-	-		CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	_	_	UNKIN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	_	UNKIN	—	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	—	UNKIN		-	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN		CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKIN	-	_	-	CAN COMMCIRCUIT (UN00)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	-	_	UNKIN	-	—	-	CAN COMMCIRCUIT	_
ABS	_	NG	UNKWN	UNKWN	_	_	-	_	-	-	—	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	UNKWN	_	_	-	_		CAN COMM CIRCUIT (U1000)	_



### [CAN]



PKIB4842E

#### Case 13

Г

Check AWD control unit circuit. Refer to LAN-290, "AWD Control Unit Circuit Inspection" .

					C	CAN DIAC	SUPPC	RT MNT	R						
	soroon		_				Rec	eive diagi	nosis						
SELECT STOTEM	Scieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	RESOLIS	
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	UNK	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U 101)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		—	UNKWN	—	UNKWN	_	_	1	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	I	—	—	—	UNKWN	—	UNKWN	I	CAN COMM CIRCUIT (U1000)	_	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	—	_	UNKWN	—	_	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	—	UNKWN	-	_	UNKWN	-	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 1000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	—	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_	
ALL MODE AWD/4WD	-	NG	UNKWN	Ι	-	-	-	-	_	-	-	-	CAN COMMCIRCUIT (U 100)	_	
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	_	_	I	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	UNKWN	_	_	_	_	1	CAN COMM CIRCUIT (U1000)	_	

///////: Malfunctioning part Unified BCM meter and A/C amp. CAN H 'CAN L ABS actuator and Driver seat AWD Intelligent Data link ECM тсм IPDM E/R Display unit control unit control unit control unit Key unit connector PKIB4639E

#### Case 14

Case 21: Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-291</u>, "<u>ABS Actuator and</u> <u>A</u> <u>Electric Unit (Control Unit) Circuit Inspection</u>".

					C	AN DIAC	G SUPPC	ORT MNT	R					
	screen		-				Rec	eive diag	nosis					
SELECT STOTEM	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		TEODEIO
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
FRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	Ι	CAN COMMCIRCUIT (UN00)	_
зсм	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	-	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN		-	UNKWN	-	UNKWN	-	-	UNKWN	-	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	UNIWN	_	CAN COMM CIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	-	-	_	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	Ι	-	-	-	UNKWN	-	-	Ι	CAN COMM CIRCUIT (U1000)	_
ABS	-	<b>V</b> a	UNKWN	UNKWN	-	_	-	-	-	-	-	_	CAN COMM CIRCUIT (U 100)	_
PDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	-	_	_	_	_	CAN COMM CIRCUIT	_



### Case 15

Г

#### Check IPDM E/R circuit. Refer to LAN-291, "IPDM E/R Circuit Inspection" .

					С	SAN DIAC	3 SUPPO	RT MNT	R							
	soroon	· · · · ·		í			Recr	eive diag	nosis	-				SELF-DIAG BESULTS		
SELECT STSTEM	screen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAG	I RESULIS		
ENGINE	_	NG	UNKWN			UNKWN	UNKWN		UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)		
INTELLIGENT KEY	No indication		UNKWN	UNKWN			UNKWN		UNKWN	_	_	_	CAN COMM CIRCUIT (U1000)	_		
TRANSMISSION	No indication	NG	UNKWN	UNKWN				_	UNKWN	_	UNKWN	_	CAN COMM CIRCUIT (U1000)	_		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN			_	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_		
Display unit	_	NG	UNKWN	UNKWN			UNKWN		UNKWN	-	_	UNKWN	_	_		
METER A/C AMP	No indication		UNKWN	UNKWN		UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN			UNKWN	UNKWN		UNKWN	_	_	_	CAN COMM CIRCUIT (U1000)	_		
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	[ _ ]			-	UNKWN	-	_	-	CAN COMM CIRCUIT (U1000)	_		
ABS	_	NG	UNKWN	UNKWN	<u> </u>				_	_	_	_	CAN COMM CIRCUIT (U1000)	_		
IPDM E/R	No indication	<u> </u>	UNKWN	UNKWN	'		UNKWN	-	_	_	_	_	CAN COMMCIRCUIT (UN00)	_		

PKIB4844E



А

Н

L

J

LAN

L

Μ

٦

#### Case 16

Check CAN communication circuit. Refer to LAN-292, "CAN Communication Circuit Inspection" .

					С	AN DIAC	SUPPC	ORT MNT	R					
SELECT SYSTEM	screen	La Mart	T				Rec	eive diag	nosis				SELE-DIAC	BESUITS
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIV	
ENGINE	_	NG	UNKWN	_	-	UNKWN	UNIWN	_	UNIWN	UNIWN	_	UNKWN	CAN COMM/CIRCUIT (UN00)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (UN00)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	_	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No inditation	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	_	-	-	CAN COMMCIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	_	-	_	_	_	_	_	-	-	CAN COMMCIRCUIT (UN00)	—
ABS	-	V	UNKWN	UNIN	_	_	_	-	_	_	-	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	-	_	CAN COMMCIRCUIT	_

#### Case 17

Г

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to LAN-297, "IPDM E/R Ignition Relay Circuit Inspection"

					C	CAN DIAC	SUPPO	RT MNT	R						
SELECT SYSTEM	screen	امتلاما	Transmit				Rece	eive diagr	nosis	-			SELF-DIAG RESULTS		
	00.0011	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC		
ENGINE	-	NG	UNKWN	-	_	UNKIN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (UN00)	CAN COMMCIRCUIT (UN01)	
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	—	—	_	UNKWN	-	UNKWN	1	CAN COMM CIRCUIT (U1000)	_	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	—	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	_	UNKWN	-	_	UNKWN	-	_	
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	_	-	UNKWN	UNKWN	_	UNKWN	-	_	1	CAN COMMCIRCUIT (UN00)	_	
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	—	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_	
ABS	_	NG	UNKWN	UNKWN	_	-	_	-	-	-	_	-	CAN COMM CIRCUIT (U1000)	-	
PDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	-	_	_	CAN COMM CIRCUIT (U1000)	_	

#### Case 18

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to LAN-297, "IPDM E/R Ignition Relay Circuit Inspection".

					C	CAN DIAC	SUPPC	RT MNT	7					
SELECT SYSTEM	screen		- ··				Rec	eive diagr	nosis				SELE-DIAG	BESUITS
	obreen	initiai diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	-	—	UNKWN	-	UNKWN	_	-	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	-	-	—	—	_	_	_	UNKWN		CAN COMM CIRCUIT (U 100)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	_	_	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	—	—	UNKWN	_	UNKWN	-	-	UNKWN	—	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN		_	UNKWN	UNKWN	-	UNKWN	—	Ι	Ι	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	—	NG	UNKWN		_	—	—		-	-	Ι	Ι	CAN COMM CIRCUIT (U 100)	_
ABS	_	NG	UNKWN	-	_	_	_	-	_	-	_	_	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_

#### Inspection Between TCM and Data Link Connector Circuit 1. CHECK HARNESS FOR OPEN CIRCUIT

AKSOOCJ

Turn ignition switch OFF. 1.

8 (L) - 6 (L)

9 (Y) - 14 (Y)

- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- 4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - Data link connector Harness connector 14 98 Ω PKIB5306E

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

#### Inspection Between Data Link Connector and Driver Seat Control Unit Circuit AKS00CJJ

: Continuity should exist.

: Continuity should exist.

**1. CHECK CONNECTOR** 

- Turn ignition switch OFF. 1.
- 2. Disconnect the battery cable from the negative terminal.
- Check following terminals and connectors for damage, bend and loose connection (connector side and 3. harness side).
- Harness connector M9
- Harness connector B2
- OK or NG
- OK >> GO TO 2.
- NG >> Repair terminal or connector.



#### LAN-284

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector M9.
- 2 Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and harness connector M9 terminals 1 (L), 13 (Y).
  - 6 (L) 1 (L) 14 (Y) - 13 (Y)
- : Continuity should exist.
- : Continuity should exist.

#### OK or NG

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



### 3. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- 2. Check continuity between harness connector B2 terminals 1 (L). 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L)
  - 13 (Y) 10 (Y)
- : Continuity should exist.

B.

Harness connector

: Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

### PKIR5308 Inspection Between Driver Seat Control Unit and AWD Control Unit Circuit AKSOOCJK 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B4
- Harness connector E105

#### OK or NG

OK or NG OK

NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

#### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect harness connector B4.
- Check continuity between harness connector B2 terminals 1 (L), 2. 13 (Y) and harness connector B4 terminals 4 (L), 10 (Y).
  - 1 (L) 4 (L)

: Continuity should exist.

13 (Y) - 10 (Y)

>> GO TO 3.

>> Repair harness.



: Continuity should exist.



А

F

Н

Harness connector

Ω



- L

Μ

BAT

BAT

AWD control unit connector

8

Harness connector

### $\overline{3}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect AWD control unit connector.
- 2. Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and AWD control unit harness connector E111 terminals 8 (L), 16 (Y).
  - 4 (L) 8 (L)
  - 10 (Y) 16 (Y)

: Continuity should exist.

: Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7. "TROUBLE DIAGNOSES WORK FLOW" .
- NG >> Repair harness.

### Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit

- 1. CHECK CONNECTOR
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect following connectors.
- ECM
- AWD control unit
- ABS actuator and electric unit (control unit)
- Check continuity between AWD control unit harness connector 4. E111 terminals 8 (L), 16 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 8 (L) 11 (L)
  - 16 (Y) 15 (Y)

: Continuity should exist. : Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .

NG >> Repair harness.

### **ECM Circuit Inspection**

#### **1. CHECK CONNECTOR**

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

#### OK or NG

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



ABS actuator and electric unit (control unit) connector

11,15

C/UNIT

Ω

O CONNECTOR



AWD control unit connector

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



[CAN]

AKS00CJN

F

Н

LAN

Μ

А

**Intelligent Key Unit Circuit Inspection** 

#### **1. CHECK CONNECTOR**

#### 1. Turn ignition switch OFF.

- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of Intelligent Key unit for damage, bend and loose connection (control  $_{\rm G}$  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 Intelligent Key unit connector.
- 2. Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).

#### 2 (L) - 3 (Y)

#### : Approx. 54 - 66Ω

#### OK or NG

OK >> Replace Intelligent Key unit.

NG >> Repair harness between Intelligent Key unit and BCM.



#### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

#### OK or NG

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



### LAN-287

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect TCM connector.
- 2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace TCM.
- NG >> Repair harness between TCM and BCM.



### **BCM Circuit Inspection**

#### **1. CHECK CONNECTOR**

1. Turn ignition switch OFF.

- 2. Disconnect the battery cable from the negative 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.
- Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

#### 39 (L) - 40 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16</u>, "Removal and Installation of <u>BCM</u>".
- NG >> Repair harness between BCM and harness connector M82.



AKS00CJQ

### **Display Unit Circuit Inspection**

#### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check terminals and connector of display unit for damage, bend and loose connection (unit side and harness side).

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

AKS00CJP
- 1. Disconnect display unit connector.
- 2. Check resistance between display unit harness connector M39 terminals 14 (L) and 16 (Y).

#### 14 (L) - 16 (Y)

: Approx. 54 - 66Ω

#### OK or NG

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



## **Data Link Connector Circuit Inspection**

### 1. CHECK CONNECTOR

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

#### OK or NG

OK >> GO TO 2. NG >> Repair ter

>> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

: Approx. 54 - 66Ω

#### <u>OK or NG</u>

OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u> <u>NOSES WORK FLOW"</u>.

NG >> Repair harness between data link connector and unified meter and A/C amp.



## Unified Meter and A/C Amp. Circuit Inspection

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

AKS00CJR

AKS00CJS

Μ

F

Н

А

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect unified meter and A/C amp. connector.
- 2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

#### 1 (L) - 11 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS00CJT

[CAN]

# Driver Seat Control Unit Circuit Inspection

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 B301
- Harness connector B9

#### 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.
- Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)** : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



AKS00CJU

#### AWD Control Unit Circuit Inspection 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of AWD 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.

### LAN-290

- 1. Disconnect AWD control unit connector.
- 2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

#### 8 (L) - 16 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace AWD control unit.
- NG >> Repair harness between AWD control unit and IPDM E/ R.



## ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose G 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 E24 terminals 11 (L) and 15 (Y).

#### : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.

## **IPDM E/R Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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.



LAN-291



ABS actuator and electric unit

Ω

O CONNECTOR

15

PKIB5316E

AKS00CJW

(control unit) connector

C/UNIT

11

LAN

Μ



AKS00C.IV

F

Н

А

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect IPDM E/R connector.
- Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



## **CAN Communication Circuit Inspection**

### 1. CHECK CONNECTOR

AKS00CJX

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
- ECM
- Intelligent Key unit
- TCM
- BCM
- Display unit
- Unified meter and A/C amp.
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

#### OK or NG

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

#### [CAN] 2. CHECK HARNESS FOR SHORT CIRCUIT А 1. Disconnect following connectors. ECM connector В Intelligent Key unit connector Harness connector M82 BCM connector Display unit connector Unified meter and A/C amp. connector Harness connector M9 2. Check continuity between data link connector M24 terminals 6 (L) and 14 (Y). F 6 (L) - 14 (Y) : Continuity should not exist. Data link connector OK or NG OK >> GO TO 3. E NG >> Check the following harnesses. If any harness is damaged, repair the harness. Ω Harness between data link connector and ECM • Harness between data link connector and Intelligent SKIA6868E Key unit Harness between data link connector and harness connector M82 Н Harness between data link connector and BCM Harness between data link connector and display unit Harness between data link connector and unified meter and A/C amp. Harness between data link connector and harness connector M9 3. CHECK HARNESS FOR SHORT CIRCUIT Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground. BAT LAN : Continuity should not exist. 6 (L) - Ground Data link connector 14 (Y) - Ground : Continuity should not exist. 14 OK or NG OK >> GO TO 4. NG >> Check the following harnesses. If any harness is damaged, repair the harness. Μ Harness between data link connector and ECM PKIB5318E Harness between data link connector and Intelligent Key unit Harness between data link connector and harness connector M82

- Harness between data link connector and BCM
- Harness between data link connector and display unit
- Harness between data link connector and unified meter and A/C amp.
- Harness between data link connector and harness connector M9

## 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect TCM connector. 1.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



TCM connector

## 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

#### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.

### 6. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect harness connector B4 and harness connector B9. 1.
- Check continuity between harness connector B4 terminals 4 (L) 2. and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

OK or NG

OK >> GO TO 7.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9



PKIB5319E

BAT

Harness connector

### 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground 10 (Y) - Ground
- : Continuity should not exist.

: Continuity should not exist.

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

### 8. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect driver seat control unit connector. 1.
- 2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

### OK or NG

OK >> GO TO 9. NG

>> Repair harness between driver seat control unit and harness connector B301.



## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

- 3 (L/Y) Ground
- : Continuity should not exist. : Continuity should not exist.
- 19 (BR/W) Ground

#### OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.





[CAN]

А

F

F

Н

J

Μ

PKIB5322E

PKIB5317F

## 10. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- 4WD control unit connector
- ABS actuator and electric unit (control unit) connector
- IPDM E/R connector
- 2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### : Continuity should not exist.

OK or NG

#### OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

> 48 (L) - Ground 49 (Y) - Ground

: Continuity should not exist. : Continuity should not exist.

#### OK or NG

OK >> GO TO 12.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

## 12. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

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

94 - 86

: Approx. 108 – 132 Ω

3. Check resistance between IPDM E/R terminals 48 and 49.

#### 48 - 49

: Approx. 108 – 132 Ω

#### OK or NG

- OK >> GO TO 13.
- NG >> Replace ECM and/or IPDM E/R.





IPDM E/R connector



13	3. СНЕСК ЗҮМРТОМ	А
1.	Fill in described symptoms on the column "Symptom" in the check sheet.	1
2.	Connect all the connectors, and then make sure that the symptom is reproduced.	_
<u>Ok</u>	<u>Cor NG</u>	В
0	K >> GO TO 14.	
Ν	G >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"	С
14	1. CHECK UNIT REPRODUCIBILITY	
Pe	rform the following procedure for each unit, and then perform reproducibility test.	D
1.	Turn ignition switch OFF.	
2.	Disconnect the battery cable from the negative terminal.	F
3.	Disconnect the unit connector.	
4.	Connect the battery cable to the negative terminal.	
5.	Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)	F
6.	Make sure that the same symptom is reproduce.	
-	Intelligent Key unit	G
-	TCM	
-	BCM	
-	Display unit	Н
-	Unified meter and A/C amp.	
-	Driver seat control unit	I
-	AWD control unit	I
-	ABS actuator and electric unit (control unit)	
-	ECM	J
-	IPDM E/R	
Ch	eck results	
R N	eproduced>>Install removed unit, and then check the other unit. ot reproduced>>Replace removed unit.	LAN
IP	DM E/R Ignition Relay Circuit Inspection	I
Ch	eck the following. If no malfunction is found, replace the IPDM E/R.	L
•	IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspection"	
•	Ignition power supply circuit. Refer to PG-10. "IGNITION POWER SUPPLY - IGNITION SW. IN "ON"	М

<u>AND/OR "START""</u>.

## [CAN]





Revision: 2005 August

Wiring Diagram - CAN -



LAN-CAN-34



REFER TO THE FOLLOWING.

TKWB0862E

[CAN]



TRVD000

[CAN]



TKWB0864E

[CAN]

А









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

<€∎∟⊐

TKWB0865E

Μ







TKWB0866E

## Check Sheet

### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

SELECT SYSTEM KONNER       Record algorithm to the second of the	Check sheet tabl	е														
Becker diagrams     Becker diagrams <td></td> <td></td> <td></td> <td></td> <td></td> <td>C</td> <td>CAN DIAC</td> <td>G SUPPC</td> <td>RT MNT</td> <td>R</td> <td></td> <td></td> <td></td> <td></td> <td></td>						C	CAN DIAC	G SUPPC	RT MNT	R						
Hardware     Easy like     Tool     Seed Seed Seed Market M	SELECT SYSTEM	screen	Initial	Transmit				Rec	eive diag	nosis				SELF-DIAG	RESULTS	
Existate     -     -     -     -     -     -     Unkown     -     -     -     Unkown     -     No     -     No     -     No     -     -     Unkown     -     -     Unkown <th< td=""><td></td><td></td><td>diagnosis</td><td>diagnosis</td><td>ECM</td><td>I-KEY</td><td>тсм</td><td>BCM /SEC</td><td>DISPLAY</td><td>METER /M&amp;A</td><td>AWD/4WD /e4WD</td><td>VDC/TCS /ABS</td><td>IPDM E/R</td><td></td><td></td></th<>			diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R			
NTELLGENT KEY   No	ENGINE	_	NG	UNKWN		_	UNKWN	UNKWN		UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT	CAN COMM CIRCUIT	
TRANEMISSION     No.     UNKNN UNKNN     -     -     -     -     -     UNKNN     -     -     -     -     UNKNN     -     -     -     -     UNKNN     -     -     -     -     -     UNKNN     -	INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	-	_	UNKWN	-	UNKWN	_	_	-	CAN COMM CIRCUIT (U1000)	_	
BCM   No   UNKOW UNKOW UNKOW   -   -   -   -   -   -   -   UNKOW   -   -   -   -   -   -   UNKOW   -   -   -   -   -   -   UNKOW   -   -   -   -   -   UNKOW   -   -   -   -   UNKOW   -   -   -   -   UNKOW   -   -   -   -   -   UNKOW   -   -   -   -   -   -   CAN COMM CIRCUT   -   -   -   -   -   -   -   -   CAN COMM CIRCUT   -	TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	-	—	UNKWN	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	-	
Depay control unit - NG UKKYW UKKYW - UKKYW UKKYW - UKKYW UKKYW - UKKYW - UKKYW VKW - OWKYWW UKKYW - OWKYWWW - OWKYWW UKKYW - OWKYWWW - OWKYWWWW - OWKYWWWW - OWKYWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	_	UNKWN	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	-	
METER AC AMP   No   UNKOW UNKOW   UNKOW UNKOW   UNKOW UNKOW   CAN COME CRUIT	Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	_	-	UNKWN	_	-	
AUTO DRIVE PGS.   NG   UNKVM   -   -   -   UNKVM   - </td <td>METER A/C AMP</td> <td>No indication</td> <td>_</td> <td>UNKWN</td> <td>UNKWN</td> <td>-</td> <td>UNKWN</td> <td>UNKWN</td> <td>UNKWN</td> <td>_</td> <td>UNKWN</td> <td>UNKWN</td> <td>_</td> <td>CAN COMM CIRCUIT (U1000)</td> <td>_</td>	METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_	
ALL MODE AND WIND   -   NO   UNKYNN   - <td>AUTO DRIVE POS.</td> <td colspan="15">No     No     Indication     NG     UNKWN     -     -     UNKWN     -     -     -     CAN COMM CIRCUIT (U1000)     -       MODE AWD/4WD     -     NG     UNKWN     -     -     -     UNKWN     -     -     -     CAN COMM CIRCUIT (U1000)     -       MODE AWD/4WD     -     NG     UNKWN     UNKWN     -     -     -     CAN COMM CIRCUIT (U1000)     -       3     -     NG     UNKWN     UNKWN     -     -     -     -     CAN COMM CIRCUIT (U1000)     -       M E/R     No     -     UNKWN     UNKWN     -     -     -     -     CAN COMM CIRCUIT (U1000)     -</td>	AUTO DRIVE POS.	No     No     Indication     NG     UNKWN     -     -     UNKWN     -     -     -     CAN COMM CIRCUIT (U1000)     -       MODE AWD/4WD     -     NG     UNKWN     -     -     -     UNKWN     -     -     -     CAN COMM CIRCUIT (U1000)     -       MODE AWD/4WD     -     NG     UNKWN     UNKWN     -     -     -     CAN COMM CIRCUIT (U1000)     -       3     -     NG     UNKWN     UNKWN     -     -     -     -     CAN COMM CIRCUIT (U1000)     -       M E/R     No     -     UNKWN     UNKWN     -     -     -     -     CAN COMM CIRCUIT (U1000)     -														
ABS   -   N6   UNKWINULVIKWIN   -	ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	_	-	-	CAN COMM CIRCUIT (U1000)	-	
IPPM E.R   No Indicator   UNKWN   Image: Constraint of the second	ABS	_	NG	UNKWN	UNKWN	-	-	-	-	-	_	_	-	CAN COMM CIRCUIT (U1000)	-	
Symptoms :     Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display     Check sheet table Display     Confirmation/Adjustment Display     Check sheet table Display     Confirmation/Adjustment Display     Check sheet table Display     CAN CIRC 1     Transmit diagnosis     CAN CIRC 6     -     CAN CIRC 3     ECM     CAN CIRC 3     ECM     CAN CIRC 3     ECM     CAN CIRC 6     -     CAN CIRC 3     ECM     CAN CIRC 3     ECM     CAN CIRC 9     -     CAN CIRC 9	IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	UNKWN	_	-	_	_	-	CAN COMM CIRCUIT (U1000)	_	
Symptoms :     Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 6   -     CAN CIRC 7   IPDM E/R     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -     Mattach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 6   -     CAN CIRC 7   IPDM E/R     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 5   -     CAN CIRC 4   -     CAN CIRC 5   -     CAN CIRC 6   -     CAN CIRC 7   IPDM E/R     CAN CIRC 8   -     CAN CIRC 9   -     CAN CIRC 4   -     CAN CIRC 9   -	Symptoms :															
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Contirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis   CAN CIRC 6     CAN CIRC 2   BCM   CAN CIRC 6     CAN CIRC 3   ECM   CAN CIRC 8     CAN CIRC 3   ECM   CAN CIRC 8     CAN CIRC 4   -   CAN CIRC 9     CAN CIRC 4   -   CAN CIRC 9     CAN CIRC 4   -   CAN CIRC 8     CAN CIRC 4   -   CAN CIRC 8																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -     CAN CIRC 4   -     CAN CIRC 9   -     CAN CIRC 4   -     CAN CIRC 9   -																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -     CAN CIRC 4   -     CAN CIRC 8   -     CAN CIRC 9   -																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 3   CAN CIRC 8     CAN CIRC 4   -     CAN CIRC 9   -								٦								
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -     CAN CIRC 4   -     CAN CIRC 6   -     CAN CIRC 7   IPDM E/R     CAN CIRC 8   -     CAN CIRC 9   -																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 4   -     CAN CIRC 9   -																
Attach copy of SELECT SYSTEM   Attach copy of SELECT SYSTEM     Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -																
Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 4   -     CAN CIRC 9   -				5	Attach	1 COPY C	of FM				Attac SELEC	ch copy	of TEM			
Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 5   IPDM E/R     CAN CIRC 4   -     CAN CIRC 9   -						0.01					02220					
Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   ECM     CAN CIRC 4   -     CAN CIRC 9   -																
Display control unit Translation Sheet: Rewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display   Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis   CAN CIRC 5   METER/M&A     CAN CIRC 1   Transmit diagnosis   CAN CIRC 6   -     CAN CIRC 2   BCM   CAN CIRC 7   IPDM E/R     CAN CIRC 3   ECM   CAN CIRC 8   -     CAN CIRC 4   -   CAN CIRC 9   -																
Display control unit Transition Sheet: Rewrite the following items, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis     CAN CIRC 1   Transmit diagnosis     CAN CIRC 2   BCM     CAN CIRC 3   CAN CIRC 6     CAN CIRC 3   ECM     CAN CIRC 4   -																
Display control unit Transmite the following with the followi																
Display control unit transition Sneet: Hewrite the following names, and put a check mark on the above check sheet table.     Confirmation/Adjustment Display   Check sheet table Display   Confirmation/Adjustment Display   Check sheet table Display     CAN COMM   Initial diagnosis   CAN CIRC 5   METER/M&A     CAN CIRC 1   Transmit diagnosis   CAN CIRC 6   -     CAN CIRC 2   BCM   CAN CIRC 7   IPDM E/R     CAN CIRC 3   ECM   CAN CIRC 8   -     CAN CIRC 4   -   CAN CIRC 9   -	Diaut				0.6	. D '							الا جمع ال	a alaassa alaassa i	at table	
CAN COMM Initial diagnosis CAN CIRC 5 METER/M&A   CAN CIRC 1 Transmit diagnosis CAN CIRC 6 -   CAN CIRC 2 BCM CAN CIRC 7 IPDM E/R   CAN CIRC 3 ECM CAN CIRC 8 -   CAN CIRC 4 - CAN CIRC 9 -	Display Confirmation/Adi	ustment	Display	insiatioi	Check	sheet t	able Die	solav	Cor	s, and p	on/Adiu	eck ma stment	Display	Check she	t table Display	
CAN CIRC 1   Transmit diagnosis   CAN CIRC 6   -     CAN CIRC 2   BCM   CAN CIRC 7   IPDM E/R     CAN CIRC 3   ECM   CAN CIRC 8   -     CAN CIRC 4   -   CAN CIRC 9   -	CAN COMM				In	itial dia	gnosis	· ~ · ~ J	CAI	N CIRC	5			METE	ER/M&A	
CAN CIRC 2   BCM   CAN CIRC 7   IPDM E/R     CAN CIRC 3   ECM   CAN CIRC 8   -     CAN CIRC 4   -   CAN CIRC 9   -     Attach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet   CAN DIAG SUPPORT MONITOR check sheet   -	CAN CIRC 1				Tra	nsmit d	iagnosi	s	CAI		6					
CAN CIRC 3   ECM   CAN CIRC 8   -     CAN CIRC 4   -   CAN CIRC 9   -     Attach copy of display control unit   CAN DIAG SUPPORT MONITOR check sheet   -	CAN CIRC 2					BCI	И		CAI	N CIRC	7			IPD	M E/R	
CAN CIRC 4 – CAN CIRC 9 –	CAN CIRC 3					EC	N		CAI	N CIRC	8				-	
Attach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet	CAN CIRC 4					_			CAI	N CIRC	9					
Attach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet																
Attach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet																
Attach copy of display control unit CAN DIAG SUPPORT MONITOR check sheet																
display control unit CAN DIAG SUPPORT MONITOR check sheet								<b>∆</b> ttoo	h conv	of						
CAN DIAG SUPPORT MONITOR check sheet								display	control	unit						
						CAN E	DIAG SI	UPPOR	T MON	IITOR c	heck sł	neet				
															PKIR4723E	

AKS00AGB

А

В

С

D

Е

F

G

Н

J

AN

L

Μ

[CAN]



[CAN]



٦

### CHECK SHEET RESULTS (EXAMPLE)

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

#### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-324</u>, "Inspection Between TCM and Data <u>Link Connector Circuit</u>".

					C	AN DIAG	SUPPC	RT MNT	R					
SELECT SYSTEM	screen	Initial	Transmit				Rec	eive diagr	nosis	-			SELE-DIAG	
		diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	_	-	UNKWN	UNKWN	—	UNIWN	UNKWN	—		CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		1	UNKWN	_	UNKWN	_	_	1	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	1	—	_	UNKWN	—	UNKWN		CAN COMMCIRCUIT (UN00)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	1	—	—	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN		—	-	UNKWN	-	UNKWN	-	_	UNKWN	-	-
METER A/C AMP	No indication	-	UNKWN		_	UNIWN	UNKWN	UNKWN	—	UNKWN	UNKWN	_	CAN COMM/CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	—	UNKWN	UNKWN	—	UNKWN	-	-	_	CAN COMMCIRCUIT (UN00)	_
ALL MODE AWD/4WD	—	NG	UNKWN		_	I	—	—	UNKWN	—	_	Ι	CAN COMMCIRCUIT (U N00)	_
ABS	-	NG	UNKWN	UNKWN	—	-	-	-	-	-	_	Ι	CAN COMMCIRCUIT (UN00)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNIWN	_	_	_	—	-	CAN COMMCIRCUIT (UN00)	_



### [CAN]

#### Case 2

Check harness between data link connector and driver seat control unit. Refer to <u>LAN-324</u>, "Inspection <u>A</u><u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

					C	AN DIAC	SUPPC	ORT MNT	R					
	ecreen		-				Rec	eive diag	nosis					
SELECT STOTEM.	5010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	TILOULIS
INGINE	_	NG	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
FRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
ЗСМ	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	-	UNKWN	-	-	UNIÓWN	CAN COMM CIRCUIT (U1000)	—
Display control unit	1	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-		UNKWN	-	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	-	UNIWN	UNKWN	-	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No individuation	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U 000)	_
ALL MODE AWD/4WD	Ι	NG	UNKWN	-	-	_	-	-	-	-		-	CAN COMICIRCUIT (U 100)	—
ABS	-	NG	UNKWN	UNIWN	_	-	-	-	-	-	-		CAN COMM CIRCUIT (U 1000)	-
PDM E/R	No induction	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	_		_



Check harness between driver seat control unit and AWD control unit. Refer to <u>LAN-325</u>, "Inspection Between <u>Driver Seat Control Unit and AWD Control Unit Circuit</u>".

					C	AN DIAC	SUPPO	RT MNT	R					
	ecreen		-				Rece	eive diagi	nosis					BESHITS
SELECT STOTEM	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	GELI -DIAC	THEODERO
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	_	UNKWN	UNKWN	—	UNKVN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	_	CAN COMM CIRCUIT (U1000)	—
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	-	—	-	UNKWN	—		—	CAN COMM CIRCUIT (U 1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	-	UNKWN	-	-	UNKVN	CAN COMM CIRCUIT (U1000)	—
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	_	UNKWN	-	_	UNKVN	-	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	—	UNKWN		_	CAN COMM CIRCUIT (U 1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	UNKWN	-	UNKWN	-	-	_	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN		-	_	-	-	_	-	-	-	CAN COMM CIRCUIT (U 1000)	_
ABS	-	NG	UNKWN	UNKWN	_	-	_	-	_	-	_	_	CAN COMM CIRCUIT (U 1000)	-
IPDM E/R	No indention	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT	_

PKIB4850E



## [CAN]

А

#### Case 4

Check harness between AWD control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-326</u>, <u>"Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

					C	AN DIAC	SUPPC	ORT MNT	R					
	oroon						Rec	eive diag	nosis					
SELECT STOTEM	Screen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	GELI -DIAC	RESOLIS
INGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	—	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
NTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	_	-	—	CAN COMM CIRCUIT (U1000)	_
RANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNIÓWN	-	CAN COMMCIRCUIT (U 100)	_
3CM	No indication	NG	UNKWN	UNKWN	UNKWN	—	_	_	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	UNKWN	-	_
IETER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	_
UTO DRIVE POS.	No indication	NG	UNKWN	—	_	UNKWN	UNKWN	—	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
LL MODE AWD/4WD	—	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
IBS	-	NG	UNKWN	UNION	_	-	-	-	_	-	-	-	CAN COMM CIRCUIT (UN00)	_
PDM E/R	No indivation	_	UNKWN	UNKWN	-	-	UNKWN	- I	_	_	_	_	CAN COMMCIRCUIT	_



Г

Check ECM circuit. Refer to LAN-326, "ECM Circuit Inspection" .

					С	CAN DIAC	G SUPPC	PRT MNT	R					
	screen						Rec	eive diag	nosis					
SELECT STOTEM	Screen	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNIWN	_	_	UNKWN	UNKWN	_	UNKWN	UNKWN	—		CAN COMM CIRCUIT (U100)	CAN COMM CIRCUI (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	—	UNKWN	—	UNKWN	_	_	1	CAN COMM CIRCUIT (U100)	—
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN		UNKWN	-	-	-	UNKWN	_	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN		-	-	UNKWN	-	UNKWN	-	_	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN		-	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	-	CAN COMM/CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN		-	_	-	_	UNKWN	_	-	-	CAN COMM/CIRCUIT (U100)	-
ABS	-	NG	UNKWN	UNWN	-	-	-	-	-	-	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNWN	_	_	UNKWN	_	-	_	_	_	CAN COMMCIRCUIT (U1000)	_



Г

Check Intelligent Key unit circuit. Refer to LAN-327, "Intelligent Key Unit Circuit Inspection" .

					C	CAN DIAC	SUPPC	ORT MNT	R					
SELECT SYSTEM	screen		<b>-</b> -				Rec	eive diagr	nosis					RESULTS
OLLEOF OF OF OF LW	obiech	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
NTELLIGENT KEY	No ind Nation	_	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U 1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	-	UNKWN	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	-	UNKWN	-	-	UNKWN	-	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	—	UNKWN	UNKWN	-	UNKWN	—	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	-	_	-	-	-	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	-	-	-	-	CAN COMM CIRCUIT (U1000)	—



Μ

L

А

В

С

D

Е

F

G

Н

J

PKIB4854E

#### Case 7

Check TCM circuit. Refer to LAN-327, "TCM Circuit Inspection" .

					C	AN DIAC	G SUPPC	RT MNT	R					
SELECT SYSTEM	screen		<b>-</b>				Rec	eive diag	nosis				SELE-DIAG	BESUITS
OLLEOT OT OT LIM	obreen	initiai diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIAC	
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMMCIRCUIT (U 1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No individuation	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (U 100)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	—	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	_	UNKWN	—	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	-	CAN COMM/CIRCUIT (U 100)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKIN	UNKWN	-	UNKWN	-	-	-	CAN COMMCIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-		CAN COMM CIRCUIT (U1000)	—
ABS	-	NG	UNKWN	UNKWN	_	_	-	_	_	-	—	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	-	_	_	CAN COMM CIRCUIT (U1000)	_



## [CAN]

А

В

С

D

Е

F

G

Н

J

#### Case 8

Г

Check BCM circuit. Refer to LAN-328, "BCM Circuit Inspection" .

					C	CAN DIAC	G SUPPC	ORT MNT	R					
SELECT SYSTEM	screen		<b>-</b>				Rec	eive diagı	nosis				SELE-DIAG	BESUITS
OLLEON ON ON EN	obreen	initiai diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	_	-	UNKWN	UNKIN	-	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	-	UNKIN	-	UNKWN	-	-	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	Not individual individual	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKIN	-	UNKWN	-	-	UNKWN	-	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKIN	UNKWN	_	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	UNKIN	-	UNKWN	-	-	—	CAN COMMCIRCUIT (UN00)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	_	_	-	-	_	-	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKIN	-	_	-	_	_	CAN COMM CIRCUIT (U 1000)	_



Μ

L

Г

Check display control unit circuit. Refer to LAN-328, "Display Control Unit Circuit Inspection" .

					C	CAN DIAC	SUPPC	RT MNT	R					
	screen		-				Rec	eive diagi	nosis					
SELECT STOTEM	3018611	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	THEODERO
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	UNKWN	_	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		—	UNKWN	-	UNKWN	_		1	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	—	—	Ι	UNKWN	-	UNKWN	I	CAN COMM CIRCUIT (U1000)	_
всм	No indication	NG	UNKWN	UNKWN	UNKWN	—	—		UNKWN	_		UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN		—	UNKWN		UNKWN	_		UNKWN	_	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	I	UNKWN	UNKWN		—	UNKWN	UNKWN	I	CAN COMM CIRCUIT (U 000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN			UNKWN	UNKWN	-	UNKWN	—	-	1	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	_	_	_	_	-	_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	UNKWN	_	_	_	-	1	CAN COMM CIRCUIT (U1000)	_

PKIB4856E



Г

Check data link connector circuit. Refer to LAN-329, "Data Link Connector Circuit Inspection" .

					C	AN DIAC	3 SUPPC	DRT MNT	R					
SELECT SYSTEM	screen		<b>-</b>				Rec	eive diagi	nosis				SELE-DIAG	BESUITS
OLLEON OPOTENIN	obreen	initiai diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	_	_	UNKWN	UNKWN	—	UNKWN	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indivision	-	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No individualion	NG	UNKWN	UNKWN	-	-	-	-	UNKWN	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indivision	NG	UNKWN	UNKWN	UNKWN	_	-	-	UNKWN	-	—	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	_	UNKWN	_	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	_	-	-	-	_	-	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No individuation	_	UNKWN	UNKWN	_	_	UNKWN	—	_	-	_	_	CAN COMM CIRCUIT (U1000)	_



А

В

С

D

Е

F

G

PKIB4858E

### Case 11

Check unified meter and A/C amp. circuit. Refer to LAN-329, "Unified Meter and A/C Amp. Circuit Inspection" .

					C	AN DIAC	SUPPC	RT MNT	R						
	soroop						Rec								
SELECTOTOTEM	Scieen	Initial diagnosis	Transmit diagnosis	ECM I-KEY		тсм	TCM BCM /SEC		DISPLAY METER A		AWD/4WD VDC/TCS /e4WD /ABS		SELI-DIAC		
ENGINE	-	NG	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U101)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	-	UNKWN	-	-		CAN COMMCIRCUIT (UN00)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	-	-	-	UNKWN	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_	
всм	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	_	UNKWN	—	_	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display control unit	-	NG	UNKWN	UNKWN	_	_	UNKWN	_	UNKWN	-	_	UNKWN	_	_	
METER A/C AMP	No indivation	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	_	UNKWN	UNKWN		CAN COMM/CIRCUIT (U1000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	-	-	-	CAN COMMCIRCUIT (UN00)	_	
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	-	_	-	_	UNKWN	-	-	-	CAN COMM CIRCUIT (U N00)	_	
ABS	_	NG	UNKWN	UNKWN	_	_	-	_	-	-	—	_	CAN COMM CIRCUIT (U1000)	-	
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_		CAN COMM CIRCUIT (U1000)	_	

///////: Malfunctioning part Unified BCM meter and A/C amp. THE REAL PROPERTY IN CAN H CAN L ABS actuator and Intelligent Display Data link Driver seat AWD ECM тсм IPDM E/R electric unit (control unit) Key unit control unit connector control unit control unit PKIB4652E

### [CAN]



Case 12

Г

Check AWD control unit circuit. Refer to LAN-330, "AWD Control Unit Circuit Inspection" .

					C	AN DIAC	SUPPO	RT MNT	R					
	soroon		_				Rece	eive diagi	nosis					
SELECTOTOTEM	3018611	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	—	UNKWN	UNKWN	-	UNKWN	UNIWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (UN001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		-	UNKWN	-	UNKWN			_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	I	-	_		UNKWN	I	UNKWN		CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN		_		UNKWN			UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	_	UNKWN	-	-	UNKWN	—	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (UN000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	-	_	_	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	-	-	_	-	-	-	-	-	Ι	CAN COMM CIRCUIT (UN000)	-
ABS	_	NG	UNKWN	UNKWN	_	_	—	_	_	_	—	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_

PKIB4860E



Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-331</u>, "ABS Actuator and Electric Unit (<u>Control Unit</u>) <u>Circuit Inspection</u>".

					С	AN DIAC	G SUPPC	DRT MNT	R							
	screen		-				Rec	eive diag	nosis							
SELECT STOTEM	3010011	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	GELI -DIAC	TEODEIG		
ENGINE	-	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)		
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	_	UNKWN	-	UNKWN	_	-	-	CAN COMM CIRCUIT (U1000)	_		
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	-	-	UNKWN	_	UNIWN	-	CAN COMM CIRCUIT (U 000)	_		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	-	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	-		
Display control unit	-	NG	UNKWN	UNKWN	-	_	UNKWN	-	UNKWN	-	-	UNKWN	-	-		
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	_	UNKWN	UNIWN	-	CAN COMM CIRCUIT (UN000)	-		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	—	-	-	CAN COMM CIRCUIT (U1000)	_		
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN		-	-	-	UNKWN	-	-	-	CAN COMM CIRCUIT (U1000)	_		
ABS	-	V	UNIWN	UNIWN	_	_	-	-	-	-	-	-	CAN COMM CIRCUIT (U 000)	_		
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	UNKWN	-	_	-	-	-	CAN COMM CIRCUIT (U1000)	_		



## Case 15

Г

#### Check IPDM E/R circuit. Refer to LAN-331, "IPDM E/R Circuit Inspection" .

					C	CAN DIAC	G SUPPC	RT MNT	R						
	soroon						Rec	eive diagi	nosis						
SELECT STOTEM	3018611	Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	TILOULIS	
ENGINE	-	NG	UNKWN	-	—	UNKWN	UNKWN	_	UNKWN	UNKWN	-	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUI (UN01)	
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN		—	UNKWN	—	UNKWN	_		1	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	—	—	—	UNKWN	-	UNKWN	I	CAN COMM CIRCUIT (U1000)	_	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	_	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display control unit	-	NG	UNKWN	UNKWN		—	UNKWN	—	UNKWN	_		UNKWN	_	-	
METER A/C AMP	No indication	-	UNKWN	UNKWN	I	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	I	CAN COMM CIRCUIT (U1000)	-	
AUTO DRIVE POS.	No indication	NG	UNKWN	-		UNKWN	UNKWN	—	UNKWN	—	-	1	CAN COMM CIRCUIT (U1000)	_	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	-	—	-	—	UNKWN	—		I	CAN COMM CIRCUIT (U1000)	_	
ABS	-	NG	UNKWN	UNKWN	_	_	-	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_	
PDM E/R	Ind Nation	_	UNKWN	UNKWN	_	_	UNKWN	_	_	-	_	_	CAN COMIN CIRCUIT (U 000)	_	

PKIB4862E



А

Н

L

J

LAN

L

Μ

٦

#### Case 16

Check CAN communication circuit. Refer to LAN-332, "CAN Communication Circuit Inspection" .

					C	AN DIAC	G SUPPO	RT MNT	R							
SELECT SYSTEM	screen		÷ .				Rece	eive diagi	nosis							
OLLEOT OTOTEM	oreen	initiai diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	1D/4WD VDC/TCS IP 94WD /ABS E					
ENGINE	_	NG	UNIWN	_	_	UNKIN	UNKWN	_	UNKWN	UNI	-	UNKUN	CAN COMM CIRCUIT (UN00)	CAN COMM/CIRCUIT (U1001)		
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	UNKWN	_	UNKWN	_	-	—	CAN COMM CIRCUIT (UN00)	_		
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	—	UNKWN	—	UNKWN	—	CAN COMM CIRCUIT (UN00)	_		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_		
Display control unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	-	UNKWN	-	-	UNKVN	_	_		
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	—	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 100)	_		
AUTO DRIVE POS.	No indication	NG	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	-	-	-		-		
ALL MODE AWD/4WD	_	NG	UNKWN	-	_	-	-	_	_	-	-	-	CAN COMM CIRCUIT (UN00)	-		
ABS	_	V	UNKWN	UNKWN	_	_	-	_	_	_	_	-	CAN COMM CIRCUIT (U 100)	-		
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT	_		

#### Case 17

Г

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to <u>LAN-337</u>, "IPDM E/R Ignition Relay <u>Circuit Inspection"</u>.

					C	CAN DIAC	SUPPO	RT MNT	R						
SELECT SYSTEM	screen	امتلاما	Transmit				Rece	eive diagr	nosis	-	-		SELF-DIAG BESULTS		
	00.0011	diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIVIC		
ENGINE	-	NG	UNKWN	-	—	UNKWN	UNKWN	-	UNKWN	UNKIN	-	UNKWN	CAN COMM CIRCUIT (U0000)	CAN COMMCIRCUIT (UN01)	
NTELLIGENT KEY	No indication	-	UNKWN	UNKWN		—	UNKWN		UNKWN	-	_	—	CAN COMM CIRCUIT (U1000)	_	
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	—	—	-	UNKWN	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	_	
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-		UNKWN	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_	
Display control unit	-	NG	UNKWN	UNKWN	1	—	UNKWN	1	UNKWN	-	_	UNKWN	_	—	
METER A/C AMP	No indication	_	UNKWN	UNKWN	I	UNKWN	UNKWN	UNKWN	1	UNKVN		—	CAN COMM CIRCUIT (UN000)	_	
AUTO DRIVE POS.	No indication	NG	UNKWN	_		UNKWN	UNKWN		UNKWN	-	_	—	CAN COMM CIRCUIT (U 000)	_	
ALL MODE AWD/4WD	—	NG	UNKWN	UNKWN	1	—	_	1	UNKWN	-	_	-	CAN COMM CIRCUIT (U1000)	_	
ABS	-	NG	UNKWN	UNKWN	-	-	-	-	-	-	_	-	CAN COMM CIRCUIT (U1000)	_	
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	UNKWN	_	_	-	_	—	CAN COMM CIRCUIT (U1000)	_	

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to LAN-337, "IPDM E/R Ignition Relay Circuit Inspection".

					C	AN DIAC	SUPPC	RT MNT	R					
SELECT SYSTEM	screen		- ··				Rec	SELE-DIAG BESULTS						
	0010011	Initial diagnosis	diagnosis	ECM	I-KEY	тсм	BCM /SEC	DISPLAY	METER /M&A	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	UNKWN	—	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	1	UNKWN	UNKWN		-	UNKWN	—	UNKWN	_	-	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	-	Ι	-	—	_	_	-	UNKWN	-	CAN COMMCIRCUIT (U 1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	UNKWN	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN		-	UNKWN	_	UNKWN	_	-	UNKWN	_	_
METER A/C AMP	No indication	l	UNKWN	UNKWN	I	UNKWN	UNKWN	UNKWN	-	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN			UNKWN	UNKWN	—	UNKWN	—	Ι	Ι	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	—	NG	UNKWN	—	-	_	—	—	-	—	_	_	CAN COMMCIRCUIT (U 100)	_
ABS	-	NG	UNKWN	-	_	_	_	-	—	-	-	_	CAN COMMCIRCUIT (U N00)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	UNKWN	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_

### Inspection Between TCM and Data Link Connector Circuit 1. CHECK HARNESS FOR OPEN CIRCUIT

AKS00CJ1

#### Turn ignition switch OFF. 1.

8 (L) - 6 (L)

- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- 4. Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - Data link connector Harness connector 14 98 Ω PKIB5306E

## 9 (Y) - 14 (Y)

: Continuity should exist. : Continuity should exist.

OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" . NG >> Repair harness.

#### Inspection Between Data Link Connector and Driver Seat Control Unit Circuit AKS00CJ2

**1. CHECK CONNECTOR** 

- Turn ignition switch OFF. 1.
- 2. Disconnect the battery cable from the negative terminal.
- Check following terminals and connectors for damage, bend and loose connection (connector side and 3. harness side).
- Harness connector M9
- Harness connector B2

#### OK or NG

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


### [CAN]



PKIB5308F

# $\overline{3}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect AWD control unit connector.
- 2. Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and AWD control unit harness connector E111 terminals 8 (L), 16 (Y).
  - 4 (L) 8 (L)
  - 10 (Y) 16 (Y)

: Continuity should exist.

: Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7. "TROUBLE DIAGNOSES WORK FLOW" .
- NG >> Repair harness.

### Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit

- 1. CHECK CONNECTOR
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect following connectors.
- ECM
- AWD control unit
- ABS actuator and electric unit (control unit)
- Check continuity between AWD control unit harness connector 4. E111 terminals 8 (L), 16 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 8 (L) 11 (L)
  - 16 (Y) 15 (Y)

: Continuity should exist. : Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .

NG >> Repair harness.

### **ECM Circuit Inspection**

### **1. CHECK CONNECTOR**

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

#### OK or NG

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









AKS00CJ5

AKS00CJ4

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



**Intelligent Key Unit Circuit Inspection** 

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of Intelligent Key unit for damage, bend and loose connection (control <sub>G</sub> module side and harness side).

#### OK or NG

OK >> GO TO 2. NG >> Repair ter

>> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect Intelligent Key unit connector.
- 2. Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).

#### 2 (L) - 3 (Y)

#### : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace Intelligent Key unit.
- NG >> Repair harness between Intelligent Key unit and BCM.



### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

#### OK or NG

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



## LAN-327

[CAN]

AKSOOCJE

F

Н

LAN

Μ

А

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect TCM connector.
- 2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: **Approx. 54 - 66**Ω

#### OK or NG

- OK >> Replace TCM.
- NG >> Repair harness between TCM and BCM.



# **BCM Circuit Inspection**

### 1. CHECK CONNECTOR

1. Turn ignition switch OFF.

- 2. Disconnect the battery cable from the negative 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.
- Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

#### 39 (L) - 40 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16</u>, "Removal and Installation of <u>BCM</u>".
- NG >> Repair harness between BCM and harness connector M82.



AKS00CJ9

- Display Control Unit Circuit Inspection 1. CHECK CONNECTOR
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of display control unit for damage, bend and loose connection (unit side and harness side).

### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

AKS00CJ8

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect display control unit connector.
- 2. Check resistance between display control unit harness connector M43 terminals 25 (L) and 26 (Y).

#### 25 (L) - 26 (Y)

#### : Approx. 54 - 66Ω

#### OK or NG

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



Data Link Connector Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check data link connector and terminals for damage, bend and loose connection (connector side and harness side).  ${}_{\rm G}$

#### OK or NG

OK >> GO TO 2. NG >> Repair ter

>> Repair terminal or connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

Check resistance between data link connector M24 terminals 6 (L) and 14 (Y).

#### 6 (L) - 14 (Y)

: Approx. 54 - 66Ω

#### OK or NG

OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u> <u>NOSES WORK FLOW"</u>.

NG >> Repair harness between data link connector and unified meter and A/C amp.



# Unified Meter and A/C Amp. Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check terminals and connector of unified meter and A/C amp. for damage, bend and loose connection (meter side and harness side).

#### OK or NG

OK >> GO TO 2.

NG >> Repair terminal or connector.

AKSOOCJA

AKS00CJB

Μ

F

Н

А

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect unified meter and A/C amp. connector.
- 2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

#### 1 (L) - 11 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



AKS00CJC

[CAN]

# Driver Seat Control Unit Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 B301
- Harness connector B9

#### 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.
- Check resistance between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)** : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



AKS00CJD

#### AWD Control Unit Circuit Inspection 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of AWD 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.

- 1. Disconnect AWD control unit connector.
- 2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

#### 8 (L) - 16 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace AWD control unit.
- NG >> Repair harness between AWD control unit and IPDM E/ R.



# ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

### 1. CHECK CONNECTOR

#### 1. Turn ignition switch OFF.

- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of ABS actuator and electric unit (control unit) for damage, bend and loose G 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 E24 terminals 11 (L) and 15 (Y).

#### 11 (L) - 15 (Y)

#### : **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 IPDM E/R.

# **IPDM E/R Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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.



M

PKIB5316E

AKS00CJF

AKS00C.IE

F

Н

А

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect IPDM E/R connector.
- Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



# **CAN Communication Circuit Inspection**

### 1. CHECK CONNECTOR

AKS00CJG

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, control unit side, unit side, meter side and harness side).
- ECM
- Intelligent Key unit
- TCM
- BCM
- Display control unit
- Unified meter and A/C amp.
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

#### OK or NG

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

	[CAN]
2. CHECK HARNESS FOR SHORT CIRCUIT	
1. Disconnect following connectors.	
ECM connector	
Intelligent Key unit connector	
Harness connector M82	
BCM connector	
Display control unit connector	
Unified meter and A/C amp. connector	
Harness connector M9	
<ol> <li>Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).</li> </ol>	
6 (L) - 14 (Y) Continuity should not exist	
	Data link connector
NG >> Check the following harnesses. If any harness is dam-	
aged, repair the harness.	
<ul> <li>Harness between data link connector and ECM</li> </ul>	( [Ω] )
<ul> <li>Harness between data link connector and Intelligent Key unit</li> </ul>	SKIA6868E
<ul> <li>Harness between data link connector and harness connector</li> </ul>	ector M82
<ul> <li>Harness between data link connector and BCM</li> </ul>	
<ul> <li>Harness between data link connector and display control</li> </ul>	unit
<ul> <li>Harness between data link connector and unified meter a</li> </ul>	and A/C amp.
<ul> <li>Harness between data link connector and harness connector</li> </ul>	ector M9
<b>2</b>	
5. CHECK HARNESS FOR SHORT CIRCUIT	
Check continuity between data link connector M24 terminals 6 (L),	
(1) and ground.	
6 (L) - Ground : Continuity should not exist.	Data link connector
14 (Y) - Ground : Continuity should not exist.	
OK or NG	
OK >> GO TO 4.	Í
NG >> Check the following harnesses. If any harness is dam-	
aged, repair the harness.	
Harness between data link connector and intelligent	PKIB5318E
<ul> <li>Hamess between data link connector and intelligent – Key unit</li> </ul>	
<ul> <li>Harness between data link connector and harness connector</li> </ul>	ector M82
<ul> <li>Harness between data link connector and BCM</li> </ul>	
<ul> <li>Harness between data link connector and display control</li> </ul>	unit
<ul> <li>Harness between data link connector and unified meter a</li> </ul>	and A/C amp.

• Harness between data link connector and harness connector M9

### 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect TCM connector. 1.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



# 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

#### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.

### 6. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect harness connector B4 and harness connector B9. 1.
- Check continuity between harness connector B4 terminals 4 (L) 2. and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

OK or NG

OK >> GO TO 7.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9





### 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

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

: Continuity should not exist.

OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

### 8. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect driver seat control unit connector. 1.
- 2. Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

9. CHECK HARNESS FOR SHORT CIRCUIT

B303 terminals 3 (L/Y), 19 (BR/W) and ground.

### OK or NG

OK >> GO TO 9. NG

>> Repair harness between driver seat control unit and harness connector B301.



### OK or NG

OK >> GO TO 10.

3 (L/Y) - Ground

19 (BR/W) - Ground

NG >> Repair harness between driver seat control unit and harness connector B301.





LAN-335

А

F

F

J

LAN

Μ

PKIB5322E

- 10 (Y) Ground

PKIB5317F

# 10. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- AWD control unit connector
- ABS actuator and electric unit (control unit) connector
- IPDM E/R connector
- 2. Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### : Continuity should not exist.

OK or NG

#### OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

## 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

> 48 (L) - Ground 49 (Y) - Ground

: Continuity should not exist. : Continuity should not exist.

#### OK or NG

OK >> GO TO 12.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

### 12. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

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

94 - 86

: Approx. 108 – 132 Ω

3. Check resistance between IPDM E/R terminals 48 and 49.

#### 48 - 49

: Approx. 108 – 132 Ω

#### OK or NG

- OK >> GO TO 13.
- NG >> Replace ECM and/or IPDM E/R.





IPDM E/R connector

13	3. СНЕСК ЗҮМРТОМ	А
1.	Fill in described symptoms on the column "Symptom" in the check sheet.	
2.	Connect all the connectors, and then make sure that the symptom is reproduced.	
OK	<u>í or NG</u>	В
O	K >> GO TO 14.	
IN		С
14	1. CHECK UNIT REPRODUCIBILITY	
Pe	rform the following procedure for each unit, and then perform reproducibility test.	D
1.	Turn ignition switch OFF.	
2.	Disconnect the battery cable from the negative terminal.	Е
3.	Disconnect the unit connector.	
4.	Connect the battery cable to the negative terminal.	
5.	Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)	F
6.	Make sure that the same symptom is reproduce.	
-	Intelligent Key unit	G
-	TCM	
-	BCM	
-	Display control unit	Н
-	Unified meter and A/C amp.	
-	Driver seat control unit	1
-	AWD control unit	1
-	ABS actuator and electric unit (control unit)	
-	ECM	J
-	IPDM E/R	
Ch	eck results	
R N	eproduced>>Install removed unit, and then check the other unit. ot reproduced>>Replace removed unit.	LAN
IP	DM E/R Ignition Relay Circuit Inspection	1
Ch	eck the following. If no malfunction is found, replace the IPDM E/R.	L
•	IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspection"	
•	Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY - IGNITION SW. IN "ON"</u> <u>AND/OR "START"</u>	Μ

# [CAN]

# PFP:23710





TKWB0867E

Wiring Diagram - CAN -



LAN-CAN-39



REFER TO THE FOLLOWING.

TKWB0868E

### [CAN]

# LAN-CAN-40 A

DATA LINE



TKWB0869E

[CAN]

## LAN-CAN-41

DATA LINE



TKWB0870E

[CAN]

А

В

# LAN-CAN-42

DATA LINE



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

TKWB0871E







TKWB0872E

## Check Sheet

### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

SELECT SYSTEM screen         Initial InitialInitial Initininitial Initial Initial Initial Initial Initinini In																
SELECT SYSTEM so	creen	Initial	Transmit					Rece	ive diagno	sis					SELF-DIAG	RESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	-	NG	UNKWN	Ι	_	UNKWN	_	UNKWN	-	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	—	—	UNKWN	-	UNKWN	—	_	—	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	Ι	-	—	—	-	UNKWN	_	_	UNKWN	—	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	-	—	_	-	UNKWN	—	_	—	—	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	_	_	_	UNKWN	_	_
METER A/C AMP	No indication	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN		_	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	—	-	UNKWN	_	UNKWN	-	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	—	—	_	-	UNKWN	—	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
ABS	_	NG	UNKWN	UNKWN	_	UNKWN	_	_	-		UNKWN	UNKWN	_	_	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No         UNKWN         UNKWN         UNKWN         UNKWN         CA           oms :         -         -         -         -         -         -         CA															_
	M E/R     NO     UNKWN     UNKWN <th< td=""></th<>															
	<u>M E/R indication</u> <u>UNKWN</u> <u>UNKWN</u> <u>-</u>															
	/mptoms :															
/mptoms :																
				Atta	ich cor	ov of					Attac	ch copy	∕ of			
				SELE	CT SY	ŚTEM					SELEC	TSÝS	TEM			
		vnolot <sup>i</sup> -			wite 41-										de abaat tabla	
Display Confirmation/Adi	v unit Tra	unslatic	on Shee	et: Rew Cheo	/rite the	e follov et table	ving na	imes, a	and put	a cheo	ck mar n/Adius	k on th stment	e abov Displa	/e chec	k sheet table. Check sheet ta	ble Display
Display Confirmation/Adj CAN COMM	/ unit Tra	inslatic Displa	on Shee	et: Rew Cheo	vrite the ck shee Initial	e follov et table diagno	ving na Displa	ames, a ay	and put Confi CAN	a cheo rmatio	ck mar n/Adju:	k on th stment	e abov Displa	/e chec	k sheet table. Check sheet ta METER/I	ble Display M&A
Display Confirmation/Adj CAN COMM CAN 1	v unit Tra justment	unslatic Displa	on Shee	et: Rew Cheo T	vrite the ck shee Initial īransm	e follov et table diagno it diagr	ving na e Displa sis nosis	ames, a ay	and put Confi CAN CAN	a cheorrmation 5 6	ck mar n/Adju	k on th stment	e abov Displa	re chec y	k sheet table. Check sheet ta METER/ TIRE-	ble Display M&A P
Display Confirmation/Adj CAN COMM CAN 1 CAN 2	v unit Tra justment	inslatic Displa	on Shee	et: Rew Cheo T	vrite the ck shee Initial Transmi	e follov et table diagno it diagr 3CM	ving na e Displa esis nosis	ames, a ay	and put Confi CAN CAN CAN	a chea rmation 5 6 7	ck mar n/Adjus	k on th stment	e abov Displa	y y	k sheet table. Check sheet ta METER/I TIRE- IPDM E	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3	/ unit Tra	Inslatio	on Shee	et: Rew Cheo T	vrite the ck shee Initial ransm E	e follow et table diagno it diagr 3CM ECM	ving na Displa sis nosis	ames, a ay	Confi CAN CAN CAN CAN CAN	a chea rmatio 5 6 7 8	ck mar n/Adju	k on th stment	e abov Displa	y	k sheet table. Check sheet ta METER/I TIRE- IPDM E –	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	v unit Tra	nslatic Displa	on Shee	et: Rew Cheo T	vrite the ck shee Initial iransmi E	e follov et table diagno it diagr 3CM ECM	ving na Displa sis nosis	ames, a ay	Confi CAN CAN CAN CAN CAN CAN	a chei rmatio 5 6 7 8 9	ck mar n/Adjus	k on th stment	e abov Displa	y y	k sheet table. Check sheet ta METER/I TIRE- IPDM E - -	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	v unit Tra	inslatic	on Shee	et: Rew Cheo T	vrite the ck shee Initial iransmi E E	e follov et table diagno it diagr 3CM ECM	ving na Displa Displa	ames, a ay	Confi CAN CAN CAN CAN CAN CAN	a chea rmation 5 6 7 8 9	ck mar n/Adjus	k on th stment	e abov Displa	y chec	k sheet table. Check sheet ta METER/ TIRE- IPDM E 	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	v unit Tra	Inslatic	on Shee	et: Rew Chec T	vrite the ck shee Initial ransmi E E	e follov et table diagno it diagr 3CM ECM -	ving na Displa psis nosis	ames, a ay	Confi CAN CAN CAN CAN CAN CAN	a chee rmatio 5 6 7 8 9	ck mar n/Adjus	k on th stment	e abov Displa	y chec	k sheet table. Check sheet ta METER/ TIRE- IPDM E — —	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 3 CAN 4	/ unit Tra	inslatic	on Shee	et: Rew Cheo T	vrite the ck shee Initial ransm E E	e follov et table diagno it diagr 3CM ECM 	ving na e Displa sis nosis	ames, a ay	Confi CAN CAN CAN CAN CAN CAN	a chea rmation 5 6 7 8 9	ck mar n/Adjus	k on th stment	e abov Displa	y chec	k sheet table. Check sheet ta METER/I TIRE- IPDM E — —	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	/ unit Tra	Inslatio	on Shee	et: Rew Cheo T	vrite the ck shee Initial ransmi E E	e follow et table diagno it diagr 3CM ECM	ving na Displa sis nosis	ames, a ay	Confi CAN CAN CAN CAN CAN CAN	a cheo rmatio 5 6 7 8 9	ck mar n/Adjus	k on th stment	e abov Displa	y y	k sheet table. Check sheet ta METER/ TIRE- IPDM E 	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	v unit Tra	Inslatio	on Shee	et: Rew Cheo T	vrite the ck shee Initial ransmi E E	e follow et table diagno it diagr 3CM = CM	ving na Displa Displa Dosis	Attach	Confi CAN CAN CAN CAN CAN CAN CAN	a chea rmatio 5 6 7 8 9	ck mar n/Adjus	k on th stment	e abov Displa	y y	k sheet table. Check sheet ta METER/ TIRE- IPDM E 	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	v unit Tra	nslatio	on Shee	et: Rew Cheo T	vrite the ck shee Initial ransm E E	e follov et table diagno it diagr 3CM ECM 	ving na Displa Displa Disis Dosis	ames, a ay Attach displa	copy o ay unit TR che	a chea rmatio 5 6 7 8 9 9	ck mar n/Adjus	k on th stment	e abov Displa	y	k sheet table. Check sheet ta METER/I TIRE- IPDM E — —	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	/ unit Tra	Inslatic	on Shea	et: Rew Cheo T	vrite the ck shee Initial ransm E E	e follov et table diagno it diagr 3CM = CM	ving na Displa Disis Dosis	Attach displa	copy o ay unit TR che	a chea rmatio 5 6 7 8 9 f	ck mar n/Adjus	k on th stment	e abov Displa	y	k sheet table. Check sheet ta METER/I TIRE- IPDM E — —	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	/ unit Tra	Inslatio	on Shee	et: Rew Cheo T	vrite the ck shee Initial fransmi E	e follow et table diagno it diagr 3CM = CM	ving na Displa Displa Dosis	ames, a ay Attach displa	and put Confi CAN CAN CAN CAN CAN CAN	a cher rmatio 5 6 7 8 9 9	ck mar n/Adjus	k on th stment	e abov Displa	y y	k sheet table. Check sheet ta METER/ TIRE- IPDM E 	ble Display M&A P E/R
Display Confirmation/Adj CAN COMM CAN 1 CAN 2 CAN 3 CAN 4	v unit Tra	Inslatio	on Shee	et: Rew Chec T	vrite the ck shee Initial ransm E E	e follow et table diagno it diagr 3CM = CM - C/	ving na Displa Displa Dosis	Attach displa	Confi CAN CAN CAN CAN CAN CAN CAN	a chea rmatio 5 6 7 8 9 9	ck mar n/Adjus	k on th stment	e abov Displa	y	k sheet table. Check sheet ta METER/ TIRE- IPDM E 	ble Display M&A P E/R

А

В

С

D

Е

F

G

Н

J

LAN

L

Μ

Attach copy of Attach copy of Attach copy of ENGINÉ INTELLIGENT KEY TRANSMISSION SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of AIR PRESSURE Attach copy of METER A/C AMP Attach copy of BCM MONITOR SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of AUTO DRIVE POS. Attach copy of Attach copy of ALL MODE AWD/4WD ABS SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of IPDM E/R SELF-DIAG RESULTS PKIB4725E





### CHECK SHEET RESULTS (EXAMPLE)

#### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

#### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-366, "Inspection Between TCM and Data</u> <u>Link Connector Circuit"</u>.

															ſ	
						С	AN DIAG	SUPPOR	T MNTR							
								Rece	ive diagno	sis						DEOUNTO
SELECT STOTEM S	Sieen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESOLIS
ENGINE	_	NG	UNKWN	—	—	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNION	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No individual	-	UNKWN	UNKWN	-	-	—	UNKWN	_	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U 000)	-
TRANSMISSION	No individualition	NG	UNKWN	UNKWN	-	—	—	-	—	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U 000)	_
AIR PRESSURE MONITOR	No indivision	NG	UNKWN	-	-	-	—	-	-	UNKWN	-	-	-		CAN COMM CIRCUIT (U 000)	-
ВСМ	No individualion	NG	UNKWN	UNKWN	UNKWN	-	_	_	_	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	—	NG	UNKWN	UNIWN	-	—	UNKVN	UNKWN	—	UNKWN	-	-	-	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN		-	UNKWN	UNKVN		UNKWN	-	Ι	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKVN	—	UNKWN	—	UNKWN		-	-	_	CAN COMICIRCUIT (U000)	-
ALL MODE AWD/4WD	-	NG	UNKWN		-	—	—	-	—	UNKWN	Ι	-	UNKWN	-	CAN COMP CIRCUIT (U 000)	-
ABS	_	NG	UNKWN		-	UNKVN	_	-	_	_	UNKWN	UNKWN	_	-	CAN COMICIRCUIT (U000)	_
IPDM E/R	No indication	_	UNKWN		-	-	_	UNION	_	_	_	-	_	_	CAN COMIC IRCUIT (U 000)	_
																PKIB4866E



Check harness between data link connector and driver seat control unit. Refer to <u>LAN-366</u>, "Inspection <u>A</u><u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

SELECT SYSTEM screen ENGINE - INTELLIGENT KEY N indic TRANSMISSION indic UD DECOUPE NONTRO	n c No dication No dication	Initial diagnosis NG — NG	Transmit diagnosis UNKWN UNKWN	ECM — UNKWN	I-KEY	TCM	TIRE-P	SUPPOR Rece BCM /SEC UNKWN	T MNTR ive diagno DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG	
SELECT SYSTEM screen ENGINE - INTELLIGENT KEY N indic TRANSMISSION N IN	n o No dication No dication	Initial diagnosis NG — NG	Transmit diagnosis UNKWN UNKWN	ECM — UNKWN	I-KEY	TCM UNKWN	TIRE-P	Rece BCM /SEC UNKWN	ive diagno DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG	
ENGINE - INTELLIGENT KEY N India TRANSMISSION N India	No dication No	Initial diagnosis NG — NG	Transmit diagnosis UNKWN UNKWN	ECM — UNKWN	I-KEY		TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE - INTELLIGENT KEY N indic TRANSMISSION N indic N N N N N N N N N N N N N N N N N N N	No dication No dication	NG — NG	UNKWN UNKWN	— UNKWN	_	UNKWN	-	UNKWN	_	UNKWN		1			CAN COMMA CIRCUIT	CAN COMMCIBCUIT
INTELLIGENT KEY N indic TRANSMISSION N indic AUD DESCRIPTE MONITOR	No dication No dication	— NG	UNKWN	UNKWN	_			1	1		-		UNK	UNKWN	(U1000)	(UN01)
TRANSMISSION N indic	No	NG				-	-	UNKWN	-	UNKWN	_	_	-	-	CAN COMM CIRCUIT (U1000)	_
	MI-		UNKWN	UNKWN	_	-	-	-	-	UNKWN	-	_		-	CAN COMICIRCUIT (U000)	_
AIR PRESSURE MONITOR indic	dication	NG	UNKWN	-	_	-	-	_	-	UNKWN	_	_	-	-	CAN COMM CIRCUIT (U1000)	_
BCM N indic	No dication	NG	UNKWN	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	Ι	UNK	CAN COMM CIRCUIT (U1000)	-
Display unit -	-	NG	UNKWN	UNKWN	_	-	UNKWN	UNKWN	-	UNKWN	—	_	-	UNKIN	—	_
METER A/C AMP Nindic	No dication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	-				—	CAN COMM CIRCUIT (U0000)	_
AUTO DRIVE POS. Nindi	Notion	NG	UNKWN	-	_	UNKWN	-	UNKWN	_	UNKWN	_	-		-	CAN COMICIRCUIT (U000)	_
ALL MODE AWD/4WD -	-	NG	UNKWN	-	_	-	-	-	-	-	_	_	UNKWN	-	CAN COMP CIRCUIT (U000)	_
ABS -	-	NG	UNKWN	UNIONN	_	UNKVN	-	-	_	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U000)	-
IPDM E/R Indi	Notion	-	UNKWN	UNKWN	_	-	-	UNKWN	-	-	_	_	-	—	CAN COMM CIRCUIT (U000)	_



Check harness between driver seat control unit and AWD control unit. Refer to <u>LAN-367</u>, "Inspection Between <u>Driver Seat Control Unit and AWD Control Unit Circuit</u>".

-																
						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM &	creen							Rece	ive diagno	osis						
SELECT STOTEMS	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THESULIS
ENGINE	-	NG	UNKWN	-	-	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN		UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	—	UNKWN	-	UNKWN	-	-	—	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	—	-	_	UNKWN	-	-		-	CAN COMM CIRCUIT (U 000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	-	-	1	CAN COMM CIRCUIT (U1000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	_	-	UNKWN	-	-	-		CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	-	-	-		_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN		Ι	CAN COMM CIRCUIT (U000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	-	_	-	—	-	—	-	-	-	UNKWN		CAN COMP CIRCUIT (U000)	_
ABS	-	NG	UNKWN		-	UNKVN	_	-	-	-		UNKWN	-	I	CAN COMM CIRCUIT (U 000)	_
IPDM E/R	No inditation	-	UNKWN	UNKWN	_	_	_	UNKWN	-	-	_	-	_	_	CAN COMIC IRCUIT (U 000)	_
																PKIB4868E



А

В

С

D

Е

F

G

#### Case 4

Check harness between AWD control unit and ABS actuator and electric unit (control unit). Refer to <u>LAN-368</u>, <u>"Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit"</u>.

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM S	creen		_					Rece	ive diagno	sis					SELE-DIAG	RESULTS
GEELOT GTOTEMIS	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	I NEGOLI G
ENGINE	-	NG	UNKWN	-	_	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKUN		CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	_	_	_	—	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_		_	CAN COMM CIRCUIT (U 000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-		-	-	-	-	UNKWN	-	—	-		CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	-	-		CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	Ι	—	UNKWN	UNKWN	Ι	UNKWN	—	-	-		-	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN			CAN COMM CIRCUIT (U000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-		UNKWN	-	UNKWN	-	UNKWN	—	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	-	UNKWN	-	—		-	CAN COMM CIRCUIT (U000)	—
ABS	_	NG	UNKWN	UNIONN	-	UNKUN	_	_	_	_			-	-	CAN COMM CIRCUIT (U000)	-
IPDM E/R	No indivision	-	UNKWN	UNKWN	-	_	_	UNKWN	_	_	_	—	-	-	CAN COMM CIRCUIT (U000)	_



Check ECM circuit. Refer to LAN-368, "ECM Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECINTO
OLLEOT OTOTEM'S	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOLIG
ENGINE	_	NG	UNKVN	—	-	UNKWN	_	UNKVN	_	UNKUN	_				CAN COMMCIRCUIT (U1000)	CAN COMMCIRCUI (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNIWN	-	-	_	UNKWN	_	UNKWN	_	_	-	—	CAN COMMCIRCUIT (UN00)	-
TRANSMISSION	No indication	NG	UNKWN		-	—	—	_		UNKWN	—	_	UNKWN	-	CAN COMMCIRCUIT (U 100)	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	-	-	-	-	-	UNKWN	-	-	-		CAN COMM CIRCUIT (U1000)	Ι
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	
Display unit	-	NG	UNKWN	UNIWN	-		UNKWN	UNKWN	Ι	UNKWN	—	-	I	UNKWN	—	Ι
METER A/C AMP	No indication	-	UNKWN	UNIONN	-	UNKWN	UNKWN	UNKWN	UNKWN	—	_	UNKWN	UNKWN		CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	—	-	_	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNHWN	-	_	-	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U 00)	-
ABS	_	NG	UNKWN		-	UNKWN	—	_	_	-	UNKWN	UNKWN	_	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	—	UNKWN		-	-	-	UNKWN	—	—	—	—	_	-	CAN COMMCIRCUIT (U 00)	_



Check Intelligent Key unit circuit. Refer to LAN-369, "Intelligent Key Unit Circuit Inspection" .

			-	-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM S	creen							Rece	ive diagno	sis					SELE-DIAG	
OLLOT OT OT OT OT		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	GEEI -DIAC	
ENGINE	-	NG	UNKWN	_	-	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No inditation	-	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	_	-	_	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	—	-	_	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN		Ι	-	-	-	-	UNKWN	I	Ι	—	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN		Ι	—	-	UNKWN	-	Ι	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	—	—	UNKWN	UNKWN	—	UNKWN	_	—	-	UNKWN	_	—
METER A/C AMP	No indication	-	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	Ι	Ι	—	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	_	-	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	-	_	_	-	UNKWN	UNKWN	—	_	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	-	UNKWN	_	—	-	_	-	_	CAN COMM CIRCUIT (U1000)	_



Μ

L

А

В

С

D

Е

F

G

Н

J

Check TCM circuit. Refer to LAN-369, "TCM Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis					SELE-DIAG	BESHITS
OLLEOT OTOTEM'S	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOLIG
ENGINE	_	NG	UNKWN	—	_	UNKVN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMMCIRCUIT (UN00)	CAN COMMCIRCUI (UV01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	Ι	Ι	—	UNKWN	Ι	UNKWN	—	-	I	—	CAN COMM CIRCUIT (U1000)	1
TRANSMISSION	No indivision	NG	UNKWN	UNKWN	-	-	_	-	-	UNKWN	—	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	Ι
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	
Display unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN	—	-	I	UNKWN	_	-
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNKUN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKVN	_	UNKWN	-	UNKWN	_	-	-	-	CAN COMMCIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	_	UNKVN	_	_	_	-	UNKWN	UNKWN	_	_	CAN COMM CIRCUIT (U 100)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	—	_	—	UNKWN	_	—	_	-	_	—	CAN COMM CIRCUIT (U1000)	_



Check low tire pressure warning control unit circuit. Refer to <u>LAN-370</u>, "Low Tire Pressure Warning Control <u>A</u> <u>Unit Circuit Inspection</u>".

															г	
						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM &	creen							Rece	ive diagno	osis						DECUTE
SELECT STOTEM'S	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	-	NG	UNKWN	-	-	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	_	-	_	UNKWN	_	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No inditation	NG	UNKWN	-	_	_	_	_	_	UNKWN	_	_	-	_	CAN COMMCIRCUIT (U 100)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	-	—	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKVN	UNKWN	_	UNKWN	—	-	-	UNKWN	—	_
METER A/C AMP	No indication	_	UNKWN	UNKWN		UNKWN	UNKVN	UNKWN	UNKWN	-	—	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	—	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	-	_	-	_	UNKWN	_	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	-	_	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	_	UNKWN	_	-	_	-	-	—	CAN COMM CIRCUIT (U1000)	_



Check BCM circuit. Refer to LAN-370, "BCM Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECINTO
OLLEOT OTOTEM'S		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESOLIS
ENGINE	_	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	Ι	Ι	—	UNKIN	Ι	UNKWN	—		Ι	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	1	-	—	_		UNKWN	—	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	-	-		CAN COMM CIRCUIT (U1000)	_
BCM	No indivision	NG	UNKWN	UNKWN	UNKWN	-	_	—	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	_	UNKWN	UNKIN	-	UNKWN	_	—	-	UNKWN	_	_
METER A/C AMP	No indication	—	UNKWN	UNKWN		UNKWN	UNKWN	UNKON	UNKWN	—	_	UNKWN	UNKWN		CAN COMM CIRCUIT (UN00)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	-		-	UNKWN	—	-	_	-	CAN COMM CIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	-	UNKWN	UNKWN	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	—	_	_	UNKIN	_	—	_	—	_	-	CAN COMM CIRCUIT (U 100)	-



# [CAN]

А

В

С

D

Е

F

G

J

#### Case 10

Check display unit circuit. Refer to LAN-371, "Display Unit Circuit Inspection" .

						С	AN DIAG	SUPPOR	MNTR							
SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULIS	
ENGINE	_	NG	UNKWN	-	-	UNKWN	Ι	UNKWN	-	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication		UNKWN	UNKWN	Ι	-	I	UNKWN	—	UNKWN	-	—	—	—	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-		-	_	UNKWN	_	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	Ι	I	I	Ι	I	—	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	—
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	I	-	_	UNKWN	-	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	—	UNKWN	_	-	-	UNKWN	_	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN		—	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	I	UNKWN	-	UNKWN	_	—	-	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	—		_	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	-	-	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	-	-	-	UNKWN	-	—	_	-	-	—	CAN COMM CIRCUIT (U1000)	_



Μ

L

Check data link connector circuit. Refer to LAN-371, "Data Link Connector Circuit Inspection" .

OF LECT OVETEM server								DECITE								
SELECT STOTEMS	SELECT STSTEM SCIENT		Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESOLIS
ENGINE	_	NG	UNKWN	_	-	UNKWN	_	UNKWN	-	UNKWN	-	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No indivision		UNKWN	UNKWN	Ι	-	—	UNKWN	-	UNKWN	-	-	Ι	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No individual	NG	UNKWN	UNKWN	1	-	—	—	-	UNKWN	-	—	UNKWN	—	CAN COMM CIRCUIT (U1000)	—
AIR PRESSURE MONITOR	No individualition	NG	UNKWN	-	-	_	—	-	_	UNKWN	-	—	-	-	CAN COMM CIRCUIT (U1000)	_
BCM	No inditation	NG	UNKWN	UNKWN	UNKWN	-	-	—	_	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	_	UNKWN	UNKWN	_	UNKWN	—	_	-	UNKWN	_	_
METER A/C AMP	No indivision	-	UNKWN	UNKWN		UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
AUTO DRIVE POS.	No indivision	NG	UNKWN	-	_	UNKWN	-	UNKWN	_	UNKWN	_	—	-	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	—	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
ABS	_	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	-	UNKWN	UNKWN	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indivision	—	UNKWN	UNKWN	_	_	-	UNKWN	_	_	-	_	—	—	CAN COMM CIRCUIT (U1000)	_



В

С

D

Е

F

G

J

#### Case 12

А Check unified meter and A/C amp. circuit. Refer to LAN-372, "Unified Meter and A/C Amp. Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	_	NG	UNKWN	_	_	UNKWN	-	UNKWN	_	UNKIN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	_	UNKWN	_		_	-	_	-	CAN COMM CIRCUIT (U000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—		1	—		—	-	UNKWN	—	CAN COMM CIRCUIT (U000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-		Ι		-		-	-	-	-	CAN COMM CIRCUIT (UM00)	—
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	I	-	_		-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	—	UNKVN	—	-	-	UNKWN	—	-
METER A/C AMP	No indivision	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	1	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U 000)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-		—	-	-	-	CAN COMICIRCUIT (U000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	-		-	-	UNKWN	-	CAN COMM CIRCUIT (U 000)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	_	—	_	UNKWN	_	-	_	-	-	—	CAN COMM CIRCUIT (U1000)	_



Μ

L

Check steering angle sensor circuit. Refer to LAN-372, "Steering Angle Sensor Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM soroon																
SELECT CTOTEMS	SELECT STOTEM SCIECT		Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEODERS
ENGINE	_	NG	UNKWN	—	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	-	_	-	—	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	1	-	—	—		UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	1
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	—	-		CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	
Display unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	Ι	UNKWN	-	-	Ι	UNKWN	—	Ι
METER A/C AMP	No indication	_	UNKWN	UNKWN		UNKWN	UNKWN	UNKWN	UNKWN		—	UNKWN	UNKWN		CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	-	UNKWN	-	UNKWN	_	—	_	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	—	UNKWN	—	_	_	-		UNKWN	_	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	—	_	—	UNKWN	_	-	-	—	_	-	CAN COMM CIRCUIT (U1000)	_


А

В

С

D

Е

F

G

Н

J

### Case 14

Check driver seat control unit circuit. Refer to LAN-373, "Driver Seat Control Unit Circuit Inspection" .

				-		C	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM &	creen							Rece	ive diagno	sis						DECINTO
GEELOT GTOTEMIS	cicen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOUEIG
ENGINE	-	NG	UNKWN	-	-	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	Ι	-	-	UNKWN	—	UNKWN	Ι	—	—	—	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN		-	-	-	—	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	_	-	_	_	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	_	_	UNKWN	-	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN		-	-	UNKWN	-	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No ind ation	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	Ι	-	—	-	CAN COMMCIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	—	-	UNKWN	UNKWN	—	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	_	-	-	-	-	—	CAN COMM CIRCUIT (U1000)	_



Μ

L

Check AWD control unit circuit. Refer to LAN-373, "AWD Control Unit Circuit Inspection" .

						C	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	oroop							Rece	ive diagno	osis						
SELECTOTOTEMS	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	-	NG	UNKWN	-	_	UNKWN	-	UNKWN	_	UNKWN	_	UNK	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (U1001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	—	-	-	UNKWN	-	UNKWN	—		-	—	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	-	-	-	UNKWN	—		UNKWN	-	CAN COMM CIRCUIT (U1000)	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	—	-	-	-	—	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	—
всм	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	—	-	UNKWN	—	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKWN	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	—	-	-	UNKWN	_	_
METER A/C AMP	No indication	—	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	-	_		UNKWN	—	CAN COMMCIRCUIT (U100)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	—	UNKWN	-	UNKWN	-	UNKWN	—	_	-	—	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKVN	-	_	-	-	-	—	-	—	-	-	_	CAN COMM/CIRCUIT (UN00)	_
ABS	-	NG	UNKWN	UNKWN	_	UNKWN	-	-	_	-	UNKWN		-	_	CAN COMMCIRCUIT (UN00)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	-	UNKWN	-	-	_	_	-	_	CAN COMM CIRCUIT (U1000)	_



Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-374</u>, "ABS Actuator and Electric Unit (<u>Control Unit</u>) <u>Circuit Inspection</u>".

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis					SELE-DIAG	
GELLOT OTOTEM		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	I NEGOLI G
ENGINE	_	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	UNKWN	UNKON	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM/CIRCUIT (U101)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	-	—	-	UNKWN	-	UNKWN	-	—	—	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	-	-	UNKWN	_	_		-	CAN COMM CIRCUIT (U000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	_	_	-	-	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	—	_	UNKWN	-	_	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	UNKWN	_	-	-	UNKWN	_	-
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNK	-	CAN COMM CIRCUIT (U 000)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	-	—	-	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	-	UNKWN	-	—		-	CAN COMP CIRCUIT (U 000)	—
ABS	-	V	UNKVN	UNKIN	_	UNKWN	_	-	-	_			_	_	CAN COMM CIRCUIT (U 000)	-
IPDM E/R	No indication	_	UNKWN	UNKWN	_	—	-	UNKWN	-	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



#### Check IPDM E/R circuit. Refer to LAN-374, "IPDM E/R Circuit Inspection" .

				-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM 9	reen							Rece	ive diagno	sis					SELE-DIAG	RESULTS
OLLOT OTOTEMO	510011	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	GELI-DIAC	HEBBEIG
ENGINE	—	NG	UNKWN	_	-	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN	UNKWN	UNKVN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCU (UN01)
INTELLIGENT KEY	No indication		UNKWN	UNKWN	Ι	-	—	UNKWN	—	UNKWN	1	-	Ι	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	—	_	—	UNKWN	-	—	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	Ι	Ι	—	-	-	UNKWN	-	—		Ι	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	_	UNKWN	-	-	Ι		CAN COMM CIRCUIT (U1000)	_
Display unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN	_	-	I		_	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	_	UNKWN	-	UNKWN	_	_	_	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	_	-	—	-	-	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	_	-	UNKWN	UNKWN	_	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indivision	—	UNKWN	UNKWN	—	-	_	UNKWN	_	_	_	_	_	-	CAN COMM CIRCUIT (U 000)	-



А

Н

L

J

LAN

L

Μ

### Case 18

Check CAN communication circuit. Refer to LAN-375, "CAN Communication Circuit Inspection" .

				-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEMS	creen		<b>.</b> .			-	-	Rece	ive diagno	sis					SELE-DIAG	RESULTS
		Initial diagnosis	Iransmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	OLLI DIVE	
ENGINE	_	NG	UNKON	-	_	UNIKWN	-		—	UNKWN	-	UNKVN	UNKUN	UNK	CAN COMMCIRCUIT (UN00)	CAN COMMCIRCUIT (UN01)
NTELLIGENT KEY	No indication		UNKWN	UNKWN	—	-	—	UNKWN	—	UNKWN	Ι	-	Ι	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	—	-	—	UNKWN	-	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	—	—	—	-	—	UNKWN	-	-	-	-	CAN COMMCIRCUIT (U1000)	_
ВСМ	No individualion	NG	UNKWN	UNKWN	UNKWN	-	—	—	—	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display unit	-	NG	UNKVN	UNHWN	_	—	UNKWN	UNKWN	—	UNIWN		-	Ι		—	—
METER A/C AMP	No ind ation	1	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	—	Ι	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No ind ation	NG	UNKWN	—	_	UNKWN	—	UNKWN	—	UNKWN	1	-	-	_	CAN COMMCIRCUIT (UN00)	_
ALL MODE AWD/4WD	_	NG	UNKWN		—	_	—	-	—	—	-	-	Ι		CAN COMMCIRCUIT (UN00)	—
ABS	_	V	UNKVN		_	UNKWN	_	_	_	_	UNKWN		_	-	CAN COMMCIRCUIT (UN00)	_
PDM E/R	No ind ation	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	-	_	-	CAN COMMCIRCUIT (UN00)	_

#### Case 19

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to <u>LAN-381</u>, "IPDM E/R Ignition Relay <u>Circuit Inspection</u>".

						С	AN DIAG	SUPPOR	T MNTR							
	roon							Rece	ive diagno	sis						
SELECT STOTEMISC		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS
ENGINE	-	NG	UNKWN	_	-	UNKVIN	-	UNKWN	-	UNKWN	-			UNKWN	CAN COMMCIRCUIT (UN00)	CAN COMMCIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	_	UNKWN	-	UNKWN	_	Ι	-	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	—	-	—	UNKWN	-	Ι	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	-	-	_	-	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	I	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	—	NG	UNKWN	UNKWN	Ι		UNKWN	UNKWN	-	UNKWN	-	I	Ι	UNKWN	—	-
METER A/C AMP	No indication	1	UNKWN	UNKWN	Ι		UNKWN	UNKWN	UNKWN	I	-			-	CAN COMMCIRCUIT (U 100)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	Ι		-	UNKWN	-	UNKWN	-	Ι	Ι	-	CAN COMMCIRCUIT (UN00)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	_	-	-	-	UNKWN	—	Ι	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	_	-	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	-	-	-	UNKWN	-	-	-	-	—	—	CAN COMM CIRCUIT (U1000)	-

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-381, "IPDM E/R Ignition Relay</u> <u>Circuit Inspection"</u>.

						C	AN DIAG	SUPPOR	T MNTB							
							, <i>Di</i>	Bece	ive diagno	sis						
SELECT SYSTEM &	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	ТСМ	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	B RESULTS
ENGINE	_	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	_	—	UNKWN	_	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	-	-	_	_	-	—	—	—	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	—	_	_	UNKWN	-	-	_	_	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	_	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN	—	-	-	UNKWN	_	-
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	—	-	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	—	-	_	—	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN		Ι	—	—	_	_	—	—	-	UNKWN	—	CAN COMM CIRCUIT (U 00)	—
ABS	_	NG	UNKWN	-		UNKWN	_	_	_	—	_	UNKWN	_	_	CAN COMMCIRCUIT (U 00)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	-	_	-	CAN COMM CIRCUIT (U1000)	_

### Inspection Between TCM and Data Link Connector Circuit 1. CHECK HARNESS FOR OPEN CIRCUIT

AKS00CID

### 1. Turn ignition switch OFF.

- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - Harness connector

# 8 (L) - 6 (L)

9 (Y) - 14 (Y)

: Continuity should exist.

: Continuity should exist.

### OK or NG

OK>> Connect all the connectors and diagnose again. Refer to<br/>LAN-7, "TROUBLE DIAGNOSES WORK FLOW"NG>> Repair harness.

# Inspection Between Data Link Connector and Driver Seat Control Unit Circuit

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M9
- Harness connector B2

#### OK or NG

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

## [CAN]



PKIB5308F

BAT

Harness connector

4 10

# $\overline{3}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect AWD control unit connector.
- 2. Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and AWD control unit harness connector E111 terminals 8 (L), 16 (Y).
  - 4 (L) 8 (L)
  - 10 (Y) 16 (Y)

: Continuity should exist.

: Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7. "TROUBLE DIAGNOSES WORK FLOW" .
- NG >> Repair harness.

#### Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit AKS00CIG

- 1. CHECK CONNECTOR
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect following connectors.
- ECM
- AWD control unit
- ABS actuator and electric unit (control unit)
- Check continuity between AWD control unit harness connector 4. E111 terminals 8 (L), 16 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 8 (L) 11 (L)
  - 16 (Y) 15 (Y)

: Continuity should exist. : Continuity should exist.

### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .

NG >> Repair harness.

## **ECM Circuit Inspection**

### **1. CHECK CONNECTOR**

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

### OK or NG

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

PKIB5310E

AWD control unit connector

Ω





AKS00CIH

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



## **Intelligent Key Unit Circuit Inspection**

### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of Intelligent Key unit for damage, bend and loose connection (control <sub>G</sub> 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 Intelligent Key unit connector.
- 2. Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).

#### 2 (L) - 3 (Y)

#### : Approx. 54 - 66Ω

### OK or NG

OK >> Replace Intelligent Key unit.

NG >> Repair harness between Intelligent Key unit and BCM.



### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

#### OK or NG

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



## LAN-369

[CAN]

AKS00CII

F

Н

LAN

Μ

А

- 1. Disconnect TCM connector.
- 2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

### 5 (L) - 6 (Y)

: **Approx. 54 - 66**Ω

### OK or NG

- OK >> Replace TCM.
- NG >> Repair harness between TCM and BCM.



# Low Tire Pressure Warning Control Unit Circuit Inspection

AKS00CIK

### 1. Turn ignition switch OFF.

1. CHECK CONNECTOR

- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of low tire pressure warning 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 low tire pressure warning control unit connector.
- 2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).
  - 9 (L) 21 (Y)

#### : Approx. 54 - 66Ω

### OK or NG

- OK >> Replace low tire pressure warning control unit.
- NG >> Repair harness between low tire pressure warning control unit and BCM.



### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.



AKS00CIL



- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check data link connector and terminals 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 M24 terminals 6 (L) and 14 (Y).

: Approx. 54 - 66 $\Omega$ 

### 6 (L) - 14 (Y)

OK or NG

- OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u><u>NOSES WORK FLOW"</u>.
- NG >> Repair harness between data link connector and unified meter and A/C amp.



# Unified Meter and A/C Amp. Circuit Inspection

### 1. CHECK CONNECTOR

AKS00CIO

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of unified meter and A/C amp. 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 unified meter and A/C amp. connector.
- 2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

#### 1 (L) - 11 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.



AKS00CIP

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect steering angle sensor connector.
- 2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

### 4 (L) - 5 (Y)

: **Approx. 54 - 66**Ω

### OK or NG

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



# **Driver Seat Control Unit Circuit Inspection**

## 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control unit side and  $_{\rm G}$  harness side).
- Driver seat control unit connector
- Harness connector B301
- Harness connector B9

### 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 B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)** : Approx. 54 - 66Ω

### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



### AWD Control Unit Circuit Inspection 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of AWD 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.

AKSOOCIG

F

Н

А

- 1. Disconnect AWD control unit connector.
- 2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

### 8 (L) - 16 (Y)

: Approx. 54 - 66Ω

### OK or NG

- OK >> Replace AWD control unit.
- NG >> Repair harness between AWD control unit and IPDM E/ R.



# ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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 E24 terminals 11 (L) and 15 (Y).
  - 11 (L) 15 (Y)

### : Approx. 54 - 66Ω

### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.

# **IPDM E/R Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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.



AKS00CIT

AKS00CIS

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect IPDM E/R connector.
- 2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

### : Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



[CAN]

AKSOOCIU

F

Н

А

**CAN Communication Circuit Inspection** 

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, G control unit side, unit side, meter side, sensor side and harness side).
- ECM
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

### OK or NG

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

L

Μ

J

# 2. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- ECM connector
- Intelligent Key unit connector
- Harness connector M82
- Low tire pressure warning control unit connector
- BCM connector
- Display unit connector
- Unified meter and A/C amp. connector
- Steering angle sensor connector
- Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y)

: Continuity should not exist.

### OK or NG

### OK >> GO TO 3.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9



# $\overline{\mathbf{3}}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between	data link connector M2	4 terminals 6 (L),
14 (Y) and ground.		

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

- OK or NG
- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9

### 4. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect TCM connector.
- Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

### OK or NG

- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.







F

F

Н

Μ

## 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4 and harness connector B9.
- 2. Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

### 4 (L) - 10 (Y)

#### : Continuity should not exist.

### OK or NG

- OK >> GO TO 7.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground
- : Continuity should not exist.
- 10 (Y) Ground
- : Continuity should not exist.

### OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

### 8. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect driver seat control unit connector. 1.
- Check continuity between driver seat control unit harness con-2. nector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

#### OK or NG

- OK >> GO TO 9.
- >> Repair harness between driver seat control unit and har-NG ness connector B301.





Harness connector



PKIB5321E

BAT

### 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

3 (L/Y) - Ground

d : Continuity should not exist. ound : Continuity should not exist.

19 (BR/W) - Ground

#### OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.

# 10. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- AWD control unit connector
- ABS actuator and electric unit (control unit) connector
- IPDM E/R connector
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

### : Continuity should not exist.

### OK or NG

OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

# 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

> 48 (L) - Ground 49 (Y) - Ground

: Continuity should not exist.

: Continuity should not exist.

### OK or NG

- OK >> GO TO 12.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

LAN-379



Driver seat control unit connector



PKIB5322E

А

F

F

LAN

# 12. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

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

94 - 86

3. Check resistance between IPDM E/R terminals 48 and 49.

: Approx. 108 – 132 Ω

- OK or NG
- OK >> GO TO 13.

48 - 49

NG >> Replace ECM and/or IPDM E/R.



# 13. снеск зумртом

- 1. Fill in described symptoms on the column "Symptom" in the check sheet.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

: Approx. 108 – 132  $\Omega$ 

OK or NG

OK >> GO TO 14.

NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"

# 14. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

#### Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

	[CAN]
DM E/R Ignition Relay Circuit Inspection	AKS00CIV
neck the following. If no malfunction is found, replace the IPDM E/R.	
IPDM E/R power supply circuit. Refer to PG-27, "IPDM E/R Power/Ground Circuit Inspect	tion" .
Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY - IGNITIO</u> <u>AND/OR "START""</u> .	<u>)n sw. in "on"</u>

# [CAN]

PFP:23710





TKWB0873E

[CAN]

Wiring Diagram - CAN -



AKS00AHF

LAN-CAN-44



REFER TO THE FOLLOWING.

TKWB0874E

# [CAN]

# LAN-CAN-45 A

DATA LINE



TKWB0875E

[CAN]

### LAN-CAN-46

DATA LINE



56545250484644424038363432302826 55535149474543413937353331292725 W J1121314151617181920 GR H.S.

TKWB0876E

[CAN]

А

В

# LAN-CAN-47

DATA LINE



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

TKWB0877E







TKWB0878E

## **Check Sheet**

### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

Check sheet tabl	le															
			1	1		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM so	creen	Initial	Transmit					Rece	ive diagno	sis					SELF-DIAG	G RESULTS
		diagnosis	diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R		
ENGINE	_	NG	UNKWN	-	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT	-
TRANSMISSION	No	NG	UNKWN	UNKWN	_	_	_	_	-	UNKWN	_	_	UNKWN	_	CAN COMM CIRCUIT	_
AIR PRESSURE MONITOR	No	NG	UNKWN	-	_	_	_	_	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT	_
BCM	No	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	_	_	_	UNKWN	CAN COMM CIRCUIT	_
Display control unit		NG	UNKWN	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	_	_	_	UNKWN		_
METER A/C AMP	No	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	_	_	UNKWN	UNKWN	_	CAN COMM CIRCUIT	_
AUTO DRIVE POS.	No	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	_	_	_	CAN COMM CIRCUIT	_
ALL MODE AWD/4WD	indication	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	_	CAN COMM CIRCUIT	
ABS	_	NG	UNKWN	UNKWN	_	UNKWN	_	_	-		UNKWN	UNKWN	_	_	(U1000) CAN COMM CIRCUIT	<u> </u>
IPDM E/B	No				_	_	_		_	_	_	_	_	_	(U1000) CAN COMM CIRCUIT	
	indication			ONIN				CINICUIN							(U1000)	
Symptoms :																
				Atta SELE	ICH COP	by of					Attac	ch copy	/ of			
				OLLL	01 01						JELEC	1010				
Display	/ control	unit Ti	ranslat	ion She	et: Re	write th	ne follo	wina n	ames	and n	it a che	eck ma	rk on t	he abo	ve check sheet t	table.
Confirmation/Adj	ustmen	t Displa	ay	Che	ck shee	et table	Displa	ay	Confi	rmatio	n/Adju	stment	Displa	y	Check sheet ta	ble Display
CAN COMM			-		Initial	diagno	sis .		CAN	CIRC	5				METER/	M&A
CAN CIRC 1				Т	ransm	it diagr	nosis		CAN	CIRC	6				TIRE	-P
CAN CIRC 2					E	зсм			CAN	CIRC	7				IPDM I	E/R
CAN CIRC 3					E	ECM			CAN	CIRC	8				-	
CAN CIRC 4						-			CAN	CIRC	9					
								A 44 I-								
							dis	Attach solav ce	copy o ontrol i	ı İnit						
					CA	N DIA	G SUP	PORT	MONI	FOR ch	neck sh	neet				
L																

LAN-389

PKIB4727E

А

Attach copy of Attach copy of Attach copy of ENGINÉ INTELLIGENT KEY TRANSMISSION SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of AIR PRESSURE Attach copy of Attach copy of METER A/C AMP BCM MONITOR SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of AUTO DRIVE POS. Attach copy of Attach copy of ALL MODE AWD/4WD ABS SELF-DIAG RESULTS SELF-DIAG RESULTS SELF-DIAG RESULTS Attach copy of IPDM E/R SELF-DIAG RESULTS PKIB4725E

[CAN]



### CHECK SHEET RESULTS (EXAMPLE)

### NOTE:

If a check mark is put on "NG" on "INITIAL DIAG (Initial diagnosis)", replace the control unit.

### Case 1

Check harness between TCM and data link connector. Refer to <u>LAN-410, "Inspection Between TCM and Data</u> <u>Link Connector Circuit"</u>.

						С	AN DIAG	SUPPOR	T MNTR							
	oroon							Rece	ive diagno	osis						DECULTO
GELEOTOTOTEMS	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEODERS
ENGINE	—	NG	UNKWN	-	-	UNKWN	-	UNKWN	—	UNKWN	_	UNKIN	UNKUN		CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indivition	—	UNKWN	UNKWN	-	_	—	UNKWN	—	UNKWN	—	_	_	—	CAN COMM CIRCUIT (U 000)	_
TRANSMISSION	No indivition	NG	UNKWN	UNKWN	-	—	—	-	—	UNKWN	—	—	UNKWN	_	CAN COMM CIRCUIT (U 000)	
AIR PRESSURE MONITOR	No indivition	NG	UNKWN	-	-	—	—	-	—	UNKWN	_	_	-	-	CAN COMM CIRCUIT (U 000)	-
ВСМ	No indivition	NG	UNKWN	UNKWN	UNKWN	-	—	-	—	UNKWN	—	—	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	—	-		UNKUN	-	UNKWN	—	-	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKVN		UNKWN	-	_	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U0000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKVN	—	UNKVN	—	UNKWN	—	—	-	_	CAN COMM CIRCUIT (U0000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	—	—	-	—	UNKWN	—	—	UNKWN	-	CAN COMM CIRCUIT (U0000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKVN	_	-	-	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U0000)	_
IPDM E/R	No indication	-	UNKWN		-	_	-	UNK	_	_	-	-	-	_	CAN COMM CIRCUIT (U0000)	_
																PKIB4886E



Check harness between data link connector and driver seat control unit. Refer to <u>LAN-410</u>, "Inspection <u>A</u><u>Between Data Link Connector and Driver Seat Control Unit Circuit</u>".

		r													Г	
				-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis					SELE-DIAC	RESULTS
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELI-DIAC	
ENGINE	-	NG	UNKWN	-	_	UNKWN	_	UNKWN	-	UNKWN	_	UNKUN	UNKVN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	_	UNKWN	-	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	-	-	_	UNKWN	-	-		-	CAN COMM CIRCUIT (U 000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	—	_	-	UNKWN	-	-	-	1	CAN COMM CIRCUIT (U1000)	—
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	—	—	-	UNKWN	-	-	-		CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	_	-	-		_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	_			_	CAN COMIC CIRCUIT (U0000)	_
AUTO DRIVE POS.	No indivition	NG	UNKWN	-	—	UNKWN	—	UNKWN	-	UNKWN	—	—	—	-	CAN COMY CIRCUIT (U000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	-	—	-	—	—	-		—	-	UNKWN	-	CAN COMM CIRCUIT (U0000)	_
ABS	_	NG	UNKWN	UNKWN	_	UNKVN	_	_	-	_		UNKWN	_	-	CAN COMIN CIRCUIT (U0000)	_
IPDM E/R	No indivition	_	UNKWN	UNKWN	_	-	_	UNKWN	-	_	_	-	_	_	CAN COMM CIRCUIT	_



Check harness between driver seat control unit and AWD control unit. Refer to <u>LAN-411</u>, "Inspection Between <u>Driver Seat Control Unit and AWD Control Unit Circuit</u>".

SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULIS	
ENGINE	-	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	UNKIN	UNKVN	UNKIN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	-	_	UNKWN	—	UNKWN	_	-	-	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	-	-	_	UNKWN	—	-		-	CAN COMM CIRCUIT (U 000)	—
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	-	-	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	—
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	-	-	UNKUN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	_	_	UNKWN	UNKWN	-	UNKWN	_	-	-	UNKUN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U0000)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	—	UNKWN	-	UNKWN	-	UNKWN	—	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	-	_	_	-	-	—	-	—	-	UNKWN	_	CAN COMP CIRCUIT (U0000)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKUN	-	-	-	-		UNKWN	-	-	CAN COMP CIRCUIT (U0000)	-
IPDM E/R	No individual	-	UNKWN	UNKWN	-	_	-	UNKWN	-	-	_	-	-	_	CAN COMY CIRCUIT (U 000)	_
																PKIB4888E



### [CAN]

#### Case 4

А Check harness between AWD control unit and ABS actuator and electric unit (control unit). Refer to LAN-412. "Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit" .

SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULTS	
ENGINE	-	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	UNKWN	UNKUN	UNK	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	_	_	UNKWN	-	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	-	_	UNKWN	_	-		-	CAN COMMCIRCUIT (U 00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	_	_	_	_	_	_	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	_
ВСМ	No indication	NG	UNKWN	UNKWN	UNKWN	—	-	—	_	UNKWN	_	-	_	UNKUN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN	—	-	-	UNKVN	-	-
METER A/C AMP	No indication	_	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKIN	-	CAN COMMCIRCUIT	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	_	UNKWN	-	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	-	UNKWN	-	-		-	CAN COMMICIRCUIT (UN00)	—
ABS	-	NG	UNKWN	UNK	_	UNK	_	-	-	-	UNKUN	UNKWN	-	-	CAN COMMCIRCUIT	-
IPDM E/R	No indiation	-	UNKWN	UNKWN	—	_	-	UNKWN	-	_	_	-	-	-	CAN COMMCIRCUIT (UN00)	-



Check ECM circuit. Refer to LAN-412, "ECM Circuit Inspection" .

						С										
SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULIS	
ENGINE	-	NG	UNIWN	-	-	UNKWN	-	UNKWN	-		_			UNKVN	CAN COMMCIRCUIT (U N00)	CAN COMMCIRCU (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNIWN	-	-	_	UNKWN	_	UNKWN	-	_	—	_	CAN COMMCIRCUIT (UN00)	-
TRANSMISSION	No indication	NG	UNKWN		-	_	_	-	_	UNKWN	-	—	UNKWN	-	CAN COMMCIRCUIT (U 100)	-
AIR PRESSURE MONITOR	No indication	NG	UNKWN	—	-	-	—	-	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	Ι
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	
Display control unit	-	NG	UNKWN	UNKWN	-		UNKWN	UNKWN	Ι	UNKWN	-	-	_	UNKWN	—	Ι
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	-	CAN COMMCIRCUIT (U 1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	_	-	-	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	_	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMMCIRCUIT (U 1000)	-
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	-	UNKWN	UNKWN	-	-	CAN COMMCIRCUIT (U 000)	-
IPDM E/R	No indication	—	UNKWN	UNKON	-	—	—	UNKWN	_	—	-	—	-	—	CAN COMMCIRCUIT (U 100)	-


# [CAN]

А

В

С

D

Е

F

G

J

#### Case 6

Check Intelligent Key unit circuit. Refer to LAN-413, "Intelligent Key Unit Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECITE
GLEET STOTEMS	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	I NEGOLIG
ENGINE	-	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	-	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indivision	_	UNKWN	UNKWN	_	-	_	UNKWN	-	UNKWN	_	_	—	-	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	—	—	-	—	UNKWN	_	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN		Ι		-	-		UNKWN	-		—	-	CAN COMM CIRCUIT (U1000)	—
BCM	No indication	NG	UNKWN	UNKWN			-	-	-	UNKWN	-	Ι	—	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display control unit	—	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN	_	Ι	—	UNKWN	—	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
AUTO DRIVE POS.	No indication	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	_		—	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	_	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	-	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	-	UNKWN	UNKWN	-	—	-	UNKWN	—	_	_	-	—	—	CAN COMM CIRCUIT (U1000)	_



Μ

Check TCM circuit. Refer to LAN-413, "TCM Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECITE
SELECT STSTEM'S	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG	RESOLIS
ENGINE	_	NG	UNKWN	—	_	UNKWN	-	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMMCIRCUIT (U1000)	CAN COMMCIRCUI (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	Ι	Ι	-	UNKWN	—	UNKWN	—	-	I	-	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indivision	NG	UNKWN	UNKWN	-	-	-	-	—	UNKWN	—	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	-	-	-	UNKWN	-	-	-	1	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	—	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	_	-	—	UNKWN	-	-
METER A/C AMP	No indication	—	UNKWN	UNKWN	-	UNK	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNK	-	UNKWN	-	UNKWN	—	-	-	-	CAN COMMCIRCUIT (U 1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	-	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	_	NG	UNKWN	UNKWN	—	UNKVN	-	-	—	-	UNKWN	UNKWN	—	-	CAN COMMCIRCUIT (UN00)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	—	_	-	UNKWN	_	—	_	-	_	—	CAN COMM CIRCUIT (U1000)	-



Check low tire pressure warning control unit circuit. Refer to <u>LAN-414</u>, "Low Tire Pressure Warning Control <u>A</u> <u>Unit Circuit Inspection</u>".

															т				
		CAN DIAG SUPPORT MNTR																	
SELECT SYSTEM &	creen							Rece	ive diagno	sis					SELF-DIAG RESULTS				
SELECTOTOTEM		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESULIS			
ENGINE	-	NG	UNKWN	-	_	UNKWN	_	UNKWN	-	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)			
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	_			
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	-	—	-	—	UNKWN	-	-	UNKWN	—	CAN COMM CIRCUIT (U1000)	—			
AIR PRESSURE MONITOR	No individualition	NG	UNKWN	-	-	-	—	-	-	UNKWN	-	-	-	-	CAN COMMCIRCUIT (UN00)	—			
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	_	—	—	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	_			
Display control unit	-	NG	UNKWN	UNKWN	—	-		UNKWN	—	UNKWN	-	-	-	UNKWN	—	-			
METER A/C AMP	No indication	_	UNKWN	UNKWN	—	UNKWN		UNKWN	UNKWN	—	-	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_			
AUTO DRIVE POS.	No indication	NG	UNKWN	-	-	UNKWN	-	UNKWN	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	-			
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	—			
ABS	-	NG	UNKWN	UNKWN	_	UNKWN	_	-	—	—	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-			
IPDM E/R	No indication	_	UNKWN	UNKWN	_	-	-	UNKWN	_	_	_	-	-	_	CAN COMM CIRCUIT (U1000)	_			



Check BCM circuit. Refer to LAN-414, "BCM Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM .	creen							Rece	ive diagno	sis						DECINTO
SELECT CTOTEM'S		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOLETO
ENGINE	-	NG	UNKWN	-	-	UNKWN	_	UNKUN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMP CIRCUI (U001)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	_	-	_	UNKVN	_	UNKWN	_	_	_	-	CAN COMMCIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	1	-	—	_		UNKWN	—	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	—	-	1	CAN COMM CIRCUIT (U1000)	Ι
BCM	No individual	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKUN	Ι	UNKWN	—	-	-	UNKWN	-	Ι
METER A/C AMP	No indication	—	UNKWN	UNKWN		UNKWN	UNKWN	UNKUN	UNKWN	—	_	UNKWN	UNKWN	Ι	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	-		-	UNKWN	—	—	-	-	CAN COMMCIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	_	-	—	_	-	UNKWN	—	—	UNKWN		CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	_	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-
IPDM E/R	No indication	—	UNKWN	UNKWN	_	_	—	UNKON	—	—	_	_	-	-	CAN COMMCIRCUIT (UN00)	_



А

В

С

D

Е

F

G

J

#### Case 10

Check display control unit circuit. Refer to LAN-415, "Display Control Unit Circuit Inspection" .

				-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM S	creen							Rece	ive diagno	sis					SELE-DIAG	
OLLOT OTOTEMO	oreen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	GEEI -DIAC	
ENGINE	-	NG	UNKWN	_	-	UNKWN	-	UNKWN	_	UNKWN	-	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	_	UNKWN	UNKWN	-	-	-	UNKWN	_	UNKWN	-	-	—	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	—	-	_	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN		Ι	-	—	-	-	UNKWN	I		—	-	CAN COMM CIRCUIT (U1000)	—
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	Ι	-	UNKWN	CAN COMM CIRCUIT (U1000)	—
Display control unit	-	NG	UNKWN	UNKWN	Ι		UNKUN	UNKUN			Ι	Ι	-		—	—
METER A/C AMP	No indication	_	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNIONN	Ι	-	UNKWN	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	Ι		—	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	-	-	UNKWN	UNKWN	—	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	_	-	UNKWN	_	_	-	-	-	_	CAN COMM CIRCUIT (U1000)	_



Μ

Check data link connector circuit. Refer to LAN-415, "Data Link Connector Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM of	creen							Rece	ive diagno	sis						DECITE
GELLOT OTOTEMA	ciccii	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	RESOLIS
ENGINE	_	NG	UNKWN	_	-	UNKWN	_	UNKWN	_	UNKWN	—	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No individualition	-	UNKWN	UNKWN	Ι	-	—	UNKWN		UNKWN	—	-	Ι	Ι	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No individual	NG	UNKWN	UNKWN	1	—	—	-	Ι	UNKWN	—	1	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No individualition	NG	UNKWN	_		—	—	_	-	UNKWN	_	_	l	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indition	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	—	_	UNKWN	UNKWN	-	UNKWN	_	-	-	UNKWN	_	_
METER A/C AMP	No indition	-	UNKWN	UNKWN	—	UNKWN	UNKWN	UNKWN	UNKWN	—	—	UNKWN	UNKWN	_	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indition	NG	UNKWN	_		UNKWN	-	UNKWN		UNKWN	—	-	l	_	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	_	_	—	_	-	UNKWN	—	—	UNKWN		CAN COMM CIRCUIT (U1000)	—
ABS	_	NG	UNKWN	UNKWN	-	UNKWN	_	_	_	_	UNKWN	UNKWN	_	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No inclusion	-	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_	_	-	CAN COMM CIRCUIT (U1000)	_



В

С

D

Е

F

G

J

#### Case 12

А Check unified meter and A/C amp. circuit. Refer to LAN-416, "Unified Meter and A/C Amp. Circuit Inspection" .

			_			С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECITE
GELLOT OTOTEM'S	ciccii	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	I NEGOLI G
ENGINE	-	NG	UNKWN	I	_	UNKWN	_	UNKWN	—	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (UN01)
INTELLIGENT KEY	No indication		UNKWN	UNKWN	—	-	-	UNKWN	—		—	—	Ι	—	CAN COMMCIRCUIT (UN00)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	—	—	_	1	—		—	—	UNKWN	—	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN		_	-	-		-		-	—		-	CAN COMMCIRCUIT (UV00)	—
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	-	_	UNK	-	—	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	_	_	UNKWN	UNKWN	_	UNKWN	_	—	-	UNKWN	_	-
METER A/C AMP	No individual	_	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	CAN COMMCIRCUIT (U 100)	—
AUTO DRIVE POS.	No indication	NG	UNKWN	I	_	UNKWN	-	UNKWN	-	UNKUN	_	—	_	-	CAN COMMCIRCUIT (UN00)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	_	—	-	-	UNKUN	-	—	UNKWN	-	CAN COMMCIRCUIT (U 100)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	—	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	—	UNKWN	UNKWN	_	—	-	UNKWN	_	—	_	—	_	—	CAN COMM CIRCUIT (U1000)	_



Μ

L

Check steering angle sensor circuit. Refer to LAN-416, "Steering Angle Sensor Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM .	creen							Rece	ive diagno	sis						
SELECT CTOTEM'S		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEODERS
ENGINE	_	NG	UNKWN	—	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUI (U1001)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	-	_	-	—	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	1	-	—	_		UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	1
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	—	-		CAN COMM CIRCUIT (U1000)	-
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	—	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	Ι	UNKWN	-	-	I	UNKWN	—	Ι
METER A/C AMP	No indication	—	UNKWN	UNKWN		UNKWN	UNKWN	UNKWN	UNKWN		—	UNKWN	UNKWN		CAN COMM CIRCUIT (U1000)	-
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	-	UNKWN	-	UNKWN	_	—	_	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	-
ABS	-	NG	UNKWN	UNKWN	—	UNKWN	—	_	_	-		UNKWN	_	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	—	_	—	UNKWN	_	-	-	—	_	-	CAN COMM CIRCUIT (U1000)	_



А

В

С

D

Е

F

G

J

#### Case 14

Check driver seat control unit circuit. Refer to LAN-417, "Driver Seat Control Unit Circuit Inspection" .

				-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM &	reen							Rece	ive diagno	sis						DECINTO
GELEOTOTOTEMA	516611	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG	NEOULIO
ENGINE	_	NG	UNKWN	-	-	UNKWN	_	UNKWN	-	UNKWN	-	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	Ι	-	-	UNKWN	-	UNKWN	-	Ι	—	—	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	—	-	—	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	_	-	_	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	_	_	_	UNKWN	-	-	_	UNKWN	CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	_	—	UNKWN	UNKWN	—	UNKWN	-	—	-	UNKWN	_	_
METER A/C AMP	No indication	-	UNKWN	UNKWN	-	UNKWN	UNKWN	UNKWN	UNKWN	-	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No ind ation	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN		Ι	—	-	CAN COMMCIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	—	—	-	-	UNKWN	-	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	—
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	-	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indication	-	UNKWN	UNKWN	-	-	-	UNKWN	-	—	-	-	-	—	CAN COMM CIRCUIT (U1000)	_



Μ

Check AWD control unit circuit. Refer to LAN-417, "AWD Control Unit Circuit Inspection" .

SELECT SYSTEM scree	-															
SELECT SYSTEM scree						С	AN DIAG	SUPPOR	T MNTR							
SELECT STOTEWISCIES	an I							Rece	ive diagno	sis						
	en	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG	RESULIS
ENGINE	_	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	-		UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
	No ndication	Ι	UNKWN	UNKWN	_	-	_	UNKWN	_	UNKWN	-	_	_	_	CAN COMM CIRCUIT (U1000)	_
TRANSMISSION	No ndication	NG	UNKWN	UNKWN	Ι	_	_	-	_	UNKWN	_	_	UNKWN	—	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No ndication	NG	UNKWN		Ι	_	-	-	-	UNKWN	-	-		-	CAN COMM CIRCUIT (U1000)	—
BCM	No ndication	NG	UNKWN	UNKWN	UNKWN	-	-	Ι	-	UNKWN	-	-		UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	Ι	UNKWN	-	-	Ι	UNKWN	-	—
METER A/C AMP	No ndication	Ι	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNKWN	-	Ι		UNKWN	—	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No ndication	NG	UNKWN	_	-	UNKWN	_	UNKWN		UNKWN	-	_	_	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKIN		Ι	-	—	_	-		—	—		-	CAN COMMCIRCUIT (UN00)	—
ABS	_	NG	UNKWN	UNKWN	_	UNKWN	_	_	_	_	UNKWN		_	—	CAN COMMCIRCUIT (UN00)	_
IPDM E/R inc	No ndication	-	UNKWN	UNKWN	-	_	-	UNKWN	_	_	_	_	_	_	CAN COMM CIRCUIT (U1000)	_



Check ABS actuator and electric unit (control unit) circuit. Refer to <u>LAN-418</u>, "ABS Actuator and Electric Unit (<u>Control Unit</u>) <u>Circuit Inspection</u>".

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECINTO
GELLOT OTOTEM	creen	Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAC	THEOUEIG
ENGINE	_	NG	UNKWN	_	_	UNKWN	_	UNKWN	-	UNKWN	_	UNKWN	UNKVN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCUIT (UN01)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	_	_	UNKWN	-	UNKWN	—	-	_	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	_	_	_	-	_	UNKWN	_	-		-	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	_	—	_	_	-	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	_	-	_	-	UNKWN	-	-	I	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	—	-	UNKWN	UNKWN	-	UNKWN	—	-	—	UNKWN	-	-
METER A/C AMP	No indication	—	UNKWN	UNKWN	_	UNKWN	UNKWN	UNKWN	UNKWN		-	UNKWN		-	CAN COMMCIRCUIT (UN00)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	-	UNKWN	-	UNKWN	_	-	-	-	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	—	—	-	-	UNKWN	_	-		-	CAN COMM CIRCUIT (UN00)	_
ABS	-	V	UNKWN	UNIWN	_	UNKWN	-	-	-		UNKWN		-	_	CAN COMMCIRCUIT (U1000)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	_	—	-	UNKWN	-	-	_	-	_	—	CAN COMM CIRCUIT (U1000)	_



#### Check IPDM E/R circuit. Refer to LAN-418, "IPDM E/R Circuit Inspection" .

				-		С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM	creen							Rece	ive diagno	sis						DECLITE
OLLEOT OTOTEM'S		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG	REBULIS
ENGINE	—	NG	UNKWN	_	Ι	UNKWN	-	UNKWN	—	UNKWN	-	UNKWN	UNKWN	UNKVN	CAN COMM CIRCUIT (U1000)	CAN COMMCIRCU (UN01)
INTELLIGENT KEY	No indication	—	UNKWN	UNKWN	Ι	Ι	—	UNKWN	—	UNKWN	1	—	_	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	-	_	-	—	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	Ι	—	-	-	UNKWN	-	—	-	1	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	_	UNKWN	-	-	-		CAN COMM CIRCUIT (U1000)	_
Display control unit	-	NG	UNKWN	UNKWN	Ι	-	UNKWN	UNKWN	-	UNKWN	_	-	-		_	-
METER A/C AMP	No indication	—	UNKWN	UNKWN		UNKWN	UNKWN	UNKWN	UNKWN		-	UNKWN	UNKWN	Ι	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN	-	_	UNKWN	-	UNKWN	-	UNKWN	-	—	-	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG	UNKWN	UNKWN	-	-	—	-	-	UNKWN	-	—	UNKWN	-	CAN COMM CIRCUIT (U1000)	_
ABS	-	NG	UNKWN	UNKWN	—	UNKWN	—	_	—	_	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	_
IPDM E/R	No indivision	-	UNKWN	UNKWN	_	—	-	UNKWN	_	_	—	_	-	-	CAN COMMCIRCUIT (UN00)	_



А

I

J

AN

Μ

#### Case 18

Check CAN communication circuit. Refer to LAN-419, "CAN Communication Circuit Inspection" .

						С	AN DIAG	SUPPOR	T MNTR							
SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULTS	
ENGINE	-	NG	UNK	-	_	UNKVN	_	UNIONN	-		-	UNKWN	UNIKWN	UNK	CAN COMMCIRCUIT (U100)	CAN COMMCIRCUIT (U1001)
INTELLIGENT KEY	No inditation	-	UNKWN	UNKWN	_	-	_	UNKWN	-	UNKWN	-	-	_	-	CAN COMMCIRCUIT (UN00)	-
TRANSMISSION	indivation	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	-	UNKWN	-	CAN COMMCIRCUIT (U100)	_
AIR PRESSURE MONITOR	No individual	NG	UNKWN	—	_	-	_	_	—	UNKWN	-	-	-	-	CAN COMM CIRCUIT (U N00)	_
ВСМ	No inditation	NG	UNKWN	UNKWN	UNKWN	-	-	-	-	UNKWN	-	-	Ι	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNK	UNKWN	-	_		UNKWN	_	UNKVN	_	-	-	UNK	_	-
METER A/C AMP	No indivision	-	UNKWN	UNKWN		UNKWN	UNKWN	UNKWN	UNKWN	—	-	UNKWN	UNKWN	-	CAN COMM CIRCUIT (UN00)	—
AUTO DRIVE POS.	No indivision	NG	UNKWN	-	_	UNKWN	-	UNKWN	-	UNKWN	_	-	Ι	-	CAN COMM CIRCUIT (U1000)	-
ALL MODE AWD/4WD	-	NG		-	-	_	-	-	-	—	-	-	_	-	CAN COMM CIRCUIT (UN00)	—
ABS	-	V	UNKIN		_	UNKVN	_	-	-	_		UNHWN	_	-	CAN COMM CIRCUIT (UN00)	-
IPDM E/R	No indivision	_	UNKWN	UNKWN	_	_	_	UNKWN	_	_	_	_	-	_	CAN COMMCIRCUIT	_

#### Case 19

Check IPDM E/R ignition relay circuit continuously sticks "OFF". Refer to LAN-425, "IPDM E/R Ignition Relay Circuit Inspection".

CAN DIAG SUPPORT MNTR																		
SELECT SYSTEM coroon			_															
OLLEOT OTOTEM'S	d		Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULTS			
ENGINE	-	NG	UNKWN	_	_	UNKVN	_	UNKWN	_	UNKWN	_			UNKWN	CAN COMMCIRCUIT (UN00)	CAN COMMCIRCUIT (U1001)		
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	_	_	_	UNKWN	_	UNKWN	_	-	-	-	CAN COMM CIRCUIT (U1000)	-		
TRANSMISSION	No indication	NG	UNKWN	UNKWN	-	_	—	_	—	UNKWN	—	-	UNKWN	-	CAN COMM CIRCUIT (U1000)	_		
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	_	_	_	_	UNKWN	_	-	-	-	CAN COMM CIRCUIT (U1000)	_		
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	_	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-		
Display control unit	-	NG	UNKWN	UNKWN	Ι		UNKWN	UNKWN	—	UNKWN	—	-	-	UNKWN	—	-		
METER A/C AMP	No indication	-	UNKWN	UNKWN	Ι		UNKWN	UNKWN	UNKWN	—	—	บหน่งท		Ι	CAN COMMCIRCUIT (U1000)	-		
AUTO DRIVE POS.	No indication	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	—	-	-	-	CAN COMMCIRCUIT (U1000)	-		
ALL MODE AWD/4WD	_	NG	UNKWN	UNKWN	_	_	_	_	_	UNKWN	_	-	UNKWN	_	CAN COMM CIRCUIT (U1000)	_		
ABS	-	NG	UNKWN	UNKWN	-	UNKWN	—	_	_	-	UNKWN	UNKWN	-	-	CAN COMM CIRCUIT (U1000)	-		
IPDM E/R	No indication	_	UNKWN	UNKWN	-	—	-	UNKWN	_	-	_	-	-	-	CAN COMM CIRCUIT (U1000)	_		

Check IPDM E/R ignition relay circuit continuously sticks "ON". Refer to <u>LAN-425</u>, "IPDM E/R Ignition Relay <u>Circuit Inspection</u>".

						С										
SELECT SYSTEM screen																
		Initial diagnosis	Transmit diagnosis	ECM	I-KEY	тсм	TIRE-P	BCM /SEC	DISPLAY	METER /M&A	STRG	AWD/4WD /e4WD	VDC/TCS /ABS	IPDM E/R	SELF-DIAG RESULTS	
ENGINE	-	NG	UNKWN	_	_	UNKWN	_	UNKWN	_	UNKWN	_	UNKWN	UNKWN	UNKWN	CAN COMM CIRCUIT (U1000)	CAN COMM CIRCUIT (U1001)
INTELLIGENT KEY	No indication	-	UNKWN	UNKWN	-	_	—	UNKWN	—	UNKWN	_	-	_	-	CAN COMM CIRCUIT (U1000)	-
TRANSMISSION	No indication	NG	UNKWN	-	-	_	_	-	_	-	—	-	UNKWN	-	CAN COMMCIRCUIT (UN00)	_
AIR PRESSURE MONITOR	No indication	NG	UNKWN	-	-	-	—	_	-	UNKWN	-	-	_	_	CAN COMM CIRCUIT (U1000)	_
BCM	No indication	NG	UNKWN	UNKWN	UNKWN	-	-	_	-	UNKWN	-	-	-	UNKWN	CAN COMM CIRCUIT (U1000)	-
Display control unit	-	NG	UNKWN	UNKWN	Ι		UNKWN	UNKWN		UNKWN	—	-	—	UNKWN	—	—
METER A/C AMP	No indication	—	UNKWN	UNKWN	Ι	UNKWN	UNKWN	UNKWN	UNKWN		—	UNKWN	UNKWN	—	CAN COMM CIRCUIT (U1000)	_
AUTO DRIVE POS.	No indication	NG	UNKWN		Ι	UNKWN	-	UNKWN	-	UNKWN	—	-	_	—	CAN COMM CIRCUIT (U1000)	_
ALL MODE AWD/4WD	-	NG	UNKWN		Ι	—	—	-	—		—	-	UNKWN	—	CAN COMM/CIRCUIT (U1000)	—
ABS	_	NG	UNKWN	_	_	UNKWN	_	_	_	_	_	UNKWN	_	_	CAN COMMCIRCUIT (U100)	_
IPDM E/R	No indication	_	UNKWN	UNKWN	-	_	_	UNKWN	_	_	_	-	_	_	CAN COMM CIRCUIT (U1000)	_

### Inspection Between TCM and Data Link Connector Circuit 1. CHECK HARNESS FOR OPEN CIRCUIT

AKS00CHV

#### 1. Turn ignition switch OFF.

- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect ECM connector and harness connector M82.
- Check continuity between harness connector M82 terminals 8 (L), 9 (Y) and data link connector M24 terminals 6 (L), 14 (Y).
  - Harness connector

# 8 (L) - 6 (L)

9 (Y) - 14 (Y)

: Continuity should exist.

: Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to <u>LAN-7, "TROUBLE DIAGNOSES WORK FLOW"</u>. NG >> Repair harness.

# Inspection Between Data Link Connector and Driver Seat Control Unit Circuit

1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M9
- Harness connector B2

#### OK or NG

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

### [CAN]



PKIB5308F

# $\overline{\mathbf{3}}$ . Check harness for open circuit

- 1. Disconnect AWD control unit connector.
- Check continuity between harness connector E105 terminals 4 (L), 10 (Y) and AWD control unit harness connector E111 terminals 8 (L), 16 (Y).
  - 4 (L) 8 (L)
  - 10 (Y) 16 (Y)

: Continuity should exist.

: Continuity should exist.

OK or NG

- OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW".
- NG >> Repair harness.

# Inspection Between AWD Control Unit and ABS Actuator and Electric Unit (Control Unit) Circuit

- 1. CHECK CONNECTOR
- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect following connectors.
- ECM
- AWD control unit
- ABS actuator and electric unit (control unit)
- 4. Check continuity between AWD control unit harness connector E111 terminals 8 (L), 16 (Y) and ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L), 15 (Y).
  - 8 (L) 11 (L)
  - 16 (Y) 15 (Y)

: Continuity should exist. : Continuity should exist.

#### OK or NG

OK >> Connect all the connectors and diagnose again. Refer to LAN-7, "TROUBLE DIAGNOSES WORK FLOW" .

NG >> Repair harness.

# **ECM Circuit Inspection**

#### 1. CHECK CONNECTOR

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

#### OK or NG

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

AKS00CIC



AKS00CHY

2005 Murano





- 1. Disconnect ECM connector.
- 2. Check resistance between ECM harness connector M80 terminals 94 (L) and 86 (Y).

#### 94 (L) - 86 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace ECM.
- NG >> Repair harness between ECM and BCM.



**Intelligent Key Unit Circuit Inspection** 

#### **1. CHECK CONNECTOR**

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of Intelligent Key unit for damage, bend and loose connection (control <sub>G</sub> module side and harness side).

#### OK or NG

OK >> GO TO 2. NG >> Repair ter

>> Repair terminal or connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect Intelligent Key unit connector.
- 2. Check resistance between Intelligent Key unit harness connector M99 terminals 2 (L) and 3 (Y).

#### 2 (L) - 3 (Y)

#### : Approx. 54 - 66Ω

#### OK or NG

OK >> Replace Intelligent Key unit.

NG >> Repair harness between Intelligent Key unit and BCM.



#### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side and harness side).
- TCM connector
- Harness connector F102
- Harness connector M82

#### OK or NG

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



### LAN-413

[CAN]

AKS00CHZ

F

Н

А

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect TCM connector.
- 2. Check resistance between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace TCM.
- NG >> Repair harness between TCM and BCM.



# Low Tire Pressure Warning Control Unit Circuit Inspection

AKS00CI1

#### 1. Turn ignition switch OFF.

1. CHECK CONNECTOR

- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of low tire pressure warning 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 low tire pressure warning control unit connector.
- 2. Check resistance between low tire pressure warning control unit harness connector M81 terminals 9 (L) and 21 (Y).
  - 9 (L) 21 (Y)

#### : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace low tire pressure warning control unit.
- NG >> Repair harness between low tire pressure warning control unit and BCM.



### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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.



AKS00Cl2

# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check resistance between BCM harness connector M34 terminals 39 (L) and 40 (Y).

#### 39 (L) - 40 (Y)

: Approx. 54 - 66Ω

OK or NG

- OK >> Replace BCM. Refer to <u>BCS-16</u>, "Removal and Installation of <u>BCM</u>".
- NG >> Repair harness between BCM and harness connector M82.



[CAN]

AKS00CI3

F

Н

А

**Display Control Unit Circuit Inspection** 

#### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of display control unit for damage, bend and loose connection (unit side  $_{\rm G}$  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 M43 terminals 25 (L) and 26 (Y).

#### 25 (L) - 26 (Y)

#### : **Approx. 54 - 66**Ω

#### OK or NG

OK >> Replace display control unit.

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



# **Data Link Connector Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check data link connector and terminals 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 M24 terminals 6 (L) and 14 (Y).

: Approx. 54 - 66 $\Omega$ 

#### 6 (L) - 14 (Y)

OK or NG

- OK >> Diagnose again. Refer to <u>LAN-7, "TROUBLE DIAG-</u><u>NOSES WORK FLOW"</u>.
- NG >> Repair harness between data link connector and unified meter and A/C amp.



# Unified Meter and A/C Amp. Circuit Inspection

#### 1. CHECK CONNECTOR

AKS00CI5

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of unified meter and A/C amp. 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 unified meter and A/C amp. connector.
- 2. Check resistance between unified meter and A/C amp. harness connector M49 terminals 1 (L) and 11 (Y).

#### 1 (L) - 11 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace unified meter and A/C amp.
- NG >> Repair harness between unified meter and A/C amp. and data link connector.



#### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.



# $\overline{2}$ . CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect steering angle sensor connector.
- 2. Check resistance between steering angle sensor harness connector M33 terminals 4 (L) and 5 (Y).

#### 4 (L) - 5 (Y)

: **Approx. 54 - 66**Ω

#### OK or NG

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



**Driver Seat Control Unit Circuit Inspection** 

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control unit side and  $_{\rm G}$  harness side).
- Driver seat control unit connector
- Harness connector B301
- Harness connector B9

#### 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 B303 terminals 3 (L/Y) and 19 (BR/W).

**3 (L/Y) - 19 (BR/W)** : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace driver seat control unit.
- NG >> Repair harness between driver seat control unit and harness connector B4.



# **AWD Control Unit Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check terminals and connector of AWD 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.

[CAN]

AKS00CI7

F

Н

А

- 1. Disconnect AWD control unit connector.
- 2. Check resistance between AWD control unit harness connector E111 terminals 8 (L) and 16 (Y).

#### 8 (L) - 16 (Y)

: Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace AWD control unit.
- NG >> Repair harness between AWD control unit and IPDM E/ R.



# ABS Actuator and Electric Unit (Control Unit) Circuit Inspection

#### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative 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.
- Check resistance between ABS actuator and electric unit (control unit) harness connector E24 terminals 11 (L) and 15 (Y).
  - 11 (L) 15 (Y)

#### : Approx. 54 - 66Ω

#### OK or NG

- OK >> Replace ABS actuator and electric unit (control unit).
- NG >> Repair harness between ABS actuator and electric unit (control unit) and IPDM E/R.

# **IPDM E/R Circuit Inspection**

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 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.





AKS00CI9

AKS00CI8

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect IPDM E/R connector.
- 2. Check resistance between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

: Approx. 108 - 132Ω

#### OK or NG

- OK >> Replace IPDM E/R.
- NG >> Repair harness between IPDM E/R and ABS actuator and electric unit (control unit).



[CAN]

AKS00CIA

F

Н

А

**CAN Communication Circuit Inspection** 

### 1. CHECK CONNECTOR

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check following terminals and connectors for damage, bend and loose connection (control module side, G control unit side, unit side, meter side, sensor side and harness side).
- ECM
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display control unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- IPDM E/R
- Between ECM and IPDM E/R
- Between ECM and TCM
- Between ECM and driver seat control unit

#### OK or NG

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

L

Μ

J

# 2. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- ECM connector
- Intelligent Key unit connector
- Harness connector M82
- Low tire pressure warning control unit connector
- BCM connector
- Display control unit connector
- Unified meter and A/C amp. connector
- Steering angle sensor connector
- Harness connector M9
- Check continuity between data link connector M24 terminals 6 (L) and 14 (Y).

6 (L) - 14 (Y)

: Continuity should not exist.

#### OK or NG

#### OK >> GO TO 3.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display control unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9



# $\overline{3}$ . CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between data link connector M24 terminals 6 (L), 14 (Y) and ground.

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

: Continuity should not exist.

OK or NG

- OK >> GO TO 4.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between data link connector and ECM
  - Harness between data link connector and Intelligent Key unit
  - Harness between data link connector and harness connector M82
  - Harness between data link connector and low tire pressure warning control unit
  - Harness between data link connector and BCM
  - Harness between data link connector and display control unit
  - Harness between data link connector and unified meter and A/C amp.
  - Harness between data link connector and steering angle sensor
  - Harness between data link connector and harness connector M9

#### 4. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect TCM connector. 1.
- 2. Check continuity between TCM harness connector F103 terminals 5 (L) and 6 (Y).

#### 5 (L) - 6 (Y)

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 5.
- NG >> Repair harness between TCM and harness connector F102.



### 5. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between TCM harness connector F103 terminals 5 (L), 6 (Y) and ground.

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

- OK or NG
- OK >> GO TO 6.
- NG >> Repair harness between TCM and harness connector F102.





Μ

А

F

F

Н

## 6. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect harness connector B4 and harness connector B9.
- 2. Check continuity between harness connector B4 terminals 4 (L) and 10 (Y).

#### 4 (L) - 10 (Y)

#### : Continuity should not exist.

#### OK or NG

- OK >> GO TO 7.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

## 7. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between harness connector B4 terminals 4 (L), 10 (Y) and ground.

- 4 (L) Ground
- : Continuity should not exist.
- 10 (Y) Ground
- : Continuity should not exist.

#### OK or NG

- OK >> GO TO 8.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between harness connector B4 and harness connector B2
  - Harness between harness connector B4 and harness connector B9

## 8. CHECK HARNESS FOR SHORT CIRCUIT

- Disconnect driver seat control unit connector. 1.
- Check continuity between driver seat control unit harness con-2. nector B303 terminals 3 (L/Y) and 19 (BR/W).

#### 3 (L/Y) - 19 (BR/W) : Continuity should not exist.

#### OK or NG

- OK >> GO TO 9.
- >> Repair harness between driver seat control unit and har-NG ness connector B301.







BAT

## 9. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between driver seat control unit harness connector B303 terminals 3 (L/Y), 19 (BR/W) and ground.

3 (L/Y) - Ground

I : Continuity should not exist. und : Continuity should not exist.

19 (BR/W) - Ground

#### OK or NG

- OK >> GO TO 10.
- NG >> Repair harness between driver seat control unit and harness connector B301.

# 10. CHECK HARNESS FOR SHORT CIRCUIT

- 1. Disconnect following connectors.
- AWD control unit connector
- ABS actuator and electric unit (control unit) connector
- IPDM E/R connector
- Check continuity between IPDM E/R harness connector E9 terminals 48 (L) and 49 (Y).

#### 48 (L) - 49 (Y)

#### : Continuity should not exist.

#### OK or NG

OK >> GO TO 11.

- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105

# 11. CHECK HARNESS FOR SHORT CIRCUIT

Check continuity between IPDM E/R harness connector E9 terminals 48 (L), 49 (Y) and ground.

> 48 (L) - Ground 49 (Y) - Ground

: Continuity should not exist.

: Continuity should not exist.

#### OK or NG

- OK >> GO TO 12.
- NG >> Check the following harnesses. If any harness is damaged, repair the harness.
  - Harness between IPDM E/R and AWD control unit
  - Harness between IPDM E/R and ABS actuator and electric unit (control unit)
  - Harness between IPDM E/R and harness connector E105







А

F

LAN

Μ

# 12. CHECK ECM AND IPDM E/R INTERNAL CIRCUIT

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

94 - 86

3. Check resistance between IPDM E/R terminals 48 and 49.

: Approx. 108 – 132 Ω

- OK or NG
- OK >> GO TO 13.

48 - 49

NG >> Replace ECM and/or IPDM E/R.



# 13. снеск зумртом

- 1. Fill in described symptoms on the column "Symptom" in the check sheet.
- 2. Connect all the connectors, and then make sure that the symptom is reproduced.

: Approx. 108 – 132  $\Omega$ 

OK or NG

OK >> GO TO 14.

NG >> Refer to LAN-17, "Example of Filling in Check Sheet When Initial Conditions Are Not Reproduced"

# 14. CHECK UNIT REPRODUCIBILITY

Perform the following procedure for each unit, and then perform reproducibility test.

- 1. Turn ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the unit connector.
- 4. Connect the battery cable to the negative terminal.
- 5. Make sure that the symptom filled in the "Symptom" of the check sheet is reproduced. (Do not confuse it with the symptom related to removed unit.)
- 6. Make sure that the same symptom is reproduce.
- Intelligent Key unit
- TCM
- Low tire pressure warning control unit
- BCM
- Display control unit
- Unified meter and A/C amp.
- Steering angle sensor
- Driver seat control unit
- AWD control unit
- ABS actuator and electric unit (control unit)
- ECM
- IPDM E/R

#### Check results

Reproduced>>Install removed unit, and then check the other unit. Not reproduced>>Replace removed unit.

# CAN SYSTEM (TYPE 10)

	[CAN]
PDM E/R Ignition Relay Circuit Inspection	AKS00CIB
beck the following. If no malfunction is found, replace the IPDM E/R.	
IPDM E/R power supply circuit. Refer to <u>PG-27</u> , "IPDM E/R Power/Ground Cir	cuit Inspection".
Ignition power supply circuit. Refer to <u>PG-10, "IGNITION POWER SUPPLY</u> AND/OR "START".	- IGNITION SW. IN "ON"
	-
	L

# CAN SYSTEM (TYPE 10)