

D

Е

# **CONTENTS**

CAN FUNDAMENTAL	PRECAUTIONS	.22	F
PRECAUTION6	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-		
PRECAUTIONS 6	SIONER"		G
Precautions for Trouble Diagnosis6	Precaution for Battery Service		
	Precautions for Trouble Diagnosis		
Precautions for Harness Repair6	Precautions for Harness Repair	.22	Н
FUNCTION DIAGNOSIS7	BASIC INSPECTION	.24	
CAN COMMUNICATION SYSTEM7	DIAGNOSIS AND REPAIR WORKFLOW	-24	1
System Description7	Interview Sheet		ı
System Diagram7	interview Griect	.27	
CAN Communication Control Circuit8	FUNCTION DIAGNOSIS	.25	J
DIAG ON CAN9	CAN COMMUNICATION SYSTEM	. 25	0
Description9	CAN System Specification Chart		
System Diagram9	CAN Communication Signal Chart		K
TROUBLE DIAGNOSIS10	COMPONENT DIAGNOSIS	20	
Condition of Error Detection10	COMI CILLIT DIAGRACIO	. 23	
Symptom When Error Occurs in CAN Communi-	CAN COMMUNICATION SYSTEM	.29	L
cation System10	Component Parts Location		
CAN Diagnosis with CONSULT-III13	Wiring Diagram - CAN SYSTEM		
Self-Diagnosis13			LAN
CAN Diagnostic Support Monitor13	MALFUNCTION AREA CHART	.36	LAIN
How to Use CAN Communication Signal Chart 15	Main Line		
· ·	Branch Line	.36	
BASIC INSPECTION16	Short Circuit	.36	Ν
DIAGNOSIS AND REPAIR WORKFLOW16	MAIN LINE BETWEEN BCM AND DLC CIR-		
Trouble Diagnosis Flow Chart16	CUIT	.37	$\bigcirc$
Trouble Diagnosis Procedure16	Diagnosis Procedure	.37	0
CAN	MAIN LINE DETIMEEN DI O AND ADD OID		
	MAIN LINE BETWEEN DLC AND ADP CIR-		Р
HOW TO USE THIS MANUAL21	CUIT		Р
HOW TO USE THIS SECTION21	Diagnosis Procedure	.38	
Caution21	MAIN LINE BETWEEN ADP AND ABS CIR-		
Abbreviation List21	CUIT	.39	
	Diagnosis Procedure		
PRECAUTION22	•		
	ECM BRANCH LINE CIRCUIT	.41	

Diagnosis Procedure	. 41	Diagnosis Procedure62
A-BAG BRANCH LINE CIRCUIT  Diagnosis Procedure		A-BAG BRANCH LINE CIRCUIT
AV BRANCH LINE CIRCUIT  Diagnosis Procedure		AV BRANCH LINE CIRCUIT 64 Diagnosis Procedure
BCM BRANCH LINE CIRCUIT  Diagnosis Procedure		BCM BRANCH LINE CIRCUIT65 Diagnosis Procedure65
PSB BRANCH LINE CIRCUIT  Diagnosis Procedure		<b>DLC BRANCH LINE CIRCUIT66</b> Diagnosis Procedure66
TCM BRANCH LINE CIRCUIT  Diagnosis Procedure		M&A BRANCH LINE CIRCUIT 67 Diagnosis Procedure 67
AFS BRANCH LINE CIRCUIT  Diagnosis Procedure		STRG BRANCH LINE CIRCUIT 68 Diagnosis Procedure
DLC BRANCH LINE CIRCUIT  Diagnosis Procedure		ADP BRANCH LINE CIRCUIT69 Diagnosis Procedure69
M&A BRANCH LINE CIRCUIT  Diagnosis Procedure		ABS BRANCH LINE CIRCUIT70 Diagnosis Procedure70
STRG BRANCH LINE CIRCUIT  Diagnosis Procedure		IPDM-E BRANCH LINE CIRCUIT71 Diagnosis Procedure71
ADP BRANCH LINE CIRCUIT  Diagnosis Procedure		CAN COMMUNICATION CIRCUIT
RAS BRANCH LINE CIRCUIT  Diagnosis Procedure		CAN SYSTEM (TYPE 2) COMPONENT DIAGNOSIS74
ABS BRANCH LINE CIRCUIT  Diagnosis Procedure		MAIN LINE BETWEEN BCM AND DLC CIR- CUIT74
ICC BRANCH LINE CIRCUIT  Diagnosis Procedure		Diagnosis Procedure74  MAIN LINE BETWEEN DLC AND ADP CIR-
IPDM-E BRANCH LINE CIRCUIT  Diagnosis Procedure		CUIT
CAN COMMUNICATION CIRCUIT  Diagnosis Procedure		MAIN LINE BETWEEN ADP AND ABS CIR-CUIT
CAN SYSTEM (TYPE 1) COMPONENT DIAGNOSIS	EO	ECM BRANCH LINE CIRCUIT78
	. 30	Diagnosis Procedure78
MAIN LINE BETWEEN BCM AND DLC CIR- CUIT Diagnosis Procedure		A-BAG BRANCH LINE CIRCUIT
MAIN LINE BETWEEN DLC AND ADP CIR-		AV BRANCH LINE CIRCUIT 80 Diagnosis Procedure
Diagnosis Procedure		BCM BRANCH LINE CIRCUIT 81
MAIN LINE BETWEEN ADP AND ABS CIR-		Diagnosis Procedure81
CUITDiagnosis Procedure		DLC BRANCH LINE CIRCUIT82 Diagnosis Procedure82
ECM BRANCH LINE CIRCUIT		M&A BRANCH LINE CIRCUIT 83

Diagnosis Procedure125	COMPONENT DIAGNOSIS147
ICC BRANCH LINE CIRCUIT 126	MAIN LINE BETWEEN BCM AND DLC CIR-
Diagnosis Procedure126	CUIT147
IPDM-E BRANCH LINE CIRCUIT 127	Diagnosis Procedure
Diagnosis Procedure127	MAIN LINE BETWEEN DLC AND ADP CIR-
CAN COMMUNICATION CIRCUIT 128 Diagnosis Procedure	<b>CUIT148</b> Diagnosis Procedure
CAN SYSTEM (TYPE 5)	MAIN LINE BETWEEN ADP AND ABS CIR-
COMPONENT DIAGNOSIS130	CUIT149 Diagnosis Procedure149
MAIN LINE BETWEEN BCM AND DLC CIR-	•
CUIT 130	ECM BRANCH LINE CIRCUIT151 Diagnosis Procedure151
Diagnosis Procedure130	Diagnosis Procedure131
MAIN LINE BETWEEN DLC AND ADP CIR-	A-BAG BRANCH LINE CIRCUIT152 Diagnosis Procedure152
<b>CUIT</b> 131  Diagnosis Procedure	AV BRANCH LINE CIRCUIT153
· ·	Diagnosis Procedure
MAIN LINE BETWEEN ADP AND ABS CIR-	BCM BRANCH LINE CIRCUIT154
<b>CUIT</b> 132  Diagnosis Procedure	Diagnosis Procedure
· ·	<b>v</b>
ECM BRANCH LINE CIRCUIT 134  Diagnosis Procedure	TCM BRANCH LINE CIRCUIT155 Diagnosis Procedure155
· ·	
A-BAG BRANCH LINE CIRCUIT135 Diagnosis Procedure135	DLC BRANCH LINE CIRCUIT156 Diagnosis Procedure156
AV BRANCH LINE CIRCUIT136	M&A BRANCH LINE CIRCUIT157
Diagnosis Procedure136	Diagnosis Procedure
BCM BRANCH LINE CIRCUIT137	STRG BRANCH LINE CIRCUIT158
Diagnosis Procedure137	Diagnosis Procedure 158
TCM BRANCH LINE CIRCUIT138	ADP BRANCH LINE CIRCUIT159
Diagnosis Procedure138	Diagnosis Procedure
DLC BRANCH LINE CIRCUIT139	RAS BRANCH LINE CIRCUIT160
Diagnosis Procedure139	Diagnosis Procedure 160
M&A BRANCH LINE CIRCUIT140	ABS BRANCH LINE CIRCUIT161
Diagnosis Procedure140	Diagnosis Procedure
	·
STRG BRANCH LINE CIRCUIT 141	IPDM-E BRANCH LINE CIRCUIT162 Diagnosis Procedure162
Diagnosis Procedure141	
ADP BRANCH LINE CIRCUIT142	CAN COMMUNICATION CIRCUIT163
Diagnosis Procedure142	Diagnosis Procedure
ABS BRANCH LINE CIRCUIT143	CAN SYSTEM (TYPE 7)
Diagnosis Procedure143	COMPONENT DIAGNOSIS165
IPDM-E BRANCH LINE CIRCUIT144	MAIN LINE BETWEEN BCM AND DLC CIR-
Diagnosis Procedure144	CUIT165
CAN COMMUNICATION CIRCUIT 145	Diagnosis Procedure165
Diagnosis Procedure145	MAIN LINE BETWEEN DLC AND ADP CIR-
CAN SYSTEM (TYPE 6)	CUIT166
	Diagnosis Procedure
	<b>5</b>

MAIN LINE BETWEEN ADP AND ABS CIR- CUIT167	MAIN LINE BETWEEN DLC AND ADP CIR- CUIT186
Diagnosis Procedure	Diagnosis Procedure186
•	•
ECM BRANCH LINE CIRCUIT169 Diagnosis Procedure	MAIN LINE BETWEEN ADP AND ABS CIR- CUIT187
	Diagnosis Procedure187
A-BAG BRANCH LINE CIRCUIT170	
Diagnosis Procedure170	ECM BRANCH LINE CIRCUIT189
AV BRANCH LINE CIRCUIT171	Diagnosis Procedure189
Diagnosis Procedure171	A-BAG BRANCH LINE CIRCUIT190
BCM BRANCH LINE CIRCUIT172	Diagnosis Procedure190
Diagnosis Procedure	AV BRANCH LINE CIRCUIT191
·	Diagnosis Procedure191
PSB BRANCH LINE CIRCUIT173	•
Diagnosis Procedure173	BCM BRANCH LINE CIRCUIT192
CM BRANCH LINE CIRCUIT174	Diagnosis Procedure192
Diagnosis Procedure174	PSB BRANCH LINE CIRCUIT193
AFS BRANCH LINE CIRCUIT175	Diagnosis Procedure193
Diagnosis Procedure	TCM BRANCH LINE CIRCUIT194
	Diagnosis Procedure194
DLC BRANCH LINE CIRCUIT176	AFS BRANCH LINE CIRCUIT195
Diagnosis Procedure176	Diagnosis Procedure195
#A BRANCH LINE CIRCUIT177	Diagnosis Flocedule195
Diagnosis Procedure177	DLC BRANCH LINE CIRCUIT196
STRG BRANCH LINE CIRCUIT178	Diagnosis Procedure196
Diagnosis Procedure178	M&A BRANCH LINE CIRCUIT197
ADD DDANCH LINE CIDCUIT 470	Diagnosis Procedure197
ADP BRANCH LINE CIRCUIT179  Diagnosis Procedure	STRG BRANCH LINE CIRCUIT198
·	Diagnosis Procedure198
ABS BRANCH LINE CIRCUIT180	•
Diagnosis Procedure180	ADP BRANCH LINE CIRCUIT199
CC BRANCH LINE CIRCUIT181	Diagnosis Procedure199
Diagnosis Procedure181	RAS BRANCH LINE CIRCUIT200
PDM-E BRANCH LINE CIRCUIT182	Diagnosis Procedure200
Diagnosis Procedure	ABS BRANCH LINE CIRCUIT201
<b>G</b>	Diagnosis Procedure201
CAN COMMUNICATION CIRCUIT183	•
Diagnosis Procedure	ICC BRANCH LINE CIRCUIT202
CAN SYSTEM (TYPE 8)	Diagnosis Procedure202
COMPONENT DIAGNOSIS185	IPDM-E BRANCH LINE CIRCUIT203
	Diagnosis Procedure203
MAIN LINE BETWEEN BCM AND DLC CIR-	CAN COMMUNICATION CIRCUIT204
<b>CUIT</b> 185  Diagnosis Procedure185	Diagnosis Procedure204
Diagnosis Flocedule185	

# **PRECAUTION**

## **PRECAUTIONS**

# Precautions for Trouble Diagnosis

#### INFOID:0000000001665994

### **CAUTION:**

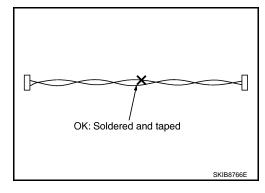
- Never apply 7.0 V or more to the measurement terminal.
- Use a tester with open terminal voltage of 7.0 V or less.
- Turn the ignition switch OFF and disconnect the battery cable from the negative terminal when checking the harness.

## Precautions for Harness Repair

INFOID:0000000001665995

Solder the repaired area and wrap tape around the soldered area.
 NOTE:

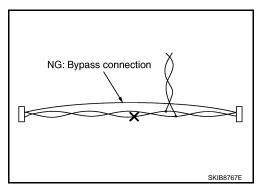
A fray of twisted lines must be within 110 mm (4.33 in).



Bypass connection is never allowed at the repaired area.

#### NOTE:

Bypass connection may cause CAN communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



 Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

INFOID:0000000001665996

# **FUNCTION DIAGNOSIS**

## CAN COMMUNICATION SYSTEM

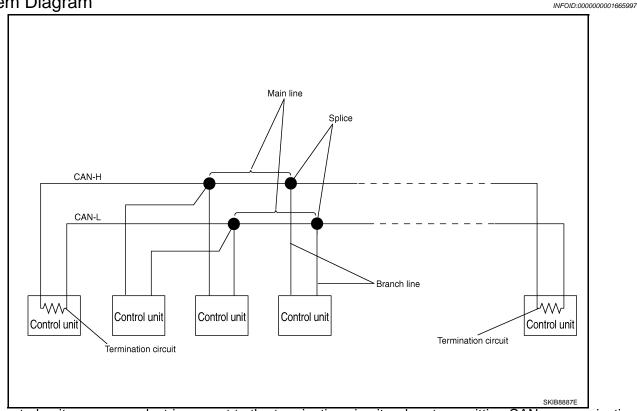
## System Description

 CAN communication is a multiplex communication system. This enables the system to transmit and receive large quantities of data at high speed by connecting control units with two communication lines (CAN-H and CAN-L).

Control units on the CAN network transmit signals using the CAN communication control circuit. They
receive only necessary signals from other control units to operate various functions.

CAN communication lines adopt twisted-pair line style (two lines twisted) for noise immunity.

## System Diagram



Each control unit passes an electric current to the termination circuits when transmitting CAN communication signal. The termination circuits produce an electrical potential difference between CAN-H and CAN-L. CAN communication system transmits and receives CAN communication signals by the potential difference.

Component	Description
Main line	CAN communication line between splices
Branch line	CAN communication line between splice and a control unit
Splice	A point connecting a branch line with a main line
Termination circuit	Refer to LAN-8, "CAN Communication Control Circuit".

В

Α

Е

D

F

G

Н

ı

K

LAN

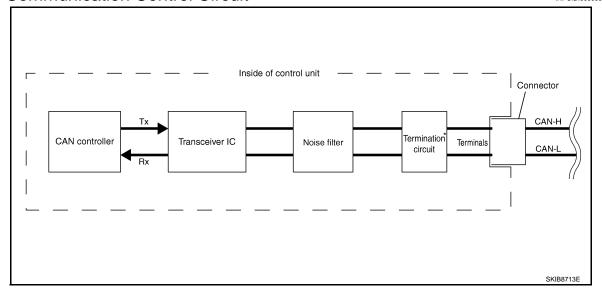
Ν

 $\cap$ 

Ρ

# **CAN Communication Control Circuit**





Component	System description
CAN controller	It controls CAN communication signal transmission and reception, error detection, etc.
Transceiver IC	It converts digital signal into CAN communication signal, and CAN communication signal into digital signal.
Noise filter	It eliminates noise of CAN communication signal.
Termination circuit <sup>*</sup> (Resistance of approx. 120 Ω)	It produces potential difference.

<sup>\*:</sup> These are the only control units wired with both ends of CAN communication system.

Α

В

D

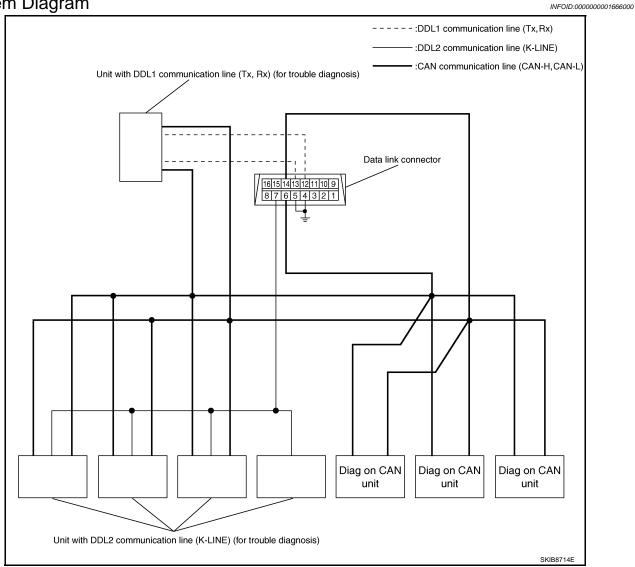
Е

## **DIAG ON CAN**

**Description** 

"Diag on CAN" is a diagnosis using CAN communication instead of previous DDL1 and DDL2 communication lines, between control units and diagnosis unit.

System Diagram



Name	Harness	Description
DDL1	Tx Rx	It is used for trouble diagnosis. (CAN-H and CAN-L are used for controlling)
DDL2	K-LINE	It is used for trouble diagnosis. (CAN-H and CAN-L are used for controlling)
Diag on CAN	CAN-H CAN-L	It is used for trouble diagnosis and control.

Revision: 2007 June LAN-9 G37 Coupe

Ν

LAN

0

## TROUBLE DIAGNOSIS

### Condition of Error Detection

INFOID:0000000001666001

"U1000" or "U1001" is indicated on SELF-DIAG RESULTS on CONSULT-III if CAN communication signal is not transmitted or received between units for 2 seconds or more.

#### CAN COMMUNICATION SYSTEM ERROR

- CAN communication line open (CAN-H, CAN-L, or both)
- CAN communication line short (ground, between CAN communication lines, other harnesses)
- Error of CAN communication control circuit of the unit connected to CAN communication line

# WHEN "U1000" OR "U1001" IS INDICATED EVEN THOUGH CAN COMMUNICATION SYSTEM IS NORMAL

- Removal/installation of parts: Error may be detected when removing and installing CAN communication unit and related parts while turning the ignition switch ON. (A DTC except for CAN communication may be detected.)
- Fuse blown out (removed): CAN communication of the unit may cease.
- Voltage drop: Error may be detected if voltage drops due to discharged battery when turning the ignition switch ON (Depending on the control unit which carries out CAN communication).
- Error may be detected if the power supply circuit of the control unit, which carries out CAN communication, malfunctions (Depending on the control unit which carries out CAN communication).
- · Error may be detected if reprogramming is not completed normally.

#### NOTE:

CAN communication system is normal if "U1000" or "U1001" is indicated on SELF-DIAG RESULTS of CON-SULT-III under the above conditions. Erase the memory of the self-diagnosis of each unit.

## Symptom When Error Occurs in CAN Communication System

INFOID:0000000001666002

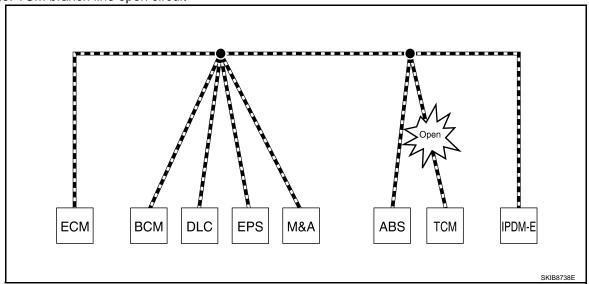
In CAN communication system, multiple units mutually transmit and receive signals. Each unit cannot transmit and receive signals if any error occurs on CAN communication line. Under this condition, multiple control units related to the root cause malfunction or go into fail-safe mode.

#### **ERROR EXAMPLE**

#### NOTE:

- Each vehicle differs in symptom of each unit under fail-safe mode and CAN communication line wiring.
- Refer to LAN-21, "Abbreviation List" for the unit abbreviation.

#### Example: TCM branch line open circuit



Unit name	Symptom
ECM	Engine torque limiting is affected, and shift harshness increases.
BCM	Reverse warning chime does not sound.

## **TROUBLE DIAGNOSIS**

### < FUNCTION DIAGNOSIS >

#### [CAN FUNDAMENTAL]

Α

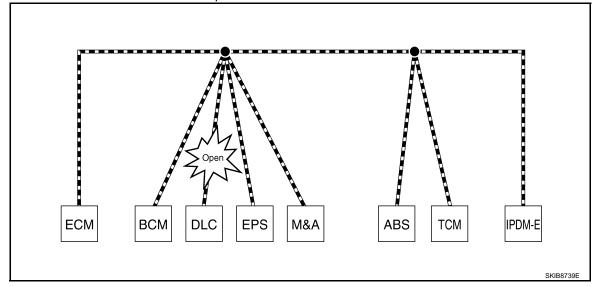
В

D

Е

Unit name	Symptom
EPS control unit	Normal operation.
Combination meter	<ul><li>Shift position indicator and OD OFF indicator turn OFF.</li><li>Warning lamps turn ON.</li></ul>
ABS actuator and electric unit (control unit)	Normal operation.
TCM	No impact on operation.
IPDM E/R	Normal operation.

Example: Data link connector branch line open circuit



Unit name	Symptom
ECM	
BCM	
EPS control unit	
Combination meter	Normal operation.
ABS actuator and electric unit (control unit)	
TCM	
IPDM E/R	

### NOTE:

- When data link connector branch line is open, transmission and reception of CAN communication signals are not affected. Therefore, no symptoms occur. However, be sure to repair malfunctioning circuit.
- The model (all units on CAN communication system are Diag on CAN) cannot perform CAN diagnosis with CONSULT-III if the following error occurs. The error is judged by the symptom.

Error	Difference of symptom
Data link connector branch line open circuit	Normal operation.
CAN-H, CAN-L harness short-circuit	Most of the units which are connected to the CAN communication system enter fail-safe mode or are deactivated.

LAN

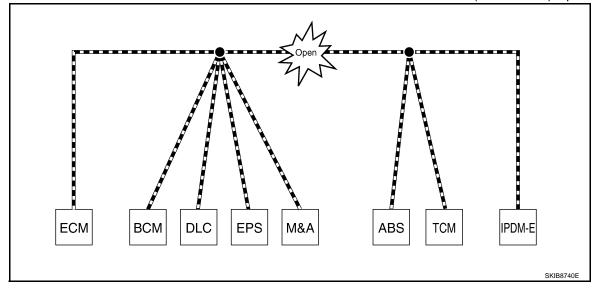
Ν

0

D

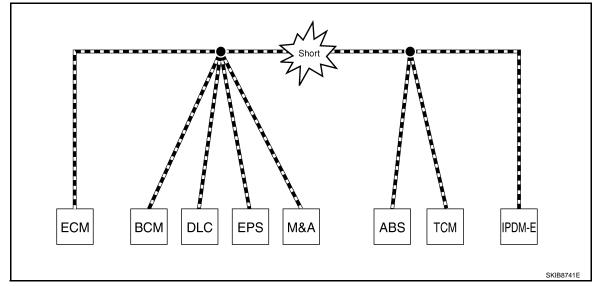
Revision: 2007 June LAN-11 G37 Coupe

Example: Main Line Between Data Link Connector and ABS Actuator and Electric Unit (Control Unit) Open Circuit



Unit name	Symptom
ECM	Engine torque limiting is affected, and shift harshness increases.
BCM	Reverse warning chime does not sound.     The front wiper moves under continuous operation mode even though the front wiper switch being in the intermittent position.
EPS control unit	The steering effort increases.
Combination meter	<ul> <li>The shift position indicator and OD OFF indicator turn OFF.</li> <li>The speedometer is inoperative.</li> <li>The odo/trip meter stops.</li> </ul>
ABS actuator and electric unit (control unit)	Normal operation.
TCM	No impact on operation.
IPDM E/R	When the ignition switch is ON,  The headlamps (Lo) turn ON.  The cooling fan continues to rotate.

Example: CAN-H, CAN-L Harness Short Circuit



### [CAN FUNDAMENTAL]

Α

В

D

Е

F

Н

Unit name	Symptom
ECM	<ul><li>Engine torque limiting is affected, and shift harshness increases.</li><li>Engine speed drops.</li></ul>
всм	<ul> <li>Reverse warning chime does not sound.</li> <li>The front wiper moves under continuous operation mode even though the front wiper switch being in the intermittent position.</li> <li>The room lamp does not turn ON.</li> <li>The engine does not start (if an error or malfunction occurs while turning the ignition switch OFF.)</li> <li>The steering lock does not release (if an error or malfunction occurs while turning the ignition switch OFF.)</li> </ul>
EPS control unit	The steering effort increases.
Combination meter	<ul> <li>The tachometer and the speedometer do not move.</li> <li>Warning lamps turn ON.</li> <li>Indicator lamps do not turn ON.</li> </ul>
ABS actuator and electric unit (control unit)	Normal operation.
TCM	No impact on operation.
IPDM E/R	When the ignition switch is ON,  The headlamps (Lo) turn ON.  The cooling fan continues to rotate.

# CAN Diagnosis with CONSULT-III

INFOID:0000000001666003

CAN diagnosis on CONSULT-III extracts the root cause by receiving the following information.

- Response to the system call
- Control unit diagnosis information
- · Self-diagnosis
- CAN diagnostic support monitor

## Self-Diagnosis

INFOID:0000000001666004

DTC	Self-diagnosis item (CONSULT-III indication)	DTC detection condition	Inspection/Action	
U1000	CAN COMM CIRCUIT	When ECM is not transmitting or receiving CAN communication signal of OBD (emission-related diagnosis) for 2 seconds or more.		
01000	CAN COMM CIRCUIT	When a control unit (except for ECM) is not transmitting or receiving CAN communication signal for 2 seconds or more.	Start the inspection. Refer to the applicable sec-	
U1001	CAN COMM CIRCUIT	When ECM is not transmitting or receiving CAN communication signal other than OBD (emission-related diagnosis) for 2 seconds or more.	tion of the indicated control unit.	
U1002	SYSTEM COMM	When a control unit is not transmitting or receiving CAN communication signal for 2 seconds or less.		
U1010	CONTROL UNIT [CAN]	When an error is detected during the initial diagnosis for CAN controller of each control unit.	Replace the control unit indicating "U1010".	

# **CAN Diagnostic Support Monitor**

INFOID:000000001666005

MONITOR ITEM (CONSULT-III)

Revision: 2007 June LAN-13 G37 Coupe

K

LAN

Ν

Example: CAN DIAG SUPPORT MNTR indication

#### Without PAST With PAST **ECM ECM** | PRSNT PAST INITIAL DIAG OK ОК TRANSMIT DIAG ОК TRANSMIT DIAG OK VDC/TCS/ABS TCM OK METER/M&A OK OK VDC/TCS/ABS UNKWN BCM/SEC OK OK METER/M&A OK icc ICC UNKWN HVAC ОК BCM/SEC OK TCM ОК IPDM E/R OK EPS OK IPDM E/R e4WD AWD/4WD ОК JSMIA0015GB

#### Without PAST

Item	PRSNT	Description
Initial diagnosis	OK	Normal at present
irilliai diagnosis	Initial diagnosis  OK Normal at pre  NG Control unit el  OK Normal at pre  UNKWN  Diagnosis not  OK Normal at pre  Unable to tran  Diagnosis not  UNKWN  Control unit name Reception diagnosis)  UNKWN  Diagnosis not  Diagnosis not  UNKWN  Diagnosis not	Control unit error (Except for some control units)
	OK	Normal at present
Transmission diagnosis UNK	LINIKWNI	Unable to transmit signals for 2 seconds or more.
	OINIXVII	Diagnosis not performed
	OK	Normal at present
Control unit name		Unable to receive signals for 2 seconds or more.
(Reception diagnosis)	UNKWN	Diagnosis not performed
		No control unit for receiving signals. (No applicable optional parts)

#### With PAST

Item	PRSNT	PAST	Description
		OK	Normal at present and in the past
Transmission diagnosis	OK	1 – 39	Normal at present, but unable to transmit signals for 2 seconds or more in the past. (The number indicates the number of ignition switch cycles from OFF to ON.)
	UNKWN	0	Unable to transmit signals for 2 seconds or more at present.
		OK	Normal at present and in the past
Control unit name	OK OK 1 – 39 Control unit name (Reception diagnosis)	Normal at present, but unable to receive signals for 2 seconds or more in the past. (The number indicates the number of ignition switch cycles from OFF to ON.)	
(Reception diagnosis)	UNKWN	0	Unable to receive signals for 2 seconds or more at present.
			Diagnosis not performed.
	ı	_	No control unit for receiving signals. (No applicable optional parts)

## MONITOR ITEM (ON-BOARD DIAGNOSIS)

#### NOTE:

For some models, CAN communication diagnosis result is received from the vehicle monitor.

## **TROUBLE DIAGNOSIS**

< FUNCTION DIAGNOSIS >

## [CAN FUNDAMENTAL]

Α

В

D

Е

F

G

Н

mple: Vehicle Display		-	
Item	Result indi- cated	Error counter	Description
	OK	0	Normal at present
CAN_COMM (Initial diagnosis)	NG	1 – 50	Control unit error (The number indicates how many times diagnosis has been run.)
	OK	0	Normal at present
CAN_CIRC_1	1 – 50	Unable to transmit for 2 seconds or more at present. (The number indicates how many times diagnosis has been run.)	
	OK	0	Normal at present
CAN_CIRC_2 – 9			Unable to transmit for 2 seconds or more at present. (The number indicates how many times diagnosis has been run.)
CAN_CIRC_2 – 9 Reception diagnosis of each unit)	UNKWN	1 – 50	Diagnosis not performed.
			No control unit for receiving signals. (No applicable optiona parts)

# How to Use CAN Communication Signal Chart

INFOID:0000000001666006

The CAN communication signal chart lists the signals needed for trouble diagnosis. It is useful for detecting the root cause by finding a signal related to the symptom, and by checking transmission and reception unit.

Example: Tachometer do	es not mo	ve even th	ough the	engine rot		it R: Receive				
Signal name/Connecting unit	W E	BCM I	M&A	STRG	V ABS	PDM-E				
A/C compressor feedback signal	Т	<u> </u>	R	į		_				
A/C compressor request signal	Т			i		R				
Accelerator pedal position signal	Т			l	R					
Cooling fan motor operation signal	Т	<u> </u>		i		R				
Engine coolant temperature signal I	Т	' '	R	l I						
Engine speed signal	Т		R	i	R					
Fuel consumption monitor signal	т т		R							
Malfunction indicator lamp signal	Т		R		ommunication between					
A/C switch signal	R	Т		ECI						
Ignition switch signal		Т				R				
Sleep/wake up signal		Т	R			R				
It indicates that an error occurs between ECM and M&A (Shaded area).										
ECM E	BCM DLC	M&A	STRG	ABS	IPDM-E	SKIB8715E				

K

LAN

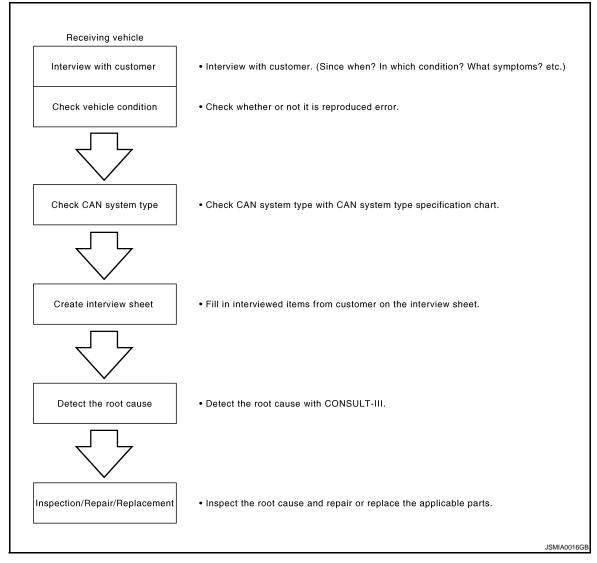
 $\cap$ 

# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

## Trouble Diagnosis Flow Chart

INFOID:0000000001666007



# Trouble Diagnosis Procedure

INFOID:0000000001666008

#### INTERVIEW WITH CUSTOMER

Interview with the customer is important to detect the root cause of CAN communication system errors and to understand vehicle condition and symptoms for proper trouble diagnosis.

#### Points in interview

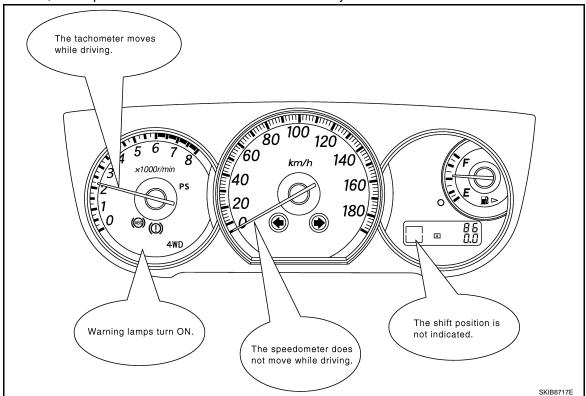
- · What: Parts name, system name
- · When: Date, Frequency
- · Where: Road condition, Place
- In what condition: Driving condition/environment
- Result: Symptom

#### NOTE:

- Check normal units as well as error symptoms.
- Example: Circuit between ECM and the combination meter is judged normal if the customer indicates tachometer functions normally.
- When a CAN communication system error is present, multiple control units may malfunction or go into failsafe mode.

< BASIC INSPECTION > [CAN FUNDAMENTAL]

• Indication of the combination meter is important to detect the root cause because it is the most obvious to the customer, and it performs CAN communication with many units.



#### INSPECTION OF VEHICLE CONDITION

Check whether the symptom is reproduced or not.

#### NOTE:

Do not turn the ignition switch OFF or disconnect the battery cable while reproducing the error. The error may temporarily correct itself, making it difficult to determine the root cause.

CHECK OF CAN SYSTEM TYPE (HOW TO USE CAN SYSTEM TYPE SPECIFICATION CHART) Determine CAN system type based on vehicle equipment.

#### NOTE:

- This chart is used if CONSULT-III does not automatically recognize CAN system type.
- There are two styles for CAN system type specification charts. Depending on the number of available system types, either style A or style B may be used.

CAN System Type Specification Chart (Style A)

#### NOTE:

LAN

K

Α

В

D

Е

F

Н

Ν

C

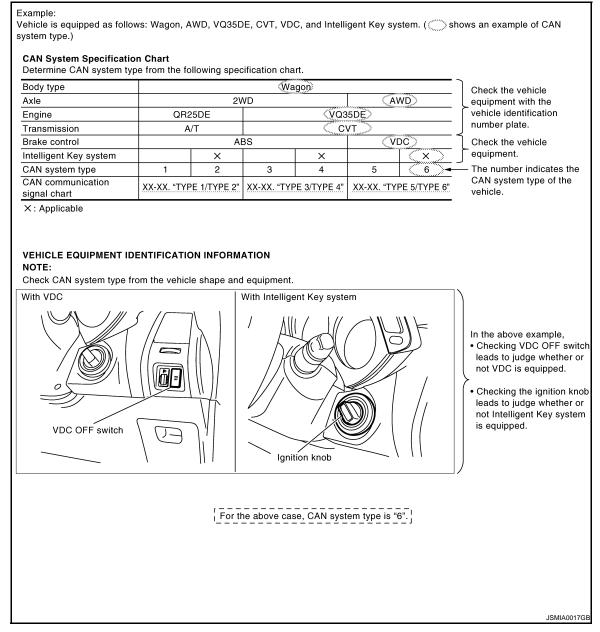
Р

Revision: 2007 June LAN-17 G37 Coupe

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

CAN system type is easily checked with the vehicle equipment identification information shown in the chart.

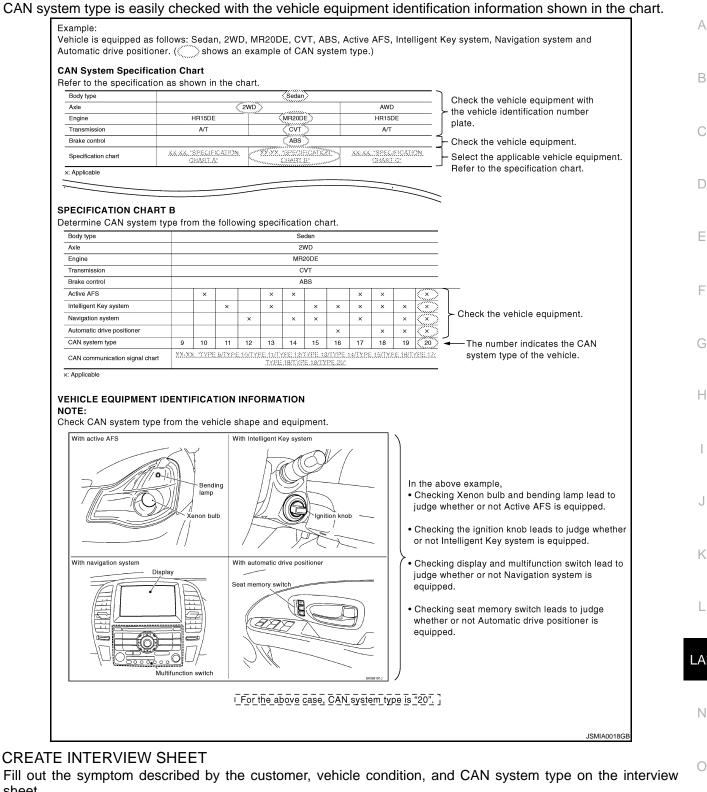


CAN System Type Specification Chart (Style B)

NOTE:

< BASIC INSPECTION >

[CAN FUNDAMENTAL]



Fill out the symptom described by the customer, vehicle condition, and CAN system type on the interview sheet.

**LAN-19** Revision: 2007 June G37 Coupe

Е

LAN

Ν

< BASIC INSPECTION >

[CAN FUNDAMENTAL]

Interview Sheet (Example)

CAN Communication System Diagnosis Interview Sheet	
Date received: 3, Feb. 2006	
Type: DBA-KG11 VIN No.: KG11-005040	
Model: BDRARGZ397EDA-E-J-	
First registration: 10, Jan. 2001 Mileage: 62,140	
CAN system type: Type 19	
Symptom (Results from interview with customer)	
<ul> <li>Headlamps suddenly turn ON while driving the vehicle.</li> <li>The engine does not restart after stopping the vehicle and turning the ignition switch OFF.</li> </ul>	
•The cooling fan continues rotating while turning the ignition switch ON.	
Condition at inspection	
Error Symptom: Present / Past	
The engine does not start. While turning the ignition switch ON, The headlamps (Lo) turn ON, and the cooling fan continues rotating. The interior lamp does not turn ON.	
	JSMIA0019GE

## DETECT THE ROOT CAUSE

CAN diagnosis function of CONSULT-III detects the root cause.

## **HOW TO USE THIS SECTION**

< HOW TO USE THIS MANUAL >

[CAN]

Α

В

D

# HOW TO USE THIS MANUAL

## HOW TO USE THIS SECTION

Caution INFOID:0000000001666009

- This section describes information peculiar to a vehicle and inspection procedures.
- For trouble diagnosis procedure, refer to LAN-16, "Trouble Diagnosis Procedure".

**Abbreviation List** INFOID:0000000001666010

Unit name abbreviations in CONSULT-III CAN diagnosis and in this section are as per the following list.

Abbreviation	Unit name	
A-BAG	Air bag diagnosis sensor unit	
ABS	ABS actuator and electric unit (control unit)	
ADP	Driver seat control unit	
AFS	AFS control unit	
AV	AV control unit	
BCM	BCM	
DLC	Data link connector	
ECM	ECM	
ICC	ICC sensor integrated unit	
IPDM-E	IPDM E/R	
M&A	Unified meter and A/C amp.	
PSB	Pre-crash seat belt control unit	<del></del>
RAS	4WAS main control unit	
STRG	Steering angle sensor	
TCM	TCM	

LAN

K

L

Ν

0

< PRECAUTION > [CAN]

# **PRECAUTION**

## **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

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

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- 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.

## Precaution for Battery Service

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

# Precautions for Trouble Diagnosis

INFOID:0000000001666012

INFOID:0000000001910556

#### **CAUTION:**

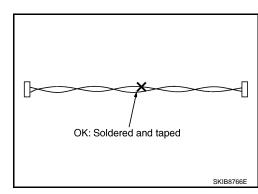
- Never apply 7.0 V or more to the measurement terminal.
- Use a tester with open terminal voltage of 7.0 V or less.
- Turn the ignition switch OFF and disconnect the battery cable from the negative terminal when checking the harness.

## Precautions for Harness Repair

INFOID:0000000001666013

Solder the repaired area and wrap tape around the soldered area.
 NOTE:

A fray of twisted lines must be within 110 mm (4.33 in).

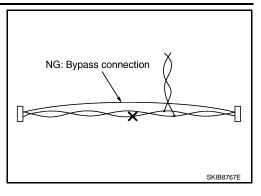


## **PRECAUTIONS**

< PRECAUTION > [CAN]

Bypass connection is never allowed at the repaired area.
 NOTE:

Bypass connection may cause CAN communication error. The spliced wire becomes separated and the characteristics of twisted line are lost.



Replace the applicable harness as an assembly if error is detected on the shield lines of CAN communication line.

Ε

F

Α

В

C

D

G

Н

Κ

\_

LAN

Ν

0

< BASIC INSPECTION > [CAN]

# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Interview Sheet

CAN Communication Syste	em Diagnosis Interview Sheet
	Date received:
Туре:	VIN No.:
Model:	
First registration:	Mileage:
CAN system type:	
Symptom (Results from interview with co	ustomer)
Condition at inspection	
Error symptom : Present / Past	
	SKIB8898E

[CAN] < FUNCTION DIAGNOSIS >

# **FUNCTION DIAGNOSIS**

# **CAN COMMUNICATION SYSTEM**

# **CAN System Specification Chart**

Determine CAN system type from the following specification chart.

Refer to LAN-16, "Trouble Diagnosis Procedure" for how to use CAN system specification chart.

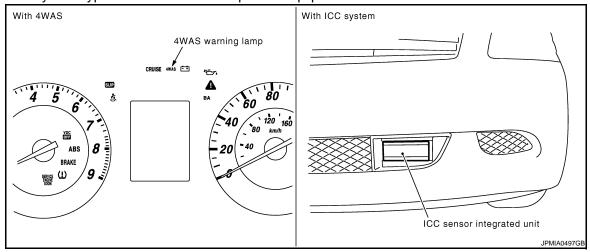
Body type	Coupe												
Axle	2WD												
Engine	VQ37VHR												
Transmission		N		P	VT								
Brake control		VDC											
4WAS		×		×		×		×					
ICC system			×	×			×	×					
CAN system type	1	2	3	4	5	6	7	8					
Start CAN Diagnosis (CONSULT-III)	1	2	3	4	5	6	7	8					

<sup>×:</sup> Applicable

## VEHICLE EQUIPMENT IDENTIFICATION INFORMATION

NOTE:

Check CAN system type from the vehicle shape and equipment.



# **CAN Communication Signal Chart**

Refer to LAN-15. "How to Use CAN Communication Signal Chart" for how to use CAN communication signal chart.

NOTE:

Refer to LAN-21, "Abbreviation List" for the abbreviations of the connecting units.

										T:	Transn	nit R:	Receive
Signal name/Connecting unit	ECM	AV	BCM	PSB	TCM	AFS	M&A	STRG	ADP	RAS	ABS	CC	IPDM-E
A/C compressor request signal	Т												R
Accelerator pedal position signal	Т				R						R	R	
ASCD OD cancel request signal	Т				R								
ASCD operation signal	Т				R								

**LAN-25** Revision: 2007 June G37 Coupe

Α

INFOID:0000000001666015 В

D

Е

F

Н

LAN

Ν

INFOID:0000000001666016

## **CAN COMMUNICATION SYSTEM**

[CAN] < FUNCTION DIAGNOSIS >

REPUNCTION DIAGNOSIS >													<b>0</b> ,,
Signal name/Connecting unit	ECM	AV	BCM	PSB	TCM	AFS	M&A	STRG	ADP	RAS	ABS	CC	IPDM-E
ASCD status signal	Т						R						
ASCD SET indicator signal	Т						R						
Closed throttle position signal	Т				R							R	
Cooling fan speed request signal	Т												R
Engine and A/T integrated control signal	T R				R T								
Engine coolant temperature signal	Т						R						
Engine speed signal	Т				R	R	R			R	R	R	
Engine status signal	Т	R	R										
Fuel consumption monitor signal	Т	R					R						
ICC brake switch signal	Т											R	
ICC clutch switch signal*1	Т											R	
ICC prohibition signal	Т											R	
ICC steering switch signal	Т											R	
Malfunctioning indicator lamp signal	Т						R						
Park/neutral position switch signal*1	Т											R	
Power generation command value signal	Т												R
	Т										R	R	
Snow mode switch signal	R						Т						
	Т											R	
Stop lamp switch signal											Т	R	
			Т		R								
Wide open throttle position signal	Т				R								
A/C quitab/indiantar aireal		Т					R						
A/C switch/indicator signal		R					Т						
Rear window defogger switch signal		Т	R										
		Т	R						R				
System setting signal		R							Т				
		R	Т										
Buzzer output signal			Т				R						
Buzzer output signal							R					Т	
Door switch signal		R	Т				R		R				R
Door unlock signal			Т						R				
Front fog light request signal			Т				R						R
Front wiper request signal			Т									R	R
High beam request signal			Т				R						R
Horn reminder signal			Т										R
Ignition switch ON signal			T R										R T
Ignition switch signal			Т						R				
Interlock/PNP switch signal			T R										R T

## **CAN COMMUNICATION SYSTEM**

< FUNCTION DIAGNOSIS > [CAN]

Signal name/Connecting unit	ECM	AV	BCM	PSB	TCM	AFS	M&A	STRG	ADP	RAS	ABS	20	IPDM-E
Key ID signal			Т						R				
Key switch signal			Т						R				
Key warning lamp signal			Т				R						
Low beam request signal			Т										R
Meter display signal			Т				R R					Т	
Oil pressure switch signal			T R				R						Т
Position light request signal			Т				R						R
Rear window defogger control signal	R	R	T R										R T
Sleep wake up signal			Т				R		R				R
Starter control relay signal			Т										R
Charter releviatories simple			R										Т
Starter relay status signal			Т										R
Starting mode signal			Т						R				
Steering lock relay signal			R T										T R
Theft warning horn request signal			Т										R
Tire pressure signal			Т				R						
Trunk switch signal		R	Т				R						
Turn indicator signal			Т				R						
A/T CHECK indicator lamp signal					Т	R	R						
A/T self-diagnosis signal	R				Т								
Current gear position signal					Т						R	R	
Manual mode indicator signal					Т		R					R	
N range signal			R		Т							R	
Output shaft revolution signal	R				Т							R	
P range signal			R		Т				R		R	R	
R range signal					Т							R	
Shift position signal				R*2	Т	R	R				R	R	
Turbine revolution signal	R				Т							R	
AFS OFF indicator lamp signal						Т	R						
A/C evaporator temperature signal	R						Т						
A/C switch signal	R						Т						
Blower fan motor switch signal	R						Т						
Distance to empty signal		R					Т						
Fuel level low warning signal		R					Т						
Fuel level sensor 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						

E F

G

A

В

С

D

Н

J

K

L

LAN

Ν

0

[CAN]

Signal name/Connecting unit	ECM	A	BCM	PSB	TCM	AFS	M&A	STRG	ADP	RAS	ABS	20	IPDM-E
Parking brake switch signal			R				Т						
Seat belt buckle switch signal			R				Т						
Sleep-ready signal			R R				Т						Т
Target A/C evaporator temperature signal	R						Т						
Vehicle speed signal	R	R	R R	R	R	R	T R		R	R	Т	R	R
Wake up signal			R				Т						
Steering angle sensor signal						R		Т		R	R		
4WAS signal										Т	R		
4WAS warning lamp signal							R			Т			
A/T shift schedule change demand signal					R						Т		
ABS malfunction signal											Т	R	
ABS operation signal					R						Т	R	
ABS warning lamp signal							R				Т		
Brake pressure control signal											Т	R	
Brake warning lamp signal							R				Т		
Side G sensor signal					R						Т		
SLIP indicator lamp signal							R				Т		
TCS malfunction signal											Т	R	
TCS operation signal											Т	R	
VDC malfunction signal											Т	R	
VDC OFF indicator lamp signal							R				Т		
VDC OFF switch signal											Т	R	
VDC operation signal											Т	R	
Deceleration degree commandment value signal											R	Т	
ICC operation signal	R											Т	
ICC warning lamp signal							R					Т	
A/T device (detention switch) signal			R										Т
Front wiper stop position signal			R										Т
High beam status signal	R					R							Т
Hood switch signal			R										Т
Low beam status signal	R					R							Т
Push-button ignition switch status signal			R										Т
Steering lock unit status signal			R										Т

<sup>\*1:</sup> M/T models only

### NOTE:

CAN data of the air bag diagnosis sensor unit is not used by usual service work, thus it is omitted.

<sup>\*2:</sup> Receive reverse position signal only

[CAN]

INFOID:0000000001666017

Α

В

C

D

Е

F

Н

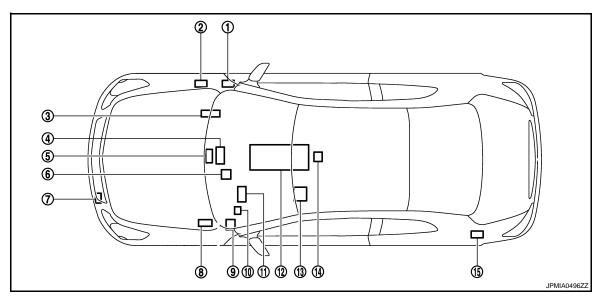
J

K

# COMPONENT DIAGNOSIS

# **CAN COMMUNICATION SYSTEM**

## **Component Parts Location**



- 1. BCM M122
- 4. AV control unit M85: Without NAVI M87: With NAVI
- 7. ICC sensor integrated unit E67
- 10. Data link connector M24
- 13. Driver seat control unit B503

- 2. IPDM E/R E6
- 5. Unified meter and A/C amp. M67
- ABS actuator and electric unit (control unit) E41
- 11. Steering angle sensor M37
- 14. Air bag diagnosis sensor unit M147
- 3. ECM M107
- 6. Pre-crash seat belt control unit M110
- 9. AFS control unit M16
- 12. A/T assembly F51
- 15. 4WAS main control unit B54

LAN

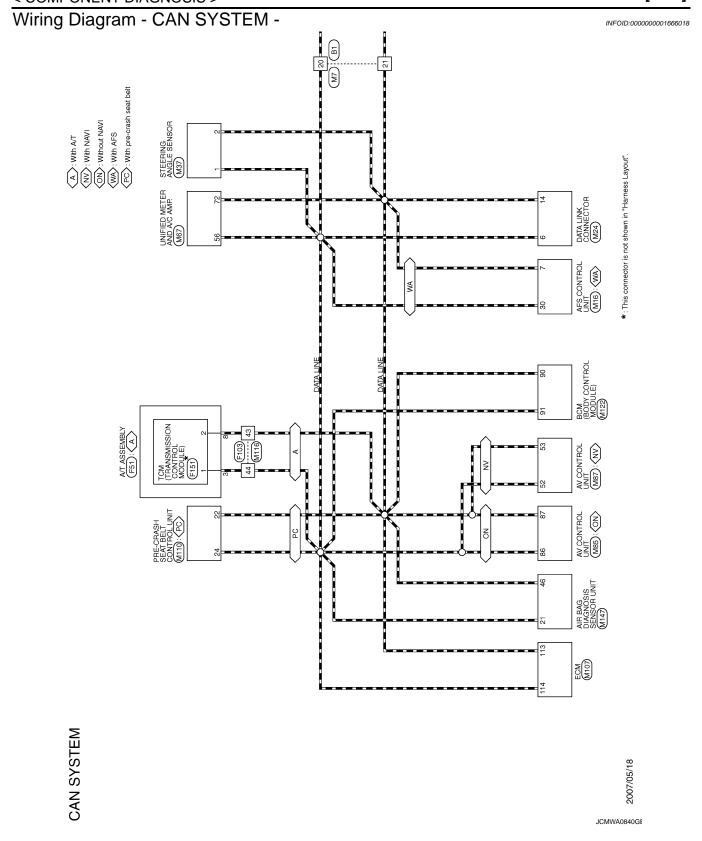
Ν

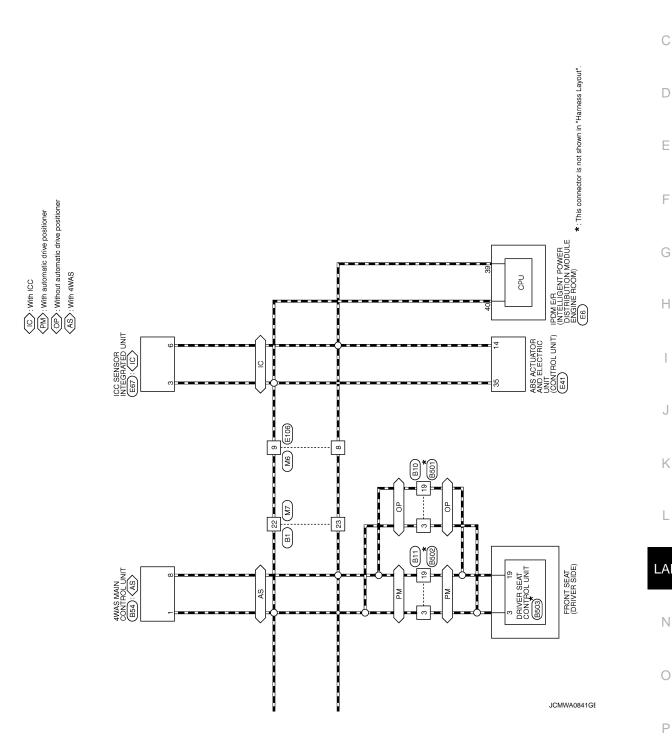
0

Р

Revision: 2007 June LAN-29 G37 Coupe

. . .





Α

В

С

D

Е

F

G

Н

J

LAN

Ν

0

Ρ

Connector Name WHE TO WIRE Connector Type TH80FW-CS16-TM4  ALS  Terminal Color No. of Wire Signal Name [Specification]	Connector Name   S10	Connector No.   B11	Connector No.   E54   Connector No.   Color   Signal Name [Specification]   Color   Signal Name [Specification]   Color   Co
ППП			
Connector Type  N3 5	NSTRAWT.C   H.S.   19   3   1   17   40   59   8   5   32   48   27   33   60	Connector Type ITH82FW  H.S.  [1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 18 19 10 11 12 13 14 15 16 7 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 19 10 11 12 13 14 15 16 18 18 18 18 18 18 18 18 18 18 18 18 18	H.S. (42 41 40 39 46 44 43)
Terminal Color   Signal Name [Specification]   Odor   Specification   Specif	Terminal   Color   Signal Name [Specification]   No.   of Wire   Signal Name [Specification]   No.   O.   No.   No.	Termina  Color   Signal Mane [Specification]   S   Signal Mane [Specification]   S   S   S   S   S   S   S   S   S	Terminal Color No. of Wire Signal Name [Specification] 39 P - 40 -

JCMWA0842GE

Signal Name [Specification]	А
HKIETO	С
Connector No.  Connector Type  Terminal Color  No.  Connector Name  Connector	D
ation]	Е
WIRE TO WIRE  THEOFW-CSIG-TM4  Night and Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	F
	G
Connector No.  Connector No.  Connector No.  Connector Name  B P P P P P P P P P P P P P P P P P P	Н
ICC SENSOR INTEGRATED UNIT  REGIFTE PR  Signal Name [Speerfreaton]  CAN-L  CAN-L  Signal Name [Speerfreaton]  Signal Name [Speerfreaton]  Signal Name [Speerfreaton]	I
IOC SENSOR INTEGRATED UNIT   RSOBEB-PR	J
Connector No.   E6.	К
	L
SYSTEM  The E41  The E41  ABS ACTUATOR AND ELECTRIC UNIT  CONTROL CONTROL  CONTROL CONTROL  The CONTROL CONTROL  CONTROL CONTROL  CONTROL UNITE	LAN
Color   Cabra   Cabr	N
COAN SYSTEM Connector Name (ABS A Connector Name (ABS A Connector Type BAA4  Terminal Color No. of Vire Connector Name WIRE Co	0
	JCMWA0843GE

Revision: 2007 June LAN-33 G37 Coupe

Connector No.   M24   Connector No.   M37   Connector No.   M67	THE DATA LINK CONNECTOR Connector Name STEERING ANGLE SENSOR IN BILISEW CONNECTOR CONNECTOR TIME THIRD WHILE SENSOR	9 10 11 12 13 4 5 6 1 7 8	Terminal Color   Signal Name [Specification]   Terminal Color   No. of Wire   Signal Name [Specification]   No. of Wire   No. of Wire   Signal Name [Specification]   No. of Wire   No	Connector No.         M87         Connector Name         ECM         Connector Name         ECM         Connector Name         PRE—CRASH SEAT BELT CONTROL UNIT CONTRO
M24	DATA LINK CONNECTOR	9 10 11 12 13 14 15 16 12 8	Color of Wire Signal Name [Specification]	M87 AV CONTROL UNIT (WITH NAVI) TH40FW-NH REC RES RESULTED HER SECTOR SE
Con	Connector Name AFS CONTROL UNIT Cons	0 10 10 10 10 10 10 10 10 10 10 10 10 10	Signal Name [Specification]  N  CAN-L  CAN-H	Me5   Me5   Corr

JCMWA0844GE

Α

В

С

D

Е

F

G

Н

J

Κ

LAN

Ν

0

JCMWA0845GE

Connector No.	M116	Connector No.	П	M122	Connec	Sonnector No.	M147
Connector Name WIRE TO WIRE	WIRE TO WIRE	Connector	Name	Connector Name BCM (BODY CONTROL MODULE)	Connec	Connector Name	AIR BAG DIAGNOSIS SENSOR UNIT
Connector Type	TK36MW-NS10	Connector Type	_	TH40FB-NH	Connec	Connector Type	TK28FY-EX-SC
1.5. 6.7.2.8.4.9.5 7.8.9.1.5 8.9.1.5		E SH	91 90 89 88 87		€ T	2021 2211 1612	117 ===================================
Terminal Color No. of Wire	Signal Name [Specification]	Terminal No.	Color of Wire	Signal Name [Specification]	Terminal No.	al Color of Wire	Signal Name [Specification]
43 P	ı	06	Ь	CAN-L	21	_	CAN-H
44	1	16	_	CAN-H	46	۵	CAN-L

# **MALFUNCTION AREA CHART**

Main Line

Malfunction Area	Reference
Main line between BCM and data link connector	LAN-37, "Diagnosis Procedure"
Main line between data link connector and driver seat control unit	LAN-38, "Diagnosis Procedure"
Main line between driver seat control unit and ABS actuator and electric unit (control unit)	LAN-39, "Diagnosis Procedure"

Branch Line

Malfunction Area	Reference
ECM branch line circuit	LAN-41, "Diagnosis Procedure"
Air bag diagnosis sensor unit branch line circuit	LAN-42, "Diagnosis Procedure"
AV control unit branch line circuit	LAN-43, "Diagnosis Procedure"
BCM branch line circuit	LAN-44, "Diagnosis Procedure"
Pre-crash seat belt control unit	LAN-45, "Diagnosis Procedure"
TCM branch line circuit	LAN-46, "Diagnosis Procedure"
AFS control unit branch line circuit	LAN-47, "Diagnosis Procedure"
Data link connector branch line circuit	LAN-48, "Diagnosis Procedure"
Unified meter and A/C amp. branch line circuit	LAN-49, "Diagnosis Procedure"
Steering angle sensor branch line circuit	LAN-50, "Diagnosis Procedure"
Driver seat control unit branch line circuit	LAN-51, "Diagnosis Procedure"
4WAS main control unit branch line circuit	LAN-52, "Diagnosis Procedure"
ABS actuator and electric unit (control unit) branch line circuit	LAN-53, "Diagnosis Procedure"
ICC sensor integrated unit branch line circuit	LAN-54, "Diagnosis Procedure"
IPDM E/R branch line circuit	LAN-55, "Diagnosis Procedure"

Short Circuit

Malfunction Area	Reference
CAN communication circuit	LAN-56, "Diagnosis Procedure"

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

C

D

Е

F

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

Diagnosis Procedure

INFOID:0000000001666022

### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M122	91	M24	6	Existed
IVI I ZZ	90	10124	14	Existed

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

Н

-

J

Κ

L

LAN

Ν

C

Р

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

## Diagnosis Procedure

INFOID:0000000001666024

G37 Coupe

#### INSPECTION PROCEDURE

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors M7 and B1.
- 2. Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M24	6	M7	20	Existed
IVIZ4	14	IVIT	21	Existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

## 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Terminal No.		Continuity
B1	20	22	Existed
	21	23	Existed

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

Е

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001666025

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

## 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M7	22	Me	9	Existed
IVI7	23	M6	8	Existed

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector		ectric unit (control unit) connector	Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E106	9	E41	35	Existed
L100	8	E41	14	Existed

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

LAN

K

-/ (1 4

N

Р

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit).

## **ECM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

F

Н

## ECM BRANCH LINE CIRCUIT

## Diagnosis Procedure

### INFOID:0000000001666026

## 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Termi	1\esistance (22)	
M107	114	113	Approx. 108 – 132

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to EC-140, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

>> Repair the power supply and the ground circuit.

Р

**LAN-41** Revision: 2007 June G37 Coupe

LAN

K

Ν

## **A-BAG BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

## A-BAG BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001666028

# 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to <u>SRC-5, "Work Flow"</u>. <u>Is the inspection result normal?</u>

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

### AV BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

# AV BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:000000001666029

## 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.check harness for open circuit

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	resistance (22)	
M87	52 53		Approx. 54 – 66

### Models without NAVI

AV control unit harness connector			Resistance ( $\Omega$ )
Connector No.	Termi	rtesistance (22)	
M85	86 87		Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

Ν

Р

**LAN-43** Revision: 2007 June G37 Coupe

LAN

K

## **BCM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

JENT DIAGNOSIS > [CAN]

## **BCM BRANCH LINE CIRCUIT**

## Diagnosis Procedure

INFOID:0000000001666030

G37 Coupe

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Termi	ixesistance (22)	
M122	91	90	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to <u>BCS-38, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

NO >> Repair the power supply and the ground circuit.

## **PSB BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

Е

F

Н

## **PSB BRANCH LINE CIRCUIT**

# Diagnosis Procedure

### INFOID:000000001666027

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the pre-crash seat belt for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of pre-crash seat belt control unit.
- 2. Check the resistance between the pre-crash seat belt control unit harness connector terminals.

Pre-cras	Resistance ( $\Omega$ )		
Connector No.	Termi	1\esistance (22)	
M110	24 22		Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the pre-crash seat belt control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the pre-crash seat belt control unit. Refer to the following.

- Power supply circuit: SBC-27, "Component Function Check"
- Ground circuit: <u>SBC-28</u>, "Component Function Check"

### Is the inspection result normal?

YES (Present error)>>Replace the pre-crash seat belt control unit. Refer to SBC-40, "Exploded View".

YES (Past error)>>Error was detected in the pre-crash seat belt control unit branch line.

>> Repair the power supply and the ground circuit.

Ν

Р

**LAN-45** Revision: 2007 June G37 Coupe

LAN

K

## TCM BRANCH LINE CIRCUIT

[CAN] < COMPONENT DIAGNOSIS >

INFOID:0000000001666031

## TCM BRANCH LINE CIRCUIT

## Diagnosis Procedure

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- A/T assembly
- Harness connector F103
- Harness connector M116

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2 .CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of A/T assembly.
- Check the resistance between the A/T assembly harness connector terminals.

A/T assembly harness connector			Resistance (Ω)
Connector No.	Termi	1\esistance (22)	
F51	3	8	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to TM-163, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the control valve with TCM. Refer to TM-232, "Exploded View".

YES (Past error)>>Error was detected in the TCM branch line.

>> Repair the power supply and the ground circuit. NO

## **AFS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

Е

F

## AFS BRANCH LINE CIRCUIT

## Diagnosis Procedure

### INFOID:0000000001666032

## 1. CHECK CONNECTOR

JID:0000000001000032

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of AFS control unit.
- 2. Check the resistance between the AFS control unit harness connector terminals.

,	AFS control unit harness connector		Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M16	30	7	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AFS control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AFS control unit. Refer to <u>EXL-61</u>, "AFS CONTROL UNIT: Diagnosis Procedure".

### Is the inspection result normal?

YES (Present error)>>Replace the AFS control unit. Refer to EXL-196, "Exploded View".

YES (Past error)>>Error was detected in the AFS control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

K

Ν

Р

Revision: 2007 June LAN-47 G37 Coupe

## **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

## DLC BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001666033

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

	Data link connector		Resistance (Ω)
Connector No.	Terminal No.		116313181106 (22)
M24	6	14	Approx. 54 – 66

### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

>> Repair the data link connector branch line.

## **M&A BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

F

Н

## **M&A BRANCH LINE CIRCUIT**

## Diagnosis Procedure

### INFOID:0000000001666034

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M67	56	72	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-49 G37 Coupe

٨٨١

K

## STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

## STRG BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001666035

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		Resistance (Ω)
Connector No.	Terminal No.		ivesistance (22)
M37	1	2	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

## ADP BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

Е

F

Н

## ADP BRANCH LINE CIRCUIT

## Diagnosis Procedure

### INFOID:000000001666037

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector		Resistance (Ω)	
Connector No.	Terminal No.		ivesistatice (22)
B503	3	19	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to ADP-63, "DRIVER SEAT CONTROL UNIT: Diagnosis Procedure".

### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

>> Repair the power supply and the ground circuit.

LAN

Ν

Р

**LAN-51** Revision: 2007 June G37 Coupe

L

## RAS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

# RAS BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001666036

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the 4WAS main control unit for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of 4WAS main control unit.
- Check the resistance between the 4WAS main control unit harness connector terminals.

4WA	4WAS main control unit harness connector		Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
B54	1	8	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the 4WAS main control unit branch line.

# 3.check power supply and ground circuit

Check the power supply and the ground circuit of the 4WAS main control unit. Refer to STC-134, "Diagnosis Procedure (4WAS Main Control Unit)".

### Is the inspection result normal?

YES (Present error)>>Replace the 4WAS main control unit. Refer to STC-178, "Exploded View".

YES (Past error)>>Error was detected in the 4WAS main control unit branch line.

>> Repair the power supply and the ground circuit. NO

## **ABS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

Н

## ABS BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001666038

## 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		110013141100 (32)
E41	35	14	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="BRC-102">BRC-102</a>, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-53 G37 Coupe

Λ N.I

K

### ICC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

## ICC BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001666039

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the ICC sensor integrated unit for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ICC sensor integrated unit.
- 2. Check the resistance between the ICC sensor integrated unit harness connector terminals.

ICC s	ICC sensor integrated unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
E67	3	6	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ICC sensor integrated unit branch line.

# 3.check power supply and ground circuit

Check the power supply and the ground circuit of the ICC sensor integrated unit. Refer to CCS-81, "Diagnosis Procedure".

### Is the inspection result normal?

YES (Present error)>>Replace the ICC sensor integrated unit. Refer to CCS-111, "Exploded View".

YES (Past error)>>Error was detected in the ICC sensor integrated unit branch line.

>> Repair the power supply and the ground circuit. NO

## IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN]

Α

В

D

F

Н

# IPDM-E BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001666040

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- 2. Check the resistance between the IPDM E/R harness connector terminals.

	IPDM E/R harness connector		Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
E6	40	39	Approx. 108 – 132

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-19, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

>> Repair the power supply and the ground circuit.

K

Р

**LAN-55** Revision: 2007 June G37 Coupe

LAN

Ν

[CAN]

INFOID:000000001666041

# CAN COMMUNICATION CIRCUIT

## Diagnosis Procedure

# 1.CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Data link connector		Continuity
Connector No.	Terminal No.		Continuity
M24	6	14	Not existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link	Data link connector		Continuity
Connector No.	Terminal No.	Ground Not existe	Continuity
M24	6		Not existed
IVI24	14		Not existed

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

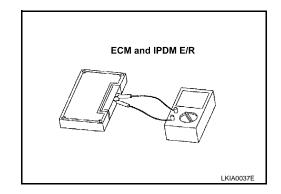
## 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- Check the resistance between the ECM terminals.

ECM		Resistance (Ω)	
Terminal No.		ivesistance (22)	
114	113	Approx. 108 – 132	

3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance $(\Omega)$	
Terminal No.			
40	39	Approx. 108 – 132	



### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

## CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

## **CAN COMMUNICATION CIRCUIT**

[CAN] < COMPONENT DIAGNOSIS > Inspection result Α Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is 6. CHECK UNIT REPRODUCTION В Perform the reproduction test as per the following procedure for each unit. 1. Turn the ignition switch OFF. C Disconnect the battery cable from the negative terminal. 3. Disconnect one of the unit connectors of CAN communication system. NOTE: ECM and IPDM E/R have a termination circuit. Check other units first. D 4. Connect the battery cable to the negative terminal. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced. NOTE: Е Although unit-related error symptoms occur, do not confuse them with other symptoms. Inspection result Reproduced>>Connect the connector. Check other units as per the above procedure. F Non-reproduced>>Replace the unit whose connector was disconnected. Н K LAN Ν

Revision: 2007 June LAN-57 G37 Coupe

Р

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

# COMPONENT DIAGNOSIS

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679385

### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ess connector	Data link connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity	
M122	91	M24	6	Existed	
MT22	90	IVIZ4	14	Existed	

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679387

Α

В

D

Е

Н

### INSPECTION PROCEDURE

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M7 and B1.
- Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity	
M24	6	M7	20	Existed	
10124	14		21	Existed	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

## ${f 3.}$ CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termiı	Continuity	
B1	20	22	Existed
	21	23	Existed

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

Ν

Р

**LAN-59** Revision: 2007 June G37 Coupe

LAN

K

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679389

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector  Connector No. Terminal No.		Continuity	
Connector No.	Terminal No.			Continuity	
M7	22 M6	9	Existed		
1017	23	IVIO	8	Existed	

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# 4. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector	ABS actuator and electric unit (control unit) harness connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.		
E106	9	E41	35	Existed	
E106	8	<del> </del>	14	Existed	

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit). Α В C D Е F G Н J K L

LAN

Ν

0

Р

## **ECM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## ECM BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679391

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

	Resistance (Ω)		
Connector No.	Termi	ixesistance (22)	
M107	114	113	Approx. 108 – 132

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to <u>EC-140, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the ECM. Refer to <u>EC-16</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM)</u>: <u>Special Repair Requirement"</u>.

YES (Past error)>>Error was detected in the ECM branch line.

NO >> Repair the power supply and the ground circuit.

## **A-BAG BRANCH LINE CIRCUIT**

_	COM	IENT	DIVC	2120M	_

Р

< COMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 1)]
A-BAG BRANCH LINE CIRCUIT	
Diagnosis Procedure	INFOID:000000001679392
1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT	
Check the air bag diagnosis sensor unit. Refer to SRC-5, "Work Flow".	
Is the inspection result normal?  YES >> Replace the main harness.	
NO >> Replace parts whose air bag system has a malfunction.	
	1

**LAN-63** Revision: 2007 June G37 Coupe

# AV BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679393

## 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.check harness for open circuit

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	110000100 (32)	
M87	52	53	Approx. 54 – 66

#### Models without NAVI

	Resistance (Ω)		
Connector No.	Termi	11033311100 (22)	
M85	86	87	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

## 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

## **BCM BRANCH LINE CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## **BCM BRANCH LINE CIRCUIT**

## Diagnosis Procedure

#### INFOID:0000000001679394

Α

В

D

F

Н

## 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

	BCM harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M122	91	90	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to BCS-38, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

>> Repair the power supply and the ground circuit.

K

Р

**LAN-65** Revision: 2007 June G37 Coupe

LAN

Ν

### **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## DLC BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679398

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M24	6	14	Approx. 54 – 66

### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

## **M&A BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## **M&A BRANCH LINE CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679399

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M67	56	72	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-67 G37 Coupe

C

В

Α

D

F

\_

F

G

Н

Н

|

K

1 4

## STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## STRG BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679400

## 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M37	1	2	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

### ADP BRANCH LINE CIRCUIT

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

# ADP BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679401

Α

В

D

Е

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		116313181106 (22)
B503	3	19	Approx. 54 – 66

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63</u>, "<u>DRIVER SEAT</u> CONTROL UNIT: Diagnosis Procedure".

### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

0

Р

Revision: 2007 June LAN-69 G37 Coupe

L

## **ABS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

## ABS BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679403

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator	ABS actuator and electric unit (control unit) harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
E41	35	14	Approx. 54 – 66

## Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="BRC-102">BRC-102</a>, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

## IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 1)]

# IPDM-E BRANCH LINE CIRCUIT

# **Diagnosis Procedure**

#### INFOID:0000000001679405

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- Check the resistance between the IPDM E/R harness connector terminals.

	IPDM E/R harness connector		
Connector No.	Terminal No.		Resistance (Ω)
E6	40	39	Approx. 108 – 132

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-19, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

>> Repair the power supply and the ground circuit.

LAN

Р

**LAN-71** Revision: 2007 June G37 Coupe

Α

В

D

F

Н

K

Ν

# CAN COMMUNICATION CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679406

# 1. CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Continuity
M24	6	14	Not existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data lini	Data link connector		Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6	Ground	Not existed
IVI24	14		Not existed

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

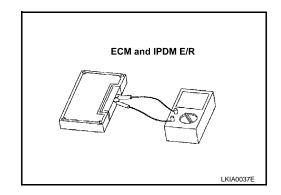
## 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- 2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)	
Terminal No.		Resistance (\$2)	
114	113	Approx. 108 – 132	

3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)	
Terminal No.		Resistance (22)	
40	39	Approx. 108 – 132	



### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

## CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

# **CAN COMMUNICATION CIRCUIT**

< COMPONENT DIAGNOSIS >	[CAN STSTEW (TTPE 1)]
Inspection result	
Reproduced>>GO TO 6.	
Non-reproduced>>Start the diagnosis again. Follow the trouble diagred detected.	nosis procedure when past error is
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit 1. Turn the ignition switch OFF.	t.
<ol> <li>Disconnect the battery cable from the negative terminal.</li> <li>Disconnect one of the unit connectors of CAN communication system NOTE:</li> </ol>	1.
ECM and IPDM E/R have a termination circuit. Check other units first 4. Connect the battery cable to the negative terminal. Check if the sy (Results from interview with customer)" are reproduced.  NOTE:	
Although unit-related error symptoms occur, do not confuse them with	n other symptoms.
Inspection result	
Reproduced>>Connect the connector. Check other units as per the above Non-reproduced>>Replace the unit whose connector was disconnected.	

**LAN-73** Revision: 2007 June G37 Coupe

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

# COMPONENT DIAGNOSIS

# MAIN LINE BETWEEN BCM AND DLC CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679414

#### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link connector		Continuity	
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity	
M122	91	M24	6	Existed	
IVI I ZZ	90	10124	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679416

Α

В

D

Е

Н

#### INSPECTION PROCEDURE

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M7 and B1.
- Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity	
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity	
M24	6	MZ	20	Existed	
10124	14	M7	21	Existed	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

## ${f 3.}$ CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termiı	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

Ν

Р

**LAN-75** Revision: 2007 June G37 Coupe

LAN

K

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679418

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector  Connector No. Terminal No.		Continuity	
Connector No.	Terminal No.				
M7	22	M6	9	Existed	
1017	23		8	Existed	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# 4.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector	ABS actuator and electric unit (control unit) harness connector		nnector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.			
E406	9	E41	35	Existed		
E106	8	<del>  E41</del>	14	Existed		

### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

[CAN SYSTEM (TYPE 2)] < COMPONENT DIAGNOSIS > NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit). Α В C D Е F G Н J K

LAN

L

Ν

0

Р

## **ECM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## ECM BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679420

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

	ECM harness connector		
Connector No.	Termi	Resistance (Ω)	
M107	114	113	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to <u>EC-140, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the ECM. Refer to <u>EC-16</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

# **A-BAG BRANCH LINE CIRCUIT**

- CC	$\Delta MDC$	UNENT	. שוש	2002	19 <

Р

< COMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 2)]
A-BAG BRANCH LINE CIRCUIT	
Diagnosis Procedure	INFOID:000000001679421
1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT	
Check the air bag diagnosis sensor unit. Refer to SRC-5, "Work Flow".	
Is the inspection result normal?  YES >> Replace the main harness.	
NO >> Replace parts whose air bag system has a malfunction.	

**LAN-79** Revision: 2007 June G37 Coupe

# AV BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679422

## 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of AV control unit.
- 2. Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	110013181100 (22)	
M87	52	53	Approx. 54 – 66

#### Models without NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	110000100 (22)	
M85	86	87	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

## **BCM BRANCH LINE CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

# **BCM BRANCH LINE CIRCUIT**

## Diagnosis Procedure

#### INFOID:0000000001679423

Α

В

D

F

Н

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

	BCM harness connector		Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M122	91	90	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to BCS-38, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

>> Repair the power supply and the ground circuit.

Р

**LAN-81** Revision: 2007 June G37 Coupe

LAN

K

Ν

## **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## DLC BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679427

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M24	6	14	Approx. 54 – 66

#### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

## **M&A BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

# M&A BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679428

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M67	56	72	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

>> Repair the power supply and the ground circuit. NO

LAN

Ν

**LAN-83** Revision: 2007 June G37 Coupe

D

Α

В

F

Н

K

Р

## STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## STRG BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679429

G37 Coupe

# 1. CHECK CONNECTOR

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

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M37	1	2	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

### ADP BRANCH LINE CIRCUIT

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

# ADP BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679430

Α

В

D

Е

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		11e3i3tarice (22)
B503	3	19	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63</u>, "<u>DRIVER SEAT</u> CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-85 G37 Coupe

L

## RAS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## RAS BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679431

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the terminals and connectors of the 4WAS main control unit for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of 4WAS main control unit.
- 2. Check the resistance between the 4WAS main control unit harness connector terminals.

4WA	4WAS main control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
B54	1	8	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the 4WAS main control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the 4WAS main control unit. Refer to <a href="STC-134">STC-134</a>, "Diagnosis Procedure (4WAS Main Control Unit)".

#### Is the inspection result normal?

YES (Present error)>>Replace the 4WAS main control unit. Refer to STC-178, "Exploded View".

YES (Past error)>>Error was detected in the 4WAS main control unit branch line.

## **ABS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

## ABS BRANCH LINE CIRCUIT

# **Diagnosis Procedure**

#### INFOID:0000000001679432

Α

В

D

Н

## 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		110013141100 (32)
E41	35	14	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="BRC-102">BRC-102</a>, "Exploded <a href="Wiew">View</a>.

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-87 G37 Coupe

K

### IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

# IPDM-E BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679434

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- Check the resistance between the IPDM E/R harness connector terminals.

	IPDM E/R harness connector		
Connector No.	Terminal No.		Resistance (Ω)
E6	40	39	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-19</u>, "<u>Diagnosis Procedure</u>". <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

## **CAN COMMUNICATION CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

# **CAN COMMUNICATION CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679435

Α

В

D

F

Н

# 1. CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Continuity
M24	6	14	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link connector			Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6	Ground	Not existed
	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

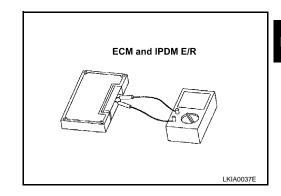
# 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- 2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)
Terminal No.		ixesistance (22)
114	113	Approx. 108 – 132

Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance ( $\Omega$ )
Terminal No.		ivesistance (22)
40	39	Approx. 108 – 132



## Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

## 5. CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

Revision: 2007 June LAN-89 G37 Coupe

LAN

K

Ν

0

Р

## **CAN COMMUNICATION CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 2)]

#### Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

## 6. CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect one of the unit connectors of CAN communication system.

#### NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

Connect the battery cable to the negative terminal. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

#### NOTE

Although unit-related error symptoms occur, do not confuse them with other symptoms.

#### Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

# **COMPONENT DIAGNOSIS**

# MAIN LINE BETWEEN BCM AND DLC CIRCUIT

Diagnosis Procedure

#### INFOID:0000000001679442

#### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link connector		Continuity
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity
M122	91	M24	6	Existed
IVITZZ	90		14	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

Н

Α

В

C

D

Е

F

K

LAN

Ν

C

Р

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679444

#### INSPECTION PROCEDURE

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors M7 and B1.
- 2. Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity
M24	6	MZ	20	Existed
10124	14	M7	21	Existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

# 3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679446

Α

D

Е

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.check harness continuity (open circuit)

1. Disconnect the harness connectors B1 and M7.

Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector  Connector No. Terminal No.		Continuity
Connector No.	Terminal No.			
M7	22	- M6	9	Existed
IVI 7	23		8	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector	ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E106	9	E41	35	Existed
L100	8	E41	14	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

LAN

. .

0

Р

Revision: 2007 June LAN-93 G37 Coupe

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit).

## **ECM BRANCH LINE CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## ECM BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679448

Α

В

D

F

Н

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

	ECM harness connector		
Connector No.	Termi	Resistance (Ω)	
M107	114	113	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to EC-140, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

>> Repair the power supply and the ground circuit.

Ν

Р

**LAN-95** Revision: 2007 June G37 Coupe

LAN

K

## **A-BAG BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

# A-BAG BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679449

# 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to <u>SRC-5</u>, "Work Flow". <u>Is the inspection result normal?</u>

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

### AV BRANCH LINE CIRCUIT

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## AV BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679450

Α

В

D

Н

## 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.check harness for open circuit

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		110313141100 (32)
M87	52	53	Approx. 54 – 66

#### Models without NAVI

	Resistance (Ω)		
Connector No.	Termi	rtesistance (22)	
M85	86	87	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

Ν

Р

**LAN-97** Revision: 2007 June G37 Coupe

LAN

K

### **BCM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

# **BCM BRANCH LINE CIRCUIT**

## Diagnosis Procedure

INFOID:0000000001679451

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Termi	ivesistatice (22)	
M122	91	90	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to <u>BCS-38, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

### **PSB BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## **PSB BRANCH LINE CIRCUIT**

# Diagnosis Procedure

INFOID:0000000001679452

Α

В

D

Е

F

Н

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the pre-crash seat belt for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of pre-crash seat belt control unit.
- 2. Check the resistance between the pre-crash seat belt control unit harness connector terminals.

Pre-cras	Pre-crash seat belt control unit harness connector			
Connector No.	Termi	Resistance ( $\Omega$ )		
M110	24	22	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the pre-crash seat belt control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the pre-crash seat belt control unit. Refer to the following.

- Power supply circuit: SBC-27, "Component Function Check"
- Ground circuit: <u>SBC-28</u>, "Component Function Check"

### Is the inspection result normal?

YES (Present error)>>Replace the pre-crash seat belt control unit. Refer to SBC-40, "Exploded View".

YES (Past error)>>Error was detected in the pre-crash seat belt control unit branch line.

>> Repair the power supply and the ground circuit.

Ν

Р

**LAN-99** Revision: 2007 June G37 Coupe

K

LAN

## **AFS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## AFS BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679454

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of AFS control unit.
- 2. Check the resistance between the AFS control unit harness connector terminals.

AFS control unit harness connector			Resistance (Ω)
Connector No.	Termi	1\esistance (22)	
M16	30	7	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AFS control unit branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AFS control unit. Refer to <u>EXL-61</u>, "AFS CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the AFS control unit. Refer to EXL-196, "Exploded View".

YES (Past error)>>Error was detected in the AFS control unit branch line.

## **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## **DLC BRANCH LINE CIRCUIT**

# **Diagnosis Procedure**

#### INFOID:0000000001679455

Α

В

D

Е

F

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M24	6	14	Approx. 54 – 66

## Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

Н

J

Κ

LAN

Ν

Р

## **M&A BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## M&A BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679456

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M67	56	72	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

### STRG BRANCH LINE CIRCUIT

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

# STRG BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679457

Α

В

D

F

Н

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M37	1	2	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to <a href="BRC-105">BRC-105</a>, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

NO >> Repair the power supply and the ground circuit.

Р

Revision: 2007 June LAN-103 G37 Coupe

LAN

K

Ν

## ADP BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## ADP BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679458

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance ( $\Omega$ )
Connector No.	Terminal No.		rtesistance (22)
B503	3	19	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63</u>, "<u>DRIVER SEAT CONTROL UNIT</u>: <u>Diagnosis Procedure</u>".

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

## **ABS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## ABS BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679460

Α

В

D

Н

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the ABS actuator and electric unit (control unit) for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		110013141100 (32)
E41	35	14	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to BRC-102, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

>> Repair the power supply and the ground circuit. NO

Р

**LAN-105** Revision: 2007 June G37 Coupe

LAN

K

Ν

### ICC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

## ICC BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679461

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ICC sensor integrated unit.
- 2. Check the resistance between the ICC sensor integrated unit harness connector terminals.

ICC s	ICC sensor integrated unit harness connector		
Connector No.	Terminal No.		Resistance (Ω)
E67	3	6	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ICC sensor integrated unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ICC sensor integrated unit. Refer to <a href="CCS-81">CCS-81</a>, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ICC sensor integrated unit. Refer to CCS-111, "Exploded View".

YES (Past error)>>Error was detected in the ICC sensor integrated unit branch line.

## IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 3)]

# IPDM-E BRANCH LINE CIRCUIT

# **Diagnosis Procedure**

INFOID:0000000001679462

Α

В

D

F

Н

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- Check the resistance between the IPDM E/R harness connector terminals.

	IPDM E/R harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
E6	40	39	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-19, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

>> Repair the power supply and the ground circuit.

K

Р

**LAN-107** Revision: 2007 June G37 Coupe

LAN

Ν

INFOID:000000001679463

# CAN COMMUNICATION CIRCUIT

# Diagnosis Procedure

1.CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Continuity
M24	6	14	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link	Data link connector		Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6	Ordana	Not existed
IVI24	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

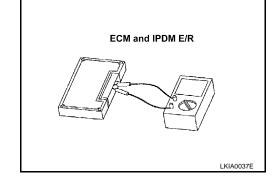
# 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- Check the resistance between the ECM terminals.

ECM		Resistance (Ω)	
Terminal No.		Resistance (22)	
114	113	Approx. 108 – 132	

3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)	
Terminal No.		Resistance (22)	
40	39	Approx. 108 – 132	



#### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

## 5. CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

# **CAN COMMUNICATION CIRCUIT**

< COMPONENT DIAGNOSIS > [CAN 5Y]	STEWI (TYPE 3)]
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure w	hen past error is
detected.  6.CHECK UNIT REPRODUCTION	I
Perform the reproduction test as per the following procedure for each unit.	-
<ol> <li>Turn the ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> <li>Disconnect one of the unit connectors of CAN communication system.</li> <li>NOTE:</li> </ol>	(
<ul><li>ECM and IPDM E/R have a termination circuit. Check other units first.</li><li>4. Connect the battery cable to the negative terminal. Check if the symptoms described (Results from interview with customer)" are reproduced.</li></ul>	in the "Symptom
<b>NOTE:</b> Although unit-related error symptoms occur, do not confuse them with other symptoms.	E
Inspection result  Reproduced>>Connect the connector. Check other units as per the above procedure.	
Non-reproduced>>Replace the unit whose connector was disconnected.	F
	(
	ŀ
	ŀ
	L
	LA
	ľ

Р

**LAN-109** Revision: 2007 June G37 Coupe

### MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

# COMPONENT DIAGNOSIS

# MAIN LINE BETWEEN BCM AND DLC CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679469

#### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ess connector	Data link connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity	
M422	91	6	Existed		
M122	90	M24	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

### MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### MAIN LINE BETWEEN DLC AND ADP CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679471

Α

В

D

Е

Н

#### INSPECTION PROCEDURE

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M7 and B1.
- Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity	
M24	6	M7	20	Existed	
IVIZ4	14	1417	21	Existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

### ${f 3.}$ CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termiı	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

Ν

Р

**LAN-111** Revision: 2007 June G37 Coupe

LAN

K

### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679473

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness connector		Harness connector		connector Harness connector  Terminal No. Connector No. Terminal No.		Continuity
Connector No.	Terminal No.	Continuity				
M7	22	M6	9	Existed		
1017	23	IVIO	8	Existed		

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# 4. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	ess connector  ABS actuator and electric unit (control unit) harness connector		,		
Connector No.	Terminal No.	Connector No.	Terminal No.		
E106	9	E41	35	Existed	
E106	8	<del> </del>	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit). Α В C D Е F G Н J K L

LAN

Ν

0

Р

### **ECM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### ECM BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679475

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Termi	ixesistance (22)	
M107	114	113	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to <u>EC-140, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the ECM. Refer to <u>EC-16</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

# **A-BAG BRANCH LINE CIRCUIT**

_	COM	MT DIA	AGNOS	10 <

< COMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 4)]
A-BAG BRANCH LINE CIRCUIT	
Diagnosis Procedure	INFOID:000000001679476
1.CHECK AIR BAG DIAGNOSIS SENSOR UNIT	
Check the air bag diagnosis sensor unit. Refer to SRC-5, "Work Flow	<u>/"</u> .
Is the inspection result normal?  YES >> Replace the main harness.	
NO >> Replace parts whose air bag system has a malfunction.	

Р

[CAN SYSTEM (TYPE 4)]

### AV BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679477

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		ivesistatice (22)
M87	52 53		Approx. 54 – 66

#### Models without NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	110000100 (22)	
M85	86	87	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT: Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

### **BCM BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

# **BCM BRANCH LINE CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679478

Α

В

D

F

Н

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

	BCM harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M122	91	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to BCS-38, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

>> Repair the power supply and the ground circuit.

Р

**LAN-117** Revision: 2007 June G37 Coupe

LAN

Ν

#### **PSB BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### **PSB BRANCH LINE CIRCUIT**

### Diagnosis Procedure

INFOID:0000000001679479

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the pre-crash seat belt for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of pre-crash seat belt control unit.
- 2. Check the resistance between the pre-crash seat belt control unit harness connector terminals.

Pre-cras	Pre-crash seat belt control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M110	24 22		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the pre-crash seat belt control unit branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the pre-crash seat belt control unit. Refer to the following.

- Power supply circuit: <u>SBC-27</u>, "Component Function Check"
- Ground circuit: SBC-28, "Component Function Check"

#### Is the inspection result normal?

YES (Present error)>>Replace the pre-crash seat belt control unit. Refer to SBC-40, "Exploded View".

YES (Past error)>>Error was detected in the pre-crash seat belt control unit branch line.

#### **AFS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### AFS BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679481

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of AFS control unit.
- 2. Check the resistance between the AFS control unit harness connector terminals.

	AFS control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M16	30	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AFS control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AFS control unit. Refer to <u>EXL-61</u>, "AFS CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the AFS control unit. Refer to EXL-196, "Exploded View".

YES (Past error)>>Error was detected in the AFS control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-119 G37 Coupe

F

Α

В

D

Н

Κ

### **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### DLC BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679482

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M24	6	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

### **M&A BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

# M&A BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679483

Α

В

D

F

Н

### 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M67	56 72		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

>> Repair the power supply and the ground circuit. NO

Ν

Р

**LAN-121** Revision: 2007 June G37 Coupe

K

LAN

### STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### STRG BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679484

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M37	1 2		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

### ADP BRANCH LINE CIRCUIT

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

# ADP BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679485

Α

В

D

Е

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		ixesistance (22)
B503	3	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to ADP-63, "DRIVER SEAT CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

>> Repair the power supply and the ground circuit.

Ν

Р

**LAN-123** Revision: 2007 June G37 Coupe

LAN

L

### RAS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### RAS BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679486

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the terminals and connectors of the 4WAS main control unit for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of 4WAS main control unit.
- 2. Check the resistance between the 4WAS main control unit harness connector terminals.

4WA	4WAS main control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
B54	1 8		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the 4WAS main control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the 4WAS main control unit. Refer to <a href="STC-134">STC-134</a>, "Diagnosis Procedure (4WAS Main Control Unit)".

#### Is the inspection result normal?

YES (Present error)>>Replace the 4WAS main control unit. Refer to STC-178, "Exploded View".

YES (Past error)>>Error was detected in the 4WAS main control unit branch line.

### **ABS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### ABS BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679487

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		110013141100 (32)
E41	35 14		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="BRC-102">BRC-102</a>, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

 $\cup$ 

Р

Revision: 2007 June LAN-125 G37 Coupe

С

Α

В

D

Н

K

#### ICC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

### ICC BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679488

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ICC sensor integrated unit.
- 2. Check the resistance between the ICC sensor integrated unit harness connector terminals.

ICC s	ICC sensor integrated unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
E67	3 6		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ICC sensor integrated unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ICC sensor integrated unit. Refer to <a href="CCS-81">CCS-81</a>, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ICC sensor integrated unit. Refer to CCS-111, "Exploded View".

YES (Past error)>>Error was detected in the ICC sensor integrated unit branch line.

### IPDM-E BRANCH LINE CIRCUIT

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 4)]

# IPDM-E BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679489

Α

В

D

F

Н

### 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
E6	40 39		Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-19, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

>> Repair the power supply and the ground circuit.

K

Ν

Р

**LAN-127** Revision: 2007 June G37 Coupe

LAN

# CAN COMMUNICATION CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679490

# 1. CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Continuity
M24	6	Not existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link connector			Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6	Ground	Not existed
IVI24	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

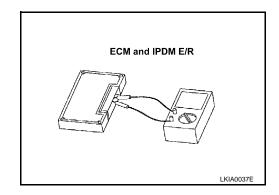
### 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- Check the resistance between the ECM terminals.

ECM		Resistance (Ω)	
Terminal No.			
114	113	Approx. 108 – 132	

3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance (Ω)	
Terminal No.		Resistance (12)	
40	39	Approx. 108 – 132	



#### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

### CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

# **CAN COMMUNICATION CIRCUIT**

< COMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 4)]
Inspection result	
Reproduced>>GO TO 6. Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis detected.	s procedure when past error is
6.CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit.	
<ol> <li>Turn the ignition switch OFF.</li> <li>Disconnect the battery cable from the negative terminal.</li> </ol>	
3. Disconnect one of the unit connectors of CAN communication system.	
NOTE: ECM and IPDM E/R have a termination circuit. Check other units first.  4. Connect the battery cable to the negative terminal. Check if the sympto (Results from interview with customer)" are reproduced.	oms described in the "Symptom
<b>NOTE:</b> Although unit-related error symptoms occur, do not confuse them with other symptoms.	ner symptoms.
Inspection result	, ,
Reproduced>>Connect the connector. Check other units as per the above p Non-reproduced>>Replace the unit whose connector was disconnected.	rocedure.

**LAN-129** Revision: 2007 June G37 Coupe

Р

### MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

# COMPONENT DIAGNOSIS

# MAIN LINE BETWEEN BCM AND DLC CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679496

#### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link connector		Continuity	
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity	
M122	91	M24	6	Existed	
IVI I ZZ	90	10124	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

### MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### MAIN LINE BETWEEN DLC AND ADP CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679498

Α

В

D

Е

Н

#### INSPECTION PROCEDURE

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M7 and B1.
- Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity
M24	6	M7	20	Existed
M24	14	IVI7	21	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

### ${f 3.}$ CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termiı	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

Ν

Р

**LAN-131** Revision: 2007 June G37 Coupe

LAN

K

### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679500

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity	
M7	22	M6	9	Existed	
1017	23	IVIO	8	Existed	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# 4. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector		ectric unit (control unit) connector	Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.		
E106	9	E41	35	Existed	
E106	8	<del> </del>	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit). Α В C D Е F G Н J K L

LAN

Ν

0

Р

### **ECM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### ECM BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679502

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

	ECM harness connector			
Connector No.	Terminal No.		Resistance (Ω)	
M107	114	113	Approx. 108 – 132	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to <u>EC-140, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the ECM. Refer to <u>EC-16</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

# **A-BAG BRANCH LINE CIRCUIT**

_	COM	MT DIA	AGNOS	10 <

Р

< COMPONENT DIAGNOSIS >	[CAN SYSTEM (TYPE 5)]
A-BAG BRANCH LINE CIRCUIT	
Diagnosis Procedure	INFOID:000000001679503
1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT	
Check the air bag diagnosis sensor unit. Refer to SRC-5, "Work Flow".	
Is the inspection result normal?  YES >> Replace the main harness.	
NO >> Replace parts whose air bag system has a malfunction.	
	I

**LAN-135** Revision: 2007 June G37 Coupe

[CAN SYSTEM (TYPE 5)]

### AV BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679504

G37 Coupe

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of AV control unit.
- 2. Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		1103/314/100 (22)
M87	52 53		Approx. 54 – 66

#### Models without NAVI

	AV control unit harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M85	86	87	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109. "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

### **BCM BRANCH LINE CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

# **BCM BRANCH LINE CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679505

Α

В

D

F

Н

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M122	91	90	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to BCS-38, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

>> Repair the power supply and the ground circuit.

K

Р

**LAN-137** Revision: 2007 June G37 Coupe

LAN

Ν

### TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

# TCM BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679507

G37 Coupe

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- A/T assembly
- Harness connector F103
- Harness connector M116

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of A/T assembly.
- 2. Check the resistance between the A/T assembly harness connector terminals.

	A/T assembly harness connector		
Connector No.	Terminal No.		Resistance (Ω)
F51	3	8	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to <u>TM-163, "Diagnosis Procedure"</u>. Is the inspection result normal?

YES (Present error)>>Replace the control valve with TCM. Refer to TM-232, "Exploded View".

YES (Past error)>>Error was detected in the TCM branch line.

### **DLC BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### **DLC BRANCH LINE CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679509

Α

В

D

Е

F

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M24	6	14	Approx. 54 – 66

### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

Н

K

Н

LAN

Ν

Р

Revision: 2007 June LAN-139 G37 Coupe

### **M&A BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### M&A BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679510

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M67	56	72	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

#### STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

# STRG BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679511

# 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the steering angle sensor for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Steering angle sensor harness connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M37	1	2	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to BRC-83, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

>> Repair the power supply and the ground circuit. NO

LAN

K

Ν

Р

**LAN-141** Revision: 2007 June G37 Coupe

Α

В

D

F

Н

### **ADP BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### ADP BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679512

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- 2. Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		110013141100 (22)
B503	3	19	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63</u>, "<u>DRIVER SEAT CONTROL UNIT</u>: <u>Diagnosis Procedure</u>".

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

### **ABS BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

### ABS BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679514

Α

В

D

Н

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		110013141100 (32)
E41	35	14	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="mailto:BRC-102">BRC-102</a>, "Exploded <a href="mailto:View"</a>.

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-143 G37 Coupe

K

#### IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

# IPDM-E BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679516

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of IPDM E/R.
- 2. Check the resistance between the IPDM E/R harness connector terminals.

	IPDM E/R harness connector		
Connector No.	Terminal No.		Resistance (Ω)
E6	40	39	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-19</u>, "<u>Diagnosis Procedure</u>". <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

## **CAN COMMUNICATION CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

# CAN COMMUNICATION CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679517

Α

В

D

F

Н

# 1.CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Continuity		
Connector No.	Termi	Continuity	
M24	6 14		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link connector			Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6	Ground	Not existed
	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

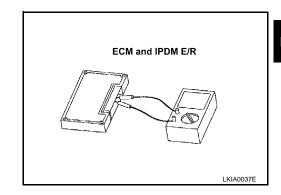
# 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- 2. Check the resistance between the ECM terminals.

ECM		Resistance ( $\Omega$ )	
Terminal No.			
114	113	Approx. 108 – 132	

Check the resistance between the IPDM E/R terminals.

IPDI	Resistance (Ω)	
Terminal No.		
40	39	Approx. 108 – 132



## Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

## 5. CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

Revision: 2007 June LAN-145 G37 Coupe

LAN

K

Ν

0

Р

## **CAN COMMUNICATION CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 5)]

#### Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

## 6.check unit reproduction

Perform the reproduction test as per the following procedure for each unit.

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Disconnect one of the unit connectors of CAN communication system.

#### NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

Connect the battery cable to the negative terminal. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

#### NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

#### Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# **COMPONENT DIAGNOSIS**

# MAIN LINE BETWEEN BCM AND DLC CIRCUIT

Diagnosis Procedure

#### INFOID:0000000001679526

Α

В

C

D

Е

F

#### INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link o	connector	Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M122	91	M24	6	Existed
M122 90	10124	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

Н

K

L

LAN

Ν

C

Р

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679528

#### INSPECTION PROCEDURE

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors M7 and B1.
- 2. Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M24	6	M7	20	Existed
10124	14		21	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

# 3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679530

Α

D

Е

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.check harness continuity (open circuit)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M7	22	M6	9	Existed
IVI /	23		8	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# f 4.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector	ABS actuator and electric unit (control unit) harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
E106	9	E41	35	Existed
∟100	8	L41	14	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

LAN

Р

Revision: 2007 June LAN-149 G37 Coupe

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit).

## **ECM BRANCH LINE CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## ECM BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679532

Α

В

D

F

Н

## 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Termi	1\esistance (22)	
M107	114	113	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to EC-140, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

>> Repair the power supply and the ground circuit.

Р

**LAN-151** Revision: 2007 June G37 Coupe

LAN

K

Ν

## **A-BAG BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# A-BAG BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679533

# 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to <u>SRC-5</u>, "Work Flow". <u>Is the inspection result normal?</u>

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

### AV BRANCH LINE CIRCUIT

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## AV BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679534

Α

В

D

Н

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.check harness for open circuit

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		116313181106 (22)
M87	52	53	Approx. 54 – 66

#### Models without NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termin	rtesistance (22)	
M85	86	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

Ν

Р

**LAN-153** Revision: 2007 June G37 Coupe

LAN

K

## **BCM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# **BCM BRANCH LINE CIRCUIT**

# Diagnosis Procedure

INFOID:0000000001679535

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance (Ω)
Connector No.	Terminal No.		ivesistatice (22)
M122	91	90	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# 3. CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to <u>BCS-38, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

## TCM BRANCH LINE CIRCUIT

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# TCM BRANCH LINE CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679537

Α

В

D

Е

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- A/T assembly
- Harness connector F103
- Harness connector M116

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of A/T assembly.
- Check the resistance between the A/T assembly harness connector terminals.

A/T assembly harness connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
F51	3	8	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to TM-163, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the control valve with TCM. Refer to TM-232, "Exploded View".

YES (Past error)>>Error was detected in the TCM branch line.

>> Repair the power supply and the ground circuit. NO

Ν

Р

**LAN-155** Revision: 2007 June G37 Coupe

LAN

K

## **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## DLC BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679539

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M24	6 14		Approx. 54 – 66

#### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

## **M&A BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# **M&A BRANCH LINE CIRCUIT**

## Diagnosis Procedure

#### INFOID:0000000001679540

Α

В

D

F

Н

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M67	56 72		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

>> Repair the power supply and the ground circuit. NO

Ν

Р

**LAN-157** Revision: 2007 June G37 Coupe

K

LAN

## STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## STRG BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679541

## 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M37	1 2		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

## ADP BRANCH LINE CIRCUIT

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# ADP BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679542

Α

В

D

Е

## 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
B503	3	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure".</u>

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

O

Р

Revision: 2007 June LAN-159 G37 Coupe

L

## RAS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## RAS BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679543

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the terminals and connectors of the 4WAS main control unit for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of 4WAS main control unit.
- 2. Check the resistance between the 4WAS main control unit harness connector terminals.

4WA	4WAS main control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
B54	1 8		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the 4WAS main control unit branch line.

# 3.check power supply and ground circuit

Check the power supply and the ground circuit of the 4WAS main control unit. Refer to <a href="STC-134">STC-134</a>, "Diagnosis Procedure (4WAS Main Control Unit)".

#### Is the inspection result normal?

YES (Present error)>>Replace the 4WAS main control unit. Refer to STC-178, "Exploded View".

YES (Past error)>>Error was detected in the 4WAS main control unit branch line.

## **ABS BRANCH LINE CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

## ABS BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679544

Α

В

D

Н

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the ABS actuator and electric unit (control unit) for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		resistance (22)
E41	35 14		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to BRC-102, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

>> Repair the power supply and the ground circuit. NO

K

Р

**LAN-161** Revision: 2007 June G37 Coupe

LAN

Ν

## IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# IPDM-E BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679546

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of IPDM E/R.
- 2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector			Resistance ( $\Omega$ )
Connector No.	Terminal No.		ivesistance (22)
E6	40	39	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-19</u>, "<u>Diagnosis Procedure</u>". <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

## **CAN COMMUNICATION CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

# **CAN COMMUNICATION CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679547

Α

В

D

F

Н

# 1.CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

Data link connector			Continuity
Connector No.	Terminal No.		Continuity
M24	6 14		Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

# 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link connector			Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6		Not existed
IVI24	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

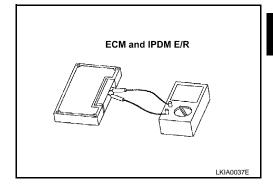
# 4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- 2. Check the resistance between the ECM terminals.

ECM		Resistance (Ω)	
Terminal No.			
114	113	Approx. 108 – 132	

Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance $(\Omega)$	
Terminal No.			
40	39	Approx. 108 – 132	



#### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

## 5. CHECK SYMPTOM

Revision: 2007 June

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

LAN-163 G37 Coupe

LAN

K

Ν

 $\cap$ 

Р

## **CAN COMMUNICATION CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 6)]

### Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

## 6.check unit reproduction

Perform the reproduction test as per the following procedure for each unit.

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Disconnect one of the unit connectors of CAN communication system.

#### NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

Connect the battery cable to the negative terminal. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

#### NOTE:

Although unit-related error symptoms occur, do not confuse them with other symptoms.

#### Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

## MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

# COMPONENT DIAGNOSIS

# MAIN LINE BETWEEN BCM AND DLC CIRCUIT

Diagnosis Procedure

#### INFOID:0000000001679553

## INSPECTION PROCEDURE

# 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link connector		Continuity	
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity	
M122	91	M24	6	Existed	
IVITZZ	90		14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

Н

Α

В

C

D

Е

F

K

L

LAN

Ν

Р

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## MAIN LINE BETWEEN DLC AND ADP CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679555

#### INSPECTION PROCEDURE

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors M7 and B1.
- 2. Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness	connector	Continuity
Connector No.	Terminal No.	Connector No. Terminal No.		Continuity
M24	6	M7	20	Existed
10124	14		21	Existed

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

# 3.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

# Diagnosis Procedure

#### INFOID:0000000001679557

Α

D

Е

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.check harness continuity (open circuit)

1. Disconnect the harness connectors B1 and M7.

Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

# 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M7	22	M6	9	Existed
IVI /	23	IVIO	8	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

# f 4.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector	ABS actuator and electric unit (control unit) harness connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.		
E106	9	E44	35	Existed	
E106 8	8	- E41	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

LAN

P

## MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit).

## **ECM BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## ECM BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:000000001679559

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

	ECM harness connector		
Connector No.	Termi	Resistance (Ω)	
M107	114	113	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to EC-140, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

>> Repair the power supply and the ground circuit.

LAN

Ν

**LAN-169** Revision: 2007 June G37 Coupe

В

Α

D

F

Н

K

Р

## **A-BAG BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

# A-BAG BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679560

# 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to <u>SRC-5</u>, "Work Flow". <u>Is the inspection result normal?</u>

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

### AV BRANCH LINE CIRCUIT

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## AV BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679561

Α

В

D

Н

## 1. CHECK CONNECTOR

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

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.check harness for open circuit

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	110313141100 (32)	
M87	52	53	Approx. 54 – 66

#### Models without NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	110013141100 (22)	
M85	86 87		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

Ν

Р

**LAN-171** Revision: 2007 June G37 Coupe

LAN

K

## **BCM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

# **BCM BRANCH LINE CIRCUIT**

## Diagnosis Procedure

INFOID:0000000001679562

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

	BCM harness connector		
Connector No.	Termi	Resistance (Ω)	
M122	91 90		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

# ${f 3.}$ CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to <u>BCS-38, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

## **PSB BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## **PSB BRANCH LINE CIRCUIT**

# Diagnosis Procedure

#### INFOID:0000000001679563

Α

В

D

Е

F

Н

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the pre-crash seat belt for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of pre-crash seat belt control unit.
- 2. Check the resistance between the pre-crash seat belt control unit harness connector terminals.

Pre-crash seat belt control unit harness connector			Resistance ( $\Omega$ )
Connector No.	Terminal No.		ivesisiance (\$2)
M110	24 22		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the pre-crash seat belt control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the pre-crash seat belt control unit. Refer to the following.

- Power supply circuit: SBC-27, "Component Function Check"
- Ground circuit: <u>SBC-28</u>, "Component Function Check"

## Is the inspection result normal?

YES (Present error)>>Replace the pre-crash seat belt control unit. Refer to SBC-40, "Exploded View".

YES (Past error)>>Error was detected in the pre-crash seat belt control unit branch line.

>> Repair the power supply and the ground circuit.

Ν

Р

**LAN-173** Revision: 2007 June G37 Coupe

K

LAN

## TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

# TCM BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679564

G37 Coupe

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- A/T assembly
- Harness connector F103
- Harness connector M116

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of A/T assembly.
- 2. Check the resistance between the A/T assembly harness connector terminals.

A/T assembly harness connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
F51	3	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

## 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to <u>TM-163, "Diagnosis Procedure"</u>. Is the inspection result normal?

YES (Present error)>>Replace the control valve with TCM. Refer to TM-232, "Exploded View".

YES (Past error)>>Error was detected in the TCM branch line.

## **AFS BRANCH LINE CIRCUIT**

## < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## AFS BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679565

## 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of AFS control unit.
- Check the resistance between the AFS control unit harness connector terminals.

AFS control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		intesistance (22)
M16	30	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AFS control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AFS control unit. Refer to EXL-61, "AFS CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the AFS control unit. Refer to EXL-196, "Exploded View".

YES (Past error)>>Error was detected in the AFS control unit branch line.

>> Repair the power supply and the ground circuit. NO

LAN

Ν

Р

**LAN-175** Revision: 2007 June G37 Coupe

D

Α

В

F

Н

K

## **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## DLC BRANCH LINE CIRCUIT

# Diagnosis Procedure

INFOID:0000000001679566

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

Data link connector			Resistance (Ω)
Connector No.	Terminal No.		ixesistance (22)
M24	6 14		Approx. 54 – 66

#### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

## **M&A BRANCH LINE CIRCUIT**

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

# **M&A BRANCH LINE CIRCUIT**

## Diagnosis Procedure

#### INFOID:000000001679567

## 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified meter and A/C amp. harness connector			Resistance (Ω)
Connector No.	Terminal No.		ivesisiance (\$2)
M67	56 72		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

>> Repair the power supply and the ground circuit. NO

LAN

Р

**LAN-177** Revision: 2007 June G37 Coupe

В

Α

D

F

Н

K

Ν

## STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## STRG BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679568

# 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M37	1 2		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

## ADP BRANCH LINE CIRCUIT

### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

# ADP BRANCH LINE CIRCUIT

## Diagnosis Procedure

#### INFOID:0000000001679569

Α

В

D

Е

# 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance (Ω)
Connector No.	Terminal No.		
B503	3 19		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure".</u>

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-179 G37 Coupe

L

## **ABS BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

## ABS BRANCH LINE CIRCUIT

## Diagnosis Procedure

INFOID:0000000001679571

# 1. CHECK CONNECTOR

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

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

# 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- 2. Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		110000000000000000000000000000000000000
E41	35 14		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="BRC-102">BRC-102</a>, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

#### ICC BRANCH LINE CIRCUIT

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

### ICC BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679572

### 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the ICC sensor integrated unit for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ICC sensor integrated unit.
- 2. Check the resistance between the ICC sensor integrated unit harness connector terminals.

ICC s	Resistance ( $\Omega$ )		
Connector No.	Termi	1\esistance (\frac{1}{2})	
E67	3 6		Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ICC sensor integrated unit branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ICC sensor integrated unit. Refer to CCS-81, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ICC sensor integrated unit. Refer to CCS-111, "Exploded View".

YES (Past error)>>Error was detected in the ICC sensor integrated unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

**LAN-181** Revision: 2007 June G37 Coupe

Α

В

D

Е

F

Н

K

Р

#### IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

### IPDM-E BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679573

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- 2. Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector			Resistance (Ω)
Connector No.	Termi	1\esistance (22)	
E6	40 39		Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to <u>PCS-19, "Diagnosis Procedure"</u>. Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

#### **CAN COMMUNICATION CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

### CAN COMMUNICATION CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679574

Α

В

D

F

Н

### 1. CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Continuity	
Connector No.	Termi	Continuity
M24	6	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

### 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link connector			Continuity	
Connector No.	Terminal No.	Ground	Continuity	
M24	6	Ground	Not existed	
IVI24	14		Not existed	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

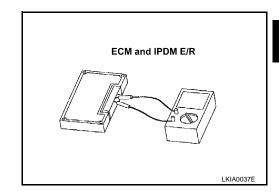
### 4. CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- 2. Check the resistance between the ECM terminals.

E	СМ	Resistance (Ω)	
Terminal No.		Resistance (12)	
114	113	Approx. 108 – 132	

Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance $(\Omega)$	
Terminal No.			
40	39	Approx. 108 – 132	



#### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

#### 5. CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

Revision: 2007 June LAN-183 G37 Coupe

LAN

K

Ν

 $\circ$ 

Р

#### **CAN COMMUNICATION CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 7)]

#### Inspection result

Reproduced>>GO TO 6.

Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error is detected.

#### 6. CHECK UNIT REPRODUCTION

Perform the reproduction test as per the following procedure for each unit.

- Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect one of the unit connectors of CAN communication system.

#### NOTE:

ECM and IPDM E/R have a termination circuit. Check other units first.

Connect the battery cable to the negative terminal. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

#### NOTE

Although unit-related error symptoms occur, do not confuse them with other symptoms.

#### Inspection result

Reproduced>>Connect the connector. Check other units as per the above procedure.

Non-reproduced>>Replace the unit whose connector was disconnected.

#### MAIN LINE BETWEEN BCM AND DLC CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

## COMPONENT DIAGNOSIS

### MAIN LINE BETWEEN BCM AND DLC CIRCUIT

Diagnosis Procedure

#### INFOID:0000000001679580

#### INSPECTION PROCEDURE

### 1. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect the following harness connectors.
- ECM
- BCM
- 4. Check the continuity between the BCM harness connector and the data link connector.

BCM harne	ss connector	Data link connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M122	91	M24	6	Existed
IVI 122	90		14	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the BCM and the data link connector.

NO >> Repair the main line between the BCM and the data link connector.

Н

Α

В

C

D

Е

F

K

L

LAN

Ν

C

Р

#### MAIN LINE BETWEEN DLC AND ADP CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### MAIN LINE BETWEEN DLC AND ADP CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679582

#### INSPECTION PROCEDURE

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector M7
- Harness connector B1

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- 1. Disconnect the harness connectors M7 and B1.
- 2. Check the continuity between the data link connector and the harness connector.

Data link	connector	Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M24	6	M7	20	Existed
IVIZ4	14	IVIT	21	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the data link connector and the harness connector M7.

### CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check the continuity between the harness connector terminals.

Connector No.	Termin	Continuity	
B1	20	22	Existed
	21	23	Existed

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the data link connector and the driver seat control unit.

NO >> Repair the main line between the harness connector B1 and the driver seat control unit.

#### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679584

Α

D

Е

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (connector side and harness side).
- Harness connector B1
- Harness connector M7
- Harness connector M6
- Harness connector E106

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.check harness continuity (open circuit)

- 1. Disconnect the harness connectors B1 and M7.
- Check the continuity between the harness connector terminals.

Connector No.	Termi	Continuity	
B1	20	22	Existed
ы	21	23	Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the main line between the driver seat control unit and the harness connector B1.

### 3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the harness connectors M6 and E106.
- 2. Check the continuity between the harness connectors.

Harness connector		Harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	Continuity
M7	22 MG	Me	9	Existed
IVI 7	23	M6	8	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the main line between the harness connectors M7 and M6.

### f 4.CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

- Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the continuity between the harness connector and the ABS actuator and electric unit (control unit) harness connector.

Harness	connector	ABS actuator and electric unit (control unit) harness connector		Continuity	
Connector No.	Terminal No.	Connector No.	Terminal No.		
E106	9	E41	35	Existed	
L100	8	E41	14	Existed	

#### Is the inspection result normal?

YES (Present error)>>Check CAN system type decision again.

YES (Past error)>>Error was detected in the main line between the driver seat control unit and the ABS actuator and electric unit (control unit).

LAN

K

Ν

Р

#### MAIN LINE BETWEEN ADP AND ABS CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

NO >> Repair the main line between the harness connector E106 and the ABS actuator and electric unit (control unit).

#### **ECM BRANCH LINE CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### ECM BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679586

Α

В

D

F

Н

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of ECM.
- 2. Check the resistance between the ECM harness connector terminals.

ECM harness connector			Resistance (Ω)
Connector No.	Terminal No.		1\esistance (22)
M107	114	Approx. 108 – 132	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ECM branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ECM. Refer to EC-140, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the ECM. Refer to EC-16, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (ECM): Special Repair Requirement".

YES (Past error)>>Error was detected in the ECM branch line.

>> Repair the power supply and the ground circuit.

Ν

Р

**LAN-189** Revision: 2007 June G37 Coupe

LAN

K

#### **A-BAG BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### A-BAG BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679587

### 1. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Check the air bag diagnosis sensor unit. Refer to <u>SRC-5</u>, "Work Flow". <u>Is the inspection result normal?</u>

YES >> Replace the main harness.

NO >> Replace parts whose air bag system has a malfunction.

#### AV BRANCH LINE CIRCUIT

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### AV BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679588

Α

В

D

#### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.check harness for open circuit

- Disconnect the connector of AV control unit.
- Check the resistance between the AV control unit harness connector terminals.
- Models with NAVI

	AV control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M87	52 53		Approx. 54 – 66

#### Models without NAVI

AV control unit harness connector			Resistance (Ω)
Connector No.	Termi	rtesistance (22)	
M85	86	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AV control unit branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AV control unit. Refer to the following.

- Base audio without navigation: AV-39, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio without navigation: AV-160, "AV CONTROL UNIT : Diagnosis Procedure"
- BOSE audio with navigation: AV-433, "AV CONTROL UNIT: Diagnosis Procedure"

#### Is the inspection result normal?

YES (Present error)>>Replace the AV control unit. Refer to the following.

- Base audio without navigation: AV-109, "Exploded View"
- BOSE audio without navigation: AV-343, "Exploded View"
- BOSE audio with navigation: AV-608, "Exploded View"

YES (Past error)>>Error was detected in the AV control unit branch line.

NO >> Repair the power supply and the ground circuit.

Ν

Р

**LAN-191** Revision: 2007 June G37 Coupe

LAN

K

#### **BCM BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### **BCM BRANCH LINE CIRCUIT**

### Diagnosis Procedure

INFOID:0000000001679589

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of BCM.
- 2. Check the resistance between the BCM harness connector terminals.

BCM harness connector			Resistance ( $\Omega$ )
Connector No.	Terminal No.		ixesistance (22)
M122	91	90	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the BCM branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the BCM. Refer to <u>BCS-38, "Diagnosis Procedure"</u>. <u>Is the inspection result normal?</u>

YES (Present error)>>Replace the BCM. Refer to BCS-79, "Exploded View".

YES (Past error)>>Error was detected in the BCM branch line.

#### **PSB BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### **PSB BRANCH LINE CIRCUIT**

### Diagnosis Procedure

#### INFOID:0000000001679590

Α

В

D

Е

F

Н

#### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of pre-crash seat belt control unit.
- 2. Check the resistance between the pre-crash seat belt control unit harness connector terminals.

Pre-cras	Pre-crash seat belt control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M110	24	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the pre-crash seat belt control unit branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the pre-crash seat belt control unit. Refer to the following.

- Power supply circuit: <u>SBC-27</u>, "Component Function Check"
- Ground circuit: <u>SBC-28</u>, "Component Function Check"

#### Is the inspection result normal?

YES (Present error)>>Replace the pre-crash seat belt control unit. Refer to SBC-40, "Exploded View".

YES (Past error)>>Error was detected in the pre-crash seat belt control unit branch line.

NO >> Repair the power supply and the ground circuit.

\_AN

Р

Revision: 2007 June LAN-193 G37 Coupe

LAN

K

N

#### TCM BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### TCM BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679591

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- A/T assembly
- Harness connector F103
- Harness connector M116

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of A/T assembly.
- 2. Check the resistance between the A/T assembly harness connector terminals.

	A/T assembly harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
F51	3	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the TCM branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the TCM. Refer to <u>TM-163, "Diagnosis Procedure"</u>. Is the inspection result normal?

YES (Present error)>>Replace the control valve with TCM. Refer to TM-232, "Exploded View".

YES (Past error)>>Error was detected in the TCM branch line.

#### **AFS BRANCH LINE CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### AFS BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679592

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of AFS control unit.
- Check the resistance between the AFS control unit harness connector terminals.

,	AFS control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M16	30	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the AFS control unit branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the AFS control unit. Refer to EXL-61, "AFS CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the AFS control unit. Refer to EXL-196, "Exploded View".

YES (Past error)>>Error was detected in the AFS control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Р

**LAN-195** Revision: 2007 June G37 Coupe

Α

В

D

F

Н

K

Ν

#### **DLC BRANCH LINE CIRCUIT**

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### DLC BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679593

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

## 2. CHECK HARNESS FOR OPEN CIRCUIT

Check the resistance between the data link connector terminals.

	Data link connector		
Connector No.	Terminal No.		Resistance (Ω)
M24	6	14	Approx. 54 – 66

#### Is the measurement value within the specification?

YES (Present error)>>Check the decision of CAN system type again.

YES (Past error)>>Error was detected in the data link connector branch line circuit.

NO >> Repair the data link connector branch line.

#### **M&A BRANCH LINE CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### **M&A BRANCH LINE CIRCUIT**

### Diagnosis Procedure

#### INFOID:0000000001679594

### 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the unified meter and A/C amp. for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of unified meter and A/C amp.
- 2. Check the resistance between the unified meter and A/C amp. harness connector terminals.

Unified	Unified meter and A/C amp. harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
M67	56	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the unified meter and A/C amp. branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the unified meter and A/C amp. Refer to MWI-50, "UNIFIED METER AND A/C AMP.: Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the unified meter and A/C amp. Refer to MWI-162, "Exploded View".

YES (Past error)>>Error was detected in the unified meter and A/C amp. branch line.

>> Repair the power supply and the ground circuit. NO

LAN

Ν

Р

**LAN-197** Revision: 2007 June G37 Coupe

В

Α

D

F

Н

K

#### STRG BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### STRG BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679595

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of steering angle sensor.
- 2. Check the resistance between the steering angle sensor harness connector terminals.

Ste	Steering angle sensor harness connector		
Connector No.	Terminal No.		Resistance (Ω)
M37	1	2	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the steering angle sensor branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the steering angle sensor. Refer to <u>BRC-83</u>, "Wiring Diagram - BRAKE CONTROL SYSTEM -".

#### Is the inspection result normal?

YES (Present error)>>Replace the steering angle sensor. Refer to BRC-105, "Exploded View".

YES (Past error)>>Error was detected in the steering angle sensor branch line.

#### ADP BRANCH LINE CIRCUIT

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### ADP BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679596

Α

В

D

Е

F

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Check the following terminals and connectors for damage, bend and loose connection (unit side and connector side).
- Models with automatic drive positioner
- Driver seat control unit
- Harness connector B502
- Harness connector B11
- Models without automatic drive positioner
- Driver seat control unit
- Harness connector B501
- Harness connector B10

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of driver seat control unit.
- Check the resistance between the driver seat control unit harness connector terminals.

Driver seat control unit harness connector			Resistance ( $\Omega$ )
Connector No.	Terminal No.		116313181106 (22)
B503	3	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the driver seat control unit branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the driver seat control unit. Refer to <u>ADP-63, "DRIVER SEAT CONTROL UNIT : Diagnosis Procedure".</u>

#### Is the inspection result normal?

YES (Present error)>>Replace the driver seat control unit. Refer to ADP-236, "Exploded View".

YES (Past error)>>Error was detected in the driver seat control unit branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

0

Р

Revision: 2007 June LAN-199 G37 Coupe

L

#### RAS BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### RAS BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679597

### 1. CHECK CONNECTOR

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the 4WAS main control unit for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of 4WAS main control unit.
- 2. Check the resistance between the 4WAS main control unit harness connector terminals.

4WA	4WAS main control unit harness connector		
Connector No.	Terminal No.		Resistance ( $\Omega$ )
B54	1	Approx. 54 – 66	

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the 4WAS main control unit branch line.

### 3.check power supply and ground circuit

Check the power supply and the ground circuit of the 4WAS main control unit. Refer to <a href="STC-134">STC-134</a>, "Diagnosis Procedure (4WAS Main Control Unit)".

#### Is the inspection result normal?

YES (Present error)>>Replace the 4WAS main control unit. Refer to STC-178, "Exploded View".

YES (Past error)>>Error was detected in the 4WAS main control unit branch line.

#### **ABS BRANCH LINE CIRCUIT**

#### < COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### ABS BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679598

Α

В

D

Н

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2.CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ABS actuator and electric unit (control unit).
- Check the resistance between the ABS actuator and electric unit (control unit) harness connector terminals.

ABS actuator and electric unit (control unit) harness connector			Resistance (Ω)
Connector No.	Terminal No.		resistance (22)
E41	35	14	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ABS actuator and electric unit (control unit) branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ABS actuator and electric unit (control unit). Refer to BRC-37, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ABS actuator and electric unit (control unit). Refer to <a href="BRC-102">BRC-102</a>, "Exploded View".

YES (Past error)>>Error was detected in the ABS actuator and electric unit (control unit) branch line.

NO >> Repair the power supply and the ground circuit.

LAN

Ν

Р

Revision: 2007 June LAN-201 G37 Coupe

K

#### ICC BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

#### ICC BRANCH LINE CIRCUIT

### Diagnosis Procedure

INFOID:0000000001679599

### 1. CHECK CONNECTOR

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

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS FOR OPEN CIRCUIT

- 1. Disconnect the connector of ICC sensor integrated unit.
- 2. Check the resistance between the ICC sensor integrated unit harness connector terminals.

ICC s	ICC sensor integrated unit harness connector		Resistance ( $\Omega$ )
Connector No.	Terminal No.		
E67	3	6	Approx. 54 – 66

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the ICC sensor integrated unit branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the ICC sensor integrated unit. Refer to <a href="CCS-81">CCS-81</a>, "Diagnosis Procedure".

#### Is the inspection result normal?

YES (Present error)>>Replace the ICC sensor integrated unit. Refer to CCS-111, "Exploded View".

YES (Past error)>>Error was detected in the ICC sensor integrated unit branch line.

#### IPDM-E BRANCH LINE CIRCUIT

< COMPONENT DIAGNOSIS >

[CAN SYSTEM (TYPE 8)]

### IPDM-E BRANCH LINE CIRCUIT

### Diagnosis Procedure

#### INFOID:0000000001679600

Α

В

D

F

Н

### 1. CHECK CONNECTOR

- Turn the ignition switch OFF.
- Disconnect the battery cable from the negative terminal.
- Check the terminals and connectors of the IPDM E/R for damage, bend and loose connection (unit side and connector side).

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2 CHECK HARNESS FOR OPEN CIRCUIT

- Disconnect the connector of IPDM E/R.
- Check the resistance between the IPDM E/R harness connector terminals.

IPDM E/R harness connector			Pagistanes (O)
Connector No.	Connector No. Terminal No.		Resistance ( $\Omega$ )
E6	40	39	Approx. 108 – 132

#### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> Repair the IPDM E/R branch line.

### 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check the power supply and the ground circuit of the IPDM E/R. Refer to PCS-19, "Diagnosis Procedure". Is the inspection result normal?

YES (Present error)>>Replace the IPDM E/R. Refer to PCS-34, "Exploded View".

YES (Past error)>>Error was detected in the IPDM E/R branch line.

>> Repair the power supply and the ground circuit.

K

Ν

Р

**LAN-203** Revision: 2007 June G37 Coupe

LAN

INFOID:000000001679601

### CAN COMMUNICATION CIRCUIT

### Diagnosis Procedure

# 1.CONNECTOR INSPECTION

- 1. Turn the ignition switch OFF.
- 2. Disconnect the battery cable from the negative terminal.
- 3. Disconnect all the unit connectors on CAN communication system.
- 4. Check terminals and connectors for damage, bend and loose connection.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the terminal and connector.

### 2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

Check the continuity between the data link connector terminals.

	Data link connector		Continuity
Connector No.	Terminal No.		
M24	6	14	Not existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Check the harness and repair the root cause.

### 3.check harness continuity (short circuit)

Check the continuity between the data link connector and the ground.

Data link connector			Continuity
Connector No.	Terminal No.	Ground	Continuity
M24	6	Ground	Not existed
IVIZ4	14		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Check the harness and repair the root cause.

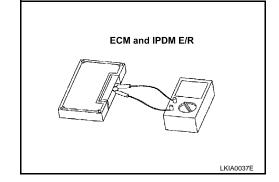
### 4.CHECK ECM AND IPDM E/R TERMINATION CIRCUIT

- Remove the ECM and the IPDM E/R.
- Check the resistance between the ECM terminals.

ECM		Resistance (Ω)	
Terminal No.		ivesistance (22)	
114	113	Approx. 108 – 132	

3. Check the resistance between the IPDM E/R terminals.

IPDM E/R		Resistance ( $\Omega$ )
Terminal No.		
40	39	Approx. 108 – 132



#### Is the measurement value within the specification?

YES >> GO TO 5.

NO >> Replace the ECM and/or the IPDM E/R.

#### CHECK SYMPTOM

Connect all the connectors. Check if the symptoms described in the "Symptom (Results from interview with customer)" are reproduced.

### **CAN COMMUNICATION CIRCUIT**

Ρ

< COMPONENT DIAGNOSIS > [CAN STSTEM (TTPE	0)]
Inspection result	
Reproduced>>GO TO 6.	
Non-reproduced>>Start the diagnosis again. Follow the trouble diagnosis procedure when past error detected.	or is
6. CHECK UNIT REPRODUCTION	
Perform the reproduction test as per the following procedure for each unit.	
Turn the ignition switch OFF.	
<ol> <li>Disconnect the battery cable from the negative terminal.</li> <li>Disconnect one of the unit connectors of CAN communication system.</li> </ol>	
NOTE:	
ECM and IPDM E/R have a termination circuit. Check other units first.	
<ol><li>Connect the battery cable to the negative terminal. Check if the symptoms described in the "Symp (Results from interview with customer)" are reproduced.</li></ol>	tom
NOTE:	
Although unit-related error symptoms occur, do not confuse them with other symptoms.  Inspection result	
Reproduced>>Connect the connector. Check other units as per the above procedure.	
Non-reproduced>>Replace the unit whose connector was disconnected.	

**LAN-205** Revision: 2007 June G37 Coupe